



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 17, 2026 – 04:57 AM UTC

PDB ID : 4V8U / pdb_00004v8u
Title : Crystal Structure of 70S Ribosome with Both Cognate tRNAs in the E and P Sites Representing an Authentic Elongation Complex.
Authors : Gao, Y.G.; Feng, S.; Chen, Y.
Deposited on : 2012-08-28
Resolution : 3.70 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 ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
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)	:	2.48.1

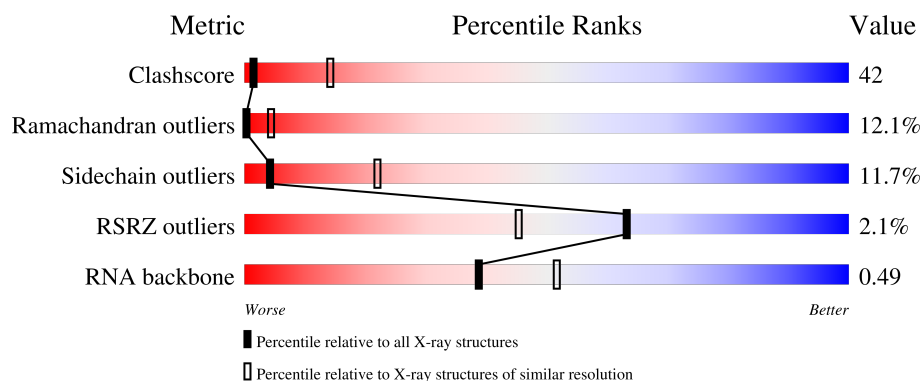
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

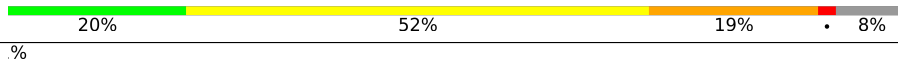
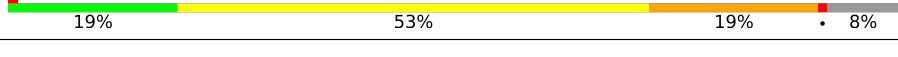
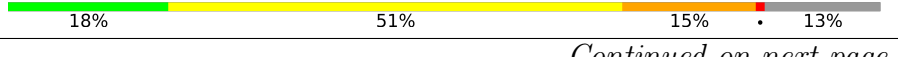
The reported resolution of this entry is 3.70 Å.

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))
Clashscore	180529	1074 (3.80-3.60)
Ramachandran outliers	177936	1055 (3.80-3.60)
Sidechain outliers	177891	1052 (3.80-3.60)
RSRZ outliers	164620	1017 (3.80-3.60)
RNA backbone	3690	1122 (4.40-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	
1	CA	1522	
2	AB	256	
2	CB	256	
3	AC	239	

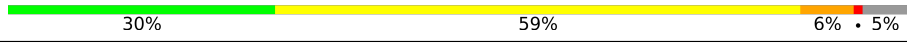
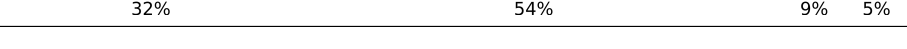
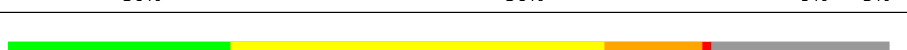
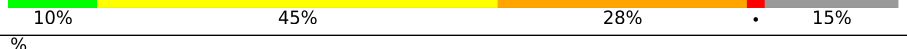
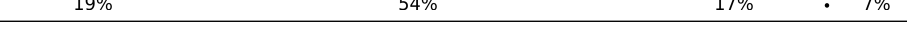
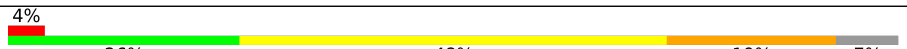
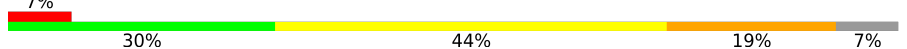
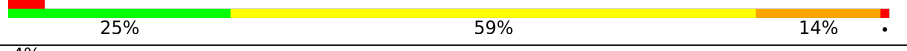
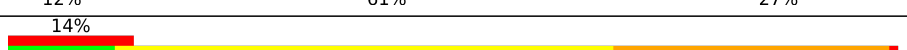
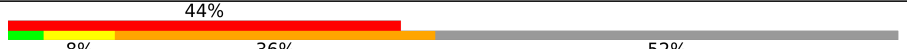
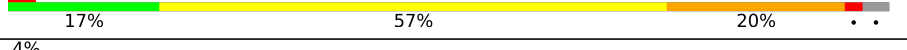
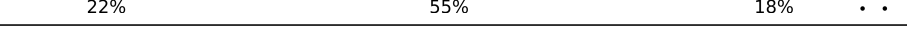
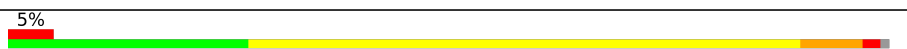
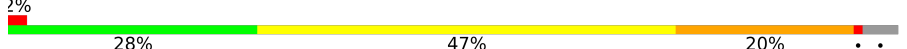
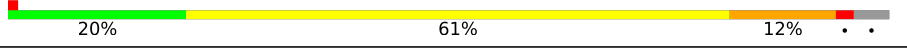
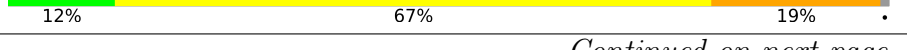
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Mol	Chain	Length	Quality of chain
3	CC	239	% 18% 51% 16% • 13%
4	AD	209	% 28% 53% 16% •
4	CD	209	% 29% 55% 14% •
5	AE	162	% 32% 49% 12% 7%
5	CE	162	% 35% 47% 12% 7%
6	AF	101	30% 62% 7% •
6	CF	101	32% 60% 8%
7	AG	156	% 34% 50% 13% ••
7	CG	156	4% 36% 49% 13% ••
8	AH	138	% 38% 49% 12%
8	CH	138	39% 49% 12%
9	AI	128	28% 60% 10% ••
9	CI	128	% 27% 61% 10% ••
10	AJ	105	% 16% 57% 20% • 6%
10	CJ	105	3% 16% 55% 22% • 6%
11	AK	129	% 41% 39% 12% • 8%
11	CK	129	2% 39% 42% 11% • 8%
12	AL	132	25% 52% 14% • 5%
12	CL	132	% 23% 54% 15% • 5%
13	AM	126	5% 13% 64% 19% ••
13	CM	126	6% 15% 63% 19% ••
14	AN	61	2% 34% 51% 8% 5% •
14	CN	61	2% 36% 51% 7% 5% •
15	AO	89	30% 57% 11% •
15	CO	89	% 29% 57% 12% •

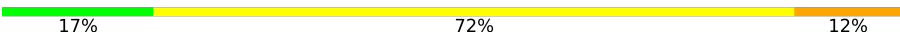
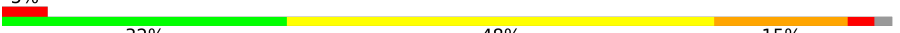
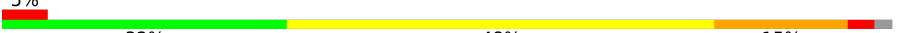
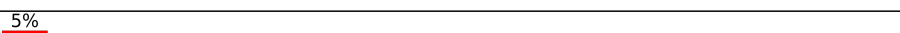
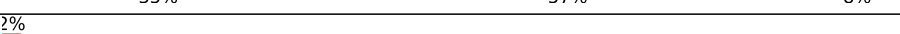
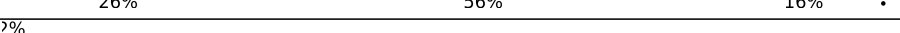
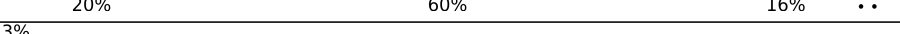
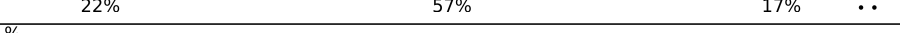
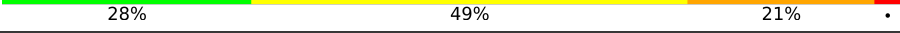
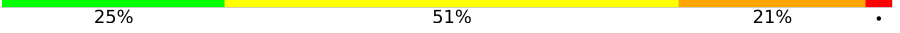
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Mol	Chain	Length	Quality of chain
16	AP	88	% 
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	% 
20	CT	106	
21	AU	27	
21	CU	27	
22	AV	76	
22	CV	76	
23	AW	77	
23	CW	77	
24	AX	25	
24	CX	25	
25	AY	691	
25	CY	691	
26	B0	85	
26	D0	85	
27	B1	98	
27	D1	98	% 
28	B2	72	

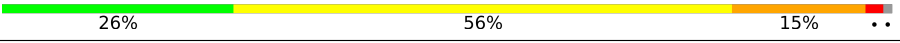
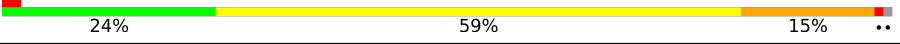
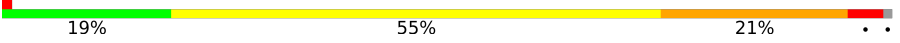
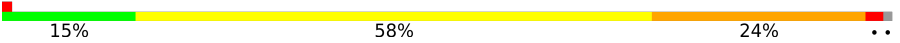
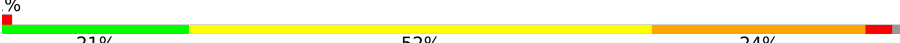
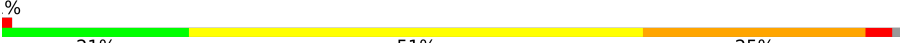
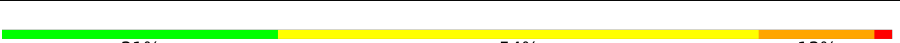
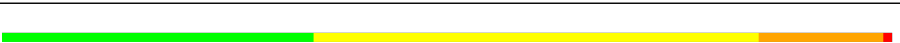
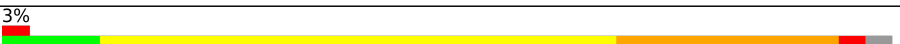
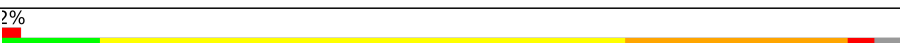
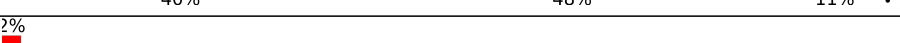
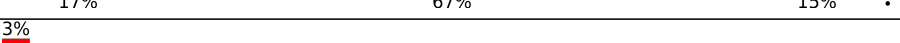
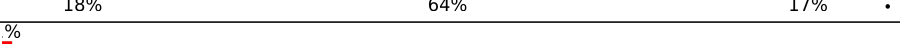
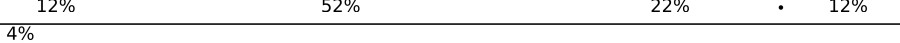
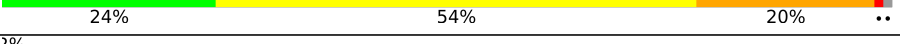
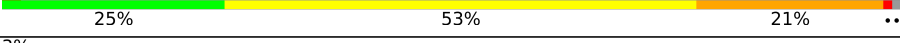
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Mol	Chain	Length	Quality of chain
28	D2	72	
29	B3	60	
29	D3	60	
30	B4	71	
30	D4	71	
31	B5	60	
31	D5	60	
32	B6	54	
32	D6	54	
33	B7	49	
33	D7	49	
34	B8	65	
34	D8	65	
35	B9	37	
35	D9	37	
36	BA	2915	
36	DA	2915	
37	BB	122	
37	DB	122	
38	BC	229	
38	DC	229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

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Mol	Chain	Length	Quality of chain
41	BF	210	
41	DF	210	
42	BG	182	
42	DG	182	
43	BH	180	
43	DH	180	
44	BJ	173	
44	DJ	173	
45	BN	140	
45	DN	140	
46	BO	122	
46	DO	122	
47	BP	150	
47	DP	150	
48	BQ	141	
48	DQ	141	
49	BR	118	
49	DR	118	
50	BS	112	
50	DS	112	
51	BT	146	
51	DT	146	
52	BU	118	
52	DU	118	
53	BV	101	

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Mol	Chain	Length	Quality of chain
53	DV	101	
54	BW	113	
54	DW	113	
55	BX	96	
55	DX	96	
56	BY	110	
56	DY	110	
57	BZ	206	
57	DZ	206	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	FUA	CY	701	-	-	X	-
60	GDP	AY	702	-	-	X	-
60	GDP	CY	702	-	-	X	-

2 Entry composition

There are 61 unique types of molecules in this entry. The entry contains 307606 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 16S RIBOSOMAL RNA.

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

- Molecule 2 is a protein called 30S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	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
			1010	639	197	174				
9	CI	127	Total	C	N	O		0	0	0
			1010	639	197	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 MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	CV	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			

- Molecule 23 is a RNA chain called RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AW	77	Total	C	N	O	P	0	0	0
			1641	733	297	535	76			
23	CW	77	Total	C	N	O	P	0	0	0
			1641	733	297	535	76			

- Molecule 24 is a RNA chain called RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AX	12	Total	C	N	O	P	0	0	0
			257	116	49	80	12			
24	CX	12	Total	C	N	O	P	0	0	0
			257	116	49	80	12			

- Molecule 25 is a protein called ELONGATION FACTOR G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	AY	667	Total	C	N	O	S	0	0	1
			5215	3316	893	988	18			
25	CY	667	Total	C	N	O	S	0	0	1
			5215	3316	893	988	18			

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L27.

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

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

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L28.

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

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L29.

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

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L30.

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

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B4	58	Total	C	N	O	S	0	0	1
			451	285	78	83	5			
30	D4	58	Total	C	N	O	S	0	0	1
			451	285	78	83	5			

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L32.

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

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			
32	D6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L34.

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

- Molecule 34 is a protein called 50S RIBOSOMAL PROTEIN L35.

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

- Molecule 35 is a protein called 50S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	B9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
35	D9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 36 is a RNA chain called 23S RIBOSOMAL RNA.

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

- Molecule 37 is a RNA chain called 5S RIBOSOMAL RNA.

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

- Molecule 38 is a protein called 50S RIBOSOMAL PROTEIN L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BC	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			
38	DC	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			

- Molecule 39 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			
39	DD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

- Molecule 40 is a protein called 50S RIBOSOMAL PROTEIN L3.

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

- Molecule 41 is a protein called 50S RIBOSOMAL PROTEIN L4.

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

- Molecule 42 is a protein called 50S RIBOSOMAL PROTEIN L5.

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

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

- Molecule 43 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BH	167	Total	C	N	O	S	0	0	1
			1269	803	238	227	1			
43	DH	167	Total	C	N	O	S	0	0	1
			1269	803	238	227	1			

- Molecule 44 is a protein called 50S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BJ	170	Total	C	N	O	S	0	0	0
			851	510	170	171				
44	DJ	170	Total	C	N	O	S	0	0	0
			851	510	170	171				

- Molecule 45 is a protein called 50S RIBOSOMAL PROTEIN L13.

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

- Molecule 46 is a protein called 50S RIBOSOMAL PROTEIN L14.

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

- Molecule 47 is a protein called 50S RIBOSOMAL PROTEIN L15.

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

- Molecule 48 is a protein called 50S RIBOSOMAL PROTEIN L16.

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

- Molecule 49 is a protein called 50S RIBOSOMAL PROTEIN L17.

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

- Molecule 50 is a protein called 50S RIBOSOMAL PROTEIN L18.

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

- Molecule 51 is a protein called 50S RIBOSOMAL PROTEIN L19.

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

- Molecule 52 is a protein called 50S RIBOSOMAL PROTEIN L20.

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

- Molecule 53 is a protein called 50S RIBOSOMAL PROTEIN L21.

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

- Molecule 54 is a protein called 50S RIBOSOMAL PROTEIN L22.

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

- Molecule 55 is a protein called 50S RIBOSOMAL PROTEIN L23.

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

- Molecule 56 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	BY	107	Total	C	N	O	S	0	0	1
			811	520	155	131	5			
56	DY	107	Total	C	N	O	S	0	0	1
			811	520	155	131	5			

- Molecule 57 is a protein called 50S RIBOSOMAL PROTEIN L25.

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

- Molecule 58 is ZINC ION (CCD ID: ZN) (formula: Zn).

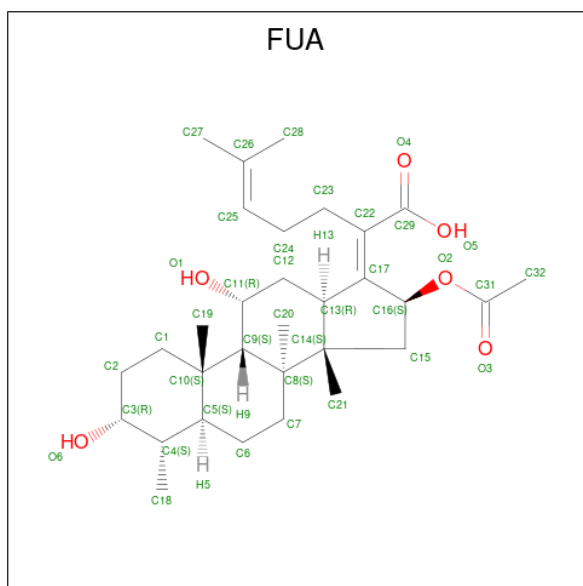
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AD	1	Total	Zn	0	0
			1	1		

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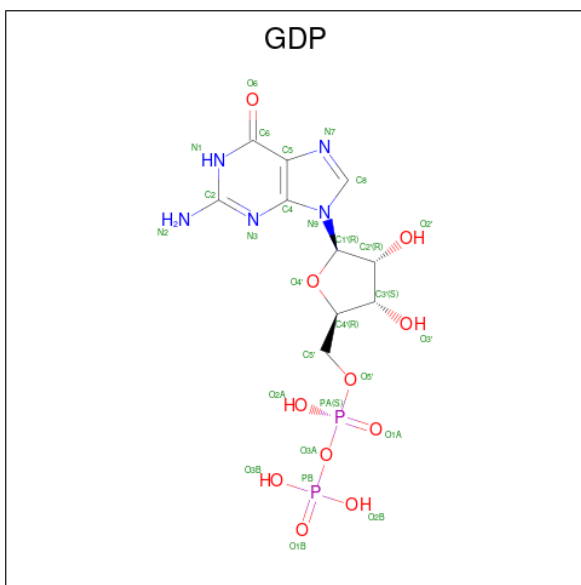
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AN	1	Total	Zn	0	0
			1	1		
58	B4	1	Total	Zn	0	0
			1	1		
58	B9	1	Total	Zn	0	0
			1	1		
58	CD	1	Total	Zn	0	0
			1	1		
58	CN	1	Total	Zn	0	0
			1	1		
58	D4	1	Total	Zn	0	0
			1	1		
58	D9	1	Total	Zn	0	0
			1	1		

- Molecule 59 is FUSIDIC ACID (CCD ID: FUA) (formula: $C_{31}H_{48}O_6$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
59	AY	1	Total	C	O	0	0
			37	31	6		
59	CY	1	Total	C	O	0	0
			37	31	6		

- Molecule 60 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
60	AY	1	Total 28	C 10	N 5	O 11	P 2	0	0
60	CY	1	Total 28	C 10	N 5	O 11	P 2	0	0

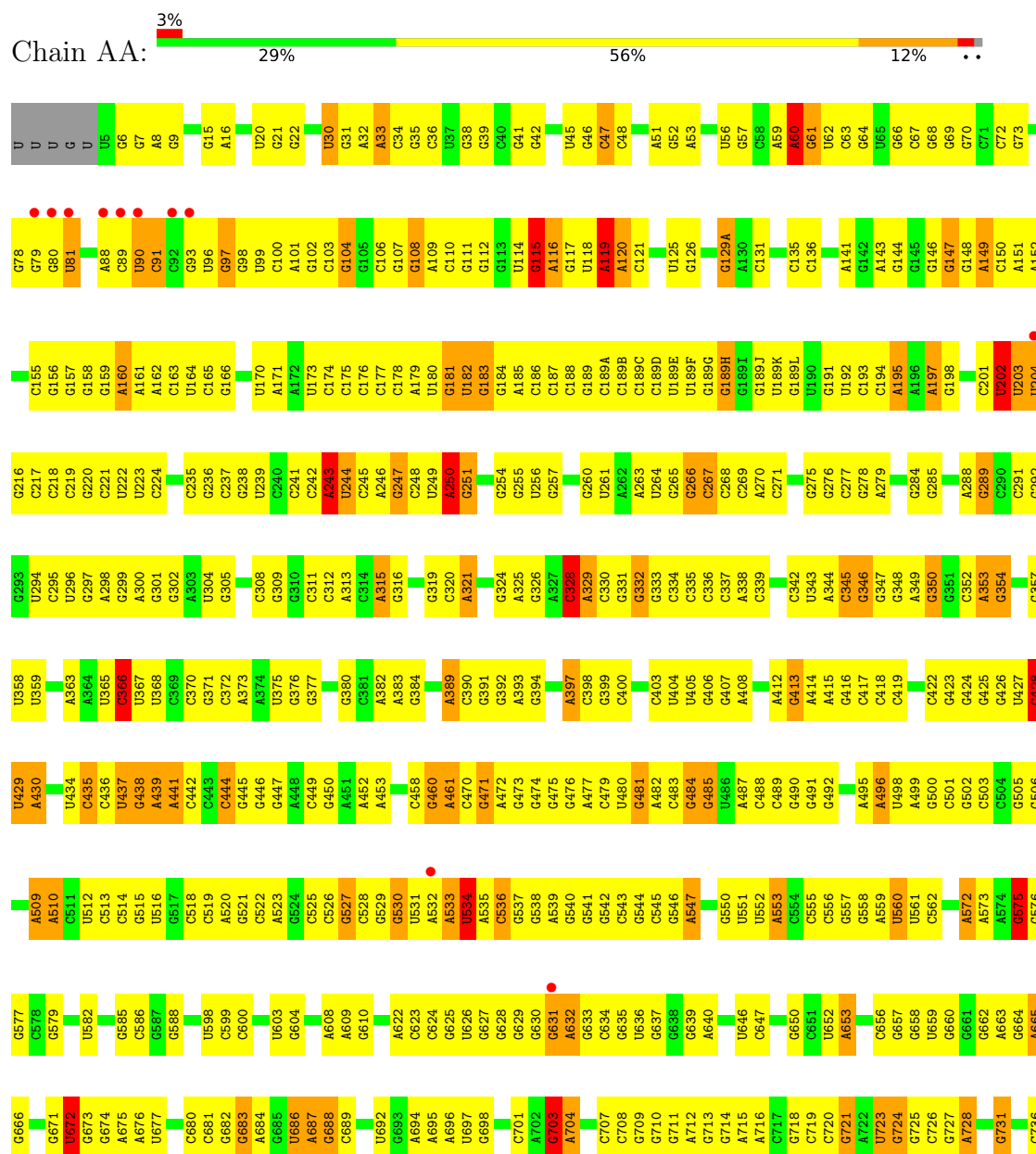
- Molecule 61 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

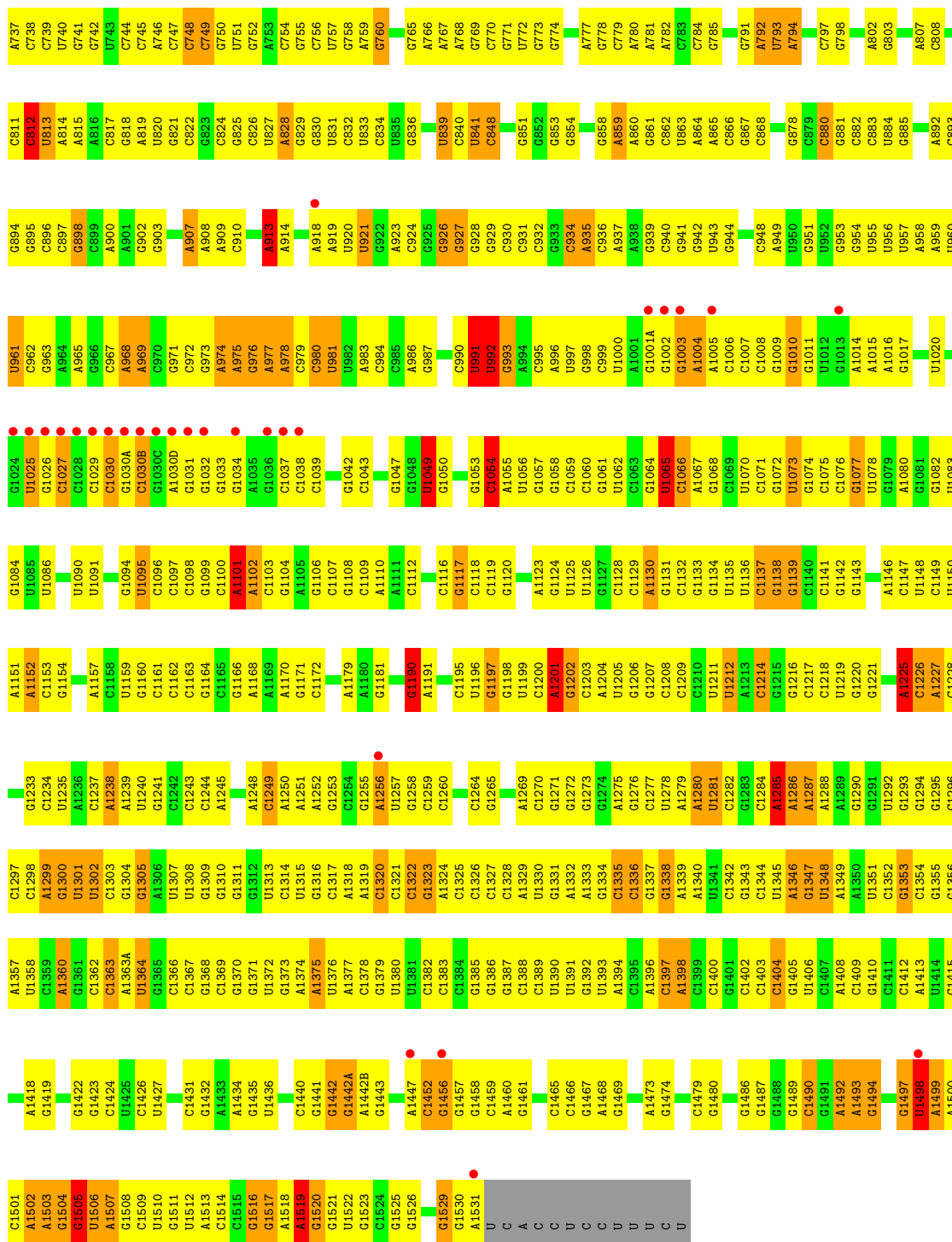
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	AY	1	Total Mg 1 1	0	0
61	CY	1	Total Mg 1 1	0	0

3 Residue-property plots

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

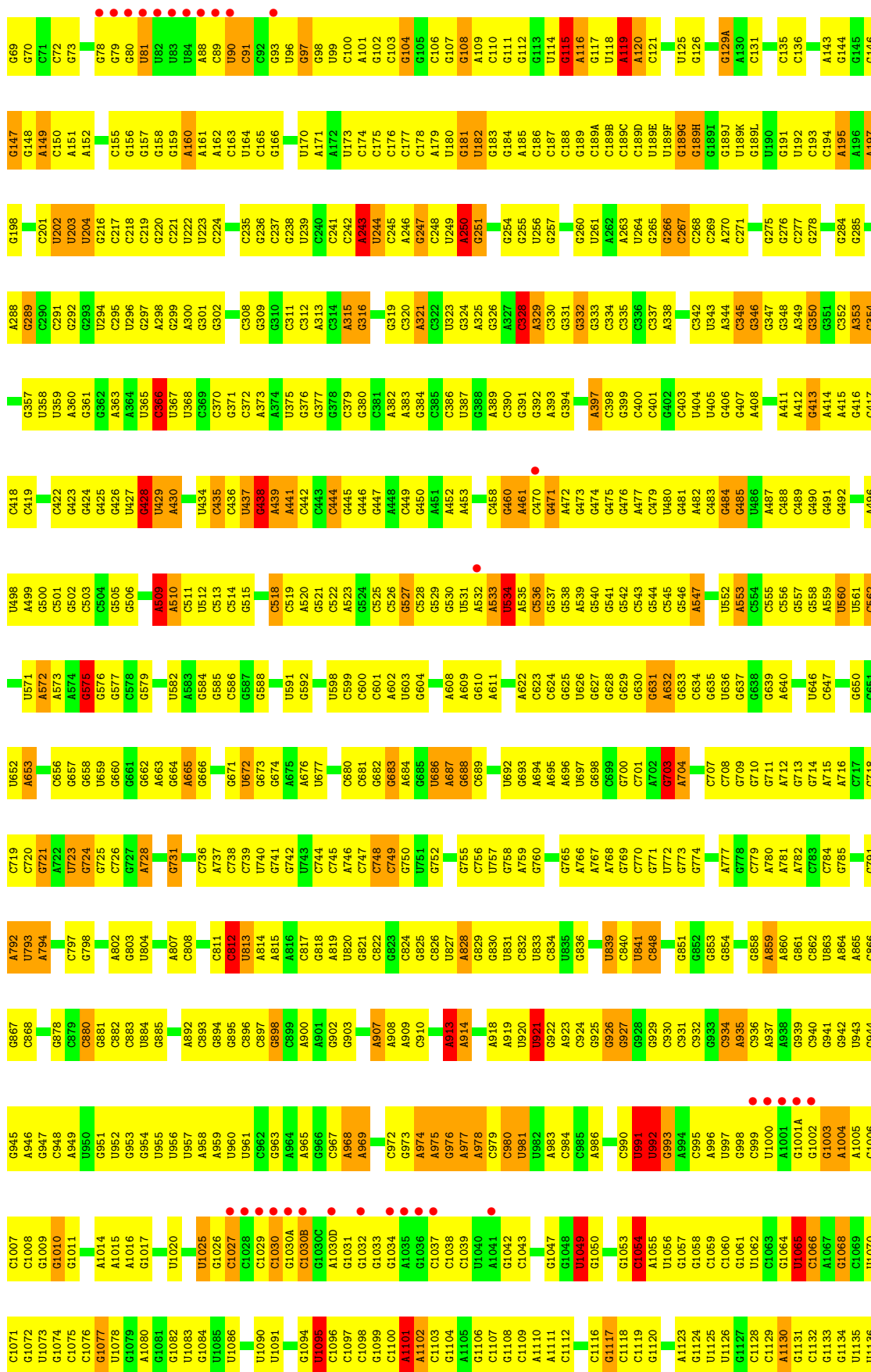
• Molecule 1: 16S RIBOSOMAL RNA

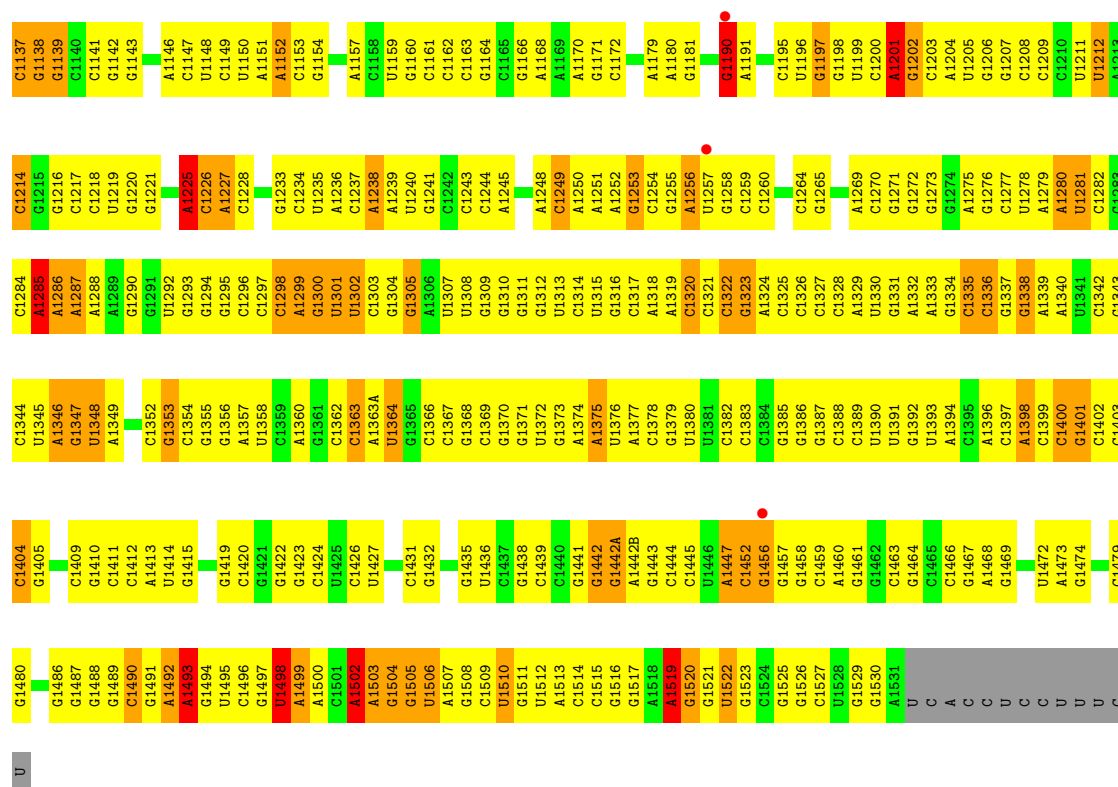




- Molecule 1: 16S RIBOSOMAL RNA

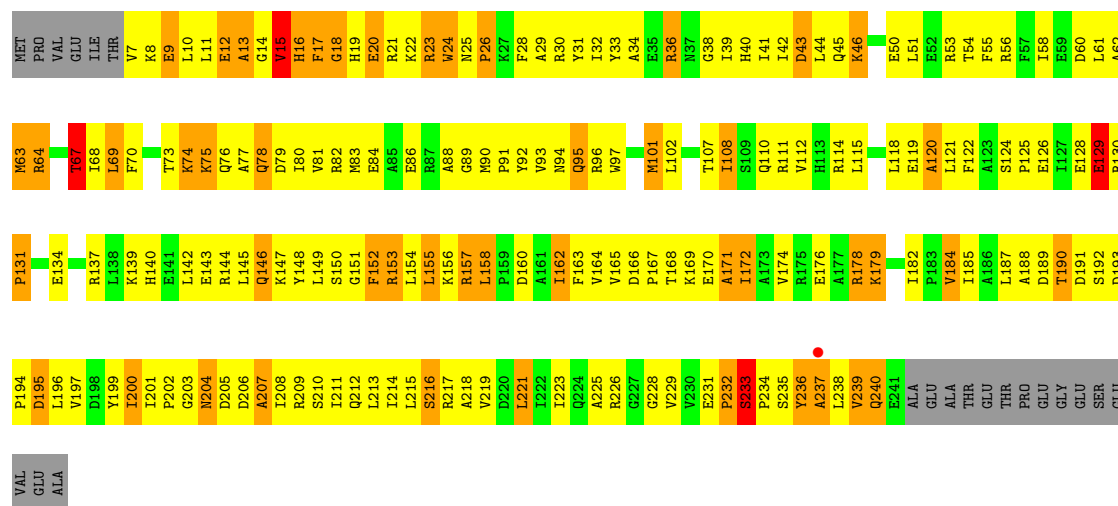






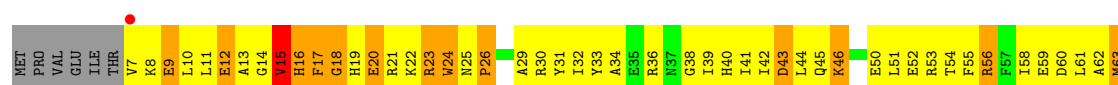
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

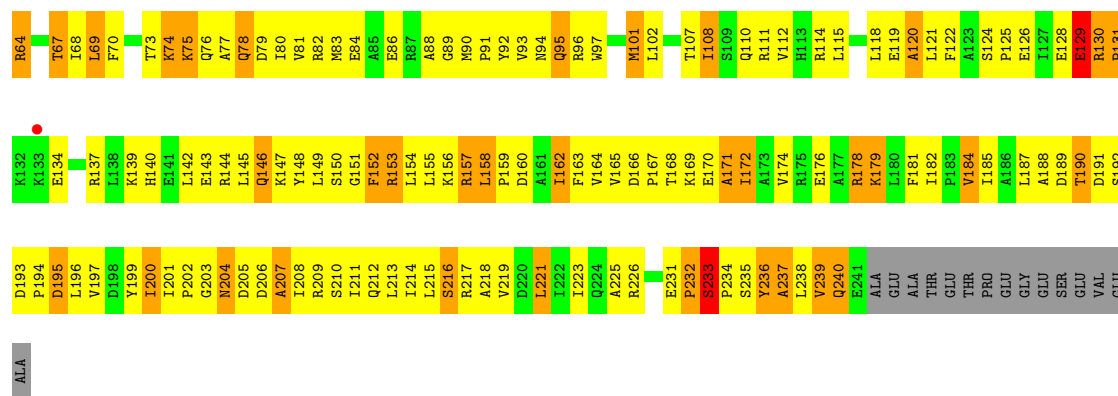
Chain AB: 20% 52% 19% 8%



• Molecule 2: 30S RIBOSOMAL PROTEIN S2

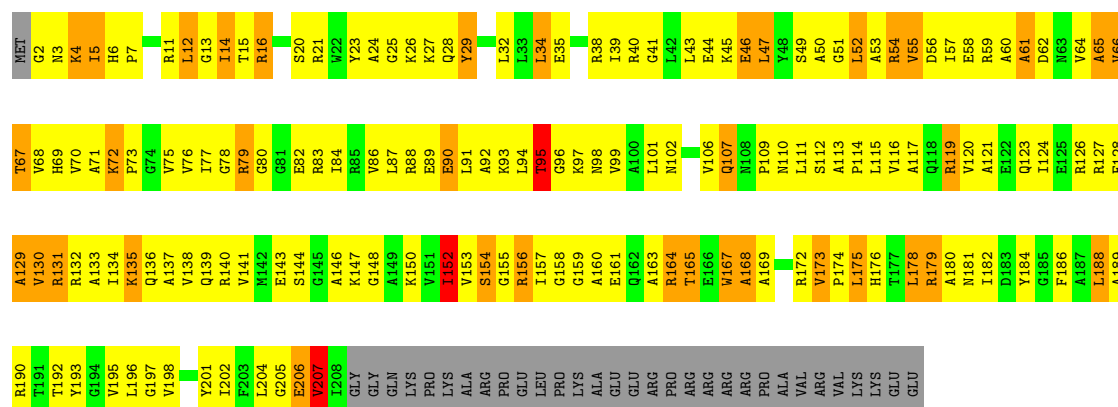
Chain CB: 19% 53% 19% 8%





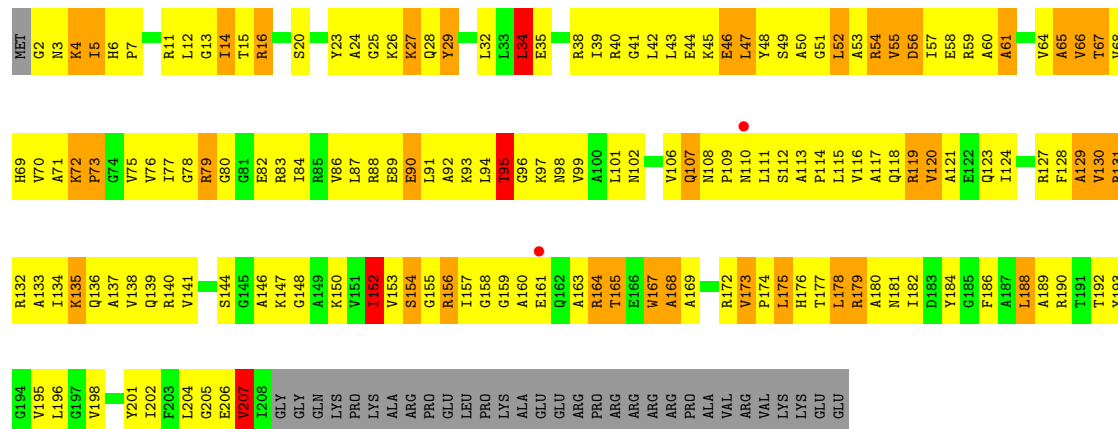
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain AC: 18% 51% 15% 13%



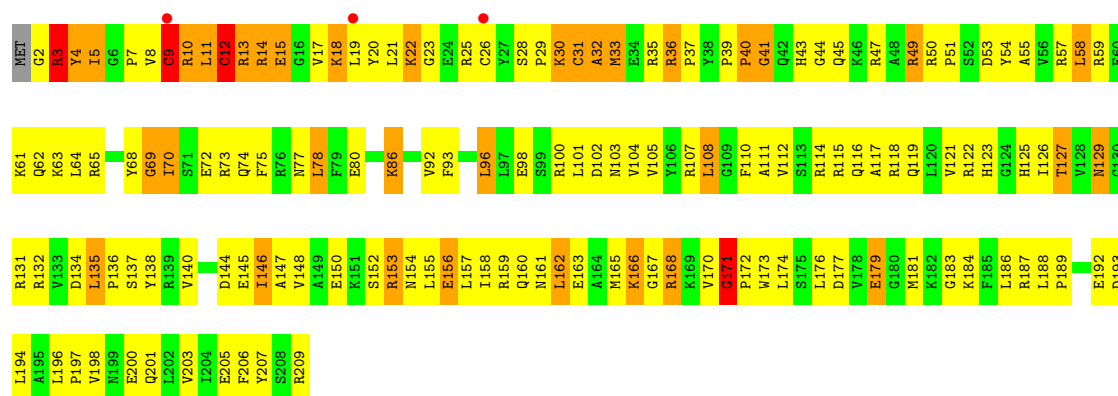
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain CC: 18% 51% 16% 13%

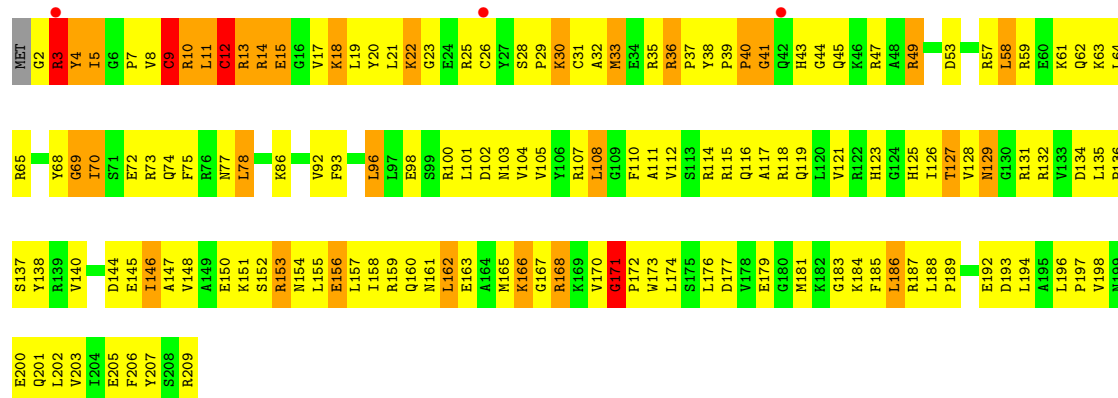


• Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain AD: 28% 53% 16%



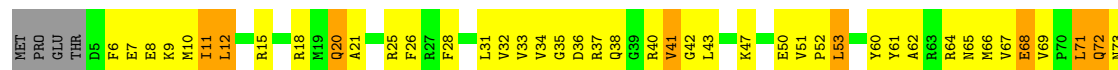
• Molecule 4: 30S RIBOSOMAL PROTEIN S4

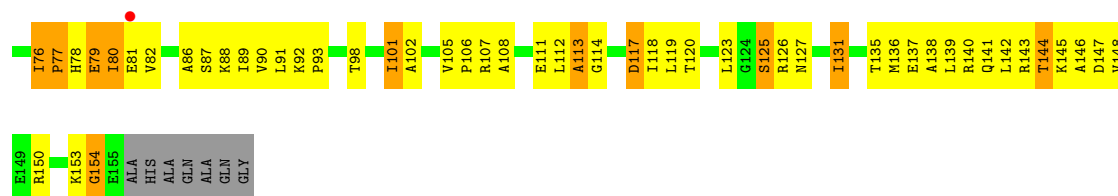


• Molecule 5: 30S RIBOSOMAL PROTEIN S5



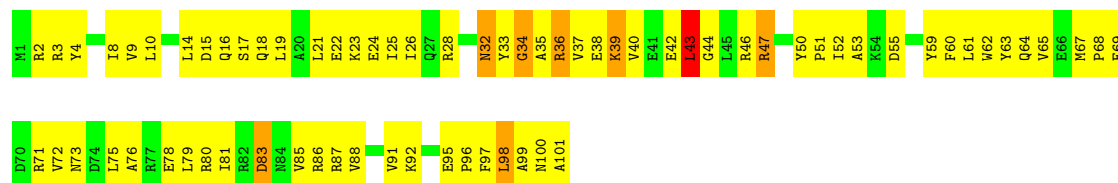
• Molecule 5: 30S RIBOSOMAL PROTEIN S5





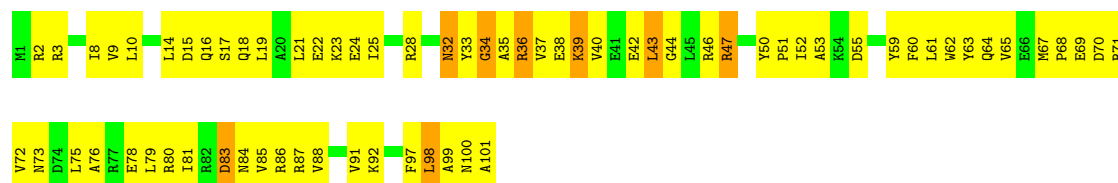
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain AF: 30% 62% 7%



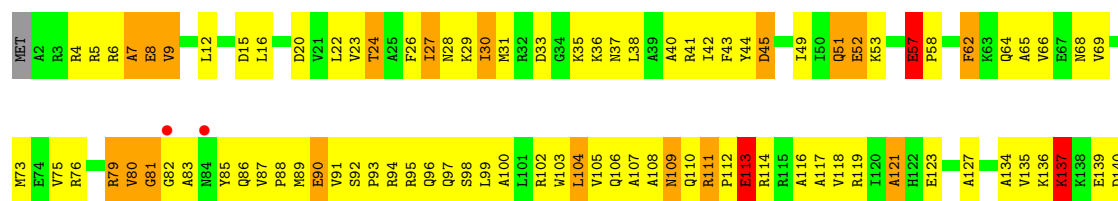
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain CF: 32% 60% 8%



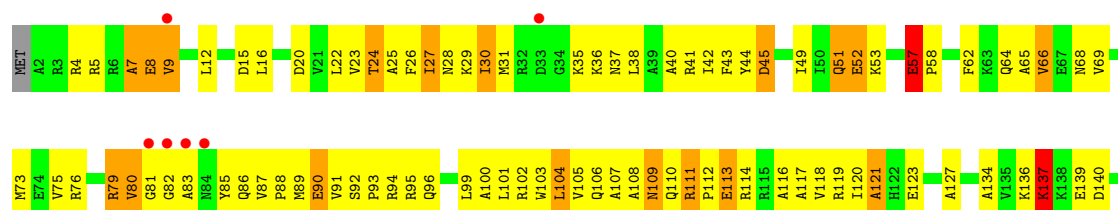
• Molecule 7: 30S RIBOSOMAL PROTEIN S7

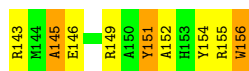
Chain AG: 34% 50% 13%



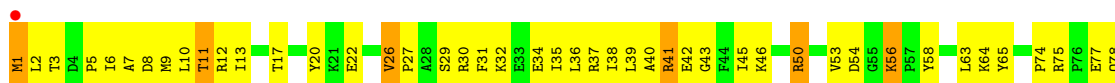
• Molecule 7: 30S RIBOSOMAL PROTEIN S7

Chain CG: 4% 36% 49% 13%

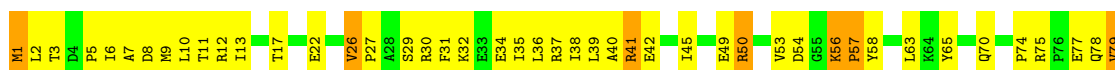




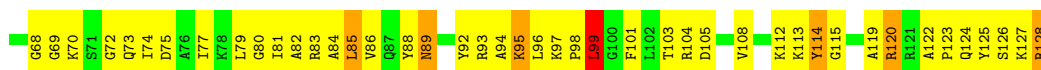
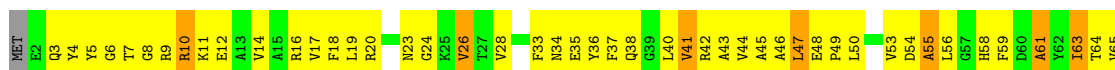
• Molecule 8: 30S RIBOSOMAL PROTEIN S8



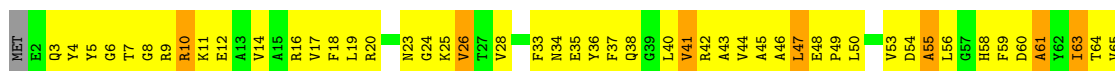
• Molecule 8: 30S RIBOSOMAL PROTEIN S8



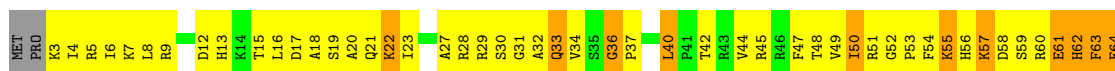
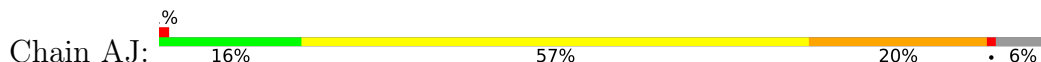
• Molecule 9: 30S RIBOSOMAL PROTEIN S9

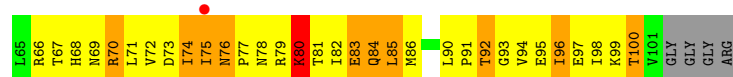


• Molecule 9: 30S RIBOSOMAL PROTEIN S9

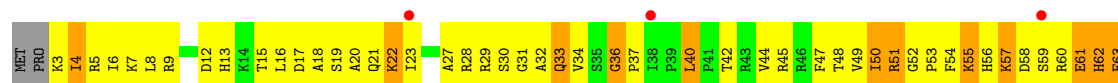
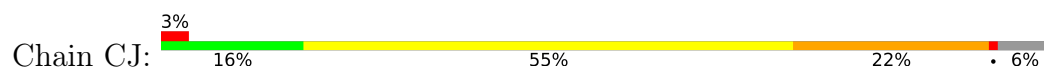


• Molecule 10: 30S RIBOSOMAL PROTEIN S10





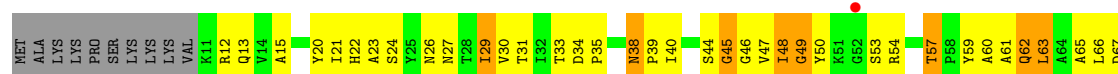
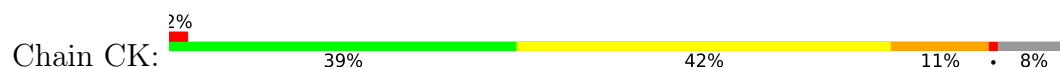
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



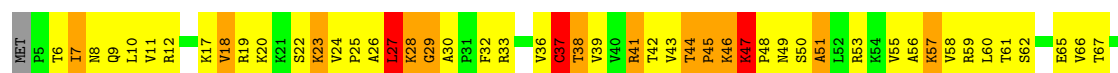
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



• Molecule 11: 30S RIBOSOMAL PROTEIN S11

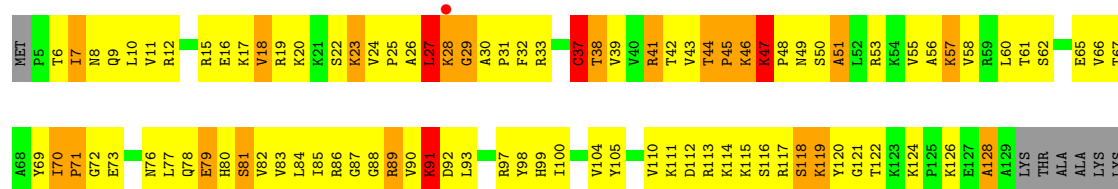


• Molecule 12: 30S RIBOSOMAL PROTEIN S12

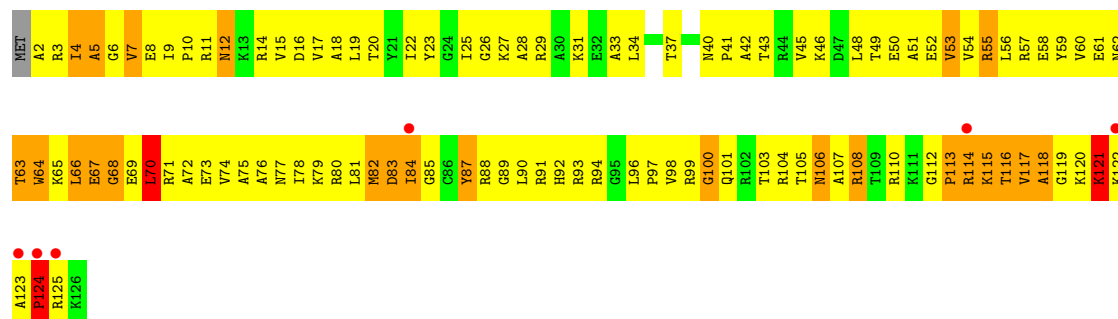


• Molecule 12: 30S RIBOSOMAL PROTEIN S12

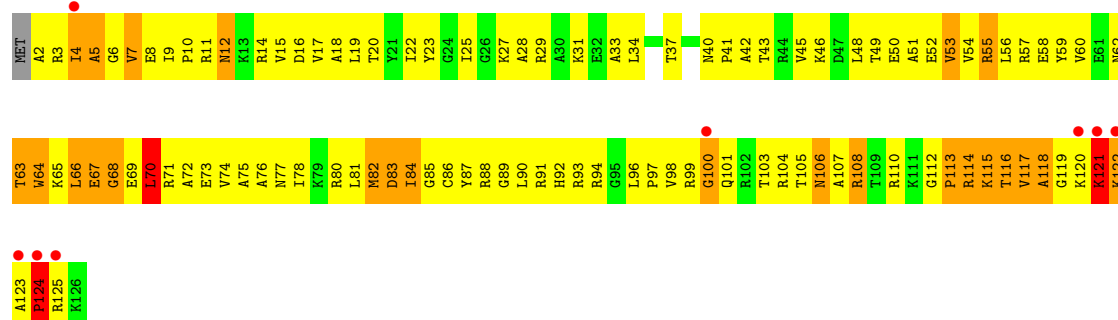




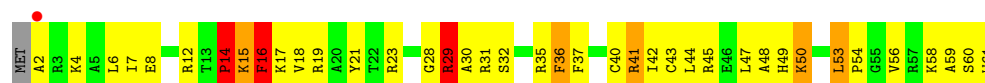
• Molecule 13: 30S RIBOSOMAL PROTEIN S13



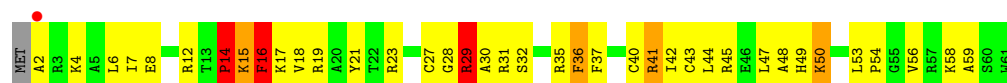
• Molecule 13: 30S RIBOSOMAL PROTEIN S13



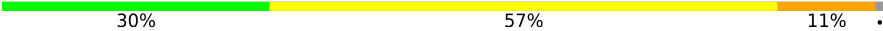
• Molecule 14: 30S RIBOSOMAL PROTEIN S14 TYPE Z

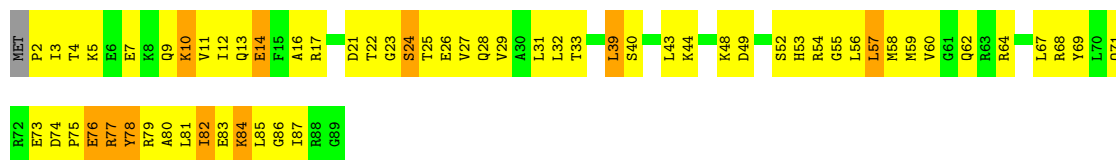


• Molecule 14: 30S RIBOSOMAL PROTEIN S14 TYPE Z



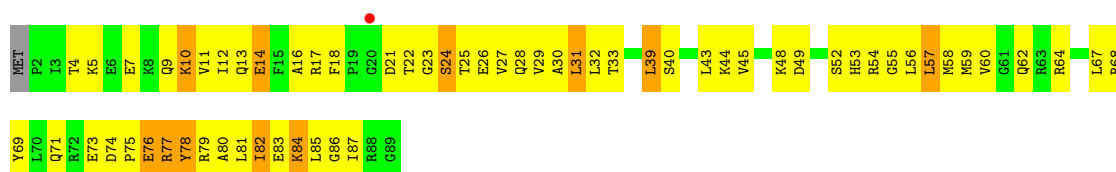
• Molecule 15: 30S RIBOSOMAL PROTEIN S15

Chain AO:  30% 57% 11% .



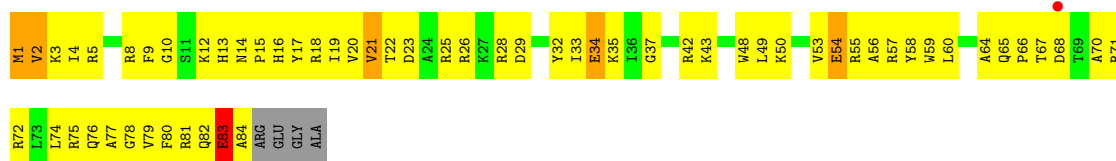
• Molecule 15: 30S RIBOSOMAL PROTEIN S15

Chain CO:  29% 57% 12% .



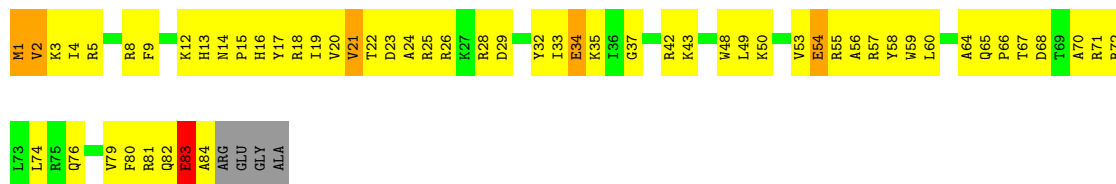
• Molecule 16: 30S RIBOSOMAL PROTEIN S16

Chain AP:  26% 63% 6% • 5%



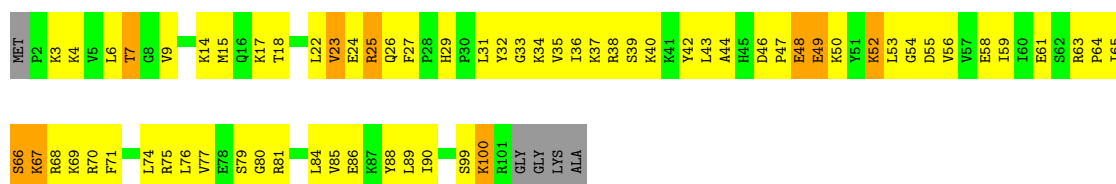
• Molecule 16: 30S RIBOSOMAL PROTEIN S16

Chain CP:  30% 59% 6% • 5%



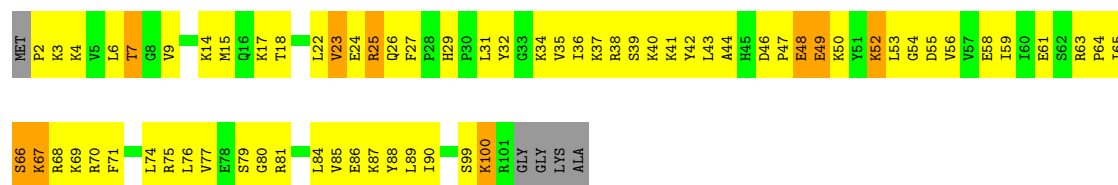
• Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain AQ:  32% 54% 9% 5%

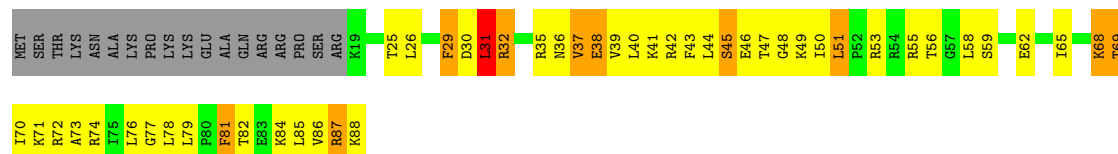


• Molecule 17: 30S RIBOSOMAL PROTEIN S17

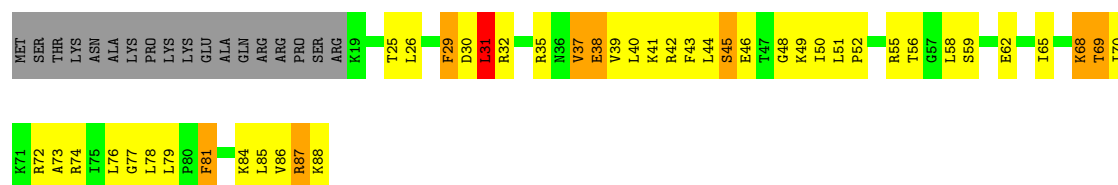
Chain CQ:  30% 56% 9% 5%



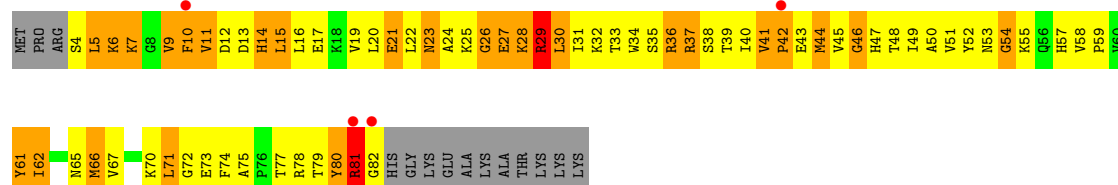
• Molecule 18: 30S RIBOSOMAL PROTEIN S18



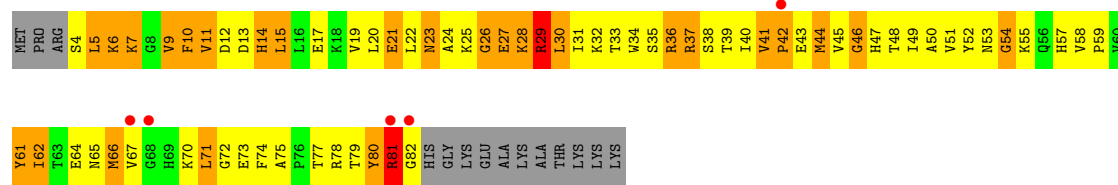
• Molecule 18: 30S RIBOSOMAL PROTEIN S18



• Molecule 19: 30S RIBOSOMAL PROTEIN S19

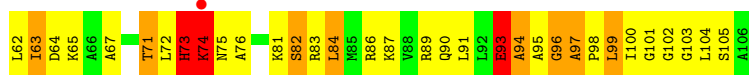


• Molecule 19: 30S RIBOSOMAL PROTEIN S19

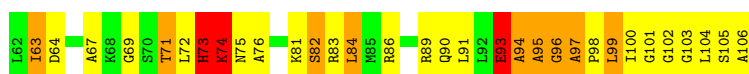


• Molecule 20: 30S RIBOSOMAL PROTEIN S20

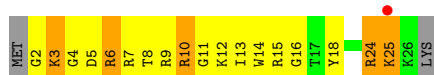




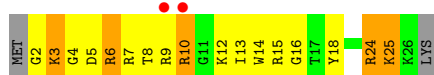
• Molecule 20: 30S RIBOSOMAL PROTEIN S20



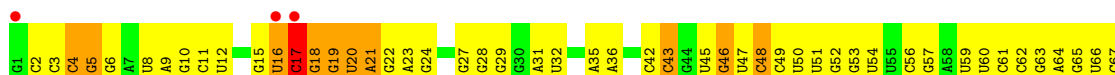
• Molecule 21: 30S RIBOSOMAL PROTEIN THX



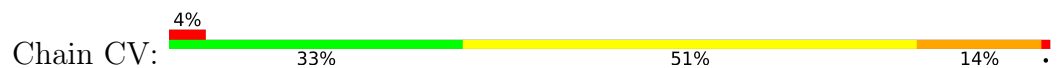
• Molecule 21: 30S RIBOSOMAL PROTEIN THX



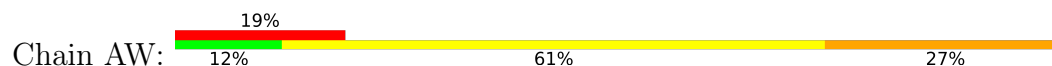
• Molecule 22: MRNA



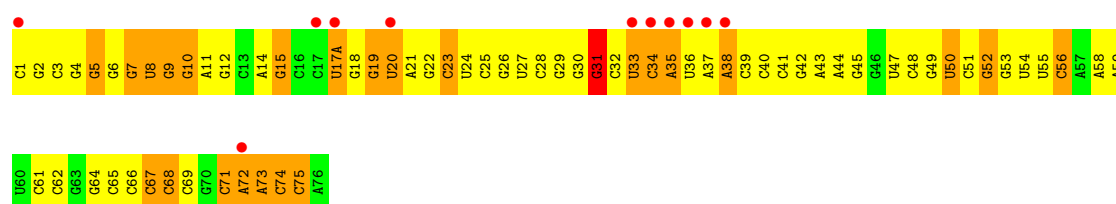
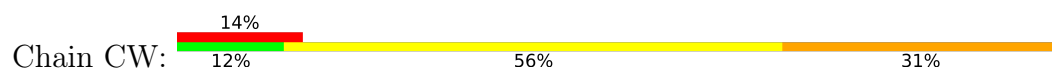
• Molecule 22: MRNA



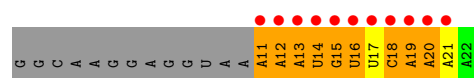
- Molecule 23: RNA



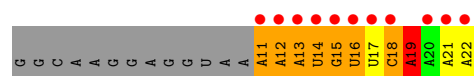
- Molecule 23: RNA



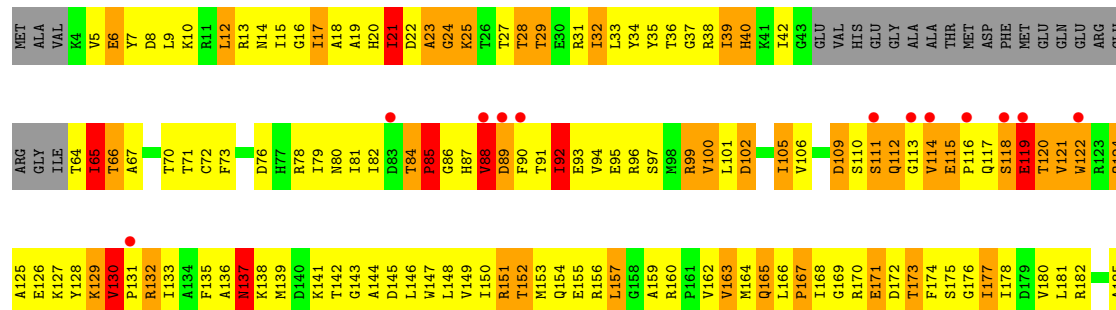
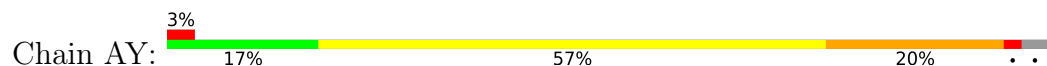
- Molecule 24: RNA

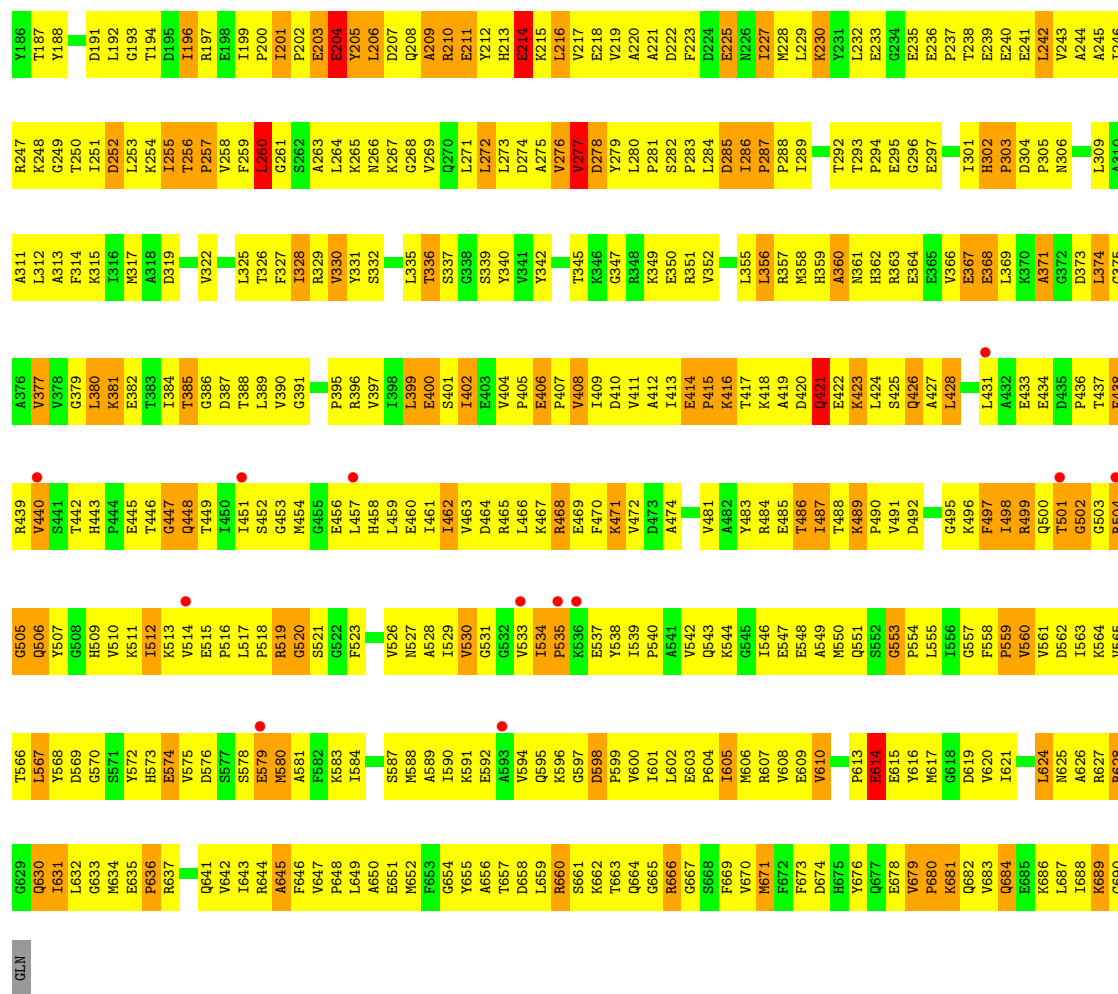


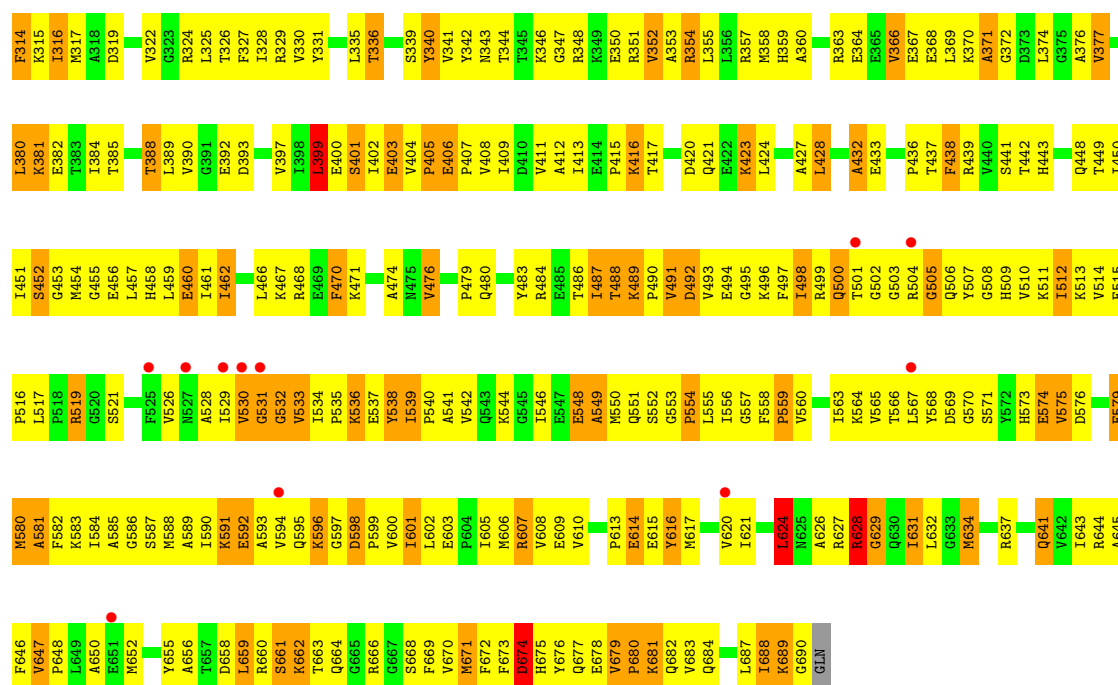
- Molecule 24: RNA



- Molecule 25: ELONGATION FACTOR G

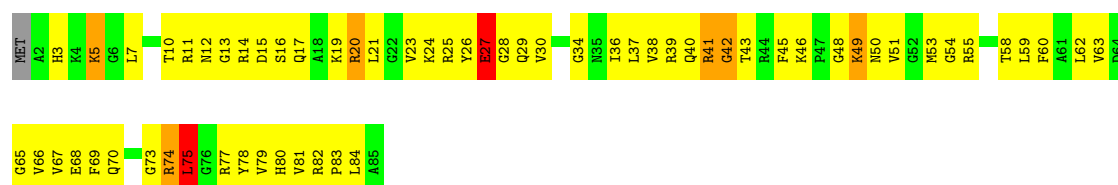






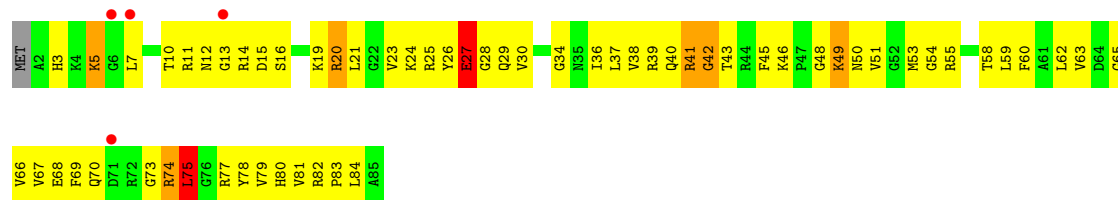
• Molecule 26: 50S RIBOSOMAL PROTEIN L27

Chain B0: 26% 64% 7% ..



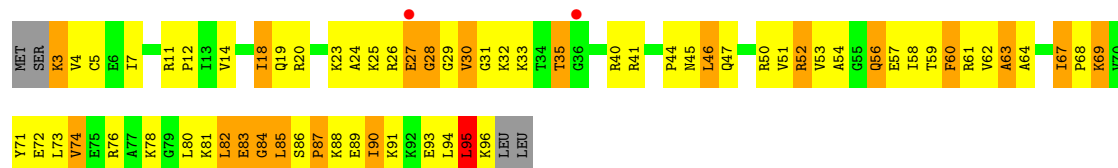
• Molecule 26: 50S RIBOSOMAL PROTEIN L27

Chain D0: 5% 27% 62% 7% ..

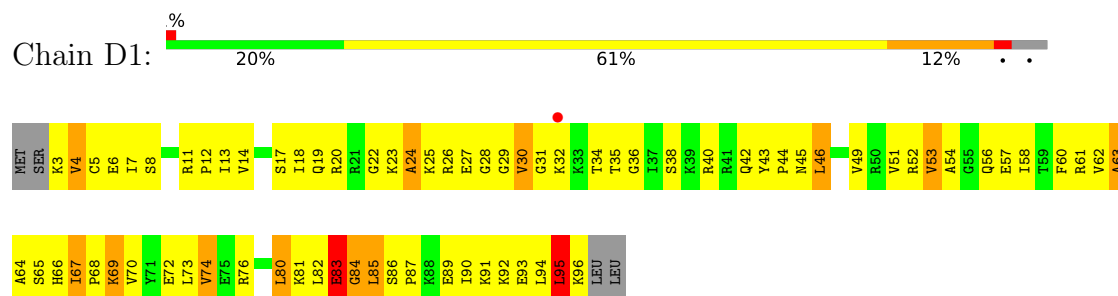


• Molecule 27: 50S RIBOSOMAL PROTEIN L28

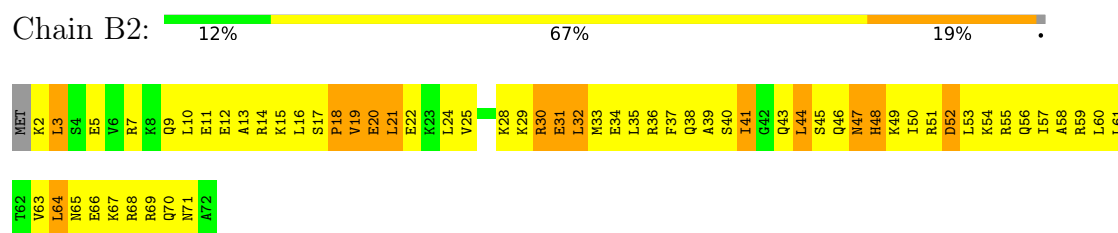
Chain B1: 2% 28% 47% 20% ..



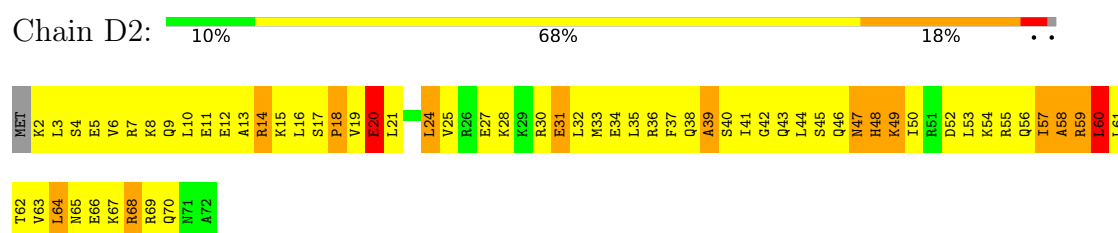
- Molecule 27: 50S RIBOSOMAL PROTEIN L28



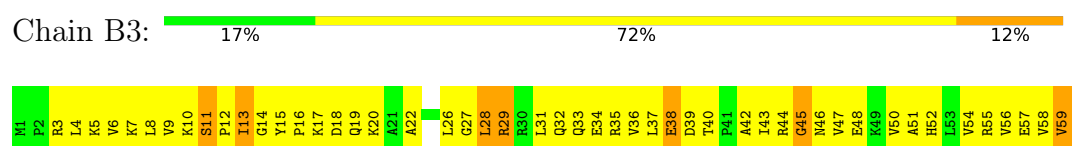
- Molecule 28: 50S RIBOSOMAL PROTEIN L29



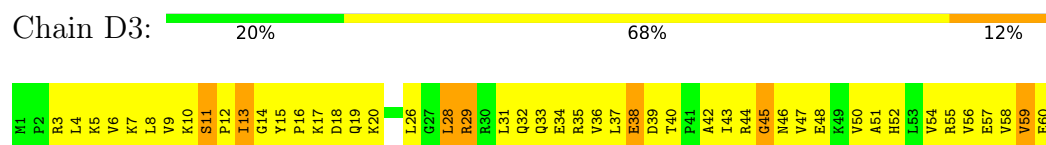
- Molecule 28: 50S RIBOSOMAL PROTEIN L29



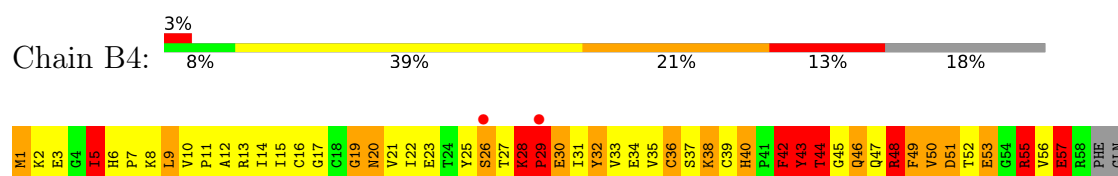
- Molecule 29: 50S RIBOSOMAL PROTEIN L30



- Molecule 29: 50S RIBOSOMAL PROTEIN L30



- Molecule 30: 50S RIBOSOMAL PROTEIN L31



ARG
ARG
TYR
GLY
ASP
SER
TYR
ARG
LYS
GLY
ARG

• Molecule 30: 50S RIBOSOMAL PROTEIN L31



M1 K2 E3 G4 I5 H6 P7 K8 L9 V10 P11 A12 A13 I14 I15 C16 C17 G18 G19 N20 V21 V22 E23 E24 Y25 Y26 S26 T27 K28 P29 E30 I31 Y32 Y33 V34 E35 C36 S37 K38 C39 H40 P41 F42 Y43 T44 G45 Q46 Q47 R48 F49 V50 D51 T52 E53 G54 R55 V56 E57 R58 PHE GLN

ARG
ARG
TYR
GLY
ASP
SER
TYR
ARG
LYS
GLY
ARG

• Molecule 31: 50S RIBOSOMAL PROTEIN L32



MET A2 K3 H4 P5 V6 P7 K10 T11 R16 R19 R20 H23 A24 L25 T26 T27 P28 T29 C33 P34 E35 C36 K37 A38 N39 K40 P41 P42 H43 T44 V45 C46 P47 E48 C49 G50 Y51 Y52 A53 G54 R55 K56 V57 L58 E59 V60

• Molecule 31: 50S RIBOSOMAL PROTEIN L32



MET A2 K3 H4 P5 V6 P7 K10 T11 R16 R19 R20 H23 A24 L25 T26 T27 P28 T29 C33 P34 E35 C36 K37 A38 N39 K40 P41 P42 H43 T44 V45 C46 P47 E48 C49 G50 Y51 Y52 A53 G54 R55 K56 V57 L58 E59 V60

• Molecule 32: 50S RIBOSOMAL PROTEIN L33



MET ALA SER GLU V5 R6 R7 K8 L9 L10 L11 E12 C13 T14 E15 C16 C17 R18 R19 N20 Y21 A22 T23 E24 K25 N26 R27 R28 N29 T30 P31 N32 K33 L34 E35 L36 R37 K38 Y39 C40 P41 W42 C43 R44 K45 H46 T47 V48 H49 R50 E51 V52 K53 I54

• Molecule 32: 50S RIBOSOMAL PROTEIN L33



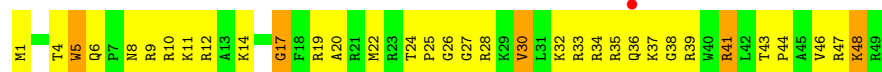
MET ALA SER GLU V5 R6 R7 K8 L9 L10 L11 E12 C13 T14 E15 C16 C17 R18 R19 N20 Y21 A22 T23 E24 K25 N26 R27 R28 N29 T30 P31 N32 K33 L34 E35 L36 R37 K38 Y39 C40 P41 W42 C43 R44 K45 H46 T47 V48 H49 R50 E51 V52 K53 I54

• Molecule 33: 50S RIBOSOMAL PROTEIN L34

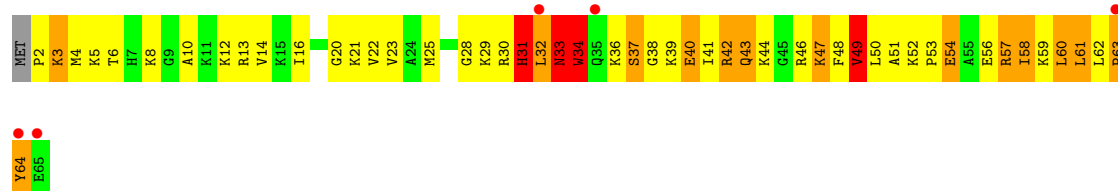


M1 T4 W5 Q6 P7 N8 R9 R10 K11 K12 A13 K14 G17 F18 R19 A20 R21 R22 R23 T24 G26 G27 R28 R29 V30 L31 K32 R33 R34 R35 Q36 K37 G38 R39 V40 R41 L42 T43 P44 A45 V46 R47 R48 R49

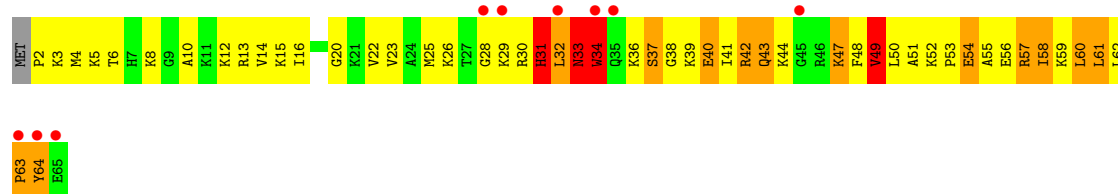
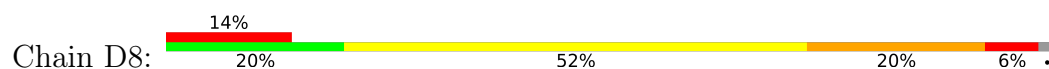
• Molecule 33: 50S RIBOSOMAL PROTEIN L34



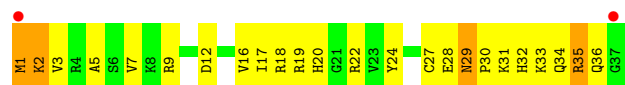
• Molecule 34: 50S RIBOSOMAL PROTEIN L35



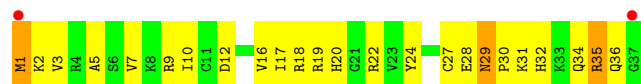
• Molecule 34: 50S RIBOSOMAL PROTEIN L35



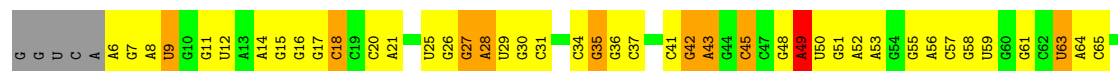
• Molecule 35: 50S RIBOSOMAL PROTEIN L36



• Molecule 35: 50S RIBOSOMAL PROTEIN L36



• Molecule 36: 23S RIBOSOMAL RNA

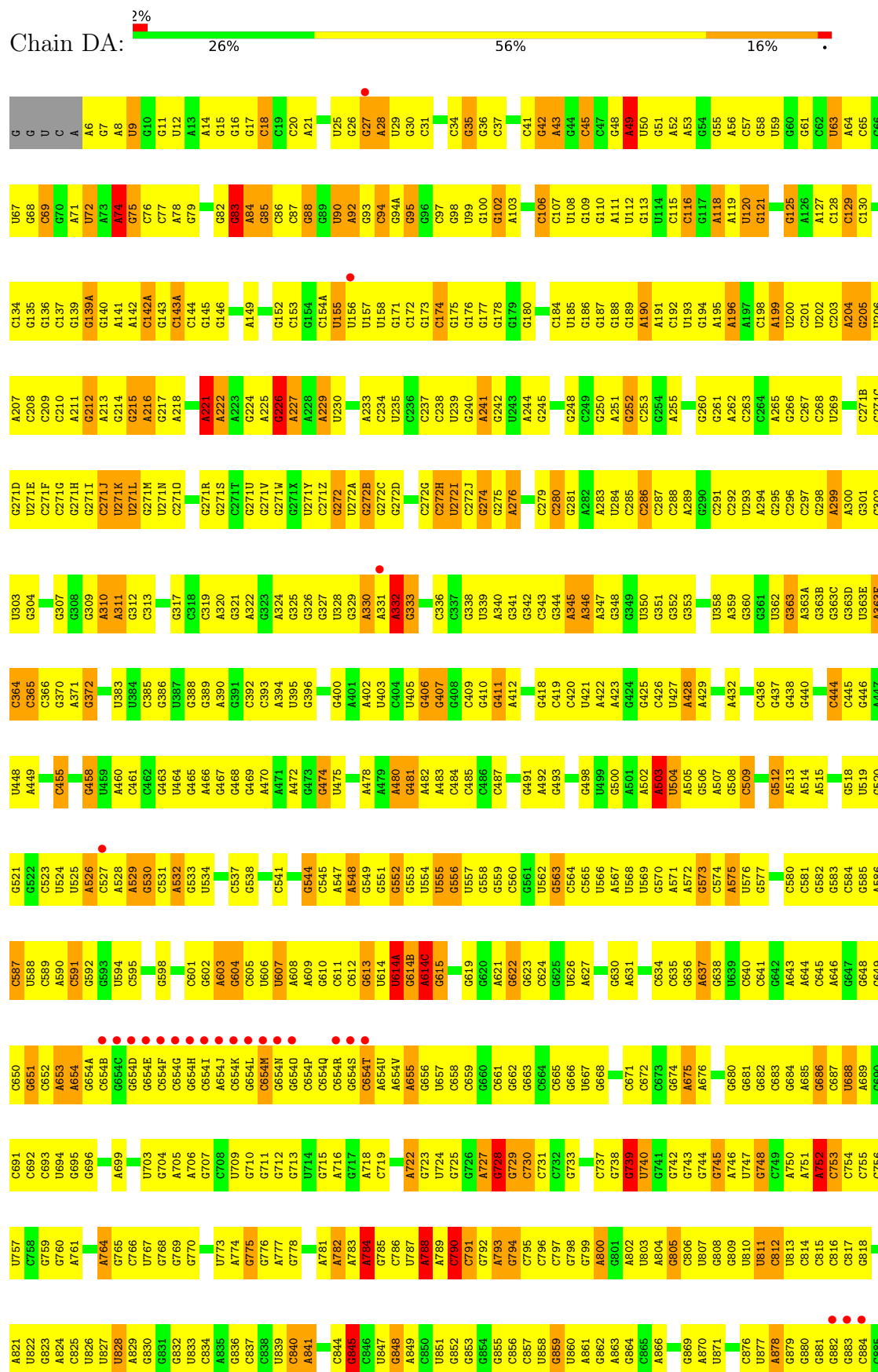


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C134	C135	C136	C137	C138	C139	C140	C141	C142	C143	C144	C145	C146	C147	C148	C149	C150	C151	C152	C153	C154	C155	C156	C157	C158	C159	C160	C161	C162	C163	C164	C165	C166	C167	C168	C169	C170	C171	C172	C173	C174	C175	C176	C177	C178	C179	C180	C181	C182	C183	C184	C185	C186	C187	C188	C189	C190	C191	C192	C193	C194	C195	C196	C197	C198	C199	C200	C201	C202	C203	C204	C205	C206																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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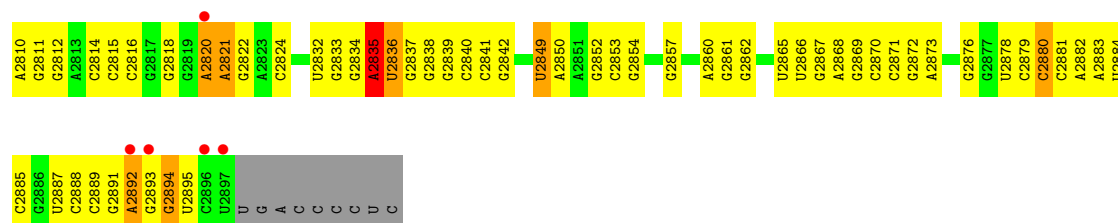
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G1695	G1619	C1545	G1479	G1410	U1341	A1276	G1216	C1153	C1092	A1027	C964	C894
G1696	G1623	C1546	G1480	C1411	U1342	G1277	G1217	C1154	G1093	A1028	C965	U895
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C1771	C1675	G1600	A1529A	A1460	U1391	G1325	G1260	U1199	G1138	G1074	G1011	G947
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G2751	U2689	G2551	G2421	G2354	A2287	A2208	U2079	A1937	U1851
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A2767		U2500		C2374	G2304	G2234	U2096	G1954	
G2768		C2501	U2438		G2305	G2235	G2097	U1955	C1882
G2769		G2502	A2439	G2375	A2306	G2236	U2098	A2030	G1883
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		C2507	G2444	G2381	A2311	C2241	G2103	U1963	G1888
		G2508	G2445	G2382	G2312	A2241	G2104	G1964	A1889
		G2509	G2446	G2383	U2313	G2242	G2105		
		C2510	G2447	G2384	G2314	U2243	G2106		
		U2511	G2448	G2385	C2315	U2244	C2107		G1899
		C2512	A2449	G2386	G2316	U2245		G1967	A1900
		U2513	A2450	U2387	C2317	G2246	G2110	G1968	A1901
		C2514	A2451	A2388	G2318	A2247	G2111	A1969	G1902
		G2515	G2452	G2389	G2319	G2248	G2112	A1970	G1903
		U2516	A2453	U2390	G2320	U2249	U2113	A1971	
		C2517	G2454	G2391	G2321		A2114	A1972	G1906
		A2518	G2455	A2392	G2322	G2256	G2115	G1907	G1907
		U2519	G2456	A2393	A2323	U2257	G2116	C1908	
		C2520	U2457	G2394	G2324	G2258	A2117	C1909	
			G2458	C2395	C2325	G2259	U2118	G1984	G1910
				G2396	G2326	C2260	A2119	G1985	U1911
				U2397	C2327	G2261	G2120	A1986	A1912
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					G2374				
					G2375				
					G2376				
					G2377				
					G2378				
					G2379				
					G2380				
					G2381				
					G2382				
					G2383				
					G2384				
					G2385				
					G2386				
					G2387				
					G2388				
					G2389				
					G2390				
					G2391				
					G2392				
					G2393				
					G2394				
					G2395				
					G2396				
					G2397				
					U2398				
					U2401				
					C2402				
					U2405				
					U2406				
					G2407				
					U2408				
					G2409				
					G2410				
					A2411				
					A2412				
					G2413				
					G2414				
					U2415				
					G2416				
					U2417				
					G2418				
					U2419				
					G2420				
					G2421				
					G2422				
					U2423				
					G2424				
					A2425				
					G2426				
					U2427				
					G2428				
					U2429				
					A2430				
					U2431				
					G2432				
					A2433				
					G2434				
					A2435				
					U2438				
					A2439				
					G2440				
					C2441				
					G2442				
					C2443				
					G2444				
					G2445				
					G2446				
					G2447				
					U2448				
					A2449				
					G2450				
					U2451				
					G2452				
					A2453				
					G2454				
					G2455				
					G2456				
					U2457				
					G2458				
					C2461				
					U2462				
					G2463				
					C2464				
					G2465				
					U2466				
					G2467				
					G2468				
					U2469				
					G2470				
					C2471				
					G2472				
					U2473				
					A2474				
					G2475				
					A2476				
					G2477				
					U2478				
					G2479				
					U2480				
					G2481				
					A2482				
					G2483				
					U2484				
					G2485				
					C2486				
					A2487				
					G2488				
					U2489				
					C2490				
					G2491				
					U2492				
					A2493				
					G2494				
					G2495				
					A2496				
					G2497				
					C2498				
					G2499				
					U2500				
					C2501				
					G2502				
					A2503				



• Molecule 37: 5S RIBOSOMAL RNA



• Molecule 37: 5S RIBOSOMAL RNA

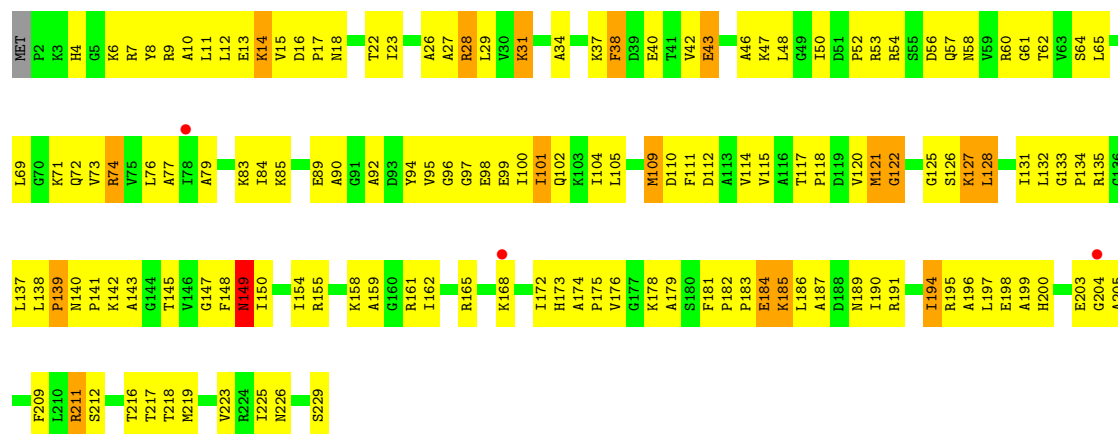


• Molecule 38: 50S RIBOSOMAL PROTEIN L1



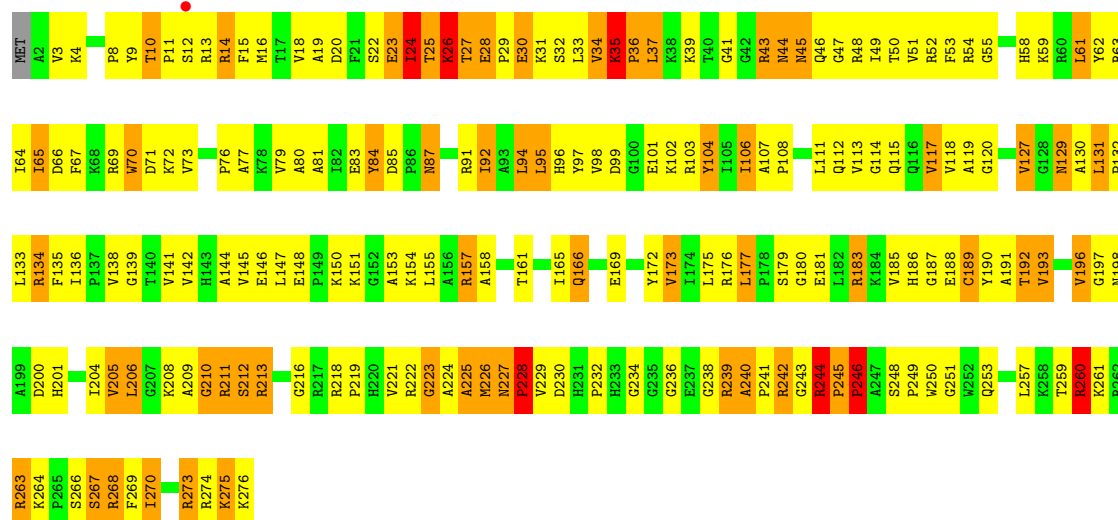
• Molecule 38: 50S RIBOSOMAL PROTEIN L1





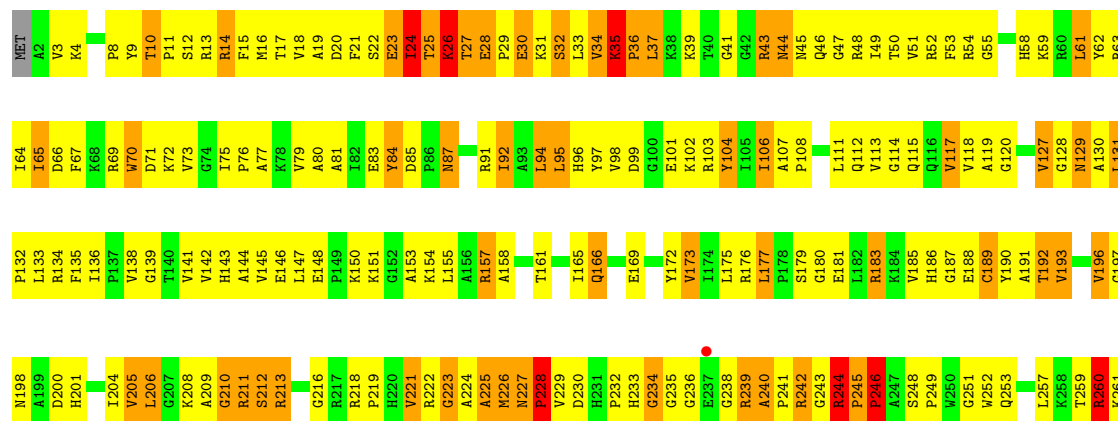
• Molecule 39: 50S RIBOSOMAL PROTEIN L2

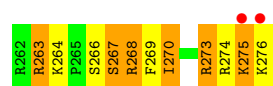
Chain BD: 28% 49% 21%



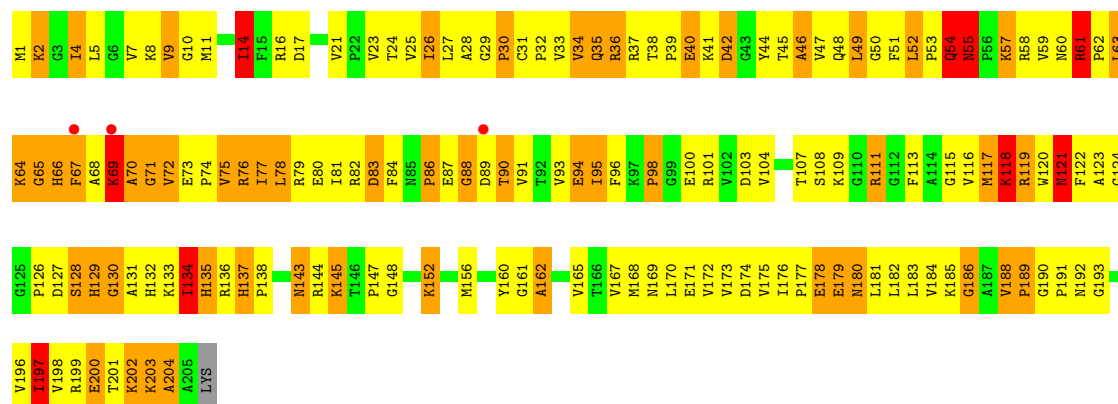
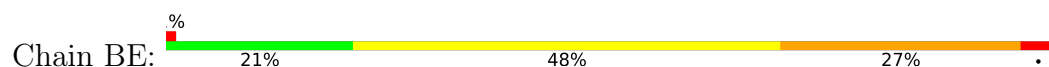
• Molecule 39: 50S RIBOSOMAL PROTEIN L2

Chain DD: 25% 51% 21%

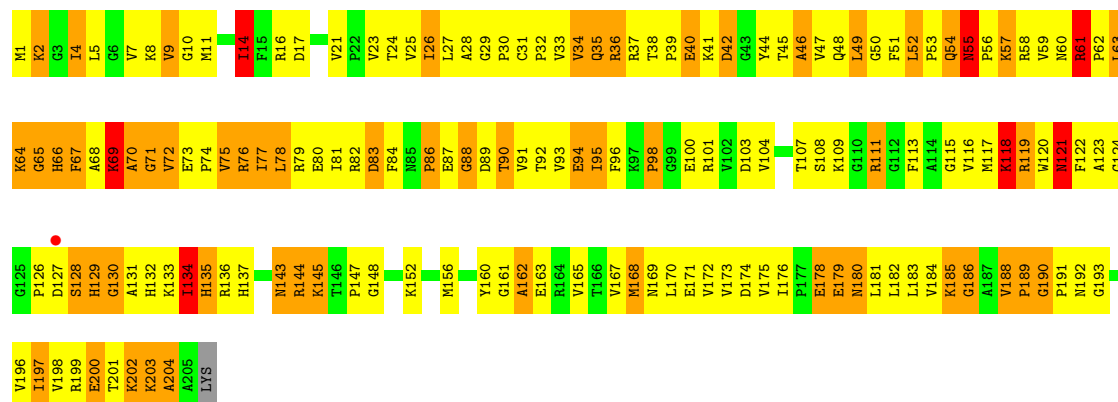
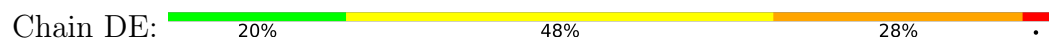




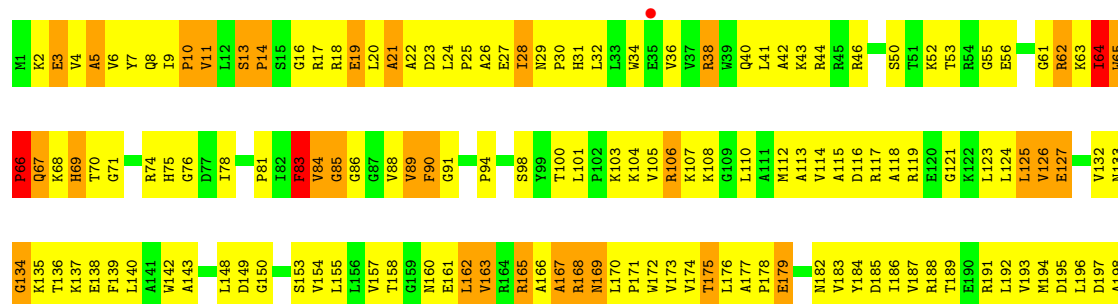
• Molecule 40: 50S RIBOSOMAL PROTEIN L3



• Molecule 40: 50S RIBOSOMAL PROTEIN L3

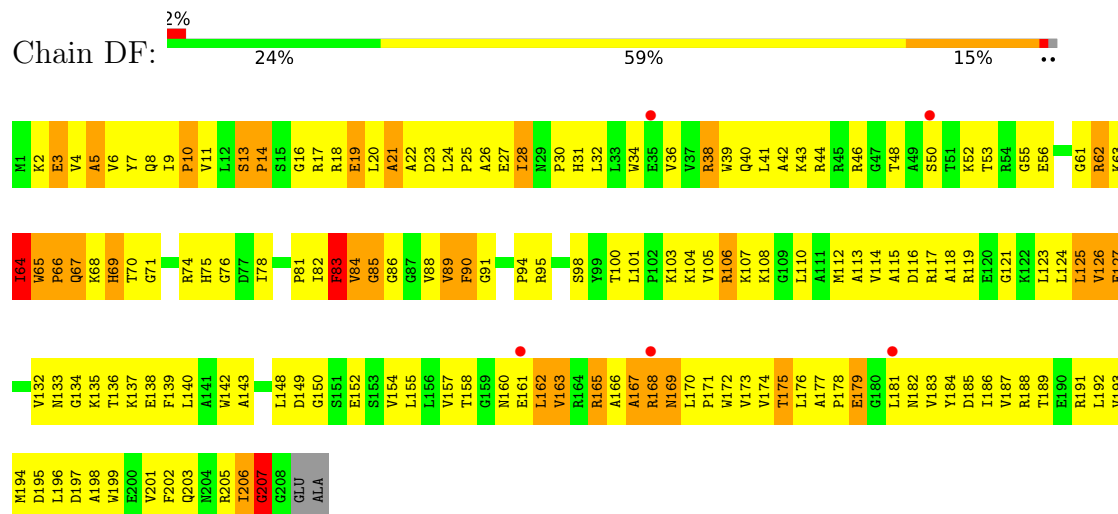


• Molecule 41: 50S RIBOSOMAL PROTEIN L4

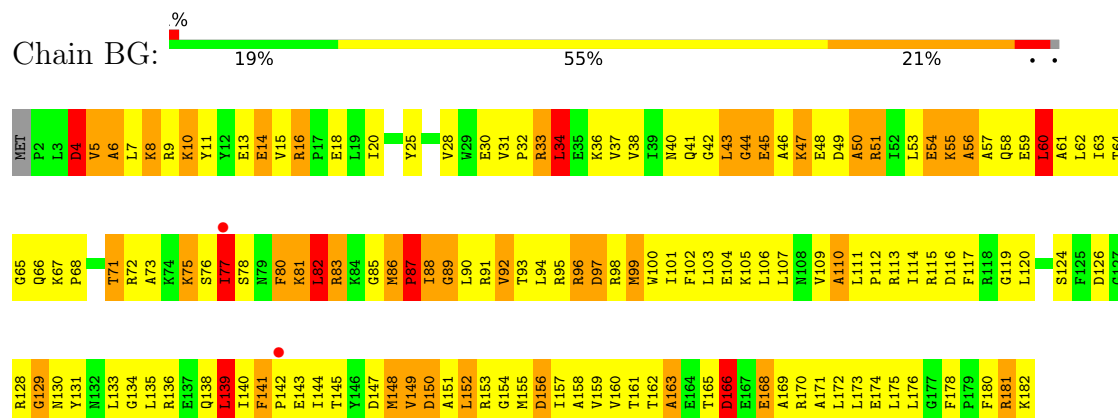




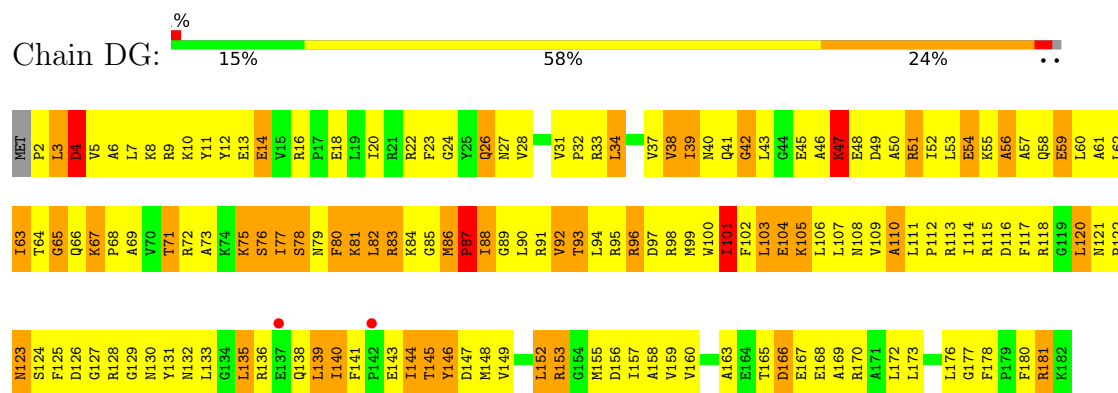
• Molecule 41: 50S RIBOSOMAL PROTEIN L4



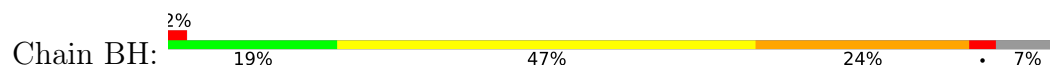
• Molecule 42: 50S RIBOSOMAL PROTEIN L5

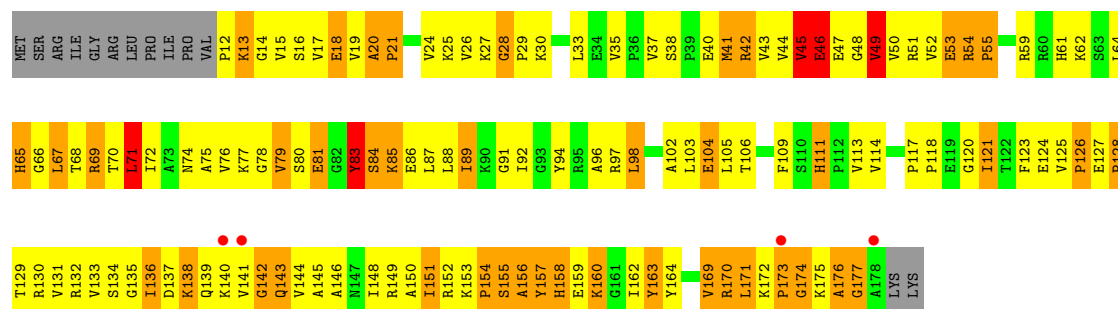


• Molecule 42: 50S RIBOSOMAL PROTEIN L5

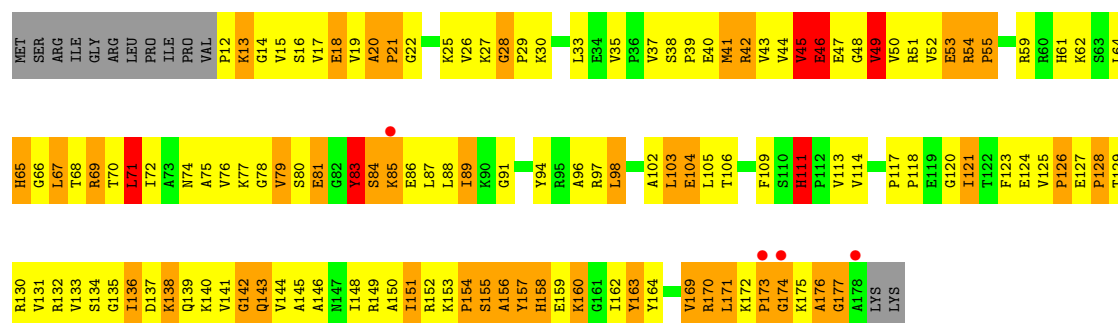
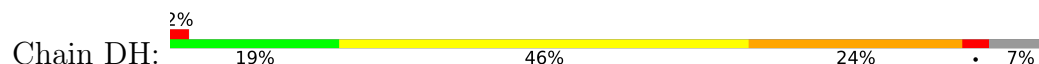


• Molecule 43: 50S RIBOSOMAL PROTEIN L6

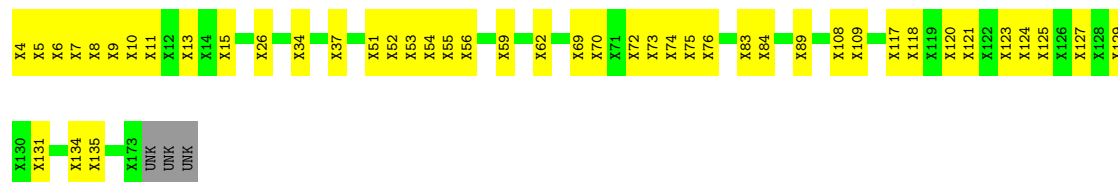




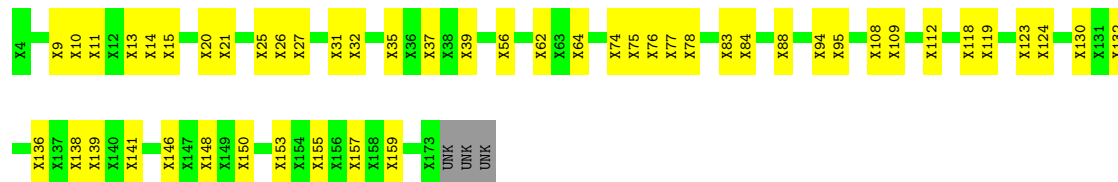
• Molecule 43: 50S RIBOSOMAL PROTEIN L6



• Molecule 44: 50S RIBOSOMAL PROTEIN L10

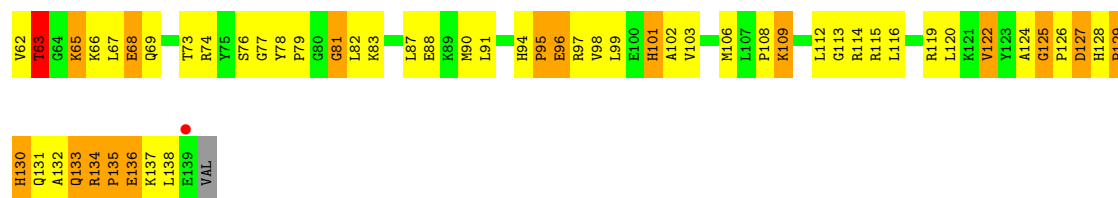


• Molecule 44: 50S RIBOSOMAL PROTEIN L10

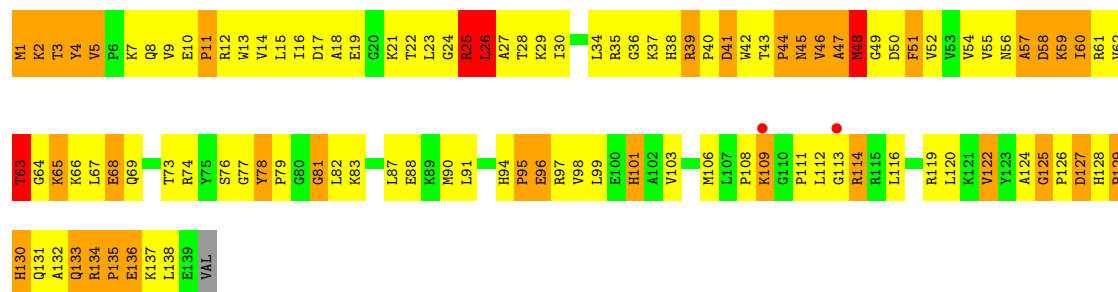


• Molecule 45: 50S RIBOSOMAL PROTEIN L13

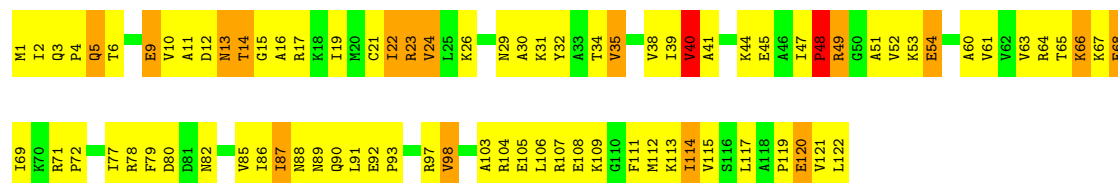
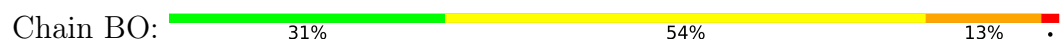




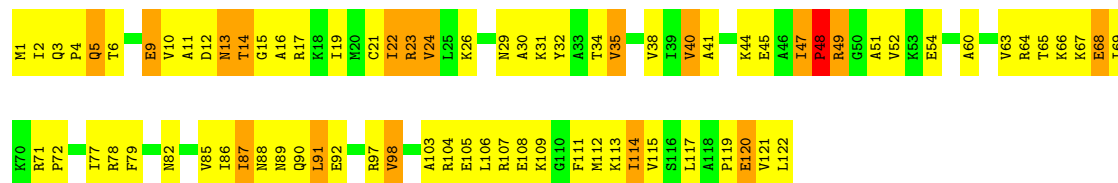
• Molecule 45: 50S RIBOSOMAL PROTEIN L13



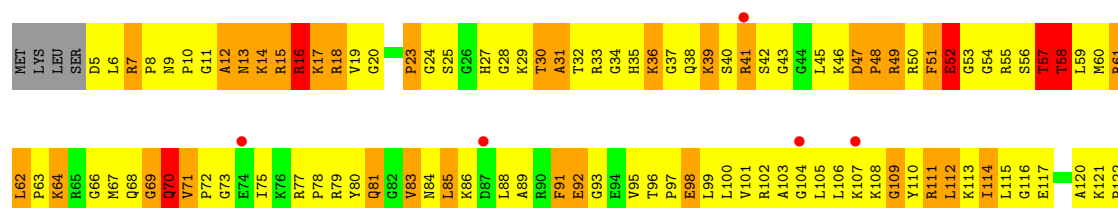
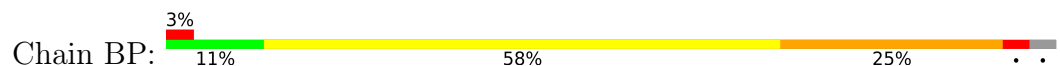
• Molecule 46: 50S RIBOSOMAL PROTEIN L14



• Molecule 46: 50S RIBOSOMAL PROTEIN L14

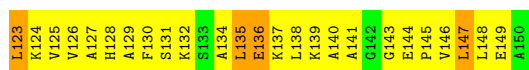
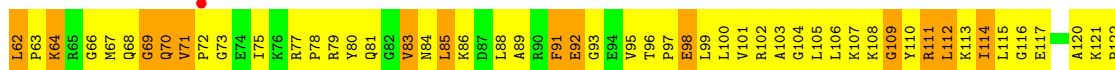
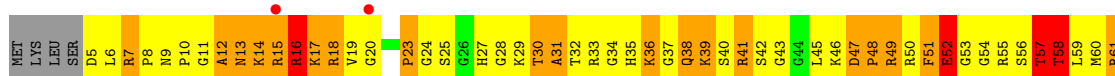
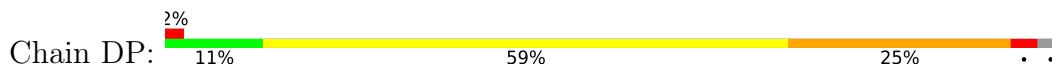


• Molecule 47: 50S RIBOSOMAL PROTEIN L15

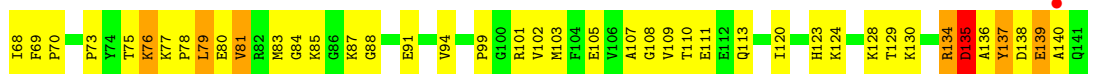




• Molecule 47: 50S RIBOSOMAL PROTEIN L15



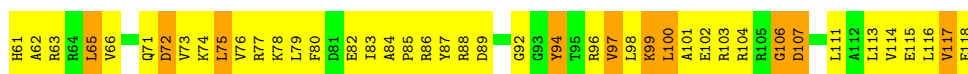
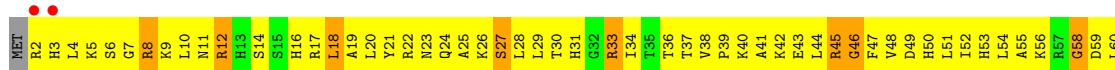
• Molecule 48: 50S RIBOSOMAL PROTEIN L16



• Molecule 48: 50S RIBOSOMAL PROTEIN L16

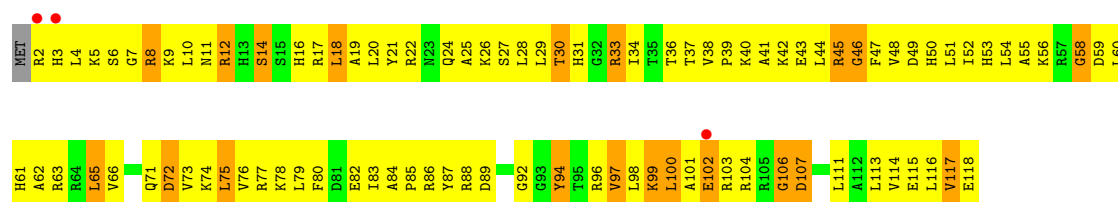


• Molecule 49: 50S RIBOSOMAL PROTEIN L17

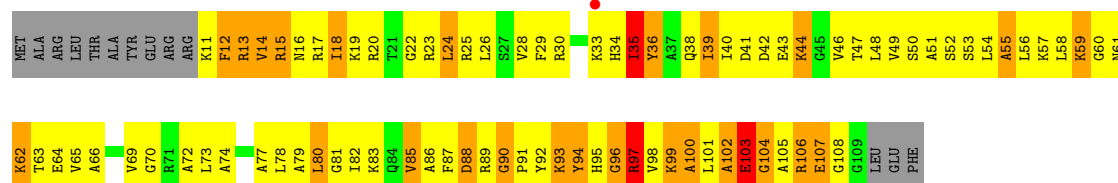
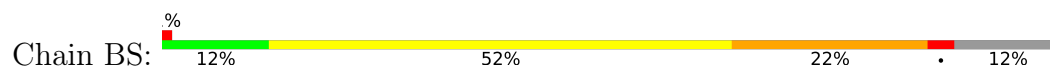


• Molecule 49: 50S RIBOSOMAL PROTEIN L17

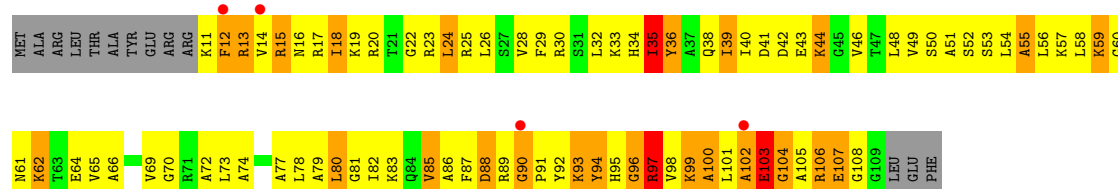
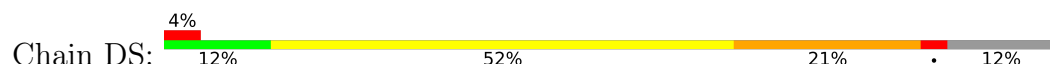




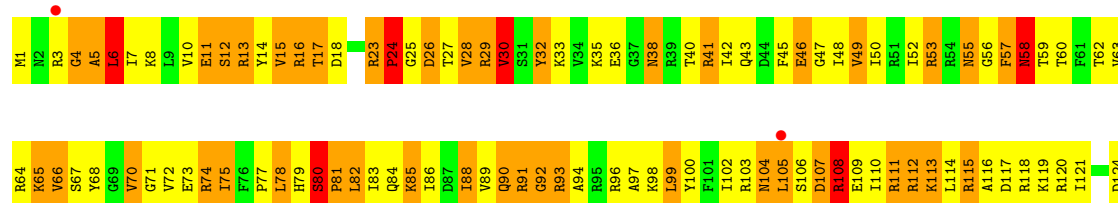
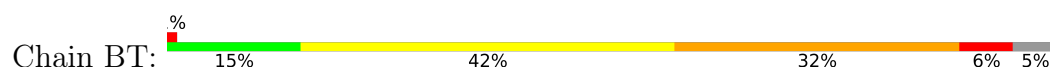
• Molecule 50: 50S RIBOSOMAL PROTEIN L18



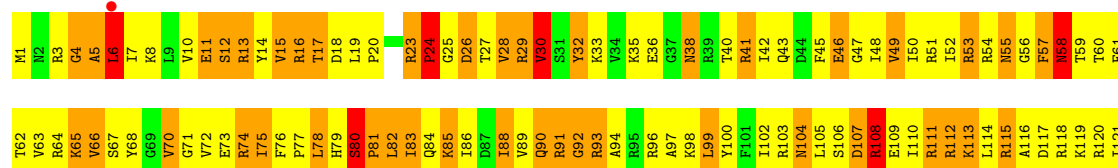
• Molecule 50: 50S RIBOSOMAL PROTEIN L18

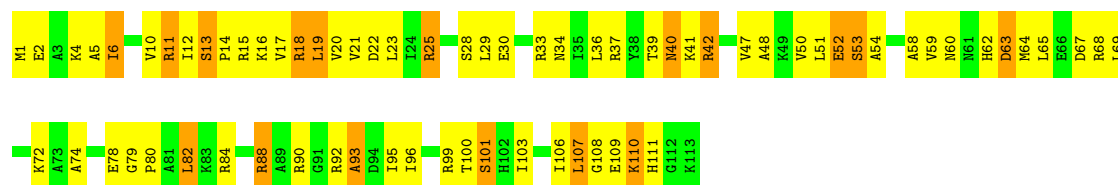


• Molecule 51: 50S RIBOSOMAL PROTEIN L19

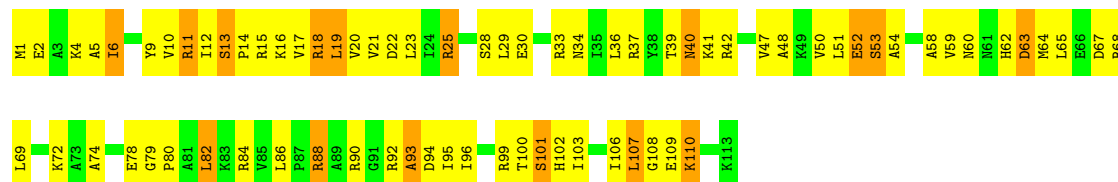


• Molecule 51: 50S RIBOSOMAL PROTEIN L19

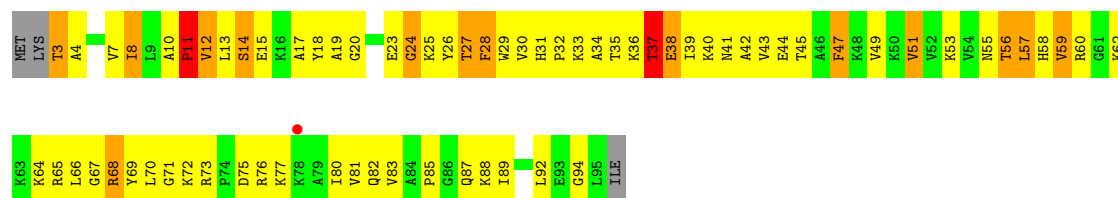




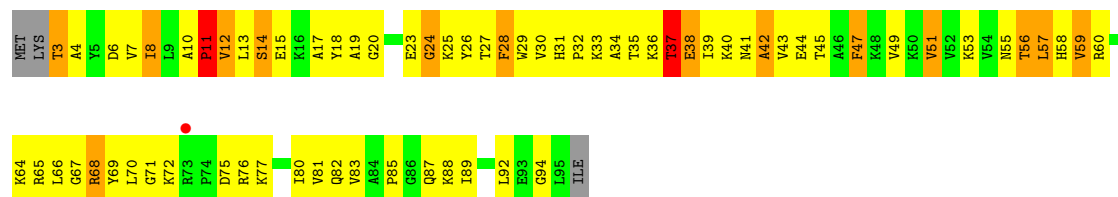
• Molecule 54: 50S RIBOSOMAL PROTEIN L22



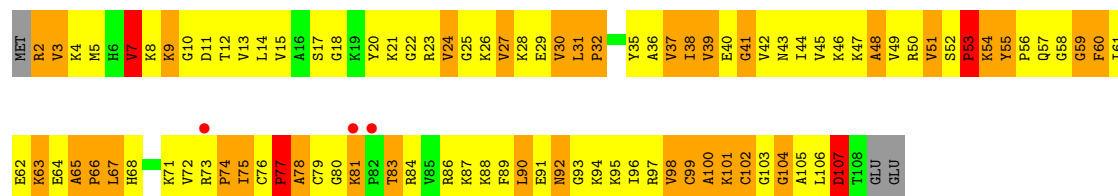
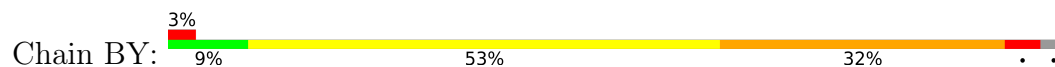
• Molecule 55: 50S RIBOSOMAL PROTEIN L23



• Molecule 55: 50S RIBOSOMAL PROTEIN L23

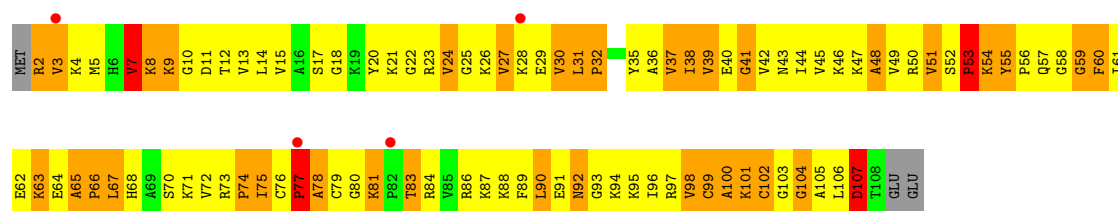


• Molecule 56: 50S RIBOSOMAL PROTEIN L24



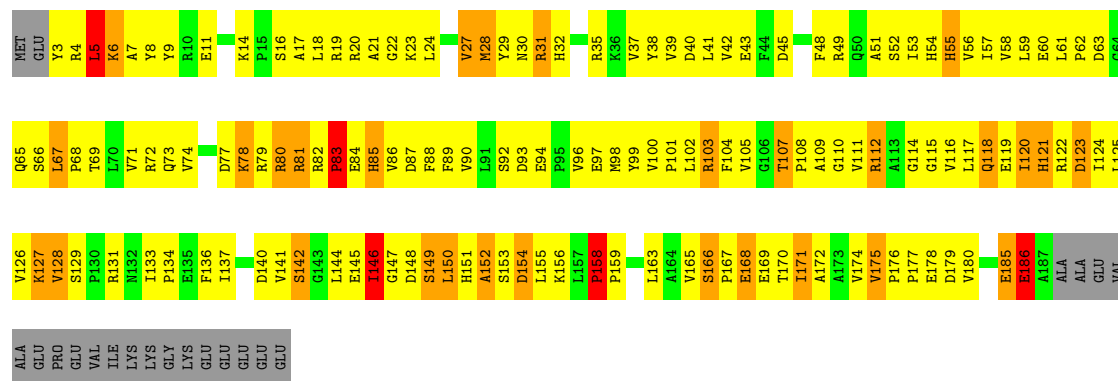
• Molecule 56: 50S RIBOSOMAL PROTEIN L24





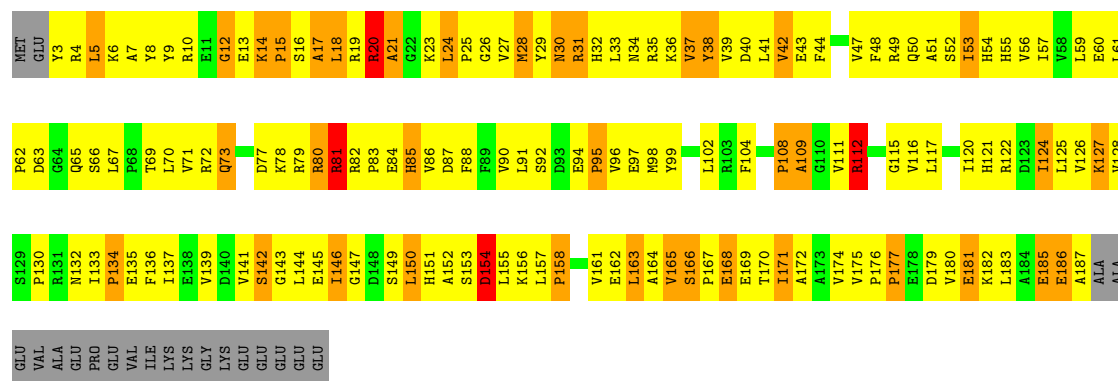
• Molecule 57: 50S RIBOSOMAL PROTEIN L25

Chain BZ: 18% 55% 14% 10%



• Molecule 57: 50S RIBOSOMAL PROTEIN L25

Chain DZ: 17% 53% 18% 10%



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	291.36Å 269.43Å 401.95Å 90.00° 91.78° 90.00°	Depositor
Resolution (Å)	49.75 – 3.70 49.75 – 3.70	Depositor EDS
% Data completeness (in resolution range)	99.9 (49.75-3.70) 99.8 (49.75-3.70)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.47 (at 3.40Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.214 , 0.249 0.213 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å ²)	84.2	Xtriage
Anisotropy	0.051	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 98.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.41$, $\langle L^2 \rangle = 0.24$	Xtriage
Estimated twinning fraction	0.048 for h,-k,-l	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	307606	wwPDB-VP
Average B, all atoms (Å ²)	102.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.34% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ 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: GDP, 5MU, ZN, FUA, MG

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	0.46	0/36190	0.70	46/56486 (0.1%)
1	CA	0.45	0/36190	0.70	42/56486 (0.1%)
2	AB	0.59	1/1936 (0.1%)	1.04	15/2611 (0.6%)
2	CB	0.52	1/1936 (0.1%)	1.04	14/2611 (0.5%)
3	AC	0.66	1/1637 (0.1%)	1.01	7/2207 (0.3%)
3	CC	0.56	1/1637 (0.1%)	1.00	8/2207 (0.4%)
4	AD	0.49	0/1733	1.02	7/2318 (0.3%)
4	CD	0.47	0/1733	1.00	6/2318 (0.3%)
5	AE	0.64	1/1163 (0.1%)	1.05	7/1566 (0.4%)
5	CE	0.61	1/1163 (0.1%)	1.06	8/1566 (0.5%)
6	AF	0.52	0/856	0.95	1/1154 (0.1%)
6	CF	0.46	0/856	0.95	0/1154
7	AG	0.54	0/1276	0.97	7/1709 (0.4%)
7	CG	0.47	0/1276	0.97	6/1709 (0.4%)
8	AH	0.58	0/1136	1.07	7/1527 (0.5%)
8	CH	0.52	0/1136	1.05	5/1527 (0.3%)
9	AI	0.52	0/1027	0.98	6/1373 (0.4%)
9	CI	0.43	0/1027	0.96	5/1373 (0.4%)
10	AJ	0.59	1/808 (0.1%)	1.01	2/1087 (0.2%)
10	CJ	0.52	1/808 (0.1%)	1.00	2/1087 (0.2%)
11	AK	0.60	0/900	1.11	6/1213 (0.5%)
11	CK	0.53	0/900	1.07	4/1213 (0.3%)
12	AL	0.59	1/987 (0.1%)	1.05	8/1322 (0.6%)
12	CL	0.56	1/987 (0.1%)	1.04	4/1322 (0.3%)
13	AM	0.55	1/999 (0.1%)	1.02	8/1338 (0.6%)
13	CM	0.51	1/999 (0.1%)	1.03	7/1338 (0.5%)
14	AN	0.61	0/501	1.02	4/664 (0.6%)
14	CN	0.53	0/501	0.99	2/664 (0.3%)
15	AO	0.54	0/745	0.88	2/992 (0.2%)
15	CO	0.50	0/745	0.87	2/992 (0.2%)
16	AP	0.53	1/717 (0.1%)	0.92	0/965
16	CP	0.52	1/717 (0.1%)	0.92	0/965

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.59	1/837 (0.1%)	0.98	1/1119 (0.1%)
17	CQ	0.56	1/837 (0.1%)	0.97	1/1119 (0.1%)
18	AR	0.55	0/579	1.03	4/768 (0.5%)
18	CR	0.50	0/579	0.98	1/768 (0.1%)
19	AS	0.52	1/643 (0.2%)	1.01	4/867 (0.5%)
19	CS	0.49	1/643 (0.2%)	1.00	4/867 (0.5%)
20	AT	0.50	0/765	1.05	8/1007 (0.8%)
20	CT	0.47	0/765	1.04	8/1007 (0.8%)
21	AU	0.63	1/213 (0.5%)	0.98	1/279 (0.4%)
21	CU	0.57	1/213 (0.5%)	0.98	1/279 (0.4%)
22	AV	0.41	0/1809	0.62	2/2819 (0.1%)
22	CV	0.39	0/1809	0.61	2/2819 (0.1%)
23	AW	0.37	0/1810	0.63	0/2821
23	CW	0.80	2/1810 (0.1%)	0.60	1/2821 (0.0%)
24	AX	0.34	0/288	0.68	0/446
24	CX	0.57	1/288 (0.3%)	0.77	1/446 (0.2%)
25	AY	0.64	2/5313 (0.0%)	1.14	54/7195 (0.8%)
25	CY	0.62	3/5313 (0.1%)	1.10	50/7195 (0.7%)
26	B0	0.51	0/671	0.95	2/892 (0.2%)
26	D0	0.46	0/671	0.95	2/892 (0.2%)
27	B1	0.54	1/739 (0.1%)	1.08	6/983 (0.6%)
27	D1	0.54	1/739 (0.1%)	1.08	5/983 (0.5%)
28	B2	0.40	0/600	0.98	2/793 (0.3%)
28	D2	0.38	0/600	0.95	2/793 (0.3%)
29	B3	0.56	1/473 (0.2%)	0.96	3/636 (0.5%)
29	D3	0.51	1/473 (0.2%)	0.95	2/636 (0.3%)
30	B4	0.63	1/461 (0.2%)	1.27	9/623 (1.4%)
30	D4	0.63	1/461 (0.2%)	1.28	10/623 (1.6%)
31	B5	0.52	0/473	1.08	2/639 (0.3%)
31	D5	0.53	0/473	1.06	2/639 (0.3%)
32	B6	0.70	0/440	1.33	7/586 (1.2%)
32	D6	0.66	0/440	1.29	6/586 (1.0%)
33	B7	0.56	1/427 (0.2%)	1.10	6/563 (1.1%)
33	D7	0.54	1/427 (0.2%)	1.09	3/563 (0.5%)
34	B8	0.67	1/516 (0.2%)	1.13	4/681 (0.6%)
34	D8	0.61	1/516 (0.2%)	1.13	4/681 (0.6%)
35	B9	0.51	0/310	0.88	1/407 (0.2%)
35	D9	0.51	0/310	0.89	1/407 (0.2%)
36	BA	0.45	0/69972	0.70	84/109237 (0.1%)
36	DA	0.45	0/69972	0.70	75/109237 (0.1%)
37	BB	0.40	0/2853	0.67	2/4451 (0.0%)
37	DB	0.42	0/2853	0.66	2/4451 (0.0%)
38	BC	0.90	4/1774 (0.2%)	0.96	7/2391 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DC	0.56	3/1774 (0.2%)	0.96	4/2391 (0.2%)
39	BD	0.60	0/2195	1.14	16/2955 (0.5%)
39	DD	0.55	0/2195	1.13	16/2955 (0.5%)
40	BE	0.56	1/1597 (0.1%)	1.06	12/2155 (0.6%)
40	DE	0.54	1/1597 (0.1%)	1.06	11/2155 (0.5%)
41	BF	0.47	1/1659 (0.1%)	1.02	10/2246 (0.4%)
41	DF	0.43	1/1659 (0.1%)	1.01	10/2246 (0.4%)
42	BG	0.54	1/1498 (0.1%)	1.12	15/2013 (0.7%)
42	DG	0.49	0/1498	1.08	13/2013 (0.6%)
43	BH	0.48	1/1293 (0.1%)	1.07	12/1746 (0.7%)
43	DH	0.47	1/1293 (0.1%)	1.07	13/1746 (0.7%)
45	BN	0.45	1/1132 (0.1%)	1.06	9/1527 (0.6%)
45	DN	0.44	1/1132 (0.1%)	1.06	9/1527 (0.6%)
46	BO	0.58	0/943	1.01	5/1269 (0.4%)
46	DO	0.55	0/943	1.03	5/1269 (0.4%)
47	BP	0.53	0/1131	1.30	14/1504 (0.9%)
47	DP	0.51	1/1131 (0.1%)	1.28	15/1504 (1.0%)
48	BQ	0.55	0/1143	0.91	0/1527
48	DQ	0.51	0/1143	0.90	0/1527
49	BR	0.47	0/974	0.91	2/1302 (0.2%)
49	DR	0.46	0/974	0.91	2/1302 (0.2%)
50	BS	0.51	1/779 (0.1%)	1.01	5/1038 (0.5%)
50	DS	0.47	1/779 (0.1%)	1.00	5/1038 (0.5%)
51	BT	0.60	1/1156 (0.1%)	1.19	16/1544 (1.0%)
51	DT	0.59	2/1156 (0.2%)	1.19	16/1544 (1.0%)
52	BU	0.46	0/975	1.07	10/1297 (0.8%)
52	DU	0.45	0/975	1.06	10/1297 (0.8%)
53	BV	0.48	0/790	0.93	1/1057 (0.1%)
53	DV	0.45	0/790	0.92	0/1057
54	BW	0.48	0/907	0.95	6/1216 (0.5%)
54	DW	0.45	0/907	0.94	5/1216 (0.4%)
55	BX	0.50	1/740 (0.1%)	1.00	5/995 (0.5%)
55	DX	0.49	1/740 (0.1%)	1.00	4/995 (0.4%)
56	BY	0.50	1/824 (0.1%)	1.01	5/1100 (0.5%)
56	DY	0.51	1/824 (0.1%)	1.00	7/1100 (0.6%)
57	BZ	0.56	1/1500 (0.1%)	1.00	6/2037 (0.3%)
57	DZ	0.51	1/1500 (0.1%)	1.01	5/2037 (0.2%)
All	All	0.49	66/331626 (0.0%)	0.81	939/494526 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	1	26
1	CA	1	21
22	AV	0	1
36	BA	2	39
36	DA	2	37
All	All	6	124

All (66) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	CW	38	A	O3'-P	29.88	2.06	1.61
38	BC	54	ARG	C-N	-29.12	0.98	1.33
38	DC	109	MET	SD-CE	9.74	2.03	1.79
38	DC	121	MET	SD-CE	9.32	2.02	1.79
38	BC	121	MET	SD-CE	8.96	2.02	1.79
38	BC	52	PRO	C-N	-7.38	1.23	1.34
24	CX	19	A	O3'-P	-7.22	1.50	1.61
2	CB	240	GLN	C-N	-5.90	1.25	1.33
50	BS	108	GLY	C-N	-5.89	1.25	1.33
2	AB	240	GLN	C-N	-5.83	1.25	1.33
38	BC	109	MET	SD-CE	5.82	1.94	1.79
43	BH	177	GLY	C-N	-5.82	1.25	1.33
25	CY	539	ILE	CA-CB	5.79	1.57	1.53
55	BX	94	GLY	C-N	-5.78	1.25	1.33
30	B4	57	GLU	C-N	-5.77	1.25	1.33
34	B8	64	TYR	C-N	-5.77	1.25	1.33
25	AY	689	LYS	C-N	-5.75	1.25	1.33
42	BG	77	ILE	CA-CB	5.73	1.61	1.53
57	BZ	186	GLU	C-N	-5.72	1.25	1.33
41	BF	207	GLY	C-N	-5.69	1.25	1.33
10	CJ	100	THR	C-N	-5.68	1.25	1.33
50	DS	108	GLY	C-N	-5.68	1.25	1.33
13	AM	125	ARG	C-N	-5.68	1.25	1.33
43	DH	177	GLY	C-N	-5.67	1.25	1.33
25	CY	689	LYS	C-N	-5.64	1.25	1.33
30	D4	57	GLU	C-N	-5.63	1.25	1.33
23	CW	31	G	O3'-P	5.61	1.69	1.61
13	CM	125	ARG	C-N	-5.59	1.25	1.33
10	AJ	100	THR	C-N	-5.59	1.25	1.33
34	D8	64	TYR	C-N	-5.58	1.25	1.33
3	CC	207	VAL	C-N	-5.57	1.25	1.33
5	CE	154	GLY	C-N	-5.57	1.25	1.33
55	DX	94	GLY	C-N	-5.56	1.25	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	CP	83	GLU	C-N	-5.55	1.25	1.33
21	CU	25	LYS	C-N	-5.54	1.25	1.33
51	BT	137	LYS	C-N	-5.54	1.25	1.33
21	AU	25	LYS	C-N	-5.53	1.25	1.33
19	AS	81	ARG	C-N	-5.53	1.25	1.33
17	CQ	100	LYS	C-N	-5.53	1.25	1.33
3	AC	207	VAL	C-N	-5.52	1.25	1.33
45	BN	138	LEU	C-N	-5.52	1.25	1.33
33	D7	48	LYS	C-N	-5.51	1.25	1.33
19	CS	81	ARG	C-N	-5.48	1.25	1.33
57	DZ	186	GLU	C-N	-5.47	1.25	1.33
51	DT	137	LYS	C-N	-5.46	1.25	1.33
56	BY	107	ASP	C-N	-5.46	1.25	1.33
27	D1	95	LEU	C-N	-5.46	1.25	1.33
12	AL	128	ALA	C-N	-5.45	1.25	1.33
17	AQ	100	LYS	C-N	-5.45	1.25	1.33
33	B7	48	LYS	C-N	-5.43	1.25	1.33
56	DY	107	ASP	C-N	-5.42	1.25	1.33
41	DF	207	GLY	C-N	-5.38	1.25	1.33
40	BE	204	ALA	C-N	-5.36	1.25	1.33
45	DN	138	LEU	C-N	-5.35	1.25	1.33
5	AE	154	GLY	C-N	-5.34	1.25	1.33
16	AP	83	GLU	C-N	-5.32	1.25	1.33
27	B1	95	LEU	C-N	-5.32	1.25	1.33
29	D3	59	VAL	C-N	-5.29	1.25	1.33
29	B3	59	VAL	C-N	-5.29	1.25	1.33
40	DE	204	ALA	C-N	-5.29	1.25	1.33
12	CL	128	ALA	C-N	-5.26	1.25	1.33
47	DP	38	GLN	CA-C	5.23	1.55	1.52
25	AY	534	ILE	CA-CB	5.21	1.59	1.54
38	DC	121	MET	CG-SD	5.03	1.93	1.80
51	DT	83	ILE	CA-CB	5.01	1.59	1.54
25	CY	601	ILE	CA-CB	5.00	1.59	1.54

All (939) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BA	1992	G	C2'-C3'-O3'	15.34	132.51	109.50
36	DA	1992	G	C2'-C3'-O3'	15.25	132.37	109.50
1	AA	1498	U	C2'-C3'-O3'	14.28	130.91	109.50
1	CA	1498	U	C2'-C3'-O3'	14.08	130.62	109.50
36	BA	1799	G	C2'-C3'-O3'	13.71	130.07	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	DA	1799	G	C2'-C3'-O3'	13.64	129.96	109.50
1	AA	115	G	C2'-C3'-O3'	12.30	127.96	109.50
1	CA	115	G	C2'-C3'-O3'	12.13	127.70	109.50
42	BG	54	GLU	N-CA-C	-11.99	98.75	113.50
36	BA	2799	C	C2'-C3'-O3'	11.43	126.65	109.50
36	DA	2799	C	C2'-C3'-O3'	11.42	126.63	109.50
51	BT	29	ARG	N-CA-C	11.16	126.52	108.99
30	D4	42	PHE	N-CA-C	11.07	123.49	107.88
30	B4	42	PHE	N-CA-C	11.06	123.47	107.88
1	CA	533	A	C2'-C3'-O3'	10.98	125.97	109.50
1	CA	60	A	C2'-C3'-O3'	10.98	125.97	109.50
51	DT	29	ARG	N-CA-C	10.89	126.09	108.99
1	AA	60	A	C2'-C3'-O3'	10.80	125.69	109.50
1	AA	533	A	C2'-C3'-O3'	10.69	125.54	109.50
1	AA	328	C	C2'-C3'-O3'	10.60	125.41	109.50
1	CA	328	C	C2'-C3'-O3'	10.57	125.35	109.50
1	CA	575	G	C2'-C3'-O3'	10.40	125.10	109.50
39	DD	240	ALA	N-CA-C	10.24	117.43	108.22
39	BD	212	SER	N-CA-C	-10.14	101.41	113.88
12	AL	26	ALA	N-CA-C	-10.07	101.62	113.21
12	CL	26	ALA	N-CA-C	-9.99	101.72	113.21
1	CA	428	G	C2'-C3'-O3'	9.93	124.40	109.50
1	AA	428	G	C2'-C3'-O3'	9.91	124.37	109.50
39	DD	212	SER	N-CA-C	-9.87	101.74	113.88
47	BP	16	ARG	N-CA-C	-9.86	101.82	114.04
2	CB	154	LEU	N-CA-C	-9.78	101.35	113.18
36	DA	2225	A	C2'-C3'-O3'	9.78	124.16	109.50
1	AA	575	G	C2'-C3'-O3'	9.77	124.16	109.50
47	DP	16	ARG	N-CA-C	-9.76	101.93	114.04
1	CA	366	C	C2'-C3'-O3'	9.69	124.04	109.50
36	BA	2225	A	C2'-C3'-O3'	9.66	123.99	109.50
47	DP	52	GLU	N-CA-C	9.66	131.38	110.80
47	BP	52	GLU	N-CA-C	9.63	131.31	110.80
2	AB	154	LEU	N-CA-C	-9.59	101.58	113.18
1	AA	366	C	C2'-C3'-O3'	9.46	123.70	109.50
25	AY	286	ILE	CA-C-N	9.36	130.02	120.38
25	AY	286	ILE	C-N-CA	9.36	130.02	120.38
1	AA	1201	A	C2'-C3'-O3'	9.34	123.50	109.50
39	BD	240	ALA	N-CA-C	9.32	116.61	108.22
7	AG	145	ALA	N-CA-C	-9.25	99.03	110.41
36	DA	1799	G	C4'-C3'-O3'	9.17	123.16	109.40
25	CY	626	ALA	N-CA-C	-9.15	102.11	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BA	1799	G	C4'-C3'-O3'	9.09	123.04	109.40
7	CG	145	ALA	N-CA-C	-9.08	99.24	110.41
36	BA	503	A	C2'-C3'-O3'	9.05	123.08	109.50
47	DP	54	GLY	N-CA-C	-9.05	102.43	115.64
47	BP	54	GLY	N-CA-C	-9.01	102.49	115.64
36	BA	2172	U	C2'-C3'-O3'	9.00	123.00	109.50
32	D6	17	LYS	N-CA-C	-8.99	99.31	111.54
32	B6	17	LYS	N-CA-C	-8.93	99.40	111.54
2	CB	56	ARG	N-CA-C	-8.90	99.76	111.24
41	DF	106	ARG	N-CA-C	-8.89	102.42	113.18
1	CA	1201	A	C2'-C3'-O3'	8.88	122.81	109.50
36	DA	2172	U	C2'-C3'-O3'	8.85	122.77	109.50
36	BA	1819	A	C2'-C3'-O3'	8.84	122.76	109.50
41	BF	106	ARG	N-CA-C	-8.84	102.48	113.18
20	CT	94	ALA	N-CA-C	-8.81	101.22	113.20
11	AK	48	ILE	N-CA-C	-8.81	100.45	110.05
36	DA	503	A	C2'-C3'-O3'	8.77	122.66	109.50
20	AT	94	ALA	N-CA-C	-8.76	101.28	113.20
1	CA	115	G	C4'-C3'-O3'	8.74	122.51	109.40
42	BG	86	MET	CA-C-N	-8.73	108.93	119.84
42	BG	86	MET	C-N-CA	-8.73	108.93	119.84
2	CB	23	ARG	N-CA-C	-8.68	100.09	113.02
36	BA	49	A	C2'-C3'-O3'	8.66	122.49	109.50
36	DA	49	A	C2'-C3'-O3'	8.62	122.42	109.50
25	AY	274	ASP	N-CA-C	-8.61	101.10	111.69
1	AA	1285	A	C2'-C3'-O3'	8.59	122.38	109.50
2	AB	23	ARG	N-CA-C	-8.57	100.25	113.02
51	BT	108	ARG	N-CA-C	-8.52	100.61	112.45
4	CD	11	LEU	N-CA-C	-8.51	102.08	111.36
2	AB	56	ARG	N-CA-C	-8.49	100.29	111.24
30	D4	43	TYR	N-CA-C	8.48	128.86	110.80
4	AD	11	LEU	N-CA-C	-8.46	102.13	111.36
13	AM	82	MET	N-CA-C	-8.45	103.09	112.72
45	BN	3	THR	N-CA-C	-8.44	97.80	109.95
47	BP	136	GLU	N-CA-C	-8.42	102.05	111.82
36	DA	1819	A	C2'-C3'-O3'	8.42	122.13	109.50
30	B4	43	TYR	N-CA-C	8.39	128.68	110.80
1	AA	115	G	C4'-C3'-O3'	8.30	121.84	109.40
47	BP	51	PHE	N-CA-C	8.29	122.72	109.79
51	BT	4	GLY	N-CA-C	-8.23	102.79	112.83
27	D1	74	VAL	N-CA-C	-8.23	103.10	113.22
46	BO	22	ILE	N-CA-C	-8.22	105.13	111.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
47	BP	116	GLY	N-CA-C	8.21	122.21	111.70
47	DP	136	GLU	N-CA-C	-8.21	102.29	111.82
45	DN	3	THR	N-CA-C	-8.21	98.13	109.95
18	CR	81	PHE	N-CA-C	-8.17	103.45	113.41
46	DO	22	ILE	N-CA-C	-8.10	105.22	111.62
4	AD	10	ARG	N-CA-C	-8.10	103.22	113.43
32	D6	21	TYR	N-CA-C	8.09	121.34	109.69
51	DT	108	ARG	N-CA-C	-8.09	101.20	112.45
8	AH	107	LEU	N-CA-C	8.07	120.07	111.28
39	BD	53	PHE	N-CA-C	8.05	122.79	111.52
1	AA	1498	U	C4'-C3'-O3'	8.05	121.47	109.40
1	CA	1285	A	C2'-C3'-O3'	8.03	121.54	109.50
25	CY	538	TYR	N-CA-C	8.03	121.13	111.82
36	BA	739	G	C4'-C3'-O3'	8.02	121.43	109.40
30	D4	53	GLU	N-CA-C	8.01	121.97	109.96
25	AY	287	PRO	CA-C-N	8.00	129.84	119.84
25	AY	287	PRO	C-N-CA	8.00	129.84	119.84
36	BA	1237	A	C2'-C3'-O3'	7.99	121.48	109.50
47	DP	116	GLY	N-CA-C	7.98	121.92	111.70
28	D2	39	ALA	N-CA-C	-7.96	103.02	112.89
13	CM	84	ILE	N-CA-C	-7.96	101.10	111.05
39	DD	53	PHE	N-CA-C	7.95	122.65	111.52
36	BA	1838	C	C2'-C3'-O3'	7.94	121.41	109.50
55	DX	37	THR	N-CA-C	-7.92	103.22	113.12
36	DA	739	G	C4'-C3'-O3'	7.90	121.25	109.40
36	DA	1838	C	C2'-C3'-O3'	7.87	121.30	109.50
11	CK	48	ILE	N-CA-C	-7.87	101.48	110.05
19	CS	23	ASN	N-CA-C	-7.87	103.90	113.97
36	DA	1427	A	C2'-C3'-O3'	7.86	121.29	109.50
19	AS	23	ASN	N-CA-C	-7.83	103.94	113.97
18	AR	81	PHE	N-CA-C	-7.83	103.86	113.41
51	DT	4	GLY	N-CA-C	-7.81	103.30	112.83
47	BP	58	THR	N-CA-C	-7.80	94.19	110.80
2	CB	112	VAL	N-CA-C	-7.79	105.11	111.81
13	CM	82	MET	N-CA-C	-7.79	103.84	112.72
19	AS	65	ASN	N-CA-C	7.78	119.40	111.07
32	B6	21	TYR	N-CA-C	7.77	120.88	109.69
41	BF	71	GLY	N-CA-C	-7.75	104.61	114.37
55	BX	37	THR	N-CA-C	-7.75	103.44	113.12
47	DP	51	PHE	N-CA-C	7.75	121.88	109.79
13	AM	84	ILE	N-CA-C	-7.74	101.38	111.05
47	DP	58	THR	N-CA-C	-7.72	94.34	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	112	VAL	N-CA-C	-7.71	105.18	111.81
36	DA	1786	A	N9-C1'-C2'	7.70	125.55	114.00
30	B4	53	GLU	N-CA-C	7.70	121.51	109.96
50	DS	16	ASN	N-CA-C	-7.69	103.89	113.28
50	BS	16	ASN	N-CA-C	-7.69	103.90	113.28
25	AY	650	ALA	N-CA-C	-7.67	102.25	111.69
25	AY	423	LYS	N-CA-C	-7.66	103.93	113.28
19	CS	65	ASN	N-CA-C	7.65	119.25	111.07
18	AR	32	ARG	N-CA-C	-7.64	105.13	114.75
41	DF	163	VAL	N-CA-C	-7.59	101.56	111.05
36	BA	1022	G	C2'-C3'-O3'	7.57	120.86	109.50
36	DA	1237	A	C2'-C3'-O3'	7.57	120.86	109.50
36	BA	1427	A	C2'-C3'-O3'	7.55	120.82	109.50
55	BX	14	SER	N-CA-C	7.54	120.33	108.79
25	AY	272	LEU	N-CA-C	-7.54	104.23	113.50
32	B6	23	THR	N-CA-C	7.53	126.85	110.80
27	B1	74	VAL	N-CA-C	-7.53	102.32	113.39
36	BA	2732	G	N9-C1'-C2'	7.53	123.29	112.00
40	DE	65	GLY	N-CA-C	-7.52	103.40	115.66
20	AT	12	ALA	N-CA-C	-7.51	103.68	114.12
41	BF	163	VAL	N-CA-C	-7.51	101.66	111.05
45	DN	48	MET	N-CA-C	-7.51	104.16	112.72
32	D6	23	THR	N-CA-C	7.50	126.78	110.80
19	CS	21	GLU	N-CA-C	-7.50	103.59	112.89
36	DA	945	A	N9-C1'-C2'	7.49	125.24	114.00
19	AS	21	GLU	N-CA-C	-7.49	103.61	112.89
52	DU	58	ARG	N-CA-C	-7.47	102.19	111.75
36	BA	1252	G	N9-C1'-C2'	7.46	123.19	112.00
40	BE	65	GLY	N-CA-C	-7.45	103.51	115.66
1	CA	1498	U	C4'-C3'-O3'	7.45	120.58	109.40
37	BB	103	G	C5'-C4'-C3'	-7.44	104.83	116.00
39	BD	210	GLY	N-CA-C	-7.44	99.85	111.98
12	AL	61	THR	N-CA-C	-7.43	104.09	113.01
45	BN	48	MET	N-CA-C	-7.43	104.25	112.72
36	BA	2799	C	C4'-C3'-O3'	7.42	120.54	109.40
27	D1	67	ILE	CB-CA-C	-7.42	106.65	113.70
36	DA	2799	C	C4'-C3'-O3'	7.41	120.51	109.40
55	DX	14	SER	N-CA-C	7.39	120.11	108.79
26	D0	27	GLU	N-CA-C	-7.38	100.58	110.55
25	CY	679	VAL	N-CA-C	-7.38	102.28	108.63
52	BU	58	ARG	N-CA-C	-7.36	102.33	111.75
12	CL	61	THR	N-CA-C	-7.36	104.18	113.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	CY	204	GLU	N-CA-C	7.32	120.33	111.40
42	DG	54	GLU	N-CA-C	-7.32	103.45	112.38
41	BF	162	LEU	N-CA-C	-7.30	104.35	113.55
27	B1	67	ILE	CB-CA-C	-7.30	106.61	114.35
8	CH	107	LEU	N-CA-C	7.28	120.14	111.33
25	AY	118	SER	N-CA-C	-7.28	102.43	111.75
5	AE	113	ALA	N-CA-C	-7.27	103.44	111.36
36	DA	2732	G	N9-C1'-C2'	7.26	122.89	112.00
36	BA	1786	A	N9-C1'-C2'	7.26	124.88	114.00
52	DU	56	ASP	N-CA-C	-7.25	102.77	111.69
25	AY	501	THR	N-CA-C	-7.21	105.01	113.88
31	B5	46	CYS	CA-C-N	7.21	128.86	119.84
31	B5	46	CYS	C-N-CA	7.21	128.86	119.84
46	DO	47	ILE	N-CA-C	-7.21	102.32	109.02
4	CD	10	ARG	N-CA-C	-7.20	103.50	112.72
3	AC	173	VAL	CA-C-N	7.20	128.84	119.84
3	AC	173	VAL	C-N-CA	7.20	128.84	119.84
36	DA	1252	G	N9-C1'-C2'	7.20	122.80	112.00
25	CY	659	LEU	N-CA-C	-7.20	103.52	111.36
7	AG	87	VAL	N-CA-C	7.18	115.01	107.76
20	CT	12	ALA	N-CA-C	-7.17	104.15	114.12
41	DF	162	LEU	N-CA-C	-7.16	104.52	113.55
25	CY	213	HIS	N-CA-C	-7.16	104.42	113.01
1	AA	1049	U	C2'-C3'-O3'	7.12	120.18	109.50
2	AB	233	SER	CA-C-N	-7.11	112.65	119.76
2	AB	233	SER	C-N-CA	-7.11	112.65	119.76
25	AY	414	GLU	CA-C-N	7.11	128.73	119.84
25	AY	414	GLU	C-N-CA	7.11	128.73	119.84
36	BA	221	A	C2'-C3'-O3'	7.11	120.17	109.50
39	DD	210	GLY	N-CA-C	-7.11	100.40	111.98
26	B0	27	GLU	N-CA-C	-7.10	100.97	110.55
25	CY	596	LYS	N-CA-C	-7.09	104.20	112.92
22	AV	17	C	C2'-C3'-O3'	7.08	120.12	109.50
1	CA	1049	U	C2'-C3'-O3'	7.07	120.11	109.50
36	DA	1022	G	C2'-C3'-O3'	7.07	120.11	109.50
11	AK	40	ILE	N-CA-C	-7.06	106.04	111.62
36	BA	1236	G	N9-C1'-C2'	7.04	122.56	112.00
2	CB	200	ILE	N-CA-C	7.04	120.00	109.17
36	BA	120	U	C2'-C3'-O3'	-7.02	103.17	113.70
7	AG	51	GLN	N-CA-C	-7.01	104.20	112.89
52	BU	56	ASP	N-CA-C	-7.01	103.07	111.69
5	CE	113	ALA	N-CA-C	-7.01	103.72	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	DA	474	G	C2'-C3'-O3'	7.01	120.01	109.50
36	DA	221	A	C2'-C3'-O3'	7.00	120.01	109.50
25	CY	287	PRO	CA-C-N	7.00	128.59	119.84
25	CY	287	PRO	C-N-CA	7.00	128.59	119.84
47	BP	30	THR	N-CA-C	7.00	120.92	109.94
50	BS	55	ALA	N-CA-C	-7.00	103.70	111.82
25	AY	130	VAL	CA-C-N	6.98	126.74	119.76
25	AY	130	VAL	C-N-CA	6.98	126.74	119.76
2	CB	233	SER	CA-C-N	-6.98	112.78	119.76
2	CB	233	SER	C-N-CA	-6.98	112.78	119.76
36	DA	1236	G	N9-C1'-C2'	6.98	122.47	112.00
39	DD	22	SER	N-CA-C	-6.97	104.25	112.89
50	DS	44	LYS	N-CA-C	-6.96	105.97	114.75
36	BA	474	G	C2'-C3'-O3'	6.96	119.94	109.50
50	BS	44	LYS	N-CA-C	-6.96	105.98	114.75
25	AY	660	ARG	N-CA-C	-6.96	104.66	113.01
36	BA	945	A	N9-C1'-C2'	6.95	124.42	114.00
39	BD	22	SER	N-CA-C	-6.95	104.28	112.89
1	AA	250	A	C2'-C3'-O3'	6.93	119.90	109.50
25	AY	553	GLY	CA-C-N	6.92	129.03	121.00
25	AY	553	GLY	C-N-CA	6.92	129.03	121.00
17	AQ	67	LYS	N-CA-C	-6.92	100.94	110.35
5	CE	80	ILE	N-CA-C	6.92	117.26	108.82
1	AA	1502	A	N9-C1'-C2'	6.92	124.38	114.00
54	DW	101	SER	N-CA-C	6.92	119.93	109.41
39	DD	114	GLY	N-CA-C	-6.91	105.05	115.00
25	CY	276	VAL	N-CA-C	-6.91	104.45	110.74
3	AC	109	PRO	N-CA-C	-6.90	104.87	113.84
31	D5	46	CYS	CA-C-N	6.89	128.46	119.84
31	D5	46	CYS	C-N-CA	6.89	128.46	119.84
42	DG	78	SER	N-CA-C	-6.89	102.94	111.75
7	CG	51	GLN	N-CA-C	-6.88	104.37	112.89
40	BE	42	ASP	N-CA-C	-6.87	106.79	114.62
17	CQ	67	LYS	N-CA-C	-6.87	101.00	110.35
36	BA	1156	A	N9-C1'-C2'	6.87	124.30	114.00
50	DS	55	ALA	N-CA-C	-6.86	103.86	111.82
27	B1	60	PHE	N-CA-C	6.85	119.57	108.34
54	BW	101	SER	N-CA-C	6.83	119.79	109.41
41	DF	38	ARG	N-CA-C	-6.82	103.92	111.36
39	BD	240	ALA	CA-C-N	6.82	128.36	119.84
39	BD	240	ALA	C-N-CA	6.82	128.36	119.84
25	CY	32	ILE	N-CA-C	-6.79	104.15	110.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	CC	173	VAL	CA-C-N	6.78	128.32	119.84
3	CC	173	VAL	C-N-CA	6.78	128.32	119.84
47	DP	30	THR	N-CA-C	6.78	120.59	109.94
32	D6	8	LYS	N-CA-C	-6.78	104.16	113.18
41	DF	71	GLY	N-CA-C	-6.76	105.85	114.37
2	AB	200	ILE	N-CA-C	6.76	119.58	109.17
36	DA	1156	A	N9-C1'-C2'	6.75	124.13	114.00
25	CY	126	GLU	N-CA-C	-6.74	104.16	112.38
52	DU	70	ARG	N-CA-C	-6.74	104.93	113.01
1	AA	1190	G	N9-C1'-C2'	6.73	122.09	112.00
12	AL	118	SER	N-CA-C	-6.72	103.19	111.33
36	BA	788	A	C4'-C3'-O3'	-6.71	102.93	113.00
1	CA	250	A	C2'-C3'-O3'	6.71	119.56	109.50
36	DA	120	U	C2'-C3'-O3'	-6.70	103.64	113.70
34	B8	54	GLU	N-CA-C	-6.70	103.90	111.07
25	AY	126	GLU	N-CA-C	-6.69	104.98	113.01
43	DH	67	LEU	N-CA-C	-6.69	103.91	111.07
36	DA	1212	G	C2'-C3'-O3'	-6.69	99.47	109.50
36	DA	2506	U	C2'-C3'-O3'	6.69	119.53	109.50
47	BP	15	ARG	N-CA-C	6.68	120.54	108.17
38	DC	133	GLY	CA-C-N	6.68	126.37	119.82
38	DC	133	GLY	C-N-CA	6.68	126.37	119.82
5	AE	80	ILE	N-CA-C	6.67	116.96	108.82
43	DH	128	PRO	N-CA-C	-6.67	105.27	114.27
40	DE	42	ASP	N-CA-C	-6.67	107.02	114.62
36	BA	1212	G	C2'-C3'-O3'	-6.66	99.52	109.50
36	BA	1252	G	C4'-C3'-O3'	-6.65	103.02	113.00
36	DA	788	A	C4'-C3'-O3'	-6.64	103.04	113.00
56	BY	65	ALA	CA-C-N	6.63	128.13	119.84
56	BY	65	ALA	C-N-CA	6.63	128.13	119.84
50	BS	18	ILE	N-CA-C	-6.63	104.39	113.00
36	DA	748	G	N9-C1'-C2'	6.60	121.90	112.00
1	AA	913	A	C2'-C3'-O3'	6.60	119.39	109.50
36	DA	1992	G	C4'-C3'-O3'	6.60	119.29	109.40
36	BA	1992	G	C4'-C3'-O3'	6.59	119.28	109.40
38	BC	133	GLY	CA-C-N	6.58	126.27	119.82
38	BC	133	GLY	C-N-CA	6.58	126.27	119.82
43	BH	67	LEU	N-CA-C	-6.57	104.04	111.07
12	CL	118	SER	N-CA-C	-6.57	103.38	111.33
25	AY	462	ILE	N-CA-C	-6.56	103.38	112.50
57	BZ	11	GLU	N-CA-C	-6.55	104.22	111.36
34	D8	54	GLU	N-CA-C	-6.55	104.06	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	DN	114	ARG	N-CA-C	-6.54	104.94	113.12
52	BU	70	ARG	N-CA-C	-6.54	105.16	113.01
9	CI	26	VAL	N-CA-C	6.54	117.45	107.77
36	BA	2506	U	C2'-C3'-O3'	6.53	119.30	109.50
25	CY	305	PRO	N-CA-C	-6.53	106.37	114.20
25	AY	368	GLU	N-CA-C	6.52	118.44	108.07
22	CV	76	A	C2'-C3'-O3'	-6.52	99.72	109.50
36	DA	788	A	N9-C1'-C2'	6.52	121.78	112.00
43	BH	128	PRO	N-CA-C	-6.52	105.47	114.27
42	DG	86	MET	CA-C-N	-6.50	111.71	119.84
42	DG	86	MET	C-N-CA	-6.50	111.71	119.84
9	AI	26	VAL	N-CA-C	6.50	117.39	107.77
9	AI	99	LEU	N-CA-C	-6.50	100.90	110.52
36	BA	788	A	N9-C1'-C2'	6.50	121.75	112.00
56	DY	65	ALA	CA-C-N	6.50	127.96	119.84
56	DY	65	ALA	C-N-CA	6.50	127.96	119.84
25	CY	679	VAL	CA-C-N	6.49	127.96	119.84
25	CY	679	VAL	C-N-CA	6.49	127.96	119.84
51	DT	125	ARG	N-CA-C	-6.49	104.20	111.28
25	CY	286	ILE	N-CA-C	6.49	115.31	108.95
36	DA	1818	U	C4'-C3'-O3'	-6.49	103.27	113.00
50	DS	18	ILE	N-CA-C	-6.49	104.57	113.00
47	DP	15	ARG	N-CA-C	6.47	120.14	108.17
57	BZ	158	PRO	CA-C-N	6.46	127.92	119.84
57	BZ	158	PRO	C-N-CA	6.46	127.92	119.84
15	CO	78	TYR	N-CA-C	-6.45	102.92	111.24
25	CY	581	ALA	N-CA-C	-6.45	105.38	113.18
51	BT	80	SER	N-CA-C	6.44	124.05	109.81
25	AY	115	GLU	CA-C-N	6.43	126.14	119.64
25	AY	115	GLU	C-N-CA	6.43	126.14	119.64
1	CA	992	U	C2'-C3'-O3'	6.42	119.14	109.50
3	CC	109	PRO	N-CA-C	-6.42	104.98	113.65
2	CB	160	ASP	N-CA-C	-6.41	105.42	113.18
52	DU	34	LYS	N-CA-C	-6.39	104.58	112.38
36	DA	2835	A	C4'-C3'-O3'	-6.39	103.42	113.00
8	AH	56	LYS	CA-C-N	6.38	127.82	119.84
8	AH	56	LYS	C-N-CA	6.38	127.82	119.84
36	DA	1252	G	C4'-C3'-O3'	-6.38	103.43	113.00
51	BT	125	ARG	N-CA-C	-6.38	104.33	111.28
36	DA	2689	U	C4'-C3'-O3'	6.38	118.97	109.40
51	DT	80	SER	N-CA-C	6.37	123.90	109.81
52	BU	34	LYS	N-CA-C	-6.37	104.61	112.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	812	C	C2'-C3'-O3'	6.37	119.05	109.50
7	CG	87	VAL	N-CA-C	6.37	114.90	107.77
42	DG	67	LYS	CA-C-N	6.36	126.33	120.03
42	DG	67	LYS	C-N-CA	6.36	126.33	120.03
45	BN	114	ARG	N-CA-C	-6.36	105.17	113.12
11	AK	38	ASN	CA-C-N	6.36	126.33	119.78
11	AK	38	ASN	C-N-CA	6.36	126.33	119.78
36	BA	1818	U	C4'-C3'-O3'	-6.36	103.46	113.00
36	DA	332	A	C2'-C3'-O3'	6.36	119.03	109.50
56	BY	63	LYS	CB-CA-C	-6.36	107.92	117.07
36	BA	752	A	C2'-C3'-O3'	6.32	118.98	109.50
8	AH	22	GLU	N-CA-C	6.32	117.83	111.07
34	D8	60	LEU	N-CA-C	-6.32	102.08	111.81
1	AA	1531	A	C2'-C3'-O3'	-6.31	100.03	109.50
1	AA	921	U	C5'-C4'-C3'	-6.30	106.55	116.00
15	AO	78	TYR	N-CA-C	-6.30	103.11	111.24
41	BF	38	ARG	N-CA-C	-6.30	103.94	111.69
39	DD	240	ALA	CA-C-N	6.30	127.71	119.84
39	DD	240	ALA	C-N-CA	6.30	127.71	119.84
39	BD	114	GLY	N-CA-C	-6.27	105.98	115.00
32	B6	8	LYS	N-CA-C	-6.26	104.85	113.18
49	BR	25	ALA	N-CA-C	-6.26	104.45	111.28
9	CI	99	LEU	N-CA-C	-6.26	101.26	110.52
33	B7	22	MET	N-CA-C	6.25	118.90	111.33
36	BA	2689	U	C4'-C3'-O3'	6.24	118.76	109.40
42	BG	55	LYS	N-CA-C	-6.24	104.58	111.82
25	CY	462	ILE	N-CA-C	-6.24	104.52	113.07
30	D4	55	ARG	N-CA-C	-6.24	103.00	111.55
49	DR	25	ALA	N-CA-C	-6.24	104.48	111.28
1	CA	921	U	C5'-C4'-C3'	-6.23	106.66	116.00
1	CA	1493	A	C4'-C3'-O3'	-6.23	103.66	113.00
52	BU	99	ALA	N-CA-C	-6.22	105.71	113.55
7	AG	81	GLY	N-CA-C	-6.22	102.03	110.43
36	BA	332	A	C2'-C3'-O3'	6.22	118.83	109.50
34	B8	60	LEU	N-CA-C	-6.22	102.23	111.81
36	DA	752	A	C2'-C3'-O3'	6.21	118.82	109.50
36	BA	2835	A	C4'-C3'-O3'	-6.21	103.68	113.00
25	AY	534	ILE	CA-C-N	6.20	127.59	119.84
25	AY	534	ILE	C-N-CA	6.20	127.59	119.84
22	AV	76	A	C2'-C3'-O3'	-6.20	100.20	109.50
34	D8	34	TRP	N-CA-C	-6.20	97.60	110.80
25	AY	278	ASP	N-CA-C	6.19	118.83	111.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	AY	538	TYR	N-CA-C	6.18	120.82	113.28
56	DY	63	LYS	CB-CA-C	-6.17	108.18	117.07
5	CE	69	VAL	CA-C-N	6.17	127.55	119.84
5	CE	69	VAL	C-N-CA	6.17	127.55	119.84
57	DZ	109	ALA	N-CA-C	-6.17	106.08	113.97
52	DU	96	ALA	N-CA-C	-6.17	105.62	113.02
40	BE	127	ASP	N-CA-C	-6.16	104.86	112.38
47	BP	53	GLY	N-CA-C	-6.16	98.58	113.18
1	AA	992	U	C2'-C3'-O3'	6.16	118.74	109.50
36	BA	1495	A	N9-C1'-C2'	6.16	121.24	112.00
36	BA	748	G	N9-C1'-C2'	6.15	121.23	112.00
1	CA	1190	G	N9-C1'-C2'	6.15	121.22	112.00
11	CK	38	ASN	CA-C-N	6.15	126.11	119.78
11	CK	38	ASN	C-N-CA	6.15	126.11	119.78
52	DU	50	ARG	N-CA-C	-6.14	103.31	111.24
27	B1	7	ILE	CB-CA-C	-6.14	106.49	111.71
13	CM	117	VAL	N-CA-C	6.14	117.53	108.45
42	BG	56	ALA	N-CA-C	-6.13	105.28	112.89
47	BP	64	LYS	N-CA-C	-6.13	105.56	113.16
36	DA	614(A)	U	C2'-C3'-O3'	-6.13	104.50	113.70
30	B4	55	ARG	N-CA-C	-6.12	103.16	111.55
25	AY	433	GLU	N-CA-C	-6.12	106.35	113.88
33	D7	22	MET	N-CA-C	6.12	118.73	111.33
47	DP	53	GLY	N-CA-C	-6.12	98.68	113.18
25	AY	626	ALA	N-CA-C	-6.11	104.93	113.37
8	CH	22	GLU	N-CA-C	6.11	117.61	111.07
7	AG	57	GLU	N-CA-C	-6.09	102.37	109.93
36	BA	2438	U	C2'-C3'-O3'	-6.09	104.56	113.70
43	BH	28	GLY	CA-C-N	6.09	125.31	118.97
43	BH	28	GLY	C-N-CA	6.09	125.31	118.97
20	AT	13	LEU	N-CA-C	-6.09	104.95	112.38
20	CT	72	LEU	N-CA-C	-6.09	100.56	109.63
39	BD	44	ASN	N-CA-C	6.09	116.46	107.88
22	CV	17	C	C2'-C3'-O3'	6.09	118.63	109.50
36	BA	1379	A	N9-C1'-C2'	6.08	123.12	114.00
36	DA	1379	A	N9-C1'-C2'	6.08	123.12	114.00
20	CT	13	LEU	N-CA-C	-6.08	104.97	112.38
4	AD	114	ARG	N-CA-C	-6.07	104.22	111.69
7	CG	57	GLU	N-CA-C	-6.07	102.40	109.93
12	AL	119	LYS	N-CA-C	-6.07	101.54	110.52
52	BU	96	ALA	N-CA-C	-6.06	105.75	113.02
47	BP	104	GLY	N-CA-C	6.05	115.71	110.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	B7	30	VAL	N-CA-C	-6.04	104.62	110.72
47	DP	64	LYS	N-CA-C	-6.04	105.67	113.16
36	BA	614(A)	U	C2'-C3'-O3'	-6.03	104.65	113.70
36	BA	614(C)	A	C2'-C3'-O3'	6.03	118.55	109.50
41	DF	65	TRP	N-CA-C	6.03	119.58	109.09
36	DA	1495	A	N9-C1'-C2'	6.03	121.04	112.00
12	CL	119	LYS	N-CA-C	-6.02	101.61	110.52
25	CY	591	LYS	N-CA-C	-6.01	105.77	113.23
51	BT	26	ASP	N-CA-C	6.01	117.95	107.49
25	AY	658	ASP	N-CA-C	-6.01	107.77	114.62
45	BN	25	ARG	N-CA-C	-6.01	105.44	112.89
51	BT	112	ARG	N-CA-C	-6.01	105.51	114.64
27	D1	4	VAL	N-CA-C	6.00	117.24	108.53
36	BA	845	G	N9-C1'-C2'	6.00	121.00	112.00
8	CH	56	LYS	CA-C-N	6.00	127.34	119.84
8	CH	56	LYS	C-N-CA	6.00	127.34	119.84
43	BH	133	VAL	N-CA-C	6.00	117.23	108.53
36	DA	1020	A	N9-C1'-C2'	6.00	121.00	112.00
39	DD	263	ARG	N-CA-C	6.00	120.60	113.16
2	AB	160	ASP	N-CA-C	-5.99	105.93	113.18
49	BR	72	ASP	N-CA-C	5.99	118.41	109.25
52	DU	99	ALA	N-CA-C	-5.98	106.02	113.55
40	BE	137	HIS	CA-C-N	5.98	125.68	119.05
40	BE	137	HIS	C-N-CA	5.98	125.68	119.05
36	DA	2438	U	C2'-C3'-O3'	-5.98	104.73	113.70
39	DD	44	ASN	N-CA-C	5.97	116.30	107.88
38	BC	194	ILE	N-CA-C	-5.96	105.04	110.82
36	DA	845	G	N9-C1'-C2'	5.95	120.93	112.00
36	DA	614(C)	A	C2'-C3'-O3'	5.95	118.42	109.50
39	DD	213	ARG	N-CA-C	-5.95	104.37	111.69
42	BG	44	GLY	N-CA-C	-5.95	107.19	114.92
4	CD	114	ARG	N-CA-C	-5.95	104.38	111.69
26	D0	28	GLY	N-CA-C	-5.94	105.93	115.08
26	B0	28	GLY	N-CA-C	-5.94	105.94	115.08
41	BF	83	PHE	N-CA-C	5.93	120.35	111.81
47	DP	20	GLY	N-CA-C	-5.93	104.63	112.82
36	BA	1020	A	N9-C1'-C2'	5.93	120.89	112.00
25	CY	650	ALA	N-CA-C	-5.93	104.74	111.14
30	D4	47	GLN	N-CA-C	5.93	116.25	108.07
21	AU	24	ARG	N-CA-C	-5.92	106.69	112.97
13	AM	117	VAL	N-CA-C	5.92	117.21	108.45
14	AN	50	LYS	N-CA-C	-5.92	106.04	113.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BA	1236	G	C4'-C3'-O3'	-5.92	104.13	113.00
55	DX	38	GLU	N-CA-C	-5.92	105.32	112.54
23	CW	38	A	O3'-P-O5'	5.91	112.87	104.00
39	BD	263	ARG	N-CA-C	5.91	120.49	113.16
49	DR	72	ASP	N-CA-C	5.90	118.27	109.59
30	B4	47	GLN	N-CA-C	5.90	116.21	108.07
56	DY	63	LYS	CA-C-O	5.90	121.36	117.94
25	CY	423	LYS	N-CA-C	-5.90	106.13	113.38
34	B8	34	TRP	N-CA-C	-5.89	98.25	110.80
42	BG	48	GLU	N-CA-C	5.89	117.65	110.41
40	DE	58	ARG	N-CA-C	-5.88	105.46	114.16
25	CY	302	HIS	CA-C-N	5.87	127.18	119.84
25	CY	302	HIS	C-N-CA	5.87	127.18	119.84
2	CB	184	VAL	N-CA-C	5.87	116.46	107.77
8	CH	79	VAL	N-CA-C	-5.87	105.36	111.58
5	CE	127	ASN	CA-C-N	5.87	127.17	119.84
5	CE	127	ASN	C-N-CA	5.87	127.17	119.84
47	BP	20	GLY	N-CA-C	-5.86	104.73	112.82
40	BE	58	ARG	N-CA-C	-5.86	105.49	114.16
51	DT	26	ASP	N-CA-C	5.86	117.68	107.49
4	AD	12	CYS	N-CA-C	-5.85	101.71	111.37
50	DS	93	LYS	N-CA-C	-5.85	103.38	111.28
1	AA	366	C	C4'-C3'-O3'	5.85	118.17	109.40
41	BF	65	TRP	N-CA-C	5.84	119.26	109.09
41	DF	197	ASP	N-CA-C	-5.84	105.99	113.23
30	D4	44	THR	N-CA-C	5.83	123.23	110.80
1	AA	812	C	C2'-C3'-O3'	5.82	118.23	109.50
55	BX	38	GLU	N-CA-C	-5.82	105.44	112.54
40	DE	127	ASP	N-CA-C	-5.82	105.28	112.38
7	CG	137	LYS	N-CA-C	-5.82	104.58	111.03
47	DP	104	GLY	N-CA-C	5.81	115.50	110.21
20	AT	72	LEU	N-CA-C	-5.81	100.98	109.63
42	DG	59	GLU	N-CA-C	-5.80	104.92	112.23
45	DN	26	LEU	N-CA-C	-5.79	106.13	113.43
1	AA	1505	G	N9-C1'-C2'	5.79	120.68	112.00
1	AA	30	U	C2'-C3'-O3'	5.78	118.17	109.50
41	BF	197	ASP	N-CA-C	-5.78	106.06	113.23
45	DN	2	LYS	N-CA-C	5.78	118.31	108.02
45	DN	25	ARG	N-CA-C	-5.78	105.72	112.89
28	B2	52	ASP	N-CA-C	-5.77	105.50	113.18
36	DA	2405	G	N9-C1'-C2'	5.77	120.66	112.00
29	D3	11	SER	CA-C-N	5.77	125.31	119.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	D3	11	SER	C-N-CA	5.77	125.31	119.19
43	DH	133	VAL	N-CA-C	5.77	116.89	108.53
1	AA	553	A	C5'-C4'-C3'	-5.76	107.35	116.00
40	BE	118	LYS	N-CA-C	-5.76	98.53	110.80
1	CA	913	A	C2'-C3'-O3'	5.76	118.14	109.50
56	DY	7	VAL	N-CA-C	5.76	121.32	109.34
9	CI	63	ILE	N-CA-C	5.75	117.71	108.85
1	AA	119	A	C2'-C3'-O3'	5.75	118.12	109.50
51	BT	127	ALA	N-CA-C	-5.75	106.31	113.15
36	DA	1236	G	C4'-C3'-O3'	-5.75	104.38	113.00
9	AI	115	GLY	N-CA-C	-5.74	108.25	115.08
10	AJ	80	LYS	N-CA-C	-5.74	106.12	113.01
20	AT	27	LYS	N-CA-C	-5.74	105.17	111.82
1	CA	366	C	C4'-C3'-O3'	5.74	118.00	109.40
25	CY	274	ASP	N-CA-C	-5.73	106.29	113.28
25	CY	500	GLN	N-CA-C	5.73	118.91	107.62
40	DE	118	LYS	N-CA-C	-5.73	98.60	110.80
51	DT	112	ARG	N-CA-C	-5.73	106.08	114.39
2	AB	184	VAL	N-CA-C	5.73	116.24	107.77
56	BY	63	LYS	CA-C-O	5.72	121.26	117.94
39	DD	14	ARG	N-CA-C	-5.72	103.80	112.04
9	AI	36	TYR	N-CA-C	-5.72	106.30	113.28
47	DP	139	LYS	N-CA-C	-5.72	105.03	112.23
38	DC	194	ILE	N-CA-C	-5.71	105.28	110.82
1	CA	119	A	C2'-C3'-O3'	5.71	118.06	109.50
52	BU	115	ALA	N-CA-C	-5.71	105.99	113.12
32	B6	45	LYS	CB-CA-C	-5.70	108.14	116.53
36	DA	1313	U	N1-C1'-C2'	5.70	120.56	112.00
32	D6	33	LYS	N-CA-C	-5.70	98.66	110.80
52	BU	50	ARG	N-CA-C	-5.70	103.89	111.24
43	DH	28	GLY	CA-C-N	5.69	125.36	119.05
43	DH	28	GLY	C-N-CA	5.69	125.36	119.05
30	B4	44	THR	N-CA-C	5.68	122.91	110.80
36	BA	1313	U	N1-C1'-C2'	5.68	120.52	112.00
41	DF	83	PHE	N-CA-C	5.68	119.99	111.81
1	CA	1065	U	C2'-C3'-O3'	5.68	118.02	109.50
1	AA	1065	U	C2'-C3'-O3'	5.67	118.01	109.50
25	CY	137	ASN	N-CA-C	5.67	122.89	110.80
39	BD	14	ARG	N-CA-C	-5.67	103.87	112.04
39	DD	193	VAL	N-CA-C	5.67	117.34	109.80
11	AK	87	THR	N-CA-C	-5.67	108.16	114.62
36	DA	226	G	C4'-C3'-O3'	5.66	117.89	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	BT	23	ARG	CA-C-N	5.66	126.91	119.84
51	BT	23	ARG	C-N-CA	5.66	126.91	119.84
25	CY	476	VAL	N-CA-C	5.66	114.96	106.42
1	CA	534	U	C2'-C3'-O3'	-5.66	105.22	113.70
9	CI	115	GLY	N-CA-C	-5.66	108.35	115.08
36	DA	972	G	N9-C1'-C2'	5.66	120.48	112.00
43	DH	79	VAL	N-CA-C	-5.65	106.81	113.42
45	BN	2	LYS	N-CA-C	5.65	118.07	108.02
9	AI	63	ILE	N-CA-C	5.65	117.54	108.85
36	DA	2779	U	C2'-C3'-O3'	5.64	117.96	109.50
14	CN	36	PHE	N-CA-C	5.63	118.14	111.33
1	CA	553	A	C5'-C4'-C3'	-5.63	107.56	116.00
42	DG	56	ALA	N-CA-C	-5.62	105.52	112.38
18	AR	51	LEU	CA-C-N	5.62	125.82	120.31
18	AR	51	LEU	C-N-CA	5.62	125.82	120.31
52	BU	62	ILE	N-CA-C	5.62	115.81	110.42
25	CY	491	VAL	N-CA-C	5.61	116.78	108.65
19	CS	36	ARG	N-CA-C	-5.61	105.54	112.38
1	CA	30	U	C2'-C3'-O3'	5.61	117.91	109.50
33	D7	30	VAL	N-CA-C	-5.61	105.06	110.72
32	B6	33	LYS	N-CA-C	-5.60	98.86	110.80
43	DH	172	LYS	CA-C-N	5.60	126.84	119.84
43	DH	172	LYS	C-N-CA	5.60	126.84	119.84
5	AE	69	VAL	CA-C-N	5.60	126.84	119.84
5	AE	69	VAL	C-N-CA	5.60	126.84	119.84
56	BY	7	VAL	N-CA-C	5.60	120.99	109.34
43	BH	79	VAL	N-CA-C	-5.60	106.87	113.42
20	AT	14	LYS	N-CA-C	-5.60	104.58	111.75
36	DA	2296	U	C4'-C3'-O3'	5.59	117.79	109.40
19	AS	36	ARG	N-CA-C	-5.59	105.56	112.38
36	BA	728	G	C2'-C3'-O3'	5.59	117.89	109.50
11	CK	87	THR	N-CA-C	-5.59	108.25	114.62
36	BA	2779	U	C2'-C3'-O3'	5.59	117.89	109.50
52	DU	115	ALA	N-CA-C	-5.59	106.13	113.12
42	BG	141	PHE	CA-C-N	5.59	126.83	119.84
42	BG	141	PHE	C-N-CA	5.59	126.83	119.84
40	BE	128	SER	N-CA-C	5.59	122.70	110.80
46	BO	9	GLU	N-CA-C	-5.59	100.14	109.24
46	BO	66	LYS	N-CA-C	-5.58	105.28	111.36
46	DO	66	LYS	N-CA-C	-5.58	105.28	111.36
36	BA	2405	G	N9-C1'-C2'	5.58	120.37	112.00
50	BS	93	LYS	N-CA-C	-5.58	103.71	111.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	AY	214	GLU	N-CA-C	-5.58	106.15	113.12
25	CY	314	PHE	N-CA-C	5.57	120.36	113.50
36	DA	74	A	C2'-C3'-O3'	5.57	117.86	109.50
42	BG	89	GLY	N-CA-C	-5.56	100.00	113.18
36	DA	2835	A	N9-C1'-C2'	5.56	120.34	112.00
13	AM	101	GLN	N-CA-C	5.56	115.74	108.07
20	AT	93	GLU	N-CA-C	-5.56	106.08	112.92
29	B3	11	SER	CA-C-N	5.56	125.08	119.19
29	B3	11	SER	C-N-CA	5.56	125.08	119.19
25	AY	572	TYR	N-CA-C	5.55	115.57	108.24
43	DH	139	GLN	N-CA-C	-5.55	105.38	111.82
51	DT	70	VAL	N-CA-C	5.55	116.10	110.05
2	CB	158	LEU	CA-C-N	5.54	125.49	119.78
2	CB	158	LEU	C-N-CA	5.54	125.49	119.78
3	CC	34	LEU	N-CA-C	-5.54	105.14	111.07
40	DE	128	SER	N-CA-C	5.54	122.60	110.80
34	B8	47	LYS	N-CA-C	5.54	116.69	108.60
13	CM	123	ALA	CA-C-N	5.54	126.77	119.84
13	CM	123	ALA	C-N-CA	5.54	126.77	119.84
28	D2	31	GLU	N-CA-C	-5.54	105.16	111.14
36	BA	2464	C	N1-C1'-C2'	-5.53	105.70	114.00
36	DA	2580	U	N1-C1'-C2'	5.53	120.30	112.00
25	CY	433	GLU	N-CA-C	-5.53	104.76	112.45
36	BA	2835	A	N9-C1'-C2'	5.53	120.30	112.00
25	AY	167	PRO	N-CA-C	5.53	119.56	110.55
36	BA	848	G	C5'-C4'-C3'	-5.53	107.71	116.00
1	AA	315	A	N9-C1'-C2'	5.52	120.29	112.00
43	BH	65	HIS	N-CA-C	-5.52	102.31	110.48
36	BA	2511	U	C5'-C4'-C3'	-5.52	107.72	116.00
25	AY	426	GLN	N-CA-C	-5.51	106.40	113.02
1	CA	839	U	N1-C1'-C2'	5.51	120.27	112.00
36	DA	1609	A	N9-C1'-C2'	5.51	120.27	112.00
43	DH	65	HIS	N-CA-C	-5.51	102.32	110.48
36	BA	74	A	C2'-C3'-O3'	5.51	117.76	109.50
14	AN	36	PHE	N-CA-C	5.50	117.99	111.33
33	B7	5	TRP	N-CA-C	5.50	117.61	108.20
1	CA	315	A	N9-C1'-C2'	5.50	120.25	112.00
42	DG	77	ILE	CB-CA-C	-5.50	107.06	113.22
15	AO	52	SER	N-CA-C	-5.50	105.37	111.36
9	CI	36	TYR	N-CA-C	-5.50	106.58	113.28
36	BA	83	G	C4'-C3'-O3'	-5.49	104.76	113.00
43	BH	139	GLN	N-CA-C	-5.49	105.45	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BA	1051	G	N9-C1'-C2'	5.49	120.24	112.00
3	AC	152	ILE	N-CA-C	5.49	115.79	108.27
3	CC	152	ILE	N-CA-C	5.49	115.79	108.27
36	DA	848	G	C5'-C4'-C3'	-5.49	107.77	116.00
20	CT	93	GLU	N-CA-C	-5.49	106.17	112.92
55	DX	47	PHE	N-CA-C	-5.49	104.52	113.19
10	CJ	80	LYS	N-CA-C	-5.48	106.43	113.01
54	DW	53	SER	N-CA-C	-5.48	106.66	113.19
43	BH	172	LYS	CA-C-N	5.48	126.69	119.84
43	BH	172	LYS	C-N-CA	5.48	126.69	119.84
54	BW	53	SER	N-CA-C	-5.48	106.67	113.19
39	BD	213	ARG	N-CA-C	-5.48	104.95	111.69
40	BE	168	MET	N-CA-C	5.48	118.66	109.95
25	CY	34	TYR	N-CA-C	-5.48	99.12	110.80
25	CY	549	ALA	N-CA-C	-5.48	106.59	113.28
51	DT	23	ARG	CA-C-N	5.48	126.69	119.84
51	DT	23	ARG	C-N-CA	5.48	126.69	119.84
5	AE	127	ASN	CA-C-N	5.48	126.69	119.84
5	AE	127	ASN	C-N-CA	5.48	126.69	119.84
36	DA	728	G	C2'-C3'-O3'	5.48	117.72	109.50
4	AD	171	GLY	CA-C-N	5.48	126.69	119.84
4	AD	171	GLY	C-N-CA	5.48	126.69	119.84
42	BG	60	LEU	N-CA-C	-5.48	106.67	113.19
40	DE	135	HIS	N-CA-C	5.48	120.41	111.37
36	BA	226	G	C4'-C3'-O3'	5.47	117.61	109.40
13	AM	123	ALA	CA-C-N	5.47	126.68	119.84
13	AM	123	ALA	C-N-CA	5.47	126.68	119.84
27	B1	54	ALA	CB-CA-C	-5.46	110.25	116.54
1	AA	913	A	C4'-C3'-O3'	5.46	117.58	109.40
55	BX	47	PHE	N-CA-C	-5.45	104.58	113.19
40	DE	168	MET	N-CA-C	5.45	118.62	109.95
36	BA	1301	A	C2'-C3'-O3'	5.45	117.67	109.50
7	AG	137	LYS	N-CA-C	-5.45	104.99	111.03
39	BD	193	VAL	N-CA-C	5.44	117.04	109.80
51	BT	93	ARG	N-CA-C	-5.44	105.72	112.47
1	CA	438	G	C4'-C3'-O3'	5.44	117.56	109.40
25	AY	76	ASP	N-CA-C	5.44	119.13	111.52
25	AY	151	ARG	N-CA-C	-5.44	106.68	113.15
45	DN	68	GLU	N-CA-C	-5.44	105.25	113.51
27	D1	54	ALA	CB-CA-C	-5.44	110.29	116.54
36	DA	1835	G	C5'-C4'-C3'	-5.43	107.85	116.00
4	AD	31	CYS	N-CA-C	-5.43	105.88	113.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	CN	50	LYS	N-CA-C	-5.42	106.64	113.20
4	CD	12	CYS	N-CA-C	-5.42	102.42	111.37
10	CJ	64	GLU	N-CA-C	5.42	117.50	109.69
36	BA	1654	A	C5'-C4'-C3'	5.42	124.13	116.00
36	DA	1051	G	N9-C1'-C2'	5.42	120.13	112.00
42	BG	4	ASP	N-CA-C	5.42	122.33	110.80
54	BW	13	SER	N-CA-C	5.42	116.52	109.64
1	AA	839	U	N1-C1'-C2'	5.41	120.12	112.00
25	AY	32	ILE	N-CA-C	-5.41	104.45	110.62
1	AA	534	U	C2'-C3'-O3'	-5.41	105.59	113.70
51	DT	127	ALA	N-CA-C	-5.41	106.72	113.15
1	AA	672	U	N1-C1'-C2'	5.40	120.10	112.00
20	CT	14	LYS	N-CA-C	-5.40	104.84	111.75
57	BZ	175	VAL	CA-C-N	5.40	125.94	120.38
57	BZ	175	VAL	C-N-CA	5.40	125.94	120.38
25	AY	302	HIS	CA-C-N	5.40	126.59	119.84
25	AY	302	HIS	C-N-CA	5.40	126.59	119.84
45	BN	26	LEU	N-CA-C	-5.40	106.63	113.43
42	DG	65	GLY	N-CA-C	-5.40	107.57	114.37
51	DT	93	ARG	N-CA-C	-5.39	105.78	112.47
7	AG	45	ASP	N-CA-C	-5.38	106.67	113.18
36	BA	790	C	C2'-C3'-O3'	-5.38	105.64	113.70
54	BW	13	SER	CA-C-N	5.38	126.56	119.84
54	BW	13	SER	C-N-CA	5.38	126.56	119.84
36	DA	1654	A	C5'-C4'-C3'	5.37	124.05	116.00
1	CA	243	A	C2'-C3'-O3'	5.37	117.55	109.50
36	BA	1609	A	N9-C1'-C2'	5.37	120.05	112.00
47	BP	139	LYS	N-CA-C	-5.37	105.47	112.23
40	DE	137	HIS	CA-C-N	5.36	125.00	119.05
40	DE	137	HIS	C-N-CA	5.36	125.00	119.05
45	BN	68	GLU	N-CA-C	-5.36	105.36	113.51
42	DG	166	ASP	N-CA-C	-5.36	105.33	111.07
36	BA	2296	U	C4'-C3'-O3'	5.36	117.44	109.40
25	AY	152	THR	N-CA-C	-5.36	108.52	114.62
32	B6	32	ASN	N-CA-C	5.36	116.77	107.93
42	BG	139	LEU	N-CA-C	5.36	118.83	112.72
1	AA	315	A	C4'-C3'-O3'	-5.35	104.97	113.00
28	B2	71	ASN	N-CA-C	-5.35	106.63	114.39
42	DG	28	VAL	N-CA-C	-5.35	105.74	113.07
1	AA	243	A	C2'-C3'-O3'	5.35	117.53	109.50
51	BT	113	LYS	N-CA-C	-5.35	106.77	113.72
20	CT	27	LYS	N-CA-C	-5.35	105.62	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	DB	40	U	C2'-C3'-O3'	-5.34	105.69	113.70
37	BB	40	U	C2'-C3'-O3'	-5.34	105.69	113.70
2	CB	46	LYS	N-CA-C	-5.34	105.91	112.90
25	CY	489	LYS	CA-C-N	5.33	125.09	119.76
25	CY	489	LYS	C-N-CA	5.33	125.09	119.76
36	BA	1493	C	N1-C1'-C2'	5.33	122.00	114.00
36	DA	2132	U	N1-C1'-C2'	5.33	120.00	112.00
1	AA	703	G	N9-C1'-C2'	5.33	119.99	112.00
30	D4	36	CYS	CB-CA-C	-5.33	109.40	117.07
3	AC	164	ARG	CA-C-O	5.32	121.03	117.94
4	CD	171	GLY	CA-C-N	5.32	126.50	119.84
4	CD	171	GLY	C-N-CA	5.32	126.50	119.84
36	DA	83	G	C4'-C3'-O3'	-5.32	105.02	113.00
46	DO	9	GLU	N-CA-C	-5.32	100.57	109.24
40	BE	63	LEU	N-CA-C	-5.32	106.06	112.54
36	BA	972	G	N9-C1'-C2'	5.31	119.97	112.00
36	BA	1930	G	C1'-C2'-O2'	-5.31	103.83	111.80
25	AY	143	GLY	N-CA-C	-5.31	108.51	115.47
46	BO	40	VAL	N-CA-C	-5.31	100.00	107.75
39	BD	35	LYS	N-CA-C	5.31	121.54	109.81
15	CO	52	SER	N-CA-C	-5.31	105.57	111.36
36	DA	1301	A	C2'-C3'-O3'	5.31	117.46	109.50
52	BU	97	ASP	N-CA-C	-5.31	106.05	113.37
25	CY	457	LEU	N-CA-C	5.30	117.06	111.28
36	DA	790	C	C2'-C3'-O3'	-5.30	105.75	113.70
43	BH	121	ILE	N-CA-C	5.29	115.34	108.35
3	AC	126	ARG	N-CA-C	-5.29	106.41	112.92
27	B1	90	ILE	N-CA-C	-5.29	105.92	110.74
36	BA	2580	U	N1-C1'-C2'	5.29	119.93	112.00
1	AA	572	A	N9-C1'-C2'	5.29	119.93	112.00
36	DA	2126	A	C2'-C3'-O3'	5.28	117.42	109.50
25	CY	607	ARG	N-CA-C	-5.28	101.67	110.17
10	AJ	64	GLU	N-CA-C	5.28	117.29	109.69
52	DU	97	ASP	N-CA-C	-5.28	106.09	113.37
1	CA	1225	A	C4'-C3'-O3'	5.28	117.31	109.40
2	CB	108	ILE	N-CA-C	-5.27	105.25	111.00
51	DT	80	SER	CA-C-N	-5.27	113.25	119.84
51	DT	80	SER	C-N-CA	-5.27	113.25	119.84
25	AY	421	GLN	N-CA-C	-5.27	106.62	113.16
36	DA	2464	C	N1-C1'-C2'	-5.27	106.10	114.00
25	CY	203	GLU	N-CA-C	5.27	122.02	110.80
57	DZ	20	ARG	N-CA-C	-5.27	106.81	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	BD	134	ARG	N-CA-C	5.26	118.48	111.75
1	CA	913	A	C4'-C3'-O3'	5.26	117.29	109.40
1	AA	6	G	C4'-C3'-O3'	-5.26	105.11	113.00
33	D7	5	TRP	N-CA-C	5.25	117.51	107.75
5	AE	67	VAL	N-CA-C	5.24	115.45	108.27
25	AY	489	LYS	CA-C-N	5.24	125.40	119.90
25	AY	489	LYS	C-N-CA	5.24	125.40	119.90
54	BW	42	ARG	N-CA-C	-5.24	105.99	112.38
1	CA	1502	A	N9-C1'-C2'	5.23	121.85	114.00
3	CC	164	ARG	CB-CA-C	-5.23	109.54	117.07
3	CC	164	ARG	CA-C-O	5.23	120.97	117.94
2	AB	108	ILE	N-CA-C	-5.22	105.30	111.00
25	AY	227	ILE	N-CA-C	-5.22	107.66	112.83
1	CA	703	G	N9-C1'-C2'	5.22	119.83	112.00
51	DT	30	VAL	N-CA-C	5.22	120.20	109.34
51	BT	30	VAL	N-CA-C	5.22	120.20	109.34
25	AY	679	VAL	CA-C-N	5.22	126.36	119.84
25	AY	679	VAL	C-N-CA	5.22	126.36	119.84
1	CA	1054	C	N1-C1'-C2'	5.22	119.83	112.00
54	DW	13	SER	CA-C-N	5.22	126.36	119.84
54	DW	13	SER	C-N-CA	5.22	126.36	119.84
38	BC	6	LYS	N-CA-C	-5.22	105.66	112.23
39	DD	35	LYS	N-CA-C	5.22	121.34	109.81
25	CY	452	SER	N-CA-C	5.21	118.23	110.52
40	DE	63	LEU	N-CA-C	-5.21	106.18	112.54
2	AB	214	ILE	N-CA-C	5.21	115.43	110.53
25	CY	624	LEU	N-CA-C	-5.21	106.89	113.20
35	B9	3	VAL	N-CA-C	5.21	116.12	109.30
52	DU	62	ILE	N-CA-C	5.21	115.42	110.42
9	AI	72	GLY	N-CA-C	-5.21	106.48	112.73
27	D1	67	ILE	N-CA-C	-5.21	106.16	112.67
1	AA	672	U	C4'-C3'-O3'	-5.21	105.19	113.00
25	AY	38	ARG	N-CA-C	-5.20	106.33	113.30
51	DT	113	LYS	N-CA-C	-5.20	106.96	113.72
36	BA	745	G	C5'-C4'-C3'	-5.20	108.20	116.00
25	AY	256	THR	CA-C-N	5.20	126.33	119.84
25	AY	256	THR	C-N-CA	5.20	126.33	119.84
36	BA	2597	G	N9-C1'-C2'	5.20	119.80	112.00
36	BA	2026	C	C5'-C4'-C3'	-5.19	108.21	116.00
1	CA	1298	C	N1-C1'-C2'	5.19	119.79	112.00
8	AH	79	VAL	N-CA-C	-5.19	106.08	111.58
34	D8	47	LYS	N-CA-C	5.19	116.18	108.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	D4	42	PHE	CA-C-N	5.19	131.45	121.54
30	D4	42	PHE	C-N-CA	5.19	131.45	121.54
21	CU	24	ARG	N-CA-C	-5.19	106.71	112.57
36	BA	2126	A	C2'-C3'-O3'	5.18	117.28	109.50
25	AY	29	THR	N-CA-C	5.18	117.72	111.40
25	CY	628	ARG	N-CA-C	5.18	121.84	110.80
54	DW	13	SER	N-CA-C	5.18	116.22	109.64
51	BT	70	VAL	N-CA-C	5.17	116.06	110.21
2	AB	158	LEU	CA-C-N	5.17	125.11	119.78
2	AB	158	LEU	C-N-CA	5.17	125.11	119.78
3	AC	164	ARG	CB-CA-C	-5.17	109.62	117.07
1	AA	1225	A	C4'-C3'-O3'	5.17	117.16	109.40
20	CT	50	GLU	N-CA-C	5.17	116.99	111.36
36	BA	1459	G	N9-C1'-C2'	5.17	119.75	112.00
36	BA	784	A	N9-C1'-C2'	5.17	119.75	112.00
36	BA	1109	C	N1-C1'-C2'	5.16	119.75	112.00
25	CY	272	LEU	N-CA-C	-5.16	106.83	113.23
41	DF	13	SER	CA-C-N	5.16	126.29	119.84
41	DF	13	SER	C-N-CA	5.16	126.29	119.84
43	BH	71	LEU	N-CA-C	-5.16	105.78	111.71
25	CY	629	GLY	N-CA-C	5.16	119.93	112.82
36	DA	784	A	N9-C1'-C2'	5.16	119.73	112.00
25	AY	225	GLU	N-CA-C	-5.15	106.95	113.18
1	CA	1095	U	C5'-C4'-C3'	-5.15	108.27	116.00
13	CM	101	GLN	N-CA-C	5.15	115.18	108.07
25	CY	432	ALA	N-CA-C	-5.15	107.66	114.31
45	DN	122	VAL	N-CA-C	5.15	115.90	108.48
42	DG	144	ILE	N-CA-C	5.15	116.38	108.71
1	CA	1101	A	C5'-C4'-C3'	5.15	122.92	115.20
57	DZ	124	ILE	N-CA-C	5.15	116.22	109.58
29	B3	22	ALA	N-CA-C	-5.15	107.13	113.41
1	AA	1054	C	N1-C1'-C2'	5.14	119.72	112.00
41	BF	13	SER	CA-C-N	5.14	126.27	119.84
41	BF	13	SER	C-N-CA	5.14	126.27	119.84
32	D6	32	ASN	N-CA-C	5.14	116.42	107.93
36	DA	2518	A	C2'-C3'-O3'	-5.14	105.98	113.70
36	DA	1493	C	N1-C1'-C2'	5.14	121.71	114.00
36	DA	1459	G	N9-C1'-C2'	5.14	119.71	112.00
13	CM	50	GLU	N-CA-C	-5.14	105.17	111.75
1	CA	509	A	C5'-C4'-C3'	-5.14	108.30	116.00
7	CG	45	ASP	N-CA-C	-5.13	106.97	113.18
45	DN	78	TYR	N-CA-C	5.13	117.56	110.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	B7	6	GLN	CA-C-N	5.12	125.13	119.90
33	B7	6	GLN	C-N-CA	5.12	125.13	119.90
36	BA	1378	A	C2'-C3'-O3'	5.12	117.19	109.50
30	B4	42	PHE	CA-C-N	5.12	131.32	121.54
30	B4	42	PHE	C-N-CA	5.12	131.32	121.54
1	AA	1101	A	C5'-C4'-C3'	5.12	122.87	115.20
43	DH	121	ILE	N-CA-C	5.11	115.10	108.35
8	AH	100	ILE	CA-C-N	5.11	125.39	119.92
8	AH	100	ILE	C-N-CA	5.11	125.39	119.92
36	DA	2511	U	C5'-C4'-C3'	-5.11	108.34	116.00
38	BC	149	ASN	N-CA-C	-5.10	105.78	112.72
12	AL	70	ILE	CA-C-N	5.10	126.22	119.84
12	AL	70	ILE	C-N-CA	5.10	126.22	119.84
36	DA	1051	G	C4'-C3'-O3'	-5.10	105.35	113.00
12	AL	44	THR	CA-C-N	5.10	126.21	119.84
12	AL	44	THR	C-N-CA	5.10	126.21	119.84
1	CA	1493	A	C2'-C3'-O3'	5.10	121.35	113.70
39	BD	59	LYS	N-CA-C	-5.10	102.84	110.23
56	DY	63	LYS	N-CA-C	5.10	112.96	108.78
20	AT	50	GLU	N-CA-C	5.09	116.91	111.36
25	AY	260	LEU	N-CA-C	5.09	115.06	107.88
36	BA	2779	U	C5'-C4'-C3'	-5.09	107.56	115.20
1	AA	1190	G	C4'-C3'-O3'	-5.09	105.37	113.00
45	BN	115	ARG	N-CA-C	-5.09	106.33	112.54
36	DA	2111	C	N1-C1'-C2'	5.09	121.63	114.00
25	CY	574	GLU	N-CA-C	5.09	117.48	111.33
39	DD	225	ALA	N-CA-C	-5.09	99.96	110.80
57	BZ	93	ASP	N-CA-C	-5.08	108.10	114.56
3	CC	27	LYS	N-CA-C	-5.08	107.63	113.88
2	CB	214	ILE	N-CA-C	5.08	115.31	110.53
25	AY	598	ASP	CA-C-N	5.08	126.48	120.23
25	AY	598	ASP	C-N-CA	5.08	126.48	120.23
46	DO	51	ALA	N-CA-C	-5.08	107.06	113.20
53	BV	12	TYR	N-CA-C	5.07	116.01	108.86
38	DC	149	ASN	N-CA-C	-5.07	105.82	112.72
36	BA	2132	U	N1-C1'-C2'	5.07	119.60	112.00
38	BC	54	ARG	O-C-N	-5.07	116.27	123.01
11	AK	24	SER	N-CA-C	-5.06	102.01	109.86
25	CY	399	LEU	N-CA-C	5.06	121.58	110.80
35	D9	3	VAL	N-CA-C	5.06	116.20	109.37
6	AF	25	ILE	N-CA-C	-5.06	104.73	111.05
40	BE	135	HIS	N-CA-C	5.05	119.71	111.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	BN	122	VAL	N-CA-C	5.05	115.76	108.48
5	CE	131	ILE	N-CA-C	-5.05	105.47	110.62
25	CY	280	LEU	CA-C-N	5.05	125.45	119.99
25	CY	280	LEU	C-N-CA	5.05	125.45	119.99
36	DA	1930	G	C1'-C2'-O2'	-5.05	104.22	111.80
5	CE	67	VAL	N-CA-C	5.05	115.19	108.27
25	CY	128	TYR	N-CA-C	-5.05	106.96	114.64
51	BT	80	SER	CA-C-N	-5.05	113.53	119.84
51	BT	80	SER	C-N-CA	-5.05	113.53	119.84
57	DZ	21	ALA	N-CA-C	-5.05	106.71	112.92
36	BA	2117	A	N9-C1'-C2'	5.05	119.57	112.00
56	DY	8	LYS	N-CA-C	5.05	117.22	109.95
2	AB	67	THR	N-CA-C	5.04	117.98	110.52
1	AA	516	U	N1-C1'-C2'	5.04	119.56	112.00
33	B7	24	THR	N-CA-C	5.04	116.00	109.65
1	CA	315	A	C4'-C3'-O3'	-5.04	105.44	113.00
47	DP	38	GLN	N-CA-C	5.04	116.13	108.12
36	BA	2111	C	N1-C1'-C2'	5.04	121.56	114.00
13	AM	50	GLU	N-CA-C	-5.03	105.31	111.75
36	BA	793	A	C4'-C3'-O3'	-5.03	105.45	113.00
46	BO	51	ALA	N-CA-C	-5.03	107.11	113.20
25	CY	352	VAL	N-CA-C	-5.03	102.20	108.84
30	D4	36	CYS	CA-C-O	5.03	120.86	117.94
38	BC	14	LYS	N-CA-C	5.03	121.52	110.80
30	B4	36	CYS	CB-CA-C	-5.03	109.14	116.53
42	BG	168	GLU	N-CA-C	-5.03	105.71	111.14
43	DH	103	LEU	N-CA-C	5.03	116.71	108.52
1	AA	389	A	C5'-C4'-C3'	5.03	123.54	116.00
43	DH	71	LEU	N-CA-C	-5.03	105.93	111.71
14	AN	53	LEU	CA-C-N	5.02	125.30	119.93
14	AN	53	LEU	C-N-CA	5.02	125.30	119.93
1	AA	754	C	N1-C1'-C2'	5.02	119.53	112.00
36	BA	1506	C	N1-C1'-C2'	5.02	119.53	112.00
36	BA	1669	A	N9-C1'-C2'	5.02	119.53	112.00
40	BE	152	LYS	N-CA-C	-5.02	103.42	110.50
1	AA	481	G	C5'-C4'-C3'	-5.01	107.68	115.20
39	DD	59	LYS	N-CA-C	-5.01	102.96	110.23
55	BX	27	THR	N-CA-C	5.01	118.17	107.70
36	BA	2121	G	C5'-C4'-C3'	-5.01	108.49	116.00
25	CY	259	PHE	N-CA-C	-5.01	102.07	109.18
42	BG	51	ARG	N-CA-C	5.01	116.68	108.52
37	DB	88	C	N1-C1'-C2'	5.01	119.51	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BA	512	G	C4'-C3'-O3'	-5.00	105.49	113.00
57	DZ	73	GLN	N-CA-C	5.00	116.53	108.32
2	AB	46	LYS	N-CA-C	-5.00	106.35	112.90
13	AM	87	TYR	N-CA-C	-5.00	105.52	110.97
36	BA	1584	C	N1-C1'-C2'	5.00	119.50	112.00
36	BA	1835	G	C5'-C4'-C3'	-5.00	108.49	116.00
1	CA	1190	G	C4'-C3'-O3'	-5.00	105.50	113.00
36	DA	1109	C	N1-C1'-C2'	5.00	119.50	112.00
24	CX	19	A	O3'-P-O5'	-5.00	96.50	104.00
36	DA	512	G	C4'-C3'-O3'	-5.00	105.50	113.00

All (6) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	1498	U	C3'
36	BA	1799	G	C3'
36	BA	1992	G	C3'
1	CA	1498	U	C3'
36	DA	1799	G	C3'
36	DA	1992	G	C3'

All (124) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1065	U	Sidechain
1	AA	1073	U	Sidechain
1	AA	1077	G	Sidechain
1	AA	108	G	Sidechain
1	AA	118	U	Sidechain
1	AA	1190	G	Sidechain
1	AA	1214	C	Sidechain
1	AA	1360	A	Sidechain
1	AA	1398	A	Sidechain
1	AA	1498	U	Sidechain
1	AA	1505	G	Sidechain
1	AA	1516	G	Sidechain
1	AA	1519	A	Sidechain
1	AA	1529	G	Sidechain
1	AA	202	U	Sidechain
1	AA	250	A	Sidechain
1	AA	436	C	Sidechain
1	AA	534	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	586	C	Sidechain
1	AA	672	U	Sidechain
1	AA	727	G	Sidechain
1	AA	749	C	Sidechain
1	AA	760	G	Sidechain
1	AA	880	C	Sidechain
1	AA	898	G	Sidechain
1	AA	991	U	Sidechain
22	AV	4	C	Sidechain
36	BA	1156	A	Sidechain
36	BA	1162	G	Sidechain
36	BA	1236	G	Sidechain
36	BA	1252	G	Sidechain
36	BA	1300	U	Sidechain
36	BA	1379	A	Sidechain
36	BA	1496	A	Sidechain
36	BA	1619	G	Sidechain
36	BA	1623	G	Sidechain
36	BA	1647	G	Sidechain
36	BA	1690	A	Sidechain
36	BA	1772	G	Sidechain
36	BA	1791	A	Sidechain
36	BA	1802	A	Sidechain
36	BA	1907	G	Sidechain
36	BA	1952	A	Sidechain
36	BA	1985	G	Sidechain
36	BA	1992	G	Sidechain
36	BA	2009	G	Sidechain
36	BA	2031	A	Sidechain
36	BA	2033	A	Sidechain
36	BA	2052	G	Sidechain
36	BA	2061	G	Sidechain
36	BA	2296	U	Sidechain
36	BA	2320	A	Sidechain
36	BA	2344	U	Sidechain
36	BA	2401	U	Sidechain
36	BA	2405	G	Sidechain
36	BA	2569	G	Sidechain
36	BA	2659	G	Sidechain
36	BA	269	U	Sidechain
36	BA	2732	G	Sidechain
36	BA	2835	A	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	463	G	Sidechain
36	BA	688	U	Sidechain
36	BA	746	A	Sidechain
36	BA	788	A	Sidechain
36	BA	845	G	Sidechain
36	BA	945	A	Sidechain
1	CA	1065	U	Sidechain
1	CA	1077	G	Sidechain
1	CA	108	G	Sidechain
1	CA	118	U	Sidechain
1	CA	1190	G	Sidechain
1	CA	1214	C	Sidechain
1	CA	1401	G	Sidechain
1	CA	1502	A	Sidechain
1	CA	1510	U	Sidechain
1	CA	1519	A	Sidechain
1	CA	1522	U	Sidechain
1	CA	1525	G	Sidechain
1	CA	189(G)	G	Sidechain
1	CA	250	A	Sidechain
1	CA	436	C	Sidechain
1	CA	586	C	Sidechain
1	CA	672	U	Sidechain
1	CA	749	C	Sidechain
1	CA	880	C	Sidechain
1	CA	898	G	Sidechain
1	CA	991	U	Sidechain
36	DA	1156	A	Sidechain
36	DA	1162	G	Sidechain
36	DA	1236	G	Sidechain
36	DA	1238	G	Sidechain
36	DA	1252	G	Sidechain
36	DA	1300	U	Sidechain
36	DA	1379	A	Sidechain
36	DA	1619	G	Sidechain
36	DA	1623	G	Sidechain
36	DA	1647	G	Sidechain
36	DA	1690	A	Sidechain
36	DA	1772	G	Sidechain
36	DA	1802	A	Sidechain
36	DA	1907	G	Sidechain
36	DA	1930	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	1952	A	Sidechain
36	DA	1992	G	Sidechain
36	DA	2009	G	Sidechain
36	DA	2031	A	Sidechain
36	DA	2033	A	Sidechain
36	DA	2052	G	Sidechain
36	DA	2061	G	Sidechain
36	DA	2320	A	Sidechain
36	DA	2344	U	Sidechain
36	DA	2401	U	Sidechain
36	DA	2464	C	Sidechain
36	DA	2569	G	Sidechain
36	DA	2659	G	Sidechain
36	DA	269	U	Sidechain
36	DA	2732	G	Sidechain
36	DA	2835	A	Sidechain
36	DA	2857	G	Sidechain
36	DA	463	G	Sidechain
36	DA	688	U	Sidechain
36	DA	788	A	Sidechain
36	DA	845	G	Sidechain
36	DA	945	A	Sidechain

5.2 Too-close contacts

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	1167	0
1	CA	32329	0	16318	1207	0
2	AB	1901	0	1951	243	0
2	CB	1901	0	1951	241	0
3	AC	1613	0	1677	199	0
3	CC	1613	0	1677	207	0
4	AD	1703	0	1763	182	0
4	CD	1703	0	1763	191	0
5	AE	1147	0	1207	122	0
5	CE	1147	0	1207	119	0
6	AF	843	0	857	81	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	CF	843	0	857	83	0
7	AG	1257	0	1296	98	0
7	CG	1257	0	1296	101	0
8	AH	1116	0	1177	95	0
8	CH	1116	0	1177	92	0
9	AI	1010	0	1035	145	0
9	CI	1010	0	1035	145	0
10	AJ	795	0	840	161	0
10	CJ	795	0	840	159	0
11	AK	885	0	904	64	0
11	CK	885	0	904	69	0
12	AL	971	0	1057	143	0
12	CL	971	0	1057	150	0
13	AM	988	0	1059	169	0
13	CM	988	0	1059	164	0
14	AN	492	0	529	64	0
14	CN	492	0	529	64	0
15	AO	734	0	771	75	0
15	CO	734	0	771	79	0
16	AP	701	0	720	72	0
16	CP	701	0	720	72	0
17	AQ	824	0	891	63	0
17	CQ	824	0	891	69	0
18	AR	574	0	644	84	0
18	CR	574	0	644	83	0
19	AS	630	0	652	109	0
19	CS	630	0	652	115	0
20	AT	763	0	861	109	0
20	CT	763	0	861	106	0
21	AU	209	0	221	20	0
21	CU	209	0	221	19	0
22	AV	1619	0	822	62	0
22	CV	1619	0	822	60	0
23	AW	1641	0	839	125	0
23	CW	1641	0	840	115	0
24	AX	257	0	130	45	0
24	CX	257	0	130	51	0
25	AY	5215	0	5288	897	0
25	CY	5215	0	5287	839	0
26	B0	662	0	688	99	0
26	D0	662	0	688	100	0
27	B1	732	0	808	130	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	D1	732	0	808	117	0
28	B2	598	0	653	93	0
28	D2	598	0	653	124	0
29	B3	468	0	523	63	0
29	D3	468	0	523	63	0
30	B4	451	0	449	95	0
30	D4	451	0	449	93	0
31	B5	459	0	480	102	0
31	D5	459	0	480	100	0
32	B6	433	0	461	151	0
32	D6	433	0	461	153	0
33	B7	419	0	467	40	0
33	D7	419	0	467	38	0
34	B8	508	0	576	102	0
34	D8	508	0	576	102	0
35	B9	307	0	335	30	0
35	D9	307	0	335	28	0
36	BA	62474	0	31497	2608	0
36	DA	62474	0	31497	2646	0
37	BB	2551	0	1295	132	0
37	DB	2551	0	1295	140	0
38	BC	1742	0	1797	171	0
38	DC	1742	0	1798	170	0
39	BD	2145	0	2234	311	0
39	DD	2145	0	2234	326	0
40	BE	1564	0	1629	261	0
40	DE	1564	0	1629	257	0
41	BF	1624	0	1677	251	0
41	DF	1624	0	1677	240	0
42	BG	1474	0	1534	251	0
42	DG	1474	0	1534	276	0
43	BH	1269	0	1337	184	0
43	DH	1269	0	1337	184	0
44	BJ	851	0	194	31	0
44	DJ	851	0	195	32	0
45	BN	1105	0	1180	195	0
45	DN	1105	0	1180	201	0
46	BO	933	0	996	114	0
46	DO	933	0	996	108	0
47	BP	1114	0	1187	302	0
47	DP	1114	0	1187	303	0
48	BQ	1122	0	1179	137	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	DQ	1122	0	1179	127	0
49	BR	960	0	1021	157	0
49	DR	960	0	1021	160	0
50	BS	771	0	832	162	0
50	DS	771	0	832	154	0
51	BT	1142	0	1202	249	0
51	DT	1142	0	1202	247	0
52	BU	958	0	1015	142	0
52	DU	958	0	1015	150	0
53	BV	779	0	852	143	0
53	DV	779	0	852	145	0
54	BW	896	0	953	101	0
54	DW	896	0	953	104	0
55	BX	726	0	778	82	0
55	DX	726	0	778	86	0
56	BY	811	0	901	184	0
56	DY	811	0	901	189	0
57	BZ	1468	0	1492	207	0
57	DZ	1468	0	1492	232	0
58	AD	1	0	0	0	0
58	AN	1	0	0	0	0
58	B4	1	0	0	0	0
58	B9	1	0	0	0	0
58	CD	1	0	0	0	0
58	CN	1	0	0	0	0
58	D4	1	0	0	0	0
58	D9	1	0	0	0	0
59	AY	37	0	47	15	0
59	CY	37	0	47	26	0
60	AY	28	0	12	14	0
60	CY	28	0	12	10	0
61	AY	1	0	0	0	0
61	CY	1	0	0	0	0
All	All	307606	0	211582	21971	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 42.

All (21971) 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)
38:BC:121:MET:CE	38:BC:121:MET:SD	2.02	1.48
1:CA:1503:A:N1	24:CX:11:A:C2	1.82	1.47
23:CW:34:C:C3'	23:CW:35:A:H5''	1.42	1.47
38:DC:121:MET:SD	38:DC:121:MET:CE	2.02	1.46
38:DC:109:MET:SD	38:DC:109:MET:CE	2.03	1.44
23:AW:34:C:C3'	23:AW:35:A:H5''	1.42	1.44
22:CV:36:A:N1	24:CX:16:U:O4	1.61	1.32
36:DA:1378:A:O2'	36:DA:1379:A:H5''	1.39	1.23
24:CX:11:A:H4'	24:CX:12:A:C5'	1.69	1.23
24:AX:11:A:H4'	24:AX:12:A:C5'	1.69	1.21
23:AW:34:C:C2'	23:AW:35:A:H5''	1.71	1.20
36:BA:1378:A:O2'	36:BA:1379:A:H5''	1.42	1.20
23:CW:34:C:C2'	23:CW:35:A:H5''	1.71	1.19
36:DA:612:C:H2'	36:DA:613:G:H5''	1.21	1.18
36:BA:612:C:H2'	36:BA:613:G:H5''	1.22	1.17
24:AX:11:A:H4'	24:AX:12:A:H5'	1.24	1.17
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.10	1.17
36:BA:965:C:H5'	36:BA:2273:A:H1'	1.25	1.17
36:DA:965:C:H5'	36:DA:2273:A:H1'	1.24	1.17
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.24	1.16
42:DG:46:ALA:HB2	42:DG:88:ILE:HB	1.23	1.16
2:CB:168:THR:HG23	2:CB:192:SER:HB3	1.17	1.16
36:BA:1884:A:H2'	36:BA:1885:A:H5''	1.19	1.15
55:BX:12:VAL:HB	55:BX:17:ALA:HB1	1.28	1.15
41:DF:40:GLN:HE22	41:DF:182:ASN:HB2	1.11	1.15
57:DZ:20:ARG:HB2	57:DZ:20:ARG:HH11	1.12	1.14
19:AS:42:PRO:HB3	30:B4:50:VAL:HG21	1.28	1.14
24:CX:11:A:H4'	24:CX:12:A:H5'	1.24	1.14
59:CY:701:FUA:H202	59:CY:701:FUA:H5	1.29	1.14
25:AY:84:THR:H	25:AY:85:PRO:HD2	1.09	1.14
41:BF:3:GLU:HA	41:BF:24:LEU:HG	1.26	1.14
1:CA:1503:A:C2	24:CX:11:A:C2	2.35	1.13
41:DF:167:ALA:HB1	41:DF:173:VAL:HG11	1.26	1.13
1:CA:979:C:H3'	1:CA:980:C:H5''	1.20	1.13
41:BF:167:ALA:HB1	41:BF:173:VAL:HG11	1.27	1.13
23:CW:38:A:O3'	23:CW:39:C:P	2.06	1.13
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.22	1.12
25:CY:146:LEU:HD12	25:CY:167:PRO:HD3	1.30	1.12
25:CY:490:PRO:HG3	25:CY:516:PRO:HD2	1.30	1.12
24:AX:11:A:H1'	24:AX:12:A:N7	1.65	1.12
36:BA:1747(A):G:H2'	36:BA:1748:G:H5''	1.30	1.12
25:CY:510:VAL:HA	25:CY:570:GLY:HA3	1.28	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:15:GLU:HB3	53:BV:16:PRO:HD2	1.26	1.11
36:DA:1747(A):G:H2'	36:DA:1748:G:H5''	1.30	1.11
41:DF:3:GLU:HA	41:DF:24:LEU:HG	1.24	1.11
1:AA:979:C:H3'	1:AA:980:C:H5''	1.20	1.11
23:AW:34:C:H2'	23:AW:35:A:O4'	1.50	1.11
25:AY:281:PRO:HB2	25:AY:286:ILE:HD11	1.22	1.11
36:DA:1884:A:H2'	36:DA:1885:A:H5''	1.19	1.11
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.30	1.11
24:CX:11:A:H1'	24:CX:12:A:N7	1.65	1.11
13:CM:124:PRO:HG2	25:CY:574:GLU:H	1.13	1.11
36:DA:2133:G:H2'	36:DA:2157:G:H22	1.16	1.11
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.12	1.11
33:B7:19:ARG:HD3	36:BA:125:G:H5'	1.30	1.11
1:AA:1503:A:N1	24:AX:11:A:C2	2.19	1.10
23:AW:34:C:H3'	23:AW:35:A:C5'	1.81	1.10
27:B1:3:LYS:HG3	27:B1:4:VAL:H	1.14	1.10
36:BA:2584:U:H2'	36:BA:2585:U:H5'	1.32	1.10
36:DA:2012:G:H4'	54:DW:96:ILE:HD11	1.18	1.10
36:DA:2645:G:H3'	36:DA:2646:C:H5'	1.31	1.10
55:DX:12:VAL:HB	55:DX:17:ALA:HB1	1.24	1.10
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.27	1.10
39:BD:35:LYS:HZ3	39:BD:36:PRO:HD3	1.16	1.10
36:BA:2483:C:H3'	36:BA:2484:G:H5''	1.34	1.10
36:DA:2473:U:H3'	36:DA:2474:C:H5''	1.13	1.10
23:CW:34:C:H2'	23:CW:35:A:O4'	1.50	1.10
43:DH:12:PRO:HD3	43:DH:49:VAL:HG12	1.34	1.10
49:DR:99:LYS:HD3	49:DR:99:LYS:H	1.10	1.10
42:DG:76:SER:HB2	42:DG:83:ARG:HB3	1.13	1.09
43:BH:12:PRO:HD3	43:BH:49:VAL:HG12	1.34	1.09
23:CW:34:C:H3'	23:CW:35:A:C5'	1.81	1.09
25:CY:546:ILE:HG21	25:CY:565:VAL:HG21	1.35	1.09
59:AY:701:FUA:H5	59:AY:701:FUA:H202	1.29	1.09
40:BE:38:THR:HG22	40:BE:40:GLU:H	1.13	1.09
25:CY:491:VAL:HG13	25:CY:596:LYS:HE2	1.33	1.09
36:BA:2012:G:H4'	54:BW:96:ILE:HD11	1.17	1.09
36:BA:2473:U:H3'	36:BA:2474:C:H5''	1.14	1.09
49:BR:99:LYS:HD3	49:BR:99:LYS:H	1.09	1.09
23:AW:3:C:H2'	23:AW:4:G:H5''	1.24	1.08
23:CW:34:C:C3'	23:CW:35:A:C5'	2.31	1.08
36:DA:1043:C:H2'	36:DA:1044:G:H5''	1.33	1.08
36:BA:2133:G:H2'	36:BA:2157:G:N2	1.69	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:793:U:H3'	1:CA:794:A:H5''	1.30	1.08
25:CY:499:ARG:HB2	25:CY:506:GLN:HB3	1.21	1.08
56:DY:76:CYS:HB3	56:DY:96:ILE:HD11	1.36	1.08
36:BA:996:A:H4'	52:BU:92:ARG:HE	1.17	1.08
55:BX:12:VAL:HG23	55:BX:13:LEU:H	1.16	1.08
40:DE:38:THR:HG22	40:DE:40:GLU:H	1.16	1.08
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.35	1.07
47:BP:30:THR:HG22	47:BP:31:ALA:H	1.16	1.07
56:BY:76:CYS:HB3	56:BY:96:ILE:HD11	1.36	1.07
36:BA:1043:C:H2'	36:BA:1044:G:H5''	1.31	1.07
56:DY:76:CYS:SG	56:DY:77:PRO:HD2	1.93	1.07
36:BA:2133:G:H2'	36:BA:2157:G:H22	1.18	1.07
57:BZ:69:THR:HG22	57:BZ:90:VAL:HA	1.30	1.07
29:D3:31:LEU:HD13	29:D3:32:GLN:HG2	1.34	1.07
53:DV:15:GLU:HB3	53:DV:16:PRO:HD2	1.29	1.07
23:AW:34:C:C3'	23:AW:35:A:C5'	2.31	1.07
45:BN:9:VAL:HG11	45:BN:39:ARG:HH22	1.15	1.07
36:DA:2483:C:H3'	36:DA:2484:G:H5''	1.33	1.07
36:BA:2645:G:H3'	36:BA:2646:C:H5'	1.32	1.06
56:BY:76:CYS:SG	56:BY:77:PRO:HD2	1.94	1.06
55:DX:12:VAL:HG23	55:DX:13:LEU:H	1.15	1.06
25:AY:468:ARG:HH11	25:AY:468:ARG:HB3	1.12	1.06
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.19	1.06
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.37	1.06
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.14	1.06
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.16	1.06
37:BB:7:G:H2'	37:BB:8:U:H5''	1.33	1.06
55:BX:35:THR:HG22	55:BX:37:THR:H	1.20	1.06
57:BZ:151:HIS:HB3	57:BZ:170:THR:HA	1.37	1.06
36:DA:2584:U:H2'	36:DA:2585:U:H5'	1.34	1.06
2:AB:168:THR:HG23	2:AB:192:SER:HB3	1.17	1.06
36:BA:940:G:H5'	36:BA:941:A:OP2	1.56	1.06
42:BG:63:ILE:HA	42:BG:143:GLU:HG3	1.33	1.06
36:DA:2133:G:H2'	36:DA:2157:G:N2	1.68	1.06
25:AY:606:MET:HE3	25:AY:671:MET:HE3	1.38	1.05
36:BA:1845:G:H2'	36:BA:1846:G:H5''	1.38	1.05
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.16	1.05
33:D7:19:ARG:HD3	36:DA:125:G:H5'	1.29	1.05
25:AY:21:ILE:HD13	25:AY:21:ILE:H	1.20	1.05
1:CA:1503:A:C2	24:CX:11:A:H2	1.73	1.05
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.08	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:8:GLN:HB3	41:DF:126:VAL:HA	1.35	1.05
1:AA:793:U:H3'	1:AA:794:A:H5''	1.30	1.05
47:DP:30:THR:HG22	47:DP:31:ALA:H	1.16	1.05
41:BF:40:GLN:HE22	41:BF:182:ASN:HB2	1.13	1.05
43:BH:98:LEU:HB2	43:BH:125:VAL:HG21	1.39	1.05
25:CY:136:ALA:HB3	25:CY:260:LEU:HB3	1.35	1.05
36:DA:240:G:H3'	36:DA:241:A:H5''	1.39	1.05
29:B3:31:LEU:HD13	29:B3:32:GLN:HG2	1.38	1.04
36:BA:2723:C:H5''	49:BR:2:ARG:HH11	1.22	1.04
37:DB:7:G:H2'	37:DB:8:U:H5''	1.33	1.04
40:DE:117:MET:HA	40:DE:122:PHE:H	1.15	1.04
25:AY:485:GLU:HG3	25:AY:553:GLY:HA3	1.40	1.04
31:B5:56:LYS:HG3	31:B5:57:VAL:H	1.21	1.04
13:CM:108:ARG:HH11	13:CM:108:ARG:HA	1.22	1.04
34:D8:33:ASN:H	34:D8:33:ASN:ND2	1.48	1.04
57:DZ:10:ARG:HD2	57:DZ:36:LYS:HE2	1.39	1.04
13:AM:69:GLU:HG2	30:B4:43:TYR:OH	1.55	1.04
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	1.40	1.04
34:B8:33:ASN:HD22	34:B8:33:ASN:N	1.51	1.04
34:D8:33:ASN:HD22	34:D8:33:ASN:N	1.51	1.04
15:CO:17:ARG:HD3	15:CO:26:GLU:HG3	1.40	1.04
28:D2:4:SER:HA	28:D2:7:ARG:HH12	1.20	1.04
36:DA:1747(A):G:C2'	36:DA:1748:G:H5''	1.88	1.04
43:DH:98:LEU:HB2	43:DH:125:VAL:HG21	1.39	1.04
36:BA:272(G):C:H2'	36:BA:272(H):C:H5''	1.39	1.04
41:BF:8:GLN:HB3	41:BF:126:VAL:HA	1.34	1.04
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.19	1.03
36:BA:240:G:H3'	36:BA:241:A:H5''	1.38	1.03
42:DG:68:PRO:HA	42:DG:92:VAL:HG13	1.40	1.03
2:AB:223:ILE:HG12	2:AB:226:ARG:NH2	1.73	1.03
25:AY:293:THR:HA	25:AY:397:VAL:HG12	1.40	1.03
1:CA:1399:C:H4'	1:CA:1400:C:C5'	1.88	1.03
36:DA:1803:A:O3'	39:DD:259:THR:HG21	1.58	1.03
36:DA:1845:G:H2'	36:DA:1846:G:H5''	1.38	1.03
45:DN:9:VAL:HG11	45:DN:39:ARG:HH22	1.14	1.03
56:DY:8:LYS:HB2	56:DY:28:LYS:NZ	1.73	1.03
36:DA:211:A:H2'	36:DA:212:G:H5''	1.38	1.03
57:DZ:69:THR:HG22	57:DZ:90:VAL:HA	1.38	1.03
29:B3:29:ARG:HB2	29:B3:29:ARG:HH11	1.24	1.03
56:BY:8:LYS:HB2	56:BY:28:LYS:NZ	1.73	1.03
41:DF:24:LEU:HB3	41:DF:25:PRO:HD2	1.41	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:51:ARG:HA	42:DG:51:ARG:HE	1.20	1.03
55:DX:35:THR:HG22	55:DX:37:THR:H	1.18	1.03
55:BX:35:THR:HB	55:BX:38:GLU:HB2	1.39	1.03
27:D1:44:PRO:HG2	27:D1:46:LEU:HD21	1.33	1.03
25:AY:490:PRO:HG3	25:AY:516:PRO:HD2	1.40	1.02
36:BA:1884:A:C2'	36:BA:1885:A:H5''	1.88	1.02
36:DA:996:A:H4'	52:DU:92:ARG:HE	1.15	1.02
29:D3:17:LYS:HG2	36:DA:969:U:OP1	1.60	1.02
22:AV:4:C:HO2'	22:AV:5:G:H8	1.05	1.02
30:B4:1:MET:SD	42:BG:98:ARG:HG3	1.98	1.02
1:AA:1489:G:H2'	1:AA:1490:C:H5''	1.39	1.02
36:BA:1747(A):G:C2'	36:BA:1748:G:H5''	1.87	1.02
25:CY:157:LEU:HD23	25:CY:157:LEU:H	1.22	1.02
25:AY:85:PRO:HA	25:AY:94:VAL:HG22	1.39	1.01
39:BD:131:LEU:HB2	39:BD:136:ILE:HD11	1.39	1.01
23:CW:14:A:H3'	23:CW:15:G:H5''	1.36	1.01
50:DS:13:ARG:HG3	50:DS:14:VAL:H	1.24	1.01
36:BA:1301:A:O2'	36:BA:1302:A:H2'	1.60	1.01
25:CY:289:ILE:HG22	25:CY:290:LYS:H	0.89	1.01
36:DA:940:G:H5'	36:DA:941:A:OP2	1.59	1.01
42:DG:121:ASN:HB3	42:DG:124:SER:HB2	1.41	1.01
22:AV:36:A:N1	24:AX:16:U:O4	1.93	1.01
40:BE:117:MET:HA	40:BE:122:PHE:H	1.20	1.01
45:BN:57:ALA:H	45:BN:124:ALA:HA	1.25	1.01
10:CJ:50:ILE:HD13	10:CJ:50:ILE:H	1.23	1.01
25:CY:289:ILE:HG22	25:CY:290:LYS:N	1.73	1.01
39:DD:166:GLN:HA	39:DD:166:GLN:HE21	1.25	1.01
32:B6:28:ARG:HH11	32:B6:28:ARG:HB3	1.26	1.01
25:CY:223:PHE:HB3	25:CY:248:LYS:HD3	1.38	1.01
51:BT:125:ARG:HA	51:BT:125:ARG:HH11	1.26	1.01
1:CA:1057:G:H5''	3:CC:154:SER:HB2	1.40	1.01
25:CY:546:ILE:HG23	25:CY:590:ILE:HG13	1.43	1.01
31:D5:56:LYS:HG3	31:D5:57:VAL:H	1.22	1.01
36:DA:1884:A:C2'	36:DA:1885:A:H5''	1.90	1.01
55:DX:35:THR:HB	55:DX:38:GLU:HB2	1.38	1.01
23:CW:3:C:H2'	23:CW:4:G:H5''	1.41	1.00
25:CY:439:ARG:H	25:CY:452:SER:HB3	1.22	1.00
32:D6:28:ARG:HH11	32:D6:28:ARG:HB3	1.25	1.00
32:D6:41:PRO:HD2	32:D6:45:LYS:O	1.61	1.00
38:DC:28:ARG:HG3	38:DC:28:ARG:HH11	1.21	1.00
25:AY:621:ILE:HG23	25:AY:631:ILE:HG12	1.39	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:223:ILE:HG12	2:CB:226:ARG:NH2	1.75	1.00
25:CY:289:ILE:CG2	25:CY:290:LYS:H	1.71	1.00
36:BA:2262:U:H2'	36:BA:2263:C:H5'	1.43	1.00
25:CY:539:ILE:HD12	25:CY:567:LEU:HD21	1.43	1.00
32:D6:28:ARG:HB3	32:D6:28:ARG:NH1	1.77	1.00
36:DA:2068:U:H3	36:DA:2430:A:H2	1.03	1.00
42:DG:111:LEU:HA	42:DG:114:ILE:HD11	1.41	1.00
40:BE:111:ARG:HA	49:BR:2:ARG:HB3	1.42	1.00
49:BR:38:VAL:HB	49:BR:39:PRO:HD3	1.44	1.00
56:BY:46:LYS:H	56:BY:62:GLU:HB2	1.26	1.00
36:DA:612:C:C2'	36:DA:613:G:H5''	1.91	1.00
36:DA:1061:U:H4'	36:DA:1070:A:H1'	1.44	1.00
56:DY:28:LYS:HB3	56:DY:37:VAL:HB	1.44	1.00
41:BF:24:LEU:HB3	41:BF:25:PRO:HD2	1.42	1.00
36:DA:1899:G:N2	36:DA:1902:C:H41	1.59	1.00
36:BA:1803:A:O3'	39:BD:259:THR:HG21	1.61	1.00
23:CW:34:C:C2'	23:CW:35:A:C5'	2.40	1.00
36:DA:272(G):C:H2'	36:DA:272(H):C:H5''	1.39	1.00
36:DA:1452:A:H3'	36:DA:1453:U:H5''	1.40	1.00
23:AW:34:C:C2'	23:AW:35:A:C5'	2.40	0.99
23:AW:34:C:H3'	23:AW:35:A:H5''	1.01	0.99
34:B8:33:ASN:H	34:B8:33:ASN:ND2	1.49	0.99
36:BA:211:A:H2'	36:BA:212:G:H5''	1.39	0.99
39:BD:166:GLN:HE21	39:BD:166:GLN:HA	1.22	0.99
12:CL:41:ARG:HH11	12:CL:41:ARG:HB3	1.25	0.99
7:AG:27:ILE:HD11	7:AG:40:ALA:HA	1.44	0.99
36:BA:1061:U:H4'	36:BA:1070:A:H1'	1.42	0.99
36:BA:2287:A:H62	36:BA:2344:U:H3	1.10	0.99
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.40	0.99
25:AY:84:THR:H	25:AY:85:PRO:CD	1.75	0.99
42:BG:68:PRO:HA	42:BG:92:VAL:HG12	1.44	0.99
13:AM:108:ARG:HA	13:AM:108:ARG:HH11	1.23	0.99
29:D3:29:ARG:HB2	29:D3:29:ARG:HH11	1.25	0.99
36:DA:2579:C:H4'	40:DE:134:ILE:HG12	1.44	0.99
26:B0:27:GLU:CD	26:B0:27:GLU:H	1.68	0.99
23:CW:34:C:H3'	23:CW:35:A:H5''	1.01	0.99
36:BA:925:C:H2'	36:BA:926:A:H5''	1.43	0.99
25:CY:348:ARG:HG2	25:CY:382:GLU:HG3	1.43	0.99
36:BA:612:C:C2'	36:BA:613:G:H5''	1.92	0.99
56:DY:46:LYS:H	56:DY:62:GLU:HB2	1.26	0.99
28:B2:41:ILE:HD11	28:B2:44:LEU:HD12	1.44	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:2:ALA:HA	36:DA:2015:A:H1'	1.45	0.99
36:DA:2262:U:H2'	36:DA:2263:C:H5'	1.43	0.99
45:DN:57:ALA:H	45:DN:124:ALA:HA	1.24	0.99
25:AY:439:ARG:H	25:AY:452:SER:HB3	1.28	0.99
52:DU:44:ASN:HD21	53:DV:75:PHE:HB3	1.28	0.99
36:DA:27:G:HO2'	36:DA:28:A:H8	1.02	0.98
36:DA:925:C:H2'	36:DA:926:A:H5''	1.41	0.98
36:DA:2287:A:H62	36:DA:2344:U:H3	1.09	0.98
12:AL:41:ARG:HH11	12:AL:41:ARG:HB3	1.28	0.98
39:BD:32:SER:O	39:BD:36:PRO:HG3	1.62	0.98
1:CA:975:A:H4'	1:CA:976:G:H5''	1.45	0.98
10:AJ:50:ILE:H	10:AJ:50:ILE:HD13	1.25	0.98
32:B6:28:ARG:HB3	32:B6:28:ARG:NH1	1.78	0.98
51:DT:125:ARG:HH11	51:DT:125:ARG:HA	1.28	0.98
36:DA:1301:A:O2'	36:DA:1302:A:H2'	1.62	0.98
13:CM:69:GLU:HG2	30:D4:43:TYR:OH	1.63	0.98
18:CR:29:PHE:HD1	18:CR:29:PHE:H	1.09	0.98
36:BA:1494:A:O2'	36:BA:1495:A:H5''	1.64	0.98
36:BA:2393:A:H5''	47:BP:62:LEU:HB3	1.43	0.98
36:BA:2579:C:H4'	40:BE:134:ILE:HG12	1.46	0.98
32:D6:8:LYS:HZ1	36:DA:2285:C:H5	1.03	0.98
36:DA:2308:G:N7	36:DA:2310:A:H5'	1.79	0.98
47:DP:126:VAL:HA	47:DP:145:PRO:HB2	1.46	0.98
1:AA:979:C:C3'	1:AA:980:C:H5''	1.93	0.97
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.28	0.97
40:DE:111:ARG:HA	49:DR:2:ARG:HB3	1.43	0.97
56:DY:51:VAL:HG12	56:DY:53:PRO:HD2	1.46	0.97
42:BG:135:LEU:HD11	42:BG:155:MET:HG2	1.46	0.97
25:AY:250:THR:HA	25:AY:255:ILE:HG23	1.45	0.97
36:BA:2796:U:H3'	36:BA:2799:C:H5'	1.46	0.97
50:BS:13:ARG:HG3	50:BS:14:VAL:H	1.24	0.97
26:D0:27:GLU:CD	26:D0:27:GLU:H	1.69	0.97
29:B3:17:LYS:HG2	36:BA:969:U:OP1	1.63	0.97
25:CY:487:ILE:HG22	25:CY:594:VAL:HG13	1.45	0.97
36:DA:2723:C:H5''	49:DR:2:ARG:HH11	1.23	0.97
25:AY:624:LEU:HD23	25:AY:631:ILE:HD11	1.45	0.97
36:DA:211:A:C2'	36:DA:212:G:H5''	1.95	0.97
25:AY:606:MET:HG3	25:AY:649:LEU:HD21	1.47	0.97
36:BA:2308:G:N7	36:BA:2310:A:H5'	1.79	0.97
52:BU:44:ASN:HD21	53:BV:75:PHE:HB3	1.30	0.97
1:CA:979:C:C3'	1:CA:980:C:H5''	1.95	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DU:34:LYS:HA	52:DU:34:LYS:HE2	1.45	0.97
7:CG:27:ILE:HD11	7:CG:40:ALA:HA	1.45	0.97
36:BA:1452:A:H3'	36:BA:1453:U:H5''	1.43	0.96
47:BP:126:VAL:HA	47:BP:145:PRO:HB2	1.47	0.96
51:BT:65:LYS:HE3	51:BT:66:VAL:H	1.30	0.96
39:DD:131:LEU:HB2	39:DD:136:ILE:HD11	1.43	0.96
51:DT:28:VAL:HG22	51:DT:46:GLU:HA	1.46	0.96
36:BA:2584:U:C2'	36:BA:2585:U:H5'	1.96	0.96
36:DA:1494:A:O2'	36:DA:1495:A:H5''	1.63	0.96
25:AY:423:LYS:HB3	25:AY:472:VAL:HG22	1.47	0.96
27:B1:76:ARG:HH22	27:B1:95:LEU:HD22	1.31	0.96
36:BA:27:G:HO2'	36:BA:28:A:H8	1.03	0.96
42:BG:61:ALA:HA	42:BG:64:THR:HG22	1.46	0.96
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.66	0.96
56:BY:28:LYS:HB3	56:BY:37:VAL:HB	1.45	0.96
25:AY:252:ASP:HB2	25:AY:254:LYS:HG2	1.46	0.96
32:B6:41:PRO:HD2	32:B6:45:LYS:O	1.64	0.96
36:BA:1845:G:C2'	36:BA:1846:G:H5''	1.95	0.96
56:BY:7:VAL:HB	56:BY:8:LYS:HD2	1.44	0.96
36:BA:2392:A:H8	47:BP:60:MET:HB3	1.30	0.96
51:BT:28:VAL:HG22	51:BT:46:GLU:HA	1.48	0.96
36:DA:2103:C:H2'	36:DA:2104:G:H5''	1.46	0.96
1:AA:656:C:H4'	15:AO:62:GLN:HE22	1.31	0.96
25:AY:84:THR:HG23	59:AY:701:FUA:O3	1.65	0.96
51:BT:23:ARG:HG2	51:BT:120:ARG:HH12	1.29	0.96
47:DP:7:ARG:HB3	47:DP:8:PRO:HD3	1.48	0.96
51:DT:23:ARG:HG2	51:DT:120:ARG:HH12	1.30	0.96
31:B5:2:ALA:HA	36:BA:2015:A:H1'	1.44	0.96
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.47	0.95
25:AY:385:THR:HG21	25:AY:436:PRO:HG3	1.48	0.95
56:BY:51:VAL:HG12	56:BY:53:PRO:HD2	1.47	0.95
57:BZ:23:LYS:HD3	57:BZ:38:TYR:HE2	1.30	0.95
1:CA:80:G:H3'	1:CA:81:U:H5'	1.45	0.95
56:DY:7:VAL:HB	56:DY:8:LYS:HD2	1.46	0.95
25:CY:92:ILE:HG21	25:CY:454:MET:HE1	1.44	0.95
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.48	0.95
25:CY:409:ILE:HG22	25:CY:459:LEU:HD21	1.47	0.95
36:BA:1375:C:H2'	36:BA:1376:C:H6	1.31	0.95
36:BA:2473:U:H3'	36:BA:2474:C:C5'	1.96	0.95
41:BF:28:ILE:H	41:BF:28:ILE:HD13	1.31	0.95
39:DD:32:SER:O	39:DD:36:PRO:HG3	1.65	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:80:G:H3'	1:AA:81:U:H5'	1.45	0.95
20:AT:57:ARG:NH1	20:AT:102:GLY:HA2	1.82	0.95
36:BA:2286:A:H4'	36:BA:2287:A:H5'	1.49	0.95
25:CY:227:ILE:HG23	25:CY:237:PRO:HG2	1.49	0.95
25:AY:530:VAL:HG13	25:AY:531:GLY:H	1.32	0.95
36:BA:211:A:C2'	36:BA:212:G:H5''	1.96	0.95
36:BA:2103:C:H2'	36:BA:2104:G:H5''	1.47	0.95
51:BT:65:LYS:HA	51:BT:65:LYS:NZ	1.80	0.95
36:DA:1845:G:C2'	36:DA:1846:G:H5''	1.95	0.95
36:DA:2473:U:H3'	36:DA:2474:C:C5'	1.96	0.95
36:DA:2761:G:H2'	36:DA:2762:G:H5''	1.46	0.95
25:AY:12:LEU:O	25:AY:283:PRO:HD3	1.65	0.95
36:DA:2523:G:C2'	36:DA:2524:G:H5''	1.96	0.95
36:BA:674:G:H1'	41:BF:74:ARG:HD3	1.49	0.95
11:CK:54:ARG:O	11:CK:57:THR:HG22	1.65	0.95
22:CV:51:U:H3	22:CV:63:G:H1	1.05	0.95
49:DR:38:VAL:HB	49:DR:39:PRO:HD3	1.47	0.95
53:DV:51:VAL:HG12	53:DV:52:VAL:H	1.32	0.95
32:B6:8:LYS:HZ1	36:BA:2285:C:H5	1.05	0.95
36:BA:1846:G:H8	36:BA:1846:G:H5'	1.31	0.95
36:BA:2317:C:H2'	36:BA:2318:G:H5'	1.48	0.95
24:CX:11:A:H4'	24:CX:12:A:O5'	1.65	0.95
36:BA:1899:G:N2	36:BA:1902:C:H41	1.65	0.94
36:BA:2020:A:O2'	36:BA:2021:C:H5''	1.66	0.94
39:BD:35:LYS:HZ3	39:BD:36:PRO:CD	1.80	0.94
53:BV:62:LEU:HD21	53:BV:95:LEU:HB2	1.50	0.94
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.46	0.94
36:DA:2796:U:H3'	36:DA:2799:C:H5'	1.46	0.94
42:DG:139:LEU:HA	42:DG:144:ILE:HD13	1.49	0.94
25:AY:573:HIS:HD2	25:AY:576:ASP:H	1.13	0.94
36:BA:2189:U:H2'	36:BA:2190:G:H5''	1.46	0.94
25:CY:548:GLU:HA	25:CY:551:GLN:HE21	1.29	0.94
36:DA:154(A):C:H5''	36:DA:155:U:H5''	1.48	0.94
36:DA:2392:A:H8	47:DP:60:MET:HB3	1.31	0.94
43:DH:153:LYS:HD2	43:DH:154:PRO:HD2	1.49	0.94
53:DV:62:LEU:HD21	53:DV:95:LEU:HB2	1.48	0.94
23:AW:3:C:C2'	23:AW:4:G:H5''	1.97	0.94
36:BA:1814:G:H3'	36:BA:1815:A:H5''	1.48	0.94
36:BA:2761:G:H2'	36:BA:2762:G:H5''	1.46	0.94
55:BX:24:GLY:O	55:BX:82:GLN:HA	1.67	0.94
5:CE:50:GLU:HG3	5:CE:52:PRO:HD2	1.48	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:65:LYS:HA	51:DT:65:LYS:NZ	1.80	0.94
25:AY:512:ILE:HD12	25:AY:589:ALA:HB1	1.48	0.94
36:BA:2245:U:H5'	36:BA:2246:G:H5'	1.48	0.94
36:DA:2393:A:H5''	47:DP:62:LEU:HB3	1.45	0.94
50:DS:28:VAL:HG12	50:DS:29:PHE:H	1.32	0.94
27:B1:80:LEU:HD23	27:B1:81:LYS:H	1.30	0.94
45:BN:46:VAL:HG13	45:BN:47:ALA:H	1.33	0.94
1:CA:656:C:H4'	15:CO:62:GLN:HE22	1.30	0.94
28:D2:38:GLN:HA	28:D2:41:ILE:HG23	1.48	0.94
36:BA:2068:U:H3	36:BA:2430:A:H2	1.03	0.94
1:AA:975:A:H4'	1:AA:976:G:H5''	1.47	0.94
25:AY:526:VAL:HB	25:AY:566:THR:HA	1.50	0.94
47:BP:55:ARG:HG2	47:BP:56:SER:H	1.33	0.94
36:DA:2189:U:H2'	36:DA:2190:G:H5''	1.46	0.94
36:DA:2245:U:H5'	36:DA:2246:G:H5'	1.48	0.94
41:DF:3:GLU:CA	41:DF:24:LEU:HG	1.97	0.94
50:DS:24:LEU:HB3	50:DS:85:VAL:HG12	1.50	0.94
36:BA:2523:G:C2'	36:BA:2524:G:H5''	1.98	0.94
41:BF:3:GLU:CA	41:BF:24:LEU:HG	1.97	0.94
50:BS:28:VAL:HG12	50:BS:29:PHE:H	1.30	0.94
52:BU:34:LYS:HE2	52:BU:34:LYS:HA	1.46	0.94
39:DD:35:LYS:HZ3	39:DD:36:PRO:HD3	1.32	0.94
36:DA:272(J):C:H3'	36:DA:274:G:H5''	1.50	0.94
36:DA:1452:A:H3'	36:DA:1453:U:C5'	1.97	0.94
36:DA:2317:C:H2'	36:DA:2318:G:H5'	1.49	0.94
42:DG:76:SER:CB	42:DG:83:ARG:HB3	1.97	0.94
42:BG:152:LEU:H	42:BG:152:LEU:HD23	1.33	0.93
25:CY:573:HIS:HD2	25:CY:576:ASP:H	1.08	0.93
45:BN:45:ASN:HD22	45:BN:45:ASN:H	1.02	0.93
49:BR:99:LYS:HD3	49:BR:99:LYS:N	1.83	0.93
1:CA:1004:A:H5'	1:CA:1025:U:H3	1.32	0.93
47:DP:146:VAL:HG22	47:DP:147:LEU:H	1.31	0.93
25:CY:530:VAL:HG22	25:CY:531:GLY:H	1.32	0.93
39:DD:83:GLU:HB2	39:DD:92:ILE:HD11	1.50	0.93
46:BO:111:PHE:HB3	46:BO:114:ILE:HD13	1.48	0.93
50:BS:95:HIS:CG	50:BS:96:GLY:H	1.86	0.93
36:BA:154(A):C:H5''	36:BA:155:U:H5''	1.49	0.93
47:BP:7:ARG:HB3	47:BP:8:PRO:HD3	1.47	0.93
53:BV:51:VAL:HG12	53:BV:52:VAL:H	1.32	0.93
51:DT:65:LYS:HE3	51:DT:66:VAL:H	1.32	0.93
53:BV:18:LEU:HD22	53:BV:19:LYS:H	1.33	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:206:GLU:HG2	3:CC:207:VAL:H	1.34	0.93
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.51	0.93
14:CN:12:ARG:HH12	14:CN:14:PRO:HG3	1.34	0.93
17:CQ:69:LYS:O	17:CQ:70:ARG:HD2	1.68	0.93
36:DA:1846:G:H8	36:DA:1846:G:H5'	1.33	0.93
36:BA:965:C:C5'	36:BA:2273:A:H1'	1.99	0.93
36:BA:2476:A:H2'	36:BA:2477:C:H5''	1.51	0.93
9:CI:119:ALA:O	9:CI:120:ARG:HG2	1.69	0.93
36:DA:2020:A:O2'	36:DA:2021:C:H5''	1.68	0.93
41:DF:28:ILE:HD13	41:DF:28:ILE:H	1.32	0.93
36:BA:1452:A:H3'	36:BA:1453:U:C5'	1.98	0.93
27:D1:76:ARG:HH22	27:D1:95:LEU:HD13	1.34	0.93
16:CP:1:MET:HE2	16:CP:65:GLN:HG3	1.50	0.93
36:DA:813:U:H2'	36:DA:814:C:C6	2.03	0.93
46:DO:17:ARG:HE	46:DO:47:ILE:HD11	1.31	0.93
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.30	0.93
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	1.81	0.93
20:CT:57:ARG:NH1	20:CT:102:GLY:HA2	1.84	0.93
25:CY:632:LEU:HG	25:CY:645:ALA:HA	1.46	0.93
36:DA:965:C:C5'	36:DA:2273:A:H1'	1.99	0.93
36:DA:2286:A:H4'	36:DA:2287:A:H5'	1.50	0.93
45:DN:46:VAL:HG13	45:DN:47:ALA:H	1.32	0.93
11:AK:111:ASP:HA	18:AR:84:LYS:HD2	1.50	0.92
36:BA:142:A:H1'	36:BA:1408:C:H1'	1.49	0.92
53:BV:28:GLU:HB2	53:BV:31:ALA:HB2	1.48	0.92
36:DA:1814:G:H3'	36:DA:1815:A:H5''	1.49	0.92
45:DN:54:VAL:HB	45:DN:122:VAL:HG22	1.48	0.92
1:AA:1004:A:H5'	1:AA:1025:U:H3	1.33	0.92
36:BA:108:U:H2'	36:BA:109:G:C8	2.04	0.92
43:BH:153:LYS:HD2	43:BH:154:PRO:HD2	1.50	0.92
32:D6:8:LYS:HE3	32:D6:25:LYS:HD3	1.51	0.92
36:DA:1375:C:H2'	36:DA:1376:C:H6	1.33	0.92
53:DV:28:GLU:HB2	53:DV:31:ALA:HB2	1.49	0.92
36:BA:272(J):C:H3'	36:BA:274:G:H5''	1.52	0.92
50:DS:95:HIS:CG	50:DS:96:GLY:H	1.88	0.92
45:BN:54:VAL:HB	45:BN:122:VAL:HG22	1.50	0.92
46:BO:17:ARG:HE	46:BO:47:ILE:HD11	1.33	0.92
36:DA:1697:G:H3'	36:DA:1698:A:H5''	1.49	0.92
25:AY:196:ILE:HG13	25:AY:197:ARG:H	1.33	0.92
25:AY:238:THR:HG22	25:AY:241:GLU:HG2	1.50	0.92
32:B6:8:LYS:HE3	32:B6:25:LYS:HD3	1.51	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:45:ARG:HG3	49:BR:46:GLY:H	1.34	0.92
36:DA:2584:U:C2'	36:DA:2585:U:H5'	1.98	0.92
49:DR:99:LYS:HD3	49:DR:99:LYS:N	1.84	0.92
17:AQ:69:LYS:O	17:AQ:70:ARG:HD2	1.70	0.92
37:BB:48:A:H4'	50:BS:95:HIS:HD2	1.35	0.92
12:CL:41:ARG:HG2	12:CL:42:THR:H	1.34	0.92
13:CM:3:ARG:HG2	13:CM:9:ILE:HD11	1.52	0.92
53:DV:18:LEU:HD22	53:DV:19:LYS:H	1.32	0.92
1:AA:148:G:H2'	1:AA:149:A:H8	1.34	0.92
18:AR:29:PHE:H	18:AR:29:PHE:HD1	1.10	0.92
25:AY:487:ILE:HG23	25:AY:594:VAL:HG13	1.49	0.92
20:CT:48:LYS:HB3	20:CT:51:GLU:HG2	1.52	0.92
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.35	0.92
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.52	0.92
57:DZ:163:LEU:H	57:DZ:163:LEU:HD23	1.33	0.92
36:BA:1243:G:H1'	47:BP:8:PRO:HB3	1.52	0.92
1:CA:148:G:H2'	1:CA:149:A:H8	1.33	0.92
1:CA:1363(A):A:H4'	1:CA:1364:U:H5''	1.50	0.92
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.52	0.92
13:CM:23:TYR:HB3	13:CM:67:GLU:HB3	1.50	0.92
49:DR:45:ARG:HG3	49:DR:46:GLY:H	1.34	0.92
55:DX:24:GLY:O	55:DX:82:GLN:HA	1.69	0.92
1:AA:1363(A):A:H4'	1:AA:1364:U:H5''	1.52	0.91
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.52	0.91
47:BP:146:VAL:HG22	47:BP:147:LEU:H	1.31	0.91
1:CA:1399:C:H4'	1:CA:1400:C:H5'	1.50	0.91
25:CY:427:ALA:HB1	25:CY:466:LEU:HG	1.50	0.91
36:DA:674:G:H1'	41:DF:74:ARG:HD3	1.51	0.91
36:DA:1899:G:H22	36:DA:1902:C:N4	1.66	0.91
36:DA:2317:C:C2'	36:DA:2318:G:H5'	2.00	0.91
41:DF:155:LEU:HA	41:DF:174:VAL:HB	1.52	0.91
13:AM:23:TYR:HB3	13:AM:67:GLU:HB3	1.51	0.91
41:BF:155:LEU:HA	41:BF:174:VAL:HB	1.52	0.91
4:CD:49:ARG:HA	4:CD:49:ARG:HE	1.33	0.91
25:CY:92:ILE:HG12	25:CY:405:PRO:HG2	1.52	0.91
36:DA:2476:A:H2'	36:DA:2477:C:H5''	1.52	0.91
36:DA:2572:A:H5'	36:DA:2574:G:H4'	1.52	0.91
36:DA:2811:G:OP1	40:DE:60:ASN:HB2	1.68	0.91
47:DP:59:LEU:HA	47:DP:61:ARG:NE	1.85	0.91
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.50	0.91
25:AY:9:LEU:CD2	25:AY:284:LEU:HB2	2.01	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1697:G:H3'	36:BA:1698:A:H5''	1.49	0.91
49:BR:10:LEU:HB3	49:BR:17:ARG:HD3	1.52	0.91
50:BS:24:LEU:HB3	50:BS:85:VAL:HG12	1.49	0.91
36:DA:1043:C:C2'	36:DA:1044:G:H5''	2.01	0.91
36:DA:1503:U:H2'	36:DA:1504:C:H6	1.32	0.91
16:AP:1:MET:HE2	16:AP:65:GLN:HG3	1.50	0.91
36:BA:1043:C:C2'	36:BA:1044:G:H5''	2.00	0.91
36:BA:2811:G:OP1	40:BE:60:ASN:HB2	1.70	0.91
37:BB:7:G:C2'	37:BB:8:U:H5''	1.99	0.91
28:D2:24:LEU:HD22	28:D2:60:LEU:HD11	1.51	0.91
36:DA:2645:G:H3'	36:DA:2646:C:C5'	2.00	0.91
46:DO:114:ILE:H	46:DO:114:ILE:HD12	1.34	0.91
23:AW:71:C:H2'	23:AW:72:A:H8	1.34	0.91
31:B5:34:PRO:O	31:B5:35:GLU:HB2	1.70	0.91
41:BF:84:VAL:HG12	41:BF:85:GLY:N	1.86	0.91
46:BO:104:ARG:HE	51:BT:33:LYS:HE3	1.34	0.91
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.52	0.91
46:DO:111:PHE:HB3	46:DO:114:ILE:HD13	1.50	0.91
36:BA:1899:G:H22	36:BA:1902:C:N4	1.68	0.91
51:BT:55:ASN:N	51:BT:59:THR:HG22	1.85	0.91
47:DP:16:ARG:HD3	47:DP:18:ARG:H	1.35	0.91
56:DY:74:PRO:HG3	56:DY:83:THR:HG22	1.51	0.91
57:DZ:20:ARG:HB2	57:DZ:20:ARG:NH1	1.86	0.91
1:AA:1502:A:H2	1:AA:1505:G:H1	1.12	0.91
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.52	0.91
36:BA:2807:G:H3'	36:BA:2808:U:H5''	1.53	0.91
51:BT:55:ASN:H	51:BT:59:THR:HG22	1.35	0.91
36:DA:108:U:H2'	36:DA:109:G:C8	2.04	0.91
56:DY:17:SER:HB2	56:DY:71:LYS:HD2	1.52	0.91
57:DZ:81:ARG:HB3	57:DZ:81:ARG:NH1	1.86	0.91
36:DA:2672:G:H2'	36:DA:2673:G:H5''	1.53	0.91
36:DA:2807:G:H3'	36:DA:2808:U:H5''	1.52	0.91
36:BA:108:U:H2'	36:BA:109:G:H8	1.36	0.91
38:BC:28:ARG:HH11	38:BC:28:ARG:HG3	1.33	0.91
22:CV:36:A:N1	24:CX:16:U:C4	2.38	0.91
51:BT:53:ARG:HH11	51:BT:53:ARG:HB3	1.35	0.90
25:CY:5:VAL:HG13	25:CY:6:GLU:H	1.32	0.90
42:DG:76:SER:HB2	42:DG:83:ARG:CB	2.00	0.90
36:BA:1038:C:H3'	36:BA:1039:G:H5''	1.52	0.90
45:BN:133:GLN:HG2	45:BN:135:PRO:HD3	1.52	0.90
39:DD:35:LYS:HD2	39:DD:36:PRO:N	1.86	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:546:ILE:HD13	25:AY:565:VAL:HG11	1.52	0.90
25:AY:550:MET:HE3	25:AY:563:ILE:HD11	1.53	0.90
36:BA:813:U:H2'	36:BA:814:C:C6	2.06	0.90
37:DB:7:G:C2'	37:DB:8:U:H5''	2.00	0.90
40:DE:107:THR:O	40:DE:190:GLY:HA2	1.72	0.90
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.54	0.90
14:AN:12:ARG:HH12	14:AN:14:PRO:HG3	1.36	0.90
36:BA:2317:C:C2'	36:BA:2318:G:H5'	2.01	0.90
36:BA:2473:U:C3'	36:BA:2474:C:H5''	2.02	0.90
39:BD:35:LYS:HD2	39:BD:36:PRO:N	1.85	0.90
57:BZ:24:LEU:HD21	57:BZ:86:VAL:HG23	1.52	0.90
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.69	0.90
20:CT:23:ARG:O	20:CT:27:LYS:HB2	1.71	0.90
31:D5:34:PRO:O	31:D5:35:GLU:HB2	1.69	0.90
37:DB:7:G:H5'	50:DS:29:PHE:CE2	2.07	0.90
45:DN:45:ASN:H	45:DN:45:ASN:HD22	1.03	0.90
36:BA:1503:U:H2'	36:BA:1504:C:H6	1.31	0.90
39:BD:83:GLU:HB2	39:BD:92:ILE:HD11	1.54	0.90
8:CH:83:ILE:HD12	8:CH:137:VAL:HG22	1.54	0.90
1:AA:509:A:H5'	1:AA:510:A:OP2	1.72	0.90
25:CY:84:THR:H	25:CY:85:PRO:HD3	1.35	0.90
32:D6:11:LEU:HG	32:D6:26:ASN:ND2	1.86	0.90
36:DA:1517:G:H8	36:DA:1517:G:H5'	1.36	0.90
23:AW:14:A:H3'	23:AW:15:G:H5''	1.52	0.90
36:DA:142:A:H1'	36:DA:1408:C:H1'	1.52	0.90
37:DB:103:G:H21	57:DZ:73:GLN:HE22	1.00	0.90
14:AN:12:ARG:O	14:AN:14:PRO:HD3	1.72	0.90
41:DF:40:GLN:NE2	41:DF:182:ASN:HB2	1.87	0.90
42:DG:68:PRO:HA	42:DG:92:VAL:CG1	2.02	0.90
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.54	0.90
27:D1:73:LEU:HD21	27:D1:94:LEU:HB3	1.52	0.90
23:AW:2:G:H1	23:AW:71:C:H42	1.20	0.90
47:BP:16:ARG:HD3	47:BP:18:ARG:H	1.36	0.90
47:BP:59:LEU:HA	47:BP:61:ARG:NE	1.86	0.90
40:DE:47:VAL:HG12	40:DE:48:GLN:H	1.37	0.90
52:DU:90:VAL:HG21	53:DV:47:VAL:HG21	1.53	0.90
56:BY:17:SER:HB2	56:BY:71:LYS:HD2	1.52	0.89
23:AW:7:G:H3'	23:AW:8:U:H5'	1.54	0.89
36:BA:745:G:H5'	36:BA:746:A:OP2	1.72	0.89
36:BA:2298:A:H62	36:BA:2318:G:H8	1.19	0.89
47:BP:39:LYS:HE2	47:BP:40:SER:H	1.37	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.54	0.89
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.70	0.89
13:AM:3:ARG:HH21	13:AM:7:VAL:HG13	1.37	0.89
40:BE:47:VAL:HG12	40:BE:48:GLN:H	1.36	0.89
1:CA:1490:C:H5'	1:CA:1490:C:H6	1.37	0.89
11:CK:111:ASP:HA	18:CR:84:LYS:HD2	1.51	0.89
36:DA:2473:U:C3'	36:DA:2474:C:H5''	2.01	0.89
5:AE:80:ILE:HG22	8:AH:104:ARG:NH2	1.87	0.89
8:AH:83:ILE:HD12	8:AH:137:VAL:HG22	1.54	0.89
36:BA:970:C:H2'	36:BA:971:C:H6	1.34	0.89
36:BA:1782:C:H1'	36:BA:2609:U:H5'	1.52	0.89
52:BU:90:VAL:HG21	53:BV:47:VAL:HG21	1.52	0.89
25:CY:185:ALA:HB3	25:CY:199:ILE:O	1.72	0.89
36:DA:996:A:H4'	52:DU:92:ARG:NE	1.87	0.89
45:DN:133:GLN:HG2	45:DN:135:PRO:HD3	1.52	0.89
49:DR:10:LEU:HB3	49:DR:17:ARG:HD3	1.54	0.89
1:AA:1030(D):A:H2'	1:AA:1031:G:H5'	1.54	0.89
2:AB:17:PHE:HB3	2:AB:44:LEU:HD21	1.52	0.89
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.72	0.89
30:B4:1:MET:HE2	42:BG:66:GLN:OE1	1.72	0.89
10:CJ:6:ILE:HD11	10:CJ:72:VAL:HB	1.52	0.89
30:D4:2:LYS:HB2	37:DB:40:U:O4	1.72	0.89
36:DA:365:C:H5'	36:DA:365:C:H6	1.37	0.89
51:DT:55:ASN:N	51:DT:59:THR:HG22	1.86	0.89
24:AX:11:A:H4'	24:AX:12:A:O5'	1.65	0.89
25:AY:170:ARG:O	25:AY:171:GLU:HG2	1.71	0.89
38:BC:71:LYS:HG2	38:BC:72:GLN:H	1.37	0.89
47:BP:62:LEU:HD23	47:BP:62:LEU:H	1.38	0.89
36:DA:1782:C:H1'	36:DA:2609:U:H5'	1.54	0.89
46:DO:104:ARG:HE	51:DT:33:LYS:HE3	1.35	0.89
4:AD:49:ARG:HA	4:AD:49:ARG:HE	1.35	0.89
27:B1:46:LEU:HB3	27:B1:63:ALA:HA	1.53	0.89
51:BT:132:LYS:HD3	51:BT:132:LYS:H	1.37	0.89
36:DA:1038:C:H3'	36:DA:1039:G:H5''	1.52	0.89
1:AA:686:U:HO2'	1:AA:687:A:H8	0.94	0.89
25:AY:92:ILE:HG12	25:AY:405:PRO:HG2	1.54	0.89
36:DA:1243:G:H1'	47:DP:8:PRO:HB3	1.53	0.89
36:DA:1899:G:H22	36:DA:1902:C:H41	1.15	0.89
36:DA:2761:G:C2'	36:DA:2762:G:H5''	2.03	0.89
41:DF:84:VAL:HG12	41:DF:85:GLY:N	1.86	0.89
25:AY:281:PRO:HB2	25:AY:286:ILE:CD1	2.02	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B5:4:HIS:HB3	31:B5:5:PRO:HD3	1.55	0.89
36:BA:1434:A:H61	36:BA:1558:A:N6	1.71	0.89
1:CA:1004:A:H61	1:CA:1034:G:H2'	1.36	0.89
3:AC:206:GLU:HG2	3:AC:207:VAL:H	1.38	0.89
36:BA:1517:G:H5'	36:BA:1517:G:H8	1.36	0.89
1:AA:1489:G:C2'	1:AA:1490:C:H5''	2.02	0.88
20:AT:13:LEU:H	20:AT:13:LEU:HD12	1.38	0.88
3:CC:90:GLU:O	3:CC:93:LYS:HB3	1.73	0.88
10:CJ:4:ILE:HD11	10:CJ:77:PRO:HB3	1.54	0.88
36:BA:2645:G:H3'	36:BA:2646:C:C5'	2.01	0.88
38:BC:90:ALA:HA	38:BC:155:ARG:NH1	1.87	0.88
1:CA:129(A):G:O2'	1:CA:189(F):U:H2'	1.73	0.88
36:DA:108:U:H2'	36:DA:109:G:H8	1.37	0.88
38:DC:71:LYS:HG2	38:DC:72:GLN:H	1.39	0.88
42:DG:5:VAL:HB	42:DG:8:LYS:HB2	1.53	0.88
36:BA:1348:G:H2'	36:BA:1349:A:H5''	1.53	0.88
36:BA:2761:G:C2'	36:BA:2762:G:H5''	2.03	0.88
4:CD:36:ARG:HH11	4:CD:36:ARG:CB	1.86	0.88
4:AD:194:LEU:HB3	4:AD:196:LEU:HD13	1.55	0.88
36:BA:1142(A):A:C2'	36:BA:1143:A:H5''	2.03	0.88
36:BA:2572:A:H5'	36:BA:2574:G:H4'	1.56	0.88
1:CA:1030(D):A:H2'	1:CA:1031:G:H5'	1.56	0.88
36:DA:970:C:H2'	36:DA:971:C:H6	1.38	0.88
47:DP:39:LYS:HE2	47:DP:40:SER:H	1.38	0.88
40:BE:1:MET:HB3	40:BE:200:GLU:OE2	1.74	0.88
45:BN:48:MET:H	45:BN:48:MET:CE	1.85	0.88
3:CC:34:LEU:HD22	3:CC:38:ARG:HD2	1.55	0.88
47:DP:55:ARG:HG2	47:DP:56:SER:H	1.37	0.88
57:DZ:166:SER:HB2	57:DZ:168:GLU:N	1.88	0.88
3:AC:52:LEU:H	3:AC:52:LEU:HD23	1.39	0.88
20:AT:48:LYS:HB3	20:AT:51:GLU:HG2	1.56	0.88
41:BF:40:GLN:NE2	41:BF:182:ASN:HB2	1.89	0.88
55:BX:12:VAL:HG23	55:BX:13:LEU:N	1.89	0.88
36:DA:482:A:H4'	56:DY:47:LYS:HG2	1.55	0.88
36:DA:1540:U:H3'	36:DA:1541:G:H3'	1.55	0.88
36:DA:2200:C:H42	36:DA:2223:G:H1	1.20	0.88
36:DA:2298:A:H62	36:DA:2318:G:H8	1.21	0.88
38:DC:90:ALA:HA	38:DC:155:ARG:NH1	1.89	0.88
1:AA:129(A):G:O2'	1:AA:189(F):U:H2'	1.71	0.88
1:AA:979:C:H3'	1:AA:980:C:C5'	2.03	0.88
24:CX:11:A:H1'	24:CX:12:A:C8	2.09	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:112:PRO:C	42:DG:113:ARG:HA	1.99	0.88
10:AJ:78:ASN:HD22	10:AJ:81:THR:HG21	1.38	0.88
25:AY:255:ILE:HG12	25:AY:257:PRO:HD3	1.55	0.88
32:B6:11:LEU:HG	32:B6:26:ASN:ND2	1.89	0.88
36:BA:482:A:H4'	56:BY:47:LYS:HG2	1.56	0.88
36:BA:1236:G:HO2'	36:BA:1237:A:H8	0.95	0.88
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.56	0.88
36:DA:1020:A:N1	36:DA:1141:U:H2'	1.89	0.88
47:DP:62:LEU:HD23	47:DP:62:LEU:H	1.38	0.88
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.53	0.88
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.56	0.88
14:CN:12:ARG:O	14:CN:14:PRO:HD3	1.73	0.88
55:DX:12:VAL:HG23	55:DX:13:LEU:N	1.87	0.88
1:AA:1004:A:H61	1:AA:1034:G:H2'	1.37	0.88
25:AY:546:ILE:HG23	25:AY:590:ILE:HG13	1.55	0.88
45:BN:1:MET:HE1	45:BN:3:THR:OG1	1.75	0.88
57:BZ:166:SER:HB2	57:BZ:167:PRO:C	1.98	0.88
1:CA:979:C:H3'	1:CA:980:C:C5'	2.04	0.88
36:DA:1236:G:HO2'	36:DA:1237:A:H8	0.91	0.88
45:DN:1:MET:HE1	45:DN:3:THR:OG1	1.74	0.88
2:AB:204:ASN:HD22	2:AB:205:ASP:N	1.72	0.87
3:AC:90:GLU:O	3:AC:93:LYS:HB3	1.74	0.87
36:BA:2138:C:H2'	36:BA:2139:C:C6	2.08	0.87
42:BG:76:SER:HA	42:BG:83:ARG:HB3	1.54	0.87
45:BN:55:VAL:HG22	45:BN:126:PRO:HA	1.56	0.87
46:BO:114:ILE:H	46:BO:114:ILE:HD12	1.38	0.87
36:DA:84:A:H5'	56:DY:9:LYS:HB3	1.56	0.87
36:DA:745:G:H5'	36:DA:746:A:OP2	1.74	0.87
36:BA:996:A:H4'	52:BU:92:ARG:NE	1.89	0.87
36:BA:2523:G:H2'	36:BA:2524:G:H5''	1.55	0.87
55:BX:11:PRO:HA	55:BX:28:PHE:HB3	1.56	0.87
42:DG:39:ILE:HA	42:DG:156:ASP:O	1.74	0.87
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.09	0.87
36:BA:2138:C:H2'	36:BA:2139:C:H6	1.38	0.87
39:BD:44:ASN:HB3	39:BD:49:ILE:HA	1.53	0.87
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD2	2.08	0.87
51:DT:53:ARG:HH11	51:DT:53:ARG:HB3	1.37	0.87
25:AY:453:GLY:HA2	25:AY:458:HIS:HD2	1.36	0.87
42:BG:139:LEU:HA	42:BG:144:ILE:HG21	1.56	0.87
52:BU:20:LEU:HD22	52:BU:20:LEU:H	1.39	0.87
2:CB:204:ASN:HD22	2:CB:205:ASP:N	1.73	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:78:ASN:HD22	10:CJ:81:THR:HG21	1.39	0.87
25:CY:652:MET:HA	25:CY:652:MET:HE3	1.54	0.87
36:DA:2523:G:H2'	36:DA:2524:G:H5''	1.54	0.87
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.54	0.87
32:B6:6:ARG:N	32:B6:6:ARG:HD2	1.90	0.87
56:BY:74:PRO:HG3	56:BY:83:THR:HG22	1.53	0.87
2:CB:17:PHE:HB3	2:CB:44:LEU:HD21	1.56	0.87
41:DF:20:LEU:HD23	41:DF:21:ALA:H	1.39	0.87
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	1.55	0.87
28:B2:3:LEU:HD22	28:B2:7:ARG:HH12	1.36	0.87
1:CA:973:G:O4'	10:CJ:55:LYS:HG3	1.74	0.87
1:CA:1227:A:H2'	13:CM:117:VAL:HG21	1.56	0.87
2:CB:42:ILE:HD11	2:CB:202:PRO:HB2	1.56	0.87
32:D6:6:ARG:N	32:D6:6:ARG:HD2	1.90	0.87
54:DW:22:ASP:HA	54:DW:25:ARG:HH12	1.39	0.87
27:B1:81:LYS:HE2	36:BA:271(H):G:H4'	1.56	0.87
47:BP:30:THR:HG22	47:BP:31:ALA:N	1.90	0.87
57:BZ:86:VAL:HG12	57:BZ:87:ASP:H	1.37	0.87
36:DA:1070:A:H5'	36:DA:1072:C:OP2	1.75	0.87
27:B1:29:GLY:O	27:B1:30:VAL:HG22	1.75	0.87
1:CA:1399:C:H4'	1:CA:1400:C:H5''	1.56	0.87
36:DA:2189:U:C2'	36:DA:2190:G:H5''	2.05	0.87
1:AA:1227:A:H2'	13:AM:117:VAL:HG21	1.57	0.87
25:AY:519:ARG:HH22	25:AY:678:GLU:HB3	1.38	0.87
31:B5:40:LYS:NZ	31:B5:46:CYS:H	1.72	0.87
36:DA:1452:A:C3'	36:DA:1453:U:H5''	2.05	0.87
37:DB:82:G:O2'	37:DB:83:G:H5'	1.75	0.87
52:DU:20:LEU:H	52:DU:20:LEU:HD22	1.37	0.87
43:BH:17:VAL:HG11	43:BH:50:VAL:HG21	1.57	0.86
51:BT:91:ARG:O	51:BT:117:ASP:HB2	1.75	0.86
25:CY:529:ILE:HD11	25:CY:567:LEU:HD11	1.54	0.86
42:DG:87:PRO:O	42:DG:88:ILE:HD12	1.75	0.86
45:DN:55:VAL:HG22	45:DN:126:PRO:HA	1.57	0.86
51:DT:91:ARG:O	51:DT:117:ASP:HB2	1.75	0.86
1:AA:1234:C:O2'	1:AA:1235:U:H5'	1.73	0.86
4:AD:36:ARG:HH11	4:AD:36:ARG:CB	1.87	0.86
15:AO:54:ARG:HG2	15:AO:58:MET:HE2	1.55	0.86
36:BA:1540:U:H3'	36:BA:1541:G:H3'	1.55	0.86
38:BC:28:ARG:HG2	38:BC:183:PRO:HB3	1.57	0.86
40:BE:107:THR:O	40:BE:190:GLY:HA2	1.75	0.86
22:CV:36:A:C6	24:CX:16:U:O4	2.28	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1348:G:H2'	36:DA:1349:A:H5''	1.54	0.86
39:DD:35:LYS:HZ3	39:DD:36:PRO:CD	1.88	0.86
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.56	0.86
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	1.83	0.86
4:CD:108:LEU:HD21	4:CD:183:GLY:HA3	1.57	0.86
51:DT:65:LYS:HA	51:DT:65:LYS:HZ2	1.38	0.86
1:AA:1054:C:O2'	1:AA:1055:A:H5''	1.76	0.86
36:BA:212:G:H5'	36:BA:212:G:H8	1.40	0.86
36:BA:2189:U:C2'	36:BA:2190:G:H5''	2.05	0.86
39:BD:183:ARG:HH11	39:BD:183:ARG:HG2	1.39	0.86
41:BF:20:LEU:HD23	41:BF:21:ALA:H	1.40	0.86
1:CA:509:A:H5'	1:CA:510:A:OP2	1.75	0.86
25:CY:330:VAL:HG21	25:CY:369:LEU:HB3	1.57	0.86
36:DA:2138:C:H2'	36:DA:2139:C:C6	2.10	0.86
43:DH:157:TYR:HE1	43:DH:171:LEU:HD22	1.40	0.86
15:AO:80:ALA:HB1	15:AO:84:LYS:HE2	1.58	0.86
24:AX:11:A:H1'	24:AX:12:A:C8	2.09	0.86
36:BA:27:G:H22	36:BA:512:G:H2'	1.40	0.86
47:BP:23:PRO:HB2	47:BP:33:ARG:HG3	1.57	0.86
45:DN:48:MET:CE	45:DN:48:MET:H	1.86	0.86
51:DT:115:ARG:HB3	51:DT:115:ARG:HH11	1.41	0.86
56:DY:8:LYS:HB2	56:DY:28:LYS:HZ1	1.36	0.86
25:AY:406:GLU:HB3	25:AY:407:PRO:HD2	1.57	0.86
25:AY:409:ILE:HG12	25:AY:656:ALA:HB3	1.53	0.86
54:BW:22:ASP:HA	54:BW:25:ARG:HH12	1.41	0.86
2:CB:12:GLU:O	2:CB:14:GLY:N	2.09	0.86
13:CM:3:ARG:HH21	13:CM:7:VAL:HG13	1.39	0.86
27:D1:46:LEU:H	27:D1:46:LEU:HD22	1.40	0.86
37:DB:65:C:N4	37:DB:109:C:H2'	1.91	0.86
40:DE:1:MET:HB3	40:DE:200:GLU:OE2	1.76	0.86
55:DX:11:PRO:HA	55:DX:28:PHE:HB3	1.57	0.86
1:AA:1490:C:H5'	1:AA:1490:C:H6	1.39	0.86
9:AI:119:ALA:O	9:AI:120:ARG:HG2	1.73	0.86
22:AV:53:G:H2'	22:AV:54:U:H6	1.39	0.86
25:AY:15:ILE:HD11	25:AY:81:ILE:HG12	1.58	0.86
32:B6:5:VAL:HG23	36:BA:2283:C:H5'	1.58	0.86
36:BA:27:G:N2	36:BA:512:G:H2'	1.91	0.86
43:BH:157:TYR:HE1	43:BH:171:LEU:HD22	1.40	0.86
28:D2:2:LYS:HB2	36:DA:97:C:H5''	1.56	0.86
36:DA:1142(A):A:C2'	36:DA:1143:A:H5''	2.05	0.86
42:DG:71:THR:HG23	42:DG:89:GLY:C	2.01	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:85:LEU:HD23	47:DP:85:LEU:H	1.41	0.86
48:DQ:62:GLY:HA2	57:DZ:116:VAL:HG21	1.55	0.86
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.56	0.86
52:BU:31:SER:HB3	52:BU:34:LYS:HB2	1.57	0.86
23:CW:7:G:H3'	23:CW:8:U:H5'	1.58	0.86
47:DP:40:SER:O	47:DP:41:ARG:HD2	1.76	0.86
2:AB:126:GLU:HA	2:AB:129:GLU:OE2	1.75	0.86
1:CA:998:G:H2'	1:CA:999:C:C2	2.11	0.86
4:CD:194:LEU:HB3	4:CD:196:LEU:HD13	1.57	0.86
47:DP:30:THR:HG22	47:DP:31:ALA:N	1.90	0.86
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.57	0.86
25:AY:35:TYR:OH	25:AY:266:ASN:HB3	1.75	0.86
36:BA:288:C:H2'	36:BA:289:A:H8	1.41	0.86
36:BA:365:C:H5'	36:BA:365:C:H6	1.39	0.86
25:CY:330:VAL:HG12	25:CY:371:ALA:HA	1.58	0.86
36:DA:2562:U:H1'	46:DO:23:ARG:HH11	1.40	0.86
36:DA:2795:G:H21	36:DA:2796:U:H5	1.20	0.86
38:DC:28:ARG:HG2	38:DC:183:PRO:HB3	1.58	0.86
39:DD:183:ARG:HH11	39:DD:183:ARG:HG2	1.39	0.86
41:BF:132:VAL:HG22	41:BF:133:ASN:H	1.41	0.85
47:BP:40:SER:O	47:BP:41:ARG:HD2	1.76	0.85
23:CW:30:G:C2'	23:CW:31:G:H5''	2.05	0.85
25:CY:453:GLY:HA2	25:CY:458:HIS:CD2	2.11	0.85
39:DD:44:ASN:HB3	39:DD:49:ILE:HA	1.55	0.85
1:AA:973:G:O4'	10:AJ:55:LYS:HG3	1.76	0.85
36:BA:2425:A:H5'	36:BA:2427:C:O4'	1.76	0.85
39:BD:14:ARG:HG3	39:BD:15:PHE:N	1.91	0.85
56:BY:44:ILE:HG22	56:BY:45:VAL:H	1.39	0.85
10:CJ:49:VAL:O	10:CJ:60:ARG:HB3	1.76	0.85
31:D5:40:LYS:NZ	31:D5:46:CYS:H	1.73	0.85
34:D8:52:LYS:N	34:D8:53:PRO:HD2	1.92	0.85
46:DO:35:VAL:HG11	46:DO:103:ALA:HB3	1.56	0.85
46:DO:107:ARG:HA	46:DO:112:MET:HE1	1.58	0.85
25:AY:90:PHE:HB2	25:AY:454:MET:HE3	1.56	0.85
36:BA:2200:C:H42	36:BA:2223:G:H1	1.20	0.85
3:CC:156:ARG:HH21	3:CC:161:GLU:HA	1.40	0.85
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.11	0.85
36:DA:914:C:H2'	36:DA:915:C:H5'	1.57	0.85
36:DA:2262:U:C2'	36:DA:2263:C:H5'	2.06	0.85
36:BA:1020:A:N1	36:BA:1141:U:H2'	1.90	0.85
36:BA:2795:G:H21	36:BA:2796:U:H5	1.19	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:23:PRO:HB2	47:DP:33:ARG:HG3	1.57	0.85
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.58	0.85
12:AL:83:VAL:HG11	12:AL:100:ILE:HD13	1.59	0.85
25:CY:228:MET:O	25:CY:232:LEU:HD22	1.76	0.85
40:DE:179:GLU:HB3	40:DE:181:LEU:HD23	1.57	0.85
43:DH:17:VAL:HG11	43:DH:50:VAL:HG21	1.59	0.85
56:DY:44:ILE:HG22	56:DY:45:VAL:H	1.40	0.85
1:AA:998:G:H2'	1:AA:999:C:C2	2.11	0.85
32:D6:15:GLU:HG3	32:D6:47:THR:HG21	1.58	0.85
52:DU:91:ASP:OD1	52:DU:96:ALA:HB2	1.77	0.85
22:AV:15:G:H3'	22:AV:16:U:H5''	1.57	0.85
25:AY:71:THR:HG22	25:AY:80:ASN:OD1	1.76	0.85
36:BA:395:U:H2'	36:BA:396:G:N7	1.92	0.85
51:BT:85:LYS:HB3	51:BT:85:LYS:NZ	1.90	0.85
18:CR:58:LEU:HB3	18:CR:62:GLU:HB3	1.58	0.85
36:DA:27:G:N2	36:DA:512:G:H2'	1.92	0.85
36:DA:272(G):C:C2'	36:DA:272(H):C:H5''	2.07	0.85
1:AA:1026:G:H2'	1:AA:1027:C:H5'	1.59	0.85
42:BG:93:THR:O	42:BG:94:LEU:HD23	1.77	0.85
51:BT:65:LYS:HA	51:BT:65:LYS:HZ2	1.40	0.85
2:CB:21:ARG:HD2	2:CB:39:ILE:HG12	1.59	0.85
36:DA:1434:A:H61	36:DA:1558:A:N6	1.73	0.85
39:DD:147:LEU:HD13	39:DD:155:LEU:HD11	1.59	0.85
42:DG:121:ASN:CB	42:DG:124:SER:HB2	2.06	0.85
51:DT:132:LYS:HD3	51:DT:132:LYS:H	1.38	0.85
25:AY:223:PHE:CZ	25:AY:249:GLY:HA3	2.12	0.85
36:BA:2645:G:H4'	36:BA:2732:G:O2'	1.76	0.85
57:BZ:40:ASP:OD1	57:BZ:42:VAL:HG12	1.76	0.85
1:CA:686:U:HO2'	1:CA:687:A:H8	0.93	0.85
4:CD:8:VAL:C	4:CD:10:ARG:H	1.84	0.85
25:CY:32:ILE:O	25:CY:36:THR:HG23	1.77	0.85
36:DA:212:G:H8	36:DA:212:G:H5'	1.41	0.85
36:DA:1824:G:OP1	39:DD:52:ARG:HD3	1.77	0.85
40:DE:38:THR:HB	40:DE:41:LYS:HG2	1.57	0.85
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.59	0.85
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.11	0.85
25:AY:468:ARG:HB3	25:AY:468:ARG:NH1	1.91	0.85
36:BA:614(A):U:H4'	36:BA:614(B):G:H5''	1.59	0.85
36:BA:2591:C:H2'	36:BA:2592:G:C8	2.11	0.85
43:BH:45:VAL:HA	43:BH:50:VAL:HG22	1.58	0.85
47:BP:85:LEU:HD23	47:BP:85:LEU:H	1.40	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:107:THR:HA	2:CB:110:GLN:HE21	1.41	0.85
27:D1:76:ARG:HH12	27:D1:95:LEU:HD22	1.40	0.85
36:DA:1947:C:H2'	36:DA:1948:G:H5''	1.57	0.85
36:DA:2778:A:H5'	36:DA:2779:U:OP2	1.77	0.85
43:DH:17:VAL:O	43:DH:45:VAL:HG22	1.76	0.85
28:B2:69:ARG:HG3	28:B2:70:GLN:H	1.42	0.84
36:BA:2262:U:C2'	36:BA:2263:C:H5'	2.06	0.84
39:BD:70:TRP:CH2	39:BD:150:LYS:HA	2.12	0.84
47:BP:62:LEU:H	47:BP:62:LEU:CD2	1.88	0.84
52:BU:91:ASP:OD1	52:BU:96:ALA:HB2	1.76	0.84
12:CL:41:ARG:HB3	12:CL:41:ARG:NH1	1.90	0.84
13:CM:97:PRO:HA	13:CM:110:ARG:HD3	1.57	0.84
19:CS:64:GLU:HG2	30:D4:48:ARG:HH22	1.42	0.84
36:DA:2138:C:H2'	36:DA:2139:C:H6	1.39	0.84
1:AA:1237:C:H3'	1:AA:1238:A:H5'	1.59	0.84
25:AY:607:ARG:HG2	25:AY:646:PHE:CE1	2.11	0.84
36:BA:2310:A:O2'	36:BA:2311:A:H5'	1.77	0.84
36:BA:2672:G:H2'	36:BA:2673:G:H5''	1.57	0.84
36:BA:2876:G:H4'	51:BT:3:ARG:HE	1.42	0.84
37:BB:65:C:N4	37:BB:109:C:H2'	1.92	0.84
12:CL:90:VAL:O	12:CL:92:ASP:N	2.10	0.84
36:DA:710:G:H2'	36:DA:711:G:H8	1.42	0.84
3:AC:3:ASN:O	3:AC:4:LYS:HB2	1.75	0.84
3:AC:34:LEU:HD22	3:AC:38:ARG:HD2	1.58	0.84
5:AE:102:ALA:HB2	5:AE:120:THR:OG1	1.76	0.84
32:B6:11:LEU:HD23	32:B6:51:GLU:HG3	1.58	0.84
40:BE:36:ARG:HH11	40:BE:36:ARG:HG2	1.42	0.84
43:BH:17:VAL:O	43:BH:45:VAL:HG22	1.76	0.84
25:CY:606:MET:O	25:CY:646:PHE:HA	1.77	0.84
51:DT:23:ARG:O	51:DT:25:GLY:N	2.10	0.84
53:DV:15:GLU:HB3	53:DV:16:PRO:CD	2.07	0.84
1:AA:80:G:H3'	1:AA:81:U:C5'	2.07	0.84
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.57	0.84
18:AR:58:LEU:HB3	18:AR:62:GLU:HB3	1.60	0.84
25:AY:19:ALA:HA	25:AY:121:VAL:HG11	1.59	0.84
25:AY:427:ALA:HB1	25:AY:466:LEU:HD11	1.59	0.84
42:BG:111:LEU:HA	42:BG:114:ILE:HD11	1.58	0.84
53:BV:15:GLU:HB3	53:BV:16:PRO:CD	2.06	0.84
36:DA:27:G:H22	36:DA:512:G:H2'	1.41	0.84
36:DA:2425:A:H5'	36:DA:2427:C:O4'	1.78	0.84
25:AY:141:LYS:O	25:AY:144:ALA:HB2	1.77	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:52:LYS:N	34:B8:53:PRO:HD2	1.93	0.84
36:BA:84:A:H5'	56:BY:9:LYS:HB3	1.57	0.84
36:BA:272(G):C:C2'	36:BA:272(H):C:H5''	2.06	0.84
40:BE:179:GLU:HB3	40:BE:181:LEU:HD23	1.59	0.84
46:BO:107:ARG:HA	46:BO:112:MET:HE1	1.57	0.84
1:CA:328:C:H2'	1:CA:328:C:O2	1.77	0.84
6:CF:33:TYR:HA	6:CF:71:ARG:NH2	1.91	0.84
26:D0:43:THR:H	36:DA:2331:G:H4'	1.41	0.84
36:DA:288:C:H2'	36:DA:289:A:H8	1.41	0.84
36:DA:925:C:C2'	36:DA:926:A:H5''	2.07	0.84
36:DA:1899:G:N2	36:DA:1902:C:N4	2.24	0.84
23:AW:50:U:H3	23:AW:64:G:H22	1.25	0.84
36:BA:1824:G:OP1	39:BD:52:ARG:HD3	1.78	0.84
36:BA:1947:C:H2'	36:BA:1948:G:H5''	1.59	0.84
25:CY:605:ILE:HD11	25:CY:677:GLN:HG2	1.57	0.84
36:DA:1053:C:H2'	36:DA:1054:A:H5''	1.57	0.84
46:BO:35:VAL:HG11	46:BO:103:ALA:HB3	1.57	0.84
45:DN:22:THR:HB	45:DN:25:ARG:HB2	1.60	0.84
51:DT:85:LYS:NZ	51:DT:85:LYS:HB3	1.91	0.84
51:DT:129:ARG:HH21	51:DT:132:LYS:HB3	1.42	0.84
36:BA:2306:C:H5''	36:BA:2307:G:O4'	1.78	0.84
37:BB:82:G:O2'	37:BB:83:G:H5'	1.78	0.84
40:BE:38:THR:HB	40:BE:41:LYS:HG2	1.60	0.84
43:BH:13:LYS:HE2	43:BH:13:LYS:HA	1.59	0.84
43:BH:121:ILE:HD11	43:BH:140:LYS:HB3	1.60	0.84
28:D2:37:PHE:HE1	55:DX:11:PRO:HB3	1.43	0.84
47:DP:62:LEU:H	47:DP:62:LEU:CD2	1.89	0.84
51:DT:55:ASN:H	51:DT:59:THR:HG22	1.37	0.84
1:AA:328:C:O2	1:AA:328:C:H2'	1.76	0.84
10:AJ:49:VAL:O	10:AJ:60:ARG:HB3	1.78	0.84
36:BA:710:G:H2'	36:BA:711:G:H8	1.42	0.84
36:BA:1070:A:H5'	36:BA:1072:C:OP2	1.76	0.84
1:CA:973:G:H1'	10:CJ:55:LYS:CE	2.08	0.84
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.12	0.84
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.59	0.84
23:CW:51:C:H2'	23:CW:52:G:H5''	1.60	0.84
25:CY:628:ARG:HE	25:CY:648:PRO:HG2	1.43	0.84
36:DA:1504:C:H2'	36:DA:1505:C:H5''	1.58	0.84
43:DH:121:ILE:HD11	43:DH:140:LYS:HB3	1.60	0.84
55:DX:12:VAL:CG2	55:DX:13:LEU:H	1.91	0.84
5:AE:11:ILE:HD12	5:AE:31:LEU:HD12	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.59	0.84
25:AY:157:LEU:H	25:AY:157:LEU:HD23	1.43	0.84
25:AY:607:ARG:HG2	25:AY:646:PHE:HE1	1.43	0.84
36:DA:581:C:H2'	36:DA:582:G:C8	2.13	0.84
36:DA:2068:U:N3	36:DA:2430:A:H2	1.76	0.84
36:DA:2306:C:H5''	36:DA:2307:G:O4'	1.78	0.84
36:DA:2591:C:H2'	36:DA:2592:G:C8	2.12	0.84
42:DG:77:ILE:HG21	42:DG:80:PHE:HB2	1.58	0.84
52:DU:31:SER:HB3	52:DU:34:LYS:HB2	1.60	0.84
57:DZ:7:ALA:HB3	57:DZ:61:LEU:HD23	1.60	0.84
10:AJ:6:ILE:O	10:AJ:6:ILE:HD12	1.79	0.83
12:AL:18:VAL:HG23	12:AL:19:ARG:N	1.93	0.83
12:AL:41:ARG:HB3	12:AL:41:ARG:NH1	1.93	0.83
36:BA:1658:C:OP1	40:BE:132:HIS:ND1	2.10	0.83
1:CA:1026:G:H2'	1:CA:1027:C:H5'	1.60	0.83
1:CA:1423:G:H5'	46:DO:49:ARG:HH22	1.42	0.83
10:CJ:6:ILE:HD12	10:CJ:6:ILE:O	1.78	0.83
23:CW:30:G:H2'	23:CW:31:G:H5''	1.59	0.83
43:DH:45:VAL:HA	43:DH:50:VAL:HG22	1.59	0.83
25:AY:415:PRO:HA	25:AY:474:ALA:CB	2.08	0.83
41:BF:25:PRO:HG3	41:BF:119:ARG:HB2	1.60	0.83
47:BP:125:VAL:O	47:BP:145:PRO:HD2	1.77	0.83
51:BT:129:ARG:HH21	51:BT:132:LYS:HB3	1.43	0.83
1:CA:100:C:H2'	1:CA:101:A:C8	2.13	0.83
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.42	0.83
41:DF:132:VAL:HG22	41:DF:133:ASN:H	1.42	0.83
12:AL:90:VAL:O	12:AL:92:ASP:N	2.09	0.83
36:BA:2778:A:H5'	36:BA:2779:U:OP2	1.78	0.83
42:BG:76:SER:CA	42:BG:83:ARG:HB3	2.08	0.83
1:CA:1502:A:H2	1:CA:1505:G:H1	1.24	0.83
5:CE:76:ILE:HG13	5:CE:142:LEU:HD13	1.59	0.83
25:CY:546:ILE:HD13	25:CY:565:VAL:HG11	1.60	0.83
36:DA:395:U:H2'	36:DA:396:G:N7	1.93	0.83
4:AD:8:VAL:C	4:AD:10:ARG:H	1.85	0.83
36:BA:2562:U:H1'	46:BO:23:ARG:HH11	1.40	0.83
42:BG:63:ILE:HD12	42:BG:64:THR:N	1.94	0.83
41:DF:84:VAL:HG12	41:DF:85:GLY:H	1.41	0.83
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.60	0.83
25:AY:510:VAL:HA	25:AY:570:GLY:HA3	1.60	0.83
36:BA:914:C:H2'	36:BA:915:C:H5'	1.57	0.83
36:BA:2068:U:N3	36:BA:2430:A:H2	1.76	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:23:LEU:HB3	45:BN:60:ILE:HG21	1.60	0.83
57:BZ:9:TYR:HE1	57:BZ:61:LEU:HD13	1.42	0.83
3:CC:79:ARG:HB2	3:CC:79:ARG:HH11	1.41	0.83
25:CY:353:ALA:O	25:CY:354:ARG:HB2	1.79	0.83
31:D5:4:HIS:HB3	31:D5:5:PRO:HD3	1.59	0.83
32:D6:37:ARG:NH2	36:DA:2286:A:H62	1.77	0.83
36:DA:1658:C:OP1	40:DE:132:HIS:ND1	2.10	0.83
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.13	0.83
9:AI:53:VAL:C	9:AI:55:ALA:H	1.85	0.83
10:AJ:63:PHE:HB3	14:AN:58:LYS:HA	1.59	0.83
36:BA:1142(A):A:H4'	45:BN:25:ARG:HH22	1.42	0.83
40:BE:111:ARG:HG3	49:BR:2:ARG:HG2	1.61	0.83
15:CO:80:ALA:HB1	15:CO:84:LYS:HE2	1.59	0.83
25:CY:548:GLU:O	25:CY:551:GLN:HG2	1.78	0.83
59:CY:701:FUA:H122	59:CY:701:FUA:H231	1.59	0.83
36:DA:833:U:H5''	47:DP:48:PRO:HB3	1.60	0.83
36:DA:2312:U:H2'	36:DA:2313:C:H5''	1.60	0.83
41:DF:25:PRO:HG3	41:DF:119:ARG:HB2	1.61	0.83
1:AA:100:C:H2'	1:AA:101:A:C8	2.12	0.83
1:AA:1004:A:H5'	1:AA:1025:U:N3	1.93	0.83
36:BA:1504:C:H2'	36:BA:1505:C:H5''	1.57	0.83
39:BD:144:ALA:HB3	39:BD:192:THR:HG23	1.61	0.83
42:BG:51:ARG:CZ	42:BG:53:LEU:HD21	2.08	0.83
1:CA:736:C:H2'	1:CA:737:A:C8	2.14	0.83
3:CC:3:ASN:O	3:CC:4:LYS:HB2	1.78	0.83
20:CT:50:GLU:HB3	20:CT:99:LEU:HB2	1.61	0.83
27:D1:76:ARG:NH2	27:D1:95:LEU:HD13	1.92	0.83
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.09	0.83
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.42	0.83
23:AW:14:A:C3'	23:AW:15:G:H5''	2.07	0.83
51:BT:129:ARG:O	51:BT:131:ALA:N	2.12	0.83
9:CI:5:TYR:CD1	9:CI:6:GLY:N	2.46	0.83
15:CO:54:ARG:HG2	15:CO:58:MET:HE2	1.59	0.83
25:CY:289:ILE:O	25:CY:290:LYS:HG3	1.78	0.83
36:DA:1494:A:C2'	36:DA:1495:A:H5''	2.08	0.83
42:DG:73:ALA:H	42:DG:87:PRO:CG	1.91	0.83
42:DG:112:PRO:O	42:DG:113:ARG:HA	1.79	0.83
5:CE:80:ILE:HG22	8:CH:104:ARG:NH2	1.92	0.83
24:CX:11:A:C4'	24:CX:12:A:H5'	2.08	0.83
25:CY:453:GLY:HA2	25:CY:458:HIS:HD2	1.42	0.83
32:D6:11:LEU:HD23	32:D6:51:GLU:HG3	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:14:ARG:HG3	39:DD:15:PHE:N	1.92	0.83
3:AC:156:ARG:HH21	3:AC:161:GLU:HA	1.43	0.83
32:B6:15:GLU:HG3	32:B6:47:THR:HG21	1.60	0.83
36:BA:1053:C:H2'	36:BA:1054:A:H5''	1.59	0.83
36:BA:1452:A:C3'	36:BA:1453:U:H5''	2.07	0.83
43:BH:16:SER:HB2	43:BH:27:LYS:HB2	1.60	0.83
1:CA:1112:C:O2	3:CC:179:ARG:HG3	1.79	0.83
2:CB:126:GLU:HA	2:CB:129:GLU:OE2	1.78	0.83
40:DE:116:VAL:O	40:DE:117:MET:HB3	1.77	0.83
1:AA:1442:G:C6	1:AA:1442(B):A:H2	1.97	0.82
1:CA:1234:C:O2'	1:CA:1235:U:H5'	1.77	0.82
2:CB:43:ASP:OD2	2:CB:46:LYS:HB2	1.77	0.82
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.42	0.82
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.61	0.82
25:CY:605:ILE:CG2	25:CY:646:PHE:HB3	2.09	0.82
36:DA:2645:G:H4'	36:DA:2732:G:O2'	1.79	0.82
41:DF:63:LYS:HE3	41:DF:67:GLN:HB2	1.61	0.82
47:DP:59:LEU:HA	47:DP:61:ARG:CZ	2.09	0.82
1:AA:793:U:C3'	1:AA:794:A:H5''	2.09	0.82
2:AB:12:GLU:O	2:AB:14:GLY:N	2.10	0.82
25:AY:431:LEU:HD22	25:AY:466:LEU:HD13	1.59	0.82
32:B6:10:LEU:CD2	32:B6:10:LEU:H	1.92	0.82
36:BA:925:C:C2'	36:BA:926:A:H5''	2.09	0.82
1:CA:1004:A:H5'	1:CA:1025:U:N3	1.92	0.82
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.61	0.82
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.62	0.82
4:CD:36:ARG:HH11	4:CD:36:ARG:HB3	1.41	0.82
42:DG:46:ALA:CB	42:DG:88:ILE:HB	2.07	0.82
36:BA:581:C:H2'	36:BA:582:G:C8	2.14	0.82
36:BA:1494:A:C2'	36:BA:1495:A:H5''	2.08	0.82
39:DD:70:TRP:CH2	39:DD:150:LYS:HA	2.14	0.82
47:DP:125:VAL:O	47:DP:145:PRO:HD2	1.76	0.82
57:DZ:10:ARG:HH21	57:DZ:26:GLY:H	1.28	0.82
25:AY:227:ILE:HD12	25:AY:245:ALA:HB2	1.62	0.82
26:B0:43:THR:H	36:BA:2331:G:H4'	1.42	0.82
56:BY:17:SER:CB	56:BY:71:LYS:HD2	2.09	0.82
1:CA:1503:A:N1	24:CX:11:A:N3	2.26	0.82
23:CW:1:C:H2'	23:CW:2:G:H8	1.42	0.82
23:CW:68:C:H2'	23:CW:69:C:C6	2.14	0.82
25:CY:82:ILE:HD12	25:CY:101:LEU:HD23	1.58	0.82
32:D6:5:VAL:HG23	36:DA:2283:C:H5'	1.58	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:364:C:H2'	36:DA:365:C:H5''	1.62	0.82
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	1.61	0.82
23:AW:24:U:H2'	23:AW:25:C:H6	1.45	0.82
25:AY:505:GLY:HA3	25:AY:576:ASP:CG	2.03	0.82
1:CA:80:G:H3'	1:CA:81:U:C5'	2.08	0.82
36:DA:226:G:H4'	36:DA:227:A:OP1	1.80	0.82
40:DE:111:ARG:HG3	49:DR:2:ARG:HG2	1.61	0.82
45:DN:23:LEU:HB3	45:DN:60:ILE:HG21	1.60	0.82
1:AA:182:U:H5'	1:AA:183:G:OP2	1.79	0.82
4:AD:36:ARG:HH11	4:AD:36:ARG:HB3	1.43	0.82
36:BA:226:G:H4'	36:BA:227:A:OP1	1.78	0.82
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.61	0.82
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.42	0.82
20:CT:13:LEU:HD12	20:CT:13:LEU:H	1.43	0.82
31:D5:55:ARG:O	31:D5:56:LYS:HB2	1.79	0.82
36:DA:1516:C:C2'	36:DA:1517:G:H5''	2.09	0.82
47:DP:41:ARG:HH11	47:DP:41:ARG:HA	1.43	0.82
49:DR:7:GLY:O	49:DR:8:ARG:HB2	1.79	0.82
38:BC:184:GLU:HB2	38:BC:185:LYS:HZ1	1.45	0.82
1:CA:148:G:H2'	1:CA:149:A:C8	2.14	0.82
12:AL:25:PRO:C	12:AL:27:LEU:H	1.85	0.82
15:AO:83:GLU:C	15:AO:85:LEU:H	1.87	0.82
41:BF:84:VAL:HG12	41:BF:85:GLY:H	1.44	0.82
42:BG:59:GLU:HA	42:BG:62:LEU:HD13	1.59	0.82
13:CM:82:MET:HA	13:CM:93:ARG:HH21	1.43	0.82
41:DF:53:THR:HG22	41:DF:56:GLU:HG3	1.61	0.82
1:AA:148:G:H2'	1:AA:149:A:C8	2.15	0.82
3:AC:79:ARG:HH11	3:AC:79:ARG:HB2	1.45	0.82
5:AE:76:ILE:HG13	5:AE:142:LEU:HD13	1.60	0.82
9:AI:5:TYR:CD1	9:AI:6:GLY:N	2.47	0.82
25:AY:149:VAL:O	25:AY:152:THR:HG22	1.79	0.82
36:BA:545:C:H2'	36:BA:547:A:H5''	1.60	0.82
36:BA:1242:A:H5'	36:BA:1243:G:OP2	1.79	0.82
51:BT:115:ARG:HH11	51:BT:115:ARG:HB3	1.43	0.82
1:CA:1116:C:H2'	1:CA:1117:G:H5'	1.62	0.82
15:CO:83:GLU:C	15:CO:85:LEU:H	1.88	0.82
26:D0:25:ARG:HD2	26:D0:29:GLN:NE2	1.95	0.82
36:DA:621:A:H2'	36:DA:622:G:H5'	1.60	0.82
36:DA:2876:G:H4'	51:DT:3:ARG:HE	1.44	0.82
39:DD:108:PRO:HG2	39:DD:111:LEU:HB2	1.61	0.82
39:DD:132:PRO:HG3	39:DD:190:TYR:CE1	2.15	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:7:ARG:O	47:DP:10:PRO:HD2	1.80	0.82
25:AY:289:ILE:HG13	25:AY:331:TYR:CD1	2.15	0.82
31:B5:19:ARG:HA	36:BA:2046:G:H5'	1.62	0.82
39:BD:108:PRO:HG2	39:BD:111:LEU:HB2	1.61	0.82
1:CA:1237:C:H3'	1:CA:1238:A:H5'	1.60	0.82
36:DA:2310:A:O2'	36:DA:2311:A:H5'	1.79	0.82
50:DS:30:ARG:HD3	50:DS:97:ARG:HG2	1.62	0.82
52:DU:92:ARG:HD3	52:DU:94:ASN:HB3	1.61	0.82
1:AA:973:G:H1'	10:AJ:55:LYS:CE	2.10	0.81
22:AV:36:A:N6	24:AX:16:U:O4	2.13	0.81
31:B5:2:ALA:CA	36:BA:2015:A:H1'	2.09	0.81
36:BA:833:U:H5''	47:BP:48:PRO:HB3	1.62	0.81
39:BD:166:GLN:HA	39:BD:166:GLN:NE2	1.95	0.81
53:BV:15:GLU:CB	53:BV:16:PRO:HD2	2.10	0.81
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.77	0.81
36:DA:612:C:H2'	36:DA:613:G:C5'	2.08	0.81
56:DY:17:SER:CB	56:DY:71:LYS:HD2	2.09	0.81
27:B1:56:GLN:HA	27:B1:56:GLN:HE21	1.43	0.81
36:BA:2009:G:H1'	49:BR:107:ASP:O	1.80	0.81
4:CD:30:LYS:C	4:CD:32:ALA:H	1.87	0.81
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	2.09	0.81
43:DH:13:LYS:HE2	43:DH:13:LYS:HA	1.60	0.81
43:DH:16:SER:HB2	43:DH:27:LYS:HB2	1.60	0.81
45:DN:43:THR:O	45:DN:46:VAL:HG12	1.80	0.81
1:AA:656:C:H4'	15:AO:62:GLN:NE2	1.95	0.81
12:AL:126:LYS:HG3	12:AL:128:ALA:H	1.44	0.81
13:AM:8:GLU:OE1	13:AM:22:ILE:HA	1.80	0.81
25:AY:145:ASP:HB3	25:AY:148:LEU:HB2	1.61	0.81
25:AY:428:LEU:HD13	25:AY:440:VAL:HG11	1.62	0.81
47:BP:41:ARG:HA	47:BP:41:ARG:HH11	1.44	0.81
51:BT:30:VAL:HG21	51:BT:83:ILE:HG12	1.63	0.81
55:BX:12:VAL:CG2	55:BX:13:LEU:H	1.92	0.81
1:CA:793:U:C3'	1:CA:794:A:H5''	2.09	0.81
5:CE:102:ALA:HB2	5:CE:120:THR:OG1	1.80	0.81
10:CJ:63:PHE:HB3	14:CN:58:LYS:HA	1.62	0.81
11:CK:99:GLN:HG2	11:CK:105:VAL:HG21	1.60	0.81
25:CY:488:THR:HG23	25:CY:600:VAL:HB	1.60	0.81
36:DA:545:C:H2'	36:DA:547:A:H5''	1.62	0.81
36:DA:614(A):U:H4'	36:DA:614(B):G:H5''	1.60	0.81
36:DA:1242:A:H5'	36:DA:1243:G:OP2	1.80	0.81
36:DA:2103:C:C2'	36:DA:2104:G:H5''	2.09	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:112:GLN:H	39:DD:115:GLN:NE2	1.79	0.81
48:DQ:39:PRO:HB3	48:DQ:99:PRO:HD3	1.62	0.81
25:AY:427:ALA:HB1	25:AY:466:LEU:CD1	2.11	0.81
36:BA:2852:G:H2'	36:BA:2853:C:C6	2.15	0.81
25:CY:90:PHE:CZ	59:CY:701:FUA:H121	2.15	0.81
25:CY:548:GLU:OE1	25:CY:583:LYS:HE2	1.81	0.81
25:CY:580:MET:HE2	25:CY:581:ALA:N	1.95	0.81
36:DA:6:A:O2'	45:DN:130:HIS:HB2	1.79	0.81
36:DA:2009:G:H1'	49:DR:107:ASP:O	1.79	0.81
36:DA:2723:C:C5'	49:DR:2:ARG:HH11	1.92	0.81
45:DN:45:ASN:HD22	45:DN:45:ASN:N	1.75	0.81
55:DX:53:LYS:HD2	55:DX:55:ASN:HD21	1.46	0.81
57:DZ:18:LEU:H	57:DZ:18:LEU:HD12	1.46	0.81
25:AY:415:PRO:HG3	25:AY:421:GLN:HG2	1.61	0.81
36:BA:2103:C:C2'	36:BA:2104:G:H5''	2.10	0.81
40:BE:116:VAL:O	40:BE:117:MET:HB3	1.78	0.81
49:BR:7:GLY:O	49:BR:8:ARG:HB2	1.79	0.81
25:CY:573:HIS:CD2	25:CY:576:ASP:H	1.97	0.81
36:DA:1142(A):A:H4'	45:DN:25:ARG:HH22	1.43	0.81
38:DC:31:LYS:HE3	38:DC:179:ALA:O	1.80	0.81
46:DO:63:VAL:HG23	46:DO:64:ARG:HG3	1.61	0.81
39:BD:147:LEU:HD13	39:BD:155:LEU:HD11	1.62	0.81
41:BF:63:LYS:HE3	41:BF:67:GLN:HB2	1.61	0.81
1:CA:656:C:H4'	15:CO:62:GLN:NE2	1.95	0.81
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.46	0.81
9:CI:88:TYR:O	9:CI:89:ASN:HB2	1.81	0.81
18:CR:59:SER:H	18:CR:62:GLU:HB2	1.44	0.81
25:CY:156:ARG:HB2	25:CY:157:LEU:HD23	1.61	0.81
36:DA:2523:G:H2'	36:DA:2524:G:C5'	2.10	0.81
51:DT:129:ARG:O	51:DT:131:ALA:N	2.13	0.81
57:DZ:111:VAL:O	57:DZ:112:ARG:HB2	1.78	0.81
5:CE:11:ILE:HD12	5:CE:31:LEU:HD12	1.61	0.81
12:CL:25:PRO:C	12:CL:27:LEU:H	1.85	0.81
13:CM:8:GLU:OE1	13:CM:22:ILE:HA	1.80	0.81
23:CW:34:C:O2'	23:CW:35:A:C5'	2.29	0.81
25:CY:281:PRO:HB2	25:CY:286:ILE:HD11	1.61	0.81
42:DG:72:ARG:HB3	42:DG:87:PRO:HD2	1.62	0.81
43:DH:169:VAL:HG22	43:DH:170:ARG:H	1.46	0.81
51:DT:108:ARG:HG3	51:DT:109:GLU:N	1.93	0.81
1:AA:438:G:H4'	1:AA:439:A:OP1	1.81	0.81
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:35:LYS:NZ	39:BD:36:PRO:HD3	1.95	0.81
43:BH:83:TYR:HB3	43:BH:134:SER:HA	1.61	0.81
3:CC:134:ILE:HD11	3:CC:153:VAL:HG23	1.62	0.81
24:CX:17:U:H2'	24:CX:18:C:H6	1.44	0.81
45:DN:45:ASN:H	45:DN:45:ASN:ND2	1.79	0.81
51:DT:30:VAL:HG21	51:DT:83:ILE:HG12	1.61	0.81
2:AB:44:LEU:H	2:AB:44:LEU:HD12	1.45	0.81
25:AY:33:LEU:HD23	25:AY:360:ALA:HB2	1.61	0.81
46:BO:63:VAL:HG23	46:BO:64:ARG:HG3	1.63	0.81
12:CL:47:LYS:NZ	12:CL:48:PRO:HD3	1.96	0.81
36:DA:1779:U:H5	36:DA:1784:A:N7	1.79	0.81
49:DR:99:LYS:H	49:DR:99:LYS:CD	1.84	0.81
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	1.81	0.81
31:B5:55:ARG:O	31:B5:56:LYS:HB2	1.79	0.81
32:B6:37:ARG:NH2	36:BA:2286:A:H62	1.77	0.81
36:BA:1436:G:H1'	36:BA:1477:A:O2'	1.80	0.81
1:CA:182:U:H5'	1:CA:183:G:OP2	1.81	0.81
12:CL:70:ILE:HG23	12:CL:100:ILE:HD12	1.61	0.81
25:CY:17:ILE:O	25:CY:85:PRO:HG2	1.79	0.81
25:CY:606:MET:HE2	25:CY:671:MET:HE3	1.61	0.81
41:DF:154:VAL:HG22	41:DF:191:ARG:HB3	1.63	0.81
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.44	0.80
2:AB:107:THR:HA	2:AB:110:GLN:HE21	1.44	0.80
18:AR:87:ARG:HB3	18:AR:87:ARG:NH1	1.97	0.80
25:AY:171:GLU:HG3	25:AY:172:ASP:H	1.46	0.80
25:AY:555:LEU:HD11	25:AY:599:PRO:O	1.81	0.80
31:B5:55:ARG:HD3	31:B5:55:ARG:C	2.06	0.80
36:BA:2712:U:O2'	36:BA:2712(A):A:H8	1.64	0.80
2:CB:20:GLU:O	2:CB:39:ILE:HG23	1.81	0.80
9:CI:53:VAL:C	9:CI:55:ALA:H	1.88	0.80
18:CR:87:ARG:HB3	18:CR:87:ARG:NH1	1.95	0.80
32:D6:10:LEU:CD2	32:D6:10:LEU:H	1.93	0.80
36:DA:936:C:H2'	36:DA:937:U:C6	2.17	0.80
36:DA:1539:G:C2	36:DA:1540:U:H1'	2.16	0.80
52:DU:47:TYR:HA	52:DU:50:ARG:NH1	1.96	0.80
57:DZ:166:SER:HB2	57:DZ:167:PRO:C	2.04	0.80
1:AA:792:A:O2'	1:AA:794:A:N7	2.13	0.80
23:AW:34:C:O2'	23:AW:35:A:C5'	2.29	0.80
25:AY:84:THR:HG23	59:AY:701:FUA:C31	2.11	0.80
57:BZ:166:SER:HB2	57:BZ:167:PRO:CA	2.11	0.80
36:DA:1644:C:H2'	36:DA:1644:C:O2	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:39:ILE:HG13	42:DG:92:VAL:HG23	1.62	0.80
54:DW:107:LEU:H	54:DW:107:LEU:HD22	1.46	0.80
3:AC:16:ARG:HB2	3:AC:16:ARG:HH11	1.46	0.80
24:AX:17:U:H2'	24:AX:18:C:H6	1.43	0.80
36:BA:6:A:O2'	45:BN:130:HIS:HB2	1.79	0.80
36:BA:621:A:H2'	36:BA:622:G:H5'	1.63	0.80
36:BA:1658:C:H2'	36:BA:1659:U:C6	2.16	0.80
36:BA:1876:A:H2'	36:BA:1877:A:C8	2.16	0.80
47:BP:7:ARG:O	47:BP:10:PRO:HD2	1.81	0.80
28:D2:2:LYS:CB	36:DA:97:C:H5''	2.10	0.80
36:DA:1290:C:H2'	36:DA:1291:C:H6	1.44	0.80
39:DD:106:ILE:HD11	39:DD:196:VAL:HG13	1.63	0.80
9:AI:4:TYR:CD2	9:AI:88:TYR:HB2	2.17	0.80
25:AY:201:ILE:H	25:AY:201:ILE:HD12	1.45	0.80
36:BA:1516:C:C2'	36:BA:1517:G:H5''	2.09	0.80
43:BH:43:VAL:HG11	43:BH:52:VAL:HG22	1.64	0.80
45:BN:22:THR:HB	45:BN:25:ARG:HB2	1.61	0.80
27:D1:26:ARG:HG3	27:D1:27:GLU:HG3	1.62	0.80
28:D2:12:GLU:O	28:D2:16:LEU:HG	1.82	0.80
1:AA:579:G:H5'	1:AA:728:A:H1'	1.64	0.80
1:AA:625:G:H2'	1:AA:626:U:C6	2.17	0.80
1:AA:736:C:H2'	1:AA:737:A:C8	2.14	0.80
4:AD:108:LEU:HD21	4:AD:183:GLY:HA3	1.62	0.80
7:AG:45:ASP:O	7:AG:49:ILE:HG12	1.81	0.80
18:AR:59:SER:H	18:AR:62:GLU:HB2	1.46	0.80
24:AX:11:A:C1'	24:AX:12:A:C8	2.65	0.80
25:AY:149:VAL:O	25:AY:153:MET:N	2.13	0.80
36:BA:9:U:H5	36:BA:2629:A:H62	1.29	0.80
43:BH:169:VAL:HG22	43:BH:170:ARG:H	1.46	0.80
51:BT:102:ILE:O	51:BT:106:SER:HB3	1.82	0.80
23:CW:50:U:H3	23:CW:64:G:H22	1.30	0.80
25:CY:238:THR:HG23	25:CY:241:GLU:H	1.47	0.80
26:D0:11:ARG:NH1	26:D0:11:ARG:HB2	1.96	0.80
31:D5:2:ALA:CA	36:DA:2015:A:H1'	2.11	0.80
36:DA:2712:U:HO2'	36:DA:2712(A):A:H8	0.83	0.80
39:DD:71:ASP:HB2	39:DD:103:ARG:HH22	1.44	0.80
51:DT:30:VAL:HG21	51:DT:84:GLN:H	1.45	0.80
2:AB:21:ARG:HD2	2:AB:39:ILE:HG12	1.63	0.80
28:B2:36:ARG:HA	28:B2:39:ALA:HB3	1.64	0.80
36:BA:799:G:H3'	36:BA:800:A:H5''	1.61	0.80
36:BA:1614:A:H62	54:BW:93:ALA:HB2	1.47	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1747(A):G:H2'	36:BA:1748:G:C5'	2.10	0.80
41:BF:154:VAL:HG22	41:BF:191:ARG:HB3	1.64	0.80
47:BP:59:LEU:HA	47:BP:61:ARG:CZ	2.11	0.80
51:BT:30:VAL:HG21	51:BT:84:GLN:H	1.46	0.80
1:CA:792:A:O2'	1:CA:794:A:N7	2.14	0.80
25:CY:12:LEU:O	25:CY:283:PRO:HD3	1.81	0.80
36:DA:1188:U:O2'	36:DA:1189:A:H5'	1.80	0.80
40:DE:36:ARG:HH11	40:DE:36:ARG:HG2	1.44	0.80
52:DU:55:ARG:HA	52:DU:58:ARG:HG3	1.63	0.80
4:AD:30:LYS:C	4:AD:32:ALA:H	1.86	0.80
22:AV:36:A:C6	24:AX:16:U:O4	2.35	0.80
36:BA:2723:C:C5'	49:BR:2:ARG:HH11	1.93	0.80
45:BN:45:ASN:H	45:BN:45:ASN:ND2	1.78	0.80
50:BS:101:LEU:O	50:BS:101:LEU:HD12	1.82	0.80
3:CC:83:ARG:O	3:CC:86:VAL:HG22	1.80	0.80
20:CT:57:ARG:HH11	20:CT:102:GLY:HA2	1.46	0.80
36:DA:581:C:H2'	36:DA:582:G:H8	1.45	0.80
42:DG:91:ARG:HD2	42:DG:92:VAL:N	1.97	0.80
45:DN:58:ASP:C	45:DN:60:ILE:H	1.89	0.80
14:AN:29:ARG:HH11	14:AN:29:ARG:HG3	1.47	0.80
20:AT:50:GLU:HB3	20:AT:99:LEU:HB2	1.63	0.80
36:BA:2312:U:H2'	36:BA:2313:C:H5''	1.62	0.80
36:BA:2523:G:H2'	36:BA:2524:G:C5'	2.10	0.80
41:BF:53:THR:HG22	41:BF:56:GLU:HG3	1.62	0.80
41:BF:170:LEU:HB2	41:BF:173:VAL:HB	1.63	0.80
43:BH:124:GLU:HG3	43:BH:132:ARG:HG3	1.63	0.80
3:CC:16:ARG:HB2	3:CC:16:ARG:HH11	1.46	0.80
9:CI:53:VAL:HG23	9:CI:55:ALA:HB3	1.63	0.80
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.64	0.80
23:CW:22:G:C2'	23:CW:23:C:H5''	2.11	0.80
36:DA:676:A:H8	36:DA:2069:G:H21	1.28	0.80
47:DP:38:GLN:HG3	47:DP:39:LYS:H	1.46	0.80
57:DZ:151:HIS:HB3	57:DZ:170:THR:HA	1.64	0.80
6:AF:33:TYR:HA	6:AF:71:ARG:NH2	1.95	0.80
6:AF:43:LEU:H	6:AF:43:LEU:HD12	1.47	0.80
24:AX:17:U:H2'	24:AX:18:C:C6	2.17	0.80
40:BE:38:THR:HG22	40:BE:40:GLU:N	1.94	0.80
1:CA:1104:G:O5'	2:CB:111:ARG:HD2	1.82	0.80
4:CD:64:LEU:HB2	4:CD:198:VAL:HG11	1.64	0.80
36:DA:1876:A:H2'	36:DA:1877:A:C8	2.16	0.80
38:DC:73:VAL:HG11	38:DC:158:LYS:HA	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:124:GLU:HG3	43:DH:132:ARG:HG3	1.63	0.80
53:DV:15:GLU:CB	53:DV:16:PRO:HD2	2.11	0.80
1:AA:1226:C:N4	13:AM:104:ARG:HD2	1.97	0.80
13:AM:82:MET:HA	13:AM:93:ARG:HH21	1.43	0.80
22:AV:51:U:H3	22:AV:63:G:H1	1.30	0.80
24:AX:11:A:C4'	24:AX:12:A:H5'	2.08	0.80
39:BD:24:ILE:HG23	39:BD:25:THR:H	1.47	0.80
45:BN:43:THR:O	45:BN:46:VAL:HG12	1.81	0.80
48:BQ:39:PRO:HB3	48:BQ:99:PRO:HD3	1.64	0.80
51:BT:38:ASN:HD22	51:BT:38:ASN:C	1.90	0.80
12:CL:18:VAL:HG23	12:CL:19:ARG:N	1.95	0.80
28:D2:47:ASN:ND2	36:DA:94(A):G:H21	1.79	0.80
36:DA:9:U:H5	36:DA:2629:A:H62	1.29	0.80
36:DA:2524:G:H8	36:DA:2524:G:H5'	1.45	0.80
39:DD:61:LEU:HB3	39:DD:63:ARG:HH12	1.47	0.80
42:DG:85:GLY:C	42:DG:87:PRO:HD3	2.07	0.80
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	1.82	0.79
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.64	0.79
36:BA:195:A:OP1	47:BP:46:LYS:HE2	1.82	0.79
36:BA:1539:G:C2	36:BA:1540:U:H1'	2.17	0.79
50:BS:30:ARG:HD3	50:BS:97:ARG:HG2	1.62	0.79
2:CB:204:ASN:HD22	2:CB:204:ASN:C	1.88	0.79
11:CK:85:ARG:HG2	11:CK:111:ASP:O	1.81	0.79
23:CW:14:A:C3'	23:CW:15:G:H5''	2.09	0.79
31:D5:55:ARG:HD3	31:D5:55:ARG:C	2.06	0.79
1:AA:1503:A:C2	24:AX:11:A:C2	2.70	0.79
36:BA:1899:G:N2	36:BA:1902:C:N4	2.27	0.79
57:BZ:115:GLY:N	57:BZ:177:PRO:HG3	1.97	0.79
1:CA:1002:G:H22	1:CA:1039:C:H2'	1.47	0.79
3:CC:157:ILE:HD12	3:CC:164:ARG:HB2	1.64	0.79
15:CO:33:THR:HG21	15:CO:85:LEU:HD21	1.64	0.79
24:CX:18:C:C5'	24:CX:19:A:OP1	2.30	0.79
1:AA:1116:C:H2'	1:AA:1117:G:H5'	1.63	0.79
12:AL:20:LYS:HD3	12:AL:20:LYS:H	1.44	0.79
36:BA:364:C:H2'	36:BA:365:C:H5''	1.64	0.79
37:BB:7:G:H5'	50:BS:29:PHE:CE2	2.17	0.79
39:BD:166:GLN:HE21	39:BD:166:GLN:CA	1.95	0.79
51:BT:23:ARG:HG2	51:BT:120:ARG:NH1	1.97	0.79
51:BT:108:ARG:HG3	51:BT:109:GLU:N	1.97	0.79
56:BY:8:LYS:HB2	56:BY:28:LYS:HZ1	1.46	0.79
3:CC:173:VAL:HG12	3:CC:175:LEU:HD12	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CX:11:A:C1'	24:CX:12:A:C8	2.65	0.79
24:AX:18:C:C5'	24:AX:19:A:OP1	2.30	0.79
26:B0:10:THR:HG22	26:B0:11:ARG:H	1.47	0.79
39:BD:132:PRO:HG3	39:BD:190:TYR:CE1	2.17	0.79
51:BT:23:ARG:O	51:BT:25:GLY:N	2.15	0.79
12:CL:83:VAL:HG11	12:CL:100:ILE:HD13	1.65	0.79
26:D0:10:THR:HG22	26:D0:11:ARG:H	1.47	0.79
36:DA:799:G:H3'	36:DA:800:A:H5''	1.62	0.79
41:DF:185:ASP:HA	41:DF:188:ARG:HG2	1.63	0.79
1:AA:1112:C:O2	3:AC:179:ARG:HG3	1.82	0.79
11:AK:85:ARG:HG2	11:AK:111:ASP:O	1.83	0.79
27:B1:76:ARG:NH2	27:B1:95:LEU:HD22	1.97	0.79
36:BA:978:G:H1	36:BA:985:C:H42	1.30	0.79
36:BA:2852:G:H2'	36:BA:2853:C:H6	1.47	0.79
48:BQ:56:ARG:HH21	57:BZ:180:VAL:HG21	1.47	0.79
51:BT:60:THR:HG22	51:BT:77:PRO:HA	1.65	0.79
25:CY:568:TYR:CE1	25:CY:569:ASP:HB2	2.18	0.79
36:DA:1285:G:H2'	36:DA:1286:A:H5'	1.65	0.79
36:DA:1689:A:H62	36:DA:1698:A:H2	1.29	0.79
39:DD:91:ARG:HH11	39:DD:91:ARG:HG2	1.48	0.79
39:BD:263:ARG:HB2	39:BD:263:ARG:NH1	1.98	0.79
41:BF:34:TRP:HB2	47:BP:10:PRO:HB2	1.65	0.79
47:BP:38:GLN:HG3	47:BP:39:LYS:H	1.46	0.79
1:CA:1490:C:H5'	1:CA:1490:C:C6	2.18	0.79
25:CY:223:PHE:CZ	25:CY:249:GLY:HA3	2.16	0.79
25:CY:584:ILE:O	25:CY:588:MET:HG3	1.82	0.79
36:DA:1658:C:H2'	36:DA:1659:U:C6	2.18	0.79
47:DP:30:THR:CG2	47:DP:31:ALA:H	1.95	0.79
47:DP:77:ARG:HB2	47:DP:78:PRO:HD2	1.64	0.79
49:DR:10:LEU:HD22	49:DR:17:ARG:HD3	1.63	0.79
25:AY:165:GLN:HB2	25:AY:260:LEU:HD11	1.65	0.79
28:B2:69:ARG:CG	28:B2:70:GLN:H	1.95	0.79
36:BA:2316:C:H1'	42:BG:128:ARG:NH2	1.97	0.79
39:BD:112:GLN:H	39:BD:115:GLN:NE2	1.80	0.79
45:BN:48:MET:H	45:BN:48:MET:HE3	1.47	0.79
45:BN:58:ASP:C	45:BN:60:ILE:H	1.90	0.79
47:BP:91:PHE:H	47:BP:91:PHE:HD1	1.29	0.79
1:CA:438:G:H4'	1:CA:439:A:OP1	1.82	0.79
1:CA:1489:G:H2'	1:CA:1490:C:H5''	1.65	0.79
16:CP:25:ARG:HH11	16:CP:25:ARG:HG3	1.48	0.79
22:CV:52:G:H2'	22:CV:53:G:C8	2.18	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:47:ASP:HB3	47:DP:48:PRO:CA	2.13	0.79
1:AA:1503:A:C2	24:AX:11:A:H2	2.01	0.79
3:AC:83:ARG:O	3:AC:86:VAL:HG22	1.82	0.79
9:AI:53:VAL:HG23	9:AI:55:ALA:HB3	1.62	0.79
20:AT:45:GLN:HB2	20:AT:91:LEU:HD13	1.65	0.79
25:AY:439:ARG:N	25:AY:452:SER:HB3	1.96	0.79
26:B0:25:ARG:HD2	26:B0:29:GLN:NE2	1.96	0.79
36:BA:2334:G:H5'	50:BS:13:ARG:HD3	1.65	0.79
56:BY:8:LYS:HB2	56:BY:28:LYS:HZ3	1.43	0.79
12:CL:126:LYS:HG3	12:CL:128:ALA:H	1.46	0.79
24:CX:17:U:H2'	24:CX:18:C:C6	2.17	0.79
36:DA:1436:G:H1'	36:DA:1477:A:O2'	1.81	0.79
38:DC:128:LEU:HD12	38:DC:132:LEU:HG	1.65	0.79
42:DG:116:ASP:O	42:DG:117:PHE:HB3	1.82	0.79
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.17	0.79
10:AJ:69:ASN:O	10:AJ:70:ARG:HD2	1.82	0.79
13:AM:3:ARG:NH2	13:AM:7:VAL:HG13	1.97	0.79
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.63	0.79
20:AT:57:ARG:HH11	20:AT:102:GLY:HA2	1.45	0.79
22:AV:53:G:H2'	22:AV:54:U:C6	2.18	0.79
26:B0:11:ARG:HB2	26:B0:11:ARG:NH1	1.97	0.79
27:B1:3:LYS:HG3	27:B1:4:VAL:N	1.96	0.79
36:BA:1188:U:O2'	36:BA:1189:A:H5'	1.83	0.79
39:BD:44:ASN:CB	39:BD:49:ILE:HA	2.13	0.79
51:BT:55:ASN:H	51:BT:59:THR:CG2	1.96	0.79
52:BU:95:LEU:HD12	53:BV:11:GLN:HE21	1.46	0.79
53:BV:28:GLU:HB2	53:BV:31:ALA:CB	2.12	0.79
1:CA:973:G:H3'	1:CA:974:A:H5''	1.64	0.79
23:CW:3:C:C2'	23:CW:4:G:H5''	2.13	0.79
25:CY:509:HIS:ND1	25:CY:570:GLY:HA2	1.98	0.79
17:AQ:52:LYS:H	17:AQ:52:LYS:HD2	1.47	0.79
23:AW:34:C:O2'	23:AW:35:A:C4'	2.31	0.79
36:BA:2110:G:O2'	36:BA:2120:G:H5'	1.83	0.79
57:BZ:77:ASP:O	57:BZ:79:ARG:N	2.16	0.79
57:BZ:98:MET:HE2	57:BZ:99:TYR:O	1.82	0.79
22:CV:52:G:H2'	22:CV:53:G:H8	1.48	0.79
36:DA:978:G:H1	36:DA:985:C:N4	1.80	0.79
36:DA:1314:C:H5'	36:DA:1314:C:H6	1.47	0.79
36:DA:2756:U:H4'	36:DA:2757:A:OP1	1.81	0.79
40:DE:59:VAL:HG11	40:DE:63:LEU:HG	1.65	0.79
50:DS:106:ARG:HH11	50:DS:106:ARG:HB3	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1899:G:H22	36:BA:1902:C:H41	1.19	0.78
49:BR:28:LEU:HD23	49:BR:29:LEU:HD12	1.65	0.78
1:CA:483:C:H3'	1:CA:484:G:H5''	1.63	0.78
25:CY:251:ILE:HG23	25:CY:281:PRO:HB3	1.62	0.78
34:D8:51:ALA:HA	34:D8:54:GLU:OE1	1.81	0.78
36:DA:1614:A:H62	54:DW:93:ALA:HB2	1.47	0.78
47:DP:115:LEU:HA	47:DP:134:ALA:HB3	1.64	0.78
51:DT:23:ARG:HG2	51:DT:120:ARG:NH1	1.97	0.78
51:DT:38:ASN:C	51:DT:38:ASN:HD22	1.89	0.78
2:AB:168:THR:CG2	2:AB:192:SER:HB3	2.09	0.78
25:AY:281:PRO:CB	25:AY:286:ILE:HD11	2.10	0.78
34:B8:4:MET:O	34:B8:62:LEU:HD12	1.83	0.78
36:BA:1290:C:H2'	36:BA:1291:C:H6	1.48	0.78
42:BG:16:ARG:HE	42:BG:31:VAL:HG11	1.48	0.78
43:BH:46:GLU:CD	43:BH:51:ARG:HB2	2.08	0.78
55:BX:53:LYS:HD2	55:BX:55:ASN:HD21	1.47	0.78
23:CW:34:C:O2'	23:CW:35:A:C4'	2.31	0.78
25:CY:91:THR:O	25:CY:93:GLU:N	2.15	0.78
36:DA:1775:U:H2'	36:DA:1776:G:H5'	1.65	0.78
36:DA:2852:G:H2'	36:DA:2853:C:C6	2.17	0.78
52:DU:88:ILE:HG22	53:DV:47:VAL:O	1.83	0.78
25:AY:247:ARG:HD2	25:AY:278:ASP:O	1.82	0.78
25:AY:415:PRO:HA	25:AY:474:ALA:HB2	1.63	0.78
25:AY:539:ILE:O	25:AY:542:VAL:HG12	1.83	0.78
42:BG:42:GLY:HA2	42:BG:89:GLY:HA2	1.63	0.78
52:BU:47:TYR:HA	52:BU:50:ARG:NH1	1.98	0.78
5:CE:144:THR:O	5:CE:148:VAL:HG23	1.83	0.78
32:D6:10:LEU:H	32:D6:10:LEU:HD23	1.48	0.78
40:DE:38:THR:HG22	40:DE:40:GLU:N	1.97	0.78
41:DF:170:LEU:HB2	41:DF:173:VAL:HB	1.64	0.78
43:DH:43:VAL:HG11	43:DH:52:VAL:HG22	1.63	0.78
51:DT:29:ARG:HB3	51:DT:85:LYS:HA	1.66	0.78
53:DV:19:LYS:HZ3	53:DV:20:LEU:H	1.31	0.78
12:AL:70:ILE:HG23	12:AL:100:ILE:HD12	1.65	0.78
25:AY:141:LYS:HE3	60:AY:702:GDP:N2	1.97	0.78
36:BA:978:G:H1	36:BA:985:C:N4	1.80	0.78
36:BA:1779:U:H5	36:BA:1784:A:N7	1.81	0.78
36:BA:1819:A:H4'	36:BA:1820:U:C5'	2.13	0.78
57:BZ:79:ARG:O	57:BZ:80:ARG:HB2	1.81	0.78
10:CJ:61:GLU:OE1	14:CN:45:ARG:HD2	1.83	0.78
12:CL:20:LYS:HD3	12:CL:20:LYS:H	1.46	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:272:LEU:O	25:CY:276:VAL:HG23	1.83	0.78
36:DA:654(L):G:H2'	36:DA:654(M):C:H4'	1.66	0.78
36:DA:1278:A:H5''	49:DR:36:THR:HG22	1.65	0.78
36:DA:2133:G:C2'	36:DA:2157:G:H22	1.96	0.78
47:DP:91:PHE:HD1	47:DP:91:PHE:H	1.30	0.78
50:DS:101:LEU:HD12	50:DS:101:LEU:O	1.83	0.78
54:DW:29:LEU:CD1	54:DW:51:LEU:HD11	2.14	0.78
57:DZ:156:LYS:O	57:DZ:158:PRO:HD3	1.81	0.78
1:AA:483:C:H3'	1:AA:484:G:H5''	1.63	0.78
2:AB:43:ASP:OD2	2:AB:46:LYS:HB2	1.83	0.78
2:AB:95:GLN:C	2:AB:96:ARG:HD2	2.09	0.78
8:AH:17:THR:HB	8:AH:78:GLN:OE1	1.84	0.78
25:AY:82:ILE:HD12	25:AY:101:LEU:HD23	1.63	0.78
36:BA:676:A:H8	36:BA:2069:G:H21	1.28	0.78
39:BD:71:ASP:HB2	39:BD:103:ARG:HH22	1.46	0.78
41:BF:185:ASP:HA	41:BF:188:ARG:HG2	1.64	0.78
10:CJ:69:ASN:O	10:CJ:70:ARG:HD2	1.84	0.78
53:DV:28:GLU:HB2	53:DV:31:ALA:CB	2.13	0.78
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.29	0.78
28:D2:33:MET:O	28:D2:37:PHE:HB2	1.84	0.78
39:DD:35:LYS:NZ	39:DD:36:PRO:HD3	1.97	0.78
43:DH:83:TYR:HB3	43:DH:134:SER:HA	1.63	0.78
51:DT:55:ASN:H	51:DT:59:THR:CG2	1.97	0.78
20:AT:26:ASN:O	20:AT:30:LYS:HB2	1.83	0.78
39:BD:35:LYS:HD2	39:BD:35:LYS:C	2.08	0.78
53:BV:19:LYS:HZ3	53:BV:20:LEU:H	1.31	0.78
2:CB:168:THR:CG2	2:CB:192:SER:HB3	2.09	0.78
36:BA:936:C:H2'	36:BA:937:U:C6	2.18	0.78
36:BA:1884:A:H2'	36:BA:1885:A:C5'	2.10	0.78
36:BA:2012:G:C4'	54:BW:96:ILE:HD11	2.08	0.78
39:BD:61:LEU:HB3	39:BD:63:ARG:HH12	1.48	0.78
49:BR:99:LYS:H	49:BR:99:LYS:CD	1.84	0.78
51:BT:65:LYS:HE3	51:BT:66:VAL:N	1.98	0.78
14:CN:29:ARG:HG3	14:CN:29:ARG:HH11	1.49	0.78
27:D1:44:PRO:HG2	27:D1:46:LEU:CD2	2.12	0.78
34:D8:4:MET:O	34:D8:62:LEU:HD12	1.84	0.78
34:D8:48:PHE:O	34:D8:49:VAL:HG13	1.82	0.78
36:DA:2178:C:H4'	38:DC:47:LYS:HD3	1.66	0.78
36:DA:2334:G:H5'	50:DS:13:ARG:HD3	1.64	0.78
39:DD:24:ILE:HG23	39:DD:25:THR:H	1.49	0.78
1:AA:1225:A:H2'	1:AA:1225:A:N3	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1490:C:H6	1:AA:1490:C:C5'	1.97	0.78
36:BA:970:C:H2'	36:BA:971:C:C6	2.18	0.78
40:BE:179:GLU:O	40:BE:180:ASN:HB2	1.84	0.78
45:BN:46:VAL:HG13	45:BN:48:MET:HE2	1.66	0.78
1:CA:284:G:H2'	1:CA:285:G:H8	1.48	0.78
13:CM:3:ARG:NH2	13:CM:7:VAL:HG13	1.98	0.78
32:D6:30:THR:HG22	32:D6:32:ASN:ND2	1.99	0.78
36:DA:83:G:HO2'	36:DA:84:A:H8	1.30	0.78
36:DA:573:G:O2'	36:DA:574:C:H3'	1.83	0.78
37:DB:103:G:H21	57:DZ:73:GLN:NE2	1.79	0.78
42:DG:108:ASN:C	42:DG:112:PRO:HG2	2.09	0.78
47:DP:47:ASP:HB3	47:DP:48:PRO:HA	1.65	0.78
1:AA:1100:C:H2'	1:AA:1101:A:H5''	1.65	0.78
36:BA:1578:U:H2'	36:BA:1579:A:H5''	1.66	0.78
36:BA:1748:G:H8	36:BA:1748:G:H5'	1.47	0.78
36:BA:2444:G:OP2	41:BF:68:LYS:HE2	1.84	0.78
39:BD:165:ILE:HD13	39:BD:175:LEU:HD21	1.65	0.78
1:CA:201:C:H2'	1:CA:202:U:H5''	1.66	0.78
1:CA:625:G:H2'	1:CA:626:U:C6	2.18	0.78
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	1.84	0.78
30:D4:14:ILE:O	30:D4:21:VAL:HG13	1.84	0.78
34:D8:50:LEU:HD12	34:D8:51:ALA:H	1.49	0.78
39:DD:35:LYS:HD2	39:DD:35:LYS:C	2.09	0.78
45:DN:129:PRO:O	45:DN:130:HIS:HB3	1.82	0.78
1:AA:284:G:H2'	1:AA:285:G:H8	1.48	0.77
1:AA:1364:U:H2'	1:AA:1364:U:O2	1.84	0.77
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.64	0.77
10:AJ:61:GLU:OE1	14:AN:45:ARG:HD2	1.83	0.77
22:AV:46:G:O2'	22:AV:47:U:H5'	1.83	0.77
25:AY:25:LYS:HE3	60:AY:702:GDP:O2B	1.84	0.77
27:B1:76:ARG:HH22	27:B1:95:LEU:CD2	1.98	0.77
32:B6:6:ARG:HD2	32:B6:6:ARG:H	1.49	0.77
32:B6:54:ILE:O	32:B6:54:ILE:HD12	1.83	0.77
36:BA:279:C:H2'	36:BA:280:C:H5''	1.66	0.77
36:BA:979:G:H3'	36:BA:980:A:C5'	2.14	0.77
38:BC:73:VAL:HG11	38:BC:158:LYS:HA	1.64	0.77
45:BN:67:LEU:O	45:BN:68:GLU:HB2	1.85	0.77
1:CA:101:A:O2'	1:CA:102:G:H5'	1.83	0.77
1:CA:1442(A):G:H2'	51:DT:118:ARG:HH11	1.49	0.77
2:CB:95:GLN:C	2:CB:96:ARG:HD2	2.07	0.77
25:CY:92:ILE:CG2	25:CY:454:MET:HE1	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:19:ARG:HA	36:DA:2046:G:H5'	1.65	0.77
36:DA:585:G:H2'	36:DA:1251:C:H42	1.47	0.77
36:DA:1609:A:H5'	36:DA:1610:A:OP2	1.83	0.77
36:DA:1718:G:H5'	36:DA:1718:G:H8	1.49	0.77
39:DD:263:ARG:NH1	39:DD:263:ARG:HB2	1.98	0.77
41:DF:174:VAL:HG21	41:DF:189:THR:HG21	1.66	0.77
45:DN:15:LEU:HD13	45:DN:16:ILE:N	1.99	0.77
1:AA:1128:C:H2'	1:AA:1129:C:H5''	1.67	0.77
15:AO:78:TYR:O	15:AO:82:ILE:HG22	1.85	0.77
25:AY:293:THR:HB	25:AY:294:PRO:HD2	1.66	0.77
25:AY:513:LYS:HB2	25:AY:566:THR:HB	1.65	0.77
36:BA:1278:A:H5''	49:BR:36:THR:HG22	1.66	0.77
36:BA:2585:U:O2'	36:BA:2586:C:H5'	1.85	0.77
52:BU:92:ARG:HD3	52:BU:94:ASN:HB3	1.65	0.77
53:BV:45:THR:O	53:BV:46:VAL:HG12	1.84	0.77
12:CL:6:THR:H	12:CL:9:GLN:NE2	1.81	0.77
22:CV:2:C:H2'	22:CV:3:C:H6	1.48	0.77
29:D3:29:ARG:HB2	29:D3:29:ARG:NH1	1.99	0.77
36:DA:979:G:H3'	36:DA:980:A:C5'	2.14	0.77
36:DA:1819:A:H4'	36:DA:1820:U:C5'	2.13	0.77
42:DG:77:ILE:HG22	42:DG:80:PHE:N	1.99	0.77
47:DP:55:ARG:HG2	47:DP:56:SER:N	1.99	0.77
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.64	0.77
25:AY:510:VAL:HG22	25:AY:534:ILE:CD1	2.14	0.77
32:B6:10:LEU:H	32:B6:10:LEU:HD23	1.48	0.77
36:BA:581:C:H2'	36:BA:582:G:H8	1.47	0.77
36:BA:1314:C:H5'	36:BA:1314:C:H6	1.46	0.77
36:BA:1959:G:H3'	36:BA:1960:A:H5''	1.66	0.77
39:BD:10:THR:HG23	39:BD:13:ARG:HB3	1.66	0.77
45:BN:129:PRO:O	45:BN:130:HIS:HB3	1.83	0.77
1:CA:1226:C:N4	13:CM:104:ARG:HD2	1.99	0.77
1:CA:1489:G:C2'	1:CA:1490:C:H5''	2.14	0.77
2:CB:96:ARG:HD2	2:CB:96:ARG:N	1.99	0.77
10:CJ:53:PRO:HA	14:CN:42:ILE:HD11	1.67	0.77
25:CY:628:ARG:NE	25:CY:648:PRO:HG2	1.99	0.77
36:DA:84:A:H5''	56:DY:9:LYS:HZ2	1.49	0.77
36:DA:195:A:OP1	47:DP:46:LYS:HE2	1.85	0.77
36:DA:2631:G:N2	40:DE:61:ARG:HH12	1.82	0.77
39:DD:166:GLN:HA	39:DD:166:GLN:NE2	1.98	0.77
42:DG:111:LEU:HA	42:DG:114:ILE:CD1	2.14	0.77
47:DP:127:ALA:O	47:DP:148:LEU:HD11	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:625:G:H2'	1:AA:626:U:H6	1.49	0.77
23:AW:34:C:C2'	23:AW:35:A:O4'	2.30	0.77
25:AY:276:VAL:HA	25:AY:280:LEU:HD23	1.64	0.77
50:BS:97:ARG:NH2	50:BS:98:VAL:HA	1.99	0.77
52:BU:55:ARG:HA	52:BU:58:ARG:HG3	1.64	0.77
1:CA:579:G:H5'	1:CA:728:A:H1'	1.64	0.77
1:CA:697:U:H2'	1:CA:698:G:H5'	1.66	0.77
1:CA:1004:A:N6	1:CA:1034:G:H2'	1.99	0.77
1:CA:1152:A:H5''	10:CJ:13:HIS:HD2	1.49	0.77
12:CL:39:VAL:HB	12:CL:57:LYS:HB2	1.65	0.77
36:DA:965:C:H5'	36:DA:2273:A:C1'	2.10	0.77
36:DA:1790:C:H5''	36:DA:1791:A:OP1	1.84	0.77
42:DG:138:GLN:OE1	42:DG:153:ARG:HG2	1.85	0.77
56:DY:86:ARG:HB3	56:DY:88:LYS:HZ1	1.47	0.77
57:DZ:40:ASP:OD1	57:DZ:42:VAL:HG12	1.83	0.77
1:AA:101:A:O2'	1:AA:102:G:H5'	1.83	0.77
1:AA:973:G:H3'	1:AA:974:A:H5''	1.65	0.77
12:AL:47:LYS:NZ	12:AL:48:PRO:HD3	2.00	0.77
15:AO:33:THR:HG21	15:AO:85:LEU:HD21	1.67	0.77
25:AY:513:LYS:CB	25:AY:566:THR:HB	2.14	0.77
25:AY:616:TYR:HE2	25:AY:664:GLN:HE21	1.32	0.77
30:B4:14:ILE:O	30:B4:21:VAL:HG13	1.85	0.77
36:BA:1485:G:H1'	36:BA:1505:C:H42	1.48	0.77
38:BC:138:LEU:HD22	38:BC:139:PRO:HD2	1.65	0.77
39:BD:158:ALA:HB3	39:BD:161:THR:HG21	1.65	0.77
42:BG:64:THR:HG23	42:BG:66:GLN:H	1.49	0.77
47:BP:115:LEU:HA	47:BP:134:ALA:HB3	1.65	0.77
1:CA:797:C:OP1	11:CK:124:LYS:HE3	1.85	0.77
9:CI:4:TYR:CD2	9:CI:88:TYR:HB2	2.20	0.77
25:CY:544:LYS:O	25:CY:548:GLU:HB3	1.83	0.77
36:DA:1959:G:H3'	36:DA:1960:A:H5''	1.65	0.77
55:DX:53:LYS:HD2	55:DX:55:ASN:ND2	1.99	0.77
1:AA:522:C:H41	12:AL:53:ARG:NH2	1.83	0.77
1:AA:1299:A:H2'	1:AA:1299:A:N3	1.98	0.77
2:AB:204:ASN:HD22	2:AB:204:ASN:C	1.88	0.77
25:AY:67:ALA:CB	25:AY:358:MET:HG3	2.13	0.77
30:B4:1:MET:SD	42:BG:98:ARG:CG	2.73	0.77
36:BA:654(L):G:H2'	36:BA:654(M):C:H4'	1.65	0.77
40:BE:59:VAL:HG11	40:BE:63:LEU:HG	1.66	0.77
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.67	0.77
17:CQ:52:LYS:HD2	17:CQ:52:LYS:H	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:120:THR:O	25:CY:124:GLN:CD	2.28	0.77
27:D1:19:GLN:O	27:D1:35:THR:HG22	1.83	0.77
28:D2:55:ARG:O	28:D2:58:ALA:HB3	1.84	0.77
36:DA:654(V):A:H3'	36:DA:655:A:H2'	1.66	0.77
36:DA:2796:U:H3'	36:DA:2799:C:C5'	2.14	0.77
39:DD:166:GLN:HE21	39:DD:166:GLN:CA	1.97	0.77
52:DU:95:LEU:HD12	53:DV:11:GLN:HE21	1.47	0.77
55:DX:12:VAL:HG12	55:DX:27:THR:O	1.84	0.77
22:AV:36:A:N1	24:AX:16:U:C4	2.52	0.77
32:B6:27:LYS:O	32:B6:27:LYS:HD2	1.85	0.77
36:BA:979:G:H3'	36:BA:980:A:H5'	1.67	0.77
36:BA:1609:A:H5'	36:BA:1610:A:OP2	1.85	0.77
57:BZ:153:SER:HB2	57:BZ:163:LEU:HD13	1.66	0.77
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.66	0.77
4:CD:129:ASN:N	4:CD:129:ASN:HD22	1.83	0.77
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.65	0.77
25:CY:95:GLU:OE1	25:CY:124:GLN:HB3	1.84	0.77
29:D3:8:LEU:HD22	29:D3:31:LEU:HD23	1.67	0.77
36:DA:2105:C:H42	36:DA:2184:G:H1	1.33	0.77
36:DA:2110:G:O2'	36:DA:2120:G:H5'	1.83	0.77
36:DA:2461:C:H5'	36:DA:2462:U:OP2	1.85	0.77
41:DF:34:TRP:HB2	47:DP:10:PRO:HB2	1.65	0.77
49:DR:100:LEU:H	49:DR:100:LEU:HD22	1.49	0.77
2:AB:96:ARG:HD2	2:AB:96:ARG:N	1.98	0.77
25:AY:223:PHE:CE1	25:AY:249:GLY:HA3	2.20	0.77
36:BA:1285:G:H2'	36:BA:1286:A:H5'	1.66	0.77
38:BC:31:LYS:HE3	38:BC:179:ALA:O	1.84	0.77
42:BG:77:ILE:HG22	42:BG:77:ILE:O	1.85	0.77
51:BT:29:ARG:HB3	51:BT:85:LYS:HA	1.67	0.77
52:BU:110:VAL:HG12	52:BU:114:LYS:HD2	1.65	0.77
20:CT:45:GLN:HB2	20:CT:91:LEU:HD13	1.66	0.77
23:CW:34:C:C2'	23:CW:35:A:O4'	2.30	0.77
25:CY:33:LEU:HD23	25:CY:360:ALA:HB2	1.67	0.77
36:DA:88:G:OP1	36:DA:90:U:H5	1.66	0.77
36:DA:2579:C:C4'	40:DE:134:ILE:HG12	2.13	0.77
36:DA:2672:G:C2'	36:DA:2673:G:H5''	2.14	0.77
39:DD:39:LYS:HB2	39:DD:62:TYR:HB2	1.67	0.77
39:DD:144:ALA:HB3	39:DD:192:THR:HG23	1.65	0.77
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	1.67	0.77
3:AC:173:VAL:HG12	3:AC:175:LEU:HD12	1.67	0.77
34:B8:48:PHE:O	34:B8:49:VAL:HG13	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1231:G:H2'	36:BA:1232:G:H8	1.50	0.77
36:BA:2175:C:H4'	38:BC:219:MET:O	1.85	0.77
39:BD:39:LYS:HB2	39:BD:62:TYR:HB2	1.67	0.77
39:BD:270:ILE:H	39:BD:270:ILE:HD12	1.49	0.77
41:BF:20:LEU:HD23	41:BF:21:ALA:N	2.00	0.77
7:CG:45:ASP:O	7:CG:49:ILE:HG12	1.83	0.77
19:CS:21:GLU:HG3	19:CS:22:LEU:HD23	1.66	0.77
36:DA:1747(A):G:H2'	36:DA:1748:G:C5'	2.11	0.77
47:DP:7:ARG:CZ	47:DP:7:ARG:HA	2.15	0.77
52:DU:92:ARG:O	52:DU:94:ASN:N	2.18	0.77
12:AL:57:LYS:HG3	12:AL:67:THR:HG22	1.66	0.77
36:BA:654(V):A:H3'	36:BA:655:A:H2'	1.65	0.77
36:BA:2105:C:H42	36:BA:2184:G:H1	1.32	0.77
6:CF:43:LEU:H	6:CF:43:LEU:HD12	1.48	0.77
16:CP:20:VAL:HG21	16:CP:32:TYR:HB2	1.66	0.77
25:CY:513:LYS:CB	25:CY:566:THR:HB	2.15	0.77
40:DE:78:LEU:C	40:DE:79:ARG:HD2	2.09	0.77
9:AI:95:LYS:HD3	9:AI:96:LEU:N	2.00	0.76
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.65	0.76
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.67	0.76
19:AS:21:GLU:HG3	19:AS:22:LEU:HD23	1.66	0.76
36:BA:2796:U:H3'	36:BA:2799:C:C5'	2.14	0.76
54:BW:29:LEU:CD1	54:BW:51:LEU:HD11	2.16	0.76
1:CA:1225:A:H2'	1:CA:1225:A:N3	1.98	0.76
10:CJ:64:GLU:HG2	14:CN:59:ALA:HB2	1.67	0.76
25:CY:9:LEU:O	25:CY:9:LEU:HD23	1.83	0.76
25:CY:124:GLN:HA	25:CY:127:LYS:HD2	1.67	0.76
26:D0:74:ARG:HG2	37:DB:13:A:OP2	1.85	0.76
36:DA:2313:C:H5'	36:DA:2313:C:H6	1.50	0.76
39:DD:158:ALA:HB3	39:DD:161:THR:HG21	1.66	0.76
54:DW:5:ALA:HB2	54:DW:54:ALA:HB2	1.65	0.76
1:AA:926:G:N2	24:AX:16:U:OP2	2.19	0.76
2:AB:20:GLU:O	2:AB:39:ILE:HG23	1.85	0.76
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.66	0.76
24:AX:12:A:H4'	24:AX:13:A:OP1	1.85	0.76
28:B2:69:ARG:HG3	28:B2:70:GLN:N	2.00	0.76
41:BF:174:VAL:HG21	41:BF:189:THR:HG21	1.68	0.76
47:BP:47:ASP:HB3	47:BP:48:PRO:HA	1.66	0.76
47:BP:55:ARG:HG2	47:BP:56:SER:N	1.94	0.76
49:BR:10:LEU:HD22	49:BR:17:ARG:HD3	1.67	0.76
13:CM:96:LEU:HB3	13:CM:97:PRO:HD2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CX:12:A:H4'	24:CX:13:A:OP1	1.85	0.76
36:DA:83:G:O2'	36:DA:84:A:H8	1.68	0.76
36:DA:979:G:H3'	36:DA:980:A:H5'	1.67	0.76
36:DA:1514:U:H2'	36:DA:1515:G:H8	1.51	0.76
36:DA:1717:G:H2'	36:DA:1718:G:H5''	1.68	0.76
36:DA:2389:G:H5''	36:DA:2390:U:H5'	1.67	0.76
41:DF:20:LEU:HD23	41:DF:21:ALA:N	1.99	0.76
1:AA:1004:A:N6	1:AA:1034:G:H2'	2.00	0.76
19:AS:78:ARG:HB2	19:AS:81:ARG:HH11	1.49	0.76
22:AV:64:A:H2'	22:AV:65:G:H8	1.51	0.76
23:AW:6:G:H2'	23:AW:7:G:O4'	1.86	0.76
39:BD:35:LYS:HG3	39:BD:63:ARG:HG3	1.66	0.76
43:BH:44:VAL:O	43:BH:50:VAL:HG13	1.84	0.76
45:BN:15:LEU:HD13	45:BN:16:ILE:N	1.99	0.76
47:BP:62:LEU:HD23	47:BP:62:LEU:N	2.00	0.76
47:BP:77:ARG:HB2	47:BP:78:PRO:HD2	1.67	0.76
52:BU:88:ILE:HG22	53:BV:47:VAL:O	1.85	0.76
56:BY:44:ILE:HG22	56:BY:45:VAL:N	2.00	0.76
4:CD:9:CYS:SG	4:CD:22:LYS:HD2	2.26	0.76
36:DA:1516:C:H2'	36:DA:1517:G:H5''	1.67	0.76
42:DG:46:ALA:HB2	42:DG:88:ILE:CB	2.09	0.76
42:DG:64:THR:HG23	42:DG:66:GLN:H	1.49	0.76
42:DG:73:ALA:O	42:DG:85:GLY:HA2	1.85	0.76
52:DU:110:VAL:HG12	52:DU:114:LYS:HD2	1.66	0.76
12:AL:18:VAL:CG2	12:AL:19:ARG:H	1.96	0.76
19:AS:41:VAL:HG21	19:AS:44:MET:HB2	1.67	0.76
36:BA:585:G:H2'	36:BA:1251:C:H42	1.49	0.76
38:BC:101:ILE:HG23	38:BC:128:LEU:HD23	1.67	0.76
41:BF:53:THR:HG23	41:BF:55:GLY:H	1.50	0.76
42:BG:34:LEU:HD13	42:BG:99:MET:HE1	1.64	0.76
43:BH:86:GLU:HA	43:BH:132:ARG:HA	1.68	0.76
47:BP:47:ASP:HB3	47:BP:48:PRO:CA	2.15	0.76
53:BV:40:LEU:HA	53:BV:45:THR:HB	1.67	0.76
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.33	0.76
5:CE:64:ARG:HG3	5:CE:64:ARG:HH11	1.51	0.76
36:DA:284:U:H2'	36:DA:285:C:C6	2.20	0.76
36:DA:1780:A:H5'	36:DA:1781:C:OP2	1.85	0.76
36:DA:2175:C:H4'	38:DC:219:MET:O	1.84	0.76
51:DT:115:ARG:HB3	51:DT:115:ARG:NH1	2.00	0.76
1:AA:1479:C:H2'	1:AA:1480:G:H8	1.51	0.76
5:AE:79:GLU:HB3	5:AE:93:PRO:HD2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:144:THR:O	5:AE:148:VAL:HG23	1.84	0.76
23:AW:22:G:C2'	23:AW:23:C:H5''	2.15	0.76
30:B4:7:PRO:O	30:B4:8:LYS:HB3	1.84	0.76
36:BA:1516:C:H2'	36:BA:1517:G:H5''	1.66	0.76
36:BA:1876:A:H2'	36:BA:1877:A:H8	1.51	0.76
36:BA:2579:C:C4'	40:BE:134:ILE:HG12	2.15	0.76
42:BG:51:ARG:HA	42:BG:51:ARG:HE	1.51	0.76
49:BR:100:LEU:HD22	49:BR:100:LEU:H	1.50	0.76
1:CA:1047:G:H5''	14:CN:4:LYS:HD3	1.68	0.76
1:CA:1504:G:OP1	1:CA:1507:A:H4'	1.85	0.76
10:CJ:4:ILE:HB	10:CJ:74:ILE:HD11	1.68	0.76
36:DA:272(J):C:H42	36:DA:363:G:H22	1.33	0.76
36:DA:1053:C:C2'	36:DA:1054:A:H5''	2.15	0.76
36:DA:1748:G:H5'	36:DA:1748:G:H8	1.49	0.76
36:DA:2444:G:OP2	41:DF:68:LYS:HE2	1.86	0.76
39:DD:44:ASN:CB	39:DD:49:ILE:HA	2.15	0.76
45:DN:48:MET:H	45:DN:48:MET:HE3	1.50	0.76
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.65	0.76
30:B4:12:ALA:CB	30:B4:29:PRO:HA	2.16	0.76
36:BA:88:G:OP1	36:BA:90:U:H5	1.67	0.76
36:BA:2497:A:H8	36:BA:2497:A:OP2	1.68	0.76
36:BA:2668:G:O2'	36:BA:2669:G:H5'	1.86	0.76
1:CA:939:G:H5''	7:CG:102:ARG:NH2	2.01	0.76
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.66	0.76
29:D3:5:LYS:HE3	29:D3:34:GLU:OE1	1.85	0.76
38:DC:184:GLU:HB2	38:DC:185:LYS:HZ1	1.49	0.76
39:DD:10:THR:HG23	39:DD:13:ARG:HB3	1.68	0.76
43:DH:44:VAL:O	43:DH:50:VAL:HG13	1.86	0.76
49:DR:84:ALA:HB3	49:DR:85:PRO:HD3	1.67	0.76
54:DW:109:GLU:CD	54:DW:109:GLU:H	1.94	0.76
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.66	0.76
5:AE:64:ARG:HH11	5:AE:64:ARG:HG3	1.51	0.76
12:AL:6:THR:H	12:AL:9:GLN:NE2	1.83	0.76
36:BA:1718:G:H8	36:BA:1718:G:H5'	1.51	0.76
37:BB:3:C:H42	37:BB:118:G:H1	1.34	0.76
40:BE:78:LEU:C	40:BE:79:ARG:HD2	2.10	0.76
51:BT:89:VAL:CG1	51:BT:91:ARG:HG3	2.16	0.76
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.34	0.76
36:DA:970:C:H2'	36:DA:971:C:C6	2.21	0.76
36:DA:1578:U:H2'	36:DA:1579:A:H5''	1.66	0.76
36:DA:2681:C:H5	36:DA:2725:A:H62	1.34	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:20:ARG:HH11	57:DZ:20:ARG:CB	1.96	0.76
57:DZ:37:VAL:O	57:DZ:38:TYR:HB3	1.83	0.76
1:AA:1513:A:H2'	1:AA:1514:C:H6	1.51	0.76
25:AY:84:THR:N	25:AY:85:PRO:HD2	1.94	0.76
46:BO:98:VAL:HG22	46:BO:117:LEU:HB3	1.67	0.76
47:BP:7:ARG:CZ	47:BP:7:ARG:HA	2.16	0.76
48:BQ:59:ARG:HA	57:BZ:180:VAL:HG23	1.68	0.76
54:BW:5:ALA:HB2	54:BW:54:ALA:HB2	1.65	0.76
2:CB:124:SER:OG	2:CB:125:PRO:HD2	1.86	0.76
59:CY:701:FUA:H231	59:CY:701:FUA:C12	2.15	0.76
32:D6:54:ILE:HD12	32:D6:54:ILE:O	1.85	0.76
45:DN:113:GLY:HA2	45:DN:116:LEU:HD12	1.68	0.76
47:DP:97:PRO:O	47:DP:98:GLU:HB3	1.84	0.76
51:DT:65:LYS:HE3	51:DT:66:VAL:N	2.00	0.76
56:DY:46:LYS:N	56:DY:62:GLU:HB2	2.01	0.76
9:AI:104:ARG:HG2	9:AI:104:ARG:O	1.85	0.76
36:BA:965:C:H5'	36:BA:2273:A:C1'	2.10	0.76
36:BA:1541:G:H4'	36:BA:1542:A:O5'	1.86	0.76
36:BA:1689:A:H62	36:BA:1698:A:H2	1.31	0.76
39:BD:27:THR:HG21	39:BD:83:GLU:HG2	1.67	0.76
42:BG:112:PRO:O	42:BG:113:ARG:HA	1.84	0.76
4:CD:96:LEU:HD22	4:CD:96:LEU:H	1.49	0.76
25:CY:21:ILE:O	25:CY:22:ASP:HB2	1.83	0.76
36:DA:1047:G:N2	36:DA:1110:G:H1'	2.01	0.76
40:DE:179:GLU:O	40:DE:180:ASN:HB2	1.86	0.76
1:AA:1002:G:H22	1:AA:1039:C:H2'	1.48	0.76
1:AA:1152:A:H5''	10:AJ:13:HIS:HD2	1.50	0.76
7:AG:151:TYR:OH	11:AK:54:ARG:HD3	1.86	0.76
36:BA:1697:G:H3'	36:BA:1698:A:C5'	2.16	0.76
36:BA:1840:G:H1	36:BA:1902:C:H42	1.34	0.76
39:BD:91:ARG:HH11	39:BD:91:ARG:HG2	1.50	0.76
55:BX:53:LYS:HD2	55:BX:55:ASN:ND2	2.01	0.76
1:CA:720:C:H3'	1:CA:721:G:H5''	1.68	0.76
1:CA:759:A:H2'	1:CA:760:G:H5'	1.68	0.76
1:CA:1100:C:H2'	1:CA:1101:A:H5''	1.68	0.76
20:CT:26:ASN:O	20:CT:30:LYS:HB2	1.85	0.76
36:DA:358:U:H2'	36:DA:359:A:H8	1.50	0.76
36:DA:1845:G:H2'	36:DA:1846:G:C5'	2.16	0.76
37:DB:3:C:H42	37:DB:118:G:H1	1.33	0.76
40:DE:60:ASN:OD1	40:DE:62:PRO:HD2	1.85	0.76
42:DG:60:LEU:O	42:DG:63:ILE:HG13	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:117:VAL:O	49:DR:118:GLU:HB2	1.85	0.76
53:DV:58:VAL:O	53:DV:97:LYS:HB2	1.86	0.76
1:AA:1490:C:H5'	1:AA:1490:C:C6	2.20	0.75
2:AB:165:VAL:HG23	2:AB:166:ASP:N	1.98	0.75
3:AC:157:ILE:HD12	3:AC:164:ARG:HB2	1.68	0.75
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.85	0.75
25:AY:573:HIS:CD2	25:AY:576:ASP:H	2.02	0.75
32:B6:30:THR:HG22	32:B6:32:ASN:ND2	2.01	0.75
36:BA:2889:C:H2'	36:BA:2891:G:O4'	1.87	0.75
50:BS:85:VAL:HG23	50:BS:106:ARG:HG3	1.68	0.75
1:CA:522:C:H41	12:CL:53:ARG:NH2	1.84	0.75
13:CM:15:VAL:O	13:CM:19:LEU:HD23	1.85	0.75
19:CS:9:VAL:O	19:CS:11:VAL:N	2.19	0.75
36:DA:586:A:H5'	41:DF:89:VAL:HG21	1.68	0.75
36:DA:986:C:O2'	36:DA:987:G:H5'	1.86	0.75
36:DA:1876:A:H2'	36:DA:1877:A:H8	1.51	0.75
36:DA:2777:G:H5''	36:DA:2778:A:H5''	1.68	0.75
47:DP:126:VAL:HA	47:DP:145:PRO:CB	2.16	0.75
1:AA:697:U:H2'	1:AA:698:G:H5'	1.66	0.75
1:AA:1037:C:H2'	1:AA:1038:C:C2	2.20	0.75
25:AY:165:GLN:C	25:AY:166:LEU:HD12	2.11	0.75
25:AY:466:LEU:HA	25:AY:470:PHE:CD2	2.21	0.75
25:AY:500:GLN:HG2	25:AY:576:ASP:OD2	1.87	0.75
42:BG:8:LYS:O	42:BG:11:TYR:HB3	1.85	0.75
1:CA:1037:C:H2'	1:CA:1038:C:C2	2.20	0.75
36:DA:978:G:H1	36:DA:985:C:H42	1.31	0.75
36:DA:1220:A:H3'	36:DA:1221:C:H5'	1.67	0.75
36:DA:1485:G:H1'	36:DA:1505:C:H42	1.49	0.75
45:DN:22:THR:HA	45:DN:61:ARG:O	1.87	0.75
49:DR:87:TYR:C	49:DR:89:ASP:H	1.93	0.75
51:DT:60:THR:HG22	51:DT:77:PRO:HA	1.67	0.75
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.67	0.75
4:AD:129:ASN:ND2	4:AD:145:GLU:H	1.84	0.75
15:AO:11:VAL:O	15:AO:14:GLU:HB3	1.86	0.75
27:B1:86:SER:O	27:B1:90:ILE:HG12	1.87	0.75
36:BA:1582:C:H2'	36:BA:1583:A:H8	1.51	0.75
36:BA:1998:G:O2'	36:BA:1999:C:H5'	1.86	0.75
36:BA:2147:G:H2'	36:BA:2148:G:O4'	1.87	0.75
43:BH:98:LEU:HB2	43:BH:125:VAL:CG2	2.15	0.75
49:BR:2:ARG:HD3	49:BR:5:LYS:HE2	1.66	0.75
1:CA:1299:A:H2'	1:CA:1299:A:N3	1.99	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:18:LYS:HE2	4:CD:20:TYR:HE1	1.52	0.75
8:CH:17:THR:HB	8:CH:78:GLN:OE1	1.85	0.75
9:CI:104:ARG:O	9:CI:104:ARG:HG2	1.86	0.75
13:CM:49:THR:O	13:CM:53:VAL:HG23	1.85	0.75
23:CW:49:G:H2'	23:CW:50:U:H5''	1.68	0.75
25:CY:162:VAL:HG21	25:CY:255:ILE:HD11	1.68	0.75
25:CY:187:THR:HG22	25:CY:197:ARG:O	1.87	0.75
36:DA:1697:G:H3'	36:DA:1698:A:C5'	2.16	0.75
39:DD:43:ARG:HB3	39:DD:54:ARG:HB2	1.69	0.75
39:DD:129:ASN:O	39:DD:193:VAL:HG12	1.85	0.75
2:AB:124:SER:OG	2:AB:125:PRO:HD2	1.85	0.75
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.67	0.75
10:AJ:53:PRO:HA	14:AN:42:ILE:HD11	1.68	0.75
12:AL:39:VAL:HB	12:AL:57:LYS:HB2	1.67	0.75
36:BA:83:G:O2'	36:BA:84:A:H8	1.69	0.75
36:BA:1220:A:H3'	36:BA:1221:C:H5'	1.67	0.75
36:BA:1644:C:O2	36:BA:1644:C:H2'	1.85	0.75
55:BX:12:VAL:HG12	55:BX:27:THR:O	1.84	0.75
12:CL:47:LYS:HZ2	12:CL:47:LYS:HB3	1.51	0.75
19:CS:78:ARG:HB2	19:CS:81:ARG:HH11	1.50	0.75
28:D2:69:ARG:HH22	36:DA:111:A:C5'	1.99	0.75
32:D6:27:LYS:O	32:D6:27:LYS:HD2	1.86	0.75
36:DA:406:G:HO2'	36:DA:407:G:H8	1.33	0.75
36:DA:1504:C:C2'	36:DA:1505:C:H5''	2.17	0.75
36:DA:1943:U:H2'	36:DA:1943:U:O2	1.85	0.75
43:DH:86:GLU:HA	43:DH:132:ARG:HA	1.68	0.75
51:DT:102:ILE:O	51:DT:106:SER:HB3	1.87	0.75
4:AD:18:LYS:HE2	4:AD:20:TYR:HE1	1.50	0.75
8:AH:50:ARG:HH11	8:AH:50:ARG:HB3	1.50	0.75
36:BA:284:U:H2'	36:BA:285:C:H6	1.51	0.75
36:BA:358:U:H2'	36:BA:359:A:H8	1.50	0.75
36:BA:1047:G:N2	36:BA:1110:G:H1'	2.02	0.75
36:BA:2681:C:H5	36:BA:2725:A:H62	1.33	0.75
38:BC:184:GLU:HB2	38:BC:185:LYS:NZ	2.01	0.75
42:BG:77:ILE:CG2	42:BG:80:PHE:H	2.00	0.75
50:BS:13:ARG:HG3	50:BS:14:VAL:N	2.02	0.75
56:BY:46:LYS:N	56:BY:62:GLU:HB2	2.01	0.75
3:CC:35:GLU:HG3	3:CC:95:THR:HG21	1.68	0.75
9:CI:47:LEU:HD12	9:CI:47:LEU:N	2.01	0.75
25:CY:377:VAL:HG21	25:CY:380:LEU:HD22	1.67	0.75
25:CY:592:GLU:HA	25:CY:595:GLN:HB2	1.66	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:1:MET:HG2	42:DG:98:ARG:NE	2.01	0.75
36:DA:279:C:H2'	36:DA:280:C:H5''	1.67	0.75
36:DA:882:G:H2'	36:DA:883:G:C8	2.21	0.75
36:DA:1541:G:H4'	36:DA:1542:A:O5'	1.87	0.75
50:DS:97:ARG:NH2	50:DS:98:VAL:HA	2.02	0.75
55:DX:35:THR:O	55:DX:39:ILE:HG12	1.86	0.75
1:AA:720:C:H3'	1:AA:721:G:H5''	1.67	0.75
47:BP:127:ALA:O	47:BP:148:LEU:HD11	1.86	0.75
48:BQ:29:PHE:HB2	48:BQ:105:GLU:OE2	1.86	0.75
49:BR:84:ALA:HB3	49:BR:85:PRO:HD3	1.69	0.75
2:CB:83:MET:HG3	2:CB:234:PRO:HG3	1.68	0.75
18:CR:56:THR:HB	18:CR:58:LEU:HD13	1.69	0.75
25:CY:290:LYS:HB3	25:CY:298:VAL:HG23	1.68	0.75
28:D2:32:LEU:HA	28:D2:53:LEU:HD13	1.68	0.75
36:DA:11:G:H2'	36:DA:12:U:C6	2.22	0.75
36:DA:284:U:H2'	36:DA:285:C:H6	1.50	0.75
36:DA:871:U:OP1	48:DQ:5:ARG:HG3	1.87	0.75
36:DA:958:U:OP2	48:DQ:14:ARG:NH1	2.18	0.75
38:DC:138:LEU:HD22	38:DC:139:PRO:HD2	1.67	0.75
16:AP:25:ARG:HG3	16:AP:25:ARG:HH11	1.51	0.75
29:B3:29:ARG:HB2	29:B3:29:ARG:NH1	1.97	0.75
36:BA:11:G:H2'	36:BA:12:U:C6	2.22	0.75
36:BA:84:A:H5''	56:BY:9:LYS:HZ2	1.50	0.75
36:BA:1819:A:H4'	36:BA:1820:U:H5'	1.67	0.75
39:BD:27:THR:CG2	39:BD:83:GLU:HG2	2.16	0.75
50:BS:36:TYR:N	50:BS:36:TYR:HD1	1.85	0.75
54:BW:88:ARG:HB3	54:BW:92:ARG:HB3	1.67	0.75
2:CB:185:ILE:HG22	2:CB:199:TYR:CB	2.13	0.75
25:CY:265:LYS:O	25:CY:267:LYS:HG3	1.87	0.75
27:D1:24:ALA:HB2	27:D1:32:LYS:HE3	1.67	0.75
36:DA:2852:G:H2'	36:DA:2853:C:H6	1.51	0.75
47:DP:84:ASN:HA	47:DP:115:LEU:O	1.87	0.75
47:DP:127:ALA:HB3	47:DP:130:PHE:CE1	2.22	0.75
48:DQ:29:PHE:HB2	48:DQ:105:GLU:OE2	1.86	0.75
51:DT:89:VAL:CG1	51:DT:91:ARG:HG3	2.16	0.75
54:DW:59:VAL:HA	54:DW:63:ASP:HA	1.68	0.75
25:AY:121:VAL:HG23	25:AY:122:TRP:H	1.52	0.75
25:AY:180:VAL:HG23	25:AY:216:LEU:HD12	1.68	0.75
29:B3:5:LYS:HE3	29:B3:34:GLU:OE1	1.87	0.75
29:B3:59:VAL:HG12	29:B3:60:GLU:N	2.02	0.75
36:BA:1348:G:C2'	36:BA:1349:A:H5''	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2133:G:C2'	36:BA:2157:G:H22	1.96	0.75
41:BF:7:TYR:HD2	41:BF:16:GLY:HA3	1.52	0.75
1:CA:376:G:H2'	1:CA:377:G:H8	1.51	0.75
19:CS:41:VAL:HG21	19:CS:44:MET:HB2	1.68	0.75
20:CT:82:SER:O	20:CT:86:ARG:HB2	1.87	0.75
25:CY:409:ILE:HD11	25:CY:656:ALA:HB3	1.68	0.75
27:D1:86:SER:HB2	27:D1:90:ILE:HG12	1.67	0.75
28:D2:38:GLN:O	28:D2:41:ILE:HG12	1.86	0.75
30:D4:7:PRO:O	30:D4:8:LYS:HB3	1.84	0.75
40:DE:34:VAL:O	40:DE:35:GLN:HB2	1.85	0.75
41:DF:53:THR:HG23	41:DF:55:GLY:H	1.52	0.75
42:DG:67:LYS:HD3	42:DG:68:PRO:N	2.02	0.75
47:DP:7:ARG:HA	47:DP:7:ARG:NH1	2.01	0.75
54:DW:88:ARG:HB3	54:DW:92:ARG:HB3	1.68	0.75
1:AA:939:G:H5''	7:AG:102:ARG:NH2	2.02	0.75
3:AC:35:GLU:HG3	3:AC:95:THR:HG21	1.69	0.75
4:AD:9:CYS:SG	4:AD:22:LYS:HD2	2.27	0.75
26:B0:20:ARG:HD2	26:B0:20:ARG:H	1.52	0.75
34:B8:51:ALA:HA	34:B8:54:GLU:OE1	1.86	0.75
36:BA:1717:G:H2'	36:BA:1718:G:H5''	1.68	0.75
36:BA:2524:G:H8	36:BA:2524:G:H5'	1.50	0.75
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.51	0.75
4:CD:5:ILE:HA	4:CD:115:ARG:HH12	1.49	0.75
32:D6:6:ARG:HD2	32:D6:6:ARG:H	1.48	0.75
36:DA:144:C:H2'	36:DA:145:G:H8	1.51	0.75
36:DA:962:G:O2'	36:DA:963:U:H5'	1.86	0.75
36:DA:1582:C:H2'	36:DA:1583:A:H8	1.51	0.75
36:DA:2023:G:H5'	36:DA:2617:C:H4'	1.69	0.75
36:DA:2296:U:H4'	36:DA:2297:C:OP1	1.86	0.75
36:DA:2585:U:O2'	36:DA:2586:C:H5'	1.86	0.75
45:DN:46:VAL:HG13	45:DN:48:MET:HE2	1.68	0.75
57:DZ:18:LEU:HD12	57:DZ:18:LEU:N	2.02	0.75
57:DZ:98:MET:HE2	57:DZ:99:TYR:O	1.87	0.75
23:AW:2:G:H1	23:AW:71:C:N4	1.84	0.74
29:B3:36:VAL:O	29:B3:37:LEU:HD23	1.87	0.74
36:BA:144:C:H2'	36:BA:145:G:H8	1.50	0.74
36:BA:612:C:H2'	36:BA:613:G:C5'	2.10	0.74
39:BD:106:ILE:HD11	39:BD:196:VAL:HG13	1.69	0.74
42:BG:116:ASP:O	42:BG:117:PHE:HB3	1.87	0.74
47:BP:97:PRO:O	47:BP:98:GLU:HB3	1.86	0.74
25:CY:17:ILE:H	25:CY:17:ILE:HD12	1.50	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:499:ARG:HB2	25:CY:506:GLN:CB	2.11	0.74
59:CY:701:FUA:H202	59:CY:701:FUA:C5	2.14	0.74
29:D3:28:LEU:HA	29:D3:33:GLN:OE1	1.87	0.74
36:DA:154(A):C:H3'	36:DA:155:U:C5'	2.17	0.74
36:DA:903:C:H2'	36:DA:904:C:H5'	1.69	0.74
36:DA:1885:A:H5'	36:DA:1885:A:H8	1.52	0.74
47:DP:62:LEU:HD23	47:DP:62:LEU:N	2.00	0.74
48:DQ:54:MET:HG2	48:DQ:64:ILE:HD13	1.69	0.74
51:DT:75:ILE:HD12	51:DT:75:ILE:N	2.02	0.74
53:DV:40:LEU:HA	53:DV:45:THR:HB	1.69	0.74
54:DW:68:ARG:HA	54:DW:110:LYS:HG2	1.69	0.74
1:AA:1442(B):A:N7	51:BT:118:ARG:HG2	2.02	0.74
10:AJ:64:GLU:HG2	14:AN:59:ALA:HB2	1.68	0.74
25:AY:625:ASN:C	25:AY:627:ARG:H	1.94	0.74
29:B3:8:LEU:HD22	29:B3:31:LEU:HD23	1.69	0.74
36:BA:1328:G:H8	36:BA:1328:G:O5'	1.70	0.74
36:BA:2131:G:H8	36:BA:2158:A:H62	1.34	0.74
37:BB:48:A:H4'	50:BS:95:HIS:CD2	2.22	0.74
50:BS:106:ARG:HH11	50:BS:106:ARG:HB3	1.51	0.74
1:CA:773:G:O2'	1:CA:774:G:H5'	1.88	0.74
8:CH:50:ARG:HH11	8:CH:50:ARG:HB3	1.52	0.74
12:CL:89:ARG:HD3	12:CL:91:LYS:NZ	2.02	0.74
25:CY:272:LEU:HD12	25:CY:275:ALA:HB3	1.69	0.74
32:D6:28:ARG:HH11	32:D6:28:ARG:CB	2.01	0.74
50:DS:36:TYR:N	50:DS:36:TYR:HD1	1.85	0.74
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	1.87	0.74
18:AR:88:LYS:HD3	18:AR:88:LYS:C	2.13	0.74
19:AS:9:VAL:O	19:AS:11:VAL:N	2.19	0.74
59:AY:701:FUA:H202	59:AY:701:FUA:C5	2.15	0.74
41:BF:89:VAL:HG12	41:BF:90:PHE:H	1.50	0.74
1:CA:707:C:H4'	11:CK:20:TYR:CD2	2.22	0.74
25:CY:513:LYS:HB3	25:CY:566:THR:HB	1.67	0.74
39:DD:35:LYS:HG3	39:DD:63:ARG:HG3	1.67	0.74
43:DH:98:LEU:HB2	43:DH:125:VAL:CG2	2.16	0.74
9:AI:47:LEU:HD12	9:AI:47:LEU:N	2.01	0.74
25:AY:554:PRO:HG3	25:AY:594:VAL:HG12	1.69	0.74
36:BA:284:U:H2'	36:BA:285:C:C6	2.21	0.74
40:BE:34:VAL:O	40:BE:35:GLN:HB2	1.86	0.74
45:BN:22:THR:HA	45:BN:61:ARG:O	1.86	0.74
1:CA:694:A:O2'	23:CW:38:A:O2'	2.05	0.74
10:CJ:50:ILE:HD13	10:CJ:50:ILE:N	1.99	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1348:G:C2'	36:DA:1349:A:H5''	2.16	0.74
39:DD:165:ILE:HD13	39:DD:175:LEU:HD21	1.68	0.74
41:DF:7:TYR:HD2	41:DF:16:GLY:HA3	1.51	0.74
43:DH:46:GLU:CD	43:DH:51:ARG:HB2	2.12	0.74
49:DR:2:ARG:HD3	49:DR:5:LYS:HE2	1.67	0.74
1:AA:1226:C:H5'	13:AM:96:LEU:HD13	1.68	0.74
1:AA:1348:U:H4'	9:AI:120:ARG:HG3	1.68	0.74
20:AT:82:SER:O	20:AT:86:ARG:HB2	1.87	0.74
25:AY:230:LYS:HZ2	25:AY:230:LYS:HB2	1.51	0.74
25:AY:534:ILE:HG13	25:AY:570:GLY:O	1.87	0.74
36:BA:2178:C:H4'	38:BC:47:LYS:HD3	1.69	0.74
1:CA:1364:U:O2	1:CA:1364:U:H2'	1.87	0.74
36:DA:1409:C:H2'	36:DA:1410:G:C8	2.23	0.74
36:DA:1840:G:H1	36:DA:1902:C:H42	1.35	0.74
41:DF:192:LEU:HD21	41:DF:194:MET:HG3	1.69	0.74
42:DG:51:ARG:CZ	42:DG:53:LEU:HD21	2.18	0.74
45:DN:57:ALA:N	45:DN:124:ALA:HA	2.00	0.74
49:DR:87:TYR:O	49:DR:89:ASP:N	2.20	0.74
50:DS:83:LYS:HG2	50:DS:105:ALA:HB3	1.68	0.74
50:DS:106:ARG:HB3	50:DS:106:ARG:NH1	2.03	0.74
10:AJ:96:ILE:H	10:AJ:96:ILE:HD13	1.51	0.74
28:B2:49:LYS:O	28:B2:53:LEU:HB2	1.87	0.74
36:BA:907:U:OP1	48:BQ:24:GLY:N	2.20	0.74
36:BA:2631:G:N2	40:BE:61:ARG:HH12	1.85	0.74
40:BE:78:LEU:O	40:BE:79:ARG:HD2	1.88	0.74
47:BP:30:THR:CG2	47:BP:31:ALA:H	1.96	0.74
47:BP:58:THR:O	47:BP:61:ARG:NE	2.21	0.74
49:BR:87:TYR:O	49:BR:89:ASP:N	2.19	0.74
50:BS:49:VAL:HG12	50:BS:50:SER:H	1.51	0.74
57:BZ:103:ARG:HB2	57:BZ:103:ARG:HH11	1.51	0.74
1:CA:1348:U:H4'	9:CI:120:ARG:HG3	1.68	0.74
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.68	0.74
25:CY:227:ILE:HD12	25:CY:245:ALA:HB2	1.69	0.74
25:CY:272:LEU:HA	25:CY:275:ALA:HB3	1.68	0.74
26:D0:20:ARG:H	26:D0:20:ARG:HD2	1.52	0.74
36:DA:288:C:H2'	36:DA:289:A:C8	2.23	0.74
42:DG:34:LEU:HD22	42:DG:99:MET:HE3	1.69	0.74
52:DU:47:TYR:HA	52:DU:50:ARG:HH11	1.52	0.74
56:DY:44:ILE:HG22	56:DY:45:VAL:N	2.01	0.74
1:AA:797:C:OP1	11:AK:124:LYS:HE3	1.88	0.74
25:AY:165:GLN:HE21	25:AY:177:ILE:HG21	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:178:ILE:HG13	25:AY:185:ALA:HA	1.69	0.74
26:B0:74:ARG:HG2	37:BB:13:A:OP2	1.88	0.74
31:B5:44:THR:HG21	49:BR:101:ALA:HB2	1.70	0.74
32:B6:48:VAL:HG23	32:B6:49:HIS:H	1.53	0.74
35:B9:34:GLN:O	35:B9:35:ARG:HB2	1.87	0.74
36:BA:83:G:HO2'	36:BA:84:A:H8	1.33	0.74
36:BA:1053:C:C2'	36:BA:1054:A:H5''	2.17	0.74
36:BA:2712:U:HO2'	36:BA:2712(A):A:H8	0.80	0.74
38:BC:23:ILE:HB	38:BC:229:SER:OXT	1.87	0.74
39:BD:43:ARG:HB3	39:BD:54:ARG:HB2	1.69	0.74
39:BD:48:ARG:HG3	39:BD:48:ARG:HH11	1.50	0.74
40:BE:11:MET:HB3	40:BE:24:THR:HA	1.70	0.74
45:BN:57:ALA:N	45:BN:124:ALA:HA	2.02	0.74
32:D6:35:GLU:CB	32:D6:51:GLU:HB2	2.17	0.74
36:DA:480:A:OP2	56:DY:46:LYS:HE3	1.88	0.74
36:DA:2131:G:H8	36:DA:2158:A:H62	1.36	0.74
37:DB:91:C:OP1	48:DQ:16:ARG:HG3	1.87	0.74
40:DE:78:LEU:O	40:DE:79:ARG:HD2	1.88	0.74
49:DR:28:LEU:HD23	49:DR:29:LEU:HD12	1.67	0.74
50:DS:40:ILE:HG22	50:DS:41:ASP:H	1.52	0.74
56:DY:2:ARG:HD3	56:DY:3:VAL:HG23	1.68	0.74
1:AA:1129:C:H5'	1:AA:1129:C:H6	1.52	0.74
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.69	0.74
36:BA:419:C:H2'	36:BA:420:C:H6	1.53	0.74
36:BA:840:C:H2'	36:BA:841:A:H5''	1.70	0.74
47:BP:7:ARG:HA	47:BP:7:ARG:NH1	2.02	0.74
47:BP:40:SER:C	47:BP:41:ARG:HD2	2.13	0.74
47:BP:126:VAL:HA	47:BP:145:PRO:CB	2.18	0.74
49:BR:87:TYR:C	49:BR:89:ASP:H	1.94	0.74
50:BS:34:HIS:HB3	50:BS:53:SER:HB3	1.69	0.74
2:CB:55:PHE:HD1	2:CB:221:LEU:HG	1.53	0.74
5:CE:79:GLU:HB3	5:CE:93:PRO:HD2	1.68	0.74
32:D6:5:VAL:CG2	36:DA:2283:C:H5'	2.17	0.74
36:DA:1053:C:C3'	36:DA:1054:A:H5''	2.18	0.74
36:DA:2787:C:H1'	40:DE:61:ARG:HD3	1.70	0.74
36:DA:2889:C:H2'	36:DA:2891:G:O4'	1.87	0.74
47:DP:40:SER:C	47:DP:41:ARG:HD2	2.12	0.74
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.02	0.74
22:AV:56:C:O2	42:BG:78:SER:HB3	1.86	0.74
36:BA:962:G:O2'	36:BA:963:U:H5'	1.88	0.74
41:BF:24:LEU:HB3	41:BF:25:PRO:CD	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:91:ARG:NH1	18:CR:88:LYS:HE3	2.03	0.74
20:CT:93:GLU:C	20:CT:95:ALA:H	1.96	0.74
25:CY:28:THR:O	25:CY:32:ILE:HG13	1.87	0.74
25:CY:533:VAL:HG12	25:CY:571:SER:HA	1.69	0.74
28:D2:69:ARG:HH22	36:DA:111:A:H4'	1.53	0.74
36:DA:613:G:H5'	36:DA:613:G:H8	1.52	0.74
36:DA:2602:A:H4'	36:DA:2603:G:C5'	2.18	0.74
39:DD:48:ARG:HH11	39:DD:48:ARG:HG3	1.50	0.74
41:DF:89:VAL:HG12	41:DF:90:PHE:H	1.51	0.74
45:DN:67:LEU:O	45:DN:68:GLU:HB2	1.86	0.74
47:DP:50:ARG:O	47:DP:57:THR:HG22	1.88	0.74
57:DZ:29:TYR:HB3	57:DZ:34:ASN:CB	2.17	0.74
1:AA:773:G:O2'	1:AA:774:G:H5'	1.88	0.74
4:AD:5:ILE:HA	4:AD:115:ARG:HH12	1.52	0.74
11:AK:84:VAL:HG11	11:AK:95:ILE:HD11	1.69	0.74
25:AY:609:GLU:HA	25:AY:643:ILE:O	1.87	0.74
29:B3:56:VAL:HG12	29:B3:57:GLU:N	2.03	0.74
41:BF:161:GLU:O	41:BF:165:ARG:HG3	1.88	0.74
51:BT:115:ARG:HB3	51:BT:115:ARG:NH1	2.02	0.74
52:BU:47:TYR:HA	52:BU:50:ARG:HH11	1.52	0.74
25:CY:128:TYR:O	25:CY:129:LYS:HB2	1.86	0.74
25:CY:131:PRO:HG2	25:CY:281:PRO:HG3	1.70	0.74
28:D2:9:GLN:HA	28:D2:12:GLU:OE1	1.87	0.74
41:DF:24:LEU:HB3	41:DF:25:PRO:CD	2.17	0.74
46:DO:98:VAL:HG22	46:DO:117:LEU:HB3	1.70	0.74
1:AA:201:C:H2'	1:AA:202:U:H5''	1.68	0.73
3:AC:14:ILE:HG13	3:AC:15:THR:N	2.03	0.73
10:AJ:50:ILE:HD13	10:AJ:50:ILE:N	2.02	0.73
12:AL:41:ARG:CG	12:AL:42:THR:H	2.00	0.73
13:AM:15:VAL:O	13:AM:19:LEU:HD23	1.88	0.73
25:AY:416:LYS:CD	25:AY:417:THR:H	2.01	0.73
34:B8:2:PRO:HA	36:BA:591:C:O2	1.88	0.73
36:BA:2296:U:H4'	36:BA:2297:C:OP1	1.85	0.73
39:BD:129:ASN:O	39:BD:193:VAL:HG12	1.88	0.73
54:BW:78:GLU:OE2	54:BW:99:ARG:HD2	1.88	0.73
2:CB:165:VAL:HG23	2:CB:166:ASP:N	1.98	0.73
9:CI:95:LYS:HD3	9:CI:96:LEU:N	2.03	0.73
30:D4:10:VAL:HG23	30:D4:11:PRO:HD2	1.70	0.73
36:DA:1819:A:H4'	36:DA:1820:U:H5'	1.69	0.73
42:DG:95:ARG:O	42:DG:96:ARG:HG2	1.88	0.73
48:DQ:137:TYR:OH	57:DZ:81:ARG:HD3	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DV:45:THR:O	53:DV:46:VAL:HG12	1.85	0.73
1:AA:631:G:H2'	1:AA:632:A:C8	2.23	0.73
1:AA:1321:C:H5''	1:AA:1322:C:H5''	1.70	0.73
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.23	0.73
4:AD:13:ARG:O	4:AD:15:GLU:N	2.21	0.73
34:B8:50:LEU:HD12	34:B8:51:ALA:H	1.52	0.73
36:BA:871:U:OP1	48:BQ:5:ARG:HG3	1.87	0.73
36:BA:1053:C:C3'	36:BA:1054:A:H5''	2.18	0.73
36:BA:1142(A):A:H2'	36:BA:1143:A:H5''	1.68	0.73
36:BA:2787:C:H1'	40:BE:61:ARG:HD3	1.69	0.73
45:BN:113:GLY:HA2	45:BN:116:LEU:HD12	1.69	0.73
49:BR:117:VAL:O	49:BR:118:GLU:HB2	1.86	0.73
1:CA:625:G:H2'	1:CA:626:U:H6	1.52	0.73
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.87	0.73
25:CY:489:LYS:HG2	25:CY:598:ASP:HB2	1.68	0.73
25:CY:528:ALA:O	25:CY:568:TYR:HA	1.88	0.73
36:DA:214:G:H1'	36:DA:216:A:O2'	1.87	0.73
42:DG:62:LEU:H	42:DG:62:LEU:HD12	1.53	0.73
50:DS:12:PHE:O	50:DS:14:VAL:HG23	1.88	0.73
50:DS:59:LYS:HG2	50:DS:60:GLY:H	1.52	0.73
5:AE:11:ILE:HD12	5:AE:31:LEU:CD1	2.18	0.73
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.03	0.73
23:AW:24:U:H2'	23:AW:25:C:C6	2.22	0.73
23:AW:68:C:H2'	23:AW:69:C:C6	2.24	0.73
25:AY:662:LYS:NZ	43:BH:175:LYS:HG3	2.03	0.73
27:B1:64:ALA:O	27:B1:67:ILE:HG13	1.88	0.73
27:B1:80:LEU:HB3	27:B1:82:LEU:HD11	1.70	0.73
32:B6:5:VAL:HG12	32:B6:6:ARG:O	1.88	0.73
36:BA:192:C:H2'	36:BA:193:U:H5'	1.70	0.73
42:BG:111:LEU:HA	42:BG:114:ILE:CD1	2.18	0.73
47:BP:85:LEU:HD12	47:BP:120:ALA:HB2	1.69	0.73
1:CA:1128:C:H2'	1:CA:1129:C:H5''	1.69	0.73
4:CD:129:ASN:ND2	4:CD:145:GLU:H	1.86	0.73
15:CO:78:TYR:O	15:CO:82:ILE:HG22	1.88	0.73
18:CR:88:LYS:HD3	18:CR:88:LYS:C	2.13	0.73
25:CY:589:ALA:O	25:CY:593:ALA:HB2	1.87	0.73
28:D2:64:LEU:O	28:D2:68:ARG:HB2	1.89	0.73
36:DA:840:C:H2'	36:DA:841:A:H5''	1.70	0.73
36:DA:1142(A):A:H2'	36:DA:1143:A:H5''	1.68	0.73
46:DO:114:ILE:HD12	46:DO:114:ILE:N	2.03	0.73
50:DS:95:HIS:CG	50:DS:96:GLY:N	2.55	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DV:38:LEU:HD23	53:DV:39:LEU:N	2.03	0.73
3:AC:16:ARG:HB2	3:AC:16:ARG:NH1	2.02	0.73
4:AD:96:LEU:H	4:AD:96:LEU:HD22	1.53	0.73
23:AW:56:C:O2	23:AW:56:C:H2'	1.87	0.73
28:B2:47:ASN:O	28:B2:49:LYS:N	2.22	0.73
36:BA:613:G:H8	36:BA:613:G:H5'	1.53	0.73
36:BA:1242:A:N1	47:BP:8:PRO:HG2	2.03	0.73
36:BA:1504:C:C2'	36:BA:1505:C:H5''	2.17	0.73
36:BA:2776:A:H4'	36:BA:2777:G:H5''	1.71	0.73
38:BC:4:HIS:ND1	38:BC:8:TYR:HE2	1.87	0.73
54:BW:59:VAL:HA	54:BW:63:ASP:HA	1.68	0.73
54:BW:68:ARG:HA	54:BW:110:LYS:HG2	1.69	0.73
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.03	0.73
29:D3:36:VAL:O	29:D3:37:LEU:HD23	1.88	0.73
34:D8:2:PRO:HA	36:DA:591:C:O2	1.89	0.73
36:DA:1998:G:O2'	36:DA:1999:C:H5'	1.88	0.73
36:DA:2314:C:O2'	36:DA:2315:G:H5'	1.87	0.73
42:DG:126:ASP:CB	42:DG:130:ASN:HB2	2.19	0.73
4:AD:129:ASN:N	4:AD:129:ASN:HD22	1.84	0.73
23:AW:14:A:H3'	23:AW:15:G:C5'	2.19	0.73
25:AY:113:GLY:C	25:AY:115:GLU:H	1.97	0.73
25:AY:335:LEU:HD23	25:AY:355:LEU:HD11	1.69	0.73
36:BA:958:U:OP2	48:BQ:14:ARG:NH1	2.20	0.73
43:BH:83:TYR:HB3	43:BH:135:GLY:H	1.52	0.73
51:BT:13:ARG:CZ	51:BT:13:ARG:HA	2.18	0.73
51:BT:89:VAL:HG12	51:BT:91:ARG:HG3	1.70	0.73
54:BW:1:MET:HE3	54:BW:2:GLU:H	1.53	0.73
15:CO:11:VAL:O	15:CO:14:GLU:HB3	1.87	0.73
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.70	0.73
25:CY:541:ALA:HB1	25:CY:579:GLU:O	1.88	0.73
36:DA:176:G:O2'	36:DA:177:G:H5'	1.88	0.73
38:DC:4:HIS:ND1	38:DC:8:TYR:HE2	1.86	0.73
45:DN:15:LEU:HB2	45:DN:134:ARG:HB2	1.70	0.73
1:AA:376:G:H2'	1:AA:377:G:H8	1.52	0.73
17:AQ:52:LYS:H	17:AQ:52:LYS:CD	2.01	0.73
25:AY:261:GLY:HA3	25:AY:267:LYS:O	1.89	0.73
27:B1:86:SER:HB2	27:B1:90:ILE:HG12	1.71	0.73
32:B6:28:ARG:HH11	32:B6:28:ARG:CB	2.01	0.73
33:B7:8:ASN:HD22	33:B7:9:ARG:N	1.86	0.73
40:BE:60:ASN:OD1	40:BE:62:PRO:HD2	1.87	0.73
43:BH:19:VAL:HG12	43:BH:20:ALA:H	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:30:LYS:HD2	43:BH:81:GLU:HG2	1.69	0.73
48:BQ:67:ARG:HD2	48:BQ:105:GLU:OE1	1.88	0.73
54:BW:107:LEU:HD22	54:BW:107:LEU:H	1.52	0.73
56:BY:51:VAL:HG12	56:BY:53:PRO:CD	2.19	0.73
1:CA:939:G:H5''	7:CG:102:ARG:CZ	2.19	0.73
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	1.88	0.73
25:CY:174:PHE:CZ	25:CY:261:GLY:HA2	2.24	0.73
25:CY:193:GLY:HA3	25:CY:266:ASN:HB3	1.71	0.73
28:D2:38:GLN:HA	28:D2:41:ILE:CG2	2.17	0.73
36:DA:1242:A:N1	47:DP:8:PRO:HG2	2.04	0.73
36:DA:1409:C:H2'	36:DA:1410:G:H8	1.53	0.73
47:DP:95:VAL:HA	47:DP:99:LEU:HD23	1.70	0.73
50:DS:98:VAL:HG12	50:DS:100:ALA:H	1.54	0.73
1:AA:514:C:H2'	1:AA:515:G:H8	1.54	0.73
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.53	0.73
1:AA:1452:C:H1'	1:AA:1456:G:N2	2.02	0.73
25:AY:584:ILE:O	25:AY:588:MET:HG3	1.88	0.73
28:B2:2:LYS:HD2	28:B2:5:GLU:OE1	1.89	0.73
36:BA:710:G:H2'	36:BA:711:G:C8	2.24	0.73
47:BP:127:ALA:HB3	47:BP:130:PHE:CE1	2.23	0.73
52:BU:92:ARG:O	52:BU:94:ASN:N	2.20	0.73
53:BV:98:GLU:OE2	53:BV:100:ARG:HD3	1.89	0.73
32:D6:35:GLU:HB2	32:D6:51:GLU:HB2	1.70	0.73
36:DA:662:G:OP1	47:DP:18:ARG:HD2	1.89	0.73
36:DA:1231:G:H2'	36:DA:1232:G:H8	1.53	0.73
36:DA:1514:U:H2'	36:DA:1515:G:C8	2.23	0.73
36:DA:2645:G:C3'	36:DA:2646:C:H5'	2.14	0.73
38:DC:184:GLU:HB2	38:DC:185:LYS:NZ	2.02	0.73
43:DH:19:VAL:HG12	43:DH:20:ALA:H	1.54	0.73
44:DJ:21:UNK:CB	44:DJ:88:UNK:HA	2.18	0.73
51:DT:32:TYR:CD1	51:DT:32:TYR:N	2.56	0.73
57:DZ:132:ASN:O	57:DZ:133:ILE:HD13	1.89	0.73
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.54	0.73
11:AK:91:ARG:NH1	18:AR:88:LYS:HE3	2.03	0.73
13:AM:49:THR:O	13:AM:53:VAL:HG23	1.88	0.73
23:AW:32:C:H6	23:AW:32:C:O5'	1.72	0.73
25:AY:555:LEU:HG	25:AY:599:PRO:HB2	1.69	0.73
36:BA:2461:C:H5'	36:BA:2462:U:OP2	1.88	0.73
40:BE:36:ARG:HH21	40:BE:88:GLY:HA2	1.53	0.73
45:BN:15:LEU:HB2	45:BN:134:ARG:HB2	1.70	0.73
50:BS:12:PHE:O	50:BS:14:VAL:HG23	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:83:LYS:HG2	50:BS:105:ALA:HB3	1.69	0.73
25:CY:210:ARG:HH11	25:CY:210:ARG:HG2	1.51	0.73
31:D5:58:LEU:HD22	31:D5:58:LEU:O	1.89	0.73
36:DA:1678:G:N2	36:DA:1989:G:H22	1.86	0.73
36:DA:2312:U:C2'	36:DA:2313:C:H5''	2.18	0.73
36:DA:2572:A:C5'	36:DA:2574:G:H4'	2.18	0.73
38:DC:28:ARG:HG3	38:DC:28:ARG:NH1	2.00	0.73
41:DF:161:GLU:O	41:DF:165:ARG:HG3	1.89	0.73
41:DF:185:ASP:HA	41:DF:188:ARG:CG	2.18	0.73
45:DN:58:ASP:O	45:DN:60:ILE:N	2.22	0.73
50:DS:59:LYS:HG2	50:DS:60:GLY:N	2.03	0.73
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.71	0.73
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.35	0.73
25:AY:199:ILE:HD12	25:AY:199:ILE:O	1.89	0.73
25:AY:555:LEU:HD21	25:AY:599:PRO:HG2	1.71	0.73
27:B1:86:SER:HB3	27:B1:89:GLU:HB2	1.70	0.73
28:B2:38:GLN:O	28:B2:41:ILE:HG12	1.88	0.73
30:B4:10:VAL:HG23	30:B4:11:PRO:HD2	1.69	0.73
36:BA:882:G:H2'	36:BA:883:G:C8	2.22	0.73
36:BA:2756:U:H4'	36:BA:2757:A:OP1	1.88	0.73
36:BA:2777:G:H5''	36:BA:2778:A:H5''	1.71	0.73
37:BB:112:U:H2'	37:BB:113:G:H8	1.54	0.73
51:BT:65:LYS:CE	51:BT:66:VAL:H	2.00	0.73
1:CA:1226:C:H5'	13:CM:96:LEU:HD13	1.71	0.73
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.71	0.73
25:CY:152:THR:O	25:CY:156:ARG:HG2	1.89	0.73
25:CY:512:ILE:HD13	25:CY:512:ILE:H	1.53	0.73
27:D1:45:ASN:HD21	36:DA:2090:G:H21	1.33	0.73
36:DA:1068:G:H21	36:DA:1096:A:H5'	1.53	0.73
36:DA:1221(A):C:O2'	36:DA:1222:C:H5'	1.89	0.73
36:DA:1328:G:H8	36:DA:1328:G:O5'	1.72	0.73
36:DA:2497:A:H8	36:DA:2497:A:OP2	1.72	0.73
36:DA:2666:C:H5'	36:DA:2667:C:OP2	1.88	0.73
43:DH:83:TYR:HB3	43:DH:135:GLY:H	1.52	0.73
50:DS:64:GLU:CD	50:DS:64:GLU:H	1.96	0.73
57:DZ:151:HIS:HA	57:DZ:171:ILE:HG23	1.69	0.73
1:AA:939:G:H5''	7:AG:102:ARG:CZ	2.19	0.73
2:AB:233:SER:HB2	2:AB:234:PRO:CD	2.19	0.73
36:BA:481:G:H2'	36:BA:507:A:N1	2.04	0.73
36:BA:903:C:H2'	36:BA:904:C:H5'	1.70	0.73
36:BA:986:C:O2'	36:BA:987:G:H5'	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1943:U:H2'	36:BA:1943:U:O2	1.87	0.73
36:BA:2313:C:H5'	36:BA:2313:C:H6	1.53	0.73
42:BG:91:ARG:HD2	42:BG:92:VAL:N	2.04	0.73
51:BT:82:LEU:HD12	51:BT:82:LEU:N	2.04	0.73
53:BV:38:LEU:HD23	53:BV:39:LEU:N	2.03	0.73
53:BV:58:VAL:O	53:BV:97:LYS:HB2	1.88	0.73
56:BY:8:LYS:HD2	56:BY:8:LYS:N	2.03	0.73
1:CA:677:U:H3	1:CA:713:G:H22	1.37	0.73
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	1.89	0.73
10:CJ:96:ILE:HD13	10:CJ:96:ILE:H	1.53	0.73
19:CS:41:VAL:C	19:CS:43:GLU:H	1.97	0.73
25:CY:160:ARG:HH21	25:CY:219:VAL:HG22	1.52	0.73
39:DD:270:ILE:H	39:DD:270:ILE:HD12	1.53	0.73
42:DG:63:ILE:HG21	42:DG:141:PHE:CD2	2.24	0.73
51:DT:85:LYS:HB3	51:DT:85:LYS:HZ3	1.52	0.73
53:DV:77:ALA:O	53:DV:79:VAL:HG23	1.87	0.73
56:DY:8:LYS:HD2	56:DY:8:LYS:N	2.04	0.73
57:DZ:10:ARG:HB3	57:DZ:36:LYS:HB2	1.71	0.73
1:AA:759:A:H2'	1:AA:760:G:H5'	1.69	0.72
16:AP:8:ARG:HB3	16:AP:28:ARG:HH12	1.54	0.72
25:AY:212:TYR:HA	25:AY:215:LYS:HD2	1.71	0.72
36:BA:2672:G:C2'	36:BA:2673:G:H5''	2.18	0.72
36:BA:2742:C:O2'	36:BA:2743:C:H5'	1.89	0.72
41:BF:185:ASP:HA	41:BF:188:ARG:CG	2.18	0.72
43:BH:67:LEU:O	43:BH:71:LEU:HD12	1.89	0.72
47:BP:84:ASN:C	47:BP:86:LYS:H	1.96	0.72
50:BS:59:LYS:HG2	50:BS:60:GLY:H	1.53	0.72
50:BS:64:GLU:CD	50:BS:64:GLU:H	1.97	0.72
51:BT:98:LYS:HB3	51:BT:100:TYR:HE1	1.53	0.72
57:BZ:23:LYS:HD3	57:BZ:38:TYR:CE2	2.19	0.72
57:BZ:115:GLY:CA	57:BZ:177:PRO:HG3	2.19	0.72
1:CA:1325:C:H2'	1:CA:1326:C:H6	1.54	0.72
5:CE:87:SER:HB3	5:CE:131:ILE:HD13	1.71	0.72
8:CH:41:ARG:HH22	8:CH:123:GLU:CD	1.96	0.72
12:CL:57:LYS:HG3	12:CL:67:THR:HG22	1.71	0.72
23:CW:32:C:O5'	23:CW:32:C:H6	1.72	0.72
25:CY:65:ILE:O	25:CY:65:ILE:HG12	1.88	0.72
25:CY:71:THR:HG22	25:CY:80:ASN:OD1	1.89	0.72
25:CY:539:ILE:HA	25:CY:542:VAL:HG12	1.70	0.72
36:DA:1012:U:O4	45:DN:28:THR:HG21	1.89	0.72
54:DW:78:GLU:OE2	54:DW:99:ARG:HD2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:80:VAL:CG2	7:AG:83:ALA:HB3	2.19	0.72
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.53	0.72
23:AW:7:G:H3'	23:AW:8:U:C5'	2.18	0.72
32:B6:30:THR:O	32:B6:32:ASN:N	2.22	0.72
34:B8:62:LEU:HD13	36:BA:242:G:H5''	1.71	0.72
1:CA:363:A:OP1	12:CL:33:ARG:HD3	1.89	0.72
1:CA:1226:C:C5	13:CM:104:ARG:HB2	2.23	0.72
25:CY:145:ASP:O	25:CY:149:VAL:HG23	1.89	0.72
36:DA:2147:G:H2'	36:DA:2148:G:O4'	1.88	0.72
36:DA:2248:C:H2'	36:DA:2249:U:H5'	1.72	0.72
36:DA:2776:A:H4'	36:DA:2777:G:H5''	1.71	0.72
43:DH:85:LYS:HE3	43:DH:145:ALA:HB1	1.69	0.72
47:DP:85:LEU:HD12	47:DP:120:ALA:HB2	1.69	0.72
51:DT:29:ARG:CB	51:DT:85:LYS:HA	2.19	0.72
52:DU:93:LYS:HD2	52:DU:93:LYS:H	1.55	0.72
19:AS:9:VAL:O	19:AS:9:VAL:HG12	1.88	0.72
23:AW:22:G:O2'	23:AW:23:C:H5''	1.88	0.72
25:AY:14:ASN:ND2	25:AY:80:ASN:HB2	2.02	0.72
36:BA:272(J):C:H42	36:BA:363:G:H22	1.37	0.72
36:BA:1332:G:H22	36:BA:1609:A:H3'	1.55	0.72
36:BA:1845:G:H2'	36:BA:1846:G:C5'	2.18	0.72
41:BF:8:GLN:CB	41:BF:126:VAL:HA	2.18	0.72
42:BG:68:PRO:CA	42:BG:92:VAL:HG12	2.17	0.72
47:BP:84:ASN:HA	47:BP:115:LEU:O	1.88	0.72
48:BQ:54:MET:HG2	48:BQ:64:ILE:HD13	1.69	0.72
56:BY:28:LYS:O	56:BY:38:ILE:HG22	1.89	0.72
1:CA:1279:A:H5'	1:CA:1280:A:OP1	1.89	0.72
3:CC:16:ARG:HB2	3:CC:16:ARG:NH1	2.04	0.72
12:CL:47:LYS:HZ3	12:CL:48:PRO:HD3	1.54	0.72
13:CM:91:ARG:HD2	13:CM:97:PRO:O	1.89	0.72
25:CY:238:THR:HG22	25:CY:241:GLU:HG2	1.69	0.72
25:CY:277:VAL:HG13	25:CY:278:ASP:H	1.54	0.72
25:CY:526:VAL:HB	25:CY:566:THR:HA	1.71	0.72
35:D9:18:ARG:HG2	35:D9:18:ARG:O	1.89	0.72
36:DA:1332:G:H22	36:DA:1609:A:H3'	1.54	0.72
36:DA:1523:U:H2'	36:DA:1524:G:C8	2.25	0.72
36:DA:2466:C:O2'	36:DA:2467:C:H5'	1.89	0.72
38:DC:101:ILE:HG23	38:DC:128:LEU:HD23	1.71	0.72
40:DE:36:ARG:HH21	40:DE:88:GLY:HA2	1.53	0.72
47:DP:58:THR:O	47:DP:61:ARG:NE	2.22	0.72
50:DS:85:VAL:HG23	50:DS:106:ARG:HG3	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:13:ARG:CZ	51:DT:13:ARG:HA	2.18	0.72
1:AA:349:A:H2'	1:AA:350:G:H5''	1.71	0.72
1:AA:1279:A:H5'	1:AA:1280:A:OP1	1.90	0.72
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.72	0.72
16:AP:33:ILE:O	16:AP:34:GLU:HB2	1.89	0.72
25:AY:464:ASP:O	25:AY:468:ARG:HB2	1.90	0.72
25:AY:613:PRO:HG2	25:AY:666:ARG:HE	1.55	0.72
28:B2:69:ARG:HH22	36:BA:111:A:H4'	1.54	0.72
32:B6:35:GLU:HB2	32:B6:51:GLU:HB2	1.72	0.72
36:BA:214:G:H1'	36:BA:216:A:O2'	1.88	0.72
36:BA:1409:C:H2'	36:BA:1410:G:C8	2.24	0.72
36:BA:2020:A:C2'	36:BA:2021:C:H5''	2.19	0.72
50:BS:34:HIS:NE2	50:BS:54:LEU:HB3	2.04	0.72
52:BU:44:ASN:ND2	53:BV:75:PHE:HB3	2.04	0.72
54:BW:109:GLU:CD	54:BW:109:GLU:H	1.96	0.72
1:CA:108:G:H5'	1:CA:109:A:H5''	1.71	0.72
1:CA:1423:G:C5'	46:DO:49:ARG:HH22	2.03	0.72
1:CA:1479:C:H2'	1:CA:1480:G:H8	1.53	0.72
23:CW:2:G:H1	23:CW:71:C:H42	1.37	0.72
36:DA:1517:G:H5'	36:DA:1517:G:C8	2.24	0.72
39:DD:27:THR:HG21	39:DD:83:GLU:HG2	1.71	0.72
50:DS:49:VAL:HG12	50:DS:50:SER:H	1.54	0.72
51:DT:89:VAL:HG12	51:DT:91:ARG:HG3	1.72	0.72
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.71	0.72
12:AL:47:LYS:HB3	12:AL:47:LYS:HZ2	1.54	0.72
25:AY:85:PRO:HG3	25:AY:94:VAL:HG13	1.71	0.72
25:AY:210:ARG:O	25:AY:214:GLU:HG2	1.88	0.72
25:AY:580:MET:HE2	25:AY:580:MET:O	1.89	0.72
31:B5:58:LEU:HD22	31:B5:58:LEU:O	1.89	0.72
36:BA:154(A):C:H3'	36:BA:155:U:C5'	2.18	0.72
36:BA:288:C:H2'	36:BA:289:A:C8	2.23	0.72
36:BA:1790:C:H5''	36:BA:1791:A:OP1	1.90	0.72
43:BH:85:LYS:HE3	43:BH:145:ALA:HB1	1.70	0.72
49:BR:2:ARG:CD	49:BR:5:LYS:HE2	2.19	0.72
50:BS:40:ILE:HG22	50:BS:41:ASP:N	2.05	0.72
55:BX:8:ILE:N	55:BX:8:ILE:HD12	2.03	0.72
56:BY:7:VAL:HB	56:BY:8:LYS:CD	2.19	0.72
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.25	0.72
1:CA:1220:G:H2'	1:CA:1221:G:H8	1.53	0.72
1:CA:1227:A:C2'	13:CM:117:VAL:HG21	2.18	0.72
1:CA:1294:G:O2'	1:CA:1295:G:H5'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:59:ARG:HG3	3:CC:64:VAL:HA	1.71	0.72
4:CD:13:ARG:O	4:CD:15:GLU:N	2.22	0.72
35:D9:34:GLN:O	35:D9:35:ARG:HB2	1.87	0.72
53:DV:18:LEU:HD22	53:DV:19:LYS:N	2.03	0.72
13:AM:4:ILE:HG22	13:AM:5:ALA:H	1.53	0.72
23:AW:35:A:N6	24:AX:14:U:O4	2.20	0.72
25:AY:227:ILE:HD13	25:AY:242:LEU:HA	1.70	0.72
32:B6:15:GLU:OE2	32:B6:20:ASN:ND2	2.22	0.72
33:B7:26:GLY:O	33:B7:30:VAL:HG23	1.88	0.72
34:B8:4:MET:CE	34:B8:61:LEU:HD22	2.20	0.72
36:BA:545:C:C2'	36:BA:547:A:H5''	2.20	0.72
36:BA:956:G:H4'	48:BQ:83:MET:HE1	1.71	0.72
36:BA:1115:G:H2'	36:BA:1116:C:C6	2.24	0.72
36:BA:1775:U:H2'	36:BA:1776:G:H5'	1.69	0.72
36:BA:2577:A:H5'	36:BA:2578:G:H5'	1.70	0.72
47:BP:95:VAL:HA	47:BP:99:LEU:HD23	1.71	0.72
51:BT:32:TYR:N	51:BT:32:TYR:CD1	2.56	0.72
51:BT:38:ASN:O	51:BT:38:ASN:ND2	2.21	0.72
53:BV:18:LEU:HD22	53:BV:19:LYS:N	2.04	0.72
56:BY:2:ARG:HD3	56:BY:3:VAL:HG23	1.69	0.72
1:CA:1255:G:H2'	1:CA:1279:A:H62	1.54	0.72
12:CL:41:ARG:CG	12:CL:42:THR:H	2.00	0.72
27:D1:60:PHE:CD1	27:D1:91:LYS:HE3	2.25	0.72
36:DA:395:U:H2'	36:DA:396:G:C8	2.25	0.72
36:DA:936:C:H2'	36:DA:937:U:H6	1.52	0.72
50:DS:96:GLY:O	50:DS:98:VAL:N	2.22	0.72
3:AC:123:GLN:HB3	3:AC:128:PHE:HD2	1.54	0.72
3:AC:154:SER:O	3:AC:165:THR:HA	1.90	0.72
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.55	0.72
10:AJ:6:ILE:HD11	10:AJ:72:VAL:CB	2.19	0.72
13:AM:78:ILE:O	13:AM:82:MET:HG2	1.89	0.72
20:AT:93:GLU:C	20:AT:95:ALA:H	1.97	0.72
25:AY:135:PHE:CD1	25:AY:272:LEU:HD22	2.24	0.72
27:B1:50:ARG:HD2	36:BA:2200:C:OP1	1.89	0.72
32:B6:35:GLU:CB	32:B6:51:GLU:HB2	2.20	0.72
36:BA:395:U:H2'	36:BA:396:G:C8	2.24	0.72
36:BA:406:G:HO2'	36:BA:407:G:H8	1.37	0.72
36:BA:480:A:OP2	56:BY:46:LYS:HE3	1.90	0.72
36:BA:654(S):G:H3'	36:BA:654(T):C:C5'	2.19	0.72
36:BA:769:G:O2'	36:BA:770:G:H5'	1.89	0.72
36:BA:1516:C:H2'	36:BA:1517:G:C5'	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2023:G:H5'	36:BA:2617:C:H4'	1.70	0.72
36:BA:2241:A:H2'	36:BA:2242:G:C8	2.25	0.72
36:BA:2312:U:C2'	36:BA:2313:C:H5''	2.19	0.72
39:BD:14:ARG:HG3	39:BD:15:PHE:H	1.54	0.72
51:BT:16:ARG:H	51:BT:79:HIS:HD2	1.35	0.72
3:CC:156:ARG:NH2	3:CC:161:GLU:HA	2.05	0.72
12:CL:32:PHE:HE1	12:CL:86:ARG:HG3	1.51	0.72
16:CP:21:VAL:O	16:CP:33:ILE:HB	1.88	0.72
20:CT:48:LYS:HB3	20:CT:51:GLU:CG	2.20	0.72
26:D0:60:PHE:CE2	36:DA:2365:G:H4'	2.24	0.72
36:DA:134:C:H2'	36:DA:135:G:H8	1.54	0.72
36:DA:710:G:H2'	36:DA:711:G:C8	2.25	0.72
36:DA:1516:C:H2'	36:DA:1517:G:C5'	2.19	0.72
36:DA:2196:C:O2'	36:DA:2197:U:H5'	1.90	0.72
36:DA:2668:G:O2'	36:DA:2669:G:H5'	1.88	0.72
45:DN:133:GLN:HG2	45:DN:134:ARG:H	1.53	0.72
49:DR:21:TYR:HB3	49:DR:47:PHE:CD2	2.24	0.72
50:DS:52:SER:HB3	50:DS:55:ALA:HB3	1.72	0.72
1:AA:99:U:H2'	1:AA:100:C:C6	2.25	0.72
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.25	0.72
1:AA:1226:C:C5	13:AM:104:ARG:HB2	2.23	0.72
1:AA:1227:A:C2'	13:AM:117:VAL:HG21	2.20	0.72
18:AR:56:THR:HB	18:AR:58:LEU:HD13	1.71	0.72
37:BB:7:G:H5'	50:BS:29:PHE:CD2	2.25	0.72
57:BZ:4:ARG:HD2	57:BZ:60:GLU:OE2	1.90	0.72
9:CI:114:TYR:HE2	10:CJ:60:ARG:H	1.36	0.72
23:CW:23:C:H2'	23:CW:24:U:C6	2.24	0.72
25:CY:181:LEU:HD21	25:CY:243:VAL:HG22	1.71	0.72
26:D0:30:VAL:HG12	26:D0:66:VAL:HG22	1.72	0.72
27:D1:29:GLY:HA3	36:DA:2396:G:O2'	1.90	0.72
36:DA:1775:U:C2'	36:DA:1776:G:H5'	2.19	0.72
36:DA:2315:G:O2'	42:DG:128:ARG:HD2	1.89	0.72
36:DA:2713:A:H3'	36:DA:2714:G:H5'	1.71	0.72
53:DV:18:LEU:CD2	53:DV:19:LYS:H	2.00	0.72
1:AA:266:G:H8	1:AA:266:G:H5''	1.54	0.72
2:AB:83:MET:HG3	2:AB:234:PRO:HG3	1.72	0.72
28:B2:7:ARG:O	28:B2:11:GLU:HG3	1.90	0.72
37:BB:91:C:OP1	48:BQ:16:ARG:HG3	1.90	0.72
39:BD:44:ASN:HB2	39:BD:48:ARG:O	1.89	0.72
45:BN:133:GLN:HG2	45:BN:134:ARG:H	1.55	0.72
1:CA:194:C:H2'	1:CA:195:A:H5''	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1404:C:H1'	1:CA:1499:A:N1	2.05	0.72
7:CG:4:ARG:HB3	7:CG:5:ARG:HH11	1.54	0.72
7:CG:80:VAL:CG2	7:CG:83:ALA:HB3	2.19	0.72
16:CP:8:ARG:HB3	16:CP:28:ARG:HH12	1.55	0.72
22:CV:4:C:HO2'	22:CV:5:G:H8	1.38	0.72
25:CY:137:ASN:HD21	25:CY:263:ALA:CB	2.03	0.72
25:CY:180:VAL:HG23	25:CY:216:LEU:HD22	1.72	0.72
46:DO:17:ARG:NE	46:DO:47:ILE:HD11	2.05	0.72
50:DS:34:HIS:NE2	50:DS:54:LEU:HB3	2.04	0.72
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.72	0.72
12:AL:89:ARG:HD3	12:AL:91:LYS:NZ	2.03	0.72
25:AY:491:VAL:HG12	25:AY:492:ASP:N	2.05	0.72
25:AY:510:VAL:HG22	25:AY:534:ILE:HD11	1.70	0.72
32:B6:5:VAL:CG2	36:BA:2283:C:H5'	2.19	0.72
36:BA:1012:U:O4	45:BN:28:THR:HG21	1.89	0.72
36:BA:1169:G:H1	36:BA:1180:C:H42	1.37	0.72
42:BG:60:LEU:O	42:BG:63:ILE:HD11	1.89	0.72
51:BT:35:LYS:HZ3	51:BT:41:ARG:HD2	1.55	0.72
53:BV:18:LEU:CD2	53:BV:19:LYS:H	2.01	0.72
55:BX:35:THR:O	55:BX:39:ILE:HG12	1.89	0.72
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.72	0.72
7:CG:23:VAL:HG13	7:CG:43:PHE:CE2	2.25	0.72
12:CL:27:LEU:HB2	12:CL:62:SER:HB2	1.70	0.72
25:CY:135:PHE:CD1	25:CY:272:LEU:HD22	2.24	0.72
25:CY:327:PHE:HA	25:CY:376:ALA:HA	1.72	0.72
25:CY:346:LYS:HE2	25:CY:384:ILE:HG23	1.72	0.72
30:D4:12:ALA:CB	30:D4:29:PRO:HA	2.19	0.72
34:D8:4:MET:CE	34:D8:61:LEU:HD22	2.20	0.72
36:DA:154(A):C:C5'	36:DA:155:U:H5''	2.19	0.72
36:DA:2712:U:O2'	36:DA:2712(A):A:H8	1.66	0.72
39:DD:131:LEU:HD12	39:DD:131:LEU:N	2.04	0.72
43:DH:144:VAL:O	43:DH:148:ILE:HG12	1.90	0.72
48:DQ:27:VAL:HG21	48:DQ:134:ARG:HG2	1.72	0.72
52:DU:44:ASN:ND2	53:DV:75:PHE:HB3	2.03	0.72
1:AA:707:C:H4'	11:AK:20:TYR:CD2	2.24	0.71
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.25	0.71
23:AW:31:G:H5'	23:AW:31:G:H8	1.54	0.71
25:AY:539:ILE:HD12	25:AY:567:LEU:HD21	1.72	0.71
36:BA:662:G:OP1	47:BP:18:ARG:HD2	1.90	0.71
36:BA:975(A):G:O2'	36:BA:976:C:H5'	1.89	0.71
36:BA:1678:G:N2	36:BA:1989:G:H22	1.87	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:128:LEU:HD12	38:BC:132:LEU:HG	1.72	0.71
40:BE:44:TYR:O	40:BE:45:THR:HB	1.90	0.71
42:BG:56:ALA:HB1	42:BG:153:ARG:CZ	2.20	0.71
43:BH:68:THR:O	43:BH:72:ILE:HG12	1.90	0.71
50:BS:40:ILE:HG22	50:BS:41:ASP:H	1.52	0.71
53:BV:77:ALA:O	53:BV:79:VAL:HG23	1.89	0.71
1:CA:447:G:H2'	1:CA:485:G:N2	2.05	0.71
1:CA:1486:G:H2'	1:CA:1487:G:O4'	1.90	0.71
2:CB:118:LEU:HB3	2:CB:142:LEU:HD12	1.71	0.71
36:DA:1850:G:H5'	36:DA:1851:U:OP2	1.90	0.71
36:DA:2577:A:H5'	36:DA:2578:G:H5'	1.70	0.71
49:DR:2:ARG:CD	49:DR:5:LYS:HE2	2.19	0.71
9:AI:4:TYR:CE2	9:AI:88:TYR:HB2	2.25	0.71
16:AP:53:VAL:HG23	16:AP:54:GLU:H	1.55	0.71
27:B1:60:PHE:CE1	27:B1:91:LYS:HE3	2.25	0.71
36:BA:573:G:O2'	36:BA:574:C:H3'	1.88	0.71
36:BA:586:A:H5'	41:BF:89:VAL:HG21	1.72	0.71
36:BA:936:C:H2'	36:BA:937:U:H6	1.54	0.71
36:BA:1068:G:H21	36:BA:1096:A:H5'	1.55	0.71
36:BA:1517:G:H5'	36:BA:1517:G:C8	2.24	0.71
36:BA:2463:C:O2'	36:BA:2464:C:H5'	1.90	0.71
45:BN:18:ALA:CB	45:BN:21:LYS:HB2	2.19	0.71
50:BS:59:LYS:HG2	50:BS:60:GLY:N	2.04	0.71
57:BZ:86:VAL:HG12	57:BZ:87:ASP:N	2.04	0.71
1:CA:275:G:H5''	17:CQ:14:LYS:HB2	1.72	0.71
1:CA:349:A:H2'	1:CA:350:G:H5''	1.71	0.71
2:CB:75:LYS:HA	2:CB:78:GLN:HG3	1.70	0.71
2:CB:233:SER:HB2	2:CB:234:PRO:CD	2.20	0.71
5:CE:11:ILE:HD12	5:CE:31:LEU:CD1	2.20	0.71
27:D1:76:ARG:HH22	27:D1:95:LEU:CD1	2.04	0.71
36:DA:336:C:H4'	56:DY:7:VAL:HG21	1.71	0.71
54:DW:22:ASP:HA	54:DW:25:ARG:NH1	2.05	0.71
56:DY:51:VAL:HG12	56:DY:53:PRO:CD	2.18	0.71
57:DZ:109:ALA:HB3	57:DZ:145:GLU:HA	1.72	0.71
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB2	2.20	0.71
12:AL:27:LEU:HB2	12:AL:62:SER:HB2	1.72	0.71
12:AL:47:LYS:HZ3	12:AL:48:PRO:HD3	1.55	0.71
25:AY:192:LEU:HD13	25:AY:192:LEU:O	1.89	0.71
36:BA:614(A):U:H4'	36:BA:614(B):G:C5'	2.20	0.71
49:BR:21:TYR:HB3	49:BR:47:PHE:CD2	2.26	0.71
56:BY:10:GLY:CA	56:BY:27:VAL:HG13	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:77:ASP:O	57:BZ:77:ASP:CG	2.33	0.71
1:CA:631:G:H2'	1:CA:632:A:C8	2.24	0.71
19:CS:9:VAL:O	19:CS:9:VAL:HG12	1.88	0.71
36:DA:598:G:H5'	47:DP:15:ARG:HB2	1.72	0.71
36:DA:1001:A:H2'	36:DA:1002:G:O4'	1.90	0.71
36:DA:2286:A:H4'	36:DA:2287:A:C5'	2.20	0.71
38:DC:139:PRO:HA	38:DC:145:THR:HG21	1.72	0.71
40:DE:11:MET:HB3	40:DE:24:THR:HA	1.70	0.71
41:DF:187:VAL:HG12	47:DP:7:ARG:HH22	1.55	0.71
51:DT:28:VAL:CG2	51:DT:46:GLU:HA	2.19	0.71
55:DX:55:ASN:HB2	55:DX:80:ILE:HG12	1.71	0.71
2:AB:55:PHE:HD1	2:AB:221:LEU:HG	1.54	0.71
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.71	0.71
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.56	0.71
18:AR:37:VAL:HG23	18:AR:38:GLU:H	1.55	0.71
23:AW:68:C:H5'	23:AW:68:C:H6	1.54	0.71
36:BA:1503:U:H2'	36:BA:1504:C:C6	2.21	0.71
36:BA:2314:C:O2'	36:BA:2315:G:H5'	1.91	0.71
43:BH:85:LYS:HD3	43:BH:85:LYS:C	2.15	0.71
46:BO:104:ARG:NE	51:BT:33:LYS:HE3	2.06	0.71
3:CC:134:ILE:HD11	3:CC:153:VAL:CG2	2.21	0.71
9:CI:4:TYR:CE2	9:CI:88:TYR:HB2	2.26	0.71
13:CM:6:GLY:C	13:CM:8:GLU:H	1.99	0.71
25:CY:487:ILE:CG2	25:CY:594:VAL:HG13	2.20	0.71
27:D1:76:ARG:NH1	27:D1:95:LEU:HD22	2.06	0.71
31:D5:4:HIS:O	36:DA:2056:G:N2	2.23	0.71
36:DA:2304:G:H22	36:DA:2312:U:H3	1.38	0.71
37:DB:45:A:H1'	42:DG:95:ARG:NH1	2.05	0.71
41:DF:148:LEU:HD23	41:DF:191:ARG:NH1	2.06	0.71
51:DT:80:SER:HB3	51:DT:81:PRO:HD3	1.71	0.71
54:DW:10:VAL:HG23	54:DW:101:SER:O	1.89	0.71
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.90	0.71
2:AB:118:LEU:HB3	2:AB:142:LEU:HD12	1.71	0.71
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.71	0.71
25:AY:196:ILE:HG13	25:AY:197:ARG:N	2.04	0.71
25:AY:413:ILE:HD11	25:AY:474:ALA:HB3	1.73	0.71
31:B5:4:HIS:CB	31:B5:5:PRO:HD3	2.19	0.71
36:BA:2286:A:H4'	36:BA:2287:A:C5'	2.19	0.71
45:BN:26:LEU:C	45:BN:26:LEU:HD12	2.15	0.71
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.73	0.71
13:CM:66:LEU:HD12	13:CM:66:LEU:N	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:37:VAL:HG23	18:CR:38:GLU:H	1.55	0.71
23:CW:24:U:H2'	23:CW:25:C:C6	2.25	0.71
28:D2:47:ASN:HB2	36:DA:95:G:H1'	1.71	0.71
36:DA:2020:A:C2'	36:DA:2021:C:H5''	2.20	0.71
36:DA:2463:C:O2'	36:DA:2464:C:H5'	1.90	0.71
39:DD:27:THR:CG2	39:DD:83:GLU:HG2	2.20	0.71
42:DG:51:ARG:NH1	42:DG:53:LEU:HD21	2.05	0.71
51:DT:38:ASN:O	51:DT:38:ASN:ND2	2.20	0.71
57:DZ:29:TYR:HB3	57:DZ:34:ASN:HB2	1.73	0.71
57:DZ:98:MET:O	57:DZ:126:VAL:HG22	1.90	0.71
1:AA:108:G:H5'	1:AA:109:A:H5''	1.72	0.71
1:AA:1294:G:O2'	1:AA:1295:G:H5'	1.90	0.71
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.72	0.71
4:AD:4:TYR:O	4:AD:5:ILE:HB	1.90	0.71
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.56	0.71
13:AM:6:GLY:C	13:AM:8:GLU:H	1.98	0.71
15:AO:64:ARG:HH11	15:AO:64:ARG:HG3	1.56	0.71
25:AY:9:LEU:HD21	25:AY:284:LEU:HB2	1.72	0.71
25:AY:12:LEU:HD12	25:AY:14:ASN:HD21	1.55	0.71
25:AY:573:HIS:CD2	25:AY:575:VAL:H	2.08	0.71
25:AY:601:ILE:HG21	25:AY:687:LEU:CD1	2.20	0.71
36:BA:285:C:H2'	36:BA:286:C:H5'	1.72	0.71
36:BA:614(A):U:H5''	36:BA:614(B):G:OP1	1.90	0.71
36:BA:658:C:H2'	36:BA:659:C:C6	2.26	0.71
36:BA:1409:C:H2'	36:BA:1410:G:H8	1.55	0.71
36:BA:2602:A:H4'	36:BA:2603:G:C5'	2.20	0.71
39:BD:131:LEU:HD12	39:BD:131:LEU:N	2.06	0.71
42:BG:77:ILE:HG22	42:BG:80:PHE:H	1.56	0.71
46:BO:114:ILE:HD12	46:BO:114:ILE:N	2.06	0.71
50:BS:13:ARG:CG	50:BS:14:VAL:H	2.03	0.71
50:BS:97:ARG:HH21	50:BS:98:VAL:HA	1.54	0.71
51:BT:75:ILE:HD12	51:BT:75:ILE:N	2.05	0.71
1:CA:99:U:H2'	1:CA:100:C:C6	2.26	0.71
1:CA:1129:C:H6	1:CA:1129:C:H5'	1.54	0.71
19:CS:13:ASP:C	19:CS:15:LEU:H	1.97	0.71
23:CW:35:A:N6	24:CX:14:U:O4	2.20	0.71
24:CX:11:A:N3	24:CX:11:A:H3'	2.06	0.71
32:D6:8:LYS:NZ	36:DA:2285:C:H5	1.87	0.71
33:D7:26:GLY:O	33:D7:30:VAL:HG23	1.90	0.71
36:DA:1503:U:H2'	36:DA:1504:C:C6	2.22	0.71
36:DA:1649:G:O2'	36:DA:1650:G:H5'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2439:A:C8	36:DA:2586:C:H4'	2.25	0.71
45:DN:62:VAL:HG22	45:DN:66:LYS:HG3	1.71	0.71
53:DV:19:LYS:NZ	53:DV:20:LEU:H	1.88	0.71
56:DY:7:VAL:HB	56:DY:8:LYS:CD	2.20	0.71
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.25	0.71
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.91	0.71
36:BA:1001:A:H2'	36:BA:1002:G:O4'	1.90	0.71
36:BA:1514:U:H2'	36:BA:1515:G:C8	2.26	0.71
36:BA:1514:U:H2'	36:BA:1515:G:H8	1.56	0.71
36:BA:2439:A:C8	36:BA:2586:C:H4'	2.24	0.71
42:BG:53:LEU:N	42:BG:53:LEU:HD22	2.03	0.71
1:CA:1349:A:OP1	9:CI:120:ARG:HB2	1.90	0.71
23:CW:51:C:C2'	23:CW:52:G:H5''	2.20	0.71
24:CX:16:U:C2'	24:CX:17:U:H5'	2.20	0.71
25:CY:289:ILE:HD11	25:CY:331:TYR:CZ	2.25	0.71
25:CY:488:THR:HG23	25:CY:600:VAL:CB	2.21	0.71
26:D0:11:ARG:HB2	26:D0:11:ARG:HH11	1.54	0.71
36:DA:769:G:O2'	36:DA:770:G:H5'	1.90	0.71
51:DT:65:LYS:CE	51:DT:66:VAL:H	2.01	0.71
1:AA:275:G:H5''	17:AQ:14:LYS:HB2	1.71	0.71
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.72	0.71
5:AE:87:SER:HB3	5:AE:131:ILE:HD13	1.71	0.71
5:AE:143:ARG:HH12	8:AH:77:GLU:CD	1.99	0.71
7:AG:23:VAL:HG13	7:AG:43:PHE:CE2	2.26	0.71
19:AS:41:VAL:C	19:AS:43:GLU:H	1.98	0.71
24:AX:11:A:H3'	24:AX:11:A:N3	2.06	0.71
36:BA:176:G:O2'	36:BA:177:G:H5'	1.90	0.71
36:BA:297:C:H2'	36:BA:298:G:O4'	1.91	0.71
53:BV:19:LYS:HG2	53:BV:94:LEU:HB2	1.72	0.71
1:CA:243:A:H4'	1:CA:244:U:O5'	1.91	0.71
1:CA:973:G:H1'	10:CJ:55:LYS:NZ	2.05	0.71
1:CA:1321:C:H5''	1:CA:1322:C:H5''	1.71	0.71
16:CP:33:ILE:O	16:CP:34:GLU:HB2	1.91	0.71
25:CY:605:ILE:HD11	25:CY:677:GLN:CG	2.21	0.71
34:D8:62:LEU:HD13	36:DA:242:G:H5''	1.73	0.71
36:DA:654(S):G:H3'	36:DA:654(T):C:C5'	2.20	0.71
36:DA:790:C:H5'	36:DA:791:C:OP2	1.91	0.71
36:DA:907:U:OP1	48:DQ:24:GLY:N	2.23	0.71
36:DA:1278:A:C5'	49:DR:36:THR:HG22	2.21	0.71
45:DN:109:LYS:CE	45:DN:109:LYS:H	2.03	0.71
48:DQ:67:ARG:HD2	48:DQ:105:GLU:OE1	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.54	0.71
2:AB:137:ARG:C	2:AB:137:ARG:HD3	2.16	0.71
4:AD:61:LYS:HD3	4:AD:206:PHE:CE2	2.26	0.71
7:AG:4:ARG:HB3	7:AG:5:ARG:HH11	1.55	0.71
25:AY:329:ARG:HD3	25:AY:374:LEU:HD11	1.72	0.71
26:B0:11:ARG:HB2	26:B0:11:ARG:HH11	1.56	0.71
36:BA:1203:G:H3'	36:BA:1204:A:H5''	1.72	0.71
36:BA:2713:A:H3'	36:BA:2714:G:H5'	1.72	0.71
45:BN:58:ASP:O	45:BN:60:ILE:N	2.24	0.71
50:BS:95:HIS:CG	50:BS:96:GLY:N	2.53	0.71
50:BS:106:ARG:HB3	50:BS:106:ARG:NH1	2.06	0.71
51:BT:28:VAL:CG2	51:BT:46:GLU:HA	2.21	0.71
1:CA:1375:A:H5'	1:CA:1376:U:OP2	1.90	0.71
20:CT:42:GLN:HE21	20:CT:42:GLN:HA	1.54	0.71
36:DA:2069:G:O2'	36:DA:2070:G:H5'	1.90	0.71
1:AA:194:C:H2'	1:AA:195:A:H5''	1.71	0.71
1:AA:509:A:C5'	1:AA:510:A:OP2	2.39	0.71
1:AA:1208:C:H2'	1:AA:1209:C:H6	1.56	0.71
3:AC:59:ARG:HG3	3:AC:64:VAL:HA	1.72	0.71
9:AI:47:LEU:CD1	9:AI:47:LEU:H	2.04	0.71
25:AY:400:GLU:O	25:AY:402:ILE:HD12	1.90	0.71
29:B3:17:LYS:HZ3	29:B3:20:LYS:HE3	1.56	0.71
36:BA:1658:C:H2'	36:BA:1659:U:H6	1.56	0.71
42:BG:135:LEU:CD1	42:BG:155:MET:HG2	2.20	0.71
25:CY:69:VAL:HA	25:CY:81:ILE:O	1.90	0.71
25:CY:138:LYS:HE2	60:CY:702:GDP:N9	2.05	0.71
25:CY:609:GLU:O	25:CY:669:PHE:HA	1.90	0.71
31:D5:44:THR:HG21	49:DR:101:ALA:HB2	1.72	0.71
36:DA:285:C:H2'	36:DA:286:C:H5'	1.72	0.71
36:DA:2801:A:H4'	36:DA:2801(A):A:O4'	1.91	0.71
40:DE:4:ILE:HD13	40:DE:28:ALA:HB1	1.71	0.71
40:DE:179:GLU:HB3	40:DE:181:LEU:CD2	2.20	0.71
43:DH:76:VAL:O	43:DH:79:VAL:HG22	1.91	0.71
51:DT:45:PHE:CE2	51:DT:74:ARG:HB2	2.26	0.71
53:DV:19:LYS:HG2	53:DV:94:LEU:HB2	1.71	0.71
1:AA:1325:C:H2'	1:AA:1326:C:H6	1.54	0.70
10:AJ:55:LYS:H	10:AJ:55:LYS:HE3	1.56	0.70
19:AS:13:ASP:C	19:AS:15:LEU:H	1.96	0.70
31:B5:4:HIS:O	36:BA:2056:G:N2	2.24	0.70
36:BA:134:C:H2'	36:BA:135:G:H8	1.55	0.70
36:BA:1523:U:H2'	36:BA:1524:G:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2248:C:H2'	36:BA:2249:U:H5'	1.72	0.70
36:BA:2572:A:C5'	36:BA:2574:G:H4'	2.19	0.70
36:BA:2666:C:H5'	36:BA:2667:C:OP2	1.91	0.70
42:BG:133:LEU:HD11	42:BG:157:ILE:HD12	1.71	0.70
1:CA:408:A:H4'	4:CD:112:VAL:HG11	1.73	0.70
1:CA:545:C:O2'	1:CA:546:G:H5'	1.91	0.70
25:CY:632:LEU:HD12	25:CY:644:ARG:HB2	1.73	0.70
36:DA:614(A):U:H4'	36:DA:614(B):G:C5'	2.20	0.70
42:DG:141:PHE:HB2	42:DG:144:ILE:HG22	1.73	0.70
43:DH:30:LYS:HD2	43:DH:81:GLU:HG2	1.73	0.70
56:DY:10:GLY:CA	56:DY:27:VAL:HG13	2.21	0.70
19:AS:53:ASN:C	19:AS:55:LYS:H	1.98	0.70
25:AY:17:ILE:HD12	25:AY:17:ILE:N	2.06	0.70
30:B4:30:GLU:O	30:B4:31:ILE:HD12	1.90	0.70
32:B6:48:VAL:HG23	32:B6:49:HIS:N	2.05	0.70
36:BA:781:A:H2'	36:BA:1777:U:O2'	1.91	0.70
36:BA:1721:G:C6	36:BA:1739:U:H5'	2.26	0.70
36:BA:2304:G:H22	36:BA:2312:U:H3	1.39	0.70
40:BE:4:ILE:CD1	40:BE:28:ALA:HB1	2.21	0.70
50:BS:28:VAL:HG12	50:BS:29:PHE:N	2.05	0.70
2:CB:137:ARG:HD3	2:CB:137:ARG:C	2.16	0.70
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.73	0.70
26:D0:14:ARG:HB2	26:D0:14:ARG:NH1	2.06	0.70
29:D3:56:VAL:HG12	29:D3:57:GLU:N	2.05	0.70
30:D4:30:GLU:O	30:D4:31:ILE:HD12	1.91	0.70
36:DA:2784:C:H1'	40:DE:37:ARG:HH12	1.56	0.70
39:DD:145:VAL:HG22	39:DD:191:ALA:HB1	1.73	0.70
42:DG:73:ALA:HB3	42:DG:87:PRO:HG3	1.71	0.70
50:DS:51:ALA:HB3	50:DS:73:LEU:HB2	1.72	0.70
51:DT:82:LEU:HD12	51:DT:82:LEU:N	2.06	0.70
51:DT:98:LYS:HB3	51:DT:100:TYR:HE1	1.56	0.70
55:DX:30:VAL:HG22	55:DX:77:LYS:O	1.92	0.70
56:DY:8:LYS:HB2	56:DY:28:LYS:HZ3	1.53	0.70
10:AJ:82:ILE:O	10:AJ:86:MET:HB2	1.91	0.70
13:AM:91:ARG:HD2	13:AM:97:PRO:O	1.91	0.70
23:AW:30:G:O2'	23:AW:31:G:H5''	1.91	0.70
25:AY:205:TYR:O	25:AY:207:ASP:N	2.24	0.70
25:AY:250:THR:CA	25:AY:255:ILE:HG23	2.20	0.70
29:B3:28:LEU:HA	29:B3:33:GLN:OE1	1.91	0.70
36:BA:806:C:OP2	47:BP:39:LYS:HD3	1.90	0.70
36:BA:1221(A):C:O2'	36:BA:1222:C:H5'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2801:A:H4'	36:BA:2801(A):A:O4'	1.91	0.70
36:BA:2876:G:H4'	51:BT:3:ARG:NE	2.06	0.70
45:BN:65:LYS:HB3	45:BN:65:LYS:HZ2	1.57	0.70
47:BP:92:GLU:HG3	47:BP:93:GLY:H	1.56	0.70
55:BX:55:ASN:HB2	55:BX:80:ILE:HG12	1.72	0.70
3:CC:123:GLN:HB3	3:CC:128:PHE:HD2	1.54	0.70
4:CD:61:LYS:HD3	4:CD:206:PHE:CE2	2.26	0.70
10:CJ:75:ILE:CG1	10:CJ:76:ASN:H	1.96	0.70
13:CM:78:ILE:O	13:CM:82:MET:HG2	1.90	0.70
25:CY:503:GLY:C	25:CY:505:GLY:H	1.98	0.70
29:D3:8:LEU:HD22	29:D3:31:LEU:CD2	2.20	0.70
36:DA:545:C:C2'	36:DA:547:A:H5''	2.21	0.70
36:DA:742:G:O2'	36:DA:743:G:H5'	1.90	0.70
36:DA:848:G:O6	36:DA:928:G:H2'	1.91	0.70
36:DA:1721:G:C6	36:DA:1739:U:H5'	2.26	0.70
36:DA:2815:C:H2'	36:DA:2816:C:C6	2.27	0.70
40:DE:4:ILE:CD1	40:DE:28:ALA:HB1	2.21	0.70
53:DV:98:GLU:OE2	53:DV:100:ARG:HD3	1.91	0.70
55:DX:8:ILE:HD12	55:DX:8:ILE:N	2.06	0.70
57:DZ:157:LEU:HD11	57:DZ:163:LEU:HD22	1.73	0.70
1:AA:473:G:H2'	1:AA:474:G:H8	1.55	0.70
1:AA:1502:A:H2	1:AA:1505:G:N1	1.85	0.70
2:AB:75:LYS:HA	2:AB:78:GLN:HG3	1.72	0.70
5:AE:80:ILE:HG22	8:AH:104:ARG:HH22	1.56	0.70
24:AX:15:G:O2'	24:AX:16:U:H5''	1.91	0.70
25:AY:546:ILE:O	25:AY:550:MET:HG3	1.91	0.70
26:B0:60:PHE:CE2	36:BA:2365:G:H4'	2.27	0.70
31:B5:56:LYS:CG	31:B5:57:VAL:H	1.96	0.70
36:BA:1885:A:H8	36:BA:1885:A:H5'	1.54	0.70
40:BE:4:ILE:HD13	40:BE:28:ALA:HB1	1.73	0.70
41:BF:148:LEU:HD23	41:BF:191:ARG:NH1	2.07	0.70
51:BT:13:ARG:HA	51:BT:13:ARG:NH1	2.07	0.70
12:CL:79:GLU:HB2	25:CY:442:THR:HG21	1.73	0.70
13:CM:4:ILE:HG22	13:CM:5:ALA:H	1.55	0.70
16:CP:53:VAL:HG23	16:CP:54:GLU:H	1.56	0.70
23:CW:22:G:H2'	23:CW:23:C:H5''	1.72	0.70
25:CY:100:VAL:HG23	25:CY:312:LEU:HD13	1.73	0.70
29:D3:59:VAL:HG12	29:D3:60:GLU:N	2.06	0.70
31:D5:3:LYS:NZ	36:DA:2613:U:H2'	2.06	0.70
36:DA:297:C:H2'	36:DA:298:G:O4'	1.90	0.70
36:DA:481:G:H2'	36:DA:507:A:N1	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1259:G:O2'	36:DA:1260:G:H5'	1.91	0.70
36:DA:2579:C:H4'	40:DE:134:ILE:CG1	2.21	0.70
36:DA:2742:C:O2'	36:DA:2743:C:H5'	1.91	0.70
38:DC:23:ILE:HB	38:DC:229:SER:OXT	1.91	0.70
42:DG:97:ASP:O	42:DG:101:ILE:HB	1.90	0.70
45:DN:18:ALA:CB	45:DN:21:LYS:HB2	2.20	0.70
46:DO:26:LYS:HB3	46:DO:30:ALA:HB2	1.71	0.70
53:DV:6:LYS:O	53:DV:37:VAL:HG21	1.92	0.70
1:AA:477:A:O2'	1:AA:479:C:H5'	1.92	0.70
1:AA:1047:G:H5''	14:AN:4:LYS:HD3	1.73	0.70
1:AA:1349:A:OP1	9:AI:120:ARG:HB2	1.91	0.70
3:AC:156:ARG:NH2	3:AC:161:GLU:HA	2.06	0.70
9:AI:46:ALA:O	9:AI:49:PRO:HD2	1.92	0.70
9:AI:93:ARG:C	9:AI:95:LYS:H	1.99	0.70
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.73	0.70
24:AX:16:U:C2'	24:AX:17:U:H5'	2.20	0.70
36:BA:1780:A:H5'	36:BA:1781:C:OP2	1.91	0.70
38:BC:211:ARG:HG3	38:BC:211:ARG:HH11	1.57	0.70
1:CA:490:G:H2'	1:CA:491:G:H8	1.56	0.70
9:CI:53:VAL:HG13	9:CI:95:LYS:HE3	1.72	0.70
18:CR:37:VAL:HG23	18:CR:38:GLU:N	2.06	0.70
25:CY:112:GLN:HG3	25:CY:115:GLU:HB3	1.72	0.70
36:DA:1846:G:H5'	36:DA:1846:G:C8	2.22	0.70
36:DA:2287:A:N6	36:DA:2344:U:H3	1.88	0.70
36:DA:2396:G:O2'	36:DA:2397:G:H5'	1.92	0.70
37:DB:103:G:N2	57:DZ:73:GLN:HE22	1.84	0.70
45:DN:26:LEU:C	45:DN:26:LEU:HD12	2.16	0.70
45:DN:38:HIS:C	52:DU:67:ALA:HB1	2.16	0.70
56:DY:94:LYS:C	56:DY:102:CYS:HB2	2.17	0.70
1:AA:973:G:H1'	10:AJ:55:LYS:NZ	2.07	0.70
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.27	0.70
3:AC:25:GLY:C	3:AC:27:LYS:H	1.99	0.70
9:AI:112:LYS:CA	9:AI:119:ALA:HB2	2.15	0.70
14:AN:12:ARG:C	14:AN:14:PRO:HD3	2.16	0.70
18:AR:45:SER:H	18:AR:51:LEU:HG	1.56	0.70
23:AW:27:U:O2'	23:AW:28:C:H5'	1.89	0.70
32:B6:37:ARG:NH1	36:BA:2286:A:N7	2.40	0.70
36:BA:2012:G:H4'	54:BW:96:ILE:CD1	2.10	0.70
40:BE:81:ILE:HG22	40:BE:81:ILE:O	1.91	0.70
41:BF:187:VAL:HG12	47:BP:7:ARG:HH22	1.56	0.70
41:BF:192:LEU:HD21	41:BF:194:MET:HG3	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:29:ARG:CB	51:BT:85:LYS:HA	2.21	0.70
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.10	0.70
10:CJ:8:LEU:CD2	10:CJ:96:ILE:HG22	2.21	0.70
25:CY:137:ASN:HD21	25:CY:263:ALA:HB3	1.56	0.70
25:CY:148:LEU:HA	25:CY:151:ARG:HD2	1.72	0.70
25:CY:409:ILE:CD1	25:CY:656:ALA:HB3	2.21	0.70
33:D7:6:GLN:O	36:DA:686:G:H1'	1.91	0.70
36:DA:1169:G:H1	36:DA:1180:C:H42	1.37	0.70
36:DA:2636:U:H4'	40:DE:80:GLU:OE1	1.91	0.70
43:DH:67:LEU:O	43:DH:71:LEU:HD12	1.91	0.70
8:AH:41:ARG:HH22	8:AH:123:GLU:CD	2.00	0.70
10:AJ:70:ARG:HH11	10:AJ:70:ARG:HG2	1.56	0.70
12:AL:117:ARG:NH2	12:AL:124:LYS:HB2	2.06	0.70
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.74	0.70
25:AY:122:TRP:CE3	25:AY:132:ARG:HD2	2.26	0.70
25:AY:330:VAL:HB	25:AY:371:ALA:HA	1.73	0.70
26:B0:30:VAL:HG12	26:B0:66:VAL:HG22	1.73	0.70
27:B1:41:ARG:NH2	36:BA:1365:A:H5'	2.07	0.70
36:BA:208:C:H2'	36:BA:209:C:H6	1.57	0.70
36:BA:2815:C:H2'	36:BA:2816:C:C6	2.27	0.70
43:BH:144:VAL:O	43:BH:148:ILE:HG12	1.91	0.70
51:BT:98:LYS:HB3	51:BT:100:TYR:CE1	2.27	0.70
1:CA:434:U:H2'	1:CA:435:C:C6	2.26	0.70
3:CC:25:GLY:C	3:CC:27:LYS:H	1.98	0.70
8:CH:89:PRO:HA	8:CH:92:ARG:HH11	1.56	0.70
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HD22	1.57	0.70
10:CJ:55:LYS:H	10:CJ:55:LYS:HE3	1.57	0.70
11:CK:21:ILE:HG13	11:CK:30:VAL:HG12	1.73	0.70
23:CW:17(A):U:OP1	36:DA:2180:U:H4'	1.92	0.70
25:CY:117:GLN:C	25:CY:119:GLU:H	1.98	0.70
36:DA:1390:U:O2'	36:DA:1391:U:H5'	1.91	0.70
37:DB:112:U:H2'	37:DB:113:G:H8	1.56	0.70
40:DE:117:MET:HA	40:DE:122:PHE:N	1.99	0.70
43:DH:85:LYS:HD3	43:DH:85:LYS:C	2.16	0.70
49:DR:113:LEU:HD12	49:DR:114:VAL:H	1.56	0.70
50:DS:40:ILE:HG22	50:DS:41:ASP:N	2.06	0.70
51:DT:16:ARG:H	51:DT:79:HIS:HD2	1.38	0.70
53:DV:38:LEU:O	53:DV:39:LEU:HD13	1.91	0.70
9:AI:114:TYR:HE2	10:AJ:60:ARG:H	1.36	0.70
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.74	0.70
19:AS:44:MET:SD	19:AS:44:MET:N	2.65	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.74	0.70
59:AY:701:FUA:H122	59:AY:701:FUA:H231	1.73	0.70
26:B0:14:ARG:NH1	26:B0:14:ARG:HB2	2.07	0.70
36:BA:82:G:H5''	36:BA:296:C:H5'	1.74	0.70
36:BA:666:G:H4'	47:BP:49:ARG:NH2	2.06	0.70
36:BA:1578:U:C2'	36:BA:1579:A:H5''	2.21	0.70
36:BA:1609:A:H1'	36:BA:1616:A:H1'	1.74	0.70
36:BA:1850:G:H5'	36:BA:1851:U:OP2	1.92	0.70
42:BG:112:PRO:C	42:BG:113:ARG:HA	2.17	0.70
42:BG:144:ILE:HD11	42:BG:149:VAL:HB	1.72	0.70
42:BG:145:THR:OG1	42:BG:148:MET:HB2	1.91	0.70
50:BS:17:ARG:HA	50:BS:20:ARG:NH1	2.07	0.70
51:BT:80:SER:HB3	51:BT:81:PRO:HD3	1.74	0.70
56:BY:94:LYS:C	56:BY:102:CYS:HB2	2.16	0.70
1:CA:625:G:H4'	16:CP:16:HIS:CD2	2.27	0.70
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.71	0.70
24:CX:15:G:O2'	24:CX:16:U:H5''	1.91	0.70
25:CY:157:LEU:HD23	25:CY:157:LEU:N	2.03	0.70
25:CY:670:VAL:HG23	25:CY:671:MET:N	2.05	0.70
36:DA:657:U:H2'	36:DA:658:C:C6	2.27	0.70
36:DA:2241:A:H2'	36:DA:2242:G:C8	2.26	0.70
39:DD:183:ARG:HG2	39:DD:183:ARG:NH1	2.06	0.70
42:DG:55:LYS:HA	42:DG:58:GLN:HG3	1.74	0.70
57:DZ:153:SER:HB2	57:DZ:163:LEU:HD13	1.74	0.70
1:AA:434:U:H2'	1:AA:435:C:C6	2.27	0.70
1:AA:490:G:H2'	1:AA:491:G:H8	1.57	0.70
1:AA:1255:G:H2'	1:AA:1279:A:H62	1.56	0.70
18:AR:37:VAL:HG23	18:AR:38:GLU:N	2.06	0.70
25:AY:442:THR:HG23	25:AY:447:GLY:O	1.92	0.70
25:AY:503:GLY:C	25:AY:505:GLY:H	2.00	0.70
31:B5:40:LYS:HE2	31:B5:46:CYS:HB3	1.73	0.70
35:B9:18:ARG:HG2	35:B9:18:ARG:O	1.92	0.70
36:BA:336:C:H4'	56:BY:7:VAL:HG21	1.74	0.70
36:BA:742:G:O2'	36:BA:743:G:H5'	1.92	0.70
40:BE:179:GLU:HB3	40:BE:181:LEU:CD2	2.22	0.70
45:BN:67:LEU:HB3	45:BN:88:GLU:HG2	1.72	0.70
50:BS:52:SER:HB3	50:BS:55:ALA:HB3	1.72	0.70
4:CD:159:ARG:HG3	4:CD:159:ARG:HH11	1.55	0.70
11:CK:84:VAL:HG11	11:CK:95:ILE:HD11	1.73	0.70
14:CN:12:ARG:C	14:CN:14:PRO:HD3	2.15	0.70
17:CQ:52:LYS:H	17:CQ:52:LYS:CD	2.03	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:36:THR:HB	25:CY:72:CYS:HB2	1.73	0.70
25:CY:90:PHE:HZ	59:CY:701:FUA:H121	1.55	0.70
25:CY:101:LEU:HD13	25:CY:103:GLY:O	1.91	0.70
27:D1:86:SER:O	27:D1:90:ILE:HG12	1.92	0.70
28:D2:69:ARG:HG3	28:D2:70:GLN:N	2.06	0.70
32:D6:15:GLU:CD	32:D6:44:ARG:HH12	1.99	0.70
36:DA:658:C:H2'	36:DA:659:C:C6	2.26	0.70
36:DA:1607:C:H4'	36:DA:1608:A:O5'	1.91	0.70
36:DA:2591:C:H2'	36:DA:2592:G:H8	1.57	0.70
39:DD:39:LYS:NZ	39:DD:87:ASN:HB3	2.07	0.70
47:DP:92:GLU:HG3	47:DP:93:GLY:H	1.56	0.70
57:DZ:24:LEU:HD23	57:DZ:25:PRO:O	1.92	0.70
13:AM:69:GLU:HG2	30:B4:43:TYR:HH	1.57	0.70
25:AY:404:VAL:N	25:AY:405:PRO:HD3	2.06	0.70
28:B2:32:LEU:HD11	28:B2:54:LYS:HG2	1.74	0.70
36:BA:16:G:O2'	36:BA:17:G:H5'	1.92	0.70
36:BA:1268:A:H2'	36:BA:1269:A:O4'	1.91	0.70
36:BA:2103:C:H1'	36:BA:2187:G:H1	1.56	0.70
36:BA:2287:A:N6	36:BA:2344:U:H3	1.88	0.70
36:BA:2466:C:O2'	36:BA:2467:C:H5'	1.91	0.70
39:BD:31:LYS:HZ2	39:BD:33:LEU:HB2	1.57	0.70
46:BO:26:LYS:HB3	46:BO:30:ALA:HB2	1.74	0.70
49:BR:97:VAL:HG13	49:BR:114:VAL:HG22	1.74	0.70
53:BV:38:LEU:O	53:BV:39:LEU:HD13	1.92	0.70
57:BZ:59:LEU:O	57:BZ:66:SER:HA	1.91	0.70
19:CS:58:VAL:O	19:CS:58:VAL:HG23	1.92	0.70
23:CW:14:A:H3'	23:CW:15:G:C5'	2.15	0.70
25:CY:90:PHE:HE2	59:CY:701:FUA:H9	1.56	0.70
25:CY:512:ILE:HG22	25:CY:567:LEU:HA	1.74	0.70
25:CY:613:PRO:HG2	25:CY:666:ARG:NH2	2.07	0.70
36:DA:49:A:H5''	36:DA:51:G:O4'	1.91	0.70
36:DA:82:G:H5''	36:DA:296:C:H5'	1.74	0.70
40:DE:36:ARG:NH2	40:DE:88:GLY:H	1.90	0.70
42:DG:101:ILE:O	42:DG:104:GLU:HB3	1.92	0.70
56:DY:96:ILE:HD12	56:DY:99:CYS:SG	2.31	0.70
1:AA:268:C:H2'	1:AA:268:C:O2	1.92	0.69
1:AA:677:U:H3	1:AA:713:G:H22	1.37	0.69
9:AI:18:PHE:O	9:AI:61:ALA:HA	1.92	0.69
23:AW:51:C:C3'	23:AW:52:G:H5''	2.21	0.69
25:AY:446:THR:O	25:AY:448:GLN:HG2	1.92	0.69
25:AY:453:GLY:HA3	25:AY:459:LEU:HD11	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:519:ARG:HH22	25:AY:678:GLU:CB	2.05	0.69
36:BA:598:G:H5'	47:BP:15:ARG:HB2	1.73	0.69
36:BA:1278:A:C5'	49:BR:36:THR:HG22	2.22	0.69
43:BH:85:LYS:HZ3	43:BH:87:LEU:HG	1.56	0.69
45:BN:45:ASN:HD22	45:BN:45:ASN:N	1.74	0.69
46:BO:104:ARG:HE	51:BT:33:LYS:CE	2.04	0.69
1:CA:301:G:O2'	1:CA:302:G:H5'	1.92	0.69
2:CB:12:GLU:HA	2:CB:16:HIS:ND1	2.07	0.69
3:CC:14:ILE:HG13	3:CC:15:THR:N	2.05	0.69
25:CY:21:ILE:HG21	25:CY:88:VAL:HG13	1.73	0.69
31:D5:46:CYS:SG	31:D5:47:PRO:HD2	2.32	0.69
36:DA:192:C:H2'	36:DA:193:U:H5'	1.72	0.69
36:DA:208:C:H2'	36:DA:209:C:H6	1.56	0.69
36:DA:419:C:H2'	36:DA:420:C:H6	1.55	0.69
36:DA:1123:C:H2'	36:DA:1124:C:H6	1.57	0.69
49:DR:97:VAL:HG13	49:DR:114:VAL:HG22	1.74	0.69
1:AA:160:A:H1'	1:AA:344:A:C5	2.27	0.69
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.22	0.69
17:AQ:58:GLU:HB2	17:AQ:74:LEU:HB3	1.73	0.69
25:AY:9:LEU:HD23	25:AY:9:LEU:C	2.18	0.69
25:AY:12:LEU:HB3	25:AY:283:PRO:HG2	1.74	0.69
32:B6:15:GLU:CD	32:B6:44:ARG:HH12	1.98	0.69
36:BA:991:C:H5'	36:BA:991:C:H6	1.56	0.69
39:BD:183:ARG:HG2	39:BD:183:ARG:NH1	2.05	0.69
50:BS:98:VAL:HG12	50:BS:100:ALA:H	1.55	0.69
51:BT:113:LYS:O	51:BT:114:LEU:HD23	1.92	0.69
1:CA:473:G:H2'	1:CA:474:G:H8	1.56	0.69
18:CR:45:SER:H	18:CR:51:LEU:HG	1.58	0.69
23:CW:34:C:C2'	23:CW:35:A:C4'	2.70	0.69
25:CY:489:LYS:HD3	25:CY:598:ASP:OD1	1.91	0.69
25:CY:546:ILE:O	25:CY:550:MET:HG3	1.91	0.69
36:DA:608:A:H2'	36:DA:609:A:C8	2.27	0.69
36:DA:1203:G:H3'	36:DA:1204:A:H5''	1.74	0.69
36:DA:1203:G:H4'	47:DP:7:ARG:HD2	1.74	0.69
36:DA:2244:U:O2	36:DA:2434:A:H2'	1.91	0.69
38:DC:50:ILE:HD12	38:DC:57:GLN:O	1.92	0.69
47:DP:84:ASN:C	47:DP:86:LYS:H	1.97	0.69
51:DT:16:ARG:HD2	51:DT:18:ASP:OD1	1.93	0.69
1:AA:266:G:H5''	1:AA:266:G:C8	2.26	0.69
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	1.74	0.69
22:AV:64:A:H2'	22:AV:65:G:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:628:ARG:HH12	25:AY:680:PRO:HG2	1.56	0.69
36:BA:272(H):C:H2'	36:BA:272(I):U:H5'	1.72	0.69
36:BA:1494:A:H2'	36:BA:1495:A:H5''	1.74	0.69
36:BA:2244:U:O2	36:BA:2434:A:H2'	1.91	0.69
36:BA:2645:G:C3'	36:BA:2646:C:H5'	2.15	0.69
51:BT:46:GLU:O	51:BT:65:LYS:HD2	1.92	0.69
54:BW:22:ASP:HA	54:BW:25:ARG:NH1	2.07	0.69
57:BZ:42:VAL:HG13	57:BZ:43:GLU:H	1.57	0.69
1:CA:1459:C:H2'	1:CA:1460:A:C8	2.27	0.69
8:CH:109:ILE:HG12	8:CH:110:ALA:N	2.07	0.69
15:CO:33:THR:HG21	15:CO:85:LEU:CD2	2.21	0.69
22:CV:15:G:H3'	22:CV:16:U:H5''	1.73	0.69
31:D5:50:GLY:HA2	31:D5:56:LYS:HB3	1.73	0.69
36:DA:272(H):C:H2'	36:DA:272(I):U:H5'	1.74	0.69
36:DA:956:G:H4'	48:DQ:83:MET:HE1	1.73	0.69
36:DA:975(A):G:O2'	36:DA:976:C:H5'	1.92	0.69
36:DA:1609:A:H1'	36:DA:1616:A:H1'	1.74	0.69
40:DE:134:ILE:HD12	40:DE:134:ILE:N	2.07	0.69
1:AA:1489:G:C3'	1:AA:1490:C:H5''	2.23	0.69
2:AB:223:ILE:HG23	2:AB:226:ARG:NH1	2.08	0.69
9:AI:53:VAL:HG13	9:AI:95:LYS:HE3	1.73	0.69
19:AS:58:VAL:O	19:AS:58:VAL:HG23	1.91	0.69
25:AY:512:ILE:H	25:AY:512:ILE:HD13	1.57	0.69
27:B1:46:LEU:HD13	27:B1:46:LEU:N	2.06	0.69
28:B2:13:ALA:HA	28:B2:16:LEU:CD1	2.23	0.69
36:BA:272(J):C:H5'	36:BA:274:G:OP2	1.91	0.69
36:BA:296:C:O2'	36:BA:297:C:H5'	1.91	0.69
36:BA:1846:G:H5'	36:BA:1846:G:C8	2.20	0.69
45:BN:46:VAL:HG13	45:BN:47:ALA:N	2.08	0.69
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.58	0.69
3:CC:50:ALA:O	3:CC:70:VAL:HG13	1.91	0.69
23:CW:7:G:H3'	23:CW:8:U:C5'	2.22	0.69
36:DA:528:A:H2	36:DA:2043:C:C5'	2.05	0.69
36:DA:782:A:C2	39:DD:226:MET:HG2	2.28	0.69
36:DA:2876:G:H4'	51:DT:3:ARG:NE	2.07	0.69
57:DZ:130:PRO:HA	57:DZ:133:ILE:HD11	1.72	0.69
1:AA:1239:A:H2'	1:AA:1298:C:H42	1.58	0.69
1:AA:1432:G:OP1	51:BT:107:ASP:HB2	1.92	0.69
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.74	0.69
25:AY:84:THR:N	25:AY:85:PRO:CD	2.49	0.69
36:BA:608:A:H2'	36:BA:609:A:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2575:C:H2'	36:BA:2578:G:O6	1.91	0.69
36:BA:2804:C:H2'	36:BA:2805:G:C8	2.27	0.69
38:BC:50:ILE:HD12	38:BC:57:GLN:O	1.93	0.69
39:BD:39:LYS:NZ	39:BD:87:ASN:HB3	2.07	0.69
24:CX:16:U:H2'	24:CX:17:U:H5'	1.74	0.69
25:CY:100:VAL:HG22	25:CY:329:ARG:HB2	1.74	0.69
25:CY:509:HIS:HE1	25:CY:511:LYS:HE3	1.56	0.69
25:CY:605:ILE:HG21	25:CY:646:PHE:HB3	1.74	0.69
32:D6:30:THR:O	32:D6:32:ASN:N	2.24	0.69
36:DA:861:A:H2'	36:DA:862:G:O4'	1.92	0.69
37:DB:77:U:O2'	37:DB:78:A:H5'	1.93	0.69
43:DH:20:ALA:HB1	43:DH:21:PRO:CD	2.23	0.69
46:DO:104:ARG:HE	51:DT:33:LYS:CE	2.06	0.69
50:DS:17:ARG:HA	50:DS:20:ARG:NH1	2.08	0.69
57:DZ:143:GLY:C	57:DZ:144:LEU:HD22	2.16	0.69
16:AP:21:VAL:O	16:AP:33:ILE:HB	1.93	0.69
20:AT:42:GLN:HA	20:AT:42:GLN:HE21	1.56	0.69
25:AY:35:TYR:HE2	25:AY:269:VAL:HB	1.56	0.69
25:AY:352:VAL:HG23	25:AY:377:VAL:HG23	1.72	0.69
35:B9:36:GLN:OE1	36:BA:1124:C:H1'	1.92	0.69
36:BA:320:A:H4'	36:BA:322:A:C8	2.27	0.69
36:BA:467:G:O2'	36:BA:468:G:H5'	1.93	0.69
36:BA:583:G:H2'	36:BA:584:C:H6	1.56	0.69
36:BA:1038:C:C3'	36:BA:1039:G:H5''	2.22	0.69
36:BA:1138:G:H2'	36:BA:1139:G:O4'	1.93	0.69
36:BA:2815:C:H2'	36:BA:2816:C:H6	1.57	0.69
37:BB:106:G:C5'	57:BZ:31:ARG:HB3	2.22	0.69
41:BF:132:VAL:HG22	41:BF:133:ASN:N	2.06	0.69
53:BV:6:LYS:O	53:BV:37:VAL:HG21	1.92	0.69
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.73	0.69
6:CF:42:GLU:O	6:CF:44:GLY:N	2.24	0.69
10:CJ:9:ARG:HG2	10:CJ:69:ASN:OD1	1.93	0.69
19:CS:53:ASN:C	19:CS:55:LYS:H	1.99	0.69
22:CV:35:A:O2'	22:CV:36:A:H5'	1.92	0.69
32:D6:15:GLU:OE2	32:D6:20:ASN:ND2	2.25	0.69
36:DA:1268:A:H2'	36:DA:1269:A:O4'	1.92	0.69
36:DA:1578:U:C2'	36:DA:1579:A:H5''	2.22	0.69
36:DA:2012:G:C4'	54:DW:96:ILE:HD11	2.11	0.69
38:DC:211:ARG:HH11	38:DC:211:ARG:HG3	1.57	0.69
49:DR:51:LEU:H	49:DR:51:LEU:HD12	1.57	0.69
50:DS:36:TYR:N	50:DS:36:TYR:CD1	2.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DS:88:ASP:CG	50:DS:89:ARG:H	2.00	0.69
1:AA:461:A:O2'	1:AA:470:C:H5'	1.93	0.69
1:AA:748:C:OP2	1:AA:748:C:H6	1.75	0.69
2:AB:61:LEU:HD23	2:AB:68:ILE:HD11	1.75	0.69
11:AK:108:ILE:HD12	11:AK:108:ILE:N	2.07	0.69
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.74	0.69
20:AT:48:LYS:HB3	20:AT:51:GLU:CG	2.21	0.69
25:AY:411:VAL:HG12	25:AY:412:ALA:N	2.06	0.69
25:AY:466:LEU:HA	25:AY:470:PHE:HD2	1.57	0.69
28:B2:2:LYS:CB	36:BA:97:C:H5''	2.23	0.69
32:B6:8:LYS:NZ	36:BA:2285:C:H5	1.87	0.69
36:BA:1754:C:OP1	51:BT:96:ARG:NH1	2.25	0.69
36:BA:1782:C:H2'	36:BA:1783:A:H5'	1.75	0.69
38:BC:139:PRO:HA	38:BC:145:THR:HG21	1.74	0.69
50:BS:51:ALA:HB3	50:BS:73:LEU:HB2	1.74	0.69
54:BW:1:MET:CE	54:BW:2:GLU:H	2.06	0.69
56:BY:95:LYS:HE2	56:BY:101:LYS:H	1.57	0.69
1:CA:477:A:O2'	1:CA:479:C:H5'	1.92	0.69
1:CA:748:C:H6	1:CA:748:C:OP2	1.76	0.69
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.41	0.69
3:CC:70:VAL:O	3:CC:106:VAL:HG23	1.93	0.69
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.58	0.69
10:CJ:61:GLU:OE2	14:CN:49:HIS:HE1	1.75	0.69
11:CK:124:LYS:HD2	11:CK:125:PHE:HE1	1.58	0.69
19:CS:42:PRO:HB3	30:D4:50:VAL:HG21	1.73	0.69
20:CT:33:ILE:HD13	20:CT:63:ILE:HA	1.72	0.69
36:DA:583:G:H2'	36:DA:584:C:H6	1.58	0.69
36:DA:2801(A):A:H4'	36:DA:2802:G:C8	2.27	0.69
39:DD:16:MET:HE1	39:DD:208:LYS:HE2	1.74	0.69
39:DD:34:VAL:C	39:DD:36:PRO:HD2	2.17	0.69
42:DG:57:ALA:HA	42:DG:90:LEU:HD21	1.75	0.69
1:AA:243:A:H4'	1:AA:244:U:O5'	1.91	0.69
1:AA:491:G:H2'	1:AA:492:G:H8	1.57	0.69
1:AA:740:U:O2'	1:AA:741:G:H5'	1.93	0.69
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.22	0.69
11:AK:124:LYS:HD2	11:AK:125:PHE:HE1	1.57	0.69
19:AS:78:ARG:HB2	19:AS:81:ARG:NH1	2.07	0.69
25:AY:509:HIS:CE1	25:AY:570:GLY:HA2	2.28	0.69
25:AY:605:ILE:HG23	25:AY:646:PHE:HB3	1.74	0.69
26:B0:27:GLU:CD	26:B0:27:GLU:N	2.46	0.69
27:B1:71:TYR:HA	27:B1:74:VAL:HG23	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:13:CYS:HA	32:B6:50:ARG:O	1.93	0.69
36:BA:545:C:C3'	36:BA:547:A:H5''	2.23	0.69
36:BA:1322:A:OP1	54:BW:11:ARG:HG3	1.93	0.69
36:BA:1390:U:O2'	36:BA:1391:U:H5'	1.93	0.69
36:BA:2893:G:H5'	36:BA:2894:G:H5'	1.73	0.69
37:BB:103:G:H5'	37:BB:104:U:OP2	1.92	0.69
38:BC:118:PRO:HB2	38:BC:148:PHE:CZ	2.27	0.69
40:BE:200:GLU:N	40:BE:200:GLU:OE1	2.26	0.69
42:BG:131:TYR:CE2	42:BG:133:LEU:HB3	2.28	0.69
42:BG:171:ALA:O	42:BG:175:LEU:HG	1.92	0.69
45:BN:67:LEU:HB3	45:BN:88:GLU:CG	2.23	0.69
47:BP:50:ARG:O	47:BP:57:THR:HG22	1.92	0.69
48:BQ:27:VAL:HG21	48:BQ:134:ARG:HG2	1.73	0.69
49:BR:51:LEU:H	49:BR:51:LEU:HD12	1.57	0.69
51:BT:45:PHE:CE2	51:BT:74:ARG:HB2	2.27	0.69
51:BT:132:LYS:HD3	51:BT:132:LYS:N	2.07	0.69
53:BV:19:LYS:NZ	53:BV:20:LEU:H	1.89	0.69
1:CA:250:A:H4'	1:CA:251:G:O5'	1.92	0.69
1:CA:973:G:H1'	10:CJ:55:LYS:HE2	1.75	0.69
1:CA:1009:G:H2'	1:CA:1009:G:N3	2.08	0.69
1:CA:1161:C:H2'	1:CA:1162:C:H6	1.56	0.69
3:CC:154:SER:O	3:CC:165:THR:HA	1.91	0.69
9:CI:8:GLY:HA2	9:CI:79:LEU:HD12	1.74	0.69
9:CI:18:PHE:O	9:CI:61:ALA:HA	1.93	0.69
9:CI:46:ALA:O	9:CI:49:PRO:HD2	1.91	0.69
9:CI:47:LEU:H	9:CI:47:LEU:CD1	2.05	0.69
9:CI:93:ARG:C	9:CI:95:LYS:H	2.00	0.69
13:CM:49:THR:HB	13:CM:52:GLU:HG3	1.74	0.69
25:CY:112:GLN:CG	25:CY:115:GLU:HB3	2.22	0.69
25:CY:293:THR:HA	25:CY:397:VAL:HG12	1.74	0.69
25:CY:546:ILE:HG23	25:CY:590:ILE:CG1	2.21	0.69
36:DA:16:G:O2'	36:DA:17:G:H5'	1.92	0.69
36:DA:271(Z):C:H1'	36:DA:272(C):G:H1'	1.75	0.69
36:DA:525:U:O2'	36:DA:526:A:H5''	1.93	0.69
36:DA:545:C:C3'	36:DA:547:A:H5''	2.23	0.69
36:DA:622:G:O2'	36:DA:623:G:H5'	1.93	0.69
36:DA:1678:G:H22	36:DA:1989:G:H22	1.39	0.69
39:DD:79:VAL:O	39:DD:113:VAL:HG13	1.92	0.69
42:DG:37:VAL:HG22	42:DG:159:VAL:HA	1.75	0.69
47:DP:7:ARG:CB	47:DP:8:PRO:HD3	2.22	0.69
49:DR:4:LEU:O	49:DR:4:LEU:HD13	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DS:65:VAL:O	50:DS:69:VAL:HG12	1.93	0.69
50:DS:97:ARG:HH21	50:DS:98:VAL:HA	1.57	0.69
51:DT:13:ARG:HA	51:DT:13:ARG:NH1	2.08	0.69
51:DT:90:GLN:O	51:DT:92:GLY:N	2.26	0.69
51:DT:98:LYS:HB3	51:DT:100:TYR:CE1	2.28	0.69
52:DU:55:ARG:HA	52:DU:58:ARG:CG	2.22	0.69
1:AA:793:U:O2	1:AA:1516:G:H4'	1.93	0.69
10:AJ:8:LEU:CD2	10:AJ:96:ILE:HG22	2.22	0.69
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD11	1.75	0.69
25:AY:180:VAL:HG23	25:AY:181:LEU:N	2.08	0.69
36:BA:657:U:H2'	36:BA:658:C:C6	2.28	0.69
36:BA:1114:G:H2'	36:BA:1115:G:H5'	1.74	0.69
36:BA:1607:C:H4'	36:BA:1608:A:O5'	1.93	0.69
36:BA:2126:A:H4'	36:BA:2127:G:O5'	1.92	0.69
36:BA:2396:G:O2'	36:BA:2397:G:H5'	1.93	0.69
36:BA:2801(A):A:H4'	36:BA:2802:G:C8	2.28	0.69
39:BD:145:VAL:HG22	39:BD:191:ALA:HB1	1.74	0.69
47:BP:23:PRO:HB2	47:BP:33:ARG:CG	2.22	0.69
1:CA:268:C:H2'	1:CA:268:C:O2	1.92	0.69
8:CH:42:GLU:HG3	8:CH:109:ILE:HD12	1.74	0.69
10:CJ:4:ILE:HD12	10:CJ:4:ILE:N	2.08	0.69
10:CJ:82:ILE:O	10:CJ:86:MET:HB2	1.93	0.69
25:CY:424:LEU:O	25:CY:428:LEU:HD23	1.93	0.69
36:DA:320:A:H2'	41:DF:136:THR:OG1	1.93	0.69
36:DA:614(A):U:H5''	36:DA:614(B):G:OP1	1.93	0.69
36:DA:781:A:H2'	36:DA:1777:U:O2'	1.93	0.69
36:DA:2804:C:H2'	36:DA:2805:G:C8	2.27	0.69
39:DD:44:ASN:HB2	39:DD:48:ARG:O	1.92	0.69
41:DF:8:GLN:CB	41:DF:126:VAL:HA	2.19	0.69
1:AA:270:A:H2'	1:AA:271:C:C6	2.28	0.69
1:AA:301:G:O2'	1:AA:302:G:H5'	1.93	0.69
1:AA:666:G:H5'	1:AA:726:C:H1'	1.74	0.69
1:AA:1109:C:O2'	1:AA:1110:A:H5'	1.91	0.69
2:AB:156:LYS:O	2:AB:157:ARG:HB2	1.93	0.69
23:AW:34:C:C2'	23:AW:35:A:C4'	2.70	0.69
25:AY:111:SER:O	25:AY:113:GLY:N	2.25	0.69
30:B4:16:CYS:SG	30:B4:17:GLY:N	2.66	0.69
32:B6:15:GLU:OE2	32:B6:44:ARG:NH2	2.23	0.69
36:BA:363(B):G:H2'	36:BA:363(C):G:H8	1.58	0.69
36:BA:848:G:N3	36:BA:933:A:H1'	2.08	0.69
36:BA:1047:G:HO2'	36:BA:1110:G:N2	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:266:G:H5''	1:CA:266:G:C8	2.28	0.69
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.28	0.69
1:CA:1296:C:H5'	1:CA:1297:C:OP2	1.93	0.69
20:CT:64:ASP:OD1	20:CT:81:LYS:HD2	1.93	0.69
25:CY:66:THR:O	25:CY:358:MET:HE2	1.93	0.69
25:CY:608:VAL:O	25:CY:644:ARG:HA	1.93	0.69
26:D0:51:VAL:HG21	26:D0:79:VAL:O	1.93	0.69
31:D5:4:HIS:CB	31:D5:5:PRO:HD3	2.23	0.69
32:D6:27:LYS:HD2	32:D6:30:THR:HB	1.75	0.69
36:DA:991:C:H5'	36:DA:991:C:H6	1.57	0.69
36:DA:1494:A:H2'	36:DA:1495:A:H5''	1.74	0.69
36:DA:1884:A:H2'	36:DA:1885:A:C5'	2.11	0.69
36:DA:2126:A:H4'	36:DA:2127:G:O5'	1.93	0.69
40:DE:36:ARG:HH21	40:DE:88:GLY:CA	2.06	0.69
41:DF:132:VAL:HG22	41:DF:133:ASN:N	2.07	0.69
1:AA:250:A:H4'	1:AA:251:G:O5'	1.93	0.68
1:AA:736:C:H2'	1:AA:737:A:H8	1.57	0.68
20:AT:50:GLU:HA	20:AT:53:LEU:HD12	1.74	0.68
34:B8:6:THR:HG22	34:B8:63:PRO:HD3	1.74	0.68
36:BA:49:A:H5''	36:BA:51:G:O4'	1.94	0.68
36:BA:286:C:H2'	36:BA:287:C:C6	2.28	0.68
36:BA:1534:U:H2'	36:BA:1535:A:O4'	1.93	0.68
36:BA:1959:G:C3'	36:BA:1960:A:H5''	2.23	0.68
36:BA:2753:A:O2'	36:BA:2754:U:H5'	1.93	0.68
40:BE:36:ARG:HH21	40:BE:88:GLY:CA	2.06	0.68
51:BT:85:LYS:HB3	51:BT:85:LYS:HZ3	1.53	0.68
57:BZ:151:HIS:HA	57:BZ:171:ILE:HG23	1.72	0.68
1:CA:1016:A:H2'	1:CA:1017:G:O4'	1.91	0.68
1:CA:1459:C:H2'	1:CA:1460:A:H8	1.58	0.68
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.75	0.68
5:CE:148:VAL:HG21	8:CH:107:LEU:HD22	1.75	0.68
22:CV:5:G:O2'	22:CV:6:G:H5'	1.93	0.68
25:CY:487:ILE:CD1	25:CY:563:ILE:HG22	2.22	0.68
31:D5:33:CYS:HG	31:D5:49:CYS:HG	1.38	0.68
32:D6:15:GLU:OE2	32:D6:44:ARG:NH2	2.26	0.68
36:DA:296:C:O2'	36:DA:297:C:H5'	1.93	0.68
36:DA:1959:G:C3'	36:DA:1960:A:H5''	2.23	0.68
36:DA:2815:C:H2'	36:DA:2816:C:H6	1.57	0.68
43:DH:41:MET:HE2	43:DH:43:VAL:HG12	1.75	0.68
1:AA:1009:G:H2'	1:AA:1009:G:N3	2.07	0.68
1:AA:1400:C:H5'	24:AX:18:C:N4	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:173:TRP:HB3	4:AD:187:ARG:NH1	2.08	0.68
9:AI:95:LYS:HZ2	9:AI:96:LEU:HD13	1.58	0.68
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.93	0.68
25:AY:164:MET:O	25:AY:180:VAL:HG22	1.93	0.68
25:AY:196:ILE:CG1	25:AY:197:ARG:H	2.04	0.68
25:AY:260:LEU:O	25:AY:268:GLY:HA3	1.93	0.68
26:B0:14:ARG:HB2	26:B0:14:ARG:HH11	1.58	0.68
28:B2:3:LEU:HD12	36:BA:98:G:H5''	1.75	0.68
36:BA:240:G:C3'	36:BA:241:A:H5''	2.20	0.68
36:BA:2415:G:O3'	47:BP:66:GLY:HA3	1.93	0.68
36:BA:2636:U:H4'	40:BE:80:GLU:OE1	1.94	0.68
40:BE:14:ILE:HD11	40:BE:173:VAL:HG11	1.75	0.68
45:BN:109:LYS:H	45:BN:109:LYS:CE	2.06	0.68
51:BT:90:GLN:O	51:BT:92:GLY:N	2.26	0.68
1:CA:60:A:H5''	1:CA:331:G:H22	1.58	0.68
1:CA:160:A:H1'	1:CA:344:A:C5	2.29	0.68
1:CA:666:G:H5'	1:CA:726:C:H1'	1.76	0.68
1:CA:740:U:O2'	1:CA:741:G:H5'	1.94	0.68
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.28	0.68
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.23	0.68
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.58	0.68
34:D8:33:ASN:N	34:D8:36:LYS:HD2	2.09	0.68
34:D8:61:LEU:HD12	34:D8:62:LEU:H	1.58	0.68
36:DA:120:U:H2'	36:DA:120:U:O2	1.94	0.68
36:DA:320:A:H4'	36:DA:322:A:C8	2.28	0.68
36:DA:1223:G:H5'	36:DA:1224:C:OP2	1.94	0.68
36:DA:1322:A:OP1	54:DW:11:ARG:HG3	1.93	0.68
36:DA:2762:G:H8	36:DA:2762:G:H5'	1.57	0.68
41:DF:17:ARG:HG3	41:DF:17:ARG:HH11	1.58	0.68
42:DG:133:LEU:HD12	42:DG:157:ILE:HB	1.76	0.68
44:DJ:26:UNK:HA	44:DJ:84:UNK:HA	1.75	0.68
47:DP:23:PRO:HB2	47:DP:33:ARG:CG	2.22	0.68
51:DT:46:GLU:O	51:DT:65:LYS:HD2	1.93	0.68
51:DT:132:LYS:HD3	51:DT:132:LYS:N	2.07	0.68
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.28	0.68
3:AC:50:ALA:O	3:AC:70:VAL:HG13	1.92	0.68
25:AY:180:VAL:CG2	25:AY:216:LEU:HD12	2.23	0.68
25:AY:409:ILE:CG1	25:AY:656:ALA:HB3	2.23	0.68
29:B3:8:LEU:HD22	29:B3:31:LEU:CD2	2.23	0.68
31:B5:3:LYS:NZ	36:BA:2613:U:H2'	2.08	0.68
32:B6:5:VAL:O	32:B6:8:LYS:HB3	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1649:G:O2'	36:BA:1650:G:H5'	1.93	0.68
36:BA:1794:U:O2'	36:BA:1795:C:H5'	1.94	0.68
40:BE:11:MET:HB2	40:BE:23:VAL:O	1.93	0.68
51:BT:129:ARG:NH1	51:BT:130:ALA:HA	2.07	0.68
1:CA:266:G:H5''	1:CA:266:G:H8	1.57	0.68
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.74	0.68
6:CF:63:TYR:O	6:CF:65:VAL:HG13	1.93	0.68
9:CI:112:LYS:CA	9:CI:119:ALA:HB2	2.11	0.68
12:CL:23:LYS:O	12:CL:24:VAL:HG23	1.93	0.68
20:CT:50:GLU:HA	20:CT:53:LEU:HD12	1.74	0.68
23:CW:31:G:H8	23:CW:31:G:H5'	1.58	0.68
25:CY:34:TYR:O	25:CY:38:ARG:HB2	1.93	0.68
36:DA:272(J):C:H5'	36:DA:274:G:OP2	1.93	0.68
36:DA:1114:G:H2'	36:DA:1115:G:H5'	1.73	0.68
36:DA:1430:C:H2'	36:DA:1431:U:C6	2.28	0.68
36:DA:2248:C:C2'	36:DA:2249:U:H5'	2.24	0.68
36:DA:2753:A:O2'	36:DA:2754:U:H5'	1.93	0.68
41:DF:7:TYR:HB3	41:DF:16:GLY:C	2.18	0.68
49:DR:78:LYS:HG2	49:DR:78:LYS:O	1.93	0.68
50:DS:13:ARG:HG3	50:DS:14:VAL:N	2.01	0.68
51:DT:129:ARG:NH1	51:DT:130:ALA:HA	2.08	0.68
54:DW:1:MET:HE3	54:DW:2:GLU:H	1.56	0.68
1:AA:447:G:H2'	1:AA:485:G:N2	2.08	0.68
1:AA:1296:C:H5'	1:AA:1297:C:OP2	1.93	0.68
10:AJ:50:ILE:H	10:AJ:50:ILE:CD1	2.02	0.68
13:AM:27:LYS:HE2	13:AM:31:LYS:HE3	1.76	0.68
25:AY:149:VAL:HA	25:AY:152:THR:HG22	1.76	0.68
26:B0:10:THR:HG22	26:B0:11:ARG:N	2.08	0.68
28:B2:3:LEU:CD2	28:B2:7:ARG:HH12	2.06	0.68
31:B5:3:LYS:HG2	36:BA:747:U:C5	2.28	0.68
31:B5:19:ARG:HA	36:BA:2046:G:C5'	2.23	0.68
31:B5:46:CYS:SG	31:B5:47:PRO:HD2	2.34	0.68
36:BA:154(A):C:C5'	36:BA:155:U:H5''	2.21	0.68
36:BA:848:G:O6	36:BA:928:G:H2'	1.92	0.68
36:BA:1223:G:H5'	36:BA:1224:C:OP2	1.93	0.68
36:BA:1963:U:H2'	36:BA:1963:U:O2	1.93	0.68
39:BD:35:LYS:HG2	39:BD:62:TYR:O	1.93	0.68
41:BF:7:TYR:HB3	41:BF:16:GLY:C	2.19	0.68
43:BH:41:MET:HE2	43:BH:43:VAL:HG12	1.75	0.68
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.29	0.68
4:CD:192:GLU:CD	4:CD:192:GLU:H	2.01	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:103:VAL:CG2	8:CH:110:ALA:HB2	2.23	0.68
14:CN:53:LEU:HB3	14:CN:56:VAL:HG21	1.74	0.68
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.75	0.68
25:CY:343:ASN:OD1	25:CY:346:LYS:HB2	1.94	0.68
28:D2:36:ARG:HA	28:D2:39:ALA:HB3	1.75	0.68
31:D5:25:LEU:HD12	54:DW:19:LEU:HB3	1.76	0.68
36:DA:582:G:H2'	36:DA:583:G:C8	2.28	0.68
36:DA:806:C:OP2	47:DP:39:LYS:HD3	1.92	0.68
36:DA:1658:C:H2'	36:DA:1659:U:H6	1.58	0.68
36:DA:2415:G:O3'	47:DP:66:GLY:HA3	1.93	0.68
40:DE:11:MET:HB2	40:DE:23:VAL:O	1.93	0.68
40:DE:81:ILE:HG22	40:DE:81:ILE:O	1.92	0.68
42:DG:34:LEU:HD13	42:DG:99:MET:HE1	1.75	0.68
42:DG:34:LEU:HD11	42:DG:100:TRP:CZ2	2.27	0.68
57:DZ:10:ARG:HH21	57:DZ:26:GLY:N	1.90	0.68
6:AF:42:GLU:O	6:AF:44:GLY:N	2.27	0.68
36:BA:1203:G:H4'	47:BP:7:ARG:HD2	1.76	0.68
36:BA:2389:G:H5''	36:BA:2390:U:H5'	1.74	0.68
36:BA:2394:C:OP1	47:BP:63:PRO:HD2	1.93	0.68
40:BE:36:ARG:NH2	40:BE:88:GLY:H	1.91	0.68
43:BH:20:ALA:HB1	43:BH:21:PRO:CD	2.23	0.68
45:BN:62:VAL:HG22	45:BN:66:LYS:HG3	1.74	0.68
11:CK:108:ILE:HD12	11:CK:108:ILE:N	2.08	0.68
13:CM:9:ILE:HD13	42:DG:146:TYR:CZ	2.29	0.68
25:CY:381:LYS:HD2	25:CY:381:LYS:N	2.09	0.68
25:CY:484:ARG:HD2	25:CY:559:PRO:HB2	1.76	0.68
25:CY:553:GLY:HA2	25:CY:560:VAL:CG2	2.22	0.68
25:CY:616:TYR:HE2	25:CY:664:GLN:HE21	1.42	0.68
30:D4:28:LYS:HA	30:D4:28:LYS:HE3	1.75	0.68
36:DA:654(G):C:H2'	36:DA:654(H):G:H8	1.59	0.68
37:DB:15:A:H3'	37:DB:16:G:H5'	1.75	0.68
40:DE:200:GLU:N	40:DE:200:GLU:OE1	2.27	0.68
42:DG:153:ARG:HH11	42:DG:153:ARG:HB3	1.57	0.68
55:DX:35:THR:HB	55:DX:38:GLU:CB	2.21	0.68
56:DY:28:LYS:O	56:DY:38:ILE:HG22	1.92	0.68
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.09	0.68
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.58	0.68
8:AH:109:ILE:HG12	8:AH:110:ALA:N	2.09	0.68
12:AL:7:ILE:O	12:AL:11:VAL:HG23	1.92	0.68
12:AL:17:LYS:HD3	12:AL:18:VAL:HG22	1.75	0.68
25:AY:227:ILE:HG23	25:AY:237:PRO:CG	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:628:ARG:HE	25:AY:648:PRO:HG2	1.57	0.68
31:B5:19:ARG:HD2	36:BA:1266:G:OP1	1.93	0.68
34:B8:25:MET:HE2	47:BP:64:LYS:HG3	1.74	0.68
36:BA:120:U:O2	36:BA:120:U:H2'	1.92	0.68
36:BA:2784:C:H1'	40:BE:37:ARG:HH12	1.57	0.68
40:BE:133:LYS:N	40:BE:134:ILE:HD12	2.08	0.68
1:CA:719:C:O2'	18:CR:49:LYS:HB3	1.94	0.68
4:CD:144:ASP:O	4:CD:184:LYS:HA	1.93	0.68
13:CM:9:ILE:HD13	42:DG:146:TYR:CE2	2.29	0.68
25:CY:400:GLU:O	25:CY:402:ILE:HG13	1.94	0.68
26:D0:10:THR:HG22	26:D0:11:ARG:N	2.08	0.68
33:D7:8:ASN:HD22	33:D7:9:ARG:N	1.91	0.68
36:DA:2146:C:H4'	36:DA:2147:G:C8	2.28	0.68
6:AF:2:ARG:HD3	6:AF:92:LYS:HE3	1.76	0.68
11:AK:124:LYS:HD2	11:AK:125:PHE:CE1	2.29	0.68
25:AY:431:LEU:CD2	25:AY:466:LEU:HD13	2.23	0.68
27:B1:44:PRO:HG2	27:B1:46:LEU:HD11	1.75	0.68
27:B1:57:GLU:HG2	27:B1:58:ILE:H	1.59	0.68
36:BA:28:A:N6	36:BA:512:G:H1'	2.08	0.68
36:BA:2146:C:H4'	36:BA:2147:G:C8	2.29	0.68
39:BD:226:MET:HB3	39:BD:230:ASP:HB2	1.76	0.68
42:BG:82:LEU:HD22	42:BG:87:PRO:HB3	1.74	0.68
45:BN:9:VAL:HG11	45:BN:39:ARG:NH2	2.00	0.68
52:BU:53:ARG:HA	52:BU:56:ASP:OD2	1.92	0.68
55:BX:35:THR:HB	55:BX:38:GLU:CB	2.21	0.68
1:CA:148:G:H1	1:CA:174:C:H42	1.41	0.68
4:CD:61:LYS:HE2	4:CD:62:GLN:HE21	1.58	0.68
25:CY:335:LEU:O	25:CY:368:GLU:HA	1.94	0.68
59:CY:701:FUA:O1	59:CY:701:FUA:H12	1.93	0.68
31:D5:3:LYS:HG2	36:DA:747:U:C5	2.28	0.68
36:DA:272(J):C:N4	36:DA:363:G:H22	1.91	0.68
36:DA:1386:C:H2'	36:DA:1387:C:H6	1.57	0.68
36:DA:1947:C:C2'	36:DA:1948:G:H5''	2.24	0.68
42:DG:5:VAL:HG12	42:DG:7:LEU:H	1.59	0.68
43:DH:68:THR:O	43:DH:72:ILE:HG12	1.94	0.68
43:DH:85:LYS:HZ3	43:DH:87:LEU:HG	1.58	0.68
45:DN:67:LEU:HB3	45:DN:88:GLU:HG2	1.75	0.68
51:DT:113:LYS:O	51:DT:114:LEU:HD23	1.93	0.68
51:DT:132:LYS:HG2	51:DT:133:GLU:H	1.59	0.68
56:DY:25:GLY:HA3	56:DY:39:VAL:CG1	2.24	0.68
1:AA:267:C:H2'	1:AA:268:C:H6	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:9:PHE:CE2	16:AP:18:ARG:CZ	2.77	0.68
25:AY:680:PRO:C	25:AY:682:GLN:H	2.02	0.68
27:B1:58:ILE:HD11	27:B1:91:LYS:HB2	1.75	0.68
36:BA:2069:G:O2'	36:BA:2070:G:H5'	1.94	0.68
36:BA:2258:C:O2'	36:BA:2426:A:H4'	1.94	0.68
39:BD:79:VAL:O	39:BD:113:VAL:HG13	1.93	0.68
42:BG:34:LEU:HA	42:BG:161:THR:HA	1.76	0.68
43:BH:12:PRO:CD	43:BH:49:VAL:HG12	2.19	0.68
43:BH:16:SER:CB	43:BH:27:LYS:HB2	2.24	0.68
45:BN:18:ALA:HB1	45:BN:21:LYS:HB2	1.74	0.68
50:BS:20:ARG:HA	50:BS:20:ARG:NE	2.07	0.68
54:BW:10:VAL:HG23	54:BW:101:SER:O	1.93	0.68
1:CA:781:A:H4'	1:CA:1522:U:O2'	1.93	0.68
1:CA:1404:C:H1'	1:CA:1499:A:C2	2.29	0.68
22:CV:61:C:H2'	22:CV:62:C:H6	1.59	0.68
25:CY:100:VAL:HG22	25:CY:329:ARG:CB	2.24	0.68
25:CY:139:MET:HE2	25:CY:167:PRO:HB3	1.74	0.68
25:CY:411:VAL:HG23	25:CY:459:LEU:HD22	1.76	0.68
28:D2:35:LEU:HD11	28:D2:49:LYS:HB3	1.76	0.68
28:D2:69:ARG:HH22	36:DA:111:A:H5''	1.58	0.68
32:D6:13:CYS:HA	32:D6:50:ARG:O	1.94	0.68
32:D6:14:THR:O	32:D6:49:HIS:HA	1.94	0.68
34:D8:8:LYS:HE3	36:DA:245:G:O6	1.94	0.68
36:DA:739:G:H4'	36:DA:740:U:OP1	1.93	0.68
36:DA:2122:U:H2'	36:DA:2123:G:C8	2.29	0.68
49:DR:11:ASN:OD1	49:DR:12:ARG:N	2.26	0.68
54:DW:5:ALA:O	54:DW:6:ILE:HB	1.94	0.68
1:AA:241:C:O2'	1:AA:242:C:H5'	1.92	0.68
1:AA:545:C:O2'	1:AA:546:G:H5'	1.94	0.68
9:AI:114:TYR:HD2	10:AJ:60:ARG:HG3	1.59	0.68
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.75	0.68
20:AT:33:ILE:HD13	20:AT:63:ILE:HA	1.76	0.68
25:AY:519:ARG:CZ	25:AY:678:GLU:H	2.06	0.68
25:AY:606:MET:HE3	25:AY:671:MET:CE	2.21	0.68
28:B2:12:GLU:O	28:B2:16:LEU:HG	1.94	0.68
34:B8:61:LEU:HD12	34:B8:62:LEU:H	1.58	0.68
36:BA:582:G:H2'	36:BA:583:G:C8	2.28	0.68
36:BA:1259:G:O2'	36:BA:1260:G:H5'	1.93	0.68
36:BA:1942:C:H3'	36:BA:1943:U:H5''	1.75	0.68
37:BB:77:U:O2'	37:BB:78:A:H5'	1.93	0.68
39:BD:16:MET:HE1	39:BD:208:LYS:HE2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:88:ASP:CG	50:BS:89:ARG:H	1.98	0.68
51:BT:24:PRO:HD3	51:BT:52:ILE:HD12	1.75	0.68
51:BT:28:VAL:HG13	51:BT:46:GLU:HA	1.76	0.68
1:CA:664:G:H22	1:CA:741:G:H1	1.41	0.68
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.08	0.68
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.75	0.68
19:CS:78:ARG:HB2	19:CS:81:ARG:NH1	2.08	0.68
25:CY:655:TYR:CE1	25:CY:659:LEU:HB2	2.29	0.68
36:DA:363(B):G:H2'	36:DA:363(C):G:H8	1.58	0.68
36:DA:1534:U:H2'	36:DA:1535:A:O4'	1.93	0.68
36:DA:1842:G:H2'	36:DA:1843:C:C6	2.29	0.68
36:DA:2258:C:O2'	36:DA:2426:A:H4'	1.94	0.68
36:DA:2575:C:H2'	36:DA:2578:G:O6	1.93	0.68
42:DG:86:MET:N	42:DG:87:PRO:HD3	2.08	0.68
50:DS:34:HIS:HB3	50:DS:53:SER:HB3	1.75	0.68
57:DZ:185:GLU:O	57:DZ:187:ALA:N	2.27	0.68
1:AA:368:U:P	25:AY:351:ARG:HH21	2.16	0.68
23:AW:38:A:C5	23:AW:39:C:C5	2.82	0.68
25:AY:601:ILE:HG21	25:AY:687:LEU:HD12	1.76	0.68
32:B6:27:LYS:HD2	32:B6:30:THR:HB	1.76	0.68
36:BA:622:G:O2'	36:BA:623:G:H5'	1.93	0.68
36:BA:1638:C:H2'	36:BA:1639:U:O4'	1.94	0.68
36:BA:2344:U:O2'	36:BA:2345:G:H5''	1.93	0.68
37:BB:106:G:H5''	57:BZ:31:ARG:HB3	1.76	0.68
41:BF:89:VAL:HG12	41:BF:90:PHE:N	2.09	0.68
49:BR:4:LEU:HD13	49:BR:4:LEU:O	1.92	0.68
50:BS:89:ARG:HG3	50:BS:92:TYR:CA	2.24	0.68
50:BS:96:GLY:O	50:BS:98:VAL:N	2.24	0.68
1:CA:1117:G:O2'	9:CI:104:ARG:HD3	1.93	0.68
6:CF:2:ARG:HD3	6:CF:92:LYS:HE3	1.75	0.68
17:CQ:9:VAL:HG11	17:CQ:84:LEU:HD12	1.75	0.68
17:CQ:47:PRO:HG2	17:CQ:48:GLU:OE2	1.93	0.68
25:CY:227:ILE:HG23	25:CY:237:PRO:CG	2.22	0.68
25:CY:455:GLY:HA2	25:CY:660:ARG:HH12	1.59	0.68
32:D6:11:LEU:CD2	32:D6:51:GLU:HG3	2.24	0.68
33:D7:35:ARG:HH11	33:D7:35:ARG:HG2	1.59	0.68
36:DA:568:U:H2'	36:DA:570:G:OP2	1.94	0.68
36:DA:2893:G:H5'	36:DA:2894:G:H5'	1.74	0.68
40:DE:64:LYS:C	40:DE:66:HIS:H	2.02	0.68
43:DH:16:SER:CB	43:DH:27:LYS:HB2	2.24	0.68
10:AJ:27:ALA:HA	10:AJ:30:SER:OG	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:75:ILE:CG1	10:AJ:76:ASN:H	1.98	0.67
14:AN:41:ARG:HH11	14:AN:41:ARG:HG2	1.59	0.67
20:AT:64:ASP:OD1	20:AT:81:LYS:HD2	1.94	0.67
31:B5:25:LEU:HD12	54:BW:19:LEU:HB3	1.76	0.67
36:BA:1993:U:H4'	40:BE:128:SER:OG	1.93	0.67
39:BD:45:ASN:HB2	39:BD:46:GLN:OE1	1.94	0.67
50:BS:36:TYR:N	50:BS:36:TYR:CD1	2.58	0.67
56:BY:31:LEU:N	56:BY:31:LEU:HD22	2.09	0.67
56:BY:86:ARG:HB3	56:BY:88:LYS:HZ2	1.59	0.67
4:CD:173:TRP:HB3	4:CD:187:ARG:NH1	2.09	0.67
17:CQ:58:GLU:HB2	17:CQ:74:LEU:HB3	1.76	0.67
25:CY:181:LEU:HD11	25:CY:242:LEU:HB3	1.76	0.67
25:CY:227:ILE:HG22	25:CY:227:ILE:O	1.94	0.67
27:D1:82:LEU:O	27:D1:83:GLU:HG3	1.93	0.67
36:DA:666:G:H4'	47:DP:49:ARG:NH2	2.08	0.67
39:DD:172:TYR:CD1	39:DD:186:HIS:HA	2.27	0.67
46:DO:104:ARG:NE	51:DT:33:LYS:HE3	2.08	0.67
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.29	0.67
10:AJ:42:THR:HG23	10:AJ:67:THR:O	1.95	0.67
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.19	0.67
25:AY:157:LEU:HD23	25:AY:157:LEU:N	2.08	0.67
25:AY:409:ILE:HG12	25:AY:656:ALA:CB	2.25	0.67
33:B7:6:GLN:O	36:BA:686:G:H1'	1.94	0.67
34:B8:8:LYS:HE3	36:BA:245:G:O6	1.94	0.67
36:BA:528:A:H2	36:BA:2043:C:C5'	2.08	0.67
36:BA:956:G:C4'	48:BQ:83:MET:HE1	2.24	0.67
36:BA:2198:A:H4'	36:BA:2199:A:OP1	1.95	0.67
36:BA:2579:C:H4'	40:BE:134:ILE:CG1	2.23	0.67
39:BD:34:VAL:C	39:BD:36:PRO:HD2	2.19	0.67
40:BE:34:VAL:O	40:BE:34:VAL:HG22	1.92	0.67
43:BH:76:VAL:O	43:BH:79:VAL:HG22	1.93	0.67
50:BS:49:VAL:HG12	50:BS:50:SER:N	2.09	0.67
1:CA:1228:C:OP1	13:CM:115:LYS:HG3	1.94	0.67
13:CM:27:LYS:HE2	13:CM:31:LYS:HE3	1.76	0.67
26:D0:14:ARG:HB2	26:D0:14:ARG:HH11	1.57	0.67
36:DA:1306:C:H2'	36:DA:1307:A:H8	1.58	0.67
38:DC:139:PRO:HA	38:DC:145:THR:CG2	2.24	0.67
40:DE:14:ILE:HD11	40:DE:173:VAL:HG11	1.74	0.67
51:DT:24:PRO:HD3	51:DT:52:ILE:HD12	1.75	0.67
1:AA:1117:G:O2'	9:AI:104:ARG:HD3	1.95	0.67
24:AX:16:U:H2'	24:AX:17:U:H5'	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:373:ASP:C	25:AY:374:LEU:HD12	2.18	0.67
25:AY:578:SER:HB3	25:AY:581:ALA:HB2	1.77	0.67
31:B5:50:GLY:HA2	31:B5:56:LYS:HB3	1.75	0.67
36:BA:1386:C:H2'	36:BA:1387:C:H6	1.60	0.67
36:BA:1775:U:C2'	36:BA:1776:G:H5'	2.24	0.67
36:BA:2591:C:H2'	36:BA:2592:G:H8	1.56	0.67
42:BG:34:LEU:HD13	42:BG:99:MET:CE	2.23	0.67
42:BG:91:ARG:HD2	42:BG:91:ARG:C	2.19	0.67
50:BS:97:ARG:C	50:BS:97:ARG:NE	2.53	0.67
51:BT:16:ARG:HD2	51:BT:18:ASP:OD1	1.94	0.67
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.30	0.67
1:CA:461:A:O2'	1:CA:470:C:H5'	1.93	0.67
1:CA:818:G:O2'	1:CA:819:A:H5'	1.94	0.67
12:CL:37:CYS:HB3	12:CL:79:GLU:O	1.95	0.67
31:D5:19:ARG:HA	36:DA:2046:G:C5'	2.24	0.67
32:D6:5:VAL:O	32:D6:8:LYS:HB3	1.94	0.67
36:DA:813:U:H2'	36:DA:814:C:C5	2.30	0.67
36:DA:1038:C:C3'	36:DA:1039:G:H5''	2.22	0.67
36:DA:2657:A:O2'	43:DH:160:LYS:HE3	1.93	0.67
42:DG:110:ALA:HB1	42:DG:140:ILE:HD13	1.77	0.67
45:DN:9:VAL:HG11	45:DN:39:ARG:NH2	1.99	0.67
46:DO:47:ILE:CG2	46:DO:48:PRO:HD2	2.25	0.67
52:DU:112:ARG:CZ	53:DV:46:VAL:HG21	2.24	0.67
1:AA:176:C:H2'	1:AA:177:C:H6	1.58	0.67
3:AC:46:GLU:O	3:AC:47:LEU:HB2	1.94	0.67
12:AL:37:CYS:HB3	12:AL:79:GLU:O	1.94	0.67
22:AV:61:C:H2'	22:AV:62:C:H6	1.60	0.67
36:BA:790:C:H5'	36:BA:791:C:OP2	1.94	0.67
36:BA:861:A:H2'	36:BA:862:G:O4'	1.94	0.67
36:BA:1558:A:H4'	36:BA:1559:G:O5'	1.95	0.67
41:BF:17:ARG:HH11	41:BF:17:ARG:HG3	1.58	0.67
51:BT:132:LYS:HG2	51:BT:133:GLU:H	1.60	0.67
54:BW:14:PRO:HG2	54:BW:78:GLU:HB2	1.77	0.67
1:CA:514:C:H2'	1:CA:515:G:H8	1.58	0.67
5:CE:6:PHE:HB3	5:CE:35:GLY:O	1.94	0.67
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	1.94	0.67
10:CJ:49:VAL:CG2	14:CN:41:ARG:HB2	2.23	0.67
24:CX:12:A:H2'	24:CX:12:A:N3	2.10	0.67
25:CY:313:ALA:HA	25:CY:328:ILE:HG22	1.76	0.67
36:DA:582:G:H2'	36:DA:583:G:H8	1.60	0.67
36:DA:1290:C:H2'	36:DA:1291:C:C6	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:6:LEU:HB3	47:DP:9:ASN:HD21	1.58	0.67
51:DT:35:LYS:HZ1	51:DT:41:ARG:HD2	1.57	0.67
1:AA:1375:A:H5'	1:AA:1376:U:OP2	1.95	0.67
15:AO:33:THR:HG21	15:AO:85:LEU:CD2	2.24	0.67
16:AP:8:ARG:NH2	16:AP:15:PRO:HG3	2.08	0.67
31:B5:41:PRO:HG2	31:B5:44:THR:OG1	1.93	0.67
36:BA:84:A:H5''	56:BY:9:LYS:NZ	2.10	0.67
36:BA:603:A:H4'	36:BA:604:G:O5'	1.94	0.67
36:BA:654(G):C:H2'	36:BA:654(H):G:H8	1.60	0.67
36:BA:1123:C:H2'	36:BA:1124:C:H6	1.58	0.67
39:BD:35:LYS:NZ	39:BD:35:LYS:HB3	2.10	0.67
40:BE:64:LYS:C	40:BE:66:HIS:H	2.01	0.67
42:BG:141:PHE:O	42:BG:144:ILE:HG22	1.94	0.67
51:BT:132:LYS:H	51:BT:132:LYS:CD	2.08	0.67
52:BU:93:LYS:HD2	52:BU:93:LYS:H	1.59	0.67
1:CA:267:C:H2'	1:CA:268:C:H6	1.59	0.67
4:CD:92:VAL:O	4:CD:96:LEU:HD22	1.95	0.67
6:CF:75:LEU:O	6:CF:79:LEU:HG	1.94	0.67
25:CY:170:ARG:H	25:CY:170:ARG:HD2	1.59	0.67
25:CY:673:PHE:CG	25:CY:674:ASP:N	2.62	0.67
29:D3:17:LYS:NZ	29:D3:20:LYS:HE3	2.10	0.67
36:DA:28:A:N6	36:DA:512:G:H1'	2.09	0.67
36:DA:286:C:H2'	36:DA:287:C:C6	2.30	0.67
36:DA:1775:U:H2'	36:DA:1776:G:C5'	2.24	0.67
42:DG:51:ARG:HA	42:DG:51:ARG:NE	2.02	0.67
42:DG:114:ILE:O	42:DG:116:ASP:N	2.28	0.67
50:DS:13:ARG:CG	50:DS:14:VAL:H	2.04	0.67
56:DY:95:LYS:HE2	56:DY:101:LYS:H	1.60	0.67
1:AA:664:G:H22	1:AA:741:G:H1	1.43	0.67
1:AA:1160:G:O6	1:AA:1181:G:O6	2.11	0.67
4:AD:64:LEU:HD23	4:AD:75:PHE:HZ	1.60	0.67
9:AI:95:LYS:HZ2	9:AI:96:LEU:CD1	2.08	0.67
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HD22	1.59	0.67
12:AL:36:VAL:HG11	25:AY:425:SER:HB3	1.77	0.67
25:AY:329:ARG:HA	25:AY:374:LEU:HG	1.76	0.67
25:AY:627:ARG:NH1	25:AY:652:MET:HE3	2.10	0.67
29:B3:29:ARG:HH11	29:B3:29:ARG:CB	2.04	0.67
30:B4:28:LYS:HA	30:B4:28:LYS:HE3	1.76	0.67
36:BA:943:U:OP2	47:BP:38:GLN:CD	2.38	0.67
36:BA:1016:G:H1	36:BA:1146:C:H42	1.43	0.67
40:BE:63:LEU:O	40:BE:63:LEU:HD23	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:157:VAL:CG2	41:BF:194:MET:HG2	2.25	0.67
47:BP:7:ARG:CB	47:BP:8:PRO:HD3	2.22	0.67
52:BU:55:ARG:HA	52:BU:58:ARG:CG	2.25	0.67
57:BZ:156:LYS:O	57:BZ:158:PRO:HD3	1.94	0.67
1:CA:176:C:H2'	1:CA:177:C:H6	1.60	0.67
1:CA:1006:C:H2'	1:CA:1007:C:C6	2.29	0.67
1:CA:1160:G:O6	1:CA:1181:G:O6	2.12	0.67
13:CM:37:THR:HG21	13:CM:56:LEU:HD22	1.77	0.67
16:CP:4:ILE:HG13	16:CP:64:ALA:HB1	1.77	0.67
23:CW:51:C:C3'	23:CW:52:G:H5''	2.25	0.67
32:D6:5:VAL:HG12	32:D6:6:ARG:O	1.94	0.67
36:DA:548:A:H2'	36:DA:549:G:H5'	1.76	0.67
47:DP:122:PRO:O	47:DP:123:LEU:HB3	1.93	0.67
49:DR:10:LEU:HD22	49:DR:17:ARG:CD	2.24	0.67
49:DR:24:GLN:NE2	49:DR:36:THR:HG21	2.09	0.67
52:DU:95:LEU:HD13	53:DV:4:ILE:HG23	1.77	0.67
57:DZ:91:LEU:HD22	57:DZ:130:PRO:HG3	1.77	0.67
1:AA:164:U:H2'	1:AA:165:C:C6	2.30	0.67
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.75	0.67
9:AI:47:LEU:N	9:AI:47:LEU:CD1	2.57	0.67
10:AJ:55:LYS:CE	10:AJ:55:LYS:H	2.08	0.67
19:AS:6:LYS:H	19:AS:6:LYS:CE	2.08	0.67
25:AY:141:LYS:HE3	60:AY:702:GDP:HN22	1.57	0.67
29:B3:56:VAL:HG12	29:B3:57:GLU:H	1.58	0.67
34:B8:61:LEU:C	34:B8:63:PRO:HD2	2.20	0.67
36:BA:203:C:H3'	36:BA:204:A:H5''	1.76	0.67
36:BA:1132:A:H2'	36:BA:1133:U:H6	1.58	0.67
47:BP:108:LYS:C	47:BP:110:TYR:H	2.03	0.67
47:BP:122:PRO:O	47:BP:123:LEU:HB3	1.93	0.67
48:BQ:136:ALA:C	48:BQ:138:ASP:H	2.02	0.67
49:BR:10:LEU:HB3	49:BR:17:ARG:CD	2.24	0.67
1:CA:491:G:H2'	1:CA:492:G:H8	1.58	0.67
1:CA:659:U:O2'	1:CA:660:G:H5'	1.94	0.67
25:CY:512:ILE:HD11	25:CY:589:ALA:HB1	1.77	0.67
27:D1:58:ILE:HD11	27:D1:91:LYS:HB2	1.76	0.67
32:D6:48:VAL:HG23	32:D6:49:HIS:H	1.58	0.67
34:D8:52:LYS:N	34:D8:53:PRO:CD	2.57	0.67
36:DA:1197:G:H2'	36:DA:1198:U:H6	1.60	0.67
39:DD:11:PRO:O	39:DD:13:ARG:N	2.27	0.67
40:DE:34:VAL:O	40:DE:34:VAL:HG22	1.93	0.67
40:DE:203:LYS:HE3	40:DE:204:ALA:HB2	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:16:GLY:O	41:DF:17:ARG:HG3	1.95	0.67
52:DU:53:ARG:HA	52:DU:56:ASP:OD2	1.95	0.67
55:DX:10:ALA:HB1	55:DX:11:PRO:HD2	1.74	0.67
2:AB:12:GLU:HA	2:AB:16:HIS:ND1	2.08	0.67
2:AB:238:LEU:O	2:AB:238:LEU:HG	1.95	0.67
8:AH:10:LEU:CD2	8:AH:83:ILE:HD11	2.24	0.67
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.27	0.67
31:B5:27:PRO:HG3	54:BW:23:LEU:HD11	1.77	0.67
36:BA:2074:U:H2'	36:BA:2075:U:C6	2.30	0.67
52:BU:25:TRP:O	52:BU:28:ARG:HB2	1.95	0.67
52:BU:112:ARG:CZ	53:BV:46:VAL:HG21	2.25	0.67
1:CA:509:A:H3'	1:CA:510:A:C8	2.30	0.67
3:CC:46:GLU:O	3:CC:47:LEU:HB2	1.93	0.67
10:CJ:42:THR:HG23	10:CJ:67:THR:O	1.94	0.67
12:CL:28:LYS:O	12:CL:29:GLY:C	2.38	0.67
12:CL:53:ARG:NH1	12:CL:92:ASP:OD2	2.26	0.67
25:CY:111:SER:O	25:CY:113:GLY:N	2.27	0.67
31:D5:36:CYS:SG	31:D5:48:GLU:O	2.51	0.67
31:D5:41:PRO:HG2	31:D5:44:THR:OG1	1.95	0.67
38:DC:135:ARG:N	38:DC:135:ARG:HD2	2.10	0.67
49:DR:10:LEU:HB3	49:DR:17:ARG:CD	2.25	0.67
1:AA:1208:C:H2'	1:AA:1209:C:C6	2.30	0.67
2:AB:187:LEU:HD11	2:AB:204:ASN:O	1.95	0.67
18:AR:31:LEU:HD23	18:AR:31:LEU:H	1.60	0.67
22:AV:68:C:H2'	22:AV:69:G:C8	2.29	0.67
25:AY:180:VAL:HG23	25:AY:181:LEU:H	1.59	0.67
26:B0:51:VAL:HG21	26:B0:79:VAL:O	1.94	0.67
30:B4:12:ALA:HB1	30:B4:29:PRO:HA	1.77	0.67
36:BA:548:A:H2'	36:BA:549:G:H5'	1.75	0.67
42:BG:31:VAL:O	42:BG:33:ARG:HD3	1.94	0.67
47:BP:16:ARG:CD	47:BP:18:ARG:H	2.08	0.67
1:CA:178:C:O2'	1:CA:179:A:H5'	1.94	0.67
10:CJ:4:ILE:HB	10:CJ:74:ILE:CD1	2.24	0.67
12:CL:7:ILE:O	12:CL:11:VAL:HG23	1.94	0.67
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB2	1.77	0.67
25:CY:413:ILE:HG22	25:CY:449:THR:O	1.95	0.67
25:CY:580:MET:HE1	36:DA:1913:A:N6	2.08	0.67
38:DC:118:PRO:HB2	38:DC:148:PHE:CZ	2.30	0.67
40:DE:133:LYS:N	40:DE:134:ILE:HD12	2.09	0.67
46:DO:3:GLN:HB2	46:DO:4:PRO:HD2	1.74	0.67
49:DR:45:ARG:HG3	49:DR:46:GLY:N	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:980:C:H2'	1:AA:981:U:H5'	1.76	0.67
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.29	0.67
25:AY:9:LEU:HD23	25:AY:9:LEU:O	1.95	0.67
25:AY:111:SER:OG	25:AY:141:LYS:HB3	1.96	0.67
32:B6:9:LEU:HD12	32:B6:28:ARG:HG3	1.77	0.67
36:BA:1827:C:O2'	36:BA:1828:G:H5'	1.94	0.67
36:BA:1842:G:H2'	36:BA:1843:C:C6	2.30	0.67
39:BD:35:LYS:HG2	39:BD:63:ARG:HA	1.77	0.67
39:BD:39:LYS:HZ1	39:BD:87:ASN:HB3	1.60	0.67
40:BE:24:THR:HG23	40:BE:184:VAL:HG23	1.76	0.67
47:BP:6:LEU:HB3	47:BP:9:ASN:HD21	1.58	0.67
1:CA:1211:U:H5'	1:CA:1212:U:OP1	1.95	0.67
2:CB:156:LYS:O	2:CB:157:ARG:HB2	1.94	0.67
3:CC:206:GLU:HG2	3:CC:207:VAL:N	2.09	0.67
4:CD:4:TYR:O	4:CD:5:ILE:HB	1.93	0.67
11:CK:79:SER:OG	11:CK:106:LYS:HD2	1.95	0.67
12:CL:46:LYS:HB2	12:CL:92:ASP:O	1.94	0.67
19:CS:44:MET:N	19:CS:44:MET:SD	2.67	0.67
25:CY:281:PRO:HB2	25:CY:286:ILE:CD1	2.24	0.67
25:CY:609:GLU:H	25:CY:670:VAL:HG22	1.59	0.67
34:D8:42:ARG:O	34:D8:44:LYS:N	2.25	0.67
36:DA:796:C:H2'	36:DA:797:C:C6	2.29	0.67
36:DA:1386:C:H2'	36:DA:1387:C:C6	2.29	0.67
39:DD:35:LYS:HG2	39:DD:62:TYR:O	1.95	0.67
40:DE:44:TYR:O	40:DE:45:THR:HB	1.93	0.67
52:DU:49:HIS:HA	52:DU:52:ARG:HB2	1.77	0.67
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.77	0.66
13:AM:46:LYS:O	13:AM:46:LYS:HD3	1.95	0.66
16:AP:9:PHE:HE2	16:AP:18:ARG:CZ	2.09	0.66
25:AY:530:VAL:HG13	25:AY:531:GLY:N	2.06	0.66
27:B1:90:ILE:O	27:B1:94:LEU:HD12	1.93	0.66
36:BA:271(Z):C:H1'	36:BA:272(C):G:H1'	1.76	0.66
36:BA:676:A:H1'	36:BA:2443:C:H1'	1.76	0.66
36:BA:1231:G:H2'	36:BA:1232:G:C8	2.30	0.66
36:BA:1306:C:H2'	36:BA:1307:A:H8	1.59	0.66
37:BB:87:G:H2'	37:BB:88:C:H3'	1.77	0.66
41:BF:3:GLU:HA	41:BF:24:LEU:CG	2.15	0.66
55:BX:10:ALA:HB1	55:BX:11:PRO:HD2	1.75	0.66
1:CA:585:G:H4'	12:CL:8:ASN:HD21	1.59	0.66
4:CD:64:LEU:HD23	4:CD:75:PHE:HZ	1.59	0.66
9:CI:24:GLY:HA2	9:CI:59:PHE:O	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:47:LEU:N	9:CI:47:LEU:CD1	2.58	0.66
22:CV:6:G:H1	22:CV:67:C:H42	1.43	0.66
29:D3:56:VAL:HG12	29:D3:57:GLU:H	1.59	0.66
31:D5:40:LYS:HZ3	31:D5:46:CYS:H	1.43	0.66
36:DA:1016:G:H1	36:DA:1146:C:H42	1.42	0.66
36:DA:2103:C:H1'	36:DA:2187:G:H1	1.58	0.66
38:DC:28:ARG:HH11	38:DC:28:ARG:CG	2.01	0.66
40:DE:132:HIS:HA	40:DE:135:HIS:CE1	2.30	0.66
42:DG:109:VAL:C	42:DG:112:PRO:HD2	2.20	0.66
45:DN:18:ALA:HB1	45:DN:21:LYS:HB2	1.75	0.66
1:AA:408:A:H4'	4:AD:112:VAL:HG11	1.76	0.66
1:AA:523:A:N1	12:AL:92:ASP:HB2	2.11	0.66
3:AC:155:GLY:O	3:AC:156:ARG:HB2	1.95	0.66
4:AD:144:ASP:O	4:AD:184:LYS:HA	1.94	0.66
12:AL:28:LYS:O	12:AL:29:GLY:C	2.38	0.66
25:AY:519:ARG:NH2	25:AY:678:GLU:HB3	2.09	0.66
25:AY:560:VAL:HG11	25:AY:594:VAL:HG11	1.77	0.66
32:B6:11:LEU:CD2	32:B6:51:GLU:HG3	2.25	0.66
36:BA:271(R):G:O2'	36:BA:271(S):G:H5'	1.96	0.66
36:BA:279:C:C2'	36:BA:280:C:H5''	2.25	0.66
36:BA:559:G:H22	52:BU:49:HIS:CD2	2.13	0.66
39:BD:210:GLY:C	39:BD:212:SER:H	2.03	0.66
51:BT:80:SER:HB3	51:BT:81:PRO:CD	2.26	0.66
56:BY:9:LYS:HD3	56:BY:94:LYS:HE2	1.77	0.66
57:BZ:40:ASP:HB3	57:BZ:43:GLU:HG2	1.77	0.66
1:CA:523:A:N1	12:CL:92:ASP:HB2	2.11	0.66
1:CA:1057:G:H5''	3:CC:154:SER:CB	2.21	0.66
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	1.75	0.66
2:CB:120:ALA:O	2:CB:121:LEU:HD23	1.95	0.66
2:CB:187:LEU:HD11	2:CB:204:ASN:O	1.94	0.66
3:CC:68:VAL:HG12	3:CC:70:VAL:HG23	1.76	0.66
5:CE:145:LYS:HA	8:CH:107:LEU:HD21	1.75	0.66
7:CG:151:TYR:OH	11:CK:54:ARG:HD3	1.95	0.66
13:CM:124:PRO:HG2	25:CY:574:GLU:N	1.98	0.66
15:CO:64:ARG:HG3	15:CO:64:ARG:HH11	1.61	0.66
25:CY:215:LYS:HA	25:CY:218:GLU:OE1	1.95	0.66
26:D0:26:TYR:HE2	36:DA:857:C:H1'	1.61	0.66
34:D8:61:LEU:C	34:D8:63:PRO:HD2	2.19	0.66
36:DA:389:G:H1	47:DP:71:VAL:HG12	1.59	0.66
36:DA:730:C:O2'	36:DA:731:C:H5'	1.95	0.66
36:DA:848:G:N3	36:DA:933:A:H1'	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1115:G:H2'	36:DA:1116:C:C6	2.30	0.66
36:DA:1782:C:H2'	36:DA:1783:A:H5'	1.76	0.66
36:DA:1993:U:H4'	40:DE:128:SER:OG	1.95	0.66
40:DE:24:THR:HG23	40:DE:184:VAL:HG23	1.76	0.66
41:DF:18:ARG:HG2	41:DF:19:GLU:H	1.60	0.66
45:DN:133:GLN:HG2	45:DN:134:ARG:N	2.10	0.66
1:AA:1423:G:H5'	46:BO:49:ARG:HH22	1.60	0.66
25:AY:487:ILE:HD11	25:AY:563:ILE:HG22	1.77	0.66
59:AY:701:FUA:O1	59:AY:701:FUA:H201	1.95	0.66
36:BA:525:U:O2'	36:BA:526:A:H5''	1.94	0.66
36:BA:1386:C:H2'	36:BA:1387:C:C6	2.30	0.66
36:BA:1717:G:C2'	36:BA:1718:G:H5''	2.25	0.66
36:BA:2457:U:C2'	36:BA:2458:G:H5'	2.24	0.66
46:BO:69:ILE:HD12	46:BO:69:ILE:N	2.09	0.66
49:BR:10:LEU:HD22	49:BR:17:ARG:CD	2.25	0.66
49:BR:56:LYS:HE3	49:BR:94:TYR:HE2	1.59	0.66
51:BT:26:ASP:HB3	51:BT:89:VAL:O	1.95	0.66
55:BX:30:VAL:HG22	55:BX:77:LYS:O	1.95	0.66
1:CA:163:C:O2'	1:CA:164:U:H5'	1.95	0.66
1:CA:241:C:O2'	1:CA:242:C:H5'	1.95	0.66
1:CA:509:A:C5'	1:CA:510:A:OP2	2.42	0.66
30:D4:14:ILE:HD12	30:D4:14:ILE:N	2.11	0.66
36:DA:676:A:H2	36:DA:802:A:H61	1.43	0.66
36:DA:693:C:O2'	36:DA:694:U:H5'	1.96	0.66
42:DG:77:ILE:CG2	42:DG:80:PHE:HB2	2.24	0.66
51:DT:28:VAL:HG22	51:DT:46:GLU:CA	2.23	0.66
51:DT:78:LEU:HD22	51:DT:78:LEU:O	1.95	0.66
51:DT:80:SER:HB3	51:DT:81:PRO:CD	2.25	0.66
54:DW:1:MET:CE	54:DW:2:GLU:H	2.07	0.66
56:DY:9:LYS:HD3	56:DY:94:LYS:HE2	1.78	0.66
2:AB:223:ILE:HG12	2:AB:226:ARG:CZ	2.26	0.66
29:B3:17:LYS:NZ	29:B3:20:LYS:HE3	2.10	0.66
36:BA:782:A:C2	39:BD:226:MET:HG2	2.30	0.66
36:BA:2455:G:H2'	36:BA:2456:C:C6	2.31	0.66
37:BB:87:G:C3'	37:BB:88:C:H5''	2.25	0.66
40:BE:98:PRO:HG3	40:BE:175:VAL:HG12	1.76	0.66
44:BJ:26:UNK:HA	44:BJ:84:UNK:HA	1.77	0.66
45:BN:38:HIS:C	52:BU:67:ALA:HB1	2.20	0.66
47:BP:105:LEU:H	47:BP:105:LEU:HD12	1.61	0.66
49:BR:4:LEU:C	49:BR:6:SER:H	2.03	0.66
50:BS:54:LEU:HD13	50:BS:54:LEU:O	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:115:GLY:HA2	57:BZ:177:PRO:HG3	1.78	0.66
57:BZ:166:SER:HB2	57:BZ:168:GLU:N	2.11	0.66
1:CA:627:G:O2'	1:CA:628:G:H5'	1.96	0.66
25:CY:84:THR:H	25:CY:85:PRO:CD	2.05	0.66
32:D6:48:VAL:HG23	32:D6:49:HIS:N	2.10	0.66
36:DA:240:G:C3'	36:DA:241:A:H5''	2.21	0.66
36:DA:467:G:O2'	36:DA:468:G:H5'	1.96	0.66
36:DA:1717:G:C2'	36:DA:1718:G:H5''	2.25	0.66
36:DA:1754:C:OP1	51:DT:96:ARG:NH1	2.28	0.66
36:DA:2344:U:O2'	36:DA:2345:G:H5''	1.95	0.66
37:DB:15:A:H3'	37:DB:16:G:C5'	2.26	0.66
38:DC:4:HIS:HB3	38:DC:8:TYR:HD2	1.61	0.66
42:DG:5:VAL:HB	42:DG:8:LYS:CB	2.24	0.66
47:DP:46:LYS:HG2	47:DP:52:GLU:HG2	1.77	0.66
56:DY:31:LEU:N	56:DY:31:LEU:HD22	2.10	0.66
1:AA:178:C:O2'	1:AA:179:A:H5'	1.95	0.66
1:AA:363:A:OP1	12:AL:33:ARG:HD3	1.96	0.66
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	1.96	0.66
5:AE:79:GLU:HB3	5:AE:92:LYS:HA	1.78	0.66
6:AF:50:TYR:CE1	18:AR:77:GLY:HA2	2.31	0.66
6:AF:75:LEU:O	6:AF:79:LEU:HG	1.95	0.66
25:AY:662:LYS:HZ2	43:BH:175:LYS:HG3	1.60	0.66
31:B5:36:CYS:SG	31:B5:48:GLU:O	2.53	0.66
31:B5:36:CYS:SG	31:B5:49:CYS:HB3	2.35	0.66
32:B6:15:GLU:CD	32:B6:44:ARG:NH1	2.54	0.66
32:B6:40:CYS:HB2	32:B6:46:HIS:CE1	2.31	0.66
34:B8:52:LYS:N	34:B8:53:PRO:CD	2.58	0.66
36:BA:55:G:H2'	36:BA:56:A:H8	1.59	0.66
36:BA:279:C:C3'	36:BA:280:C:H5''	2.26	0.66
36:BA:1380:G:H2'	36:BA:1381:G:H8	1.59	0.66
36:BA:2344:U:H4'	36:BA:2345:G:OP1	1.94	0.66
36:BA:2762:G:H5'	36:BA:2762:G:H8	1.58	0.66
38:BC:28:ARG:HG3	38:BC:28:ARG:NH1	2.10	0.66
38:BC:139:PRO:HA	38:BC:145:THR:CG2	2.26	0.66
51:BT:106:SER:HA	51:BT:110:ILE:HG12	1.77	0.66
1:CA:56:U:H2'	1:CA:57:G:C8	2.30	0.66
1:CA:345:C:H5'	1:CA:346:G:OP1	1.96	0.66
9:CI:33:PHE:CZ	9:CI:47:LEU:HD11	2.30	0.66
10:CJ:70:ARG:HH11	10:CJ:70:ARG:HG2	1.60	0.66
25:CY:223:PHE:CE2	25:CY:249:GLY:HA3	2.29	0.66
32:D6:9:LEU:HD12	32:D6:28:ARG:HG3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:203:C:H3'	36:DA:204:A:H5''	1.78	0.66
36:DA:1186:G:H2'	36:DA:1187:G:O4'	1.94	0.66
36:DA:1380:G:H2'	36:DA:1381:G:H8	1.61	0.66
36:DA:1942:C:H3'	36:DA:1943:U:H5''	1.76	0.66
36:DA:2394:C:OP1	47:DP:63:PRO:HD2	1.95	0.66
47:DP:95:VAL:HG23	47:DP:125:VAL:HG23	1.78	0.66
48:DQ:136:ALA:C	48:DQ:138:ASP:H	2.01	0.66
1:AA:339:C:OP2	46:BO:97:ARG:NH1	2.29	0.66
1:AA:598:U:H2'	1:AA:599:C:C6	2.30	0.66
1:AA:1423:G:C5'	46:BO:49:ARG:HH22	2.07	0.66
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.76	0.66
4:AD:61:LYS:HE2	4:AD:62:GLN:HE21	1.61	0.66
5:AE:6:PHE:HB3	5:AE:35:GLY:O	1.95	0.66
16:AP:4:ILE:HG13	16:AP:64:ALA:HB1	1.78	0.66
24:AX:11:A:O4'	24:AX:12:A:C8	2.49	0.66
25:AY:606:MET:CE	25:AY:671:MET:HE3	2.23	0.66
46:BO:47:ILE:CG2	46:BO:48:PRO:HD2	2.26	0.66
48:BQ:76:LYS:HB3	48:BQ:91:GLU:CG	2.26	0.66
49:BR:24:GLN:NE2	49:BR:36:THR:HG21	2.10	0.66
51:BT:24:PRO:HD3	51:BT:52:ILE:CD1	2.25	0.66
54:BW:64:MET:O	54:BW:65:LEU:HB3	1.95	0.66
57:BZ:6:LYS:HG2	57:BZ:8:TYR:OH	1.95	0.66
57:BZ:9:TYR:CE1	57:BZ:61:LEU:HD13	2.29	0.66
57:BZ:42:VAL:HG13	57:BZ:43:GLU:N	2.10	0.66
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	1.96	0.66
24:CX:11:A:C4'	24:CX:12:A:O5'	2.41	0.66
24:CX:11:A:O4'	24:CX:12:A:C8	2.49	0.66
31:D5:19:ARG:HD2	36:DA:1266:G:OP1	1.95	0.66
32:D6:37:ARG:NH1	36:DA:2286:A:N7	2.43	0.66
36:DA:84:A:H5''	56:DY:9:LYS:NZ	2.09	0.66
36:DA:120:U:H5'	36:DA:121:G:OP1	1.95	0.66
36:DA:603:A:H4'	36:DA:604:G:O5'	1.95	0.66
36:DA:1049:C:H2'	36:DA:1050:A:H8	1.61	0.66
37:DB:87:G:C3'	37:DB:88:C:H5''	2.26	0.66
39:DD:39:LYS:HZ1	39:DD:87:ASN:HB3	1.59	0.66
48:DQ:12:GLN:HE21	48:DQ:73:PRO:HD2	1.61	0.66
1:AA:203:U:H5''	1:AA:204:U:OP1	1.96	0.66
1:AA:953:G:H5'	1:AA:965:A:H61	1.61	0.66
3:AC:70:VAL:O	3:AC:106:VAL:HG23	1.96	0.66
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.76	0.66
25:AY:21:ILE:H	25:AY:21:ILE:CD1	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:65:ILE:HG12	25:AY:65:ILE:O	1.94	0.66
27:B1:23:LYS:HD3	27:B1:28:GLY:HA3	1.76	0.66
36:BA:359:A:H2'	36:BA:360:G:O4'	1.94	0.66
40:BE:134:ILE:HD12	40:BE:134:ILE:N	2.11	0.66
41:BF:16:GLY:O	41:BF:17:ARG:HG3	1.96	0.66
41:BF:78:ILE:HA	41:BF:83:PHE:CD2	2.30	0.66
49:BR:62:ALA:O	49:BR:66:VAL:HG23	1.95	0.66
1:CA:663:A:O2'	1:CA:664:G:H5'	1.96	0.66
1:CA:865:A:H2	1:CA:918:A:H4'	1.59	0.66
1:CA:1004:A:H61	1:CA:1034:G:C2'	2.06	0.66
5:CE:79:GLU:HB3	5:CE:92:LYS:HA	1.76	0.66
8:CH:85:ARG:HH12	8:CH:134:ILE:HG23	1.59	0.66
13:CM:8:GLU:C	13:CM:9:ILE:HD12	2.20	0.66
18:CR:29:PHE:CD1	18:CR:29:PHE:N	2.59	0.66
25:CY:139:MET:O	25:CY:171:GLU:HA	1.95	0.66
25:CY:406:GLU:HB3	25:CY:407:PRO:HD2	1.78	0.66
27:D1:86:SER:CB	27:D1:90:ILE:HG12	2.25	0.66
34:D8:6:THR:HG22	34:D8:63:PRO:HD3	1.75	0.66
36:DA:784:A:H5''	39:DD:227:ASN:ND2	2.11	0.66
36:DA:956:G:C4'	48:DQ:83:MET:HE1	2.25	0.66
36:DA:1223:G:H3'	36:DA:1224:C:C5'	2.25	0.66
36:DA:2198:A:H4'	36:DA:2199:A:OP1	1.94	0.66
40:DE:61:ARG:HG2	40:DE:62:PRO:HD3	1.78	0.66
41:DF:20:LEU:HD22	41:DF:23:ASP:OD2	1.95	0.66
47:DP:112:LEU:H	47:DP:128:HIS:CD2	2.14	0.66
51:DT:106:SER:HA	51:DT:110:ILE:HG12	1.76	0.66
57:DZ:81:ARG:HB3	57:DZ:81:ARG:HH11	1.61	0.66
1:AA:1026:G:C2'	1:AA:1027:C:H5'	2.26	0.66
1:AA:1082:G:O2'	1:AA:1083:U:H5'	1.96	0.66
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.31	0.66
25:AY:25:LYS:O	25:AY:28:THR:HB	1.95	0.66
36:BA:320:A:H2'	41:BF:136:THR:OG1	1.95	0.66
36:BA:389:G:H1	47:BP:71:VAL:HG12	1.60	0.66
36:BA:739:G:H4'	36:BA:740:U:OP1	1.95	0.66
36:BA:2055:C:H4'	36:BA:2056:G:H5''	1.78	0.66
36:BA:2248:C:C2'	36:BA:2249:U:H5'	2.24	0.66
40:BE:103:ASP:OD2	40:BE:201:THR:HA	1.96	0.66
45:BN:74:ARG:HH21	45:BN:83:LYS:HD3	1.61	0.66
46:BO:68:GLU:HB3	46:BO:78:ARG:HB2	1.77	0.66
1:CA:203:U:H5''	1:CA:204:U:OP1	1.96	0.66
1:CA:301:G:H2'	1:CA:302:G:H8	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1489:G:H2'	1:CA:1490:C:C5'	2.25	0.66
25:CY:74:TRP:CG	25:CY:273:LEU:HD22	2.30	0.66
36:DA:55:G:H2'	36:DA:56:A:H8	1.58	0.66
36:DA:272(H):C:H5'	36:DA:272(H):C:H6	1.61	0.66
36:DA:1378:A:H4'	36:DA:1379:A:OP1	1.96	0.66
36:DA:1682:G:H5'	36:DA:1762:A:O2'	1.96	0.66
36:DA:2392:A:H2	36:DA:2424:C:H42	1.41	0.66
36:DA:2593:U:H2'	36:DA:2594:C:C6	2.31	0.66
38:DC:190:ILE:O	38:DC:194:ILE:HG12	1.96	0.66
39:DD:131:LEU:HB2	39:DD:136:ILE:CD1	2.23	0.66
39:DD:243:GLY:O	39:DD:244:ARG:HB3	1.95	0.66
40:DE:98:PRO:HG3	40:DE:175:VAL:HG12	1.77	0.66
43:DH:124:GLU:CG	43:DH:132:ARG:HG3	2.26	0.66
47:DP:122:PRO:HB3	47:DP:141:ALA:HB1	1.78	0.66
49:DR:56:LYS:HE3	49:DR:94:TYR:HE2	1.61	0.66
54:DW:64:MET:O	54:DW:65:LEU:HB3	1.96	0.66
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.30	0.66
5:AE:76:ILE:CG2	5:AE:118:ILE:HD13	2.26	0.66
19:AS:22:LEU:O	19:AS:26:GLY:HA2	1.96	0.66
25:AY:82:ILE:CD1	25:AY:101:LEU:HD23	2.25	0.66
25:AY:621:ILE:HG12	25:AY:643:ILE:HD13	1.77	0.66
25:AY:681:LYS:O	25:AY:681:LYS:HD2	1.96	0.66
33:B7:35:ARG:HG2	33:B7:35:ARG:HH11	1.60	0.66
36:BA:676:A:H2	36:BA:802:A:H61	1.42	0.66
36:BA:1125:G:H3'	36:BA:1126:A:H5''	1.78	0.66
36:BA:1290:C:H2'	36:BA:1291:C:C6	2.30	0.66
36:BA:2593:U:H2'	36:BA:2594:C:C6	2.31	0.66
41:BF:18:ARG:HG2	41:BF:19:GLU:H	1.61	0.66
46:BO:86:ILE:H	46:BO:86:ILE:HD12	1.61	0.66
51:BT:57:PHE:O	51:BT:59:THR:HG23	1.96	0.66
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.30	0.66
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.76	0.66
10:CJ:6:ILE:HD11	10:CJ:72:VAL:CB	2.23	0.66
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.60	0.66
19:CS:21:GLU:HG3	19:CS:22:LEU:CD2	2.25	0.66
25:CY:101:LEU:HD12	25:CY:101:LEU:O	1.96	0.66
27:D1:80:LEU:HD23	27:D1:81:LYS:H	1.61	0.66
35:D9:36:GLN:OE1	36:DA:1124:C:H1'	1.96	0.66
36:DA:328:U:H4'	56:DY:68:HIS:CD2	2.31	0.66
40:DE:33:VAL:HG12	40:DE:90:THR:H	1.61	0.66
42:DG:55:LYS:HD3	42:DG:55:LYS:C	2.21	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DO:86:ILE:HD12	46:DO:86:ILE:H	1.60	0.66
49:DR:4:LEU:C	49:DR:6:SER:H	2.02	0.66
54:DW:50:VAL:HG11	54:DW:103:ILE:HG21	1.76	0.66
57:DZ:18:LEU:H	57:DZ:18:LEU:CD1	2.08	0.66
1:AA:60:A:H5''	1:AA:331:G:H22	1.60	0.66
2:AB:156:LYS:O	2:AB:157:ARG:CB	2.44	0.66
19:AS:24:ALA:O	19:AS:25:LYS:HB2	1.96	0.66
25:AY:315:LYS:NZ	25:AY:317:MET:HG2	2.11	0.66
25:AY:407:PRO:HB3	25:AY:452:SER:OG	1.96	0.66
25:AY:519:ARG:NH2	25:AY:678:GLU:CB	2.59	0.66
36:BA:568:U:H2'	36:BA:570:G:OP2	1.95	0.66
36:BA:1947:C:C2'	36:BA:1948:G:H5''	2.26	0.66
42:BG:28:VAL:O	42:BG:31:VAL:HG12	1.96	0.66
42:BG:114:ILE:O	42:BG:116:ASP:N	2.28	0.66
56:BY:79:CYS:SG	56:BY:80:GLY:N	2.67	0.66
1:CA:948:C:O2'	1:CA:949:A:H5'	1.96	0.66
1:CA:1190:G:H3'	3:CC:3:ASN:HD22	1.60	0.66
13:CM:19:LEU:HA	13:CM:22:ILE:HD13	1.77	0.66
31:D5:40:LYS:HE2	31:D5:46:CYS:HB3	1.76	0.66
36:DA:212:G:H5'	36:DA:212:G:C8	2.29	0.66
36:DA:822:U:H2'	36:DA:823:G:H8	1.61	0.66
36:DA:1367:A:H2'	36:DA:1368:G:H5'	1.78	0.66
36:DA:1504:C:C3'	36:DA:1505:C:H5''	2.27	0.66
36:DA:2186:G:C3'	36:DA:2187:G:H5''	2.26	0.66
42:DG:63:ILE:HA	42:DG:143:GLU:HG3	1.77	0.66
45:DN:74:ARG:HH21	45:DN:83:LYS:HD3	1.61	0.66
47:DP:16:ARG:CD	47:DP:18:ARG:H	2.07	0.66
51:DT:132:LYS:H	51:DT:132:LYS:CD	2.08	0.66
52:DU:84:LYS:C	52:DU:86:ALA:H	2.03	0.66
1:AA:56:U:H2'	1:AA:57:G:C8	2.31	0.65
1:AA:148:G:H1	1:AA:174:C:H42	1.42	0.65
13:AM:37:THR:HG21	13:AM:56:LEU:HD22	1.78	0.65
17:AQ:47:PRO:HG2	17:AQ:48:GLU:OE2	1.95	0.65
25:AY:176:GLY:HA3	25:AY:187:THR:HA	1.78	0.65
30:B4:14:ILE:HD12	30:B4:14:ILE:N	2.11	0.65
36:BA:272(B):G:H2'	36:BA:272(C):G:C8	2.32	0.65
36:BA:1030:G:OP2	48:BQ:128:LYS:HE2	1.96	0.65
36:BA:1049:C:H2'	36:BA:1050:A:H8	1.60	0.65
36:BA:1541:G:H4'	36:BA:1542:A:C5'	2.26	0.65
36:BA:2657:A:O2'	43:BH:160:LYS:HE3	1.96	0.65
40:BE:33:VAL:HG12	40:BE:90:THR:H	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:85:LEU:HD23	47:BP:85:LEU:N	2.10	0.65
1:CA:277:C:O2'	1:CA:278:G:H5'	1.95	0.65
1:CA:439:A:H2'	1:CA:441:A:H5'	1.78	0.65
1:CA:1129:C:H2'	1:CA:1139:G:N7	2.11	0.65
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	1.78	0.65
22:CV:2:C:H2'	22:CV:3:C:C6	2.30	0.65
25:CY:602:LEU:HB3	25:CY:676:TYR:HB3	1.76	0.65
29:D3:17:LYS:HZ3	29:D3:20:LYS:HE3	1.60	0.65
34:D8:25:MET:HE2	47:DP:64:LYS:HG3	1.77	0.65
36:DA:84:A:C5'	56:DY:9:LYS:HZ2	2.08	0.65
36:DA:1558:A:H4'	36:DA:1559:G:O5'	1.96	0.65
36:DA:2103:C:C3'	36:DA:2104:G:H5''	2.26	0.65
39:DD:14:ARG:HG3	39:DD:15:PHE:H	1.59	0.65
42:DG:126:ASP:HB2	42:DG:130:ASN:HB2	1.76	0.65
47:DP:91:PHE:CE2	47:DP:95:VAL:HG12	2.30	0.65
50:DS:20:ARG:HA	50:DS:20:ARG:NE	2.09	0.65
1:AA:509:A:H3'	1:AA:510:A:C8	2.32	0.65
9:AI:104:ARG:C	9:AI:105:ASP:N	2.54	0.65
13:AM:54:VAL:O	13:AM:58:GLU:HG2	1.95	0.65
22:AV:71:G:H2'	22:AV:72:C:O4'	1.96	0.65
23:AW:51:C:H2'	23:AW:52:G:H5''	1.78	0.65
25:AY:247:ARG:HG3	25:AY:247:ARG:HH11	1.61	0.65
27:B1:82:LEU:HD12	27:B1:82:LEU:N	2.12	0.65
29:B3:6:VAL:HB	29:B3:54:VAL:HG11	1.78	0.65
36:BA:1186:G:H2'	36:BA:1187:G:O4'	1.97	0.65
36:BA:1946:U:H2'	36:BA:1947:C:C6	2.31	0.65
38:BC:90:ALA:HA	38:BC:155:ARG:HH12	1.58	0.65
39:BD:131:LEU:HB2	39:BD:136:ILE:CD1	2.20	0.65
39:BD:172:TYR:CD1	39:BD:186:HIS:HA	2.32	0.65
41:BF:160:ASN:HD21	41:BF:162:LEU:HD13	1.60	0.65
47:BP:146:VAL:O	47:BP:148:LEU:N	2.30	0.65
49:BR:78:LYS:HG2	49:BR:78:LYS:O	1.95	0.65
54:BW:40:ASN:O	54:BW:41:LYS:HG2	1.95	0.65
1:CA:585:G:H4'	12:CL:8:ASN:ND2	2.12	0.65
1:CA:953:G:H5'	1:CA:965:A:H61	1.61	0.65
1:CA:1456:G:H2'	1:CA:1457:G:H5'	1.78	0.65
3:CC:82:GLU:O	3:CC:86:VAL:HG13	1.95	0.65
22:CV:46:G:O2'	22:CV:47:U:H5'	1.96	0.65
25:CY:98:MET:HA	25:CY:101:LEU:HD12	1.78	0.65
30:D4:1:MET:HE2	42:DG:66:GLN:OE1	1.97	0.65
36:DA:279:C:C3'	36:DA:280:C:H5''	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:69:LYS:HE2	40:DE:69:LYS:H	1.62	0.65
41:DF:160:ASN:HD21	41:DF:162:LEU:HD13	1.59	0.65
47:DP:146:VAL:O	47:DP:148:LEU:N	2.29	0.65
50:DS:54:LEU:HD13	50:DS:54:LEU:O	1.96	0.65
51:DT:118:ARG:HA	51:DT:121:ILE:HB	1.77	0.65
52:DU:25:TRP:O	52:DU:28:ARG:HB2	1.95	0.65
2:AB:22:LYS:H	2:AB:40:HIS:CE1	2.14	0.65
3:AC:110:ASN:ND2	3:AC:140:ARG:HB3	2.11	0.65
25:AY:616:TYR:HB3	25:AY:662:LYS:O	1.95	0.65
26:B0:73:GLY:O	26:B0:75:LEU:N	2.26	0.65
28:B2:10:LEU:O	28:B2:14:ARG:HG2	1.96	0.65
36:BA:582:G:H2'	36:BA:583:G:H8	1.61	0.65
36:BA:688:U:H4'	36:BA:1780:A:C2	2.31	0.65
36:BA:1171:G:H2'	36:BA:1173:G:H4'	1.78	0.65
36:BA:1197:G:H2'	36:BA:1198:U:H6	1.60	0.65
36:BA:1678:G:H22	36:BA:1989:G:H22	1.42	0.65
36:BA:1865:G:H2'	36:BA:1866:C:H5''	1.77	0.65
40:BE:51:PHE:O	40:BE:74:PRO:HB3	1.96	0.65
49:BR:113:LEU:HD12	49:BR:114:VAL:H	1.60	0.65
57:BZ:115:GLY:H	57:BZ:177:PRO:HG3	1.61	0.65
1:CA:980:C:H2'	1:CA:981:U:H5'	1.76	0.65
1:CA:1002:G:N2	1:CA:1039:C:H2'	2.11	0.65
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.31	0.65
9:CI:112:LYS:HA	9:CI:119:ALA:CB	2.15	0.65
19:CS:40:ILE:HG12	19:CS:71:LEU:HD23	1.77	0.65
25:CY:168:ILE:HB	25:CY:176:GLY:O	1.96	0.65
25:CY:191:ASP:HA	25:CY:267:LYS:HE3	1.78	0.65
25:CY:580:MET:O	25:CY:580:MET:HG2	1.94	0.65
36:DA:491:G:H2'	36:DA:492:A:H8	1.61	0.65
36:DA:2457:U:C2'	36:DA:2458:G:H5'	2.27	0.65
36:DA:2583:G:H2'	36:DA:2584:U:O2	1.96	0.65
50:DS:28:VAL:HG12	50:DS:29:PHE:N	2.07	0.65
50:DS:34:HIS:CE1	50:DS:54:LEU:HB3	2.31	0.65
1:AA:719:C:O2'	18:AR:49:LYS:HB3	1.95	0.65
2:AB:120:ALA:O	2:AB:121:LEU:HD23	1.96	0.65
3:AC:68:VAL:HG12	3:AC:70:VAL:HG23	1.77	0.65
19:AS:21:GLU:HG3	19:AS:22:LEU:CD2	2.25	0.65
20:AT:29:LYS:O	20:AT:33:ILE:HG13	1.97	0.65
24:AX:12:A:H2'	24:AX:12:A:N3	2.10	0.65
25:AY:335:LEU:HD11	25:AY:352:VAL:HG11	1.78	0.65
25:AY:630:GLN:NE2	25:AY:646:PHE:HD2	1.93	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1094:U:H2'	36:BA:1096:A:OP2	1.95	0.65
45:BN:125:GLY:HA3	45:BN:126:PRO:O	1.96	0.65
50:BS:65:VAL:O	50:BS:69:VAL:HG12	1.96	0.65
54:BW:82:LEU:HB3	54:BW:84:ARG:HH12	1.60	0.65
57:BZ:78:LYS:HD3	57:BZ:78:LYS:H	1.61	0.65
1:CA:1513:A:H2'	1:CA:1514:C:H6	1.60	0.65
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.78	0.65
9:CI:77:ILE:O	9:CI:81:ILE:HG12	1.96	0.65
10:CJ:27:ALA:HA	10:CJ:30:SER:OG	1.97	0.65
10:CJ:27:ALA:HB2	10:CJ:85:LEU:HD11	1.76	0.65
16:CP:9:PHE:CE2	16:CP:18:ARG:CZ	2.79	0.65
25:CY:487:ILE:HD13	25:CY:487:ILE:H	1.61	0.65
25:CY:510:VAL:HG22	25:CY:534:ILE:HD11	1.78	0.65
26:D0:43:THR:HG22	36:DA:2331:G:O3'	1.97	0.65
32:D6:47:THR:HG23	32:D6:48:VAL:N	2.11	0.65
36:DA:359:A:H2'	36:DA:360:G:O4'	1.95	0.65
36:DA:1094:U:H2'	36:DA:1096:A:OP2	1.95	0.65
36:DA:2171:A:H1'	36:DA:2172:U:C6	2.31	0.65
36:DA:2631:G:N2	40:DE:61:ARG:NH1	2.44	0.65
37:DB:87:G:H2'	37:DB:88:C:H3'	1.77	0.65
43:DH:98:LEU:HD12	43:DH:102:ALA:O	1.97	0.65
48:DQ:76:LYS:HB3	48:DQ:91:GLU:CG	2.26	0.65
49:DR:62:ALA:O	49:DR:66:VAL:HG23	1.97	0.65
50:DS:49:VAL:HG12	50:DS:50:SER:N	2.11	0.65
1:AA:663:A:O2'	1:AA:664:G:H5'	1.96	0.65
1:AA:973:G:H1'	10:AJ:55:LYS:HE2	1.77	0.65
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.31	0.65
9:AI:95:LYS:NZ	9:AI:96:LEU:CD1	2.59	0.65
25:AY:228:MET:O	25:AY:232:LEU:HD23	1.96	0.65
25:AY:613:PRO:HG2	25:AY:666:ARG:NE	2.10	0.65
28:B2:10:LEU:HD22	28:B2:14:ARG:NH2	2.12	0.65
34:B8:25:MET:HG3	47:BP:64:LYS:CB	2.27	0.65
36:BA:1504:C:C3'	36:BA:1505:C:H5''	2.27	0.65
40:BE:132:HIS:HA	40:BE:135:HIS:CE1	2.32	0.65
47:BP:122:PRO:HB3	47:BP:141:ALA:HB1	1.79	0.65
48:BQ:27:VAL:HG12	48:BQ:28:ALA:N	2.11	0.65
50:BS:30:ARG:HH22	50:BS:62:LYS:HD2	1.60	0.65
54:BW:5:ALA:O	54:BW:6:ILE:HB	1.96	0.65
10:CJ:13:HIS:O	10:CJ:17:ASP:HB2	1.96	0.65
10:CJ:50:ILE:H	10:CJ:50:ILE:CD1	2.00	0.65
22:CV:36:A:H1'	25:CY:503:GLY:H	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:22:G:O2'	23:CW:23:C:H5''	1.96	0.65
25:CY:312:LEU:O	25:CY:328:ILE:HA	1.97	0.65
36:DA:1638:C:H2'	36:DA:1639:U:O4'	1.95	0.65
36:DA:2483:C:C3'	36:DA:2484:G:H5''	2.21	0.65
37:DB:13:A:O2'	37:DB:14:U:H3'	1.96	0.65
41:DF:160:ASN:HD22	41:DF:161:GLU:N	1.95	0.65
47:DP:58:THR:O	47:DP:61:ARG:HG3	1.97	0.65
48:DQ:110:THR:HG22	48:DQ:113:GLN:OE1	1.96	0.65
50:DS:30:ARG:HH22	50:DS:62:LYS:HD2	1.60	0.65
57:DZ:53:ILE:HG22	57:DZ:71:VAL:HB	1.76	0.65
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.11	0.65
1:AA:1493:A:H61	25:AY:579:GLU:HG3	1.62	0.65
4:AD:30:LYS:C	4:AD:32:ALA:N	2.55	0.65
9:AI:33:PHE:CZ	9:AI:47:LEU:HD11	2.32	0.65
10:AJ:9:ARG:HG2	10:AJ:69:ASN:OD1	1.96	0.65
25:AY:679:VAL:HB	25:AY:683:VAL:HB	1.77	0.65
31:B5:2:ALA:N	36:BA:2014:A:HO2'	1.94	0.65
36:BA:1682:G:H5'	36:BA:1762:A:O2'	1.96	0.65
36:BA:1840:G:H1	36:BA:1902:C:N4	1.94	0.65
36:BA:2392:A:C8	47:BP:60:MET:HB3	2.23	0.65
39:BD:65:ILE:HG22	39:BD:104:TYR:HB3	1.77	0.65
43:BH:149:ARG:HA	43:BH:162:ILE:HG13	1.77	0.65
47:BP:88:LEU:HD11	47:BP:95:VAL:HG11	1.78	0.65
51:BT:83:ILE:HG13	51:BT:84:GLN:N	2.11	0.65
52:BU:95:LEU:HD13	53:BV:4:ILE:HG23	1.77	0.65
3:CC:110:ASN:ND2	3:CC:140:ARG:HB3	2.12	0.65
6:CF:8:ILE:HG23	6:CF:85:VAL:HG13	1.78	0.65
11:CK:124:LYS:HD2	11:CK:125:PHE:CE1	2.30	0.65
13:CM:46:LYS:HD3	13:CM:46:LYS:O	1.97	0.65
25:CY:264:LEU:O	25:CY:264:LEU:HD23	1.95	0.65
27:D1:70:VAL:O	27:D1:74:VAL:HG23	1.97	0.65
36:DA:1541:G:H4'	36:DA:1542:A:C5'	2.26	0.65
36:DA:1865:G:H2'	36:DA:1866:C:H5''	1.76	0.65
40:DE:117:MET:HG2	40:DE:117:MET:O	1.97	0.65
41:DF:157:VAL:CG2	41:DF:194:MET:HG2	2.26	0.65
45:DN:126:PRO:O	45:DN:127:ASP:HB2	1.97	0.65
46:DO:47:ILE:HG22	46:DO:48:PRO:HD2	1.79	0.65
49:DR:44:LEU:HD13	49:DR:44:LEU:O	1.96	0.65
57:DZ:44:PHE:CZ	57:DZ:48:PHE:HD2	2.15	0.65
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.79	0.65
22:AV:3:C:O2'	22:AV:4:C:H5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:227:ILE:HD11	25:AY:241:GLU:O	1.96	0.65
29:B3:28:LEU:HD23	29:B3:28:LEU:N	2.11	0.65
34:B8:33:ASN:N	34:B8:36:LYS:HD2	2.12	0.65
36:BA:328:U:H4'	56:BY:68:HIS:CD2	2.31	0.65
36:BA:756:C:O2'	36:BA:757:U:H5'	1.95	0.65
36:BA:1113:U:H2'	36:BA:1114:G:C8	2.32	0.65
36:BA:1223:G:H3'	36:BA:1224:C:C5'	2.26	0.65
36:BA:1223:G:H3'	36:BA:1224:C:H5''	1.78	0.65
42:BG:34:LEU:HD22	42:BG:99:MET:HE3	1.79	0.65
46:BO:3:GLN:HB2	46:BO:4:PRO:HD2	1.77	0.65
46:BO:4:PRO:O	46:BO:5:GLN:HB2	1.96	0.65
50:BS:35:ILE:HD11	50:BS:99:LYS:HE3	1.79	0.65
57:BZ:168:GLU:HA	57:BZ:168:GLU:OE1	1.96	0.65
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.32	0.65
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.31	0.65
3:CC:41:GLY:O	3:CC:45:LYS:HG3	1.96	0.65
8:CH:10:LEU:CD2	8:CH:83:ILE:HD11	2.26	0.65
25:CY:88:VAL:HB	25:CY:90:PHE:CE1	2.31	0.65
25:CY:377:VAL:HG21	25:CY:380:LEU:HD13	1.77	0.65
26:D0:50:ASN:HB3	26:D0:63:VAL:HG22	1.78	0.65
36:DA:1125:G:H3'	36:DA:1126:A:H5''	1.79	0.65
36:DA:1362:C:O2'	36:DA:1363:C:H5'	1.96	0.65
36:DA:2001:A:H4'	36:DA:2689:U:H2'	1.76	0.65
48:DQ:30:GLY:HA2	48:DQ:107:ALA:HB2	1.79	0.65
48:DQ:43:THR:O	48:DQ:47:ILE:HG13	1.95	0.65
51:DT:83:ILE:HG13	51:DT:84:GLN:N	2.12	0.65
56:DY:86:ARG:HB3	56:DY:88:LYS:NZ	2.11	0.65
57:DZ:150:LEU:N	57:DZ:150:LEU:HD23	2.11	0.65
1:AA:164:U:H2'	1:AA:165:C:H6	1.60	0.65
1:AA:301:G:H2'	1:AA:302:G:H8	1.61	0.65
1:AA:1004:A:H61	1:AA:1034:G:C2'	2.07	0.65
1:AA:1128:C:C2'	1:AA:1129:C:H5''	2.26	0.65
5:AE:148:VAL:HG21	8:AH:107:LEU:HD22	1.78	0.65
32:B6:14:THR:O	32:B6:49:HIS:HA	1.97	0.65
36:BA:1052:C:H2'	36:BA:1053:C:C6	2.32	0.65
37:BB:96:U:H2'	37:BB:97:G:C8	2.30	0.65
40:BE:61:ARG:HG2	40:BE:62:PRO:HD3	1.77	0.65
40:BE:70:ALA:O	40:BE:71:GLY:C	2.40	0.65
43:BH:124:GLU:CG	43:BH:132:ARG:HG3	2.26	0.65
47:BP:23:PRO:O	47:BP:33:ARG:HD2	1.97	0.65
47:BP:64:LYS:C	47:BP:66:GLY:H	2.05	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:45:ARG:HG3	49:BR:46:GLY:N	2.08	0.65
51:BT:35:LYS:HZ2	51:BT:41:ARG:NH1	1.94	0.65
56:BY:25:GLY:HA3	56:BY:39:VAL:CG1	2.26	0.65
2:CB:238:LEU:O	2:CB:238:LEU:HG	1.95	0.65
7:CG:145:ALA:O	7:CG:146:GLU:HB2	1.96	0.65
16:CP:9:PHE:HE2	16:CP:18:ARG:CZ	2.10	0.65
26:D0:40:GLN:NE2	26:D0:43:THR:HA	2.12	0.65
30:D4:7:PRO:CG	42:DG:61:ALA:HB1	2.27	0.65
36:DA:559:G:H22	52:DU:49:HIS:CD2	2.14	0.65
36:DA:2745:C:H4'	43:DH:142:GLY:O	1.97	0.65
39:DD:35:LYS:NZ	39:DD:35:LYS:HB3	2.12	0.65
41:DF:89:VAL:HG12	41:DF:90:PHE:N	2.11	0.65
47:DP:23:PRO:HB2	47:DP:33:ARG:CD	2.27	0.65
47:DP:41:ARG:HH11	47:DP:41:ARG:CA	2.08	0.65
47:DP:108:LYS:C	47:DP:110:TYR:H	2.04	0.65
57:DZ:155:LEU:H	57:DZ:155:LEU:HD23	1.61	0.65
1:AA:1329:A:O2'	1:AA:1330:U:H5'	1.96	0.65
1:AA:1392:G:O2'	1:AA:1393:U:H5'	1.96	0.65
3:AC:52:LEU:H	3:AC:52:LEU:CD2	2.10	0.65
3:AC:134:ILE:HD11	3:AC:153:VAL:CG2	2.27	0.65
25:AY:180:VAL:HG23	25:AY:216:LEU:CD1	2.27	0.65
25:AY:201:ILE:H	25:AY:201:ILE:CD1	2.09	0.65
30:B4:51:ASP:OD1	30:B4:52:THR:N	2.30	0.65
32:B6:47:THR:HG23	32:B6:48:VAL:N	2.11	0.65
36:BA:2310:A:O2'	36:BA:2311:A:C5'	2.44	0.65
36:BA:2312:U:H2'	36:BA:2313:C:C5'	2.27	0.65
36:BA:2439:A:H2'	36:BA:2439:A:N3	2.12	0.65
38:BC:4:HIS:HB3	38:BC:8:TYR:HD2	1.62	0.65
42:BG:109:VAL:C	42:BG:112:PRO:HD2	2.22	0.65
45:BN:46:VAL:O	45:BN:47:ALA:HB3	1.96	0.65
1:CA:1329:A:O2'	1:CA:1330:U:H5'	1.97	0.65
25:CY:315:LYS:NZ	25:CY:317:MET:HG2	2.11	0.65
25:CY:580:MET:O	25:CY:584:ILE:HG12	1.96	0.65
32:D6:15:GLU:CD	32:D6:44:ARG:NH1	2.55	0.65
34:D8:25:MET:HG3	47:DP:64:LYS:CB	2.26	0.65
36:DA:784:A:H5''	39:DD:227:ASN:HD21	1.62	0.65
36:DA:1223:G:H3'	36:DA:1224:C:H5''	1.78	0.65
36:DA:2012:G:H4'	54:DW:96:ILE:CD1	2.12	0.65
39:DD:35:LYS:HG2	39:DD:63:ARG:HA	1.78	0.65
47:DP:16:ARG:HH11	47:DP:16:ARG:C	2.05	0.65
47:DP:64:LYS:C	47:DP:66:GLY:H	2.05	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DS:89:ARG:HG3	50:DS:92:TYR:CA	2.26	0.65
1:AA:176:C:H2'	1:AA:177:C:C6	2.31	0.65
10:AJ:13:HIS:O	10:AJ:17:ASP:HB2	1.96	0.65
22:AV:27:G:H1	22:AV:43:C:H42	1.45	0.65
25:AY:12:LEU:HB3	25:AY:283:PRO:CG	2.27	0.65
25:AY:115:GLU:HG3	25:AY:118:SER:HB3	1.77	0.65
25:AY:119:GLU:O	25:AY:121:VAL:HG22	1.95	0.65
25:AY:152:THR:HA	25:AY:155:GLU:HB3	1.79	0.65
25:AY:272:LEU:O	25:AY:275:ALA:HB3	1.96	0.65
31:B5:56:LYS:HG3	31:B5:57:VAL:N	2.04	0.65
33:B7:33:ARG:NH1	36:BA:467:G:OP1	2.30	0.65
36:BA:143:G:H4'	55:BX:35:THR:HG21	1.77	0.65
36:BA:783:A:H8	36:BA:784:A:H4'	1.61	0.65
37:BB:13:A:O2'	37:BB:14:U:H3'	1.97	0.65
46:BO:17:ARG:NE	46:BO:47:ILE:HD11	2.08	0.65
50:BS:34:HIS:CE1	50:BS:54:LEU:HB3	2.31	0.65
56:BY:9:LYS:O	56:BY:28:LYS:HE2	1.97	0.65
1:CA:1109:C:O2'	1:CA:1110:A:H5'	1.97	0.65
1:CA:1358:U:OP1	14:CN:35:ARG:HG3	1.97	0.65
4:CD:188:LEU:HD12	4:CD:189:PRO:HD2	1.78	0.65
10:CJ:55:LYS:CE	10:CJ:55:LYS:H	2.09	0.65
13:CM:34:LEU:HD13	13:CM:41:PRO:HG3	1.77	0.65
32:D6:43:CYS:O	32:D6:44:ARG:HB2	1.96	0.65
36:DA:271(R):G:O2'	36:DA:271(S):G:H5'	1.97	0.65
36:DA:881:G:H2'	36:DA:882:G:H5'	1.78	0.65
36:DA:1231:G:H2'	36:DA:1232:G:C8	2.32	0.65
36:DA:1794:U:O2'	36:DA:1795:C:H5'	1.97	0.65
39:DD:210:GLY:C	39:DD:212:SER:H	2.05	0.65
40:DE:63:LEU:O	40:DE:63:LEU:HD23	1.96	0.65
46:DO:68:GLU:HB3	46:DO:78:ARG:HB2	1.77	0.65
47:DP:13:ASN:O	47:DP:14:LYS:HB2	1.97	0.65
47:DP:88:LEU:HD11	47:DP:95:VAL:HG11	1.77	0.65
57:DZ:139:VAL:HG12	57:DZ:141:VAL:HG23	1.79	0.65
1:AA:52:G:O2'	1:AA:53:A:H5'	1.97	0.64
1:AA:163:C:O2'	1:AA:164:U:H5'	1.97	0.64
1:AA:528:C:H41	12:AL:49:ASN:HD21	1.45	0.64
1:AA:741:G:O2'	1:AA:742:G:H5'	1.98	0.64
2:AB:62:ALA:O	2:AB:64:ARG:N	2.30	0.64
13:AM:124:PRO:HG2	25:AY:574:GLU:H	1.62	0.64
25:AY:67:ALA:HB3	25:AY:358:MET:HG3	1.77	0.64
25:AY:227:ILE:HG23	25:AY:237:PRO:HG2	1.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B5:40:LYS:NZ	31:B5:46:CYS:N	2.44	0.64
36:BA:491:G:H2'	36:BA:492:A:H8	1.61	0.64
36:BA:631:A:OP1	47:BP:64:LYS:HE2	1.97	0.64
36:BA:1479:G:H5'	36:BA:1558:A:H2	1.62	0.64
36:BA:2122:U:H2'	36:BA:2123:G:C8	2.31	0.64
36:BA:2732:G:H3'	36:BA:2733:A:H5'	1.79	0.64
41:BF:32:LEU:O	41:BF:36:VAL:HG23	1.97	0.64
47:BP:46:LYS:HG2	47:BP:52:GLU:HG2	1.77	0.64
50:BS:73:LEU:O	50:BS:73:LEU:HD23	1.98	0.64
51:BT:28:VAL:HG22	51:BT:46:GLU:CA	2.25	0.64
1:CA:1208:C:H2'	1:CA:1209:C:H6	1.60	0.64
3:CC:59:ARG:HD3	3:CC:64:VAL:HG22	1.79	0.64
30:D4:16:CYS:SG	30:D4:17:GLY:N	2.70	0.64
31:D5:27:PRO:HG3	54:DW:23:LEU:HD11	1.78	0.64
36:DA:528:A:H2	36:DA:2043:C:H5'	1.62	0.64
36:DA:852:G:H2'	36:DA:853:G:H8	1.62	0.64
36:DA:1138:G:H2'	36:DA:1139:G:O4'	1.96	0.64
36:DA:2713:A:H3'	36:DA:2714:G:C5'	2.27	0.64
36:DA:2832:U:H1'	36:DA:2834:G:N3	2.11	0.64
41:DF:112:MET:HA	41:DF:115:ALA:HB3	1.78	0.64
43:DH:44:VAL:C	43:DH:46:GLU:H	2.04	0.64
45:DN:67:LEU:HB3	45:DN:88:GLU:CG	2.27	0.64
51:DT:24:PRO:HD3	51:DT:52:ILE:CD1	2.27	0.64
54:DW:40:ASN:O	54:DW:41:LYS:HG2	1.96	0.64
57:DZ:81:ARG:HB3	57:DZ:81:ARG:CZ	2.26	0.64
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.79	0.64
1:AA:1002:G:N2	1:AA:1039:C:H2'	2.12	0.64
10:AJ:3:LYS:NZ	10:AJ:77:PRO:HD2	2.12	0.64
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	1.98	0.64
10:AJ:78:ASN:HD22	10:AJ:81:THR:CG2	2.10	0.64
25:AY:485:GLU:CG	25:AY:553:GLY:HA3	2.23	0.64
36:BA:492:A:H2'	36:BA:493:G:O4'	1.96	0.64
36:BA:1788:C:O2'	36:BA:1789:A:H5'	1.98	0.64
36:BA:2103:C:C3'	36:BA:2104:G:H5''	2.27	0.64
39:BD:11:PRO:O	39:BD:13:ARG:N	2.28	0.64
41:BF:112:MET:HA	41:BF:115:ALA:HB3	1.77	0.64
42:BG:55:LYS:O	42:BG:58:GLN:HG3	1.97	0.64
43:BH:44:VAL:C	43:BH:46:GLU:H	2.05	0.64
47:BP:58:THR:O	47:BP:61:ARG:HG3	1.97	0.64
49:BR:55:ALA:HA	49:BR:80:PHE:CE1	2.32	0.64
50:BS:97:ARG:C	50:BS:97:ARG:HE	2.05	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BX:57:LEU:N	55:BX:57:LEU:HD13	2.11	0.64
57:BZ:77:ASP:O	57:BZ:78:LYS:C	2.39	0.64
1:CA:1128:C:H1'	1:CA:1147:C:H42	1.62	0.64
2:CB:14:GLY:O	2:CB:15:VAL:HG13	1.97	0.64
2:CB:22:LYS:H	2:CB:40:HIS:CE1	2.15	0.64
2:CB:233:SER:CB	2:CB:234:PRO:HD2	2.28	0.64
6:CF:50:TYR:CE1	18:CR:77:GLY:HA2	2.31	0.64
10:CJ:20:ALA:C	10:CJ:22:LYS:H	2.06	0.64
13:CM:3:ARG:HA	13:CM:9:ILE:HG13	1.79	0.64
19:CS:22:LEU:O	19:CS:26:GLY:HA2	1.96	0.64
28:D2:63:VAL:HA	28:D2:66:GLU:HG2	1.80	0.64
32:D6:40:CYS:HB2	32:D6:46:HIS:CE1	2.31	0.64
36:DA:25:U:H5''	54:DW:80:PRO:HD3	1.77	0.64
36:DA:756:C:O2'	36:DA:757:U:H5'	1.97	0.64
36:DA:811:U:O2'	36:DA:812:C:H5''	1.97	0.64
36:DA:1887:C:H3'	36:DA:1888:G:H5''	1.78	0.64
36:DA:1946:U:H2'	36:DA:1947:C:C6	2.32	0.64
36:DA:2074:U:H2'	36:DA:2075:U:C6	2.33	0.64
36:DA:2195:C:O2'	36:DA:2196:C:H5'	1.96	0.64
39:DD:35:LYS:HD2	39:DD:36:PRO:CA	2.27	0.64
42:DG:38:VAL:HG23	42:DG:158:ALA:HB3	1.78	0.64
42:DG:57:ALA:HA	42:DG:90:LEU:CD2	2.26	0.64
45:DN:46:VAL:HG13	45:DN:47:ALA:N	2.08	0.64
45:DN:46:VAL:O	45:DN:47:ALA:HB3	1.96	0.64
52:DU:20:LEU:H	52:DU:20:LEU:CD2	2.09	0.64
1:AA:189:G:H2'	1:AA:189(A):C:C6	2.32	0.64
1:AA:630:G:C2'	1:AA:631:G:H5'	2.27	0.64
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.38	0.64
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.63	0.64
4:AD:107:ARG:HH21	4:AD:194:LEU:CD1	2.10	0.64
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.78	0.64
12:AL:46:LYS:HB2	12:AL:92:ASP:O	1.96	0.64
16:AP:74:LEU:HD23	16:AP:79:VAL:HG21	1.79	0.64
25:AY:9:LEU:HD22	25:AY:284:LEU:HB2	1.79	0.64
25:AY:25:LYS:NZ	25:AY:86:GLY:HA2	2.12	0.64
27:B1:19:GLN:O	27:B1:35:THR:HG22	1.98	0.64
36:BA:1362:C:O2'	36:BA:1363:C:H5'	1.97	0.64
36:BA:2196:C:O2'	36:BA:2197:U:H5'	1.97	0.64
36:BA:2794:C:H42	36:BA:2801(A):A:H61	1.44	0.64
40:BE:69:LYS:HE2	40:BE:69:LYS:H	1.62	0.64
41:BF:178:PRO:HG2	41:BF:179:GLU:OE1	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:60:ARG:NH1	48:BQ:60:ARG:HB2	2.12	0.64
1:CA:164:U:H2'	1:CA:165:C:C6	2.32	0.64
1:CA:736:C:H2'	1:CA:737:A:H8	1.61	0.64
1:CA:1026:G:C2'	1:CA:1027:C:H5'	2.26	0.64
2:CB:33:TYR:HB2	2:CB:43:ASP:HB2	1.79	0.64
3:CC:59:ARG:CG	3:CC:64:VAL:HA	2.27	0.64
3:CC:130:VAL:HG11	3:CC:157:ILE:HG23	1.79	0.64
12:CL:18:VAL:CG2	12:CL:19:ARG:H	1.97	0.64
13:CM:97:PRO:CA	13:CM:110:ARG:HD3	2.28	0.64
17:CQ:53:LEU:HD21	17:CQ:85:VAL:HG11	1.79	0.64
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.11	0.64
19:CS:6:LYS:CE	19:CS:6:LYS:H	2.10	0.64
25:CY:78:ARG:HH11	25:CY:78:ARG:HG3	1.62	0.64
25:CY:110:SER:HA	25:CY:149:VAL:HG21	1.79	0.64
26:D0:42:GLY:HA3	36:DA:2331:G:O4'	1.98	0.64
26:D0:45:PHE:O	26:D0:59:LEU:HD11	1.97	0.64
27:D1:51:VAL:HG21	27:D1:74:VAL:HG21	1.80	0.64
27:D1:60:PHE:CE1	27:D1:91:LYS:HG3	2.32	0.64
33:D7:33:ARG:NH1	36:DA:467:G:OP1	2.29	0.64
36:DA:55:G:H2'	36:DA:56:A:C8	2.32	0.64
36:DA:783:A:H8	36:DA:784:A:H4'	1.63	0.64
36:DA:1036:G:OP1	43:DH:59:ARG:HD2	1.97	0.64
36:DA:1113:U:H2'	36:DA:1114:G:C8	2.32	0.64
36:DA:1114:G:C2'	36:DA:1115:G:H5'	2.28	0.64
40:DE:77:ILE:HG22	40:DE:78:LEU:HD12	1.80	0.64
41:DF:78:ILE:HA	41:DF:83:PHE:CD2	2.31	0.64
45:DN:3:THR:HG22	45:DN:4:TYR:H	1.62	0.64
50:DS:74:ALA:HB1	50:DS:103:GLU:CB	2.28	0.64
54:DW:14:PRO:HG2	54:DW:78:GLU:HB2	1.79	0.64
56:DY:13:VAL:HG22	56:DY:14:LEU:H	1.62	0.64
56:DY:76:CYS:HB3	56:DY:96:ILE:CD1	2.22	0.64
1:AA:1228:C:OP1	13:AM:115:LYS:HG3	1.98	0.64
1:AA:1404:C:H1'	1:AA:1499:A:N1	2.13	0.64
3:AC:16:ARG:HH11	3:AC:16:ARG:CB	2.11	0.64
3:AC:59:ARG:HD3	3:AC:64:VAL:HG22	1.79	0.64
4:AD:192:GLU:CD	4:AD:192:GLU:H	2.06	0.64
10:AJ:6:ILE:CD1	10:AJ:72:VAL:HB	2.25	0.64
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.10	0.64
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	1.80	0.64
25:AY:145:ASP:HB3	25:AY:148:LEU:HD22	1.78	0.64
26:B0:43:THR:HG22	36:BA:2331:G:O3'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:84:A:C5'	56:BY:9:LYS:HZ2	2.10	0.64
36:BA:822:U:H2'	36:BA:823:G:H8	1.62	0.64
36:BA:2186:G:C3'	36:BA:2187:G:H5''	2.27	0.64
42:BG:16:ARG:O	42:BG:20:ILE:HG13	1.98	0.64
46:BO:115:VAL:HG13	46:BO:121:VAL:HG21	1.78	0.64
52:BU:79:PHE:HE1	52:BU:83:LEU:HD11	1.62	0.64
53:BV:21:ARG:O	53:BV:22:VAL:HG13	1.97	0.64
57:BZ:150:LEU:HD23	57:BZ:150:LEU:N	2.12	0.64
1:CA:275:G:H5''	17:CQ:14:LYS:CB	2.27	0.64
1:CA:1298:C:O2	1:CA:1298:C:H2'	1.96	0.64
6:CF:33:TYR:HA	6:CF:71:ARG:HH21	1.62	0.64
15:CO:82:ILE:C	15:CO:82:ILE:HD13	2.23	0.64
24:CX:11:A:O2'	24:CX:12:A:P	2.56	0.64
25:CY:264:LEU:HD22	25:CY:265:LYS:HZ2	1.62	0.64
25:CY:483:TYR:O	25:CY:558:PHE:HB3	1.97	0.64
25:CY:506:GLN:NE2	36:DA:1913:A:H62	1.93	0.64
27:D1:67:ILE:N	27:D1:68:PRO:HD2	2.12	0.64
32:D6:6:ARG:O	32:D6:7:ILE:HB	1.98	0.64
36:DA:143:G:H4'	55:DX:35:THR:HG21	1.78	0.64
36:DA:1043:C:C3'	36:DA:1044:G:H5''	2.27	0.64
36:DA:1132:A:H2'	36:DA:1133:U:H6	1.61	0.64
36:DA:2055:C:H4'	36:DA:2056:G:H5''	1.78	0.64
36:DA:2344:U:H4'	36:DA:2345:G:OP1	1.96	0.64
38:DC:128:LEU:HD13	38:DC:131:ILE:HB	1.79	0.64
51:DT:28:VAL:HG13	51:DT:46:GLU:HA	1.78	0.64
51:DT:35:LYS:NZ	51:DT:41:ARG:NH1	2.45	0.64
52:DU:20:LEU:HD22	52:DU:20:LEU:N	2.09	0.64
57:DZ:29:TYR:O	57:DZ:30:ASN:HB3	1.96	0.64
1:AA:627:G:O2'	1:AA:628:G:H5'	1.97	0.64
1:AA:1190:G:H3'	3:AC:3:ASN:HD22	1.62	0.64
1:AA:1239:A:H2'	1:AA:1298:C:N4	2.12	0.64
4:AD:9:CYS:SG	4:AD:31:CYS:O	2.55	0.64
8:AH:104:ARG:O	8:AH:106:GLY:N	2.30	0.64
9:AI:125:TYR:HD1	9:AI:126:SER:N	1.95	0.64
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.12	0.64
12:AL:23:LYS:O	12:AL:24:VAL:HG23	1.96	0.64
25:AY:443:HIS:CE1	25:AY:445:GLU:HB2	2.31	0.64
26:B0:50:ASN:HB3	26:B0:63:VAL:HG22	1.80	0.64
28:B2:69:ARG:CG	28:B2:70:GLN:N	2.58	0.64
36:BA:1810:A:H2'	36:BA:1811:G:O4'	1.98	0.64
36:BA:2171:A:H1'	36:BA:2172:U:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2188:C:H2'	36:BA:2189:U:C6	2.32	0.64
37:BB:91:C:H5'	48:BQ:17:LEU:O	1.98	0.64
39:BD:35:LYS:HD2	39:BD:36:PRO:CA	2.25	0.64
40:BE:49:LEU:N	40:BE:49:LEU:HD22	2.12	0.64
47:BP:13:ASN:O	47:BP:14:LYS:HB2	1.96	0.64
49:BR:11:ASN:OD1	49:BR:12:ARG:N	2.30	0.64
54:BW:82:LEU:HD12	54:BW:82:LEU:N	2.12	0.64
1:CA:555:C:H2'	1:CA:556:C:C6	2.32	0.64
1:CA:1298:C:H1'	1:CA:1299:A:C6	2.33	0.64
2:CB:82:ARG:HH11	2:CB:82:ARG:HG3	1.62	0.64
2:CB:139:LYS:O	2:CB:143:GLU:HG2	1.98	0.64
2:CB:223:ILE:HG23	2:CB:226:ARG:NH1	2.11	0.64
3:CC:86:VAL:O	3:CC:90:GLU:HG2	1.98	0.64
4:CD:107:ARG:HH21	4:CD:194:LEU:CD1	2.11	0.64
4:CD:112:VAL:HG12	4:CD:116:GLN:NE2	2.12	0.64
20:CT:29:LYS:O	20:CT:33:ILE:HG13	1.96	0.64
26:D0:19:LYS:HD3	26:D0:41:ARG:HH22	1.63	0.64
36:DA:211:A:H2'	36:DA:212:G:C5'	2.22	0.64
36:DA:943:U:OP2	47:DP:38:GLN:CD	2.40	0.64
43:DH:159:GLU:HG3	43:DH:160:LYS:N	2.13	0.64
47:DP:105:LEU:H	47:DP:105:LEU:HD12	1.62	0.64
50:DS:89:ARG:O	50:DS:92:TYR:HB3	1.97	0.64
54:DW:82:LEU:HD12	54:DW:82:LEU:N	2.13	0.64
1:AA:1298:C:H2'	1:AA:1298:C:O2	1.97	0.64
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.80	0.64
13:AM:40:ASN:ND2	13:AM:42:ALA:HB3	2.12	0.64
23:AW:51:C:H3'	23:AW:52:G:H5''	1.79	0.64
24:AX:11:A:C1'	24:AX:12:A:N7	2.52	0.64
25:AY:230:LYS:HZ1	25:AY:237:PRO:HA	1.62	0.64
32:B6:15:GLU:CD	32:B6:44:ARG:HH22	2.04	0.64
36:BA:1043:C:C3'	36:BA:1044:G:H5''	2.27	0.64
36:BA:2807:G:H1	36:BA:2893:G:H1	1.46	0.64
38:BC:135:ARG:N	38:BC:135:ARG:HD2	2.12	0.64
41:BF:160:ASN:HD22	41:BF:161:GLU:N	1.94	0.64
45:BN:120:LEU:HD11	45:BN:122:VAL:HG23	1.79	0.64
45:BN:133:GLN:HG2	45:BN:134:ARG:N	2.12	0.64
1:CA:972:C:OP2	10:CJ:57:LYS:HG2	1.97	0.64
1:CA:1010:G:N1	1:CA:1020:U:H1'	2.13	0.64
1:CA:1239:A:H2'	1:CA:1298:C:H42	1.61	0.64
2:CB:156:LYS:O	2:CB:157:ARG:CB	2.45	0.64
10:CJ:47:PHE:CZ	14:CN:37:PHE:HE1	2.16	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:54:VAL:O	13:CM:58:GLU:HG2	1.98	0.64
15:CO:26:GLU:HA	15:CO:81:LEU:HD22	1.80	0.64
25:CY:95:GLU:O	25:CY:99:ARG:HD3	1.97	0.64
29:D3:35:ARG:HD3	29:D3:37:LEU:HD21	1.78	0.64
36:DA:1109:C:H5'	36:DA:1110:G:OP2	1.96	0.64
36:DA:1477:A:H5'	36:DA:1478:G:OP2	1.97	0.64
36:DA:1999:C:O2'	36:DA:2000:G:H5'	1.97	0.64
36:DA:2794:C:H42	36:DA:2801(A):A:H61	1.44	0.64
38:DC:50:ILE:HB	38:DC:57:GLN:HG2	1.80	0.64
38:DC:185:LYS:HE3	38:DC:185:LYS:N	2.12	0.64
39:DD:65:ILE:HG22	39:DD:104:TYR:HB3	1.80	0.64
39:DD:130:ALA:C	39:DD:131:LEU:HD12	2.22	0.64
39:DD:226:MET:HB3	39:DD:230:ASP:HB2	1.80	0.64
43:DH:149:ARG:HA	43:DH:162:ILE:HG13	1.79	0.64
45:DN:39:ARG:HB2	45:DN:41:ASP:OD1	1.98	0.64
46:DO:115:VAL:HG13	46:DO:121:VAL:HG21	1.77	0.64
49:DR:45:ARG:CG	49:DR:46:GLY:H	2.09	0.64
51:DT:5:ALA:O	51:DT:7:ILE:N	2.30	0.64
53:DV:39:LEU:HD12	53:DV:50:PRO:O	1.97	0.64
54:DW:68:ARG:CA	54:DW:110:LYS:HG2	2.27	0.64
1:AA:1005:A:OP1	1:AA:1006:C:N3	2.31	0.64
1:AA:1442(A):G:H22	51:BT:119:LYS:HG3	1.62	0.64
6:AF:63:TYR:O	6:AF:65:VAL:HG13	1.98	0.64
8:AH:123:GLU:O	8:AH:127:LEU:HD23	1.97	0.64
13:AM:10:PRO:CG	13:AM:18:ALA:HB1	2.28	0.64
13:AM:80:ARG:O	13:AM:83:ASP:HB3	1.98	0.64
17:AQ:22:LEU:HD11	17:AQ:39:SER:HB2	1.79	0.64
23:AW:1:C:H2'	23:AW:2:G:H8	1.62	0.64
23:AW:28:C:H2'	23:AW:29:G:H8	1.62	0.64
25:AY:92:ILE:HG12	25:AY:405:PRO:CG	2.26	0.64
25:AY:211:GLU:HB2	25:AY:215:LYS:NZ	2.13	0.64
36:BA:55:G:H2'	36:BA:56:A:C8	2.32	0.64
36:BA:1775:U:H2'	36:BA:1776:G:C5'	2.27	0.64
36:BA:2200:C:N4	36:BA:2223:G:H1	1.94	0.64
38:BC:50:ILE:HB	38:BC:57:GLN:HG2	1.79	0.64
41:BF:25:PRO:CG	41:BF:119:ARG:HB2	2.28	0.64
43:BH:136:ILE:HD12	43:BH:136:ILE:N	2.13	0.64
50:BS:88:ASP:CG	50:BS:89:ARG:N	2.55	0.64
52:BU:20:LEU:HD22	52:BU:20:LEU:N	2.11	0.64
55:BX:27:THR:HB	55:BX:80:ILE:HG22	1.80	0.64
56:BY:86:ARG:HB3	56:BY:88:LYS:NZ	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:630:G:C2'	1:CA:631:G:H5'	2.27	0.64
1:CA:1005:A:OP1	1:CA:1006:C:N3	2.31	0.64
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.32	0.64
2:CB:223:ILE:HG12	2:CB:226:ARG:CZ	2.27	0.64
3:CC:173:VAL:HG12	3:CC:175:LEU:CD1	2.28	0.64
13:CM:3:ARG:HG2	13:CM:9:ILE:CD1	2.26	0.64
17:CQ:9:VAL:HG12	17:CQ:56:VAL:HG22	1.78	0.64
25:CY:14:ASN:O	25:CY:101:LEU:HB2	1.98	0.64
28:D2:65:ASN:ND2	36:DA:112:U:H5'	2.11	0.64
29:D3:28:LEU:N	29:D3:28:LEU:HD23	2.13	0.64
36:DA:272(B):G:H2'	36:DA:272(C):G:C8	2.31	0.64
36:DA:279:C:C2'	36:DA:280:C:H5''	2.26	0.64
36:DA:676:A:H1'	36:DA:2443:C:H1'	1.77	0.64
36:DA:1796:U:OP1	39:DD:276:LYS:HE3	1.97	0.64
36:DA:2629:A:H2'	36:DA:2629:A:N3	2.13	0.64
37:DB:65:C:H41	37:DB:109:C:H2'	1.62	0.64
38:DC:90:ALA:HA	38:DC:155:ARG:HH12	1.60	0.64
39:DD:45:ASN:HB2	39:DD:46:GLN:OE1	1.98	0.64
42:DG:133:LEU:CD1	42:DG:157:ILE:HB	2.27	0.64
47:DP:23:PRO:O	47:DP:33:ARG:HD2	1.98	0.64
1:AA:1128:C:H1'	1:AA:1147:C:H42	1.63	0.64
1:AA:1226:C:H41	13:AM:104:ARG:HD2	1.61	0.64
2:AB:82:ARG:HG3	2:AB:82:ARG:HH11	1.63	0.64
3:AC:76:VAL:HG23	3:AC:77:ILE:HG13	1.80	0.64
23:AW:61:C:H2'	23:AW:62:C:C6	2.33	0.64
25:AY:241:GLU:O	25:AY:244:ALA:HB3	1.96	0.64
25:AY:335:LEU:CD2	25:AY:355:LEU:HD11	2.28	0.64
36:BA:272(H):C:H5'	36:BA:272(H):C:H6	1.63	0.64
36:BA:272(J):C:N4	36:BA:363:G:H22	1.96	0.64
36:BA:1367:A:H2'	36:BA:1368:G:H5'	1.79	0.64
36:BA:1477:A:H5'	36:BA:1478:G:OP2	1.98	0.64
37:BB:15:A:H3'	37:BB:16:G:H5'	1.79	0.64
40:BE:199:ARG:HB3	40:BE:200:GLU:OE1	1.98	0.64
41:BF:185:ASP:HA	41:BF:188:ARG:CD	2.28	0.64
43:BH:18:GLU:HB2	43:BH:25:LYS:HB2	1.80	0.64
47:BP:6:LEU:HB3	47:BP:9:ASN:ND2	2.12	0.64
49:BR:83:ILE:HA	49:BR:86:ARG:HD3	1.80	0.64
51:BT:35:LYS:NZ	51:BT:41:ARG:NH1	2.46	0.64
53:BV:51:VAL:HG12	53:BV:52:VAL:N	2.11	0.64
54:BW:68:ARG:CA	54:BW:110:LYS:HG2	2.26	0.64
1:CA:270:A:H2'	1:CA:271:C:C6	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:415:A:H2'	1:CA:416:G:C8	2.33	0.64
1:CA:833:U:H2'	1:CA:834:C:C6	2.33	0.64
12:CL:17:LYS:HD3	12:CL:18:VAL:HG22	1.78	0.64
25:CY:14:ASN:HB2	25:CY:102:ASP:OD1	1.96	0.64
25:CY:601:ILE:HD12	25:CY:684:GLN:HG3	1.78	0.64
59:CY:701:FUA:H122	59:CY:701:FUA:C23	2.28	0.64
39:DD:118:VAL:HG12	39:DD:129:ASN:OD1	1.98	0.64
40:DE:51:PHE:O	40:DE:74:PRO:HB3	1.98	0.64
43:DH:16:SER:HB2	43:DH:27:LYS:CB	2.27	0.64
47:DP:23:PRO:HD2	47:DP:33:ARG:HH21	1.63	0.64
50:DS:30:ARG:NH2	50:DS:62:LYS:HD2	2.12	0.64
50:DS:74:ALA:HB1	50:DS:103:GLU:HB2	1.80	0.64
51:DT:115:ARG:HH11	51:DT:115:ARG:CB	2.11	0.64
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.79	0.64
9:AI:114:TYR:CD2	10:AJ:60:ARG:HG3	2.32	0.64
25:AY:8:ASP:O	25:AY:9:LEU:HB3	1.97	0.64
25:AY:603:GLU:O	25:AY:676:TYR:HA	1.98	0.64
59:AY:701:FUA:H5	59:AY:701:FUA:C20	2.12	0.64
28:B2:7:ARG:HH11	28:B2:7:ARG:HG3	1.62	0.64
30:B4:10:VAL:CG2	30:B4:11:PRO:HD2	2.27	0.64
36:BA:1099:G:H2'	36:BA:1100:C:O4'	1.98	0.64
37:BB:20:C:O2'	37:BB:21:G:H5''	1.98	0.64
43:BH:118:PRO:HG2	43:BH:121:ILE:HD12	1.80	0.64
43:BH:159:GLU:HG3	43:BH:160:LYS:N	2.13	0.64
47:BP:91:PHE:CE2	47:BP:95:VAL:HG12	2.33	0.64
50:BS:30:ARG:NH2	50:BS:62:LYS:HD2	2.12	0.64
51:BT:5:ALA:O	51:BT:7:ILE:N	2.31	0.64
1:CA:475:G:O2'	1:CA:476:G:H5'	1.98	0.64
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.32	0.64
10:CJ:78:ASN:HD22	10:CJ:81:THR:CG2	2.11	0.64
12:CL:38:THR:HG23	12:CL:57:LYS:HB3	1.78	0.64
16:CP:1:MET:SD	16:CP:3:LYS:HE3	2.38	0.64
20:CT:86:ARG:HH11	20:CT:86:ARG:HG3	1.63	0.64
25:CY:467:LYS:O	25:CY:471:LYS:HA	1.97	0.64
27:D1:3:LYS:HG3	27:D1:4:VAL:H	1.61	0.64
28:D2:39:ALA:HA	28:D2:45:SER:HB3	1.78	0.64
30:D4:10:VAL:CG2	30:D4:11:PRO:HD2	2.27	0.64
30:D4:51:ASP:OD1	30:D4:52:THR:N	2.31	0.64
36:DA:26:G:OP1	54:DW:80:PRO:HB3	1.98	0.64
36:DA:1099:G:H2'	36:DA:1100:C:O4'	1.98	0.64
36:DA:1183:G:O2'	36:DA:1184:G:H5'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1803:A:O3'	39:DD:259:THR:CG2	2.42	0.64
36:DA:2716:U:O2'	36:DA:2717:G:H5'	1.97	0.64
57:DZ:57:ILE:HD12	57:DZ:57:ILE:N	2.11	0.64
1:AA:59:A:H2'	1:AA:59:A:N3	2.13	0.64
1:AA:948:C:O2'	1:AA:949:A:H5'	1.97	0.64
1:AA:972:C:OP2	10:AJ:57:LYS:HG2	1.97	0.64
1:AA:1516:G:H2'	1:AA:1518:A:OP2	1.97	0.64
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.28	0.64
22:AV:11:C:O2'	22:AV:12:U:H5'	1.97	0.64
25:AY:132:ARG:O	25:AY:256:THR:HG23	1.98	0.64
25:AY:578:SER:HB3	25:AY:581:ALA:CB	2.28	0.64
36:BA:1080:C:O2'	36:BA:1081:U:H5'	1.98	0.64
36:BA:1796:U:OP1	39:BD:276:LYS:HE3	1.97	0.64
36:BA:2518:A:H5''	36:BA:2519:U:OP2	1.97	0.64
37:BB:35:U:O2	37:BB:35:U:H2'	1.98	0.64
42:BG:68:PRO:HB2	42:BG:90:LEU:HD11	1.79	0.64
47:BP:23:PRO:HB2	47:BP:33:ARG:CD	2.27	0.64
51:BT:80:SER:CB	51:BT:81:PRO:HD3	2.28	0.64
53:BV:25:LEU:H	53:BV:92:THR:HG21	1.63	0.64
54:BW:54:ALA:HB1	54:BW:107:LEU:HD21	1.80	0.64
1:CA:973:G:C1'	10:CJ:55:LYS:HE2	2.27	0.64
1:CA:992:U:H1'	1:CA:993:G:C2	2.33	0.64
1:CA:1004:A:C5'	1:CA:1025:U:H3	2.09	0.64
1:CA:1404:C:H2'	1:CA:1404:C:O2	1.96	0.64
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.80	0.64
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.78	0.64
25:CY:13:ARG:HB3	25:CY:79:ILE:HG23	1.80	0.64
25:CY:553:GLY:O	25:CY:557:GLY:HA2	1.98	0.64
26:D0:27:GLU:HA	26:D0:67:VAL:O	1.97	0.64
27:D1:64:ALA:HA	27:D1:67:ILE:HD11	1.80	0.64
31:D5:40:LYS:NZ	31:D5:46:CYS:N	2.45	0.64
36:DA:491:G:H2'	36:DA:492:A:C8	2.33	0.64
36:DA:902:C:H2'	36:DA:903:C:C6	2.33	0.64
36:DA:1052:C:H2'	36:DA:1053:C:C6	2.33	0.64
36:DA:1389:G:H2'	36:DA:1390:U:C6	2.33	0.64
36:DA:2348:U:H2'	36:DA:2349:G:C5'	2.28	0.64
39:DD:91:ARG:HG2	39:DD:91:ARG:NH1	2.12	0.64
40:DE:25:VAL:HG22	40:DE:183:LEU:HG	1.79	0.64
40:DE:57:LYS:HZ3	40:DE:63:LEU:HG	1.61	0.64
40:DE:70:ALA:O	40:DE:71:GLY:C	2.41	0.64
41:DF:32:LEU:O	41:DF:36:VAL:HG23	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:6:LEU:HB3	47:DP:9:ASN:ND2	2.12	0.64
47:DP:16:ARG:HD3	47:DP:18:ARG:N	2.09	0.64
48:DQ:17:LEU:C	48:DQ:18:LYS:HD2	2.23	0.64
54:DW:82:LEU:HB3	54:DW:84:ARG:HH12	1.63	0.64
55:DX:44:GLU:HB2	55:DX:49:VAL:O	1.98	0.64
56:DY:79:CYS:SG	56:DY:80:GLY:N	2.70	0.64
57:DZ:79:ARG:O	57:DZ:80:ARG:HB2	1.97	0.64
1:AA:1211:U:H5'	1:AA:1212:U:OP1	1.97	0.63
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.33	0.63
1:AA:1423:G:H2'	1:AA:1424:C:C6	2.33	0.63
5:AE:36:ASP:OD1	5:AE:38:GLN:HB2	1.97	0.63
14:AN:53:LEU:HB3	14:AN:56:VAL:HG21	1.79	0.63
22:AV:23:A:H2'	22:AV:24:G:H8	1.63	0.63
24:AX:11:A:O2'	24:AX:12:A:P	2.56	0.63
25:AY:21:ILE:HD12	25:AY:88:VAL:HG13	1.80	0.63
25:AY:311:ALA:HB2	25:AY:330:VAL:HA	1.80	0.63
25:AY:496:LYS:HE2	25:AY:498:ILE:HD13	1.80	0.63
36:BA:144:C:H2'	36:BA:145:G:C8	2.33	0.63
36:BA:419:C:H2'	36:BA:420:C:C6	2.32	0.63
36:BA:881:G:H2'	36:BA:882:G:H5'	1.78	0.63
36:BA:2537:U:H2'	36:BA:2538:C:C6	2.33	0.63
36:BA:2646:C:OP2	36:BA:2732:G:H2'	1.97	0.63
47:BP:16:ARG:NH1	47:BP:16:ARG:HB2	2.13	0.63
47:BP:85:LEU:H	47:BP:85:LEU:CD2	2.08	0.63
1:CA:52:G:O2'	1:CA:53:A:H5'	1.99	0.63
1:CA:718:G:C8	11:CK:116:HIS:HB3	2.33	0.63
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.28	0.63
2:CB:31:TYR:O	2:CB:42:ILE:HG13	1.98	0.63
13:CM:40:ASN:ND2	13:CM:42:ALA:HB3	2.13	0.63
22:CV:56:C:H1'	42:DG:76:SER:OG	1.97	0.63
25:CY:276:VAL:HA	25:CY:280:LEU:HD23	1.80	0.63
25:CY:606:MET:CE	25:CY:671:MET:HG2	2.27	0.63
26:D0:70:GLN:NE2	26:D0:80:HIS:NE2	2.46	0.63
26:D0:73:GLY:O	26:D0:75:LEU:N	2.29	0.63
32:D6:15:GLU:OE2	32:D6:44:ARG:NH1	2.30	0.63
36:DA:1151:G:H5''	52:DU:81:HIS:CE1	2.33	0.63
36:DA:1237:A:O2'	36:DA:1238:G:O4'	2.15	0.63
36:DA:2310:A:O2'	36:DA:2311:A:C5'	2.46	0.63
42:DG:121:ASN:CG	42:DG:124:SER:HB2	2.23	0.63
50:DS:97:ARG:NE	50:DS:97:ARG:C	2.56	0.63
52:DU:56:ASP:O	52:DU:59:ARG:HB2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:99:VAL:O	3:AC:99:VAL:HG23	1.98	0.63
8:AH:85:ARG:HH12	8:AH:134:ILE:HG23	1.63	0.63
12:AL:27:LEU:O	12:AL:29:GLY:N	2.31	0.63
13:AM:94:ARG:NE	19:AS:82:GLY:N	2.46	0.63
23:AW:14:A:C2'	23:AW:15:G:H5''	2.28	0.63
23:AW:22:G:H2'	23:AW:23:C:C5'	2.28	0.63
25:AY:22:ASP:O	60:AY:702:GDP:H5'	1.98	0.63
25:AY:112:GLN:O	25:AY:115:GLU:HB3	1.98	0.63
25:AY:555:LEU:HD13	25:AY:601:ILE:HG13	1.81	0.63
32:B6:37:ARG:NH2	36:BA:2286:A:N6	2.46	0.63
36:BA:1237:A:O2'	36:BA:1238:G:O4'	2.16	0.63
40:BE:46:ALA:HA	40:BE:82:ARG:O	1.98	0.63
42:BG:129:GLY:HA2	42:BG:169:ALA:HB2	1.80	0.63
45:BN:10:GLU:CD	45:BN:11:PRO:HD2	2.23	0.63
47:BP:84:ASN:C	47:BP:86:LYS:N	2.53	0.63
57:BZ:84:GLU:O	57:BZ:85:HIS:HB2	1.98	0.63
57:BZ:99:TYR:HE1	57:BZ:125:LEU:HD13	1.64	0.63
5:CE:76:ILE:CG2	5:CE:118:ILE:HD13	2.29	0.63
20:CT:90:GLN:HA	20:CT:93:GLU:OE2	1.98	0.63
25:CY:165:GLN:C	25:CY:166:LEU:HD12	2.24	0.63
25:CY:415:PRO:HB2	25:CY:420:ASP:C	2.23	0.63
25:CY:605:ILE:HG23	25:CY:646:PHE:HB3	1.78	0.63
25:CY:621:ILE:HD11	25:CY:634:MET:HE1	1.79	0.63
27:D1:26:ARG:HG3	27:D1:27:GLU:N	2.13	0.63
27:D1:80:LEU:CD2	27:D1:81:LYS:H	2.11	0.63
28:D2:3:LEU:O	28:D2:3:LEU:HD23	1.98	0.63
35:D9:27:CYS:SG	35:D9:28:GLU:N	2.71	0.63
36:DA:654(M):C:HO2'	36:DA:654(N):G:H8	1.46	0.63
36:DA:840:C:C2'	36:DA:841:A:H5''	2.29	0.63
37:DB:96:U:H2'	37:DB:97:G:C8	2.33	0.63
42:DG:41:GLN:HG2	42:DG:155:MET:HB3	1.80	0.63
47:DP:101:VAL:HB	47:DP:107:LYS:HA	1.79	0.63
49:DR:83:ILE:HA	49:DR:86:ARG:HD3	1.80	0.63
54:DW:107:LEU:HD22	54:DW:107:LEU:N	2.13	0.63
1:AA:191:G:H1'	20:AT:105:SER:HA	1.80	0.63
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.61	0.63
1:AA:1442(A):G:H2'	51:BT:118:ARG:HH11	1.63	0.63
1:AA:1525:G:H2'	1:AA:1526:G:H8	1.64	0.63
3:AC:47:LEU:HD11	3:AC:76:VAL:HG12	1.79	0.63
3:AC:175:LEU:HD21	3:AC:201:TYR:CE2	2.34	0.63
5:AE:81:GLU:HG3	5:AE:90:VAL:HG13	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.81	0.63
10:AJ:20:ALA:C	10:AJ:22:LYS:H	2.05	0.63
13:AM:3:ARG:HG2	13:AM:9:ILE:CD1	2.28	0.63
24:AX:18:C:H5'	24:AX:19:A:OP1	1.98	0.63
25:AY:252:ASP:HB2	25:AY:254:LYS:CG	2.25	0.63
36:BA:484:C:H2'	36:BA:485:C:C6	2.33	0.63
36:BA:852:G:H2'	36:BA:853:G:H8	1.63	0.63
40:BE:24:THR:CG2	40:BE:184:VAL:HG23	2.28	0.63
45:BN:39:ARG:HB2	45:BN:41:ASP:OD1	1.98	0.63
45:BN:126:PRO:O	45:BN:127:ASP:HB2	1.98	0.63
50:BS:74:ALA:HB1	50:BS:103:GLU:HB2	1.81	0.63
2:CB:83:MET:CG	2:CB:234:PRO:HG3	2.27	0.63
25:CY:165:GLN:HE21	25:CY:177:ILE:HG21	1.63	0.63
29:D3:6:VAL:HB	29:D3:54:VAL:HG11	1.79	0.63
31:D5:45:VAL:HG22	31:D5:51:TYR:CE2	2.34	0.63
39:DD:263:ARG:HB2	39:DD:263:ARG:HH11	1.63	0.63
43:DH:12:PRO:CD	43:DH:49:VAL:HG12	2.20	0.63
49:DR:55:ALA:HA	49:DR:80:PHE:CE1	2.33	0.63
54:DW:54:ALA:HB1	54:DW:107:LEU:HD21	1.80	0.63
10:AJ:78:ASN:C	10:AJ:79:ARG:HH11	2.06	0.63
25:AY:388:THR:HG23	25:AY:399:LEU:HD13	1.81	0.63
25:AY:527:ASN:ND2	25:AY:539:ILE:HG21	2.12	0.63
25:AY:608:VAL:HG12	25:AY:609:GLU:H	1.64	0.63
25:AY:688:ILE:HG22	25:AY:688:ILE:O	1.97	0.63
27:B1:45:ASN:HD21	27:B1:47:GLN:NE2	1.97	0.63
32:B6:28:ARG:O	32:B6:32:ASN:HB2	1.98	0.63
33:B7:46:VAL:HG12	33:B7:47:ARG:N	2.13	0.63
34:B8:6:THR:CG2	34:B8:63:PRO:HD3	2.28	0.63
34:B8:42:ARG:O	34:B8:44:LYS:N	2.25	0.63
36:BA:518:G:H4'	54:BW:18:ARG:NH1	2.14	0.63
36:BA:1183:G:O2'	36:BA:1184:G:H5'	1.98	0.63
46:BO:47:ILE:HG22	46:BO:48:PRO:HD2	1.78	0.63
47:BP:112:LEU:H	47:BP:128:HIS:CD2	2.16	0.63
47:BP:115:LEU:N	47:BP:115:LEU:HD23	2.14	0.63
48:BQ:45:GLN:H	48:BQ:45:GLN:NE2	1.97	0.63
52:BU:49:HIS:HA	52:BU:52:ARG:HB2	1.80	0.63
55:BX:70:LEU:HD23	55:BX:71:GLY:N	2.13	0.63
56:BY:13:VAL:HG22	56:BY:14:LEU:H	1.62	0.63
1:CA:1314:C:H2'	1:CA:1315:U:H6	1.63	0.63
4:CD:31:CYS:O	4:CD:31:CYS:SG	2.56	0.63
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:24:ALA:O	19:CS:25:LYS:HB2	1.97	0.63
25:CY:358:MET:HE1	25:CY:363:ARG:HG2	1.80	0.63
35:D9:22:ARG:HB2	35:D9:24:TYR:HE1	1.63	0.63
36:DA:274:G:H2'	36:DA:274:G:N3	2.12	0.63
36:DA:1840:G:H1	36:DA:1902:C:N4	1.95	0.63
36:DA:2439:A:H2'	36:DA:2439:A:N3	2.13	0.63
36:DA:2483:C:H3'	36:DA:2484:G:C5'	2.22	0.63
36:DA:2807:G:H1	36:DA:2893:G:H1	1.47	0.63
37:DB:20:C:O2'	37:DB:21:G:H5''	1.99	0.63
37:DB:91:C:O2'	37:DB:92:C:H5'	1.99	0.63
39:DD:23:GLU:HA	39:DD:23:GLU:OE1	1.97	0.63
42:DG:16:ARG:O	42:DG:20:ILE:HG13	1.99	0.63
56:DY:97:ARG:HG3	56:DY:97:ARG:HH11	1.63	0.63
57:DZ:153:SER:HB2	57:DZ:163:LEU:CD1	2.29	0.63
1:AA:345:C:H5'	1:AA:346:G:OP1	1.98	0.63
3:AC:110:ASN:O	3:AC:141:VAL:HG22	1.98	0.63
6:AF:46:ARG:HH22	18:AR:37:VAL:HG21	1.62	0.63
12:AL:27:LEU:HD13	12:AL:28:LYS:H	1.64	0.63
21:AU:2:GLY:O	21:AU:4:GLY:N	2.32	0.63
25:AY:487:ILE:H	25:AY:487:ILE:HD13	1.63	0.63
25:AY:537:GLU:O	25:AY:540:PRO:HD2	1.99	0.63
25:AY:609:GLU:HB2	25:AY:670:VAL:HG22	1.80	0.63
27:B1:29:GLY:C	27:B1:31:GLY:H	2.05	0.63
27:B1:76:ARG:HH12	27:B1:95:LEU:HD22	1.63	0.63
32:B6:53:LYS:HG3	32:B6:54:ILE:H	1.64	0.63
34:B8:30:ARG:NH2	36:BA:2419:U:O4	2.32	0.63
36:BA:120:U:H5'	36:BA:121:G:OP1	1.98	0.63
36:BA:212:G:H5'	36:BA:212:G:C8	2.28	0.63
36:BA:813:U:H2'	36:BA:814:C:C5	2.34	0.63
36:BA:1036:G:OP1	43:BH:59:ARG:HD2	1.97	0.63
36:BA:2000:G:O2'	36:BA:2001:A:H5'	1.99	0.63
37:BB:15:A:H3'	37:BB:16:G:C5'	2.28	0.63
39:BD:263:ARG:HB2	39:BD:263:ARG:HH11	1.62	0.63
41:BF:2:LYS:HD3	41:BF:119:ARG:HG3	1.80	0.63
43:BH:16:SER:HB2	43:BH:27:LYS:CB	2.27	0.63
45:BN:14:VAL:HG11	45:BN:137:LYS:HD2	1.80	0.63
45:BN:125:GLY:HA3	45:BN:126:PRO:C	2.23	0.63
54:BW:50:VAL:HG11	54:BW:103:ILE:HG21	1.79	0.63
1:CA:1128:C:C2'	1:CA:1129:C:H5''	2.28	0.63
1:CA:1239:A:H2'	1:CA:1298:C:N4	2.14	0.63
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.11	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:95:LYS:HZ2	9:CI:96:LEU:HD13	1.62	0.63
13:CM:22:ILE:HB	13:CM:25:ILE:HD12	1.79	0.63
13:CM:94:ARG:NE	19:CS:82:GLY:N	2.46	0.63
25:CY:517:LEU:HD23	25:CY:521:SER:HB3	1.80	0.63
25:CY:670:VAL:HG23	25:CY:671:MET:H	1.63	0.63
31:D5:3:LYS:NZ	36:DA:2613:U:C2'	2.62	0.63
36:DA:78:A:O2'	36:DA:79:G:H5'	1.98	0.63
36:DA:492:A:H2'	36:DA:493:G:O4'	1.99	0.63
36:DA:610:G:N2	36:DA:619:G:H1'	2.13	0.63
36:DA:2076:U:H5'	36:DA:2238:G:H22	1.63	0.63
36:DA:2312:U:H2'	36:DA:2313:C:C5'	2.26	0.63
36:DA:2762:G:H5'	36:DA:2762:G:C8	2.33	0.63
41:DF:185:ASP:HA	41:DF:188:ARG:CD	2.28	0.63
43:DH:41:MET:O	43:DH:42:ARG:HB3	1.98	0.63
45:DN:65:LYS:HZ2	45:DN:65:LYS:HB3	1.63	0.63
45:DN:125:GLY:HA3	45:DN:126:PRO:C	2.23	0.63
46:DO:4:PRO:O	46:DO:5:GLN:HB2	1.98	0.63
51:DT:80:SER:CB	51:DT:81:PRO:HD3	2.28	0.63
52:DU:79:PHE:HE1	52:DU:83:LEU:HD11	1.63	0.63
56:DY:9:LYS:O	56:DY:28:LYS:HE2	1.99	0.63
57:DZ:82:ARG:O	57:DZ:83:PRO:C	2.41	0.63
1:AA:439:A:H2'	1:AA:441:A:H5'	1.80	0.63
1:AA:475:G:O2'	1:AA:476:G:H5'	1.98	0.63
1:AA:1358:U:OP1	14:AN:35:ARG:HG3	1.99	0.63
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD12	1.79	0.63
18:AR:44:LEU:O	18:AR:45:SER:C	2.41	0.63
26:B0:19:LYS:HD3	26:B0:41:ARG:HH22	1.64	0.63
31:B5:3:LYS:HG2	36:BA:747:U:C4	2.34	0.63
32:B6:43:CYS:O	32:B6:44:ARG:HB2	1.97	0.63
36:BA:491:G:H2'	36:BA:492:A:C8	2.33	0.63
38:BC:185:LYS:HE3	38:BC:185:LYS:N	2.14	0.63
49:BR:55:ALA:HB2	49:BR:79:LEU:HD11	1.81	0.63
50:BS:89:ARG:O	50:BS:92:TYR:HB3	1.98	0.63
1:CA:41:G:H2'	1:CA:42:G:H8	1.64	0.63
1:CA:1082:G:O2'	1:CA:1083:U:H5'	1.99	0.63
17:CQ:53:LEU:HD23	17:CQ:54:GLY:N	2.13	0.63
25:CY:327:PHE:CD1	25:CY:376:ALA:HB2	2.34	0.63
30:D4:12:ALA:HB1	30:D4:29:PRO:HA	1.80	0.63
36:DA:1963:U:O2	36:DA:1963:U:H2'	1.98	0.63
36:DA:2392:A:C8	47:DP:60:MET:HB3	2.23	0.63
39:DD:76:PRO:HG2	39:DD:98:VAL:HG21	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:16:ARG:HD3	47:DP:16:ARG:C	2.23	0.63
55:DX:35:THR:HG22	55:DX:37:THR:N	2.03	0.63
57:DZ:28:MET:HB3	57:DZ:88:PHE:HB2	1.81	0.63
1:AA:1010:G:N1	1:AA:1020:U:H1'	2.14	0.63
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.34	0.63
1:AA:1298:C:H1'	1:AA:1299:A:C6	2.33	0.63
2:AB:14:GLY:O	2:AB:15:VAL:HG13	1.98	0.63
3:AC:59:ARG:CG	3:AC:64:VAL:HA	2.28	0.63
17:AQ:53:LEU:HD21	17:AQ:85:VAL:HG11	1.80	0.63
25:AY:528:ALA:O	25:AY:568:TYR:HA	1.99	0.63
33:B7:41:ARG:HH22	36:BA:460:A:P	2.22	0.63
35:B9:27:CYS:SG	35:B9:28:GLU:N	2.71	0.63
36:BA:25:U:H5''	54:BW:80:PRO:HD3	1.80	0.63
36:BA:189:G:O2'	36:BA:190:A:H5''	1.98	0.63
36:BA:730:C:O2'	36:BA:731:C:H5'	1.98	0.63
36:BA:1120:G:H2'	36:BA:1121:C:C6	2.33	0.63
36:BA:1538:G:H2'	36:BA:1539:G:C8	2.33	0.63
36:BA:2241:A:H2'	36:BA:2242:G:H8	1.64	0.63
39:BD:118:VAL:HG12	39:BD:129:ASN:OD1	1.98	0.63
40:BE:111:ARG:HA	49:BR:2:ARG:CB	2.25	0.63
41:BF:50:SER:HB2	41:BF:94:PRO:HD3	1.80	0.63
42:BG:72:ARG:CB	42:BG:87:PRO:HD2	2.29	0.63
42:BG:131:TYR:HB3	42:BG:159:VAL:CG1	2.28	0.63
45:BN:43:THR:HG22	45:BN:45:ASN:ND2	2.14	0.63
47:BP:41:ARG:HH11	47:BP:41:ARG:CA	2.12	0.63
48:BQ:110:THR:HG22	48:BQ:113:GLN:OE1	1.98	0.63
56:BY:96:ILE:HD12	56:BY:99:CYS:SG	2.39	0.63
57:BZ:111:VAL:O	57:BZ:112:ARG:HB2	1.97	0.63
1:CA:1226:C:H41	13:CM:104:ARG:HD2	1.62	0.63
5:CE:9:LYS:HB3	5:CE:112:LEU:HD11	1.79	0.63
8:CH:123:GLU:O	8:CH:127:LEU:HD23	1.98	0.63
9:CI:95:LYS:NZ	9:CI:96:LEU:CD1	2.62	0.63
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.81	0.63
21:CU:2:GLY:O	21:CU:4:GLY:N	2.32	0.63
25:CY:632:LEU:HD12	25:CY:644:ARG:CB	2.29	0.63
36:DA:189:G:O2'	36:DA:190:A:H5''	1.99	0.63
36:DA:2455:G:H2'	36:DA:2456:C:C6	2.34	0.63
40:DE:49:LEU:N	40:DE:49:LEU:HD22	2.14	0.63
41:DF:50:SER:HB2	41:DF:94:PRO:HD3	1.80	0.63
45:DN:125:GLY:HA3	45:DN:126:PRO:O	1.97	0.63
50:DS:35:ILE:HD11	50:DS:99:LYS:HE3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DU:112:ARG:NH1	53:DV:46:VAL:HG21	2.13	0.63
53:DV:19:LYS:HE2	53:DV:19:LYS:HA	1.81	0.63
53:DV:25:LEU:H	53:DV:92:THR:HG21	1.64	0.63
56:DY:86:ARG:CB	56:DY:88:LYS:HZ1	2.11	0.63
1:AA:659:U:O2'	1:AA:660:G:H5'	1.99	0.63
13:AM:19:LEU:HA	13:AM:22:ILE:HD13	1.79	0.63
18:AR:29:PHE:CD1	18:AR:29:PHE:N	2.59	0.63
20:AT:26:ASN:HA	20:AT:29:LYS:HG2	1.80	0.63
25:AY:491:VAL:CG1	25:AY:492:ASP:N	2.62	0.63
25:AY:519:ARG:NH1	25:AY:678:GLU:H	1.96	0.63
36:BA:363(B):G:H2'	36:BA:363(C):G:C8	2.34	0.63
36:BA:1887:C:H3'	36:BA:1888:G:H5''	1.79	0.63
36:BA:2629:A:H2'	36:BA:2629:A:N3	2.13	0.63
40:BE:203:LYS:HE3	40:BE:204:ALA:HB2	1.79	0.63
41:BF:165:ARG:HA	41:BF:168:ARG:HD3	1.81	0.63
47:BP:101:VAL:HB	47:BP:107:LYS:HA	1.80	0.63
51:BT:91:ARG:HG2	51:BT:116:ALA:HA	1.81	0.63
52:BU:20:LEU:H	52:BU:20:LEU:CD2	2.11	0.63
1:CA:1208:C:H2'	1:CA:1209:C:C6	2.33	0.63
1:CA:1367:C:H4'	10:CJ:48:THR:HG21	1.81	0.63
1:CA:1392:G:O2'	1:CA:1393:U:H5'	1.97	0.63
3:CC:58:GLU:HB2	3:CC:65:ALA:HB2	1.81	0.63
6:CF:46:ARG:HH22	18:CR:37:VAL:HG21	1.62	0.63
7:CG:28:ASN:O	7:CG:31:MET:HB3	1.98	0.63
7:CG:79:ARG:O	7:CG:79:ARG:HD2	1.99	0.63
12:CL:41:ARG:HG2	12:CL:42:THR:N	2.12	0.63
13:CM:10:PRO:CG	13:CM:18:ALA:HB1	2.28	0.63
22:CV:20:U:H5'	22:CV:21:A:OP2	1.98	0.63
32:D6:53:LYS:HG3	32:D6:54:ILE:H	1.64	0.63
36:DA:11:G:H2'	36:DA:12:U:H6	1.64	0.63
36:DA:419:C:H2'	36:DA:420:C:C6	2.33	0.63
36:DA:1171:G:H2'	36:DA:1173:G:H4'	1.79	0.63
36:DA:1506:C:O2	36:DA:1506:C:H2'	1.98	0.63
36:DA:2523:G:O2'	36:DA:2524:G:H5''	1.99	0.63
45:DN:26:LEU:HD12	45:DN:27:ALA:N	2.14	0.63
48:DQ:56:ARG:HH21	57:DZ:180:VAL:HG21	1.62	0.63
53:DV:21:ARG:O	53:DV:22:VAL:HG13	1.99	0.63
56:DY:74:PRO:O	56:DY:80:GLY:HA2	1.99	0.63
2:AB:31:TYR:O	2:AB:42:ILE:HG13	1.99	0.63
2:AB:139:LYS:O	2:AB:143:GLU:HG2	1.99	0.63
2:AB:233:SER:CB	2:AB:234:PRO:HD2	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:82:GLU:O	3:AC:86:VAL:HG13	1.98	0.63
13:AM:22:ILE:HB	13:AM:25:ILE:HD12	1.80	0.63
25:AY:549:ALA:HB2	25:AY:587:SER:OG	1.99	0.63
25:AY:609:GLU:HB3	25:AY:642:VAL:HG13	1.81	0.63
26:B0:26:TYR:HE2	36:BA:857:C:H1'	1.62	0.63
27:B1:3:LYS:HE3	36:BA:1364:G:N7	2.14	0.63
29:B3:35:ARG:HD3	29:B3:37:LEU:HD21	1.79	0.63
36:BA:840:C:C2'	36:BA:841:A:H5''	2.28	0.63
36:BA:2001:A:H4'	36:BA:2689:U:H2'	1.79	0.63
37:BB:40:U:H3'	37:BB:41:U:H5''	1.81	0.63
41:BF:28:ILE:O	41:BF:30:PRO:HD3	1.99	0.63
46:BO:113:LYS:O	46:BO:117:LEU:HD12	1.99	0.63
47:BP:16:ARG:HD3	47:BP:16:ARG:C	2.23	0.63
47:BP:16:ARG:HD3	47:BP:18:ARG:N	2.11	0.63
47:BP:16:ARG:C	47:BP:16:ARG:HH11	2.06	0.63
47:BP:58:THR:C	47:BP:61:ARG:HE	2.06	0.63
51:BT:125:ARG:HH11	51:BT:125:ARG:CA	2.09	0.63
1:CA:1409:C:O2'	1:CA:1410:G:H5'	1.98	0.63
3:CC:16:ARG:HH11	3:CC:16:ARG:CB	2.12	0.63
3:CC:84:ILE:O	3:CC:88:ARG:HG3	1.99	0.63
25:CY:5:VAL:HG13	25:CY:6:GLU:N	2.10	0.63
25:CY:377:VAL:CG2	25:CY:380:LEU:HD13	2.28	0.63
32:D6:15:GLU:CD	32:D6:44:ARG:HH22	2.07	0.63
36:DA:364:C:C2'	36:DA:365:C:H5''	2.28	0.63
36:DA:1080:C:O2'	36:DA:1081:U:H5'	1.99	0.63
36:DA:1827:C:O2'	36:DA:1828:G:H5'	1.98	0.63
38:DC:57:GLN:NE2	38:DC:205:ALA:HA	2.13	0.63
40:DE:36:ARG:NH2	40:DE:88:GLY:CA	2.62	0.63
47:DP:85:LEU:H	47:DP:85:LEU:CD2	2.09	0.63
50:DS:73:LEU:O	50:DS:73:LEU:HD23	1.98	0.63
55:DX:57:LEU:N	55:DX:57:LEU:HD13	2.14	0.63
56:DY:13:VAL:HG23	56:DY:73:ARG:C	2.24	0.63
1:AA:1321:C:H5''	1:AA:1322:C:C5'	2.30	0.62
5:AE:145:LYS:HA	8:AH:107:LEU:HD21	1.80	0.62
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.80	0.62
25:AY:252:ASP:O	25:AY:253:LEU:HB2	1.99	0.62
25:AY:301:ILE:HG22	25:AY:332:SER:HB2	1.79	0.62
25:AY:652:MET:HE3	25:AY:652:MET:HA	1.81	0.62
26:B0:45:PHE:O	26:B0:59:LEU:HD11	1.99	0.62
36:BA:555:U:H2'	36:BA:556:G:C8	2.33	0.62
39:BD:35:LYS:O	39:BD:36:PRO:C	2.42	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:36:ARG:NH2	40:BE:88:GLY:CA	2.62	0.62
47:BP:6:LEU:HG	47:BP:7:ARG:H	1.64	0.62
47:BP:80:TYR:CD1	47:BP:111:ARG:HB3	2.34	0.62
50:BS:74:ALA:HB1	50:BS:103:GLU:CB	2.29	0.62
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.81	0.62
3:CC:155:GLY:O	3:CC:156:ARG:HB2	1.99	0.62
25:CY:227:ILE:HD11	25:CY:241:GLU:HG3	1.80	0.62
27:D1:6:GLU:C	27:D1:7:ILE:HD12	2.24	0.62
32:D6:22:ALA:C	32:D6:23:THR:HG23	2.24	0.62
36:DA:1971:A:C4	39:DD:241:PRO:HD3	2.34	0.62
36:DA:2632:A:N3	40:DE:61:ARG:NH1	2.47	0.62
36:DA:2646:C:OP2	36:DA:2732:G:H2'	1.98	0.62
42:DG:111:LEU:HB3	42:DG:117:PHE:CE2	2.33	0.62
45:DN:48:MET:H	45:DN:48:MET:HE2	1.64	0.62
47:DP:41:ARG:HH11	47:DP:41:ARG:CB	2.11	0.62
47:DP:80:TYR:CD1	47:DP:111:ARG:HB3	2.34	0.62
47:DP:106:LEU:HD11	47:DP:112:LEU:HD23	1.81	0.62
47:DP:146:VAL:HG22	47:DP:147:LEU:N	2.10	0.62
52:DU:85:LYS:HD3	52:DU:117:GLN:HE22	1.64	0.62
54:DW:13:SER:HB3	54:DW:16:LYS:HD2	1.80	0.62
1:AA:714:G:H2'	1:AA:715:A:C8	2.33	0.62
1:AA:975:A:H8	1:AA:975:A:H5'	1.64	0.62
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.32	0.62
26:B0:49:LYS:H	26:B0:80:HIS:HD1	1.47	0.62
26:B0:70:GLN:NE2	26:B0:80:HIS:NE2	2.47	0.62
28:B2:41:ILE:CD1	28:B2:44:LEU:HD12	2.25	0.62
36:BA:364:C:C2'	36:BA:365:C:H5''	2.29	0.62
36:BA:693:C:O2'	36:BA:694:U:H5'	1.99	0.62
36:BA:1582:C:H2'	36:BA:1583:A:C8	2.34	0.62
36:BA:2688:U:H3'	36:BA:2688:U:O2	1.98	0.62
39:BD:241:PRO:O	39:BD:242:ARG:HB2	1.99	0.62
47:BP:16:ARG:CZ	47:BP:18:ARG:HG2	2.29	0.62
1:CA:176:C:H2'	1:CA:177:C:C6	2.33	0.62
1:CA:1325:C:H2'	1:CA:1326:C:C6	2.33	0.62
9:CI:82:ALA:HB1	9:CI:96:LEU:HD11	1.81	0.62
10:CJ:3:LYS:NZ	10:CJ:77:PRO:HD2	2.14	0.62
15:CO:83:GLU:C	15:CO:85:LEU:N	2.57	0.62
32:D6:43:CYS:HB2	32:D6:44:ARG:HH21	1.64	0.62
36:DA:6:A:H2'	36:DA:6:A:N3	2.14	0.62
36:DA:898:C:H2'	36:DA:899:A:O4'	1.99	0.62
36:DA:1682:G:H2'	36:DA:1683:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2105:C:H2'	36:DA:2106:G:H5'	1.81	0.62
36:DA:2518:A:H5''	36:DA:2519:U:OP2	1.99	0.62
36:DA:2524:G:H5'	36:DA:2524:G:C8	2.31	0.62
43:DH:136:ILE:HD12	43:DH:136:ILE:N	2.14	0.62
45:DN:65:LYS:HB3	45:DN:65:LYS:NZ	2.14	0.62
1:AA:936:C:O2'	1:AA:937:A:H5'	1.99	0.62
3:AC:167:TRP:O	3:AC:168:ALA:CB	2.46	0.62
7:AG:145:ALA:O	7:AG:146:GLU:HB2	1.97	0.62
17:AQ:26:GLN:HG2	17:AQ:37:LYS:HG3	1.81	0.62
20:AT:86:ARG:HG3	20:AT:86:ARG:HH11	1.64	0.62
27:B1:80:LEU:HD23	27:B1:81:LYS:N	2.09	0.62
31:B5:4:HIS:HB3	31:B5:5:PRO:CD	2.27	0.62
36:BA:6:A:N3	36:BA:6:A:H2'	2.14	0.62
36:BA:933:A:H2'	36:BA:934:G:O4'	2.00	0.62
36:BA:1043:C:H2'	36:BA:1044:G:C5'	2.19	0.62
36:BA:1109:C:H5'	36:BA:1110:G:OP2	1.98	0.62
39:BD:65:ILE:HD13	39:BD:65:ILE:H	1.62	0.62
42:BG:153:ARG:HB3	42:BG:153:ARG:NH1	2.14	0.62
45:BN:21:LYS:HD2	45:BN:26:LEU:HB3	1.80	0.62
50:BS:49:VAL:HG21	50:BS:77:ALA:HB2	1.80	0.62
57:BZ:54:HIS:HE1	57:BZ:123:ASP:OD2	1.81	0.62
1:CA:275:G:H2'	1:CA:276:G:H8	1.63	0.62
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.14	0.62
1:CA:1148:U:O3'	9:CI:14:VAL:HG11	1.99	0.62
2:CB:67:THR:HG22	2:CB:90:MET:SD	2.40	0.62
8:CH:104:ARG:O	8:CH:106:GLY:N	2.33	0.62
9:CI:104:ARG:O	9:CI:105:ASP:HB3	1.99	0.62
14:CN:12:ARG:HB2	14:CN:12:ARG:NH1	2.14	0.62
29:D3:4:LEU:O	29:D3:36:VAL:HA	1.98	0.62
31:D5:2:ALA:N	36:DA:2014:A:HO2'	1.98	0.62
36:DA:226:G:O2'	36:DA:227:A:C8	2.47	0.62
36:DA:1722:A:O2'	36:DA:1739:U:H5''	1.99	0.62
36:DA:1805:U:O2	39:DD:50:THR:HB	1.98	0.62
36:DA:2461:C:O2	36:DA:2461:C:H2'	1.99	0.62
36:DA:2469:A:H2	36:DA:2481:G:H21	1.46	0.62
36:DA:2476:A:C2'	36:DA:2477:C:H5''	2.28	0.62
38:DC:79:ALA:HB1	38:DC:83:LYS:HB2	1.81	0.62
39:DD:241:PRO:O	39:DD:242:ARG:HB2	1.98	0.62
42:DG:111:LEU:HD23	42:DG:114:ILE:HD11	1.79	0.62
42:DG:165:THR:HB	42:DG:168:GLU:HG3	1.79	0.62
46:DO:120:GLU:CD	46:DO:122:LEU:HD21	2.23	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:275:G:H2'	1:AA:276:G:H8	1.64	0.62
1:AA:418:C:H2'	1:AA:419:C:C6	2.35	0.62
1:AA:555:C:H2'	1:AA:556:C:C6	2.34	0.62
1:AA:818:G:O2'	1:AA:819:A:H5'	1.99	0.62
3:AC:130:VAL:HG11	3:AC:157:ILE:HG23	1.81	0.62
5:AE:11:ILE:HG22	5:AE:12:LEU:N	2.13	0.62
11:AK:79:SER:OG	11:AK:106:LYS:HD2	1.99	0.62
20:AT:90:GLN:HA	20:AT:93:GLU:OE2	1.99	0.62
30:B4:3:GLU:HG3	37:BB:43:C:OP1	2.00	0.62
36:BA:120:U:O2'	36:BA:149:A:C8	2.52	0.62
36:BA:898:C:H2'	36:BA:899:A:O4'	1.99	0.62
36:BA:902:C:H2'	36:BA:903:C:C6	2.35	0.62
36:BA:2348:U:H2'	36:BA:2349:G:C5'	2.29	0.62
36:BA:2469:A:H2	36:BA:2481:G:H21	1.47	0.62
41:BF:20:LEU:HD22	41:BF:23:ASP:OD2	1.99	0.62
52:BU:112:ARG:HH22	53:BV:46:VAL:HG11	1.64	0.62
1:CA:1003:G:H1'	1:CA:1039:C:O2	1.99	0.62
1:CA:1442:G:C6	1:CA:1442(B):A:H2	2.17	0.62
2:CB:12:GLU:HA	2:CB:16:HIS:CG	2.35	0.62
22:CV:11:C:O2'	22:CV:12:U:H5'	1.99	0.62
27:D1:60:PHE:HE1	27:D1:91:LYS:HG3	1.64	0.62
36:DA:555:U:H2'	36:DA:556:G:C8	2.34	0.62
36:DA:636:G:H2'	47:DP:115:LEU:HD12	1.81	0.62
36:DA:723:G:H2'	36:DA:724:U:C6	2.34	0.62
40:DE:199:ARG:HB3	40:DE:200:GLU:OE1	2.00	0.62
41:DF:25:PRO:CG	41:DF:119:ARG:HB2	2.29	0.62
42:DG:138:GLN:HB3	42:DG:153:ARG:O	2.00	0.62
45:DN:10:GLU:CD	45:DN:11:PRO:HD2	2.24	0.62
45:DN:14:VAL:HG11	45:DN:137:LYS:HD2	1.81	0.62
46:DO:113:LYS:O	46:DO:117:LEU:HD12	1.99	0.62
51:DT:23:ARG:HA	51:DT:52:ILE:HD11	1.82	0.62
51:DT:35:LYS:NZ	51:DT:41:ARG:HH11	1.97	0.62
57:DZ:91:LEU:CD2	57:DZ:130:PRO:HG3	2.30	0.62
1:AA:415:A:H2'	1:AA:416:G:C8	2.34	0.62
7:AG:79:ARG:O	7:AG:79:ARG:HD2	2.00	0.62
25:AY:153:MET:HA	25:AY:157:LEU:HD21	1.81	0.62
26:B0:40:GLN:NE2	26:B0:43:THR:HA	2.15	0.62
36:BA:274:G:H2'	36:BA:274:G:N3	2.13	0.62
36:BA:406:G:O2'	36:BA:407:G:H8	1.82	0.62
36:BA:1217:C:OP2	52:BU:15:LYS:NZ	2.24	0.62
36:BA:2008:C:H2'	36:BA:2009:G:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2483:C:H3'	36:BA:2484:G:C5'	2.22	0.62
41:BF:25:PRO:HG3	41:BF:119:ARG:CB	2.30	0.62
43:BH:41:MET:O	43:BH:42:ARG:HB3	1.99	0.62
45:BN:3:THR:HG22	45:BN:4:TYR:H	1.63	0.62
55:BX:44:GLU:HB2	55:BX:49:VAL:O	1.99	0.62
1:CA:164:U:H2'	1:CA:165:C:H6	1.63	0.62
1:CA:708:C:H2'	1:CA:709:G:H8	1.64	0.62
1:CA:986:A:H1'	19:CS:54:GLY:O	1.99	0.62
1:CA:995:C:O2'	1:CA:996:A:H5'	2.00	0.62
3:CC:110:ASN:O	3:CC:141:VAL:HG22	1.98	0.62
7:CG:37:ASN:HD21	9:CI:40:LEU:HA	1.65	0.62
9:CI:79:LEU:HD11	9:CI:83:ARG:HD2	1.81	0.62
16:CP:20:VAL:CG2	16:CP:32:TYR:HB2	2.28	0.62
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.81	0.62
25:CY:491:VAL:CG1	25:CY:492:ASP:N	2.62	0.62
32:D6:37:ARG:NH2	36:DA:2286:A:N6	2.45	0.62
36:DA:84:A:H5'	56:DY:9:LYS:CB	2.29	0.62
36:DA:144:C:H2'	36:DA:145:G:C8	2.33	0.62
36:DA:208:C:H2'	36:DA:209:C:C6	2.34	0.62
36:DA:902:C:H2'	36:DA:903:C:H6	1.64	0.62
36:DA:2050:C:H1'	40:DE:156:MET:CE	2.28	0.62
36:DA:2441:C:O2'	36:DA:2442:C:H5'	2.00	0.62
36:DA:2850:A:H5'	36:DA:2868:A:H2	1.64	0.62
46:DO:87:ILE:N	46:DO:87:ILE:HD13	2.14	0.62
50:DS:52:SER:CB	50:DS:55:ALA:HB3	2.30	0.62
51:DT:23:ARG:HA	51:DT:52:ILE:CD1	2.28	0.62
52:DU:112:ARG:HH22	53:DV:46:VAL:HG11	1.63	0.62
54:DW:29:LEU:HD11	54:DW:51:LEU:HD11	1.82	0.62
1:AA:1003:G:H1'	1:AA:1039:C:O2	1.99	0.62
1:AA:1004:A:C5'	1:AA:1025:U:H3	2.09	0.62
1:AA:1226:C:H5'	13:AM:96:LEU:CD1	2.30	0.62
2:AB:67:THR:HG22	2:AB:90:MET:SD	2.38	0.62
3:AC:175:LEU:HD21	3:AC:201:TYR:HE2	1.65	0.62
14:AN:12:ARG:NH1	14:AN:12:ARG:HB2	2.14	0.62
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.81	0.62
23:AW:11:A:H2'	23:AW:12:G:H8	1.64	0.62
25:AY:633:GLY:HA3	25:AY:644:ARG:NH1	2.13	0.62
26:B0:16:SER:OG	36:BA:2261:C:H3'	1.99	0.62
36:BA:545:C:H3'	36:BA:547:A:H5''	1.82	0.62
36:BA:610:G:N2	36:BA:619:G:H1'	2.14	0.62
36:BA:654(S):G:H3'	36:BA:654(T):C:H5''	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1236:G:O2'	36:BA:1237:A:H8	1.75	0.62
36:BA:2195:C:O2'	36:BA:2196:C:H5'	2.00	0.62
36:BA:2476:A:C2'	36:BA:2477:C:H5''	2.28	0.62
36:BA:2713:A:H3'	36:BA:2714:G:C5'	2.29	0.62
37:BB:60:C:H2'	37:BB:61:G:H8	1.65	0.62
39:BD:158:ALA:HB3	39:BD:161:THR:CG2	2.30	0.62
39:BD:243:GLY:O	39:BD:244:ARG:HB3	1.98	0.62
42:BG:76:SER:CB	42:BG:83:ARG:HB3	2.29	0.62
43:BH:130:ARG:NH1	43:BH:130:ARG:HB3	2.14	0.62
45:BN:133:GLN:O	45:BN:134:ARG:HB3	1.99	0.62
46:BO:1:MET:HG3	46:BO:67:LYS:HG2	1.81	0.62
47:BP:23:PRO:HD2	47:BP:33:ARG:HH21	1.64	0.62
47:BP:106:LEU:HD11	47:BP:112:LEU:HD23	1.80	0.62
50:BS:56:LEU:O	50:BS:56:LEU:HD23	2.00	0.62
50:BS:98:VAL:C	50:BS:100:ALA:H	2.07	0.62
51:BT:27:THR:OG1	51:BT:28:VAL:N	2.29	0.62
52:BU:84:LYS:C	52:BU:86:ALA:H	2.06	0.62
52:BU:88:ILE:O	52:BU:88:ILE:HG13	1.98	0.62
56:BY:74:PRO:O	56:BY:80:GLY:HA2	1.99	0.62
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.63	0.62
1:CA:1147:C:O2	9:CI:16:ARG:NH1	2.32	0.62
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.39	0.62
2:CB:60:ASP:HB3	2:CB:64:ARG:NH2	2.14	0.62
3:CC:175:LEU:HD21	3:CC:201:TYR:CE2	2.33	0.62
12:CL:25:PRO:C	12:CL:27:LEU:N	2.58	0.62
25:CY:519:ARG:HD3	25:CY:676:TYR:O	1.99	0.62
25:CY:688:ILE:HG22	25:CY:688:ILE:O	1.99	0.62
31:D5:36:CYS:SG	31:D5:49:CYS:HB3	2.39	0.62
34:D8:6:THR:CG2	34:D8:63:PRO:HD3	2.29	0.62
34:D8:43:GLN:C	34:D8:44:LYS:HD2	2.24	0.62
36:DA:139:G:C6	36:DA:140:G:H2'	2.34	0.62
36:DA:336:C:H4'	56:DY:7:VAL:CG2	2.29	0.62
36:DA:1059:G:H2'	36:DA:1060:U:C5	2.34	0.62
36:DA:2305:A:C2	36:DA:2306:C:H1'	2.34	0.62
37:DB:80:U:H2'	37:DB:81:G:H21	1.65	0.62
38:DC:4:HIS:ND1	38:DC:8:TYR:CE2	2.68	0.62
43:DH:18:GLU:HB2	43:DH:25:LYS:HB2	1.81	0.62
45:DN:41:ASP:C	52:DU:64:ARG:HH12	2.06	0.62
4:AD:8:VAL:C	4:AD:10:ARG:N	2.57	0.62
17:AQ:9:VAL:HG12	17:AQ:56:VAL:HG22	1.80	0.62
25:AY:102:ASP:O	25:AY:130:VAL:HG22	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B5:45:VAL:HG22	31:B5:51:TYR:CE2	2.35	0.62
36:BA:556:G:H2'	36:BA:557:U:C6	2.34	0.62
36:BA:1301:A:H4'	36:BA:1302:A:OP1	1.99	0.62
36:BA:2121:G:O2'	38:BC:168:LYS:HG2	2.00	0.62
38:BC:190:ILE:O	38:BC:194:ILE:HG12	2.00	0.62
39:BD:145:VAL:HG12	39:BD:146:GLU:N	2.15	0.62
45:BN:65:LYS:HB3	45:BN:65:LYS:NZ	2.14	0.62
47:BP:27:HIS:CD2	47:BP:28:GLY:N	2.67	0.62
50:BS:99:LYS:O	50:BS:101:LEU:N	2.33	0.62
51:BT:23:ARG:HA	51:BT:52:ILE:CD1	2.28	0.62
51:BT:118:ARG:HA	51:BT:121:ILE:HB	1.80	0.62
1:CA:201:C:C2'	1:CA:202:U:H5''	2.30	0.62
1:CA:528:C:H41	12:CL:49:ASN:HD21	1.45	0.62
1:CA:1431:C:H2'	1:CA:1432:G:H5'	1.82	0.62
22:CV:61:C:O2'	22:CV:62:C:H5'	2.00	0.62
23:CW:22:G:H2'	23:CW:23:C:C5'	2.29	0.62
23:CW:49:G:C2'	23:CW:50:U:H5''	2.28	0.62
32:D6:19:ARG:O	32:D6:20:ASN:O	2.18	0.62
33:D7:46:VAL:HG12	33:D7:47:ARG:N	2.14	0.62
36:DA:528:A:H2	36:DA:2043:C:H4'	1.64	0.62
36:DA:2184:G:H2'	36:DA:2185:C:C6	2.34	0.62
40:DE:24:THR:CG2	40:DE:184:VAL:HG23	2.29	0.62
40:DE:103:ASP:OD2	40:DE:201:THR:HA	1.99	0.62
50:DS:49:VAL:HG21	50:DS:77:ALA:HB2	1.82	0.62
50:DS:88:ASP:CG	50:DS:89:ARG:N	2.56	0.62
55:DX:12:VAL:HB	55:DX:17:ALA:CB	2.15	0.62
57:DZ:24:LEU:HD21	57:DZ:86:VAL:HG23	1.80	0.62
57:DZ:166:SER:HB2	57:DZ:167:PRO:CA	2.29	0.62
1:AA:708:C:H2'	1:AA:709:G:H8	1.65	0.62
3:AC:41:GLY:O	3:AC:45:LYS:HG3	1.99	0.62
3:AC:60:ALA:O	3:AC:61:ALA:HB2	2.00	0.62
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.82	0.62
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE1	2.16	0.62
32:B6:22:ALA:C	32:B6:23:THR:HG23	2.24	0.62
36:BA:958:U:H6	36:BA:958:U:H3'	1.65	0.62
36:BA:1378:A:H4'	36:BA:1379:A:OP1	1.98	0.62
36:BA:1389:G:H2'	36:BA:1390:U:C6	2.35	0.62
37:BB:114:C:H2'	37:BB:115:G:C8	2.35	0.62
41:BF:28:ILE:H	41:BF:28:ILE:CD1	2.10	0.62
42:BG:138:GLN:OE1	42:BG:153:ARG:HG2	2.00	0.62
47:BP:24:GLY:CA	47:BP:33:ARG:NH1	2.62	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:17:LEU:C	48:BQ:18:LYS:HD2	2.25	0.62
53:BV:19:LYS:HE2	53:BV:19:LYS:HA	1.80	0.62
57:BZ:28:MET:HB3	57:BZ:88:PHE:HB2	1.82	0.62
1:CA:1444:C:H2'	1:CA:1445:C:C6	2.35	0.62
3:CC:167:TRP:O	3:CC:168:ALA:CB	2.47	0.62
5:CE:20:GLN:O	5:CE:21:ALA:C	2.42	0.62
15:CO:5:LYS:O	15:CO:9:GLN:HG2	1.98	0.62
25:CY:530:VAL:HG12	25:CY:533:VAL:CG2	2.30	0.62
25:CY:580:MET:CE	36:DA:1913:A:N6	2.62	0.62
32:D6:47:THR:HG23	32:D6:48:VAL:H	1.65	0.62
32:D6:51:GLU:O	32:D6:52:VAL:HB	1.99	0.62
36:DA:363(B):G:H2'	36:DA:363(C):G:C8	2.34	0.62
36:DA:1820:U:H6	36:DA:1820:U:OP1	1.83	0.62
36:DA:2299:G:O2'	36:DA:2300:G:H5'	1.99	0.62
41:DF:28:ILE:H	41:DF:28:ILE:CD1	2.10	0.62
42:DG:34:LEU:HD12	42:DG:34:LEU:N	2.15	0.62
45:DN:21:LYS:HB3	45:DN:26:LEU:HD23	1.82	0.62
47:DP:85:LEU:HD23	47:DP:85:LEU:N	2.12	0.62
1:AA:833:U:H2'	1:AA:834:C:C6	2.34	0.62
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.35	0.62
10:AJ:4:ILE:HB	10:AJ:74:ILE:CD1	2.30	0.62
12:AL:82:VAL:HG12	12:AL:105:TYR:CD2	2.35	0.62
25:AY:406:GLU:HB3	25:AY:407:PRO:CD	2.29	0.62
25:AY:486:THR:HG23	25:AY:600:VAL:CG1	2.29	0.62
25:AY:530:VAL:HG22	25:AY:531:GLY:N	2.15	0.62
27:B1:80:LEU:CD2	27:B1:81:LYS:H	2.07	0.62
28:B2:21:LEU:O	28:B2:24:LEU:HB3	1.99	0.62
34:B8:43:GLN:C	34:B8:44:LYS:HD2	2.24	0.62
36:BA:11:G:H2'	36:BA:12:U:H6	1.65	0.62
36:BA:1536:C:H2'	36:BA:1537:G:H4'	1.80	0.62
36:BA:1722:A:O2'	36:BA:1739:U:H5''	1.99	0.62
36:BA:2762:G:H5'	36:BA:2762:G:C8	2.34	0.62
40:BE:26:ILE:HG21	40:BE:196:VAL:HG21	1.81	0.62
40:BE:57:LYS:HZ3	40:BE:63:LEU:HG	1.64	0.62
43:BH:98:LEU:HD12	43:BH:102:ALA:O	1.98	0.62
48:BQ:87:LYS:HG2	48:BQ:88:GLY:H	1.64	0.62
1:CA:116:A:H2'	1:CA:117:G:O4'	2.00	0.62
1:CA:490:G:H2'	1:CA:491:G:C8	2.35	0.62
1:CA:1479:C:H2'	1:CA:1480:G:C8	2.34	0.62
4:CD:74:GLN:HA	4:CD:77:ASN:HD22	1.64	0.62
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CX:18:C:H5'	24:CX:19:A:OP1	1.98	0.62
25:CY:183:MET:O	25:CY:201:ILE:HD11	2.00	0.62
25:CY:198:GLU:O	25:CY:198:GLU:HG3	1.99	0.62
26:D0:23:VAL:HG11	26:D0:69:PHE:HZ	1.64	0.62
26:D0:25:ARG:HD2	26:D0:29:GLN:HE22	1.65	0.62
27:D1:44:PRO:O	27:D1:46:LEU:HD22	2.00	0.62
28:D2:37:PHE:CE1	55:DX:11:PRO:HB3	2.31	0.62
34:D8:13:ARG:HD3	47:DP:61:ARG:O	1.98	0.62
36:DA:545:C:H3'	36:DA:547:A:H5''	1.82	0.62
36:DA:1435:G:H5'	36:DA:1436:G:OP2	2.00	0.62
36:DA:1930:G:O2'	36:DA:1931:U:P	2.57	0.62
39:DD:210:GLY:O	39:DD:211:ARG:HB3	2.00	0.62
41:DF:154:VAL:HG11	41:DF:193:VAL:HG23	1.81	0.62
45:DN:133:GLN:O	45:DN:134:ARG:HB3	1.99	0.62
46:DO:111:PHE:CB	46:DO:114:ILE:HD13	2.29	0.62
47:DP:16:ARG:HB2	47:DP:16:ARG:NH1	2.14	0.62
48:DQ:43:THR:HB	48:DQ:45:GLN:HE21	1.65	0.62
50:DS:42:ASP:C	50:DS:44:LYS:H	2.07	0.62
52:DU:113:ALA:C	52:DU:115:ALA:H	2.08	0.62
55:DX:27:THR:HB	55:DX:80:ILE:HG22	1.80	0.62
57:DZ:48:PHE:CE1	57:DZ:52:SER:HA	2.34	0.62
1:AA:1030(D):A:C2'	1:AA:1031:G:H5'	2.28	0.62
1:AA:1459:C:H2'	1:AA:1460:A:C8	2.35	0.62
4:AD:92:VAL:O	4:AD:96:LEU:HD22	2.00	0.62
4:AD:112:VAL:HG12	4:AD:116:GLN:NE2	2.14	0.62
22:AV:23:A:H2'	22:AV:24:G:C8	2.34	0.62
25:AY:201:ILE:HD12	25:AY:201:ILE:N	2.15	0.62
25:AY:580:MET:O	25:AY:583:LYS:HB3	1.99	0.62
25:AY:624:LEU:CD2	25:AY:631:ILE:HD11	2.25	0.62
29:B3:9:VAL:HG23	29:B3:10:LYS:H	1.65	0.62
36:BA:528:A:H2	36:BA:2043:C:H5'	1.63	0.62
36:BA:796:C:H2'	36:BA:797:C:C6	2.34	0.62
36:BA:1506:C:H2'	36:BA:1506:C:O2	1.98	0.62
36:BA:1909:C:O2'	36:BA:1910:G:H5'	1.99	0.62
37:BB:91:C:O2'	37:BB:92:C:H5'	2.00	0.62
37:BB:106:G:H2'	37:BB:107:G:H8	1.65	0.62
41:BF:38:ARG:O	41:BF:42:ALA:HB2	1.99	0.62
42:BG:165:THR:OG1	42:BG:168:GLU:HG3	2.00	0.62
50:BS:24:LEU:HB3	50:BS:85:VAL:CG1	2.29	0.62
51:BT:23:ARG:HA	51:BT:52:ILE:HD11	1.82	0.62
51:BT:35:LYS:NZ	51:BT:41:ARG:HH11	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:78:LEU:HD22	51:BT:78:LEU:O	2.00	0.62
57:BZ:8:TYR:HB2	57:BZ:38:TYR:CE1	2.35	0.62
1:CA:35:G:H2'	1:CA:36:C:C6	2.35	0.62
1:CA:357:G:O2'	1:CA:358:U:H5'	2.00	0.62
1:CA:538:G:OP1	12:CL:113:ARG:HD2	1.99	0.62
3:CC:110:ASN:HD21	3:CC:140:ARG:HB3	1.65	0.62
10:CJ:32:ALA:HB3	10:CJ:76:ASN:O	1.99	0.62
18:CR:44:LEU:O	18:CR:45:SER:C	2.42	0.62
23:CW:23:C:H2'	23:CW:24:U:H6	1.63	0.62
25:CY:74:TRP:NE1	25:CY:273:LEU:HB3	2.15	0.62
25:CY:220:ALA:O	25:CY:245:ALA:HB1	2.00	0.62
25:CY:487:ILE:HD12	25:CY:563:ILE:HG22	1.80	0.62
28:D2:69:ARG:HH22	36:DA:111:A:C4'	2.12	0.62
34:D8:30:ARG:NH2	36:DA:2419:U:O4	2.32	0.62
36:DA:1479:G:H5'	36:DA:1558:A:H2	1.64	0.62
36:DA:1528(A):A:H62	36:DA:1541:G:N2	1.97	0.62
36:DA:1909:C:O2'	36:DA:1910:G:H5'	2.00	0.62
41:DF:3:GLU:HA	41:DF:24:LEU:CG	2.14	0.62
43:DH:118:PRO:HG2	43:DH:121:ILE:HD12	1.81	0.62
45:DN:21:LYS:HD2	45:DN:26:LEU:HB3	1.82	0.62
46:DO:14:THR:HG21	46:DO:86:ILE:HD13	1.82	0.62
47:DP:41:ARG:HB3	47:DP:41:ARG:NH1	2.14	0.62
47:DP:97:PRO:O	47:DP:98:GLU:CB	2.47	0.62
47:DP:127:ALA:C	47:DP:148:LEU:HD11	2.24	0.62
50:DS:19:LYS:HB3	50:DS:20:ARG:HH22	1.65	0.62
53:DV:39:LEU:CD1	53:DV:51:VAL:HA	2.30	0.62
1:AA:66:G:H4'	1:AA:173:U:C5	2.35	0.61
1:AA:538:G:OP1	12:AL:113:ARG:HD2	1.99	0.61
1:AA:1325:C:H2'	1:AA:1326:C:C6	2.34	0.61
3:AC:206:GLU:HG2	3:AC:207:VAL:N	2.12	0.61
9:AI:77:ILE:O	9:AI:81:ILE:HG12	2.00	0.61
10:AJ:12:ASP:OD2	10:AJ:15:THR:HG23	2.00	0.61
13:AM:8:GLU:C	13:AM:9:ILE:HD12	2.25	0.61
13:AM:124:PRO:HG2	25:AY:574:GLU:HB2	1.82	0.61
19:AS:11:VAL:HG23	19:AS:38:SER:HB2	1.82	0.61
28:B2:64:LEU:C	28:B2:64:LEU:HD13	2.25	0.61
30:B4:2:LYS:HB2	37:BB:40:U:O4	1.99	0.61
36:BA:528:A:H2	36:BA:2043:C:H4'	1.65	0.61
36:BA:2439:A:N7	36:BA:2586:C:H4'	2.15	0.61
37:BB:40:U:H2'	37:BB:43:C:OP2	2.00	0.61
37:BB:65:C:H41	37:BB:109:C:H2'	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:267:SER:O	39:BD:269:PHE:N	2.32	0.61
40:BE:133:LYS:H	40:BE:134:ILE:HD12	1.64	0.61
42:BG:85:GLY:C	42:BG:87:PRO:HD3	2.25	0.61
43:BH:70:THR:HG22	43:BH:74:ASN:ND2	2.14	0.61
49:BR:45:ARG:CG	49:BR:46:GLY:H	2.09	0.61
50:BS:19:LYS:HB3	50:BS:20:ARG:HH22	1.65	0.61
52:BU:112:ARG:NH1	53:BV:46:VAL:HG21	2.15	0.61
53:BV:39:LEU:HD12	53:BV:50:PRO:O	1.99	0.61
56:BY:81:LYS:HD3	56:BY:97:ARG:O	2.00	0.61
57:BZ:37:VAL:HG23	57:BZ:38:TYR:N	2.15	0.61
1:CA:191:G:H1'	20:CT:105:SER:HA	1.80	0.61
1:CA:598:U:H2'	1:CA:599:C:C6	2.35	0.61
1:CA:741:G:O2'	1:CA:742:G:H5'	2.00	0.61
1:CA:943:U:H2'	1:CA:944:G:H5'	1.82	0.61
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.00	0.61
5:CE:33:VAL:HG12	5:CE:34:VAL:N	2.14	0.61
12:CL:27:LEU:O	12:CL:29:GLY:N	2.32	0.61
16:CP:8:ARG:NH2	16:CP:15:PRO:HG3	2.15	0.61
18:CR:58:LEU:HB3	18:CR:62:GLU:CB	2.30	0.61
21:CU:2:GLY:C	21:CU:4:GLY:H	2.08	0.61
23:CW:23:C:H5'	23:CW:23:C:H6	1.65	0.61
25:CY:9:LEU:CD2	25:CY:284:LEU:HB2	2.30	0.61
33:D7:41:ARG:HH22	36:DA:460:A:P	2.23	0.61
36:DA:519:U:H2'	36:DA:520:G:H8	1.65	0.61
36:DA:688:U:H4'	36:DA:1780:A:C2	2.35	0.61
36:DA:1538:G:H2'	36:DA:1539:G:C8	2.34	0.61
36:DA:2457:U:O2'	36:DA:2458:G:H5'	2.00	0.61
37:DB:40:U:H3'	37:DB:41:U:H5''	1.80	0.61
39:DD:70:TRP:HZ3	39:DD:146:GLU:OE2	1.83	0.61
45:DN:91:LEU:HD23	45:DN:98:VAL:HG21	1.82	0.61
47:DP:16:ARG:CZ	47:DP:18:ARG:HG2	2.30	0.61
47:DP:58:THR:C	47:DP:61:ARG:HE	2.07	0.61
49:DR:11:ASN:O	49:DR:12:ARG:HB2	2.00	0.61
50:DS:89:ARG:HE	50:DS:91:PRO:HG2	1.65	0.61
51:DT:57:PHE:O	51:DT:59:THR:HG23	2.00	0.61
53:DV:32:THR:HG23	53:DV:59:ALA:O	2.00	0.61
1:AA:490:G:H2'	1:AA:491:G:C8	2.35	0.61
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.65	0.61
2:AB:60:ASP:HB3	2:AB:64:ARG:NH2	2.15	0.61
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.81	0.61
4:AD:43:HIS:O	4:AD:45:GLN:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:188:LEU:HD12	4:AD:189:PRO:HD2	1.81	0.61
25:AY:453:GLY:HA3	25:AY:459:LEU:CD1	2.31	0.61
28:B2:55:ARG:O	28:B2:58:ALA:HB3	1.99	0.61
34:B8:33:ASN:HD22	34:B8:33:ASN:H	0.72	0.61
36:BA:336:C:H4'	56:BY:7:VAL:CG2	2.30	0.61
36:BA:992:C:H2'	36:BA:993:G:H8	1.65	0.61
36:BA:2184:G:H2'	36:BA:2185:C:C6	2.34	0.61
36:BA:2631:G:N2	40:BE:61:ARG:NH1	2.47	0.61
42:BG:112:PRO:O	42:BG:113:ARG:CA	2.48	0.61
55:BX:8:ILE:HD12	55:BX:8:ILE:H	1.65	0.61
57:BZ:108:PRO:HG2	57:BZ:111:VAL:HG23	1.83	0.61
4:CD:30:LYS:C	4:CD:32:ALA:N	2.56	0.61
7:CG:27:ILE:CD1	7:CG:40:ALA:HA	2.28	0.61
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	1.99	0.61
13:CM:80:ARG:O	13:CM:83:ASP:HB3	2.00	0.61
22:CV:3:C:O2'	22:CV:4:C:H5'	2.00	0.61
23:CW:28:C:H2'	23:CW:29:G:H8	1.65	0.61
25:CY:170:ARG:HD2	25:CY:170:ARG:N	2.15	0.61
27:D1:82:LEU:C	27:D1:83:GLU:HG3	2.25	0.61
36:DA:654(S):G:H3'	36:DA:654(T):C:H5''	1.81	0.61
36:DA:1120:G:H2'	36:DA:1121:C:C6	2.35	0.61
36:DA:1141:U:H6	45:DN:63:THR:HG21	1.65	0.61
36:DA:2439:A:N7	36:DA:2586:C:H4'	2.15	0.61
37:DB:40:U:H2'	37:DB:43:C:OP2	2.00	0.61
38:DC:132:LEU:HD22	38:DC:137:LEU:HB2	1.82	0.61
39:DD:26:LYS:HE2	39:DD:26:LYS:H	1.65	0.61
39:DD:26:LYS:O	39:DD:27:THR:HG22	1.99	0.61
40:DE:36:ARG:HG2	40:DE:36:ARG:NH1	2.15	0.61
41:DF:2:LYS:HD3	41:DF:119:ARG:HG3	1.80	0.61
41:DF:174:VAL:HG21	41:DF:189:THR:CG2	2.30	0.61
42:DG:107:LEU:HD21	42:DG:178:PHE:CE1	2.34	0.61
48:DQ:60:ARG:HB2	48:DQ:60:ARG:NH1	2.15	0.61
49:DR:94:TYR:CD1	49:DR:94:TYR:N	2.68	0.61
49:DR:113:LEU:HD12	49:DR:114:VAL:N	2.14	0.61
51:DT:132:LYS:HG2	51:DT:133:GLU:N	2.15	0.61
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.35	0.61
5:AE:101:ILE:HG12	5:AE:101:ILE:O	2.00	0.61
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.00	0.61
10:AJ:54:PHE:CG	10:AJ:55:LYS:HE3	2.35	0.61
21:AU:2:GLY:C	21:AU:4:GLY:H	2.08	0.61
25:AY:546:ILE:HG12	25:AY:590:ILE:HG12	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:42:GLY:HA3	36:BA:2331:G:O4'	2.00	0.61
29:B3:31:LEU:HD12	36:BA:1157:G:O2'	2.00	0.61
32:B6:15:GLU:CG	32:B6:47:THR:HG21	2.31	0.61
32:B6:51:GLU:O	32:B6:52:VAL:HB	1.99	0.61
34:B8:48:PHE:C	34:B8:49:VAL:HG22	2.24	0.61
36:BA:271(E):U:H2'	36:BA:271(F):C:C6	2.35	0.61
36:BA:272(I):U:H5'	36:BA:272(I):U:O2	2.00	0.61
36:BA:1971:A:C4	39:BD:241:PRO:HD3	2.35	0.61
36:BA:2850:A:H5'	36:BA:2868:A:H2	1.64	0.61
39:BD:209:ALA:O	39:BD:212:SER:HB2	2.01	0.61
47:BP:97:PRO:O	47:BP:98:GLU:CB	2.49	0.61
52:BU:96:ALA:C	52:BU:98:LEU:H	2.08	0.61
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.35	0.61
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.35	0.61
5:CE:80:ILE:HD11	5:CE:138:ALA:HB1	1.83	0.61
9:CI:104:ARG:C	9:CI:105:ASP:N	2.58	0.61
25:CY:439:ARG:N	25:CY:452:SER:HB3	2.07	0.61
25:CY:493:VAL:HB	25:CY:592:GLU:OE2	1.99	0.61
25:CY:548:GLU:HA	25:CY:551:GLN:NE2	2.10	0.61
27:D1:23:LYS:CE	27:D1:28:GLY:HA3	2.29	0.61
28:D2:4:SER:CA	28:D2:7:ARG:HH12	2.06	0.61
30:D4:19:GLY:O	30:D4:21:VAL:HG23	2.00	0.61
32:D6:15:GLU:CG	32:D6:47:THR:HG21	2.29	0.61
36:DA:272(J):C:H42	36:DA:363:G:N2	1.97	0.61
36:DA:1213:A:N3	36:DA:1238:G:H1'	2.15	0.61
37:DB:35:U:H2'	37:DB:35:U:O2	1.98	0.61
43:DH:66:GLY:HA2	43:DH:69:ARG:HB3	1.83	0.61
48:DQ:45:GLN:H	48:DQ:45:GLN:NE2	1.98	0.61
51:DT:27:THR:OG1	51:DT:28:VAL:N	2.30	0.61
55:DX:70:LEU:HD23	55:DX:71:GLY:N	2.16	0.61
1:AA:277:C:O2'	1:AA:278:G:H5'	2.00	0.61
1:AA:579:G:C5'	1:AA:728:A:H1'	2.31	0.61
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.14	0.61
1:AA:1284:C:H3'	1:AA:1285:A:H5''	1.81	0.61
2:AB:89:GLY:O	2:AB:90:MET:HE2	2.00	0.61
4:AD:74:GLN:HA	4:AD:77:ASN:HD22	1.64	0.61
5:AE:9:LYS:HB3	5:AE:112:LEU:HD11	1.82	0.61
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG23	1.83	0.61
13:AM:40:ASN:HD21	13:AM:42:ALA:HB3	1.65	0.61
16:AP:1:MET:SD	16:AP:3:LYS:HE3	2.40	0.61
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:457:LEU:O	25:AY:461:ILE:HG13	2.00	0.61
25:AY:568:TYR:CE2	25:AY:569:ASP:HB2	2.34	0.61
27:B1:45:ASN:HD21	27:B1:47:GLN:HE21	1.48	0.61
27:B1:45:ASN:HB2	36:BA:2230:G:H1'	1.81	0.61
28:B2:57:ILE:O	28:B2:61:LEU:HG	2.00	0.61
36:BA:1057:A:H61	36:BA:1081:U:H3	1.48	0.61
36:BA:1059:G:H2'	36:BA:1060:U:C5	2.35	0.61
36:BA:2457:U:O2'	36:BA:2458:G:H5'	2.00	0.61
36:BA:2632:A:N3	40:BE:61:ARG:NH1	2.48	0.61
38:BC:79:ALA:HB1	38:BC:83:LYS:HB2	1.82	0.61
43:BH:105:LEU:CD2	43:BH:113:VAL:HB	2.30	0.61
46:BO:120:GLU:CD	46:BO:122:LEU:HD21	2.25	0.61
47:BP:95:VAL:HG23	47:BP:125:VAL:HG23	1.80	0.61
49:BR:65:LEU:O	49:BR:65:LEU:HD12	2.01	0.61
1:CA:737:A:H2'	1:CA:738:C:C6	2.35	0.61
1:CA:793:U:H3'	1:CA:794:A:C5'	2.19	0.61
2:CB:101:MET:O	2:CB:102:LEU:HD12	2.01	0.61
10:CJ:48:THR:HG23	10:CJ:62:HIS:ND1	2.15	0.61
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.83	0.61
25:CY:509:HIS:CE1	25:CY:511:LYS:HE3	2.35	0.61
36:DA:1030:G:OP2	48:DQ:128:LYS:HE2	1.99	0.61
36:DA:1378:A:HO2'	36:DA:1379:A:H5''	1.63	0.61
36:DA:1536:C:H2'	36:DA:1537:G:H4'	1.81	0.61
36:DA:1541:G:H1'	36:DA:1542:A:C4	2.36	0.61
36:DA:2348:U:C2'	36:DA:2349:G:H5''	2.31	0.61
40:DE:46:ALA:HA	40:DE:82:ARG:O	2.00	0.61
46:DO:114:ILE:H	46:DO:114:ILE:CD1	2.11	0.61
47:DP:84:ASN:C	47:DP:86:LYS:N	2.54	0.61
50:DS:56:LEU:O	50:DS:56:LEU:HD23	2.01	0.61
52:DU:88:ILE:O	52:DU:88:ILE:HG13	2.00	0.61
1:AA:718:G:C8	11:AK:116:HIS:HB3	2.34	0.61
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.15	0.61
5:AE:76:ILE:HG22	5:AE:118:ILE:HD13	1.82	0.61
10:AJ:32:ALA:HB3	10:AJ:76:ASN:O	2.01	0.61
23:AW:76:A:N6	36:BA:2422:A:O4'	2.33	0.61
25:AY:529:ILE:HD11	25:AY:567:LEU:CD1	2.31	0.61
59:AY:701:FUA:O2	59:AY:701:FUA:H211	2.00	0.61
36:BA:520:G:H2'	36:BA:521:G:C8	2.35	0.61
36:BA:784:A:H5''	39:BD:227:ASN:ND2	2.15	0.61
36:BA:1287:A:H2'	36:BA:1287:A:N3	2.16	0.61
36:BA:1799:G:H5'	36:BA:1819:A:N6	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2105:C:H2'	36:BA:2106:G:H5'	1.82	0.61
36:BA:2192:G:H2'	36:BA:2193:G:H5''	1.81	0.61
36:BA:2219:G:O2'	36:BA:2220:G:H5'	2.00	0.61
36:BA:2789:C:H1'	36:BA:2892:A:C2	2.36	0.61
45:BN:41:ASP:C	52:BU:64:ARG:HH12	2.09	0.61
50:BS:89:ARG:HE	50:BS:91:PRO:HG2	1.65	0.61
56:BY:44:ILE:CG2	56:BY:45:VAL:H	2.13	0.61
1:CA:66:G:H4'	1:CA:173:U:C5	2.35	0.61
1:CA:1292:U:H2'	1:CA:1293:G:C8	2.35	0.61
4:CD:36:ARG:HB3	4:CD:36:ARG:NH1	2.13	0.61
25:CY:15:ILE:HD12	25:CY:81:ILE:HG23	1.81	0.61
25:CY:100:VAL:HG21	25:CY:314:PHE:HD2	1.65	0.61
25:CY:247:ARG:HD2	25:CY:278:ASP:O	2.01	0.61
25:CY:512:ILE:HD13	25:CY:512:ILE:N	2.15	0.61
26:D0:26:TYR:O	26:D0:67:VAL:HB	2.01	0.61
26:D0:42:GLY:HA3	36:DA:2331:G:C4'	2.31	0.61
34:D8:62:LEU:CD1	36:DA:242:G:H5''	2.30	0.61
36:DA:484:C:H2'	36:DA:485:C:C6	2.35	0.61
36:DA:1810:A:H2'	36:DA:1811:G:O4'	2.00	0.61
36:DA:2732:G:H3'	36:DA:2733:A:H5'	1.82	0.61
39:DD:183:ARG:HD2	39:DD:270:ILE:HG23	1.80	0.61
41:DF:43:LYS:HA	41:DF:98:SER:HB3	1.81	0.61
42:DG:110:ALA:CB	42:DG:140:ILE:HD13	2.31	0.61
51:DT:57:PHE:C	51:DT:58:ASN:HD22	2.08	0.61
57:DZ:127:LYS:HB3	57:DZ:127:LYS:NZ	2.14	0.61
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.82	0.61
1:AA:275:G:H5''	17:AQ:14:LYS:CB	2.29	0.61
1:AA:460:G:H5'	1:AA:461:A:OP2	2.01	0.61
1:AA:995:C:O2'	1:AA:996:A:H5'	2.01	0.61
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.18	0.61
9:AI:40:LEU:C	9:AI:42:ARG:H	2.09	0.61
10:AJ:71:LEU:HD12	10:AJ:72:VAL:H	1.65	0.61
17:AQ:48:GLU:O	17:AQ:49:GLU:C	2.43	0.61
20:AT:13:LEU:HD12	20:AT:13:LEU:N	2.10	0.61
20:AT:47:GLY:O	20:AT:49:ALA:N	2.28	0.61
25:AY:510:VAL:HG12	25:AY:511:LYS:N	2.16	0.61
30:B4:19:GLY:O	30:B4:21:VAL:HG23	2.01	0.61
31:B5:33:CYS:HG	31:B5:49:CYS:HG	1.47	0.61
34:B8:30:ARG:O	34:B8:31:HIS:HB3	1.98	0.61
36:BA:208:C:H2'	36:BA:209:C:C6	2.34	0.61
36:BA:990:A:H61	53:BV:76:LYS:HZ1	1.46	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1151:G:H5''	52:BU:81:HIS:CE1	2.35	0.61
36:BA:1213:A:N3	36:BA:1238:G:H1'	2.16	0.61
36:BA:1332:G:N2	36:BA:1609:A:H3'	2.15	0.61
41:BF:84:VAL:O	41:BF:86:GLY:N	2.34	0.61
43:BH:12:PRO:O	43:BH:15:VAL:HG22	2.00	0.61
47:BP:91:PHE:N	47:BP:91:PHE:CD1	2.68	0.61
51:BT:10:VAL:C	51:BT:12:SER:N	2.57	0.61
2:CB:193:ASP:O	2:CB:193:ASP:OD1	2.17	0.61
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.00	0.61
25:CY:400:GLU:HG2	25:CY:401:SER:N	2.15	0.61
25:CY:505:GLY:HA3	25:CY:576:ASP:CG	2.26	0.61
29:D3:31:LEU:HD12	36:DA:1157:G:O2'	2.00	0.61
29:D3:31:LEU:CD1	29:D3:32:GLN:HG2	2.22	0.61
36:DA:260:G:H1'	36:DA:621:A:H1'	1.83	0.61
36:DA:271(E):U:H2'	36:DA:271(F):C:C6	2.36	0.61
36:DA:406:G:O2'	36:DA:407:G:H8	1.83	0.61
36:DA:803:U:O2'	36:DA:804:A:H5'	2.00	0.61
36:DA:2056:G:N3	36:DA:2056:G:H2'	2.15	0.61
36:DA:2241:A:H2'	36:DA:2242:G:H8	1.66	0.61
36:DA:2807:G:C3'	36:DA:2808:U:H5''	2.29	0.61
38:DC:73:VAL:CG1	38:DC:158:LYS:HA	2.31	0.61
38:DC:182:PRO:HD2	38:DC:185:LYS:HG2	1.82	0.61
39:DD:35:LYS:O	39:DD:36:PRO:C	2.43	0.61
42:DG:91:ARG:HD2	42:DG:91:ARG:C	2.25	0.61
46:DO:69:ILE:HD12	46:DO:69:ILE:N	2.15	0.61
47:DP:114:ILE:HD12	47:DP:115:LEU:N	2.14	0.61
50:DS:51:ALA:CB	50:DS:73:LEU:HB2	2.30	0.61
50:DS:97:ARG:C	50:DS:97:ARG:HE	2.08	0.61
57:DZ:63:ASP:C	57:DZ:65:GLN:H	2.08	0.61
1:AA:1492:A:N3	24:AX:20:A:O2'	2.33	0.61
2:AB:83:MET:CG	2:AB:234:PRO:HG3	2.30	0.61
10:AJ:48:THR:HG23	10:AJ:62:HIS:ND1	2.15	0.61
32:B6:15:GLU:CD	32:B6:44:ARG:NH2	2.59	0.61
36:BA:64:A:C4	55:BX:66:LEU:HD13	2.35	0.61
36:BA:1556:C:H2'	36:BA:1557:C:C6	2.35	0.61
36:BA:2514:U:H2'	36:BA:2515:C:H6	1.64	0.61
40:BE:25:VAL:HG22	40:BE:183:LEU:HG	1.82	0.61
41:BF:63:LYS:CE	41:BF:67:GLN:HB2	2.31	0.61
48:BQ:12:GLN:HE21	48:BQ:73:PRO:HD2	1.64	0.61
52:BU:54:LYS:O	52:BU:58:ARG:HG3	2.01	0.61
53:BV:34:GLU:C	53:BV:35:LEU:HD22	2.26	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:88:LYS:HZ1	56:BY:93:GLY:C	2.08	0.61
1:CA:179:A:H2'	1:CA:180:U:C6	2.36	0.61
1:CA:559:A:H4'	1:CA:560:U:H5'	1.83	0.61
1:CA:714:G:H2'	1:CA:715:A:C8	2.35	0.61
1:CA:836:G:C6	1:CA:851:G:C6	2.89	0.61
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.35	0.61
1:CA:1301:U:H3'	1:CA:1302:U:H5''	1.82	0.61
3:CC:47:LEU:HD11	3:CC:76:VAL:HG12	1.82	0.61
13:CM:121:LYS:HZ3	13:CM:121:LYS:HB2	1.65	0.61
23:CW:58:A:H4'	23:CW:59:A:OP1	2.00	0.61
24:CX:14:U:H5'	24:CX:15:G:OP2	2.00	0.61
33:D7:10:ARG:HH12	33:D7:14:LYS:HE3	1.66	0.61
34:D8:13:ARG:HB3	47:DP:63:PRO:HB3	1.83	0.61
34:D8:14:VAL:HG21	34:D8:22:VAL:HG13	1.82	0.61
36:DA:295:G:H2'	36:DA:296:C:H6	1.65	0.61
36:DA:2853:C:H2'	36:DA:2854:G:C8	2.36	0.61
39:DD:31:LYS:NZ	39:DD:33:LEU:HB2	2.15	0.61
39:DD:48:ARG:HG3	39:DD:48:ARG:NH1	2.15	0.61
42:DG:131:TYR:HE2	42:DG:133:LEU:HD23	1.65	0.61
42:DG:139:LEU:HA	42:DG:144:ILE:HG21	1.83	0.61
43:DH:12:PRO:O	43:DH:15:VAL:HG22	2.01	0.61
46:DO:1:MET:HG3	46:DO:67:LYS:HG2	1.82	0.61
48:DQ:87:LYS:HG2	48:DQ:88:GLY:H	1.66	0.61
49:DR:75:LEU:HD13	49:DR:75:LEU:O	2.00	0.61
1:AA:20:U:H2'	1:AA:21:G:O4'	2.00	0.61
1:AA:539:A:H2'	1:AA:540:G:C8	2.35	0.61
1:AA:824:C:H2'	1:AA:825:G:H8	1.66	0.61
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.30	0.61
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.46	0.61
13:AM:106:ASN:O	13:AM:107:ALA:HB3	1.99	0.61
15:AO:5:LYS:O	15:AO:9:GLN:HG2	2.01	0.61
25:AY:88:VAL:O	25:AY:90:PHE:N	2.33	0.61
25:AY:99:ARG:NH2	25:AY:128:TYR:HB2	2.15	0.61
25:AY:548:GLU:O	25:AY:551:GLN:HG2	2.00	0.61
27:B1:57:GLU:HG2	27:B1:58:ILE:N	2.16	0.61
34:B8:54:GLU:O	34:B8:58:ILE:HG12	2.00	0.61
34:B8:56:GLU:HA	34:B8:59:LYS:NZ	2.16	0.61
34:B8:62:LEU:CD1	36:BA:242:G:H5''	2.29	0.61
36:BA:78:A:O2'	36:BA:79:G:H5'	2.01	0.61
36:BA:751:A:H5'	54:BW:90:ARG:HA	1.83	0.61
36:BA:803:U:O2'	36:BA:804:A:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:71:LYS:HG2	38:BC:72:GLN:N	2.14	0.61
38:BC:132:LEU:HD22	38:BC:137:LEU:HB2	1.83	0.61
39:BD:259:THR:O	39:BD:260:ARG:C	2.43	0.61
41:BF:187:VAL:CG1	47:BP:7:ARG:HH22	2.14	0.61
45:BN:26:LEU:HD12	45:BN:27:ALA:N	2.16	0.61
50:BS:42:ASP:C	50:BS:44:LYS:H	2.08	0.61
56:BY:39:VAL:HG12	56:BY:40:GLU:N	2.16	0.61
1:CA:219:C:H2'	1:CA:220:G:O4'	2.01	0.61
1:CA:1030(A):G:H1'	1:CA:1031:G:H1	1.66	0.61
1:CA:1160:G:H2'	1:CA:1160:G:N3	2.15	0.61
1:CA:1170:A:H2'	1:CA:1171:G:O4'	2.01	0.61
3:CC:175:LEU:HD21	3:CC:201:TYR:HE2	1.65	0.61
10:CJ:12:ASP:OD2	10:CJ:15:THR:HG23	2.00	0.61
12:CL:47:LYS:HD2	12:CL:48:PRO:HD3	1.82	0.61
17:CQ:59:ILE:HG23	17:CQ:71:PHE:HB3	1.82	0.61
20:CT:12:ALA:O	20:CT:15:ARG:HB2	1.99	0.61
22:CV:56:C:O2	42:DG:78:SER:HB3	2.01	0.61
25:CY:84:THR:N	25:CY:85:PRO:HD3	2.13	0.61
25:CY:330:VAL:CG1	25:CY:371:ALA:HA	2.31	0.61
31:D5:3:LYS:HG2	36:DA:747:U:C4	2.36	0.61
36:DA:662:G:P	47:DP:18:ARG:HD2	2.41	0.61
36:DA:2832:U:H1'	36:DA:2834:G:C2	2.35	0.61
39:DD:76:PRO:HG2	39:DD:98:VAL:CG2	2.30	0.61
41:DF:38:ARG:O	41:DF:42:ALA:HB2	2.01	0.61
41:DF:84:VAL:O	41:DF:86:GLY:N	2.33	0.61
41:DF:187:VAL:HG12	47:DP:7:ARG:NH2	2.16	0.61
42:DG:55:LYS:HD3	42:DG:56:ALA:N	2.16	0.61
45:DN:43:THR:HG22	45:DN:45:ASN:ND2	2.15	0.61
56:DY:88:LYS:NZ	56:DY:93:GLY:O	2.33	0.61
57:DZ:65:GLN:HB3	57:DZ:67:LEU:HD11	1.83	0.61
1:AA:624:C:O2'	1:AA:625:G:H5'	2.01	0.61
1:AA:973:G:C1'	10:AJ:55:LYS:HE2	2.30	0.61
9:AI:81:ILE:O	9:AI:85:LEU:HG	2.01	0.61
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.83	0.61
17:AQ:53:LEU:HD23	17:AQ:54:GLY:N	2.15	0.61
20:AT:12:ALA:O	20:AT:15:ARG:HB2	1.99	0.61
25:AY:230:LYS:NZ	25:AY:237:PRO:HA	2.16	0.61
25:AY:487:ILE:CG2	25:AY:594:VAL:HG13	2.26	0.61
27:B1:51:VAL:HG21	27:B1:74:VAL:HG21	1.81	0.61
27:B1:76:ARG:HH22	27:B1:95:LEU:CB	2.14	0.61
31:B5:20:ARG:HA	31:B5:23:HIS:ND1	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:15:GLU:OE2	32:B6:44:ARG:NH1	2.32	0.61
32:B6:47:THR:HG23	32:B6:48:VAL:H	1.65	0.61
34:B8:13:ARG:HD3	47:BP:61:ARG:O	2.01	0.61
35:B9:22:ARG:HB2	35:B9:24:TYR:HE1	1.65	0.61
36:BA:528:A:C2	36:BA:2043:C:H5'	2.36	0.61
36:BA:754:C:H2'	36:BA:755:C:C6	2.36	0.61
36:BA:894:C:O2'	36:BA:895:U:H5'	2.01	0.61
36:BA:902:C:H2'	36:BA:903:C:H6	1.66	0.61
36:BA:1114:G:C2'	36:BA:1115:G:H5'	2.30	0.61
36:BA:1682:G:H2'	36:BA:1683:C:C6	2.36	0.61
36:BA:1820:U:H6	36:BA:1820:U:OP1	1.83	0.61
36:BA:2305:A:C2	36:BA:2306:C:H1'	2.35	0.61
36:BA:2723:C:H5''	49:BR:2:ARG:NH1	2.05	0.61
47:BP:114:ILE:HD12	47:BP:115:LEU:N	2.16	0.61
50:BS:101:LEU:HD12	50:BS:101:LEU:C	2.26	0.61
1:CA:20:U:H2'	1:CA:21:G:O4'	2.00	0.61
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.83	0.61
1:CA:683:G:H5'	1:CA:684:A:OP2	2.01	0.61
1:CA:976:G:H5'	1:CA:1358:U:O2'	2.01	0.61
3:CC:76:VAL:HG23	3:CC:77:ILE:HG13	1.81	0.61
5:CE:71:LEU:HD11	5:CE:114:GLY:HA3	1.82	0.61
9:CI:81:ILE:O	9:CI:85:LEU:HG	2.00	0.61
9:CI:95:LYS:HZ2	9:CI:96:LEU:CD1	2.14	0.61
18:CR:46:GLU:HA	18:CR:46:GLU:OE1	2.01	0.61
25:CY:25:LYS:HE2	25:CY:86:GLY:HA2	1.82	0.61
25:CY:264:LEU:HD22	25:CY:265:LYS:NZ	2.15	0.61
27:D1:94:LEU:O	27:D1:96:LYS:N	2.34	0.61
29:D3:9:VAL:HG23	29:D3:10:LYS:H	1.64	0.61
31:D5:20:ARG:HA	31:D5:23:HIS:ND1	2.16	0.61
34:D8:48:PHE:C	34:D8:49:VAL:HG22	2.26	0.61
36:DA:392:C:H5''	36:DA:409:C:H5''	1.81	0.61
36:DA:2593:U:H2'	36:DA:2594:C:H6	1.65	0.61
37:DB:60:C:H2'	37:DB:61:G:H8	1.66	0.61
39:DD:145:VAL:HG12	39:DD:146:GLU:N	2.16	0.61
41:DF:28:ILE:O	41:DF:30:PRO:HD3	2.01	0.61
42:DG:53:LEU:HB3	42:DG:56:ALA:HB3	1.83	0.61
47:DP:9:ASN:H	47:DP:10:PRO:HD2	1.66	0.61
47:DP:24:GLY:CA	47:DP:33:ARG:NH1	2.64	0.61
51:DT:109:GLU:HA	51:DT:112:ARG:HB3	1.83	0.61
57:DZ:182:LYS:O	57:DZ:183:LEU:HD23	2.00	0.61
1:AA:41:G:H2'	1:AA:42:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.36	0.61
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.29	0.61
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.01	0.61
23:AW:34:C:H2'	23:AW:35:A:H5''	1.80	0.61
25:AY:5:VAL:HG13	25:AY:6:GLU:N	2.15	0.61
25:AY:416:LYS:HD2	25:AY:417:THR:H	1.65	0.61
36:BA:260:G:H1'	36:BA:621:A:H1'	1.83	0.61
36:BA:1163:G:O2'	36:BA:1164:G:H5'	2.01	0.61
36:BA:1541:G:H1'	36:BA:1542:A:C4	2.36	0.61
36:BA:1858:G:H2'	36:BA:1883:G:H22	1.65	0.61
36:BA:2523:G:O2'	36:BA:2524:G:H5''	2.00	0.61
38:BC:117:THR:HG22	38:BC:147:GLY:O	2.01	0.61
49:BR:11:ASN:O	49:BR:12:ARG:HB2	2.00	0.61
52:BU:59:ARG:HH11	52:BU:59:ARG:HG2	1.66	0.61
56:BY:13:VAL:HG23	56:BY:73:ARG:C	2.26	0.61
2:CB:207:ALA:HB3	2:CB:210:SER:CB	2.31	0.61
3:CC:60:ALA:O	3:CC:61:ALA:HB2	2.00	0.61
17:CQ:48:GLU:O	17:CQ:49:GLU:C	2.43	0.61
25:CY:84:THR:N	25:CY:85:PRO:CD	2.63	0.61
25:CY:85:PRO:HA	25:CY:94:VAL:HG13	1.83	0.61
25:CY:506:GLN:HE22	36:DA:1913:A:N6	1.98	0.61
25:CY:530:VAL:O	25:CY:531:GLY:C	2.44	0.61
25:CY:688:ILE:HD12	25:CY:688:ILE:N	2.15	0.61
36:DA:272(J):C:H3'	36:DA:274:G:C5'	2.29	0.61
36:DA:299:A:H5'	36:DA:300:A:OP2	2.01	0.61
36:DA:894:C:O2'	36:DA:895:U:H5'	2.00	0.61
36:DA:2008:C:H2'	36:DA:2009:G:H8	1.66	0.61
36:DA:2030:A:H4'	36:DA:2031:A:H8	1.66	0.61
38:DC:128:LEU:CD1	38:DC:132:LEU:HG	2.31	0.61
41:DF:192:LEU:HD23	41:DF:193:VAL:N	2.16	0.61
47:DP:23:PRO:CB	47:DP:33:ARG:HG3	2.31	0.61
50:DS:99:LYS:O	50:DS:101:LEU:N	2.34	0.61
51:DT:10:VAL:C	51:DT:12:SER:N	2.56	0.61
56:DY:44:ILE:CG2	56:DY:45:VAL:H	2.13	0.61
57:DZ:152:ALA:HB3	57:DZ:154:ASP:OD1	2.01	0.61
1:AA:737:A:H2'	1:AA:738:C:C6	2.36	0.60
23:AW:14:A:H2'	23:AW:15:G:H5''	1.83	0.60
25:AY:153:MET:O	25:AY:157:LEU:HG	2.01	0.60
25:AY:539:ILE:CD1	25:AY:567:LEU:HD21	2.31	0.60
26:B0:23:VAL:HG11	26:B0:69:PHE:HZ	1.66	0.60
28:B2:3:LEU:HB2	36:BA:98:G:OP1	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:759:G:H2'	36:BA:760:G:H8	1.66	0.60
36:BA:1819:A:H1'	36:BA:1821:A:C6	2.36	0.60
36:BA:2346:A:H1'	36:BA:2383:G:C8	2.36	0.60
36:BA:2392:A:H2	36:BA:2424:C:H42	1.47	0.60
36:BA:2438:U:O3'	36:BA:2439:A:H4'	2.01	0.60
36:BA:2593:U:H2'	36:BA:2594:C:H6	1.64	0.60
39:BD:70:TRP:HZ3	39:BD:146:GLU:OE2	1.84	0.60
39:BD:95:LEU:HD12	39:BD:103:ARG:O	2.01	0.60
41:BF:43:LYS:HA	41:BF:98:SER:HB3	1.82	0.60
42:BG:60:LEU:O	42:BG:60:LEU:HD13	1.98	0.60
45:BN:134:ARG:O	45:BN:136:GLU:N	2.34	0.60
47:BP:66:GLY:O	47:BP:67:MET:HB3	2.01	0.60
51:BT:115:ARG:HH11	51:BT:115:ARG:CB	2.13	0.60
53:BV:39:LEU:CD1	53:BV:51:VAL:HA	2.31	0.60
1:CA:552:U:H4'	12:CL:86:ARG:HG2	1.81	0.60
3:CC:11:ARG:HH21	3:CC:180:ALA:HB3	1.66	0.60
19:CS:15:LEU:O	19:CS:19:VAL:HG23	2.01	0.60
25:CY:146:LEU:HD12	25:CY:167:PRO:CD	2.20	0.60
25:CY:210:ARG:HG2	25:CY:210:ARG:NH1	2.16	0.60
32:D6:28:ARG:O	32:D6:32:ASN:HB2	2.01	0.60
36:DA:1141:U:H5''	45:DN:63:THR:CG2	2.30	0.60
36:DA:1858:G:H2'	36:DA:1883:G:H22	1.66	0.60
36:DA:2679:A:H4'	40:DE:165:VAL:HG11	1.83	0.60
37:DB:106:G:H2'	37:DB:107:G:H8	1.65	0.60
42:DG:73:ALA:H	42:DG:87:PRO:HG3	1.65	0.60
46:DO:10:VAL:HG21	46:DO:16:ALA:O	2.01	0.60
46:DO:97:ARG:HH11	46:DO:97:ARG:HG3	1.66	0.60
47:DP:66:GLY:O	47:DP:67:MET:HB3	1.99	0.60
50:DS:98:VAL:C	50:DS:100:ALA:H	2.07	0.60
51:DT:28:VAL:CG2	51:DT:46:GLU:HG3	2.30	0.60
56:DY:39:VAL:HG12	56:DY:40:GLU:N	2.16	0.60
1:AA:309:G:H1'	1:AA:608:A:C2	2.36	0.60
1:AA:1305:G:OP1	21:AU:2:GLY:N	2.34	0.60
1:AA:1370:G:C2	1:AA:1371:G:C8	2.89	0.60
14:AN:12:ARG:NH1	14:AN:14:PRO:HG3	2.14	0.60
15:AO:26:GLU:HA	15:AO:81:LEU:HD22	1.81	0.60
23:AW:11:A:H2'	23:AW:12:G:C8	2.36	0.60
23:AW:50:U:H3	23:AW:64:G:N2	1.95	0.60
25:AY:96:ARG:O	25:AY:100:VAL:HG12	2.00	0.60
25:AY:252:ASP:O	25:AY:254:LYS:HE3	2.01	0.60
59:AY:701:FUA:O1	59:AY:701:FUA:H12	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:7:LEU:HD13	48:BQ:85:LYS:HG3	1.83	0.60
36:BA:1326:U:O2'	36:BA:1327:C:H5'	2.00	0.60
36:BA:2461:C:H2'	36:BA:2461:C:O2	1.99	0.60
38:BC:138:LEU:HD13	38:BC:138:LEU:C	2.25	0.60
40:BE:170:LEU:H	40:BE:170:LEU:HD12	1.66	0.60
46:BO:111:PHE:CB	46:BO:114:ILE:HD13	2.28	0.60
47:BP:127:ALA:C	47:BP:148:LEU:HD11	2.26	0.60
49:BR:44:LEU:HD13	49:BR:44:LEU:O	2.02	0.60
52:BU:56:ASP:O	52:BU:59:ARG:HB2	2.00	0.60
57:BZ:146:ILE:HD13	57:BZ:146:ILE:H	1.66	0.60
1:CA:579:G:C5'	1:CA:728:A:H1'	2.30	0.60
2:CB:233:SER:CB	2:CB:234:PRO:CD	2.79	0.60
3:CC:99:VAL:O	3:CC:99:VAL:HG23	2.00	0.60
5:CE:11:ILE:HG22	5:CE:12:LEU:N	2.16	0.60
7:CG:38:LEU:O	7:CG:42:ILE:HG13	2.01	0.60
25:CY:92:ILE:HG23	25:CY:93:GLU:N	2.16	0.60
25:CY:388:THR:HG21	25:CY:399:LEU:HD13	1.83	0.60
25:CY:484:ARG:CD	25:CY:559:PRO:HB2	2.31	0.60
25:CY:546:ILE:CD1	25:CY:565:VAL:HG11	2.29	0.60
27:D1:69:LYS:HE2	27:D1:72:GLU:OE2	2.00	0.60
36:DA:1809:A:H2'	36:DA:1810:A:C8	2.36	0.60
36:DA:2192:G:H2'	36:DA:2193:G:H5''	1.82	0.60
39:DD:65:ILE:H	39:DD:65:ILE:HD13	1.65	0.60
41:DF:63:LYS:CE	41:DF:67:GLN:HB2	2.30	0.60
43:DH:88:LEU:HD23	43:DH:164:TYR:O	2.01	0.60
48:DQ:76:LYS:HE2	48:DQ:77:LYS:O	2.01	0.60
57:DZ:61:LEU:C	57:DZ:63:ASP:H	2.09	0.60
1:AA:116:A:H2'	1:AA:117:G:O4'	2.00	0.60
1:AA:585:G:H4'	12:AL:8:ASN:ND2	2.15	0.60
3:AC:70:VAL:HG12	3:AC:71:ALA:N	2.15	0.60
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HG2	1.84	0.60
12:AL:8:ASN:O	12:AL:12:ARG:HG3	2.01	0.60
25:AY:249:GLY:HA2	25:AY:252:ASP:OD2	2.02	0.60
32:B6:7:ILE:HD12	32:B6:7:ILE:N	2.15	0.60
36:BA:1435:G:H5'	36:BA:1436:G:OP2	2.01	0.60
36:BA:2679:A:H4'	40:BE:165:VAL:HG11	1.83	0.60
42:BG:77:ILE:HG22	42:BG:80:PHE:O	2.01	0.60
42:BG:86:MET:N	42:BG:87:PRO:HD3	2.16	0.60
46:BO:87:ILE:HD13	46:BO:87:ILE:N	2.16	0.60
50:BS:52:SER:CB	50:BS:55:ALA:HB3	2.30	0.60
56:BY:88:LYS:NZ	56:BY:93:GLY:O	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:145:GLU:O	57:BZ:146:ILE:C	2.44	0.60
1:CA:404:U:H2'	1:CA:405:U:H6	1.66	0.60
1:CA:1284:C:H3'	1:CA:1285:A:H5''	1.82	0.60
2:CB:187:LEU:HD12	2:CB:205:ASP:HA	1.82	0.60
12:CL:8:ASN:O	12:CL:12:ARG:HG3	2.01	0.60
25:CY:188:TYR:CD1	25:CY:196:ILE:HG22	2.37	0.60
28:D2:69:ARG:O	28:D2:70:GLN:HB2	2.01	0.60
34:D8:54:GLU:O	34:D8:58:ILE:HG12	2.00	0.60
36:DA:1882:C:H2'	36:DA:1883:G:O4'	2.01	0.60
36:DA:2028:U:H2'	36:DA:2029:G:C8	2.37	0.60
36:DA:2789:C:H1'	36:DA:2892:A:C2	2.36	0.60
37:DB:3:C:N4	37:DB:118:G:H1	1.98	0.60
37:DB:44:G:H1'	37:DB:47:C:N4	2.16	0.60
41:DF:25:PRO:HG3	41:DF:119:ARG:CB	2.30	0.60
42:DG:147:ASP:C	42:DG:149:VAL:H	2.08	0.60
48:DQ:59:ARG:HB3	57:DZ:180:VAL:HG21	1.83	0.60
51:DT:91:ARG:HG2	51:DT:116:ALA:HA	1.83	0.60
52:DU:59:ARG:HH11	52:DU:59:ARG:HG2	1.64	0.60
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.34	0.60
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.66	0.60
1:AA:1005:A:H5'	1:AA:1006:C:OP2	2.00	0.60
1:AA:1148:U:O3'	9:AI:14:VAL:HG11	2.01	0.60
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.83	0.60
1:AA:1479:C:H2'	1:AA:1480:G:C8	2.34	0.60
2:AB:12:GLU:HA	2:AB:16:HIS:CG	2.37	0.60
2:AB:233:SER:CB	2:AB:234:PRO:CD	2.79	0.60
3:AC:86:VAL:O	3:AC:90:GLU:HG2	2.02	0.60
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.82	0.60
6:AF:99:ALA:O	6:AF:100:ASN:HB2	2.01	0.60
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.01	0.60
9:AI:104:ARG:O	9:AI:105:ASP:HB3	2.01	0.60
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.02	0.60
19:AS:53:ASN:O	19:AS:55:LYS:N	2.32	0.60
25:AY:19:ALA:CA	25:AY:121:VAL:HG11	2.29	0.60
25:AY:106:VAL:HG23	25:AY:132:ARG:HG3	1.82	0.60
25:AY:229:LEU:O	25:AY:233:GLU:HG3	2.01	0.60
32:B6:6:ARG:O	32:B6:7:ILE:HB	2.01	0.60
32:B6:7:ILE:HG22	32:B6:7:ILE:O	2.00	0.60
36:BA:1061:U:H4'	36:BA:1070:A:C1'	2.26	0.60
36:BA:1430:C:H2'	36:BA:1431:U:C6	2.36	0.60
37:BB:80:U:H2'	37:BB:81:G:H21	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:91:ARG:HG2	39:BD:91:ARG:NH1	2.15	0.60
40:BE:170:LEU:HD12	40:BE:170:LEU:N	2.16	0.60
43:BH:30:LYS:CD	43:BH:81:GLU:HG2	2.31	0.60
45:BN:66:LYS:O	45:BN:67:LEU:HD23	2.01	0.60
49:BR:94:TYR:CD1	49:BR:94:TYR:N	2.68	0.60
50:BS:17:ARG:O	50:BS:20:ARG:HG2	2.02	0.60
57:BZ:127:LYS:O	57:BZ:128:VAL:HB	2.02	0.60
1:CA:22:G:H4'	1:CA:885:G:C8	2.37	0.60
1:CA:1305:G:OP1	21:CU:2:GLY:N	2.34	0.60
1:CA:1321:C:H5''	1:CA:1322:C:C5'	2.31	0.60
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.31	0.60
1:CA:1342:C:O2'	1:CA:1343:G:H5'	2.01	0.60
8:CH:103:VAL:HG21	8:CH:110:ALA:HB2	1.83	0.60
10:CJ:78:ASN:HB2	10:CJ:81:THR:HG23	1.84	0.60
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.67	0.60
19:CS:41:VAL:O	19:CS:41:VAL:HG23	2.01	0.60
25:CY:580:MET:HE2	25:CY:580:MET:C	2.26	0.60
29:D3:29:ARG:HH11	29:D3:29:ARG:CB	2.07	0.60
36:DA:648:G:H2'	36:DA:649:G:H8	1.65	0.60
36:DA:933:A:H2'	36:DA:934:G:O4'	2.01	0.60
36:DA:1287:A:N3	36:DA:1287:A:H2'	2.17	0.60
36:DA:2386:C:H2'	36:DA:2387:U:C6	2.36	0.60
40:DE:77:ILE:HG22	40:DE:78:LEU:CD1	2.31	0.60
40:DE:170:LEU:HD12	40:DE:170:LEU:N	2.16	0.60
41:DF:178:PRO:HG2	41:DF:179:GLU:OE1	2.00	0.60
41:DF:187:VAL:CG1	47:DP:7:ARG:HH22	2.13	0.60
45:DN:120:LEU:HD11	45:DN:122:VAL:HG23	1.82	0.60
46:DO:97:ARG:O	46:DO:98:VAL:HG13	2.01	0.60
47:DP:91:PHE:N	47:DP:91:PHE:CD1	2.70	0.60
1:AA:424:G:H2'	1:AA:425:G:H8	1.67	0.60
1:AA:513:C:O2'	1:AA:514:C:H5'	2.01	0.60
1:AA:542:G:O2'	1:AA:543:C:H5'	2.02	0.60
1:AA:820:U:H4'	1:AA:821:G:OP2	2.01	0.60
1:AA:1147:C:O2	9:AI:16:ARG:NH1	2.33	0.60
3:AC:84:ILE:O	3:AC:88:ARG:HG3	2.02	0.60
13:AM:82:MET:CA	13:AM:93:ARG:HH21	2.14	0.60
23:AW:23:C:H5'	23:AW:23:C:H6	1.66	0.60
25:AY:12:LEU:HB3	25:AY:283:PRO:CD	2.30	0.60
25:AY:408:VAL:HG21	25:AY:660:ARG:NH2	2.17	0.60
25:AY:488:THR:O	25:AY:516:PRO:HG3	2.02	0.60
26:B0:27:GLU:HA	26:B0:67:VAL:O	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B4:55:ARG:HH21	30:B4:56:VAL:HG22	1.66	0.60
36:BA:295:G:H2'	36:BA:296:C:H6	1.66	0.60
36:BA:784:A:H5''	39:BD:227:ASN:HD21	1.67	0.60
36:BA:1528(A):A:H62	36:BA:1541:G:N2	1.99	0.60
36:BA:1814:G:H4'	39:BD:51:VAL:HG21	1.83	0.60
36:BA:2386:C:H2'	36:BA:2387:U:C6	2.37	0.60
36:BA:2832:U:H1'	36:BA:2834:G:N3	2.16	0.60
38:BC:57:GLN:NE2	38:BC:205:ALA:HA	2.16	0.60
39:BD:48:ARG:HG3	39:BD:48:ARG:NH1	2.16	0.60
46:BO:107:ARG:CA	46:BO:112:MET:HE1	2.31	0.60
47:BP:75:ILE:HD12	47:BP:75:ILE:N	2.17	0.60
48:BQ:43:THR:O	48:BQ:47:ILE:HG13	2.02	0.60
53:BV:24:LYS:HA	53:BV:92:THR:HG23	1.84	0.60
54:BW:13:SER:HB3	54:BW:16:LYS:HD2	1.84	0.60
55:BX:70:LEU:HD23	55:BX:70:LEU:C	2.26	0.60
56:BY:27:VAL:HG12	56:BY:29:GLU:OE1	2.01	0.60
57:BZ:82:ARG:O	57:BZ:83:PRO:C	2.44	0.60
1:CA:999:C:H2'	1:CA:1000:U:C5	2.37	0.60
1:CA:1288:A:H2	1:CA:1352:C:O2	1.85	0.60
6:CF:99:ALA:O	6:CF:100:ASN:HB2	2.01	0.60
9:CI:8:GLY:CA	9:CI:79:LEU:HD12	2.30	0.60
13:CM:82:MET:CA	13:CM:93:ARG:HH21	2.15	0.60
31:D5:4:HIS:HB3	31:D5:5:PRO:CD	2.31	0.60
36:DA:272(I):U:H5'	36:DA:272(I):U:O2	2.01	0.60
36:DA:402:A:O2'	36:DA:403:U:H5'	2.01	0.60
36:DA:528:A:C2	36:DA:2043:C:H5'	2.36	0.60
36:DA:556:G:H2'	36:DA:557:U:C6	2.36	0.60
36:DA:1043:C:H2'	36:DA:1044:G:C5'	2.20	0.60
36:DA:1057:A:H61	36:DA:1081:U:H3	1.48	0.60
36:DA:1326:U:O2'	36:DA:1327:C:H5'	2.01	0.60
36:DA:1332:G:N2	36:DA:1609:A:H3'	2.15	0.60
36:DA:2537:U:H2'	36:DA:2538:C:C6	2.36	0.60
36:DA:2688:U:H3'	36:DA:2688:U:O2	2.02	0.60
39:DD:145:VAL:HG12	39:DD:146:GLU:O	2.01	0.60
40:DE:116:VAL:O	40:DE:117:MET:CB	2.50	0.60
41:DF:185:ASP:OD1	41:DF:188:ARG:HD3	2.01	0.60
43:DH:130:ARG:HB3	43:DH:130:ARG:NH1	2.15	0.60
46:DO:26:LYS:HB3	46:DO:30:ALA:CB	2.31	0.60
57:DZ:149:SER:HB2	57:DZ:172:ALA:O	2.02	0.60
1:AA:179:A:H2'	1:AA:180:U:C6	2.37	0.60
3:AC:11:ARG:HH21	3:AC:180:ALA:HB3	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:81:GLY:O	7:AG:83:ALA:N	2.34	0.60
9:AI:53:VAL:O	9:AI:54:ASP:HB2	2.01	0.60
12:AL:59:ARG:CZ	25:AY:422:GLU:OE2	2.49	0.60
22:AV:61:C:O2'	22:AV:62:C:H5'	2.00	0.60
25:AY:9:LEU:HD22	25:AY:284:LEU:HD22	1.83	0.60
25:AY:315:LYS:HZ3	25:AY:317:MET:HG2	1.64	0.60
36:BA:84:A:H5'	56:BY:9:LYS:CB	2.31	0.60
36:BA:1141:U:H5''	45:BN:63:THR:CG2	2.32	0.60
36:BA:2776:A:H4'	36:BA:2777:G:C5'	2.32	0.60
41:BF:119:ARG:HH11	41:BF:119:ARG:HG2	1.66	0.60
42:BG:131:TYR:HE2	42:BG:133:LEU:HB3	1.66	0.60
42:BG:133:LEU:HD12	42:BG:133:LEU:C	2.26	0.60
45:BN:21:LYS:HB3	45:BN:26:LEU:HD23	1.82	0.60
47:BP:71:VAL:H	47:BP:72:PRO:CD	2.15	0.60
51:BT:57:PHE:C	51:BT:58:ASN:HD22	2.10	0.60
1:CA:1431:C:C2'	1:CA:1432:G:H5'	2.31	0.60
4:CD:43:HIS:O	4:CD:45:GLN:N	2.34	0.60
9:CI:114:TYR:HD2	10:CJ:60:ARG:HG3	1.65	0.60
10:CJ:71:LEU:HD12	10:CJ:72:VAL:H	1.67	0.60
19:CS:53:ASN:O	19:CS:55:LYS:N	2.35	0.60
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	1.82	0.60
23:CW:49:G:C3'	23:CW:50:U:H5''	2.31	0.60
25:CY:82:ILE:CD1	25:CY:101:LEU:HD23	2.30	0.60
25:CY:276:VAL:O	25:CY:280:LEU:HD23	2.02	0.60
25:CY:546:ILE:CG2	25:CY:590:ILE:HG13	2.26	0.60
31:D5:3:LYS:HD2	31:D5:5:PRO:HD2	1.82	0.60
32:D6:9:LEU:HD22	32:D6:9:LEU:C	2.27	0.60
36:DA:64:A:C4	55:DX:66:LEU:HD13	2.37	0.60
36:DA:621:A:H2'	36:DA:622:G:C5'	2.31	0.60
36:DA:1217:C:OP2	52:DU:15:LYS:NZ	2.28	0.60
36:DA:1301:A:H4'	36:DA:1302:A:OP1	2.02	0.60
36:DA:2348:U:H2'	36:DA:2349:G:H5''	1.83	0.60
36:DA:2777:G:C5'	36:DA:2778:A:H5''	2.31	0.60
43:DH:70:THR:HG22	43:DH:74:ASN:ND2	2.16	0.60
46:DO:107:ARG:CA	46:DO:112:MET:HE1	2.31	0.60
51:DT:26:ASP:HB3	51:DT:89:VAL:O	2.02	0.60
53:DV:5:VAL:HG23	53:DV:37:VAL:HG23	1.82	0.60
53:DV:24:LYS:HA	53:DV:92:THR:HG23	1.83	0.60
6:AF:8:ILE:HG23	6:AF:85:VAL:HG13	1.83	0.60
12:AL:82:VAL:HG12	12:AL:105:TYR:HD2	1.66	0.60
23:AW:5:G:H1	23:AW:68:C:H42	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AX:14:U:H5'	24:AX:15:G:OP2	2.00	0.60
25:AY:276:VAL:CA	25:AY:280:LEU:HD23	2.31	0.60
25:AY:335:LEU:HD21	25:AY:352:VAL:HG21	1.82	0.60
25:AY:630:GLN:HG2	25:AY:630:GLN:O	2.02	0.60
36:BA:811:U:O2'	36:BA:812:C:H5''	2.01	0.60
36:BA:878:A:H2'	36:BA:879:G:O4'	2.02	0.60
36:BA:1432:C:H2'	36:BA:1433:U:O4'	2.01	0.60
36:BA:1914:C:H2'	36:BA:1915:U:O4'	2.01	0.60
36:BA:2056:G:H2'	36:BA:2056:G:N3	2.16	0.60
36:BA:2076:U:H5'	36:BA:2238:G:H22	1.64	0.60
36:BA:2716:U:O2'	36:BA:2717:G:H5'	2.02	0.60
39:BD:23:GLU:HA	39:BD:23:GLU:OE1	2.01	0.60
39:BD:130:ALA:C	39:BD:131:LEU:HD12	2.26	0.60
46:BO:69:ILE:HD13	46:BO:77:ILE:HG23	1.83	0.60
48:BQ:30:GLY:HA2	48:BQ:107:ALA:HB2	1.83	0.60
55:BX:35:THR:HG22	55:BX:37:THR:N	2.05	0.60
1:CA:865:A:H5'	1:CA:1078:U:O4	2.02	0.60
1:CA:1030(D):A:C2'	1:CA:1031:G:H5'	2.30	0.60
1:CA:1226:C:H5'	13:CM:96:LEU:CD1	2.31	0.60
2:CB:89:GLY:O	2:CB:90:MET:HE2	2.01	0.60
4:CD:9:CYS:SG	4:CD:31:CYS:O	2.60	0.60
7:CG:81:GLY:O	7:CG:83:ALA:N	2.35	0.60
12:CL:70:ILE:CG2	12:CL:100:ILE:HD12	2.32	0.60
16:CP:67:THR:N	16:CP:70:ALA:HB3	2.17	0.60
25:CY:606:MET:HE3	25:CY:671:MET:HG2	1.83	0.60
30:D4:14:ILE:HG23	30:D4:31:ILE:HG22	1.84	0.60
31:D5:47:PRO:O	31:D5:57:VAL:HG22	2.02	0.60
34:D8:30:ARG:O	34:D8:31:HIS:HB3	2.02	0.60
36:DA:781:A:C8	39:DD:219:PRO:HG3	2.36	0.60
36:DA:965:C:C4'	36:DA:2273:A:H1'	2.32	0.60
36:DA:2547:U:H2'	36:DA:2548:G:H8	1.66	0.60
36:DA:2776:A:H4'	36:DA:2777:G:C5'	2.31	0.60
37:DB:21:G:H2'	37:DB:21:G:N3	2.16	0.60
41:DF:119:ARG:HH11	41:DF:119:ARG:HG2	1.66	0.60
41:DF:192:LEU:HD23	41:DF:192:LEU:C	2.26	0.60
47:DP:27:HIS:CD2	47:DP:28:GLY:N	2.70	0.60
47:DP:86:LYS:HB2	47:DP:117:GLU:O	2.01	0.60
53:DV:1:MET:HE2	53:DV:1:MET:HA	1.83	0.60
1:AA:683:G:H5'	1:AA:684:A:OP2	2.01	0.60
2:AB:142:LEU:O	2:AB:146:GLN:HB2	2.01	0.60
2:AB:187:LEU:HD12	2:AB:205:ASP:HA	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:180:ALA:O	3:AC:181:ASN:HB3	2.02	0.60
11:AK:30:VAL:HG21	11:AK:65:ALA:HA	1.84	0.60
17:AQ:80:GLY:O	17:AQ:81:ARG:HD2	2.01	0.60
19:AS:13:ASP:C	19:AS:15:LEU:N	2.59	0.60
23:AW:36:U:O5'	23:AW:36:U:H6	1.85	0.60
25:AY:169:GLY:HA3	25:AY:173:THR:O	2.02	0.60
36:BA:723:G:H2'	36:BA:724:U:C6	2.37	0.60
36:BA:2422:A:H4'	36:BA:2423:U:OP1	2.02	0.60
39:BD:35:LYS:HB3	39:BD:35:LYS:HZ2	1.66	0.60
40:BE:117:MET:O	40:BE:117:MET:HG2	2.02	0.60
47:BP:86:LYS:HB2	47:BP:117:GLU:O	2.02	0.60
50:BS:89:ARG:HH11	50:BS:89:ARG:HG2	1.66	0.60
51:BT:62:THR:HG22	51:BT:75:ILE:HG13	1.84	0.60
52:BU:113:ALA:C	52:BU:115:ALA:H	2.08	0.60
1:CA:865:A:C2	1:CA:918:A:H4'	2.35	0.60
1:CA:1326:C:O2'	1:CA:1327:C:H5'	2.01	0.60
12:CL:27:LEU:HD13	12:CL:28:LYS:H	1.67	0.60
12:CL:82:VAL:HG12	12:CL:105:TYR:CD2	2.37	0.60
18:CR:43:PHE:HE2	18:CR:58:LEU:HD11	1.66	0.60
19:CS:11:VAL:HG23	19:CS:38:SER:HB2	1.82	0.60
27:D1:45:ASN:C	27:D1:45:ASN:HD22	2.08	0.60
28:D2:40:SER:C	28:D2:42:GLY:H	2.10	0.60
32:D6:16:CYS:O	32:D6:17:LYS:C	2.45	0.60
36:DA:754:C:H2'	36:DA:755:C:C6	2.36	0.60
36:DA:1430:C:H2'	36:DA:1431:U:H6	1.66	0.60
36:DA:2656:U:H2'	36:DA:2657:A:H5''	1.84	0.60
39:DD:232:PRO:HD2	39:DD:249:PRO:HA	1.84	0.60
48:DQ:3:MET:HB2	48:DQ:4:PRO:HD2	1.83	0.60
48:DQ:59:ARG:HB3	57:DZ:180:VAL:CG2	2.32	0.60
53:DV:49:THR:O	53:DV:50:PRO:C	2.44	0.60
1:AA:865:A:H2	1:AA:918:A:H4'	1.67	0.60
1:AA:986:A:H1'	19:AS:54:GLY:O	2.00	0.60
1:AA:992:U:H1'	1:AA:993:G:C2	2.37	0.60
1:AA:1053:G:N7	1:AA:1200:C:H5''	2.17	0.60
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.02	0.60
1:AA:1509:C:O2'	1:AA:1510:U:H5'	2.01	0.60
4:AD:176:LEU:HD12	4:AD:177:ASP:H	1.66	0.60
9:AI:3:GLN:NE2	9:AI:20:ARG:HH21	2.00	0.60
9:AI:53:VAL:CG1	9:AI:95:LYS:HE3	2.31	0.60
9:AI:113:LYS:HD2	9:AI:119:ALA:HB1	1.84	0.60
12:AL:38:THR:HG23	12:AL:57:LYS:HB3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B4:31:ILE:HG22	30:B4:31:ILE:O	2.01	0.60
31:B5:3:LYS:NZ	36:BA:2613:U:C2'	2.65	0.60
36:BA:139:G:C6	36:BA:140:G:H2'	2.36	0.60
36:BA:402:A:O2'	36:BA:403:U:H5'	2.02	0.60
36:BA:965:C:C4'	36:BA:2273:A:H1'	2.32	0.60
36:BA:1090:U:O2	36:BA:1102:C:H1'	2.02	0.60
36:BA:1779:U:C5	36:BA:1784:A:N7	2.67	0.60
36:BA:1999:C:O2'	36:BA:2000:G:H5'	2.02	0.60
36:BA:2348:U:C2'	36:BA:2349:G:H5''	2.32	0.60
40:BE:77:ILE:HG22	40:BE:78:LEU:HD12	1.83	0.60
41:BF:192:LEU:HD23	41:BF:193:VAL:N	2.17	0.60
42:BG:95:ARG:O	42:BG:96:ARG:O	2.19	0.60
56:BY:13:VAL:HG22	56:BY:14:LEU:N	2.16	0.60
9:CI:113:LYS:HD2	9:CI:119:ALA:HB1	1.83	0.60
11:CK:30:VAL:HG21	11:CK:65:ALA:HA	1.83	0.60
12:CL:76:ASN:CG	12:CL:76:ASN:O	2.44	0.60
22:CV:4:C:O2'	22:CV:5:G:H8	1.83	0.60
25:CY:25:LYS:CE	25:CY:86:GLY:HA2	2.31	0.60
25:CY:451:ILE:HD11	25:CY:462:ILE:HG21	1.82	0.60
36:DA:654:A:N7	36:DA:654(V):A:H4'	2.17	0.60
36:DA:1556:C:H2'	36:DA:1557:C:C6	2.36	0.60
36:DA:1582:C:H2'	36:DA:1583:A:C8	2.35	0.60
36:DA:2309:A:C2'	36:DA:2310:A:H5''	2.32	0.60
36:DA:2411:A:O2'	36:DA:2412:A:H5'	2.01	0.60
36:DA:2591:C:OP2	39:DD:239:ARG:HB3	2.01	0.60
38:DC:117:THR:HG22	38:DC:147:GLY:O	2.02	0.60
40:DE:133:LYS:H	40:DE:134:ILE:HD12	1.66	0.60
42:DG:181:ARG:HB2	42:DG:181:ARG:CZ	2.31	0.60
43:DH:40:GLU:HG3	43:DH:64:LEU:HD13	1.84	0.60
50:DS:88:ASP:OD1	50:DS:89:ARG:N	2.35	0.60
53:DV:5:VAL:HG23	53:DV:37:VAL:O	2.02	0.60
57:DZ:69:THR:HG22	57:DZ:90:VAL:CA	2.24	0.60
1:AA:35:G:H2'	1:AA:36:C:C6	2.37	0.60
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.02	0.60
1:AA:1008:C:H2'	1:AA:1009:G:H8	1.66	0.60
1:AA:1442:G:C6	1:AA:1442(B):A:C2	2.86	0.60
3:AC:110:ASN:HD21	3:AC:140:ARG:HB3	1.65	0.60
3:AC:157:ILE:C	3:AC:159:GLY:H	2.10	0.60
4:AD:176:LEU:HD12	4:AD:177:ASP:N	2.16	0.60
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	1.84	0.60
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.28	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:51:C:H2'	23:AW:52:G:O4'	2.01	0.60
25:AY:35:TYR:CE2	25:AY:269:VAL:HB	2.37	0.60
25:AY:141:LYS:CE	60:AY:702:GDP:HN22	2.13	0.60
25:AY:168:ILE:HD11	25:AY:178:ILE:CD1	2.32	0.60
25:AY:509:HIS:ND1	25:AY:570:GLY:HA2	2.17	0.60
27:B1:50:ARG:HG2	27:B1:59:THR:HG22	1.82	0.60
32:B6:8:LYS:O	32:B6:9:LEU:HD13	2.01	0.60
36:BA:884:C:H41	36:BA:886:C:H42	1.50	0.60
36:BA:1198:U:H2'	36:BA:1198:U:O2	2.00	0.60
36:BA:1930:G:O2'	36:BA:1931:U:P	2.60	0.60
36:BA:2148:G:O2'	36:BA:2149:G:H5'	2.02	0.60
36:BA:2299:G:O2'	36:BA:2300:G:H5'	2.02	0.60
37:BB:44:G:H1'	37:BB:47:C:N4	2.17	0.60
41:BF:154:VAL:HG11	41:BF:193:VAL:HG23	1.83	0.60
41:BF:192:LEU:HD23	41:BF:192:LEU:C	2.26	0.60
51:BT:28:VAL:HG12	51:BT:28:VAL:O	2.00	0.60
53:BV:1:MET:HE2	53:BV:1:MET:HA	1.84	0.60
1:CA:59:A:H2'	1:CA:59:A:N3	2.14	0.60
1:CA:460:G:H5'	1:CA:461:A:OP2	2.02	0.60
1:CA:1005:A:H5'	1:CA:1006:C:OP2	2.01	0.60
1:CA:1008:C:H2'	1:CA:1009:G:H8	1.66	0.60
1:CA:1442(B):A:C2	51:DT:118:ARG:NH2	2.70	0.60
5:CE:41:VAL:HG22	5:CE:113:ALA:HA	1.82	0.60
6:CF:22:GLU:C	6:CF:24:GLU:H	2.10	0.60
7:CG:22:LEU:O	7:CG:22:LEU:HD23	2.01	0.60
8:CH:63:LEU:HD22	8:CH:63:LEU:H	1.67	0.60
19:CS:62:ILE:HG23	19:CS:62:ILE:O	2.02	0.60
24:CX:11:A:C1'	24:CX:12:A:N7	2.52	0.60
25:CY:25:LYS:NZ	25:CY:86:GLY:HA2	2.17	0.60
25:CY:174:PHE:HZ	25:CY:261:GLY:HA2	1.66	0.60
25:CY:293:THR:HB	25:CY:294:PRO:HD2	1.83	0.60
25:CY:377:VAL:HG21	25:CY:380:LEU:CD2	2.32	0.60
25:CY:609:GLU:CG	25:CY:670:VAL:HG21	2.32	0.60
36:DA:709:U:H2'	36:DA:710:G:C8	2.37	0.60
36:DA:1902:C:H4'	39:DD:244:ARG:HB2	1.84	0.60
42:DG:3:LEU:HD23	42:DG:97:ASP:OD2	2.02	0.60
42:DG:129:GLY:O	42:DG:130:ASN:CG	2.44	0.60
45:DN:134:ARG:O	45:DN:136:GLU:N	2.34	0.60
57:DZ:163:LEU:H	57:DZ:163:LEU:CD2	2.10	0.60
1:AA:976:G:H5'	1:AA:1358:U:O2'	2.01	0.59
1:AA:1129:C:H2'	1:AA:1139:G:N7	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.79	0.59
3:AC:94:LEU:O	3:AC:95:THR:HG23	2.02	0.59
5:AE:145:LYS:HA	8:AH:107:LEU:CD2	2.32	0.59
8:AH:118:VAL:O	8:AH:119:LEU:HD23	2.01	0.59
10:AJ:18:ALA:C	10:AJ:20:ALA:H	2.10	0.59
11:AK:126:ARG:O	11:AK:128:ALA:N	2.34	0.59
25:AY:379:GLY:O	25:AY:380:LEU:O	2.20	0.59
26:B0:78:TYR:HD1	26:B0:78:TYR:H	1.48	0.59
28:B2:37:PHE:O	28:B2:41:ILE:HG23	2.02	0.59
34:B8:13:ARG:HB3	47:BP:63:PRO:HB3	1.84	0.59
36:BA:274:G:O2'	36:BA:275:G:H5''	2.02	0.59
36:BA:816:C:O2'	36:BA:817:C:H5'	2.01	0.59
36:BA:1434:A:H61	36:BA:1558:A:H62	1.48	0.59
36:BA:1930:G:H2'	36:BA:1968:G:O6	2.02	0.59
36:BA:2262:U:C2'	36:BA:2263:C:C5'	2.79	0.59
36:BA:2761:G:C3'	36:BA:2762:G:H5''	2.32	0.59
37:BB:21:G:N3	37:BB:21:G:H2'	2.16	0.59
41:BF:187:VAL:HG12	47:BP:7:ARG:NH2	2.17	0.59
42:BG:68:PRO:CB	42:BG:90:LEU:HD11	2.31	0.59
49:BR:12:ARG:HH11	49:BR:12:ARG:HG3	1.67	0.59
54:BW:20:VAL:HG23	54:BW:47:VAL:HG21	1.84	0.59
1:CA:41:G:H2'	1:CA:42:G:C8	2.36	0.59
1:CA:403:C:O2'	1:CA:404:U:H5'	2.01	0.59
1:CA:936:C:O2'	1:CA:937:A:H5'	2.01	0.59
1:CA:943:U:C2'	1:CA:944:G:H5'	2.32	0.59
9:CI:114:TYR:CD2	10:CJ:60:ARG:HG3	2.37	0.59
23:CW:11:A:H61	23:CW:24:U:H3	1.48	0.59
23:CW:50:U:H3	23:CW:64:G:N2	1.97	0.59
25:CY:16:GLY:O	25:CY:104:ALA:HB1	2.02	0.59
25:CY:92:ILE:CG1	25:CY:405:PRO:HG2	2.30	0.59
25:CY:136:ALA:HB3	25:CY:260:LEU:CB	2.22	0.59
26:D0:77:ARG:HH22	36:DA:857:C:H5'	1.66	0.59
30:D4:2:LYS:O	30:D4:3:GLU:HB2	2.01	0.59
34:D8:56:GLU:HA	34:D8:59:LYS:NZ	2.17	0.59
36:DA:94:C:H5'	36:DA:94(A):G:OP2	2.01	0.59
36:DA:569:U:C4	36:DA:570:G:C6	2.90	0.59
36:DA:1814:G:H4'	39:DD:51:VAL:HG21	1.83	0.59
40:DE:26:ILE:HG21	40:DE:196:VAL:HG21	1.84	0.59
42:DG:121:ASN:HB3	42:DG:124:SER:CB	2.26	0.59
43:DH:43:VAL:HG12	43:DH:52:VAL:HA	1.84	0.59
44:DJ:56:UNK:HA	44:DJ:83:UNK:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:55:ALA:HB2	49:DR:79:LEU:HD11	1.84	0.59
55:DX:8:ILE:HD12	55:DX:8:ILE:H	1.66	0.59
1:AA:346:G:OP1	51:BT:41:ARG:NH2	2.34	0.59
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.17	0.59
5:AE:80:ILE:HD11	5:AE:138:ALA:HB1	1.84	0.59
12:AL:76:ASN:O	12:AL:76:ASN:CG	2.45	0.59
14:AN:12:ARG:NH1	14:AN:12:ARG:CB	2.66	0.59
18:AR:46:GLU:OE1	18:AR:46:GLU:HA	2.02	0.59
23:AW:51:C:C2'	23:AW:52:G:H5''	2.32	0.59
25:AY:124:GLN:C	25:AY:127:LYS:HB3	2.27	0.59
26:B0:42:GLY:HA3	36:BA:2331:G:C4'	2.32	0.59
32:B6:43:CYS:HB2	32:B6:44:ARG:HH21	1.67	0.59
36:BA:1485:G:C1'	36:BA:1505:C:H42	2.14	0.59
36:BA:1518:U:H2'	36:BA:1519:G:O4'	2.02	0.59
36:BA:1803:A:O3'	39:BD:259:THR:CG2	2.45	0.59
36:BA:1812:A:O2'	36:BA:1813:G:H5'	2.02	0.59
42:BG:38:VAL:HG22	42:BG:93:THR:HG23	1.82	0.59
43:BH:66:GLY:HA2	43:BH:69:ARG:HB3	1.83	0.59
50:BS:51:ALA:CB	50:BS:73:LEU:HB2	2.32	0.59
50:BS:88:ASP:OD1	50:BS:89:ARG:N	2.34	0.59
1:CA:418:C:H2'	1:CA:419:C:C6	2.37	0.59
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.18	0.59
3:CC:157:ILE:C	3:CC:159:GLY:H	2.10	0.59
10:CJ:18:ALA:C	10:CJ:20:ALA:H	2.09	0.59
25:CY:119:GLU:C	25:CY:121:VAL:H	2.10	0.59
25:CY:415:PRO:HA	25:CY:474:ALA:CB	2.32	0.59
36:DA:631:A:OP1	47:DP:64:LYS:HE2	2.02	0.59
36:DA:733:G:H8	36:DA:733:G:O5'	1.86	0.59
36:DA:2200:C:O2	36:DA:2200:C:H2'	2.03	0.59
36:DA:2406:U:N3	47:DP:72:PRO:HB2	2.17	0.59
36:DA:2606:C:O2'	36:DA:2607:G:H5'	2.01	0.59
37:DB:65:C:H2'	37:DB:109:C:N4	2.16	0.59
38:DC:60:ARG:HG3	38:DC:165:ARG:HG3	1.84	0.59
47:DP:71:VAL:H	47:DP:72:PRO:CD	2.15	0.59
47:DP:115:LEU:N	47:DP:115:LEU:HD23	2.17	0.59
54:DW:47:VAL:HA	54:DW:50:VAL:HG12	1.84	0.59
55:DX:12:VAL:CB	55:DX:17:ALA:HB1	2.17	0.59
56:DY:55:TYR:N	56:DY:55:TYR:HD1	2.00	0.59
1:AA:337:C:H2'	1:AA:338:A:H8	1.67	0.59
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.29	0.59
2:AB:193:ASP:OD1	2:AB:193:ASP:O	2.19	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:152:ILE:HG22	3:AC:167:TRP:HA	1.83	0.59
3:AC:173:VAL:HG12	3:AC:175:LEU:CD1	2.31	0.59
4:AD:30:LYS:HB3	4:AD:35:ARG:HD2	1.84	0.59
8:AH:29:SER:OG	8:AH:32:LYS:HG3	2.02	0.59
14:AN:44:LEU:O	14:AN:44:LEU:HD12	2.02	0.59
25:AY:185:ALA:HB2	25:AY:201:ILE:HD12	1.83	0.59
25:AY:605:ILE:CG2	25:AY:646:PHE:HB3	2.32	0.59
25:AY:625:ASN:C	25:AY:627:ARG:N	2.60	0.59
28:B2:67:LYS:O	28:B2:70:GLN:HG3	2.03	0.59
30:B4:2:LYS:O	30:B4:3:GLU:HB2	2.01	0.59
30:B4:14:ILE:HG23	30:B4:31:ILE:HG22	1.84	0.59
31:B5:3:LYS:HG2	36:BA:747:U:O4	2.02	0.59
34:B8:58:ILE:O	34:B8:59:LYS:HG3	2.01	0.59
36:BA:1155:A:O3'	52:BU:55:ARG:NH1	2.36	0.59
36:BA:2523:G:C2'	36:BA:2524:G:C5'	2.74	0.59
36:BA:2591:C:OP2	39:BD:239:ARG:HB3	2.03	0.59
37:BB:3:C:N4	37:BB:118:G:H1	1.99	0.59
37:BB:65:C:H2'	37:BB:109:C:N4	2.16	0.59
39:BD:176:ARG:HH11	39:BD:176:ARG:HG2	1.67	0.59
42:BG:43:LEU:HD11	42:BG:153:ARG:HD3	1.85	0.59
42:BG:72:ARG:HB3	42:BG:87:PRO:HD2	1.83	0.59
55:BX:10:ALA:HB1	55:BX:11:PRO:CD	2.32	0.59
1:CA:542:G:O2'	1:CA:543:C:H5'	2.01	0.59
1:CA:1255:G:H2'	1:CA:1279:A:N6	2.17	0.59
9:CI:53:VAL:CG1	9:CI:95:LYS:HE3	2.31	0.59
10:CJ:8:LEU:HD21	10:CJ:96:ILE:HG22	1.83	0.59
13:CM:70:LEU:C	13:CM:70:LEU:HD23	2.28	0.59
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.03	0.59
23:CW:36:U:H6	23:CW:36:U:O5'	1.85	0.59
25:CY:135:PHE:CE1	25:CY:272:LEU:HD22	2.37	0.59
27:D1:53:VAL:HG22	27:D1:74:VAL:HG13	1.83	0.59
31:D5:36:CYS:SG	31:D5:38:ALA:HB3	2.42	0.59
34:D8:25:MET:SD	47:DP:64:LYS:HD2	2.42	0.59
39:DD:28:GLU:HB2	39:DD:29:PRO:CD	2.32	0.59
39:DD:158:ALA:HB3	39:DD:161:THR:CG2	2.31	0.59
39:DD:259:THR:O	39:DD:260:ARG:C	2.45	0.59
40:DE:111:ARG:HA	49:DR:2:ARG:CB	2.25	0.59
46:DO:105:GLU:HA	46:DO:108:GLU:OE2	2.03	0.59
48:DQ:51:ARG:O	48:DQ:55:VAL:HG12	2.03	0.59
51:DT:28:VAL:HG12	51:DT:28:VAL:O	2.02	0.59
51:DT:62:THR:HG22	51:DT:75:ILE:HG13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:9:TYR:CE1	57:DZ:61:LEU:HD22	2.37	0.59
57:DZ:104:PHE:CD1	57:DZ:139:VAL:HG21	2.37	0.59
1:AA:357:G:O2'	1:AA:358:U:H5'	2.03	0.59
1:AA:404:U:H2'	1:AA:405:U:H6	1.67	0.59
1:AA:1030(A):G:H1'	1:AA:1031:G:H1	1.67	0.59
2:AB:22:LYS:HE2	2:AB:22:LYS:HA	1.84	0.59
9:AI:79:LEU:HD11	9:AI:83:ARG:HD2	1.84	0.59
14:AN:12:ARG:HH11	14:AN:12:ARG:HB3	1.67	0.59
20:AT:43:LEU:HB3	20:AT:48:LYS:HB2	1.84	0.59
25:AY:485:GLU:HB2	25:AY:560:VAL:HG22	1.85	0.59
25:AY:614:GLU:HA	25:AY:617:MET:HB2	1.85	0.59
32:B6:27:LYS:HB3	32:B6:30:THR:HG22	1.84	0.59
36:BA:636:G:H2'	47:BP:115:LEU:HD12	1.84	0.59
36:BA:814:C:H2'	36:BA:815:C:C6	2.38	0.59
36:BA:1485:G:H2'	36:BA:1486:A:C8	2.37	0.59
36:BA:2050:C:H1'	40:BE:156:MET:CE	2.32	0.59
36:BA:2411:A:O2'	36:BA:2412:A:H5'	2.02	0.59
36:BA:2514:U:H2'	36:BA:2515:C:C6	2.38	0.59
36:BA:2745:C:H4'	43:BH:142:GLY:O	2.02	0.59
39:BD:183:ARG:HD2	39:BD:270:ILE:HG23	1.82	0.59
40:BE:11:MET:CB	40:BE:24:THR:HA	2.31	0.59
40:BE:45:THR:O	40:BE:46:ALA:HB2	2.03	0.59
42:BG:32:PRO:HA	42:BG:162:THR:HB	1.85	0.59
42:BG:91:ARG:C	42:BG:91:ARG:CD	2.75	0.59
45:BN:17:ASP:OD2	45:BN:56:ASN:HB3	2.03	0.59
1:CA:192:U:O4'	20:CT:103:GLY:HA2	2.02	0.59
1:CA:731:G:OP1	1:CA:766:A:H1'	2.02	0.59
1:CA:975:A:H8	1:CA:975:A:H5'	1.67	0.59
1:CA:1116:C:H2'	1:CA:1117:G:C5'	2.31	0.59
2:CB:9:GLU:N	2:CB:9:GLU:OE1	2.36	0.59
10:CJ:54:PHE:CG	10:CJ:55:LYS:HE3	2.38	0.59
11:CK:126:ARG:O	11:CK:128:ALA:N	2.36	0.59
13:CM:40:ASN:HD21	13:CM:42:ALA:HB3	1.68	0.59
18:CR:56:THR:CB	18:CR:58:LEU:HD13	2.32	0.59
25:CY:25:LYS:HA	25:CY:28:THR:HB	1.84	0.59
25:CY:182:ARG:HG2	25:CY:239:GLU:OE2	2.03	0.59
25:CY:314:PHE:HD1	25:CY:315:LYS:HB2	1.67	0.59
25:CY:495:GLY:O	25:CY:585:ALA:HB1	2.02	0.59
28:D2:2:LYS:O	28:D2:6:VAL:HG23	2.01	0.59
28:D2:50:ILE:HG23	28:D2:54:LYS:HE3	1.84	0.59
30:D4:31:ILE:HG22	30:D4:31:ILE:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:777:A:H2'	36:DA:778:G:C8	2.38	0.59
36:DA:1155:A:O3'	52:DU:55:ARG:NH1	2.35	0.59
36:DA:1485:G:C1'	36:DA:1505:C:H42	2.15	0.59
36:DA:1509(A):A:H2'	36:DA:1509(B):A:H8	1.68	0.59
36:DA:2000:G:O2'	36:DA:2001:A:H5'	2.01	0.59
36:DA:2784:C:H1'	40:DE:37:ARG:NH1	2.17	0.59
37:DB:85:G:O2'	37:DB:86:G:H5'	2.01	0.59
42:DG:42:GLY:HA2	42:DG:89:GLY:HA2	1.84	0.59
1:AA:403:C:O2'	1:AA:404:U:H5'	2.01	0.59
1:AA:999:C:H2'	1:AA:1000:U:C5	2.36	0.59
12:AL:70:ILE:CG2	12:AL:100:ILE:HD12	2.33	0.59
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.83	0.59
18:AR:43:PHE:HE2	18:AR:58:LEU:HD11	1.68	0.59
20:AT:55:ILE:O	20:AT:58:LYS:HB3	2.02	0.59
22:AV:6:G:H1	22:AV:67:C:H42	1.50	0.59
25:AY:438:PHE:CD1	25:AY:438:PHE:C	2.79	0.59
25:AY:617:MET:CE	25:AY:641:GLN:HB3	2.33	0.59
26:B0:77:ARG:HH22	36:BA:857:C:H5'	1.67	0.59
29:B3:4:LEU:O	29:B3:36:VAL:HA	2.03	0.59
32:B6:19:ARG:O	32:B6:20:ASN:O	2.20	0.59
36:BA:392:C:H5''	36:BA:409:C:H5''	1.85	0.59
36:BA:654(M):C:O2'	36:BA:654(N):G:H8	1.84	0.59
36:BA:709:U:H2'	36:BA:710:G:C8	2.37	0.59
36:BA:781:A:C8	39:BD:219:PRO:HG3	2.37	0.59
36:BA:2547:U:H2'	36:BA:2548:G:H8	1.66	0.59
36:BA:2811:G:H2'	36:BA:2812:G:H8	1.67	0.59
38:BC:4:HIS:ND1	38:BC:8:TYR:CE2	2.69	0.59
39:BD:28:GLU:HB2	39:BD:29:PRO:CD	2.33	0.59
42:BG:63:ILE:HD12	42:BG:64:THR:HB	1.84	0.59
42:BG:111:LEU:HB2	42:BG:112:PRO:HD3	1.84	0.59
43:BH:43:VAL:HG12	43:BH:52:VAL:HA	1.84	0.59
47:BP:122:PRO:HA	47:BP:141:ALA:O	2.03	0.59
51:BT:132:LYS:HG2	51:BT:133:GLU:N	2.16	0.59
57:BZ:103:ARG:HD2	57:BZ:136:PHE:CD1	2.37	0.59
1:CA:46:G:O2'	1:CA:365:U:H1'	2.03	0.59
1:CA:1318:A:H1'	19:CS:37:ARG:HH21	1.66	0.59
9:CI:5:TYR:HD1	9:CI:6:GLY:H	1.46	0.59
9:CI:125:TYR:HD1	9:CI:126:SER:N	1.99	0.59
10:CJ:34:VAL:HG13	10:CJ:73:ASP:O	2.02	0.59
14:CN:41:ARG:HG2	14:CN:41:ARG:HH11	1.67	0.59
16:CP:67:THR:HB	16:CP:70:ALA:HB2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:787:U:OP1	36:DA:1780:A:N6	2.35	0.59
36:DA:1090:U:O2	36:DA:1102:C:H1'	2.03	0.59
36:DA:1336:A:OP2	55:DX:64:LYS:HE3	2.03	0.59
36:DA:1624:G:O2'	36:DA:1625:C:H5'	2.03	0.59
36:DA:2219:G:O2'	36:DA:2220:G:H5'	2.01	0.59
36:DA:2262:U:C2'	36:DA:2263:C:C5'	2.79	0.59
36:DA:2590:A:O2'	36:DA:2591:C:H5'	2.02	0.59
40:DE:108:SER:HB3	40:DE:165:VAL:HG21	1.83	0.59
41:DF:103:LYS:C	41:DF:105:VAL:H	2.10	0.59
41:DF:188:ARG:HA	47:DP:7:ARG:HH21	1.67	0.59
48:DQ:34:LEU:HD12	48:DQ:130:LYS:O	2.02	0.59
49:DR:9:LYS:O	49:DR:10:LEU:HD23	2.01	0.59
50:DS:101:LEU:HD12	50:DS:101:LEU:C	2.26	0.59
55:DX:10:ALA:HB1	55:DX:11:PRO:CD	2.33	0.59
1:AA:284:G:H2'	1:AA:285:G:C8	2.35	0.59
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.03	0.59
7:AG:28:ASN:O	7:AG:31:MET:HB3	2.02	0.59
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	2.03	0.59
25:AY:150:ILE:O	25:AY:154:GLN:HG2	2.02	0.59
25:AY:313:ALA:HA	25:AY:328:ILE:HG22	1.83	0.59
25:AY:553:GLY:HA2	25:AY:560:VAL:CG2	2.33	0.59
25:AY:613:PRO:C	25:AY:615:GLU:H	2.09	0.59
28:B2:2:LYS:HB3	36:BA:97:C:H5''	1.85	0.59
29:B3:16:PRO:HB2	29:B3:18:ASP:OD1	2.03	0.59
36:BA:733:G:H8	36:BA:733:G:O5'	1.85	0.59
36:BA:1242:A:C6	47:BP:8:PRO:HG2	2.37	0.59
36:BA:1542:A:H5'	36:BA:1543:C:OP2	2.01	0.59
36:BA:2712:U:C2'	36:BA:2712(A):A:O5'	2.51	0.59
38:BC:48:LEU:HD12	38:BC:48:LEU:N	2.17	0.59
39:BD:26:LYS:HE2	39:BD:26:LYS:H	1.67	0.59
39:BD:31:LYS:NZ	39:BD:33:LEU:HB2	2.17	0.59
40:BE:117:MET:HA	40:BE:122:PHE:N	2.05	0.59
47:BP:83:VAL:HB	47:BP:105:LEU:HD22	1.84	0.59
48:BQ:75:THR:HG22	48:BQ:76:LYS:N	2.17	0.59
49:BR:113:LEU:HD12	49:BR:114:VAL:N	2.17	0.59
51:BT:125:ARG:HA	51:BT:125:ARG:NH1	2.09	0.59
52:BU:90:VAL:O	52:BU:92:ARG:N	2.36	0.59
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.18	0.59
1:CA:1238:A:C5'	1:CA:1336:C:H41	2.16	0.59
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.03	0.59
12:CL:89:ARG:HD3	12:CL:91:LYS:HZ1	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:134:ALA:HB3	25:CY:258:VAL:HG22	1.84	0.59
27:D1:3:LYS:HD3	36:DA:1364:G:H5''	1.84	0.59
36:DA:709:U:H2'	36:DA:710:G:H8	1.67	0.59
36:DA:1539:G:H2'	36:DA:1540:U:O4'	2.03	0.59
36:DA:1819:A:H1'	36:DA:1821:A:C6	2.38	0.59
40:DE:11:MET:CB	40:DE:24:THR:HA	2.32	0.59
40:DE:36:ARG:HH22	40:DE:88:GLY:H	1.50	0.59
40:DE:45:THR:O	40:DE:46:ALA:HB2	2.03	0.59
40:DE:133:LYS:C	40:DE:134:ILE:HD12	2.27	0.59
40:DE:199:ARG:NH1	40:DE:199:ARG:HB2	2.18	0.59
47:DP:6:LEU:HG	47:DP:7:ARG:H	1.67	0.59
52:DU:54:LYS:O	52:DU:58:ARG:HG3	2.01	0.59
56:DY:14:LEU:HB2	56:DY:24:VAL:HG22	1.85	0.59
57:DZ:12:GLY:HA2	57:DZ:36:LYS:NZ	2.18	0.59
57:DZ:54:HIS:HA	57:DZ:98:MET:HE1	1.83	0.59
1:AA:219:C:H2'	1:AA:220:G:O4'	2.02	0.59
1:AA:1347:G:O2'	1:AA:1348:U:P	2.61	0.59
3:AC:47:LEU:HD23	3:AC:52:LEU:HD13	1.84	0.59
7:AG:27:ILE:CD1	7:AG:40:ALA:HA	2.27	0.59
25:AY:216:LEU:CD2	25:AY:246:ILE:HD11	2.33	0.59
25:AY:608:VAL:O	25:AY:609:GLU:HG3	2.02	0.59
36:BA:1141:U:H6	45:BN:63:THR:HG21	1.67	0.59
36:BA:1805:U:O2	39:BD:50:THR:HB	2.02	0.59
36:BA:2441:C:O2'	36:BA:2442:C:H5'	2.02	0.59
37:BB:49:C:H2'	37:BB:50:G:C8	2.38	0.59
39:BD:26:LYS:O	39:BD:27:THR:HG22	2.02	0.59
43:BH:76:VAL:C	43:BH:78:GLY:H	2.09	0.59
43:BH:149:ARG:HD3	43:BH:164:TYR:CE1	2.37	0.59
48:BQ:76:LYS:HE2	48:BQ:77:LYS:O	2.02	0.59
53:BV:5:VAL:HG23	53:BV:37:VAL:HG23	1.83	0.59
57:BZ:81:ARG:HG3	57:BZ:81:ARG:O	2.02	0.59
57:BZ:96:VAL:HG22	57:BZ:97:GLU:N	2.18	0.59
57:BZ:109:ALA:C	57:BZ:111:VAL:H	2.11	0.59
1:CA:1270:C:H4'	1:CA:1313:U:O2'	2.03	0.59
1:CA:1370:G:C2	1:CA:1371:G:C8	2.91	0.59
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.38	0.59
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.03	0.59
5:CE:101:ILE:HG12	5:CE:101:ILE:O	2.02	0.59
10:CJ:44:VAL:HG22	10:CJ:66:ARG:HG2	1.84	0.59
14:CN:12:ARG:NH1	14:CN:14:PRO:HG3	2.12	0.59
25:CY:157:LEU:H	25:CY:157:LEU:CD2	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:670:VAL:HB	25:CY:672:PHE:CZ	2.37	0.59
34:D8:8:LYS:O	34:D8:12:LYS:HG3	2.03	0.59
36:DA:158:U:H2'	36:DA:171:G:O4'	2.03	0.59
36:DA:962:G:H2'	36:DA:963:U:O4'	2.03	0.59
36:DA:1432:C:H2'	36:DA:1433:U:O4'	2.02	0.59
36:DA:1677:A:H2'	36:DA:1678:G:C8	2.37	0.59
36:DA:2722:G:H2'	36:DA:2723:C:C6	2.38	0.59
47:DP:122:PRO:HA	47:DP:141:ALA:O	2.03	0.59
51:DT:78:LEU:HD13	51:DT:79:HIS:CE1	2.37	0.59
56:DY:84:ARG:HG2	56:DY:84:ARG:HH11	1.68	0.59
1:AA:41:G:H2'	1:AA:42:G:C8	2.37	0.59
1:AA:630:G:O2'	1:AA:631:G:H5'	2.01	0.59
1:AA:826:C:H2'	1:AA:827:U:H6	1.67	0.59
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.03	0.59
2:AB:15:VAL:H	2:AB:16:HIS:CE1	2.21	0.59
10:AJ:3:LYS:HZ3	10:AJ:77:PRO:HD2	1.68	0.59
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	2.03	0.59
12:AL:91:LYS:HZ2	12:AL:91:LYS:HA	1.68	0.59
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.27	0.59
13:AM:108:ARG:HA	13:AM:108:ARG:NH1	2.07	0.59
18:AR:50:ILE:HD12	18:AR:70:ILE:HG21	1.84	0.59
25:AY:124:GLN:O	25:AY:127:LYS:HB3	2.02	0.59
28:B2:38:GLN:C	28:B2:40:SER:H	2.10	0.59
36:BA:26:G:OP1	54:BW:80:PRO:HB3	2.02	0.59
36:BA:654:A:N7	36:BA:654(V):A:H4'	2.17	0.59
36:BA:1069:A:O2'	36:BA:1070:A:H5''	2.03	0.59
36:BA:2722:G:H2'	36:BA:2723:C:C6	2.38	0.59
37:BB:20:C:H2'	37:BB:21:G:C5'	2.33	0.59
39:BD:84:TYR:C	39:BD:84:TYR:CD1	2.81	0.59
43:BH:41:MET:HG3	43:BH:43:VAL:HG13	1.85	0.59
1:CA:1308:U:H5''	13:CM:98:VAL:HG23	1.85	0.59
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.68	0.59
3:CC:152:ILE:HG22	3:CC:167:TRP:HA	1.84	0.59
9:CI:53:VAL:O	9:CI:54:ASP:HB2	2.02	0.59
10:CJ:6:ILE:CD1	10:CJ:72:VAL:HB	2.29	0.59
11:CK:21:ILE:HG13	11:CK:30:VAL:CG1	2.33	0.59
13:CM:56:LEU:HD13	13:CM:56:LEU:C	2.26	0.59
19:CS:45:VAL:O	19:CS:47:HIS:N	2.36	0.59
20:CT:43:LEU:HB3	20:CT:48:LYS:HB2	1.84	0.59
26:D0:10:THR:HG21	36:DA:2277:G:OP2	2.03	0.59
28:D2:69:ARG:NH2	36:DA:111:A:H4'	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:53:PRO:HA	34:D8:56:GLU:HB2	1.85	0.59
36:DA:1069:A:O2'	36:DA:1070:A:H5''	2.02	0.59
36:DA:1257:C:H2'	36:DA:1258:C:H6	1.68	0.59
36:DA:2121:G:O2'	38:DC:168:LYS:HG2	2.03	0.59
38:DC:115:VAL:HA	38:DC:145:THR:CG2	2.33	0.59
39:DD:261:LYS:HZ1	39:DD:263:ARG:HH22	1.51	0.59
42:DG:64:THR:HG23	42:DG:66:GLN:N	2.18	0.59
45:DN:74:ARG:NH2	45:DN:83:LYS:HD3	2.18	0.59
48:DQ:27:VAL:HG12	48:DQ:28:ALA:N	2.16	0.59
51:DT:102:ILE:HG13	51:DT:103:ARG:N	2.17	0.59
54:DW:95:ILE:O	54:DW:95:ILE:HG13	2.03	0.59
1:AA:201:C:C2'	1:AA:202:U:H5''	2.32	0.59
1:AA:1060:C:H4'	10:AJ:52:GLY:N	2.18	0.59
3:AC:58:GLU:N	3:AC:65:ALA:HB3	2.11	0.59
5:AE:98:THR:HB	5:AE:117:ASP:HB3	1.84	0.59
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.03	0.59
19:AS:6:LYS:HE3	19:AS:6:LYS:N	2.18	0.59
25:AY:416:LYS:HD3	25:AY:417:THR:N	2.18	0.59
31:B5:11:THR:OG1	36:BA:1263:U:O3'	2.21	0.59
36:BA:1657:C:O2'	36:BA:1658:C:H5'	2.03	0.59
36:BA:2200:C:H2'	36:BA:2200:C:O2	2.03	0.59
36:BA:2784:C:H1'	40:BE:37:ARG:NH1	2.18	0.59
46:BO:97:ARG:HG3	46:BO:97:ARG:HH11	1.68	0.59
51:BT:90:GLN:O	51:BT:91:ARG:C	2.46	0.59
56:BY:14:LEU:HB2	56:BY:24:VAL:HG22	1.85	0.59
1:CA:820:U:H4'	1:CA:821:G:OP2	2.02	0.59
3:CC:70:VAL:HG12	3:CC:71:ALA:N	2.17	0.59
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	1.84	0.59
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG22	1.83	0.59
12:CL:60:LEU:HD21	12:CL:66:VAL:HG22	1.85	0.59
17:CQ:26:GLN:HG2	17:CQ:37:LYS:HG3	1.85	0.59
25:CY:145:ASP:OD2	25:CY:148:LEU:HB2	2.02	0.59
26:D0:78:TYR:H	26:D0:78:TYR:HD1	1.50	0.59
28:D2:33:MET:HE3	28:D2:37:PHE:CE2	2.37	0.59
29:D3:35:ARG:CD	29:D3:37:LEU:HD21	2.33	0.59
32:D6:9:LEU:HD12	32:D6:28:ARG:CG	2.32	0.59
34:D8:47:LYS:NZ	34:D8:49:VAL:HG13	2.18	0.59
36:DA:328:U:H4'	56:DY:68:HIS:NE2	2.18	0.59
42:DG:38:VAL:O	42:DG:39:ILE:HG23	2.02	0.59
43:DH:76:VAL:C	43:DH:78:GLY:H	2.10	0.59
47:DP:101:VAL:HG12	47:DP:106:LEU:HB3	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.38	0.59
13:AM:105:THR:O	13:AM:106:ASN:CG	2.46	0.59
25:AY:539:ILE:N	25:AY:540:PRO:CD	2.65	0.59
25:AY:637:ARG:HH11	25:AY:637:ARG:HG3	1.68	0.59
31:B5:55:ARG:HH12	49:BR:33:ARG:HG2	1.68	0.59
36:BA:545:C:H6	36:BA:545:C:OP1	1.86	0.59
36:BA:1204:A:N1	36:BA:1241:A:H2	2.00	0.59
36:BA:1773:A:H2'	36:BA:1774:C:O4'	2.02	0.59
36:BA:2492:U:O2'	36:BA:2493:U:H5'	2.02	0.59
36:BA:2555:U:H2'	36:BA:2556:C:H5'	1.84	0.59
36:BA:2712:U:H1'	36:BA:2712(A):A:C8	2.38	0.59
38:BC:60:ARG:HG3	38:BC:165:ARG:HG3	1.84	0.59
43:BH:88:LEU:HD23	43:BH:164:TYR:O	2.01	0.59
47:BP:9:ASN:H	47:BP:10:PRO:HD2	1.68	0.59
51:BT:28:VAL:CG2	51:BT:46:GLU:HG3	2.33	0.59
52:BU:65:ILE:HD11	52:BU:93:LYS:HA	1.85	0.59
1:CA:296:U:O2'	1:CA:297:G:H5'	2.02	0.59
1:CA:539:A:H2'	1:CA:540:G:C8	2.38	0.59
1:CA:695:A:H2'	1:CA:696:A:C8	2.37	0.59
1:CA:1303:C:C2'	1:CA:1304:G:H5'	2.33	0.59
2:CB:148:TYR:O	2:CB:149:LEU:HD23	2.03	0.59
3:CC:70:VAL:HG12	3:CC:72:LYS:N	2.01	0.59
8:CH:114:THR:HG21	8:CH:129:VAL:HG23	1.85	0.59
9:CI:40:LEU:C	9:CI:42:ARG:H	2.09	0.59
17:CQ:15:MET:HE1	17:CQ:43:LEU:CD2	2.33	0.59
19:CS:64:GLU:HG2	30:D4:48:ARG:NH2	2.15	0.59
25:CY:144:ALA:HB3	25:CY:171:GLU:HB3	1.83	0.59
32:D6:38:LYS:HB3	36:DA:2344:U:H5''	1.85	0.59
34:D8:25:MET:HG3	47:DP:64:LYS:HB3	1.85	0.59
36:DA:852:G:H2'	36:DA:853:G:C8	2.38	0.59
36:DA:2761:G:C3'	36:DA:2762:G:H5''	2.32	0.59
38:DC:22:THR:HB	38:DC:229:SER:HB2	1.85	0.59
40:DE:170:LEU:HD12	40:DE:170:LEU:H	1.67	0.59
43:DH:149:ARG:HD3	43:DH:164:TYR:CE1	2.37	0.59
48:DQ:75:THR:HG22	48:DQ:76:LYS:N	2.18	0.59
51:DT:66:VAL:HA	51:DT:71:GLY:HA2	1.83	0.59
53:DV:2:PHE:O	53:DV:3:ALA:HB3	2.02	0.59
1:AA:192:U:O4'	20:AT:103:GLY:HA2	2.02	0.58
1:AA:943:U:C2'	1:AA:944:G:H5'	2.33	0.58
9:AI:8:GLY:CA	9:AI:79:LEU:HD12	2.33	0.58
25:AY:312:LEU:HD11	25:AY:401:SER:OG	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:417:THR:C	25:AY:419:ALA:H	2.10	0.58
25:AY:459:LEU:H	25:AY:459:LEU:HD12	1.68	0.58
28:B2:7:ARG:HG3	28:B2:7:ARG:NH1	2.17	0.58
32:B6:9:LEU:C	32:B6:9:LEU:HD22	2.28	0.58
36:BA:94:C:H5'	36:BA:94(A):G:OP2	2.03	0.58
36:BA:272(J):C:H42	36:BA:363:G:N2	2.01	0.58
36:BA:1190:G:H5'	47:BP:35:HIS:H	1.68	0.58
36:BA:1375:C:H2'	36:BA:1376:C:C6	2.24	0.58
36:BA:2115:G:N3	36:BA:2117:A:N7	2.51	0.58
39:BD:30:GLU:HG3	39:BD:63:ARG:CZ	2.33	0.58
40:BE:36:ARG:HH22	40:BE:88:GLY:H	1.50	0.58
45:BN:3:THR:CG2	45:BN:5:VAL:HG23	2.33	0.58
48:BQ:3:MET:HB2	48:BQ:4:PRO:HD2	1.84	0.58
48:BQ:56:ARG:NH2	57:BZ:180:VAL:HG11	2.18	0.58
48:BQ:59:ARG:HB3	57:BZ:180:VAL:HG21	1.84	0.58
51:BT:11:GLU:CD	51:BT:11:GLU:H	2.11	0.58
51:BT:62:THR:CG2	51:BT:75:ILE:HG13	2.33	0.58
53:BV:49:THR:O	53:BV:50:PRO:C	2.43	0.58
56:BY:97:ARG:HH11	56:BY:97:ARG:HG3	1.65	0.58
1:CA:630:G:O2'	1:CA:631:G:H5'	2.02	0.58
1:CA:759:A:C2'	1:CA:760:G:H5'	2.33	0.58
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.81	0.58
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.03	0.58
7:CG:16:LEU:CD1	9:CI:42:ARG:HA	2.33	0.58
11:CK:15:ALA:HA	11:CK:76:GLY:O	2.02	0.58
15:CO:56:LEU:HD21	36:DA:715:G:C2	2.38	0.58
23:CW:30:G:O2'	23:CW:31:G:H5''	2.02	0.58
31:D5:58:LEU:HD13	31:D5:59:GLU:N	2.18	0.58
36:DA:120:U:O2'	36:DA:149:A:C8	2.50	0.58
36:DA:1542:A:H5'	36:DA:1543:C:OP2	2.03	0.58
36:DA:1788:C:O2'	36:DA:1789:A:H5'	2.03	0.58
36:DA:1914:C:H2'	36:DA:1915:U:O4'	2.03	0.58
40:DE:34:VAL:O	40:DE:35:GLN:CB	2.51	0.58
40:DE:176:ILE:HG22	40:DE:178:GLU:HB3	1.85	0.58
41:DF:165:ARG:HH11	41:DF:165:ARG:HB3	1.67	0.58
42:DG:51:ARG:HE	42:DG:51:ARG:CA	2.02	0.58
42:DG:75:LYS:O	42:DG:76:SER:HB3	2.01	0.58
45:DN:97:ARG:O	45:DN:101:HIS:HB2	2.03	0.58
49:DR:12:ARG:HG3	49:DR:12:ARG:HH11	1.68	0.58
51:DT:28:VAL:HG21	51:DT:46:GLU:HG3	1.84	0.58
51:DT:62:THR:CG2	51:DT:75:ILE:HG13	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DU:95:LEU:HD13	53:DV:4:ILE:CG2	2.33	0.58
53:DV:28:GLU:OE1	53:DV:31:ALA:HB2	2.03	0.58
53:DV:34:GLU:C	53:DV:35:LEU:HD22	2.28	0.58
55:DX:70:LEU:HD23	55:DX:70:LEU:C	2.28	0.58
56:DY:39:VAL:HG12	56:DY:40:GLU:HG2	1.85	0.58
57:DZ:143:GLY:O	57:DZ:144:LEU:HD22	2.02	0.58
10:AJ:8:LEU:HD21	10:AJ:96:ILE:HG22	1.84	0.58
13:AM:52:GLU:HA	13:AM:55:ARG:HD3	1.85	0.58
23:AW:6:G:H1	23:AW:67:C:H42	1.49	0.58
25:AY:314:PHE:CZ	25:AY:327:PHE:HB3	2.38	0.58
25:AY:510:VAL:HA	25:AY:570:GLY:CA	2.31	0.58
28:B2:13:ALA:HA	28:B2:16:LEU:HD12	1.83	0.58
36:BA:1827:C:C2'	36:BA:1828:G:H5'	2.33	0.58
36:BA:2183:C:O2'	36:BA:2184:G:H5'	2.03	0.58
36:BA:2682:U:C6	40:BE:11:MET:HE2	2.38	0.58
36:BA:2777:G:C5'	36:BA:2778:A:H5''	2.33	0.58
39:BD:70:TRP:C	39:BD:70:TRP:CD1	2.81	0.58
41:BF:188:ARG:HA	47:BP:7:ARG:HH21	1.67	0.58
42:BG:64:THR:HG23	42:BG:66:GLN:N	2.18	0.58
45:BN:97:ARG:O	45:BN:101:HIS:HB2	2.02	0.58
48:BQ:76:LYS:HB3	48:BQ:91:GLU:HG2	1.85	0.58
54:BW:107:LEU:HD22	54:BW:107:LEU:N	2.18	0.58
56:BY:15:VAL:O	56:BY:22:GLY:N	2.36	0.58
2:CB:44:LEU:HD12	2:CB:44:LEU:N	2.15	0.58
3:CC:94:LEU:O	3:CC:95:THR:HG23	2.02	0.58
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.85	0.58
10:CJ:78:ASN:C	10:CJ:79:ARG:HH11	2.11	0.58
14:CN:12:ARG:HH11	14:CN:12:ARG:CB	2.17	0.58
14:CN:37:PHE:HE2	14:CN:53:LEU:HD22	1.68	0.58
31:D5:36:CYS:SG	31:D5:49:CYS:SG	3.01	0.58
32:D6:15:GLU:CD	32:D6:44:ARG:NH2	2.61	0.58
32:D6:41:PRO:HD3	32:D6:47:THR:HG22	1.85	0.58
34:D8:5:LYS:HG2	36:DA:242:G:C8	2.38	0.58
34:D8:30:ARG:HE	34:D8:30:ARG:HA	1.68	0.58
34:D8:58:ILE:O	34:D8:59:LYS:HG3	2.02	0.58
36:DA:992:C:H2'	36:DA:993:G:H8	1.68	0.58
36:DA:2200:C:N4	36:DA:2223:G:H1	1.95	0.58
36:DA:2795:G:N2	36:DA:2796:U:H5	1.97	0.58
42:DG:72:ARG:CB	42:DG:87:PRO:HD2	2.30	0.58
50:DS:93:LYS:O	50:DS:95:HIS:N	2.36	0.58
51:DT:10:VAL:C	51:DT:12:SER:H	2.11	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DU:96:ALA:C	52:DU:98:LEU:H	2.09	0.58
57:DZ:29:TYR:HB3	57:DZ:34:ASN:HB3	1.82	0.58
1:AA:1238:A:C5'	1:AA:1336:C:H41	2.16	0.58
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.38	0.58
12:AL:47:LYS:HD2	12:AL:48:PRO:HD3	1.86	0.58
13:AM:15:VAL:HA	13:AM:18:ALA:HB3	1.85	0.58
23:AW:68:C:H2'	23:AW:69:C:H6	1.67	0.58
31:B5:47:PRO:O	31:B5:57:VAL:HG22	2.03	0.58
36:BA:45:C:OP2	36:BA:215:G:H5''	2.03	0.58
36:BA:2229:C:O2'	36:BA:2230:G:H5'	2.03	0.58
42:BG:13:GLU:O	42:BG:14:GLU:HG3	2.03	0.58
42:BG:73:ALA:HB3	42:BG:87:PRO:HG3	1.85	0.58
47:BP:27:HIS:HD2	47:BP:28:GLY:N	2.02	0.58
49:BR:9:LYS:O	49:BR:10:LEU:HD23	2.03	0.58
1:CA:1269:A:H2'	1:CA:1270:C:H5'	1.85	0.58
3:CC:53:ALA:HB2	3:CC:115:LEU:HG	1.85	0.58
20:CT:42:GLN:HA	20:CT:42:GLN:NE2	2.19	0.58
22:CV:17:C:H1'	22:CV:18:G:OP2	2.03	0.58
23:CW:61:C:H2'	23:CW:62:C:C6	2.38	0.58
25:CY:113:GLY:HA3	25:CY:148:LEU:HD23	1.85	0.58
28:D2:17:SER:HB2	28:D2:18:PRO:HD2	1.85	0.58
32:D6:15:GLU:OE1	32:D6:44:ARG:NH2	2.37	0.58
34:D8:33:ASN:HA	34:D8:36:LYS:CD	2.34	0.58
36:DA:518:G:H4'	54:DW:18:ARG:NH1	2.18	0.58
36:DA:654(M):C:O2'	36:DA:654(N):G:H8	1.85	0.58
36:DA:878:A:H2'	36:DA:879:G:O4'	2.02	0.58
36:DA:2476:A:N1	36:DA:2477:C:C5	2.71	0.58
40:DE:100:GLU:O	40:DE:172:VAL:HG23	2.03	0.58
41:DF:20:LEU:HB3	41:DF:23:ASP:OD2	2.03	0.58
49:DR:4:LEU:C	49:DR:6:SER:N	2.61	0.58
49:DR:65:LEU:HD12	49:DR:65:LEU:O	2.02	0.58
50:DS:104:GLY:C	50:DS:106:ARG:H	2.11	0.58
1:AA:1269:A:H2'	1:AA:1270:C:H5'	1.84	0.58
1:AA:1326:C:O2'	1:AA:1327:C:H5'	2.04	0.58
1:AA:1459:C:H2'	1:AA:1460:A:H8	1.69	0.58
2:AB:9:GLU:N	2:AB:9:GLU:OE1	2.36	0.58
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.33	0.58
16:AP:9:PHE:HE2	16:AP:18:ARG:NE	2.02	0.58
16:AP:19:ILE:N	16:AP:37:GLY:O	2.35	0.58
19:AS:41:VAL:O	19:AS:41:VAL:HG23	2.01	0.58
19:AS:67:VAL:CG2	30:B4:48:ARG:HH21	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:92:ILE:HG21	25:AY:437:THR:HG21	1.85	0.58
25:AY:132:ARG:O	25:AY:132:ARG:HG2	2.03	0.58
25:AY:621:ILE:CG1	25:AY:643:ILE:HD13	2.33	0.58
36:BA:904:C:H4'	57:BZ:169:GLU:OE1	2.03	0.58
36:BA:2348:U:H2'	36:BA:2349:G:H5''	1.85	0.58
37:BB:85:G:O2'	37:BB:86:G:H5'	2.03	0.58
39:BD:267:SER:CA	39:BD:270:ILE:HD11	2.33	0.58
41:BF:89:VAL:O	41:BF:91:GLY:N	2.33	0.58
47:BP:97:PRO:HD3	47:BP:126:VAL:O	2.04	0.58
48:BQ:34:LEU:HD12	48:BQ:130:LYS:O	2.03	0.58
56:BY:95:LYS:CE	56:BY:101:LYS:H	2.15	0.58
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.36	0.58
1:CA:895:G:H2'	1:CA:896:C:C6	2.39	0.58
2:CB:54:THR:O	2:CB:58:ILE:HG13	2.03	0.58
3:CC:79:ARG:HB2	3:CC:79:ARG:NH1	2.16	0.58
5:CE:81:GLU:HG3	5:CE:90:VAL:HG13	1.84	0.58
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.03	0.58
14:CN:32:SER:O	14:CN:40:CYS:HA	2.04	0.58
20:CT:13:LEU:HD12	20:CT:13:LEU:N	2.15	0.58
25:CY:339:SER:HB2	25:CY:352:VAL:CG1	2.34	0.58
25:CY:491:VAL:CG1	25:CY:596:LYS:HE2	2.23	0.58
32:D6:27:LYS:HB3	32:D6:30:THR:HG22	1.85	0.58
36:DA:1242:A:C6	47:DP:8:PRO:HG2	2.38	0.58
36:DA:1375:C:H2'	36:DA:1376:C:C6	2.25	0.58
36:DA:1485:G:H2'	36:DA:1486:A:C8	2.38	0.58
36:DA:2346:A:H1'	36:DA:2383:G:C8	2.38	0.58
36:DA:2415:G:H4'	47:DP:67:MET:N	2.18	0.58
36:DA:2853:C:H2'	36:DA:2854:G:H8	1.69	0.58
39:DD:30:GLU:HG3	39:DD:63:ARG:CZ	2.34	0.58
41:DF:157:VAL:HG22	41:DF:194:MET:HA	1.84	0.58
42:DG:172:LEU:O	42:DG:172:LEU:HD23	2.03	0.58
47:DP:122:PRO:HG3	47:DP:141:ALA:HB3	1.86	0.58
52:DU:90:VAL:O	52:DU:92:ARG:N	2.36	0.58
53:DV:21:ARG:HB3	53:DV:91:TYR:CD2	2.39	0.58
54:DW:69:LEU:HA	54:DW:108:GLY:O	2.03	0.58
56:DY:13:VAL:HG22	56:DY:14:LEU:N	2.16	0.58
57:DZ:145:GLU:O	57:DZ:147:GLY:N	2.28	0.58
1:AA:1288:A:H2	1:AA:1352:C:O2	1.86	0.58
12:AL:89:ARG:HD3	12:AL:91:LYS:HZ3	1.67	0.58
14:AN:12:ARG:CB	14:AN:12:ARG:HH11	2.16	0.58
36:BA:560:C:H4'	52:BU:52:ARG:CZ	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:680:G:H2'	36:BA:681:G:C8	2.38	0.58
36:BA:709:U:H2'	36:BA:710:G:H8	1.67	0.58
36:BA:1809:A:H2'	36:BA:1810:A:C8	2.38	0.58
36:BA:2022:U:H2'	36:BA:2616:C:O2'	2.04	0.58
36:BA:2406:U:N3	47:BP:72:PRO:HB2	2.17	0.58
36:BA:2590:A:OP2	39:BD:238:GLY:HA2	2.04	0.58
36:BA:2682:U:O4	36:BA:2728:U:H1'	2.02	0.58
36:BA:2792:G:H2'	36:BA:2792:G:N3	2.19	0.58
38:BC:115:VAL:HA	38:BC:145:THR:CG2	2.34	0.58
38:BC:186:LEU:O	38:BC:190:ILE:HG12	2.03	0.58
41:BF:174:VAL:HG21	41:BF:189:THR:CG2	2.32	0.58
41:BF:185:ASP:OD1	41:BF:188:ARG:HD3	2.03	0.58
47:BP:23:PRO:CB	47:BP:33:ARG:HG3	2.31	0.58
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.86	0.58
12:CL:89:ARG:HA	12:CL:97:ARG:HA	1.86	0.58
19:CS:67:VAL:HG11	30:D4:50:VAL:HG22	1.85	0.58
20:CT:50:GLU:HB2	20:CT:100:ILE:HB	1.84	0.58
25:CY:223:PHE:HB3	25:CY:248:LYS:CD	2.24	0.58
25:CY:499:ARG:CB	25:CY:506:GLN:HB3	2.15	0.58
25:CY:603:GLU:O	25:CY:676:TYR:HA	2.04	0.58
25:CY:679:VAL:HB	25:CY:683:VAL:HB	1.85	0.58
28:D2:25:VAL:HG22	28:D2:60:LEU:HD22	1.84	0.58
34:D8:61:LEU:CD1	34:D8:62:LEU:H	2.16	0.58
36:DA:1019:U:HO2'	36:DA:1021:A:H2	1.52	0.58
36:DA:1779:U:C5	36:DA:1784:A:N7	2.65	0.58
36:DA:2115:G:N3	36:DA:2117:A:N7	2.52	0.58
36:DA:2386:C:H2'	36:DA:2387:U:H6	1.69	0.58
36:DA:2728:U:O2'	36:DA:2729:G:H5'	2.03	0.58
36:DA:2792:G:H2'	36:DA:2792:G:N3	2.19	0.58
41:DF:103:LYS:HA	41:DF:106:ARG:HG3	1.85	0.58
41:DF:170:LEU:HD12	41:DF:172:TRP:HE1	1.69	0.58
45:DN:90:MET:HE2	45:DN:90:MET:HA	1.86	0.58
47:DP:96:THR:O	47:DP:99:LEU:HB3	2.04	0.58
56:DY:81:LYS:HD3	56:DY:97:ARG:O	2.03	0.58
57:DZ:40:ASP:CG	57:DZ:42:VAL:HG12	2.29	0.58
1:AA:473:G:H2'	1:AA:474:G:C8	2.38	0.58
1:AA:476:G:H2'	1:AA:477:A:H8	1.69	0.58
1:AA:833:U:H2'	1:AA:834:C:H6	1.69	0.58
4:AD:36:ARG:HB3	4:AD:36:ARG:NH1	2.14	0.58
6:AF:22:GLU:C	6:AF:24:GLU:H	2.10	0.58
7:AG:35:LYS:HE3	7:AG:38:LEU:HD23	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:10:ARG:HG3	9:AI:75:ASP:HB3	1.85	0.58
11:AK:21:ILE:HG13	11:AK:30:VAL:CG1	2.32	0.58
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.39	0.58
25:AY:171:GLU:CG	25:AY:172:ASP:H	2.16	0.58
25:AY:380:LEU:O	25:AY:381:LYS:HE2	2.02	0.58
30:B4:1:MET:HG3	42:BG:66:GLN:HG3	1.84	0.58
34:B8:14:VAL:HG21	34:B8:22:VAL:HG13	1.85	0.58
36:BA:200:U:H2'	36:BA:201:C:H5'	1.86	0.58
36:BA:211:A:H2'	36:BA:212:G:C5'	2.24	0.58
36:BA:1053:C:H3'	36:BA:1054:A:H5''	1.85	0.58
36:BA:1666:G:H1'	46:BO:3:GLN:HE21	1.68	0.58
36:BA:1789:A:OP1	39:BD:222:ARG:HG3	2.03	0.58
36:BA:1882:C:H2'	36:BA:1883:G:O4'	2.04	0.58
36:BA:2497:A:OP2	36:BA:2497:A:C8	2.54	0.58
36:BA:2656:U:H2'	36:BA:2657:A:H5''	1.84	0.58
36:BA:2853:C:H2'	36:BA:2854:G:C8	2.38	0.58
40:BE:108:SER:HB3	40:BE:165:VAL:HG21	1.85	0.58
42:BG:49:ASP:O	42:BG:50:ALA:HB3	2.03	0.58
43:BH:46:GLU:OE1	43:BH:51:ARG:HB2	2.04	0.58
44:BJ:52:UNK:O	44:BJ:53:UNK:CB	2.51	0.58
46:BO:34:THR:O	46:BO:35:VAL:C	2.46	0.58
51:BT:78:LEU:HD13	51:BT:79:HIS:CE1	2.38	0.58
54:BW:29:LEU:HD11	54:BW:51:LEU:HD11	1.84	0.58
54:BW:47:VAL:HA	54:BW:50:VAL:HG12	1.84	0.58
56:BY:55:TYR:N	56:BY:55:TYR:HD1	2.02	0.58
15:CO:40:SER:O	15:CO:44:LYS:HG3	2.04	0.58
19:CS:41:VAL:O	19:CS:43:GLU:N	2.36	0.58
22:CV:36:A:H2	24:CX:16:U:H3	1.51	0.58
25:CY:658:ASP:O	25:CY:662:LYS:HG2	2.02	0.58
26:D0:40:GLN:HE22	26:D0:43:THR:HA	1.69	0.58
26:D0:49:LYS:H	26:D0:80:HIS:HD1	1.50	0.58
28:D2:16:LEU:HB3	28:D2:20:GLU:HG2	1.86	0.58
28:D2:37:PHE:CE2	55:DX:47:PHE:HZ	2.22	0.58
28:D2:43:GLN:O	28:D2:44:LEU:HB2	2.01	0.58
28:D2:69:ARG:HG3	28:D2:70:GLN:H	1.67	0.58
32:D6:7:ILE:HD12	32:D6:7:ILE:N	2.18	0.58
34:D8:51:ALA:HA	34:D8:54:GLU:CD	2.27	0.58
36:DA:566:U:O2'	36:DA:567:A:H5'	2.03	0.58
36:DA:680:G:H2'	36:DA:681:G:C8	2.39	0.58
36:DA:1105:U:H2'	36:DA:1106:G:O4'	2.03	0.58
36:DA:1223:G:C3'	36:DA:1224:C:H5''	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1657:C:H2'	36:DA:1658:C:C6	2.39	0.58
36:DA:2422:A:H4'	36:DA:2423:U:OP1	2.02	0.58
36:DA:2464:C:HO2'	36:DA:2465:C:H6	1.46	0.58
45:DN:3:THR:HG22	45:DN:4:TYR:N	2.18	0.58
47:DP:64:LYS:C	47:DP:66:GLY:N	2.61	0.58
56:DY:51:VAL:C	56:DY:53:PRO:HD2	2.28	0.58
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.03	0.58
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.38	0.58
2:AB:238:LEU:O	2:AB:240:GLN:N	2.37	0.58
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.61	0.58
9:AI:33:PHE:C	9:AI:35:GLU:H	2.11	0.58
10:AJ:22:LYS:HE3	10:AJ:23:ILE:N	2.18	0.58
16:AP:67:THR:N	16:AP:70:ALA:HB3	2.18	0.58
18:AR:58:LEU:HB3	18:AR:62:GLU:CB	2.30	0.58
19:AS:9:VAL:O	19:AS:9:VAL:CG1	2.51	0.58
25:AY:225:GLU:O	25:AY:228:MET:HE2	2.03	0.58
27:B1:67:ILE:N	27:B1:68:PRO:HD2	2.18	0.58
32:B6:15:GLU:OE1	32:B6:44:ARG:NH2	2.36	0.58
36:BA:83:G:N2	36:BA:102:G:H2'	2.19	0.58
36:BA:272(J):C:H3'	36:BA:274:G:C5'	2.30	0.58
36:BA:1053:C:H2'	36:BA:1054:A:C5'	2.32	0.58
36:BA:1257:C:H2'	36:BA:1258:C:H6	1.68	0.58
36:BA:1798:U:OP2	39:BD:274:ARG:NH2	2.37	0.58
36:BA:2309:A:C2'	36:BA:2310:A:H5''	2.33	0.58
36:BA:2415:G:H4'	47:BP:67:MET:N	2.19	0.58
36:BA:2583:G:H2'	36:BA:2584:U:O2	2.03	0.58
36:BA:2606:C:O2'	36:BA:2607:G:H5'	2.03	0.58
41:BF:170:LEU:HD12	41:BF:172:TRP:HE1	1.68	0.58
47:BP:12:ALA:HB1	47:BP:16:ARG:HB3	1.85	0.58
51:BT:66:VAL:HA	51:BT:71:GLY:HA2	1.86	0.58
57:BZ:18:LEU:O	57:BZ:21:ALA:HB3	2.04	0.58
1:CA:934:C:H5	1:CA:1344:C:H2'	1.68	0.58
1:CA:1054:C:OP2	1:CA:1197:G:OP2	2.22	0.58
2:CB:21:ARG:CD	2:CB:39:ILE:HG12	2.31	0.58
13:CM:15:VAL:HA	13:CM:18:ALA:HB3	1.86	0.58
18:CR:58:LEU:HD12	18:CR:58:LEU:N	2.19	0.58
19:CS:6:LYS:C	19:CS:7:LYS:HE3	2.27	0.58
25:CY:15:ILE:C	25:CY:101:LEU:HD22	2.28	0.58
25:CY:25:LYS:HE2	25:CY:86:GLY:H	1.69	0.58
25:CY:114:VAL:O	25:CY:114:VAL:HG13	2.04	0.58
25:CY:247:ARG:HH11	25:CY:247:ARG:HG3	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:486:THR:HG23	25:CY:600:VAL:HG13	1.84	0.58
25:CY:499:ARG:O	25:CY:505:GLY:O	2.21	0.58
27:D1:7:ILE:HG22	27:D1:66:HIS:HD2	1.68	0.58
36:DA:520:G:H2'	36:DA:521:G:C8	2.38	0.58
36:DA:822:U:H2'	36:DA:823:G:C8	2.39	0.58
37:DB:114:C:H2'	37:DB:115:G:C8	2.38	0.58
39:DD:172:TYR:HD1	39:DD:186:HIS:HA	1.68	0.58
39:DD:201:HIS:O	39:DD:204:ILE:HG12	2.04	0.58
56:DY:105:ALA:C	56:DY:107:ASP:H	2.12	0.58
1:AA:269:C:H2'	1:AA:270:A:C8	2.39	0.58
1:AA:299:G:H2'	1:AA:300:A:C8	2.39	0.58
1:AA:376:G:H2'	1:AA:377:G:C8	2.37	0.58
1:AA:943:U:H2'	1:AA:944:G:H5'	1.84	0.58
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.85	0.58
1:AA:1442(A):G:N2	51:BT:119:LYS:HA	2.19	0.58
2:AB:44:LEU:HD12	2:AB:44:LEU:N	2.18	0.58
2:AB:148:TYR:O	2:AB:149:LEU:HD23	2.02	0.58
2:AB:207:ALA:HB3	2:AB:210:SER:CB	2.34	0.58
2:AB:213:LEU:O	2:AB:213:LEU:HD23	2.04	0.58
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.14	0.58
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.84	0.58
15:AO:16:ALA:HB1	15:AO:21:ASP:HB3	1.85	0.58
24:AX:18:C:H5''	24:AX:19:A:OP1	2.02	0.58
25:AY:14:ASN:HB2	25:AY:102:ASP:OD1	2.02	0.58
25:AY:185:ALA:HB3	25:AY:199:ILE:O	2.04	0.58
30:B4:27:THR:O	30:B4:28:LYS:HB3	2.04	0.58
34:B8:53:PRO:HA	34:B8:56:GLU:HB2	1.86	0.58
36:BA:787:U:OP1	36:BA:1780:A:N6	2.37	0.58
36:BA:1174:A:H5'	36:BA:1175:U:H5''	1.86	0.58
36:BA:2386:C:H2'	36:BA:2387:U:H6	1.69	0.58
38:BC:73:VAL:CG1	38:BC:158:LYS:HA	2.31	0.58
39:BD:76:PRO:HG2	39:BD:98:VAL:HG21	1.86	0.58
39:BD:210:GLY:O	39:BD:211:ARG:HB3	2.02	0.58
42:BG:129:GLY:O	42:BG:130:ASN:CG	2.46	0.58
47:BP:102:ARG:HB3	47:BP:102:ARG:NH1	2.19	0.58
53:BV:66:ARG:CZ	53:BV:88:ARG:HH21	2.16	0.58
1:CA:575:G:H4'	1:CA:575:G:OP1	2.04	0.58
2:CB:17:PHE:O	2:CB:204:ASN:HB2	2.03	0.58
2:CB:62:ALA:O	2:CB:64:ARG:N	2.31	0.58
5:CE:143:ARG:HH12	8:CH:77:GLU:CD	2.11	0.58
13:CM:83:ASP:CG	13:CM:84:ILE:N	2.61	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:32:ILE:HG22	25:CY:33:LEU:HD12	1.86	0.58
25:CY:488:THR:OG1	25:CY:598:ASP:HB3	2.02	0.58
28:D2:14:ARG:HH11	28:D2:14:ARG:HG3	1.68	0.58
30:D4:27:THR:O	30:D4:28:LYS:HB3	2.03	0.58
36:DA:654(P):C:C2'	36:DA:654(Q):C:H5'	2.34	0.58
36:DA:1537:G:H2'	36:DA:1538:G:H8	1.69	0.58
36:DA:2712:U:C2'	36:DA:2712(A):A:O5'	2.52	0.58
37:DB:7:G:H5'	50:DS:29:PHE:CD2	2.39	0.58
37:DB:7:G:C3'	37:DB:8:U:H5''	2.33	0.58
37:DB:77:U:OP1	57:DZ:19:ARG:NH2	2.37	0.58
38:DC:185:LYS:HE3	38:DC:185:LYS:CA	2.34	0.58
40:DE:7:VAL:CG1	40:DE:27:LEU:HB3	2.32	0.58
45:DN:17:ASP:OD2	45:DN:56:ASN:HB3	2.03	0.58
49:DR:21:TYR:HB3	49:DR:47:PHE:CE2	2.38	0.58
57:DZ:85:HIS:ND1	57:DZ:85:HIS:C	2.61	0.58
3:AC:14:ILE:HG13	3:AC:15:THR:H	1.68	0.58
4:AD:127:THR:HA	4:AD:132:ARG:HA	1.86	0.58
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.19	0.58
22:AV:31:A:O2'	22:AV:32:U:H5'	2.03	0.58
24:AX:11:A:C4'	24:AX:12:A:O5'	2.41	0.58
25:AY:459:LEU:O	25:AY:463:VAL:HG23	2.03	0.58
29:B3:35:ARG:CD	29:B3:37:LEU:HD21	2.34	0.58
31:B5:19:ARG:HG3	36:BA:2046:G:H5''	1.86	0.58
36:BA:299:A:H5'	36:BA:300:A:OP2	2.03	0.58
36:BA:1105:U:H2'	36:BA:1106:G:O4'	2.03	0.58
36:BA:2081:C:O2'	36:BA:2082:A:H5'	2.03	0.58
40:BE:36:ARG:HG2	40:BE:36:ARG:NH1	2.14	0.58
43:BH:40:GLU:HG3	43:BH:64:LEU:HD13	1.86	0.58
45:BN:46:VAL:O	45:BN:47:ALA:CB	2.52	0.58
46:BO:14:THR:HG21	46:BO:86:ILE:HD13	1.86	0.58
47:BP:27:HIS:HD2	47:BP:28:GLY:H	1.50	0.58
48:BQ:43:THR:HB	48:BQ:45:GLN:HE21	1.68	0.58
57:BZ:24:LEU:CD2	57:BZ:86:VAL:HG23	2.29	0.58
1:CA:119:A:O2'	1:CA:120:A:OP2	2.21	0.58
5:CE:80:ILE:HG22	8:CH:104:ARG:HH22	1.64	0.58
10:CJ:22:LYS:HE3	10:CJ:23:ILE:N	2.19	0.58
13:CM:9:ILE:HD12	13:CM:9:ILE:N	2.19	0.58
26:D0:16:SER:OG	36:DA:2261:C:H3'	2.03	0.58
32:D6:8:LYS:O	32:D6:9:LEU:HD13	2.03	0.58
36:DA:45:C:OP2	36:DA:215:G:H5''	2.03	0.58
36:DA:200:U:H2'	36:DA:201:C:H5'	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:648:G:H2'	36:DA:649:G:C8	2.38	0.58
36:DA:1773:A:H2'	36:DA:1774:C:O4'	2.04	0.58
36:DA:2811:G:H2'	36:DA:2812:G:H8	1.68	0.58
37:DB:49:C:H2'	37:DB:50:G:C8	2.39	0.58
37:DB:56:G:H4'	42:DG:27:ASN:HD21	1.69	0.58
39:DD:70:TRP:CD1	39:DD:70:TRP:C	2.81	0.58
40:DE:47:VAL:HG12	40:DE:48:GLN:N	2.14	0.58
40:DE:203:LYS:HG3	40:DE:204:ALA:N	2.19	0.58
47:DP:75:ILE:N	47:DP:75:ILE:HD12	2.18	0.58
54:DW:20:VAL:HG23	54:DW:47:VAL:HG21	1.85	0.58
56:DY:95:LYS:CE	56:DY:101:LYS:H	2.17	0.58
57:DZ:35:ARG:HG3	57:DZ:35:ARG:HH11	1.69	0.58
4:AD:104:VAL:HG21	4:AD:140:VAL:HG21	1.86	0.58
12:AL:17:LYS:CD	12:AL:18:VAL:HG22	2.33	0.58
14:AN:37:PHE:CE2	14:AN:53:LEU:HD22	2.39	0.58
14:AN:37:PHE:HE2	14:AN:53:LEU:HD22	1.68	0.58
25:AY:135:PHE:CE1	25:AY:272:LEU:HD22	2.39	0.58
25:AY:181:LEU:HB2	25:AY:216:LEU:HD11	1.85	0.58
25:AY:249:GLY:HA2	25:AY:252:ASP:CG	2.29	0.58
27:B1:90:ILE:HG22	27:B1:94:LEU:HD11	1.86	0.58
36:BA:363(A):A:H2'	36:BA:363(B):G:H8	1.69	0.58
36:BA:520:G:H2'	36:BA:521:G:H8	1.68	0.58
36:BA:558:G:H5'	45:BN:112:LEU:HD22	1.85	0.58
36:BA:1142(A):A:O2'	36:BA:1143:A:H2'	2.04	0.58
36:BA:1624:G:O2'	36:BA:1625:C:H5'	2.03	0.58
36:BA:1902:C:H4'	39:BD:244:ARG:HB2	1.85	0.58
36:BA:2014:A:H4'	54:BW:92:ARG:HH22	1.69	0.58
36:BA:2061:G:H5'	36:BA:2503:A:N1	2.18	0.58
36:BA:2408:U:H2'	36:BA:2409:G:C8	2.38	0.58
39:BD:263:ARG:HH11	39:BD:263:ARG:CB	2.16	0.58
39:BD:275:LYS:C	39:BD:275:LYS:HD2	2.28	0.58
40:BE:8:LYS:O	40:BE:193:GLY:N	2.37	0.58
42:BG:61:ALA:HA	42:BG:64:THR:CG2	2.28	0.58
45:BN:91:LEU:HD23	45:BN:98:VAL:HG21	1.84	0.58
46:BO:97:ARG:O	46:BO:98:VAL:HG13	2.04	0.58
49:BR:75:LEU:HD13	49:BR:75:LEU:O	2.04	0.58
52:BU:92:ARG:NH1	53:BV:11:GLN:O	2.37	0.58
56:BY:37:VAL:HG23	56:BY:38:ILE:N	2.19	0.58
1:CA:36:C:H4'	12:CL:122:THR:O	2.04	0.58
1:CA:60:A:H5''	1:CA:331:G:N2	2.19	0.58
1:CA:697:U:C2'	1:CA:698:G:H5'	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1358:U:P	14:CN:35:ARG:HG3	2.44	0.58
2:CB:15:VAL:H	2:CB:16:HIS:CE1	2.22	0.58
2:CB:164:VAL:HG12	2:CB:165:VAL:N	2.19	0.58
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.03	0.58
8:CH:63:LEU:HD22	8:CH:63:LEU:N	2.19	0.58
14:CN:12:ARG:NH1	14:CN:12:ARG:CB	2.67	0.58
25:CY:12:LEU:HD11	25:CY:78:ARG:HD2	1.86	0.58
25:CY:542:VAL:HG23	25:CY:582:PHE:O	2.03	0.58
30:D4:9:LEU:HA	30:D4:26:SER:O	2.04	0.58
34:D8:37:SER:O	34:D8:38:GLY:C	2.47	0.58
34:D8:50:LEU:C	34:D8:52:LYS:H	2.11	0.58
36:DA:20:C:H2'	36:DA:21:A:H8	1.67	0.58
36:DA:814:C:H2'	36:DA:815:C:C6	2.39	0.58
36:DA:1190:G:H5'	47:DP:35:HIS:H	1.68	0.58
36:DA:1516:C:O2'	36:DA:1517:G:H5''	2.04	0.58
36:DA:1523:U:H2'	36:DA:1524:G:H8	1.67	0.58
39:DD:275:LYS:HD2	39:DD:275:LYS:C	2.28	0.58
43:DH:41:MET:HG3	43:DH:43:VAL:HG13	1.85	0.58
45:DN:3:THR:CG2	45:DN:5:VAL:HG23	2.34	0.58
51:DT:11:GLU:CD	51:DT:11:GLU:H	2.12	0.58
51:DT:30:VAL:CG2	51:DT:84:GLN:H	2.16	0.58
51:DT:35:LYS:HZ1	51:DT:41:ARG:CD	2.16	0.58
51:DT:102:ILE:HB	51:DT:110:ILE:CD1	2.34	0.58
1:AA:559:A:H4'	1:AA:560:U:H5'	1.85	0.57
2:AB:101:MET:O	2:AB:102:LEU:HD12	2.04	0.57
2:AB:223:ILE:HG12	2:AB:226:ARG:HH22	1.66	0.57
7:AG:108:ALA:C	7:AG:110:GLN:H	2.12	0.57
8:AH:104:ARG:O	8:AH:105:ARG:C	2.46	0.57
9:AI:53:VAL:CG2	9:AI:55:ALA:HB3	2.33	0.57
15:AO:83:GLU:C	15:AO:85:LEU:N	2.57	0.57
17:AQ:3:LYS:HB3	17:AQ:61:GLU:HB3	1.86	0.57
17:AQ:15:MET:HE1	17:AQ:43:LEU:CD2	2.33	0.57
20:AT:50:GLU:HB2	20:AT:100:ILE:HB	1.86	0.57
25:AY:122:TRP:C	25:AY:122:TRP:CD1	2.82	0.57
25:AY:411:VAL:CG1	25:AY:412:ALA:N	2.66	0.57
32:B6:9:LEU:HD12	32:B6:28:ARG:CG	2.34	0.57
36:BA:533:G:H5''	52:BU:24:TYR:CE1	2.39	0.57
36:BA:852:G:H2'	36:BA:853:G:C8	2.39	0.57
36:BA:1525:G:H2'	36:BA:1526:G:C8	2.39	0.57
36:BA:1537:G:H2'	36:BA:1538:G:H8	1.69	0.57
36:BA:2476:A:N1	36:BA:2477:C:C5	2.71	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:34:VAL:HG23	39:BD:35:LYS:H	1.68	0.57
39:BD:242:ARG:HH11	39:BD:242:ARG:HG3	1.69	0.57
47:BP:101:VAL:HG12	47:BP:106:LEU:HB3	1.85	0.57
50:BS:89:ARG:HG3	50:BS:92:TYR:HA	1.86	0.57
57:BZ:105:VAL:O	57:BZ:105:VAL:HG13	2.03	0.57
1:CA:269:C:H2'	1:CA:270:A:C8	2.39	0.57
1:CA:473:G:H2'	1:CA:474:G:C8	2.39	0.57
1:CA:1442(B):A:N7	51:DT:118:ARG:HG2	2.19	0.57
2:CB:22:LYS:HE2	2:CB:22:LYS:HA	1.86	0.57
3:CC:180:ALA:O	3:CC:181:ASN:HB3	2.03	0.57
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.04	0.57
7:CG:15:ASP:OD1	7:CG:16:LEU:N	2.36	0.57
19:CS:9:VAL:O	19:CS:9:VAL:CG1	2.52	0.57
23:CW:56:C:OP1	23:CW:56:C:C6	2.57	0.57
24:CX:21:A:H2'	24:CX:22:A:H8	1.69	0.57
25:CY:141:LYS:HE3	60:CY:702:GDP:N2	2.19	0.57
25:CY:191:ASP:O	25:CY:265:LYS:O	2.21	0.57
36:DA:143:G:H2'	36:DA:143(A):C:C6	2.39	0.57
36:DA:458:G:N2	36:DA:469:G:H2'	2.19	0.57
36:DA:650:C:C3'	36:DA:651:G:H5''	2.34	0.57
36:DA:1518:U:H2'	36:DA:1519:G:O4'	2.03	0.57
36:DA:1540:U:C3'	36:DA:1541:G:H3'	2.33	0.57
36:DA:2199:A:H3'	36:DA:2200:C:H6	1.69	0.57
36:DA:2308:G:N2	42:DG:79:ASN:HB2	2.19	0.57
36:DA:2723:C:H5''	49:DR:2:ARG:NH1	2.07	0.57
36:DA:2870:C:H5''	49:DR:65:LEU:HD21	1.86	0.57
37:DB:20:C:H2'	37:DB:21:G:C5'	2.34	0.57
39:DD:205:VAL:O	39:DD:206:LEU:C	2.46	0.57
40:DE:36:ARG:NH2	40:DE:88:GLY:N	2.52	0.57
41:DF:10:PRO:HD2	41:DF:13:SER:O	2.04	0.57
45:DN:109:LYS:H	45:DN:109:LYS:HE3	1.69	0.57
52:DU:34:LYS:HA	52:DU:34:LYS:CE	2.27	0.57
56:DY:8:LYS:HD2	56:DY:8:LYS:H	1.67	0.57
56:DY:15:VAL:O	56:DY:22:GLY:N	2.37	0.57
57:DZ:24:LEU:HD23	57:DZ:24:LEU:C	2.29	0.57
1:AA:449:C:O2	16:AP:42:ARG:HD2	2.04	0.57
1:AA:895:G:H2'	1:AA:896:C:C6	2.39	0.57
1:AA:1255:G:H2'	1:AA:1279:A:N6	2.18	0.57
3:AC:79:ARG:O	3:AC:79:ARG:HG3	2.03	0.57
7:AG:37:ASN:HD21	9:AI:40:LEU:HA	1.67	0.57
13:AM:56:LEU:C	13:AM:56:LEU:HD13	2.28	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:9:A:C2	22:AV:45:U:C4	2.92	0.57
36:BA:143:G:H2'	36:BA:143(A):C:C6	2.39	0.57
36:BA:426:C:O2'	36:BA:427:U:H5'	2.05	0.57
36:BA:688:U:C4'	36:BA:1780:A:H2	2.16	0.57
36:BA:1813:G:H1'	39:BD:50:THR:OG1	2.04	0.57
37:BB:7:G:C3'	37:BB:8:U:H5''	2.34	0.57
38:BC:118:PRO:HA	38:BC:121:MET:HG2	1.86	0.57
39:BD:77:ALA:HB2	39:BD:97:TYR:CD2	2.39	0.57
41:BF:170:LEU:HD12	41:BF:172:TRP:NE1	2.20	0.57
42:BG:97:ASP:H	42:BG:100:TRP:HD1	1.50	0.57
43:BH:175:LYS:O	43:BH:176:ALA:CB	2.52	0.57
49:BR:38:VAL:HB	49:BR:39:PRO:CD	2.28	0.57
50:BS:44:LYS:O	50:BS:46:VAL:HG23	2.05	0.57
52:BU:95:LEU:HD13	53:BV:4:ILE:CG2	2.33	0.57
53:BV:28:GLU:OE1	53:BV:31:ALA:HB2	2.04	0.57
54:BW:68:ARG:HB3	54:BW:110:LYS:H	1.69	0.57
54:BW:69:LEU:HA	54:BW:108:GLY:O	2.03	0.57
56:BY:28:LYS:C	56:BY:38:ILE:HG22	2.28	0.57
56:BY:51:VAL:C	56:BY:53:PRO:HD2	2.29	0.57
1:CA:624:C:O2'	1:CA:625:G:H5'	2.03	0.57
4:CD:30:LYS:HB3	4:CD:35:ARG:HD2	1.85	0.57
4:CD:127:THR:HA	4:CD:132:ARG:HA	1.86	0.57
6:CF:28:ARG:O	6:CF:32:ASN:HB2	2.04	0.57
10:CJ:5:ARG:HG3	10:CJ:71:LEU:HD11	1.86	0.57
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HG2	1.85	0.57
22:CV:50:U:O2'	22:CV:51:U:H5'	2.04	0.57
23:CW:74:C:C2'	23:CW:75:C:H5'	2.34	0.57
25:CY:65:ILE:HD13	25:CY:65:ILE:H	1.69	0.57
25:CY:72:CYS:SG	25:CY:79:ILE:HB	2.44	0.57
25:CY:104:ALA:O	25:CY:132:ARG:HB2	2.04	0.57
25:CY:491:VAL:HG11	25:CY:596:LYS:HG2	1.86	0.57
26:D0:43:THR:N	36:DA:2331:G:H4'	2.17	0.57
36:DA:145:G:H2'	36:DA:146:G:H8	1.69	0.57
36:DA:363(A):A:H2'	36:DA:363(B):G:H8	1.70	0.57
36:DA:661:C:O3'	47:DP:18:ARG:HD2	2.04	0.57
36:DA:803:U:C2'	36:DA:804:A:H5'	2.34	0.57
36:DA:807:U:OP2	47:DP:39:LYS:HG3	2.05	0.57
36:DA:953:A:O2'	36:DA:954:G:H5'	2.04	0.57
36:DA:1827:C:C2'	36:DA:1828:G:H5'	2.33	0.57
36:DA:2438:U:O3'	36:DA:2439:A:H4'	2.02	0.57
44:DJ:37:UNK:C	44:DJ:39:UNK:N	2.64	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:66:LYS:O	45:DN:67:LEU:HD23	2.04	0.57
46:DO:107:ARG:HA	46:DO:112:MET:CE	2.33	0.57
47:DP:12:ALA:HB1	47:DP:16:ARG:HB3	1.85	0.57
51:DT:28:VAL:HG11	51:DT:46:GLU:OE1	2.03	0.57
54:DW:14:PRO:O	54:DW:18:ARG:HG3	2.03	0.57
1:AA:731:G:OP1	1:AA:766:A:H1'	2.04	0.57
4:AD:158:ILE:HG23	4:AD:162:LEU:HD12	1.85	0.57
5:AE:20:GLN:O	5:AE:21:ALA:C	2.44	0.57
9:AI:82:ALA:HB1	9:AI:96:LEU:HD11	1.85	0.57
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.69	0.57
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.86	0.57
25:AY:100:VAL:HG23	25:AY:329:ARG:CB	2.33	0.57
25:AY:301:ILE:CG2	25:AY:332:SER:HB2	2.34	0.57
25:AY:311:ALA:CB	25:AY:330:VAL:HA	2.34	0.57
25:AY:312:LEU:HD23	25:AY:387:ASP:O	2.03	0.57
25:AY:415:PRO:HA	25:AY:474:ALA:HB1	1.86	0.57
29:B3:45:GLY:HA3	36:BA:851:U:O2'	2.05	0.57
32:B6:38:LYS:HB3	36:BA:2344:U:H5''	1.86	0.57
34:B8:61:LEU:CD1	34:B8:62:LEU:H	2.16	0.57
36:BA:662:G:P	47:BP:18:ARG:HD2	2.44	0.57
36:BA:1509(A):A:H2'	36:BA:1509(B):A:H8	1.70	0.57
36:BA:1540:U:C3'	36:BA:1541:G:H3'	2.32	0.57
36:BA:2008:C:H2'	36:BA:2009:G:C8	2.39	0.57
36:BA:2465:C:O2'	36:BA:2466:C:H5'	2.04	0.57
36:BA:2837:G:H2'	36:BA:2838:G:H8	1.68	0.57
37:BB:104:U:O3'	57:BZ:72:ARG:NH1	2.37	0.57
38:BC:29:LEU:C	38:BC:29:LEU:HD23	2.28	0.57
41:BF:157:VAL:HG22	41:BF:194:MET:HG2	1.86	0.57
43:BH:104:GLU:HA	43:BH:113:VAL:O	2.04	0.57
45:BN:48:MET:H	45:BN:48:MET:HE2	1.66	0.57
46:BO:114:ILE:H	46:BO:114:ILE:CD1	2.14	0.57
56:BY:105:ALA:C	56:BY:107:ASP:H	2.11	0.57
1:CA:449:C:O2	16:CP:42:ARG:HD2	2.04	0.57
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.69	0.57
2:CB:32:ILE:HD12	2:CB:40:HIS:HB3	1.87	0.57
8:CH:118:VAL:O	8:CH:119:LEU:HD23	2.04	0.57
14:CN:12:ARG:HH11	14:CN:12:ARG:HB3	1.68	0.57
25:CY:25:LYS:HE2	25:CY:86:GLY:CA	2.34	0.57
26:D0:24:LYS:O	26:D0:25:ARG:HD3	2.03	0.57
32:D6:33:LYS:HG2	32:D6:34:LEU:H	1.69	0.57
34:D8:14:VAL:CG2	34:D8:22:VAL:HG13	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:50:LEU:C	34:D8:53:PRO:HD2	2.29	0.57
36:DA:545:C:H6	36:DA:545:C:OP1	1.87	0.57
36:DA:558:G:H5'	45:DN:112:LEU:HD22	1.86	0.57
36:DA:654(P):C:H2'	36:DA:654(Q):C:O4'	2.04	0.57
36:DA:1163:G:O2'	36:DA:1164:G:H5'	2.02	0.57
36:DA:2332:U:H5'	36:DA:2336:A:N6	2.19	0.57
36:DA:2408:U:H2'	36:DA:2409:G:C8	2.39	0.57
36:DA:2712:U:H1'	36:DA:2712(A):A:C8	2.39	0.57
38:DC:14:LYS:HD3	38:DC:14:LYS:H	1.70	0.57
39:DD:35:LYS:CG	39:DD:63:ARG:HG3	2.35	0.57
41:DF:185:ASP:CA	41:DF:188:ARG:HG2	2.34	0.57
42:DG:114:ILE:O	42:DG:114:ILE:HG22	2.03	0.57
50:DS:17:ARG:O	50:DS:20:ARG:HG2	2.04	0.57
51:DT:10:VAL:O	51:DT:12:SER:N	2.37	0.57
1:AA:1057:G:H5''	3:AC:154:SER:CB	2.23	0.57
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.39	0.57
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.04	0.57
4:AD:70:ILE:HD11	4:AD:74:GLN:HB3	1.86	0.57
10:AJ:40:LEU:N	10:AJ:40:LEU:HD23	2.19	0.57
25:AY:628:ARG:NH1	25:AY:680:PRO:HG2	2.18	0.57
26:B0:25:ARG:HD2	26:B0:29:GLN:HE22	1.67	0.57
31:B5:3:LYS:HD2	31:B5:5:PRO:HD2	1.86	0.57
36:BA:158:U:H2'	36:BA:171:G:O4'	2.05	0.57
36:BA:810:U:OP1	36:BA:1253:A:N7	2.38	0.57
36:BA:1204:A:N6	36:BA:1240:U:H2'	2.20	0.57
36:BA:1285:G:C2'	36:BA:1286:A:H5'	2.35	0.57
40:BE:101:ARG:NE	40:BE:171:GLU:HB2	2.19	0.57
40:BE:116:VAL:O	40:BE:117:MET:CB	2.48	0.57
45:BN:74:ARG:NH2	45:BN:83:LYS:HD3	2.19	0.57
47:BP:41:ARG:HH11	47:BP:41:ARG:CB	2.17	0.57
48:BQ:17:LEU:HD23	48:BQ:17:LEU:N	2.20	0.57
53:BV:21:ARG:HB3	53:BV:91:TYR:CD2	2.39	0.57
56:BY:17:SER:OG	56:BY:18:GLY:N	2.37	0.57
57:BZ:7:ALA:HA	57:BZ:39:VAL:HG12	1.85	0.57
1:CA:183:G:H2'	1:CA:184:G:C8	2.39	0.57
1:CA:332:G:H2'	1:CA:333:G:H8	1.70	0.57
2:CB:137:ARG:HH11	2:CB:137:ARG:HG2	1.69	0.57
2:CB:238:LEU:O	2:CB:240:GLN:N	2.37	0.57
4:CD:158:ILE:HG23	4:CD:162:LEU:HD12	1.85	0.57
4:CD:176:LEU:HD12	4:CD:177:ASP:H	1.69	0.57
5:CE:36:ASP:OD1	5:CE:38:GLN:HB2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.20	0.57
17:CQ:80:GLY:O	17:CQ:81:ARG:HD2	2.05	0.57
23:CW:67:C:H2'	23:CW:68:C:H5'	1.86	0.57
25:CY:15:ILE:HD12	25:CY:15:ILE:C	2.29	0.57
25:CY:85:PRO:HA	25:CY:94:VAL:HG22	1.85	0.57
25:CY:566:THR:O	25:CY:567:LEU:C	2.47	0.57
36:DA:548:A:C2'	36:DA:549:G:H5'	2.34	0.57
36:DA:759:G:H2'	36:DA:760:G:H8	1.68	0.57
36:DA:1047:G:HO2'	36:DA:1110:G:N2	2.02	0.57
38:DC:92:ALA:HB2	38:DC:154:ILE:HD13	1.87	0.57
38:DC:138:LEU:C	38:DC:138:LEU:HD13	2.30	0.57
41:DF:165:ARG:HA	41:DF:168:ARG:HD3	1.85	0.57
42:DG:73:ALA:H	42:DG:87:PRO:HG2	1.68	0.57
43:DH:156:ALA:O	43:DH:158:HIS:N	2.37	0.57
53:DV:66:ARG:CZ	53:DV:88:ARG:HH21	2.18	0.57
1:AA:836:G:C6	1:AA:851:G:C6	2.91	0.57
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.05	0.57
2:AB:17:PHE:O	2:AB:204:ASN:HB2	2.05	0.57
3:AC:58:GLU:O	3:AC:59:ARG:HG3	2.05	0.57
3:AC:86:VAL:O	3:AC:89:GLU:HB3	2.05	0.57
4:AD:61:LYS:HD3	4:AD:206:PHE:CD2	2.40	0.57
25:AY:191:ASP:HA	25:AY:265:LYS:O	2.04	0.57
25:AY:314:PHE:CD1	25:AY:315:LYS:N	2.72	0.57
25:AY:327:PHE:HA	25:AY:375:GLY:O	2.05	0.57
25:AY:438:PHE:HB2	25:AY:452:SER:O	2.04	0.57
25:AY:628:ARG:NE	25:AY:648:PRO:HG2	2.19	0.57
34:B8:25:MET:HG3	47:BP:64:LYS:HB3	1.86	0.57
36:BA:20:C:H2'	36:BA:21:A:H8	1.69	0.57
36:BA:328:U:H4'	56:BY:68:HIS:NE2	2.19	0.57
36:BA:341:G:H2'	36:BA:342:G:C8	2.40	0.57
36:BA:458:G:N2	36:BA:469:G:H2'	2.20	0.57
36:BA:500:G:N2	36:BA:502:A:H3'	2.19	0.57
36:BA:650:C:C3'	36:BA:651:G:H5''	2.35	0.57
36:BA:1668:A:H61	36:BA:1676:A:H61	1.53	0.57
41:BF:127:GLU:OE1	41:BF:196:LEU:HD12	2.04	0.57
46:BO:105:GLU:HA	46:BO:108:GLU:OE2	2.04	0.57
49:BR:21:TYR:HB3	49:BR:47:PHE:CE2	2.39	0.57
51:BT:10:VAL:C	51:BT:12:SER:H	2.12	0.57
51:BT:10:VAL:O	51:BT:12:SER:N	2.37	0.57
1:CA:908:A:H2'	1:CA:909:A:C8	2.40	0.57
1:CA:1347:G:O2'	1:CA:1348:U:OP2	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1354:C:H2'	1:CA:1355:G:H8	1.69	0.57
11:CK:33:THR:HA	11:CK:40:ILE:HG12	1.86	0.57
19:CS:19:VAL:HG11	19:CS:44:MET:HG2	1.85	0.57
23:CW:40:C:O2'	23:CW:41:C:H5'	2.04	0.57
25:CY:90:PHE:CE2	59:CY:701:FUA:H121	2.38	0.57
25:CY:179:ASP:O	25:CY:183:MET:HA	2.04	0.57
25:CY:186:TYR:CD2	25:CY:271:LEU:HD11	2.39	0.57
25:CY:355:LEU:HG	25:CY:369:LEU:HD13	1.87	0.57
25:CY:512:ILE:CD1	25:CY:589:ALA:HB1	2.34	0.57
25:CY:536:LYS:HZ2	25:CY:536:LYS:H	1.53	0.57
26:D0:7:LEU:HD13	48:DQ:85:LYS:HG3	1.86	0.57
28:D2:60:LEU:O	28:D2:63:VAL:HG12	2.04	0.57
30:D4:19:GLY:O	30:D4:20:ASN:C	2.46	0.57
31:D5:16:ARG:HH11	31:D5:20:ARG:NH1	2.03	0.57
36:DA:341:G:H2'	36:DA:342:G:C8	2.39	0.57
36:DA:1210:A:H5''	36:DA:1212:G:O4'	2.04	0.57
36:DA:1799:G:H5'	36:DA:1819:A:N6	2.19	0.57
36:DA:1943:U:H4'	36:DA:1944:U:OP1	2.04	0.57
36:DA:2672:G:C3'	36:DA:2673:G:H5''	2.35	0.57
39:DD:142:VAL:HG23	39:DD:192:THR:O	2.05	0.57
41:DF:7:TYR:HD2	41:DF:16:GLY:CA	2.17	0.57
41:DF:18:ARG:HG2	41:DF:19:GLU:N	2.19	0.57
42:DG:111:LEU:HB2	42:DG:112:PRO:HD3	1.85	0.57
45:DN:42:TRP:CZ3	45:DN:48:MET:HE1	2.39	0.57
1:AA:759:A:C2'	1:AA:760:G:H5'	2.34	0.57
2:AB:80:ILE:HD12	2:AB:80:ILE:H	1.70	0.57
2:AB:204:ASN:ND2	2:AB:204:ASN:C	2.59	0.57
7:AG:29:LYS:HB2	7:AG:105:VAL:HG21	1.86	0.57
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.18	0.57
23:AW:71:C:H2'	23:AW:72:A:C8	2.26	0.57
25:AY:64:THR:C	25:AY:66:THR:H	2.12	0.57
25:AY:91:THR:O	25:AY:93:GLU:N	2.28	0.57
25:AY:404:VAL:O	25:AY:404:VAL:HG12	2.03	0.57
27:B1:11:ARG:HB2	27:B1:12:PRO:HD2	1.85	0.57
27:B1:76:ARG:NH1	27:B1:95:LEU:HD22	2.20	0.57
28:B2:20:GLU:HG3	28:B2:21:LEU:N	2.20	0.57
31:B5:16:ARG:HH11	31:B5:20:ARG:NH1	2.02	0.57
34:B8:25:MET:SD	47:BP:64:LYS:HD2	2.44	0.57
34:B8:37:SER:O	34:B8:38:GLY:C	2.47	0.57
36:BA:548:A:C2'	36:BA:549:G:H5'	2.34	0.57
36:BA:910:A:C5	48:BQ:13:GLN:HG3	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1223:G:C3'	36:BA:1224:C:H5''	2.35	0.57
36:BA:2151:G:O2'	36:BA:2152:G:H5'	2.04	0.57
36:BA:2464:C:HO2'	36:BA:2465:C:H6	1.47	0.57
39:BD:232:PRO:HD2	39:BD:249:PRO:HA	1.86	0.57
41:BF:22:ALA:HB1	41:BF:26:ALA:HB2	1.87	0.57
41:BF:84:VAL:C	41:BF:86:GLY:H	2.13	0.57
41:BF:160:ASN:ND2	41:BF:162:LEU:H	2.03	0.57
42:BG:37:VAL:HA	42:BG:158:ALA:O	2.04	0.57
42:BG:68:PRO:HA	42:BG:92:VAL:CG1	2.29	0.57
47:BP:48:PRO:O	47:BP:50:ARG:N	2.37	0.57
50:BS:28:VAL:CG1	50:BS:29:PHE:H	2.13	0.57
1:CA:1503:A:C2	24:CX:11:A:N3	2.72	0.57
7:CG:80:VAL:HG21	7:CG:83:ALA:HB3	1.86	0.57
7:CG:85:TYR:CD2	7:CG:154:TYR:HE2	2.22	0.57
28:D2:11:GLU:O	28:D2:15:LYS:HG2	2.04	0.57
30:D4:14:ILE:HG23	30:D4:31:ILE:CG2	2.35	0.57
31:D5:29:THR:O	31:D5:42:PRO:HD2	2.04	0.57
36:DA:884:C:H41	36:DA:886:C:H42	1.51	0.57
36:DA:1368:G:O2'	36:DA:1369:G:H5'	2.05	0.57
36:DA:1789:A:H2'	36:DA:1790:C:O4'	2.03	0.57
36:DA:2229:C:O2'	36:DA:2230:G:H5'	2.04	0.57
36:DA:2406:U:C2	47:DP:72:PRO:HB2	2.40	0.57
36:DA:2723:C:C5'	49:DR:2:ARG:NH1	2.66	0.57
37:DB:102:A:H3'	37:DB:103:G:H8	1.68	0.57
38:DC:57:GLN:HE21	38:DC:205:ALA:HA	1.69	0.57
38:DC:74:ARG:HG3	38:DC:112:ASP:OD1	2.05	0.57
41:DF:110:LEU:HD12	41:DF:206:ILE:HD11	1.86	0.57
47:DP:32:THR:HG21	47:DP:37:GLY:HA2	1.87	0.57
47:DP:57:THR:OG1	47:DP:59:LEU:CB	2.53	0.57
48:DQ:56:ARG:HA	48:DQ:56:ARG:HE	1.69	0.57
55:DX:12:VAL:HG12	55:DX:27:THR:HG23	1.87	0.57
1:AA:1061:G:O2'	1:AA:1062:U:H5'	2.04	0.57
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.20	0.57
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.69	0.57
8:AH:63:LEU:H	8:AH:63:LEU:HD22	1.69	0.57
15:AO:17:ARG:CD	15:AO:26:GLU:HG3	2.27	0.57
18:AR:56:THR:CB	18:AR:58:LEU:HD13	2.35	0.57
25:AY:18:ALA:O	25:AY:106:VAL:HA	2.05	0.57
25:AY:21:ILE:O	25:AY:23:ALA:N	2.34	0.57
25:AY:25:LYS:HZ3	25:AY:86:GLY:HA2	1.70	0.57
28:B2:50:ILE:C	28:B2:52:ASP:H	2.11	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:14:VAL:CG2	34:B8:22:VAL:HG13	2.35	0.57
36:BA:654(M):C:O2'	36:BA:654(N):G:C8	2.58	0.57
36:BA:777:A:H2'	36:BA:778:G:C8	2.39	0.57
36:BA:1142(A):A:O2'	36:BA:1143:A:H5''	2.04	0.57
36:BA:1943:U:H4'	36:BA:1944:U:OP1	2.04	0.57
36:BA:2704:C:H2'	36:BA:2705:A:O4'	2.04	0.57
37:BB:61:G:O2'	37:BB:62:C:H5'	2.05	0.57
38:BC:128:LEU:HD13	38:BC:131:ILE:HB	1.85	0.57
39:BD:43:ARG:CB	39:BD:54:ARG:HB2	2.35	0.57
40:BE:201:THR:C	40:BE:202:LYS:HD2	2.29	0.57
41:BF:103:LYS:C	41:BF:105:VAL:H	2.11	0.57
41:BF:117:ARG:NH2	47:BP:5:ASP:N	2.53	0.57
42:BG:47:LYS:HG2	42:BG:81:LYS:CB	2.34	0.57
43:BH:159:GLU:HA	43:BH:159:GLU:OE1	2.05	0.57
45:BN:90:MET:HE2	45:BN:90:MET:HA	1.86	0.57
46:BO:26:LYS:HB3	46:BO:30:ALA:CB	2.33	0.57
47:BP:57:THR:OG1	47:BP:59:LEU:CB	2.52	0.57
47:BP:96:THR:O	47:BP:99:LEU:HB3	2.05	0.57
50:BS:85:VAL:C	50:BS:106:ARG:HG2	2.30	0.57
53:BV:2:PHE:O	53:BV:3:ALA:HB3	2.03	0.57
53:BV:5:VAL:HG23	53:BV:37:VAL:O	2.04	0.57
54:BW:4:LYS:HA	54:BW:106:ILE:HG22	1.87	0.57
55:BX:12:VAL:O	55:BX:13:LEU:HB2	2.05	0.57
56:BY:10:GLY:C	56:BY:27:VAL:HG13	2.30	0.57
1:CA:512:U:H2'	1:CA:513:C:H6	1.70	0.57
1:CA:513:C:O2'	1:CA:514:C:H5'	2.05	0.57
1:CA:1060:C:H4'	10:CJ:52:GLY:N	2.20	0.57
3:CC:174:PRO:O	3:CC:176:HIS:N	2.37	0.57
5:CE:76:ILE:HG22	5:CE:118:ILE:HD13	1.85	0.57
5:CE:98:THR:HB	5:CE:117:ASP:HB3	1.84	0.57
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HG13	1.87	0.57
16:CP:67:THR:H	16:CP:70:ALA:HB3	1.70	0.57
19:CS:6:LYS:H	19:CS:6:LYS:CD	2.17	0.57
31:D5:55:ARG:HH12	49:DR:33:ARG:HG2	1.68	0.57
32:D6:11:LEU:HG	32:D6:26:ASN:HD22	1.67	0.57
32:D6:11:LEU:HD22	32:D6:12:GLU:N	2.20	0.57
36:DA:1759:A:H2'	36:DA:1760:A:C8	2.40	0.57
36:DA:2820:A:O3'	49:DR:5:LYS:HE3	2.03	0.57
36:DA:2837:G:H2'	36:DA:2838:G:H8	1.69	0.57
39:DD:263:ARG:HH11	39:DD:263:ARG:CB	2.17	0.57
41:DF:127:GLU:OE1	41:DF:196:LEU:HD12	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:35:HIS:O	47:DP:36:LYS:HB2	2.05	0.57
47:DP:97:PRO:HD3	47:DP:126:VAL:O	2.04	0.57
1:AA:1404:C:H1'	1:AA:1499:A:C2	2.39	0.57
2:AB:119:GLU:C	2:AB:121:LEU:H	2.13	0.57
5:AE:101:ILE:N	5:AE:101:ILE:HD13	2.19	0.57
25:AY:82:ILE:CG1	25:AY:101:LEU:HD23	2.35	0.57
34:B8:50:LEU:C	34:B8:52:LYS:H	2.12	0.57
36:BA:654(P):C:C2'	36:BA:654(Q):C:H5'	2.34	0.57
36:BA:797:C:H2'	36:BA:798:G:H8	1.69	0.57
36:BA:1395:A:H4'	36:BA:1397:U:C5	2.40	0.57
36:BA:1473:G:H2'	36:BA:1474:C:O4'	2.05	0.57
36:BA:2425:A:H4'	36:BA:2426:A:H5''	1.87	0.57
36:BA:2590:A:O2'	36:BA:2591:C:H5'	2.04	0.57
38:BC:28:ARG:HH11	38:BC:28:ARG:CG	2.11	0.57
39:BD:28:GLU:H	39:BD:29:PRO:HD2	1.70	0.57
39:BD:267:SER:C	39:BD:269:PHE:H	2.13	0.57
40:BE:1:MET:HB2	40:BE:83:ASP:O	2.05	0.57
40:BE:7:VAL:CG1	40:BE:27:LEU:HB3	2.35	0.57
45:BN:96:GLU:N	45:BN:96:GLU:OE1	2.37	0.57
1:CA:1206:G:H4'	3:CC:192:THR:O	2.05	0.57
2:CB:119:GLU:C	2:CB:121:LEU:H	2.13	0.57
9:CI:10:ARG:HG3	9:CI:75:ASP:HB3	1.87	0.57
18:CR:50:ILE:HD12	18:CR:70:ILE:HG21	1.85	0.57
25:CY:98:MET:HA	25:CY:101:LEU:CD1	2.35	0.57
26:D0:19:LYS:NZ	26:D0:41:ARG:HH12	2.02	0.57
26:D0:51:VAL:HG22	26:D0:81:VAL:HG23	1.85	0.57
36:DA:1930:G:H2'	36:DA:1968:G:O6	2.04	0.57
39:DD:267:SER:O	39:DD:269:PHE:N	2.37	0.57
41:DF:64:ILE:HG22	41:DF:76:GLY:O	2.04	0.57
42:DG:153:ARG:HB3	42:DG:153:ARG:NH1	2.19	0.57
43:DH:159:GLU:HA	43:DH:159:GLU:OE1	2.04	0.57
45:DN:99:LEU:O	45:DN:103:VAL:HG23	2.05	0.57
56:DY:37:VAL:HG23	56:DY:38:ILE:N	2.19	0.57
57:DZ:115:GLY:HA3	57:DZ:146:ILE:CG2	2.34	0.57
57:DZ:115:GLY:H	57:DZ:177:PRO:HG3	1.70	0.57
1:AA:1442:G:C4	51:BT:118:ARG:NH2	2.73	0.57
3:AC:78:GLY:HA3	3:AC:83:ARG:HB3	1.85	0.57
3:AC:174:PRO:O	3:AC:176:HIS:N	2.38	0.57
12:AL:27:LEU:CD1	12:AL:28:LYS:H	2.18	0.57
13:AM:92:HIS:CE1	13:AM:98:VAL:HG21	2.40	0.57
16:AP:67:THR:HB	16:AP:70:ALA:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:4:LYS:HG3	17:AQ:6:LEU:HD21	1.86	0.57
19:AS:41:VAL:O	19:AS:43:GLU:N	2.37	0.57
23:AW:72:A:O2'	23:AW:73:A:O5'	2.21	0.57
24:AX:12:A:C4'	24:AX:13:A:OP1	2.53	0.57
25:AY:99:ARG:HA	25:AY:128:TYR:CZ	2.40	0.57
25:AY:177:ILE:HG21	25:AY:260:LEU:HD21	1.87	0.57
36:BA:35:G:O2'	36:BA:36:G:H5'	2.04	0.57
36:BA:1401:G:H2'	36:BA:1402:C:O4'	2.05	0.57
36:BA:1609:A:H1'	36:BA:1616:A:C1'	2.35	0.57
36:BA:2103:C:H2'	36:BA:2103:C:O2	2.04	0.57
36:BA:2105:C:N4	36:BA:2184:G:H1	2.03	0.57
36:BA:2504:U:O5'	36:BA:2504:U:H6	1.87	0.57
37:BB:20:C:C2'	37:BB:21:G:H5''	2.35	0.57
39:BD:148:GLU:O	39:BD:151:LYS:HG3	2.05	0.57
39:BD:205:VAL:O	39:BD:206:LEU:C	2.48	0.57
39:BD:242:ARG:HG3	39:BD:242:ARG:NH1	2.19	0.57
45:BN:3:THR:HG22	45:BN:4:TYR:N	2.20	0.57
56:BY:39:VAL:HG12	56:BY:40:GLU:HG2	1.86	0.57
57:BZ:79:ARG:O	57:BZ:79:ARG:HG3	2.05	0.57
57:BZ:166:SER:HB2	57:BZ:167:PRO:HA	1.87	0.57
1:CA:1368:G:O2'	1:CA:1369:C:H5'	2.04	0.57
3:CC:50:ALA:HB1	3:CC:70:VAL:CG1	2.35	0.57
4:CD:28:SER:O	4:CD:30:LYS:N	2.36	0.57
11:CK:91:ARG:HH11	18:CR:88:LYS:HE3	1.68	0.57
12:CL:32:PHE:CE1	12:CL:86:ARG:HG3	2.38	0.57
12:CL:38:THR:CG2	12:CL:57:LYS:HB3	2.35	0.57
17:CQ:3:LYS:HB3	17:CQ:61:GLU:HB3	1.86	0.57
25:CY:249:GLY:C	25:CY:255:ILE:HG22	2.29	0.57
25:CY:513:LYS:HB2	25:CY:566:THR:HB	1.86	0.57
25:CY:607:ARG:HA	25:CY:645:ALA:O	2.05	0.57
27:D1:26:ARG:HG3	27:D1:27:GLU:H	1.68	0.57
27:D1:73:LEU:HD23	27:D1:94:LEU:HD22	1.87	0.57
36:DA:816:C:O2'	36:DA:817:C:H5'	2.05	0.57
36:DA:958:U:H3'	36:DA:958:U:H6	1.68	0.57
36:DA:1053:C:H3'	36:DA:1054:A:H5''	1.86	0.57
36:DA:1141:U:H5''	45:DN:63:THR:HG23	1.86	0.57
36:DA:1174:A:H5'	36:DA:1175:U:H5''	1.86	0.57
36:DA:1434:A:H61	36:DA:1558:A:H62	1.50	0.57
36:DA:2103:C:H2'	36:DA:2103:C:O2	2.03	0.57
39:DD:43:ARG:CB	39:DD:54:ARG:HB2	2.34	0.57
40:DE:59:VAL:CG2	40:DE:63:LEU:HA	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:53:THR:CG2	41:DF:56:GLU:HG3	2.32	0.57
41:DF:68:LYS:HG3	41:DF:69:HIS:CD2	2.40	0.57
46:DO:34:THR:O	46:DO:35:VAL:C	2.47	0.57
50:DS:19:LYS:HB3	50:DS:20:ARG:NH2	2.19	0.57
51:DT:90:GLN:O	51:DT:91:ARG:C	2.46	0.57
57:DZ:23:LYS:HD3	57:DZ:38:TYR:HE1	1.70	0.57
1:AA:192:U:H2'	1:AA:193:C:C6	2.40	0.57
1:AA:575:G:OP1	1:AA:575:G:H4'	2.03	0.57
1:AA:956:U:O2'	1:AA:957:U:H5'	2.05	0.57
1:AA:1479:C:O2'	1:AA:1480:G:H5'	2.04	0.57
7:AG:22:LEU:O	7:AG:22:LEU:HD23	2.04	0.57
9:AI:65:VAL:HG21	9:AI:73:GLN:CB	2.35	0.57
11:AK:15:ALA:HA	11:AK:76:GLY:O	2.04	0.57
19:AS:6:LYS:H	19:AS:6:LYS:CD	2.17	0.57
25:AY:209:ALA:O	25:AY:210:ARG:C	2.47	0.57
27:B1:3:LYS:HE3	36:BA:1364:G:C8	2.39	0.57
30:B4:9:LEU:HA	30:B4:26:SER:O	2.04	0.57
30:B4:14:ILE:HG23	30:B4:31:ILE:CG2	2.35	0.57
36:BA:519:U:H2'	36:BA:520:G:H8	1.68	0.57
36:BA:621:A:H2'	36:BA:622:G:C5'	2.32	0.57
36:BA:654(P):C:H2'	36:BA:654(Q):C:O4'	2.04	0.57
36:BA:797:C:P	41:BF:62:ARG:HG3	2.44	0.57
36:BA:962:G:H2'	36:BA:963:U:O4'	2.05	0.57
36:BA:1461:G:H2'	36:BA:1462:C:H6	1.70	0.57
36:BA:2733:A:O2'	36:BA:2734:A:H5'	2.05	0.57
38:BC:185:LYS:HE3	38:BC:185:LYS:CA	2.34	0.57
39:BD:248:SER:HB2	39:BD:249:PRO:HD2	1.86	0.57
51:BT:28:VAL:HG21	51:BT:46:GLU:HG3	1.87	0.57
1:CA:424:G:H2'	1:CA:425:G:H8	1.69	0.57
1:CA:487:A:H2'	1:CA:488:C:O4'	2.05	0.57
1:CA:833:U:H2'	1:CA:834:C:H6	1.68	0.57
1:CA:1190:G:OP1	3:CC:5:ILE:HD12	2.05	0.57
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.40	0.57
8:CH:29:SER:OG	8:CH:32:LYS:HG3	2.05	0.57
10:CJ:4:ILE:HB	10:CJ:74:ILE:CG1	2.34	0.57
16:CP:74:LEU:HD23	16:CP:79:VAL:HG21	1.85	0.57
25:CY:539:ILE:O	25:CY:542:VAL:HG12	2.05	0.57
25:CY:652:MET:HA	25:CY:652:MET:CE	2.31	0.57
36:DA:250:G:H2'	36:DA:251:A:C8	2.40	0.57
36:DA:797:C:H2'	36:DA:798:G:H8	1.70	0.57
36:DA:1639:U:O2'	36:DA:1640:C:H5''	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1812:A:O2'	36:DA:1813:G:H5'	2.05	0.57
36:DA:2081:C:O2'	36:DA:2082:A:H5'	2.05	0.57
38:DC:118:PRO:HA	38:DC:121:MET:HG2	1.87	0.57
38:DC:127:LYS:O	38:DC:128:LEU:HD22	2.05	0.57
39:DD:34:VAL:HG23	39:DD:35:LYS:H	1.68	0.57
40:DE:1:MET:HB2	40:DE:83:ASP:O	2.04	0.57
43:DH:17:VAL:CG1	43:DH:50:VAL:HG21	2.34	0.57
43:DH:105:LEU:CD2	43:DH:113:VAL:HB	2.34	0.57
43:DH:159:GLU:HG3	43:DH:160:LYS:H	1.70	0.57
48:DQ:51:ARG:O	48:DQ:54:MET:HB3	2.05	0.57
51:DT:38:ASN:C	51:DT:38:ASN:ND2	2.62	0.57
54:DW:68:ARG:HB3	54:DW:110:LYS:H	1.70	0.57
56:DY:10:GLY:C	56:DY:27:VAL:HG13	2.30	0.57
56:DY:17:SER:OG	56:DY:18:GLY:N	2.37	0.57
56:DY:55:TYR:N	56:DY:55:TYR:CD1	2.70	0.57
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.05	0.56
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.20	0.56
22:AV:4:C:O2'	22:AV:5:G:H8	1.82	0.56
23:AW:15:G:H2'	23:AW:16:C:H5'	1.87	0.56
23:AW:54:5MU:O2'	23:AW:55:U:H5'	2.05	0.56
25:AY:33:LEU:HD23	25:AY:360:ALA:CB	2.33	0.56
25:AY:113:GLY:C	25:AY:115:GLU:N	2.63	0.56
25:AY:484:ARG:CD	25:AY:559:PRO:HB2	2.34	0.56
25:AY:546:ILE:HG23	25:AY:590:ILE:CG1	2.31	0.56
25:AY:573:HIS:HD2	25:AY:576:ASP:N	1.95	0.56
25:AY:636:PRO:O	25:AY:637:ARG:HD3	2.05	0.56
36:BA:226:G:O2'	36:BA:227:A:C8	2.47	0.56
36:BA:503:A:H4'	36:BA:504:U:H5'	1.87	0.56
36:BA:803:U:C2'	36:BA:804:A:H5'	2.35	0.56
37:BB:40:U:O2	37:BB:43:C:H5''	2.05	0.56
40:BE:34:VAL:O	40:BE:35:GLN:CB	2.52	0.56
41:BF:10:PRO:HD2	41:BF:13:SER:O	2.05	0.56
42:BG:106:LEU:HA	42:BG:110:ALA:HB3	1.86	0.56
43:BH:83:TYR:O	43:BH:84:SER:HB3	2.04	0.56
45:BN:7:LYS:O	45:BN:9:VAL:N	2.37	0.56
47:BP:105:LEU:HD12	47:BP:105:LEU:N	2.19	0.56
50:BS:104:GLY:C	50:BS:106:ARG:H	2.12	0.56
51:BT:53:ARG:HH11	51:BT:53:ARG:CB	2.14	0.56
1:CA:658:G:O4'	15:CO:22:THR:HB	2.04	0.56
1:CA:1076:C:H5'	1:CA:1077:G:OP2	2.05	0.56
2:CB:12:GLU:HB3	2:CB:16:HIS:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:176:LEU:HD12	4:CD:177:ASP:N	2.19	0.56
6:CF:42:GLU:C	6:CF:44:GLY:N	2.63	0.56
7:CG:51:GLN:HA	7:CG:51:GLN:OE1	2.05	0.56
8:CH:87:SER:OG	8:CH:92:ARG:HA	2.04	0.56
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.19	0.56
14:CN:37:PHE:CE2	14:CN:53:LEU:HD22	2.40	0.56
19:CS:6:LYS:HE3	19:CS:6:LYS:N	2.20	0.56
22:CV:68:C:H2'	22:CV:69:G:C8	2.40	0.56
28:D2:48:HIS:O	28:D2:49:LYS:C	2.47	0.56
31:D5:19:ARG:HG3	36:DA:2046:G:H5''	1.86	0.56
36:DA:1053:C:H2'	36:DA:1054:A:C5'	2.31	0.56
36:DA:1813:G:H1'	39:DD:50:THR:OG1	2.05	0.56
39:DD:218:ARG:HB3	39:DD:219:PRO:HD2	1.87	0.56
40:DE:101:ARG:NE	40:DE:171:GLU:HB2	2.20	0.56
41:DF:157:VAL:HG22	41:DF:194:MET:HG2	1.86	0.56
43:DH:12:PRO:HB2	43:DH:15:VAL:HG11	1.87	0.56
43:DH:124:GLU:CB	43:DH:132:ARG:HG3	2.35	0.56
1:AA:183:G:H2'	1:AA:184:G:C8	2.40	0.56
1:AA:382:A:H2'	1:AA:383:A:H8	1.70	0.56
1:AA:450:G:H1	1:AA:483:C:H42	1.53	0.56
1:AA:812:C:O2'	1:AA:813:U:OP2	2.24	0.56
1:AA:821:G:O2'	1:AA:822:C:H5'	2.05	0.56
1:AA:1206:G:H4'	3:AC:192:THR:O	2.04	0.56
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.06	0.56
1:AA:1493:A:H61	25:AY:579:GLU:CG	2.17	0.56
2:AB:137:ARG:HH11	2:AB:137:ARG:HG2	1.70	0.56
4:AD:31:CYS:O	4:AD:32:ALA:HB3	2.06	0.56
5:AE:68:GLU:O	5:AE:68:GLU:HG3	2.04	0.56
6:AF:15:ASP:C	6:AF:17:SER:H	2.13	0.56
13:AM:65:LYS:C	13:AM:66:LEU:HD12	2.30	0.56
25:AY:105:ILE:HD12	25:AY:105:ILE:N	2.18	0.56
25:AY:282:SER:O	25:AY:286:ILE:HD13	2.04	0.56
26:B0:14:ARG:NH1	36:BA:2279:G:O6	2.38	0.56
26:B0:51:VAL:HG22	26:B0:81:VAL:HG23	1.86	0.56
36:BA:1210:A:H5''	36:BA:1212:G:O4'	2.04	0.56
36:BA:1316:U:H2'	36:BA:1317:A:H8	1.70	0.56
36:BA:1794:U:H2'	36:BA:1795:C:H6	1.70	0.56
36:BA:2759:G:O2'	36:BA:2760:C:H5'	2.05	0.56
37:BB:50:G:OP1	50:BS:63:THR:HG23	2.04	0.56
38:BC:57:GLN:HE21	38:BC:205:ALA:HA	1.70	0.56
38:BC:74:ARG:HG3	38:BC:112:ASP:OD1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:145:VAL:HG13	39:BD:191:ALA:HB2	1.86	0.56
40:BE:100:GLU:O	40:BE:172:VAL:HG23	2.05	0.56
43:BH:124:GLU:CB	43:BH:132:ARG:HG3	2.35	0.56
44:BJ:26:UNK:CA	44:BJ:84:UNK:HA	2.35	0.56
46:BO:10:VAL:HG21	46:BO:16:ALA:O	2.05	0.56
47:BP:83:VAL:CB	47:BP:105:LEU:HD22	2.35	0.56
48:BQ:51:ARG:O	48:BQ:55:VAL:HG12	2.05	0.56
50:BS:19:LYS:HB3	50:BS:20:ARG:NH2	2.20	0.56
54:BW:14:PRO:O	54:BW:18:ARG:HG3	2.04	0.56
2:CB:213:LEU:O	2:CB:213:LEU:HD23	2.06	0.56
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.85	0.56
16:CP:19:ILE:N	16:CP:37:GLY:O	2.38	0.56
22:CV:42:C:H2'	22:CV:42:C:O2	2.04	0.56
25:CY:462:ILE:O	25:CY:466:LEU:HD13	2.04	0.56
25:CY:530:VAL:HG22	25:CY:531:GLY:N	2.11	0.56
25:CY:631:ILE:HD11	25:CY:643:ILE:HG21	1.87	0.56
31:D5:3:LYS:CE	36:DA:2613:U:H2'	2.34	0.56
32:D6:7:ILE:HG22	32:D6:7:ILE:O	2.03	0.56
36:DA:83:G:N2	36:DA:102:G:H2'	2.20	0.56
36:DA:1438:U:O2'	36:DA:1439:A:H5'	2.06	0.56
36:DA:1717:G:C3'	36:DA:1718:G:H5''	2.35	0.56
36:DA:2150:U:H2'	36:DA:2151:G:C8	2.41	0.56
36:DA:2504:U:O5'	36:DA:2504:U:H6	1.88	0.56
36:DA:2704:C:H2'	36:DA:2705:A:O4'	2.05	0.56
41:DF:160:ASN:ND2	41:DF:162:LEU:H	2.03	0.56
42:DG:133:LEU:CD1	42:DG:157:ILE:HD12	2.35	0.56
52:DU:65:ILE:HD11	52:DU:93:LYS:HA	1.86	0.56
56:DY:10:GLY:HA2	56:DY:27:VAL:HG13	1.87	0.56
56:DY:27:VAL:HG12	56:DY:29:GLU:OE1	2.05	0.56
57:DZ:166:SER:CB	57:DZ:168:GLU:HG3	2.35	0.56
1:AA:46:G:O2'	1:AA:365:U:H1'	2.06	0.56
1:AA:165:C:O2'	1:AA:166:G:H5'	2.05	0.56
1:AA:296:U:O2'	1:AA:297:G:H5'	2.04	0.56
1:AA:358:U:H2'	1:AA:359:U:C6	2.40	0.56
1:AA:521:G:H4'	12:AL:73:GLU:HG3	1.87	0.56
1:AA:695:A:H2'	1:AA:696:A:C8	2.40	0.56
1:AA:1054:C:OP2	1:AA:1197:G:OP2	2.22	0.56
1:AA:1270:C:H4'	1:AA:1313:U:O2'	2.06	0.56
1:AA:1367:C:H4'	10:AJ:48:THR:HG21	1.86	0.56
3:AC:79:ARG:HB2	3:AC:79:ARG:NH1	2.18	0.56
6:AF:36:ARG:HB3	6:AF:36:ARG:CZ	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.85	0.56
10:AJ:71:LEU:HD12	10:AJ:72:VAL:N	2.20	0.56
12:AL:79:GLU:HB2	25:AY:442:THR:HG21	1.87	0.56
16:AP:20:VAL:HG23	16:AP:34:GLU:C	2.29	0.56
19:AS:6:LYS:H	19:AS:6:LYS:HE3	1.70	0.56
19:AS:6:LYS:C	19:AS:7:LYS:HE3	2.30	0.56
20:AT:45:GLN:HB2	20:AT:91:LEU:HD22	1.88	0.56
22:AV:48:C:H2'	22:AV:59:U:H4'	1.87	0.56
23:AW:76:A:H61	36:BA:2422:A:C5'	2.18	0.56
25:AY:15:ILE:O	25:AY:101:LEU:HD22	2.05	0.56
25:AY:85:PRO:CA	25:AY:94:VAL:HG22	2.26	0.56
25:AY:204:GLU:CD	25:AY:204:GLU:H	2.13	0.56
25:AY:526:VAL:HG11	25:AY:566:THR:HG23	1.86	0.56
25:AY:621:ILE:HG23	25:AY:631:ILE:CG1	2.26	0.56
25:AY:655:TYR:OH	25:AY:659:LEU:HD23	2.04	0.56
26:B0:24:LYS:O	26:B0:25:ARG:HD3	2.05	0.56
27:B1:30:VAL:H	36:BA:2396:G:H4'	1.71	0.56
30:B4:19:GLY:O	30:B4:20:ASN:C	2.47	0.56
30:B4:56:VAL:O	30:B4:57:GLU:HB2	2.04	0.56
32:B6:11:LEU:HD22	32:B6:12:GLU:N	2.20	0.56
32:B6:16:CYS:O	32:B6:17:LYS:C	2.47	0.56
34:B8:50:LEU:C	34:B8:53:PRO:HD2	2.30	0.56
35:B9:29:ASN:N	35:B9:29:ASN:HD22	2.03	0.56
36:BA:648:G:H2'	36:BA:649:G:H8	1.69	0.56
36:BA:661:C:O3'	47:BP:18:ARG:HD2	2.06	0.56
36:BA:822:U:H2'	36:BA:823:G:C8	2.40	0.56
36:BA:1203:G:H3'	36:BA:1204:A:C5'	2.35	0.56
36:BA:1539:G:H2'	36:BA:1540:U:O4'	2.05	0.56
38:BC:14:LYS:HD3	38:BC:14:LYS:H	1.70	0.56
38:BC:34:ALA:HA	38:BC:40:GLU:OE2	2.05	0.56
41:BF:53:THR:HG22	41:BF:56:GLU:CG	2.34	0.56
41:BF:68:LYS:HG3	41:BF:69:HIS:CD2	2.39	0.56
41:BF:195:ASP:OD1	41:BF:196:LEU:N	2.38	0.56
42:BG:114:ILE:O	42:BG:114:ILE:HG22	2.05	0.56
43:BH:105:LEU:N	43:BH:105:LEU:HD23	2.20	0.56
45:BN:99:LEU:O	45:BN:103:VAL:HG23	2.05	0.56
47:BP:75:ILE:HG21	47:BP:77:ARG:HH21	1.71	0.56
50:BS:93:LYS:O	50:BS:95:HIS:N	2.37	0.56
51:BT:28:VAL:HG13	51:BT:46:GLU:CA	2.35	0.56
51:BT:50:ILE:CG1	51:BT:102:ILE:HD11	2.35	0.56
56:BY:76:CYS:HB3	56:BY:96:ILE:CD1	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:77:PRO:O	56:BY:78:ALA:HB2	2.05	0.56
1:CA:337:C:H2'	1:CA:338:A:H8	1.69	0.56
1:CA:368:U:P	25:CY:351:ARG:HH21	2.28	0.56
1:CA:738:C:H2'	1:CA:739:C:H6	1.70	0.56
1:CA:1010:G:H1	1:CA:1020:U:H1'	1.70	0.56
1:CA:1061:G:O2'	1:CA:1062:U:H5'	2.05	0.56
2:CB:142:LEU:O	2:CB:146:GLN:HB2	2.05	0.56
3:CC:78:GLY:HA3	3:CC:83:ARG:HB3	1.88	0.56
6:CF:18:GLN:O	6:CF:21:LEU:HB2	2.06	0.56
6:CF:42:GLU:C	6:CF:44:GLY:H	2.13	0.56
6:CF:80:ARG:HH11	6:CF:88:VAL:HB	1.70	0.56
8:CH:34:GLU:HB3	8:CH:118:VAL:HG21	1.88	0.56
10:CJ:63:PHE:CD1	10:CJ:63:PHE:N	2.73	0.56
13:CM:65:LYS:C	13:CM:66:LEU:HD12	2.29	0.56
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.40	0.56
13:CM:119:GLY:O	13:CM:120:LYS:HB2	2.05	0.56
15:CO:57:LEU:HD23	15:CO:57:LEU:H	1.70	0.56
24:CX:18:C:H5''	24:CX:19:A:OP1	2.02	0.56
25:CY:21:ILE:H	25:CY:21:ILE:HD13	1.69	0.56
25:CY:35:TYR:CE2	25:CY:269:VAL:HB	2.41	0.56
25:CY:228:MET:O	25:CY:231:TYR:HB3	2.04	0.56
25:CY:316:ILE:HG21	25:CY:324:ARG:NH2	2.21	0.56
25:CY:627:ARG:NH1	25:CY:652:MET:HE3	2.19	0.56
26:D0:7:LEU:CD2	48:DQ:81:VAL:HG23	2.35	0.56
27:D1:14:VAL:HG21	36:DA:188:G:H5'	1.87	0.56
28:D2:50:ILE:CG2	28:D2:54:LYS:HE3	2.36	0.56
29:D3:16:PRO:HB2	29:D3:18:ASP:OD1	2.04	0.56
32:D6:27:LYS:O	32:D6:27:LYS:CD	2.53	0.56
35:D9:17:ILE:HG22	35:D9:18:ARG:N	2.20	0.56
36:DA:271(F):C:O2'	36:DA:271(G):C:H5'	2.05	0.56
36:DA:500:G:N2	36:DA:502:A:H3'	2.20	0.56
36:DA:533:G:H5''	52:DU:24:TYR:CE1	2.41	0.56
36:DA:751:A:H5'	54:DW:90:ARG:HA	1.86	0.56
36:DA:813:U:H2'	36:DA:814:C:H6	1.65	0.56
36:DA:883:G:O2'	36:DA:884:C:H5'	2.05	0.56
36:DA:1198:U:H2'	36:DA:1198:U:O2	2.03	0.56
36:DA:1204:A:N1	36:DA:1241:A:H2	2.02	0.56
36:DA:1609:A:H1'	36:DA:1616:A:C1'	2.35	0.56
36:DA:1654:A:O2'	40:DE:113:PHE:O	2.23	0.56
36:DA:2148:G:O2'	36:DA:2149:G:H5'	2.05	0.56
36:DA:2310:A:C8	42:DG:75:LYS:HD2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2469:A:H2	36:DA:2481:G:N2	2.02	0.56
36:DA:2556:C:H2'	36:DA:2557:G:O4'	2.05	0.56
38:DC:48:LEU:HD12	38:DC:48:LEU:N	2.19	0.56
39:DD:28:GLU:H	39:DD:29:PRO:HD2	1.70	0.56
41:DF:28:ILE:HG21	41:DF:116:ASP:HB2	1.88	0.56
41:DF:32:LEU:HD23	41:DF:32:LEU:C	2.31	0.56
41:DF:84:VAL:C	41:DF:86:GLY:H	2.13	0.56
44:DJ:74:UNK:C	44:DJ:76:UNK:N	2.68	0.56
46:DO:2:ILE:HD11	46:DO:82:ASN:HD22	1.70	0.56
47:DP:79:ARG:O	47:DP:111:ARG:HB2	2.05	0.56
48:DQ:101:ARG:HD2	48:DQ:102:VAL:N	2.20	0.56
48:DQ:134:ARG:NE	57:DZ:122:ARG:NH2	2.53	0.56
50:DS:89:ARG:HG3	50:DS:92:TYR:HA	1.87	0.56
53:DV:79:VAL:HG12	53:DV:79:VAL:O	2.05	0.56
56:DY:28:LYS:C	56:DY:38:ILE:HG22	2.30	0.56
1:AA:1300:G:O2'	1:AA:1301:U:P	2.63	0.56
13:AM:119:GLY:O	13:AM:120:LYS:HB2	2.04	0.56
15:AO:17:ARG:HG3	15:AO:17:ARG:HH11	1.69	0.56
20:AT:11:SER:HA	20:AT:13:LEU:CD1	2.35	0.56
25:AY:28:THR:O	25:AY:32:ILE:HG13	2.04	0.56
25:AY:138:LYS:HG2	60:AY:702:GDP:C5	2.40	0.56
25:AY:512:ILE:H	25:AY:512:ILE:CD1	2.17	0.56
25:AY:608:VAL:HG12	25:AY:609:GLU:N	2.20	0.56
32:B6:9:LEU:HD22	32:B6:9:LEU:O	2.06	0.56
32:B6:41:PRO:HD3	32:B6:47:THR:HG22	1.86	0.56
36:BA:1278:A:O2'	36:BA:1279:G:H5'	2.05	0.56
36:BA:2332:U:H5'	36:BA:2336:A:N6	2.20	0.56
36:BA:2406:U:C2	47:BP:72:PRO:HB2	2.40	0.56
36:BA:2678:C:O2'	36:BA:2679:A:H5'	2.06	0.56
36:BA:2820:A:O3'	49:BR:5:LYS:HE3	2.05	0.56
42:BG:81:LYS:O	42:BG:83:ARG:HG3	2.06	0.56
51:BT:1:MET:N	51:BT:7:ILE:HD11	2.20	0.56
51:BT:109:GLU:HA	51:BT:112:ARG:HB3	1.88	0.56
57:BZ:40:ASP:HB3	57:BZ:43:GLU:CG	2.34	0.56
4:CD:28:SER:HB3	4:CD:29:PRO:HD2	1.86	0.56
4:CD:70:ILE:HD11	4:CD:74:GLN:HB3	1.86	0.56
6:CF:47:ARG:HH11	6:CF:47:ARG:HG2	1.70	0.56
18:CR:87:ARG:HB3	18:CR:87:ARG:HH11	1.70	0.56
24:CX:12:A:C4'	24:CX:13:A:OP1	2.53	0.56
25:CY:132:ARG:HG2	25:CY:132:ARG:O	2.06	0.56
32:D6:30:THR:O	32:D6:31:PRO:C	2.49	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:25:MET:HG3	47:DP:64:LYS:HB2	1.88	0.56
36:DA:11:G:H22	36:DA:2628:C:P	2.29	0.56
36:DA:940:G:H3'	36:DA:941:A:H5''	1.87	0.56
36:DA:1186:G:C2'	36:DA:1187:G:H5'	2.35	0.56
36:DA:1525:G:H2'	36:DA:1526:G:C8	2.40	0.56
36:DA:2131:G:H5'	36:DA:2133:G:H1'	1.86	0.56
36:DA:2695:C:H2'	36:DA:2696:U:C6	2.41	0.56
39:DD:61:LEU:O	39:DD:63:ARG:NH1	2.39	0.56
39:DD:95:LEU:HD12	39:DD:103:ARG:O	2.06	0.56
40:DE:108:SER:O	40:DE:162:ALA:HA	2.05	0.56
45:DN:7:LYS:O	45:DN:9:VAL:N	2.38	0.56
45:DN:96:GLU:N	45:DN:96:GLU:OE1	2.39	0.56
51:DT:1:MET:N	51:DT:7:ILE:HD11	2.21	0.56
52:DU:83:LEU:HG	52:DU:88:ILE:HD11	1.87	0.56
56:DY:77:PRO:O	56:DY:78:ALA:HB2	2.06	0.56
1:AA:191:G:N3	20:AT:105:SER:HB3	2.21	0.56
1:AA:1442(A):G:O2'	1:AA:1442(B):A:H5''	2.04	0.56
6:AF:36:ARG:HB3	6:AF:36:ARG:NH1	2.20	0.56
7:AG:85:TYR:CD2	7:AG:154:TYR:HE2	2.23	0.56
11:AK:91:ARG:HH11	18:AR:88:LYS:HE3	1.69	0.56
12:AL:53:ARG:HG2	12:AL:93:LEU:HD21	1.88	0.56
15:AO:53:HIS:CE1	15:AO:57:LEU:HD21	2.40	0.56
23:AW:10:G:H2'	23:AW:11:A:C8	2.40	0.56
25:AY:92:ILE:HD13	25:AY:92:ILE:O	2.04	0.56
25:AY:121:VAL:HA	25:AY:124:GLN:NE2	2.20	0.56
25:AY:554:PRO:HG3	25:AY:594:VAL:CG1	2.36	0.56
26:B0:40:GLN:HE22	26:B0:43:THR:HA	1.71	0.56
28:B2:30:ARG:O	28:B2:34:GLU:HB2	2.06	0.56
29:B3:38:GLU:HB3	29:B3:43:ILE:HG13	1.88	0.56
31:B5:40:LYS:HZ1	31:B5:46:CYS:H	1.53	0.56
31:B5:40:LYS:HZ3	31:B5:46:CYS:H	1.52	0.56
36:BA:1301:A:O2'	36:BA:1302:A:C2'	2.46	0.56
36:BA:1639:U:C2'	36:BA:1640:C:H5''	2.36	0.56
36:BA:1657:C:H2'	36:BA:1658:C:C6	2.40	0.56
36:BA:2028:U:H2'	36:BA:2029:G:C8	2.40	0.56
36:BA:2131:G:H5'	36:BA:2133:G:H1'	1.86	0.56
36:BA:2162:G:H2'	36:BA:2163:C:C6	2.41	0.56
38:BC:172:ILE:HD13	38:BC:197:LEU:HD21	1.86	0.56
39:BD:270:ILE:H	39:BD:270:ILE:CD1	2.09	0.56
40:BE:77:ILE:HG22	40:BE:78:LEU:CD1	2.35	0.56
41:BF:2:LYS:HG3	41:BF:25:PRO:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:157:VAL:HG22	41:BF:194:MET:HA	1.87	0.56
42:BG:51:ARG:NE	42:BG:53:LEU:HD21	2.20	0.56
46:BO:4:PRO:O	46:BO:5:GLN:CB	2.54	0.56
51:BT:63:VAL:O	51:BT:73:GLU:HA	2.06	0.56
53:BV:8:GLY:HA3	53:BV:23:GLU:HG3	1.87	0.56
53:BV:32:THR:HG23	53:BV:59:ALA:O	2.05	0.56
55:BX:12:VAL:HG12	55:BX:27:THR:HG23	1.86	0.56
56:BY:8:LYS:HD2	56:BY:8:LYS:H	1.68	0.56
56:BY:84:ARG:HH11	56:BY:84:ARG:HG2	1.70	0.56
57:BZ:122:ARG:HH11	57:BZ:122:ARG:HG2	1.71	0.56
1:CA:992:U:H4'	1:CA:993:G:O5'	2.04	0.56
1:CA:1106:G:O2'	1:CA:1107:C:H5'	2.06	0.56
1:CA:1444:C:H2'	1:CA:1445:C:H6	1.70	0.56
1:CA:1495:U:H2'	1:CA:1496:C:H6	1.70	0.56
3:CC:58:GLU:N	3:CC:65:ALA:HB3	2.09	0.56
5:CE:145:LYS:HA	8:CH:107:LEU:CD2	2.35	0.56
7:CG:35:LYS:HE3	7:CG:38:LEU:HD23	1.86	0.56
7:CG:108:ALA:C	7:CG:110:GLN:H	2.14	0.56
12:CL:53:ARG:HG2	12:CL:93:LEU:HD21	1.87	0.56
12:CL:82:VAL:HG12	12:CL:105:TYR:HD2	1.70	0.56
16:CP:20:VAL:HG23	16:CP:34:GLU:C	2.30	0.56
16:CP:25:ARG:HG3	16:CP:25:ARG:NH1	2.19	0.56
25:CY:21:ILE:O	25:CY:22:ASP:CB	2.53	0.56
25:CY:530:VAL:O	25:CY:532:GLY:N	2.38	0.56
27:D1:53:VAL:CG2	27:D1:74:VAL:HG13	2.35	0.56
36:DA:752:A:O2'	36:DA:753:C:OP2	2.19	0.56
36:DA:1666:G:H1'	46:DO:3:GLN:HE21	1.70	0.56
36:DA:2008:C:H2'	36:DA:2009:G:C8	2.40	0.56
36:DA:2346:A:C2	36:DA:2383:G:C2	2.94	0.56
39:DD:84:TYR:C	39:DD:84:TYR:CD1	2.83	0.56
42:DG:131:TYR:CE2	42:DG:133:LEU:HD23	2.41	0.56
46:DO:12:ASP:C	46:DO:14:THR:H	2.14	0.56
47:DP:75:ILE:HG21	47:DP:77:ARG:HH21	1.71	0.56
51:DT:63:VAL:O	51:DT:73:GLU:HA	2.06	0.56
53:DV:8:GLY:HA3	53:DV:23:GLU:HG3	1.87	0.56
53:DV:51:VAL:HG12	53:DV:52:VAL:N	2.10	0.56
54:DW:4:LYS:HA	54:DW:106:ILE:HG22	1.88	0.56
1:AA:793:U:H3'	1:AA:794:A:C5'	2.20	0.56
1:AA:1308:U:H5''	13:AM:98:VAL:HG23	1.86	0.56
2:AB:235:SER:C	2:AB:237:ALA:H	2.14	0.56
4:AD:98:GLU:CD	4:AD:103:ASN:HD21	2.13	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:62:ILE:O	19:AS:62:ILE:HG23	2.04	0.56
30:B4:50:VAL:O	30:B4:51:ASP:CB	2.53	0.56
31:B5:36:CYS:SG	31:B5:38:ALA:HB3	2.46	0.56
31:B5:55:ARG:O	31:B5:56:LYS:CB	2.52	0.56
31:B5:58:LEU:HD13	31:B5:59:GLU:N	2.21	0.56
36:BA:2787:C:H1'	40:BE:61:ARG:HG3	1.88	0.56
36:BA:2832:U:H1'	36:BA:2834:G:C2	2.40	0.56
40:BE:36:ARG:NH2	40:BE:88:GLY:N	2.53	0.56
42:BG:53:LEU:N	42:BG:53:LEU:CD2	2.68	0.56
43:BH:117:PRO:HB3	43:BH:123:PHE:CE2	2.40	0.56
45:BN:67:LEU:HD22	45:BN:87:LEU:HB3	1.88	0.56
45:BN:109:LYS:H	45:BN:109:LYS:HE3	1.69	0.56
45:BN:120:LEU:CD1	45:BN:122:VAL:HG23	2.36	0.56
47:BP:79:ARG:O	47:BP:111:ARG:HB2	2.05	0.56
48:BQ:76:LYS:HB3	48:BQ:91:GLU:HG3	1.88	0.56
49:BR:73:VAL:O	49:BR:76:VAL:HG12	2.05	0.56
49:BR:97:VAL:HA	49:BR:113:LEU:O	2.05	0.56
50:BS:106:ARG:HD2	50:BS:106:ARG:C	2.31	0.56
51:BT:102:ILE:HG13	51:BT:103:ARG:N	2.19	0.56
52:BU:83:LEU:HG	52:BU:88:ILE:HD11	1.86	0.56
55:BX:12:VAL:HG12	55:BX:27:THR:C	2.30	0.56
56:BY:10:GLY:HA2	56:BY:27:VAL:HG13	1.87	0.56
57:BZ:48:PHE:CE1	57:BZ:52:SER:HA	2.41	0.56
1:CA:165:C:O2'	1:CA:166:G:H5'	2.05	0.56
1:CA:931:C:H1'	1:CA:1387:G:N2	2.21	0.56
5:CE:36:ASP:OD1	5:CE:38:GLN:N	2.34	0.56
8:CH:6:ILE:HG21	8:CH:85:ARG:NH1	2.20	0.56
20:CT:45:GLN:HB2	20:CT:91:LEU:HD22	1.86	0.56
25:CY:15:ILE:HB	25:CY:104:ALA:HA	1.86	0.56
25:CY:282:SER:O	25:CY:286:ILE:HD13	2.06	0.56
25:CY:655:TYR:CZ	25:CY:659:LEU:HB2	2.41	0.56
32:D6:10:LEU:HD12	34:D8:34:TRP:HB2	1.87	0.56
36:DA:2555:U:H2'	36:DA:2556:C:H5'	1.86	0.56
39:DD:155:LEU:HD12	39:DD:155:LEU:N	2.21	0.56
43:DH:105:LEU:HD23	43:DH:105:LEU:N	2.21	0.56
45:DN:38:HIS:O	52:DU:67:ALA:HB1	2.06	0.56
1:AA:109:A:C6	1:AA:326:G:C6	2.94	0.56
1:AA:487:A:H2'	1:AA:488:C:O4'	2.06	0.56
5:AE:101:ILE:HD13	5:AE:101:ILE:H	1.70	0.56
6:AF:67:MET:HB2	6:AF:68:PRO:CD	2.31	0.56
12:AL:28:LYS:O	12:AL:30:ALA:N	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:610:VAL:HG11	25:AY:655:TYR:OH	2.05	0.56
26:B0:7:LEU:CD2	48:BQ:81:VAL:HG23	2.35	0.56
26:B0:10:THR:HG21	36:BA:2277:G:OP2	2.05	0.56
29:B3:59:VAL:CG1	29:B3:60:GLU:N	2.69	0.56
34:B8:25:MET:HG3	47:BP:64:LYS:HB2	1.88	0.56
36:BA:11:G:H22	36:BA:2628:C:P	2.28	0.56
36:BA:2092:U:H4'	36:BA:2093:G:O5'	2.05	0.56
40:BE:59:VAL:CG2	40:BE:63:LEU:HA	2.36	0.56
42:BG:152:LEU:H	42:BG:152:LEU:CD2	2.14	0.56
45:BN:132:ALA:O	45:BN:133:GLN:HB2	2.05	0.56
51:BT:70:VAL:HG12	51:BT:71:GLY:N	2.20	0.56
53:BV:99:ILE:HD13	53:BV:99:ILE:N	2.21	0.56
56:BY:55:TYR:N	56:BY:55:TYR:CD1	2.72	0.56
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.05	0.56
15:CO:17:ARG:CD	15:CO:26:GLU:HG3	2.26	0.56
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.87	0.56
19:CS:6:LYS:HG2	19:CS:7:LYS:HE3	1.87	0.56
25:CY:65:ILE:C	25:CY:67:ALA:H	2.12	0.56
25:CY:620:VAL:O	25:CY:624:LEU:HD22	2.06	0.56
27:D1:92:LYS:HE2	36:DA:153:C:OP1	2.05	0.56
28:D2:4:SER:HA	28:D2:7:ARG:NH1	2.05	0.56
36:DA:274:G:O2'	36:DA:275:G:H5''	2.05	0.56
36:DA:303:U:H2'	36:DA:304:G:C8	2.40	0.56
36:DA:799:G:C3'	36:DA:800:A:H5''	2.34	0.56
36:DA:945:A:O2'	36:DA:946:G:H4'	2.06	0.56
36:DA:1047:G:H22	36:DA:1110:G:H1'	1.71	0.56
36:DA:1395:A:H4'	36:DA:1397:U:C5	2.40	0.56
36:DA:1718:G:H5'	36:DA:1718:G:C8	2.35	0.56
36:DA:2050:C:H1'	40:DE:156:MET:HE1	1.86	0.56
36:DA:2122:U:H2'	36:DA:2123:G:H8	1.70	0.56
36:DA:2682:U:O4	36:DA:2728:U:H1'	2.06	0.56
41:DF:17:ARG:HG3	41:DF:17:ARG:NH1	2.21	0.56
41:DF:65:TRP:HZ3	41:DF:75:HIS:HD2	1.53	0.56
41:DF:195:ASP:HB3	41:DF:198:ALA:CB	2.36	0.56
42:DG:53:LEU:N	42:DG:53:LEU:HD22	2.21	0.56
45:DN:51:PHE:HD1	45:DN:51:PHE:H	1.54	0.56
55:DX:12:VAL:HG12	55:DX:27:THR:C	2.31	0.56
56:DY:59:GLY:O	56:DY:60:PHE:HB2	2.05	0.56
1:AA:1375:A:OP1	7:AG:12:LEU:HD21	2.05	0.56
3:AC:49:SER:HB2	3:AC:75:VAL:HG11	1.88	0.56
6:AF:19:LEU:HD23	6:AF:19:LEU:C	2.31	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:4:TYR:CE2	9:AI:88:TYR:CB	2.89	0.56
9:AI:84:ALA:C	9:AI:86:VAL:H	2.13	0.56
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.88	0.56
25:AY:165:GLN:NE2	25:AY:177:ILE:HG21	2.21	0.56
25:AY:252:ASP:OD1	25:AY:252:ASP:N	2.38	0.56
28:B2:63:VAL:HA	28:B2:66:GLU:HG2	1.87	0.56
30:B4:22:ILE:HD12	30:B4:22:ILE:N	2.21	0.56
31:B5:40:LYS:HZ1	31:B5:46:CYS:N	2.03	0.56
33:B7:10:ARG:HH12	33:B7:14:LYS:HE3	1.70	0.56
34:B8:5:LYS:HG2	36:BA:242:G:C8	2.41	0.56
34:B8:51:ALA:HA	34:B8:54:GLU:CD	2.31	0.56
36:BA:2300:G:H2'	36:BA:2301:C:C6	2.41	0.56
36:BA:2428:G:H5''	36:BA:2429:G:OP1	2.06	0.56
39:BD:158:ALA:O	39:BD:196:VAL:HG11	2.05	0.56
40:BE:199:ARG:HB2	40:BE:199:ARG:NH1	2.20	0.56
42:BG:55:LYS:O	42:BG:55:LYS:HD3	2.05	0.56
45:BN:87:LEU:O	45:BN:88:GLU:C	2.49	0.56
49:BR:87:TYR:C	49:BR:89:ASP:N	2.61	0.56
54:BW:29:LEU:HD13	54:BW:51:LEU:HD11	1.87	0.56
57:BZ:145:GLU:OE1	57:BZ:146:ILE:HD13	2.04	0.56
1:CA:382:A:H2'	1:CA:383:A:H8	1.70	0.56
1:CA:957:U:O2	1:CA:959:A:H8	1.88	0.56
1:CA:1292:U:H2'	1:CA:1293:G:H8	1.71	0.56
2:CB:165:VAL:CG2	2:CB:166:ASP:H	2.05	0.56
2:CB:167:PRO:HG2	2:CB:192:SER:OG	2.05	0.56
5:CE:33:VAL:CG1	5:CE:112:LEU:HD12	2.36	0.56
13:CM:52:GLU:HA	13:CM:55:ARG:HD3	1.87	0.56
15:CO:17:ARG:HH11	15:CO:17:ARG:HG3	1.71	0.56
20:CT:47:GLY:O	20:CT:49:ALA:N	2.27	0.56
25:CY:115:GLU:OE2	25:CY:152:THR:HG21	2.05	0.56
25:CY:659:LEU:C	25:CY:659:LEU:HD13	2.30	0.56
26:D0:5:LYS:HB3	26:D0:5:LYS:NZ	2.21	0.56
31:D5:3:LYS:HG2	36:DA:747:U:O4	2.05	0.56
36:DA:814:C:H2'	36:DA:815:C:H6	1.71	0.56
36:DA:1204:A:N6	36:DA:1240:U:H2'	2.20	0.56
36:DA:1461:G:H2'	36:DA:1462:C:H6	1.70	0.56
36:DA:2186:G:H2'	36:DA:2187:G:H5''	1.87	0.56
39:DD:31:LYS:HZ2	39:DD:33:LEU:HB2	1.69	0.56
45:DN:46:VAL:O	45:DN:47:ALA:CB	2.52	0.56
53:DV:18:LEU:HD13	53:DV:19:LYS:N	2.21	0.56
57:DZ:85:HIS:C	57:DZ:85:HIS:HD1	2.13	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:405:U:H3'	1:AA:406:G:H5'	1.88	0.56
1:AA:512:U:H2'	1:AA:513:C:H6	1.71	0.56
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.88	0.56
3:AC:136:GLN:O	3:AC:137:ALA:C	2.49	0.56
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.04	0.56
7:AG:80:VAL:HG21	7:AG:83:ALA:HB3	1.87	0.56
10:AJ:29:ARG:HB3	10:AJ:29:ARG:CZ	2.35	0.56
11:AK:33:THR:HA	11:AK:40:ILE:HG12	1.87	0.56
12:AL:89:ARG:HA	12:AL:97:ARG:HA	1.87	0.56
25:AY:237:PRO:HB2	25:AY:242:LEU:HG	1.87	0.56
25:AY:485:GLU:CG	25:AY:558:PHE:H	2.19	0.56
32:B6:5:VAL:HG12	32:B6:6:ARG:N	2.21	0.56
35:B9:29:ASN:HD22	35:B9:29:ASN:H	1.54	0.56
36:BA:303:U:H2'	36:BA:304:G:C8	2.41	0.56
36:BA:583:G:H2'	36:BA:584:C:C6	2.40	0.56
36:BA:883:G:O2'	36:BA:884:C:H5'	2.06	0.56
36:BA:1028:A:N6	36:BA:1125:G:H2'	2.21	0.56
36:BA:1274:A:N3	36:BA:1297:C:H1'	2.20	0.56
36:BA:1523:U:H2'	36:BA:1524:G:H8	1.68	0.56
36:BA:1639:U:O2'	36:BA:1640:C:H5''	2.06	0.56
36:BA:1791:A:H5'	39:BD:206:LEU:HD12	1.87	0.56
36:BA:2469:A:H2	36:BA:2481:G:N2	2.02	0.56
39:BD:205:VAL:O	39:BD:205:VAL:HG12	2.05	0.56
42:BG:10:LYS:HE2	42:BG:14:GLU:OE2	2.06	0.56
51:BT:30:VAL:CG2	51:BT:84:GLN:H	2.18	0.56
55:BX:26:TYR:O	55:BX:81:VAL:HG22	2.06	0.56
2:CB:51:LEU:CD2	2:CB:55:PHE:HE2	2.19	0.56
3:CC:52:LEU:H	3:CC:52:LEU:CD2	2.14	0.56
4:CD:104:VAL:HG21	4:CD:140:VAL:HG21	1.88	0.56
7:CG:29:LYS:HB2	7:CG:105:VAL:HG21	1.87	0.56
7:CG:140:ASP:HA	7:CG:143:ARG:NH1	2.21	0.56
8:CH:99:GLU:O	8:CH:100:ILE:C	2.49	0.56
13:CM:105:THR:O	13:CM:106:ASN:CG	2.49	0.56
22:CV:64:A:H2'	22:CV:65:G:H8	1.70	0.56
23:CW:4:G:O2'	23:CW:5:G:H8	1.89	0.56
25:CY:210:ARG:O	25:CY:214:GLU:HG2	2.06	0.56
29:D3:26:LEU:HB3	29:D3:28:LEU:HD21	1.88	0.56
36:DA:1185:C:H5'	36:DA:1186:G:P	2.46	0.56
36:DA:2183:C:O2'	36:DA:2184:G:H5'	2.06	0.56
36:DA:2428:G:H5''	36:DA:2429:G:OP1	2.06	0.56
37:DB:40:U:O2	37:DB:43:C:H5''	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:50:GLY:HA3	40:DE:74:PRO:HG3	1.88	0.56
50:DS:48:LEU:HD12	50:DS:48:LEU:N	2.21	0.56
1:AA:865:A:C2	1:AA:918:A:H4'	2.41	0.56
1:AA:1342:C:H1'	9:AI:124:GLN:HG3	1.88	0.56
3:AC:20:SER:HB3	3:AC:40:ARG:NH2	2.21	0.56
3:AC:50:ALA:HB1	3:AC:70:VAL:CG1	2.35	0.56
3:AC:127:ARG:HH11	3:AC:127:ARG:HG2	1.71	0.56
4:AD:129:ASN:HD22	4:AD:129:ASN:H	1.54	0.56
10:AJ:32:ALA:N	10:AJ:78:ASN:HD21	2.03	0.56
23:AW:22:G:H2'	23:AW:23:C:H5''	1.84	0.56
32:B6:27:LYS:O	32:B6:27:LYS:CD	2.52	0.56
36:BA:139(A):G:N2	55:BX:44:GLU:OE2	2.39	0.56
36:BA:1717:G:C3'	36:BA:1718:G:H5''	2.36	0.56
36:BA:2723:C:C5'	49:BR:2:ARG:NH1	2.66	0.56
37:BB:22:U:H2'	37:BB:23:G:C8	2.40	0.56
40:BE:59:VAL:HG21	40:BE:63:LEU:HA	1.87	0.56
41:BF:17:ARG:HG3	41:BF:17:ARG:NH1	2.21	0.56
42:BG:53:LEU:HD22	42:BG:53:LEU:H	1.67	0.56
51:BT:102:ILE:HB	51:BT:110:ILE:CD1	2.36	0.56
53:BV:2:PHE:CE1	53:BV:13:ARG:NH1	2.73	0.56
55:BX:60:ARG:HA	55:BX:75:ASP:OD2	2.05	0.56
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.87	0.56
2:CB:207:ALA:C	2:CB:209:ARG:N	2.61	0.56
3:CC:6:HIS:HD2	3:CC:7:PRO:HD2	1.69	0.56
4:CD:8:VAL:C	4:CD:10:ARG:N	2.57	0.56
6:CF:98:LEU:HD13	6:CF:101:ALA:HB2	1.86	0.56
7:CG:139:GLU:O	7:CG:143:ARG:HG3	2.06	0.56
9:CI:3:GLN:NE2	9:CI:20:ARG:HH21	2.03	0.56
20:CT:55:ILE:O	20:CT:58:LYS:HB3	2.06	0.56
23:CW:56:C:H2'	23:CW:56:C:O2	2.06	0.56
25:CY:438:PHE:C	25:CY:438:PHE:HD1	2.14	0.56
25:CY:438:PHE:HB3	25:CY:458:HIS:NE2	2.19	0.56
27:D1:20:ARG:HH11	27:D1:20:ARG:HG2	1.71	0.56
27:D1:23:LYS:HE2	27:D1:28:GLY:HA3	1.87	0.56
33:D7:10:ARG:NH1	33:D7:14:LYS:HE3	2.21	0.56
36:DA:426:C:O2'	36:DA:427:U:H5'	2.05	0.56
36:DA:675:A:OP1	41:DF:76:GLY:HA2	2.05	0.56
36:DA:1101:U:H2'	36:DA:1102:C:C6	2.41	0.56
36:DA:1473:G:H2'	36:DA:1474:C:O4'	2.06	0.56
36:DA:2113:U:H2'	36:DA:2114:A:H8	1.71	0.56
36:DA:2172:U:H1'	36:DA:2173:A:OP1	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2392:A:H1'	47:DP:60:MET:HE3	1.86	0.56
38:DC:121:MET:O	38:DC:125:GLY:N	2.35	0.56
38:DC:186:LEU:O	38:DC:190:ILE:HG12	2.05	0.56
41:DF:185:ASP:HA	41:DF:188:ARG:HD3	1.88	0.56
42:DG:43:LEU:HD22	42:DG:43:LEU:N	2.20	0.56
43:DH:173:PRO:O	43:DH:175:LYS:N	2.39	0.56
47:DP:102:ARG:HB3	47:DP:102:ARG:NH1	2.20	0.56
55:DX:68:ARG:O	55:DX:68:ARG:HD3	2.05	0.56
56:DY:30:VAL:HG12	56:DY:31:LEU:N	2.21	0.56
1:AA:1404:C:H5'	1:AA:1405:G:OP2	2.06	0.55
2:AB:12:GLU:HB3	2:AB:16:HIS:HB2	1.88	0.55
2:AB:164:VAL:HG12	2:AB:165:VAL:N	2.21	0.55
6:AF:28:ARG:O	6:AF:32:ASN:HB2	2.06	0.55
8:AH:114:THR:HG22	8:AH:130:GLY:O	2.05	0.55
9:AI:55:ALA:HA	9:AI:58:HIS:CD2	2.41	0.55
13:AM:74:VAL:HA	13:AM:77:ASN:HD22	1.71	0.55
13:AM:83:ASP:CG	13:AM:84:ILE:N	2.62	0.55
15:AO:39:LEU:HD22	15:AO:43:LEU:HG	1.88	0.55
20:AT:45:GLN:HA	20:AT:91:LEU:HB3	1.88	0.55
22:AV:35:A:H2'	22:AV:36:A:H8	1.70	0.55
25:AY:9:LEU:CD1	25:AY:284:LEU:HD13	2.36	0.55
25:AY:20:HIS:HA	25:AY:87:HIS:CD2	2.42	0.55
25:AY:21:ILE:HG23	25:AY:88:VAL:HG13	1.88	0.55
25:AY:230:LYS:HB2	25:AY:230:LYS:NZ	2.18	0.55
25:AY:314:PHE:HD1	25:AY:315:LYS:HB2	1.71	0.55
25:AY:463:VAL:O	25:AY:467:LYS:HB3	2.06	0.55
27:B1:87:PRO:HG2	27:B1:88:LYS:H	1.70	0.55
34:B8:32:LEU:O	34:B8:33:ASN:O	2.23	0.55
36:BA:27:G:O2'	36:BA:28:A:H8	1.80	0.55
36:BA:229:A:OP1	36:BA:229:A:H8	1.89	0.55
36:BA:533:G:H5''	52:BU:24:TYR:CD1	2.41	0.55
36:BA:769:G:H2'	36:BA:770:G:H8	1.71	0.55
36:BA:1019:U:HO2'	36:BA:1021:A:H2	1.50	0.55
36:BA:1510:G:O2'	36:BA:1511:C:H5'	2.06	0.55
36:BA:1584:C:H5'	36:BA:1586:A:OP2	2.05	0.55
36:BA:2408:U:H2'	36:BA:2409:G:H8	1.71	0.55
36:BA:2483:C:C3'	36:BA:2484:G:H5''	2.23	0.55
38:BC:22:THR:HB	38:BC:229:SER:HB2	1.86	0.55
39:BD:145:VAL:HG12	39:BD:146:GLU:O	2.06	0.55
39:BD:275:LYS:HD2	39:BD:275:LYS:O	2.06	0.55
40:BE:119:ARG:HG2	40:BE:160:TYR:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:73:ALA:H	42:BG:87:PRO:CG	2.18	0.55
44:BJ:73:UNK:C	44:BJ:75:UNK:N	2.67	0.55
47:BP:122:PRO:HG3	47:BP:141:ALA:HB3	1.87	0.55
53:BV:19:LYS:CE	53:BV:20:LEU:H	2.19	0.55
53:BV:32:THR:HG22	53:BV:33:VAL:N	2.21	0.55
54:BW:6:ILE:HA	54:BW:103:ILE:O	2.06	0.55
1:CA:956:U:O2'	1:CA:957:U:H5'	2.05	0.55
1:CA:1342:C:H1'	9:CI:124:GLN:HG3	1.88	0.55
1:CA:1420:C:H42	1:CA:1480:G:H1	1.54	0.55
3:CC:58:GLU:O	3:CC:59:ARG:HG3	2.05	0.55
9:CI:84:ALA:C	9:CI:86:VAL:H	2.15	0.55
13:CM:116:THR:HG22	13:CM:117:VAL:N	2.21	0.55
17:CQ:4:LYS:HG3	17:CQ:6:LEU:HD21	1.87	0.55
25:CY:208:GLN:O	25:CY:211:GLU:HG2	2.06	0.55
31:D5:56:LYS:CG	31:D5:57:VAL:H	1.98	0.55
36:DA:116:C:H1'	36:DA:127:A:H1'	1.88	0.55
36:DA:118:A:N3	36:DA:178:G:H1'	2.21	0.55
36:DA:810:U:OP1	36:DA:1253:A:N7	2.38	0.55
36:DA:1169:G:H1	36:DA:1180:C:N4	2.04	0.55
36:DA:1539:G:N3	36:DA:1540:U:H1'	2.21	0.55
36:DA:2759:G:O2'	36:DA:2760:C:H5'	2.06	0.55
37:DB:66:A:H61	37:DB:108:U:H2'	1.71	0.55
43:DH:46:GLU:OE1	43:DH:51:ARG:HB2	2.06	0.55
43:DH:104:GLU:HA	43:DH:113:VAL:O	2.06	0.55
47:DP:81:GLN:HG2	47:DP:106:LEU:HA	1.88	0.55
49:DR:97:VAL:O	49:DR:98:LEU:HD23	2.06	0.55
51:DT:80:SER:CB	51:DT:81:PRO:CD	2.84	0.55
53:DV:18:LEU:CG	53:DV:19:LYS:H	2.19	0.55
53:DV:19:LYS:CE	53:DV:20:LEU:H	2.19	0.55
53:DV:99:ILE:N	53:DV:99:ILE:HD13	2.21	0.55
57:DZ:59:LEU:O	57:DZ:66:SER:HA	2.06	0.55
1:AA:36:C:H4'	12:AL:122:THR:O	2.06	0.55
1:AA:635:G:O2'	1:AA:636:U:H5'	2.05	0.55
1:AA:1358:U:P	14:AN:35:ARG:HG3	2.45	0.55
2:AB:235:SER:O	2:AB:237:ALA:N	2.35	0.55
2:AB:236:TYR:CD2	2:AB:239:VAL:HG21	2.41	0.55
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.71	0.55
6:AF:33:TYR:HA	6:AF:71:ARG:HH21	1.66	0.55
19:AS:19:VAL:HG11	19:AS:44:MET:HG2	1.88	0.55
25:AY:5:VAL:HG13	25:AY:6:GLU:H	1.70	0.55
25:AY:35:TYR:C	25:AY:37:GLY:H	2.13	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:149:VAL:CA	25:AY:152:THR:HG22	2.36	0.55
25:AY:265:LYS:HB3	25:AY:267:LYS:HE3	1.88	0.55
25:AY:423:LYS:O	25:AY:427:ALA:HB2	2.07	0.55
25:AY:487:ILE:HG21	25:AY:594:VAL:HA	1.88	0.55
25:AY:513:LYS:HB3	25:AY:566:THR:HB	1.86	0.55
26:B0:50:ASN:HA	26:B0:62:LEU:HD12	1.86	0.55
36:BA:116:C:H1'	36:BA:127:A:H1'	1.88	0.55
36:BA:145:G:H2'	36:BA:146:G:H8	1.72	0.55
36:BA:250:G:H2'	36:BA:251:A:C8	2.41	0.55
36:BA:1464:C:O2'	36:BA:1528:A:C8	2.58	0.55
36:BA:2107:C:H42	36:BA:2182:G:H1	1.52	0.55
36:BA:2672:G:C3'	36:BA:2673:G:H5''	2.35	0.55
36:BA:2787:C:O2	36:BA:2787:C:H2'	2.05	0.55
36:BA:2876:G:C4'	51:BT:3:ARG:HE	2.17	0.55
39:BD:218:ARG:HB3	39:BD:219:PRO:HD2	1.88	0.55
41:BF:7:TYR:HD2	41:BF:16:GLY:CA	2.17	0.55
41:BF:110:LEU:HD12	41:BF:206:ILE:HD11	1.88	0.55
41:BF:165:ARG:HH11	41:BF:165:ARG:HB3	1.71	0.55
43:BH:19:VAL:O	43:BH:20:ALA:HB2	2.06	0.55
43:BH:156:ALA:O	43:BH:158:HIS:N	2.37	0.55
43:BH:159:GLU:O	43:BH:160:LYS:O	2.23	0.55
46:BO:91:LEU:N	46:BO:91:LEU:HD22	2.21	0.55
51:BT:42:ILE:O	51:BT:42:ILE:HG13	2.06	0.55
51:BT:80:SER:CB	51:BT:81:PRO:CD	2.83	0.55
52:BU:90:VAL:O	52:BU:91:ASP:C	2.49	0.55
55:BX:68:ARG:O	55:BX:68:ARG:HD3	2.06	0.55
1:CA:821:G:O2'	1:CA:822:C:H5'	2.05	0.55
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.41	0.55
5:CE:101:ILE:HD11	5:CE:119:LEU:HA	1.89	0.55
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.06	0.55
7:CG:75:VAL:HG11	7:CG:86:GLN:HB3	1.88	0.55
15:CO:16:ALA:HB1	15:CO:21:ASP:HB3	1.88	0.55
16:CP:9:PHE:HE2	16:CP:18:ARG:NE	2.03	0.55
22:CV:68:C:H2'	22:CV:69:G:H8	1.70	0.55
23:CW:54:5MU:H2'	23:CW:55:U:O4'	2.06	0.55
32:D6:13:CYS:HB3	32:D6:49:HIS:HB3	1.88	0.55
34:D8:62:LEU:N	34:D8:63:PRO:CD	2.69	0.55
36:DA:560:C:H4'	52:DU:52:ARG:CZ	2.35	0.55
36:DA:1815:A:OP2	36:DA:1822:G:H5''	2.06	0.55
36:DA:2186:G:C2'	36:DA:2187:G:H5''	2.36	0.55
36:DA:2733:A:O2'	36:DA:2734:A:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2787:C:H2'	36:DA:2787:C:O2	2.05	0.55
39:DD:241:PRO:O	39:DD:242:ARG:CB	2.54	0.55
39:DD:267:SER:CA	39:DD:270:ILE:HD11	2.36	0.55
40:DE:8:LYS:O	40:DE:193:GLY:N	2.37	0.55
42:DG:83:ARG:HD2	42:DG:83:ARG:H	1.70	0.55
42:DG:122:PRO:HG2	42:DG:123:ASN:OD1	2.06	0.55
43:DH:83:TYR:O	43:DH:84:SER:HB3	2.05	0.55
46:DO:14:THR:CB	46:DO:86:ILE:HD13	2.36	0.55
47:DP:48:PRO:O	47:DP:50:ARG:N	2.38	0.55
47:DP:83:VAL:HB	47:DP:105:LEU:HD22	1.86	0.55
48:DQ:76:LYS:HB3	48:DQ:91:GLU:HG3	1.86	0.55
50:DS:28:VAL:CG1	50:DS:29:PHE:H	2.14	0.55
57:DZ:42:VAL:HG13	57:DZ:43:GLU:N	2.21	0.55
1:AA:8:A:N6	4:AD:209:ARG:HB2	2.21	0.55
1:AA:382:A:H2'	1:AA:383:A:C8	2.41	0.55
1:AA:697:U:C2'	1:AA:698:G:H5'	2.33	0.55
1:AA:738:C:H2'	1:AA:739:C:H6	1.71	0.55
1:AA:992:U:H4'	1:AA:993:G:O5'	2.05	0.55
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.88	0.55
4:AD:33:MET:O	4:AD:37:PRO:HG3	2.07	0.55
6:AF:71:ARG:HG3	6:AF:71:ARG:HH11	1.69	0.55
7:AG:51:GLN:OE1	7:AG:51:GLN:HA	2.06	0.55
9:AI:5:TYR:HD1	9:AI:6:GLY:H	1.47	0.55
25:AY:460:GLU:O	25:AY:463:VAL:HB	2.05	0.55
28:B2:28:LYS:NZ	28:B2:56:GLN:HE22	2.04	0.55
35:B9:29:ASN:ND2	35:B9:29:ASN:O	2.40	0.55
36:BA:903:C:H2'	36:BA:904:C:C5'	2.35	0.55
36:BA:978:G:C2	36:BA:986:C:N3	2.74	0.55
36:BA:1847:A:H3'	36:BA:1848:A:H5'	1.88	0.55
36:BA:2172:U:H1'	36:BA:2173:A:OP1	2.06	0.55
36:BA:2346:A:C2	36:BA:2383:G:C2	2.94	0.55
36:BA:2531:A:OP1	43:BH:177:GLY:C	2.50	0.55
38:BC:29:LEU:HD23	38:BC:29:LEU:O	2.05	0.55
38:BC:225:ILE:C	38:BC:225:ILE:HD12	2.31	0.55
40:BE:98:PRO:CG	40:BE:175:VAL:HG12	2.36	0.55
41:BF:185:ASP:CA	41:BF:188:ARG:HG2	2.34	0.55
42:BG:126:ASP:OD2	42:BG:130:ASN:HB2	2.06	0.55
45:BN:94:HIS:N	45:BN:95:PRO:CD	2.69	0.55
48:BQ:56:ARG:HE	48:BQ:56:ARG:HA	1.72	0.55
49:BR:56:LYS:HE3	49:BR:94:TYR:CE2	2.40	0.55
56:BY:30:VAL:HG12	56:BY:31:LEU:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1441:G:H4'	1:CA:1442:G:C4	2.40	0.55
3:CC:167:TRP:O	3:CC:168:ALA:HB3	2.06	0.55
4:CD:10:ARG:O	4:CD:13:ARG:HB2	2.07	0.55
4:CD:61:LYS:HD3	4:CD:206:PHE:CD2	2.41	0.55
4:CD:152:SER:O	4:CD:155:LEU:HG	2.05	0.55
6:CF:36:ARG:NH1	6:CF:36:ARG:HB3	2.21	0.55
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.06	0.55
9:CI:33:PHE:C	9:CI:35:GLU:H	2.13	0.55
23:CW:30:G:H2'	23:CW:31:G:C5'	2.31	0.55
25:CY:661:SER:C	25:CY:663:THR:H	2.14	0.55
26:D0:20:ARG:H	26:D0:20:ARG:CD	2.19	0.55
27:D1:76:ARG:HH22	27:D1:95:LEU:HD22	1.70	0.55
28:D2:2:LYS:HA	28:D2:5:GLU:OE1	2.07	0.55
32:D6:37:ARG:HH22	36:DA:2286:A:H62	1.51	0.55
36:DA:216:A:O2'	36:DA:217:G:H5'	2.06	0.55
36:DA:1056:G:H4'	36:DA:1086:A:H8	1.71	0.55
36:DA:1142(A):A:O2'	36:DA:1143:A:H2'	2.06	0.55
36:DA:1270:C:H5''	36:DA:1271:G:O5'	2.06	0.55
36:DA:1316:U:H2'	36:DA:1317:A:H8	1.71	0.55
36:DA:2203:U:O2'	39:DD:151:LYS:HE3	2.06	0.55
38:DC:65:LEU:HD13	38:DC:189:ASN:ND2	2.22	0.55
39:DD:238:GLY:O	39:DD:239:ARG:O	2.24	0.55
42:DG:52:ILE:HG22	42:DG:54:GLU:H	1.71	0.55
42:DG:181:ARG:HH11	42:DG:181:ARG:HG3	1.70	0.55
43:DH:76:VAL:C	43:DH:78:GLY:N	2.64	0.55
51:DT:125:ARG:HA	51:DT:125:ARG:NH1	2.10	0.55
13:AM:116:THR:HG22	13:AM:117:VAL:N	2.21	0.55
18:AR:44:LEU:HD22	18:AR:79:LEU:HD22	1.89	0.55
25:AY:15:ILE:O	25:AY:15:ILE:HD12	2.05	0.55
25:AY:213:HIS:O	25:AY:217:VAL:HG23	2.06	0.55
27:B1:45:ASN:ND2	27:B1:47:GLN:HE21	2.04	0.55
30:B4:8:LYS:O	30:B4:9:LEU:HB2	2.07	0.55
32:B6:33:LYS:HG2	32:B6:34:LEU:H	1.70	0.55
36:BA:118:A:N3	36:BA:178:G:H1'	2.21	0.55
36:BA:2186:G:H2'	36:BA:2187:G:H5''	1.87	0.55
36:BA:2199:A:H3'	36:BA:2200:C:H6	1.71	0.55
36:BA:2728:U:O2'	36:BA:2729:G:H5'	2.07	0.55
38:BC:71:LYS:CG	38:BC:72:GLN:H	2.14	0.55
39:BD:142:VAL:HG23	39:BD:192:THR:O	2.06	0.55
40:BE:108:SER:O	40:BE:162:ALA:HA	2.07	0.55
42:BG:61:ALA:CA	42:BG:64:THR:HG22	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:71:THR:N	42:BG:89:GLY:O	2.39	0.55
42:BG:170:ARG:HH21	42:BG:180:PHE:HB3	1.72	0.55
43:BH:173:PRO:O	43:BH:175:LYS:N	2.40	0.55
45:BN:55:VAL:HG21	45:BN:127:ASP:N	2.22	0.55
52:BU:85:LYS:HD3	52:BU:117:GLN:HE22	1.70	0.55
53:BV:66:ARG:HG2	53:BV:88:ARG:HE	1.71	0.55
1:CA:275:G:H2'	1:CA:276:G:C8	2.41	0.55
2:CB:236:TYR:CD2	2:CB:239:VAL:HG21	2.41	0.55
3:CC:14:ILE:HG13	3:CC:15:THR:H	1.71	0.55
4:CD:98:GLU:CD	4:CD:103:ASN:HD21	2.14	0.55
5:CE:91:LEU:HA	5:CE:120:THR:HG22	1.87	0.55
6:CF:14:LEU:HD22	6:CF:18:GLN:HE21	1.70	0.55
9:CI:53:VAL:CG2	9:CI:55:ALA:HB3	2.34	0.55
9:CI:88:TYR:O	9:CI:89:ASN:CB	2.53	0.55
13:CM:74:VAL:HA	13:CM:77:ASN:HD22	1.69	0.55
15:CO:76:GLU:C	15:CO:78:TYR:H	2.15	0.55
21:CU:3:LYS:HB3	21:CU:14:TRP:CD1	2.41	0.55
23:CW:53:G:O2'	23:CW:54:5MU:H5''	2.07	0.55
25:CY:438:PHE:HD1	25:CY:438:PHE:O	1.90	0.55
25:CY:489:LYS:HG2	25:CY:598:ASP:CB	2.34	0.55
35:D9:17:ILE:HG22	35:D9:18:ARG:H	1.70	0.55
36:DA:321:G:C2	36:DA:341:G:H4'	2.41	0.55
36:DA:528:A:C2	36:DA:2043:C:C5'	2.89	0.55
36:DA:2105:C:N4	36:DA:2184:G:H1	2.03	0.55
37:DB:20:C:C2'	37:DB:21:G:H5''	2.36	0.55
37:DB:105:A:P	57:DZ:72:ARG:HH12	2.30	0.55
43:DH:19:VAL:O	43:DH:20:ALA:HB2	2.06	0.55
45:DN:55:VAL:HG21	45:DN:127:ASP:N	2.21	0.55
45:DN:109:LYS:H	45:DN:109:LYS:HE2	1.71	0.55
46:DO:69:ILE:HD13	46:DO:77:ILE:HG23	1.88	0.55
51:DT:129:ARG:O	51:DT:129:ARG:HG2	2.06	0.55
52:DU:104:GLN:HB3	53:DV:44:LYS:NZ	2.21	0.55
55:DX:26:TYR:O	55:DX:81:VAL:HG22	2.06	0.55
1:AA:902:G:O2'	1:AA:903:G:H5'	2.07	0.55
5:AE:71:LEU:HD11	5:AE:114:GLY:HA3	1.88	0.55
7:AG:15:ASP:OD1	7:AG:16:LEU:N	2.39	0.55
28:B2:17:SER:HB2	28:B2:18:PRO:HD2	1.89	0.55
32:B6:54:ILE:HD13	36:BA:2420:C:H5'	1.88	0.55
35:B9:17:ILE:HG22	35:B9:18:ARG:N	2.22	0.55
36:BA:64:A:C5	55:BX:66:LEU:HD13	2.42	0.55
36:BA:271(F):C:O2'	36:BA:271(G):C:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:321:G:C2	36:BA:341:G:H4'	2.41	0.55
36:BA:606:U:H2'	36:BA:606:U:O2	2.05	0.55
36:BA:648:G:H2'	36:BA:649:G:C8	2.41	0.55
36:BA:744:G:C2	36:BA:745:G:H1'	2.42	0.55
36:BA:1677:A:H2'	36:BA:1678:G:C8	2.41	0.55
38:BC:85:LYS:O	38:BC:89:GLU:HG3	2.06	0.55
38:BC:121:MET:O	38:BC:125:GLY:N	2.37	0.55
39:BD:227:ASN:O	39:BD:228:PRO:C	2.50	0.55
41:BF:18:ARG:HG2	41:BF:19:GLU:N	2.20	0.55
41:BF:20:LEU:HB3	41:BF:23:ASP:OD2	2.05	0.55
42:BG:25:TYR:HD1	42:BG:30:GLU:HG2	1.71	0.55
43:BH:169:VAL:C	43:BH:170:ARG:HG3	2.32	0.55
47:BP:32:THR:HG21	47:BP:37:GLY:HA2	1.89	0.55
53:BV:18:LEU:CG	53:BV:19:LYS:H	2.19	0.55
1:CA:687:A:N1	1:CA:700:G:O2'	2.34	0.55
1:CA:812:C:HO2'	1:CA:813:U:P	2.29	0.55
1:CA:1219:U:H2'	1:CA:1220:G:H8	1.72	0.55
6:CF:38:GLU:O	6:CF:39:LYS:O	2.25	0.55
8:CH:104:ARG:O	8:CH:105:ARG:C	2.50	0.55
11:CK:33:THR:HG22	11:CK:39:PRO:HA	1.89	0.55
12:CL:17:LYS:CD	12:CL:18:VAL:HG22	2.36	0.55
12:CL:91:LYS:HA	12:CL:91:LYS:HZ2	1.72	0.55
14:CN:44:LEU:HD12	14:CN:44:LEU:O	2.07	0.55
20:CT:36:LEU:HD12	20:CT:59:ALA:HB2	1.87	0.55
25:CY:316:ILE:HG23	25:CY:326:THR:HG22	1.89	0.55
29:D3:9:VAL:O	29:D3:31:LEU:HD21	2.06	0.55
31:D5:56:LYS:HG3	31:D5:57:VAL:N	2.06	0.55
36:DA:142:A:H8	36:DA:1595:G:H21	1.55	0.55
36:DA:195:A:H5''	36:DA:196:A:OP2	2.07	0.55
36:DA:267:C:H2'	36:DA:268:C:H6	1.71	0.55
36:DA:1019:U:O2'	36:DA:1021:A:H2	1.88	0.55
36:DA:1669:A:H2'	36:DA:1670:C:H5'	1.89	0.55
38:DC:176:VAL:HG21	38:DC:190:ILE:HD13	1.89	0.55
39:DD:148:GLU:O	39:DD:151:LYS:HG3	2.06	0.55
39:DD:209:ALA:O	39:DD:212:SER:HB2	2.07	0.55
50:DS:24:LEU:CB	50:DS:85:VAL:HG12	2.33	0.55
51:DT:28:VAL:HG21	51:DT:46:GLU:OE1	2.07	0.55
51:DT:50:ILE:HA	51:DT:99:LEU:CD1	2.36	0.55
56:DY:2:ARG:CD	56:DY:3:VAL:HG23	2.36	0.55
1:AA:1116:C:C2'	1:AA:1117:G:H5'	2.36	0.55
1:AA:1319:A:OP1	19:AS:10:PHE:CE1	2.59	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.21	0.55
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.41	0.55
3:AC:70:VAL:HG12	3:AC:72:LYS:N	2.02	0.55
5:AE:12:LEU:HD13	5:AE:12:LEU:O	2.06	0.55
9:AI:40:LEU:O	9:AI:42:ARG:N	2.40	0.55
10:AJ:6:ILE:HD12	10:AJ:6:ILE:C	2.32	0.55
17:AQ:7:THR:O	17:AQ:23:VAL:HG13	2.07	0.55
25:AY:637:ARG:HG3	25:AY:637:ARG:NH1	2.20	0.55
27:B1:51:VAL:HG22	27:B1:52:ARG:N	2.21	0.55
31:B5:36:CYS:HG	31:B5:49:CYS:HB3	1.71	0.55
34:B8:33:ASN:HA	34:B8:36:LYS:CD	2.37	0.55
36:BA:1270:C:H5''	36:BA:1271:G:O5'	2.07	0.55
36:BA:1345:C:H42	36:BA:1601:G:H1	1.55	0.55
36:BA:1789:A:H2'	36:BA:1790:C:O4'	2.06	0.55
36:BA:1899:G:O2'	36:BA:1900:A:H5''	2.07	0.55
36:BA:2524:G:H5'	36:BA:2524:G:C8	2.35	0.55
36:BA:2681:C:H4'	36:BA:2682:U:H5'	1.89	0.55
36:BA:2795:G:N2	36:BA:2796:U:H5	1.97	0.55
36:BA:2807:G:C3'	36:BA:2808:U:H5''	2.31	0.55
39:BD:25:THR:HG22	39:BD:26:LYS:H	1.71	0.55
39:BD:35:LYS:CG	39:BD:63:ARG:HG3	2.34	0.55
39:BD:155:LEU:HD12	39:BD:155:LEU:N	2.21	0.55
40:BE:161:GLY:O	40:BE:162:ALA:C	2.49	0.55
42:BG:152:LEU:HD23	42:BG:152:LEU:N	2.12	0.55
47:BP:115:LEU:HA	47:BP:134:ALA:CB	2.36	0.55
47:BP:146:VAL:HG22	47:BP:147:LEU:N	2.10	0.55
48:BQ:136:ALA:O	48:BQ:138:ASP:N	2.40	0.55
49:BR:38:VAL:CB	49:BR:39:PRO:HD3	2.26	0.55
51:BT:28:VAL:HG11	51:BT:46:GLU:OE1	2.07	0.55
51:BT:35:LYS:HZ3	51:BT:41:ARG:CD	2.20	0.55
56:BY:59:GLY:O	56:BY:60:PHE:HB2	2.06	0.55
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.06	0.55
1:CA:1202:G:C2	14:CN:42:ILE:HG21	2.41	0.55
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.21	0.55
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.41	0.55
3:CC:101:LEU:HD23	3:CC:101:LEU:C	2.32	0.55
3:CC:127:ARG:HH11	3:CC:127:ARG:HG2	1.71	0.55
4:CD:61:LYS:CE	4:CD:62:GLN:HE21	2.19	0.55
6:CF:36:ARG:HB3	6:CF:36:ARG:CZ	2.36	0.55
10:CJ:6:ILE:HD12	10:CJ:6:ILE:C	2.31	0.55
10:CJ:29:ARG:CZ	10:CJ:29:ARG:HB3	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB3	2.36	0.55
15:CO:39:LEU:HD22	15:CO:43:LEU:HG	1.87	0.55
25:CY:71:THR:HB	25:CY:78:ARG:HH12	1.70	0.55
25:CY:171:GLU:O	25:CY:174:PHE:HB2	2.06	0.55
25:CY:259:PHE:C	25:CY:260:LEU:HD13	2.31	0.55
26:D0:12:ASN:O	26:D0:14:ARG:N	2.36	0.55
32:D6:45:LYS:HG2	36:DA:2371:G:H4'	1.89	0.55
33:D7:46:VAL:HG12	33:D7:47:ARG:H	1.71	0.55
35:D9:1:MET:HG3	36:DA:2478:A:OP2	2.07	0.55
36:DA:1241:A:H2'	36:DA:1242:A:O4'	2.06	0.55
36:DA:1639:U:C2'	36:DA:1640:C:H5''	2.37	0.55
36:DA:2329:G:H2'	36:DA:2330:G:C8	2.41	0.55
36:DA:2876:G:C4'	51:DT:3:ARG:HE	2.18	0.55
38:DC:97:GLY:H	38:DC:100:ILE:HG12	1.71	0.55
39:DD:270:ILE:H	39:DD:270:ILE:CD1	2.11	0.55
40:DE:55:ASN:C	40:DE:57:LYS:H	2.14	0.55
42:DG:31:VAL:O	42:DG:33:ARG:HD3	2.06	0.55
48:DQ:136:ALA:O	48:DQ:138:ASP:N	2.40	0.55
57:DZ:10:ARG:HB3	57:DZ:36:LYS:CB	2.36	0.55
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.07	0.55
1:AA:424:G:O2'	1:AA:425:G:H5'	2.07	0.55
1:AA:807:A:H2'	1:AA:808:C:C6	2.42	0.55
1:AA:1403:C:H2'	1:AA:1403:C:O2	2.07	0.55
10:AJ:4:ILE:HB	10:AJ:74:ILE:CG1	2.37	0.55
10:AJ:5:ARG:HG3	10:AJ:71:LEU:HD11	1.89	0.55
15:AO:76:GLU:C	15:AO:78:TYR:H	2.15	0.55
16:AP:67:THR:H	16:AP:70:ALA:HB3	1.71	0.55
16:AP:82:GLN:O	16:AP:84:ALA:N	2.40	0.55
18:AR:58:LEU:HD12	18:AR:58:LEU:N	2.22	0.55
23:AW:30:G:H2'	23:AW:31:G:H5'	1.89	0.55
25:AY:216:LEU:HD23	25:AY:246:ILE:HD11	1.87	0.55
25:AY:511:LYS:HB2	25:AY:569:ASP:HB3	1.88	0.55
27:B1:29:GLY:O	27:B1:30:VAL:CG2	2.49	0.55
33:B7:46:VAL:HG12	33:B7:47:ARG:H	1.71	0.55
34:B8:48:PHE:O	34:B8:49:VAL:HG22	2.07	0.55
36:BA:28:A:H62	36:BA:512:G:H1'	1.72	0.55
36:BA:252:G:OP2	47:BP:50:ARG:NH2	2.40	0.55
36:BA:1336:A:OP2	55:BX:64:LYS:HE3	2.07	0.55
36:BA:2203:U:O2'	39:BD:151:LYS:HE3	2.06	0.55
40:BE:131:ALA:HB3	40:BE:134:ILE:HD13	1.88	0.55
41:BF:50:SER:CB	41:BF:94:PRO:HD3	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:76:VAL:C	43:BH:78:GLY:N	2.64	0.55
44:BJ:129:UNK:C	44:BJ:131:UNK:N	2.68	0.55
45:BN:42:TRP:CZ3	45:BN:48:MET:HE1	2.41	0.55
48:BQ:27:VAL:O	48:BQ:28:ALA:HB3	2.06	0.55
1:CA:404:U:H2'	1:CA:405:U:C6	2.42	0.55
1:CA:405:U:H3'	1:CA:406:G:H5'	1.89	0.55
1:CA:520:A:N1	1:CA:536:C:H1'	2.22	0.55
2:CB:82:ARG:HG3	2:CB:82:ARG:NH1	2.21	0.55
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.14	0.55
4:CD:173:TRP:O	4:CD:174:LEU:HD23	2.06	0.55
9:CI:55:ALA:HA	9:CI:58:HIS:CD2	2.41	0.55
11:CK:99:GLN:CG	11:CK:105:VAL:HG21	2.33	0.55
20:CT:11:SER:HA	20:CT:13:LEU:CD1	2.36	0.55
25:CY:486:THR:HG23	25:CY:600:VAL:CG1	2.37	0.55
25:CY:580:MET:HE1	36:DA:1913:A:H61	1.69	0.55
26:D0:19:LYS:HD3	26:D0:41:ARG:NH2	2.21	0.55
28:D2:33:MET:HE3	28:D2:37:PHE:CD2	2.42	0.55
30:D4:1:MET:HE3	37:DB:43:C:H4'	1.88	0.55
30:D4:50:VAL:O	30:D4:51:ASP:CB	2.55	0.55
34:D8:32:LEU:O	34:D8:33:ASN:O	2.24	0.55
36:DA:503:A:H4'	36:DA:504:U:H5'	1.87	0.55
36:DA:796:C:H2'	36:DA:797:C:H6	1.71	0.55
36:DA:880:G:H2'	36:DA:881:G:H8	1.71	0.55
36:DA:1296:G:H1	36:DA:1644:C:H42	1.54	0.55
36:DA:1401:G:H2'	36:DA:1402:C:O4'	2.07	0.55
36:DA:1847:A:H3'	36:DA:1848:A:H5'	1.89	0.55
36:DA:1935:G:H1'	36:DA:1964:G:N2	2.22	0.55
36:DA:2151:G:O2'	36:DA:2152:G:H5'	2.06	0.55
36:DA:2168:G:N2	36:DA:2170:A:H3'	2.22	0.55
36:DA:2514:U:H2'	36:DA:2515:C:H6	1.70	0.55
40:DE:14:ILE:CD1	40:DE:173:VAL:HG11	2.36	0.55
41:DF:22:ALA:HB1	41:DF:26:ALA:HB2	1.87	0.55
41:DF:53:THR:HG22	41:DF:56:GLU:CG	2.33	0.55
43:DH:44:VAL:O	43:DH:46:GLU:HG2	2.06	0.55
47:DP:45:LEU:HG	47:DP:46:LYS:H	1.72	0.55
47:DP:83:VAL:CB	47:DP:105:LEU:HD22	2.37	0.55
48:DQ:27:VAL:O	48:DQ:28:ALA:HB3	2.07	0.55
48:DQ:76:LYS:HB3	48:DQ:91:GLU:HG2	1.87	0.55
50:DS:24:LEU:HB3	50:DS:85:VAL:CG1	2.29	0.55
54:DW:29:LEU:HD13	54:DW:51:LEU:HD11	1.87	0.55
57:DZ:97:GLU:HA	57:DZ:126:VAL:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:426:G:P	4:AD:36:ARG:HH22	2.30	0.55
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.37	0.55
1:AA:934:C:H5	1:AA:1344:C:H2'	1.72	0.55
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.72	0.55
8:AH:9:MET:O	8:AH:10:LEU:C	2.50	0.55
11:AK:108:ILE:N	11:AK:108:ILE:CD1	2.70	0.55
15:AO:40:SER:O	15:AO:44:LYS:HG3	2.07	0.55
19:AS:6:LYS:HG2	19:AS:7:LYS:HE3	1.89	0.55
23:AW:39:C:H2'	23:AW:40:C:C6	2.42	0.55
32:B6:11:LEU:HG	32:B6:26:ASN:HD22	1.68	0.55
34:B8:60:LEU:C	34:B8:63:PRO:HD2	2.32	0.55
36:BA:58:G:H1	36:BA:69:C:H42	1.54	0.55
36:BA:107:C:H2'	36:BA:108:U:C6	2.42	0.55
36:BA:402:A:C2'	36:BA:403:U:H5'	2.37	0.55
36:BA:566:U:O2'	36:BA:567:A:H5'	2.07	0.55
36:BA:884:C:N4	36:BA:886:C:H42	2.05	0.55
36:BA:940:G:H3'	36:BA:941:A:H5''	1.88	0.55
36:BA:1022:G:N2	36:BA:1142(A):A:H2	2.05	0.55
36:BA:1075:C:H5'	36:BA:1076:C:OP2	2.07	0.55
36:BA:1493:C:C4	36:BA:2206:G:O2'	2.59	0.55
36:BA:2150:U:H2'	36:BA:2151:G:C8	2.42	0.55
36:BA:2556:C:H2'	36:BA:2557:G:O4'	2.07	0.55
38:BC:92:ALA:HB2	38:BC:154:ILE:HD13	1.89	0.55
40:BE:144:ARG:O	40:BE:145:LYS:C	2.48	0.55
41:BF:32:LEU:C	41:BF:32:LEU:HD23	2.32	0.55
41:BF:160:ASN:HD22	41:BF:160:ASN:C	2.13	0.55
44:BJ:54:UNK:O	44:BJ:55:UNK:C	2.54	0.55
48:BQ:51:ARG:O	48:BQ:54:MET:HB3	2.07	0.55
57:BZ:102:LEU:HD21	57:BZ:124:ILE:HD13	1.88	0.55
1:CA:191:G:N3	20:CT:105:SER:HB3	2.22	0.55
1:CA:358:U:H2'	1:CA:359:U:C6	2.41	0.55
1:CA:687:A:N6	1:CA:703:G:H1'	2.22	0.55
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.06	0.55
1:CA:1490:C:C2'	1:CA:1491:G:H5'	2.37	0.55
3:CC:79:ARG:O	3:CC:79:ARG:HG3	2.05	0.55
7:CG:109:ASN:HA	7:CG:119:ARG:HE	1.70	0.55
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HG22	1.89	0.55
18:CR:45:SER:OG	18:CR:46:GLU:N	2.38	0.55
26:D0:50:ASN:HA	26:D0:62:LEU:HD12	1.87	0.55
29:D3:45:GLY:HA3	36:DA:851:U:O2'	2.06	0.55
30:D4:1:MET:HA	30:D4:6:HIS:CE1	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:9:LEU:HD22	32:D6:9:LEU:O	2.06	0.55
36:DA:1510:G:O2'	36:DA:1511:C:H5'	2.07	0.55
36:DA:1930:G:HO2'	36:DA:1931:U:P	2.29	0.55
36:DA:2022:U:H2'	36:DA:2616:C:O2'	2.06	0.55
36:DA:2415:G:H2'	36:DA:2416:C:C6	2.42	0.55
37:DB:90:A:C8	37:DB:91:C:H1'	2.42	0.55
38:DC:73:VAL:HG13	38:DC:158:LYS:HG2	1.89	0.55
39:DD:35:LYS:CG	39:DD:63:ARG:HA	2.37	0.55
39:DD:248:SER:HB2	39:DD:249:PRO:HD2	1.87	0.55
40:DE:59:VAL:HG21	40:DE:63:LEU:HA	1.88	0.55
41:DF:2:LYS:HG3	41:DF:25:PRO:HG2	1.88	0.55
41:DF:160:ASN:OD1	41:DF:163:VAL:HG23	2.07	0.55
42:DG:111:LEU:HB3	42:DG:117:PHE:HE2	1.71	0.55
43:DH:121:ILE:HG23	43:DH:134:SER:O	2.07	0.55
47:DP:27:HIS:HD2	47:DP:28:GLY:N	2.04	0.55
50:DS:89:ARG:HH11	50:DS:89:ARG:HG2	1.70	0.55
52:DU:68:ALA:O	52:DU:71:GLN:HB3	2.07	0.55
57:DZ:153:SER:OG	57:DZ:157:LEU:HD11	2.06	0.55
1:AA:45:U:H2'	1:AA:46:G:C8	2.42	0.55
1:AA:658:G:O4'	15:AO:22:THR:HB	2.07	0.55
1:AA:713:G:H2'	1:AA:714:G:C8	2.42	0.55
1:AA:1303:C:C2'	1:AA:1304:G:H5'	2.36	0.55
1:AA:1442(B):A:C5	51:BT:118:ARG:NE	2.74	0.55
1:AA:1490:C:C5'	1:AA:1490:C:C6	2.85	0.55
1:AA:1492:A:H2'	1:AA:1493:A:C8	2.42	0.55
2:AB:32:ILE:HD12	2:AB:40:HIS:HB3	1.89	0.55
3:AC:20:SER:HB3	3:AC:40:ARG:HH22	1.72	0.55
5:AE:101:ILE:CD1	5:AE:119:LEU:HD23	2.34	0.55
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.07	0.55
13:AM:121:LYS:HZ3	13:AM:121:LYS:HB2	1.72	0.55
25:AY:487:ILE:HD13	25:AY:487:ILE:N	2.21	0.55
25:AY:491:VAL:HG11	25:AY:596:LYS:HD3	1.89	0.55
28:B2:32:LEU:O	28:B2:35:LEU:HB3	2.07	0.55
29:B3:26:LEU:HB3	29:B3:28:LEU:HD21	1.89	0.55
34:B8:62:LEU:N	34:B8:63:PRO:CD	2.69	0.55
35:B9:1:MET:O	35:B9:34:GLN:HG2	2.07	0.55
36:BA:654(G):C:H2'	36:BA:654(H):G:C8	2.42	0.55
36:BA:1487:G:H3'	36:BA:1488:G:H8	1.71	0.55
36:BA:1943:U:O2'	36:BA:1944:U:O5'	2.21	0.55
36:BA:2870:C:H5''	49:BR:65:LEU:HD21	1.87	0.55
38:BC:101:ILE:H	38:BC:101:ILE:HD12	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:133:LYS:C	40:BE:134:ILE:HD12	2.31	0.55
41:BF:206:ILE:HG22	41:BF:207:GLY:N	2.21	0.55
43:BH:124:GLU:HB2	43:BH:132:ARG:HG3	1.89	0.55
45:BN:50:ASP:O	45:BN:52:VAL:HG23	2.07	0.55
47:BP:80:TYR:CE1	47:BP:111:ARG:HG2	2.42	0.55
51:BT:107:ASP:CG	51:BT:108:ARG:H	2.15	0.55
53:BV:18:LEU:HD13	53:BV:19:LYS:N	2.22	0.55
56:BY:44:ILE:CG2	56:BY:45:VAL:N	2.70	0.55
1:CA:309:G:H1'	1:CA:608:A:C2	2.42	0.55
1:CA:603:U:H2'	1:CA:604:G:C8	2.41	0.55
1:CA:1190:G:OP1	3:CC:4:LYS:HA	2.07	0.55
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.89	0.55
4:CD:154:ASN:O	4:CD:155:LEU:HD23	2.07	0.55
23:CW:24:U:H2'	23:CW:25:C:H6	1.72	0.55
25:CY:238:THR:CG2	25:CY:241:GLU:HG2	2.35	0.55
25:CY:262:SER:OG	25:CY:265:LYS:HG2	2.07	0.55
30:D4:22:ILE:HD12	30:D4:22:ILE:N	2.21	0.55
31:D5:55:ARG:O	31:D5:56:LYS:CB	2.52	0.55
36:DA:310:A:P	56:DY:18:GLY:HA2	2.47	0.55
36:DA:1028:A:N6	36:DA:1125:G:H2'	2.20	0.55
36:DA:1278:A:O2'	36:DA:1279:G:H5'	2.07	0.55
36:DA:1899:G:O2'	36:DA:1900:A:H5''	2.06	0.55
36:DA:2317:C:H2'	36:DA:2318:G:C5'	2.29	0.55
37:DB:54:G:O2'	37:DB:55:U:H5'	2.07	0.55
40:DE:119:ARG:NH1	40:DE:156:MET:O	2.40	0.55
40:DE:183:LEU:HD12	40:DE:183:LEU:N	2.21	0.55
41:DF:84:VAL:CG1	41:DF:85:GLY:H	2.12	0.55
42:DG:62:LEU:H	42:DG:62:LEU:CD1	2.20	0.55
43:DH:30:LYS:CD	43:DH:81:GLU:HG2	2.35	0.55
43:DH:124:GLU:HB2	43:DH:132:ARG:HG3	1.89	0.55
45:DN:67:LEU:HD22	45:DN:87:LEU:HB3	1.88	0.55
47:DP:27:HIS:HD2	47:DP:28:GLY:H	1.54	0.55
51:DT:7:ILE:O	51:DT:10:VAL:HB	2.06	0.55
51:DT:32:TYR:HD1	51:DT:81:PRO:O	1.89	0.55
51:DT:35:LYS:HZ3	51:DT:41:ARG:NH1	2.05	0.55
53:DV:2:PHE:CE1	53:DV:13:ARG:NH1	2.75	0.55
57:DZ:115:GLY:HA3	57:DZ:146:ILE:HG21	1.88	0.55
57:DZ:157:LEU:HD22	57:DZ:161:VAL:HG12	1.89	0.55
1:AA:1082:G:C2'	1:AA:1083:U:H5'	2.37	0.55
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.42	0.55
2:AB:51:LEU:CD2	2:AB:55:PHE:HE2	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:41:ARG:HG2	12:AL:42:THR:N	2.13	0.55
13:AM:9:ILE:HD12	13:AM:9:ILE:N	2.22	0.55
15:AO:82:ILE:HD13	15:AO:82:ILE:O	2.07	0.55
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.07	0.55
16:AP:28:ARG:HH11	16:AP:28:ARG:HG2	1.70	0.55
25:AY:164:MET:HE2	25:AY:257:PRO:HB3	1.88	0.55
25:AY:411:VAL:HG23	25:AY:459:LEU:HD22	1.88	0.55
28:B2:2:LYS:HA	28:B2:5:GLU:OE1	2.07	0.55
28:B2:32:LEU:HD11	28:B2:54:LYS:CG	2.37	0.55
30:B4:48:ARG:HH21	30:B4:49:PHE:HE1	1.55	0.55
32:B6:30:THR:O	32:B6:31:PRO:C	2.50	0.55
33:B7:24:THR:HG23	33:B7:27:GLY:H	1.72	0.55
36:BA:1132:A:H2'	36:BA:1133:U:C6	2.40	0.55
36:BA:1185:C:H5'	36:BA:1186:G:P	2.47	0.55
36:BA:1186:G:C2'	36:BA:1187:G:H5'	2.36	0.55
36:BA:1782:C:C2'	36:BA:1783:A:H5'	2.37	0.55
36:BA:2186:G:C2'	36:BA:2187:G:H5''	2.36	0.55
38:BC:138:LEU:HD22	38:BC:139:PRO:CD	2.36	0.55
40:BE:14:ILE:CD1	40:BE:173:VAL:HG11	2.37	0.55
42:BG:107:LEU:HD11	42:BG:178:PHE:CE1	2.41	0.55
43:BH:17:VAL:CG1	43:BH:50:VAL:HG21	2.32	0.55
45:BN:3:THR:C	45:BN:4:TYR:CG	2.84	0.55
47:BP:33:ARG:O	47:BP:34:GLY:C	2.50	0.55
47:BP:126:VAL:HG12	47:BP:148:LEU:HD21	1.89	0.55
49:BR:4:LEU:C	49:BR:6:SER:N	2.62	0.55
51:BT:88:ILE:HG22	51:BT:89:VAL:HG23	1.88	0.55
56:BY:50:ARG:HB2	56:BY:57:GLN:HA	1.89	0.55
1:CA:382:A:H2'	1:CA:383:A:C8	2.41	0.55
1:CA:639:G:O2'	1:CA:640:A:H5'	2.07	0.55
1:CA:793:U:O2	1:CA:1516:G:H4'	2.07	0.55
1:CA:1168:A:H8	1:CA:1168:A:OP1	1.90	0.55
1:CA:1221:G:H1'	19:CS:54:GLY:HA3	1.87	0.55
2:CB:69:LEU:HD12	2:CB:70:PHE:N	2.22	0.55
6:CF:15:ASP:C	6:CF:17:SER:H	2.14	0.55
6:CF:15:ASP:C	6:CF:17:SER:N	2.65	0.55
23:CW:6:G:H2'	23:CW:7:G:O4'	2.06	0.55
26:D0:14:ARG:NH1	36:DA:2279:G:O6	2.40	0.55
29:D3:44:ARG:O	29:D3:45:GLY:C	2.50	0.55
30:D4:56:VAL:O	30:D4:57:GLU:HB2	2.06	0.55
36:DA:285:C:O2'	36:DA:286:C:H5''	2.07	0.55
36:DA:528:A:C2	36:DA:2043:C:H4'	2.43	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:900:A:H2'	36:DA:901:A:O4'	2.07	0.55
36:DA:910:A:C5	48:DQ:13:GLN:HG3	2.42	0.55
36:DA:1205:U:C5	41:DF:171:PRO:HA	2.42	0.55
36:DA:1381:G:N2	36:DA:1382:G:H1'	2.22	0.55
36:DA:2514:U:H2'	36:DA:2515:C:C6	2.41	0.55
40:DE:119:ARG:HG2	40:DE:160:TYR:HB2	1.89	0.55
41:DF:117:ARG:NH2	47:DP:5:ASP:N	2.55	0.55
42:DG:66:GLN:HG2	42:DG:67:LYS:H	1.72	0.55
47:DP:132:LYS:O	47:DP:136:GLU:HG2	2.07	0.55
51:DT:88:ILE:HG22	51:DT:89:VAL:HG23	1.89	0.55
54:DW:6:ILE:HA	54:DW:103:ILE:O	2.07	0.55
56:DY:13:VAL:HG21	56:DY:72:VAL:HB	1.89	0.55
56:DY:86:ARG:CZ	56:DY:95:LYS:HD2	2.37	0.55
57:DZ:3:TYR:CD2	57:DZ:51:ALA:HB2	2.42	0.55
57:DZ:133:ILE:N	57:DZ:134:PRO:CD	2.70	0.55
1:AA:275:G:H2'	1:AA:276:G:C8	2.42	0.54
1:AA:291:C:O2'	1:AA:292:G:H5'	2.06	0.54
1:AA:1347:G:C2'	1:AA:1348:U:OP2	2.55	0.54
4:AD:58:LEU:HD23	4:AD:58:LEU:C	2.32	0.54
20:AT:42:GLN:HA	20:AT:42:GLN:NE2	2.21	0.54
23:AW:26:G:H2'	23:AW:27:U:C6	2.42	0.54
25:AY:115:GLU:CG	25:AY:118:SER:HB3	2.38	0.54
32:B6:13:CYS:HB3	32:B6:49:HIS:HB3	1.88	0.54
34:B8:4:MET:HE1	34:B8:61:LEU:HD22	1.88	0.54
34:B8:47:LYS:NZ	34:B8:49:VAL:HG13	2.22	0.54
36:BA:142:A:H8	36:BA:1595:G:H21	1.55	0.54
36:BA:389:G:H22	47:BP:72:PRO:HD3	1.72	0.54
36:BA:675:A:OP1	41:BF:76:GLY:HA2	2.07	0.54
36:BA:752:A:O2'	36:BA:753:C:OP2	2.21	0.54
36:BA:799:G:C3'	36:BA:800:A:H5''	2.34	0.54
36:BA:880:G:H2'	36:BA:881:G:H8	1.72	0.54
36:BA:1035:U:H2'	36:BA:1036:G:H8	1.72	0.54
36:BA:1669:A:H2'	36:BA:1670:C:H5'	1.88	0.54
36:BA:2122:U:H2'	36:BA:2123:G:H8	1.72	0.54
37:BB:17:C:H3'	37:BB:18:G:H8	1.72	0.54
37:BB:49:C:OP1	50:BS:96:GLY:HA3	2.07	0.54
37:BB:102:A:H3'	37:BB:103:G:H8	1.72	0.54
39:BD:94:LEU:HD23	39:BD:95:LEU:N	2.23	0.54
41:BF:53:THR:CG2	41:BF:56:GLU:HG3	2.33	0.54
43:BH:159:GLU:HG3	43:BH:160:LYS:H	1.72	0.54
46:BO:104:ARG:HH21	51:BT:33:LYS:HE3	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:98:VAL:HG12	50:BS:100:ALA:N	2.22	0.54
52:BU:50:ARG:HH21	53:BV:70:ILE:CG2	2.20	0.54
52:BU:68:ALA:O	52:BU:71:GLN:HB3	2.07	0.54
56:BY:2:ARG:N	56:BY:4:LYS:HG2	2.22	0.54
57:BZ:14:LYS:O	57:BZ:18:LEU:HD13	2.07	0.54
57:BZ:185:GLU:O	57:BZ:186:GLU:C	2.50	0.54
1:CA:299:G:H2'	1:CA:300:A:C8	2.42	0.54
1:CA:673:G:H2'	1:CA:674:G:C8	2.42	0.54
1:CA:1319:A:OP1	19:CS:10:PHE:CE1	2.60	0.54
2:CB:7:VAL:O	2:CB:11:LEU:HG	2.08	0.54
3:CC:20:SER:HB3	3:CC:40:ARG:HH22	1.72	0.54
3:CC:20:SER:HB3	3:CC:40:ARG:NH2	2.22	0.54
10:CJ:16:LEU:HD11	10:CJ:70:ARG:HB2	1.88	0.54
12:CL:8:ASN:HB2	17:CQ:34:LYS:HZ3	1.72	0.54
19:CS:17:GLU:O	19:CS:21:GLU:HG2	2.07	0.54
22:CV:35:A:H2	24:CX:18:C:C2	2.24	0.54
23:CW:34:C:O2'	23:CW:35:A:H4'	2.06	0.54
25:CY:100:VAL:HG21	25:CY:314:PHE:CD2	2.42	0.54
26:D0:48:GLY:HA3	26:D0:80:HIS:HD1	1.72	0.54
28:D2:15:LYS:O	28:D2:16:LEU:HD23	2.06	0.54
28:D2:35:LEU:O	28:D2:38:GLN:HG2	2.08	0.54
28:D2:36:ARG:HA	28:D2:39:ALA:CB	2.36	0.54
33:D7:37:LYS:HE2	36:DA:469:G:O6	2.07	0.54
36:DA:35:G:O2'	36:DA:36:G:H5'	2.06	0.54
36:DA:402:A:C2'	36:DA:403:U:H5'	2.37	0.54
36:DA:825:C:O2'	36:DA:826:U:H5'	2.07	0.54
36:DA:997:G:O2'	36:DA:998:C:H5'	2.06	0.54
36:DA:1064:C:H42	36:DA:1074:G:H1	1.55	0.54
36:DA:1203:G:H3'	36:DA:1204:A:C5'	2.37	0.54
36:DA:1395:A:H4'	36:DA:1397:U:C4	2.42	0.54
36:DA:1789:A:OP1	39:DD:222:ARG:HG3	2.06	0.54
36:DA:1826:G:H4'	39:DD:242:ARG:NH2	2.22	0.54
36:DA:2345:G:C4'	36:DA:2346:A:H5'	2.37	0.54
38:DC:29:LEU:HD23	38:DC:29:LEU:C	2.32	0.54
38:DC:115:VAL:HG12	38:DC:145:THR:HA	1.88	0.54
42:DG:167:GLU:O	42:DG:170:ARG:HB3	2.06	0.54
45:DN:3:THR:C	45:DN:4:TYR:CG	2.85	0.54
47:DP:50:ARG:HH11	47:DP:50:ARG:HG2	1.72	0.54
1:AA:393:A:O2'	1:AA:394:G:H5'	2.08	0.54
1:AA:802:A:H3'	1:AA:803:G:C8	2.42	0.54
1:AA:1354:C:H2'	1:AA:1355:G:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.16	0.54
2:AB:167:PRO:HG2	2:AB:192:SER:OG	2.06	0.54
2:AB:185:ILE:HG22	2:AB:199:TYR:CB	2.20	0.54
6:AF:42:GLU:C	6:AF:44:GLY:H	2.15	0.54
7:AG:107:ALA:O	7:AG:110:GLN:HB2	2.08	0.54
9:AI:11:LYS:O	9:AI:12:GLU:HB2	2.07	0.54
10:AJ:16:LEU:HD11	10:AJ:70:ARG:HB2	1.88	0.54
10:AJ:29:ARG:HH11	10:AJ:29:ARG:HG2	1.73	0.54
25:AY:14:ASN:HD22	25:AY:80:ASN:HB2	1.72	0.54
25:AY:17:ILE:N	25:AY:17:ILE:CD1	2.69	0.54
25:AY:121:VAL:HA	25:AY:124:GLN:HE22	1.71	0.54
25:AY:215:LYS:O	25:AY:219:VAL:HG23	2.07	0.54
25:AY:276:VAL:HA	25:AY:280:LEU:CD2	2.33	0.54
27:B1:82:LEU:O	27:B1:83:GLU:HG3	2.07	0.54
32:B6:35:GLU:HA	32:B6:35:GLU:OE1	2.07	0.54
32:B6:42:TRP:HA	32:B6:42:TRP:CE3	2.41	0.54
36:BA:322:A:H3'	41:BF:169:ASN:HD21	1.71	0.54
36:BA:1035:U:H2'	36:BA:1036:G:C8	2.43	0.54
36:BA:1047:G:H22	36:BA:1110:G:H1'	1.72	0.54
36:BA:1056:G:H4'	36:BA:1086:A:H8	1.72	0.54
36:BA:1252:G:N3	52:BU:33:ARG:HD2	2.21	0.54
36:BA:1767:C:O2'	36:BA:1768:U:H5'	2.07	0.54
36:BA:2523:G:H2'	36:BA:2524:G:H5'	1.88	0.54
39:BD:35:LYS:CG	39:BD:63:ARG:HA	2.37	0.54
41:BF:185:ASP:HA	41:BF:188:ARG:HD3	1.88	0.54
44:BJ:59:UNK:HA	44:BJ:62:UNK:CB	2.38	0.54
47:BP:41:ARG:NH1	47:BP:41:ARG:HB3	2.22	0.54
47:BP:81:GLN:HG2	47:BP:106:LEU:HA	1.89	0.54
48:BQ:101:ARG:HD2	48:BQ:102:VAL:N	2.21	0.54
49:BR:10:LEU:CB	49:BR:17:ARG:HD3	2.33	0.54
49:BR:104:ARG:HG3	49:BR:111:LEU:HD21	1.88	0.54
52:BU:21:ALA:O	52:BU:22:LYS:C	2.50	0.54
56:BY:31:LEU:HB2	56:BY:32:PRO:HA	1.90	0.54
1:CA:324:G:H8	1:CA:324:G:O5'	1.90	0.54
3:CC:136:GLN:O	3:CC:137:ALA:C	2.49	0.54
9:CI:54:ASP:O	9:CI:56:LEU:N	2.37	0.54
12:CL:6:THR:HG23	12:CL:9:GLN:HE21	1.71	0.54
19:CS:6:LYS:H	19:CS:6:LYS:HE3	1.72	0.54
23:CW:65:C:H2'	23:CW:66:C:C6	2.42	0.54
28:D2:2:LYS:HB3	36:DA:97:C:H5''	1.88	0.54
29:D3:9:VAL:HG11	29:D3:55:ARG:HD3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:37:SER:O	30:D4:38:LYS:HB2	2.07	0.54
36:DA:363(D):G:O2'	36:DA:363(E):U:H5'	2.07	0.54
36:DA:978:G:C2	36:DA:986:C:N3	2.76	0.54
36:DA:1345:C:H42	36:DA:1601:G:H1	1.55	0.54
36:DA:1353:A:H2'	36:DA:1354:A:C8	2.42	0.54
36:DA:1452:A:C3'	36:DA:1453:U:C5'	2.76	0.54
36:DA:1921:G:O2'	36:DA:1922:G:H5'	2.08	0.54
36:DA:2069:G:C2'	36:DA:2070:G:H5'	2.38	0.54
36:DA:2531:A:OP1	43:DH:177:GLY:C	2.50	0.54
37:DB:22:U:H2'	37:DB:23:G:C8	2.42	0.54
39:DD:72:LYS:HE3	39:DD:101:GLU:HB3	1.89	0.54
40:DE:14:ILE:HG13	40:DE:21:VAL:CG2	2.37	0.54
43:DH:117:PRO:HB3	43:DH:123:PHE:CE2	2.41	0.54
43:DH:159:GLU:O	43:DH:160:LYS:O	2.25	0.54
47:DP:13:ASN:N	47:DP:13:ASN:HD22	2.05	0.54
47:DP:105:LEU:HD12	47:DP:105:LEU:N	2.21	0.54
51:DT:27:THR:O	51:DT:28:VAL:HG23	2.07	0.54
52:DU:21:ALA:O	52:DU:22:LYS:C	2.50	0.54
57:DZ:95:PRO:HA	57:DZ:128:VAL:C	2.32	0.54
1:AA:332:G:H2'	1:AA:333:G:H8	1.71	0.54
1:AA:538:G:H2'	1:AA:539:A:H8	1.72	0.54
1:AA:547:A:OP2	4:AD:2:GLY:N	2.41	0.54
1:AA:639:G:O2'	1:AA:640:A:H5'	2.07	0.54
1:AA:687:A:O2'	1:AA:701:C:N4	2.40	0.54
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	2.07	0.54
1:AA:1292:U:H2'	1:AA:1293:G:H8	1.71	0.54
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.88	0.54
7:AG:75:VAL:HG11	7:AG:86:GLN:HB3	1.89	0.54
7:AG:109:ASN:HA	7:AG:119:ARG:HE	1.71	0.54
8:AH:63:LEU:HD22	8:AH:63:LEU:N	2.22	0.54
9:AI:5:TYR:CE1	9:AI:18:PHE:HE1	2.26	0.54
12:AL:17:LYS:HD3	12:AL:18:VAL:N	2.23	0.54
15:AO:83:GLU:O	15:AO:85:LEU:N	2.37	0.54
23:AW:22:G:C2'	23:AW:23:C:C5'	2.83	0.54
25:AY:523:PHE:HD1	25:AY:550:MET:HE1	1.73	0.54
27:B1:26:ARG:HG3	27:B1:27:GLU:H	1.72	0.54
30:B4:5:ILE:HG12	30:B4:5:ILE:O	2.06	0.54
31:B5:29:THR:O	31:B5:42:PRO:HD2	2.08	0.54
36:BA:814:C:H2'	36:BA:815:C:H6	1.70	0.54
36:BA:953:A:O2'	36:BA:954:G:H5'	2.07	0.54
36:BA:1012:U:C4	45:BN:28:THR:HG21	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1101:U:H2'	36:BA:1102:C:C6	2.41	0.54
36:BA:1632:A:C5	36:BA:1633:G:C6	2.95	0.54
36:BA:2030:A:H4'	36:BA:2031:A:H8	1.71	0.54
36:BA:2309:A:H2'	36:BA:2310:A:H5''	1.89	0.54
36:BA:2543:G:H8	36:BA:2543:G:H5'	1.73	0.54
37:BB:105:A:P	57:BZ:72:ARG:HH12	2.30	0.54
39:BD:28:GLU:CD	39:BD:28:GLU:N	2.66	0.54
39:BD:43:ARG:HD2	39:BD:44:ASN:OD1	2.08	0.54
47:BP:50:ARG:HH11	47:BP:50:ARG:HG2	1.71	0.54
55:BX:71:GLY:C	55:BX:72:LYS:HG3	2.31	0.54
57:BZ:107:THR:HG23	57:BZ:111:VAL:HB	1.89	0.54
13:CM:15:VAL:HA	13:CM:18:ALA:CB	2.38	0.54
15:CO:17:ARG:NH1	15:CO:77:ARG:CZ	2.71	0.54
25:CY:415:PRO:HA	25:CY:474:ALA:HB2	1.89	0.54
25:CY:438:PHE:C	25:CY:438:PHE:CD1	2.85	0.54
27:D1:52:ARG:NH2	36:DA:2218:U:H1'	2.21	0.54
28:D2:30:ARG:O	28:D2:34:GLU:HB2	2.06	0.54
29:D3:31:LEU:O	29:D3:32:GLN:HB2	2.08	0.54
30:D4:1:MET:HG2	42:DG:98:ARG:HE	1.70	0.54
33:D7:24:THR:HG23	33:D7:27:GLY:H	1.72	0.54
33:D7:35:ARG:HG2	33:D7:35:ARG:NH1	2.23	0.54
36:DA:27:G:O2'	36:DA:28:A:H8	1.80	0.54
36:DA:1463:C:H2'	36:DA:1464:C:H6	1.71	0.54
36:DA:1584:C:H5'	36:DA:1586:A:OP2	2.06	0.54
36:DA:1719:G:C2'	36:DA:1720:U:H5'	2.37	0.54
36:DA:1794:U:H2'	36:DA:1795:C:H6	1.71	0.54
36:DA:2329:G:H2'	36:DA:2330:G:H8	1.73	0.54
36:DA:2425:A:H4'	36:DA:2426:A:H5''	1.88	0.54
36:DA:2611:U:H3'	36:DA:2611:U:OP2	2.08	0.54
39:DD:28:GLU:N	39:DD:28:GLU:CD	2.65	0.54
41:DF:113:ALA:HB1	41:DF:186:ILE:HG21	1.89	0.54
41:DF:170:LEU:HD12	41:DF:172:TRP:NE1	2.21	0.54
43:DH:19:VAL:HG12	43:DH:20:ALA:N	2.20	0.54
49:DR:12:ARG:HB3	49:DR:16:HIS:HD2	1.72	0.54
57:DZ:10:ARG:HD2	57:DZ:36:LYS:HB3	1.89	0.54
2:AB:82:ARG:HG3	2:AB:82:ARG:NH1	2.23	0.54
5:AE:91:LEU:HA	5:AE:120:THR:HG22	1.90	0.54
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.07	0.54
25:AY:119:GLU:OE1	25:AY:666:ARG:HG2	2.07	0.54
25:AY:149:VAL:C	25:AY:152:THR:HG22	2.33	0.54
25:AY:529:ILE:HD11	25:AY:567:LEU:HD11	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:560:VAL:CG1	25:AY:594:VAL:HG11	2.37	0.54
27:B1:60:PHE:CD1	27:B1:91:LYS:HE3	2.41	0.54
36:BA:512:G:HO2'	36:BA:513:A:H8	1.55	0.54
36:BA:945:A:O2'	36:BA:946:G:H4'	2.07	0.54
36:BA:2168:G:N2	36:BA:2170:A:H3'	2.22	0.54
37:BB:66:A:H61	37:BB:108:U:H2'	1.72	0.54
37:BB:106:G:H5'	57:BZ:31:ARG:HB3	1.88	0.54
38:BC:115:VAL:HG12	38:BC:145:THR:HA	1.89	0.54
39:BD:108:PRO:HG2	39:BD:111:LEU:CB	2.34	0.54
39:BD:201:HIS:O	39:BD:204:ILE:HG12	2.07	0.54
40:BE:50:GLY:HA3	40:BE:74:PRO:HG3	1.90	0.54
41:BF:103:LYS:HA	41:BF:106:ARG:HG3	1.89	0.54
42:BG:34:LEU:HD11	42:BG:100:TRP:CH2	2.43	0.54
42:BG:170:ARG:O	42:BG:174:GLU:HG3	2.08	0.54
43:BH:12:PRO:HB2	43:BH:15:VAL:HG11	1.88	0.54
43:BH:83:TYR:HB3	43:BH:135:GLY:N	2.21	0.54
46:BO:12:ASP:C	46:BO:14:THR:H	2.16	0.54
47:BP:112:LEU:O	47:BP:128:HIS:HB2	2.08	0.54
50:BS:14:VAL:O	50:BS:15:ARG:C	2.50	0.54
54:BW:95:ILE:O	54:BW:95:ILE:HG13	2.06	0.54
56:BY:17:SER:HB3	56:BY:71:LYS:HD2	1.90	0.54
57:BZ:9:TYR:CD2	57:BZ:35:ARG:NH2	2.74	0.54
1:CA:450:G:H1	1:CA:483:C:H42	1.56	0.54
1:CA:472:A:H2'	1:CA:473:G:O4'	2.07	0.54
1:CA:687:A:O2'	1:CA:701:C:N4	2.40	0.54
1:CA:862:C:O2'	1:CA:863:U:H5'	2.06	0.54
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.21	0.54
4:CD:201:GLN:O	4:CD:205:GLU:HG3	2.08	0.54
10:CJ:40:LEU:HD23	10:CJ:40:LEU:N	2.22	0.54
12:CL:83:VAL:CG1	12:CL:100:ILE:HG23	2.38	0.54
13:CM:108:ARG:N	13:CM:108:ARG:HD2	2.21	0.54
20:CT:45:GLN:HA	20:CT:91:LEU:HB3	1.90	0.54
25:CY:298:VAL:HG22	25:CY:299:VAL:N	2.23	0.54
25:CY:553:GLY:HA2	25:CY:560:VAL:HG23	1.89	0.54
34:D8:4:MET:HE1	34:D8:61:LEU:HD22	1.89	0.54
34:D8:56:GLU:HA	34:D8:59:LYS:HZ1	1.72	0.54
35:D9:35:ARG:HD3	36:DA:2742:C:OP1	2.08	0.54
36:DA:65:C:H5'	55:DX:71:GLY:HA3	1.90	0.54
36:DA:1116:C:H2'	36:DA:1117:G:H8	1.73	0.54
36:DA:1127:A:H2'	36:DA:1128:A:H5''	1.89	0.54
36:DA:1188:U:C2'	36:DA:1189:A:H5'	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1285:G:C2'	36:DA:1286:A:H5'	2.34	0.54
36:DA:1887:C:C3'	36:DA:1888:G:H5''	2.36	0.54
36:DA:2130:U:OP1	38:DC:6:LYS:HB2	2.07	0.54
36:DA:2377:A:O2'	36:DA:2378:A:H5'	2.07	0.54
36:DA:2408:U:H2'	36:DA:2409:G:H8	1.72	0.54
38:DC:225:ILE:C	38:DC:225:ILE:HD12	2.32	0.54
39:DD:158:ALA:O	39:DD:196:VAL:HG11	2.07	0.54
43:DH:37:VAL:HG12	43:DH:38:SER:N	2.23	0.54
45:DN:58:ASP:O	45:DN:60:ILE:HG13	2.07	0.54
45:DN:94:HIS:N	45:DN:95:PRO:CD	2.69	0.54
46:DO:4:PRO:O	46:DO:5:GLN:CB	2.54	0.54
51:DT:23:ARG:HB2	51:DT:24:PRO:HD2	1.89	0.54
57:DZ:9:TYR:HB3	57:DZ:35:ARG:HH22	1.72	0.54
57:DZ:10:ARG:CD	57:DZ:36:LYS:HE2	2.26	0.54
1:AA:687:A:N6	1:AA:703:G:H1'	2.22	0.54
1:AA:812:C:O2'	1:AA:813:U:P	2.65	0.54
1:AA:957:U:O2	1:AA:959:A:H8	1.90	0.54
1:AA:1109:C:C2'	1:AA:1110:A:H5'	2.37	0.54
3:AC:11:ARG:O	3:AC:13:GLY:N	2.40	0.54
3:AC:54:ARG:HD3	3:AC:69:HIS:ND1	2.22	0.54
4:AD:28:SER:O	4:AD:30:LYS:N	2.38	0.54
5:AE:41:VAL:HG22	5:AE:113:ALA:HA	1.90	0.54
5:AE:101:ILE:HD13	5:AE:118:ILE:O	2.07	0.54
10:AJ:32:ALA:N	10:AJ:78:ASN:ND2	2.55	0.54
15:AO:74:ASP:C	15:AO:76:GLU:H	2.15	0.54
18:AR:74:ARG:HB3	18:AR:81:PHE:CE1	2.43	0.54
19:AS:4:SER:O	19:AS:6:LYS:HE3	2.07	0.54
19:AS:17:GLU:O	19:AS:21:GLU:HG2	2.08	0.54
22:AV:20:U:H5'	22:AV:21:A:OP2	2.07	0.54
25:AY:634:MET:HA	25:AY:642:VAL:O	2.06	0.54
26:B0:5:LYS:NZ	26:B0:5:LYS:HB3	2.22	0.54
30:B4:51:ASP:OD1	30:B4:52:THR:HG23	2.08	0.54
33:B7:8:ASN:HD22	33:B7:8:ASN:C	2.13	0.54
36:BA:564:C:O2'	36:BA:565:C:H5'	2.07	0.54
36:BA:654(M):C:HO2'	36:BA:654(N):G:H8	1.46	0.54
36:BA:882:G:H1	36:BA:894:C:H42	1.56	0.54
36:BA:1462:C:H4'	36:BA:2703:C:H5'	1.89	0.54
36:BA:1467:C:C5	36:BA:1546:C:H2'	2.43	0.54
36:BA:2236:C:H2'	36:BA:2237:G:O4'	2.07	0.54
36:BA:2688:U:H1'	36:BA:2721:A:N6	2.23	0.54
37:BB:68:C:H2'	37:BB:69:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:223:VAL:HG12	38:BC:223:VAL:O	2.07	0.54
39:BD:238:GLY:O	39:BD:239:ARG:O	2.26	0.54
43:BH:89:ILE:HD13	43:BH:94:TYR:HB3	1.90	0.54
50:BS:92:TYR:CG	50:BS:93:LYS:N	2.76	0.54
1:CA:59:A:H1'	1:CA:354:G:N2	2.22	0.54
1:CA:192:U:H2'	1:CA:193:C:C6	2.41	0.54
1:CA:426:G:P	4:CD:36:ARG:HH22	2.30	0.54
1:CA:476:G:H2'	1:CA:477:A:H8	1.72	0.54
1:CA:1116:C:C2'	1:CA:1117:G:H5'	2.35	0.54
1:CA:1128:C:H4'	1:CA:1148:U:O2	2.07	0.54
2:CB:208:ILE:O	2:CB:212:GLN:HB2	2.07	0.54
7:CG:37:ASN:ND2	9:CI:40:LEU:HA	2.22	0.54
13:CM:81:LEU:N	13:CM:81:LEU:HD22	2.23	0.54
25:CY:614:GLU:HA	25:CY:617:MET:HB2	1.89	0.54
28:D2:28:LYS:O	28:D2:53:LEU:HD21	2.07	0.54
31:D5:58:LEU:HD13	31:D5:58:LEU:C	2.32	0.54
36:DA:903:C:H2'	36:DA:904:C:C5'	2.35	0.54
36:DA:1274:A:N3	36:DA:1297:C:H1'	2.22	0.54
36:DA:2287:A:H2	36:DA:2346:A:C2	2.25	0.54
36:DA:2523:G:C2'	36:DA:2524:G:C5'	2.74	0.54
36:DA:2681:C:H4'	36:DA:2682:U:H5'	1.89	0.54
39:DD:11:PRO:C	39:DD:13:ARG:H	2.15	0.54
43:DH:169:VAL:C	43:DH:170:ARG:HG3	2.33	0.54
49:DR:56:LYS:HE3	49:DR:94:TYR:CE2	2.41	0.54
50:DS:44:LYS:O	50:DS:46:VAL:HG23	2.07	0.54
50:DS:106:ARG:HD2	50:DS:106:ARG:C	2.32	0.54
51:DT:16:ARG:H	51:DT:79:HIS:CD2	2.24	0.54
51:DT:42:ILE:HD13	51:DT:83:ILE:HD13	1.88	0.54
52:DU:88:ILE:O	52:DU:90:VAL:N	2.40	0.54
56:DY:88:LYS:HZ3	56:DY:93:GLY:C	2.16	0.54
57:DZ:63:ASP:C	57:DZ:65:GLN:N	2.63	0.54
1:AA:427:U:C4	1:AA:428:G:C6	2.96	0.54
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.43	0.54
1:AA:1221:G:H1'	19:AS:54:GLY:HA3	1.89	0.54
1:AA:1298:C:C5	7:AG:114:ARG:HD3	2.43	0.54
2:AB:8:LYS:O	2:AB:11:LEU:N	2.41	0.54
4:AD:61:LYS:CE	4:AD:62:GLN:HE21	2.21	0.54
10:AJ:95:GLU:HA	10:AJ:95:GLU:OE1	2.07	0.54
23:AW:50:U:H3	23:AW:64:G:H1	1.54	0.54
25:AY:627:ARG:HH12	25:AY:652:MET:HE3	1.73	0.54
27:B1:4:VAL:HG23	27:B1:11:ARG:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:37:ARG:CZ	36:BA:2286:A:N7	2.71	0.54
36:BA:363(D):G:O2'	36:BA:363(E):U:H5'	2.08	0.54
36:BA:643:A:O2'	36:BA:644:A:H5'	2.07	0.54
36:BA:674:G:C1'	41:BF:74:ARG:HD3	2.31	0.54
36:BA:914:C:C2'	36:BA:915:C:H5'	2.34	0.54
36:BA:1395:A:H4'	36:BA:1397:U:C4	2.42	0.54
36:BA:1755:A:P	51:BT:113:LYS:HZ1	2.31	0.54
36:BA:2069:G:C2'	36:BA:2070:G:H5'	2.38	0.54
36:BA:2787:C:H1'	40:BE:61:ARG:CD	2.38	0.54
40:BE:55:ASN:C	40:BE:57:LYS:H	2.15	0.54
43:BH:77:LYS:HA	43:BH:80:SER:OG	2.08	0.54
45:BN:26:LEU:C	45:BN:28:THR:H	2.14	0.54
46:BO:98:VAL:CG2	46:BO:117:LEU:HB3	2.38	0.54
47:BP:47:ASP:OD1	47:BP:49:ARG:HB2	2.08	0.54
48:BQ:62:GLY:HA2	57:BZ:116:VAL:HG21	1.89	0.54
50:BS:103:GLU:O	50:BS:104:GLY:C	2.51	0.54
51:BT:82:LEU:N	51:BT:82:LEU:CD1	2.70	0.54
51:BT:129:ARG:O	51:BT:129:ARG:HG2	2.07	0.54
52:BU:31:SER:CB	52:BU:34:LYS:HB2	2.33	0.54
52:BU:104:GLN:HB3	53:BV:44:LYS:NZ	2.22	0.54
53:BV:64:HIS:ND1	53:BV:92:THR:HG22	2.23	0.54
57:BZ:119:GLU:C	57:BZ:121:HIS:H	2.16	0.54
1:CA:757:U:H2'	1:CA:758:G:O4'	2.08	0.54
1:CA:1082:G:C2'	1:CA:1083:U:H5'	2.38	0.54
1:CA:1344:C:O2'	1:CA:1345:U:H5'	2.08	0.54
2:CB:178:ARG:HH22	2:CB:196:LEU:HA	1.73	0.54
2:CB:207:ALA:O	2:CB:208:ILE:C	2.50	0.54
3:CC:49:SER:HB2	3:CC:75:VAL:HG11	1.88	0.54
3:CC:150:LYS:HB2	3:CC:169:ALA:HB1	1.90	0.54
4:CD:158:ILE:O	4:CD:162:LEU:HB2	2.08	0.54
8:CH:114:THR:HG22	8:CH:130:GLY:O	2.07	0.54
10:CJ:29:ARG:HH11	10:CJ:29:ARG:HG2	1.73	0.54
10:CJ:95:GLU:HA	10:CJ:95:GLU:OE1	2.08	0.54
22:CV:37:A:C2	24:CX:16:U:C4	2.96	0.54
25:CY:617:MET:HE3	25:CY:641:GLN:HB3	1.90	0.54
36:DA:1022:G:N2	36:DA:1142(A):A:H2	2.05	0.54
36:DA:1075:C:H5'	36:DA:1076:C:OP2	2.08	0.54
36:DA:1252:G:N3	52:DU:33:ARG:HD2	2.21	0.54
36:DA:1404:C:O2'	36:DA:1405:U:H5'	2.06	0.54
37:DB:48:A:H4'	50:DS:95:HIS:HD2	1.73	0.54
38:DC:85:LYS:O	38:DC:89:GLU:HG3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:172:ILE:HD13	38:DC:197:LEU:HD21	1.89	0.54
38:DC:196:ALA:O	38:DC:199:ALA:HB3	2.07	0.54
39:DD:35:LYS:HG2	39:DD:62:TYR:C	2.32	0.54
40:DE:201:THR:C	40:DE:202:LYS:HD2	2.32	0.54
41:DF:206:ILE:HG22	41:DF:207:GLY:N	2.22	0.54
44:DJ:27:UNK:HA	44:DJ:112:UNK:O	2.08	0.54
45:DN:16:ILE:O	45:DN:54:VAL:HA	2.08	0.54
46:DO:91:LEU:N	46:DO:91:LEU:HD22	2.23	0.54
47:DP:47:ASP:OD1	47:DP:49:ARG:HB2	2.07	0.54
50:DS:89:ARG:CG	50:DS:92:TYR:HA	2.38	0.54
53:DV:5:VAL:HG22	53:DV:6:LYS:N	2.22	0.54
53:DV:19:LYS:HZ3	53:DV:20:LEU:N	2.03	0.54
1:AA:60:A:H5''	1:AA:331:G:N2	2.22	0.54
1:AA:908:A:H2'	1:AA:909:A:C8	2.42	0.54
1:AA:1368:G:O2'	1:AA:1369:C:H5'	2.07	0.54
2:AB:9:GLU:HG2	2:AB:10:LEU:N	2.23	0.54
8:AH:99:GLU:O	8:AH:100:ILE:C	2.48	0.54
12:AL:80:HIS:O	12:AL:81:SER:HB2	2.08	0.54
13:AM:108:ARG:N	13:AM:108:ARG:HD2	2.22	0.54
18:AR:87:ARG:HB3	18:AR:87:ARG:HH11	1.72	0.54
19:AS:45:VAL:O	19:AS:47:HIS:N	2.37	0.54
25:AY:409:ILE:HG22	25:AY:459:LEU:HD13	1.90	0.54
26:B0:11:ARG:C	26:B0:12:ASN:HD22	2.15	0.54
26:B0:19:LYS:HD3	26:B0:41:ARG:NH2	2.23	0.54
28:B2:2:LYS:HB2	36:BA:97:C:H5''	1.88	0.54
33:B7:12:ARG:HH11	33:B7:12:ARG:HG3	1.73	0.54
36:BA:688:U:H2'	36:BA:689:A:H8	1.73	0.54
36:BA:1188:U:C2'	36:BA:1189:A:H5'	2.38	0.54
36:BA:1205:U:C5	41:BF:171:PRO:HA	2.43	0.54
36:BA:1272:A:OP2	36:BA:1647:G:OP1	2.25	0.54
36:BA:2317:C:H2'	36:BA:2318:G:C5'	2.30	0.54
36:BA:2853:C:H2'	36:BA:2854:G:H8	1.71	0.54
39:BD:11:PRO:C	39:BD:13:ARG:H	2.16	0.54
40:BE:48:GLN:HE21	40:BE:78:LEU:HD22	1.72	0.54
41:BF:65:TRP:HZ3	41:BF:75:HIS:HD2	1.54	0.54
41:BF:132:VAL:CG2	41:BF:133:ASN:H	2.18	0.54
42:BG:56:ALA:HB1	42:BG:153:ARG:NE	2.22	0.54
43:BH:37:VAL:HG12	43:BH:38:SER:N	2.22	0.54
45:BN:9:VAL:HG12	45:BN:10:GLU:N	2.22	0.54
50:BS:19:LYS:O	50:BS:20:ARG:NH2	2.41	0.54
51:BT:7:ILE:O	51:BT:10:VAL:HB	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:27:THR:O	51:BT:28:VAL:HG23	2.07	0.54
51:BT:32:TYR:HD1	51:BT:81:PRO:O	1.90	0.54
52:BU:34:LYS:HA	52:BU:34:LYS:CE	2.28	0.54
2:CB:151:GLY:O	2:CB:152:PHE:C	2.50	0.54
5:CE:78:HIS:O	5:CE:93:PRO:HD3	2.07	0.54
7:CG:107:ALA:O	7:CG:110:GLN:HB2	2.08	0.54
7:CG:114:ARG:HH11	7:CG:114:ARG:HG2	1.73	0.54
9:CI:17:VAL:HG13	9:CI:63:ILE:HG12	1.89	0.54
12:CL:42:THR:HG23	12:CL:42:THR:O	2.07	0.54
19:CS:41:VAL:C	19:CS:43:GLU:N	2.64	0.54
25:CY:438:PHE:HD2	25:CY:462:ILE:HD13	1.72	0.54
26:D0:11:ARG:C	26:D0:12:ASN:HD22	2.16	0.54
26:D0:77:ARG:NH2	36:DA:857:C:H5'	2.23	0.54
27:D1:73:LEU:CD2	27:D1:94:LEU:HB3	2.30	0.54
28:D2:47:ASN:HD21	36:DA:94(A):G:H21	1.54	0.54
32:D6:42:TRP:CE3	32:D6:42:TRP:HA	2.41	0.54
32:D6:43:CYS:HB2	32:D6:44:ARG:NH2	2.22	0.54
36:DA:528:A:H2	36:DA:2043:C:C4'	2.19	0.54
36:DA:1047:G:HO2'	36:DA:1110:G:H1	1.55	0.54
36:DA:1272:A:OP2	36:DA:1647:G:OP1	2.25	0.54
36:DA:2011:U:H2'	36:DA:2012:G:H5'	1.89	0.54
36:DA:2107:C:H42	36:DA:2182:G:H1	1.53	0.54
43:DH:77:LYS:HA	43:DH:80:SER:OG	2.06	0.54
44:DJ:13:UNK:C	44:DJ:15:UNK:H	2.20	0.54
44:DJ:25:UNK:O	44:DJ:84:UNK:HA	2.08	0.54
53:DV:82:ARG:N	53:DV:82:ARG:HD2	2.23	0.54
56:DY:44:ILE:CG2	56:DY:45:VAL:N	2.71	0.54
1:AA:472:A:H2'	1:AA:473:G:O4'	2.07	0.54
2:AB:178:ARG:HH22	2:AB:196:LEU:HA	1.71	0.54
6:AF:15:ASP:C	6:AF:17:SER:N	2.64	0.54
13:AM:6:GLY:C	13:AM:8:GLU:N	2.66	0.54
25:AY:510:VAL:HG22	25:AY:534:ILE:HD13	1.90	0.54
25:AY:670:VAL:O	25:AY:671:MET:HB2	2.07	0.54
28:B2:35:LEU:C	28:B2:35:LEU:HD23	2.32	0.54
30:B4:22:ILE:HG22	30:B4:23:GLU:N	2.22	0.54
34:B8:30:ARG:HA	34:B8:30:ARG:HE	1.72	0.54
36:BA:74:A:O2'	36:BA:75:G:OP2	2.21	0.54
36:BA:586:A:C2	36:BA:1254:A:C2	2.96	0.54
36:BA:1127:A:H2'	36:BA:1128:A:H5''	1.89	0.54
36:BA:2350:C:H2'	36:BA:2351:G:O4'	2.07	0.54
36:BA:2849:U:H1'	36:BA:2866:U:H6	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2876:G:H5'	51:BT:3:ARG:HA	1.90	0.54
40:BE:183:LEU:HD12	40:BE:183:LEU:N	2.22	0.54
41:BF:28:ILE:HG21	41:BF:116:ASP:HB2	1.90	0.54
42:BG:153:ARG:HB3	42:BG:153:ARG:HH11	1.72	0.54
43:BH:53:GLU:CD	43:BH:54:ARG:H	2.16	0.54
47:BP:13:ASN:N	47:BP:13:ASN:HD22	2.04	0.54
48:BQ:45:GLN:H	48:BQ:45:GLN:CD	2.15	0.54
48:BQ:135:ASP:CG	57:BZ:49:ARG:NH1	2.66	0.54
1:CA:202:U:H5'	1:CA:203:U:H5	1.72	0.54
1:CA:807:A:H2'	1:CA:808:C:C6	2.43	0.54
1:CA:1112:C:O2'	3:CC:179:ARG:HG2	2.08	0.54
3:CC:52:LEU:HD23	3:CC:52:LEU:N	2.17	0.54
4:CD:159:ARG:HG3	4:CD:159:ARG:NH1	2.21	0.54
4:CD:196:LEU:C	4:CD:198:VAL:H	2.16	0.54
5:CE:12:LEU:O	5:CE:12:LEU:HD13	2.06	0.54
12:CL:47:LYS:HD2	12:CL:48:PRO:CD	2.37	0.54
20:CT:30:LYS:NZ	20:CT:34:LYS:HE3	2.23	0.54
25:CY:568:TYR:CD1	25:CY:569:ASP:HB2	2.42	0.54
30:D4:42:PHE:N	30:D4:42:PHE:CD1	2.76	0.54
32:D6:5:VAL:HG12	32:D6:6:ARG:N	2.22	0.54
34:D8:10:ALA:O	34:D8:14:VAL:HG12	2.08	0.54
34:D8:33:ASN:O	34:D8:34:TRP:HB3	2.06	0.54
35:D9:29:ASN:HD22	35:D9:29:ASN:H	1.54	0.54
36:DA:769:G:H2'	36:DA:770:G:H8	1.72	0.54
36:DA:884:C:N4	36:DA:886:C:H42	2.06	0.54
36:DA:1017:G:H2'	36:DA:1018:C:H6	1.73	0.54
36:DA:2162:G:H2'	36:DA:2163:C:C6	2.43	0.54
37:DB:42:C:O4'	42:DG:69:ALA:HB2	2.08	0.54
39:DD:77:ALA:HB2	39:DD:97:TYR:CD2	2.42	0.54
42:DG:13:GLU:O	42:DG:14:GLU:HG3	2.07	0.54
43:DH:175:LYS:O	43:DH:176:ALA:CB	2.55	0.54
45:DN:132:ALA:O	45:DN:133:GLN:HB2	2.06	0.54
46:DO:24:VAL:CG2	46:DO:30:ALA:HB3	2.38	0.54
46:DO:79:PHE:HB3	51:DT:70:VAL:HG11	1.89	0.54
50:DS:85:VAL:C	50:DS:106:ARG:HG2	2.32	0.54
53:DV:32:THR:HG22	53:DV:33:VAL:N	2.23	0.54
57:DZ:67:LEU:HD12	57:DZ:67:LEU:N	2.22	0.54
57:DZ:102:LEU:HG	57:DZ:122:ARG:O	2.08	0.54
1:AA:1026:G:C3'	1:AA:1027:C:H5'	2.38	0.54
1:AA:1205:U:O2'	3:AC:195:VAL:HG23	2.08	0.54
4:AD:101:LEU:HD23	4:AD:121:VAL:HG13	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:146:ILE:N	4:AD:146:ILE:HD13	2.23	0.54
4:AD:152:SER:O	4:AD:155:LEU:HG	2.07	0.54
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.07	0.54
7:AG:152:ALA:O	7:AG:155:ARG:HG3	2.08	0.54
9:AI:125:TYR:HD1	9:AI:126:SER:H	1.55	0.54
9:AI:126:SER:O	9:AI:128:ARG:HD2	2.07	0.54
18:AR:55:ARG:HG3	18:AR:55:ARG:HH11	1.73	0.54
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.90	0.54
23:AW:10:G:H2'	23:AW:11:A:H8	1.73	0.54
25:AY:491:VAL:CG1	25:AY:492:ASP:H	2.21	0.54
25:AY:517:LEU:HB3	25:AY:521:SER:OG	2.07	0.54
25:AY:634:MET:HG2	25:AY:634:MET:O	2.08	0.54
26:B0:26:TYR:O	26:B0:67:VAL:HB	2.07	0.54
30:B4:37:SER:O	30:B4:38:LYS:HB2	2.07	0.54
35:B9:17:ILE:HG22	35:B9:18:ARG:H	1.72	0.54
36:BA:90:U:H3'	36:BA:90:U:O2	2.07	0.54
36:BA:204:A:OP1	36:BA:204:A:H8	1.91	0.54
36:BA:514:A:H2'	36:BA:515:A:C8	2.43	0.54
36:BA:813:U:H2'	36:BA:814:C:H6	1.68	0.54
36:BA:862:G:H2'	36:BA:863:A:O4'	2.08	0.54
36:BA:1241:A:H2'	36:BA:1242:A:O4'	2.08	0.54
36:BA:1815:A:OP2	36:BA:1822:G:H5''	2.08	0.54
36:BA:2111:C:O2	36:BA:2147:G:N2	2.41	0.54
36:BA:2392:A:H1'	47:BP:60:MET:HE3	1.90	0.54
36:BA:2577:A:H5'	36:BA:2578:G:C5'	2.36	0.54
36:BA:2713:A:C3'	36:BA:2714:G:C5'	2.86	0.54
38:BC:218:THR:HG22	38:BC:219:MET:SD	2.48	0.54
39:BD:35:LYS:HD3	39:BD:61:LEU:HD12	1.90	0.54
39:BD:76:PRO:HG2	39:BD:98:VAL:CG2	2.37	0.54
39:BD:172:TYR:HD1	39:BD:186:HIS:HA	1.72	0.54
39:BD:179:SER:C	39:BD:181:GLU:H	2.15	0.54
39:BD:270:ILE:HD12	39:BD:270:ILE:N	2.21	0.54
40:BE:120:TRP:O	40:BE:121:ASN:C	2.51	0.54
41:BF:61:GLY:O	41:BF:62:ARG:C	2.51	0.54
42:BG:180:PHE:O	42:BG:181:ARG:C	2.50	0.54
50:BS:48:LEU:HD12	50:BS:48:LEU:N	2.22	0.54
50:BS:89:ARG:CG	50:BS:92:TYR:HA	2.37	0.54
1:CA:826:C:H2'	1:CA:827:U:H6	1.72	0.54
1:CA:974:A:C8	14:CN:31:ARG:HD2	2.43	0.54
1:CA:1387:G:C6	1:CA:1388:C:N4	2.76	0.54
2:CB:11:LEU:HD11	2:CB:217:ARG:NH2	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:236:TYR:HA	2:CB:239:VAL:HG23	1.89	0.54
4:CD:129:ASN:HD22	4:CD:129:ASN:H	1.55	0.54
4:CD:173:TRP:HB2	4:CD:187:ARG:O	2.08	0.54
5:CE:28:PHE:CD2	5:CE:51:VAL:HG22	2.43	0.54
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.88	0.54
9:CI:11:LYS:O	9:CI:12:GLU:HB2	2.08	0.54
12:CL:41:ARG:CG	12:CL:42:THR:N	2.70	0.54
12:CL:89:ARG:HD3	12:CL:91:LYS:HZ3	1.73	0.54
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.20	0.54
17:CQ:69:LYS:C	17:CQ:70:ARG:HD2	2.32	0.54
25:CY:125:ALA:C	25:CY:127:LYS:N	2.65	0.54
25:CY:304:ASP:C	25:CY:306:ASN:H	2.14	0.54
25:CY:537:GLU:O	25:CY:540:PRO:HD2	2.08	0.54
31:D5:11:THR:OG1	36:DA:1263:U:O3'	2.25	0.54
36:DA:28:A:H62	36:DA:512:G:H1'	1.71	0.54
36:DA:90:U:H3'	36:DA:90:U:O2	2.07	0.54
36:DA:345:A:O2'	36:DA:346:A:N7	2.39	0.54
36:DA:1047:G:O2'	36:DA:1110:G:N2	2.41	0.54
36:DA:1068:G:N2	36:DA:1096:A:H5'	2.22	0.54
36:DA:1441:G:H2'	36:DA:1442:G:H8	1.73	0.54
36:DA:2014:A:H4'	54:DW:92:ARG:HH22	1.72	0.54
36:DA:2111:C:O2	36:DA:2147:G:N2	2.41	0.54
36:DA:2300:G:H2'	36:DA:2301:C:C6	2.42	0.54
36:DA:2465:C:O2'	36:DA:2466:C:H5'	2.07	0.54
36:DA:2577:A:H5'	36:DA:2578:G:C5'	2.35	0.54
36:DA:2682:U:C6	40:DE:11:MET:HE2	2.43	0.54
38:DC:29:LEU:HD23	38:DC:29:LEU:O	2.08	0.54
38:DC:42:VAL:HG21	38:DC:186:LEU:HD22	1.90	0.54
39:DD:25:THR:HG22	39:DD:26:LYS:H	1.73	0.54
42:DG:32:PRO:HB3	42:DG:163:ALA:HB2	1.89	0.54
46:DO:2:ILE:HD11	46:DO:82:ASN:HB3	1.90	0.54
50:DS:38:GLN:O	50:DS:39:ILE:HG13	2.08	0.54
51:DT:28:VAL:HG13	51:DT:46:GLU:CA	2.36	0.54
52:DU:110:VAL:HG12	52:DU:114:LYS:CD	2.38	0.54
56:DY:50:ARG:HB2	56:DY:57:GLN:HA	1.90	0.54
57:DZ:7:ALA:O	57:DZ:62:PRO:HD3	2.08	0.54
1:AA:514:C:H2'	1:AA:515:G:C8	2.40	0.54
1:AA:815:A:H62	1:AA:1509:C:H1'	1.73	0.54
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.08	0.54
2:AB:207:ALA:C	2:AB:209:ARG:N	2.62	0.54
2:AB:207:ALA:O	2:AB:208:ILE:C	2.50	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:208:ILE:O	2:AB:212:GLN:HB2	2.08	0.54
3:AC:101:LEU:HD23	3:AC:101:LEU:C	2.33	0.54
6:AF:98:LEU:HD13	6:AF:101:ALA:HB2	1.90	0.54
9:AI:95:LYS:HZ3	9:AI:96:LEU:HD12	1.73	0.54
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HG13	1.88	0.54
20:AT:30:LYS:HZ2	20:AT:34:LYS:HE3	1.72	0.54
23:AW:34:C:O2'	23:AW:35:A:H4'	2.06	0.54
25:AY:137:ASN:HD21	25:AY:263:ALA:CB	2.21	0.54
25:AY:170:ARG:C	25:AY:171:GLU:HG2	2.31	0.54
25:AY:608:VAL:HG13	25:AY:670:VAL:O	2.08	0.54
30:B4:39:CYS:O	30:B4:42:PHE:CE2	2.61	0.54
36:BA:222:A:H5''	36:BA:421:U:OP1	2.07	0.54
36:BA:569:U:C4	36:BA:570:G:C6	2.95	0.54
36:BA:1675:C:H2'	36:BA:1676:A:O4'	2.07	0.54
36:BA:2811:G:H2'	36:BA:2812:G:C8	2.43	0.54
39:BD:24:ILE:O	39:BD:25:THR:O	2.26	0.54
39:BD:70:TRP:O	39:BD:73:VAL:HG23	2.08	0.54
40:BE:119:ARG:NH1	40:BE:156:MET:O	2.42	0.54
46:BO:47:ILE:O	46:BO:48:PRO:O	2.25	0.54
49:BR:97:VAL:O	49:BR:98:LEU:HD23	2.07	0.54
50:BS:38:GLN:O	50:BS:39:ILE:HG13	2.07	0.54
56:BY:2:ARG:HD3	56:BY:2:ARG:C	2.33	0.54
57:BZ:61:LEU:O	57:BZ:63:ASP:N	2.41	0.54
57:BZ:152:ALA:C	57:BZ:167:PRO:HB2	2.33	0.54
1:CA:67:C:H2'	1:CA:68:G:C8	2.43	0.54
1:CA:662:G:H2'	1:CA:663:A:C8	2.43	0.54
1:CA:710:G:O2'	1:CA:711:G:H5'	2.08	0.54
1:CA:824:C:H2'	1:CA:825:G:H8	1.72	0.54
1:CA:1270:C:H2'	1:CA:1271:G:C8	2.43	0.54
2:CB:101:MET:C	2:CB:102:LEU:HD12	2.33	0.54
2:CB:235:SER:O	2:CB:237:ALA:N	2.36	0.54
3:CC:154:SER:OG	3:CC:155:GLY:N	2.40	0.54
4:CD:163:GLU:C	4:CD:165:MET:H	2.16	0.54
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.43	0.54
15:CO:55:GLY:O	15:CO:56:LEU:C	2.51	0.54
17:CQ:15:MET:HE1	17:CQ:43:LEU:HD21	1.90	0.54
25:CY:178:ILE:HD11	25:CY:185:ALA:CB	2.38	0.54
25:CY:230:LYS:HZ1	25:CY:237:PRO:HA	1.72	0.54
25:CY:293:THR:C	25:CY:295:GLU:H	2.16	0.54
25:CY:441:SER:O	25:CY:449:THR:HA	2.08	0.54
28:D2:25:VAL:HG11	28:D2:61:LEU:HD21	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D3:40:THR:OG1	29:D3:43:ILE:HG12	2.07	0.54
36:DA:637:A:H2'	47:DP:117:GLU:OE2	2.08	0.54
36:DA:1487:G:H3'	36:DA:1488:G:H8	1.73	0.54
36:DA:1493:C:C4	36:DA:2206:G:O2'	2.61	0.54
36:DA:1943:U:O2	36:DA:1943:U:C2'	2.56	0.54
36:DA:2105:C:C2'	36:DA:2106:G:H5'	2.38	0.54
36:DA:2849:U:H1'	36:DA:2866:U:H6	1.73	0.54
39:DD:24:ILE:O	39:DD:25:THR:O	2.25	0.54
39:DD:35:LYS:HZ3	39:DD:35:LYS:HB3	1.73	0.54
39:DD:267:SER:C	39:DD:269:PHE:H	2.16	0.54
41:DF:114:VAL:HG21	41:DF:202:PHE:CE1	2.43	0.54
42:DG:34:LEU:HD13	42:DG:99:MET:CE	2.37	0.54
42:DG:114:ILE:HD12	42:DG:117:PHE:CD2	2.43	0.54
47:DP:83:VAL:H	47:DP:115:LEU:CD2	2.20	0.54
49:DR:82:GLU:O	49:DR:86:ARG:HG3	2.08	0.54
49:DR:97:VAL:HA	49:DR:113:LEU:O	2.08	0.54
55:DX:71:GLY:C	55:DX:72:LYS:HG3	2.31	0.54
57:DZ:127:LYS:HB3	57:DZ:127:LYS:HZ3	1.72	0.54
1:AA:483:C:C3'	1:AA:484:G:H5''	2.36	0.53
1:AA:542:G:H5'	4:AD:41:GLY:HA2	1.90	0.53
1:AA:769:G:O2'	1:AA:770:C:H5'	2.07	0.53
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.08	0.53
1:AA:1431:C:C2'	1:AA:1432:G:H5'	2.38	0.53
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.88	0.53
5:AE:12:LEU:C	5:AE:12:LEU:HD22	2.33	0.53
6:AF:80:ARG:HH11	6:AF:88:VAL:HB	1.73	0.53
8:AH:87:SER:OG	8:AH:92:ARG:HA	2.07	0.53
9:AI:17:VAL:HG13	9:AI:63:ILE:HG12	1.89	0.53
18:AR:31:LEU:HD23	18:AR:31:LEU:N	2.23	0.53
27:B1:47:GLN:HG3	36:BA:2091:U:O2'	2.08	0.53
28:B2:16:LEU:O	28:B2:20:GLU:HB3	2.09	0.53
28:B2:18:PRO:O	28:B2:19:VAL:C	2.50	0.53
28:B2:25:VAL:HG22	28:B2:60:LEU:HD13	1.89	0.53
34:B8:10:ALA:O	34:B8:14:VAL:HG12	2.09	0.53
36:BA:1019:U:O2'	36:BA:1021:A:H2	1.91	0.53
36:BA:1516:C:O2'	36:BA:1517:G:H5''	2.07	0.53
36:BA:1718:G:H5'	36:BA:1718:G:C8	2.37	0.53
36:BA:2130:U:OP1	38:BC:6:LYS:HB2	2.08	0.53
36:BA:2377:A:O2'	36:BA:2378:A:H5'	2.07	0.53
36:BA:2611:U:H3'	36:BA:2611:U:OP2	2.08	0.53
36:BA:2650:U:O2'	36:BA:2651:C:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:15:A:H1'	37:BB:110:G:C5	2.43	0.53
38:BC:101:ILE:HG23	38:BC:128:LEU:CD2	2.37	0.53
40:BE:203:LYS:HG3	40:BE:204:ALA:N	2.22	0.53
41:BF:157:VAL:HG21	41:BF:194:MET:HG2	1.90	0.53
43:BH:44:VAL:O	43:BH:46:GLU:HG2	2.08	0.53
43:BH:96:ALA:HB1	43:BH:103:LEU:HD11	1.90	0.53
47:BP:64:LYS:C	47:BP:66:GLY:N	2.61	0.53
49:BR:94:TYR:H	49:BR:94:TYR:HD1	1.54	0.53
50:BS:12:PHE:C	50:BS:12:PHE:CD1	2.86	0.53
52:BU:52:ARG:O	52:BU:55:ARG:HG2	2.09	0.53
1:CA:424:G:O2'	1:CA:425:G:H5'	2.08	0.53
1:CA:1119:C:O2'	1:CA:1120:G:H5'	2.07	0.53
1:CA:1347:G:C2'	1:CA:1348:U:OP2	2.56	0.53
2:CB:24:TRP:HA	2:CB:190:THR:O	2.08	0.53
3:CC:54:ARG:HD3	3:CC:69:HIS:ND1	2.23	0.53
8:CH:40:ALA:HA	8:CH:45:ILE:HG13	1.90	0.53
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.90	0.53
9:CI:95:LYS:HZ3	9:CI:96:LEU:HD12	1.73	0.53
10:CJ:56:HIS:O	10:CJ:58:ASP:O	2.26	0.53
12:CL:28:LYS:O	12:CL:30:ALA:N	2.41	0.53
12:CL:58:VAL:O	12:CL:65:GLU:HA	2.08	0.53
17:CQ:7:THR:O	17:CQ:23:VAL:HG13	2.08	0.53
18:CR:87:ARG:HH11	18:CR:87:ARG:CB	2.21	0.53
19:CS:44:MET:HB3	19:CS:47:HIS:HD2	1.73	0.53
19:CS:67:VAL:CG1	30:D4:50:VAL:HG22	2.38	0.53
25:CY:78:ARG:HG3	25:CY:78:ARG:NH1	2.23	0.53
25:CY:319:ASP:HB2	25:CY:325:LEU:HD12	1.90	0.53
25:CY:652:MET:HE2	25:CY:655:TYR:HB2	1.90	0.53
34:D8:43:GLN:O	34:D8:44:LYS:HD2	2.08	0.53
34:D8:50:LEU:O	34:D8:52:LYS:N	2.39	0.53
36:DA:107:C:H2'	36:DA:108:U:C6	2.42	0.53
36:DA:198:C:H2'	36:DA:199:A:H5''	1.89	0.53
36:DA:389:G:H22	47:DP:72:PRO:HD3	1.72	0.53
36:DA:883:G:H2'	36:DA:884:C:O4'	2.08	0.53
36:DA:2713:A:C3'	36:DA:2714:G:C5'	2.86	0.53
37:DB:94:C:H2'	37:DB:95:C:C6	2.43	0.53
38:DC:4:HIS:CE1	38:DC:8:TYR:HE2	2.26	0.53
39:DD:186:HIS:HD2	39:DD:188:GLU:H	1.56	0.53
40:DE:50:GLY:HA2	40:DE:78:LEU:HB3	1.89	0.53
42:DG:135:LEU:H	42:DG:135:LEU:HD12	1.74	0.53
44:DJ:10:UNK:O	44:DJ:11:UNK:CB	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:50:ASP:O	45:DN:52:VAL:HG23	2.07	0.53
47:DP:126:VAL:HG12	47:DP:148:LEU:HD21	1.89	0.53
49:DR:48:VAL:O	49:DR:49:ASP:C	2.51	0.53
49:DR:73:VAL:O	49:DR:76:VAL:HG12	2.08	0.53
49:DR:106:GLY:O	49:DR:107:ASP:HB3	2.08	0.53
51:DT:11:GLU:C	51:DT:13:ARG:H	2.16	0.53
51:DT:102:ILE:HB	51:DT:110:ILE:HD11	1.89	0.53
53:DV:64:HIS:ND1	53:DV:92:THR:HG22	2.23	0.53
56:DY:31:LEU:HB2	56:DY:32:PRO:HA	1.89	0.53
57:DZ:9:TYR:HE1	57:DZ:61:LEU:HD22	1.71	0.53
1:AA:603:U:H2'	1:AA:604:G:C8	2.43	0.53
1:AA:1387:G:C6	1:AA:1388:C:N4	2.76	0.53
3:AC:154:SER:OG	3:AC:155:GLY:N	2.41	0.53
4:AD:100:ARG:HB3	4:AD:102:ASP:OD1	2.09	0.53
6:AF:14:LEU:HD22	6:AF:18:GLN:HE21	1.73	0.53
8:AH:114:THR:HG21	8:AH:129:VAL:HG23	1.89	0.53
13:AM:6:GLY:O	13:AM:8:GLU:N	2.41	0.53
14:AN:15:LYS:O	14:AN:16:PHE:C	2.51	0.53
16:AP:48:TRP:CD1	16:AP:48:TRP:H	2.27	0.53
19:AS:53:ASN:C	19:AS:55:LYS:N	2.65	0.53
22:AV:17:C:O2'	22:AV:18:G:OP2	2.25	0.53
29:B3:31:LEU:O	29:B3:32:GLN:HB2	2.08	0.53
32:B6:10:LEU:HD12	34:B8:34:TRP:HB2	1.88	0.53
32:B6:11:LEU:HA	32:B6:54:ILE:OXT	2.07	0.53
32:B6:47:THR:CG2	32:B6:49:HIS:CE1	2.91	0.53
34:B8:43:GLN:O	34:B8:44:LYS:HD2	2.07	0.53
36:BA:1404:C:O2'	36:BA:1405:U:H5'	2.08	0.53
36:BA:1486:A:H2'	36:BA:1487:G:H8	1.74	0.53
36:BA:1509(A):A:H2'	36:BA:1509(B):A:C8	2.43	0.53
36:BA:2131:G:H5'	36:BA:2133:G:C1'	2.39	0.53
36:BA:2839:G:H2'	36:BA:2840:C:C6	2.43	0.53
38:BC:74:ARG:HH11	38:BC:74:ARG:HG2	1.73	0.53
39:BD:35:LYS:HG2	39:BD:62:TYR:C	2.34	0.53
39:BD:241:PRO:O	39:BD:242:ARG:CB	2.55	0.53
42:BG:173:LEU:HD23	42:BG:176:LEU:HD12	1.90	0.53
47:BP:132:LYS:O	47:BP:136:GLU:HG2	2.09	0.53
49:BR:12:ARG:HB3	49:BR:16:HIS:HD2	1.72	0.53
51:BT:11:GLU:C	51:BT:13:ARG:H	2.15	0.53
52:BU:95:LEU:HD12	53:BV:11:GLN:HG3	1.89	0.53
56:BY:31:LEU:HD23	56:BY:36:ALA:H	1.74	0.53
1:CA:393:A:O2'	1:CA:394:G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:555:C:H2'	1:CA:556:C:H6	1.72	0.53
1:CA:841:U:H3'	1:CA:848:C:H5'	1.90	0.53
1:CA:1026:G:C3'	1:CA:1027:C:H5'	2.38	0.53
1:CA:1516:G:N1	1:CA:1519:A:OP2	2.41	0.53
3:CC:141:VAL:HG11	3:CC:202:ILE:HD12	1.91	0.53
4:CD:173:TRP:CE2	4:CD:189:PRO:HB3	2.43	0.53
6:CF:71:ARG:HH11	6:CF:71:ARG:HG3	1.73	0.53
12:CL:10:LEU:HB3	17:CQ:32:TYR:CE2	2.42	0.53
12:CL:78:GLN:O	12:CL:79:GLU:C	2.51	0.53
15:CO:29:VAL:HG11	15:CO:67:LEU:HD21	1.91	0.53
17:CQ:48:GLU:O	17:CQ:50:LYS:N	2.41	0.53
19:CS:40:ILE:O	19:CS:41:VAL:C	2.51	0.53
20:CT:33:ILE:HG21	20:CT:63:ILE:HG12	1.90	0.53
32:D6:54:ILE:HD13	36:DA:2420:C:H5'	1.90	0.53
33:D7:12:ARG:HG3	33:D7:12:ARG:HH11	1.73	0.53
36:DA:191:A:H2'	36:DA:192:C:C6	2.44	0.53
36:DA:520:G:H2'	36:DA:521:G:H8	1.72	0.53
36:DA:990:A:H61	53:DV:76:LYS:HZ1	1.56	0.53
36:DA:1509(A):A:H2'	36:DA:1509(B):A:C8	2.42	0.53
36:DA:1713:U:O2'	36:DA:1714:G:H5'	2.08	0.53
36:DA:1791:A:H5'	39:DD:206:LEU:HD12	1.90	0.53
36:DA:2061:G:H5'	36:DA:2503:A:N1	2.23	0.53
37:DB:61:G:O2'	37:DB:62:C:H5'	2.08	0.53
40:DE:7:VAL:HG12	40:DE:27:LEU:HB3	1.90	0.53
40:DE:48:GLN:HE21	40:DE:78:LEU:HD22	1.72	0.53
41:DF:107:LYS:O	41:DF:110:LEU:N	2.42	0.53
42:DG:34:LEU:HD11	42:DG:100:TRP:CH2	2.43	0.53
43:DH:26:VAL:HG11	43:DH:75:ALA:O	2.08	0.53
43:DH:29:PRO:C	43:DH:30:LYS:HE2	2.33	0.53
44:DJ:20:UNK:CB	44:DJ:88:UNK:O	2.56	0.53
47:DP:23:PRO:C	47:DP:33:ARG:CZ	2.81	0.53
50:DS:92:TYR:CG	50:DS:93:LYS:N	2.77	0.53
52:DU:79:PHE:CE1	52:DU:83:LEU:HD11	2.43	0.53
53:DV:39:LEU:N	53:DV:39:LEU:HD22	2.23	0.53
1:AA:1010:G:H1	1:AA:1020:U:H1'	1.71	0.53
2:AB:7:VAL:O	2:AB:11:LEU:HG	2.07	0.53
3:AC:95:THR:O	3:AC:97:LYS:N	2.42	0.53
4:AD:158:ILE:O	4:AD:162:LEU:HB2	2.08	0.53
6:AF:2:ARG:HD3	6:AF:92:LYS:CE	2.38	0.53
7:AG:37:ASN:ND2	9:AI:40:LEU:HA	2.24	0.53
9:AI:54:ASP:O	9:AI:56:LEU:N	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:56:LEU:C	9:AI:56:LEU:HD23	2.33	0.53
10:AJ:6:ILE:HD11	10:AJ:72:VAL:CG2	2.39	0.53
10:AJ:16:LEU:HD12	10:AJ:70:ARG:HD3	1.91	0.53
10:AJ:61:GLU:OE2	14:AN:49:HIS:CE1	2.59	0.53
12:AL:45:PRO:HG2	12:AL:51:ALA:HB3	1.90	0.53
14:AN:32:SER:O	14:AN:40:CYS:HA	2.08	0.53
16:AP:74:LEU:CD2	16:AP:79:VAL:HG21	2.38	0.53
25:AY:35:TYR:HH	25:AY:266:ASN:HB3	1.73	0.53
25:AY:421:GLN:NE2	25:AY:421:GLN:O	2.41	0.53
32:B6:35:GLU:HB3	32:B6:51:GLU:HB2	1.91	0.53
35:B9:1:MET:HG3	36:BA:2478:A:OP2	2.08	0.53
36:BA:285:C:O2'	36:BA:286:C:H5''	2.09	0.53
36:BA:528:A:C2	36:BA:2043:C:H4'	2.44	0.53
36:BA:637:A:OP2	47:BP:115:LEU:HB2	2.08	0.53
36:BA:1116:C:H2'	36:BA:1117:G:H8	1.71	0.53
36:BA:1132:A:C4	36:BA:1133:U:C5	2.96	0.53
36:BA:1278:A:O3'	49:BR:34:ILE:HG23	2.08	0.53
37:BB:54:G:O2'	37:BB:55:U:H5'	2.07	0.53
38:BC:73:VAL:HG13	38:BC:158:LYS:HG2	1.90	0.53
40:BE:50:GLY:HA2	40:BE:78:LEU:HB3	1.90	0.53
43:BH:50:VAL:HG12	43:BH:51:ARG:N	2.23	0.53
43:BH:155:SER:O	43:BH:157:TYR:N	2.42	0.53
46:BO:2:ILE:HD11	46:BO:82:ASN:HD22	1.72	0.53
48:BQ:58:PHE:HD1	48:BQ:58:PHE:O	1.92	0.53
57:BZ:61:LEU:C	57:BZ:63:ASP:H	2.16	0.53
1:CA:603:U:H2'	1:CA:604:G:H8	1.73	0.53
1:CA:646:U:H2'	1:CA:647:C:C6	2.44	0.53
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.07	0.53
1:CA:936:C:H2'	1:CA:937:A:O4'	2.08	0.53
2:CB:235:SER:C	2:CB:237:ALA:H	2.14	0.53
4:CD:33:MET:O	4:CD:37:PRO:HG3	2.08	0.53
18:CR:55:ARG:HH11	18:CR:55:ARG:HG3	1.73	0.53
25:CY:392:GLU:HG3	25:CY:393:ASP:OD2	2.08	0.53
25:CY:548:GLU:O	25:CY:548:GLU:HG2	2.07	0.53
30:D4:8:LYS:O	30:D4:9:LEU:HB2	2.07	0.53
30:D4:22:ILE:HG22	30:D4:23:GLU:N	2.23	0.53
34:D8:33:ASN:HA	34:D8:36:LYS:HG3	1.89	0.53
36:DA:52:A:O2'	36:DA:53:A:H5'	2.09	0.53
36:DA:688:U:H2'	36:DA:689:A:H8	1.74	0.53
36:DA:1678:G:N2	36:DA:1989:G:N2	2.56	0.53
36:DA:2309:A:H2'	36:DA:2310:A:H5''	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:101:ILE:O	38:DC:105:LEU:HB2	2.08	0.53
38:DC:218:THR:HG22	38:DC:219:MET:SD	2.48	0.53
39:DD:35:LYS:CD	39:DD:36:PRO:N	2.67	0.53
39:DD:145:VAL:HG13	39:DD:191:ALA:HB2	1.90	0.53
39:DD:176:ARG:HH11	39:DD:176:ARG:HG2	1.72	0.53
41:DF:50:SER:CB	41:DF:94:PRO:HD3	2.38	0.53
43:DH:83:TYR:CB	43:DH:135:GLY:H	2.21	0.53
43:DH:85:LYS:NZ	43:DH:87:LEU:HG	2.23	0.53
45:DN:4:TYR:O	45:DN:5:VAL:C	2.52	0.53
45:DN:22:THR:O	45:DN:25:ARG:HB2	2.08	0.53
47:DP:127:ALA:HB3	47:DP:130:PHE:CZ	2.42	0.53
48:DQ:79:LEU:HD23	48:DQ:80:GLU:H	1.72	0.53
50:DS:12:PHE:C	50:DS:12:PHE:CD1	2.86	0.53
50:DS:95:HIS:CD2	50:DS:96:GLY:H	2.27	0.53
51:DT:3:ARG:O	51:DT:4:GLY:C	2.50	0.53
51:DT:50:ILE:CG1	51:DT:102:ILE:HD11	2.37	0.53
51:DT:65:LYS:HA	51:DT:65:LYS:HZ1	1.69	0.53
53:DV:19:LYS:HG2	53:DV:94:LEU:CB	2.38	0.53
55:DX:12:VAL:O	55:DX:13:LEU:HB2	2.08	0.53
55:DX:23:GLU:O	55:DX:25:LYS:N	2.40	0.53
56:DY:8:LYS:HE2	56:DY:72:VAL:O	2.08	0.53
57:DZ:163:LEU:HD23	57:DZ:163:LEU:N	2.14	0.53
1:AA:192:U:H2'	1:AA:193:C:H6	1.74	0.53
1:AA:392:G:H2'	1:AA:393:A:H8	1.72	0.53
1:AA:404:U:H2'	1:AA:405:U:C6	2.42	0.53
1:AA:636:U:H2'	1:AA:637:G:C8	2.44	0.53
1:AA:821:G:H2'	1:AA:822:C:H6	1.74	0.53
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.09	0.53
1:AA:1234:C:H1'	1:AA:1364:U:C6	2.43	0.53
1:AA:1442:G:H1	1:AA:1461:G:H21	1.56	0.53
3:AC:82:GLU:N	3:AC:82:GLU:OE1	2.42	0.53
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.36	0.53
6:AF:83:ASP:OD1	6:AF:83:ASP:N	2.41	0.53
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.90	0.53
13:AM:15:VAL:HA	13:AM:18:ALA:CB	2.37	0.53
14:AN:29:ARG:HG3	14:AN:29:ARG:NH1	2.21	0.53
16:AP:49:LEU:HD12	16:AP:50:LYS:H	1.73	0.53
19:AS:29:ARG:O	19:AS:31:ILE:N	2.41	0.53
25:AY:71:THR:HA	25:AY:79:ILE:O	2.09	0.53
25:AY:261:GLY:CA	25:AY:267:LYS:O	2.56	0.53
25:AY:304:ASP:C	25:AY:306:ASN:H	2.16	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:389:LEU:HD12	25:AY:389:LEU:N	2.23	0.53
29:B3:9:VAL:O	29:B3:31:LEU:HD21	2.09	0.53
31:B5:58:LEU:HD13	31:B5:58:LEU:C	2.34	0.53
32:B6:27:LYS:HB3	32:B6:32:ASN:ND2	2.23	0.53
33:B7:35:ARG:HG2	33:B7:35:ARG:NH1	2.22	0.53
36:BA:175:G:O2'	36:BA:176:G:H5'	2.09	0.53
36:BA:1461:G:O2'	36:BA:1462:C:H5'	2.08	0.53
36:BA:2037:G:H2'	36:BA:2038:G:C8	2.44	0.53
40:BE:176:ILE:HG22	40:BE:178:GLU:HB3	1.90	0.53
41:BF:64:ILE:HG22	41:BF:76:GLY:O	2.08	0.53
41:BF:123:LEU:CD1	41:BF:192:LEU:HD22	2.39	0.53
42:BG:97:ASP:O	42:BG:101:ILE:HG13	2.08	0.53
43:BH:19:VAL:HG12	43:BH:20:ALA:N	2.20	0.53
43:BH:29:PRO:C	43:BH:30:LYS:HE2	2.34	0.53
48:BQ:24:GLY:O	48:BQ:102:VAL:HG23	2.07	0.53
49:BR:106:GLY:O	49:BR:107:ASP:HB3	2.08	0.53
51:BT:28:VAL:HG21	51:BT:46:GLU:OE1	2.07	0.53
54:BW:36:LEU:HD11	54:BW:47:VAL:HG12	1.91	0.53
56:BY:2:ARG:C	56:BY:4:LYS:H	2.16	0.53
1:CA:376:G:H2'	1:CA:377:G:C8	2.36	0.53
1:CA:392:G:H2'	1:CA:393:A:H8	1.73	0.53
1:CA:815:A:H62	1:CA:1509:C:H1'	1.72	0.53
1:CA:920:U:H1'	1:CA:1080:A:C2	2.43	0.53
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.43	0.53
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.44	0.53
2:CB:51:LEU:HD23	2:CB:55:PHE:HE2	1.74	0.53
4:CD:2:GLY:O	4:CD:4:TYR:N	2.41	0.53
9:CI:35:GLU:HA	9:CI:38:GLN:HB2	1.90	0.53
9:CI:45:ALA:O	9:CI:48:GLU:HB2	2.09	0.53
22:CV:29:G:N2	22:CV:42:C:H1'	2.23	0.53
25:CY:689:LYS:HG3	25:CY:690:GLY:N	2.24	0.53
27:D1:17:SER:C	27:D1:18:ILE:HD12	2.34	0.53
30:D4:25:TYR:O	30:D4:26:SER:HB3	2.08	0.53
36:DA:58:G:H1	36:DA:69:C:H42	1.56	0.53
36:DA:229:A:OP1	36:DA:229:A:H8	1.90	0.53
36:DA:322:A:H5'	36:DA:340:A:H1'	1.90	0.53
36:DA:665:C:H2'	36:DA:666:G:H8	1.74	0.53
36:DA:1035:U:H2'	36:DA:1036:G:C8	2.44	0.53
36:DA:1132:A:H2'	36:DA:1133:U:C6	2.43	0.53
36:DA:1149:G:H2'	36:DA:1150:C:C6	2.44	0.53
36:DA:2208:A:H1'	36:DA:2219:G:C4	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2481:G:O2'	36:DA:2482:G:P	2.67	0.53
38:DC:71:LYS:HG2	38:DC:72:GLN:N	2.15	0.53
41:DF:123:LEU:CD1	41:DF:192:LEU:HD22	2.39	0.53
42:DG:51:ARG:CZ	42:DG:53:LEU:CD2	2.85	0.53
42:DG:63:ILE:HG23	42:DG:143:GLU:HB2	1.90	0.53
42:DG:133:LEU:HD12	42:DG:133:LEU:C	2.32	0.53
42:DG:152:LEU:HD23	42:DG:152:LEU:H	1.73	0.53
44:DJ:62:UNK:C	44:DJ:64:UNK:N	2.70	0.53
49:DR:100:LEU:HD22	49:DR:100:LEU:N	2.20	0.53
50:DS:98:VAL:HG12	50:DS:100:ALA:N	2.21	0.53
51:DT:36:GLU:HG2	51:DT:36:GLU:O	2.07	0.53
52:DU:49:HIS:C	52:DU:52:ARG:HB2	2.34	0.53
1:AA:1404:C:H1'	1:AA:1499:A:C6	2.43	0.53
2:AB:24:TRP:HA	2:AB:190:THR:O	2.09	0.53
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.08	0.53
2:AB:69:LEU:HD12	2:AB:70:PHE:N	2.23	0.53
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.08	0.53
10:AJ:63:PHE:CD1	10:AJ:63:PHE:N	2.72	0.53
10:AJ:78:ASN:C	10:AJ:79:ARG:NH1	2.67	0.53
19:AS:43:GLU:HB2	19:AS:44:MET:SD	2.48	0.53
19:AS:44:MET:HB3	19:AS:47:HIS:HD2	1.74	0.53
25:AY:86:GLY:O	25:AY:87:HIS:HB3	2.08	0.53
25:AY:88:VAL:O	25:AY:89:ASP:C	2.50	0.53
25:AY:294:PRO:HG2	25:AY:295:GLU:OE2	2.08	0.53
25:AY:680:PRO:O	25:AY:682:GLN:N	2.38	0.53
29:B3:56:VAL:CG1	29:B3:57:GLU:N	2.71	0.53
31:B5:16:ARG:HH11	31:B5:20:ARG:HH12	1.57	0.53
36:BA:65:C:H5'	55:BX:71:GLY:HA3	1.90	0.53
36:BA:883:G:H2'	36:BA:884:C:O4'	2.08	0.53
36:BA:947:G:H2'	36:BA:948:G:C8	2.43	0.53
36:BA:1017:G:H2'	36:BA:1018:C:H6	1.73	0.53
36:BA:1463:C:H2'	36:BA:1464:C:H6	1.74	0.53
36:BA:2192:G:C2'	36:BA:2193:G:H5''	2.38	0.53
36:BA:2345:G:C4'	36:BA:2346:A:H5'	2.39	0.53
36:BA:2704:C:O2'	36:BA:2705:A:H5'	2.08	0.53
37:BB:65:C:H2'	37:BB:109:C:H41	1.72	0.53
41:BF:195:ASP:HB3	41:BF:198:ALA:CB	2.38	0.53
42:BG:55:LYS:HA	42:BG:58:GLN:HG3	1.91	0.53
45:BN:46:VAL:CG1	45:BN:47:ALA:H	2.15	0.53
51:BT:23:ARG:HB2	51:BT:24:PRO:HD2	1.90	0.53
51:BT:50:ILE:HA	51:BT:99:LEU:CD1	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BV:18:LEU:HD13	53:BV:19:LYS:H	1.73	0.53
56:BY:84:ARG:HD2	56:BY:97:ARG:HD2	1.89	0.53
56:BY:86:ARG:CZ	56:BY:95:LYS:HD2	2.39	0.53
1:CA:502:G:H2'	1:CA:503:C:O4'	2.07	0.53
1:CA:626:U:H5'	1:CA:627:G:OP2	2.08	0.53
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.61	0.53
2:CB:82:ARG:O	2:CB:86:GLU:HG3	2.07	0.53
3:CC:186:PHE:HA	3:CC:198:VAL:O	2.09	0.53
13:CM:4:ILE:O	13:CM:5:ALA:C	2.52	0.53
15:CO:74:ASP:C	15:CO:76:GLU:H	2.15	0.53
19:CS:6:LYS:HG2	19:CS:7:LYS:CE	2.39	0.53
25:CY:88:VAL:O	25:CY:90:PHE:HD1	1.90	0.53
25:CY:92:ILE:CG2	25:CY:93:GLU:N	2.71	0.53
25:CY:103:GLY:HA2	25:CY:130:VAL:HG22	1.91	0.53
25:CY:193:GLY:HA3	25:CY:266:ASN:CB	2.37	0.53
31:D5:45:VAL:HG22	31:D5:51:TYR:CD2	2.44	0.53
32:D6:47:THR:CG2	32:D6:49:HIS:CE1	2.92	0.53
34:D8:33:ASN:H	34:D8:33:ASN:HD22	0.71	0.53
36:DA:222:A:H5''	36:DA:421:U:OP1	2.07	0.53
36:DA:1277:G:O2'	49:DR:24:GLN:HG2	2.07	0.53
36:DA:1669:A:H4'	36:DA:2549:G:H4'	1.90	0.53
36:DA:2230:G:H2'	36:DA:2231:C:H6	1.73	0.53
36:DA:2787:C:H1'	40:DE:61:ARG:HG3	1.90	0.53
41:DF:40:GLN:OE1	41:DF:184:TYR:HB2	2.08	0.53
41:DF:160:ASN:HD22	41:DF:160:ASN:C	2.15	0.53
41:DF:170:LEU:HB2	41:DF:173:VAL:CB	2.38	0.53
43:DH:50:VAL:HG12	43:DH:51:ARG:N	2.23	0.53
43:DH:89:ILE:HD13	43:DH:94:TYR:HB3	1.90	0.53
46:DO:87:ILE:HD13	46:DO:87:ILE:H	1.74	0.53
46:DO:104:ARG:HH21	51:DT:33:LYS:HE3	1.73	0.53
49:DR:38:VAL:HB	49:DR:39:PRO:CD	2.31	0.53
50:DS:15:ARG:O	50:DS:18:ILE:HG13	2.08	0.53
51:DT:125:ARG:HH11	51:DT:125:ARG:CA	2.11	0.53
53:DV:40:LEU:HD22	53:DV:40:LEU:N	2.24	0.53
56:DY:31:LEU:HD23	56:DY:36:ALA:H	1.72	0.53
1:AA:236:G:O2'	1:AA:237:C:H5'	2.08	0.53
1:AA:662:G:H2'	1:AA:663:A:C8	2.44	0.53
1:AA:1037:C:H2'	1:AA:1038:C:N3	2.23	0.53
1:AA:1119:C:O2'	1:AA:1120:G:H5'	2.09	0.53
1:AA:1392:G:N2	1:AA:1502:A:H8	2.07	0.53
4:AD:127:THR:HG22	4:AD:147:ALA:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:154:ASN:O	4:AD:155:LEU:HD23	2.08	0.53
4:AD:163:GLU:C	4:AD:165:MET:N	2.66	0.53
4:AD:173:TRP:CE2	4:AD:189:PRO:HB3	2.44	0.53
8:AH:120:THR:HG23	8:AH:123:GLU:OE1	2.08	0.53
13:AM:4:ILE:O	13:AM:5:ALA:C	2.51	0.53
17:AQ:15:MET:HE1	17:AQ:43:LEU:HD21	1.89	0.53
22:AV:72:C:O2	22:AV:72:C:H2'	2.09	0.53
25:AY:117:GLN:HA	25:AY:119:GLU:HG3	1.90	0.53
25:AY:289:ILE:HG13	25:AY:331:TYR:CG	2.44	0.53
26:B0:7:LEU:CD1	48:BQ:85:LYS:HE2	2.38	0.53
30:B4:1:MET:HA	30:B4:6:HIS:CE1	2.43	0.53
30:B4:13:ARG:HH11	30:B4:13:ARG:HB3	1.73	0.53
36:BA:363(A):A:H2'	36:BA:363(B):G:C8	2.44	0.53
36:BA:444:C:H2'	36:BA:445:C:C6	2.44	0.53
36:BA:1064:C:H42	36:BA:1074:G:H1	1.57	0.53
36:BA:1141:U:H5''	45:BN:63:THR:HG23	1.89	0.53
36:BA:1438:U:O2'	36:BA:1439:A:H5'	2.09	0.53
36:BA:1491:G:O2'	39:BD:101:GLU:HB2	2.09	0.53
36:BA:1654:A:O2'	40:BE:113:PHE:O	2.26	0.53
36:BA:1719:G:C2'	36:BA:1720:U:H5'	2.37	0.53
36:BA:1773:A:H2	36:BA:1977:A:N1	2.06	0.53
36:BA:1815:A:H1'	36:BA:1817:G:C8	2.44	0.53
36:BA:2011:U:H2'	36:BA:2012:G:H5'	1.91	0.53
36:BA:2488:A:O2'	36:BA:2489:G:H5'	2.09	0.53
37:BB:112:U:H2'	37:BB:113:G:C8	2.41	0.53
38:BC:4:HIS:CE1	38:BC:8:TYR:HE2	2.26	0.53
39:BD:92:ILE:HD13	39:BD:92:ILE:H	1.73	0.53
39:BD:133:LEU:HD22	39:BD:165:ILE:HD11	1.90	0.53
40:BE:7:VAL:HG12	40:BE:27:LEU:HB3	1.91	0.53
40:BE:49:LEU:N	40:BE:49:LEU:CD2	2.71	0.53
42:BG:95:ARG:O	42:BG:96:ARG:HG2	2.08	0.53
49:BR:18:LEU:C	49:BR:18:LEU:HD23	2.34	0.53
49:BR:82:GLU:O	49:BR:86:ARG:HG3	2.08	0.53
52:BU:59:ARG:O	52:BU:62:ILE:N	2.41	0.53
53:BV:39:LEU:N	53:BV:39:LEU:HD22	2.23	0.53
55:BX:12:VAL:HB	55:BX:17:ALA:CB	2.20	0.53
56:BY:2:ARG:CD	56:BY:3:VAL:HG23	2.38	0.53
57:BZ:79:ARG:O	57:BZ:80:ARG:CB	2.54	0.53
57:BZ:153:SER:HB2	57:BZ:163:LEU:CD1	2.39	0.53
1:CA:109:A:C6	1:CA:326:G:C6	2.97	0.53
1:CA:521:G:H4'	12:CL:73:GLU:HG3	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.43	0.53
3:CC:86:VAL:O	3:CC:89:GLU:HB3	2.08	0.53
3:CC:181:ASN:ND2	3:CC:204:LEU:HB2	2.23	0.53
4:CD:192:GLU:CD	4:CD:192:GLU:N	2.65	0.53
5:CE:101:ILE:N	5:CE:101:ILE:HD13	2.23	0.53
9:CI:56:LEU:HD23	9:CI:56:LEU:C	2.34	0.53
10:CJ:4:ILE:HB	10:CJ:74:ILE:HG13	1.91	0.53
10:CJ:81:THR:C	10:CJ:83:GLU:N	2.65	0.53
19:CS:36:ARG:NH1	19:CS:52:TYR:O	2.41	0.53
19:CS:37:ARG:O	19:CS:70:LYS:HD2	2.09	0.53
21:CU:8:THR:O	21:CU:12:LYS:HB2	2.08	0.53
25:CY:313:ALA:CA	25:CY:328:ILE:HG22	2.37	0.53
25:CY:329:ARG:HG2	25:CY:331:TYR:OH	2.08	0.53
25:CY:550:MET:HE3	25:CY:563:ILE:CD1	2.39	0.53
32:D6:35:GLU:HB3	32:D6:51:GLU:HB2	1.88	0.53
36:DA:748:G:O6	36:DA:751:A:H4'	2.09	0.53
36:DA:1827:C:H2'	36:DA:1828:G:O4'	2.09	0.53
36:DA:2131:G:H5'	36:DA:2133:G:C1'	2.39	0.53
36:DA:2502:G:H5''	36:DA:2503:A:H5''	1.90	0.53
36:DA:2839:G:H2'	36:DA:2840:C:C6	2.43	0.53
38:DC:197:LEU:O	38:DC:200:HIS:N	2.41	0.53
40:DE:95:ILE:N	40:DE:95:ILE:HD13	2.24	0.53
41:DF:89:VAL:O	41:DF:91:GLY:N	2.31	0.53
43:DH:54:ARG:HH11	43:DH:54:ARG:HG2	1.74	0.53
43:DH:83:TYR:HB3	43:DH:135:GLY:N	2.22	0.53
45:DN:58:ASP:C	45:DN:60:ILE:N	2.57	0.53
45:DN:62:VAL:O	45:DN:62:VAL:HG13	2.08	0.53
45:DN:120:LEU:CD1	45:DN:122:VAL:HG23	2.38	0.53
52:DU:50:ARG:HH21	53:DV:70:ILE:CG2	2.21	0.53
1:AA:59:A:H5''	1:AA:60:A:H5'	1.90	0.53
1:AA:399:G:H2'	1:AA:400:C:C6	2.44	0.53
1:AA:502:G:H2'	1:AA:503:C:O4'	2.09	0.53
1:AA:673:G:H2'	1:AA:674:G:C8	2.44	0.53
1:AA:1004:A:H5'	1:AA:1025:U:C4	2.43	0.53
1:AA:1313:U:OP2	19:AS:6:LYS:CB	2.57	0.53
2:AB:86:GLU:C	2:AB:88:ALA:H	2.16	0.53
2:AB:213:LEU:HD23	2:AB:213:LEU:C	2.33	0.53
3:AC:70:VAL:CG1	3:AC:71:ALA:N	2.72	0.53
4:AD:173:TRP:HB2	4:AD:187:ARG:O	2.09	0.53
6:AF:86:ARG:O	6:AF:87:ARG:HG2	2.09	0.53
18:AR:44:LEU:HD12	18:AR:44:LEU:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:227:ILE:HG23	25:AY:237:PRO:CB	2.38	0.53
25:AY:621:ILE:CG2	25:AY:631:ILE:HG12	2.27	0.53
25:AY:664:GLN:HG2	36:BA:2660:A:OP1	2.08	0.53
27:B1:32:LYS:C	27:B1:33:LYS:HG3	2.34	0.53
27:B1:46:LEU:HB3	27:B1:63:ALA:CA	2.35	0.53
30:B4:13:ARG:HB3	30:B4:13:ARG:NH1	2.24	0.53
30:B4:49:PHE:O	30:B4:50:VAL:O	2.27	0.53
32:B6:40:CYS:HB2	32:B6:46:HIS:ND1	2.23	0.53
34:B8:39:LYS:HE3	36:BA:2365:G:O6	2.09	0.53
36:BA:428:A:H3'	36:BA:429:A:H8	1.74	0.53
36:BA:613:G:H5'	36:BA:613:G:C8	2.41	0.53
36:BA:818:G:OP2	36:BA:1187:G:O6	2.26	0.53
36:BA:2329:G:H2'	36:BA:2330:G:H8	1.74	0.53
36:BA:2346:A:H1'	36:BA:2383:G:N9	2.23	0.53
38:BC:65:LEU:HD13	38:BC:189:ASN:ND2	2.23	0.53
38:BC:176:VAL:HG21	38:BC:190:ILE:HD13	1.91	0.53
38:BC:182:PRO:HD2	38:BC:185:LYS:HG2	1.90	0.53
39:BD:261:LYS:HZ1	39:BD:263:ARG:HH22	1.56	0.53
42:BG:77:ILE:O	42:BG:77:ILE:CG2	2.56	0.53
45:BN:51:PHE:H	45:BN:51:PHE:HD1	1.56	0.53
47:BP:45:LEU:HG	47:BP:46:LYS:H	1.73	0.53
47:BP:75:ILE:CG2	47:BP:77:ARG:HH21	2.22	0.53
56:BY:61:ILE:HG12	56:BY:62:GLU:N	2.24	0.53
57:BZ:119:GLU:O	57:BZ:121:HIS:N	2.41	0.53
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.90	0.53
1:CA:1318:A:H2'	1:CA:1319:A:H5'	1.91	0.53
2:CB:77:ALA:O	2:CB:78:GLN:C	2.51	0.53
6:CF:83:ASP:N	6:CF:83:ASP:OD1	2.42	0.53
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.91	0.53
11:CK:59:TYR:CE2	11:CK:63:LEU:HD11	2.43	0.53
11:CK:108:ILE:N	11:CK:108:ILE:CD1	2.71	0.53
12:CL:45:PRO:HG2	12:CL:51:ALA:HB3	1.90	0.53
14:CN:18:VAL:HG23	14:CN:19:ARG:N	2.24	0.53
20:CT:93:GLU:C	20:CT:95:ALA:N	2.65	0.53
31:D5:16:ARG:HH11	31:D5:20:ARG:HH12	1.57	0.53
32:D6:45:LYS:HE3	36:DA:2371:G:H5''	1.90	0.53
36:DA:637:A:OP2	47:DP:115:LEU:HB2	2.09	0.53
36:DA:1494:A:O2'	36:DA:1495:A:C5'	2.47	0.53
36:DA:1657:C:O2'	36:DA:1658:C:H5'	2.07	0.53
36:DA:2206:G:H3'	36:DA:2206:G:N3	2.24	0.53
36:DA:2346:A:H1'	36:DA:2383:G:N9	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2467:C:O2	48:DQ:124:LYS:NZ	2.41	0.53
36:DA:2506:U:H4'	36:DA:2507:C:OP1	2.09	0.53
36:DA:2657:A:H2'	36:DA:2658:C:H5'	1.89	0.53
39:DD:72:LYS:HG3	39:DD:103:ARG:HH21	1.74	0.53
41:DF:198:ALA:O	41:DF:201:VAL:HG12	2.09	0.53
42:DG:173:LEU:O	42:DG:178:PHE:HB2	2.09	0.53
49:DR:10:LEU:CD2	49:DR:17:ARG:HD3	2.34	0.53
49:DR:17:ARG:O	49:DR:20:LEU:HB3	2.09	0.53
51:DT:107:ASP:CG	51:DT:108:ARG:H	2.15	0.53
55:DX:26:TYR:HD2	55:DX:92:LEU:HD12	1.73	0.53
56:DY:2:ARG:N	56:DY:4:LYS:HG2	2.23	0.53
56:DY:84:ARG:HD2	56:DY:97:ARG:HD2	1.91	0.53
57:DZ:14:LYS:O	57:DZ:16:SER:N	2.41	0.53
1:AA:45:U:H2'	1:AA:46:G:H8	1.74	0.53
1:AA:63:C:O2'	1:AA:380:G:H4'	2.09	0.53
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.61	0.53
2:AB:11:LEU:HD11	2:AB:217:ARG:NH2	2.23	0.53
4:AD:29:PRO:C	4:AD:30:LYS:HG2	2.34	0.53
9:AI:8:GLY:O	9:AI:9:ARG:HG3	2.09	0.53
9:AI:11:LYS:O	9:AI:11:LYS:HG2	2.09	0.53
9:AI:35:GLU:HA	9:AI:38:GLN:HB2	1.90	0.53
12:AL:32:PHE:CE1	12:AL:86:ARG:HG3	2.39	0.53
13:AM:34:LEU:HD13	13:AM:41:PRO:CG	2.39	0.53
15:AO:71:GLN:O	15:AO:71:GLN:HG2	2.09	0.53
23:AW:31:G:H5'	23:AW:31:G:C8	2.40	0.53
25:AY:147:TRP:HB2	25:AY:151:ARG:NE	2.23	0.53
25:AY:272:LEU:O	25:AY:276:VAL:HG23	2.09	0.53
25:AY:329:ARG:HD3	25:AY:374:LEU:CD1	2.38	0.53
25:AY:384:ILE:O	25:AY:385:THR:C	2.51	0.53
26:B0:43:THR:HG23	26:B0:43:THR:O	2.08	0.53
29:B3:32:GLN:HG3	36:BA:1158:C:O2'	2.09	0.53
31:B5:3:LYS:CE	36:BA:2613:U:H2'	2.38	0.53
31:B5:7:PRO:HG2	36:BA:2016:U:O2	2.08	0.53
36:BA:185:U:H2'	36:BA:186:G:C8	2.44	0.53
36:BA:2329:G:H2'	36:BA:2330:G:C8	2.43	0.53
36:BA:2695:C:H2'	36:BA:2696:U:C6	2.43	0.53
38:BC:97:GLY:H	38:BC:100:ILE:HG12	1.73	0.53
39:BD:72:LYS:HE3	39:BD:101:GLU:HB3	1.90	0.53
41:BF:107:LYS:O	41:BF:110:LEU:N	2.42	0.53
42:BG:47:LYS:HB3	42:BG:81:LYS:HD3	1.90	0.53
42:BG:55:LYS:HD3	42:BG:58:GLN:HE21	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:126:PRO:HG2	43:BH:127:GLU:H	1.72	0.53
45:BN:22:THR:O	45:BN:25:ARG:HB2	2.09	0.53
46:BO:79:PHE:HB3	51:BT:70:VAL:HG11	1.90	0.53
47:BP:25:SER:O	47:BP:30:THR:HG23	2.09	0.53
48:BQ:10:ARG:HB2	48:BQ:10:ARG:HH11	1.74	0.53
49:BR:92:GLY:HA2	49:BR:94:TYR:CE1	2.44	0.53
50:BS:24:LEU:CB	50:BS:85:VAL:HG12	2.32	0.53
1:CA:538:G:H2'	1:CA:539:A:H8	1.74	0.53
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.43	0.53
3:CC:11:ARG:O	3:CC:13:GLY:N	2.42	0.53
20:CT:42:GLN:NE2	20:CT:42:GLN:CA	2.70	0.53
25:CY:490:PRO:CG	25:CY:516:PRO:HD2	2.22	0.53
25:CY:609:GLU:HG2	25:CY:670:VAL:HG21	1.90	0.53
36:DA:154(A):C:H3'	36:DA:155:U:H5''	1.90	0.53
36:DA:654(A):G:C2'	36:DA:654(B):C:H5'	2.39	0.53
36:DA:674:G:C1'	41:DF:74:ARG:HD3	2.32	0.53
36:DA:688:U:C4'	36:DA:1780:A:H2	2.22	0.53
36:DA:777:A:H2'	36:DA:778:G:H8	1.74	0.53
36:DA:821:A:H2'	36:DA:946:G:H5''	1.91	0.53
36:DA:997:G:OP1	52:DU:93:LYS:HD3	2.09	0.53
36:DA:1310:G:C2'	36:DA:1311:G:H5'	2.39	0.53
36:DA:1675:C:H2'	36:DA:1676:A:O4'	2.09	0.53
36:DA:1748:G:H5'	36:DA:1748:G:C8	2.37	0.53
36:DA:2193:G:H8	36:DA:2193:G:H5'	1.73	0.53
36:DA:2869:G:H2'	36:DA:2870:C:C6	2.44	0.53
38:DC:223:VAL:HG12	38:DC:223:VAL:O	2.08	0.53
42:DG:77:ILE:HG21	42:DG:80:PHE:CB	2.35	0.53
42:DG:172:LEU:O	42:DG:176:LEU:HD12	2.08	0.53
45:DN:131:GLN:NE2	45:DN:133:GLN:N	2.57	0.53
47:DP:112:LEU:O	47:DP:128:HIS:HB2	2.08	0.53
50:DS:12:PHE:O	50:DS:14:VAL:N	2.42	0.53
51:DT:57:PHE:O	51:DT:58:ASN:C	2.52	0.53
51:DT:70:VAL:HG12	51:DT:71:GLY:N	2.24	0.53
52:DU:59:ARG:O	52:DU:62:ILE:N	2.42	0.53
53:DV:17:GLY:O	53:DV:18:LEU:HB3	2.09	0.53
53:DV:66:ARG:HG2	53:DV:88:ARG:HE	1.73	0.53
55:DX:60:ARG:HA	55:DX:75:ASP:OD2	2.09	0.53
56:DY:2:ARG:C	56:DY:4:LYS:H	2.17	0.53
1:AA:119:A:O2'	1:AA:120:A:OP2	2.20	0.53
1:AA:539:A:H2'	1:AA:540:G:H8	1.72	0.53
1:AA:711:G:O2'	1:AA:712:A:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1116:C:C2'	1:AA:1117:G:C5'	2.87	0.53
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.74	0.53
1:AA:1168:A:OP1	1:AA:1168:A:H8	1.92	0.53
2:AB:219:VAL:O	2:AB:223:ILE:HG13	2.09	0.53
2:AB:236:TYR:HA	2:AB:239:VAL:HG23	1.89	0.53
4:AD:11:LEU:O	4:AD:12:CYS:C	2.51	0.53
5:AE:34:VAL:HG12	5:AE:62:ALA:HB1	1.91	0.53
7:AG:139:GLU:O	7:AG:143:ARG:HG3	2.09	0.53
8:AH:103:VAL:HG23	8:AH:110:ALA:HB2	1.90	0.53
9:AI:79:LEU:C	9:AI:79:LEU:HD13	2.34	0.53
9:AI:112:LYS:HA	9:AI:119:ALA:CB	2.19	0.53
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.39	0.53
23:AW:4:G:O2'	23:AW:5:G:H8	1.92	0.53
25:AY:150:ILE:CD1	25:AY:163:VAL:HG22	2.38	0.53
25:AY:193:GLY:N	25:AY:266:ASN:HD22	2.07	0.53
25:AY:485:GLU:O	25:AY:560:VAL:HA	2.08	0.53
32:B6:27:LYS:HB3	32:B6:30:THR:CG2	2.39	0.53
36:BA:154(A):C:N4	36:BA:172:C:H42	2.06	0.53
36:BA:267:C:H2'	36:BA:268:C:H6	1.74	0.53
36:BA:528:A:H2	36:BA:2043:C:C4'	2.21	0.53
36:BA:559:G:N2	52:BU:49:HIS:CD2	2.77	0.53
36:BA:665:C:H2'	36:BA:666:G:H8	1.74	0.53
36:BA:671:C:O2'	36:BA:672:C:H5'	2.09	0.53
36:BA:825:C:O2'	36:BA:826:U:H5'	2.08	0.53
36:BA:1257:C:H2'	36:BA:1258:C:C6	2.43	0.53
36:BA:1537:G:H2'	36:BA:1538:G:C8	2.44	0.53
36:BA:2240:C:O2'	36:BA:2241:A:H5'	2.09	0.53
36:BA:2415:G:H2'	36:BA:2416:C:C6	2.43	0.53
36:BA:2712:U:O2'	36:BA:2712(A):A:O5'	2.27	0.53
46:BO:2:ILE:HD11	46:BO:82:ASN:HB3	1.90	0.53
48:BQ:50:ALA:O	48:BQ:51:ARG:C	2.51	0.53
50:BS:97:ARG:NE	50:BS:97:ARG:O	2.42	0.53
51:BT:16:ARG:H	51:BT:79:HIS:CD2	2.20	0.53
51:BT:36:GLU:HG2	51:BT:36:GLU:O	2.09	0.53
53:BV:79:VAL:HG12	53:BV:79:VAL:O	2.07	0.53
56:BY:8:LYS:HE2	56:BY:72:VAL:O	2.09	0.53
1:CA:45:U:H2'	1:CA:46:G:C8	2.44	0.53
1:CA:713:G:H2'	1:CA:714:G:C8	2.43	0.53
1:CA:742:G:OP1	15:CO:59:MET:HE2	2.09	0.53
1:CA:1006:C:H2'	1:CA:1007:C:C5	2.44	0.53
1:CA:1300:G:O2'	1:CA:1301:U:P	2.67	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1308:U:H5'	13:CM:98:VAL:CG2	2.39	0.53
1:CA:1347:G:O2'	1:CA:1348:U:P	2.66	0.53
1:CA:1452:C:H1'	1:CA:1456:G:N2	2.24	0.53
6:CF:19:LEU:HD23	6:CF:19:LEU:C	2.33	0.53
18:CR:87:ARG:NH1	18:CR:87:ARG:CB	2.71	0.53
20:CT:13:LEU:O	20:CT:16:HIS:N	2.42	0.53
20:CT:30:LYS:HZ2	20:CT:34:LYS:HE3	1.73	0.53
25:CY:19:ALA:O	25:CY:87:HIS:HB2	2.09	0.53
25:CY:92:ILE:HD13	25:CY:92:ILE:C	2.34	0.53
25:CY:181:LEU:HD12	25:CY:242:LEU:HD13	1.91	0.53
25:CY:539:ILE:HA	25:CY:542:VAL:CG1	2.38	0.53
28:D2:69:ARG:CG	28:D2:70:GLN:N	2.71	0.53
29:D3:59:VAL:CG1	29:D3:60:GLU:N	2.72	0.53
30:D4:39:CYS:SG	30:D4:42:PHE:CD2	3.01	0.53
30:D4:48:ARG:HH21	30:D4:49:PHE:HE1	1.57	0.53
30:D4:55:ARG:HH21	30:D4:56:VAL:HG22	1.73	0.53
32:D6:40:CYS:HB2	32:D6:46:HIS:ND1	2.24	0.53
36:DA:145:G:H2'	36:DA:146:G:C8	2.43	0.53
36:DA:363(F):A:H1'	36:DA:364:C:H5	1.74	0.53
36:DA:845:G:OP2	36:DA:845:G:H8	1.91	0.53
36:DA:2688:U:H1'	36:DA:2721:A:N6	2.24	0.53
36:DA:2811:G:H2'	36:DA:2812:G:C8	2.44	0.53
37:DB:68:C:H2'	37:DB:69:G:H8	1.73	0.53
37:DB:91:C:H5'	48:DQ:17:LEU:O	2.09	0.53
39:DD:94:LEU:HD23	39:DD:95:LEU:N	2.23	0.53
40:DE:49:LEU:N	40:DE:49:LEU:CD2	2.72	0.53
46:DO:60:ALA:HA	46:DO:87:ILE:HD13	1.91	0.53
47:DP:115:LEU:HA	47:DP:134:ALA:CB	2.35	0.53
51:DT:42:ILE:O	51:DT:42:ILE:HG13	2.08	0.53
51:DT:75:ILE:N	51:DT:75:ILE:CD1	2.70	0.53
1:AA:999:C:H2'	1:AA:1000:U:C6	2.44	0.53
1:AA:1270:C:H2'	1:AA:1271:G:C8	2.43	0.53
5:AE:76:ILE:HG13	5:AE:77:PRO:HD2	1.91	0.53
5:AE:145:LYS:CA	8:AH:107:LEU:HD21	2.38	0.53
6:AF:47:ARG:HH11	6:AF:47:ARG:HG2	1.74	0.53
8:AH:6:ILE:HG21	8:AH:85:ARG:NH1	2.24	0.53
12:AL:8:ASN:HB2	17:AQ:34:LYS:HZ3	1.73	0.53
12:AL:20:LYS:HD3	12:AL:20:LYS:N	2.20	0.53
12:AL:78:GLN:O	12:AL:79:GLU:C	2.52	0.53
13:AM:81:LEU:N	13:AM:81:LEU:HD22	2.24	0.53
17:AQ:52:LYS:H	17:AQ:52:LYS:CE	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:58:VAL:O	19:AS:59:PRO:C	2.52	0.53
20:AT:36:LEU:HD12	20:AT:59:ALA:HB2	1.90	0.53
20:AT:42:GLN:NE2	20:AT:42:GLN:CA	2.71	0.53
23:AW:14:A:C3'	23:AW:15:G:C5'	2.83	0.53
25:AY:100:VAL:HG23	25:AY:329:ARG:HB2	1.88	0.53
25:AY:438:PHE:C	25:AY:438:PHE:HD1	2.17	0.53
25:AY:486:THR:HG23	25:AY:600:VAL:HG12	1.90	0.53
36:BA:92:A:H2'	36:BA:93:G:C8	2.44	0.53
36:BA:154(A):C:H3'	36:BA:155:U:H5''	1.91	0.53
36:BA:1156:A:O2'	36:BA:1157:G:OP1	2.24	0.53
36:BA:1204:A:H61	36:BA:1240:U:H2'	1.74	0.53
36:BA:2287:A:H2	36:BA:2346:A:C2	2.27	0.53
36:BA:2488:A:H2'	36:BA:2489:G:C8	2.44	0.53
36:BA:2735:G:H2'	36:BA:2736:G:H8	1.74	0.53
37:BB:94:C:H2'	37:BB:95:C:C6	2.44	0.53
38:BC:127:LYS:O	38:BC:128:LEU:HD22	2.09	0.53
39:BD:187:GLY:C	39:BD:189:CYS:H	2.16	0.53
40:BE:47:VAL:HG12	40:BE:48:GLN:N	2.12	0.53
42:BG:140:ILE:C	42:BG:140:ILE:HD12	2.34	0.53
45:BN:58:ASP:C	45:BN:60:ILE:N	2.58	0.53
47:BP:23:PRO:C	47:BP:33:ARG:CZ	2.81	0.53
47:BP:127:ALA:HB3	47:BP:130:PHE:CZ	2.44	0.53
51:BT:129:ARG:O	51:BT:129:ARG:CG	2.57	0.53
57:BZ:67:LEU:HD12	57:BZ:67:LEU:N	2.24	0.53
57:BZ:154:ASP:N	57:BZ:154:ASP:OD1	2.41	0.53
1:CA:939:G:C5'	7:CG:102:ARG:NH2	2.72	0.53
1:CA:1163:C:H2'	1:CA:1164:G:H8	1.74	0.53
3:CC:150:LYS:HB2	3:CC:169:ALA:CB	2.39	0.53
12:CL:47:LYS:CD	12:CL:48:PRO:HD3	2.39	0.53
25:CY:168:ILE:HB	25:CY:176:GLY:C	2.34	0.53
25:CY:592:GLU:O	25:CY:592:GLU:HG2	2.08	0.53
28:D2:31:GLU:HB3	28:D2:53:LEU:HD11	1.90	0.53
36:DA:503:A:H4'	36:DA:504:U:C5'	2.39	0.53
36:DA:586:A:C2	36:DA:1254:A:C2	2.96	0.53
36:DA:914:C:C2'	36:DA:915:C:H5'	2.34	0.53
36:DA:947:G:H2'	36:DA:948:G:C8	2.44	0.53
36:DA:1061:U:H4'	36:DA:1070:A:C1'	2.28	0.53
36:DA:1257:C:H2'	36:DA:1258:C:C6	2.44	0.53
36:DA:1655:A:C2	36:DA:2049:G:H4'	2.44	0.53
36:DA:2174:C:O2'	36:DA:2175:C:H5'	2.08	0.53
38:DC:34:ALA:HA	38:DC:40:GLU:OE2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:128:LEU:HD12	38:DC:132:LEU:CG	2.38	0.53
41:DF:61:GLY:O	41:DF:62:ARG:C	2.51	0.53
41:DF:154:VAL:HG13	41:DF:191:ARG:O	2.09	0.53
44:DJ:153:UNK:C	44:DJ:155:UNK:N	2.72	0.53
47:DP:80:TYR:CE1	47:DP:111:ARG:HG2	2.43	0.53
50:DS:103:GLU:O	50:DS:104:GLY:C	2.52	0.53
1:AA:276:G:O2'	1:AA:277:C:H5'	2.09	0.52
1:AA:932:C:H4'	7:AG:4:ARG:NH2	2.23	0.52
1:AA:1354:C:O2'	1:AA:1355:G:H5'	2.09	0.52
2:AB:82:ARG:O	2:AB:86:GLU:HG3	2.10	0.52
5:AE:88:LYS:HB3	5:AE:123:LEU:O	2.08	0.52
5:AE:143:ARG:NH1	8:AH:77:GLU:CD	2.67	0.52
12:AL:58:VAL:O	12:AL:65:GLU:HA	2.09	0.52
19:AS:72:GLY:O	19:AS:74:PHE:N	2.42	0.52
25:AY:204:GLU:O	25:AY:205:TYR:C	2.51	0.52
25:AY:217:VAL:O	25:AY:217:VAL:HG12	2.09	0.52
25:AY:409:ILE:O	25:AY:459:LEU:HD11	2.09	0.52
25:AY:616:TYR:O	25:AY:620:VAL:HG23	2.10	0.52
32:B6:37:ARG:HH22	36:BA:2286:A:H62	1.53	0.52
36:BA:271(J):C:H2'	36:BA:271(J):C:O2	2.08	0.52
36:BA:285:C:H2'	36:BA:286:C:C5'	2.39	0.52
36:BA:1539:G:N3	36:BA:1540:U:H1'	2.23	0.52
36:BA:2652:C:H42	36:BA:2668:G:H1	1.55	0.52
40:BE:63:LEU:O	40:BE:64:LYS:C	2.51	0.52
40:BE:95:ILE:N	40:BE:95:ILE:HD13	2.24	0.52
41:BF:114:VAL:HG21	41:BF:202:PHE:CE1	2.44	0.52
41:BF:198:ALA:O	41:BF:201:VAL:HG12	2.10	0.52
45:BN:16:ILE:O	45:BN:54:VAL:HA	2.09	0.52
45:BN:65:LYS:CB	45:BN:69:GLN:HG3	2.39	0.52
47:BP:35:HIS:O	47:BP:36:LYS:HB2	2.09	0.52
49:BR:12:ARG:HB3	49:BR:16:HIS:CD2	2.44	0.52
51:BT:3:ARG:O	51:BT:4:GLY:C	2.51	0.52
53:BV:5:VAL:HG22	53:BV:6:LYS:N	2.23	0.52
1:CA:999:C:H2'	1:CA:1000:U:C6	2.44	0.52
1:CA:1269:A:C2'	1:CA:1270:C:H5'	2.39	0.52
2:CB:63:MET:HB3	2:CB:225:ALA:HB1	1.91	0.52
2:CB:219:VAL:O	2:CB:223:ILE:HG13	2.09	0.52
9:CI:4:TYR:CE2	9:CI:88:TYR:CB	2.91	0.52
23:CW:51:C:H3'	23:CW:52:G:H5''	1.91	0.52
25:CY:146:LEU:O	25:CY:150:ILE:HG13	2.10	0.52
25:CY:191:ASP:O	25:CY:266:ASN:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:514:VAL:HG12	25:CY:515:GLU:N	2.24	0.52
27:D1:57:GLU:HG2	27:D1:58:ILE:N	2.24	0.52
28:D2:10:LEU:HD22	28:D2:14:ARG:NH2	2.24	0.52
34:D8:60:LEU:C	34:D8:63:PRO:HD2	2.34	0.52
36:DA:20:C:H2'	36:DA:21:A:C8	2.43	0.52
36:DA:110:G:H2'	36:DA:111:A:H8	1.74	0.52
36:DA:118:A:H1'	36:DA:178:G:O4'	2.09	0.52
36:DA:271(J):C:O2	36:DA:271(J):C:H2'	2.09	0.52
36:DA:533:G:H5''	52:DU:24:TYR:CD1	2.44	0.52
36:DA:583:G:H2'	36:DA:584:C:C6	2.42	0.52
36:DA:610:G:H22	36:DA:619:G:H1'	1.74	0.52
36:DA:1464:C:O2'	36:DA:1528:A:C8	2.59	0.52
36:DA:1798:U:OP2	39:DD:274:ARG:NH2	2.42	0.52
36:DA:1814:G:C3'	36:DA:1815:A:H5''	2.31	0.52
36:DA:2291:U:H2'	36:DA:2292:C:C6	2.44	0.52
36:DA:2576:G:H3'	36:DA:2576:G:N3	2.24	0.52
36:DA:2749:A:N1	36:DA:2750:A:N6	2.57	0.52
37:DB:65:C:H2'	37:DB:109:C:H41	1.74	0.52
38:DC:101:ILE:HD12	38:DC:101:ILE:H	1.73	0.52
39:DD:70:TRP:O	39:DD:73:VAL:HG23	2.08	0.52
39:DD:275:LYS:HD2	39:DD:275:LYS:O	2.09	0.52
40:DE:98:PRO:CG	40:DE:175:VAL:HG12	2.38	0.52
40:DE:144:ARG:O	40:DE:145:LYS:C	2.52	0.52
41:DF:160:ASN:CG	41:DF:163:VAL:HG23	2.34	0.52
43:DH:169:VAL:HG22	43:DH:170:ARG:N	2.20	0.52
45:DN:9:VAL:HG12	45:DN:10:GLU:N	2.23	0.52
45:DN:26:LEU:C	45:DN:28:THR:H	2.16	0.52
49:DR:104:ARG:HG3	49:DR:111:LEU:HD21	1.91	0.52
50:DS:87:PHE:CG	50:DS:88:ASP:N	2.77	0.52
51:DT:28:VAL:O	51:DT:29:ARG:CD	2.57	0.52
52:DU:90:VAL:O	52:DU:91:ASP:C	2.52	0.52
56:DY:17:SER:HB3	56:DY:71:LYS:HD2	1.90	0.52
1:AA:67:C:H2'	1:AA:68:G:C8	2.44	0.52
1:AA:264:U:H4'	17:AQ:63:ARG:HD3	1.91	0.52
1:AA:324:G:H8	1:AA:324:G:O5'	1.91	0.52
1:AA:841:U:H3'	1:AA:848:C:H5'	1.90	0.52
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.90	0.52
1:AA:1106:G:O2'	1:AA:1107:C:H5'	2.10	0.52
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.10	0.52
1:AA:1522:U:H2'	1:AA:1523:G:C8	2.44	0.52
2:AB:223:ILE:HG23	2:AB:226:ARG:CZ	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:163:GLU:OE1	4:AD:163:GLU:HA	2.10	0.52
5:AE:78:HIS:O	5:AE:93:PRO:HD3	2.10	0.52
5:AE:79:GLU:CB	5:AE:93:PRO:HD2	2.37	0.52
7:AG:15:ASP:OD1	7:AG:44:TYR:OH	2.27	0.52
13:AM:34:LEU:HD13	13:AM:41:PRO:CB	2.40	0.52
21:AU:10:ARG:O	21:AU:13:ILE:N	2.41	0.52
25:AY:70:THR:HG23	25:AY:358:MET:O	2.09	0.52
25:AY:120:THR:O	25:AY:124:GLN:CD	2.52	0.52
25:AY:272:LEU:HD12	25:AY:275:ALA:CB	2.39	0.52
25:AY:416:LYS:HD3	25:AY:417:THR:H	1.73	0.52
25:AY:505:GLY:O	25:AY:506:GLN:HB2	2.09	0.52
25:AY:655:TYR:CZ	25:AY:659:LEU:HB2	2.43	0.52
26:B0:48:GLY:HA3	26:B0:80:HIS:HD1	1.73	0.52
26:B0:77:ARG:NH2	36:BA:857:C:H5'	2.24	0.52
28:B2:12:GLU:HA	28:B2:15:LYS:HG2	1.92	0.52
29:B3:7:LYS:HE3	29:B3:32:GLN:O	2.09	0.52
36:BA:134:C:H2'	36:BA:135:G:C8	2.41	0.52
36:BA:583:G:C4	36:BA:584:C:C5	2.96	0.52
36:BA:684:G:O2'	36:BA:788:A:N7	2.41	0.52
36:BA:1465:G:H2'	36:BA:1466:G:H8	1.74	0.52
36:BA:1887:C:C3'	36:BA:1888:G:H5''	2.38	0.52
36:BA:2009:G:O2'	36:BA:2010:G:H5'	2.08	0.52
36:BA:2657:A:H2'	36:BA:2658:C:H5'	1.90	0.52
37:BB:76:G:O3'	57:BZ:19:ARG:NH2	2.42	0.52
40:BE:14:ILE:HG13	40:BE:21:VAL:CG2	2.40	0.52
40:BE:68:ALA:O	40:BE:70:ALA:N	2.42	0.52
41:BF:160:ASN:CG	41:BF:163:VAL:HG23	2.34	0.52
42:BG:181:ARG:HH11	42:BG:181:ARG:HG3	1.75	0.52
46:BO:24:VAL:CG2	46:BO:30:ALA:HB3	2.39	0.52
49:BR:48:VAL:O	49:BR:49:ASP:C	2.51	0.52
50:BS:87:PHE:CG	50:BS:88:ASP:N	2.77	0.52
51:BT:42:ILE:HD13	51:BT:83:ILE:HD13	1.91	0.52
1:CA:439:A:H2'	1:CA:441:A:C5'	2.39	0.52
1:CA:738:C:H2'	1:CA:739:C:C6	2.44	0.52
1:CA:1313:U:OP2	19:CS:6:LYS:CB	2.57	0.52
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.72	0.52
5:CE:33:VAL:HG12	5:CE:112:LEU:HD12	1.90	0.52
5:CE:76:ILE:HG13	5:CE:77:PRO:HD2	1.90	0.52
6:CF:8:ILE:CG2	6:CF:85:VAL:HG13	2.39	0.52
6:CF:37:VAL:HG12	6:CF:38:GLU:N	2.23	0.52
9:CI:40:LEU:O	9:CI:42:ARG:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:32:ALA:N	10:CJ:78:ASN:HD21	2.07	0.52
10:CJ:71:LEU:HD12	10:CJ:72:VAL:N	2.24	0.52
12:CL:27:LEU:CD1	12:CL:28:LYS:H	2.21	0.52
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.16	0.52
19:CS:6:LYS:H	19:CS:6:LYS:HD2	1.74	0.52
20:CT:73:HIS:O	20:CT:74:LYS:C	2.52	0.52
25:CY:21:ILE:CG2	25:CY:88:VAL:HG13	2.37	0.52
25:CY:381:LYS:HD2	25:CY:381:LYS:H	1.74	0.52
28:D2:3:LEU:HD22	28:D2:7:ARG:NH2	2.24	0.52
28:D2:63:VAL:HA	28:D2:66:GLU:CG	2.40	0.52
35:D9:29:ASN:O	35:D9:29:ASN:ND2	2.41	0.52
36:DA:41:C:H2'	36:DA:42:G:O4'	2.10	0.52
36:DA:444:C:H2'	36:DA:445:C:C6	2.44	0.52
36:DA:557:U:H2'	36:DA:558:G:C8	2.44	0.52
36:DA:654(A):G:O2'	36:DA:654(B):C:H5'	2.09	0.52
36:DA:744:G:C2	36:DA:745:G:H1'	2.44	0.52
36:DA:862:G:H2'	36:DA:863:A:O4'	2.10	0.52
36:DA:925:C:C3'	36:DA:926:A:H5''	2.39	0.52
36:DA:1012:U:C4	45:DN:28:THR:HG21	2.43	0.52
36:DA:1270:C:H5''	36:DA:1271:G:C5'	2.39	0.52
36:DA:1336:A:P	55:DX:64:LYS:HE3	2.50	0.52
36:DA:1467:C:C5	36:DA:1546:C:H2'	2.44	0.52
36:DA:1668:A:H61	36:DA:1676:A:H61	1.56	0.52
36:DA:1767:C:O2'	36:DA:1768:U:H5'	2.09	0.52
36:DA:1841:U:H2'	36:DA:1842:G:C8	2.44	0.52
36:DA:2175:C:H1'	38:DC:218:THR:O	2.09	0.52
38:DC:77:ALA:HB3	38:DC:95:VAL:HA	1.91	0.52
39:DD:106:ILE:HD11	39:DD:196:VAL:CG1	2.37	0.52
41:DF:28:ILE:HD13	41:DF:28:ILE:N	2.12	0.52
41:DF:157:VAL:HG21	41:DF:194:MET:HG2	1.90	0.52
43:DH:126:PRO:HG2	43:DH:127:GLU:H	1.74	0.52
49:DR:18:LEU:HD23	49:DR:18:LEU:C	2.35	0.52
52:DU:95:LEU:HD12	53:DV:11:GLN:HG3	1.90	0.52
56:DY:2:ARG:HD3	56:DY:2:ARG:C	2.34	0.52
1:AA:8:A:C6	4:AD:209:ARG:HB2	2.44	0.52
1:AA:519:C:H2'	1:AA:520:A:O4'	2.09	0.52
1:AA:646:U:H2'	1:AA:647:C:C6	2.44	0.52
4:AD:61:LYS:HG3	4:AD:203:VAL:HG13	1.89	0.52
4:AD:68:TYR:O	4:AD:69:GLY:C	2.52	0.52
6:AF:18:GLN:O	6:AF:21:LEU:HB2	2.09	0.52
6:AF:22:GLU:C	6:AF:24:GLU:N	2.65	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:111:ILE:HG22	8:AH:112:LEU:N	2.24	0.52
10:AJ:27:ALA:CB	10:AJ:85:LEU:HD11	2.38	0.52
11:AK:99:GLN:CG	11:AK:105:VAL:HG21	2.35	0.52
18:AR:44:LEU:O	18:AR:45:SER:O	2.26	0.52
20:AT:73:HIS:O	20:AT:74:LYS:C	2.52	0.52
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.09	0.52
23:AW:50:U:H2'	23:AW:51:C:C6	2.44	0.52
25:AY:162:VAL:O	25:AY:164:MET:HG2	2.10	0.52
25:AY:210:ARG:O	25:AY:211:GLU:C	2.52	0.52
25:AY:286:ILE:HD12	25:AY:286:ILE:N	2.25	0.52
25:AY:410:ASP:HA	25:AY:459:LEU:HD21	1.92	0.52
25:AY:486:THR:O	25:AY:599:PRO:HA	2.09	0.52
27:B1:76:ARG:CZ	27:B1:95:LEU:HD22	2.40	0.52
32:B6:11:LEU:HD22	32:B6:11:LEU:C	2.35	0.52
32:B6:45:LYS:HG2	36:BA:2371:G:H4'	1.90	0.52
34:B8:33:ASN:O	34:B8:34:TRP:HB3	2.10	0.52
36:BA:41:C:H2'	36:BA:42:G:O4'	2.08	0.52
36:BA:748:G:O6	36:BA:751:A:H4'	2.09	0.52
36:BA:2050:C:H1'	40:BE:156:MET:HE1	1.92	0.52
36:BA:2206:G:H3'	36:BA:2206:G:N3	2.25	0.52
40:BE:37:ARG:HA	40:BE:42:ASP:OD2	2.09	0.52
40:BE:101:ARG:HH11	40:BE:169:ASN:ND2	2.08	0.52
42:BG:16:ARG:NE	42:BG:31:VAL:HG11	2.20	0.52
47:BP:146:VAL:HG13	47:BP:147:LEU:N	2.24	0.52
52:BU:65:ILE:HD11	52:BU:96:ALA:HB3	1.91	0.52
1:CA:483:C:C3'	1:CA:484:G:H5''	2.36	0.52
1:CA:519:C:H2'	1:CA:520:A:O4'	2.07	0.52
1:CA:1037:C:H2'	1:CA:1038:C:N3	2.24	0.52
1:CA:1234:C:H1'	1:CA:1364:U:C6	2.45	0.52
1:CA:1375:A:OP1	7:CG:12:LEU:HD21	2.08	0.52
2:CB:9:GLU:HG2	2:CB:10:LEU:N	2.24	0.52
4:CD:58:LEU:C	4:CD:58:LEU:HD23	2.33	0.52
12:CL:17:LYS:HD3	12:CL:18:VAL:N	2.25	0.52
12:CL:47:LYS:NZ	12:CL:47:LYS:HB3	2.24	0.52
14:CN:15:LYS:O	14:CN:16:PHE:C	2.51	0.52
14:CN:53:LEU:HB3	14:CN:56:VAL:CG2	2.39	0.52
19:CS:13:ASP:C	19:CS:15:LEU:N	2.60	0.52
19:CS:29:ARG:O	19:CS:31:ILE:N	2.41	0.52
22:CV:36:A:N3	25:CY:502:GLY:HA2	2.24	0.52
23:CW:17(A):U:P	36:DA:2180:U:H4'	2.49	0.52
25:CY:14:ASN:N	25:CY:14:ASN:HD22	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:315:LYS:HZ2	25:CY:317:MET:HG2	1.75	0.52
25:CY:411:VAL:HG12	25:CY:412:ALA:N	2.25	0.52
29:D3:10:LYS:NZ	29:D3:15:TYR:OH	2.39	0.52
30:D4:13:ARG:HH11	30:D4:13:ARG:HB3	1.74	0.52
32:D6:11:LEU:HA	32:D6:54:ILE:OXT	2.10	0.52
35:D9:29:ASN:HD22	35:D9:29:ASN:N	2.05	0.52
36:DA:154(A):C:N4	36:DA:172:C:H42	2.07	0.52
36:DA:363:G:H2'	36:DA:363(A):A:H8	1.75	0.52
36:DA:797:C:P	41:DF:62:ARG:HG3	2.49	0.52
36:DA:1930:G:O2'	36:DA:1931:U:OP2	2.27	0.52
36:DA:2026:C:N3	36:DA:2027:G:C8	2.77	0.52
36:DA:2350:C:H2'	36:DA:2351:G:O4'	2.09	0.52
39:DD:117:VAL:CG2	39:DD:118:VAL:N	2.73	0.52
40:DE:120:TRP:O	40:DE:121:ASN:C	2.52	0.52
40:DE:161:GLY:O	40:DE:162:ALA:C	2.52	0.52
46:DO:120:GLU:OE2	46:DO:122:LEU:HD21	2.10	0.52
50:DS:74:ALA:HB3	50:DS:103:GLU:HG3	1.92	0.52
52:DU:104:GLN:HB3	53:DV:44:LYS:HZ1	1.74	0.52
53:DV:46:VAL:HG22	53:DV:47:VAL:H	1.74	0.52
1:AA:658:G:H2'	1:AA:659:U:C6	2.45	0.52
1:AA:738:C:H2'	1:AA:739:C:C6	2.44	0.52
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.09	0.52
1:AA:1112:C:O2'	3:AC:179:ARG:HG2	2.09	0.52
1:AA:1442:G:H2'	51:BT:118:ARG:HH12	1.75	0.52
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.38	0.52
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.24	0.52
8:AH:34:GLU:HB3	8:AH:118:VAL:HG21	1.91	0.52
13:AM:97:PRO:HA	13:AM:110:ARG:CD	2.36	0.52
13:AM:117:VAL:O	13:AM:118:ALA:O	2.27	0.52
18:AR:87:ARG:HH11	18:AR:87:ARG:CB	2.22	0.52
22:AV:42:C:H2'	22:AV:42:C:O2	2.08	0.52
25:AY:277:VAL:HG13	25:AY:278:ASP:OD1	2.09	0.52
25:AY:487:ILE:CD1	25:AY:563:ILE:HG22	2.39	0.52
26:B0:19:LYS:NZ	26:B0:41:ARG:HH12	2.08	0.52
29:B3:44:ARG:O	29:B3:45:GLY:C	2.52	0.52
31:B5:20:ARG:O	31:B5:23:HIS:HB2	2.10	0.52
33:B7:37:LYS:HE2	36:BA:469:G:O6	2.10	0.52
36:BA:310:A:P	56:BY:18:GLY:HA2	2.50	0.52
36:BA:654(A):G:O2'	36:BA:654(B):C:H5'	2.09	0.52
36:BA:654(A):G:C2'	36:BA:654(B):C:H5'	2.39	0.52
36:BA:2291:U:H2'	36:BA:2292:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:126:SER:C	38:BC:128:LEU:H	2.17	0.52
39:BD:61:LEU:O	39:BD:63:ARG:NH1	2.42	0.52
40:BE:188:VAL:HG23	40:BE:189:PRO:HD2	1.92	0.52
46:BO:105:GLU:O	46:BO:109:LYS:HG3	2.10	0.52
47:BP:24:GLY:HA2	47:BP:33:ARG:NH1	2.25	0.52
52:BU:49:HIS:C	52:BU:52:ARG:HB2	2.34	0.52
53:BV:82:ARG:HD2	53:BV:82:ARG:N	2.24	0.52
57:BZ:120:ILE:HG22	57:BZ:120:ILE:O	2.08	0.52
1:CA:399:G:H2'	1:CA:400:C:C6	2.44	0.52
2:CB:20:GLU:HB2	2:CB:190:THR:OG1	2.10	0.52
8:CH:35:ILE:HG22	8:CH:39:LEU:HD21	1.90	0.52
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.92	0.52
16:CP:82:GLN:O	16:CP:84:ALA:N	2.42	0.52
22:CV:9:A:C2	22:CV:45:U:C4	2.98	0.52
25:CY:14:ASN:OD1	25:CY:374:LEU:HD13	2.09	0.52
25:CY:25:LYS:HE2	25:CY:86:GLY:N	2.24	0.52
25:CY:384:ILE:HG13	25:CY:385:THR:N	2.25	0.52
25:CY:510:VAL:HA	25:CY:570:GLY:CA	2.21	0.52
27:D1:27:GLU:O	27:D1:28:GLY:C	2.52	0.52
30:D4:26:SER:OG	30:D4:27:THR:N	2.42	0.52
32:D6:35:GLU:HA	32:D6:35:GLU:OE1	2.08	0.52
34:D8:33:ASN:HA	34:D8:36:LYS:HD2	1.92	0.52
36:DA:252:G:OP2	47:DP:50:ARG:NH2	2.43	0.52
36:DA:322:A:H3'	41:DF:169:ASN:HD21	1.74	0.52
36:DA:406:G:H8	36:DA:406:G:OP2	1.92	0.52
36:DA:643:A:O2'	36:DA:644:A:H5'	2.08	0.52
36:DA:1576:U:H2'	36:DA:1577:C:C6	2.45	0.52
36:DA:1600:C:O2'	36:DA:1601:G:H5'	2.10	0.52
36:DA:1680:U:H2'	36:DA:1681:G:O4'	2.10	0.52
36:DA:2650:U:O2'	36:DA:2651:C:H5'	2.10	0.52
36:DA:2740:A:H2'	36:DA:2741:A:C8	2.44	0.52
36:DA:2892:A:H62	36:DA:2893:G:H21	1.58	0.52
40:DE:69:LYS:HE2	40:DE:69:LYS:N	2.24	0.52
48:DQ:136:ALA:C	48:DQ:138:ASP:N	2.66	0.52
49:DR:18:LEU:HD21	49:DR:22:ARG:NE	2.24	0.52
51:DT:33:LYS:NZ	51:DT:74:ARG:NH2	2.58	0.52
51:DT:129:ARG:HD3	51:DT:129:ARG:C	2.34	0.52
1:AA:633:G:H5'	1:AA:634:C:OP2	2.09	0.52
1:AA:710:G:O2'	1:AA:711:G:H5'	2.09	0.52
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.44	0.52
2:AB:151:GLY:O	2:AB:152:PHE:C	2.52	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:152:SER:O	4:AD:154:ASN:N	2.43	0.52
13:AM:4:ILE:HG22	13:AM:5:ALA:N	2.23	0.52
25:AY:72:CYS:SG	25:AY:79:ILE:HB	2.50	0.52
25:AY:119:GLU:OE2	25:AY:666:ARG:HD2	2.09	0.52
25:AY:139:MET:O	25:AY:171:GLU:HA	2.10	0.52
25:AY:177:ILE:O	25:AY:178:ILE:HD12	2.08	0.52
25:AY:181:LEU:HD23	25:AY:182:ARG:HH12	1.75	0.52
36:BA:118:A:H1'	36:BA:178:G:O4'	2.10	0.52
36:BA:503:A:H4'	36:BA:504:U:C5'	2.39	0.52
36:BA:637:A:H2'	47:BP:117:GLU:OE2	2.09	0.52
36:BA:729:G:N7	39:BD:208:LYS:HB2	2.24	0.52
36:BA:1227:G:OP1	52:BU:13:LYS:HG2	2.09	0.52
36:BA:1759:A:H5'	36:BA:2715:C:H1'	1.91	0.52
36:BA:1814:G:C3'	36:BA:1815:A:H5''	2.30	0.52
36:BA:2457:U:H2'	36:BA:2458:G:H5'	1.92	0.52
36:BA:2467:C:O2	48:BQ:124:LYS:NZ	2.43	0.52
36:BA:2740:A:H2'	36:BA:2741:A:C8	2.45	0.52
36:BA:2810:A:H2'	40:BE:61:ARG:HH21	1.73	0.52
39:BD:35:LYS:O	39:BD:37:LEU:N	2.43	0.52
39:BD:186:HIS:HD2	39:BD:188:GLU:H	1.57	0.52
39:BD:266:SER:C	39:BD:267:SER:O	2.51	0.52
41:BF:154:VAL:HG13	41:BF:191:ARG:C	2.34	0.52
51:BT:75:ILE:N	51:BT:75:ILE:CD1	2.73	0.52
51:BT:102:ILE:HB	51:BT:110:ILE:HD11	1.92	0.52
1:CA:264:U:H4'	17:CQ:63:ARG:HD3	1.92	0.52
1:CA:284:G:H2'	1:CA:285:G:C8	2.36	0.52
1:CA:1152:A:H2'	1:CA:1153:C:H6	1.74	0.52
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.74	0.52
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.10	0.52
2:CB:107:THR:HA	2:CB:110:GLN:NE2	2.20	0.52
3:CC:34:LEU:CD2	3:CC:38:ARG:HD2	2.35	0.52
5:CE:80:ILE:CD1	5:CE:138:ALA:HB1	2.40	0.52
6:CF:22:GLU:C	6:CF:24:GLU:N	2.65	0.52
9:CI:93:ARG:C	9:CI:95:LYS:N	2.67	0.52
12:CL:80:HIS:O	12:CL:81:SER:HB2	2.09	0.52
19:CS:21:GLU:CG	19:CS:22:LEU:HD23	2.37	0.52
30:D4:5:ILE:O	30:D4:5:ILE:HG12	2.08	0.52
34:D8:16:ILE:HD12	34:D8:57:ARG:HG2	1.92	0.52
35:D9:1:MET:O	35:D9:34:GLN:HG2	2.09	0.52
36:DA:285:C:H2'	36:DA:286:C:C5'	2.38	0.52
36:DA:363(A):A:H2'	36:DA:363(B):G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:514:A:H2'	36:DA:515:A:C8	2.44	0.52
36:DA:883:G:H1	36:DA:893:C:H42	1.58	0.52
36:DA:1156:A:O2'	36:DA:1157:G:OP1	2.26	0.52
36:DA:1461:G:O2'	36:DA:1462:C:H5'	2.09	0.52
36:DA:1486:A:H2'	36:DA:1487:G:H8	1.72	0.52
36:DA:1865:G:C2'	36:DA:1866:C:H5''	2.40	0.52
36:DA:2787:C:H1'	40:DE:61:ARG:CD	2.39	0.52
37:DB:15:A:H1'	37:DB:110:G:C5	2.45	0.52
41:DF:167:ALA:O	41:DF:169:ASN:N	2.43	0.52
42:DG:14:GLU:O	42:DG:18:GLU:HB2	2.10	0.52
43:DH:41:MET:O	43:DH:42:ARG:CB	2.57	0.52
46:DO:12:ASP:OD2	46:DO:85:VAL:HG13	2.09	0.52
47:DP:144:GLU:HG2	47:DP:144:GLU:O	2.08	0.52
57:DZ:165:VAL:HG12	57:DZ:166:SER:N	2.25	0.52
1:AA:520:A:N1	1:AA:536:C:H1'	2.24	0.52
3:AC:15:THR:HG22	3:AC:16:ARG:N	2.25	0.52
3:AC:77:ILE:HA	3:AC:84:ILE:HB	1.91	0.52
4:AD:173:TRP:O	4:AD:174:LEU:HD23	2.09	0.52
6:AF:16:GLN:HA	6:AF:19:LEU:HB3	1.91	0.52
7:AG:91:VAL:HG12	7:AG:92:SER:N	2.24	0.52
10:AJ:70:ARG:HG2	10:AJ:70:ARG:NH1	2.22	0.52
12:AL:59:ARG:NE	25:AY:422:GLU:OE2	2.43	0.52
25:AY:248:LYS:O	25:AY:252:ASP:OD1	2.27	0.52
30:B4:26:SER:OG	30:B4:27:THR:N	2.41	0.52
32:B6:42:TRP:NE1	36:BA:643:A:OP1	2.43	0.52
36:BA:272(B):G:H2'	36:BA:272(C):G:H8	1.74	0.52
36:BA:1328:G:O5'	36:BA:1328:G:C8	2.59	0.52
36:BA:1368:G:O2'	36:BA:1369:G:H5'	2.09	0.52
36:BA:1784:A:H4'	36:BA:1785:A:O5'	2.09	0.52
36:BA:2105:C:C2'	36:BA:2106:G:H5'	2.39	0.52
36:BA:2869:G:H2'	36:BA:2870:C:C6	2.44	0.52
40:BE:69:LYS:O	40:BE:71:GLY:N	2.43	0.52
41:BF:135:LYS:HB3	41:BF:138:GLU:CG	2.40	0.52
41:BF:154:VAL:HG13	41:BF:191:ARG:O	2.09	0.52
45:BN:4:TYR:O	45:BN:5:VAL:C	2.53	0.52
51:BT:85:LYS:HB3	51:BT:85:LYS:HZ2	1.74	0.52
53:BV:88:ARG:O	53:BV:90:PRO:HD3	2.10	0.52
54:BW:50:VAL:HG22	54:BW:50:VAL:O	2.10	0.52
1:CA:526:C:C5	1:CA:527:G:H1'	2.44	0.52
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.40	0.52
1:CA:747:C:H2'	1:CA:748:C:C1'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1438:G:H2'	1:CA:1439:C:C6	2.45	0.52
2:CB:96:ARG:N	2:CB:96:ARG:CD	2.71	0.52
2:CB:137:ARG:HG2	2:CB:137:ARG:NH1	2.25	0.52
4:CD:57:ARG:HH11	4:CD:57:ARG:HG2	1.75	0.52
4:CD:101:LEU:HD23	4:CD:121:VAL:HG13	1.92	0.52
7:CG:75:VAL:CG1	7:CG:86:GLN:HB3	2.40	0.52
8:CH:101:PRO:HG2	8:CH:133:LEU:HD11	1.90	0.52
10:CJ:27:ALA:CB	10:CJ:85:LEU:HD11	2.39	0.52
19:CS:4:SER:O	19:CS:6:LYS:HE3	2.09	0.52
25:CY:385:THR:HG21	25:CY:436:PRO:HG3	1.90	0.52
25:CY:535:PRO:HD2	25:CY:538:TYR:HD2	1.75	0.52
25:CY:610:VAL:HG12	25:CY:669:PHE:CB	2.40	0.52
27:D1:60:PHE:CE1	27:D1:91:LYS:HE3	2.44	0.52
30:D4:49:PHE:O	30:D4:50:VAL:O	2.27	0.52
35:D9:31:LYS:HD3	36:DA:2478:A:OP1	2.10	0.52
36:DA:606:U:H2'	36:DA:606:U:O2	2.08	0.52
36:DA:723:G:H2'	36:DA:724:U:H6	1.74	0.52
36:DA:1264:G:O3'	36:DA:2615:U:H5'	2.10	0.52
36:DA:2015:A:H2'	36:DA:2016:U:O4'	2.09	0.52
36:DA:2656:U:C2'	36:DA:2657:A:H5''	2.40	0.52
36:DA:2861:G:H2'	36:DA:2862:G:H8	1.73	0.52
37:DB:17:C:H3'	37:DB:18:G:H8	1.74	0.52
39:DD:35:LYS:O	39:DD:37:LEU:N	2.43	0.52
39:DD:43:ARG:HD2	39:DD:44:ASN:OD1	2.09	0.52
42:DG:18:GLU:HA	42:DG:18:GLU:OE1	2.10	0.52
42:DG:37:VAL:HA	42:DG:158:ALA:O	2.10	0.52
43:DH:96:ALA:HB1	43:DH:103:LEU:HD11	1.91	0.52
51:DT:82:LEU:N	51:DT:82:LEU:CD1	2.72	0.52
57:DZ:77:ASP:C	57:DZ:78:LYS:HG2	2.35	0.52
1:AA:1303:C:OP1	1:AA:1304:G:OP2	2.28	0.52
4:AD:57:ARG:HH11	4:AD:57:ARG:HG2	1.75	0.52
25:AY:138:LYS:HG2	60:AY:702:GDP:C6	2.44	0.52
25:AY:170:ARG:HD2	25:AY:170:ARG:N	2.24	0.52
25:AY:181:LEU:HD13	25:AY:216:LEU:CD2	2.40	0.52
25:AY:451:ILE:HG23	25:AY:459:LEU:HD23	1.92	0.52
27:B1:91:LYS:HA	27:B1:94:LEU:HD13	1.92	0.52
28:B2:18:PRO:O	28:B2:20:GLU:N	2.43	0.52
32:B6:53:LYS:HG3	32:B6:54:ILE:HG23	1.92	0.52
35:B9:35:ARG:HD3	36:BA:2742:C:OP1	2.10	0.52
36:BA:192:C:C2'	36:BA:193:U:H5'	2.39	0.52
36:BA:363(F):A:H1'	36:BA:364:C:H5	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1169:G:H1	36:BA:1180:C:N4	2.03	0.52
36:BA:1381:G:N2	36:BA:1382:G:H1'	2.25	0.52
36:BA:1582:C:O2'	36:BA:1583:A:H5'	2.10	0.52
36:BA:1841:U:H2'	36:BA:1842:G:C8	2.44	0.52
36:BA:2097:C:O2'	36:BA:2098:U:H5'	2.10	0.52
36:BA:2111:C:H1'	36:BA:2118:U:O4'	2.10	0.52
36:BA:2352:A:H2'	36:BA:2353:G:H5'	1.92	0.52
36:BA:2749:A:N1	36:BA:2750:A:N6	2.58	0.52
36:BA:2774:C:H2'	36:BA:2775:A:O4'	2.09	0.52
37:BB:20:C:H2'	37:BB:21:G:H5'	1.92	0.52
39:BD:165:ILE:HD13	39:BD:175:LEU:CD2	2.36	0.52
41:BF:158:THR:HG21	41:BF:163:VAL:HB	1.91	0.52
44:BJ:13:UNK:C	44:BJ:15:UNK:N	2.70	0.52
44:BJ:34:UNK:HA	44:BJ:37:UNK:CB	2.40	0.52
44:BJ:108:UNK:O	44:BJ:109:UNK:C	2.57	0.52
49:BR:52:ILE:O	49:BR:55:ALA:HB3	2.10	0.52
49:BR:53:HIS:ND1	49:BR:53:HIS:O	2.43	0.52
51:BT:50:ILE:HG13	51:BT:102:ILE:HD11	1.90	0.52
57:BZ:118:GLN:CD	57:BZ:120:ILE:HD11	2.34	0.52
57:BZ:120:ILE:O	57:BZ:121:HIS:HB2	2.10	0.52
1:CA:291:C:O2'	1:CA:292:G:H5'	2.09	0.52
1:CA:1004:A:H5'	1:CA:1025:U:C4	2.43	0.52
1:CA:1014:A:H4'	19:CS:14:HIS:CE1	2.45	0.52
1:CA:1298:C:C5	7:CG:114:ARG:HD3	2.44	0.52
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.58	0.52
9:CI:125:TYR:HD1	9:CI:126:SER:H	1.56	0.52
10:CJ:3:LYS:O	10:CJ:100:THR:HG23	2.10	0.52
19:CS:53:ASN:C	19:CS:55:LYS:N	2.66	0.52
22:CV:30:G:O2'	22:CV:31:A:H5'	2.10	0.52
23:CW:74:C:H2'	23:CW:75:C:H5'	1.92	0.52
25:CY:93:GLU:HG3	59:CY:701:FUA:H62	1.90	0.52
25:CY:276:VAL:HG13	25:CY:280:LEU:HG	1.92	0.52
59:CY:701:FUA:O1	59:CY:701:FUA:H201	2.09	0.52
28:D2:36:ARG:C	28:D2:38:GLN:H	2.16	0.52
32:D6:16:CYS:SG	32:D6:48:VAL:CG2	2.97	0.52
36:DA:110:G:O2'	36:DA:111:A:H5'	2.10	0.52
36:DA:139(A):G:H22	55:DX:44:GLU:CD	2.18	0.52
36:DA:654(G):C:H2'	36:DA:654(H):G:C8	2.41	0.52
36:DA:1495:A:H2'	36:DA:1496:A:C2	2.45	0.52
36:DA:1495:A:H2'	36:DA:1496:A:N3	2.25	0.52
36:DA:2512:C:H2'	36:DA:2513:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2523:G:H2'	36:DA:2524:G:H5'	1.90	0.52
37:DB:15:A:C3'	37:DB:16:G:H5'	2.40	0.52
37:DB:29:A:OP2	50:DS:32:LEU:HG	2.10	0.52
41:DF:125:LEU:HD23	41:DF:125:LEU:N	2.25	0.52
42:DG:93:THR:O	42:DG:94:LEU:HD23	2.10	0.52
51:DT:129:ARG:O	51:DT:129:ARG:CG	2.57	0.52
54:DW:36:LEU:HD11	54:DW:47:VAL:HG12	1.91	0.52
1:AA:15:G:H8	1:AA:1396:A:HO2'	1.57	0.52
1:AA:238:G:P	17:AQ:25:ARG:HH22	2.33	0.52
1:AA:265:G:H4'	17:AQ:66:SER:HA	1.91	0.52
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.45	0.52
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.40	0.52
2:AB:51:LEU:HD23	2:AB:55:PHE:HE2	1.75	0.52
3:AC:40:ARG:O	3:AC:44:GLU:HG3	2.09	0.52
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.09	0.52
4:AD:2:GLY:O	4:AD:4:TYR:N	2.43	0.52
4:AD:145:GLU:C	4:AD:146:ILE:HD13	2.34	0.52
5:AE:107:ARG:HG2	5:AE:108:ALA:N	2.24	0.52
10:AJ:4:ILE:HB	10:AJ:74:ILE:HG13	1.91	0.52
11:AK:24:SER:O	11:AK:88:GLY:HA3	2.10	0.52
15:AO:12:ILE:O	15:AO:14:GLU:N	2.43	0.52
15:AO:24:SER:O	15:AO:25:THR:C	2.52	0.52
23:AW:22:G:H2'	23:AW:23:C:H5'	1.91	0.52
25:AY:451:ILE:HD11	25:AY:462:ILE:HG21	1.91	0.52
30:B4:48:ARG:NH2	30:B4:49:PHE:HE1	2.07	0.52
31:B5:39:MET:HG3	54:BW:34:ASN:ND2	2.25	0.52
34:B8:8:LYS:O	34:B8:12:LYS:HG3	2.10	0.52
36:BA:55:G:H1	36:BA:115:C:H42	1.57	0.52
36:BA:198:C:H2'	36:BA:199:A:H5''	1.92	0.52
36:BA:322:A:H5'	36:BA:340:A:H1'	1.91	0.52
36:BA:610:G:H22	36:BA:619:G:H1'	1.75	0.52
36:BA:997:G:O2'	36:BA:998:C:H5'	2.10	0.52
36:BA:1022:G:O2'	36:BA:1023:U:OP2	2.27	0.52
36:BA:2015:A:H2'	36:BA:2016:U:O4'	2.10	0.52
36:BA:2113:U:H2'	36:BA:2114:A:H8	1.73	0.52
36:BA:2193:G:H5'	36:BA:2193:G:H8	1.74	0.52
36:BA:2472:G:H5'	36:BA:2473:U:O5'	2.10	0.52
38:BC:97:GLY:O	38:BC:100:ILE:HG12	2.10	0.52
42:BG:9:ARG:O	42:BG:11:TYR:N	2.43	0.52
43:BH:41:MET:O	43:BH:42:ARG:CB	2.57	0.52
45:BN:18:ALA:HB3	45:BN:21:LYS:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:10:LEU:CD2	49:BR:17:ARG:HD3	2.37	0.52
51:BT:28:VAL:O	51:BT:29:ARG:CD	2.58	0.52
51:BT:83:ILE:CG1	51:BT:84:GLN:N	2.73	0.52
51:BT:108:ARG:HA	51:BT:111:ARG:NH1	2.25	0.52
53:BV:39:LEU:O	53:BV:40:LEU:HB2	2.10	0.52
56:BY:29:GLU:OE1	56:BY:29:GLU:N	2.42	0.52
1:CA:114:U:H2'	1:CA:115:G:C8	2.45	0.52
1:CA:159:G:C2'	1:CA:160:A:H5''	2.40	0.52
1:CA:425:G:O2'	1:CA:426:G:H5'	2.10	0.52
1:CA:633:G:H5'	1:CA:634:C:OP2	2.10	0.52
1:CA:974:A:OP1	1:CA:974:A:H8	1.93	0.52
2:CB:189:ASP:CG	2:CB:205:ASP:OD1	2.52	0.52
4:CD:11:LEU:O	4:CD:12:CYS:C	2.53	0.52
5:CE:60:TYR:CE1	5:CE:64:ARG:NH2	2.74	0.52
10:CJ:32:ALA:N	10:CJ:78:ASN:ND2	2.58	0.52
13:CM:2:ALA:O	13:CM:9:ILE:HG23	2.10	0.52
15:CO:71:GLN:HB2	15:CO:78:TYR:CD1	2.45	0.52
25:CY:580:MET:SD	36:DA:1913:A:N1	2.83	0.52
31:D5:3:LYS:HZ3	36:DA:2613:U:H2'	1.75	0.52
31:D5:3:LYS:HZ1	36:DA:2613:U:C2'	2.23	0.52
32:D6:42:TRP:NE1	36:DA:643:A:OP1	2.42	0.52
34:D8:39:LYS:HE3	36:DA:2365:G:O6	2.10	0.52
36:DA:185:U:H2'	36:DA:186:G:C8	2.45	0.52
36:DA:755:C:H2'	36:DA:756:C:C6	2.45	0.52
36:DA:818:G:OP2	36:DA:1187:G:O6	2.28	0.52
36:DA:882:G:H1	36:DA:894:C:H42	1.56	0.52
36:DA:1658:C:O5'	36:DA:1658:C:H6	1.93	0.52
36:DA:2313:C:O2'	36:DA:2314:C:H5'	2.09	0.52
36:DA:2348:U:C2'	36:DA:2349:G:C5'	2.87	0.52
36:DA:2590:A:OP2	39:DD:238:GLY:HA2	2.10	0.52
36:DA:2810:A:H2'	40:DE:61:ARG:HH21	1.73	0.52
38:DC:155:ARG:O	38:DC:159:ALA:HB2	2.10	0.52
39:DD:35:LYS:HD3	39:DD:61:LEU:HD12	1.91	0.52
40:DE:96:PHE:HA	40:DE:100:GLU:OE1	2.10	0.52
41:DF:107:LYS:HD2	41:DF:205:ARG:O	2.10	0.52
41:DF:123:LEU:HD12	41:DF:124:LEU:H	1.75	0.52
42:DG:53:LEU:C	42:DG:55:LYS:N	2.67	0.52
42:DG:127:GLY:HA2	42:DG:166:ASP:OD1	2.09	0.52
42:DG:128:ARG:O	42:DG:128:ARG:HG3	2.09	0.52
49:DR:53:HIS:O	49:DR:56:LYS:HB2	2.09	0.52
52:DU:82:GLY:O	52:DU:84:LYS:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:22:G:H4'	1:AA:885:G:C8	2.45	0.52
1:AA:980:C:C5	1:AA:981:U:C2	2.98	0.52
1:AA:1227:A:H2'	13:AM:117:VAL:CG2	2.36	0.52
3:AC:25:GLY:C	3:AC:27:LYS:N	2.66	0.52
5:AE:33:VAL:CG1	5:AE:112:LEU:HD12	2.39	0.52
6:AF:42:GLU:C	6:AF:44:GLY:N	2.64	0.52
7:AG:15:ASP:HA	7:AG:24:THR:HG23	1.91	0.52
11:AK:29:ILE:HB	11:AK:44:SER:CB	2.40	0.52
11:AK:44:SER:O	11:AK:45:GLY:C	2.53	0.52
15:AO:17:ARG:NH1	15:AO:77:ARG:CZ	2.73	0.52
17:AQ:48:GLU:O	17:AQ:50:LYS:N	2.42	0.52
18:AR:45:SER:OG	18:AR:46:GLU:N	2.39	0.52
25:AY:20:HIS:CE1	25:AY:21:ILE:HG12	2.45	0.52
25:AY:146:LEU:HD12	25:AY:167:PRO:HD3	1.92	0.52
25:AY:181:LEU:HD13	25:AY:216:LEU:HD21	1.91	0.52
25:AY:628:ARG:HH12	25:AY:680:PRO:CG	2.22	0.52
26:B0:12:ASN:O	26:B0:14:ARG:N	2.37	0.52
27:B1:56:GLN:OE1	27:B1:85:LEU:HD23	2.09	0.52
31:B5:45:VAL:HG22	31:B5:51:TYR:CD2	2.45	0.52
36:BA:42:G:H3'	36:BA:43:A:H8	1.75	0.52
36:BA:139(A):G:H22	55:BX:44:GLU:CD	2.17	0.52
36:BA:190:A:H2'	36:BA:191:A:C8	2.45	0.52
36:BA:675:A:OP1	41:BF:63:LYS:HE2	2.10	0.52
36:BA:845:G:H8	36:BA:845:G:OP2	1.92	0.52
36:BA:900:A:H2'	36:BA:901:A:O4'	2.10	0.52
36:BA:1216:G:H2'	36:BA:1217:C:H6	1.75	0.52
36:BA:2861:G:H2'	36:BA:2862:G:H8	1.73	0.52
37:BB:90:A:C8	37:BB:91:C:H1'	2.44	0.52
45:BN:3:THR:C	45:BN:4:TYR:CD1	2.88	0.52
45:BN:132:ALA:O	45:BN:133:GLN:CB	2.58	0.52
47:BP:115:LEU:HD23	47:BP:115:LEU:H	1.74	0.52
48:BQ:101:ARG:HD2	48:BQ:102:VAL:H	1.75	0.52
51:BT:83:ILE:HD11	51:BT:84:GLN:HE21	1.75	0.52
53:BV:17:GLY:O	53:BV:18:LEU:HB3	2.09	0.52
55:BX:26:TYR:HD2	55:BX:92:LEU:HD12	1.73	0.52
57:BZ:118:GLN:O	57:BZ:172:ALA:HB1	2.10	0.52
1:CA:236:G:O2'	1:CA:237:C:H5'	2.10	0.52
1:CA:265:G:H4'	17:CQ:66:SER:HA	1.92	0.52
1:CA:635:G:O2'	1:CA:636:U:H5'	2.09	0.52
1:CA:939:G:H5''	7:CG:102:ARG:NH1	2.24	0.52
1:CA:980:C:C5	1:CA:981:U:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1354:C:O2'	1:CA:1355:G:H5'	2.09	0.52
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.44	0.52
2:CB:207:ALA:HB3	2:CB:210:SER:HB2	1.92	0.52
4:CD:25:ARG:HH12	4:CD:30:LYS:HD2	1.75	0.52
6:CF:15:ASP:OD1	6:CF:17:SER:HB2	2.10	0.52
7:CG:134:ALA:O	7:CG:137:LYS:HB2	2.09	0.52
9:CI:65:VAL:HG21	9:CI:73:GLN:CB	2.36	0.52
13:CM:108:ARG:HA	13:CM:108:ARG:NH1	2.06	0.52
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.25	0.52
15:CO:53:HIS:CE1	15:CO:57:LEU:HD21	2.45	0.52
18:CR:87:ARG:HB3	18:CR:87:ARG:CZ	2.40	0.52
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.10	0.52
27:D1:29:GLY:O	27:D1:30:VAL:HG22	2.10	0.52
29:D3:38:GLU:HB3	29:D3:43:ILE:HG13	1.91	0.52
30:D4:13:ARG:HB3	30:D4:13:ARG:NH1	2.25	0.52
32:D6:10:LEU:HB3	34:D8:34:TRP:CD1	2.45	0.52
36:DA:650:C:H3'	36:DA:651:G:H5''	1.91	0.52
36:DA:654(L):G:C2'	36:DA:654(M):C:H4'	2.39	0.52
36:DA:687:C:H2'	36:DA:688:U:O4'	2.10	0.52
36:DA:1516:C:H2'	36:DA:1517:G:H5'	1.92	0.52
36:DA:1614:A:H2'	36:DA:1615:C:H5'	1.92	0.52
36:DA:1658:C:OP1	40:DE:132:HIS:O	2.28	0.52
36:DA:1711:C:O2'	36:DA:1712:C:H5'	2.10	0.52
36:DA:1917:U:C2'	36:DA:1918:A:H5'	2.40	0.52
38:DC:104:ILE:CG2	38:DC:131:ILE:HG21	2.40	0.52
39:DD:108:PRO:HG2	39:DD:111:LEU:CB	2.36	0.52
39:DD:179:SER:C	39:DD:181:GLU:H	2.17	0.52
39:DD:242:ARG:NH1	39:DD:242:ARG:HG3	2.24	0.52
47:DP:146:VAL:HG13	47:DP:147:LEU:N	2.24	0.52
48:DQ:17:LEU:N	48:DQ:17:LEU:HD23	2.25	0.52
48:DQ:101:ARG:HD2	48:DQ:102:VAL:H	1.75	0.52
50:DS:14:VAL:O	50:DS:15:ARG:C	2.51	0.52
51:DT:92:GLY:C	51:DT:94:ALA:N	2.67	0.52
52:DU:82:GLY:C	52:DU:84:LYS:N	2.67	0.52
53:DV:18:LEU:HD13	53:DV:19:LYS:H	1.73	0.52
57:DZ:48:PHE:CD1	57:DZ:52:SER:HA	2.45	0.52
57:DZ:109:ALA:C	57:DZ:111:VAL:H	2.16	0.52
1:AA:135:C:H2'	1:AA:136:C:H5'	1.92	0.52
1:AA:444:C:H42	1:AA:490:G:H1	1.58	0.52
1:AA:526:C:C5	1:AA:527:G:H1'	2.44	0.52
2:AB:126:GLU:HA	2:AB:129:GLU:CD	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:68:PRO:HG2	6:AF:71:ARG:HB2	1.92	0.52
12:AL:97:ARG:C	12:AL:98:TYR:CD1	2.88	0.52
13:AM:89:GLY:O	13:AM:90:LEU:C	2.52	0.52
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.32	0.52
21:AU:2:GLY:C	21:AU:4:GLY:N	2.67	0.52
25:AY:8:ASP:OD2	25:AY:10:LYS:HB2	2.09	0.52
25:AY:105:ILE:HG23	25:AY:133:ILE:HG13	1.91	0.52
25:AY:115:GLU:CD	25:AY:118:SER:HB3	2.35	0.52
25:AY:191:ASP:HB2	25:AY:265:LYS:HA	1.92	0.52
25:AY:225:GLU:CD	25:AY:225:GLU:H	2.18	0.52
26:B0:51:VAL:CG2	26:B0:81:VAL:HG23	2.40	0.52
27:B1:26:ARG:HG3	27:B1:27:GLU:N	2.23	0.52
27:B1:82:LEU:HB3	27:B1:90:ILE:CD1	2.39	0.52
30:B4:9:LEU:HD13	30:B4:26:SER:O	2.09	0.52
33:B7:10:ARG:NH1	33:B7:14:LYS:HE3	2.25	0.52
35:B9:29:ASN:H	35:B9:29:ASN:ND2	2.08	0.52
36:BA:18:C:O2'	52:BU:23:GLY:HA2	2.10	0.52
36:BA:1678:G:N2	36:BA:1989:G:N2	2.57	0.52
36:BA:1935:G:H1'	36:BA:1964:G:N2	2.25	0.52
36:BA:2230:G:H2'	36:BA:2231:C:H6	1.75	0.52
36:BA:2656:U:N3	36:BA:2665:A:H2	2.08	0.52
36:BA:2820:A:O2'	36:BA:2821:A:OP1	2.27	0.52
36:BA:2892:A:H62	36:BA:2893:G:H21	1.58	0.52
38:BC:48:LEU:HD23	38:BC:209:PHE:CZ	2.45	0.52
38:BC:101:ILE:O	38:BC:105:LEU:HB2	2.10	0.52
38:BC:173:HIS:O	38:BC:174:ALA:HB2	2.09	0.52
40:BE:111:ARG:CG	49:BR:2:ARG:HG2	2.37	0.52
40:BE:197:ILE:HG12	40:BE:197:ILE:O	2.08	0.52
41:BF:160:ASN:OD1	41:BF:163:VAL:HG23	2.09	0.52
43:BH:26:VAL:HG11	43:BH:75:ALA:O	2.09	0.52
50:BS:12:PHE:O	50:BS:14:VAL:N	2.42	0.52
52:BU:79:PHE:CE1	52:BU:83:LEU:HD11	2.43	0.52
54:BW:33:ARG:O	54:BW:37:ARG:HB2	2.10	0.52
56:BY:86:ARG:CB	56:BY:88:LYS:HZ2	2.23	0.52
57:BZ:86:VAL:CG1	57:BZ:87:ASP:H	2.17	0.52
1:CA:353:A:H8	1:CA:353:A:H5'	1.74	0.52
1:CA:802:A:H3'	1:CA:803:G:C8	2.45	0.52
1:CA:1490:C:H6	1:CA:1490:C:C5'	2.15	0.52
2:CB:121:LEU:HA	2:CB:124:SER:HB3	1.92	0.52
2:CB:204:ASN:HD21	2:CB:206:ASP:H	1.55	0.52
8:CH:103:VAL:HG23	8:CH:110:ALA:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:21:GLN:HG2	10:CJ:21:GLN:O	2.10	0.52
18:CR:44:LEU:HD12	18:CR:44:LEU:N	2.25	0.52
18:CR:74:ARG:HB3	18:CR:81:PHE:CE1	2.45	0.52
19:CS:43:GLU:HB2	19:CS:44:MET:SD	2.50	0.52
25:CY:138:LYS:HG2	60:CY:702:GDP:C4	2.45	0.52
25:CY:552:SER:HB3	25:CY:591:LYS:NZ	2.25	0.52
25:CY:566:THR:O	25:CY:566:THR:HG22	2.09	0.52
28:D2:24:LEU:HD23	28:D2:24:LEU:C	2.35	0.52
29:D3:9:VAL:HG23	29:D3:10:LYS:N	2.25	0.52
31:D5:20:ARG:O	31:D5:23:HIS:HB2	2.10	0.52
36:DA:139(A):G:N2	55:DX:44:GLU:OE2	2.42	0.52
36:DA:529:A:H4'	36:DA:530:G:O5'	2.10	0.52
36:DA:753:C:H2'	36:DA:754:C:H6	1.73	0.52
36:DA:2023:G:H4'	36:DA:2617:C:O3'	2.10	0.52
36:DA:2192:G:C2'	36:DA:2193:G:H5''	2.40	0.52
36:DA:2492:U:O2'	36:DA:2493:U:H5'	2.09	0.52
36:DA:2652:C:H42	36:DA:2668:G:H1	1.58	0.52
36:DA:2888:C:H2'	36:DA:2889:C:H6	1.75	0.52
39:DD:118:VAL:HG22	39:DD:119:ALA:N	2.24	0.52
45:DN:65:LYS:CB	45:DN:69:GLN:HG3	2.40	0.52
47:DP:57:THR:OG1	47:DP:59:LEU:HB3	2.10	0.52
48:DQ:24:GLY:O	48:DQ:102:VAL:HG23	2.10	0.52
49:DR:53:HIS:C	49:DR:53:HIS:HD1	2.18	0.52
54:DW:88:ARG:CB	54:DW:92:ARG:HB3	2.38	0.52
1:AA:555:C:H2'	1:AA:556:C:H6	1.75	0.51
1:AA:658:G:H2'	1:AA:659:U:H6	1.76	0.51
1:AA:862:C:O2'	1:AA:863:U:H5'	2.10	0.51
1:AA:1033:G:H2'	1:AA:1034:G:O4'	2.10	0.51
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.10	0.51
2:AB:84:GLU:HB3	2:AB:219:VAL:CG2	2.40	0.51
2:AB:189:ASP:C	2:AB:191:ASP:H	2.18	0.51
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	2.24	0.51
3:AC:53:ALA:HB2	3:AC:115:LEU:HG	1.91	0.51
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.72	0.51
5:AE:73:ASN:N	5:AE:73:ASN:HD22	2.08	0.51
7:AG:92:SER:O	7:AG:93:PRO:C	2.52	0.51
13:AM:83:ASP:C	13:AM:85:GLY:N	2.67	0.51
15:AO:29:VAL:HG11	15:AO:67:LEU:HD21	1.91	0.51
19:AS:40:ILE:O	19:AS:41:VAL:C	2.53	0.51
25:AY:631:ILE:HA	25:AY:645:ALA:HB2	1.92	0.51
26:B0:20:ARG:H	26:B0:20:ARG:CD	2.21	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:18:ILE:HG21	27:B1:20:ARG:NE	2.25	0.51
27:B1:40:ARG:HH12	36:BA:2232:U:P	2.33	0.51
34:B8:50:LEU:HD12	34:B8:51:ALA:N	2.25	0.51
34:B8:56:GLU:HA	34:B8:59:LYS:HZ1	1.75	0.51
36:BA:515:A:C2	36:BA:1261:C:H1'	2.45	0.51
36:BA:727:A:H3'	36:BA:728:G:C8	2.45	0.51
36:BA:1325:G:OP2	36:BA:1616:A:H2'	2.10	0.51
36:BA:1336:A:P	55:BX:64:LYS:HE3	2.51	0.51
36:BA:1946:U:H2'	36:BA:1947:C:H6	1.74	0.51
42:BG:77:ILE:HG22	42:BG:80:PHE:N	2.21	0.51
47:BP:83:VAL:O	47:BP:83:VAL:HG13	2.09	0.51
47:BP:146:VAL:CG2	47:BP:147:LEU:H	2.09	0.51
49:BR:24:GLN:HE22	49:BR:36:THR:HG21	1.72	0.51
51:BT:91:ARG:HB3	51:BT:115:ARG:O	2.10	0.51
53:BV:40:LEU:N	53:BV:40:LEU:HD22	2.24	0.51
1:CA:1239:A:H62	1:CA:1299:A:N6	2.08	0.51
2:CB:213:LEU:HD23	2:CB:213:LEU:C	2.35	0.51
5:CE:101:ILE:CD1	5:CE:119:LEU:HD23	2.33	0.51
7:CG:15:ASP:OD1	7:CG:44:TYR:OH	2.28	0.51
9:CI:5:TYR:CE1	9:CI:18:PHE:HE1	2.27	0.51
9:CI:126:SER:O	9:CI:128:ARG:HD2	2.09	0.51
10:CJ:16:LEU:HD12	10:CJ:70:ARG:HD3	1.91	0.51
12:CL:38:THR:HG22	12:CL:57:LYS:O	2.10	0.51
13:CM:97:PRO:HA	13:CM:110:ARG:CD	2.36	0.51
20:CT:56:MET:HG3	20:CT:84:LEU:HD12	1.92	0.51
25:CY:74:TRP:CE2	25:CY:273:LEU:HB3	2.45	0.51
25:CY:91:THR:HB	25:CY:95:GLU:HG2	1.91	0.51
25:CY:191:ASP:O	25:CY:193:GLY:N	2.43	0.51
25:CY:488:THR:HG23	25:CY:600:VAL:CG1	2.39	0.51
25:CY:510:VAL:HG12	25:CY:511:LYS:N	2.25	0.51
25:CY:528:ALA:HB3	25:CY:567:LEU:O	2.11	0.51
28:D2:24:LEU:CD2	28:D2:60:LEU:HD11	2.32	0.51
29:D3:12:PRO:O	29:D3:13:ILE:C	2.52	0.51
32:D6:27:LYS:HB3	32:D6:30:THR:CG2	2.39	0.51
34:D8:52:LYS:HE2	36:DA:834:C:H4'	1.91	0.51
36:DA:63:U:H4'	36:DA:63:U:OP1	2.10	0.51
36:DA:204:A:H8	36:DA:204:A:OP1	1.92	0.51
36:DA:365:C:H5'	36:DA:365:C:C6	2.29	0.51
36:DA:657:U:H2'	36:DA:658:C:H6	1.74	0.51
36:DA:1216:G:N2	36:DA:1234:U:H1'	2.25	0.51
36:DA:1345:C:O2'	36:DA:1346:G:H5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2037:G:H2'	36:DA:2038:G:C8	2.46	0.51
36:DA:2111:C:H1'	36:DA:2118:U:O4'	2.09	0.51
36:DA:2236:C:H2'	36:DA:2237:G:O4'	2.10	0.51
36:DA:2735:G:H2'	36:DA:2736:G:H8	1.74	0.51
36:DA:2836:U:C4	36:DA:2883:A:N6	2.78	0.51
37:DB:42:C:O2'	42:DG:66:GLN:NE2	2.40	0.51
38:DC:138:LEU:HD22	38:DC:139:PRO:CD	2.38	0.51
40:DE:34:VAL:HG12	40:DE:48:GLN:O	2.11	0.51
41:DF:132:VAL:CG2	41:DF:133:ASN:H	2.19	0.51
42:DG:55:LYS:C	42:DG:57:ALA:N	2.67	0.51
43:DH:154:PRO:O	43:DH:156:ALA:N	2.43	0.51
45:DN:23:LEU:HB3	45:DN:60:ILE:CG2	2.38	0.51
46:DO:14:THR:CG2	46:DO:86:ILE:HD13	2.39	0.51
47:DP:33:ARG:O	47:DP:35:HIS:O	2.28	0.51
47:DP:41:ARG:HH11	47:DP:41:ARG:HB3	1.73	0.51
48:DQ:21:THR:O	48:DQ:22:LYS:HB3	2.09	0.51
49:DR:12:ARG:HB3	49:DR:16:HIS:CD2	2.45	0.51
50:DS:40:ILE:CG2	50:DS:41:ASP:H	2.23	0.51
50:DS:85:VAL:HG23	50:DS:86:ALA:N	2.25	0.51
51:DT:32:TYR:O	51:DT:33:LYS:HB2	2.09	0.51
51:DT:50:ILE:HD12	51:DT:50:ILE:N	2.24	0.51
51:DT:108:ARG:HA	51:DT:111:ARG:NH1	2.25	0.51
54:DW:59:VAL:O	54:DW:59:VAL:HG12	2.10	0.51
1:AA:439:A:H2'	1:AA:441:A:C5'	2.41	0.51
1:AA:742:G:OP1	15:AO:59:MET:HE2	2.09	0.51
1:AA:757:U:H2'	1:AA:758:G:O4'	2.10	0.51
1:AA:1006:C:H2'	1:AA:1007:C:C5	2.45	0.51
2:AB:189:ASP:CG	2:AB:205:ASP:OD1	2.54	0.51
4:AD:163:GLU:C	4:AD:165:MET:H	2.16	0.51
10:AJ:21:GLN:HG2	10:AJ:21:GLN:O	2.10	0.51
12:AL:42:THR:O	12:AL:42:THR:HG23	2.09	0.51
14:AN:18:VAL:HG23	14:AN:19:ARG:N	2.25	0.51
18:AR:30:ASP:O	18:AR:32:ARG:N	2.36	0.51
19:AS:36:ARG:NH1	19:AS:52:TYR:O	2.42	0.51
19:AS:67:VAL:CG2	30:B4:48:ARG:NH2	2.74	0.51
21:AU:5:ASP:O	21:AU:7:ARG:N	2.43	0.51
25:AY:210:ARG:O	25:AY:212:TYR:N	2.43	0.51
25:AY:471:LYS:HG2	25:AY:471:LYS:O	2.10	0.51
25:AY:546:ILE:CD1	25:AY:565:VAL:HG11	2.34	0.51
27:B1:45:ASN:HD22	27:B1:45:ASN:C	2.17	0.51
32:B6:30:THR:HG22	32:B6:32:ASN:HD22	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:43:CYS:HB2	32:B6:44:ARG:NH2	2.24	0.51
32:B6:54:ILE:CD1	36:BA:2420:C:H5'	2.41	0.51
36:BA:27:G:N2	36:BA:512:G:C2'	2.67	0.51
36:BA:229:A:H3'	36:BA:230:U:H5'	1.92	0.51
36:BA:529:A:H4'	36:BA:530:G:O5'	2.10	0.51
36:BA:768:G:H2'	36:BA:769:G:C8	2.45	0.51
36:BA:807:U:OP2	47:BP:39:LYS:HG3	2.10	0.51
36:BA:883:G:H1	36:BA:893:C:H42	1.58	0.51
36:BA:997:G:OP1	52:BU:93:LYS:HD3	2.10	0.51
36:BA:1494:A:O2'	36:BA:1495:A:C5'	2.48	0.51
36:BA:1600:C:O2'	36:BA:1601:G:H5'	2.09	0.51
36:BA:1755:A:P	51:BT:113:LYS:NZ	2.83	0.51
36:BA:2175:C:H1'	38:BC:218:THR:O	2.09	0.51
36:BA:2308:G:O6	36:BA:2310:A:H2'	2.11	0.51
36:BA:2359:C:H2'	36:BA:2360:A:O4'	2.10	0.51
36:BA:2850:A:OP2	36:BA:2866:U:H5	1.93	0.51
36:BA:2867:G:C5	51:BT:23:ARG:NH1	2.78	0.51
38:BC:77:ALA:HB3	38:BC:95:VAL:HA	1.91	0.51
40:BE:8:LYS:HE2	40:BE:192:ASN:ND2	2.25	0.51
40:BE:131:ALA:HB3	40:BE:134:ILE:CD1	2.41	0.51
42:BG:150:ASP:CG	42:BG:151:ALA:H	2.18	0.51
45:BN:125:GLY:CA	45:BN:126:PRO:O	2.58	0.51
48:BQ:134:ARG:HG3	48:BQ:134:ARG:HH11	1.75	0.51
51:BT:104:ASN:O	51:BT:106:SER:N	2.43	0.51
1:CA:276:G:O2'	1:CA:277:C:H5'	2.10	0.51
1:CA:1334:G:H5'	1:CA:1335:C:OP2	2.10	0.51
1:CA:1515:C:O2'	1:CA:1516:G:H5'	2.10	0.51
3:CC:40:ARG:O	3:CC:44:GLU:HG3	2.09	0.51
3:CC:165:THR:O	3:CC:165:THR:HG23	2.10	0.51
6:CF:67:MET:HB2	6:CF:68:PRO:CD	2.31	0.51
10:CJ:70:ARG:HG2	10:CJ:70:ARG:NH1	2.25	0.51
25:CY:84:THR:HG22	59:CY:701:FUA:H152	1.92	0.51
25:CY:92:ILE:HD13	25:CY:92:ILE:O	2.09	0.51
25:CY:162:VAL:HG21	25:CY:255:ILE:CD1	2.39	0.51
25:CY:413:ILE:O	25:CY:413:ILE:HG23	2.10	0.51
25:CY:583:LYS:HD3	25:CY:583:LYS:C	2.35	0.51
25:CY:621:ILE:HD11	25:CY:634:MET:CE	2.40	0.51
27:D1:24:ALA:HA	27:D1:32:LYS:HG3	1.92	0.51
31:D5:7:PRO:HG2	36:DA:2016:U:O2	2.10	0.51
36:DA:279:C:H3'	36:DA:280:C:H5''	1.91	0.51
36:DA:428:A:H3'	36:DA:429:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:674:G:H5''	41:DF:76:GLY:N	2.26	0.51
36:DA:1784:A:H4'	36:DA:1785:A:O5'	2.09	0.51
36:DA:2240:C:O2'	36:DA:2241:A:H5'	2.10	0.51
36:DA:2402:C:C6	36:DA:2402:C:OP2	2.63	0.51
36:DA:2454:G:O2'	36:DA:2455:G:H5'	2.10	0.51
36:DA:2472:G:H3'	36:DA:2475:C:N4	2.25	0.51
39:DD:266:SER:C	39:DD:267:SER:O	2.51	0.51
41:DF:126:VAL:HG11	41:DF:142:TRP:HH2	1.74	0.51
41:DF:195:ASP:OD1	41:DF:196:LEU:N	2.43	0.51
42:DG:11:TYR:OH	42:DG:33:ARG:CG	2.58	0.51
42:DG:60:LEU:HA	42:DG:63:ILE:HD11	1.92	0.51
42:DG:107:LEU:HD11	42:DG:178:PHE:CE1	2.45	0.51
43:DH:28:GLY:HA3	43:DH:79:VAL:HB	1.91	0.51
43:DH:155:SER:O	43:DH:157:TYR:N	2.43	0.51
45:DN:45:ASN:N	45:DN:45:ASN:ND2	2.43	0.51
46:DO:44:LYS:O	46:DO:45:GLU:HB3	2.10	0.51
48:DQ:50:ALA:O	48:DQ:51:ARG:C	2.52	0.51
51:DT:91:ARG:HB3	51:DT:115:ARG:O	2.10	0.51
1:AA:940:C:O2'	1:AA:941:G:H5'	2.09	0.51
1:AA:1133:G:H22	1:AA:1143:G:H1'	1.75	0.51
1:AA:1269:A:C2'	1:AA:1270:C:H5'	2.40	0.51
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.45	0.51
7:AG:8:GLU:O	7:AG:9:VAL:C	2.53	0.51
8:AH:35:ILE:HG22	8:AH:39:LEU:HD21	1.92	0.51
10:AJ:3:LYS:O	10:AJ:100:THR:HG23	2.10	0.51
10:AJ:8:LEU:HD23	10:AJ:96:ILE:HG22	1.90	0.51
12:AL:38:THR:CG2	12:AL:57:LYS:HB3	2.40	0.51
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.92	0.51
15:AO:57:LEU:HD23	15:AO:57:LEU:H	1.75	0.51
19:AS:13:ASP:O	19:AS:15:LEU:N	2.44	0.51
20:AT:13:LEU:O	20:AT:16:HIS:N	2.43	0.51
23:AW:61:C:O2'	23:AW:62:C:H5'	2.10	0.51
25:AY:21:ILE:HG13	36:BA:2661:G:H5''	1.93	0.51
25:AY:25:LYS:HE3	60:AY:702:GDP:PB	2.50	0.51
25:AY:97:SER:O	25:AY:100:VAL:HG13	2.09	0.51
25:AY:679:VAL:HG23	25:AY:684:GLN:NE2	2.25	0.51
27:B1:12:PRO:CG	36:BA:1365:A:H5'	2.40	0.51
29:B3:9:VAL:HG11	29:B3:55:ARG:HD3	1.92	0.51
29:B3:15:TYR:H	29:B3:15:TYR:HD1	1.58	0.51
36:BA:925:C:C3'	36:BA:926:A:H5''	2.39	0.51
36:BA:1669:A:H4'	36:BA:2549:G:H4'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1721:G:H8	36:BA:1741:A:H62	1.57	0.51
36:BA:1856:G:H1	36:BA:1886:C:H42	1.58	0.51
36:BA:2053:G:H1	36:BA:2616:C:H42	1.58	0.51
36:BA:2208:A:H1'	36:BA:2219:G:C4	2.44	0.51
36:BA:2313:C:O2'	36:BA:2314:C:H5'	2.10	0.51
36:BA:2464:C:O2'	36:BA:2465:C:H6	1.92	0.51
36:BA:2606:C:C2'	36:BA:2607:G:H5'	2.40	0.51
43:BH:43:VAL:CG1	43:BH:52:VAL:HA	2.40	0.51
43:BH:121:ILE:HG23	43:BH:134:SER:O	2.10	0.51
45:BN:62:VAL:HG13	45:BN:62:VAL:O	2.11	0.51
46:BO:14:THR:CB	46:BO:86:ILE:HD13	2.41	0.51
48:BQ:21:THR:O	48:BQ:22:LYS:HB3	2.09	0.51
48:BQ:27:VAL:H	48:BQ:137:TYR:HD2	1.57	0.51
49:BR:53:HIS:C	49:BR:53:HIS:HD1	2.18	0.51
49:BR:115:GLU:HG2	49:BR:117:VAL:H	1.75	0.51
54:BW:15:ARG:HA	54:BW:18:ARG:HD2	1.92	0.51
55:BX:23:GLU:O	55:BX:25:LYS:N	2.42	0.51
57:BZ:4:ARG:NH1	57:BZ:58:VAL:HG11	2.25	0.51
1:CA:8:A:N6	4:CD:209:ARG:HB2	2.25	0.51
1:CA:658:G:H2'	1:CA:659:U:H6	1.76	0.51
1:CA:1332:A:O2'	1:CA:1333:A:H5'	2.09	0.51
3:CC:95:THR:O	3:CC:97:LYS:N	2.43	0.51
4:CD:13:ARG:O	4:CD:14:ARG:C	2.54	0.51
6:CF:2:ARG:HD3	6:CF:92:LYS:CE	2.41	0.51
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.10	0.51
20:CT:50:GLU:HG3	20:CT:51:GLU:N	2.26	0.51
23:CW:75:C:H5''	27:D1:30:VAL:HG11	1.92	0.51
25:CY:388:THR:CG2	25:CY:399:LEU:HD13	2.40	0.51
36:DA:134:C:H2'	36:DA:135:G:C8	2.40	0.51
36:DA:207:A:H2'	36:DA:208:C:O4'	2.11	0.51
36:DA:1659:U:O2'	36:DA:1660:C:H5'	2.10	0.51
36:DA:2292:C:O2'	36:DA:2293:C:H5'	2.10	0.51
40:DE:131:ALA:HB3	40:DE:134:ILE:HD13	1.91	0.51
41:DF:69:HIS:CD2	41:DF:69:HIS:N	2.78	0.51
41:DF:103:LYS:HA	41:DF:106:ARG:CG	2.41	0.51
43:DH:83:TYR:HA	43:DH:135:GLY:O	2.10	0.51
45:DN:22:THR:HB	45:DN:25:ARG:CB	2.37	0.51
46:DO:98:VAL:CG2	46:DO:117:LEU:HB3	2.40	0.51
51:DT:83:ILE:HD11	51:DT:84:GLN:HE21	1.74	0.51
52:DU:92:ARG:NH1	53:DV:11:GLN:O	2.41	0.51
53:DV:28:GLU:CB	53:DV:31:ALA:HB2	2.32	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DY:2:ARG:HH11	56:DY:2:ARG:HG2	1.76	0.51
57:DZ:125:LEU:HD12	57:DZ:126:VAL:H	1.75	0.51
1:AA:425:G:O2'	1:AA:426:G:H5'	2.11	0.51
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.23	0.51
1:AA:1058:G:H8	1:AA:1058:G:O5'	1.94	0.51
1:AA:1510:U:H2'	1:AA:1511:G:H8	1.72	0.51
3:AC:65:ALA:O	3:AC:66:VAL:HB	2.10	0.51
3:AC:150:LYS:HB2	3:AC:169:ALA:HB1	1.93	0.51
7:AG:75:VAL:CG1	7:AG:86:GLN:HB3	2.41	0.51
7:AG:114:ARG:HH11	7:AG:114:ARG:HG2	1.75	0.51
9:AI:45:ALA:O	9:AI:48:GLU:HB2	2.10	0.51
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.11	0.51
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.24	0.51
18:AR:87:ARG:HB3	18:AR:87:ARG:CZ	2.40	0.51
20:AT:50:GLU:HG3	20:AT:51:GLU:N	2.24	0.51
22:AV:15:G:H3'	22:AV:16:U:C5'	2.36	0.51
22:AV:52:G:H2'	22:AV:53:G:H8	1.75	0.51
23:AW:25:C:O2'	23:AW:26:G:H5'	2.10	0.51
25:AY:610:VAL:HG12	25:AY:669:PHE:HB3	1.91	0.51
26:B0:49:LYS:HG3	26:B0:80:HIS:ND1	2.24	0.51
26:B0:78:TYR:CD1	26:B0:78:TYR:N	2.78	0.51
27:B1:45:ASN:ND2	36:BA:2090:G:H21	2.09	0.51
28:B2:66:GLU:O	28:B2:69:ARG:HG2	2.10	0.51
36:BA:20:C:H2'	36:BA:21:A:C8	2.45	0.51
36:BA:654(E):G:H2'	36:BA:654(F):C:H5'	1.93	0.51
36:BA:773:U:C5'	39:BD:47:GLY:HA2	2.40	0.51
36:BA:777:A:H2'	36:BA:778:G:H8	1.75	0.51
36:BA:1591:G:O2'	36:BA:1592:C:H5'	2.10	0.51
36:BA:1748:G:H5'	36:BA:1748:G:C8	2.36	0.51
36:BA:1826:G:H4'	39:BD:242:ARG:NH2	2.26	0.51
36:BA:2026:C:N3	36:BA:2027:G:C8	2.79	0.51
36:BA:2656:U:C2'	36:BA:2657:A:H5''	2.41	0.51
36:BA:2769:C:O2'	36:BA:2770:G:H5'	2.11	0.51
40:BE:26:ILE:HG13	40:BE:182:LEU:HB3	1.92	0.51
41:BF:26:ALA:O	41:BF:27:GLU:HG3	2.11	0.51
42:BG:63:ILE:HD12	42:BG:63:ILE:C	2.36	0.51
47:BP:16:ARG:NH2	47:BP:18:ARG:HG2	2.25	0.51
47:BP:67:MET:O	47:BP:68:GLN:HG3	2.10	0.51
47:BP:113:LYS:HA	47:BP:129:ALA:O	2.11	0.51
51:BT:11:GLU:O	51:BT:14:TYR:CE1	2.63	0.51
52:BU:91:ASP:O	52:BU:92:ARG:HB3	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:81:ARG:HB2	57:BZ:81:ARG:HH11	1.75	0.51
1:CA:542:G:H5'	4:CD:41:GLY:HA2	1.92	0.51
1:CA:636:U:H2'	1:CA:637:G:C8	2.45	0.51
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.93	0.51
2:CB:102:LEU:HG	2:CB:158:LEU:CD2	2.41	0.51
3:CC:157:ILE:C	3:CC:159:GLY:N	2.69	0.51
4:CD:162:LEU:HD13	4:CD:181:MET:HG2	1.93	0.51
12:CL:22:SER:C	12:CL:24:VAL:H	2.19	0.51
12:CL:83:VAL:HG12	12:CL:84:LEU:H	1.75	0.51
13:CM:34:LEU:HD13	13:CM:41:PRO:CB	2.40	0.51
13:CM:34:LEU:HD13	13:CM:41:PRO:CG	2.40	0.51
19:CS:43:GLU:O	19:CS:45:VAL:HG13	2.10	0.51
20:CT:96:GLY:O	20:CT:97:ALA:O	2.28	0.51
22:CV:27:G:H2'	22:CV:28:G:H8	1.75	0.51
23:CW:51:C:H2'	23:CW:52:G:C5'	2.37	0.51
25:CY:17:ILE:HD11	25:CY:81:ILE:HG21	1.92	0.51
25:CY:36:THR:CB	25:CY:72:CYS:HB2	2.39	0.51
25:CY:149:VAL:O	25:CY:152:THR:HG22	2.10	0.51
25:CY:377:VAL:HG21	25:CY:380:LEU:CD1	2.40	0.51
26:D0:51:VAL:CG2	26:D0:81:VAL:HG23	2.40	0.51
30:D4:9:LEU:HD13	30:D4:26:SER:O	2.10	0.51
30:D4:48:ARG:NH2	30:D4:49:PHE:HE1	2.08	0.51
31:D5:29:THR:HG21	36:DA:2814:C:O2'	2.11	0.51
36:DA:271(K):U:H3'	36:DA:271(L):U:H5''	1.93	0.51
36:DA:637:A:H4'	36:DA:638:G:O5'	2.10	0.51
36:DA:684:G:O2'	36:DA:788:A:N7	2.44	0.51
36:DA:1035:U:H2'	36:DA:1036:G:H8	1.74	0.51
36:DA:1917:U:O2'	36:DA:1918:A:H5'	2.10	0.51
36:DA:2359:C:H2'	36:DA:2360:A:O4'	2.10	0.51
36:DA:2497:A:OP2	36:DA:2497:A:C8	2.58	0.51
36:DA:2656:U:N3	36:DA:2665:A:H2	2.08	0.51
36:DA:2678:C:O2'	36:DA:2679:A:H5'	2.10	0.51
36:DA:2774:C:H2'	36:DA:2775:A:O4'	2.10	0.51
37:DB:81:G:H5'	37:DB:81:G:N3	2.25	0.51
38:DC:126:SER:C	38:DC:128:LEU:H	2.18	0.51
39:DD:35:LYS:C	39:DD:35:LYS:CD	2.80	0.51
41:DF:6:VAL:H	41:DF:125:LEU:HD21	1.74	0.51
42:DG:72:ARG:HB3	42:DG:87:PRO:CD	2.38	0.51
43:DH:53:GLU:CD	43:DH:54:ARG:H	2.18	0.51
43:DH:157:TYR:CE1	43:DH:171:LEU:HD22	2.31	0.51
51:DT:5:ALA:O	51:DT:6:LEU:C	2.53	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DY:61:ILE:HG12	56:DY:62:GLU:N	2.25	0.51
1:AA:866:C:H2'	1:AA:867:G:O4'	2.11	0.51
1:AA:939:G:H5''	7:AG:102:ARG:NH1	2.25	0.51
1:AA:939:G:C5'	7:AG:102:ARG:NH2	2.71	0.51
8:AH:40:ALA:HA	8:AH:45:ILE:HG13	1.91	0.51
9:AI:125:TYR:CD1	9:AI:126:SER:N	2.76	0.51
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.73	0.51
15:AO:49:ASP:O	15:AO:49:ASP:OD1	2.29	0.51
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.41	0.51
19:AS:61:TYR:O	19:AS:62:ILE:HB	2.10	0.51
20:AT:96:GLY:O	20:AT:97:ALA:O	2.29	0.51
25:AY:110:SER:OG	25:AY:136:ALA:HB1	2.11	0.51
25:AY:519:ARG:NH2	25:AY:678:GLU:HB2	2.25	0.51
27:B1:86:SER:O	27:B1:90:ILE:N	2.42	0.51
29:B3:56:VAL:CG1	29:B3:57:GLU:H	2.23	0.51
30:B4:8:LYS:O	30:B4:9:LEU:CB	2.59	0.51
36:BA:7:G:O2'	36:BA:8:A:H5'	2.10	0.51
36:BA:324:A:N6	36:BA:338:G:O2'	2.42	0.51
36:BA:545:C:H2'	36:BA:547:A:C5'	2.35	0.51
36:BA:1635:G:N2	36:BA:1636:C:C2	2.79	0.51
36:BA:1799:G:H5'	36:BA:1819:A:H61	1.76	0.51
36:BA:1865:G:C2'	36:BA:1866:C:H5''	2.41	0.51
41:BF:126:VAL:HG11	41:BF:142:TRP:HH2	1.75	0.51
44:BJ:118:UNK:C	44:BJ:120:UNK:H	2.23	0.51
45:BN:15:LEU:HD13	45:BN:15:LEU:C	2.35	0.51
46:BO:1:MET:HE2	46:BO:32:TYR:CG	2.46	0.51
46:BO:107:ARG:HA	46:BO:112:MET:CE	2.34	0.51
47:BP:92:GLU:OE2	47:BP:121:LYS:HE2	2.10	0.51
49:BR:63:ARG:HH22	49:BR:77:ARG:HG2	1.76	0.51
53:BV:19:LYS:HZ3	53:BV:20:LEU:N	2.03	0.51
54:BW:51:LEU:C	54:BW:51:LEU:HD13	2.35	0.51
56:BY:30:VAL:HG12	56:BY:31:LEU:H	1.75	0.51
1:CA:238:G:P	17:CQ:25:ARG:HH22	2.34	0.51
1:CA:547:A:OP2	4:CD:2:GLY:N	2.43	0.51
1:CA:1116:C:C2'	1:CA:1117:G:C5'	2.87	0.51
2:CB:163:PHE:CD1	2:CB:185:ILE:HG13	2.46	0.51
2:CB:236:TYR:O	2:CB:237:ALA:C	2.53	0.51
5:CE:34:VAL:HG12	5:CE:62:ALA:HB1	1.92	0.51
5:CE:79:GLU:CB	5:CE:93:PRO:HD2	2.36	0.51
5:CE:144:THR:N	5:CE:147:ASP:OD1	2.40	0.51
7:CG:15:ASP:HA	7:CG:24:THR:HG23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:17:VAL:O	13:CM:20:THR:HB	2.11	0.51
13:CM:40:ASN:HD22	13:CM:43:THR:HG23	1.75	0.51
25:CY:227:ILE:HD12	25:CY:245:ALA:CB	2.39	0.51
25:CY:600:VAL:HG13	25:CY:600:VAL:O	2.10	0.51
25:CY:670:VAL:HB	25:CY:672:PHE:CE1	2.45	0.51
30:D4:8:LYS:O	30:D4:9:LEU:CB	2.58	0.51
32:D6:11:LEU:HD22	32:D6:11:LEU:C	2.36	0.51
32:D6:30:THR:HG22	32:D6:32:ASN:HD22	1.71	0.51
36:DA:16:G:H2'	36:DA:17:G:H8	1.75	0.51
36:DA:1132:A:C4	36:DA:1133:U:C5	2.98	0.51
36:DA:1270:C:H5''	36:DA:1271:G:H5'	1.93	0.51
36:DA:1310:G:H2'	36:DA:1311:G:H5'	1.92	0.51
36:DA:1491:G:O2'	39:DD:101:GLU:HB2	2.10	0.51
36:DA:1759:A:H5'	36:DA:2715:C:H1'	1.92	0.51
36:DA:2189:U:H2'	36:DA:2190:G:C5'	2.31	0.51
36:DA:2312:U:OP1	42:DG:73:ALA:HA	2.10	0.51
36:DA:2317:C:O2'	36:DA:2318:G:H5'	2.10	0.51
36:DA:2348:U:H2'	36:DA:2349:G:H5'	1.92	0.51
36:DA:2543:G:H8	36:DA:2543:G:H5'	1.76	0.51
37:DB:20:C:H2'	37:DB:21:G:H5'	1.93	0.51
38:DC:173:HIS:O	38:DC:174:ALA:HB2	2.10	0.51
39:DD:26:LYS:HE2	39:DD:26:LYS:N	2.25	0.51
39:DD:133:LEU:HD22	39:DD:165:ILE:HD11	1.91	0.51
46:DO:1:MET:HE2	46:DO:32:TYR:CG	2.45	0.51
47:DP:47:ASP:HB3	47:DP:48:PRO:C	2.35	0.51
57:DZ:9:TYR:CE2	57:DZ:35:ARG:NH1	2.76	0.51
1:AA:353:A:H5'	1:AA:353:A:H8	1.75	0.51
1:AA:828:A:H2'	1:AA:829:G:O4'	2.10	0.51
1:AA:936:C:H2'	1:AA:937:A:O4'	2.10	0.51
2:AB:236:TYR:O	2:AB:237:ALA:C	2.53	0.51
4:AD:78:LEU:HD21	4:AD:96:LEU:CB	2.41	0.51
13:AM:40:ASN:HD22	13:AM:43:THR:HG23	1.76	0.51
25:AY:66:THR:O	25:AY:67:ALA:HB3	2.11	0.51
25:AY:180:VAL:CG2	25:AY:181:LEU:H	2.23	0.51
25:AY:230:LYS:HD2	25:AY:235:GLU:OE1	2.11	0.51
25:AY:382:GLU:O	25:AY:384:ILE:HG23	2.11	0.51
26:B0:7:LEU:HD12	48:BQ:85:LYS:HE2	1.92	0.51
28:B2:3:LEU:HD12	36:BA:98:G:C5'	2.41	0.51
34:B8:41:ILE:HG13	34:B8:42:ARG:N	2.26	0.51
36:BA:18:C:O2	36:BA:554:U:H5''	2.10	0.51
36:BA:90:U:H4'	36:BA:92:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:145:G:H2'	36:BA:146:G:C8	2.45	0.51
36:BA:881:G:C2'	36:BA:882:G:H5'	2.40	0.51
36:BA:1270:C:H5''	36:BA:1271:G:C5'	2.40	0.51
36:BA:1542:A:H3'	36:BA:1542:A:H8	1.75	0.51
36:BA:1577:C:H2'	36:BA:1578:U:C6	2.46	0.51
36:BA:1680:U:H2'	36:BA:1681:G:O4'	2.09	0.51
36:BA:2348:U:C2'	36:BA:2349:G:C5'	2.89	0.51
36:BA:2502:G:H5''	36:BA:2503:A:H5''	1.92	0.51
37:BB:58:A:H2'	37:BB:59:A:C8	2.46	0.51
39:BD:72:LYS:HG3	39:BD:103:ARG:HH21	1.76	0.51
42:BG:111:LEU:HB3	42:BG:117:PHE:CE2	2.46	0.51
47:BP:140:ALA:O	47:BP:141:ALA:HB3	2.10	0.51
48:BQ:59:ARG:HB3	57:BZ:180:VAL:CG2	2.41	0.51
50:BS:89:ARG:HG2	50:BS:89:ARG:NH1	2.25	0.51
50:BS:95:HIS:CD2	50:BS:96:GLY:H	2.27	0.51
52:BU:47:TYR:CA	52:BU:50:ARG:NH1	2.73	0.51
52:BU:88:ILE:O	52:BU:90:VAL:N	2.41	0.51
52:BU:95:LEU:O	52:BU:98:LEU:HG	2.11	0.51
53:BV:49:THR:HB	53:BV:50:PRO:HD2	1.93	0.51
56:BY:13:VAL:HG21	56:BY:72:VAL:HB	1.91	0.51
57:BZ:141:VAL:O	57:BZ:142:SER:HB3	2.11	0.51
1:CA:59:A:H5''	1:CA:60:A:H5'	1.91	0.51
1:CA:243:A:C2	1:CA:246:A:C8	2.98	0.51
1:CA:1064:G:N2	1:CA:1190:G:H2'	2.25	0.51
1:CA:1109:C:C2'	1:CA:1110:A:H5'	2.40	0.51
1:CA:1456:G:C2'	1:CA:1457:G:H5'	2.39	0.51
2:CB:126:GLU:HA	2:CB:129:GLU:CD	2.35	0.51
2:CB:223:ILE:HG12	2:CB:226:ARG:HH22	1.68	0.51
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.11	0.51
4:CD:145:GLU:C	4:CD:146:ILE:HD13	2.36	0.51
4:CD:200:GLU:CD	4:CD:200:GLU:H	2.18	0.51
5:CE:91:LEU:HD13	5:CE:120:THR:CG2	2.41	0.51
6:CF:16:GLN:HA	6:CF:19:LEU:HB3	1.93	0.51
7:CG:91:VAL:HG12	7:CG:92:SER:N	2.26	0.51
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.26	0.51
11:CK:67:ASP:OD1	11:CK:71:LYS:HE3	2.11	0.51
25:CY:78:ARG:C	25:CY:79:ILE:HG13	2.33	0.51
25:CY:428:LEU:O	25:CY:432:ALA:HB2	2.11	0.51
25:CY:603:GLU:CG	25:CY:677:GLN:HG2	2.40	0.51
26:D0:37:LEU:N	26:D0:59:LEU:O	2.37	0.51
29:D3:7:LYS:HE3	29:D3:32:GLN:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D3:56:VAL:CG1	29:D3:57:GLU:N	2.73	0.51
30:D4:2:LYS:CB	37:DB:40:U:O4	2.54	0.51
34:D8:32:LEU:CD2	34:D8:32:LEU:H	2.23	0.51
36:DA:7:G:O2'	36:DA:8:A:H5'	2.10	0.51
36:DA:55:G:H1	36:DA:115:C:H42	1.58	0.51
36:DA:190:A:H2'	36:DA:191:A:C8	2.46	0.51
36:DA:229:A:H3'	36:DA:230:U:H5'	1.91	0.51
36:DA:1012:U:H3	45:DN:25:ARG:HE	1.58	0.51
36:DA:1052:C:H6	36:DA:1052:C:H3'	1.76	0.51
36:DA:1186:G:O2'	36:DA:1187:G:H5'	2.11	0.51
36:DA:1462:C:H4'	36:DA:2703:C:H5'	1.93	0.51
36:DA:1537:G:H2'	36:DA:1538:G:C8	2.44	0.51
36:DA:2030:A:H4'	36:DA:2031:A:C8	2.46	0.51
36:DA:2083:G:H2'	36:DA:2084:C:C6	2.46	0.51
36:DA:2481:G:HO2'	36:DA:2482:G:P	2.33	0.51
36:DA:2511:U:O3'	40:DE:123:ALA:HB3	2.11	0.51
36:DA:2626:C:O2'	36:DA:2627:G:H5'	2.10	0.51
39:DD:25:THR:O	39:DD:26:LYS:C	2.53	0.51
41:DF:154:VAL:HG13	41:DF:191:ARG:C	2.35	0.51
41:DF:157:VAL:O	41:DF:157:VAL:HG23	2.11	0.51
42:DG:96:ARG:O	42:DG:97:ASP:HB2	2.10	0.51
45:DN:55:VAL:HG21	45:DN:127:ASP:H	1.75	0.51
56:DY:23:ARG:O	56:DY:24:VAL:O	2.29	0.51
57:DZ:16:SER:O	57:DZ:20:ARG:HG2	2.10	0.51
1:AA:59:A:H1'	1:AA:354:G:N2	2.26	0.51
1:AA:182:U:H5'	1:AA:183:G:P	2.50	0.51
1:AA:191:G:C2	20:AT:105:SER:HB3	2.45	0.51
1:AA:333:G:O2'	1:AA:334:C:H5'	2.10	0.51
1:AA:626:U:H5'	1:AA:627:G:OP2	2.11	0.51
1:AA:977:A:H2'	1:AA:978:A:H5'	1.93	0.51
1:AA:1318:A:H2'	1:AA:1319:A:H5'	1.93	0.51
1:AA:1409:C:O2'	1:AA:1410:G:H5'	2.11	0.51
1:AA:1499:A:C1'	1:AA:1520:G:H5'	2.35	0.51
8:AH:82:HIS:HD2	8:AH:138:TRP:NE1	2.08	0.51
9:AI:88:TYR:O	9:AI:89:ASN:CB	2.57	0.51
12:AL:112:ASP:O	12:AL:114:LYS:HG3	2.10	0.51
16:AP:33:ILE:O	16:AP:34:GLU:CB	2.59	0.51
19:AS:27:GLU:O	19:AS:28:LYS:O	2.28	0.51
19:AS:39:THR:HA	19:AS:70:LYS:HD3	1.92	0.51
25:AY:427:ALA:CB	25:AY:466:LEU:HD11	2.36	0.51
26:B0:43:THR:N	36:BA:2331:G:H4'	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:28:LYS:NZ	28:B2:56:GLN:NE2	2.59	0.51
29:B3:9:VAL:HG23	29:B3:10:LYS:N	2.26	0.51
29:B3:15:TYR:HB3	29:B3:19:GLN:NE2	2.25	0.51
36:BA:302:C:H2'	36:BA:303:U:C6	2.45	0.51
36:BA:650:C:H3'	36:BA:651:G:H5''	1.92	0.51
36:BA:687:C:H2'	36:BA:688:U:O4'	2.11	0.51
36:BA:768:G:H2'	36:BA:769:G:H8	1.75	0.51
36:BA:1149:G:H2'	36:BA:1150:C:C6	2.46	0.51
36:BA:1713:U:O2'	36:BA:1714:G:H5'	2.11	0.51
36:BA:1877:A:H5'	36:BA:1878:G:OP2	2.11	0.51
36:BA:1943:U:O2	36:BA:1943:U:C2'	2.59	0.51
36:BA:2553:G:H2'	36:BA:2554:U:O4'	2.10	0.51
36:BA:2607:G:C6	36:BA:2608:G:C6	2.99	0.51
41:BF:157:VAL:O	41:BF:157:VAL:HG23	2.11	0.51
42:BG:129:GLY:H	42:BG:166:ASP:N	2.08	0.51
43:BH:18:GLU:HG3	43:BH:25:LYS:HB2	1.91	0.51
43:BH:83:TYR:CB	43:BH:135:GLY:H	2.19	0.51
43:BH:157:TYR:CE1	43:BH:171:LEU:HD22	2.32	0.51
44:BJ:26:UNK:CB	44:BJ:84:UNK:HA	2.40	0.51
45:BN:30:ILE:O	45:BN:34:LEU:HD23	2.10	0.51
45:BN:120:LEU:C	45:BN:120:LEU:HD13	2.36	0.51
51:BT:65:LYS:HA	51:BT:65:LYS:HZ1	1.67	0.51
51:BT:134:GLU:O	51:BT:135:ALA:HB2	2.10	0.51
53:BV:15:GLU:O	53:BV:16:PRO:C	2.53	0.51
1:CA:135:C:H2'	1:CA:136:C:H5'	1.93	0.51
1:CA:1064:G:H21	1:CA:1190:G:H2'	1.75	0.51
1:CA:1084:G:OP1	1:CA:1086:U:C4	2.64	0.51
2:CB:8:LYS:O	2:CB:11:LEU:N	2.44	0.51
3:CC:65:ALA:O	3:CC:66:VAL:HB	2.11	0.51
4:CD:68:TYR:O	4:CD:69:GLY:C	2.52	0.51
4:CD:162:LEU:CD1	4:CD:181:MET:HG2	2.41	0.51
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.34	0.51
7:CG:69:VAL:HG12	7:CG:69:VAL:O	2.10	0.51
12:CL:20:LYS:HD3	12:CL:20:LYS:N	2.22	0.51
16:CP:48:TRP:H	16:CP:48:TRP:CD1	2.28	0.51
23:CW:1:C:H2'	23:CW:2:G:C8	2.33	0.51
23:CW:67:C:C2'	23:CW:68:C:H5'	2.41	0.51
25:CY:73:PHE:CZ	25:CY:78:ARG:NH2	2.79	0.51
25:CY:73:PHE:HZ	25:CY:78:ARG:NH2	2.09	0.51
25:CY:455:GLY:CA	25:CY:660:ARG:HH12	2.21	0.51
28:D2:25:VAL:HG13	28:D2:57:ILE:HG23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:65:ASN:HD21	36:DA:112:U:H5'	1.74	0.51
32:D6:53:LYS:HG3	32:D6:54:ILE:HG23	1.91	0.51
35:D9:9:ARG:NH2	35:D9:16:VAL:HG23	2.24	0.51
36:DA:286:C:H5'	36:DA:286:C:H6	1.74	0.51
36:DA:559:G:N2	52:DU:49:HIS:CD2	2.77	0.51
36:DA:654(T):C:H2'	36:DA:654(U):A:N9	2.26	0.51
36:DA:1102:C:H2'	36:DA:1103:A:C8	2.46	0.51
36:DA:1166:C:H2'	36:DA:1167:U:C6	2.46	0.51
36:DA:1453:U:H2'	36:DA:1455:G:N7	2.26	0.51
36:DA:1721:G:H8	36:DA:1741:A:H62	1.58	0.51
36:DA:1782:C:C2'	36:DA:1783:A:H5'	2.39	0.51
36:DA:2097:C:O2'	36:DA:2098:U:H5'	2.11	0.51
36:DA:2352:A:H2'	36:DA:2353:G:H5'	1.93	0.51
36:DA:2712:U:O2'	36:DA:2712(A):A:O5'	2.29	0.51
37:DB:94:C:H2'	37:DB:95:C:H6	1.75	0.51
38:DC:97:GLY:O	38:DC:100:ILE:HG12	2.10	0.51
41:DF:158:THR:HG21	41:DF:163:VAL:HB	1.91	0.51
42:DG:33:ARG:O	42:DG:34:LEU:C	2.53	0.51
43:DH:40:GLU:O	43:DH:55:PRO:HD2	2.10	0.51
45:DN:18:ALA:HB3	45:DN:21:LYS:HB2	1.93	0.51
46:DO:4:PRO:HA	46:DO:21:CYS:SG	2.50	0.51
46:DO:24:VAL:HG21	46:DO:30:ALA:HB3	1.93	0.51
46:DO:47:ILE:O	46:DO:48:PRO:O	2.28	0.51
50:DS:25:ARG:CG	50:DS:26:LEU:H	2.24	0.51
52:DU:95:LEU:O	52:DU:98:LEU:HG	2.11	0.51
53:DV:39:LEU:O	53:DV:40:LEU:HB2	2.10	0.51
56:DY:10:GLY:O	56:DY:27:VAL:HG22	2.11	0.51
1:AA:243:A:C2	1:AA:246:A:C8	2.99	0.51
1:AA:1308:U:H5''	13:AM:98:VAL:CG2	2.41	0.51
1:AA:1507:A:H2'	1:AA:1508:G:C8	2.46	0.51
1:AA:1510:U:O2	1:AA:1526:G:C2	2.64	0.51
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.10	0.51
4:AD:10:ARG:O	4:AD:13:ARG:HB2	2.11	0.51
5:AE:28:PHE:CD2	5:AE:51:VAL:HG22	2.46	0.51
5:AE:144:THR:N	5:AE:147:ASP:OD1	2.40	0.51
7:AG:69:VAL:HG12	7:AG:69:VAL:O	2.10	0.51
7:AG:134:ALA:O	7:AG:137:LYS:HB2	2.11	0.51
13:AM:2:ALA:O	13:AM:9:ILE:HG23	2.10	0.51
25:AY:65:ILE:O	25:AY:67:ALA:N	2.43	0.51
25:AY:139:MET:O	25:AY:144:ALA:HB1	2.11	0.51
25:AY:227:ILE:HG22	25:AY:227:ILE:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:110:G:H2'	36:BA:111:A:H8	1.74	0.51
36:BA:1102:C:H2'	36:BA:1103:A:C8	2.46	0.51
36:BA:1277:G:O2'	49:BR:24:GLN:HG2	2.10	0.51
36:BA:1314:C:H5'	36:BA:1314:C:C6	2.37	0.51
36:BA:1827:C:H2'	36:BA:1828:G:O4'	2.11	0.51
36:BA:2345:G:C5'	36:BA:2346:A:H5'	2.40	0.51
38:BC:196:ALA:O	38:BC:199:ALA:HB3	2.11	0.51
41:BF:62:ARG:NH2	41:BF:64:ILE:HA	2.26	0.51
42:BG:61:ALA:HB1	42:BG:66:GLN:O	2.10	0.51
47:BP:57:THR:OG1	47:BP:59:LEU:HB3	2.11	0.51
48:BQ:21:THR:C	48:BQ:23:GLY:H	2.19	0.51
50:BS:66:ALA:O	50:BS:99:LYS:HD3	2.11	0.51
51:BT:129:ARG:HD3	51:BT:129:ARG:C	2.35	0.51
53:BV:46:VAL:HG22	53:BV:47:VAL:H	1.74	0.51
57:BZ:119:GLU:OE1	57:BZ:122:ARG:HD3	2.11	0.51
1:CA:781:A:C3'	1:CA:782:A:H5'	2.41	0.51
1:CA:940:C:O2'	1:CA:941:G:H5'	2.11	0.51
1:CA:1033:G:H2'	1:CA:1034:G:O4'	2.11	0.51
1:CA:1049:U:H1'	1:CA:1201:A:N7	2.26	0.51
1:CA:1259:C:C4	1:CA:1260:C:O2	2.64	0.51
1:CA:1303:C:OP1	1:CA:1304:G:OP2	2.29	0.51
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.46	0.51
3:CC:6:HIS:ND1	14:CN:49:HIS:HB3	2.25	0.51
3:CC:7:PRO:HG3	3:CC:184:TYR:CD1	2.46	0.51
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.26	0.51
4:CD:146:ILE:HD13	4:CD:146:ILE:N	2.25	0.51
7:CG:49:ILE:HG22	7:CG:49:ILE:O	2.10	0.51
22:CV:71:G:H2'	22:CV:72:C:O4'	2.11	0.51
25:CY:15:ILE:CD1	25:CY:81:ILE:HG23	2.40	0.51
25:CY:188:TYR:HD1	25:CY:196:ILE:HG22	1.76	0.51
25:CY:670:VAL:CG2	25:CY:671:MET:N	2.74	0.51
27:D1:40:ARG:HH12	36:DA:2232:U:P	2.34	0.51
27:D1:69:LYS:NZ	36:DA:372:G:OP2	2.42	0.51
32:D6:53:LYS:CG	32:D6:54:ILE:H	2.20	0.51
36:DA:64:A:C5	55:DX:66:LEU:HD13	2.45	0.51
36:DA:594:U:H2'	36:DA:595:C:C6	2.46	0.51
36:DA:712:G:O2'	36:DA:713:G:H5'	2.10	0.51
36:DA:1415:U:H3	36:DA:1587:A:H61	1.59	0.51
36:DA:1493:C:H2'	36:DA:1493:C:O2	2.11	0.51
36:DA:1755:A:P	51:DT:113:LYS:NZ	2.83	0.51
37:DB:4:C:H2'	37:DB:5:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:26:ALA:O	38:DC:27:ALA:C	2.53	0.51
39:DD:242:ARG:HG3	39:DD:242:ARG:HH11	1.75	0.51
40:DE:8:LYS:HE2	40:DE:192:ASN:ND2	2.26	0.51
40:DE:68:ALA:O	40:DE:70:ALA:N	2.44	0.51
42:DG:47:LYS:HD3	42:DG:47:LYS:N	2.26	0.51
43:DH:156:ALA:C	43:DH:158:HIS:H	2.19	0.51
48:DQ:21:THR:C	48:DQ:23:GLY:H	2.19	0.51
50:DS:25:ARG:HG2	50:DS:26:LEU:H	1.76	0.51
1:AA:159:G:H2'	1:AA:160:A:H5''	1.93	0.51
1:AA:358:U:H2'	1:AA:359:U:H6	1.76	0.51
1:AA:543:C:O2'	1:AA:544:G:H5'	2.11	0.51
1:AA:802:A:H3'	1:AA:803:G:H8	1.76	0.51
1:AA:1320:C:OP1	19:AS:70:LYS:NZ	2.43	0.51
4:AD:8:VAL:O	4:AD:10:ARG:N	2.40	0.51
4:AD:101:LEU:HD23	4:AD:121:VAL:CG1	2.40	0.51
4:AD:201:GLN:O	4:AD:205:GLU:HG3	2.10	0.51
5:AE:34:VAL:CG1	5:AE:62:ALA:HB1	2.41	0.51
8:AH:50:ARG:HH11	8:AH:50:ARG:CB	2.23	0.51
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HD12	1.93	0.51
12:AL:10:LEU:HB3	17:AQ:32:TYR:CE2	2.46	0.51
12:AL:79:GLU:HB3	25:AY:442:THR:OG1	2.09	0.51
19:AS:6:LYS:H	19:AS:6:LYS:HD2	1.75	0.51
19:AS:9:VAL:HG21	30:B4:53:GLU:CG	2.41	0.51
22:AV:2:C:H2'	22:AV:3:C:H6	1.76	0.51
25:AY:215:LYS:HA	25:AY:218:GLU:HB3	1.93	0.51
25:AY:417:THR:O	25:AY:419:ALA:N	2.41	0.51
25:AY:503:GLY:C	25:AY:505:GLY:N	2.69	0.51
27:B1:94:LEU:O	27:B1:95:LEU:C	2.54	0.51
30:B4:50:VAL:O	30:B4:51:ASP:HB3	2.11	0.51
33:B7:24:THR:HG23	33:B7:27:GLY:HA3	1.92	0.51
34:B8:16:ILE:HD12	34:B8:57:ARG:HG2	1.92	0.51
34:B8:36:LYS:O	34:B8:37:SER:C	2.54	0.51
36:BA:191:A:H2'	36:BA:192:C:C6	2.45	0.51
36:BA:528:A:C2	36:BA:2043:C:C5'	2.91	0.51
36:BA:1441:G:H2'	36:BA:1442:G:H8	1.75	0.51
36:BA:1847:A:H3'	36:BA:1848:A:C5'	2.41	0.51
38:BC:115:VAL:HA	38:BC:145:THR:HG23	1.93	0.51
39:BD:35:LYS:CD	39:BD:36:PRO:N	2.65	0.51
39:BD:209:ALA:C	39:BD:210:GLY:O	2.51	0.51
41:BF:125:LEU:N	41:BF:125:LEU:HD23	2.26	0.51
43:BH:40:GLU:O	43:BH:55:PRO:HD2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:85:LYS:NZ	43:BH:87:LEU:HG	2.23	0.51
47:BP:144:GLU:N	47:BP:145:PRO:HD3	2.25	0.51
51:BT:38:ASN:ND2	51:BT:40:THR:OG1	2.43	0.51
51:BT:55:ASN:HD22	51:BT:58:ASN:ND2	2.08	0.51
51:BT:70:VAL:HG12	51:BT:71:GLY:O	2.10	0.51
52:BU:95:LEU:CD1	53:BV:11:GLN:HG3	2.41	0.51
52:BU:101:ARG:NH1	53:BV:13:ARG:HE	2.09	0.51
54:BW:82:LEU:HB3	54:BW:84:ARG:NH1	2.26	0.51
56:BY:46:LYS:HB2	56:BY:62:GLU:HG3	1.93	0.51
1:CA:45:U:H2'	1:CA:46:G:H8	1.75	0.51
1:CA:559:A:H4'	1:CA:560:U:C5'	2.41	0.51
1:CA:828:A:H2'	1:CA:829:G:O4'	2.11	0.51
1:CA:1301:U:H3'	1:CA:1302:U:C5'	2.41	0.51
1:CA:1308:U:C5	13:CM:99:ARG:NH1	2.78	0.51
2:CB:55:PHE:HE1	2:CB:218:ALA:HA	1.76	0.51
3:CC:77:ILE:HA	3:CC:84:ILE:HB	1.92	0.51
5:CE:73:ASN:HD22	5:CE:73:ASN:N	2.07	0.51
8:CH:82:HIS:HD2	8:CH:138:TRP:NE1	2.08	0.51
9:CI:47:LEU:HD12	9:CI:47:LEU:H	1.70	0.51
10:CJ:6:ILE:HD11	10:CJ:72:VAL:CG2	2.41	0.51
15:CO:4:THR:HG23	15:CO:7:GLU:OE1	2.11	0.51
15:CO:83:GLU:O	15:CO:85:LEU:N	2.41	0.51
19:CS:72:GLY:O	19:CS:74:PHE:N	2.44	0.51
20:CT:86:ARG:HG3	20:CT:86:ARG:NH1	2.25	0.51
25:CY:170:ARG:O	25:CY:171:GLU:HG3	2.11	0.51
25:CY:496:LYS:HE2	25:CY:498:ILE:HD13	1.92	0.51
32:D6:16:CYS:SG	32:D6:48:VAL:HG21	2.50	0.51
33:D7:17:GLY:O	33:D7:20:ALA:HB3	2.11	0.51
33:D7:38:GLY:O	36:DA:458:G:H2'	2.11	0.51
34:D8:25:MET:CG	47:DP:64:LYS:HB3	2.40	0.51
36:DA:291:C:H2'	36:DA:292:C:C6	2.46	0.51
36:DA:302:C:H2'	36:DA:303:U:C6	2.45	0.51
36:DA:1165:U:H2'	36:DA:1166:C:C6	2.45	0.51
36:DA:1528:A:N3	36:DA:1528:A:H2'	2.26	0.51
36:DA:1538:G:H2'	36:DA:1539:G:H8	1.76	0.51
36:DA:1719:G:H2'	36:DA:1720:U:H5'	1.93	0.51
36:DA:1949:G:H2'	36:DA:1950:G:C8	2.46	0.51
36:DA:2658:C:C2'	36:DA:2659:G:H5'	2.41	0.51
36:DA:2850:A:OP2	36:DA:2866:U:H5	1.94	0.51
40:DE:26:ILE:HG13	40:DE:182:LEU:HB3	1.93	0.51
40:DE:188:VAL:HG23	40:DE:189:PRO:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:138:GLN:O	42:DG:144:ILE:HD13	2.10	0.51
46:DO:13:ASN:HD21	46:DO:97:ARG:HG2	1.76	0.51
47:DP:140:ALA:O	47:DP:141:ALA:HB3	2.11	0.51
49:DR:18:LEU:HD23	49:DR:19:ALA:N	2.26	0.51
50:DS:101:LEU:HD12	50:DS:102:ALA:O	2.11	0.51
52:DU:65:ILE:HD11	52:DU:96:ALA:HB3	1.92	0.51
53:DV:15:GLU:O	53:DV:16:PRO:C	2.53	0.51
54:DW:17:VAL:O	54:DW:19:LEU:N	2.43	0.51
57:DZ:56:VAL:C	57:DZ:57:ILE:HD12	2.36	0.51
57:DZ:94:GLU:O	57:DZ:96:VAL:N	2.44	0.51
1:AA:159:G:C2'	1:AA:160:A:H5''	2.41	0.51
1:AA:603:U:H2'	1:AA:604:G:H8	1.75	0.51
1:AA:1221:G:H4'	19:AS:77:THR:HG21	1.93	0.51
1:AA:1334:G:H5'	1:AA:1335:C:OP2	2.11	0.51
3:AC:54:ARG:HH11	3:AC:54:ARG:HG2	1.76	0.51
3:AC:129:ALA:O	3:AC:131:ARG:N	2.44	0.51
4:AD:110:PHE:N	4:AD:110:PHE:CD1	2.79	0.51
4:AD:159:ARG:HG3	4:AD:159:ARG:NH1	2.21	0.51
4:AD:192:GLU:CD	4:AD:192:GLU:N	2.69	0.51
7:AG:134:ALA:O	7:AG:137:LYS:N	2.40	0.51
15:AO:71:GLN:HB2	15:AO:78:TYR:CD1	2.46	0.51
20:AT:33:ILE:HG21	20:AT:63:ILE:HG12	1.93	0.51
25:AY:15:ILE:HD12	25:AY:15:ILE:C	2.35	0.51
28:B2:38:GLN:C	28:B2:40:SER:N	2.68	0.51
28:B2:45:SER:O	28:B2:46:GLN:NE2	2.44	0.51
28:B2:46:GLN:OE1	28:B2:46:GLN:HA	2.09	0.51
29:B3:40:THR:OG1	29:B3:43:ILE:HG12	2.10	0.51
32:B6:12:GLU:HG2	32:B6:23:THR:CG2	2.41	0.51
34:B8:25:MET:CG	47:BP:64:LYS:HB3	2.41	0.51
36:BA:216:A:O2'	36:BA:217:G:H5'	2.11	0.51
36:BA:893:C:H2'	36:BA:894:C:C6	2.46	0.51
36:BA:1050:A:H2'	36:BA:1051:G:O4'	2.11	0.51
36:BA:1068:G:N2	36:BA:1096:A:H5'	2.24	0.51
36:BA:1296:G:H1	36:BA:1644:C:H42	1.59	0.51
36:BA:1759:A:H2'	36:BA:1760:A:C8	2.46	0.51
36:BA:2131:G:H8	36:BA:2158:A:N6	2.05	0.51
36:BA:2189:U:H2'	36:BA:2190:G:C5'	2.32	0.51
36:BA:2577:A:C5'	36:BA:2578:G:H5'	2.41	0.51
39:BD:268:ARG:HB3	39:BD:268:ARG:NH1	2.25	0.51
40:BE:36:ARG:NH1	40:BE:36:ARG:CG	2.73	0.51
40:BE:69:LYS:HE2	40:BE:69:LYS:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:113:ALA:HB1	41:BF:186:ILE:HG21	1.92	0.51
42:BG:75:LYS:C	42:BG:76:SER:HG	2.17	0.51
46:BO:60:ALA:HA	46:BO:87:ILE:HD13	1.93	0.51
47:BP:128:HIS:ND1	47:BP:148:LEU:HD13	2.26	0.51
52:BU:97:ASP:C	52:BU:99:ALA:H	2.19	0.51
53:BV:53:GLU:O	53:BV:55:ALA:N	2.44	0.51
57:BZ:99:TYR:CE1	57:BZ:125:LEU:HD13	2.46	0.51
57:BZ:129:SER:C	57:BZ:131:ARG:H	2.19	0.51
1:CA:407:G:OP1	4:CD:115:ARG:CZ	2.59	0.51
1:CA:528:C:H41	12:CL:49:ASN:ND2	2.09	0.51
2:CB:86:GLU:C	2:CB:88:ALA:H	2.17	0.51
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.92	0.51
4:CD:61:LYS:HD2	4:CD:207:TYR:OH	2.11	0.51
4:CD:163:GLU:HA	4:CD:163:GLU:OE1	2.10	0.51
5:CE:107:ARG:HG2	5:CE:108:ALA:N	2.25	0.51
7:CG:140:ASP:HA	7:CG:143:ARG:HH11	1.76	0.51
8:CH:41:ARG:NH2	8:CH:123:GLU:OE1	2.44	0.51
8:CH:111:ILE:HG22	8:CH:112:LEU:N	2.25	0.51
10:CJ:30:SER:HA	10:CJ:80:LYS:HE2	1.93	0.51
11:CK:12:ARG:HG2	11:CK:13:GLN:N	2.25	0.51
19:CS:39:THR:HA	19:CS:70:LYS:HD3	1.92	0.51
19:CS:47:HIS:O	19:CS:62:ILE:HG21	2.11	0.51
23:CW:34:C:H2'	23:CW:35:A:C4'	2.31	0.51
25:CY:141:LYS:HE3	60:CY:702:GDP:HN22	1.75	0.51
25:CY:442:THR:HA	25:CY:449:THR:HA	1.93	0.51
32:D6:37:ARG:CZ	36:DA:2286:A:N7	2.74	0.51
36:DA:389:G:N1	47:DP:71:VAL:HG12	2.26	0.51
36:DA:773:U:C5'	39:DD:47:GLY:HA2	2.41	0.51
36:DA:1227:G:O2'	36:DA:1228:G:H5'	2.11	0.51
36:DA:1465:G:H2'	36:DA:1466:G:H8	1.75	0.51
36:DA:2124:G:H1'	38:DC:43:GLU:OE1	2.11	0.51
36:DA:2457:U:H2'	36:DA:2458:G:H5'	1.93	0.51
36:DA:2539:C:H2'	36:DA:2539:C:O2	2.11	0.51
36:DA:2606:C:C2'	36:DA:2607:G:H5'	2.40	0.51
36:DA:2850:A:C2	49:DR:61:HIS:CD2	2.99	0.51
38:DC:42:VAL:HG21	38:DC:186:LEU:CD2	2.41	0.51
45:DN:15:LEU:HD13	45:DN:15:LEU:C	2.35	0.51
45:DN:108:PRO:HG2	45:DN:113:GLY:HA3	1.93	0.51
47:DP:75:ILE:CG2	47:DP:77:ARG:HH21	2.23	0.51
47:DP:144:GLU:N	47:DP:145:PRO:HD3	2.25	0.51
52:DU:17:ILE:HG23	52:DU:39:LEU:HD12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DX:7:VAL:HB	55:DX:8:ILE:HD12	1.92	0.51
56:DY:88:LYS:O	56:DY:90:LEU:HD23	2.10	0.51
1:AA:342:C:O2'	1:AA:343:U:H5'	2.10	0.50
1:AA:390:C:H2'	1:AA:391:G:C8	2.46	0.50
1:AA:991:U:C4	1:AA:1212:U:H1'	2.46	0.50
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.64	0.50
1:AA:1284:C:H3'	1:AA:1285:A:C5'	2.41	0.50
1:AA:1423:G:H2'	1:AA:1424:C:H6	1.76	0.50
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.76	0.50
2:AB:21:ARG:CD	2:AB:39:ILE:HG12	2.36	0.50
3:AC:186:PHE:HA	3:AC:198:VAL:O	2.12	0.50
4:AD:13:ARG:O	4:AD:14:ARG:C	2.54	0.50
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.11	0.50
12:AL:83:VAL:CG1	12:AL:100:ILE:HG23	2.40	0.50
22:AV:16:U:H4'	22:AV:16:U:OP1	2.11	0.50
23:AW:38:A:H8	23:AW:38:A:O5'	1.94	0.50
25:AY:6:GLU:HG2	25:AY:6:GLU:O	2.10	0.50
25:AY:409:ILE:CD1	25:AY:654:GLY:HA2	2.41	0.50
25:AY:484:ARG:NE	25:AY:559:PRO:HB2	2.25	0.50
25:AY:619:ASP:CG	43:BH:175:LYS:HE2	2.37	0.50
27:B1:82:LEU:HB3	27:B1:90:ILE:HD12	1.92	0.50
36:BA:279:C:H3'	36:BA:280:C:H5''	1.92	0.50
36:BA:481:G:H1'	36:BA:506:G:N2	2.26	0.50
36:BA:484:C:H2'	36:BA:485:C:H6	1.76	0.50
36:BA:594:U:H2'	36:BA:595:C:C6	2.46	0.50
36:BA:688:U:C4'	36:BA:1780:A:C2	2.92	0.50
36:BA:1578:U:H2'	36:BA:1579:A:C5'	2.40	0.50
36:BA:1614:A:H2'	36:BA:1615:C:H5'	1.93	0.50
36:BA:1930:G:O2'	36:BA:1931:U:OP2	2.28	0.50
36:BA:2305:A:O2'	42:BG:136:ARG:NH1	2.44	0.50
36:BA:2713:A:C3'	36:BA:2714:G:H5'	2.40	0.50
38:BC:101:ILE:HD12	38:BC:101:ILE:N	2.27	0.50
39:BD:39:LYS:HB2	39:BD:62:TYR:CB	2.40	0.50
40:BE:69:LYS:O	40:BE:70:ALA:C	2.54	0.50
41:BF:6:VAL:H	41:BF:125:LEU:HD21	1.75	0.50
43:BH:83:TYR:HA	43:BH:135:GLY:O	2.10	0.50
43:BH:136:ILE:HD12	43:BH:136:ILE:H	1.76	0.50
45:BN:38:HIS:O	52:BU:67:ALA:HB1	2.10	0.50
50:BS:12:PHE:C	50:BS:12:PHE:HD1	2.19	0.50
51:BT:50:ILE:HD11	51:BT:64:ARG:HB3	1.93	0.50
53:BV:35:LEU:C	53:BV:37:VAL:N	2.69	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:22:G:O2'	1:CA:913:A:N1	2.34	0.50
1:CA:59:A:H3'	1:CA:331:G:H22	1.75	0.50
1:CA:191:G:C2	20:CT:105:SER:HB3	2.45	0.50
1:CA:427:U:C4	1:CA:428:G:C6	2.99	0.50
1:CA:821:G:H2'	1:CA:822:C:H6	1.76	0.50
1:CA:1226:C:H5''	13:CM:103:THR:OG1	2.11	0.50
1:CA:1509:C:O2'	1:CA:1510:U:H5'	2.11	0.50
2:CB:63:MET:O	2:CB:63:MET:HG3	2.11	0.50
3:CC:129:ALA:HB3	3:CC:132:ARG:HB3	1.92	0.50
4:CD:78:LEU:HD21	4:CD:96:LEU:CB	2.41	0.50
4:CD:121:VAL:HA	4:CD:126:ILE:HD13	1.93	0.50
8:CH:104:ARG:NH2	8:CH:138:TRP:CZ3	2.80	0.50
11:CK:21:ILE:HD13	11:CK:82:VAL:HG13	1.92	0.50
17:CQ:9:VAL:CG1	17:CQ:56:VAL:HG22	2.41	0.50
23:CW:44:A:H2'	23:CW:45:G:C8	2.46	0.50
25:CY:67:ALA:HB2	25:CY:358:MET:HG3	1.93	0.50
26:D0:20:ARG:HH11	26:D0:20:ARG:CG	2.24	0.50
28:D2:37:PHE:HE2	55:DX:47:PHE:HZ	1.57	0.50
29:D3:15:TYR:HB3	29:D3:19:GLN:NE2	2.25	0.50
29:D3:44:ARG:O	29:D3:47:VAL:N	2.44	0.50
30:D4:39:CYS:O	30:D4:42:PHE:CE2	2.63	0.50
32:D6:27:LYS:HB3	32:D6:32:ASN:ND2	2.25	0.50
32:D6:33:LYS:HG2	32:D6:34:LEU:N	2.27	0.50
32:D6:42:TRP:HA	32:D6:42:TRP:HE3	1.76	0.50
32:D6:53:LYS:HG3	32:D6:54:ILE:N	2.26	0.50
36:DA:42:G:H3'	36:DA:43:A:H8	1.76	0.50
36:DA:74:A:O2'	36:DA:75:G:OP2	2.24	0.50
36:DA:682:G:H2'	36:DA:683:C:H6	1.76	0.50
36:DA:1216:G:H2'	36:DA:1217:C:H6	1.77	0.50
36:DA:1632:A:C5	36:DA:1633:G:C6	2.99	0.50
36:DA:2131:G:C8	36:DA:2133:G:N2	2.80	0.50
36:DA:2345:G:C5'	36:DA:2346:A:H5'	2.41	0.50
37:DB:106:G:C5'	57:DZ:31:ARG:HB3	2.42	0.50
38:DC:115:VAL:HA	38:DC:145:THR:HG23	1.93	0.50
39:DD:165:ILE:HD13	39:DD:175:LEU:CD2	2.39	0.50
41:DF:53:THR:HG23	41:DF:55:GLY:N	2.25	0.50
47:DP:83:VAL:O	47:DP:83:VAL:HG13	2.10	0.50
49:DR:52:ILE:O	49:DR:55:ALA:HB3	2.11	0.50
51:DT:11:GLU:O	51:DT:14:TYR:CE1	2.63	0.50
51:DT:134:GLU:O	51:DT:135:ALA:HB2	2.10	0.50
52:DU:57:PHE:C	52:DU:59:ARG:N	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DV:13:ARG:HH11	53:DV:13:ARG:HG3	1.76	0.50
54:DW:15:ARG:HA	54:DW:18:ARG:HD2	1.92	0.50
56:DY:29:GLU:OE1	56:DY:29:GLU:N	2.44	0.50
1:AA:529:G:O6	12:AL:49:ASN:HA	2.11	0.50
1:AA:624:C:H2'	1:AA:625:G:H8	1.77	0.50
1:AA:781:A:C3'	1:AA:782:A:H5'	2.41	0.50
1:AA:974:A:H8	1:AA:974:A:OP1	1.95	0.50
1:AA:1219:U:H2'	1:AA:1220:G:H8	1.76	0.50
1:AA:1332:A:O2'	1:AA:1333:A:H5'	2.11	0.50
2:AB:63:MET:HB3	2:AB:225:ALA:HB1	1.93	0.50
5:AE:60:TYR:CE1	5:AE:64:ARG:NH2	2.75	0.50
5:AE:101:ILE:CD1	5:AE:118:ILE:O	2.59	0.50
8:AH:104:ARG:NH2	8:AH:138:TRP:CZ3	2.79	0.50
14:AN:47:LEU:O	14:AN:50:LYS:N	2.44	0.50
15:AO:64:ARG:HH11	15:AO:64:ARG:CG	2.21	0.50
23:AW:49:G:H2'	23:AW:50:U:O4'	2.10	0.50
23:AW:61:C:H2'	23:AW:62:C:H6	1.74	0.50
25:AY:29:THR:C	25:AY:31:ARG:N	2.68	0.50
25:AY:35:TYR:C	25:AY:37:GLY:N	2.70	0.50
29:B3:11:SER:HB3	36:BA:988:A:P	2.51	0.50
30:B4:42:PHE:N	30:B4:42:PHE:CD1	2.78	0.50
32:B6:53:LYS:HG3	32:B6:54:ILE:N	2.26	0.50
34:B8:32:LEU:CD2	34:B8:32:LEU:H	2.23	0.50
36:BA:271(I):G:H3'	36:BA:271(J):C:H6	1.76	0.50
36:BA:460:A:H2'	36:BA:461:C:O4'	2.12	0.50
36:BA:703:U:O2'	36:BA:704:G:H5'	2.11	0.50
36:BA:1666:G:O3'	46:BO:6:THR:HG23	2.12	0.50
36:BA:1841:U:H2'	36:BA:1842:G:H8	1.76	0.50
36:BA:2131:G:C8	36:BA:2133:G:N2	2.79	0.50
36:BA:2292:C:O2'	36:BA:2293:C:H5'	2.12	0.50
36:BA:2506:U:H4'	36:BA:2507:C:OP1	2.11	0.50
38:BC:42:VAL:HG21	38:BC:186:LEU:HD22	1.93	0.50
38:BC:128:LEU:CD1	38:BC:132:LEU:HG	2.40	0.50
39:BD:132:PRO:O	39:BD:133:LEU:C	2.54	0.50
40:BE:24:THR:HG22	40:BE:186:GLY:HA2	1.93	0.50
43:BH:13:LYS:HA	43:BH:13:LYS:CE	2.37	0.50
44:BJ:56:UNK:CB	44:BJ:83:UNK:HA	2.41	0.50
48:BQ:27:VAL:HG23	48:BQ:137:TYR:CD2	2.47	0.50
51:BT:32:TYR:O	51:BT:33:LYS:HB2	2.10	0.50
53:BV:19:LYS:HG2	53:BV:94:LEU:CB	2.39	0.50
54:BW:14:PRO:CG	54:BW:78:GLU:HB2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BX:7:VAL:HB	55:BX:8:ILE:HD12	1.93	0.50
55:BX:59:VAL:HG12	55:BX:59:VAL:O	2.10	0.50
1:CA:990:C:H2'	1:CA:991:U:C6	2.46	0.50
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.46	0.50
2:CB:60:ASP:HB3	2:CB:64:ARG:HH21	1.76	0.50
2:CB:189:ASP:OD2	2:CB:205:ASP:OD1	2.28	0.50
3:CC:70:VAL:CG1	3:CC:71:ALA:N	2.73	0.50
3:CC:129:ALA:O	3:CC:131:ARG:N	2.44	0.50
9:CI:37:PHE:HB3	9:CI:43:ALA:HB2	1.93	0.50
13:CM:6:GLY:C	13:CM:8:GLU:N	2.66	0.50
18:CR:46:GLU:C	18:CR:48:GLY:N	2.66	0.50
21:CU:10:ARG:O	21:CU:13:ILE:N	2.45	0.50
23:CW:22:G:C2'	23:CW:23:C:C5'	2.88	0.50
25:CY:91:THR:O	25:CY:92:ILE:HG22	2.11	0.50
25:CY:315:LYS:HZ2	25:CY:317:MET:CG	2.23	0.50
25:CY:329:ARG:HG2	25:CY:331:TYR:CZ	2.46	0.50
25:CY:346:LYS:NZ	25:CY:384:ILE:HG12	2.26	0.50
25:CY:529:ILE:HD11	25:CY:567:LEU:CD1	2.34	0.50
32:D6:12:GLU:HG2	32:D6:23:THR:CG2	2.42	0.50
32:D6:54:ILE:CD1	36:DA:2420:C:H5'	2.42	0.50
36:DA:18:C:O2'	52:DU:23:GLY:HA2	2.11	0.50
36:DA:613:G:H5'	36:DA:613:G:C8	2.40	0.50
36:DA:654(E):G:H2'	36:DA:654(F):C:H5'	1.93	0.50
36:DA:706:A:H2'	36:DA:707:G:O4'	2.11	0.50
36:DA:729:G:N7	39:DD:208:LYS:HB2	2.25	0.50
36:DA:1352:U:O2'	36:DA:1353:A:H5'	2.11	0.50
36:DA:1578:U:H2'	36:DA:1579:A:C5'	2.39	0.50
45:DN:57:ALA:O	45:DN:58:ASP:C	2.52	0.50
47:DP:25:SER:O	47:DP:30:THR:HG23	2.10	0.50
51:DT:90:GLN:HG2	51:DT:120:ARG:NH2	2.25	0.50
53:DV:35:LEU:C	53:DV:37:VAL:N	2.68	0.50
56:DY:2:ARG:HG2	56:DY:2:ARG:NH1	2.26	0.50
1:AA:512:U:H2'	1:AA:513:C:C6	2.47	0.50
1:AA:907:A:C2	1:AA:908:A:C4	3.00	0.50
3:AC:141:VAL:HG11	3:AC:202:ILE:HD12	1.93	0.50
3:AC:181:ASN:ND2	3:AC:204:LEU:HB2	2.27	0.50
4:AD:121:VAL:HA	4:AD:126:ILE:HD13	1.93	0.50
11:AK:44:SER:O	11:AK:46:GLY:N	2.45	0.50
12:AL:28:LYS:C	12:AL:30:ALA:N	2.68	0.50
12:AL:47:LYS:HD2	12:AL:48:PRO:CD	2.41	0.50
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:33:LEU:HD12	25:AY:33:LEU:N	2.26	0.50
25:AY:124:GLN:HA	25:AY:127:LYS:HD3	1.93	0.50
25:AY:243:VAL:HG13	25:AY:279:TYR:CE1	2.47	0.50
31:B5:3:LYS:HZ3	36:BA:2613:U:H2'	1.75	0.50
31:B5:40:LYS:HE2	31:B5:46:CYS:CB	2.38	0.50
33:B7:36:GLN:C	33:B7:38:GLY:N	2.69	0.50
36:BA:271(K):U:H3'	36:BA:271(L):U:H5''	1.93	0.50
36:BA:366:C:H5'	36:BA:370:G:H5'	1.93	0.50
36:BA:654(T):C:H2'	36:BA:654(U):A:N9	2.26	0.50
36:BA:1052:C:H3'	36:BA:1052:C:H6	1.75	0.50
36:BA:1196:C:H2'	36:BA:1197:G:O4'	2.11	0.50
36:BA:1567:A:H5'	39:BD:58:HIS:CD2	2.47	0.50
36:BA:1576:U:H2'	36:BA:1577:C:C6	2.47	0.50
36:BA:1614:A:N6	54:BW:93:ALA:HB2	2.22	0.50
36:BA:1668:A:N6	36:BA:1676:A:H61	2.08	0.50
36:BA:2462:U:H2'	36:BA:2463:C:H6	1.76	0.50
37:BB:81:G:N3	37:BB:81:G:H5'	2.26	0.50
39:BD:99:ASP:OD1	39:BD:99:ASP:C	2.55	0.50
39:BD:139:GLY:H	39:BD:165:ILE:HB	1.76	0.50
43:BH:35:VAL:HG11	43:BH:72:ILE:HD13	1.94	0.50
43:BH:156:ALA:C	43:BH:158:HIS:H	2.18	0.50
44:BJ:117:UNK:HA	44:BJ:121:UNK:O	2.11	0.50
46:BO:87:ILE:HD13	46:BO:87:ILE:H	1.76	0.50
47:BP:107:LYS:C	47:BP:109:GLY:H	2.19	0.50
47:BP:144:GLU:O	47:BP:144:GLU:HG2	2.11	0.50
48:BQ:52:VAL:C	48:BQ:54:MET:N	2.69	0.50
49:BR:17:ARG:O	49:BR:20:LEU:HB3	2.11	0.50
49:BR:18:LEU:HD21	49:BR:22:ARG:NE	2.25	0.50
51:BT:79:HIS:O	51:BT:80:SER:HB3	2.12	0.50
54:BW:20:VAL:HG23	54:BW:21:VAL:N	2.27	0.50
57:BZ:101:PRO:O	57:BZ:136:PHE:HA	2.11	0.50
1:CA:63:C:O2'	1:CA:380:G:H4'	2.11	0.50
1:CA:543:C:O2'	1:CA:544:G:H5'	2.12	0.50
1:CA:658:G:H2'	1:CA:659:U:C6	2.46	0.50
1:CA:942:G:H21	9:CI:124:GLN:NE2	2.09	0.50
1:CA:1004:A:C6	1:CA:1034:G:H2'	2.46	0.50
1:CA:1058:G:H8	1:CA:1058:G:O5'	1.93	0.50
2:CB:69:LEU:HD11	2:CB:93:VAL:HG23	1.93	0.50
4:CD:29:PRO:C	4:CD:30:LYS:HG2	2.36	0.50
5:CE:26:PHE:N	5:CE:26:PHE:CD1	2.78	0.50
7:CG:152:ALA:O	7:CG:155:ARG:HG3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:24:SER:O	11:CK:88:GLY:HA3	2.12	0.50
12:CL:17:LYS:HD3	12:CL:18:VAL:H	1.76	0.50
13:CM:6:GLY:O	13:CM:8:GLU:N	2.42	0.50
13:CM:19:LEU:O	13:CM:22:ILE:HD13	2.11	0.50
17:CQ:52:LYS:H	17:CQ:52:LYS:CE	2.24	0.50
19:CS:61:TYR:O	19:CS:62:ILE:HB	2.09	0.50
25:CY:125:ALA:HB3	25:CY:132:ARG:HH11	1.76	0.50
25:CY:196:ILE:O	25:CY:196:ILE:HD12	2.11	0.50
25:CY:298:VAL:HG22	25:CY:299:VAL:H	1.76	0.50
25:CY:512:ILE:HG22	25:CY:567:LEU:CA	2.41	0.50
25:CY:539:ILE:CA	25:CY:542:VAL:HG12	2.40	0.50
27:D1:80:LEU:HB3	27:D1:82:LEU:CD1	2.41	0.50
27:D1:83:GLU:C	27:D1:83:GLU:OE1	2.54	0.50
29:D3:31:LEU:HD13	29:D3:32:GLN:CG	2.23	0.50
30:D4:51:ASP:OD1	30:D4:52:THR:HG23	2.12	0.50
33:D7:25:PRO:HB3	33:D7:28:ARG:NH2	2.26	0.50
36:DA:175:G:O2'	36:DA:176:G:H5'	2.10	0.50
36:DA:445:C:O2'	36:DA:446:G:H5'	2.12	0.50
36:DA:621:A:C2'	36:DA:622:G:H5'	2.37	0.50
36:DA:1188:U:H5'	53:DV:79:VAL:CG1	2.41	0.50
36:DA:1227:G:OP1	52:DU:13:LYS:HG2	2.11	0.50
36:DA:1405:U:H2'	36:DA:1406:U:C6	2.46	0.50
36:DA:1656:C:H2'	36:DA:1657:C:C6	2.46	0.50
40:DE:63:LEU:O	40:DE:64:LYS:C	2.53	0.50
41:DF:168:ARG:HG2	41:DF:175:THR:HG21	1.93	0.50
42:DG:133:LEU:HD11	42:DG:157:ILE:HD12	1.93	0.50
43:DH:41:MET:SD	43:DH:53:GLU:N	2.84	0.50
45:DN:30:ILE:O	45:DN:34:LEU:HD23	2.12	0.50
48:DQ:10:ARG:HH11	48:DQ:10:ARG:HB2	1.77	0.50
51:DT:55:ASN:HD22	51:DT:58:ASN:ND2	2.09	0.50
54:DW:20:VAL:HG23	54:DW:21:VAL:N	2.27	0.50
55:DX:57:LEU:HD22	55:DX:57:LEU:O	2.10	0.50
56:DY:30:VAL:HG12	56:DY:31:LEU:H	1.75	0.50
1:AA:174:C:O2'	1:AA:175:C:H5'	2.11	0.50
1:AA:188:C:H2'	1:AA:189:G:H8	1.77	0.50
1:AA:521:G:O2'	1:AA:522:C:H5'	2.11	0.50
1:AA:926:G:C6	1:AA:1505:G:C6	3.00	0.50
2:AB:121:LEU:HA	2:AB:124:SER:HB3	1.93	0.50
4:AD:162:LEU:CD1	4:AD:181:MET:HG2	2.42	0.50
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.17	0.50
17:AQ:88:TYR:O	17:AQ:89:LEU:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:12:LEU:HD12	25:AY:14:ASN:ND2	2.24	0.50
25:AY:546:ILE:HG12	25:AY:590:ILE:CG1	2.41	0.50
30:B4:25:TYR:O	30:B4:26:SER:HB3	2.10	0.50
30:B4:39:CYS:SG	30:B4:42:PHE:CE2	2.98	0.50
32:B6:45:LYS:HE3	36:BA:2371:G:H5''	1.92	0.50
32:B6:53:LYS:CG	32:B6:54:ILE:H	2.19	0.50
36:BA:16:G:H2'	36:BA:17:G:H8	1.77	0.50
36:BA:110:G:O2'	36:BA:111:A:H5'	2.12	0.50
36:BA:1430:C:H2'	36:BA:1431:U:H6	1.76	0.50
36:BA:2860:A:C2'	36:BA:2861:G:H5'	2.42	0.50
39:BD:28:GLU:HB2	39:BD:29:PRO:HD3	1.92	0.50
40:BE:16:ARG:NH1	40:BE:171:GLU:OE2	2.44	0.50
40:BE:67:PHE:O	40:BE:70:ALA:HB2	2.11	0.50
40:BE:101:ARG:NH1	40:BE:169:ASN:ND2	2.59	0.50
41:BF:167:ALA:O	41:BF:169:ASN:N	2.45	0.50
42:BG:7:LEU:O	42:BG:8:LYS:C	2.54	0.50
43:BH:141:VAL:O	43:BH:142:GLY:C	2.55	0.50
44:BJ:10:UNK:O	44:BJ:11:UNK:CB	2.60	0.50
46:BO:88:ASN:OD1	46:BO:92:GLU:HB2	2.11	0.50
49:BR:100:LEU:HD22	49:BR:100:LEU:N	2.21	0.50
57:BZ:146:ILE:HA	57:BZ:174:VAL:O	2.11	0.50
1:CA:265:G:O2'	1:CA:266:G:H5'	2.12	0.50
1:CA:512:U:H2'	1:CA:513:C:C6	2.46	0.50
1:CA:539:A:H2'	1:CA:540:G:H8	1.76	0.50
1:CA:693:G:H21	23:CW:37:A:H2	1.58	0.50
1:CA:1065:U:O2'	1:CA:1066:C:P	2.70	0.50
1:CA:1221:G:H4'	19:CS:77:THR:HG21	1.93	0.50
5:CE:88:LYS:HB3	5:CE:123:LEU:O	2.11	0.50
8:CH:91:ARG:HB2	12:CL:7:ILE:HG21	1.94	0.50
9:CI:125:TYR:CD1	9:CI:126:SER:N	2.78	0.50
12:CL:91:LYS:O	12:CL:91:LYS:HG3	2.10	0.50
13:CM:4:ILE:HG22	13:CM:5:ALA:N	2.26	0.50
17:CQ:40:LYS:HD3	17:CQ:42:TYR:OH	2.11	0.50
21:CU:2:GLY:C	21:CU:4:GLY:N	2.67	0.50
25:CY:147:TRP:O	25:CY:151:ARG:HG3	2.10	0.50
25:CY:272:LEU:HA	25:CY:275:ALA:CB	2.39	0.50
25:CY:402:ILE:HG22	25:CY:402:ILE:O	2.12	0.50
59:CY:701:FUA:O1	59:CY:701:FUA:C1	2.57	0.50
34:D8:61:LEU:C	34:D8:63:PRO:CD	2.85	0.50
36:DA:18:C:O2	36:DA:554:U:H5''	2.11	0.50
36:DA:324:A:N6	36:DA:338:G:O2'	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:564:C:O2'	36:DA:565:C:H5'	2.12	0.50
36:DA:583:G:C4	36:DA:584:C:C5	2.98	0.50
36:DA:1131:G:H21	45:DN:73:THR:HG21	1.76	0.50
36:DA:1297:C:H2'	36:DA:1298:C:H6	1.76	0.50
36:DA:1755:A:P	51:DT:113:LYS:HZ1	2.35	0.50
36:DA:2053:G:H1	36:DA:2616:C:H42	1.60	0.50
36:DA:2494:G:O2'	36:DA:2495:G:H5'	2.10	0.50
36:DA:2562:U:H1'	46:DO:23:ARG:NH1	2.18	0.50
36:DA:2617:C:O2'	36:DA:2618:G:H5'	2.11	0.50
36:DA:2884:U:H2'	36:DA:2885:C:H5'	1.93	0.50
37:DB:58:A:H2'	37:DB:59:A:C8	2.46	0.50
38:DC:182:PRO:HD2	38:DC:185:LYS:CG	2.41	0.50
40:DE:69:LYS:O	40:DE:71:GLY:N	2.44	0.50
43:DH:43:VAL:CG1	43:DH:52:VAL:HA	2.39	0.50
56:DY:44:ILE:O	56:DY:62:GLU:HB3	2.11	0.50
1:AA:59:A:H3'	1:AA:331:G:H22	1.75	0.50
1:AA:114:U:H2'	1:AA:115:G:C8	2.46	0.50
1:AA:745:C:H2'	1:AA:746:A:C8	2.46	0.50
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.27	0.50
1:AA:1318:A:O3'	19:AS:10:PHE:CD2	2.65	0.50
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.92	0.50
2:AB:77:ALA:O	2:AB:78:GLN:C	2.52	0.50
4:AD:18:LYS:HE2	4:AD:20:TYR:CE1	2.40	0.50
5:AE:26:PHE:N	5:AE:26:PHE:CD1	2.79	0.50
6:AF:15:ASP:OD1	6:AF:17:SER:HB2	2.12	0.50
10:AJ:96:ILE:HD13	10:AJ:96:ILE:N	2.24	0.50
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.93	0.50
12:AL:41:ARG:NH1	12:AL:41:ARG:CB	2.72	0.50
13:AM:63:THR:HG22	13:AM:64:TRP:N	2.27	0.50
13:AM:66:LEU:N	13:AM:66:LEU:CD1	2.73	0.50
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.12	0.50
23:AW:23:C:O2'	23:AW:24:U:H5'	2.12	0.50
25:AY:314:PHE:CD1	25:AY:315:LYS:HB2	2.46	0.50
25:AY:546:ILE:CG2	25:AY:590:ILE:HG13	2.35	0.50
27:B1:56:GLN:HE21	27:B1:56:GLN:CA	2.16	0.50
27:B1:81:LYS:C	27:B1:82:LEU:HD12	2.36	0.50
30:B4:36:CYS:SG	30:B4:37:SER:N	2.85	0.50
32:B6:42:TRP:HA	32:B6:42:TRP:HE3	1.75	0.50
36:BA:286:C:H5'	36:BA:286:C:H6	1.76	0.50
36:BA:1461:G:H2'	36:BA:1462:C:C6	2.46	0.50
36:BA:1655:A:C2	36:BA:2049:G:H4'	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1658:C:OP1	40:BE:132:HIS:O	2.29	0.50
36:BA:2472:G:H3'	36:BA:2475:C:N4	2.26	0.50
36:BA:2888:C:H2'	36:BA:2889:C:H6	1.77	0.50
38:BC:141:PRO:C	38:BC:143:ALA:H	2.20	0.50
39:BD:27:THR:HG23	39:BD:83:GLU:HG2	1.92	0.50
39:BD:117:VAL:CG2	39:BD:118:VAL:N	2.73	0.50
39:BD:118:VAL:HG22	39:BD:119:ALA:N	2.25	0.50
41:BF:107:LYS:O	41:BF:108:LYS:C	2.55	0.50
42:BG:56:ALA:HB1	42:BG:153:ARG:NH2	2.26	0.50
42:BG:73:ALA:CB	42:BG:87:PRO:HG3	2.41	0.50
47:BP:33:ARG:O	47:BP:35:HIS:O	2.28	0.50
53:BV:25:LEU:H	53:BV:92:THR:CG2	2.24	0.50
54:BW:59:VAL:HG12	54:BW:59:VAL:O	2.10	0.50
56:BY:2:ARG:HG2	56:BY:2:ARG:NH1	2.26	0.50
56:BY:7:VAL:HG11	56:BY:8:LYS:HZ1	1.77	0.50
56:BY:52:SER:N	56:BY:53:PRO:HD2	2.25	0.50
57:BZ:40:ASP:HB3	57:BZ:43:GLU:OE2	2.12	0.50
1:CA:56:U:H2'	1:CA:57:G:H8	1.75	0.50
6:CF:14:LEU:HD22	6:CF:18:GLN:NE2	2.27	0.50
8:CH:10:LEU:HD22	8:CH:83:ILE:CD1	2.41	0.50
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.74	0.50
24:CX:11:A:N3	24:CX:11:A:C3'	2.74	0.50
25:CY:14:ASN:N	25:CY:14:ASN:ND2	2.59	0.50
25:CY:494:GLU:HG2	25:CY:495:GLY:H	1.77	0.50
59:CY:701:FUA:H5	59:CY:701:FUA:C20	2.12	0.50
28:D2:50:ILE:C	28:D2:52:ASP:H	2.18	0.50
36:DA:90:U:H4'	36:DA:92:A:C8	2.47	0.50
36:DA:295:G:H2'	36:DA:296:C:C6	2.46	0.50
36:DA:481:G:P	56:DY:47:LYS:HD3	2.52	0.50
36:DA:881:G:C2'	36:DA:882:G:H5'	2.41	0.50
36:DA:1142(A):A:O2'	36:DA:1143:A:H5''	2.10	0.50
36:DA:1591:G:O2'	36:DA:1592:C:H5'	2.11	0.50
36:DA:2115:G:H3'	36:DA:2116:G:C5'	2.41	0.50
36:DA:2647:U:H2'	36:DA:2648:C:C6	2.47	0.50
41:DF:24:LEU:C	41:DF:115:ALA:HB1	2.37	0.50
42:DG:61:ALA:O	42:DG:64:THR:HG22	2.11	0.50
47:DP:24:GLY:HA2	47:DP:33:ARG:NH1	2.26	0.50
47:DP:33:ARG:O	47:DP:34:GLY:C	2.54	0.50
47:DP:128:HIS:ND1	47:DP:148:LEU:HD13	2.27	0.50
49:DR:115:GLU:HG2	49:DR:117:VAL:H	1.75	0.50
51:DT:50:ILE:HG13	51:DT:102:ILE:HD11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DU:82:GLY:C	52:DU:84:LYS:H	2.19	0.50
53:DV:35:LEU:O	53:DV:37:VAL:N	2.45	0.50
54:DW:58:ALA:O	54:DW:63:ASP:N	2.44	0.50
55:DX:26:TYR:CE2	55:DX:89:ILE:HB	2.47	0.50
56:DY:52:SER:N	56:DY:53:PRO:HD2	2.26	0.50
57:DZ:85:HIS:HE1	57:DZ:87:ASP:OD1	1.95	0.50
57:DZ:92:SER:HB3	57:DZ:94:GLU:OE1	2.11	0.50
1:AA:974:A:C8	14:AN:31:ARG:HD2	2.47	0.50
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.94	0.50
8:AH:38:ILE:O	8:AH:39:LEU:C	2.54	0.50
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.27	0.50
12:AL:17:LYS:HD3	12:AL:18:VAL:H	1.74	0.50
16:AP:25:ARG:HG3	16:AP:25:ARG:NH1	2.23	0.50
19:AS:41:VAL:C	19:AS:43:GLU:N	2.65	0.50
25:AY:122:TRP:HZ3	25:AY:256:THR:HG21	1.77	0.50
25:AY:180:VAL:CG2	25:AY:181:LEU:N	2.75	0.50
25:AY:357:ARG:HG3	25:AY:357:ARG:HH11	1.76	0.50
25:AY:485:GLU:CB	25:AY:560:VAL:HG22	2.42	0.50
25:AY:519:ARG:NH1	25:AY:678:GLU:N	2.60	0.50
27:B1:45:ASN:ND2	27:B1:45:ASN:C	2.69	0.50
28:B2:16:LEU:O	28:B2:20:GLU:HG2	2.12	0.50
29:B3:12:PRO:O	29:B3:13:ILE:C	2.53	0.50
30:B4:45:GLY:O	30:B4:46:GLN:HB2	2.12	0.50
31:B5:29:THR:HG21	36:BA:2814:C:O2'	2.11	0.50
34:B8:33:ASN:HA	34:B8:36:LYS:HG3	1.93	0.50
36:BA:287:C:H2'	36:BA:288:C:H6	1.77	0.50
36:BA:637:A:H4'	36:BA:638:G:O5'	2.11	0.50
36:BA:654(P):C:O2'	36:BA:654(Q):C:H5'	2.11	0.50
36:BA:657:U:H2'	36:BA:658:C:H6	1.75	0.50
36:BA:696:G:C2	36:BA:767:U:O2	2.65	0.50
36:BA:1542:A:H3'	36:BA:1542:A:C8	2.47	0.50
36:BA:1629:U:H2'	36:BA:1630:G:C8	2.46	0.50
36:BA:1639:U:H2'	36:BA:1640:C:H5''	1.92	0.50
36:BA:2239:G:H5'	39:BD:251:GLY:HA3	1.93	0.50
36:BA:2348:U:H2'	36:BA:2349:G:H5'	1.93	0.50
36:BA:2469:A:O3'	48:BQ:56:ARG:NH1	2.45	0.50
36:BA:2584:U:C2'	36:BA:2585:U:C5'	2.82	0.50
36:BA:2687:U:C4	36:BA:2688:U:C5	2.99	0.50
37:BB:28:C:O2'	37:BB:29:A:H5'	2.12	0.50
42:BG:67:LYS:HD3	42:BG:68:PRO:N	2.27	0.50
42:BG:131:TYR:HB3	42:BG:159:VAL:HG13	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:79:PRO:C	45:BN:81:GLY:H	2.20	0.50
45:BN:131:GLN:NE2	45:BN:133:GLN:N	2.58	0.50
47:BP:71:VAL:H	47:BP:72:PRO:HD3	1.76	0.50
50:BS:25:ARG:CG	50:BS:26:LEU:H	2.25	0.50
51:BT:106:SER:O	51:BT:107:ASP:HB3	2.11	0.50
54:BW:17:VAL:O	54:BW:19:LEU:N	2.44	0.50
54:BW:25:ARG:NH1	54:BW:25:ARG:HB2	2.27	0.50
54:BW:28:SER:C	54:BW:30:GLU:N	2.69	0.50
56:BY:2:ARG:HG2	56:BY:2:ARG:HH11	1.76	0.50
57:BZ:151:HIS:O	57:BZ:152:ALA:C	2.53	0.50
1:CA:143:A:H2	1:CA:220:G:H1	1.59	0.50
1:CA:194:C:C2'	1:CA:195:A:H5''	2.42	0.50
1:CA:932:C:H4'	7:CG:4:ARG:NH2	2.26	0.50
1:CA:1347:G:HO2'	1:CA:1373:G:H1	1.59	0.50
4:CD:129:ASN:N	4:CD:129:ASN:ND2	2.55	0.50
5:CE:90:VAL:O	5:CE:120:THR:HA	2.12	0.50
6:CF:38:GLU:O	6:CF:39:LYS:C	2.54	0.50
8:CH:74:PRO:O	8:CH:75:ARG:C	2.55	0.50
9:CI:11:LYS:O	9:CI:11:LYS:HG2	2.11	0.50
10:CJ:47:PHE:CE2	14:CN:37:PHE:HE1	2.28	0.50
15:CO:69:TYR:CZ	15:CO:73:GLU:HG3	2.47	0.50
18:CR:31:LEU:HD23	18:CR:31:LEU:N	2.24	0.50
18:CR:44:LEU:HD22	18:CR:79:LEU:HD22	1.93	0.50
19:CS:19:VAL:CG1	19:CS:44:MET:HG2	2.41	0.50
23:CW:27:U:O2'	23:CW:28:C:H5'	2.11	0.50
25:CY:15:ILE:O	25:CY:81:ILE:HA	2.12	0.50
25:CY:304:ASP:C	25:CY:306:ASN:N	2.69	0.50
25:CY:402:ILE:O	25:CY:404:VAL:HG23	2.11	0.50
27:D1:76:ARG:HH22	27:D1:95:LEU:CG	2.25	0.50
36:DA:271(I):G:H3'	36:DA:271(J):C:H6	1.77	0.50
36:DA:557:U:H2'	36:DA:558:G:H8	1.76	0.50
36:DA:1052:C:P	36:DA:1052:C:O4'	2.69	0.50
36:DA:1841:U:H2'	36:DA:1842:G:H8	1.77	0.50
36:DA:2075:U:C2'	36:DA:2076:U:H5''	2.42	0.50
36:DA:2147:G:H2'	36:DA:2148:G:C5'	2.41	0.50
36:DA:2472:G:H5'	36:DA:2473:U:O5'	2.12	0.50
36:DA:2658:C:H2'	36:DA:2659:G:H5'	1.94	0.50
36:DA:2707:G:H2'	36:DA:2708:G:H8	1.76	0.50
36:DA:2876:G:H5'	51:DT:3:ARG:HA	1.92	0.50
37:DB:28:C:O2'	37:DB:29:A:H5'	2.11	0.50
37:DB:48:A:H2'	37:DB:49:C:H6	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:115:VAL:HB	38:DC:150:ILE:HD11	1.94	0.50
39:DD:96:HIS:CE1	39:DD:102:LYS:HE2	2.46	0.50
39:DD:130:ALA:HB2	39:DD:192:THR:HB	1.93	0.50
40:DE:24:THR:HG22	40:DE:186:GLY:HA2	1.93	0.50
41:DF:160:ASN:ND2	41:DF:162:LEU:HD13	2.26	0.50
42:DG:53:LEU:HD12	42:DG:56:ALA:HB2	1.93	0.50
43:DH:40:GLU:HG3	43:DH:64:LEU:CD1	2.42	0.50
45:DN:3:THR:C	45:DN:4:TYR:CD1	2.89	0.50
47:DP:71:VAL:H	47:DP:72:PRO:HD3	1.76	0.50
47:DP:106:LEU:O	47:DP:107:LYS:HG2	2.11	0.50
47:DP:113:LYS:HA	47:DP:129:ALA:O	2.12	0.50
48:DQ:27:VAL:H	48:DQ:137:TYR:HD2	1.59	0.50
50:DS:12:PHE:C	50:DS:12:PHE:HD1	2.19	0.50
50:DS:40:ILE:CG2	50:DS:41:ASP:N	2.75	0.50
51:DT:50:ILE:HD11	51:DT:64:ARG:HB3	1.93	0.50
51:DT:126:ALA:C	51:DT:128:GLU:H	2.19	0.50
54:DW:25:ARG:NH1	54:DW:25:ARG:HB2	2.27	0.50
54:DW:50:VAL:HG11	54:DW:103:ILE:CG2	2.42	0.50
57:DZ:65:GLN:HB3	57:DZ:67:LEU:CD1	2.40	0.50
1:AA:841:U:H3'	1:AA:848:C:C5'	2.41	0.50
1:AA:980:C:H5	1:AA:981:U:C2	2.30	0.50
1:AA:1001(A):G:H8	1:AA:1002:G:C8	2.30	0.50
1:AA:1065:U:O2'	1:AA:1066:C:P	2.69	0.50
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.75	0.50
1:AA:1465:C:C2'	1:AA:1466:C:H5'	2.42	0.50
2:AB:8:LYS:HB2	2:AB:9:GLU:OE1	2.11	0.50
2:AB:74:LYS:O	2:AB:75:LYS:C	2.54	0.50
2:AB:137:ARG:HG2	2:AB:137:ARG:NH1	2.26	0.50
2:AB:189:ASP:OD2	2:AB:205:ASP:OD1	2.29	0.50
4:AD:25:ARG:HH12	4:AD:30:LYS:HD2	1.76	0.50
4:AD:161:ASN:O	4:AD:165:MET:HG2	2.12	0.50
8:AH:65:TYR:HA	8:AH:79:VAL:HG23	1.93	0.50
13:AM:19:LEU:O	13:AM:22:ILE:HD13	2.12	0.50
16:AP:60:LEU:HD21	16:AP:66:PRO:HD3	1.93	0.50
19:AS:43:GLU:O	19:AS:45:VAL:HG13	2.11	0.50
20:AT:30:LYS:NZ	20:AT:34:LYS:HE3	2.25	0.50
23:AW:18:G:C6	23:AW:57:A:N6	2.80	0.50
24:AX:11:A:O2'	24:AX:12:A:OP2	2.30	0.50
25:AY:20:HIS:O	25:AY:21:ILE:O	2.29	0.50
25:AY:97:SER:O	25:AY:101:LEU:HG	2.12	0.50
25:AY:141:LYS:HZ1	60:AY:702:GDP:HN22	1.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:247:ARG:HG3	25:AY:247:ARG:NH1	2.26	0.50
25:AY:336:THR:HB	25:AY:339:SER:OG	2.12	0.50
25:AY:416:LYS:CD	25:AY:417:THR:N	2.71	0.50
26:B0:20:ARG:CG	26:B0:20:ARG:HH11	2.25	0.50
29:B3:31:LEU:HD13	29:B3:32:GLN:CG	2.27	0.50
30:B4:34:GLU:CD	30:B4:34:GLU:N	2.70	0.50
34:B8:33:ASN:HA	34:B8:36:LYS:HD2	1.94	0.50
36:BA:363:G:H2'	36:BA:363(A):A:H8	1.76	0.50
36:BA:653:A:H5'	36:BA:654:A:OP2	2.11	0.50
36:BA:682:G:H2'	36:BA:683:C:H6	1.75	0.50
36:BA:1052:C:O4'	36:BA:1052:C:P	2.69	0.50
36:BA:1107:G:OP1	44:BJ:59:UNK:N	2.45	0.50
36:BA:1345:C:O2'	36:BA:1346:G:H5'	2.11	0.50
36:BA:1472:A:H2'	36:BA:1473:G:C8	2.46	0.50
36:BA:1658:C:H6	36:BA:1658:C:O5'	1.95	0.50
36:BA:2553:G:H2'	36:BA:2554:U:C4'	2.42	0.50
38:BC:149:ASN:N	38:BC:149:ASN:HD22	2.10	0.50
39:BD:267:SER:HA	39:BD:270:ILE:HD11	1.93	0.50
43:BH:54:ARG:HH11	43:BH:54:ARG:HG2	1.76	0.50
46:BO:119:PRO:O	46:BO:120:GLU:HB2	2.12	0.50
47:BP:83:VAL:H	47:BP:115:LEU:CD2	2.24	0.50
48:BQ:79:LEU:HD23	48:BQ:80:GLU:H	1.76	0.50
49:BR:53:HIS:O	49:BR:56:LYS:HB2	2.11	0.50
52:BU:70:ARG:NH2	52:BU:75:ASN:HB2	2.27	0.50
53:BV:40:LEU:CA	53:BV:45:THR:HB	2.40	0.50
57:BZ:171:ILE:O	57:BZ:172:ALA:HB2	2.11	0.50
1:CA:812:C:O2'	1:CA:813:U:P	2.70	0.50
1:CA:841:U:H3'	1:CA:848:C:C5'	2.42	0.50
1:CA:977:A:H2'	1:CA:978:A:H5'	1.94	0.50
1:CA:979:C:C3'	1:CA:980:C:C5'	2.80	0.50
1:CA:1227:A:H2'	13:CM:117:VAL:CG2	2.35	0.50
1:CA:1310:G:O2'	1:CA:1311:G:H5'	2.12	0.50
1:CA:1314:C:OP2	19:CS:6:LYS:HD3	2.12	0.50
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.92	0.50
2:CB:162:ILE:HG22	2:CB:182:ILE:HG22	1.94	0.50
2:CB:169:LYS:O	2:CB:169:LYS:HD3	2.10	0.50
5:CE:12:LEU:CD1	5:CE:31:LEU:HB3	2.41	0.50
5:CE:145:LYS:CA	8:CH:107:LEU:HD21	2.41	0.50
12:CL:83:VAL:HG12	12:CL:84:LEU:N	2.27	0.50
14:CN:47:LEU:O	14:CN:50:LYS:N	2.45	0.50
20:CT:86:ARG:O	20:CT:90:GLN:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CX:11:A:O2'	24:CX:12:A:OP2	2.30	0.50
25:CY:111:SER:OG	25:CY:141:LYS:HB3	2.11	0.50
25:CY:227:ILE:HG12	25:CY:237:PRO:HB3	1.93	0.50
25:CY:503:GLY:C	25:CY:505:GLY:N	2.68	0.50
25:CY:590:ILE:HA	25:CY:593:ALA:HB3	1.93	0.50
26:D0:43:THR:O	26:D0:43:THR:HG23	2.11	0.50
27:D1:56:GLN:HE22	27:D1:87:PRO:HB3	1.77	0.50
32:D6:29:ASN:CG	32:D6:30:THR:N	2.70	0.50
36:DA:653:A:H5'	36:DA:654:A:OP2	2.11	0.50
36:DA:1188:U:C5'	53:DV:79:VAL:HG12	2.42	0.50
36:DA:1257:C:O2'	41:DF:84:VAL:HG23	2.12	0.50
36:DA:1505:C:C5	36:DA:1506:C:H1'	2.47	0.50
36:DA:1946:U:H2'	36:DA:1947:C:H6	1.76	0.50
36:DA:2039:C:H2'	36:DA:2040:C:H6	1.77	0.50
36:DA:2373:G:H2'	36:DA:2374:C:C6	2.47	0.50
36:DA:2428:G:H4'	36:DA:2429:G:O5'	2.11	0.50
36:DA:2713:A:C3'	36:DA:2714:G:H5'	2.41	0.50
37:DB:36:C:H2'	37:DB:37:C:C6	2.46	0.50
38:DC:48:LEU:HD23	38:DC:209:PHE:CZ	2.47	0.50
39:DD:261:LYS:NZ	39:DD:263:ARG:NH2	2.59	0.50
40:DE:23:VAL:CG1	40:DE:173:VAL:HG21	2.42	0.50
42:DG:9:ARG:O	42:DG:13:GLU:HG2	2.11	0.50
45:DN:46:VAL:CG1	45:DN:47:ALA:H	2.14	0.50
47:DP:67:MET:O	47:DP:68:GLN:HG3	2.12	0.50
47:DP:108:LYS:C	47:DP:110:TYR:N	2.69	0.50
48:DQ:45:GLN:H	48:DQ:45:GLN:CD	2.18	0.50
49:DR:24:GLN:HE22	49:DR:36:THR:HG21	1.74	0.50
49:DR:50:HIS:O	49:DR:51:LEU:C	2.55	0.50
49:DR:94:TYR:H	49:DR:94:TYR:HD1	1.54	0.50
50:DS:51:ALA:HB3	50:DS:73:LEU:HD12	1.93	0.50
51:DT:83:ILE:CG1	51:DT:84:GLN:N	2.73	0.50
57:DZ:125:LEU:HD23	57:DZ:164:ALA:O	2.11	0.50
57:DZ:155:LEU:HD23	57:DZ:155:LEU:N	2.26	0.50
1:AA:1239:A:H62	1:AA:1299:A:N6	2.10	0.50
2:AB:142:LEU:O	2:AB:142:LEU:HD23	2.12	0.50
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.94	0.50
3:AC:150:LYS:HB2	3:AC:169:ALA:CB	2.42	0.50
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.94	0.50
4:AD:155:LEU:O	4:AD:156:GLU:C	2.55	0.50
4:AD:162:LEU:HD13	4:AD:181:MET:HG2	1.94	0.50
5:AE:33:VAL:HG12	5:AE:112:LEU:HD12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:38:GLU:O	6:AF:39:LYS:O	2.30	0.50
10:AJ:56:HIS:O	10:AJ:58:ASP:O	2.30	0.50
14:AN:36:PHE:CD1	14:AN:36:PHE:C	2.90	0.50
17:AQ:99:SER:C	17:AQ:100:LYS:HG3	2.36	0.50
25:AY:292:THR:HG23	25:AY:297:GLU:H	1.77	0.50
26:B0:26:TYR:O	26:B0:29:GLN:HB2	2.12	0.50
27:B1:81:LYS:HZ1	36:BA:271(I):G:P	2.35	0.50
28:B2:52:ASP:O	28:B2:56:GLN:HG3	2.12	0.50
30:B4:39:CYS:HG	30:B4:42:PHE:HD2	1.50	0.50
32:B6:33:LYS:HG2	32:B6:34:LEU:N	2.27	0.50
34:B8:52:LYS:HE2	36:BA:834:C:H4'	1.93	0.50
36:BA:214:G:H1'	36:BA:216:A:HO2'	1.76	0.50
36:BA:847:U:OP2	36:BA:928:G:O6	2.30	0.50
36:BA:1049:C:H2'	36:BA:1050:A:C8	2.45	0.50
36:BA:1336:A:H2'	36:BA:1337:G:C8	2.47	0.50
36:BA:1495:A:H2'	36:BA:1496:A:C2	2.47	0.50
36:BA:1638:C:H5''	36:BA:2710:C:O2'	2.12	0.50
36:BA:1656:C:H2'	36:BA:1657:C:C6	2.46	0.50
36:BA:1694:C:O4'	36:BA:1695:G:C2	2.65	0.50
36:BA:1814:G:C4'	39:BD:51:VAL:HG21	2.41	0.50
36:BA:2741:A:H2'	36:BA:2742:C:O4'	2.12	0.50
42:BG:9:ARG:C	42:BG:11:TYR:N	2.68	0.50
43:BH:169:VAL:HG13	43:BH:170:ARG:N	2.27	0.50
48:BQ:59:ARG:HG3	48:BQ:59:ARG:HH11	1.77	0.50
51:BT:24:PRO:HA	51:BT:49:VAL:HG13	1.94	0.50
56:BY:7:VAL:HB	56:BY:8:LYS:CE	2.42	0.50
56:BY:23:ARG:O	56:BY:24:VAL:O	2.30	0.50
1:CA:521:G:O2'	1:CA:522:C:H5'	2.12	0.50
1:CA:861:G:O2'	1:CA:862:C:H5'	2.12	0.50
1:CA:1294:G:C2'	1:CA:1295:G:H5'	2.42	0.50
2:CB:207:ALA:O	2:CB:210:SER:N	2.45	0.50
4:CD:155:LEU:O	4:CD:156:GLU:C	2.55	0.50
5:CE:64:ARG:HH11	5:CE:64:ARG:CG	2.23	0.50
19:CS:27:GLU:O	19:CS:28:LYS:O	2.30	0.50
21:CU:6:ARG:NH2	21:CU:15:ARG:NH2	2.60	0.50
22:CV:3:C:C2	22:CV:71:G:N2	2.79	0.50
25:CY:90:PHE:HE2	59:CY:701:FUA:C9	2.23	0.50
25:CY:213:HIS:O	25:CY:217:VAL:HG23	2.12	0.50
25:CY:489:LYS:HG2	25:CY:598:ASP:CG	2.37	0.50
25:CY:530:VAL:CG2	25:CY:531:GLY:H	2.14	0.50
28:D2:69:ARG:CG	28:D2:70:GLN:H	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:34:GLU:N	30:D4:34:GLU:CD	2.70	0.50
36:DA:61:G:H1	36:DA:94:C:H42	1.60	0.50
36:DA:109:G:O2'	36:DA:110:G:H5'	2.11	0.50
36:DA:444:C:H2'	36:DA:445:C:H6	1.76	0.50
36:DA:807:U:H2'	36:DA:808:G:C8	2.47	0.50
36:DA:1814:G:C4'	39:DD:51:VAL:HG21	2.41	0.50
36:DA:2161:C:O2'	36:DA:2162:G:H5'	2.12	0.50
36:DA:2531:A:H4'	43:DH:157:TYR:CD2	2.46	0.50
36:DA:2607:G:C6	36:DA:2608:G:C6	2.99	0.50
36:DA:2882:A:H5''	49:DR:98:LEU:HD21	1.92	0.50
38:DC:28:ARG:NH1	38:DC:28:ARG:CG	2.65	0.50
39:DD:28:GLU:HB2	39:DD:29:PRO:HD3	1.92	0.50
39:DD:35:LYS:O	39:DD:37:LEU:HB2	2.11	0.50
40:DE:69:LYS:O	40:DE:70:ALA:C	2.54	0.50
42:DG:124:SER:HB3	42:DG:131:TYR:CE1	2.46	0.50
42:DG:181:ARG:HH11	42:DG:181:ARG:CG	2.25	0.50
45:DN:55:VAL:HG22	45:DN:56:ASN:H	1.76	0.50
45:DN:99:LEU:HD12	45:DN:122:VAL:HG21	1.93	0.50
45:DN:126:PRO:O	45:DN:127:ASP:CB	2.57	0.50
48:DQ:59:ARG:HH11	48:DQ:59:ARG:HG3	1.77	0.50
51:DT:33:LYS:HE2	51:DT:43:GLN:CD	2.37	0.50
52:DU:95:LEU:HD12	53:DV:11:GLN:NE2	2.22	0.50
52:DU:95:LEU:CD1	53:DV:11:GLN:HG3	2.42	0.50
57:DZ:82:ARG:HH11	57:DZ:82:ARG:HG2	1.77	0.50
57:DZ:127:LYS:HE2	57:DZ:162:GLU:OE2	2.11	0.50
1:AA:143:A:H2	1:AA:220:G:H1	1.59	0.50
1:AA:975:A:H5'	1:AA:975:A:C8	2.47	0.50
1:AA:1064:G:H21	1:AA:1190:G:H2'	1.77	0.50
2:AB:204:ASN:HD21	2:AB:206:ASP:H	1.56	0.50
4:AD:196:LEU:C	4:AD:198:VAL:H	2.19	0.50
5:AE:80:ILE:CD1	5:AE:138:ALA:HB1	2.41	0.50
7:AG:140:ASP:HA	7:AG:143:ARG:NH1	2.26	0.50
8:AH:104:ARG:CZ	8:AH:138:TRP:CZ3	2.95	0.50
17:AQ:4:LYS:HG3	17:AQ:6:LEU:CD2	2.41	0.50
18:AR:32:ARG:CA	18:AR:69:THR:HG21	2.42	0.50
19:AS:72:GLY:C	19:AS:74:PHE:H	2.20	0.50
25:AY:64:THR:C	25:AY:66:THR:N	2.70	0.50
25:AY:100:VAL:HG22	25:AY:374:LEU:HD21	1.94	0.50
27:B1:69:LYS:HD3	36:BA:372:G:O5'	2.11	0.50
30:B4:26:SER:HB2	42:BG:143:GLU:OE2	2.11	0.50
36:BA:272(G):C:H42	36:BA:363(C):G:H1	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:291:C:H2'	36:BA:292:C:C6	2.46	0.50
36:BA:860:U:O2	36:BA:860:U:O4'	2.30	0.50
36:BA:1316:U:H2'	36:BA:1317:A:C8	2.47	0.50
36:BA:2233:U:H2'	36:BA:2234:G:C8	2.47	0.50
36:BA:2464:C:O2'	36:BA:2465:C:O5'	2.29	0.50
36:BA:2512:C:H2'	36:BA:2513:G:O4'	2.12	0.50
36:BA:2576:G:H3'	36:BA:2576:G:N3	2.26	0.50
36:BA:2787:C:C1'	40:BE:61:ARG:HD3	2.40	0.50
36:BA:2836:U:C4	36:BA:2883:A:N6	2.79	0.50
37:BB:36:C:H2'	37:BB:37:C:C6	2.46	0.50
39:BD:176:ARG:HH11	39:BD:176:ARG:CG	2.25	0.50
40:BE:4:ILE:HD11	40:BE:28:ALA:HB1	1.94	0.50
43:BH:20:ALA:HB1	43:BH:21:PRO:HD2	1.94	0.50
43:BH:149:ARG:HA	43:BH:162:ILE:CD1	2.42	0.50
43:BH:153:LYS:CD	43:BH:154:PRO:HD2	2.34	0.50
45:BN:4:TYR:N	45:BN:4:TYR:CD1	2.79	0.50
46:BO:4:PRO:HA	46:BO:21:CYS:SG	2.52	0.50
51:BT:83:ILE:HG13	51:BT:84:GLN:HG2	1.94	0.50
55:BX:57:LEU:HD22	55:BX:57:LEU:O	2.11	0.50
1:CA:159:G:H2'	1:CA:160:A:H5''	1.93	0.50
1:CA:514:C:H2'	1:CA:515:G:C8	2.44	0.50
1:CA:652:U:C2	1:CA:752:G:N2	2.80	0.50
1:CA:1098:C:O2'	1:CA:1099:G:H5'	2.12	0.50
1:CA:1101:A:H4'	1:CA:1102:A:C4'	2.42	0.50
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.94	0.50
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.46	0.50
1:CA:1438:G:H2'	1:CA:1439:C:H6	1.77	0.50
2:CB:8:LYS:O	2:CB:9:GLU:C	2.55	0.50
2:CB:12:GLU:CA	2:CB:16:HIS:ND1	2.75	0.50
4:CD:126:ILE:HD12	4:CD:126:ILE:N	2.27	0.50
4:CD:161:ASN:O	4:CD:165:MET:HG2	2.11	0.50
6:CF:72:VAL:HG13	6:CF:73:ASN:N	2.26	0.50
13:CM:15:VAL:HG12	13:CM:45:VAL:CG2	2.37	0.50
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.41	0.50
19:CS:58:VAL:O	19:CS:59:PRO:C	2.53	0.50
21:CU:5:ASP:O	21:CU:7:ARG:N	2.45	0.50
24:CX:13:A:H2'	24:CX:14:U:O4'	2.12	0.50
25:CY:271:LEU:O	25:CY:275:ALA:HB2	2.11	0.50
26:D0:78:TYR:CD1	26:D0:78:TYR:N	2.79	0.50
31:D5:56:LYS:O	31:D5:57:VAL:O	2.30	0.50
36:DA:120:U:O2	36:DA:120:U:C2'	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:703:U:O2'	36:DA:704:G:H5'	2.12	0.50
36:DA:769:G:H5'	36:DA:1379:A:N6	2.27	0.50
36:DA:833:U:O2	47:DP:55:ARG:NH2	2.44	0.50
36:DA:1128:A:C8	36:DA:2518:A:N6	2.80	0.50
36:DA:1461:G:H2'	36:DA:1462:C:C6	2.46	0.50
36:DA:2347:C:H2'	36:DA:2348:U:C6	2.47	0.50
36:DA:2705:A:H2'	36:DA:2706:G:O4'	2.11	0.50
36:DA:2722:G:H2'	36:DA:2723:C:H6	1.77	0.50
37:DB:106:G:H5''	57:DZ:31:ARG:HB3	1.94	0.50
39:DD:187:GLY:C	39:DD:189:CYS:H	2.20	0.50
39:DD:205:VAL:O	39:DD:205:VAL:HG12	2.11	0.50
41:DF:26:ALA:O	41:DF:27:GLU:HG3	2.12	0.50
44:DJ:148:UNK:C	44:DJ:150:UNK:N	2.73	0.50
45:DN:125:GLY:CA	45:DN:126:PRO:O	2.60	0.50
47:DP:41:ARG:CB	47:DP:41:ARG:NH1	2.74	0.50
49:DR:92:GLY:HA2	49:DR:94:TYR:CE1	2.47	0.50
52:DU:52:ARG:O	52:DU:55:ARG:HG2	2.11	0.50
53:DV:53:GLU:O	53:DV:55:ALA:N	2.45	0.50
54:DW:62:HIS:O	54:DW:63:ASP:C	2.55	0.50
1:AA:723:U:H5'	1:AA:724:G:OP2	2.12	0.49
1:AA:882:C:O2'	1:AA:883:C:H5'	2.12	0.49
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.47	0.49
3:AC:165:THR:HG23	3:AC:165:THR:O	2.12	0.49
4:AD:107:ARG:HH21	4:AD:194:LEU:HD13	1.77	0.49
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.26	0.49
13:AM:17:VAL:O	13:AM:20:THR:HB	2.11	0.49
19:AS:21:GLU:CG	19:AS:22:LEU:HD23	2.37	0.49
25:AY:145:ASP:CB	25:AY:148:LEU:HD22	2.40	0.49
25:AY:402:ILE:HG22	25:AY:402:ILE:O	2.11	0.49
25:AY:679:VAL:CG2	25:AY:684:GLN:NE2	2.75	0.49
31:B5:4:HIS:CB	31:B5:5:PRO:CD	2.89	0.49
36:BA:63:U:OP1	36:BA:63:U:H4'	2.12	0.49
36:BA:444:C:H2'	36:BA:445:C:H6	1.77	0.49
36:BA:492:A:C2'	36:BA:493:G:H5'	2.41	0.49
36:BA:1207:C:H2'	36:BA:1208:C:H6	1.77	0.49
36:BA:2115:G:H3'	36:BA:2116:G:C5'	2.42	0.49
36:BA:2462:U:H2'	36:BA:2463:C:C6	2.47	0.49
37:BB:48:A:H2'	37:BB:49:C:C6	2.48	0.49
38:BC:22:THR:HA	38:BC:229:SER:OG	2.12	0.49
38:BC:104:ILE:CG2	38:BC:131:ILE:HG21	2.42	0.49
39:BD:9:TYR:C	39:BD:10:THR:HG22	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:9:VAL:CG2	40:BE:10:GLY:N	2.74	0.49
40:BE:167:VAL:HG13	40:BE:170:LEU:HD11	1.94	0.49
41:BF:53:THR:HG23	41:BF:55:GLY:N	2.23	0.49
41:BF:108:LYS:O	41:BF:112:MET:HE3	2.12	0.49
42:BG:59:GLU:C	42:BG:61:ALA:H	2.19	0.49
43:BH:154:PRO:O	43:BH:156:ALA:N	2.45	0.49
45:BN:58:ASP:O	45:BN:60:ILE:HG13	2.12	0.49
45:BN:82:LEU:HD23	45:BN:82:LEU:C	2.37	0.49
51:BT:59:THR:OG1	51:BT:78:LEU:HD12	2.12	0.49
52:BU:113:ALA:C	52:BU:115:ALA:N	2.70	0.49
54:BW:62:HIS:O	54:BW:63:ASP:C	2.54	0.49
1:CA:529:G:O6	12:CL:49:ASN:HA	2.11	0.49
4:CD:100:ARG:HB3	4:CD:102:ASP:OD1	2.11	0.49
8:CH:9:MET:O	8:CH:10:LEU:C	2.53	0.49
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.42	0.49
15:CO:24:SER:O	15:CO:25:THR:C	2.54	0.49
17:CQ:99:SER:C	17:CQ:100:LYS:HG3	2.36	0.49
18:CR:32:ARG:CA	18:CR:69:THR:HG21	2.40	0.49
19:CS:6:LYS:O	19:CS:7:LYS:HE3	2.12	0.49
19:CS:13:ASP:O	19:CS:15:LEU:N	2.45	0.49
25:CY:24:GLY:O	25:CY:28:THR:N	2.42	0.49
33:D7:11:LYS:HE2	36:DA:686:G:H5''	1.93	0.49
36:DA:92:A:H2'	36:DA:93:G:C8	2.46	0.49
36:DA:512:G:O2'	36:DA:513:A:H8	1.94	0.49
36:DA:1050:A:H2'	36:DA:1051:G:O4'	2.11	0.49
36:DA:1204:A:H61	36:DA:1240:U:H2'	1.75	0.49
36:DA:1558:A:O2'	36:DA:1559:G:OP2	2.29	0.49
36:DA:1573:G:H2'	36:DA:1574:C:H5'	1.93	0.49
38:DC:176:VAL:HG21	38:DC:190:ILE:CD1	2.42	0.49
39:DD:139:GLY:H	39:DD:165:ILE:HB	1.77	0.49
39:DD:270:ILE:HD12	39:DD:270:ILE:N	2.23	0.49
40:DE:101:ARG:HH11	40:DE:169:ASN:ND2	2.09	0.49
41:DF:62:ARG:NH2	41:DF:64:ILE:HA	2.27	0.49
42:DG:32:PRO:CB	42:DG:163:ALA:HB2	2.42	0.49
42:DG:123:ASN:C	42:DG:125:PHE:H	2.19	0.49
47:DP:92:GLU:OE2	47:DP:121:LYS:HE2	2.10	0.49
48:DQ:134:ARG:HH11	48:DQ:134:ARG:HG3	1.77	0.49
49:DR:53:HIS:O	49:DR:53:HIS:ND1	2.45	0.49
50:DS:66:ALA:O	50:DS:99:LYS:HD3	2.12	0.49
52:DU:97:ASP:C	52:DU:99:ALA:H	2.19	0.49
53:DV:38:LEU:C	53:DV:39:LEU:HD13	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DW:109:GLU:N	54:DW:109:GLU:OE1	2.45	0.49
55:DX:12:VAL:CG2	55:DX:13:LEU:N	2.58	0.49
55:DX:59:VAL:O	55:DX:59:VAL:HG12	2.12	0.49
56:DY:88:LYS:N	56:DY:88:LYS:HD2	2.26	0.49
57:DZ:79:ARG:O	57:DZ:80:ARG:CB	2.60	0.49
1:AA:189(D):C:H1'	1:AA:189(H):G:N2	2.27	0.49
1:AA:265:G:O2'	1:AA:266:G:H5'	2.12	0.49
1:AA:861:G:O2'	1:AA:862:C:H5'	2.12	0.49
1:AA:920:U:H1'	1:AA:1080:A:C2	2.46	0.49
1:AA:1466:C:H2'	1:AA:1467:G:O4'	2.12	0.49
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.77	0.49
3:AC:76:VAL:HG23	3:AC:77:ILE:N	2.28	0.49
4:AD:159:ARG:O	4:AD:163:GLU:N	2.45	0.49
6:AF:16:GLN:CD	6:AF:16:GLN:N	2.70	0.49
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.11	0.49
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.12	0.49
13:AM:23:TYR:C	13:AM:23:TYR:CD1	2.91	0.49
16:AP:8:ARG:CB	16:AP:28:ARG:NH1	2.75	0.49
16:AP:9:PHE:CE2	16:AP:18:ARG:NE	2.80	0.49
25:AY:9:LEU:HD21	25:AY:284:LEU:CB	2.41	0.49
25:AY:21:ILE:HD12	25:AY:88:VAL:CG1	2.41	0.49
25:AY:357:ARG:HG3	25:AY:357:ARG:NH1	2.27	0.49
32:B6:10:LEU:HD23	32:B6:10:LEU:N	2.24	0.49
33:B7:8:ASN:C	33:B7:8:ASN:ND2	2.68	0.49
34:B8:61:LEU:N	34:B8:63:PRO:HD2	2.27	0.49
36:BA:185:U:H2'	36:BA:186:G:H8	1.77	0.49
36:BA:302:C:H2'	36:BA:303:U:H6	1.77	0.49
36:BA:654(O):G:H2'	36:BA:654(P):C:C6	2.47	0.49
36:BA:674:G:H5''	41:BF:76:GLY:N	2.27	0.49
36:BA:744:G:OP1	40:BE:132:HIS:HB3	2.12	0.49
36:BA:824:A:H1'	36:BA:2358:G:N7	2.27	0.49
36:BA:1344:G:H4'	36:BA:1384:A:C5	2.47	0.49
36:BA:2658:C:H2'	36:BA:2659:G:H5'	1.94	0.49
41:BF:4:VAL:HA	41:BF:19:GLU:HB3	1.93	0.49
41:BF:107:LYS:HD2	41:BF:205:ARG:O	2.12	0.49
42:BG:77:ILE:CG2	42:BG:80:PHE:N	2.74	0.49
43:BH:169:VAL:HG22	43:BH:170:ARG:N	2.20	0.49
50:BS:74:ALA:HB3	50:BS:103:GLU:HG3	1.93	0.49
50:BS:106:ARG:O	50:BS:107:GLU:CB	2.59	0.49
51:BT:57:PHE:O	51:BT:58:ASN:C	2.54	0.49
52:BU:96:ALA:C	52:BU:98:LEU:N	2.70	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:55:TYR:O	56:BY:56:PRO:C	2.56	0.49
57:BZ:117:LEU:HA	57:BZ:174:VAL:HG22	1.93	0.49
1:CA:8:A:C6	4:CD:209:ARG:HB2	2.47	0.49
1:CA:980:C:H5	1:CA:981:U:C2	2.29	0.49
2:CB:17:PHE:O	2:CB:18:GLY:C	2.55	0.49
2:CB:207:ALA:HB3	2:CB:210:SER:HB3	1.93	0.49
10:CJ:6:ILE:HA	10:CJ:97:GLU:O	2.12	0.49
13:CM:117:VAL:O	13:CM:118:ALA:O	2.30	0.49
15:CO:12:ILE:O	15:CO:14:GLU:N	2.44	0.49
15:CO:64:ARG:HH11	15:CO:64:ARG:CG	2.25	0.49
25:CY:138:LYS:HE2	60:CY:702:GDP:C4	2.46	0.49
25:CY:289:ILE:HB	25:CY:301:ILE:CG1	2.41	0.49
25:CY:289:ILE:HB	25:CY:301:ILE:HG12	1.94	0.49
25:CY:456:GLU:O	25:CY:460:GLU:HB2	2.11	0.49
29:D3:11:SER:HB3	36:DA:988:A:P	2.52	0.49
36:DA:27:G:N2	36:DA:512:G:C2'	2.69	0.49
36:DA:221:A:O2'	36:DA:222:A:OP2	2.30	0.49
36:DA:272(B):G:H2'	36:DA:272(C):G:H8	1.74	0.49
36:DA:515:A:C2	36:DA:1261:C:H1'	2.46	0.49
36:DA:1196:C:H2'	36:DA:1197:G:O4'	2.12	0.49
36:DA:1325:G:OP2	36:DA:1616:A:H2'	2.12	0.49
36:DA:1608:A:C6	36:DA:1611:C:C2	3.00	0.49
36:DA:1710:C:H2'	36:DA:1711:C:C6	2.47	0.49
36:DA:2553:G:H2'	36:DA:2554:U:O4'	2.12	0.49
36:DA:2769:C:O2'	36:DA:2770:G:H5'	2.12	0.49
37:DB:115:G:H2'	37:DB:116:G:H8	1.77	0.49
40:DE:36:ARG:NH1	40:DE:36:ARG:CG	2.74	0.49
40:DE:68:ALA:HB3	40:DE:69:LYS:HE2	1.93	0.49
42:DG:39:ILE:CG1	42:DG:92:VAL:HG23	2.37	0.49
45:DN:35:ARG:O	45:DN:36:GLY:C	2.55	0.49
51:DT:24:PRO:HA	51:DT:49:VAL:HG13	1.94	0.49
53:DV:47:VAL:O	53:DV:47:VAL:HG23	2.11	0.49
56:DY:56:PRO:O	56:DY:57:GLN:HB3	2.12	0.49
56:DY:97:ARG:HG3	56:DY:97:ARG:NH1	2.27	0.49
57:DZ:13:GLU:HA	57:DZ:13:GLU:OE1	2.12	0.49
57:DZ:97:GLU:HB3	57:DZ:125:LEU:HD11	1.92	0.49
1:AA:745:C:H2'	1:AA:746:A:H8	1.75	0.49
2:AB:77:ALA:HA	2:AB:80:ILE:HD13	1.93	0.49
2:AB:101:MET:C	2:AB:102:LEU:HD12	2.37	0.49
3:AC:86:VAL:HG23	3:AC:87:LEU:HD23	1.94	0.49
3:AC:111:LEU:HD21	3:AC:144:SER:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:195:VAL:C	3:AC:196:LEU:HD22	2.37	0.49
11:AK:12:ARG:HG2	11:AK:13:GLN:N	2.26	0.49
12:AL:57:LYS:HG3	12:AL:67:THR:CG2	2.39	0.49
16:AP:5:ARG:HE	16:AP:22:THR:CG2	2.24	0.49
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.94	0.49
20:AT:93:GLU:N	20:AT:93:GLU:OE1	2.45	0.49
23:AW:31:G:C5	23:AW:32:C:C4	3.00	0.49
25:AY:313:ALA:CA	25:AY:328:ILE:HG22	2.42	0.49
25:AY:491:VAL:HG21	25:AY:596:LYS:C	2.37	0.49
27:B1:58:ILE:HD11	27:B1:91:LYS:CB	2.42	0.49
36:BA:52:A:O2'	36:BA:53:A:H5'	2.12	0.49
36:BA:142:A:N6	36:BA:1596:A:H5'	2.27	0.49
36:BA:195:A:H5''	36:BA:196:A:OP2	2.11	0.49
36:BA:333:G:H2'	36:BA:333:G:N3	2.27	0.49
36:BA:365:C:H6	36:BA:365:C:C5'	2.18	0.49
36:BA:1310:G:C2'	36:BA:1311:G:H5'	2.42	0.49
36:BA:1335:U:H2'	36:BA:1336:A:H8	1.76	0.49
36:BA:1353:A:H2'	36:BA:1354:A:C8	2.46	0.49
36:BA:1493:C:O2	36:BA:1493:C:H2'	2.12	0.49
36:BA:1644:C:O2	36:BA:1644:C:C2'	2.57	0.49
36:BA:1917:U:C2'	36:BA:1918:A:H5'	2.42	0.49
36:BA:2481:G:O2'	36:BA:2482:G:P	2.70	0.49
36:BA:2495:G:O2'	36:BA:2496:C:H5'	2.12	0.49
36:BA:2511:U:O3'	40:BE:123:ALA:HB3	2.12	0.49
38:BC:155:ARG:O	38:BC:159:ALA:HB2	2.12	0.49
39:BD:196:VAL:HG12	39:BD:196:VAL:O	2.11	0.49
39:BD:226:MET:HB3	39:BD:230:ASP:CB	2.41	0.49
40:BE:184:VAL:O	40:BE:186:GLY:N	2.42	0.49
41:BF:10:PRO:HB3	41:BF:127:GLU:HG2	1.94	0.49
41:BF:40:GLN:OE1	41:BF:184:TYR:HB2	2.12	0.49
42:BG:56:ALA:CB	42:BG:153:ARG:NH2	2.75	0.49
42:BG:73:ALA:H	42:BG:87:PRO:CD	2.25	0.49
43:BH:28:GLY:HA3	43:BH:79:VAL:HB	1.94	0.49
45:BN:24:GLY:O	45:BN:28:THR:HB	2.11	0.49
48:BQ:52:VAL:O	48:BQ:53:ALA:C	2.55	0.49
49:BR:63:ARG:NH2	49:BR:77:ARG:HG2	2.27	0.49
49:BR:78:LYS:O	49:BR:83:ILE:HG12	2.12	0.49
52:BU:82:GLY:C	52:BU:84:LYS:N	2.70	0.49
55:BX:14:SER:O	55:BX:15:GLU:C	2.55	0.49
55:BX:26:TYR:OH	55:BX:88:LYS:HB2	2.12	0.49
57:BZ:29:TYR:OH	57:BZ:87:ASP:HB3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:106:C:C2'	1:CA:107:G:H5'	2.42	0.49
1:CA:294:U:H2'	1:CA:295:C:C6	2.47	0.49
1:CA:349:A:C2'	1:CA:350:G:H5''	2.41	0.49
1:CA:1133:G:H22	1:CA:1143:G:H1'	1.76	0.49
2:CB:189:ASP:C	2:CB:191:ASP:H	2.19	0.49
3:CC:54:ARG:HH11	3:CC:54:ARG:HG2	1.77	0.49
8:CH:82:HIS:CD2	8:CH:138:TRP:NE1	2.80	0.49
9:CI:50:LEU:HD23	9:CI:85:LEU:CD2	2.41	0.49
21:CU:24:ARG:HH11	21:CU:24:ARG:HG2	1.77	0.49
23:CW:38:A:H8	23:CW:38:A:O5'	1.94	0.49
25:CY:138:LYS:HG2	60:CY:702:GDP:C5	2.46	0.49
25:CY:152:THR:HG23	25:CY:153:MET:N	2.27	0.49
25:CY:193:GLY:O	25:CY:196:ILE:HG23	2.12	0.49
25:CY:211:GLU:HB2	25:CY:215:LYS:NZ	2.26	0.49
25:CY:441:SER:C	25:CY:449:THR:HG23	2.37	0.49
25:CY:510:VAL:HG11	25:CY:567:LEU:HD13	1.93	0.49
25:CY:550:MET:HE3	25:CY:563:ILE:HD11	1.94	0.49
36:DA:211:A:C3'	36:DA:212:G:H5''	2.42	0.49
36:DA:551:G:H2'	36:DA:552:G:H5'	1.94	0.49
36:DA:893:C:H2'	36:DA:894:C:H6	1.78	0.49
36:DA:1472:A:H2'	36:DA:1473:G:C8	2.47	0.49
36:DA:1599:C:OP2	55:DX:36:LYS:HD2	2.13	0.49
36:DA:2794:C:N4	36:DA:2801(A):A:H61	2.09	0.49
36:DA:2820:A:O2'	36:DA:2821:A:OP1	2.28	0.49
38:DC:22:THR:HA	38:DC:229:SER:OG	2.12	0.49
39:DD:24:ILE:HG12	39:DD:25:THR:N	2.27	0.49
41:DF:18:ARG:CZ	41:DF:199:TRP:CZ3	2.95	0.49
41:DF:81:PRO:C	41:DF:83:PHE:H	2.19	0.49
41:DF:107:LYS:O	41:DF:108:LYS:C	2.55	0.49
41:DF:126:VAL:HG23	41:DF:127:GLU:N	2.28	0.49
47:DP:106:LEU:HD11	47:DP:112:LEU:CD2	2.43	0.49
49:DR:63:ARG:HA	49:DR:80:PHE:CZ	2.47	0.49
51:DT:38:ASN:ND2	51:DT:40:THR:OG1	2.46	0.49
52:DU:31:SER:CB	52:DU:34:LYS:HB2	2.36	0.49
54:DW:4:LYS:HG2	54:DW:5:ALA:N	2.28	0.49
56:DY:4:LYS:HD2	56:DY:32:PRO:HG3	1.95	0.49
56:DY:13:VAL:O	56:DY:24:VAL:HG13	2.12	0.49
57:DZ:10:ARG:NH2	57:DZ:26:GLY:N	2.59	0.49
1:AA:202:U:H5'	1:AA:203:U:H5	1.76	0.49
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.93	0.49
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:117:VAL:O	13:AM:118:ALA:C	2.54	0.49
17:AQ:4:LYS:CG	17:AQ:6:LEU:HD21	2.42	0.49
18:AR:72:ARG:O	18:AR:76:LEU:HD22	2.12	0.49
21:AU:24:ARG:HH11	21:AU:24:ARG:HG2	1.77	0.49
22:AV:3:C:C2'	22:AV:4:C:H5'	2.42	0.49
25:AY:122:TRP:HH2	25:AY:256:THR:HG1	1.60	0.49
25:AY:415:PRO:HB2	25:AY:420:ASP:C	2.37	0.49
25:AY:468:ARG:HH11	25:AY:468:ARG:CB	2.04	0.49
25:AY:518:PRO:O	25:AY:520:GLY:N	2.46	0.49
25:AY:555:LEU:CD1	25:AY:601:ILE:HG13	2.41	0.49
32:B6:29:ASN:CG	32:B6:30:THR:N	2.70	0.49
36:BA:207:A:H2'	36:BA:208:C:O4'	2.12	0.49
36:BA:211:A:C3'	36:BA:212:G:H5''	2.42	0.49
36:BA:635:C:H2'	36:BA:636:G:O4'	2.12	0.49
36:BA:766:C:O2'	36:BA:767:U:H5'	2.13	0.49
36:BA:833:U:O2	47:BP:55:ARG:NH2	2.44	0.49
36:BA:848:G:C2	36:BA:933:A:H1'	2.47	0.49
36:BA:893:C:H2'	36:BA:894:C:H6	1.75	0.49
36:BA:1131:G:H21	45:BN:73:THR:HG21	1.77	0.49
36:BA:1462:C:H4'	36:BA:2703:C:O4'	2.13	0.49
36:BA:2860:A:H2'	36:BA:2861:G:H5'	1.94	0.49
37:BB:94:C:H2'	37:BB:95:C:H6	1.77	0.49
37:BB:115:G:O4'	50:BS:47:THR:HB	2.13	0.49
38:BC:7:ARG:O	38:BC:11:LEU:HG	2.13	0.49
40:BE:23:VAL:CG1	40:BE:173:VAL:HG21	2.41	0.49
40:BE:145:LYS:O	40:BE:148:GLY:N	2.45	0.49
42:BG:34:LEU:HD12	42:BG:34:LEU:N	2.27	0.49
45:BN:55:VAL:HG22	45:BN:56:ASN:H	1.76	0.49
45:BN:55:VAL:HG21	45:BN:127:ASP:H	1.77	0.49
45:BN:57:ALA:O	45:BN:58:ASP:C	2.54	0.49
45:BN:109:LYS:H	45:BN:109:LYS:HE2	1.75	0.49
46:BO:13:ASN:HD21	46:BO:97:ARG:HG2	1.78	0.49
46:BO:31:LYS:HB3	46:BO:32:TYR:CE1	2.47	0.49
47:BP:46:LYS:HG2	47:BP:52:GLU:CG	2.42	0.49
51:BT:5:ALA:O	51:BT:6:LEU:C	2.54	0.49
53:BV:62:LEU:N	53:BV:62:LEU:HD22	2.27	0.49
1:CA:218:C:H5'	1:CA:470:C:N4	2.28	0.49
1:CA:444:C:H42	1:CA:490:G:H1	1.59	0.49
1:CA:866:C:H2'	1:CA:867:G:O4'	2.11	0.49
1:CA:883:C:O2'	1:CA:884:U:H5'	2.12	0.49
1:CA:1442(B):A:C5	51:DT:118:ARG:NE	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:101:ILE:HD13	5:CE:101:ILE:H	1.76	0.49
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.38	0.49
7:CG:102:ARG:HG2	7:CG:106:GLN:HE21	1.77	0.49
7:CG:102:ARG:HG2	7:CG:106:GLN:NE2	2.28	0.49
9:CI:114:TYR:HE2	10:CJ:60:ARG:N	2.07	0.49
13:CM:83:ASP:C	13:CM:85:GLY:N	2.65	0.49
16:CP:60:LEU:HD21	16:CP:66:PRO:HD3	1.95	0.49
16:CP:74:LEU:CD2	16:CP:79:VAL:HG21	2.41	0.49
18:CR:59:SER:N	18:CR:62:GLU:HB2	2.21	0.49
20:CT:42:GLN:HE21	20:CT:42:GLN:CA	2.18	0.49
22:CV:48:C:H2'	22:CV:59:U:H4'	1.94	0.49
25:CY:170:ARG:HH22	25:CY:205:TYR:HE1	1.60	0.49
25:CY:220:ALA:HB2	25:CY:246:ILE:HD11	1.93	0.49
25:CY:494:GLU:HG2	25:CY:495:GLY:N	2.27	0.49
27:D1:86:SER:HB2	27:D1:90:ILE:CG1	2.40	0.49
29:D3:56:VAL:CG1	29:D3:57:GLU:H	2.24	0.49
36:DA:654(O):G:H2'	36:DA:654(P):C:C6	2.48	0.49
36:DA:841:A:H8	36:DA:841:A:H5'	1.78	0.49
36:DA:1022:G:O2'	36:DA:1023:U:P	2.70	0.49
36:DA:1542:A:H3'	36:DA:1542:A:H8	1.77	0.49
36:DA:1582:C:O2'	36:DA:1583:A:H5'	2.12	0.49
36:DA:1847:A:H3'	36:DA:1848:A:C5'	2.41	0.49
36:DA:2464:C:O2'	36:DA:2465:C:O5'	2.31	0.49
36:DA:2733:A:H2'	36:DA:2734:A:O4'	2.13	0.49
37:DB:44:G:H1'	37:DB:47:C:H41	1.77	0.49
37:DB:112:U:H2'	37:DB:113:G:C8	2.44	0.49
38:DC:7:ARG:O	38:DC:11:LEU:HG	2.12	0.49
39:DD:72:LYS:HE2	39:DD:101:GLU:OE1	2.13	0.49
39:DD:268:ARG:NH1	39:DD:268:ARG:HB3	2.28	0.49
43:DH:124:GLU:HB2	43:DH:132:ARG:CG	2.42	0.49
45:DN:4:TYR:N	45:DN:4:TYR:CD1	2.80	0.49
46:DO:105:GLU:O	46:DO:109:LYS:HG3	2.12	0.49
47:DP:38:GLN:HG3	47:DP:39:LYS:N	2.24	0.49
48:DQ:134:ARG:HE	57:DZ:122:ARG:NH2	2.10	0.49
51:DT:79:HIS:O	51:DT:80:SER:HB3	2.13	0.49
52:DU:96:ALA:C	52:DU:98:LEU:N	2.70	0.49
56:DY:62:GLU:CD	56:DY:63:LYS:N	2.70	0.49
57:DZ:112:ARG:HH11	57:DZ:112:ARG:HG2	1.77	0.49
1:AA:15:G:H8	1:AA:1396:A:O2'	1.96	0.49
1:AA:321:A:C2	1:AA:333:G:C2	3.00	0.49
1:AA:328:C:O2	1:AA:328:C:C2'	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1226:C:H5''	13:AM:103:THR:OG1	2.12	0.49
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.42	0.49
2:AB:102:LEU:HG	2:AB:158:LEU:CD2	2.41	0.49
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.79	0.49
11:AK:67:ASP:OD1	11:AK:71:LYS:HE3	2.12	0.49
25:AY:319:ASP:OD2	25:AY:322:VAL:HG22	2.12	0.49
25:AY:633:GLY:HA3	25:AY:644:ARG:HH11	1.76	0.49
27:B1:24:ALA:HB2	27:B1:32:LYS:HE3	1.94	0.49
36:BA:64:A:H2'	36:BA:65:C:O4'	2.12	0.49
36:BA:595:C:H42	36:BA:662:G:H1	1.59	0.49
36:BA:773:U:H5'	39:BD:47:GLY:HA2	1.93	0.49
36:BA:811:U:O2	36:BA:1251:C:C6	2.65	0.49
36:BA:864:G:OP2	48:BQ:22:LYS:HE2	2.13	0.49
36:BA:1012:U:H3	45:BN:25:ARG:HE	1.61	0.49
36:BA:1326:U:H2'	36:BA:1327:C:H6	1.77	0.49
36:BA:1352:U:O2'	36:BA:1353:A:H5'	2.12	0.49
36:BA:2347:C:H2'	36:BA:2348:U:C6	2.48	0.49
36:BA:2562:U:H1'	46:BO:23:ARG:NH1	2.18	0.49
36:BA:2697:G:C2	36:BA:2711:A:C2	3.01	0.49
37:BB:87:G:H3'	37:BB:88:C:H5''	1.94	0.49
37:BB:93:G:O2'	37:BB:94:C:H5'	2.12	0.49
39:BD:79:VAL:HG21	39:BD:111:LEU:HD11	1.94	0.49
40:BE:34:VAL:HG11	40:BE:78:LEU:CD2	2.42	0.49
41:BF:89:VAL:CG1	41:BF:90:PHE:H	2.18	0.49
47:BP:47:ASP:HB3	47:BP:48:PRO:C	2.37	0.49
49:BR:117:VAL:CG1	49:BR:118:GLU:N	2.75	0.49
51:BT:50:ILE:HD12	51:BT:50:ILE:N	2.27	0.49
51:BT:92:GLY:C	51:BT:94:ALA:N	2.65	0.49
53:BV:19:LYS:NZ	53:BV:22:VAL:HG13	2.28	0.49
56:BY:88:LYS:O	56:BY:90:LEU:HD23	2.13	0.49
57:BZ:114:GLY:O	57:BZ:146:ILE:HD12	2.12	0.49
1:CA:1163:C:H2'	1:CA:1164:G:C8	2.48	0.49
1:CA:1191:A:P	3:CC:3:ASN:HD21	2.36	0.49
1:CA:1303:C:H2'	1:CA:1304:G:H5'	1.94	0.49
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.41	0.49
1:CA:1329:A:C2'	1:CA:1330:U:H5'	2.43	0.49
3:CC:86:VAL:HG23	3:CC:87:LEU:HD23	1.94	0.49
4:CD:19:LEU:CD2	4:CD:21:LEU:HD21	2.43	0.49
6:CF:68:PRO:HG2	6:CF:71:ARG:HB2	1.93	0.49
7:CG:8:GLU:O	7:CG:9:VAL:C	2.55	0.49
8:CH:54:ASP:O	8:CH:56:LYS:HG3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:7:ILE:HG22	12:CL:8:ASN:N	2.27	0.49
13:CM:70:LEU:O	13:CM:71:ARG:C	2.56	0.49
15:CO:49:ASP:O	15:CO:49:ASP:OD1	2.31	0.49
25:CY:339:SER:O	25:CY:351:ARG:HD2	2.12	0.49
25:CY:613:PRO:HG2	25:CY:666:ARG:HH21	1.75	0.49
26:D0:11:ARG:HH11	26:D0:11:ARG:CB	2.25	0.49
27:D1:46:LEU:H	27:D1:46:LEU:CD2	2.19	0.49
27:D1:69:LYS:HE2	27:D1:72:GLU:CD	2.38	0.49
28:D2:27:GLU:O	28:D2:30:ARG:N	2.45	0.49
28:D2:63:VAL:C	28:D2:65:ASN:H	2.20	0.49
30:D4:39:CYS:SG	30:D4:42:PHE:CE2	3.01	0.49
32:D6:19:ARG:O	32:D6:20:ASN:C	2.55	0.49
35:D9:29:ASN:H	35:D9:29:ASN:ND2	2.10	0.49
36:DA:860:U:O2	36:DA:860:U:O4'	2.29	0.49
36:DA:893:C:H2'	36:DA:894:C:C6	2.47	0.49
36:DA:1278:A:O3'	49:DR:34:ILE:HG23	2.11	0.49
36:DA:1577:C:H2'	36:DA:1578:U:O4'	2.12	0.49
36:DA:1614:A:N6	54:DW:93:ALA:HB2	2.22	0.49
36:DA:1666:G:C2'	36:DA:1667:G:H5'	2.42	0.49
36:DA:1815:A:H1'	36:DA:1817:G:C8	2.47	0.49
36:DA:2114:A:N3	36:DA:2167:U:O2'	2.41	0.49
36:DA:2787:C:C1'	40:DE:61:ARG:HD3	2.41	0.49
39:DD:263:ARG:O	39:DD:264:LYS:C	2.54	0.49
40:DE:37:ARG:HA	40:DE:42:ASP:OD2	2.11	0.49
40:DE:55:ASN:O	40:DE:57:LYS:N	2.39	0.49
42:DG:139:LEU:CA	42:DG:144:ILE:HD13	2.33	0.49
43:DH:86:GLU:CB	43:DH:132:ARG:HB3	2.43	0.49
50:DS:56:LEU:C	50:DS:58:LEU:H	2.20	0.49
51:DT:28:VAL:CG1	51:DT:46:GLU:HA	2.41	0.49
53:DV:49:THR:HB	53:DV:50:PRO:HD2	1.93	0.49
1:AA:860:A:H2'	1:AA:861:G:O4'	2.12	0.49
1:AA:1061:G:C2'	1:AA:1062:U:H5'	2.42	0.49
1:AA:1198:G:H2'	1:AA:1199:U:O4'	2.12	0.49
1:AA:1218:C:H2'	1:AA:1219:U:C5	2.47	0.49
1:AA:1294:G:C2'	1:AA:1295:G:H5'	2.42	0.49
2:AB:163:PHE:CD1	2:AB:185:ILE:HG13	2.47	0.49
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.21	0.49
9:AI:95:LYS:C	9:AI:98:PRO:HD2	2.38	0.49
10:AJ:47:PHE:CE2	14:AN:37:PHE:HE1	2.30	0.49
13:AM:10:PRO:HG3	13:AM:18:ALA:HB1	1.94	0.49
13:AM:78:ILE:HA	13:AM:81:LEU:HD23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.25	0.49
19:AS:6:LYS:HG2	19:AS:7:LYS:CE	2.42	0.49
21:AU:3:LYS:HB3	21:AU:14:TRP:CD1	2.47	0.49
23:AW:65:C:H2'	23:AW:66:C:C6	2.48	0.49
25:AY:364:GLU:HG2	25:AY:366:VAL:HG13	1.93	0.49
25:AY:367:GLU:O	25:AY:368:GLU:HB3	2.12	0.49
25:AY:411:VAL:CG1	25:AY:412:ALA:H	2.26	0.49
25:AY:507:TYR:C	25:AY:507:TYR:CD1	2.91	0.49
25:AY:510:VAL:HG12	25:AY:511:LYS:H	1.77	0.49
25:AY:580:MET:CE	25:AY:584:ILE:HG12	2.43	0.49
26:B0:37:LEU:N	26:B0:59:LEU:O	2.41	0.49
28:B2:41:ILE:O	28:B2:41:ILE:HG13	2.12	0.49
29:B3:6:VAL:HB	29:B3:54:VAL:CG1	2.43	0.49
36:BA:406:G:H8	36:BA:406:G:OP2	1.94	0.49
36:BA:481:G:P	56:BY:47:LYS:HD3	2.53	0.49
36:BA:783:A:C8	36:BA:784:A:H4'	2.45	0.49
36:BA:1297:C:H2'	36:BA:1298:C:H6	1.76	0.49
36:BA:1358:G:O2'	36:BA:1359:A:H5''	2.13	0.49
36:BA:1360:A:H5'	36:BA:1361:G:OP2	2.12	0.49
36:BA:1453:U:H2'	36:BA:1455:G:N7	2.27	0.49
36:BA:1528:A:H2'	36:BA:1528:A:N3	2.28	0.49
36:BA:1577:C:H2'	36:BA:1578:U:O4'	2.13	0.49
36:BA:2147:G:H2'	36:BA:2148:G:C5'	2.42	0.49
36:BA:2304:G:O2'	42:BG:156:ASP:HB3	2.13	0.49
36:BA:2809:A:H2'	36:BA:2810:A:C8	2.47	0.49
38:BC:11:LEU:C	38:BC:13:GLU:N	2.70	0.49
40:BE:68:ALA:HB3	40:BE:69:LYS:HE2	1.93	0.49
40:BE:87:GLU:O	40:BE:88:GLY:C	2.55	0.49
40:BE:132:HIS:CD2	40:BE:135:HIS:NE2	2.81	0.49
41:BF:8:GLN:HG2	41:BF:126:VAL:HG12	1.93	0.49
42:BG:33:ARG:O	42:BG:34:LEU:C	2.54	0.49
45:BN:126:PRO:O	45:BN:127:ASP:CB	2.59	0.49
46:BO:13:ASN:ND2	46:BO:97:ARG:CG	2.75	0.49
48:BQ:14:ARG:HG2	48:BQ:14:ARG:HH11	1.78	0.49
49:BR:18:LEU:HD23	49:BR:19:ALA:N	2.27	0.49
50:BS:70:GLY:C	50:BS:72:ALA:N	2.70	0.49
50:BS:95:HIS:O	50:BS:96:GLY:C	2.54	0.49
51:BT:28:VAL:CG1	51:BT:46:GLU:HA	2.40	0.49
53:BV:47:VAL:O	53:BV:47:VAL:HG23	2.13	0.49
56:BY:47:LYS:HA	56:BY:60:PHE:CD1	2.48	0.49
57:BZ:81:ARG:CB	57:BZ:81:ARG:NH1	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:80:G:C6	1:CA:90:U:H5'	2.48	0.49
1:CA:332:G:O2'	1:CA:333:G:H5'	2.12	0.49
1:CA:674:G:H4'	18:CR:81:PHE:CD2	2.48	0.49
1:CA:867:G:O2'	1:CA:868:C:H5'	2.12	0.49
1:CA:1293:G:O2'	1:CA:1294:G:H5'	2.13	0.49
1:CA:1413:A:H2'	1:CA:1414:U:O4'	2.13	0.49
2:CB:17:PHE:CG	2:CB:18:GLY:N	2.79	0.49
2:CB:149:LEU:O	2:CB:150:SER:C	2.56	0.49
3:CC:35:GLU:OE2	3:CC:59:ARG:NH1	2.45	0.49
5:CE:34:VAL:CG1	5:CE:62:ALA:HB1	2.43	0.49
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.13	0.49
10:CJ:3:LYS:HZ3	10:CJ:77:PRO:HD2	1.76	0.49
12:CL:112:ASP:O	12:CL:114:LYS:HG3	2.13	0.49
13:CM:10:PRO:HG3	13:CM:18:ALA:HB1	1.94	0.49
13:CM:118:ALA:HB3	13:CM:120:LYS:HE3	1.95	0.49
15:CO:75:PRO:O	15:CO:79:ARG:HG3	2.13	0.49
16:CP:28:ARG:HG2	16:CP:28:ARG:NH1	2.27	0.49
18:CR:72:ARG:O	18:CR:76:LEU:HD22	2.13	0.49
25:CY:5:VAL:CG1	25:CY:6:GLU:H	2.14	0.49
25:CY:33:LEU:HD12	25:CY:33:LEU:N	2.27	0.49
25:CY:138:LYS:HD3	25:CY:141:LYS:HZ2	1.76	0.49
25:CY:139:MET:HA	25:CY:144:ALA:HB1	1.95	0.49
25:CY:178:ILE:HD11	25:CY:185:ALA:HB2	1.94	0.49
25:CY:491:VAL:HG21	25:CY:597:GLY:HA2	1.94	0.49
25:CY:573:HIS:CD2	25:CY:575:VAL:H	2.30	0.49
25:CY:627:ARG:NH2	25:CY:655:TYR:HA	2.28	0.49
28:D2:48:HIS:CG	28:D2:49:LYS:H	2.29	0.49
31:D5:40:LYS:HE2	31:D5:46:CYS:CB	2.41	0.49
34:D8:20:GLY:O	34:D8:57:ARG:HD3	2.12	0.49
34:D8:33:ASN:CA	34:D8:36:LYS:HD2	2.42	0.49
36:DA:6:A:HO2'	45:DN:130:HIS:HB2	1.76	0.49
36:DA:272(H):C:H5'	36:DA:272(H):C:C6	2.46	0.49
36:DA:312:G:H2'	36:DA:313:C:O4'	2.12	0.49
36:DA:333:G:H2'	36:DA:333:G:N3	2.26	0.49
36:DA:688:U:C4'	36:DA:1780:A:C2	2.96	0.49
36:DA:917:A:O2'	36:DA:918:A:H5'	2.13	0.49
36:DA:1010:A:H1'	36:DA:1153:C:H1'	1.94	0.49
36:DA:1396:U:O2	36:DA:1396:U:H2'	2.13	0.49
36:DA:1638:C:O2'	36:DA:1639:U:H5'	2.11	0.49
36:DA:1856:G:H1	36:DA:1886:C:H42	1.60	0.49
36:DA:2205:C:O2	36:DA:2205:C:H2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2262:U:O2'	36:DA:2263:C:H5''	2.12	0.49
36:DA:2488:A:H2'	36:DA:2489:G:C8	2.48	0.49
36:DA:2747:G:O2'	43:DH:67:LEU:HD12	2.12	0.49
38:DC:65:LEU:HD11	38:DC:162:ILE:HD13	1.94	0.49
38:DC:74:ARG:HH11	38:DC:74:ARG:HG2	1.77	0.49
39:DD:73:VAL:HG13	39:DD:120:GLY:HA2	1.94	0.49
39:DD:112:GLN:O	39:DD:115:GLN:HB2	2.12	0.49
40:DE:55:ASN:HD21	40:DE:75:VAL:HG22	1.78	0.49
41:DF:4:VAL:HA	41:DF:19:GLU:HB3	1.94	0.49
42:DG:60:LEU:O	42:DG:63:ILE:CG1	2.56	0.49
43:DH:20:ALA:HB1	43:DH:21:PRO:HD2	1.94	0.49
44:DJ:9:UNK:O	44:DJ:10:UNK:C	2.60	0.49
44:DJ:118:UNK:O	44:DJ:119:UNK:CB	2.61	0.49
45:DN:132:ALA:O	45:DN:133:GLN:CB	2.59	0.49
48:DQ:58:PHE:HD1	48:DQ:58:PHE:O	1.93	0.49
49:DR:2:ARG:HD2	49:DR:5:LYS:HE2	1.93	0.49
51:DT:70:VAL:HG12	51:DT:71:GLY:O	2.12	0.49
54:DW:50:VAL:HG22	54:DW:50:VAL:O	2.12	0.49
1:AA:247:G:C6	1:AA:278:G:C2	3.01	0.49
1:AA:990:C:H2'	1:AA:991:U:C6	2.47	0.49
1:AA:1259:C:C4	1:AA:1260:C:O2	2.65	0.49
1:AA:1270:C:H2'	1:AA:1271:G:H8	1.78	0.49
10:AJ:63:PHE:HB3	14:AN:58:LYS:CA	2.39	0.49
12:AL:41:ARG:CG	12:AL:42:THR:N	2.71	0.49
18:AR:46:GLU:C	18:AR:48:GLY:N	2.68	0.49
20:AT:93:GLU:C	20:AT:95:ALA:N	2.66	0.49
23:AW:44:A:H2'	23:AW:45:G:C8	2.47	0.49
24:AX:13:A:H2'	24:AX:14:U:O4'	2.12	0.49
25:AY:17:ILE:O	25:AY:85:PRO:HG2	2.12	0.49
25:AY:111:SER:O	25:AY:112:GLN:C	2.54	0.49
25:AY:136:ALA:HB3	25:AY:260:LEU:HB3	1.94	0.49
25:AY:217:VAL:HG22	25:AY:242:LEU:HD21	1.93	0.49
25:AY:339:SER:O	25:AY:351:ARG:NH1	2.45	0.49
25:AY:402:ILE:HD12	25:AY:402:ILE:H	1.78	0.49
28:B2:16:LEU:O	28:B2:17:SER:OG	2.26	0.49
29:B3:31:LEU:CD1	29:B3:32:GLN:HG2	2.26	0.49
30:B4:1:MET:CE	42:BG:66:GLN:OE1	2.55	0.49
36:BA:445:C:O2'	36:BA:446:G:H5'	2.12	0.49
36:BA:712:G:O2'	36:BA:713:G:H5'	2.12	0.49
36:BA:1216:G:N2	36:BA:1234:U:H1'	2.27	0.49
36:BA:1310:G:H2'	36:BA:1311:G:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1719:G:O2'	36:BA:1720:U:H5'	2.13	0.49
36:BA:1772:G:H5'	36:BA:1773:A:OP2	2.13	0.49
36:BA:2291:U:O2'	36:BA:2292:C:H5'	2.13	0.49
37:BB:4:C:H2'	37:BB:5:C:C6	2.47	0.49
39:BD:66:ASP:HB2	39:BD:103:ARG:HD2	1.95	0.49
39:BD:142:VAL:HG23	39:BD:192:THR:C	2.38	0.49
39:BD:266:SER:O	39:BD:267:SER:O	2.31	0.49
42:BG:47:LYS:HG2	42:BG:81:LYS:HB3	1.95	0.49
43:BH:41:MET:SD	43:BH:53:GLU:N	2.86	0.49
43:BH:124:GLU:HB2	43:BH:132:ARG:CG	2.42	0.49
45:BN:35:ARG:O	45:BN:36:GLY:C	2.56	0.49
47:BP:56:SER:O	47:BP:57:THR:C	2.56	0.49
49:BR:96:ARG:O	49:BR:114:VAL:HA	2.13	0.49
54:BW:58:ALA:O	54:BW:63:ASP:N	2.45	0.49
57:BZ:121:HIS:HB3	57:BZ:171:ILE:HA	1.95	0.49
57:BZ:152:ALA:HB3	57:BZ:154:ASP:OD1	2.13	0.49
1:CA:255:G:O3'	17:CQ:17:LYS:HD2	2.12	0.49
1:CA:342:C:O2'	1:CA:343:U:H5'	2.12	0.49
1:CA:358:U:H2'	1:CA:359:U:H6	1.77	0.49
1:CA:865:A:H2'	1:CA:866:C:C6	2.48	0.49
1:CA:902:G:O2'	1:CA:903:G:H5'	2.13	0.49
1:CA:1002:G:C8	1:CA:1003:G:N7	2.81	0.49
1:CA:1220:G:H2'	1:CA:1221:G:C8	2.42	0.49
1:CA:1505:G:H5'	1:CA:1506:U:OP1	2.12	0.49
2:CB:223:ILE:HG23	2:CB:226:ARG:CZ	2.43	0.49
4:CD:163:GLU:C	4:CD:165:MET:N	2.66	0.49
8:CH:109:ILE:HG13	8:CH:120:THR:HB	1.95	0.49
9:CI:9:ARG:CB	9:CI:104:ARG:HH12	2.26	0.49
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.38	0.49
15:CO:71:GLN:HG2	15:CO:71:GLN:O	2.11	0.49
17:CQ:4:LYS:CG	17:CQ:6:LEU:HD21	2.42	0.49
19:CS:72:GLY:C	19:CS:74:PHE:H	2.21	0.49
23:CW:34:C:O2'	23:CW:35:A:O5'	2.30	0.49
25:CY:122:TRP:C	25:CY:122:TRP:CD1	2.90	0.49
25:CY:147:TRP:HB2	25:CY:151:ARG:NH2	2.28	0.49
25:CY:250:THR:HG21	25:CY:279:TYR:O	2.13	0.49
25:CY:509:HIS:CE1	25:CY:570:GLY:HA2	2.46	0.49
31:D5:3:LYS:HE2	36:DA:2613:U:H2'	1.94	0.49
33:D7:8:ASN:HD22	33:D7:8:ASN:C	2.17	0.49
36:DA:336:C:O3'	56:DY:7:VAL:HG22	2.11	0.49
36:DA:366:C:H5'	36:DA:370:G:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:534:U:O2'	52:DU:49:HIS:CD2	2.66	0.49
36:DA:1006:C:O2'	45:DN:106:MET:HB3	2.13	0.49
36:DA:1091:G:H2'	36:DA:1092:C:C6	2.47	0.49
36:DA:1212:G:O2'	36:DA:1236:G:N2	2.46	0.49
36:DA:1638:C:H5''	36:DA:2710:C:O2'	2.11	0.49
36:DA:2308:G:O6	36:DA:2310:A:H2'	2.12	0.49
36:DA:2741:A:H2'	36:DA:2742:C:O4'	2.12	0.49
36:DA:2746:U:O2'	36:DA:2747:G:H5'	2.12	0.49
36:DA:2860:A:C2'	36:DA:2861:G:H5'	2.43	0.49
36:DA:2888:C:H2'	36:DA:2889:C:C6	2.48	0.49
40:DE:16:ARG:NH1	40:DE:171:GLU:OE2	2.45	0.49
40:DE:49:LEU:O	40:DE:78:LEU:CB	2.61	0.49
40:DE:77:ILE:HG22	40:DE:78:LEU:N	2.26	0.49
42:DG:41:GLN:C	42:DG:43:LEU:H	2.20	0.49
43:DH:54:ARG:O	43:DH:54:ARG:HD2	2.13	0.49
45:DN:87:LEU:O	45:DN:88:GLU:C	2.54	0.49
46:DO:13:ASN:ND2	46:DO:97:ARG:CG	2.75	0.49
47:DP:95:VAL:HA	47:DP:99:LEU:CD2	2.41	0.49
48:DQ:27:VAL:HG23	48:DQ:137:TYR:CD2	2.46	0.49
50:DS:106:ARG:O	50:DS:107:GLU:CB	2.60	0.49
51:DT:83:ILE:HG13	51:DT:84:GLN:HG2	1.93	0.49
53:DV:37:VAL:HG23	53:DV:37:VAL:O	2.13	0.49
54:DW:28:SER:C	54:DW:30:GLU:N	2.69	0.49
56:DY:7:VAL:HB	56:DY:8:LYS:CE	2.43	0.49
56:DY:42:VAL:HB	56:DY:65:ALA:HB3	1.95	0.49
1:AA:93:G:O2'	1:AA:96:U:H5'	2.13	0.49
1:AA:530:G:H1	24:AX:21:A:H1'	1.78	0.49
1:AA:559:A:H4'	1:AA:560:U:C5'	2.42	0.49
1:AA:1076:C:H5'	1:AA:1077:G:OP2	2.12	0.49
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.12	0.49
2:AB:8:LYS:O	2:AB:9:GLU:C	2.55	0.49
2:AB:33:TYR:HB2	2:AB:43:ASP:CB	2.42	0.49
2:AB:82:ARG:HG2	2:AB:83:MET:HE2	1.94	0.49
2:AB:149:LEU:O	2:AB:150:SER:C	2.56	0.49
3:AC:35:GLU:OE2	3:AC:59:ARG:NH1	2.46	0.49
4:AD:129:ASN:HD21	4:AD:145:GLU:H	1.57	0.49
9:AI:10:ARG:O	9:AI:11:LYS:HB3	2.13	0.49
9:AI:47:LEU:HD12	9:AI:47:LEU:H	1.70	0.49
10:AJ:6:ILE:HA	10:AJ:97:GLU:O	2.13	0.49
12:AL:91:LYS:O	12:AL:91:LYS:HG3	2.13	0.49
13:AM:11:ARG:HG2	13:AM:12:ASN:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:30:G:C2'	23:AW:31:G:H5''	2.42	0.49
23:AW:44:A:C6	23:AW:45:G:C2	3.00	0.49
25:AY:13:ARG:O	25:AY:79:ILE:HA	2.12	0.49
25:AY:119:GLU:O	25:AY:120:THR:OG1	2.31	0.49
25:AY:177:ILE:C	25:AY:178:ILE:HD12	2.38	0.49
25:AY:181:LEU:HD21	25:AY:243:VAL:HG22	1.95	0.49
30:B4:5:ILE:C	30:B4:6:HIS:HD2	2.21	0.49
31:B5:44:THR:HG22	31:B5:45:VAL:N	2.28	0.49
34:B8:61:LEU:C	34:B8:63:PRO:CD	2.85	0.49
36:BA:585:G:H2'	36:BA:1251:C:N4	2.23	0.49
36:BA:594:U:H2'	36:BA:595:C:H6	1.78	0.49
36:BA:724:U:O2'	36:BA:725:G:H5'	2.13	0.49
36:BA:1005:C:N3	36:BA:1143:A:C2	2.81	0.49
36:BA:1165:U:H2'	36:BA:1166:C:C6	2.47	0.49
36:BA:1166:C:H2'	36:BA:1167:U:C6	2.47	0.49
36:BA:1531:C:H2'	36:BA:1532:C:C6	2.48	0.49
36:BA:1719:G:H2'	36:BA:1720:U:H5'	1.94	0.49
36:BA:1960:A:H8	36:BA:1960:A:C5'	2.26	0.49
36:BA:2174:C:O2'	36:BA:2175:C:H5'	2.11	0.49
36:BA:2189:U:C3'	36:BA:2190:G:H5''	2.41	0.49
36:BA:2707:G:H2'	36:BA:2708:G:H8	1.76	0.49
36:BA:2850:A:C2	49:BR:61:HIS:CD2	3.01	0.49
37:BB:15:A:C3'	37:BB:16:G:H5'	2.42	0.49
41:BF:132:VAL:HG22	41:BF:133:ASN:HD22	1.78	0.49
43:BH:86:GLU:CB	43:BH:132:ARG:HB3	2.43	0.49
48:BQ:130:LYS:NZ	57:BZ:80:ARG:NH1	2.61	0.49
50:BS:85:VAL:HG23	50:BS:86:ALA:N	2.27	0.49
50:BS:93:LYS:O	50:BS:94:TYR:C	2.55	0.49
51:BT:33:LYS:NZ	51:BT:74:ARG:NH2	2.61	0.49
54:BW:28:SER:C	54:BW:30:GLU:H	2.19	0.49
56:BY:13:VAL:O	56:BY:24:VAL:HA	2.13	0.49
57:BZ:51:ALA:HB1	57:BZ:57:ILE:HD11	1.95	0.49
1:CA:1198:G:H2'	1:CA:1199:U:O4'	2.11	0.49
1:CA:1275:A:O2'	1:CA:1276:G:H5'	2.13	0.49
1:CA:1500:A:OP1	1:CA:1508:G:OP1	2.30	0.49
1:CA:1507:A:H2'	1:CA:1508:G:C8	2.47	0.49
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.94	0.49
4:CD:127:THR:HG22	4:CD:147:ALA:O	2.12	0.49
4:CD:152:SER:O	4:CD:154:ASN:N	2.46	0.49
5:CE:36:ASP:OD2	5:CE:40:ARG:HB2	2.12	0.49
5:CE:150:ARG:HB2	5:CE:150:ARG:NH1	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:80:ARG:NH1	6:CF:88:VAL:O	2.45	0.49
8:CH:65:TYR:HA	8:CH:79:VAL:HG23	1.95	0.49
11:CK:111:ASP:HA	18:CR:84:LYS:CD	2.35	0.49
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.12	0.49
14:CN:36:PHE:C	14:CN:36:PHE:CD1	2.90	0.49
15:CO:74:ASP:C	15:CO:76:GLU:N	2.71	0.49
25:CY:18:ALA:O	25:CY:106:VAL:HA	2.12	0.49
25:CY:168:ILE:HD11	25:CY:178:ILE:CD1	2.41	0.49
25:CY:343:ASN:O	25:CY:347:GLY:HA2	2.13	0.49
25:CY:409:ILE:HG22	25:CY:459:LEU:CD2	2.31	0.49
25:CY:416:LYS:HB3	25:CY:420:ASP:OD2	2.12	0.49
31:D5:35:GLU:O	31:D5:36:CYS:CB	2.61	0.49
33:D7:24:THR:HG23	33:D7:27:GLY:HA3	1.93	0.49
34:D8:50:LEU:CD1	34:D8:51:ALA:H	2.22	0.49
36:DA:142:A:N6	36:DA:1596:A:H5'	2.28	0.49
36:DA:773:U:H5'	39:DD:47:GLY:HA2	1.94	0.49
36:DA:974:G:P	53:DV:76:LYS:HZ2	2.35	0.49
36:DA:1164:G:H1	36:DA:1185:C:H42	1.60	0.49
36:DA:1316:U:H2'	36:DA:1317:A:C8	2.47	0.49
36:DA:1655:A:H4'	40:DE:115:GLY:H	1.78	0.49
36:DA:1943:U:O2'	36:DA:1944:U:O5'	2.26	0.49
36:DA:2750:A:H2'	36:DA:2752:C:N4	2.28	0.49
37:DB:45:A:H1'	42:DG:95:ARG:HH12	1.75	0.49
37:DB:86:G:C6	37:DB:92:C:N3	2.80	0.49
38:DC:11:LEU:C	38:DC:13:GLU:N	2.70	0.49
39:DD:134:ARG:HG3	39:DD:135:PHE:CD1	2.48	0.49
40:DE:145:LYS:O	40:DE:148:GLY:N	2.45	0.49
42:DG:100:TRP:O	42:DG:101:ILE:C	2.54	0.49
42:DG:147:ASP:C	42:DG:149:VAL:N	2.71	0.49
45:DN:24:GLY:O	45:DN:28:THR:HB	2.13	0.49
45:DN:67:LEU:CD2	45:DN:87:LEU:HB3	2.42	0.49
50:DS:70:GLY:C	50:DS:72:ALA:N	2.70	0.49
52:DU:101:ARG:NH1	53:DV:13:ARG:HE	2.10	0.49
53:DV:17:GLY:C	53:DV:18:LEU:HD12	2.37	0.49
56:DY:7:VAL:HG11	56:DY:8:LYS:HZ1	1.76	0.49
56:DY:102:CYS:SG	56:DY:103:GLY:N	2.86	0.49
57:DZ:27:VAL:HG22	57:DZ:28:MET:N	2.27	0.49
1:AA:528:C:H41	12:AL:49:ASN:ND2	2.09	0.49
1:AA:1004:A:C6	1:AA:1034:G:H2'	2.47	0.49
2:AB:45:GLN:O	2:AB:45:GLN:HG2	2.13	0.49
2:AB:165:VAL:CG2	2:AB:166:ASP:H	2.05	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:207:ALA:HB3	2:AB:210:SER:HB2	1.94	0.49
2:AB:207:ALA:HB3	2:AB:210:SER:HB3	1.95	0.49
4:AD:19:LEU:O	4:AD:26:CYS:SG	2.70	0.49
14:AN:47:LEU:O	14:AN:48:ALA:C	2.55	0.49
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.42	0.49
20:AT:42:GLN:HE21	20:AT:42:GLN:CA	2.19	0.49
25:AY:139:MET:O	25:AY:144:ALA:CB	2.61	0.49
25:AY:147:TRP:O	25:AY:151:ARG:HG3	2.12	0.49
25:AY:174:PHE:HD2	25:AY:267:LYS:HD2	1.77	0.49
25:AY:210:ARG:O	25:AY:213:HIS:N	2.46	0.49
25:AY:322:VAL:HG21	25:AY:325:LEU:HD21	1.94	0.49
25:AY:526:VAL:CG1	25:AY:566:THR:HG23	2.43	0.49
25:AY:632:LEU:HG	25:AY:645:ALA:HA	1.95	0.49
27:B1:80:LEU:CD2	27:B1:81:LYS:N	2.73	0.49
36:BA:82:G:H5''	36:BA:296:C:C5'	2.43	0.49
36:BA:295:G:H2'	36:BA:296:C:C6	2.47	0.49
36:BA:341:G:H2'	36:BA:342:G:H8	1.77	0.49
36:BA:425:G:H2'	36:BA:426:C:H6	1.78	0.49
36:BA:481:G:OP2	56:BY:47:LYS:HD3	2.13	0.49
36:BA:1010:A:H1'	36:BA:1153:C:H1'	1.95	0.49
36:BA:1710:C:H2'	36:BA:1711:C:C6	2.48	0.49
36:BA:2134:A:C8	36:BA:2158:A:C2	3.01	0.49
36:BA:2262:U:O2'	36:BA:2263:C:H5''	2.12	0.49
38:BC:185:LYS:HE3	38:BC:185:LYS:HA	1.95	0.49
40:BE:77:ILE:HG22	40:BE:78:LEU:N	2.28	0.49
41:BF:18:ARG:CZ	41:BF:199:TRP:CZ3	2.96	0.49
41:BF:28:ILE:O	41:BF:28:ILE:HG12	2.13	0.49
41:BF:89:VAL:C	41:BF:91:GLY:H	2.20	0.49
42:BG:172:LEU:HD23	42:BG:176:LEU:HG	1.94	0.49
48:BQ:59:ARG:O	48:BQ:60:ARG:HB2	2.13	0.49
57:BZ:30:ASN:C	57:BZ:32:HIS:H	2.21	0.49
1:CA:711:G:O2'	1:CA:712:A:H5'	2.12	0.49
1:CA:769:G:O2'	1:CA:770:C:H5'	2.12	0.49
1:CA:926:G:N2	24:CX:16:U:OP2	2.39	0.49
1:CA:1225:A:N3	1:CA:1225:A:C2'	2.73	0.49
5:CE:9:LYS:CB	5:CE:112:LEU:HD11	2.43	0.49
8:CH:38:ILE:O	8:CH:39:LEU:C	2.56	0.49
11:CK:126:ARG:HH11	11:CK:126:ARG:HG2	1.77	0.49
12:CL:86:ARG:NH2	12:CL:99:HIS:CG	2.81	0.49
12:CL:97:ARG:C	12:CL:98:TYR:CD1	2.90	0.49
13:CM:89:GLY:O	13:CM:90:LEU:C	2.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:7:ILE:HG13	14:CN:8:GLU:N	2.27	0.49
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.43	0.49
15:CO:53:HIS:O	15:CO:57:LEU:HD23	2.12	0.49
17:CQ:88:TYR:O	17:CQ:89:LEU:C	2.54	0.49
22:CV:9:A:N3	22:CV:45:U:C2	2.81	0.49
25:CY:96:ARG:HG3	25:CY:403:GLU:OE2	2.12	0.49
25:CY:159:ALA:O	25:CY:161:PRO:CD	2.60	0.49
25:CY:276:VAL:O	25:CY:280:LEU:HB2	2.12	0.49
25:CY:519:ARG:NH2	25:CY:678:GLU:HB2	2.28	0.49
25:CY:554:PRO:HG3	25:CY:594:VAL:HG11	1.94	0.49
27:D1:64:ALA:HA	27:D1:67:ILE:CD1	2.42	0.49
32:D6:38:LYS:HB3	36:DA:2344:U:C5'	2.43	0.49
36:DA:341:G:H2'	36:DA:342:G:H8	1.77	0.49
36:DA:393:C:O2'	36:DA:394:A:H5'	2.13	0.49
36:DA:1015:G:H2'	36:DA:1016:G:H8	1.78	0.49
36:DA:1336:A:H2'	36:DA:1337:G:C8	2.47	0.49
36:DA:1479:G:H5'	36:DA:1558:A:C2	2.46	0.49
36:DA:2150:U:H2'	36:DA:2151:G:H8	1.78	0.49
36:DA:2372:G:O2'	36:DA:2373:G:H5'	2.12	0.49
36:DA:2432:A:O2'	36:DA:2433:A:H5'	2.13	0.49
37:DB:87:G:H3'	37:DB:88:C:H5''	1.94	0.49
38:DC:101:ILE:HD12	38:DC:101:ILE:N	2.28	0.49
39:DD:69:ARG:O	39:DD:71:ASP:N	2.46	0.49
43:DH:18:GLU:HG3	43:DH:25:LYS:HB2	1.95	0.49
45:DN:34:LEU:O	45:DN:116:LEU:HD22	2.13	0.49
47:DP:115:LEU:HD23	47:DP:115:LEU:H	1.77	0.49
52:DU:47:TYR:O	52:DU:51:LYS:HG2	2.13	0.49
52:DU:83:LEU:CD1	52:DU:83:LEU:H	2.25	0.49
53:DV:88:ARG:O	53:DV:90:PRO:HD3	2.12	0.49
55:DX:35:THR:HG22	55:DX:36:LYS:N	2.28	0.49
57:DZ:13:GLU:O	57:DZ:14:LYS:C	2.56	0.49
1:AA:674:G:H4'	18:AR:81:PHE:CD2	2.48	0.49
1:AA:694:A:O2'	23:AW:38:A:O2'	2.30	0.49
1:AA:973:G:OP1	10:AJ:57:LYS:HD3	2.13	0.49
1:AA:1134:G:C2'	1:AA:1135:U:H5'	2.43	0.49
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.95	0.49
1:AA:1509:C:C2'	1:AA:1510:U:H5'	2.43	0.49
2:AB:131:PRO:HG2	2:AB:134:GLU:HG2	1.94	0.49
2:AB:194:PRO:O	2:AB:195:ASP:C	2.56	0.49
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.13	0.49
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:200:GLU:CD	4:AD:200:GLU:H	2.20	0.49
5:AE:61:TYR:O	5:AE:62:ALA:C	2.53	0.49
8:AH:137:VAL:HG12	8:AH:138:TRP:N	2.28	0.49
9:AI:50:LEU:HD23	9:AI:85:LEU:CD2	2.43	0.49
11:AK:30:VAL:HG23	11:AK:30:VAL:O	2.12	0.49
13:AM:70:LEU:O	13:AM:71:ARG:C	2.55	0.49
15:AO:28:GLN:O	15:AO:32:LEU:HG	2.13	0.49
21:AU:8:THR:O	21:AU:12:LYS:HB2	2.13	0.49
23:AW:5:G:H1	23:AW:68:C:N4	2.11	0.49
25:AY:289:ILE:HG21	25:AY:399:LEU:HD23	1.94	0.49
25:AY:303:PRO:HA	25:AY:331:TYR:O	2.13	0.49
25:AY:363:ARG:HH11	25:AY:363:ARG:HG3	1.76	0.49
25:AY:489:LYS:HG3	25:AY:597:GLY:HA2	1.93	0.49
25:AY:604:PRO:CB	25:AY:673:PHE:HE1	2.25	0.49
27:B1:51:VAL:HG22	27:B1:52:ARG:H	1.78	0.49
30:B4:22:ILE:CG2	30:B4:23:GLU:N	2.76	0.49
36:BA:136:G:H2'	36:BA:137:C:H6	1.78	0.49
36:BA:654(L):G:C2'	36:BA:654(M):C:H4'	2.38	0.49
36:BA:821:A:H2'	36:BA:946:G:H5''	1.94	0.49
36:BA:1091:G:H2'	36:BA:1092:C:C6	2.48	0.49
36:BA:1429:G:H2'	36:BA:1430:C:C6	2.48	0.49
36:BA:1479:G:H5'	36:BA:1558:A:C2	2.45	0.49
36:BA:1656:C:H2'	36:BA:1657:C:H6	1.78	0.49
36:BA:1666:G:C2'	36:BA:1667:G:H5'	2.42	0.49
36:BA:1788:C:H2'	36:BA:1789:A:O4'	2.12	0.49
36:BA:2117:A:N6	36:BA:2171:A:N6	2.60	0.49
36:BA:2137:C:N3	36:BA:2155:G:C2	2.81	0.49
36:BA:2617:C:O2'	36:BA:2618:G:H5'	2.13	0.49
36:BA:2746:U:O2'	36:BA:2747:G:H5'	2.12	0.49
37:BB:20:C:H2'	37:BB:21:G:H5''	1.95	0.49
37:BB:106:G:O2'	37:BB:107:G:H5'	2.13	0.49
38:BC:203:GLU:C	38:BC:205:ALA:H	2.20	0.49
39:BD:26:LYS:HE2	39:BD:26:LYS:N	2.27	0.49
40:BE:34:VAL:HG12	40:BE:48:GLN:O	2.13	0.49
40:BE:49:LEU:O	40:BE:78:LEU:CB	2.61	0.49
40:BE:70:ALA:O	40:BE:72:VAL:N	2.46	0.49
41:BF:24:LEU:C	41:BF:115:ALA:HB1	2.38	0.49
42:BG:40:ASN:ND2	42:BG:41:GLN:N	2.61	0.49
42:BG:41:GLN:HE22	42:BG:153:ARG:HD2	1.78	0.49
43:BH:54:ARG:O	43:BH:54:ARG:HD2	2.13	0.49
45:BN:67:LEU:CD2	45:BN:87:LEU:HB3	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:70:GLY:C	50:BS:72:ALA:H	2.21	0.49
51:BT:126:ALA:C	51:BT:128:GLU:H	2.19	0.49
51:BT:137:LYS:HG2	51:BT:138:ALA:N	2.28	0.49
54:BW:88:ARG:CB	54:BW:92:ARG:HB3	2.38	0.49
56:BY:32:PRO:O	56:BY:35:TYR:N	2.46	0.49
56:BY:44:ILE:O	56:BY:62:GLU:HB3	2.13	0.49
56:BY:87:LYS:O	56:BY:88:LYS:HB2	2.12	0.49
56:BY:94:LYS:HG3	56:BY:102:CYS:SG	2.53	0.49
56:BY:95:LYS:CD	56:BY:101:LYS:H	2.26	0.49
57:BZ:67:LEU:HD23	57:BZ:90:VAL:HG11	1.95	0.49
1:CA:149:A:N3	1:CA:149:A:H2'	2.28	0.49
1:CA:192:U:H2'	1:CA:193:C:H6	1.76	0.49
1:CA:791:G:N2	1:CA:1497:G:O3'	2.42	0.49
1:CA:830:G:O2'	1:CA:831:U:H5'	2.12	0.49
1:CA:1132:C:N4	1:CA:1133:G:C6	2.80	0.49
4:CD:36:ARG:CB	4:CD:36:ARG:NH1	2.68	0.49
4:CD:59:ARG:NH2	4:CD:62:GLN:HG3	2.28	0.49
7:CG:29:LYS:CB	7:CG:105:VAL:HG21	2.42	0.49
7:CG:103:TRP:CE2	7:CG:137:LYS:HD3	2.47	0.49
8:CH:120:THR:HG23	8:CH:123:GLU:OE1	2.13	0.49
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.28	0.49
16:CP:49:LEU:HD12	16:CP:50:LYS:H	1.77	0.49
18:CR:30:ASP:O	18:CR:32:ARG:N	2.38	0.49
19:CS:51:VAL:HG22	19:CS:71:LEU:HD13	1.93	0.49
23:CW:50:U:H3	23:CW:64:G:H1	1.61	0.49
25:CY:174:PHE:HD2	25:CY:267:LYS:HD3	1.78	0.49
25:CY:454:MET:H	25:CY:458:HIS:CD2	2.31	0.49
27:D1:49:VAL:HG23	27:D1:62:VAL:HG12	1.95	0.49
32:D6:15:GLU:C	32:D6:16:CYS:O	2.56	0.49
34:D8:23:VAL:HG13	34:D8:47:LYS:O	2.12	0.49
36:DA:271(Z):C:H2'	36:DA:272:G:C8	2.48	0.49
36:DA:481:G:H1'	36:DA:506:G:N2	2.27	0.49
36:DA:606:U:H5'	36:DA:607:U:OP2	2.13	0.49
36:DA:1577:C:H2'	36:DA:1578:U:C6	2.48	0.49
36:DA:2134:A:C2	36:DA:2159:G:O2'	2.66	0.49
36:DA:2206:G:N2	36:DA:2207:G:H5'	2.28	0.49
36:DA:2756:U:C4'	36:DA:2757:A:OP1	2.57	0.49
36:DA:2840:C:H5''	49:DR:53:HIS:CD2	2.48	0.49
37:DB:48:A:H2'	37:DB:49:C:C6	2.47	0.49
39:DD:35:LYS:HA	39:DD:64:ILE:H	1.76	0.49
39:DD:66:ASP:HB2	39:DD:103:ARG:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:101:ARG:NH1	40:DE:169:ASN:ND2	2.60	0.49
42:DG:99:MET:O	42:DG:103:LEU:HD12	2.13	0.49
42:DG:107:LEU:HD21	42:DG:178:PHE:CD1	2.48	0.49
45:DN:46:VAL:HG11	45:DN:48:MET:SD	2.53	0.49
45:DN:57:ALA:O	45:DN:58:ASP:O	2.31	0.49
45:DN:82:LEU:HD23	45:DN:82:LEU:C	2.38	0.49
45:DN:120:LEU:C	45:DN:120:LEU:HD13	2.38	0.49
45:DN:131:GLN:HE22	45:DN:133:GLN:CA	2.26	0.49
49:DR:100:LEU:N	49:DR:100:LEU:HD13	2.27	0.49
51:DT:106:SER:O	51:DT:107:ASP:HB3	2.12	0.49
54:DW:25:ARG:NH2	54:DW:74:ALA:O	2.45	0.49
54:DW:28:SER:C	54:DW:30:GLU:H	2.20	0.49
56:DY:46:LYS:HB2	56:DY:62:GLU:HG3	1.94	0.49
57:DZ:171:ILE:HG13	57:DZ:172:ALA:N	2.28	0.49
1:AA:826:C:H2'	1:AA:827:U:C6	2.47	0.48
1:AA:1037:C:H2'	1:AA:1038:C:C4	2.47	0.48
1:AA:1080:A:H5''	5:AE:16:THR:HG21	1.95	0.48
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.66	0.48
1:AA:1316:G:O2'	14:AN:18:VAL:HG11	2.13	0.48
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.78	0.48
1:AA:1500:A:H5''	1:AA:1508:G:H5''	1.95	0.48
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.43	0.48
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.28	0.48
6:AF:38:GLU:O	6:AF:39:LYS:C	2.55	0.48
7:AG:89:MET:HE1	7:AG:156:TRP:OXT	2.13	0.48
12:AL:53:ARG:HG2	12:AL:53:ARG:HH11	1.77	0.48
13:AM:63:THR:HG22	13:AM:64:TRP:H	1.78	0.48
14:AN:53:LEU:HB3	14:AN:56:VAL:CG2	2.43	0.48
25:AY:400:GLU:O	25:AY:401:SER:HB2	2.13	0.48
28:B2:10:LEU:HD22	28:B2:14:ARG:HH21	1.77	0.48
32:B6:16:CYS:SG	32:B6:48:VAL:CG2	3.01	0.48
32:B6:18:ARG:HG3	32:B6:19:ARG:H	1.78	0.48
32:B6:48:VAL:O	32:B6:49:HIS:HB2	2.11	0.48
35:B9:31:LYS:HD3	36:BA:2478:A:OP1	2.13	0.48
36:BA:287:C:H2'	36:BA:288:C:C6	2.48	0.48
36:BA:1335:U:H2'	36:BA:1336:A:C8	2.48	0.48
36:BA:1495:A:H2'	36:BA:1496:A:N3	2.27	0.48
36:BA:1605:C:C5	36:BA:1606:G:C5	3.01	0.48
36:BA:1838:C:O2'	36:BA:1839:G:H5''	2.13	0.48
36:BA:1917:U:O2'	36:BA:1918:A:H5'	2.13	0.48
36:BA:2192:G:C3'	36:BA:2193:G:H5''	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2352:A:C2'	36:BA:2353:G:H5'	2.43	0.48
37:BB:44:G:H1'	37:BB:47:C:H41	1.78	0.48
39:BD:27:THR:HG23	39:BD:27:THR:O	2.13	0.48
42:BG:103:LEU:HA	42:BG:106:LEU:HB3	1.95	0.48
42:BG:180:PHE:O	42:BG:182:LYS:N	2.46	0.48
45:BN:57:ALA:O	45:BN:58:ASP:O	2.30	0.48
45:BN:108:PRO:HG2	45:BN:113:GLY:HA3	1.94	0.48
47:BP:16:ARG:NH1	47:BP:16:ARG:O	2.43	0.48
47:BP:59:LEU:CA	47:BP:61:ARG:NE	2.70	0.48
50:BS:101:LEU:HD12	50:BS:102:ALA:O	2.11	0.48
51:BT:56:GLY:O	51:BT:59:THR:HG23	2.13	0.48
1:CA:93:G:O2'	1:CA:96:U:H5'	2.12	0.48
1:CA:182:U:H5'	1:CA:183:G:P	2.51	0.48
1:CA:183:G:O2'	1:CA:224:C:H4'	2.13	0.48
1:CA:864:A:H2'	1:CA:865:A:C8	2.48	0.48
1:CA:1134:G:C2'	1:CA:1135:U:H5'	2.43	0.48
3:CC:15:THR:HG22	3:CC:16:ARG:N	2.28	0.48
3:CC:35:GLU:O	3:CC:38:ARG:HG2	2.13	0.48
4:CD:129:ASN:HD21	4:CD:145:GLU:H	1.60	0.48
7:CG:80:VAL:HG23	7:CG:83:ALA:HB3	1.94	0.48
11:CK:26:ASN:O	11:CK:27:ASN:HB2	2.12	0.48
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.13	0.48
16:CP:8:ARG:HH11	16:CP:8:ARG:HG2	1.77	0.48
17:CQ:24:GLU:O	17:CQ:25:ARG:HB3	2.13	0.48
18:CR:85:LEU:HD12	18:CR:86:VAL:H	1.78	0.48
25:CY:427:ALA:HB1	25:CY:466:LEU:CG	2.34	0.48
28:D2:48:HIS:CG	28:D2:49:LYS:N	2.81	0.48
29:D3:32:GLN:HG3	36:DA:1158:C:O2'	2.13	0.48
32:D6:48:VAL:O	32:D6:49:HIS:HB2	2.12	0.48
36:DA:184:C:H2'	36:DA:185:U:C6	2.48	0.48
36:DA:567:A:N1	36:DA:571:A:H8	2.11	0.48
36:DA:1306:C:H2'	36:DA:1307:A:C8	2.43	0.48
36:DA:1487:G:H2'	36:DA:1487:G:N3	2.27	0.48
36:DA:1614:A:H62	54:DW:93:ALA:CB	2.22	0.48
36:DA:1681:G:O2'	36:DA:1762:A:N3	2.33	0.48
36:DA:2137:C:N3	36:DA:2155:G:C2	2.80	0.48
36:DA:2704:C:O2'	36:DA:2705:A:H5'	2.13	0.48
36:DA:2860:A:H2'	36:DA:2861:G:H5'	1.94	0.48
38:DC:178:LYS:HG2	38:DC:181:PHE:HE1	1.78	0.48
41:DF:44:ARG:O	41:DF:44:ARG:HG3	2.13	0.48
42:DG:2:PRO:O	42:DG:3:LEU:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:35:VAL:HG11	43:DH:72:ILE:HD13	1.95	0.48
43:DH:169:VAL:HG13	43:DH:170:ARG:N	2.27	0.48
49:DR:45:ARG:O	49:DR:46:GLY:C	2.56	0.48
1:AA:106:C:C2'	1:AA:107:G:H5'	2.43	0.48
1:AA:312:C:H2'	1:AA:313:A:C8	2.48	0.48
1:AA:582:U:OP1	15:AO:68:ARG:NH2	2.46	0.48
2:AB:17:PHE:CD1	2:AB:18:GLY:N	2.81	0.48
3:AC:119:ARG:O	3:AC:123:GLN:HG3	2.13	0.48
4:AD:59:ARG:NH2	4:AD:62:GLN:HG3	2.28	0.48
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.28	0.48
6:AF:80:ARG:NH1	6:AF:88:VAL:O	2.46	0.48
8:AH:54:ASP:O	8:AH:56:LYS:HG3	2.13	0.48
12:AL:22:SER:C	12:AL:24:VAL:H	2.21	0.48
20:AT:26:ASN:HD22	20:AT:27:LYS:N	2.12	0.48
20:AT:56:MET:HG3	20:AT:84:LEU:HD12	1.95	0.48
25:AY:15:ILE:CD1	25:AY:81:ILE:HG23	2.43	0.48
25:AY:424:LEU:HA	25:AY:427:ALA:CB	2.42	0.48
25:AY:580:MET:SD	36:BA:1913:A:C6	3.06	0.48
28:B2:69:ARG:O	28:B2:70:GLN:HB2	2.13	0.48
31:B5:48:GLU:O	31:B5:49:CYS:CB	2.61	0.48
32:B6:20:ASN:ND2	32:B6:44:ARG:HH22	2.11	0.48
33:B7:17:GLY:O	33:B7:20:ALA:HB3	2.13	0.48
35:B9:27:CYS:SG	35:B9:29:ASN:ND2	2.86	0.48
36:BA:61:G:H1	36:BA:94:C:H42	1.61	0.48
36:BA:312:G:H2'	36:BA:313:C:O4'	2.12	0.48
36:BA:615:G:OP1	41:BF:182:ASN:HB3	2.12	0.48
36:BA:694:U:C2'	36:BA:695:G:O5'	2.61	0.48
36:BA:755:C:H2'	36:BA:756:C:C6	2.48	0.48
36:BA:1119:C:H2'	36:BA:1120:G:H8	1.78	0.48
36:BA:1186:G:O2'	36:BA:1187:G:H5'	2.13	0.48
36:BA:1257:C:O2'	41:BF:84:VAL:HG23	2.12	0.48
36:BA:1638:C:O2'	36:BA:1639:U:H5'	2.13	0.48
36:BA:1681:G:O2'	36:BA:1762:A:N3	2.35	0.48
36:BA:2626:C:O2'	36:BA:2627:G:H5'	2.13	0.48
38:BC:65:LEU:HD11	38:BC:162:ILE:HD13	1.96	0.48
41:BF:123:LEU:HD12	41:BF:124:LEU:H	1.78	0.48
41:BF:160:ASN:ND2	41:BF:160:ASN:C	2.70	0.48
44:BJ:74:UNK:O	44:BJ:76:UNK:N	2.47	0.48
45:BN:34:LEU:O	45:BN:116:LEU:HD22	2.13	0.48
46:BO:44:LYS:O	46:BO:45:GLU:HB3	2.13	0.48
47:BP:13:ASN:ND2	47:BP:13:ASN:H	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:2:ARG:HD2	49:BR:5:LYS:HE2	1.93	0.48
51:BT:89:VAL:HG12	51:BT:91:ARG:H	1.79	0.48
52:BU:50:ARG:C	52:BU:52:ARG:N	2.69	0.48
57:BZ:78:LYS:HD3	57:BZ:78:LYS:N	2.27	0.48
57:BZ:145:GLU:O	57:BZ:147:GLY:N	2.46	0.48
1:CA:174:C:O2'	1:CA:175:C:H5'	2.13	0.48
1:CA:398:C:O5'	1:CA:398:C:H6	1.95	0.48
1:CA:653:A:P	8:CH:56:LYS:HZ1	2.37	0.48
1:CA:793:U:C3'	1:CA:794:A:C5'	2.87	0.48
1:CA:1001(A):G:H8	1:CA:1002:G:C8	2.30	0.48
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.76	0.48
1:CA:1492:A:H2'	1:CA:1493:A:C8	2.48	0.48
2:CB:33:TYR:HB2	2:CB:43:ASP:CB	2.43	0.48
3:CC:111:LEU:HD21	3:CC:144:SER:HB2	1.95	0.48
5:CE:101:ILE:HD13	5:CE:118:ILE:O	2.12	0.48
7:CG:83:ALA:HB1	7:CG:85:TYR:CE1	2.47	0.48
7:CG:118:VAL:O	7:CG:121:ALA:HB3	2.13	0.48
9:CI:7:THR:O	9:CI:83:ARG:HD2	2.13	0.48
10:CJ:47:PHE:CE2	14:CN:37:PHE:CE1	3.01	0.48
10:CJ:61:GLU:OE2	14:CN:49:HIS:CE1	2.61	0.48
10:CJ:61:GLU:HG3	14:CN:58:LYS:NZ	2.28	0.48
15:CO:28:GLN:O	15:CO:32:LEU:HG	2.12	0.48
15:CO:76:GLU:C	15:CO:78:TYR:N	2.71	0.48
18:CR:37:VAL:C	18:CR:39:VAL:H	2.21	0.48
18:CR:44:LEU:O	18:CR:45:SER:O	2.30	0.48
25:CY:230:LYS:HB2	25:CY:230:LYS:HZ2	1.78	0.48
25:CY:507:TYR:CD2	25:CY:573:HIS:HB2	2.48	0.48
25:CY:637:ARG:HG3	25:CY:637:ARG:HH11	1.78	0.48
34:D8:48:PHE:O	34:D8:49:VAL:HG22	2.13	0.48
36:DA:365:C:H6	36:DA:365:C:C5'	2.17	0.48
36:DA:598:G:C5'	47:DP:15:ARG:HB2	2.42	0.48
36:DA:671:C:O2'	36:DA:672:C:H5'	2.13	0.48
36:DA:753:C:H2'	36:DA:754:C:C6	2.47	0.48
36:DA:1019:U:O2'	36:DA:1021:A:C2	2.62	0.48
36:DA:1022:G:O2'	36:DA:1023:U:OP2	2.27	0.48
36:DA:1336:A:H2'	36:DA:1337:G:H8	1.79	0.48
36:DA:1341:U:O4'	55:DX:57:LEU:HD12	2.14	0.48
36:DA:1358:G:O2'	36:DA:1359:A:H5''	2.12	0.48
36:DA:1360:A:H5'	36:DA:1361:G:OP2	2.13	0.48
36:DA:1682:G:H2'	36:DA:1683:C:H6	1.78	0.48
36:DA:1972:A:H2'	36:DA:1973:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2115:G:C3'	36:DA:2116:G:H5''	2.43	0.48
36:DA:2189:U:C3'	36:DA:2190:G:H5''	2.43	0.48
39:DD:35:LYS:CB	39:DD:63:ARG:HA	2.43	0.48
41:DF:4:VAL:HG22	41:DF:19:GLU:OE1	2.13	0.48
41:DF:89:VAL:C	41:DF:91:GLY:H	2.19	0.48
41:DF:135:LYS:HB3	41:DF:138:GLU:CG	2.42	0.48
42:DG:88:ILE:HG23	42:DG:89:GLY:N	2.28	0.48
45:DN:26:LEU:C	45:DN:26:LEU:CD1	2.86	0.48
46:DO:31:LYS:HB3	46:DO:32:TYR:CE1	2.48	0.48
48:DQ:52:VAL:O	48:DQ:53:ALA:C	2.56	0.48
48:DQ:56:ARG:HA	48:DQ:56:ARG:NE	2.27	0.48
50:DS:19:LYS:O	50:DS:20:ARG:NH2	2.46	0.48
54:DW:14:PRO:CG	54:DW:78:GLU:HB2	2.42	0.48
56:DY:87:LYS:O	56:DY:88:LYS:HB2	2.12	0.48
57:DZ:3:TYR:CE2	57:DZ:51:ALA:HB2	2.48	0.48
1:AA:149:A:H2'	1:AA:149:A:N3	2.28	0.48
1:AA:265:G:N2	1:AA:267:C:H5'	2.29	0.48
1:AA:1002:G:C8	1:AA:1003:G:N7	2.81	0.48
1:AA:1152:A:OP1	10:AJ:68:HIS:HD2	1.97	0.48
1:AA:1314:C:OP2	19:AS:6:LYS:HD3	2.13	0.48
2:AB:17:PHE:O	2:AB:18:GLY:C	2.55	0.48
3:AC:146:ALA:O	3:AC:148:GLY:N	2.46	0.48
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.13	0.48
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.43	0.48
16:AP:8:ARG:HH11	16:AP:8:ARG:HG2	1.79	0.48
19:AS:47:HIS:O	19:AS:62:ILE:HG21	2.14	0.48
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.95	0.48
20:AT:45:GLN:HB2	20:AT:91:LEU:CD1	2.41	0.48
24:AX:11:A:N3	24:AX:11:A:C3'	2.74	0.48
25:AY:566:THR:HG22	25:AY:566:THR:O	2.14	0.48
27:B1:86:SER:CB	27:B1:89:GLU:HB2	2.41	0.48
29:B3:44:ARG:O	29:B3:47:VAL:N	2.47	0.48
32:B6:15:GLU:CD	32:B6:44:ARG:CZ	2.86	0.48
36:BA:11:G:N2	36:BA:2628:C:OP1	2.46	0.48
36:BA:120:U:O2	36:BA:120:U:C2'	2.59	0.48
36:BA:234:C:H2'	36:BA:235:U:C6	2.49	0.48
36:BA:393:C:O2'	36:BA:394:A:H5'	2.12	0.48
36:BA:753:C:H2'	36:BA:754:C:H6	1.78	0.48
36:BA:1028:A:H2'	36:BA:1029:A:C8	2.49	0.48
36:BA:1080:C:H2'	36:BA:1081:U:O4'	2.13	0.48
36:BA:1116:C:H2'	36:BA:1117:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1921:G:O2'	36:BA:1922:G:H5'	2.14	0.48
36:BA:2056:G:N2	36:BA:2057:A:C4	2.82	0.48
36:BA:2645:G:C4'	36:BA:2732:G:O2'	2.56	0.48
37:BB:48:A:H2'	37:BB:49:C:H6	1.78	0.48
37:BB:87:G:C2'	37:BB:88:C:H5''	2.44	0.48
37:BB:115:G:H2'	37:BB:116:G:H8	1.78	0.48
42:BG:9:ARG:HD3	42:BG:13:GLU:OE2	2.12	0.48
43:BH:84:SER:OG	43:BH:85:LYS:N	2.45	0.48
49:BR:53:HIS:ND1	49:BR:53:HIS:C	2.72	0.48
50:BS:15:ARG:O	50:BS:18:ILE:HG13	2.12	0.48
51:BT:106:SER:C	51:BT:107:ASP:OD1	2.56	0.48
52:BU:47:TYR:O	52:BU:51:LYS:HG2	2.13	0.48
52:BU:82:GLY:C	52:BU:84:LYS:H	2.21	0.48
52:BU:82:GLY:O	52:BU:84:LYS:N	2.46	0.48
57:BZ:67:LEU:HD23	57:BZ:90:VAL:CG1	2.43	0.48
57:BZ:81:ARG:HB2	57:BZ:81:ARG:NH1	2.28	0.48
57:BZ:152:ALA:CA	57:BZ:167:PRO:HB2	2.43	0.48
1:CA:35:G:C6	1:CA:36:C:N4	2.82	0.48
1:CA:423:G:H2'	1:CA:424:G:H5'	1.95	0.48
1:CA:1029:C:O2'	1:CA:1032:G:N2	2.47	0.48
1:CA:1216:G:OP1	14:CN:2:ALA:HA	2.13	0.48
1:CA:1316:G:O2'	14:CN:18:VAL:HG11	2.14	0.48
1:CA:1318:A:O3'	19:CS:10:PHE:CD2	2.65	0.48
1:CA:1414:U:H2'	1:CA:1415:G:C8	2.48	0.48
6:CF:21:LEU:O	6:CF:24:GLU:HB3	2.13	0.48
7:CG:89:MET:HE1	7:CG:156:TRP:OXT	2.13	0.48
12:CL:41:ARG:NH1	12:CL:41:ARG:CB	2.69	0.48
13:CM:117:VAL:O	13:CM:118:ALA:C	2.56	0.48
17:CQ:18:THR:HG23	17:CQ:44:ALA:O	2.13	0.48
26:D0:7:LEU:CD1	48:DQ:85:LYS:HE2	2.43	0.48
27:D1:76:ARG:NH2	27:D1:95:LEU:HD22	2.27	0.48
28:D2:17:SER:O	28:D2:21:LEU:HG	2.13	0.48
28:D2:28:LYS:HB3	28:D2:57:ILE:CD1	2.43	0.48
29:D3:44:ARG:O	29:D3:46:ASN:N	2.46	0.48
33:D7:39:ARG:HD3	36:DA:458:G:O2'	2.13	0.48
36:DA:136:G:H2'	36:DA:137:C:H6	1.78	0.48
36:DA:192:C:C2'	36:DA:193:U:H5'	2.41	0.48
36:DA:635:C:H2'	36:DA:636:G:O4'	2.14	0.48
36:DA:654(P):C:O2'	36:DA:654(Q):C:H5'	2.13	0.48
36:DA:1168:G:H2'	36:DA:1169:G:C8	2.49	0.48
36:DA:2190:G:O2'	36:DA:2191:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2334:G:C2	50:DS:15:ARG:NH1	2.81	0.48
36:DA:2645:G:C4'	36:DA:2732:G:O2'	2.58	0.48
37:DB:35:U:H5'	37:DB:36:C:OP2	2.13	0.48
39:DD:132:PRO:O	39:DD:133:LEU:C	2.56	0.48
40:DE:9:VAL:CG2	40:DE:10:GLY:N	2.76	0.48
40:DE:117:MET:HE1	40:DE:136:ARG:HA	1.95	0.48
40:DE:174:ASP:OD1	40:DE:175:VAL:N	2.46	0.48
41:DF:133:ASN:N	41:DF:133:ASN:HD22	2.12	0.48
41:DF:198:ALA:C	41:DF:201:VAL:HG12	2.38	0.48
42:DG:115:ARG:HH22	42:DG:136:ARG:HD3	1.79	0.48
43:DH:149:ARG:HA	43:DH:162:ILE:CD1	2.43	0.48
45:DN:79:PRO:C	45:DN:81:GLY:H	2.19	0.48
46:DO:119:PRO:O	46:DO:120:GLU:HB2	2.14	0.48
47:DP:16:ARG:NH2	47:DP:18:ARG:HG2	2.28	0.48
50:DS:97:ARG:NE	50:DS:97:ARG:O	2.47	0.48
51:DT:35:LYS:HZ1	51:DT:41:ARG:NH1	2.11	0.48
52:DU:92:ARG:O	52:DU:93:LYS:C	2.57	0.48
54:DW:17:VAL:O	54:DW:20:VAL:HG22	2.13	0.48
54:DW:109:GLU:CD	54:DW:109:GLU:N	2.67	0.48
56:DY:43:ASN:ND2	56:DY:64:GLU:HG3	2.28	0.48
1:AA:311:C:O2'	1:AA:312:C:H5'	2.14	0.48
1:AA:1060:C:C5	3:AC:2:GLY:HA2	2.49	0.48
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.14	0.48
2:AB:151:GLY:O	2:AB:153:ARG:N	2.47	0.48
3:AC:138:VAL:O	3:AC:139:GLN:C	2.56	0.48
3:AC:146:ALA:C	3:AC:148:GLY:H	2.21	0.48
8:AH:30:ARG:HB3	8:AH:30:ARG:NH1	2.28	0.48
15:AO:55:GLY:O	15:AO:56:LEU:C	2.55	0.48
15:AO:69:TYR:CZ	15:AO:73:GLU:HG3	2.48	0.48
25:AY:191:ASP:O	25:AY:266:ASN:ND2	2.47	0.48
25:AY:238:THR:CG2	25:AY:241:GLU:HG2	2.30	0.48
25:AY:286:ILE:HG23	25:AY:287:PRO:HD2	1.96	0.48
27:B1:3:LYS:CG	27:B1:4:VAL:H	1.97	0.48
27:B1:45:ASN:HD21	36:BA:2090:G:H21	1.60	0.48
28:B2:28:LYS:HZ1	28:B2:56:GLN:HE22	1.59	0.48
31:B5:36:CYS:HG	31:B5:49:CYS:CB	2.26	0.48
34:B8:20:GLY:O	34:B8:57:ARG:HD3	2.13	0.48
36:BA:325:G:O2'	36:BA:326:G:H5'	2.14	0.48
36:BA:336:C:O3'	56:BY:7:VAL:HG22	2.13	0.48
36:BA:365:C:H5'	36:BA:365:C:C6	2.31	0.48
36:BA:389:G:N1	47:BP:71:VAL:HG12	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:551:G:H2'	36:BA:552:G:H5'	1.95	0.48
36:BA:1558:A:O2'	36:BA:1559:G:OP2	2.30	0.48
36:BA:1794:U:H2'	36:BA:1795:C:C6	2.49	0.48
36:BA:2083:G:H2'	36:BA:2084:C:C6	2.47	0.48
36:BA:2884:U:H2'	36:BA:2885:C:H5'	1.95	0.48
46:BO:14:THR:CG2	46:BO:86:ILE:HD13	2.43	0.48
48:BQ:60:ARG:HB2	48:BQ:60:ARG:CZ	2.43	0.48
49:BR:41:ALA:C	49:BR:43:GLU:H	2.21	0.48
52:BU:110:VAL:HG12	52:BU:114:LYS:CD	2.39	0.48
53:BV:81:TYR:C	53:BV:82:ARG:HD2	2.39	0.48
54:BW:17:VAL:O	54:BW:20:VAL:HG22	2.14	0.48
56:BY:3:VAL:HG12	56:BY:3:VAL:O	2.13	0.48
1:CA:189(D):C:H1'	1:CA:189(H):G:N2	2.28	0.48
1:CA:429:U:H1'	1:CA:430:A:H5''	1.96	0.48
1:CA:555:C:OP1	12:CL:20:LYS:HE2	2.14	0.48
1:CA:715:A:H2'	1:CA:716:A:C8	2.48	0.48
1:CA:963:G:N2	10:CJ:55:LYS:HD3	2.28	0.48
1:CA:1037:C:H2'	1:CA:1038:C:C4	2.48	0.48
1:CA:1038:C:H2'	1:CA:1039:C:C5	2.49	0.48
1:CA:1061:G:C2'	1:CA:1062:U:H5'	2.43	0.48
1:CA:1195:C:H2'	1:CA:1197:G:O4'	2.14	0.48
1:CA:1316:G:H4'	14:CN:18:VAL:HG12	1.95	0.48
2:CB:8:LYS:HB2	2:CB:9:GLU:OE1	2.13	0.48
2:CB:82:ARG:HG2	2:CB:83:MET:HE2	1.94	0.48
2:CB:151:GLY:O	2:CB:153:ARG:N	2.46	0.48
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.94	0.48
4:CD:18:LYS:HE2	4:CD:20:TYR:CE1	2.42	0.48
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.14	0.48
11:CK:29:ILE:HB	11:CK:44:SER:CB	2.43	0.48
12:CL:28:LYS:C	12:CL:30:ALA:N	2.68	0.48
12:CL:86:ARG:NH2	12:CL:99:HIS:CD2	2.81	0.48
13:CM:11:ARG:HG2	13:CM:12:ASN:N	2.28	0.48
17:CQ:4:LYS:HG3	17:CQ:6:LEU:CD2	2.43	0.48
22:CV:16:U:OP1	22:CV:16:U:H4'	2.13	0.48
25:CY:192:LEU:HD12	25:CY:194:THR:CG2	2.43	0.48
25:CY:443:HIS:CD2	25:CY:450:ILE:HD11	2.49	0.48
25:CY:608:VAL:HG12	25:CY:609:GLU:N	2.28	0.48
25:CY:652:MET:HE2	25:CY:655:TYR:CB	2.42	0.48
27:D1:84:GLY:O	27:D1:85:LEU:C	2.55	0.48
31:D5:44:THR:HG22	31:D5:45:VAL:N	2.28	0.48
34:D8:28:GLY:HA2	34:D8:32:LEU:HD21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:41:ILE:HG13	34:D8:42:ARG:N	2.28	0.48
35:D9:29:ASN:HD21	35:D9:32:HIS:CG	2.31	0.48
36:DA:285:C:C2'	36:DA:286:C:C5'	2.91	0.48
36:DA:594:U:H2'	36:DA:595:C:H6	1.78	0.48
36:DA:918:A:H1'	37:DB:80:U:O2'	2.13	0.48
36:DA:955:C:OP2	48:DQ:14:ARG:HD2	2.13	0.48
36:DA:1531:C:H2'	36:DA:1532:C:C6	2.48	0.48
36:DA:2117:A:N6	36:DA:2171:A:N6	2.60	0.48
36:DA:2313:C:O4'	42:DG:40:ASN:OD1	2.31	0.48
38:DC:182:PRO:HB2	38:DC:185:LYS:HD2	1.95	0.48
38:DC:185:LYS:HE3	38:DC:185:LYS:HA	1.95	0.48
39:DD:27:THR:O	39:DD:27:THR:HG23	2.12	0.48
39:DD:55:GLY:O	39:DD:216:GLY:HA2	2.14	0.48
43:DH:29:PRO:HD2	43:DH:79:VAL:O	2.13	0.48
47:DP:108:LYS:N	47:DP:108:LYS:HD2	2.29	0.48
50:DS:73:LEU:HD23	50:DS:73:LEU:C	2.37	0.48
50:DS:95:HIS:O	50:DS:96:GLY:C	2.56	0.48
54:DW:33:ARG:O	54:DW:37:ARG:HB2	2.14	0.48
57:DZ:95:PRO:O	57:DZ:127:LYS:HG3	2.13	0.48
1:AA:398:C:O5'	1:AA:398:C:H6	1.96	0.48
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.28	0.48
1:AA:1301:U:H3'	1:AA:1302:U:C5'	2.43	0.48
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.48	0.48
2:AB:63:MET:HG3	2:AB:63:MET:O	2.12	0.48
3:AC:178:LEU:C	3:AC:180:ALA:H	2.21	0.48
4:AD:125:HIS:C	4:AD:126:ILE:HD12	2.38	0.48
8:AH:74:PRO:O	8:AH:75:ARG:C	2.56	0.48
19:AS:61:TYR:CG	19:AS:62:ILE:N	2.81	0.48
20:AT:43:LEU:O	20:AT:46:GLU:N	2.46	0.48
23:AW:56:C:C6	23:AW:56:C:OP1	2.67	0.48
25:AY:408:VAL:HG21	25:AY:660:ARG:HH22	1.77	0.48
59:AY:701:FUA:O1	59:AY:701:FUA:C1	2.60	0.48
26:B0:5:LYS:HB2	48:BQ:80:GLU:O	2.14	0.48
29:B3:44:ARG:O	29:B3:46:ASN:N	2.46	0.48
31:B5:3:LYS:HZ1	36:BA:2613:U:C2'	2.26	0.48
31:B5:56:LYS:CG	31:B5:57:VAL:N	2.69	0.48
35:B9:9:ARG:NH2	35:B9:16:VAL:HG23	2.28	0.48
36:BA:20:C:O2'	36:BA:21:A:H5'	2.13	0.48
36:BA:216:A:C4	36:BA:432:A:C2	3.02	0.48
36:BA:557:U:H2'	36:BA:558:G:C8	2.48	0.48
36:BA:775:G:H21	36:BA:793:A:HO2'	1.59	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1711:C:O2'	36:BA:1712:C:H5'	2.13	0.48
36:BA:1747(A):G:O2'	36:BA:1748:G:H5''	2.12	0.48
36:BA:1858:G:H2'	36:BA:1883:G:N2	2.27	0.48
36:BA:1949:G:H2'	36:BA:1950:G:C8	2.49	0.48
36:BA:2124:G:H1'	38:BC:43:GLU:OE1	2.13	0.48
36:BA:2206:G:N2	36:BA:2207:G:H5'	2.28	0.48
36:BA:2223:G:C2'	36:BA:2224:G:H5'	2.44	0.48
36:BA:2372:G:O2'	36:BA:2373:G:H5'	2.14	0.48
36:BA:2584:U:O2	36:BA:2584:U:O4'	2.31	0.48
36:BA:2617:C:C2'	36:BA:2618:G:H5'	2.43	0.48
36:BA:2732:G:H3'	36:BA:2733:A:C5'	2.42	0.48
37:BB:89:G:C6	37:BB:90:A:C2	3.01	0.48
37:BB:96:U:H2'	37:BB:97:G:H8	1.76	0.48
38:BC:149:ASN:HD22	38:BC:149:ASN:C	2.21	0.48
39:BD:72:LYS:HE2	39:BD:101:GLU:OE1	2.13	0.48
40:BE:64:LYS:C	40:BE:66:HIS:N	2.68	0.48
42:BG:5:VAL:O	42:BG:6:ALA:C	2.57	0.48
43:BH:169:VAL:O	43:BH:170:ARG:HG3	2.12	0.48
47:BP:106:LEU:HD11	47:BP:112:LEU:CD2	2.42	0.48
47:BP:135:LEU:HD13	47:BP:135:LEU:O	2.13	0.48
48:BQ:87:LYS:CG	48:BQ:88:GLY:H	2.27	0.48
50:BS:56:LEU:C	50:BS:58:LEU:H	2.21	0.48
52:BU:57:PHE:O	52:BU:58:ARG:C	2.56	0.48
52:BU:95:LEU:HD12	53:BV:11:GLN:NE2	2.21	0.48
53:BV:4:ILE:HA	53:BV:12:TYR:O	2.13	0.48
53:BV:38:LEU:C	53:BV:39:LEU:HD13	2.37	0.48
54:BW:50:VAL:HG11	54:BW:103:ILE:CG2	2.44	0.48
56:BY:88:LYS:HD2	56:BY:88:LYS:N	2.28	0.48
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.48	0.48
1:CA:1166:G:H5'	1:CA:1168:A:OP2	2.14	0.48
2:CB:17:PHE:CD1	2:CB:18:GLY:N	2.81	0.48
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.14	0.48
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.81	0.48
4:CD:101:LEU:HD23	4:CD:121:VAL:CG1	2.43	0.48
4:CD:110:PHE:N	4:CD:110:PHE:CD1	2.81	0.48
13:CM:66:LEU:O	13:CM:67:GLU:O	2.31	0.48
25:CY:125:ALA:C	25:CY:127:LYS:H	2.22	0.48
25:CY:131:PRO:CG	25:CY:281:PRO:HG3	2.40	0.48
25:CY:468:ARG:NH1	25:CY:468:ARG:HB2	2.29	0.48
26:D0:19:LYS:CD	26:D0:41:ARG:HH22	2.25	0.48
32:D6:6:ARG:C	32:D6:8:LYS:H	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:49:VAL:O	34:D8:53:PRO:HG3	2.13	0.48
34:D8:59:LYS:HE3	34:D8:59:LYS:HB2	1.65	0.48
36:DA:299:A:H5'	56:DY:97:ARG:NE	2.28	0.48
36:DA:465:G:C6	36:DA:466:A:N6	2.81	0.48
36:DA:654(M):C:O2'	36:DA:654(N):G:C8	2.59	0.48
36:DA:727:A:H3'	36:DA:728:G:C8	2.48	0.48
36:DA:782:A:N3	39:DD:226:MET:HG2	2.28	0.48
36:DA:1436:G:O2'	36:DA:1437:C:H5'	2.13	0.48
36:DA:1599:C:H2'	36:DA:1600:C:H6	1.79	0.48
36:DA:1822:G:H2'	36:DA:1823:G:H8	1.78	0.48
36:DA:1877:A:H5'	36:DA:1878:G:OP2	2.13	0.48
36:DA:2297:C:O2'	36:DA:2298:A:H5'	2.14	0.48
38:DC:115:VAL:CG2	38:DC:150:ILE:HD11	2.44	0.48
39:DD:26:LYS:HE2	39:DD:26:LYS:CA	2.43	0.48
40:DE:51:PHE:CD1	40:DE:52:LEU:N	2.81	0.48
40:DE:111:ARG:HD2	40:DE:160:TYR:CE2	2.49	0.48
41:DF:10:PRO:HB3	41:DF:127:GLU:HG2	1.94	0.48
44:DJ:31:UNK:O	44:DJ:32:UNK:CB	2.61	0.48
49:DR:78:LYS:O	49:DR:83:ILE:HG12	2.13	0.48
53:DV:25:LEU:H	53:DV:92:THR:CG2	2.26	0.48
54:DW:20:VAL:O	54:DW:23:LEU:N	2.46	0.48
55:DX:26:TYR:OH	55:DX:88:LYS:HB2	2.13	0.48
56:DY:47:LYS:HA	56:DY:60:PHE:CD1	2.49	0.48
56:DY:91:GLU:O	56:DY:92:ASN:HB2	2.13	0.48
57:DZ:121:HIS:HB3	57:DZ:171:ILE:HA	1.95	0.48
57:DZ:127:LYS:NZ	57:DZ:127:LYS:CB	2.76	0.48
1:AA:1163:C:H2'	1:AA:1164:G:H8	1.78	0.48
1:AA:1293:G:O2'	1:AA:1294:G:H5'	2.14	0.48
2:AB:17:PHE:CD1	2:AB:17:PHE:C	2.91	0.48
2:AB:82:ARG:NH1	2:AB:92:TYR:OH	2.46	0.48
3:AC:129:ALA:HB3	3:AC:132:ARG:HB3	1.96	0.48
7:AG:102:ARG:HG2	7:AG:106:GLN:NE2	2.29	0.48
7:AG:118:VAL:O	7:AG:121:ALA:HB3	2.14	0.48
9:AI:95:LYS:HD3	9:AI:95:LYS:C	2.38	0.48
9:AI:95:LYS:NZ	9:AI:96:LEU:HD12	2.28	0.48
17:AQ:65:ILE:O	17:AQ:66:SER:HB3	2.12	0.48
22:AV:50:U:O2'	22:AV:51:U:H5'	2.13	0.48
22:AV:68:C:H2'	22:AV:69:G:H8	1.76	0.48
23:AW:49:G:H3'	23:AW:50:U:H5''	1.96	0.48
25:AY:73:PHE:HE1	25:AY:78:ARG:HB2	1.77	0.48
25:AY:100:VAL:CG2	25:AY:374:LEU:HD21	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:124:GLN:HE21	25:AY:124:GLN:HB2	1.51	0.48
25:AY:583:LYS:HD3	25:AY:583:LYS:C	2.39	0.48
25:AY:613:PRO:C	25:AY:615:GLU:N	2.71	0.48
33:B7:25:PRO:HB3	33:B7:28:ARG:NH2	2.28	0.48
36:BA:30:G:O2'	36:BA:31:C:H5'	2.13	0.48
36:BA:706:A:H2'	36:BA:707:G:O4'	2.13	0.48
36:BA:1015:G:H2'	36:BA:1016:G:H8	1.79	0.48
36:BA:1048:A:H3'	36:BA:1049:C:H5'	1.96	0.48
36:BA:1415:U:H3	36:BA:1587:A:H61	1.61	0.48
36:BA:1651:G:C2	36:BA:2007:C:C2	3.02	0.48
36:BA:1770:G:C2'	36:BA:1771:C:H5'	2.44	0.48
36:BA:1799:G:N2	36:BA:1818:U:H2'	2.27	0.48
36:BA:2075:U:C2'	36:BA:2076:U:H5''	2.43	0.48
36:BA:2647:U:H2'	36:BA:2648:C:C6	2.48	0.48
36:BA:2689:U:H4'	36:BA:2690:C:OP2	2.13	0.48
36:BA:2794:C:N4	36:BA:2801(A):A:H61	2.09	0.48
39:BD:96:HIS:CE1	39:BD:102:LYS:HE2	2.49	0.48
39:BD:218:ARG:HG3	39:BD:218:ARG:HH11	1.79	0.48
40:BE:104:VAL:HG22	40:BE:198:VAL:HG22	1.96	0.48
41:BF:4:VAL:HG22	41:BF:19:GLU:OE1	2.14	0.48
42:BG:41:GLN:C	42:BG:43:LEU:H	2.21	0.48
45:BN:133:GLN:CG	45:BN:134:ARG:H	2.25	0.48
48:BQ:52:VAL:O	48:BQ:54:MET:N	2.47	0.48
50:BS:73:LEU:HD23	50:BS:73:LEU:C	2.39	0.48
51:BT:11:GLU:O	51:BT:14:TYR:HE1	1.97	0.48
51:BT:12:SER:C	51:BT:14:TYR:H	2.22	0.48
52:BU:83:LEU:H	52:BU:83:LEU:CD1	2.27	0.48
52:BU:109:LEU:O	52:BU:112:ARG:HB2	2.13	0.48
57:BZ:108:PRO:HB3	57:BZ:141:VAL:CG1	2.44	0.48
2:CB:20:GLU:CG	2:CB:189:ASP:OD2	2.62	0.48
2:CB:210:SER:O	2:CB:211:ILE:C	2.55	0.48
3:CC:112:SER:CB	3:CC:115:LEU:HD12	2.39	0.48
5:CE:105:VAL:HB	5:CE:106:PRO:CD	2.44	0.48
9:CI:8:GLY:O	9:CI:9:ARG:HG3	2.12	0.48
13:CM:78:ILE:HA	13:CM:81:LEU:HD23	1.95	0.48
19:CS:61:TYR:CG	19:CS:62:ILE:N	2.79	0.48
22:CV:35:A:C2	24:CX:18:C:C2	3.01	0.48
23:CW:11:A:H2'	23:CW:12:G:H8	1.76	0.48
25:CY:646:PHE:O	25:CY:647:VAL:HG13	2.13	0.48
25:CY:670:VAL:CG2	25:CY:671:MET:H	2.26	0.48
28:D2:53:LEU:O	28:D2:57:ILE:HG12	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:44:THR:HG22	31:D5:45:VAL:H	1.79	0.48
33:D7:8:ASN:C	33:D7:8:ASN:ND2	2.71	0.48
34:D8:50:LEU:HD12	34:D8:51:ALA:N	2.22	0.48
35:D9:34:GLN:O	35:D9:35:ARG:CB	2.59	0.48
36:DA:64:A:H2'	36:DA:65:C:O4'	2.14	0.48
36:DA:272(G):C:H42	36:DA:363(C):G:H1	1.61	0.48
36:DA:281:G:N2	36:DA:358:U:C5	2.82	0.48
36:DA:287:C:H2'	36:DA:288:C:H6	1.79	0.48
36:DA:847:U:OP2	36:DA:928:G:O6	2.32	0.48
36:DA:910:A:H62	48:DQ:12:GLN:HA	1.79	0.48
36:DA:1326:U:H2'	36:DA:1327:C:H6	1.78	0.48
36:DA:1635:G:N2	36:DA:1636:C:C2	2.81	0.48
36:DA:2498:C:O2'	36:DA:2499:C:H5'	2.14	0.48
39:DD:142:VAL:HG23	39:DD:192:THR:C	2.38	0.48
41:DF:160:ASN:ND2	41:DF:160:ASN:C	2.71	0.48
42:DG:125:PHE:CZ	42:DG:173:LEU:HD12	2.49	0.48
46:DO:14:THR:HB	46:DO:86:ILE:HD13	1.95	0.48
47:DP:30:THR:O	47:DP:33:ARG:N	2.38	0.48
47:DP:135:LEU:HD13	47:DP:135:LEU:O	2.13	0.48
48:DQ:139:GLU:OE2	57:DZ:99:TYR:HE2	1.96	0.48
52:DU:90:VAL:HG13	53:DV:39:LEU:HG	1.95	0.48
52:DU:109:LEU:O	52:DU:112:ARG:HB2	2.14	0.48
55:DX:40:LYS:HG3	55:DX:51:VAL:CG2	2.44	0.48
56:DY:103:GLY:O	56:DY:104:GLY:C	2.56	0.48
1:AA:192:U:O3'	20:AT:57:ARG:HD2	2.14	0.48
1:AA:294:U:H2'	1:AA:295:C:C6	2.47	0.48
1:AA:538:G:H2'	1:AA:539:A:C8	2.48	0.48
1:AA:867:G:O2'	1:AA:868:C:H5'	2.13	0.48
1:AA:1030:C:H2'	1:AA:1030(A):G:H5'	1.96	0.48
1:AA:1038:C:H2'	1:AA:1039:C:C5	2.49	0.48
1:AA:1110:A:O5'	1:AA:1110:A:H8	1.96	0.48
1:AA:1132:C:N4	1:AA:1133:G:C6	2.81	0.48
2:AB:60:ASP:HB3	2:AB:64:ARG:HH21	1.78	0.48
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.71	0.48
5:AE:64:ARG:HG3	5:AE:64:ARG:NH1	2.23	0.48
7:AG:146:GLU:OE2	7:AG:149:ARG:HD2	2.13	0.48
11:AK:29:ILE:HB	11:AK:44:SER:HB2	1.96	0.48
12:AL:8:ASN:HB2	17:AQ:34:LYS:NZ	2.28	0.48
13:AM:66:LEU:O	13:AM:67:GLU:O	2.32	0.48
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.14	0.48
25:AY:84:THR:O	25:AY:85:PRO:C	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:273:LEU:HA	25:AY:276:VAL:HG23	1.96	0.48
25:AY:345:THR:HG21	25:AY:387:ASP:OD1	2.14	0.48
25:AY:651:GLU:O	25:AY:651:GLU:HG3	2.14	0.48
36:BA:42:G:H2'	36:BA:42:G:N3	2.29	0.48
36:BA:86:C:H2'	36:BA:87:C:C6	2.48	0.48
36:BA:280:C:N4	36:BA:360:G:H1	2.12	0.48
36:BA:301:G:H1'	36:BA:302:C:C6	2.48	0.48
36:BA:797:C:H2'	36:BA:798:G:C8	2.48	0.48
36:BA:1227:G:O2'	36:BA:1228:G:H5'	2.13	0.48
36:BA:1405:U:H2'	36:BA:1406:U:C6	2.49	0.48
36:BA:1573:G:H2'	36:BA:1574:C:H5'	1.94	0.48
40:BE:51:PHE:O	40:BE:52:LEU:C	2.56	0.48
40:BE:52:LEU:O	40:BE:74:PRO:HA	2.13	0.48
40:BE:96:PHE:HA	40:BE:100:GLU:OE1	2.12	0.48
41:BF:44:ARG:HG3	41:BF:44:ARG:O	2.13	0.48
43:BH:136:ILE:HG22	43:BH:136:ILE:O	2.13	0.48
47:BP:102:ARG:NH1	47:BP:102:ARG:CB	2.76	0.48
48:BQ:10:ARG:HB2	48:BQ:10:ARG:NH1	2.28	0.48
48:BQ:139:GLU:CG	57:BZ:99:TYR:HE2	2.26	0.48
49:BR:29:LEU:HB3	49:BR:75:LEU:HD11	1.95	0.48
50:BS:99:LYS:O	50:BS:100:ALA:C	2.56	0.48
52:BU:57:PHE:C	52:BU:59:ARG:N	2.64	0.48
53:BV:17:GLY:C	53:BV:18:LEU:HD12	2.39	0.48
56:BY:10:GLY:O	56:BY:27:VAL:HG22	2.12	0.48
56:BY:73:ARG:O	56:BY:74:PRO:O	2.31	0.48
1:CA:38:G:C2	1:CA:397:A:C2	3.02	0.48
1:CA:188:C:H2'	1:CA:189:G:H8	1.78	0.48
1:CA:624:C:H2'	1:CA:625:G:H8	1.78	0.48
1:CA:692:U:O4	11:CK:53:SER:HA	2.13	0.48
1:CA:723:U:H5'	1:CA:724:G:OP2	2.13	0.48
1:CA:1270:C:H2'	1:CA:1271:G:H8	1.79	0.48
2:CB:108:ILE:O	2:CB:111:ARG:HB2	2.14	0.48
4:CD:98:GLU:HG2	4:CD:189:PRO:HG3	1.96	0.48
4:CD:125:HIS:C	4:CD:126:ILE:HD12	2.38	0.48
10:CJ:61:GLU:HG3	14:CN:58:LYS:HZ3	1.79	0.48
11:CK:44:SER:O	11:CK:45:GLY:C	2.55	0.48
13:CM:23:TYR:CD1	13:CM:23:TYR:C	2.92	0.48
13:CM:66:LEU:HA	13:CM:70:LEU:HD12	1.95	0.48
23:CW:2:G:H1	23:CW:71:C:N4	2.07	0.48
23:CW:31:G:H5'	23:CW:31:G:C8	2.45	0.48
28:D2:10:LEU:O	28:D2:14:ARG:HG2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D3:15:TYR:H	29:D3:15:TYR:HD1	1.58	0.48
31:D5:3:LYS:NZ	36:DA:2613:U:O2'	2.45	0.48
31:D5:48:GLU:O	31:D5:49:CYS:CB	2.61	0.48
33:D7:36:GLN:C	33:D7:38:GLY:N	2.70	0.48
36:DA:9:U:H5	36:DA:2629:A:N6	2.06	0.48
36:DA:626:U:O2	47:DP:105:LEU:HG	2.13	0.48
36:DA:848:G:C2	36:DA:933:A:H1'	2.48	0.48
36:DA:1028:A:H2'	36:DA:1029:A:C8	2.48	0.48
36:DA:1048:A:H3'	36:DA:1049:C:H5'	1.95	0.48
36:DA:1525:G:H2'	36:DA:1526:G:H8	1.79	0.48
36:DA:1542:A:H3'	36:DA:1542:A:C8	2.49	0.48
36:DA:1683:C:H2'	36:DA:1684:C:C6	2.48	0.48
36:DA:1885:A:H5'	36:DA:1885:A:C8	2.42	0.48
36:DA:2009:G:O2'	36:DA:2010:G:H5'	2.14	0.48
36:DA:2291:U:O2'	36:DA:2292:C:H5'	2.13	0.48
36:DA:2389:G:H5''	36:DA:2390:U:C5'	2.40	0.48
36:DA:2415:G:C2	36:DA:2416:C:C2	3.01	0.48
36:DA:2687:U:C4	36:DA:2688:U:C5	3.01	0.48
36:DA:2689:U:H4'	36:DA:2690:C:OP2	2.13	0.48
36:DA:2811:G:N2	36:DA:2891:G:H1'	2.27	0.48
37:DB:103:G:H5''	37:DB:104:U:OP2	2.14	0.48
37:DB:106:G:O2'	37:DB:107:G:H5'	2.14	0.48
39:DD:227:ASN:O	39:DD:228:PRO:C	2.55	0.48
40:DE:4:ILE:HD11	40:DE:28:ALA:HB1	1.95	0.48
42:DG:111:LEU:O	42:DG:114:ILE:HG13	2.13	0.48
45:DN:12:ARG:O	45:DN:50:ASP:HB3	2.14	0.48
45:DN:18:ALA:O	45:DN:21:LYS:N	2.46	0.48
45:DN:129:PRO:O	45:DN:130:HIS:CB	2.58	0.48
47:DP:93:GLY:O	47:DP:123:LEU:HB2	2.14	0.48
47:DP:107:LYS:O	47:DP:107:LYS:HG3	2.14	0.48
49:DR:63:ARG:HH22	49:DR:77:ARG:HG2	1.78	0.48
50:DS:70:GLY:C	50:DS:72:ALA:H	2.22	0.48
51:DT:11:GLU:O	51:DT:14:TYR:HE1	1.97	0.48
55:DX:8:ILE:N	55:DX:8:ILE:CD1	2.75	0.48
56:DY:84:ARG:HG2	56:DY:84:ARG:NH1	2.29	0.48
1:AA:268:C:O2	1:AA:268:C:C2'	2.61	0.48
1:AA:545:C:H5''	4:AD:72:GLU:HG2	1.96	0.48
1:AA:559:A:P	5:AE:126:ARG:HH22	2.36	0.48
1:AA:1148:U:C2'	1:AA:1149:C:H5'	2.43	0.48
1:AA:1442:G:C5	1:AA:1442(B):A:C2	3.02	0.48
2:AB:221:LEU:HD13	2:AB:221:LEU:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:82:HIS:CD2	8:AH:138:TRP:NE1	2.82	0.48
11:AK:21:ILE:HA	11:AK:30:VAL:HG12	1.95	0.48
19:AS:4:SER:O	19:AS:5:LEU:C	2.56	0.48
25:AY:9:LEU:CD2	25:AY:9:LEU:C	2.86	0.48
25:AY:14:ASN:HA	25:AY:80:ASN:O	2.13	0.48
25:AY:24:GLY:O	25:AY:25:LYS:C	2.56	0.48
25:AY:99:ARG:HA	25:AY:128:TYR:CE1	2.49	0.48
25:AY:201:ILE:HG21	25:AY:206:LEU:CA	2.43	0.48
32:B6:7:ILE:N	32:B6:7:ILE:CD1	2.77	0.48
32:B6:10:LEU:HB3	34:B8:34:TRP:CD1	2.48	0.48
36:BA:478:A:C6	36:BA:480:A:C6	3.01	0.48
36:BA:512:G:O2'	36:BA:513:A:H8	1.96	0.48
36:BA:751:A:C5'	54:BW:90:ARG:HA	2.44	0.48
36:BA:807:U:H2'	36:BA:808:G:C8	2.49	0.48
36:BA:848:G:C4	36:BA:933:A:H8	2.32	0.48
36:BA:880:G:H1	36:BA:897:C:H42	1.62	0.48
36:BA:938:G:H2'	36:BA:939:G:H8	1.79	0.48
36:BA:1128:A:C8	36:BA:2518:A:N6	2.82	0.48
36:BA:1212:G:O2'	36:BA:1236:G:N2	2.47	0.48
36:BA:1516:C:H2'	36:BA:1517:G:H5'	1.95	0.48
36:BA:1659:U:O2'	36:BA:1660:C:H5'	2.14	0.48
36:BA:2402:C:OP2	36:BA:2402:C:C6	2.67	0.48
36:BA:2494:G:O2'	36:BA:2495:G:H5'	2.14	0.48
36:BA:2539:C:O2	36:BA:2539:C:H2'	2.14	0.48
36:BA:2547:U:H2'	36:BA:2548:G:C8	2.48	0.48
36:BA:2787:C:H1'	40:BE:61:ARG:CG	2.43	0.48
37:BB:54:G:H2'	37:BB:55:U:H6	1.78	0.48
42:BG:18:GLU:HA	42:BG:18:GLU:OE1	2.13	0.48
42:BG:72:ARG:HB3	42:BG:87:PRO:CD	2.44	0.48
45:BN:62:VAL:O	45:BN:63:THR:O	2.32	0.48
45:BN:96:GLU:CD	45:BN:96:GLU:H	2.22	0.48
50:BS:59:LYS:HD2	50:BS:61:ASN:HB2	1.96	0.48
50:BS:77:ALA:O	50:BS:78:LEU:C	2.55	0.48
52:BU:29:SER:OG	52:BU:30:LYS:HE2	2.14	0.48
52:BU:59:ARG:O	52:BU:60:LEU:C	2.55	0.48
53:BV:34:GLU:HG3	53:BV:56:SER:OG	2.14	0.48
56:BY:42:VAL:HB	56:BY:65:ALA:HB3	1.95	0.48
57:BZ:7:ALA:HB3	57:BZ:61:LEU:CD2	2.44	0.48
57:BZ:45:ASP:O	57:BZ:49:ARG:CG	2.61	0.48
57:BZ:79:ARG:O	57:BZ:79:ARG:CG	2.62	0.48
1:CA:745:C:H2'	1:CA:746:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1218:C:H2'	1:CA:1219:U:C5	2.49	0.48
1:CA:1219:U:H2'	1:CA:1220:G:C8	2.49	0.48
1:CA:1284:C:H3'	1:CA:1285:A:C5'	2.43	0.48
1:CA:1298:C:O2	1:CA:1298:C:C2'	2.62	0.48
1:CA:1404:C:H5'	1:CA:1405:G:OP2	2.14	0.48
1:CA:1442(A):G:N2	51:DT:119:LYS:HA	2.29	0.48
2:CB:32:ILE:CD1	2:CB:40:HIS:HB3	2.43	0.48
4:CD:8:VAL:O	4:CD:10:ARG:N	2.43	0.48
4:CD:65:ARG:NH1	4:CD:70:ILE:O	2.44	0.48
6:CF:16:GLN:CD	6:CF:16:GLN:N	2.72	0.48
7:CG:86:GLN:HE22	23:CW:31:G:H21	1.60	0.48
8:CH:36:LEU:C	8:CH:38:ILE:N	2.71	0.48
13:CM:7:VAL:HG12	13:CM:7:VAL:O	2.14	0.48
15:CO:10:LYS:O	15:CO:10:LYS:HD2	2.13	0.48
21:CU:13:ILE:O	21:CU:16:GLY:N	2.46	0.48
23:CW:4:G:O2'	23:CW:5:G:C8	2.65	0.48
25:CY:277:VAL:HG13	25:CY:278:ASP:N	2.27	0.48
25:CY:290:LYS:HB3	25:CY:298:VAL:CG2	2.42	0.48
25:CY:303:PRO:O	25:CY:305:PRO:HD3	2.13	0.48
25:CY:437:THR:HB	25:CY:454:MET:CE	2.44	0.48
25:CY:596:LYS:O	25:CY:596:LYS:HG3	2.13	0.48
32:D6:18:ARG:HG3	32:D6:19:ARG:H	1.79	0.48
32:D6:53:LYS:HE2	36:DA:2398:U:O2'	2.13	0.48
33:D7:27:GLY:HA2	33:D7:30:VAL:CG2	2.44	0.48
34:D8:36:LYS:O	34:D8:37:SER:C	2.56	0.48
36:DA:280:C:H3'	36:DA:281:G:C8	2.49	0.48
36:DA:604:G:O2'	36:DA:605:C:H5'	2.14	0.48
36:DA:2131:G:H8	36:DA:2158:A:N6	2.07	0.48
36:DA:2464:C:O2'	36:DA:2465:C:H6	1.95	0.48
36:DA:2794:C:H42	36:DA:2801(A):A:N6	2.11	0.48
37:DB:68:C:O2'	37:DB:69:G:H5'	2.13	0.48
37:DB:96:U:H2'	37:DB:97:G:H8	1.78	0.48
38:DC:141:PRO:C	38:DC:143:ALA:H	2.22	0.48
41:DF:65:TRP:CZ3	41:DF:75:HIS:HD2	2.32	0.48
42:DG:152:LEU:HD23	42:DG:152:LEU:N	2.28	0.48
44:DJ:136:UNK:C	44:DJ:138:UNK:N	2.73	0.48
44:DJ:157:UNK:C	44:DJ:159:UNK:N	2.76	0.48
46:DO:21:CYS:SG	46:DO:22:ILE:N	2.86	0.48
47:DP:112:LEU:C	47:DP:112:LEU:HD13	2.39	0.48
49:DR:41:ALA:C	49:DR:43:GLU:H	2.22	0.48
49:DR:117:VAL:CG1	49:DR:118:GLU:N	2.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DT:106:SER:C	51:DT:107:ASP:OD1	2.57	0.48
53:DV:4:ILE:HA	53:DV:12:TYR:O	2.14	0.48
57:DZ:117:LEU:HD12	57:DZ:174:VAL:HG22	1.95	0.48
1:AA:184:G:O2'	1:AA:185:A:H5'	2.13	0.48
1:AA:218:C:H5'	1:AA:470:C:N4	2.28	0.48
1:AA:1298:C:O2	1:AA:1298:C:C2'	2.61	0.48
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.49	0.48
1:AA:1456:G:H2'	1:AA:1457:G:H5'	1.94	0.48
1:AA:1503:A:N1	24:AX:11:A:N3	2.60	0.48
2:AB:22:LYS:H	2:AB:40:HIS:HE1	1.61	0.48
2:AB:69:LEU:HD11	2:AB:93:VAL:HG23	1.95	0.48
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.39	0.48
3:AC:134:ILE:O	3:AC:135:LYS:C	2.57	0.48
5:AE:20:GLN:NE2	5:AE:25:ARG:NH2	2.61	0.48
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.49	0.48
11:AK:60:ALA:O	11:AK:61:ALA:C	2.55	0.48
11:AK:126:ARG:O	11:AK:127:LYS:C	2.57	0.48
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.43	0.48
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.13	0.48
13:AM:58:GLU:O	13:AM:62:ASN:HB2	2.14	0.48
13:AM:72:ALA:O	13:AM:73:GLU:C	2.57	0.48
18:AR:59:SER:N	18:AR:62:GLU:HB2	2.23	0.48
25:AY:15:ILE:HD13	25:AY:17:ILE:HD11	1.95	0.48
25:AY:211:GLU:HB2	25:AY:215:LYS:HZ1	1.76	0.48
25:AY:223:PHE:HZ	25:AY:255:ILE:HG22	1.78	0.48
25:AY:374:LEU:HD12	25:AY:374:LEU:N	2.29	0.48
25:AY:644:ARG:O	25:AY:645:ALA:HB2	2.14	0.48
27:B1:27:GLU:O	27:B1:28:GLY:C	2.56	0.48
30:B4:26:SER:HB3	42:BG:105:LYS:NZ	2.29	0.48
32:B6:48:VAL:CG2	32:B6:49:HIS:N	2.76	0.48
35:B9:22:ARG:NH2	36:BA:2741:A:OP1	2.47	0.48
36:BA:271(E):U:H3	36:BA:271(S):G:H1	1.60	0.48
36:BA:795:C:H2'	36:BA:796:C:C6	2.49	0.48
36:BA:809:G:O2'	36:BA:810:U:H5'	2.13	0.48
36:BA:1270:C:H5''	36:BA:1271:G:H5'	1.94	0.48
36:BA:1338:G:N7	55:BX:62:LYS:NZ	2.59	0.48
36:BA:1675:C:O2	40:BE:129:HIS:HA	2.14	0.48
36:BA:1884:A:C3'	36:BA:1885:A:H5''	2.44	0.48
36:BA:1902:C:H2'	36:BA:1903:G:O4'	2.13	0.48
36:BA:2023:G:H4'	36:BA:2617:C:O3'	2.13	0.48
36:BA:2304:G:OP1	42:BG:124:SER:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2369:A:O2'	36:BA:2370:G:H5'	2.14	0.48
36:BA:2887:U:H2'	36:BA:2888:C:C6	2.49	0.48
39:BD:35:LYS:O	39:BD:37:LEU:HB2	2.13	0.48
39:BD:112:GLN:O	39:BD:115:GLN:HB2	2.13	0.48
40:BE:55:ASN:O	40:BE:57:LYS:N	2.41	0.48
40:BE:81:ILE:O	40:BE:81:ILE:CG2	2.62	0.48
40:BE:174:ASP:OD1	40:BE:175:VAL:N	2.46	0.48
44:BJ:6:UNK:O	44:BJ:8:UNK:N	2.47	0.48
45:BN:26:LEU:C	45:BN:28:THR:N	2.70	0.48
46:BO:24:VAL:HG21	46:BO:30:ALA:HB3	1.95	0.48
49:BR:41:ALA:C	49:BR:43:GLU:N	2.70	0.48
49:BR:59:ASP:O	49:BR:60:LEU:C	2.57	0.48
49:BR:117:VAL:HG12	49:BR:118:GLU:N	2.28	0.48
50:BS:49:VAL:CG1	50:BS:50:SER:H	2.25	0.48
51:BT:1:MET:H1	51:BT:7:ILE:HD11	1.76	0.48
56:BY:13:VAL:O	56:BY:24:VAL:HG13	2.13	0.48
1:CA:184:G:O2'	1:CA:185:A:H5'	2.14	0.48
1:CA:342:C:C2'	1:CA:343:U:H5'	2.44	0.48
1:CA:636:U:H2'	1:CA:637:G:H8	1.79	0.48
2:CB:97:TRP:CH2	2:CB:176:GLU:CD	2.91	0.48
4:CD:157:LEU:HG	4:CD:161:ASN:HD21	1.78	0.48
10:CJ:18:ALA:C	10:CJ:20:ALA:N	2.71	0.48
20:CT:16:HIS:O	20:CT:19:SER:HB3	2.14	0.48
20:CT:43:LEU:O	20:CT:46:GLU:N	2.47	0.48
22:CV:17:C:O2'	22:CV:18:G:P	2.72	0.48
25:CY:211:GLU:HG3	25:CY:212:TYR:CD2	2.48	0.48
25:CY:629:GLY:HA3	25:CY:647:VAL:HG12	1.96	0.48
25:CY:669:PHE:CE2	25:CY:671:MET:HB2	2.48	0.48
27:D1:7:ILE:HG22	27:D1:66:HIS:CD2	2.49	0.48
36:DA:425:G:H2'	36:DA:426:C:H6	1.78	0.48
36:DA:661:C:O2'	47:DP:16:ARG:O	2.29	0.48
36:DA:1236:G:O2'	36:DA:1237:A:H8	1.73	0.48
36:DA:1244:G:O2'	36:DA:1245:G:H5'	2.13	0.48
36:DA:1639:U:H2'	36:DA:1640:C:H5''	1.96	0.48
36:DA:1770:G:C2'	36:DA:1771:C:H5'	2.44	0.48
36:DA:1775:U:O2'	36:DA:1776:G:H5'	2.14	0.48
36:DA:2131:G:C8	36:DA:2158:A:N6	2.81	0.48
36:DA:2720:U:C2	36:DA:2721:A:C8	3.02	0.48
36:DA:2867:G:C5	51:DT:23:ARG:NH1	2.81	0.48
36:DA:2887:U:H2'	36:DA:2888:C:C6	2.49	0.48
38:DC:101:ILE:HG23	38:DC:128:LEU:CD2	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:79:VAL:HG21	39:DD:111:LEU:HD11	1.95	0.48
39:DD:261:LYS:NZ	39:DD:263:ARG:HH22	2.12	0.48
42:DG:107:LEU:HD11	42:DG:178:PHE:CD1	2.48	0.48
43:DH:84:SER:OG	43:DH:85:LYS:N	2.46	0.48
45:DN:133:GLN:O	45:DN:134:ARG:CB	2.62	0.48
47:DP:71:VAL:N	47:DP:72:PRO:CD	2.77	0.48
47:DP:71:VAL:O	47:DP:72:PRO:C	2.56	0.48
50:DS:98:VAL:C	50:DS:100:ALA:N	2.72	0.48
51:DT:12:SER:C	51:DT:14:TYR:H	2.22	0.48
53:DV:62:LEU:HD22	53:DV:62:LEU:N	2.28	0.48
56:DY:13:VAL:O	56:DY:24:VAL:HA	2.14	0.48
56:DY:95:LYS:CD	56:DY:101:LYS:H	2.27	0.48
1:AA:636:U:H2'	1:AA:637:G:H8	1.78	0.48
1:AA:883:C:O2'	1:AA:884:U:H5'	2.14	0.48
1:AA:1029:C:O2'	1:AA:1032:G:N2	2.46	0.48
1:AA:1271:G:H2'	1:AA:1272:G:H8	1.79	0.48
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.13	0.48
2:AB:210:SER:O	2:AB:211:ILE:C	2.56	0.48
4:AD:137:SER:O	4:AD:138:TYR:C	2.57	0.48
5:AE:9:LYS:CB	5:AE:112:LEU:HD11	2.44	0.48
6:AF:35:ALA:O	6:AF:36:ARG:C	2.57	0.48
8:AH:26:VAL:HG23	8:AH:27:PRO:HD2	1.96	0.48
9:AI:37:PHE:HB3	9:AI:43:ALA:HB2	1.95	0.48
13:AM:14:ARG:CZ	13:AM:42:ALA:HA	2.44	0.48
13:AM:22:ILE:HD12	13:AM:22:ILE:N	2.29	0.48
13:AM:118:ALA:HB3	13:AM:120:LYS:HE3	1.94	0.48
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.29	0.48
22:AV:61:C:H2'	22:AV:62:C:C6	2.46	0.48
23:AW:34:C:O2'	23:AW:35:A:O5'	2.30	0.48
25:AY:495:GLY:O	25:AY:510:VAL:N	2.45	0.48
29:B3:31:LEU:O	29:B3:32:GLN:CB	2.62	0.48
31:B5:44:THR:HG22	31:B5:45:VAL:H	1.79	0.48
31:B5:56:LYS:O	31:B5:57:VAL:O	2.31	0.48
36:BA:324:A:O2'	36:BA:325:G:H5'	2.14	0.48
36:BA:482:A:H1'	36:BA:498:G:N2	2.29	0.48
36:BA:626:U:O2	47:BP:105:LEU:HG	2.14	0.48
36:BA:651:G:O2'	36:BA:652:C:H5'	2.14	0.48
36:BA:729:G:H2'	36:BA:1775:U:O2	2.13	0.48
36:BA:1416:G:HO2'	36:BA:1417:C:H5	1.61	0.48
36:BA:1437:C:H2'	36:BA:1438:U:C6	2.49	0.48
36:BA:1655:A:H4'	40:BE:115:GLY:H	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1682:G:H5'	36:BA:1762:A:HO2'	1.76	0.48
36:BA:2287:A:N6	36:BA:2344:U:N3	2.54	0.48
36:BA:2531:A:H4'	43:BH:157:TYR:CD2	2.49	0.48
36:BA:2705:A:H2'	36:BA:2706:G:O4'	2.14	0.48
36:BA:2733:A:H2'	36:BA:2734:A:O4'	2.13	0.48
38:BC:42:VAL:HG21	38:BC:186:LEU:CD2	2.44	0.48
38:BC:74:ARG:HG2	38:BC:74:ARG:NH1	2.28	0.48
41:BF:127:GLU:HB2	41:BF:196:LEU:HD11	1.95	0.48
42:BG:117:PHE:HE1	42:BG:120:LEU:N	2.12	0.48
45:BN:18:ALA:O	45:BN:21:LYS:N	2.46	0.48
46:BO:98:VAL:HG23	46:BO:98:VAL:O	2.14	0.48
47:BP:13:ASN:O	47:BP:14:LYS:CB	2.62	0.48
50:BS:29:PHE:C	50:BS:29:PHE:CD1	2.92	0.48
56:BY:27:VAL:HG12	56:BY:29:GLU:H	1.78	0.48
56:BY:38:ILE:O	56:BY:39:VAL:C	2.57	0.48
1:CA:491:G:H2'	1:CA:492:G:C8	2.45	0.48
1:CA:973:G:C3'	1:CA:974:A:H5''	2.41	0.48
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.49	0.48
1:CA:1463:C:O2'	1:CA:1464:G:H5'	2.14	0.48
1:CA:1479:C:O2'	1:CA:1480:G:H5'	2.13	0.48
2:CB:74:LYS:O	2:CB:75:LYS:C	2.56	0.48
3:CC:206:GLU:CG	3:CC:207:VAL:H	2.09	0.48
10:CJ:78:ASN:C	10:CJ:79:ARG:NH1	2.72	0.48
11:CK:98:LEU:O	11:CK:101:SER:OG	2.30	0.48
16:CP:33:ILE:O	16:CP:33:ILE:HG22	2.14	0.48
18:CR:25:THR:C	18:CR:26:LEU:HD23	2.38	0.48
20:CT:52:ALA:O	20:CT:53:LEU:C	2.56	0.48
20:CT:93:GLU:N	20:CT:93:GLU:OE1	2.46	0.48
23:CW:71:C:H2'	23:CW:72:A:H8	1.79	0.48
25:CY:170:ARG:HH22	25:CY:208:GLN:HE22	1.62	0.48
34:D8:61:LEU:N	34:D8:63:PRO:HD2	2.28	0.48
36:DA:11:G:N2	36:DA:2628:C:OP1	2.47	0.48
36:DA:478:A:C6	36:DA:480:A:C6	3.02	0.48
36:DA:615:G:OP1	41:DF:182:ASN:HB3	2.14	0.48
36:DA:833:U:H2'	36:DA:834:C:C6	2.48	0.48
36:DA:870:A:C2	36:DA:871:U:H1'	2.49	0.48
36:DA:1344:G:H4'	36:DA:1384:A:C5	2.49	0.48
36:DA:1528:A:N1	36:DA:1542:A:H2	2.11	0.48
36:DA:1773:A:H2	36:DA:1977:A:N1	2.11	0.48
36:DA:2056:G:N2	36:DA:2057:A:C4	2.82	0.48
36:DA:2170:A:H5''	38:DC:135:ARG:HE	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2290:G:H4'	36:DA:2381:C:O2'	2.14	0.48
36:DA:2469:A:O3'	48:DQ:56:ARG:NH1	2.47	0.48
36:DA:2488:A:O2'	36:DA:2489:G:H5'	2.14	0.48
37:DB:89:G:C6	37:DB:90:A:C2	3.01	0.48
38:DC:98:GLU:HA	38:DC:101:ILE:HD13	1.96	0.48
39:DD:26:LYS:O	39:DD:27:THR:CB	2.61	0.48
39:DD:35:LYS:N	39:DD:36:PRO:HD2	2.28	0.48
39:DD:267:SER:HA	39:DD:270:ILE:HD11	1.95	0.48
40:DE:184:VAL:O	40:DE:186:GLY:N	2.42	0.48
41:DF:8:GLN:HG2	41:DF:126:VAL:HG12	1.95	0.48
43:DH:44:VAL:C	43:DH:46:GLU:N	2.71	0.48
43:DH:85:LYS:HD3	43:DH:85:LYS:O	2.13	0.48
48:DQ:12:GLN:NE2	48:DQ:73:PRO:HD2	2.25	0.48
49:DR:53:HIS:C	49:DR:53:HIS:ND1	2.72	0.48
51:DT:74:ARG:C	51:DT:75:ILE:HD12	2.39	0.48
56:DY:55:TYR:O	56:DY:56:PRO:C	2.57	0.48
56:DY:96:ILE:CG2	56:DY:99:CYS:HB3	2.43	0.48
57:DZ:77:ASP:O	57:DZ:77:ASP:CG	2.57	0.48
1:AA:194:C:C2'	1:AA:195:A:H5''	2.42	0.47
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.14	0.47
1:AA:1080:A:C5'	5:AE:16:THR:HG21	2.44	0.47
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.49	0.47
1:AA:1431:C:O2'	1:AA:1432:G:H5'	2.14	0.47
3:AC:60:ALA:O	3:AC:61:ALA:CB	2.62	0.47
10:AJ:54:PHE:CD1	10:AJ:55:LYS:HE3	2.49	0.47
11:AK:59:TYR:CE2	11:AK:63:LEU:HD11	2.49	0.47
18:AR:37:VAL:CG2	18:AR:38:GLU:H	2.26	0.47
19:AS:29:ARG:HD2	19:AS:29:ARG:N	2.29	0.47
22:AV:18:G:C5	22:AV:57:G:O6	2.66	0.47
23:AW:56:C:O2	23:AW:56:C:C2'	2.59	0.47
25:AY:150:ILE:C	25:AY:152:THR:H	2.22	0.47
25:AY:230:LYS:NZ	25:AY:230:LYS:CB	2.76	0.47
25:AY:253:LEU:HD12	25:AY:253:LEU:N	2.29	0.47
25:AY:406:GLU:CB	25:AY:407:PRO:CD	2.92	0.47
25:AY:486:THR:HG23	25:AY:600:VAL:HG13	1.94	0.47
25:AY:497:PHE:O	25:AY:498:ILE:O	2.32	0.47
36:BA:112:U:C2'	36:BA:113:G:H5'	2.44	0.47
36:BA:271(Z):C:H2'	36:BA:272:G:C8	2.48	0.47
36:BA:750:A:H3'	36:BA:751:A:H5''	1.96	0.47
36:BA:833:U:H2'	36:BA:834:C:C6	2.49	0.47
36:BA:1220:A:H3'	36:BA:1221:C:C5'	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1266:G:O2'	36:BA:2012:G:O6	2.31	0.47
36:BA:1450(A):C:H2'	36:BA:1451:C:C6	2.48	0.47
36:BA:2062:A:O4'	36:BA:2062:A:N3	2.47	0.47
36:BA:2190:G:O2'	36:BA:2191:G:H5'	2.14	0.47
36:BA:2205:C:O2	36:BA:2205:C:H2'	2.12	0.47
36:BA:2307:G:C2	36:BA:2308:G:H5''	2.49	0.47
36:BA:2321:G:H2'	36:BA:2321:G:N3	2.29	0.47
36:BA:2415:G:C2	36:BA:2416:C:C2	3.02	0.47
36:BA:2658:C:C2'	36:BA:2659:G:H5'	2.43	0.47
36:BA:2732:G:H5''	36:BA:2733:A:C8	2.49	0.47
37:BB:87:G:H2'	37:BB:88:C:H5''	1.95	0.47
39:BD:26:LYS:O	39:BD:27:THR:CB	2.62	0.47
43:BH:105:LEU:HD23	43:BH:113:VAL:O	2.14	0.47
45:BN:1:MET:C	45:BN:2:LYS:HD2	2.38	0.47
46:BO:13:ASN:HD21	46:BO:97:ARG:CG	2.27	0.47
47:BP:110:TYR:CE2	47:BP:111:ARG:NH1	2.81	0.47
50:BS:25:ARG:HG2	50:BS:26:LEU:H	1.77	0.47
51:BT:57:PHE:CG	51:BT:58:ASN:N	2.82	0.47
53:BV:13:ARG:HG3	53:BV:13:ARG:HH11	1.78	0.47
55:BX:26:TYR:CE2	55:BX:89:ILE:HB	2.49	0.47
55:BX:29:TRP:CZ3	55:BX:76:ARG:HB2	2.49	0.47
57:BZ:55:HIS:O	57:BZ:57:ILE:HD12	2.14	0.47
1:CA:333:G:O2'	1:CA:334:C:H5'	2.13	0.47
1:CA:538:G:H2'	1:CA:539:A:C8	2.49	0.47
1:CA:779:C:O2'	1:CA:780:A:H5'	2.14	0.47
1:CA:781:A:H2'	1:CA:782:A:H5'	1.94	0.47
1:CA:1205:U:O2'	3:CC:195:VAL:HG23	2.14	0.47
6:CF:78:GLU:O	6:CF:81:ILE:HG13	2.14	0.47
11:CK:22:HIS:C	11:CK:22:HIS:CD2	2.92	0.47
12:CL:81:SER:O	12:CL:83:VAL:HG23	2.14	0.47
16:CP:9:PHE:CE2	16:CP:18:ARG:NE	2.82	0.47
16:CP:18:ARG:HD3	16:CP:35:LYS:HD2	1.96	0.47
25:CY:603:GLU:C	25:CY:676:TYR:HD1	2.21	0.47
26:D0:49:LYS:HG3	26:D0:80:HIS:ND1	2.28	0.47
30:D4:22:ILE:CG2	30:D4:23:GLU:N	2.76	0.47
32:D6:14:THR:HG23	32:D6:50:ARG:HG2	1.96	0.47
36:DA:271(E):U:H3	36:DA:271(S):G:H1	1.62	0.47
36:DA:287:C:H2'	36:DA:288:C:C6	2.49	0.47
36:DA:460:A:H2'	36:DA:461:C:O4'	2.13	0.47
36:DA:481:G:OP2	56:DY:47:LYS:HD3	2.14	0.47
36:DA:595:C:H42	36:DA:662:G:H1	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:718:A:H2'	36:DA:719:C:O4'	2.14	0.47
36:DA:768:G:H2'	36:DA:769:G:C8	2.49	0.47
36:DA:824:A:H1'	36:DA:2358:G:N7	2.29	0.47
36:DA:996:A:O3'	52:DU:92:ARG:HG3	2.14	0.47
36:DA:1119:C:H2'	36:DA:1120:G:H8	1.79	0.47
36:DA:1207:C:H2'	36:DA:1208:C:H6	1.79	0.47
36:DA:1278:A:H4'	49:DR:34:ILE:CG2	2.44	0.47
36:DA:1485:G:N3	36:DA:1505:C:N3	2.62	0.47
36:DA:1495:A:N3	36:DA:1496:A:C2	2.82	0.47
36:DA:1668:A:N6	36:DA:1676:A:H61	2.11	0.47
36:DA:2282:G:H5''	36:DA:2283:C:O4'	2.14	0.47
36:DA:2850:A:H2	49:DR:61:HIS:CD2	2.32	0.47
37:DB:87:G:C2'	37:DB:88:C:H5''	2.44	0.47
39:DD:245:PRO:O	39:DD:246:PRO:C	2.57	0.47
43:DH:137:ASP:O	43:DH:138:LYS:HB2	2.14	0.47
46:DO:98:VAL:O	46:DO:98:VAL:HG23	2.14	0.47
47:DP:71:VAL:C	47:DP:73:GLY:N	2.71	0.47
47:DP:83:VAL:H	47:DP:115:LEU:HD21	1.79	0.47
47:DP:107:LYS:C	47:DP:109:GLY:H	2.22	0.47
49:DR:63:ARG:NH2	49:DR:77:ARG:HG2	2.28	0.47
50:DS:29:PHE:C	50:DS:29:PHE:CD1	2.90	0.47
50:DS:35:ILE:C	50:DS:36:TYR:HD1	2.22	0.47
50:DS:77:ALA:O	50:DS:78:LEU:C	2.57	0.47
50:DS:93:LYS:O	50:DS:94:TYR:C	2.57	0.47
57:DZ:56:VAL:HG13	57:DZ:69:THR:O	2.13	0.47
1:AA:423:G:H2'	1:AA:424:G:H5'	1.96	0.47
1:AA:692:U:O4	11:AK:53:SER:HA	2.13	0.47
1:AA:1277:C:H2'	1:AA:1278:U:C5'	2.36	0.47
1:AA:1316:G:H4'	14:AN:18:VAL:HG12	1.96	0.47
1:AA:1347:G:H3'	9:AI:108:VAL:O	2.14	0.47
5:AE:12:LEU:CD1	5:AE:31:LEU:HB3	2.44	0.47
5:AE:144:THR:C	5:AE:146:ALA:N	2.70	0.47
6:AF:15:ASP:O	6:AF:17:SER:N	2.48	0.47
8:AH:10:LEU:HD22	8:AH:83:ILE:CD1	2.39	0.47
8:AH:31:PHE:O	8:AH:34:GLU:HB2	2.15	0.47
12:AL:90:VAL:C	12:AL:92:ASP:N	2.70	0.47
16:AP:22:THR:OG1	16:AP:23:ASP:N	2.47	0.47
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.14	0.47
17:AQ:18:THR:HG23	17:AQ:44:ALA:O	2.14	0.47
22:AV:19:G:H1	22:AV:56:C:H42	1.62	0.47
25:AY:14:ASN:O	25:AY:101:LEU:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:359:HIS:C	25:AY:361:ASN:H	2.22	0.47
25:AY:526:VAL:HB	25:AY:566:THR:CA	2.34	0.47
26:B0:20:ARG:HH11	26:B0:20:ARG:HG2	1.79	0.47
28:B2:22:GLU:C	28:B2:24:LEU:N	2.70	0.47
28:B2:61:LEU:HA	28:B2:64:LEU:HB3	1.96	0.47
33:B7:38:GLY:O	36:BA:458:G:H2'	2.13	0.47
36:BA:281:G:N2	36:BA:358:U:C5	2.81	0.47
36:BA:544:G:H21	36:BA:547:A:H2'	1.78	0.47
36:BA:1348:G:C3'	36:BA:1349:A:H5''	2.44	0.47
36:BA:1396:U:H2'	36:BA:1396:U:O2	2.13	0.47
36:BA:1485:G:N3	36:BA:1505:C:N3	2.62	0.47
36:BA:1599:C:H2'	36:BA:1600:C:H6	1.78	0.47
36:BA:1839:G:H2'	36:BA:1839:G:N3	2.29	0.47
36:BA:2454:G:O2'	36:BA:2455:G:H5'	2.14	0.47
36:BA:2531:A:OP2	43:BH:176:ALA:HB3	2.14	0.47
36:BA:2747:G:O2'	43:BH:67:LEU:HD12	2.14	0.47
36:BA:2750:A:H2'	36:BA:2752:C:N4	2.29	0.47
36:BA:2882:A:H5''	49:BR:98:LEU:HD21	1.95	0.47
38:BC:176:VAL:HG21	38:BC:190:ILE:CD1	2.44	0.47
39:BD:25:THR:O	39:BD:26:LYS:C	2.55	0.47
39:BD:134:ARG:HG3	39:BD:135:PHE:CD1	2.49	0.47
41:BF:198:ALA:C	41:BF:201:VAL:HG12	2.38	0.47
42:BG:40:ASN:ND2	42:BG:41:GLN:H	2.11	0.47
42:BG:101:ILE:O	42:BG:104:GLU:HB3	2.14	0.47
43:BH:85:LYS:HD3	43:BH:85:LYS:O	2.14	0.47
45:BN:30:ILE:O	45:BN:34:LEU:CD2	2.62	0.47
45:BN:65:LYS:NZ	45:BN:65:LYS:CB	2.77	0.47
46:BO:120:GLU:OE2	46:BO:122:LEU:HD21	2.14	0.47
48:BQ:32:TYR:N	48:BQ:32:TYR:CD1	2.82	0.47
49:BR:12:ARG:HH11	49:BR:12:ARG:CG	2.27	0.47
53:BV:28:GLU:CB	53:BV:31:ALA:HB2	2.31	0.47
53:BV:66:ARG:NH1	53:BV:88:ARG:HE	2.12	0.47
54:BW:109:GLU:CD	54:BW:109:GLU:N	2.69	0.47
56:BY:4:LYS:HD2	56:BY:32:PRO:HG3	1.95	0.47
57:BZ:131:ARG:HH11	57:BZ:131:ARG:HG2	1.79	0.47
1:CA:525:C:OP1	12:CL:91:LYS:HE2	2.13	0.47
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	1.97	0.47
1:CA:1382:C:H2'	1:CA:1383:C:H6	1.79	0.47
2:CB:84:GLU:HB3	2:CB:219:VAL:CG2	2.42	0.47
3:CC:119:ARG:O	3:CC:123:GLN:HG3	2.13	0.47
4:CD:148:VAL:HG12	4:CD:152:SER:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:70:ILE:HG21	12:CL:77:LEU:HD12	1.95	0.47
13:CM:63:THR:HG22	13:CM:64:TRP:N	2.29	0.47
15:CO:48:LYS:HD3	15:CO:48:LYS:HA	1.67	0.47
19:CS:29:ARG:N	19:CS:29:ARG:HD2	2.28	0.47
19:CS:31:ILE:CG2	19:CS:49:ILE:HA	2.41	0.47
23:CW:34:C:H2'	23:CW:35:A:H5''	1.80	0.47
25:CY:491:VAL:HG13	25:CY:492:ASP:N	2.29	0.47
26:D0:34:GLY:HA3	36:DA:2353:G:H1'	1.96	0.47
28:D2:50:ILE:C	28:D2:52:ASP:N	2.72	0.47
31:D5:25:LEU:CD1	54:DW:19:LEU:HB3	2.44	0.47
34:D8:34:TRP:HB2	36:DA:2420:C:OP1	2.14	0.47
36:DA:238:C:H2'	36:DA:239:U:O4'	2.14	0.47
36:DA:302:C:H2'	36:DA:303:U:H6	1.78	0.47
36:DA:840:C:O2'	36:DA:1192:G:H4'	2.14	0.47
36:DA:880:G:H1	36:DA:897:C:H42	1.61	0.47
36:DA:1056:G:H4'	36:DA:1086:A:C8	2.50	0.47
36:DA:2287:A:N6	36:DA:2344:U:N3	2.53	0.47
36:DA:2305:A:H2'	36:DA:2306:C:O4'	2.13	0.47
39:DD:263:ARG:NH1	39:DD:263:ARG:CB	2.74	0.47
40:DE:152:LYS:HB3	45:DN:78:TYR:HA	1.96	0.47
42:DG:136:ARG:HH11	42:DG:136:ARG:HG2	1.79	0.47
47:DP:46:LYS:HG2	47:DP:52:GLU:CG	2.41	0.47
48:DQ:60:ARG:HB2	48:DQ:60:ARG:CZ	2.44	0.47
51:DT:53:ARG:HH11	51:DT:53:ARG:CB	2.16	0.47
51:DT:137:LYS:HG2	51:DT:138:ALA:N	2.29	0.47
54:DW:51:LEU:HD13	54:DW:51:LEU:C	2.40	0.47
55:DX:14:SER:O	55:DX:17:ALA:HB3	2.13	0.47
1:AA:56:U:H2'	1:AA:57:G:H8	1.76	0.47
1:AA:349:A:C2'	1:AA:350:G:H5''	2.41	0.47
1:AA:830:G:O2'	1:AA:831:U:H5'	2.14	0.47
1:AA:864:A:H2'	1:AA:865:A:C8	2.49	0.47
1:AA:1166:G:H5'	1:AA:1168:A:OP2	2.15	0.47
2:AB:7:VAL:C	2:AB:11:LEU:HG	2.39	0.47
4:AD:3:ARG:HG2	4:AD:118:ARG:HE	1.79	0.47
4:AD:53:ASP:O	4:AD:57:ARG:HD2	2.15	0.47
6:AF:21:LEU:O	6:AF:24:GLU:HB3	2.13	0.47
12:AL:38:THR:HG22	12:AL:57:LYS:O	2.14	0.47
19:AS:29:ARG:HB2	19:AS:48:THR:H	1.80	0.47
27:B1:25:LYS:HE2	36:BA:2396:G:H5'	1.96	0.47
27:B1:76:ARG:NH2	27:B1:95:LEU:HB2	2.30	0.47
28:B2:2:LYS:HE3	28:B2:52:ASP:OD2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:285:C:C2'	36:BA:286:C:C5'	2.92	0.47
36:BA:828:U:C5	36:BA:829:A:N6	2.82	0.47
36:BA:1188:U:C5'	53:BV:79:VAL:HG12	2.45	0.47
36:BA:1487:G:N3	36:BA:1487:G:H2'	2.28	0.47
36:BA:1608:A:C6	36:BA:1611:C:C2	3.02	0.47
36:BA:2079:U:H2'	36:BA:2080:G:H8	1.79	0.47
36:BA:2147:G:O2'	36:BA:2148:G:H5'	2.13	0.47
37:BB:8:U:H5'	37:BB:8:U:H6	1.80	0.47
37:BB:35:U:H5'	37:BB:36:C:OP2	2.14	0.47
39:BD:73:VAL:HG13	39:BD:120:GLY:HA2	1.95	0.47
41:BF:126:VAL:HG23	41:BF:127:GLU:N	2.28	0.47
42:BG:97:ASP:O	42:BG:101:ILE:N	2.47	0.47
44:BJ:134:UNK:O	44:BJ:135:UNK:O	2.32	0.47
45:BN:12:ARG:O	45:BN:50:ASP:HB3	2.14	0.47
45:BN:58:ASP:OD2	45:BN:59:LYS:HG2	2.14	0.47
45:BN:65:LYS:HB2	45:BN:69:GLN:HG3	1.96	0.47
45:BN:99:LEU:C	45:BN:99:LEU:HD13	2.40	0.47
45:BN:99:LEU:HD12	45:BN:122:VAL:HG21	1.96	0.47
47:BP:71:VAL:N	47:BP:72:PRO:CD	2.77	0.47
51:BT:6:LEU:O	51:BT:7:ILE:C	2.57	0.47
55:BX:47:PHE:CD2	55:BX:89:ILE:HG21	2.50	0.47
56:BY:97:ARG:HG3	56:BY:97:ARG:NH1	2.29	0.47
57:BZ:5:LEU:HB3	57:BZ:59:LEU:HD23	1.95	0.47
57:BZ:141:VAL:HG13	57:BZ:144:LEU:HD23	1.96	0.47
57:BZ:155:LEU:HD23	57:BZ:155:LEU:H	1.79	0.47
1:CA:277:C:C2'	1:CA:278:G:H5'	2.45	0.47
1:CA:1060:C:C5	3:CC:2:GLY:HA2	2.48	0.47
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.28	0.47
1:CA:1117:G:O3'	9:CI:104:ARG:HD2	2.15	0.47
1:CA:1134:G:N2	1:CA:1141:C:C2	2.82	0.47
1:CA:1426:C:H2'	1:CA:1427:U:H6	1.80	0.47
3:CC:82:GLU:N	3:CC:82:GLU:OE1	2.46	0.47
4:CD:179:GLU:C	4:CD:181:MET:H	2.22	0.47
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.14	0.47
7:CG:24:THR:O	7:CG:27:ILE:HG22	2.14	0.47
7:CG:92:SER:O	7:CG:93:PRO:C	2.55	0.47
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.15	0.47
10:CJ:8:LEU:HB2	10:CJ:70:ARG:O	2.14	0.47
10:CJ:49:VAL:HG21	14:CN:41:ARG:O	2.14	0.47
12:CL:90:VAL:C	12:CL:92:ASP:N	2.71	0.47
13:CM:67:GLU:O	13:CM:69:GLU:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:28:ARG:HG2	16:CP:29:ASP:OD1	2.14	0.47
20:CT:26:ASN:HD22	20:CT:27:LYS:N	2.11	0.47
20:CT:27:LYS:O	20:CT:27:LYS:HD3	2.14	0.47
26:D0:7:LEU:HD12	48:DQ:85:LYS:HE2	1.97	0.47
34:D8:13:ARG:HD2	47:DP:61:ARG:HH11	1.79	0.47
36:DA:30:G:O2'	36:DA:31:C:H5'	2.15	0.47
36:DA:84:A:H2	36:DA:98:G:N3	2.12	0.47
36:DA:492:A:C2'	36:DA:493:G:H5'	2.44	0.47
36:DA:588:U:H1'	41:DF:90:PHE:HB3	1.95	0.47
36:DA:654(P):C:H2'	36:DA:654(Q):C:H5'	1.96	0.47
36:DA:1843:C:H2'	36:DA:1844:C:C6	2.49	0.47
36:DA:2033:A:O2'	36:DA:2034:U:P	2.72	0.47
36:DA:2577:A:C5'	36:DA:2578:G:H5'	2.41	0.47
36:DA:2580:U:H4'	40:DE:130:GLY:HA3	1.96	0.47
38:DC:191:ARG:HH11	38:DC:191:ARG:HG3	1.79	0.47
38:DC:211:ARG:HG3	38:DC:211:ARG:NH1	2.28	0.47
39:DD:92:ILE:H	39:DD:92:ILE:HD13	1.78	0.47
42:DG:73:ALA:CB	42:DG:87:PRO:HG3	2.41	0.47
43:DH:152:ARG:O	43:DH:153:LYS:C	2.57	0.47
47:DP:100:LEU:HA	47:DP:103:ALA:HB3	1.95	0.47
52:DU:17:ILE:CG2	52:DU:39:LEU:HD12	2.44	0.47
56:DY:27:VAL:HG12	56:DY:29:GLU:H	1.79	0.47
56:DY:46:LYS:HB2	56:DY:62:GLU:CG	2.45	0.47
57:DZ:44:PHE:CZ	57:DZ:48:PHE:CD2	3.00	0.47
1:AA:931:C:H1'	1:AA:1387:G:N2	2.30	0.47
3:AC:128:PHE:O	3:AC:130:VAL:N	2.48	0.47
4:AD:187:ARG:HH11	4:AD:187:ARG:HG2	1.78	0.47
6:AF:10:LEU:HB2	6:AF:59:TYR:HB3	1.97	0.47
7:AG:103:TRP:CE2	7:AG:137:LYS:HD3	2.50	0.47
11:AK:111:ASP:HA	18:AR:84:LYS:CD	2.34	0.47
17:AQ:9:VAL:CG1	17:AQ:56:VAL:HG22	2.43	0.47
18:AR:29:PHE:HD1	18:AR:29:PHE:N	1.89	0.47
18:AR:68:LYS:O	18:AR:69:THR:C	2.58	0.47
20:AT:27:LYS:HD3	20:AT:27:LYS:O	2.14	0.47
25:AY:84:THR:CG2	59:AY:701:FUA:O3	2.51	0.47
25:AY:513:LYS:O	25:AY:515:GLU:OE1	2.32	0.47
26:B0:54:GLY:O	26:B0:55:ARG:C	2.57	0.47
29:B3:14:GLY:O	36:BA:969:U:H4'	2.14	0.47
36:BA:154(A):C:C5	36:BA:155:U:H1'	2.50	0.47
36:BA:680:G:H2'	36:BA:681:G:H8	1.76	0.47
36:BA:764:A:N3	39:BD:213:ARG:NH1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:979:G:H2'	36:BA:982:C:N4	2.30	0.47
36:BA:1278:A:H4'	49:BR:34:ILE:CG2	2.44	0.47
36:BA:2115:G:C3'	36:BA:2116:G:H5''	2.44	0.47
36:BA:2157:G:O2'	36:BA:2158:A:O5'	2.33	0.47
39:BD:24:ILE:HG12	39:BD:25:THR:N	2.28	0.47
39:BD:65:ILE:HD13	39:BD:65:ILE:N	2.29	0.47
39:BD:227:ASN:O	39:BD:230:ASP:N	2.45	0.47
40:BE:23:VAL:HG12	40:BE:173:VAL:HG21	1.96	0.47
40:BE:51:PHE:CD1	40:BE:52:LEU:N	2.82	0.47
41:BF:160:ASN:ND2	41:BF:162:LEU:HD13	2.28	0.47
47:BP:98:GLU:O	47:BP:101:VAL:HG22	2.14	0.47
48:BQ:135:ASP:HB2	48:BQ:136:ALA:H	1.58	0.47
49:BR:11:ASN:O	49:BR:12:ARG:CB	2.62	0.47
52:BU:17:ILE:HG23	52:BU:39:LEU:HD12	1.94	0.47
55:BX:57:LEU:N	55:BX:57:LEU:CD1	2.78	0.47
57:BZ:110:GLY:HA2	57:BZ:145:GLU:OE1	2.14	0.47
1:CA:390:C:H2'	1:CA:391:G:C8	2.49	0.47
1:CA:499:A:H4'	1:CA:500:G:OP1	2.14	0.47
1:CA:745:C:H2'	1:CA:746:A:H8	1.79	0.47
1:CA:1070:U:O2'	1:CA:1071:C:H5'	2.14	0.47
1:CA:1399:C:C2	1:CA:1401:G:C5	3.02	0.47
1:CA:1447:A:N3	1:CA:1447:A:H2'	2.28	0.47
2:CB:170:GLU:O	2:CB:171:ALA:C	2.57	0.47
3:CC:29:TYR:OH	14:CN:54:PRO:HD2	2.14	0.47
6:CF:16:GLN:CD	6:CF:16:GLN:H	2.22	0.47
6:CF:97:PHE:HB2	18:CR:32:ARG:HH21	1.79	0.47
7:CG:5:ARG:N	7:CG:5:ARG:HD2	2.30	0.47
7:CG:23:VAL:O	7:CG:27:ILE:HB	2.14	0.47
8:CH:104:ARG:CZ	8:CH:138:TRP:CZ3	2.97	0.47
8:CH:116:LYS:HD2	8:CH:129:VAL:HG11	1.96	0.47
13:CM:58:GLU:O	13:CM:62:ASN:HB2	2.13	0.47
14:CN:47:LEU:O	14:CN:48:ALA:C	2.55	0.47
15:CO:82:ILE:HD13	15:CO:82:ILE:O	2.14	0.47
17:CQ:52:LYS:CD	17:CQ:55:ASP:OD2	2.63	0.47
19:CS:9:VAL:HG23	30:D4:53:GLU:OE2	2.14	0.47
19:CS:37:ARG:H	19:CS:37:ARG:HG3	1.41	0.47
25:CY:174:PHE:CD2	25:CY:267:LYS:HD3	2.49	0.47
25:CY:238:THR:C	25:CY:240:GLU:H	2.22	0.47
29:D3:6:VAL:HB	29:D3:54:VAL:CG1	2.44	0.47
31:D5:39:MET:HG3	54:DW:34:ASN:ND2	2.29	0.47
32:D6:5:VAL:HG22	36:DA:2283:C:OP1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:8:LYS:HA	32:D6:27:LYS:HA	1.96	0.47
32:D6:15:GLU:CD	32:D6:44:ARG:CZ	2.87	0.47
36:DA:20:C:O2'	36:DA:21:A:H5'	2.14	0.47
36:DA:301:G:H1'	36:DA:302:C:C6	2.49	0.47
36:DA:777:A:C2	36:DA:778:G:C4	3.01	0.47
36:DA:1237:A:O2'	36:DA:1238:G:P	2.73	0.47
36:DA:1335:U:H2'	36:DA:1336:A:H8	1.79	0.47
36:DA:1666:G:O3'	46:DO:6:THR:HG23	2.14	0.47
36:DA:2735:G:H2'	36:DA:2736:G:C8	2.49	0.47
39:DD:209:ALA:C	39:DD:210:GLY:O	2.55	0.47
40:DE:38:THR:O	40:DE:42:ASP:HB2	2.14	0.47
40:DE:117:MET:CA	40:DE:122:PHE:H	2.06	0.47
41:DF:20:LEU:O	41:DF:21:ALA:O	2.33	0.47
42:DG:4:ASP:O	42:DG:5:VAL:HG23	2.14	0.47
43:DH:41:MET:HE3	43:DH:42:ARG:O	2.14	0.47
43:DH:141:VAL:O	43:DH:142:GLY:C	2.57	0.47
49:DR:10:LEU:CB	49:DR:17:ARG:HD3	2.34	0.47
51:DT:104:ASN:O	51:DT:106:SER:N	2.46	0.47
52:DU:47:TYR:CA	52:DU:50:ARG:NH1	2.72	0.47
53:DV:19:LYS:NZ	53:DV:22:VAL:HG13	2.29	0.47
55:DX:31:HIS:O	55:DX:32:PRO:C	2.57	0.47
56:DY:52:SER:N	56:DY:53:PRO:CD	2.77	0.47
1:AA:390:C:H2'	1:AA:391:G:H8	1.80	0.47
1:AA:930:C:O2'	1:AA:931:C:H5'	2.14	0.47
1:AA:1104:G:P	2:AB:111:ARG:HD2	2.55	0.47
2:AB:207:ALA:O	2:AB:210:SER:N	2.47	0.47
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.39	0.47
8:AH:109:ILE:HG13	8:AH:120:THR:HB	1.97	0.47
9:AI:7:THR:O	9:AI:83:ARG:HD2	2.14	0.47
10:AJ:30:SER:HA	10:AJ:80:LYS:HE2	1.96	0.47
12:AL:47:LYS:CD	12:AL:48:PRO:HD3	2.43	0.47
20:AT:16:HIS:O	20:AT:19:SER:HB3	2.15	0.47
25:AY:100:VAL:HG23	25:AY:329:ARG:HG2	1.97	0.47
25:AY:117:GLN:HE22	25:AY:120:THR:HG23	1.79	0.47
31:B5:35:GLU:O	31:B5:36:CYS:CB	2.62	0.47
31:B5:41:PRO:O	31:B5:44:THR:OG1	2.27	0.47
32:B6:5:VAL:CG1	32:B6:6:ARG:N	2.77	0.47
34:B8:51:ALA:N	34:B8:53:PRO:HD2	2.30	0.47
36:BA:299:A:H5'	56:BY:97:ARG:NE	2.30	0.47
36:BA:682:G:H2'	36:BA:683:C:C6	2.50	0.47
36:BA:769:G:H5'	36:BA:1379:A:N6	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:883:G:N2	36:BA:894:C:C2	2.83	0.47
36:BA:1168:G:H2'	36:BA:1169:G:C8	2.49	0.47
36:BA:1683:C:H2'	36:BA:1684:C:C6	2.48	0.47
36:BA:2272:U:H5''	36:BA:2273:A:OP1	2.14	0.47
36:BA:2580:U:H4'	40:BE:130:GLY:HA3	1.95	0.47
36:BA:2679:A:H2'	36:BA:2680:C:H6	1.79	0.47
36:BA:2840:C:H5''	49:BR:53:HIS:CD2	2.50	0.47
38:BC:197:LEU:O	38:BC:198:GLU:C	2.57	0.47
39:BD:24:ILE:HG23	39:BD:25:THR:N	2.23	0.47
39:BD:261:LYS:NZ	39:BD:263:ARG:NH2	2.62	0.47
42:BG:71:THR:OG1	42:BG:89:GLY:HA3	2.14	0.47
47:BP:112:LEU:HD13	47:BP:112:LEU:C	2.39	0.47
52:BU:75:ASN:ND2	52:BU:77:SER:OG	2.47	0.47
1:CA:312:C:H2'	1:CA:313:A:C8	2.49	0.47
1:CA:376:G:OP2	16:CP:67:THR:HG21	2.13	0.47
1:CA:803:G:C6	1:CA:804:U:N3	2.82	0.47
1:CA:1403:C:H1'	1:CA:1500:A:N1	2.29	0.47
1:CA:1431:C:H2'	1:CA:1432:G:C5'	2.43	0.47
2:CB:24:TRP:CH2	2:CB:26:PRO:HA	2.50	0.47
2:CB:131:PRO:HG2	2:CB:134:GLU:HG2	1.96	0.47
5:CE:147:ASP:HA	5:CE:150:ARG:NH1	2.29	0.47
9:CI:97:LYS:O	9:CI:98:PRO:C	2.58	0.47
10:CJ:96:ILE:HD13	10:CJ:96:ILE:N	2.26	0.47
11:CK:21:ILE:HA	11:CK:30:VAL:HG12	1.95	0.47
13:CM:66:LEU:N	13:CM:66:LEU:CD1	2.73	0.47
17:CQ:27:PHE:CZ	17:CQ:36:ILE:HD11	2.50	0.47
23:CW:36:U:O5'	23:CW:36:U:C6	2.67	0.47
25:CY:628:ARG:HH11	25:CY:628:ARG:HG2	1.79	0.47
26:D0:54:GLY:O	26:D0:55:ARG:C	2.57	0.47
27:D1:18:ILE:HD12	27:D1:18:ILE:N	2.29	0.47
28:D2:59:ARG:O	28:D2:62:THR:N	2.47	0.47
32:D6:43:CYS:CB	32:D6:44:ARG:HH21	2.27	0.47
36:DA:82:G:H5''	36:DA:296:C:C5'	2.43	0.47
36:DA:507:A:H4'	36:DA:509:C:C6	2.50	0.47
36:DA:773:U:H2'	36:DA:774:A:H5'	1.97	0.47
36:DA:1361:G:O2'	36:DA:1362:C:H5'	2.15	0.47
36:DA:1884:A:C3'	36:DA:1885:A:H5''	2.43	0.47
36:DA:2011:U:C2'	36:DA:2012:G:H5'	2.45	0.47
36:DA:2062:A:O4'	36:DA:2062:A:N3	2.47	0.47
36:DA:2103:C:H1'	36:DA:2187:G:N1	2.28	0.47
36:DA:2321:G:H2'	36:DA:2321:G:N3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2352:A:C2'	36:DA:2353:G:H5'	2.44	0.47
37:DB:20:C:H2'	37:DB:21:G:H5''	1.96	0.47
37:DB:71:C:O2'	37:DB:72:G:H5'	2.15	0.47
37:DB:111:G:O2'	37:DB:112:U:H5'	2.14	0.47
39:DD:276:LYS:HD3	39:DD:276:LYS:C	2.40	0.47
40:DE:23:VAL:HG12	40:DE:173:VAL:HG21	1.95	0.47
40:DE:70:ALA:O	40:DE:72:VAL:N	2.47	0.47
40:DE:82:ARG:O	40:DE:84:PHE:N	2.48	0.47
40:DE:131:ALA:HB3	40:DE:134:ILE:CD1	2.45	0.47
43:DH:85:LYS:HE3	43:DH:145:ALA:CB	2.42	0.47
45:DN:99:LEU:HD13	45:DN:99:LEU:C	2.40	0.47
48:DQ:10:ARG:HB2	48:DQ:10:ARG:NH1	2.30	0.47
52:DU:91:ASP:O	52:DU:92:ARG:HB3	2.15	0.47
53:DV:5:VAL:CG2	53:DV:6:LYS:N	2.77	0.47
55:DX:14:SER:O	55:DX:15:GLU:C	2.58	0.47
56:DY:96:ILE:CD1	56:DY:99:CYS:SG	3.00	0.47
57:DZ:72:ARG:HH11	57:DZ:72:ARG:HG3	1.79	0.47
1:AA:80:G:C6	1:AA:90:U:H5'	2.48	0.47
1:AA:342:C:C2'	1:AA:343:U:H5'	2.44	0.47
1:AA:407:G:OP1	4:AD:115:ARG:CZ	2.63	0.47
1:AA:665:A:H2'	1:AA:725:G:N2	2.30	0.47
1:AA:1225:A:N3	1:AA:1225:A:C2'	2.74	0.47
1:AA:1344:C:O2'	1:AA:1345:U:H5'	2.13	0.47
2:AB:179:LYS:HB2	2:AB:179:LYS:NZ	2.30	0.47
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.15	0.47
12:AL:83:VAL:HG12	12:AL:84:LEU:N	2.30	0.47
13:AM:118:ALA:CB	13:AM:120:LYS:HE3	2.45	0.47
15:AO:75:PRO:O	15:AO:79:ARG:HG3	2.14	0.47
16:AP:33:ILE:O	16:AP:33:ILE:HG22	2.14	0.47
25:AY:210:ARG:HH11	25:AY:210:ARG:HG2	1.80	0.47
25:AY:220:ALA:O	25:AY:245:ALA:HB1	2.15	0.47
25:AY:384:ILE:O	25:AY:385:THR:O	2.32	0.47
25:AY:420:ASP:HB3	25:AY:472:VAL:CG1	2.44	0.47
25:AY:487:ILE:HB	25:AY:597:GLY:O	2.14	0.47
59:AY:701:FUA:O1	59:AY:701:FUA:C20	2.62	0.47
26:B0:10:THR:CG2	26:B0:11:ARG:N	2.78	0.47
32:B6:5:VAL:HG22	36:BA:2283:C:OP1	2.15	0.47
36:BA:363(F):A:O2'	36:BA:364:C:P	2.73	0.47
36:BA:428:A:H3'	36:BA:429:A:C8	2.49	0.47
36:BA:737:C:C2'	36:BA:738:G:H5'	2.44	0.47
36:BA:841:A:H5'	36:BA:841:A:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:958:U:C6	36:BA:958:U:C3'	2.98	0.47
36:BA:1453:U:H2'	36:BA:1455:G:C8	2.50	0.47
36:BA:1668:A:N7	36:BA:1674:G:C6	2.82	0.47
36:BA:2134:A:H1'	36:BA:2158:A:H2	1.80	0.47
36:BA:2735:G:H2'	36:BA:2736:G:C8	2.49	0.47
36:BA:2794:C:H42	36:BA:2801(A):A:N6	2.12	0.47
36:BA:2801(A):A:H4'	36:BA:2802:G:H8	1.78	0.47
40:BE:1:MET:O	40:BE:2:LYS:C	2.58	0.47
40:BE:87:GLU:O	40:BE:89:ASP:N	2.48	0.47
41:BF:28:ILE:HD13	41:BF:28:ILE:N	2.11	0.47
42:BG:82:LEU:HD23	42:BG:83:ARG:N	2.29	0.47
45:BN:9:VAL:HG12	45:BN:10:GLU:H	1.77	0.47
45:BN:10:GLU:OE2	45:BN:11:PRO:HD2	2.14	0.47
45:BN:43:THR:HG22	45:BN:45:ASN:HD22	1.80	0.47
48:BQ:56:ARG:HA	48:BQ:56:ARG:NE	2.29	0.47
53:BV:37:VAL:HG23	53:BV:37:VAL:O	2.15	0.47
55:BX:14:SER:O	55:BX:17:ALA:HB3	2.13	0.47
56:BY:91:GLU:O	56:BY:92:ASN:HB2	2.14	0.47
57:BZ:119:GLU:C	57:BZ:121:HIS:N	2.73	0.47
1:CA:265:G:H2'	1:CA:267:C:H5	1.79	0.47
1:CA:275:G:O2'	1:CA:276:G:H5'	2.14	0.47
1:CA:1007:C:H2'	1:CA:1008:C:C6	2.50	0.47
1:CA:1286:A:H2'	1:CA:1287:A:H4'	1.97	0.47
2:CB:77:ALA:HA	2:CB:80:ILE:HD13	1.95	0.47
3:CC:28:GLN:O	3:CC:29:TYR:C	2.58	0.47
4:CD:78:LEU:CD2	4:CD:96:LEU:HB2	2.44	0.47
4:CD:159:ARG:O	4:CD:163:GLU:N	2.47	0.47
8:CH:30:ARG:HB3	8:CH:30:ARG:NH1	2.29	0.47
14:CN:28:GLY:O	14:CN:29:ARG:O	2.31	0.47
16:CP:8:ARG:CB	16:CP:28:ARG:NH1	2.77	0.47
23:CW:50:U:H2'	23:CW:51:C:C6	2.50	0.47
23:CW:66:C:N4	23:CW:67:C:N4	2.63	0.47
25:CY:119:GLU:C	25:CY:121:VAL:N	2.73	0.47
25:CY:315:LYS:HZ3	25:CY:317:MET:HG2	1.77	0.47
26:D0:26:TYR:O	26:D0:29:GLN:HB2	2.15	0.47
28:D2:7:ARG:O	28:D2:11:GLU:HG3	2.14	0.47
36:DA:142:A:H1'	36:DA:1408:C:C1'	2.34	0.47
36:DA:544:G:H21	36:DA:547:A:H2'	1.78	0.47
36:DA:797:C:H2'	36:DA:798:G:C8	2.50	0.47
36:DA:1044:G:H1'	36:DA:1112:G:N2	2.30	0.47
36:DA:1314:C:H5'	36:DA:1314:C:C6	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1754:C:H2'	36:DA:1755:A:O4'	2.15	0.47
37:DB:8:U:H5'	37:DB:8:U:H6	1.79	0.47
37:DB:87:G:H2'	37:DB:88:C:H5''	1.95	0.47
39:DD:26:LYS:O	39:DD:27:THR:CG2	2.62	0.47
40:DE:197:ILE:HG12	40:DE:197:ILE:O	2.15	0.47
47:DP:47:ASP:HB3	47:DP:48:PRO:O	2.15	0.47
48:DQ:43:THR:HG22	48:DQ:94:VAL:HG12	1.96	0.47
51:DT:89:VAL:HG12	51:DT:91:ARG:H	1.79	0.47
1:AA:308:C:H2'	1:AA:309:G:H8	1.80	0.47
1:AA:413:G:H21	1:AA:428:G:H1'	1.79	0.47
1:AA:458:C:H3'	1:AA:460:G:H8	1.79	0.47
1:AA:715:A:H2'	1:AA:716:A:C8	2.50	0.47
1:AA:1007:C:H2'	1:AA:1008:C:C6	2.49	0.47
1:AA:1117:G:O3'	9:AI:104:ARG:HD2	2.14	0.47
1:AA:1308:U:C5	13:AM:99:ARG:NH1	2.83	0.47
1:AA:1367:C:N3	1:AA:1368:G:C8	2.83	0.47
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.49	0.47
1:AA:1440:C:H2'	1:AA:1441:G:H5'	1.95	0.47
2:AB:111:ARG:O	2:AB:145:LEU:HD12	2.15	0.47
4:AD:78:LEU:CD2	4:AD:96:LEU:HB2	2.45	0.47
4:AD:98:GLU:HG2	4:AD:189:PRO:HG3	1.97	0.47
7:AG:102:ARG:HG2	7:AG:106:GLN:HE21	1.79	0.47
8:AH:30:ARG:HH11	8:AH:30:ARG:CB	2.28	0.47
8:AH:116:LYS:HD2	8:AH:129:VAL:HG11	1.95	0.47
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.97	0.47
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	2.15	0.47
11:AK:98:LEU:O	11:AK:101:SER:OG	2.31	0.47
14:AN:28:GLY:O	14:AN:29:ARG:O	2.33	0.47
15:AO:53:HIS:O	15:AO:57:LEU:HD23	2.14	0.47
17:AQ:24:GLU:O	17:AQ:25:ARG:HB3	2.14	0.47
18:AR:35:ARG:O	18:AR:37:VAL:N	2.45	0.47
19:AS:5:LEU:HG	19:AS:10:PHE:CD1	2.50	0.47
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.95	0.47
20:AT:74:LYS:HB2	20:AT:75:ASN:H	1.43	0.47
23:AW:57:A:O2'	23:AW:58:A:H5'	2.14	0.47
25:AY:114:VAL:O	25:AY:116:PRO:HD3	2.15	0.47
25:AY:176:GLY:HA2	25:AY:188:TYR:CD2	2.50	0.47
25:AY:543:GLN:O	25:AY:547:GLU:HB2	2.15	0.47
25:AY:609:GLU:HB3	25:AY:642:VAL:CG1	2.44	0.47
25:AY:689:LYS:HG3	25:AY:690:GLY:N	2.30	0.47
26:B0:11:ARG:HH11	26:B0:11:ARG:CB	2.26	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:78:LYS:O	27:B1:80:LEU:N	2.46	0.47
29:B3:50:VAL:O	29:B3:51:ALA:C	2.57	0.47
32:B6:15:GLU:OE2	32:B6:44:ARG:CZ	2.63	0.47
32:B6:54:ILE:HD13	36:BA:2420:C:C5'	2.45	0.47
33:B7:36:GLN:C	33:B7:38:GLY:H	2.22	0.47
34:B8:28:GLY:HA2	34:B8:32:LEU:HD21	1.96	0.47
34:B8:59:LYS:HB2	34:B8:59:LYS:HE3	1.65	0.47
36:BA:84:A:H2	36:BA:98:G:N3	2.12	0.47
36:BA:152:G:H1	36:BA:174:C:H42	1.61	0.47
36:BA:184:C:H2'	36:BA:185:U:C6	2.49	0.47
36:BA:212:G:H8	36:BA:212:G:C5'	2.20	0.47
36:BA:307:G:N2	36:BA:310:A:O5'	2.47	0.47
36:BA:409:C:H2'	36:BA:410:G:H8	1.78	0.47
36:BA:667:U:H2'	36:BA:668:G:O4'	2.15	0.47
36:BA:712:G:C2'	36:BA:713:G:H5'	2.44	0.47
36:BA:1336:A:H2'	36:BA:1337:G:H8	1.78	0.47
36:BA:1436:G:O2'	36:BA:1437:C:H5'	2.14	0.47
36:BA:1495:A:N3	36:BA:1496:A:C2	2.83	0.47
36:BA:1525:G:H2'	36:BA:1526:G:H8	1.78	0.47
36:BA:1538:G:H2'	36:BA:1539:G:H8	1.75	0.47
36:BA:1718:G:O2'	36:BA:1719:G:H5'	2.14	0.47
36:BA:1985:G:O2'	36:BA:1986:A:H5'	2.15	0.47
36:BA:2039:C:H2'	36:BA:2040:C:H6	1.79	0.47
36:BA:2297:C:O2'	36:BA:2298:A:H5'	2.15	0.47
36:BA:2373:G:H2'	36:BA:2374:C:C6	2.50	0.47
36:BA:2835:A:N6	36:BA:2878:U:H3'	2.30	0.47
36:BA:2876:G:H4'	51:BT:3:ARG:CD	2.45	0.47
36:BA:2888:C:H2'	36:BA:2889:C:C6	2.50	0.47
37:BB:53:A:C2	37:BB:54:G:C8	3.02	0.47
39:BD:35:LYS:CB	39:BD:63:ARG:HA	2.44	0.47
39:BD:35:LYS:N	39:BD:36:PRO:HD2	2.28	0.47
39:BD:153:ALA:C	39:BD:154:LYS:HG3	2.39	0.47
39:BD:263:ARG:O	39:BD:264:LYS:C	2.56	0.47
40:BE:68:ALA:C	40:BE:70:ALA:H	2.22	0.47
41:BF:103:LYS:HA	41:BF:106:ARG:CG	2.45	0.47
41:BF:140:LEU:O	41:BF:143:ALA:HB3	2.13	0.47
41:BF:168:ARG:HG2	41:BF:175:THR:HG21	1.96	0.47
41:BF:170:LEU:HB2	41:BF:173:VAL:CB	2.38	0.47
42:BG:43:LEU:N	42:BG:43:LEU:HD22	2.30	0.47
43:BH:41:MET:HE3	43:BH:42:ARG:O	2.14	0.47
46:BO:12:ASP:OD2	46:BO:85:VAL:HG13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:120:ILE:O	48:BQ:123:HIS:HB2	2.15	0.47
49:BR:45:ARG:O	49:BR:46:GLY:C	2.57	0.47
51:BT:33:LYS:HE2	51:BT:43:GLN:CD	2.39	0.47
51:BT:57:PHE:O	51:BT:59:THR:N	2.47	0.47
52:BU:90:VAL:HG13	53:BV:39:LEU:HG	1.95	0.47
53:BV:5:VAL:CG2	53:BV:6:LYS:N	2.77	0.47
54:BW:4:LYS:HG2	54:BW:5:ALA:N	2.29	0.47
56:BY:52:SER:N	56:BY:53:PRO:CD	2.77	0.47
57:BZ:89:PHE:HE2	57:BZ:96:VAL:HG21	1.79	0.47
57:BZ:103:ARG:HH11	57:BZ:103:ARG:CB	2.24	0.47
1:CA:34:C:O2'	1:CA:35:G:H5'	2.14	0.47
1:CA:192:U:O3'	20:CT:57:ARG:HD2	2.15	0.47
1:CA:328:C:O2	1:CA:328:C:C2'	2.51	0.47
1:CA:1129:C:H5'	1:CA:1129:C:C6	2.43	0.47
1:CA:1132:C:O2'	1:CA:1133:G:H5'	2.15	0.47
1:CA:1320:C:OP1	19:CS:70:LYS:NZ	2.43	0.47
1:CA:1426:C:H2'	1:CA:1427:U:C6	2.50	0.47
2:CB:53:ARG:HG2	2:CB:53:ARG:O	2.14	0.47
2:CB:179:LYS:HB2	2:CB:179:LYS:NZ	2.30	0.47
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.15	0.47
4:CD:61:LYS:HG3	4:CD:203:VAL:HG13	1.95	0.47
4:CD:168:ARG:N	4:CD:168:ARG:HD2	2.30	0.47
7:CG:88:PRO:HB3	7:CG:145:ALA:HA	1.97	0.47
8:CH:50:ARG:HH11	8:CH:50:ARG:CB	2.25	0.47
11:CK:44:SER:O	11:CK:46:GLY:N	2.48	0.47
11:CK:87:THR:O	11:CK:88:GLY:C	2.58	0.47
11:CK:126:ARG:HG2	11:CK:126:ARG:NH1	2.30	0.47
12:CL:57:LYS:HG3	12:CL:67:THR:CG2	2.42	0.47
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.14	0.47
13:CM:124:PRO:CG	25:CY:574:GLU:H	2.04	0.47
18:CR:58:LEU:N	18:CR:58:LEU:CD1	2.78	0.47
19:CS:4:SER:O	19:CS:5:LEU:C	2.58	0.47
19:CS:72:GLY:C	19:CS:74:PHE:N	2.72	0.47
22:CV:61:C:H2'	22:CV:62:C:C6	2.45	0.47
25:CY:93:GLU:HG3	59:CY:701:FUA:C6	2.45	0.47
25:CY:124:GLN:O	25:CY:127:LYS:HB3	2.15	0.47
25:CY:168:ILE:HD11	25:CY:178:ILE:HD12	1.96	0.47
25:CY:265:LYS:O	25:CY:266:ASN:C	2.57	0.47
25:CY:276:VAL:CA	25:CY:280:LEU:HD23	2.44	0.47
25:CY:331:TYR:O	25:CY:371:ALA:HB1	2.15	0.47
25:CY:655:TYR:OH	25:CY:659:LEU:HD23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:19:LYS:HZ2	26:D0:41:ARG:HH12	1.63	0.47
28:D2:38:GLN:HB2	28:D2:41:ILE:CD1	2.45	0.47
28:D2:45:SER:O	28:D2:46:GLN:NE2	2.48	0.47
29:D3:42:ALA:O	29:D3:43:ILE:C	2.58	0.47
30:D4:7:PRO:HG3	42:DG:61:ALA:HB1	1.97	0.47
31:D5:40:LYS:CE	31:D5:46:CYS:H	2.28	0.47
36:DA:86:C:H2'	36:DA:87:C:C6	2.50	0.47
36:DA:112:U:C2'	36:DA:113:G:H5'	2.44	0.47
36:DA:680:G:H2'	36:DA:681:G:H8	1.77	0.47
36:DA:712:G:C2'	36:DA:713:G:H5'	2.45	0.47
36:DA:979:G:H2'	36:DA:982:C:N4	2.30	0.47
36:DA:1005:C:N3	36:DA:1143:A:C2	2.83	0.47
36:DA:1450(A):C:H2'	36:DA:1451:C:C6	2.49	0.47
36:DA:1694:C:O4'	36:DA:1695:G:C2	2.68	0.47
36:DA:1718:G:O2'	36:DA:1719:G:H5'	2.14	0.47
36:DA:1858:G:H2'	36:DA:1883:G:N2	2.29	0.47
36:DA:1985:G:O2'	36:DA:1986:A:H5'	2.14	0.47
36:DA:2052:G:H4'	40:DE:143:ASN:O	2.15	0.47
36:DA:2230:G:H2'	36:DA:2231:C:C6	2.50	0.47
36:DA:2360:A:O2'	47:DP:60:MET:HE2	2.15	0.47
36:DA:2673:G:H5'	36:DA:2673:G:H8	1.80	0.47
36:DA:2801(A):A:H4'	36:DA:2802:G:H8	1.78	0.47
36:DA:2809:A:H2'	36:DA:2810:A:C8	2.49	0.47
37:DB:93:G:O2'	37:DB:94:C:H5'	2.15	0.47
38:DC:121:MET:O	38:DC:122:GLY:C	2.56	0.47
38:DC:149:ASN:ND2	38:DC:149:ASN:C	2.73	0.47
39:DD:83:GLU:HB2	39:DD:92:ILE:CD1	2.35	0.47
39:DD:99:ASP:OD1	39:DD:99:ASP:C	2.55	0.47
40:DE:51:PHE:HD1	40:DE:52:LEU:N	2.13	0.47
40:DE:67:PHE:O	40:DE:70:ALA:HB2	2.13	0.47
41:DF:127:GLU:HB2	41:DF:196:LEU:HD11	1.95	0.47
41:DF:132:VAL:HG22	41:DF:133:ASN:HD22	1.79	0.47
41:DF:132:VAL:CG2	41:DF:133:ASN:N	2.77	0.47
42:DG:11:TYR:OH	42:DG:33:ARG:HG3	2.14	0.47
42:DG:145:THR:HG23	42:DG:148:MET:HB3	1.97	0.47
45:DN:1:MET:C	45:DN:2:LYS:HD2	2.39	0.47
45:DN:26:LEU:C	45:DN:28:THR:N	2.72	0.47
45:DN:35:ARG:O	45:DN:42:TRP:CZ3	2.68	0.47
45:DN:58:ASP:HB3	45:DN:95:PRO:HB2	1.97	0.47
45:DN:65:LYS:NZ	45:DN:65:LYS:CB	2.78	0.47
45:DN:96:GLU:CD	45:DN:96:GLU:H	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DO:17:ARG:HH21	46:DO:47:ILE:HD11	1.80	0.47
46:DO:35:VAL:HG11	46:DO:103:ALA:CB	2.37	0.47
47:DP:98:GLU:O	47:DP:101:VAL:HG22	2.14	0.47
51:DT:57:PHE:O	51:DT:59:THR:N	2.47	0.47
53:DV:40:LEU:CA	53:DV:45:THR:HB	2.42	0.47
54:DW:82:LEU:HB3	54:DW:84:ARG:NH1	2.28	0.47
57:DZ:85:HIS:ND1	57:DZ:86:VAL:N	2.62	0.47
57:DZ:146:ILE:HG22	57:DZ:174:VAL:HG12	1.96	0.47
1:AA:189(D):C:H2'	1:AA:189(E):U:O4'	2.15	0.47
1:AA:1134:G:N2	1:AA:1141:C:C2	2.82	0.47
1:AA:1305:G:H5''	21:AU:4:GLY:C	2.40	0.47
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.93	0.47
2:AB:108:ILE:O	2:AB:111:ARG:HB2	2.15	0.47
3:AC:133:ALA:O	3:AC:137:ALA:HB2	2.14	0.47
3:AC:157:ILE:C	3:AC:159:GLY:N	2.69	0.47
3:AC:174:PRO:O	3:AC:175:LEU:C	2.57	0.47
4:AD:26:CYS:O	4:AD:31:CYS:HB2	2.15	0.47
4:AD:148:VAL:HG12	4:AD:152:SER:HB2	1.97	0.47
10:AJ:81:THR:C	10:AJ:83:GLU:N	2.66	0.47
11:AK:21:ILE:HD13	11:AK:82:VAL:HG13	1.97	0.47
15:AO:76:GLU:C	15:AO:78:TYR:N	2.71	0.47
18:AR:43:PHE:C	18:AR:44:LEU:HD12	2.40	0.47
20:AT:52:ALA:O	20:AT:53:LEU:C	2.56	0.47
25:AY:85:PRO:CG	25:AY:94:VAL:HG13	2.44	0.47
25:AY:390:VAL:O	25:AY:391:GLY:C	2.57	0.47
32:B6:25:LYS:NZ	34:B8:34:TRP:HZ2	2.12	0.47
36:BA:523:C:H2'	36:BA:524:U:O4'	2.15	0.47
36:BA:812:C:H1'	36:BA:1250:G:N2	2.30	0.47
36:BA:863:A:H2'	36:BA:864:G:C8	2.50	0.47
36:BA:917:A:O2'	36:BA:918:A:H5'	2.14	0.47
36:BA:958:U:H3'	36:BA:958:U:C6	2.47	0.47
38:BC:115:VAL:CG2	38:BC:150:ILE:HD11	2.45	0.47
39:BD:34:VAL:O	39:BD:36:PRO:HG2	2.15	0.47
39:BD:55:GLY:O	39:BD:216:GLY:HA2	2.15	0.47
40:BE:117:MET:CE	40:BE:124:GLY:HA3	2.45	0.47
41:BF:20:LEU:O	41:BF:21:ALA:O	2.32	0.47
41:BF:46:ARG:HH11	41:BF:46:ARG:HG3	1.80	0.47
41:BF:188:ARG:CA	47:BP:7:ARG:HH21	2.27	0.47
42:BG:100:TRP:O	42:BG:101:ILE:C	2.58	0.47
42:BG:111:LEU:N	42:BG:112:PRO:CD	2.78	0.47
47:BP:102:ARG:HB3	47:BP:102:ARG:CZ	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:124:LYS:HD3	47:BP:143:GLY:HA3	1.97	0.47
50:BS:35:ILE:C	50:BS:36:TYR:HD1	2.22	0.47
56:BY:46:LYS:HB2	56:BY:62:GLU:CG	2.44	0.47
57:BZ:149:SER:HB2	57:BZ:172:ALA:O	2.15	0.47
57:BZ:152:ALA:HA	57:BZ:167:PRO:HB2	1.96	0.47
1:CA:1432:G:OP1	51:DT:107:ASP:HB2	2.15	0.47
2:CB:17:PHE:CD1	2:CB:17:PHE:C	2.92	0.47
3:CC:60:ALA:O	3:CC:61:ALA:CB	2.63	0.47
6:CF:10:LEU:HB2	6:CF:59:TYR:HB3	1.97	0.47
6:CF:37:VAL:HG12	6:CF:38:GLU:H	1.80	0.47
14:CN:18:VAL:CG2	14:CN:19:ARG:N	2.78	0.47
15:CO:57:LEU:HD23	15:CO:57:LEU:N	2.29	0.47
16:CP:53:VAL:HG23	16:CP:54:GLU:N	2.27	0.47
19:CS:32:LYS:HA	19:CS:50:ALA:HB3	1.97	0.47
24:CX:13:A:OP2	24:CX:14:U:OP2	2.33	0.47
25:CY:594:VAL:HG12	25:CY:594:VAL:O	2.15	0.47
29:D3:46:ASN:O	29:D3:47:VAL:C	2.58	0.47
30:D4:5:ILE:C	30:D4:6:HIS:HD2	2.23	0.47
36:DA:265:A:H1'	36:DA:266:G:C1'	2.45	0.47
36:DA:363:G:H2'	36:DA:363(A):A:C8	2.49	0.47
36:DA:428:A:H3'	36:DA:429:A:C8	2.49	0.47
36:DA:483:A:H2'	36:DA:483:A:N3	2.30	0.47
36:DA:883:G:N2	36:DA:894:C:C2	2.83	0.47
36:DA:990:A:OP2	36:DA:991:C:OP2	2.33	0.47
36:DA:1022:G:H22	36:DA:1142(A):A:H2	1.61	0.47
36:DA:1348:G:C3'	36:DA:1349:A:H5''	2.44	0.47
36:DA:1516:C:C2'	36:DA:1517:G:C5'	2.81	0.47
36:DA:1568:G:P	39:DD:63:ARG:HH22	2.37	0.47
36:DA:1719:G:O2'	36:DA:1720:U:H5'	2.14	0.47
36:DA:1747(A):G:O2'	36:DA:1748:G:H5''	2.13	0.47
36:DA:1799:G:N2	36:DA:1818:U:H2'	2.29	0.47
36:DA:1902:C:H2'	36:DA:1903:G:O4'	2.14	0.47
36:DA:1960:A:C5'	36:DA:1960:A:H8	2.28	0.47
36:DA:2617:C:C2'	36:DA:2618:G:H5'	2.45	0.47
37:DB:45:A:H1'	42:DG:95:ARG:CZ	2.43	0.47
38:DC:149:ASN:C	38:DC:149:ASN:HD22	2.21	0.47
39:DD:27:THR:HG23	39:DD:83:GLU:HG2	1.94	0.47
40:DE:199:ARG:HB2	40:DE:199:ARG:HH11	1.80	0.47
41:DF:192:LEU:CD2	41:DF:194:MET:HG3	2.42	0.47
43:DH:136:ILE:HD12	43:DH:136:ILE:H	1.78	0.47
45:DN:9:VAL:HG12	45:DN:10:GLU:H	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DN:30:ILE:O	45:DN:34:LEU:CD2	2.63	0.47
45:DN:65:LYS:HB2	45:DN:69:GLN:HG3	1.97	0.47
46:DO:13:ASN:HD21	46:DO:97:ARG:CG	2.27	0.47
47:DP:124:LYS:HD3	47:DP:143:GLY:HA3	1.95	0.47
50:DS:85:VAL:CG2	50:DS:106:ARG:HG3	2.43	0.47
51:DT:59:THR:OG1	51:DT:78:LEU:HD12	2.15	0.47
53:DV:51:VAL:CG1	53:DV:52:VAL:H	2.14	0.47
56:DY:3:VAL:O	56:DY:3:VAL:HG12	2.15	0.47
56:DY:73:ARG:O	56:DY:74:PRO:O	2.33	0.47
1:AA:255:G:O6	1:AA:266:G:O6	2.33	0.47
1:AA:337:C:H2'	1:AA:338:A:C8	2.47	0.47
1:AA:1195:C:H2'	1:AA:1197:G:O4'	2.15	0.47
1:AA:1328:C:H2'	1:AA:1329:A:C8	2.50	0.47
3:AC:28:GLN:O	3:AC:29:TYR:C	2.58	0.47
3:AC:136:GLN:HG3	3:AC:139:GLN:HB3	1.97	0.47
4:AD:61:LYS:HD2	4:AD:207:TYR:OH	2.15	0.47
4:AD:179:GLU:C	4:AD:181:MET:H	2.21	0.47
7:AG:112:PRO:HG2	7:AG:113:GLU:OE2	2.15	0.47
10:AJ:29:ARG:C	10:AJ:31:GLY:H	2.23	0.47
12:AL:28:LYS:HB2	12:AL:33:ARG:NH2	2.30	0.47
14:AN:42:ILE:HG22	14:AN:43:CYS:N	2.30	0.47
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.29	0.47
19:AS:19:VAL:CG1	19:AS:44:MET:HG2	2.45	0.47
25:AY:114:VAL:O	25:AY:114:VAL:HG13	2.13	0.47
28:B2:15:LYS:O	28:B2:15:LYS:HG3	2.14	0.47
28:B2:24:LEU:HD23	28:B2:24:LEU:C	2.39	0.47
32:B6:6:ARG:C	32:B6:8:LYS:H	2.20	0.47
32:B6:38:LYS:HB3	36:BA:2344:U:C5'	2.45	0.47
36:BA:191:A:H8	36:BA:191:A:O5'	1.98	0.47
36:BA:606:U:H5'	36:BA:607:U:OP2	2.14	0.47
36:BA:904:C:H2'	36:BA:905:U:C6	2.49	0.47
36:BA:1022:G:H22	36:BA:1142(A):A:H2	1.62	0.47
36:BA:1264:G:O3'	36:BA:2615:U:H5'	2.15	0.47
36:BA:2052:G:H4'	40:BE:143:ASN:O	2.14	0.47
36:BA:2081:C:H2'	36:BA:2082:A:H8	1.78	0.47
36:BA:2161:C:O2'	36:BA:2162:G:H5'	2.15	0.47
36:BA:2389:G:H5''	36:BA:2390:U:O4'	2.14	0.47
36:BA:2476:A:C2	36:BA:2477:C:C5	3.03	0.47
36:BA:2508:G:O2'	36:BA:2509:G:H5'	2.15	0.47
37:BB:49:C:H2'	37:BB:50:G:H8	1.79	0.47
37:BB:111:G:O2'	37:BB:112:U:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:24:ILE:CG1	39:BD:25:THR:N	2.76	0.47
39:BD:30:GLU:CG	39:BD:63:ARG:NH2	2.78	0.47
39:BD:276:LYS:HD3	39:BD:276:LYS:C	2.39	0.47
47:BP:16:ARG:CZ	47:BP:18:ARG:CG	2.93	0.47
49:BR:63:ARG:HA	49:BR:80:PHE:CZ	2.50	0.47
49:BR:118:GLU:HA	49:BR:118:GLU:OE1	2.14	0.47
51:BT:93:ARG:HD2	51:BT:93:ARG:HA	1.72	0.47
52:BU:104:GLN:HB3	53:BV:44:LYS:HZ1	1.80	0.47
53:BV:35:LEU:O	53:BV:37:VAL:N	2.48	0.47
55:BX:40:LYS:HG3	55:BX:51:VAL:CG2	2.45	0.47
56:BY:41:GLY:O	56:BY:43:ASN:OD1	2.33	0.47
57:BZ:155:LEU:HD23	57:BZ:155:LEU:N	2.30	0.47
1:CA:22:G:O2'	1:CA:23:C:H5'	2.15	0.47
1:CA:311:C:O2'	1:CA:312:C:H5'	2.15	0.47
1:CA:687:A:H62	1:CA:703:G:H1'	1.80	0.47
1:CA:1152:A:OP1	10:CJ:68:HIS:CD2	2.67	0.47
1:CA:1305:G:C5'	21:CU:4:GLY:HA3	2.45	0.47
2:CB:45:GLN:HG2	2:CB:45:GLN:O	2.14	0.47
2:CB:172:ILE:HD12	2:CB:172:ILE:N	2.30	0.47
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.97	0.47
3:CC:136:GLN:HG3	3:CC:139:GLN:HB3	1.96	0.47
3:CC:178:LEU:C	3:CC:180:ALA:H	2.23	0.47
4:CD:78:LEU:HB3	4:CD:93:PHE:HE1	1.79	0.47
9:CI:9:ARG:HB3	9:CI:104:ARG:HH12	1.80	0.47
9:CI:10:ARG:O	9:CI:11:LYS:HB3	2.14	0.47
9:CI:95:LYS:HD3	9:CI:95:LYS:C	2.40	0.47
9:CI:95:LYS:C	9:CI:98:PRO:HD2	2.39	0.47
14:CN:29:ARG:HG3	14:CN:29:ARG:NH1	2.22	0.47
18:CR:37:VAL:CG2	18:CR:38:GLU:N	2.76	0.47
25:CY:120:THR:O	25:CY:124:GLN:CG	2.62	0.47
25:CY:327:PHE:CD1	25:CY:327:PHE:N	2.82	0.47
25:CY:359:HIS:CD2	25:CY:364:GLU:HB2	2.49	0.47
59:CY:701:FUA:C31	59:CY:701:FUA:O4	2.62	0.47
26:D0:10:THR:CG2	26:D0:11:ARG:H	2.23	0.47
27:D1:34:THR:HG22	27:D1:36:GLY:H	1.80	0.47
27:D1:76:ARG:HH12	27:D1:95:LEU:CD2	2.20	0.47
28:D2:14:ARG:HG3	28:D2:14:ARG:NH1	2.29	0.47
30:D4:30:GLU:C	30:D4:31:ILE:HD12	2.40	0.47
36:DA:42:G:H2'	36:DA:42:G:N3	2.29	0.47
36:DA:154(A):C:C5	36:DA:155:U:H1'	2.50	0.47
36:DA:324:A:O2'	36:DA:325:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:545:C:H2'	36:DA:547:A:C5'	2.37	0.47
36:DA:1080:C:H2'	36:DA:1081:U:O4'	2.14	0.47
36:DA:2732:G:H3'	36:DA:2733:A:C5'	2.44	0.47
36:DA:2787:C:H1'	40:DE:61:ARG:CG	2.45	0.47
36:DA:2852:G:H1	36:DA:2865:U:H3	1.63	0.47
37:DB:7:G:H4'	50:DS:29:PHE:CD2	2.49	0.47
37:DB:75:G:O3'	57:DZ:10:ARG:NH1	2.48	0.47
38:DC:65:LEU:HD21	38:DC:162:ILE:HD11	1.97	0.47
39:DD:9:TYR:C	39:DD:10:THR:HG22	2.39	0.47
39:DD:72:LYS:HG3	39:DD:103:ARG:NH2	2.30	0.47
39:DD:172:TYR:HD1	39:DD:185:VAL:C	2.23	0.47
40:DE:52:LEU:O	40:DE:74:PRO:HA	2.15	0.47
43:DH:50:VAL:CG1	43:DH:51:ARG:N	2.78	0.47
43:DH:149:ARG:HA	43:DH:162:ILE:CG1	2.45	0.47
47:DP:13:ASN:ND2	47:DP:13:ASN:H	2.13	0.47
49:DR:41:ALA:C	49:DR:43:GLU:N	2.71	0.47
50:DS:99:LYS:O	50:DS:100:ALA:C	2.57	0.47
53:DV:72:VAL:HG23	53:DV:85:LYS:HB2	1.97	0.47
1:AA:115:G:H1'	1:AA:116:A:N7	2.30	0.47
1:AA:555:C:OP1	12:AL:20:LYS:HE2	2.15	0.47
1:AA:1014:A:H4'	19:AS:14:HIS:CE1	2.49	0.47
1:AA:1237:C:H3'	1:AA:1238:A:C5'	2.40	0.47
1:AA:1308:U:O2'	1:AA:1309:G:H5'	2.14	0.47
1:AA:1364:U:O2	1:AA:1364:U:C2'	2.54	0.47
2:AB:188:ALA:O	2:AB:202:PRO:HA	2.15	0.47
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.14	0.47
6:AF:3:ARG:HH11	6:AF:3:ARG:HG3	1.79	0.47
9:AI:9:ARG:CB	9:AI:104:ARG:HH12	2.28	0.47
10:AJ:20:ALA:C	10:AJ:22:LYS:N	2.72	0.47
12:AL:17:LYS:NZ	12:AL:18:VAL:HG22	2.30	0.47
12:AL:89:ARG:HD3	12:AL:91:LYS:HZ1	1.75	0.47
13:AM:15:VAL:HG12	13:AM:45:VAL:CG2	2.39	0.47
13:AM:67:GLU:O	13:AM:69:GLU:N	2.48	0.47
18:AR:37:VAL:C	18:AR:39:VAL:H	2.23	0.47
23:AW:30:G:C2'	23:AW:31:G:C5'	2.93	0.47
23:AW:36:U:O5'	23:AW:36:U:C6	2.67	0.47
25:AY:65:ILE:N	25:AY:65:ILE:HD13	2.31	0.47
25:AY:177:ILE:CG2	25:AY:260:LEU:HD21	2.45	0.47
26:B0:27:GLU:HG3	26:B0:68:GLU:HA	1.95	0.47
27:B1:29:GLY:C	27:B1:31:GLY:N	2.72	0.47
31:B5:25:LEU:HD12	54:BW:19:LEU:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B5:55:ARG:HH22	49:BR:33:ARG:CD	2.28	0.47
32:B6:15:GLU:C	32:B6:16:CYS:O	2.55	0.47
32:B6:16:CYS:SG	32:B6:48:VAL:HG21	2.54	0.47
36:BA:129:C:H2'	36:BA:130:C:C6	2.50	0.47
36:BA:142:A:H1'	36:BA:1408:C:C1'	2.32	0.47
36:BA:210:C:H2'	36:BA:211:A:C8	2.50	0.47
36:BA:887:A:H2'	36:BA:887:A:N3	2.30	0.47
36:BA:1188:U:H5'	53:BV:79:VAL:CG1	2.44	0.47
36:BA:1361:G:O2'	36:BA:1362:C:H5'	2.15	0.47
36:BA:1661:G:O2'	36:BA:1662:C:H5'	2.15	0.47
36:BA:1925:C:O2'	36:BA:1926:U:H5'	2.14	0.47
36:BA:2155:G:O2'	36:BA:2156:G:H5'	2.15	0.47
36:BA:2165:G:H2'	36:BA:2166:G:O4'	2.15	0.47
36:BA:2685:G:H5'	46:BO:68:GLU:OE2	2.14	0.47
37:BB:5:C:O2'	37:BB:6:C:H5'	2.15	0.47
39:BD:91:ARG:O	39:BD:107:ALA:HB3	2.15	0.47
39:BD:183:ARG:HH11	39:BD:183:ARG:CG	2.17	0.47
42:BG:83:ARG:N	42:BG:83:ARG:HD2	2.30	0.47
46:BO:14:THR:HB	46:BO:86:ILE:HD13	1.97	0.47
47:BP:57:THR:OG1	47:BP:59:LEU:HB2	2.14	0.47
47:BP:93:GLY:O	47:BP:123:LEU:HB2	2.14	0.47
50:BS:42:ASP:O	50:BS:43:GLU:CB	2.63	0.47
54:BW:1:MET:HB3	54:BW:64:MET:HE3	1.96	0.47
54:BW:52:GLU:C	54:BW:54:ALA:H	2.23	0.47
1:CA:882:C:O2'	1:CA:883:C:H5'	2.15	0.47
1:CA:918:A:H2'	1:CA:919:A:O4'	2.15	0.47
1:CA:1123:A:O3'	10:CJ:36:GLY:HA3	2.14	0.47
1:CA:1243:C:O2'	1:CA:1244:C:H5'	2.15	0.47
1:CA:1347:G:H3'	9:CI:108:VAL:O	2.15	0.47
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.49	0.47
2:CB:111:ARG:O	2:CB:145:LEU:HD12	2.14	0.47
2:CB:142:LEU:O	2:CB:142:LEU:HD23	2.15	0.47
4:CD:119:GLN:HG3	4:CD:123:HIS:CD2	2.49	0.47
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.49	0.47
8:CH:26:VAL:HG23	8:CH:27:PRO:HD2	1.97	0.47
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.30	0.47
17:CQ:52:LYS:HD3	17:CQ:55:ASP:OD2	2.15	0.47
17:CQ:67:LYS:CA	17:CQ:70:ARG:HH12	2.26	0.47
19:CS:5:LEU:HG	19:CS:10:PHE:CD1	2.50	0.47
19:CS:29:ARG:HB2	19:CS:48:THR:H	1.78	0.47
25:CY:315:LYS:NZ	25:CY:317:MET:CG	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:377:VAL:CG2	25:CY:380:LEU:HD22	2.41	0.47
25:CY:503:GLY:O	25:CY:505:GLY:N	2.44	0.47
25:CY:652:MET:HG2	25:CY:671:MET:SD	2.55	0.47
26:D0:27:GLU:CD	26:D0:27:GLU:N	2.47	0.47
27:D1:18:ILE:HG22	27:D1:20:ARG:HG3	1.97	0.47
34:D8:39:LYS:HG3	34:D8:43:GLN:NE2	2.30	0.47
36:DA:409:C:H2'	36:DA:410:G:H8	1.80	0.47
36:DA:662:G:H2'	36:DA:663:G:H8	1.80	0.47
36:DA:667:U:H2'	36:DA:668:G:O4'	2.15	0.47
36:DA:904:C:H2'	36:DA:905:U:C6	2.49	0.47
36:DA:1759:A:H2'	36:DA:1760:A:H8	1.80	0.47
36:DA:1839:G:N3	36:DA:1839:G:H2'	2.30	0.47
36:DA:2134:A:C8	36:DA:2158:A:C2	3.02	0.47
36:DA:2143:C:C2'	36:DA:2144:U:H5'	2.45	0.47
36:DA:2165:G:H2'	36:DA:2166:G:O4'	2.15	0.47
36:DA:2223:G:C2'	36:DA:2224:G:H5'	2.45	0.47
36:DA:2307:G:H3'	36:DA:2307:G:N3	2.30	0.47
36:DA:2414:G:C2	36:DA:2415:G:C8	3.02	0.47
37:DB:54:G:H2'	37:DB:55:U:H6	1.79	0.47
40:DE:32:PRO:HA	40:DE:90:THR:HA	1.97	0.47
40:DE:55:ASN:ND2	40:DE:75:VAL:HG22	2.30	0.47
41:DF:28:ILE:O	41:DF:28:ILE:HG12	2.14	0.47
41:DF:125:LEU:HD23	41:DF:125:LEU:H	1.79	0.47
43:DH:136:ILE:HG22	43:DH:136:ILE:O	2.15	0.47
47:DP:83:VAL:HG23	47:DP:105:LEU:HD13	1.96	0.47
47:DP:102:ARG:NH1	47:DP:102:ARG:CB	2.78	0.47
47:DP:147:LEU:C	47:DP:148:LEU:HD12	2.40	0.47
48:DQ:18:LYS:HD2	48:DQ:18:LYS:N	2.30	0.47
48:DQ:52:VAL:C	48:DQ:54:MET:N	2.71	0.47
49:DR:99:LYS:N	49:DR:99:LYS:CD	2.59	0.47
54:DW:17:VAL:C	54:DW:19:LEU:N	2.73	0.47
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.96	0.46
2:AB:17:PHE:CG	2:AB:18:GLY:N	2.81	0.46
2:AB:153:ARG:C	2:AB:155:LEU:N	2.73	0.46
3:AC:32:LEU:HD22	3:AC:59:ARG:HH12	1.79	0.46
3:AC:87:LEU:O	3:AC:88:ARG:C	2.58	0.46
3:AC:129:ALA:C	3:AC:131:ARG:N	2.73	0.46
7:AG:29:LYS:CB	7:AG:105:VAL:HG21	2.45	0.46
10:AJ:16:LEU:CD1	10:AJ:70:ARG:HD3	2.46	0.46
13:AM:3:ARG:HG2	13:AM:9:ILE:CG1	2.45	0.46
17:AQ:43:LEU:HD12	17:AQ:68:ARG:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:11:SER:HA	20:AT:13:LEU:HD11	1.97	0.46
20:AT:48:LYS:O	20:AT:49:ALA:C	2.58	0.46
25:AY:128:TYR:O	25:AY:129:LYS:CB	2.63	0.46
25:AY:352:VAL:HG23	25:AY:377:VAL:CG2	2.42	0.46
27:B1:76:ARG:NH2	27:B1:95:LEU:CB	2.77	0.46
28:B2:64:LEU:O	28:B2:64:LEU:HD22	2.15	0.46
30:B4:30:GLU:C	30:B4:31:ILE:HD12	2.39	0.46
36:BA:507:A:H4'	36:BA:509:C:C6	2.50	0.46
36:BA:572:A:C2	36:BA:2033:A:C2	3.03	0.46
36:BA:753:C:H2'	36:BA:754:C:C6	2.50	0.46
36:BA:882:G:H22	36:BA:894:C:N4	2.13	0.46
36:BA:1776:G:N2	36:BA:1789:A:H1'	2.31	0.46
36:BA:2305:A:H2'	36:BA:2306:C:O4'	2.14	0.46
36:BA:2428:G:H4'	36:BA:2429:G:O5'	2.15	0.46
36:BA:2542:A:H4'	36:BA:2543:G:C8	2.50	0.46
36:BA:2673:G:H8	36:BA:2673:G:H5'	1.79	0.46
36:BA:2688:U:O2	36:BA:2688:U:C3'	2.61	0.46
36:BA:2704:C:C2'	36:BA:2705:A:H5'	2.45	0.46
39:BD:154:LYS:C	39:BD:155:LEU:HD12	2.41	0.46
40:BE:32:PRO:HA	40:BE:90:THR:HA	1.96	0.46
40:BE:132:HIS:CG	40:BE:135:HIS:NE2	2.83	0.46
43:BH:85:LYS:HE3	43:BH:145:ALA:CB	2.42	0.46
46:BO:17:ARG:HH21	46:BO:47:ILE:HD11	1.80	0.46
50:BS:40:ILE:CG2	50:BS:41:ASP:H	2.23	0.46
51:BT:11:GLU:CD	51:BT:11:GLU:N	2.73	0.46
51:BT:128:GLU:O	51:BT:130:ALA:N	2.48	0.46
52:BU:65:ILE:HG12	52:BU:96:ALA:HB1	1.97	0.46
56:BY:49:VAL:O	56:BY:51:VAL:HG23	2.15	0.46
1:CA:64:G:N2	1:CA:67:C:C4	2.83	0.46
1:CA:186:C:C2	1:CA:187:C:C5	3.04	0.46
1:CA:1271:G:H2'	1:CA:1272:G:H8	1.80	0.46
4:CD:187:ARG:HH11	4:CD:187:ARG:HG2	1.79	0.46
6:CF:3:ARG:HH11	6:CF:3:ARG:HG3	1.78	0.46
10:CJ:94:VAL:HG12	10:CJ:95:GLU:H	1.80	0.46
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.46	0.46
20:CT:8:ARG:HH11	20:CT:8:ARG:HG3	1.79	0.46
25:CY:517:LEU:HD11	25:CY:564:LYS:HB2	1.96	0.46
27:D1:17:SER:HB3	27:D1:38:SER:OG	2.15	0.46
27:D1:76:ARG:HH22	27:D1:95:LEU:CD2	2.28	0.46
28:D2:5:GLU:O	28:D2:9:GLN:HG3	2.14	0.46
29:D3:31:LEU:O	29:D3:32:GLN:CB	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:58:LEU:HD22	31:D5:58:LEU:C	2.40	0.46
32:D6:16:CYS:C	32:D6:18:ARG:N	2.68	0.46
36:DA:112:U:H2'	36:DA:113:G:H5'	1.97	0.46
36:DA:177:G:H3'	36:DA:178:G:C8	2.51	0.46
36:DA:1116:C:H2'	36:DA:1117:G:C8	2.49	0.46
36:DA:1192:G:H2'	36:DA:1193:G:O4'	2.14	0.46
36:DA:1491:G:N3	36:DA:1491:G:H2'	2.30	0.46
36:DA:1656:C:H2'	36:DA:1657:C:H6	1.80	0.46
36:DA:1661:G:O2'	36:DA:1662:C:H5'	2.15	0.46
36:DA:2009:G:H1'	49:DR:107:ASP:C	2.39	0.46
36:DA:2192:G:C3'	36:DA:2193:G:H5''	2.45	0.46
36:DA:2553:G:H2'	36:DA:2554:U:C4'	2.45	0.46
36:DA:2818:G:H4'	36:DA:2837:G:C4'	2.45	0.46
36:DA:2835:A:N6	36:DA:2878:U:H3'	2.29	0.46
37:DB:5:C:O2'	37:DB:6:C:H5'	2.15	0.46
37:DB:77:U:P	57:DZ:19:ARG:HH22	2.38	0.46
38:DC:127:LYS:O	38:DC:128:LEU:CD2	2.62	0.46
41:DF:195:ASP:HB3	41:DF:198:ALA:HB3	1.97	0.46
42:DG:40:ASN:HD22	42:DG:41:GLN:N	2.12	0.46
42:DG:61:ALA:HA	42:DG:64:THR:HG22	1.97	0.46
42:DG:67:LYS:HD3	42:DG:68:PRO:O	2.14	0.46
43:DH:127:GLU:HB2	43:DH:130:ARG:H	1.78	0.46
45:DN:2:LYS:HZ1	53:DV:12:TYR:HB3	1.80	0.46
46:DO:97:ARG:HG3	46:DO:97:ARG:NH1	2.30	0.46
47:DP:83:VAL:HG11	47:DP:112:LEU:HD21	1.95	0.46
48:DQ:32:TYR:N	48:DQ:32:TYR:CD1	2.83	0.46
49:DR:28:LEU:HD11	49:DR:114:VAL:HG12	1.96	0.46
51:DT:6:LEU:O	51:DT:7:ILE:C	2.58	0.46
51:DT:64:ARG:HD2	51:DT:73:GLU:OE2	2.15	0.46
52:DU:49:HIS:CA	52:DU:52:ARG:HB2	2.44	0.46
1:AA:311:C:HO2'	1:AA:312:C:H5'	1.80	0.46
1:AA:332:G:O2'	1:AA:333:G:H5'	2.15	0.46
1:AA:853:G:O2'	1:AA:854:G:H5'	2.14	0.46
1:AA:865:A:H2'	1:AA:866:C:C6	2.49	0.46
1:AA:983:A:H5'	1:AA:984:C:OP2	2.14	0.46
1:AA:1277:C:H6	1:AA:1277:C:H3'	1.81	0.46
1:AA:1281:U:H5''	1:AA:1282:C:H5	1.80	0.46
2:AB:96:ARG:N	2:AB:96:ARG:CD	2.72	0.46
4:AD:168:ARG:N	4:AD:168:ARG:HD2	2.30	0.46
10:AJ:47:PHE:CE2	14:AN:37:PHE:CE1	3.03	0.46
11:AK:22:HIS:CD2	11:AK:22:HIS:C	2.93	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.45	0.46
12:AL:115:LYS:O	12:AL:117:ARG:N	2.48	0.46
14:AN:18:VAL:CG2	14:AN:19:ARG:N	2.78	0.46
15:AO:25:THR:O	15:AO:26:GLU:C	2.59	0.46
15:AO:74:ASP:C	15:AO:76:GLU:N	2.70	0.46
17:AQ:40:LYS:HD3	17:AQ:42:TYR:OH	2.16	0.46
18:AR:37:VAL:CG2	18:AR:38:GLU:N	2.76	0.46
19:AS:25:LYS:O	19:AS:26:GLY:C	2.58	0.46
20:AT:73:HIS:HB3	20:AT:74:LYS:CE	2.46	0.46
25:AY:352:VAL:O	25:AY:352:VAL:HG13	2.15	0.46
29:B3:54:VAL:HG12	29:B3:55:ARG:N	2.29	0.46
30:B4:9:LEU:O	30:B4:10:VAL:HB	2.16	0.46
33:B7:27:GLY:HA2	33:B7:30:VAL:CG2	2.45	0.46
36:BA:280:C:H3'	36:BA:281:G:C8	2.50	0.46
36:BA:603:A:O2'	36:BA:604:G:OP2	2.33	0.46
36:BA:943:U:OP2	47:BP:38:GLN:OE1	2.34	0.46
36:BA:1012:U:C5	45:BN:28:THR:HG21	2.50	0.46
36:BA:1889:A:N1	36:BA:2234:G:H1'	2.31	0.46
36:BA:2498:C:O2'	36:BA:2499:C:H5'	2.14	0.46
36:BA:2729:G:H2'	36:BA:2730:C:C6	2.50	0.46
39:BD:25:THR:HG22	39:BD:26:LYS:N	2.29	0.46
41:BF:65:TRP:CZ3	41:BF:75:HIS:HD2	2.33	0.46
41:BF:81:PRO:C	41:BF:83:PHE:H	2.23	0.46
42:BG:110:ALA:O	42:BG:111:LEU:C	2.59	0.46
43:BH:128:PRO:HG2	43:BH:129:THR:HG23	1.97	0.46
47:BP:83:VAL:HG11	47:BP:112:LEU:HD21	1.97	0.46
47:BP:106:LEU:O	47:BP:107:LYS:HG2	2.14	0.46
48:BQ:21:THR:OG1	48:BQ:99:PRO:O	2.33	0.46
49:BR:7:GLY:HA3	49:BR:8:ARG:NH2	2.31	0.46
52:BU:49:HIS:O	52:BU:52:ARG:HB2	2.15	0.46
1:CA:265:G:N2	1:CA:267:C:H5'	2.30	0.46
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.14	0.46
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.40	0.46
2:CB:215:LEU:N	2:CB:215:LEU:HD22	2.30	0.46
2:CB:233:SER:OG	2:CB:234:PRO:HD2	2.15	0.46
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.42	0.46
4:CD:3:ARG:HG2	4:CD:118:ARG:HE	1.80	0.46
8:CH:30:ARG:HH11	8:CH:30:ARG:CB	2.27	0.46
20:CT:45:GLN:HB2	20:CT:91:LEU:CD1	2.41	0.46
25:CY:423:LYS:NZ	25:CY:470:PHE:O	2.47	0.46
25:CY:606:MET:HE2	25:CY:671:MET:CE	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:606:MET:HE2	25:CY:671:MET:HG2	1.94	0.46
25:CY:614:GLU:HG3	25:CY:641:GLN:NE2	2.30	0.46
27:D1:66:HIS:O	27:D1:67:ILE:C	2.57	0.46
30:D4:1:MET:SD	42:DG:98:ARG:HG3	2.55	0.46
30:D4:36:CYS:SG	30:D4:37:SER:N	2.87	0.46
33:D7:5:TRP:CZ3	36:DA:464:U:H4'	2.49	0.46
34:D8:30:ARG:HA	34:D8:30:ARG:NE	2.29	0.46
35:D9:22:ARG:NH2	36:DA:2741:A:OP1	2.49	0.46
36:DA:268:C:O2	36:DA:268:C:H2'	2.15	0.46
36:DA:425:G:O2'	36:DA:426:C:H5'	2.15	0.46
36:DA:437:G:H2'	36:DA:438:G:C8	2.50	0.46
36:DA:651:G:O2'	36:DA:652:C:H5'	2.16	0.46
36:DA:694:U:C2'	36:DA:695:G:O5'	2.63	0.46
36:DA:1629:U:H2'	36:DA:1630:G:C8	2.51	0.46
36:DA:1796:U:H2'	36:DA:1797:C:C6	2.50	0.46
36:DA:2292:C:H2'	36:DA:2293:C:C6	2.50	0.46
36:DA:2531:A:H5''	43:DH:157:TYR:CZ	2.49	0.46
37:DB:49:C:H2'	37:DB:50:G:H8	1.80	0.46
38:DC:16:ASP:O	38:DC:18:ASN:N	2.48	0.46
38:DC:115:VAL:HA	38:DC:145:THR:HG22	1.97	0.46
39:DD:24:ILE:CG1	39:DD:25:THR:N	2.76	0.46
40:DE:1:MET:O	40:DE:2:LYS:C	2.58	0.46
40:DE:167:VAL:HG13	40:DE:170:LEU:HD11	1.97	0.46
41:DF:116:ASP:OD2	47:DP:5:ASP:HB2	2.15	0.46
42:DG:168:GLU:C	42:DG:170:ARG:N	2.73	0.46
43:DH:153:LYS:CD	43:DH:154:PRO:HD2	2.33	0.46
43:DH:169:VAL:O	43:DH:170:ARG:HG3	2.14	0.46
44:DJ:11:UNK:HA	44:DJ:14:UNK:CB	2.46	0.46
45:DN:17:ASP:CG	45:DN:56:ASN:HB3	2.41	0.46
45:DN:133:GLN:CG	45:DN:134:ARG:H	2.23	0.46
50:DS:42:ASP:O	50:DS:43:GLU:HB2	2.16	0.46
50:DS:48:LEU:N	50:DS:48:LEU:CD1	2.78	0.46
51:DT:129:ARG:C	51:DT:129:ARG:CD	2.88	0.46
52:DU:102:GLU:HG3	53:DV:2:PHE:CE1	2.50	0.46
57:DZ:109:ALA:HB3	57:DZ:145:GLU:CA	2.44	0.46
1:AA:499:A:H4'	1:AA:500:G:OP1	2.15	0.46
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.15	0.46
1:AA:942:G:H21	9:AI:124:GLN:NE2	2.14	0.46
1:AA:1226:C:C6	13:AM:103:THR:O	2.68	0.46
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.80	0.46
3:AC:35:GLU:O	3:AC:38:ARG:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.50	0.46
5:AE:91:LEU:HD13	5:AE:120:THR:CG2	2.45	0.46
22:AV:29:G:N2	22:AV:42:C:H1'	2.30	0.46
25:AY:230:LYS:HE2	25:AY:241:GLU:OE2	2.16	0.46
33:B7:24:THR:C	33:B7:26:GLY:H	2.23	0.46
36:BA:88:G:OP1	36:BA:90:U:C5	2.58	0.46
36:BA:142:A:H5'	36:BA:142(A):C:OP2	2.16	0.46
36:BA:541:C:H42	36:BA:552:G:H1	1.63	0.46
36:BA:811:U:O2	36:BA:1251:C:C5	2.69	0.46
36:BA:817:C:O2'	36:BA:839:U:OP1	2.33	0.46
36:BA:1044:G:H1'	36:BA:1112:G:N2	2.30	0.46
36:BA:1127:A:C2'	36:BA:1128:A:H5''	2.46	0.46
36:BA:1505:C:C5	36:BA:1506:C:H1'	2.50	0.46
36:BA:1528:A:N1	36:BA:1542:A:H2	2.14	0.46
36:BA:1972:A:H2'	36:BA:1973:G:H8	1.80	0.46
36:BA:2364:C:O2'	36:BA:2365:G:H5'	2.14	0.46
36:BA:2811:G:N2	36:BA:2891:G:H1'	2.31	0.46
38:BC:101:ILE:H	38:BC:101:ILE:CD1	2.27	0.46
38:BC:182:PRO:HB2	38:BC:185:LYS:HD2	1.97	0.46
39:BD:10:THR:C	39:BD:11:PRO:O	2.58	0.46
39:BD:111:LEU:HD23	39:BD:127:VAL:HG12	1.97	0.46
39:BD:112:GLN:HB2	39:BD:115:GLN:HE21	1.80	0.46
43:BH:127:GLU:HB2	43:BH:130:ARG:H	1.80	0.46
46:BO:104:ARG:NH2	51:BT:33:LYS:HE3	2.30	0.46
46:BO:105:GLU:O	46:BO:109:LYS:CG	2.64	0.46
48:BQ:43:THR:HG22	48:BQ:94:VAL:HG12	1.96	0.46
49:BR:101:ALA:O	49:BR:102:GLU:HB2	2.14	0.46
52:BU:17:ILE:CG2	52:BU:39:LEU:HD12	2.46	0.46
53:BV:35:LEU:HB2	53:BV:57:VAL:CG1	2.46	0.46
53:BV:38:LEU:HD23	53:BV:38:LEU:C	2.40	0.46
54:BW:20:VAL:O	54:BW:23:LEU:N	2.47	0.46
55:BX:8:ILE:H	55:BX:8:ILE:CD1	2.26	0.46
55:BX:31:HIS:O	55:BX:32:PRO:C	2.57	0.46
56:BY:37:VAL:O	56:BY:38:ILE:HB	2.15	0.46
57:BZ:58:VAL:HA	57:BZ:67:LEU:O	2.15	0.46
57:BZ:96:VAL:HG22	57:BZ:97:GLU:H	1.80	0.46
1:CA:255:G:O6	1:CA:266:G:O6	2.32	0.46
1:CA:256:U:H2'	1:CA:257:G:C8	2.49	0.46
1:CA:337:C:H2'	1:CA:338:A:C8	2.49	0.46
1:CA:802:A:H3'	1:CA:803:G:H8	1.80	0.46
1:CA:860:A:H2'	1:CA:861:G:O4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1148:U:C2'	1:CA:1149:C:H5'	2.46	0.46
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.50	0.46
2:CB:22:LYS:H	2:CB:40:HIS:HE1	1.62	0.46
2:CB:204:ASN:HD22	2:CB:206:ASP:H	1.57	0.46
6:CF:35:ALA:O	6:CF:36:ARG:C	2.57	0.46
8:CH:32:LYS:C	8:CH:34:GLU:N	2.73	0.46
10:CJ:29:ARG:C	10:CJ:31:GLY:H	2.23	0.46
10:CJ:54:PHE:CD2	10:CJ:55:LYS:HD2	2.49	0.46
11:CK:60:ALA:O	11:CK:61:ALA:C	2.56	0.46
15:CO:23:GLY:O	15:CO:27:VAL:HB	2.16	0.46
19:CS:58:VAL:HG21	19:CS:75:ALA:CB	2.45	0.46
20:CT:22:ARG:O	20:CT:26:ASN:ND2	2.48	0.46
20:CT:48:LYS:O	20:CT:49:ALA:C	2.58	0.46
23:CW:68:C:H2'	23:CW:69:C:H6	1.71	0.46
25:CY:236:GLU:O	25:CY:236:GLU:HG3	2.15	0.46
25:CY:491:VAL:HG13	25:CY:492:ASP:H	1.80	0.46
25:CY:580:MET:CE	25:CY:580:MET:C	2.89	0.46
25:CY:610:VAL:HG12	25:CY:669:PHE:HB2	1.96	0.46
26:D0:20:ARG:HH11	26:D0:20:ARG:HG2	1.79	0.46
27:D1:29:GLY:O	27:D1:31:GLY:N	2.41	0.46
36:DA:152:G:H1	36:DA:174:C:H42	1.62	0.46
36:DA:272(G):C:C3'	36:DA:272(H):C:H5''	2.45	0.46
36:DA:296:C:OP1	56:DY:5:MET:HE1	2.15	0.46
36:DA:307:G:H21	36:DA:330:A:N6	2.13	0.46
36:DA:307:G:N2	36:DA:310:A:O5'	2.48	0.46
36:DA:422:A:C2	36:DA:423:A:C4	3.03	0.46
36:DA:675:A:OP1	41:DF:63:LYS:HE2	2.16	0.46
36:DA:768:G:H2'	36:DA:769:G:H8	1.79	0.46
36:DA:1335:U:H2'	36:DA:1336:A:C8	2.50	0.46
36:DA:1532:C:O2'	36:DA:1533:G:H5'	2.16	0.46
36:DA:2134:A:H1'	36:DA:2158:A:H2	1.79	0.46
36:DA:2308:G:H2'	36:DA:2309:A:C8	2.50	0.46
36:DA:2364:C:H2'	36:DA:2365:G:O4'	2.16	0.46
36:DA:2369:A:O2'	36:DA:2370:G:H5'	2.15	0.46
36:DA:2389:G:H5''	36:DA:2390:U:O4'	2.15	0.46
36:DA:2463:C:C2'	36:DA:2464:C:H5'	2.45	0.46
36:DA:2584:U:O2	36:DA:2584:U:O4'	2.32	0.46
36:DA:2732:G:H5''	36:DA:2733:A:C8	2.50	0.46
38:DC:15:VAL:HG23	38:DC:15:VAL:O	2.15	0.46
38:DC:203:GLU:C	38:DC:205:ALA:H	2.23	0.46
39:DD:61:LEU:HB3	39:DD:63:ARG:NH1	2.25	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:87:GLU:O	40:DE:88:GLY:C	2.57	0.46
41:DF:188:ARG:CA	47:DP:7:ARG:HH21	2.27	0.46
43:DH:159:GLU:CG	43:DH:160:LYS:H	2.27	0.46
46:DO:22:ILE:HB	46:DO:40:VAL:O	2.15	0.46
46:DO:88:ASN:OD1	46:DO:92:GLU:HB2	2.16	0.46
47:DP:16:ARG:HD3	47:DP:17:LYS:N	2.31	0.46
47:DP:112:LEU:N	47:DP:128:HIS:CD2	2.82	0.46
49:DR:96:ARG:O	49:DR:114:VAL:HA	2.15	0.46
49:DR:118:GLU:HA	49:DR:118:GLU:OE1	2.16	0.46
51:DT:33:LYS:HE2	51:DT:43:GLN:OE1	2.14	0.46
51:DT:85:LYS:HB3	51:DT:85:LYS:HZ2	1.77	0.46
52:DU:57:PHE:O	52:DU:58:ARG:C	2.56	0.46
53:DV:81:TYR:C	53:DV:82:ARG:HD2	2.40	0.46
55:DX:55:ASN:HB2	55:DX:80:ILE:CG1	2.44	0.46
56:DY:41:GLY:O	56:DY:43:ASN:OD1	2.34	0.46
56:DY:54:LYS:NZ	56:DY:54:LYS:CB	2.79	0.46
56:DY:88:LYS:C	56:DY:90:LEU:H	2.23	0.46
57:DZ:33:LEU:HD12	57:DZ:34:ASN:H	1.79	0.46
1:AA:819:A:H4'	1:AA:820:U:OP2	2.16	0.46
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.15	0.46
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.97	0.46
1:AA:1319:A:OP1	19:AS:10:PHE:CZ	2.68	0.46
1:AA:1392:G:N2	1:AA:1502:A:C8	2.84	0.46
2:AB:75:LYS:C	2:AB:75:LYS:HD3	2.39	0.46
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.98	0.46
4:AD:4:TYR:O	4:AD:5:ILE:CB	2.61	0.46
7:AG:5:ARG:N	7:AG:5:ARG:HD2	2.31	0.46
12:AL:81:SER:O	12:AL:83:VAL:HG23	2.15	0.46
13:AM:51:ALA:O	13:AM:55:ARG:HB3	2.16	0.46
15:AO:10:LYS:O	15:AO:10:LYS:HD2	2.16	0.46
16:AP:57:ARG:O	16:AP:58:TYR:C	2.59	0.46
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.51	0.46
22:AV:66:U:H2'	22:AV:67:C:C6	2.51	0.46
23:AW:29:G:H2'	23:AW:30:G:H8	1.80	0.46
25:AY:16:GLY:C	25:AY:17:ILE:HD12	2.40	0.46
25:AY:438:PHE:HD1	25:AY:438:PHE:O	1.99	0.46
25:AY:616:TYR:CG	25:AY:663:THR:HA	2.51	0.46
26:B0:67:VAL:HG12	26:B0:68:GLU:N	2.31	0.46
27:B1:84:GLY:O	27:B1:86:SER:N	2.48	0.46
30:B4:12:ALA:HB2	30:B4:29:PRO:HA	1.92	0.46
31:B5:25:LEU:CD1	54:BW:19:LEU:HB3	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:35:GLU:HB3	32:B6:51:GLU:N	2.31	0.46
34:B8:50:LEU:O	34:B8:52:LYS:N	2.40	0.46
36:BA:268:C:H2'	36:BA:268:C:O2	2.14	0.46
36:BA:331:A:O2'	36:BA:332:A:OP1	2.30	0.46
36:BA:756:C:C2'	36:BA:757:U:H5'	2.44	0.46
36:BA:1491:G:H2'	36:BA:1491:G:N3	2.31	0.46
36:BA:2033:A:O2'	36:BA:2034:U:P	2.73	0.46
36:BA:2282:G:H5''	36:BA:2283:C:O4'	2.15	0.46
36:BA:2432:A:O2'	36:BA:2433:A:H5'	2.15	0.46
36:BA:2463:C:C2'	36:BA:2464:C:H5'	2.46	0.46
36:BA:2712(A):A:OP2	36:BA:2714:G:OP2	2.33	0.46
38:BC:26:ALA:O	38:BC:27:ALA:C	2.56	0.46
38:BC:121:MET:O	38:BC:122:GLY:C	2.58	0.46
39:BD:35:LYS:HD2	39:BD:36:PRO:HA	1.96	0.46
39:BD:261:LYS:NZ	39:BD:263:ARG:NH1	2.64	0.46
42:BG:77:ILE:HG23	42:BG:80:PHE:H	1.76	0.46
43:BH:50:VAL:CG1	43:BH:51:ARG:N	2.78	0.46
47:BP:41:ARG:HH11	47:BP:41:ARG:HB3	1.80	0.46
51:BT:102:ILE:O	51:BT:103:ARG:C	2.58	0.46
55:BX:41:ASN:C	55:BX:43:VAL:H	2.23	0.46
56:BY:62:GLU:CD	56:BY:63:LYS:N	2.74	0.46
57:BZ:99:TYR:HA	57:BZ:124:ILE:O	2.15	0.46
1:CA:298:A:H2'	1:CA:299:G:O4'	2.16	0.46
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.79	0.46
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.50	0.46
1:CA:1305:G:H5''	21:CU:4:GLY:C	2.40	0.46
1:CA:1328:C:H2'	1:CA:1329:A:C8	2.50	0.46
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.80	0.46
1:CA:1442:G:H1	1:CA:1461:G:H21	1.64	0.46
2:CB:21:ARG:NH2	2:CB:38:GLY:HA3	2.30	0.46
9:CI:63:ILE:HD11	9:CI:81:ILE:HD11	1.97	0.46
16:CP:23:ASP:OD1	16:CP:25:ARG:N	2.46	0.46
19:CS:31:ILE:HG21	19:CS:49:ILE:HG12	1.96	0.46
20:CT:37:SER:O	20:CT:41:ILE:HG12	2.16	0.46
23:CW:72:A:O2'	23:CW:73:A:O5'	2.31	0.46
25:CY:19:ALA:C	25:CY:121:VAL:HG11	2.41	0.46
25:CY:168:ILE:HD12	25:CY:176:GLY:HA3	1.98	0.46
25:CY:201:ILE:HG21	25:CY:206:LEU:HA	1.96	0.46
25:CY:230:LYS:HB2	25:CY:230:LYS:NZ	2.30	0.46
28:D2:7:ARG:NH1	28:D2:7:ARG:HG3	2.30	0.46
29:D3:14:GLY:O	36:DA:969:U:H4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:3:GLU:HG2	37:DB:40:U:C5	2.51	0.46
32:D6:42:TRP:CH2	36:DA:643:A:N7	2.84	0.46
36:DA:158:U:H3'	36:DA:158:U:O2	2.15	0.46
36:DA:280:C:H3'	36:DA:281:G:H8	1.80	0.46
36:DA:795:C:H2'	36:DA:796:C:C6	2.50	0.46
36:DA:826:U:H5''	36:DA:2428:G:O3'	2.16	0.46
36:DA:851:U:H2'	36:DA:852:G:H8	1.81	0.46
36:DA:1675:C:O2	40:DE:129:HIS:HA	2.15	0.46
36:DA:1799:G:H5'	36:DA:1819:A:H61	1.79	0.46
36:DA:1818:U:H3'	39:DD:157:ARG:HG3	1.98	0.46
36:DA:2147:G:O2'	36:DA:2148:G:H5'	2.15	0.46
36:DA:2233:U:H2'	36:DA:2234:G:C8	2.50	0.46
36:DA:2685:G:H5'	46:DO:68:GLU:OE2	2.15	0.46
36:DA:2861:G:C4	36:DA:2862:G:C8	3.04	0.46
37:DB:53:A:C2	37:DB:54:G:C8	3.04	0.46
38:DC:149:ASN:HD22	38:DC:149:ASN:N	2.12	0.46
39:DD:96:HIS:CE1	39:DD:102:LYS:CE	2.99	0.46
40:DE:111:ARG:HD2	40:DE:160:TYR:HE2	1.80	0.46
42:DG:7:LEU:O	42:DG:8:LYS:C	2.58	0.46
43:DH:128:PRO:HG2	43:DH:129:THR:HG23	1.97	0.46
43:DH:170:ARG:O	43:DH:171:LEU:CB	2.62	0.46
48:DQ:87:LYS:CG	48:DQ:88:GLY:H	2.28	0.46
50:DS:42:ASP:O	50:DS:43:GLU:CB	2.64	0.46
51:DT:28:VAL:O	51:DT:29:ARG:HD2	2.16	0.46
1:AA:265:G:H5'	17:AQ:64:PRO:O	2.16	0.46
1:AA:907:A:H2'	1:AA:908:A:O4'	2.16	0.46
1:AA:918:A:H2'	1:AA:919:A:O4'	2.16	0.46
1:AA:926:G:H22	24:AX:15:G:H3'	1.80	0.46
2:AB:24:TRP:CH2	2:AB:26:PRO:HA	2.50	0.46
2:AB:53:ARG:O	2:AB:53:ARG:HG2	2.14	0.46
5:AE:150:ARG:HA	5:AE:153:LYS:HE2	1.96	0.46
6:AF:43:LEU:H	6:AF:43:LEU:CD1	2.23	0.46
13:AM:106:ASN:HB3	13:AM:107:ALA:H	1.58	0.46
13:AM:120:LYS:HD2	13:AM:120:LYS:N	2.31	0.46
17:AQ:76:LEU:HD21	17:AQ:79:SER:HB2	1.96	0.46
23:AW:30:G:H2'	23:AW:31:G:C5'	2.45	0.46
25:AY:147:TRP:HZ3	25:AY:163:VAL:HG11	1.81	0.46
25:AY:228:MET:HE3	25:AY:229:LEU:HG	1.98	0.46
25:AY:591:LYS:HD3	25:AY:591:LYS:HA	1.73	0.46
27:B1:44:PRO:HB2	27:B1:46:LEU:HD12	1.97	0.46
27:B1:86:SER:HB2	27:B1:90:ILE:CG1	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:15:GLU:HB3	32:B6:20:ASN:HB2	1.96	0.46
32:B6:35:GLU:O	32:B6:36:LEU:HB2	2.15	0.46
34:B8:33:ASN:CA	34:B8:36:LYS:HD2	2.46	0.46
34:B8:56:GLU:C	34:B8:58:ILE:N	2.72	0.46
36:BA:723:G:H2'	36:BA:724:U:H6	1.77	0.46
36:BA:962:G:C2'	36:BA:963:U:H5'	2.45	0.46
36:BA:1192:G:H2'	36:BA:1193:G:O4'	2.15	0.46
36:BA:1446:C:H2'	36:BA:1447:G:H8	1.81	0.46
36:BA:1494:A:O2'	36:BA:1495:A:OP1	2.31	0.46
36:BA:1930:G:C2'	36:BA:1931:U:OP2	2.62	0.46
36:BA:2307:G:H3'	36:BA:2307:G:N3	2.30	0.46
36:BA:2550:G:C6	36:BA:2551:C:N4	2.84	0.46
37:BB:91:C:C5'	48:BQ:17:LEU:O	2.63	0.46
40:BE:68:ALA:C	40:BE:70:ALA:N	2.74	0.46
41:BF:3:GLU:CB	41:BF:24:LEU:HG	2.44	0.46
42:BG:106:LEU:HA	42:BG:110:ALA:CB	2.46	0.46
43:BH:86:GLU:N	43:BH:86:GLU:OE1	2.47	0.46
44:BJ:7:UNK:O	44:BJ:10:UNK:CB	2.64	0.46
45:BN:3:THR:HG22	45:BN:5:VAL:HG23	1.98	0.46
45:BN:67:LEU:HB3	45:BN:88:GLU:HG3	1.94	0.46
46:BO:21:CYS:SG	46:BO:22:ILE:N	2.87	0.46
47:BP:47:ASP:HB3	47:BP:48:PRO:O	2.16	0.46
47:BP:71:VAL:C	47:BP:73:GLY:N	2.72	0.46
47:BP:108:LYS:O	47:BP:110:TYR:N	2.48	0.46
48:BQ:17:LEU:O	48:BQ:18:LYS:HD2	2.15	0.46
50:BS:51:ALA:HB3	50:BS:73:LEU:HD12	1.97	0.46
51:BT:3:ARG:C	51:BT:5:ALA:N	2.71	0.46
52:BU:49:HIS:CA	52:BU:52:ARG:HB2	2.46	0.46
52:BU:70:ARG:HA	52:BU:74:LEU:O	2.15	0.46
52:BU:102:GLU:HG3	53:BV:2:PHE:CE1	2.50	0.46
1:CA:373:A:C2	1:CA:482:A:C6	3.04	0.46
1:CA:398:C:H2'	1:CA:399:G:H8	1.81	0.46
1:CA:665:A:H2'	1:CA:725:G:N2	2.30	0.46
1:CA:1026:G:H3'	1:CA:1027:C:H5'	1.97	0.46
1:CA:1203:C:O2'	1:CA:1204:A:H5'	2.15	0.46
1:CA:1277:C:H3'	1:CA:1277:C:H6	1.81	0.46
1:CA:1298:C:O2'	1:CA:1299:A:C2	2.69	0.46
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.49	0.46
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.16	0.46
2:CB:7:VAL:C	2:CB:11:LEU:HG	2.41	0.46
2:CB:75:LYS:C	2:CB:75:LYS:HD3	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:51:GLY:O	3:CC:115:LEU:HD21	2.16	0.46
3:CC:159:GLY:HA2	3:CC:193:TYR:CE1	2.51	0.46
4:CD:26:CYS:O	4:CD:31:CYS:HB2	2.15	0.46
7:CG:112:PRO:HG2	7:CG:113:GLU:OE2	2.16	0.46
8:CH:27:PRO:HA	8:CH:58:TYR:CD1	2.51	0.46
12:CL:11:VAL:HG13	17:CQ:29:HIS:HD2	1.79	0.46
13:CM:3:ARG:HG2	13:CM:9:ILE:CG1	2.46	0.46
15:CO:25:THR:O	15:CO:26:GLU:C	2.58	0.46
16:CP:5:ARG:HE	16:CP:22:THR:CG2	2.28	0.46
18:CR:37:VAL:CG2	18:CR:38:GLU:H	2.25	0.46
25:CY:90:PHE:HE2	59:CY:701:FUA:C11	2.29	0.46
25:CY:97:SER:O	25:CY:100:VAL:HG12	2.15	0.46
25:CY:204:GLU:O	25:CY:205:TYR:C	2.58	0.46
25:CY:497:PHE:N	25:CY:508:GLY:O	2.48	0.46
27:D1:52:ARG:NH2	36:DA:2218:U:C1'	2.78	0.46
29:D3:50:VAL:O	29:D3:51:ALA:C	2.59	0.46
32:D6:35:GLU:HB3	32:D6:51:GLU:N	2.30	0.46
36:DA:194:G:H2'	36:DA:195:A:O4'	2.15	0.46
36:DA:300:A:P	56:DY:97:ARG:HE	2.38	0.46
36:DA:458:G:O2'	36:DA:469:G:O6	2.33	0.46
36:DA:650:C:H2'	36:DA:651:G:H5''	1.98	0.46
36:DA:750:A:H3'	36:DA:751:A:H5''	1.98	0.46
36:DA:887:A:H2'	36:DA:887:A:N3	2.30	0.46
36:DA:1441:G:O2'	36:DA:1442:G:H5'	2.16	0.46
36:DA:1453:U:H2'	36:DA:1455:G:C8	2.50	0.46
36:DA:1558:A:HO2'	36:DA:1559:G:P	2.39	0.46
36:DA:1930:G:C2'	36:DA:1931:U:OP2	2.63	0.46
36:DA:2115:G:H3'	36:DA:2116:G:H5''	1.98	0.46
36:DA:2307:G:C2	36:DA:2308:G:H5''	2.51	0.46
36:DA:2756:U:H1'	36:DA:2757:A:C8	2.51	0.46
37:DB:40:U:H3'	37:DB:41:U:C5'	2.44	0.46
38:DC:101:ILE:H	38:DC:101:ILE:CD1	2.28	0.46
38:DC:104:ILE:HG22	38:DC:131:ILE:HG21	1.98	0.46
39:DD:210:GLY:C	39:DD:212:SER:N	2.69	0.46
41:DF:3:GLU:CB	41:DF:24:LEU:HG	2.44	0.46
42:DG:54:GLU:O	42:DG:57:ALA:HB3	2.16	0.46
45:DN:14:VAL:HG11	45:DN:137:LYS:CD	2.45	0.46
47:DP:28:GLY:C	47:DP:29:LYS:HD2	2.40	0.46
47:DP:50:ARG:HG2	47:DP:50:ARG:NH1	2.31	0.46
47:DP:57:THR:OG1	47:DP:59:LEU:HB2	2.16	0.46
49:DR:12:ARG:HH11	49:DR:12:ARG:CG	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:117:VAL:HG12	49:DR:118:GLU:N	2.29	0.46
50:DS:58:LEU:HD23	50:DS:65:VAL:HG13	1.97	0.46
53:DV:35:LEU:HB2	53:DV:57:VAL:CG1	2.46	0.46
56:DY:31:LEU:HB2	56:DY:32:PRO:CA	2.44	0.46
57:DZ:16:SER:O	57:DZ:17:ALA:C	2.58	0.46
1:AA:265:G:H2'	1:AA:267:C:H5	1.80	0.46
1:AA:275:G:O2'	1:AA:276:G:H5'	2.15	0.46
1:AA:445:G:H2'	1:AA:446:G:H8	1.80	0.46
1:AA:977:A:C2'	1:AA:978:A:H5'	2.46	0.46
1:AA:1123:A:O3'	10:AJ:36:GLY:HA3	2.15	0.46
1:AA:1132:C:O2'	1:AA:1133:G:H5'	2.15	0.46
1:AA:1305:G:C5'	21:AU:4:GLY:HA3	2.45	0.46
1:AA:1442(B):A:C2	51:BT:118:ARG:NH2	2.82	0.46
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.16	0.46
2:AB:162:ILE:HG22	2:AB:182:ILE:HG22	1.97	0.46
2:AB:169:LYS:HD3	2:AB:169:LYS:O	2.15	0.46
3:AC:47:LEU:CD1	3:AC:76:VAL:HG12	2.44	0.46
3:AC:52:LEU:HA	3:AC:70:VAL:HG22	1.97	0.46
4:AD:19:LEU:CD2	4:AD:21:LEU:HD21	2.45	0.46
7:AG:83:ALA:HB1	7:AG:85:TYR:CE1	2.51	0.46
7:AG:143:ARG:O	7:AG:145:ALA:O	2.33	0.46
9:AI:93:ARG:C	9:AI:95:LYS:N	2.67	0.46
10:AJ:42:THR:HG23	10:AJ:67:THR:C	2.41	0.46
15:AO:39:LEU:CD2	15:AO:43:LEU:HG	2.46	0.46
19:AS:79:THR:O	19:AS:80:TYR:HB3	2.16	0.46
20:AT:73:HIS:HB3	20:AT:74:LYS:HE2	1.96	0.46
24:AX:11:A:N3	24:AX:11:A:C2'	2.79	0.46
25:AY:130:VAL:O	25:AY:132:ARG:NH2	2.49	0.46
25:AY:465:ARG:O	25:AY:470:PHE:HD2	1.99	0.46
25:AY:487:ILE:CD1	25:AY:563:ILE:CG2	2.94	0.46
25:AY:566:THR:O	25:AY:567:LEU:C	2.58	0.46
26:B0:10:THR:CG2	26:B0:11:ARG:H	2.22	0.46
26:B0:41:ARG:O	26:B0:42:GLY:O	2.33	0.46
27:B1:12:PRO:HG3	36:BA:1365:A:H5'	1.98	0.46
28:B2:69:ARG:NH2	36:BA:111:A:H4'	2.27	0.46
30:B4:1:MET:CE	42:BG:98:ARG:HG3	2.46	0.46
33:B7:5:TRP:CZ3	36:BA:464:U:H4'	2.51	0.46
36:BA:238:C:H2'	36:BA:239:U:O4'	2.15	0.46
36:BA:245:G:OP1	47:BP:69:GLY:HA3	2.16	0.46
36:BA:363:G:H2'	36:BA:363(A):A:C8	2.50	0.46
36:BA:840:C:O2'	36:BA:1192:G:H4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1199:U:H2'	36:BA:1200:C:C6	2.51	0.46
36:BA:1996:C:H4'	36:BA:1997:G:H5'	1.97	0.46
36:BA:2050:C:H2'	36:BA:2051:A:O4'	2.16	0.46
36:BA:2745:C:H2'	36:BA:2746:U:C6	2.51	0.46
40:BE:38:THR:O	40:BE:42:ASP:HB2	2.16	0.46
40:BE:196:VAL:C	40:BE:197:ILE:HG22	2.41	0.46
41:BF:62:ARG:HH21	41:BF:64:ILE:HA	1.81	0.46
41:BF:69:HIS:CD2	41:BF:69:HIS:N	2.82	0.46
42:BG:59:GLU:C	42:BG:61:ALA:N	2.72	0.46
42:BG:93:THR:HG22	42:BG:94:LEU:N	2.30	0.46
42:BG:97:ASP:O	42:BG:98:ARG:C	2.59	0.46
42:BG:172:LEU:O	42:BG:176:LEU:HG	2.15	0.46
43:BH:40:GLU:HG3	43:BH:64:LEU:CD1	2.46	0.46
43:BH:137:ASP:O	43:BH:138:LYS:HB2	2.15	0.46
46:BO:88:ASN:HD21	46:BO:90:GLN:HB2	1.81	0.46
47:BP:96:THR:O	47:BP:97:PRO:C	2.58	0.46
52:BU:92:ARG:O	52:BU:93:LYS:C	2.58	0.46
53:BV:32:THR:CG2	53:BV:33:VAL:N	2.78	0.46
54:BW:25:ARG:NH2	54:BW:74:ALA:O	2.49	0.46
1:CA:453:A:N6	1:CA:480:U:O2	2.49	0.46
1:CA:813:U:O2'	1:CA:814:A:H5'	2.15	0.46
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.50	0.46
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.97	0.46
5:CE:20:GLN:NE2	5:CE:25:ARG:NH2	2.64	0.46
9:CI:95:LYS:NZ	9:CI:96:LEU:HD13	2.27	0.46
10:CJ:42:THR:HG23	10:CJ:67:THR:C	2.40	0.46
11:CK:111:ASP:OD1	18:CR:84:LYS:HE2	2.15	0.46
12:CL:23:LYS:O	12:CL:24:VAL:CG2	2.63	0.46
13:CM:22:ILE:HD12	13:CM:22:ILE:N	2.31	0.46
20:CT:89:ARG:HD2	20:CT:104:LEU:HG	1.97	0.46
23:CW:10:G:H2'	23:CW:11:A:H8	1.81	0.46
24:CX:11:A:O2'	24:CX:12:A:O5'	2.31	0.46
24:CX:12:A:H5''	24:CX:13:A:OP1	2.15	0.46
25:CY:346:LYS:HE2	25:CY:384:ILE:HG12	1.97	0.46
28:D2:17:SER:CB	28:D2:18:PRO:HD2	2.46	0.46
30:D4:45:GLY:O	30:D4:46:GLN:HB2	2.14	0.46
33:D7:10:ARG:NH1	33:D7:14:LYS:CE	2.78	0.46
36:DA:265:A:H1'	36:DA:266:G:H1'	1.98	0.46
36:DA:347:A:H2'	36:DA:348:G:H8	1.81	0.46
36:DA:840:C:C3'	36:DA:841:A:H5''	2.46	0.46
36:DA:886:C:O2'	36:DA:887:A:H4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1196:C:O2'	36:DA:1227:G:H4'	2.16	0.46
36:DA:1827:C:H2'	36:DA:1828:G:C5'	2.45	0.46
36:DA:1838:C:O2'	36:DA:1839:G:H5''	2.16	0.46
36:DA:1843:C:H5'	39:DD:253:GLN:NE2	2.30	0.46
36:DA:2275:C:O2	48:DQ:85:LYS:HD3	2.16	0.46
36:DA:2876:G:H4'	51:DT:3:ARG:CD	2.45	0.46
38:DC:73:VAL:HG13	38:DC:73:VAL:O	2.16	0.46
38:DC:216:THR:OG1	38:DC:217:THR:N	2.49	0.46
39:DD:226:MET:HB3	39:DD:230:ASP:CB	2.45	0.46
40:DE:104:VAL:HG22	40:DE:198:VAL:HG22	1.97	0.46
41:DF:46:ARG:HG3	41:DF:46:ARG:HH11	1.81	0.46
44:DJ:75:UNK:C	44:DJ:77:UNK:H	2.27	0.46
47:DP:58:THR:O	47:DP:61:ARG:CG	2.63	0.46
47:DP:64:LYS:O	47:DP:66:GLY:N	2.42	0.46
47:DP:71:VAL:HG12	47:DP:72:PRO:HD3	1.97	0.46
48:DQ:110:THR:HG23	48:DQ:113:GLN:H	1.80	0.46
49:DR:29:LEU:HB3	49:DR:75:LEU:HD11	1.96	0.46
50:DS:56:LEU:O	50:DS:58:LEU:N	2.49	0.46
52:DU:70:ARG:NH2	52:DU:75:ASN:HB2	2.31	0.46
53:DV:34:GLU:HG3	53:DV:56:SER:OG	2.15	0.46
53:DV:43:GLU:O	53:DV:44:LYS:HB2	2.15	0.46
55:DX:8:ILE:H	55:DX:8:ILE:CD1	2.28	0.46
57:DZ:7:ALA:HA	57:DZ:39:VAL:HG12	1.97	0.46
57:DZ:102:LEU:HD21	57:DZ:124:ILE:CD1	2.46	0.46
57:DZ:158:PRO:HD2	57:DZ:161:VAL:HG21	1.97	0.46
1:AA:46:G:H2'	1:AA:366:C:H5	1.81	0.46
1:AA:61:G:OP1	20:AT:10:LEU:HD11	2.15	0.46
1:AA:186:C:C2	1:AA:187:C:C5	3.03	0.46
1:AA:255:G:O3'	17:AQ:17:LYS:HD2	2.15	0.46
1:AA:392:G:H2'	1:AA:393:A:C8	2.49	0.46
1:AA:413:G:N2	1:AA:428:G:H1'	2.31	0.46
1:AA:429:U:H1'	1:AA:430:A:H5''	1.97	0.46
1:AA:853:G:H2'	1:AA:854:G:H8	1.81	0.46
1:AA:1321:C:C5'	1:AA:1322:C:C5'	2.93	0.46
1:AA:1368:G:C2'	1:AA:1369:C:H5'	2.46	0.46
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.51	0.46
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.51	0.46
1:AA:1431:C:H2'	1:AA:1432:G:H5'	1.97	0.46
1:AA:1511:G:C6	1:AA:1512:U:C4	3.04	0.46
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.31	0.46
8:AH:39:LEU:HD22	8:AH:39:LEU:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:88:ARG:HG2	13:AM:88:ARG:HH11	1.80	0.46
14:AN:14:PRO:O	14:AN:15:LYS:O	2.34	0.46
19:AS:15:LEU:HD21	19:AS:33:THR:OG1	2.16	0.46
20:AT:86:ARG:O	20:AT:90:GLN:HG3	2.15	0.46
22:AV:2:C:H42	22:AV:71:G:H1	1.63	0.46
25:AY:368:GLU:C	25:AY:369:LEU:HD12	2.41	0.46
25:AY:555:LEU:HD21	25:AY:599:PRO:CG	2.42	0.46
25:AY:580:MET:SD	36:BA:1913:A:N6	2.88	0.46
25:AY:613:PRO:O	25:AY:615:GLU:N	2.48	0.46
26:B0:19:LYS:CD	26:B0:41:ARG:HH22	2.28	0.46
28:B2:69:ARG:HH22	36:BA:111:A:C5'	2.28	0.46
33:B7:32:LYS:HE2	36:BA:180:G:P	2.56	0.46
34:B8:23:VAL:HG13	34:B8:47:LYS:O	2.16	0.46
36:BA:106:C:O2	36:BA:106:C:H2'	2.15	0.46
36:BA:409:C:H2'	36:BA:410:G:C8	2.51	0.46
36:BA:604:G:O2'	36:BA:605:C:H5'	2.15	0.46
36:BA:650:C:H2'	36:BA:651:G:H5''	1.98	0.46
36:BA:796:C:H2'	36:BA:797:C:H6	1.77	0.46
36:BA:1517:G:O2'	36:BA:1518:U:H5'	2.15	0.46
36:BA:1614:A:H62	54:BW:93:ALA:CB	2.23	0.46
36:BA:1843:C:H2'	36:BA:1844:C:C6	2.51	0.46
36:BA:2230:G:H2'	36:BA:2231:C:C6	2.51	0.46
36:BA:2266:A:H4'	36:BA:2267:A:N3	2.31	0.46
39:BD:35:LYS:C	39:BD:35:LYS:CD	2.79	0.46
39:BD:183:ARG:NH1	39:BD:183:ARG:CG	2.75	0.46
39:BD:240:ALA:HB1	39:BD:241:PRO:HD2	1.97	0.46
40:BE:32:PRO:HA	40:BE:90:THR:HG23	1.97	0.46
43:BH:149:ARG:HA	43:BH:162:ILE:CG1	2.44	0.46
45:BN:14:VAL:HG11	45:BN:137:LYS:CD	2.45	0.46
45:BN:17:ASP:CG	45:BN:56:ASN:HB3	2.40	0.46
45:BN:46:VAL:HG11	45:BN:48:MET:SD	2.56	0.46
45:BN:131:GLN:HE22	45:BN:133:GLN:CA	2.28	0.46
46:BO:13:ASN:ND2	46:BO:97:ARG:HG3	2.31	0.46
47:BP:83:VAL:HG23	47:BP:105:LEU:HD13	1.96	0.46
47:BP:92:GLU:HG3	47:BP:93:GLY:N	2.28	0.46
47:BP:108:LYS:HD2	47:BP:108:LYS:N	2.30	0.46
50:BS:98:VAL:HG12	50:BS:100:ALA:HB2	1.98	0.46
51:BT:129:ARG:C	51:BT:129:ARG:CD	2.88	0.46
56:BY:17:SER:HB3	56:BY:71:LYS:HB3	1.97	0.46
56:BY:31:LEU:HB2	56:BY:32:PRO:CA	2.45	0.46
56:BY:43:ASN:ND2	56:BY:64:GLU:HG3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:61:LEU:C	57:BZ:63:ASP:N	2.73	0.46
1:CA:405:U:OP2	4:CD:3:ARG:HD2	2.16	0.46
1:CA:853:G:O2'	1:CA:854:G:H5'	2.16	0.46
1:CA:991:U:C4	1:CA:1212:U:H1'	2.51	0.46
1:CA:1056:U:H4'	3:CC:163:ALA:HB2	1.97	0.46
3:CC:138:VAL:O	3:CC:139:GLN:C	2.58	0.46
7:CG:108:ALA:HB2	7:CG:123:GLU:HG2	1.97	0.46
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HD12	1.97	0.46
10:CJ:32:ALA:HB1	10:CJ:76:ASN:HB3	1.96	0.46
11:CK:30:VAL:O	11:CK:30:VAL:HG23	2.15	0.46
11:CK:126:ARG:O	11:CK:127:LYS:C	2.58	0.46
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.15	0.46
22:CV:3:C:C2'	22:CV:4:C:H5'	2.46	0.46
25:CY:123:ARG:NH1	25:CY:123:ARG:HG3	2.31	0.46
25:CY:170:ARG:NH2	25:CY:205:TYR:HE1	2.12	0.46
25:CY:230:LYS:NZ	25:CY:237:PRO:HA	2.31	0.46
25:CY:413:ILE:HG12	25:CY:424:LEU:HD21	1.97	0.46
25:CY:496:LYS:HG3	25:CY:509:HIS:HD2	1.81	0.46
25:CY:590:ILE:HG22	25:CY:590:ILE:O	2.16	0.46
26:D0:36:ILE:O	26:D0:36:ILE:HG13	2.15	0.46
32:D6:5:VAL:CG1	32:D6:6:ARG:N	2.78	0.46
34:D8:56:GLU:C	34:D8:58:ILE:N	2.72	0.46
36:DA:221:A:H4'	36:DA:222:A:O5'	2.16	0.46
36:DA:271(B):C:O2'	36:DA:271(C):C:H5'	2.15	0.46
36:DA:764:A:N3	39:DD:213:ARG:NH1	2.64	0.46
36:DA:863:A:H2'	36:DA:864:G:C8	2.50	0.46
36:DA:1248:G:C5	52:DU:3:ARG:HD2	2.50	0.46
36:DA:1258:C:O4'	41:DF:84:VAL:HG21	2.16	0.46
36:DA:1632:A:H2'	36:DA:1633:G:C8	2.50	0.46
36:DA:1788:C:H2'	36:DA:1789:A:O4'	2.15	0.46
36:DA:2039:C:O2'	36:DA:2040:C:H5'	2.15	0.46
36:DA:2050:C:H2'	36:DA:2051:A:O4'	2.16	0.46
36:DA:2155:G:O2'	36:DA:2156:G:H5'	2.16	0.46
36:DA:2720:U:H2'	36:DA:2721:A:O4'	2.15	0.46
36:DA:2773:C:O2'	36:DA:2774:C:H5'	2.16	0.46
39:DD:197:GLY:O	39:DD:198:ASN:HB3	2.15	0.46
40:DE:69:LYS:HG2	40:DE:90:THR:OG1	2.15	0.46
40:DE:134:ILE:N	40:DE:134:ILE:CD1	2.76	0.46
42:DG:84:LYS:O	42:DG:85:GLY:C	2.58	0.46
42:DG:169:ALA:O	42:DG:173:LEU:HG	2.16	0.46
43:DH:87:LEU:N	43:DH:131:VAL:O	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:120:GLY:C	43:DH:121:ILE:HG13	2.41	0.46
44:DJ:35:UNK:O	44:DJ:37:UNK:N	2.48	0.46
47:DP:16:ARG:NH1	47:DP:16:ARG:O	2.42	0.46
47:DP:108:LYS:O	47:DP:110:TYR:N	2.48	0.46
48:DQ:37:LEU:HD12	48:DQ:128:LYS:HB3	1.97	0.46
48:DQ:59:ARG:O	48:DQ:60:ARG:HB2	2.16	0.46
50:DS:89:ARG:HG2	50:DS:89:ARG:NH1	2.29	0.46
51:DT:3:ARG:C	51:DT:5:ALA:N	2.71	0.46
52:DU:75:ASN:ND2	52:DU:77:SER:OG	2.48	0.46
57:DZ:9:TYR:OH	57:DZ:61:LEU:HD13	2.15	0.46
1:AA:61:G:H2'	1:AA:62:U:O4'	2.16	0.46
1:AA:1203:C:O2'	1:AA:1204:A:H5'	2.15	0.46
6:AF:69:GLU:O	6:AF:72:VAL:HG12	2.16	0.46
7:AG:108:ALA:HB2	7:AG:123:GLU:HG2	1.97	0.46
12:AL:27:LEU:CB	12:AL:62:SER:HB2	2.45	0.46
13:AM:7:VAL:O	13:AM:7:VAL:HG12	2.16	0.46
18:AR:25:THR:C	18:AR:26:LEU:HD23	2.40	0.46
20:AT:64:ASP:O	20:AT:67:ALA:HB3	2.15	0.46
23:AW:51:C:H2'	23:AW:52:G:C5'	2.46	0.46
24:AX:13:A:OP2	24:AX:14:U:OP2	2.33	0.46
25:AY:395:PRO:O	25:AY:397:VAL:N	2.47	0.46
28:B2:51:ARG:O	28:B2:55:ARG:NH1	2.49	0.46
32:B6:43:CYS:O	32:B6:44:ARG:CB	2.64	0.46
36:BA:733:G:O6	36:BA:761:A:C8	2.68	0.46
36:BA:783:A:H2'	36:BA:784:A:O5'	2.16	0.46
36:BA:814:C:C5	47:BP:27:HIS:ND1	2.84	0.46
36:BA:1480:G:C5	36:BA:1481:U:C5	3.04	0.46
36:BA:1532:C:O2'	36:BA:1533:G:H5'	2.16	0.46
36:BA:2756:U:H1'	36:BA:2757:A:C8	2.51	0.46
36:BA:2870:C:H2'	36:BA:2871:C:O4'	2.16	0.46
37:BB:90:A:H5'	37:BB:91:C:OP2	2.16	0.46
38:BC:28:ARG:NH1	38:BC:28:ARG:CG	2.73	0.46
39:BD:26:LYS:HE2	39:BD:26:LYS:CA	2.45	0.46
39:BD:147:LEU:HD13	39:BD:155:LEU:CD1	2.42	0.46
41:BF:133:ASN:N	41:BF:133:ASN:HD22	2.12	0.46
42:BG:42:GLY:C	42:BG:43:LEU:HD22	2.41	0.46
45:BN:2:LYS:HZ1	53:BV:12:TYR:HB3	1.81	0.46
48:BQ:56:ARG:HH21	57:BZ:180:VAL:CG2	2.22	0.46
49:BR:100:LEU:N	49:BR:100:LEU:HD13	2.30	0.46
50:BS:17:ARG:HA	50:BS:20:ARG:HH11	1.80	0.46
50:BS:58:LEU:HD23	50:BS:65:VAL:HG13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BY:102:CYS:SG	56:BY:103:GLY:N	2.89	0.46
57:BZ:19:ARG:NH1	57:BZ:84:GLU:O	2.49	0.46
1:CA:265:G:H5'	17:CQ:64:PRO:O	2.16	0.46
1:CA:458:C:H3'	1:CA:460:G:H8	1.81	0.46
1:CA:636:U:C5'	17:CQ:2:PRO:HG3	2.46	0.46
1:CA:1026:G:H3'	1:CA:1027:C:C5'	2.46	0.46
1:CA:1392:G:N2	1:CA:1502:A:H8	2.13	0.46
1:CA:1452:C:OP1	1:CA:1456:G:C6	2.69	0.46
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.16	0.46
9:CI:79:LEU:HD13	9:CI:83:ARG:HB2	1.97	0.46
9:CI:99:LEU:N	9:CI:99:LEU:HD22	2.31	0.46
20:CT:64:ASP:O	20:CT:67:ALA:HB3	2.15	0.46
20:CT:73:HIS:HB3	20:CT:74:LYS:HD3	1.97	0.46
25:CY:191:ASP:C	25:CY:193:GLY:N	2.72	0.46
25:CY:200:PRO:O	25:CY:201:ILE:C	2.59	0.46
25:CY:317:MET:O	25:CY:325:LEU:HB2	2.15	0.46
25:CY:556:ILE:HG22	25:CY:687:LEU:O	2.16	0.46
26:D0:25:ARG:HH11	26:D0:25:ARG:HG2	1.81	0.46
27:D1:6:GLU:O	27:D1:7:ILE:HD12	2.15	0.46
28:D2:32:LEU:HD22	28:D2:36:ARG:NH1	2.31	0.46
30:D4:50:VAL:O	30:D4:51:ASP:HB3	2.15	0.46
31:D5:10:LYS:HB2	36:DA:2017:U:O2	2.16	0.46
35:D9:27:CYS:SG	35:D9:29:ASN:ND2	2.89	0.46
36:DA:280:C:N4	36:DA:360:G:H1	2.13	0.46
36:DA:338:G:O2'	36:DA:339:U:H5'	2.16	0.46
36:DA:464:U:H2'	36:DA:465:G:O4'	2.15	0.46
36:DA:566:U:C2'	36:DA:567:A:H5'	2.46	0.46
36:DA:733:G:O6	36:DA:761:A:C8	2.68	0.46
36:DA:996:A:O3'	52:DU:92:ARG:CG	2.64	0.46
36:DA:1480:G:C5	36:DA:1481:U:C5	3.04	0.46
36:DA:2154:G:N2	36:DA:2155:G:H1'	2.31	0.46
36:DA:2309:A:H2'	36:DA:2310:A:C5'	2.45	0.46
36:DA:2320:A:C2	36:DA:2333:A:C8	3.03	0.46
36:DA:2476:A:C2	36:DA:2477:C:C5	3.04	0.46
36:DA:2876:G:C5'	51:DT:3:ARG:HA	2.46	0.46
38:DC:134:PRO:C	38:DC:135:ARG:HD2	2.40	0.46
39:DD:34:VAL:O	39:DD:36:PRO:HG2	2.15	0.46
39:DD:261:LYS:NZ	39:DD:263:ARG:NH1	2.63	0.46
40:DE:51:PHE:O	40:DE:52:LEU:C	2.58	0.46
40:DE:81:ILE:O	40:DE:81:ILE:CG2	2.62	0.46
42:DG:62:LEU:HD12	42:DG:62:LEU:N	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:33:LEU:HD21	43:DH:136:ILE:HG22	1.97	0.46
43:DH:54:ARG:HG2	43:DH:54:ARG:NH1	2.31	0.46
45:DN:58:ASP:OD2	45:DN:59:LYS:HG2	2.15	0.46
47:DP:7:ARG:CB	47:DP:8:PRO:CD	2.93	0.46
47:DP:9:ASN:N	47:DP:10:PRO:HD2	2.30	0.46
52:DU:29:SER:OG	52:DU:30:LYS:HE2	2.15	0.46
55:DX:29:TRP:CZ3	55:DX:76:ARG:HB2	2.51	0.46
57:DZ:14:LYS:HB2	57:DZ:17:ALA:HB2	1.98	0.46
57:DZ:63:ASP:HB2	57:DZ:65:GLN:HG3	1.97	0.46
1:AA:38:G:C2	1:AA:397:A:C2	3.03	0.46
1:AA:781:A:H2'	1:AA:782:A:H5'	1.97	0.46
1:AA:880:C:H2'	1:AA:881:G:H8	1.81	0.46
1:AA:1296:C:C5'	1:AA:1297:C:OP2	2.63	0.46
1:AA:1397:C:H6	1:AA:1397:C:H3'	1.81	0.46
2:AB:134:GLU:O	2:AB:137:ARG:HB3	2.15	0.46
3:AC:7:PRO:HG3	3:AC:184:TYR:CD1	2.51	0.46
6:AF:78:GLU:O	6:AF:81:ILE:HG13	2.15	0.46
7:AG:52:GLU:O	7:AG:53:LYS:C	2.58	0.46
12:AL:7:ILE:HG22	12:AL:8:ASN:N	2.31	0.46
13:AM:106:ASN:O	13:AM:107:ALA:CB	2.63	0.46
15:AO:4:THR:HG23	15:AO:7:GLU:OE1	2.16	0.46
19:AS:72:GLY:C	19:AS:74:PHE:N	2.72	0.46
20:AT:8:ARG:HH11	20:AT:8:ARG:HG3	1.80	0.46
20:AT:53:LEU:HB3	20:AT:102:GLY:HA3	1.98	0.46
20:AT:86:ARG:HG3	20:AT:86:ARG:NH1	2.27	0.46
23:AW:33:U:O2	23:AW:36:U:OP2	2.33	0.46
25:AY:219:VAL:C	25:AY:221:ALA:H	2.23	0.46
25:AY:228:MET:CE	25:AY:229:LEU:HG	2.45	0.46
25:AY:260:LEU:N	25:AY:260:LEU:HD13	2.31	0.46
25:AY:411:VAL:HG23	25:AY:459:LEU:CD2	2.45	0.46
25:AY:447:GLY:O	25:AY:448:GLN:O	2.33	0.46
27:B1:29:GLY:C	27:B1:30:VAL:HG22	2.38	0.46
27:B1:84:GLY:O	27:B1:85:LEU:C	2.59	0.46
31:B5:27:PRO:HG3	54:BW:23:LEU:CD1	2.45	0.46
33:B7:10:ARG:NH1	33:B7:14:LYS:CE	2.79	0.46
34:B8:39:LYS:HG3	34:B8:43:GLN:NE2	2.30	0.46
36:BA:83:G:O2'	36:BA:84:A:C8	2.55	0.46
36:BA:109:G:O2'	36:BA:110:G:H5'	2.15	0.46
36:BA:886:C:O2'	36:BA:887:A:H4'	2.15	0.46
36:BA:1056:G:H4'	36:BA:1086:A:C8	2.50	0.46
36:BA:1676:A:H2'	36:BA:1677:A:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2414:G:C2	36:BA:2415:G:C8	3.04	0.46
36:BA:2720:U:C2	36:BA:2721:A:C8	3.04	0.46
36:BA:2722:G:H2'	36:BA:2723:C:H6	1.78	0.46
39:BD:35:LYS:HA	39:BD:64:ILE:H	1.79	0.46
40:BE:55:ASN:HD21	40:BE:75:VAL:HG22	1.80	0.46
40:BE:152:LYS:HB3	45:BN:78:TYR:HA	1.98	0.46
43:BH:94:TYR:HA	43:BH:106:THR:O	2.16	0.46
43:BH:170:ARG:O	43:BH:171:LEU:CB	2.63	0.46
44:BJ:9:UNK:O	44:BJ:11:UNK:N	2.48	0.46
45:BN:23:LEU:HB3	45:BN:60:ILE:CG2	2.40	0.46
45:BN:58:ASP:HB3	45:BN:95:PRO:HB2	1.98	0.46
47:BP:13:ASN:N	47:BP:13:ASN:ND2	2.64	0.46
50:BS:49:VAL:CG1	50:BS:50:SER:N	2.79	0.46
55:BX:43:VAL:C	55:BX:45:THR:H	2.23	0.46
56:BY:103:GLY:O	56:BY:104:GLY:C	2.59	0.46
1:CA:66:G:C4'	1:CA:173:U:C5	2.99	0.46
1:CA:103:C:H3'	1:CA:104:G:H8	1.81	0.46
1:CA:155:C:H2'	1:CA:156:G:H8	1.81	0.46
1:CA:375:U:H2'	1:CA:376:G:H8	1.81	0.46
1:CA:413:G:H21	1:CA:428:G:H1'	1.80	0.46
1:CA:983:A:H5'	1:CA:984:C:OP2	2.15	0.46
1:CA:1030(A):G:H2'	1:CA:1030(B):C:H5'	1.98	0.46
1:CA:1074:G:O2'	1:CA:1075:C:H5'	2.16	0.46
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.16	0.46
2:CB:25:ASN:OD1	2:CB:25:ASN:C	2.59	0.46
2:CB:134:GLU:O	2:CB:137:ARG:HB3	2.15	0.46
3:CC:76:VAL:HG23	3:CC:77:ILE:N	2.31	0.46
3:CC:146:ALA:C	3:CC:148:GLY:H	2.23	0.46
9:CI:89:ASN:O	9:CI:92:TYR:HB2	2.16	0.46
13:CM:81:LEU:HD12	13:CM:86:CYS:SG	2.56	0.46
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.41	0.46
25:CY:147:TRP:HZ3	25:CY:163:VAL:HG21	1.80	0.46
25:CY:327:PHE:N	25:CY:327:PHE:HD1	2.14	0.46
25:CY:507:TYR:CD1	25:CY:508:GLY:N	2.84	0.46
25:CY:688:ILE:N	25:CY:688:ILE:CD1	2.79	0.46
26:D0:27:GLU:HG3	26:D0:68:GLU:HA	1.96	0.46
28:D2:65:ASN:HD21	36:DA:112:U:C5'	2.29	0.46
30:D4:2:LYS:HB2	37:DB:40:U:C4	2.46	0.46
30:D4:31:ILE:HG23	30:D4:33:VAL:HG23	1.98	0.46
32:D6:20:ASN:ND2	32:D6:44:ARG:HH22	2.12	0.46
32:D6:54:ILE:HD13	36:DA:2420:C:C5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:88:G:OP1	36:DA:90:U:C5	2.57	0.46
36:DA:817:C:O2'	36:DA:839:U:OP1	2.34	0.46
36:DA:882:G:H22	36:DA:894:C:N4	2.13	0.46
36:DA:1437:C:H2'	36:DA:1438:U:C6	2.51	0.46
36:DA:1605:C:C5	36:DA:1606:G:C5	3.04	0.46
36:DA:1721:G:C2	36:DA:1739:U:OP2	2.69	0.46
36:DA:2143:C:O2'	36:DA:2144:U:H5'	2.16	0.46
36:DA:2239:G:H5'	39:DD:251:GLY:HA3	1.97	0.46
36:DA:2296:U:C4'	36:DA:2297:C:OP1	2.62	0.46
36:DA:2495:G:O2'	36:DA:2496:C:H5'	2.16	0.46
36:DA:2809:A:C2	36:DA:2892:A:N3	2.84	0.46
36:DA:2881:C:C2	36:DA:2882:A:C8	3.04	0.46
38:DC:65:LEU:HD13	38:DC:189:ASN:HD22	1.80	0.46
39:DD:30:GLU:CG	39:DD:63:ARG:NH2	2.79	0.46
40:DE:4:ILE:CG1	40:DE:5:LEU:N	2.78	0.46
40:DE:77:ILE:C	40:DE:78:LEU:HG	2.40	0.46
42:DG:136:ARG:HG2	42:DG:136:ARG:NH1	2.31	0.46
47:DP:48:PRO:O	47:DP:51:PHE:N	2.45	0.46
48:DQ:52:VAL:HG12	48:DQ:56:ARG:HG3	1.98	0.46
49:DR:11:ASN:O	49:DR:12:ARG:CB	2.63	0.46
51:DT:85:LYS:O	51:DT:86:ILE:C	2.59	0.46
1:AA:147:G:N2	1:AA:148:G:H1'	2.31	0.46
1:AA:557:G:H2'	1:AA:558:G:O4'	2.16	0.46
1:AA:652:U:C2	1:AA:752:G:N2	2.83	0.46
1:AA:747:C:H2'	1:AA:748:C:C1'	2.45	0.46
1:AA:979:C:C3'	1:AA:980:C:C5'	2.78	0.46
1:AA:1030(A):G:H2'	1:AA:1030(B):C:H5'	1.98	0.46
1:AA:1243:C:O2'	1:AA:1244:C:H5'	2.15	0.46
1:AA:1300:G:HO2'	1:AA:1301:U:P	2.38	0.46
1:AA:1319:A:OP2	19:AS:5:LEU:HD23	2.15	0.46
1:AA:1329:A:OP1	13:AM:29:ARG:HG3	2.16	0.46
2:AB:20:GLU:CG	2:AB:189:ASP:OD2	2.64	0.46
2:AB:172:ILE:HD12	2:AB:172:ILE:N	2.31	0.46
3:AC:67:THR:HG23	3:AC:102:ASN:HB2	1.98	0.46
4:AD:65:ARG:NH1	4:AD:70:ILE:O	2.47	0.46
4:AD:179:GLU:O	4:AD:181:MET:HG3	2.15	0.46
10:AJ:92:THR:HG23	10:AJ:93:GLY:H	1.80	0.46
14:AN:15:LYS:O	14:AN:16:PHE:O	2.34	0.46
20:AT:89:ARG:HD2	20:AT:104:LEU:CG	2.46	0.46
23:AW:23:C:H2'	23:AW:24:U:C6	2.51	0.46
25:AY:313:ALA:O	25:AY:386:GLY:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:423:LYS:HB3	25:AY:472:VAL:CG2	2.32	0.46
26:B0:3:HIS:NE2	36:BA:2602:A:H2	2.14	0.46
30:B4:33:VAL:HG12	30:B4:34:GLU:N	2.31	0.46
31:B5:55:ARG:HD3	31:B5:56:LYS:N	2.31	0.46
34:B8:14:VAL:HG21	34:B8:22:VAL:CG1	2.46	0.46
35:B9:29:ASN:C	35:B9:31:LYS:H	2.24	0.46
36:BA:347:A:H2'	36:BA:348:G:H8	1.81	0.46
36:BA:483:A:N3	36:BA:483:A:H2'	2.29	0.46
36:BA:718:A:H2'	36:BA:719:C:O4'	2.16	0.46
36:BA:1164:G:H1	36:BA:1185:C:H42	1.63	0.46
36:BA:1362:C:H2'	36:BA:1363:C:H6	1.81	0.46
36:BA:1721:G:C2	36:BA:1739:U:OP2	2.69	0.46
36:BA:2103:C:H1'	36:BA:2187:G:N1	2.27	0.46
36:BA:2134:A:C2	36:BA:2159:G:O2'	2.66	0.46
36:BA:2320:A:H2'	36:BA:2320:A:N3	2.31	0.46
36:BA:2360:A:O2'	47:BP:60:MET:HE2	2.16	0.46
36:BA:2469:A:O2'	48:BQ:56:ARG:HD3	2.16	0.46
36:BA:2810:A:O2'	40:BE:61:ARG:HB2	2.16	0.46
37:BB:71:C:O2'	37:BB:72:G:H5'	2.16	0.46
38:BC:178:LYS:HG2	38:BC:181:PHE:HE1	1.80	0.46
39:BD:72:LYS:HG3	39:BD:103:ARG:NH2	2.30	0.46
40:BE:82:ARG:O	40:BE:84:PHE:N	2.48	0.46
41:BF:127:GLU:HB2	41:BF:196:LEU:CD1	2.46	0.46
42:BG:96:ARG:O	42:BG:98:ARG:N	2.49	0.46
42:BG:113:ARG:O	42:BG:140:ILE:HG22	2.15	0.46
45:BN:22:THR:HB	45:BN:25:ARG:CB	2.38	0.46
47:BP:95:VAL:CG2	47:BP:125:VAL:HG23	2.45	0.46
55:BX:35:THR:HB	55:BX:38:GLU:H	1.81	0.46
57:BZ:7:ALA:HB2	57:BZ:59:LEU:HD22	1.97	0.46
57:BZ:40:ASP:HB3	57:BZ:43:GLU:CD	2.40	0.46
57:BZ:137:ILE:HG21	57:BZ:155:LEU:HD12	1.98	0.46
1:CA:189(D):C:H2'	1:CA:189(E):U:O4'	2.15	0.46
1:CA:534:U:H5'	1:CA:534:U:H6	1.80	0.46
1:CA:622:A:C8	1:CA:623:C:C5	3.04	0.46
1:CA:756:C:H2'	1:CA:757:U:O4'	2.16	0.46
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.81	0.46
1:CA:1264:C:O2'	1:CA:1265:G:H5'	2.15	0.46
1:CA:1308:U:O2'	1:CA:1309:G:H5'	2.15	0.46
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.81	0.46
2:CB:204:ASN:ND2	2:CB:204:ASN:C	2.59	0.46
2:CB:204:ASN:ND2	2:CB:206:ASP:N	2.52	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:129:ALA:C	3:CC:131:ARG:N	2.73	0.46
4:CD:137:SER:O	4:CD:138:TYR:C	2.57	0.46
10:CJ:32:ALA:HB2	10:CJ:76:ASN:ND2	2.27	0.46
12:CL:27:LEU:CB	12:CL:62:SER:HB2	2.44	0.46
12:CL:53:ARG:HG2	12:CL:53:ARG:HH11	1.80	0.46
16:CP:67:THR:HB	16:CP:70:ALA:CB	2.46	0.46
17:CQ:53:LEU:HD23	17:CQ:53:LEU:C	2.41	0.46
17:CQ:65:ILE:O	17:CQ:66:SER:HB3	2.16	0.46
18:CR:55:ARG:HG3	18:CR:55:ARG:NH1	2.30	0.46
19:CS:40:ILE:CG1	19:CS:71:LEU:HD23	2.46	0.46
25:CY:115:GLU:CD	25:CY:118:SER:HB3	2.41	0.46
25:CY:286:ILE:HD12	25:CY:286:ILE:N	2.31	0.46
25:CY:415:PRO:O	25:CY:416:LYS:C	2.59	0.46
34:D8:14:VAL:HG21	34:D8:22:VAL:CG1	2.45	0.46
36:DA:212:G:O2'	36:DA:213:A:H5'	2.16	0.46
36:DA:519:U:H5''	54:DW:25:ARG:NH2	2.31	0.46
36:DA:585:G:H2'	36:DA:1251:C:N4	2.22	0.46
36:DA:649:G:H2'	36:DA:650:C:C6	2.51	0.46
36:DA:1141:U:H6	45:DN:63:THR:CG2	2.29	0.46
36:DA:1142(A):A:C5	36:DA:1144:G:C5	3.04	0.46
36:DA:1536:C:H2'	36:DA:1537:G:C4'	2.46	0.46
36:DA:1567:A:H5'	39:DD:58:HIS:CD2	2.51	0.46
36:DA:1910:G:O2'	36:DA:1911:U:H5'	2.15	0.46
36:DA:2039:C:H2'	36:DA:2040:C:C6	2.51	0.46
36:DA:2462:U:H2'	36:DA:2463:C:H6	1.81	0.46
36:DA:2645:G:C3'	36:DA:2646:C:C5'	2.85	0.46
39:DD:25:THR:HG22	39:DD:26:LYS:N	2.31	0.46
39:DD:210:GLY:O	39:DD:211:ARG:CB	2.64	0.46
40:DE:32:PRO:HA	40:DE:90:THR:HG23	1.98	0.46
40:DE:117:MET:CE	40:DE:124:GLY:HA3	2.45	0.46
41:DF:127:GLU:HB2	41:DF:196:LEU:CD1	2.46	0.46
41:DF:140:LEU:O	41:DF:143:ALA:HB3	2.16	0.46
42:DG:120:LEU:HB3	42:DG:131:TYR:OH	2.16	0.46
44:DJ:108:UNK:O	44:DJ:109:UNK:C	2.63	0.46
45:DN:62:VAL:O	45:DN:63:THR:O	2.34	0.46
47:DP:56:SER:O	47:DP:57:THR:C	2.58	0.46
48:DQ:37:LEU:HG	48:DQ:129:THR:HA	1.98	0.46
50:DS:77:ALA:HB1	50:DS:82:ILE:HB	1.98	0.46
50:DS:98:VAL:HG12	50:DS:100:ALA:HB2	1.98	0.46
53:DV:19:LYS:HB3	53:DV:94:LEU:O	2.16	0.46
55:DX:3:THR:O	55:DX:4:ALA:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:183:G:O2'	1:AA:224:C:H4'	2.16	0.45
1:AA:909:A:H2'	1:AA:910:C:O4'	2.16	0.45
1:AA:1440:C:C2'	1:AA:1441:G:H5'	2.46	0.45
1:AA:1520:G:O2'	1:AA:1521:G:H5'	2.17	0.45
2:AB:12:GLU:CA	2:AB:16:HIS:ND1	2.77	0.45
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.57	0.45
4:AD:17:VAL:O	4:AD:19:LEU:HD12	2.16	0.45
5:AE:86:ALA:HB3	5:AE:125:SER:HB3	1.98	0.45
9:AI:99:LEU:N	9:AI:99:LEU:HD22	2.31	0.45
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.16	0.45
10:AJ:8:LEU:HB2	10:AJ:70:ARG:O	2.16	0.45
10:AJ:18:ALA:C	10:AJ:20:ALA:N	2.73	0.45
12:AL:83:VAL:HG12	12:AL:84:LEU:H	1.81	0.45
13:AM:14:ARG:HB3	13:AM:16:ASP:OD1	2.16	0.45
14:AN:7:ILE:HG13	14:AN:8:GLU:N	2.29	0.45
15:AO:17:ARG:HG3	15:AO:17:ARG:NH1	2.30	0.45
19:AS:6:LYS:O	19:AS:7:LYS:HE3	2.16	0.45
20:AT:84:LEU:C	20:AT:86:ARG:H	2.24	0.45
21:AU:13:ILE:O	21:AU:16:GLY:N	2.49	0.45
25:AY:141:LYS:CE	60:AY:702:GDP:N2	2.73	0.45
25:AY:272:LEU:O	25:AY:272:LEU:HG	2.15	0.45
25:AY:390:VAL:C	25:AY:391:GLY:O	2.57	0.45
25:AY:485:GLU:OE1	25:AY:555:LEU:HB2	2.16	0.45
27:B1:41:ARG:HH22	36:BA:1365:A:H5'	1.78	0.45
31:B5:6:VAL:CG1	36:BA:2016:U:H1'	2.46	0.45
32:B6:14:THR:HG23	32:B6:50:ARG:HG2	1.99	0.45
36:BA:112:U:H2'	36:BA:113:G:H5'	1.98	0.45
36:BA:534:U:O2'	52:BU:49:HIS:CD2	2.69	0.45
36:BA:654(P):C:H2'	36:BA:654(Q):C:C5'	2.46	0.45
36:BA:1770:G:O2'	36:BA:1771:C:H5'	2.16	0.45
36:BA:1822:G:H2'	36:BA:1823:G:H8	1.81	0.45
36:BA:2030:A:H4'	36:BA:2031:A:C8	2.50	0.45
36:BA:2143:C:C2'	36:BA:2144:U:H5'	2.46	0.45
36:BA:2401:U:H2'	36:BA:2402:C:H1'	1.98	0.45
36:BA:2861:G:C4	36:BA:2862:G:C8	3.04	0.45
38:BC:31:LYS:O	38:BC:31:LYS:HD3	2.16	0.45
38:BC:216:THR:OG1	38:BC:217:THR:N	2.47	0.45
39:BD:77:ALA:CB	39:BD:97:TYR:HA	2.46	0.45
39:BD:131:LEU:N	39:BD:131:LEU:CD1	2.78	0.45
39:BD:148:GLU:HB2	39:BD:151:LYS:HD2	1.98	0.45
40:BE:4:ILE:CG1	40:BE:5:LEU:N	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:31:CYS:O	40:BE:91:VAL:N	2.49	0.45
45:BN:82:LEU:HD23	45:BN:82:LEU:O	2.16	0.45
47:BP:28:GLY:C	47:BP:29:LYS:HD2	2.41	0.45
48:BQ:12:GLN:NE2	48:BQ:73:PRO:HD2	2.30	0.45
49:BR:28:LEU:HD11	49:BR:114:VAL:HG12	1.99	0.45
50:BS:85:VAL:CG2	50:BS:106:ARG:HG3	2.42	0.45
52:BU:37:GLU:O	52:BU:40:PHE:HB2	2.17	0.45
55:BX:35:THR:HG22	55:BX:36:LYS:N	2.30	0.45
57:BZ:17:ALA:O	57:BZ:20:ARG:HG2	2.16	0.45
1:CA:61:G:OP1	20:CT:10:LEU:HD11	2.16	0.45
1:CA:269:C:H2'	1:CA:270:A:H8	1.79	0.45
1:CA:545:C:H5''	4:CD:72:GLU:HG2	1.97	0.45
1:CA:689:C:O5'	1:CA:689:C:H6	1.99	0.45
1:CA:1112:C:H1'	3:CC:179:ARG:HD3	1.98	0.45
1:CA:1502:A:H2	1:CA:1505:G:N1	2.03	0.45
2:CB:82:ARG:NH1	2:CB:92:TYR:OH	2.49	0.45
2:CB:153:ARG:C	2:CB:155:LEU:N	2.73	0.45
3:CC:92:ALA:HB2	3:CC:99:VAL:HG22	1.99	0.45
3:CC:174:PRO:O	3:CC:175:LEU:C	2.56	0.45
4:CD:78:LEU:HD21	4:CD:96:LEU:HB2	1.97	0.45
19:CS:12:ASP:H	19:CS:38:SER:HB3	1.81	0.45
19:CS:25:LYS:O	19:CS:26:GLY:C	2.59	0.45
22:CV:19:G:H4'	22:CV:20:U:OP2	2.16	0.45
25:CY:9:LEU:HD22	25:CY:284:LEU:HD22	1.98	0.45
25:CY:205:TYR:O	25:CY:206:LEU:C	2.59	0.45
25:CY:245:ALA:O	25:CY:248:LYS:HB3	2.16	0.45
25:CY:549:ALA:HB2	25:CY:587:SER:OG	2.16	0.45
32:D6:15:GLU:OE2	32:D6:44:ARG:CZ	2.63	0.45
36:DA:48:G:N2	36:DA:177:G:N2	2.64	0.45
36:DA:59:U:H3	36:DA:68:G:H1	1.63	0.45
36:DA:64:A:O2'	55:DX:71:GLY:HA3	2.16	0.45
36:DA:142:A:H5'	36:DA:142(A):C:OP2	2.16	0.45
36:DA:303:U:H2'	36:DA:304:G:H8	1.80	0.45
36:DA:324:A:OP2	36:DA:1205:U:N3	2.46	0.45
36:DA:484:C:H2'	36:DA:485:C:H6	1.78	0.45
36:DA:541:C:H42	36:DA:552:G:H1	1.63	0.45
36:DA:572:A:C2	36:DA:2033:A:C2	3.04	0.45
36:DA:637:A:N6	36:DA:652:C:H4'	2.31	0.45
36:DA:654(P):C:H2'	36:DA:654(Q):C:C5'	2.46	0.45
36:DA:938:G:H2'	36:DA:939:G:H8	1.80	0.45
36:DA:1528:A:O2'	36:DA:1528(A):A:O5'	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1799:G:H8	39:DD:181:GLU:OE1	1.99	0.45
36:DA:1972:A:H2'	36:DA:1973:G:C8	2.51	0.45
36:DA:2259:G:O2'	36:DA:2260:C:H5'	2.16	0.45
36:DA:2364:C:O2'	36:DA:2365:G:H5'	2.15	0.45
36:DA:2462:U:H2'	36:DA:2463:C:C6	2.51	0.45
36:DA:2469:A:O2'	48:DQ:56:ARG:HD3	2.16	0.45
36:DA:2517:C:C6	36:DA:2542:A:C2	3.03	0.45
38:DC:62:THR:OG1	38:DC:161:ARG:HD2	2.16	0.45
38:DC:74:ARG:HG2	38:DC:74:ARG:NH1	2.32	0.45
39:DD:43:ARG:HB3	39:DD:54:ARG:CB	2.44	0.45
45:DN:23:LEU:C	45:DN:25:ARG:H	2.23	0.45
47:DP:99:LEU:HG	47:DP:100:LEU:HD22	1.97	0.45
48:DQ:17:LEU:O	48:DQ:18:LYS:HD2	2.16	0.45
51:DT:108:ARG:HG3	51:DT:109:GLU:H	1.79	0.45
53:DV:19:LYS:HG3	53:DV:20:LEU:N	2.31	0.45
54:DW:1:MET:HB3	54:DW:64:MET:HE3	1.97	0.45
1:AA:325:A:N6	1:AA:326:G:N1	2.64	0.45
1:AA:346:G:H2'	1:AA:347:G:O4'	2.16	0.45
1:AA:770:C:O2'	1:AA:771:G:H5'	2.16	0.45
1:AA:1126:U:O4	10:AJ:7:LYS:HE2	2.17	0.45
2:AB:32:ILE:CD1	2:AB:40:HIS:HB3	2.46	0.45
5:AE:150:ARG:NH1	5:AE:150:ARG:HB2	2.31	0.45
10:AJ:61:GLU:HG3	14:AN:58:LYS:NZ	2.32	0.45
25:AY:39:ILE:HG22	25:AY:40:HIS:N	2.30	0.45
25:AY:175:SER:O	25:AY:188:TYR:N	2.49	0.45
28:B2:41:ILE:HD11	28:B2:44:LEU:CD1	2.30	0.45
30:B4:26:SER:HB3	42:BG:105:LYS:HZ2	1.80	0.45
31:B5:2:ALA:N	36:BA:2015:A:H1'	2.31	0.45
32:B6:16:CYS:C	32:B6:18:ARG:N	2.70	0.45
32:B6:19:ARG:O	32:B6:20:ASN:C	2.58	0.45
32:B6:29:ASN:O	32:B6:30:THR:C	2.60	0.45
32:B6:42:TRP:CH2	36:BA:643:A:N7	2.84	0.45
36:BA:422:A:C2	36:BA:423:A:C4	3.04	0.45
36:BA:643:A:H2'	36:BA:644:A:O4'	2.16	0.45
36:BA:675:A:H4'	41:BF:67:GLN:OE1	2.16	0.45
36:BA:946:G:H2'	36:BA:947:G:C8	2.51	0.45
36:BA:962:G:HO2'	36:BA:963:U:H5'	1.81	0.45
36:BA:990:A:OP2	36:BA:991:C:OP2	2.35	0.45
36:BA:1767:C:H2'	36:BA:1768:U:O4'	2.17	0.45
36:BA:2443:C:C2'	36:BA:2444:G:H5'	2.47	0.45
36:BA:2472:G:H3'	36:BA:2475:C:H42	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2531:A:OP1	43:BH:177:GLY:N	2.49	0.45
36:BA:2876:G:C5'	51:BT:3:ARG:HA	2.46	0.45
38:BC:73:VAL:HG13	38:BC:73:VAL:O	2.16	0.45
39:BD:77:ALA:HA	39:BD:97:TYR:HA	1.97	0.45
39:BD:245:PRO:O	39:BD:246:PRO:C	2.59	0.45
41:BF:46:ARG:HG3	41:BF:46:ARG:NH1	2.31	0.45
42:BG:37:VAL:HG22	42:BG:159:VAL:HA	1.98	0.45
47:BP:48:PRO:O	47:BP:51:PHE:N	2.46	0.45
47:BP:71:VAL:O	47:BP:72:PRO:C	2.56	0.45
47:BP:100:LEU:HA	47:BP:103:ALA:HB3	1.97	0.45
50:BS:48:LEU:N	50:BS:48:LEU:CD1	2.79	0.45
50:BS:58:LEU:HD12	50:BS:59:LYS:H	1.81	0.45
50:BS:98:VAL:C	50:BS:100:ALA:N	2.72	0.45
51:BT:14:TYR:O	51:BT:15:VAL:C	2.59	0.45
51:BT:28:VAL:O	51:BT:29:ARG:HD2	2.16	0.45
54:BW:109:GLU:N	54:BW:109:GLU:OE1	2.48	0.45
1:CA:8:A:N6	4:CD:205:GLU:O	2.49	0.45
1:CA:247:G:C6	1:CA:278:G:C2	3.04	0.45
1:CA:562:C:O2'	12:CL:16:GLU:O	2.31	0.45
1:CA:582:U:OP1	15:CO:68:ARG:NH2	2.49	0.45
1:CA:1111:A:N1	3:CC:177:THR:OG1	2.44	0.45
2:CB:194:PRO:O	2:CB:195:ASP:C	2.60	0.45
3:CC:134:ILE:O	3:CC:135:LYS:C	2.58	0.45
5:CE:7:GLU:O	5:CE:8:GLU:HB3	2.16	0.45
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.40	0.45
5:CE:61:TYR:O	5:CE:62:ALA:C	2.58	0.45
10:CJ:80:LYS:HZ3	10:CJ:80:LYS:HB3	1.81	0.45
13:CM:68:GLY:CA	13:CM:71:ARG:HB3	2.46	0.45
13:CM:72:ALA:O	13:CM:73:GLU:C	2.59	0.45
14:CN:12:ARG:HB2	14:CN:12:ARG:CZ	2.47	0.45
20:CT:50:GLU:HB2	20:CT:100:ILE:CB	2.46	0.45
24:CX:11:A:N3	24:CX:11:A:C2'	2.79	0.45
25:CY:243:VAL:O	25:CY:247:ARG:CB	2.64	0.45
25:CY:539:ILE:C	25:CY:542:VAL:HG12	2.41	0.45
25:CY:554:PRO:HD2	25:CY:560:VAL:HG22	1.98	0.45
27:D1:67:ILE:HB	27:D1:68:PRO:CD	2.46	0.45
28:D2:25:VAL:CG2	28:D2:60:LEU:HD22	2.46	0.45
30:D4:31:ILE:CG2	30:D4:33:VAL:HG23	2.46	0.45
31:D5:44:THR:CG2	49:DR:101:ALA:HB2	2.45	0.45
32:D6:25:LYS:NZ	34:D8:34:TRP:HZ2	2.14	0.45
32:D6:35:GLU:O	32:D6:36:LEU:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:52:VAL:HG22	32:D6:53:LYS:N	2.30	0.45
34:D8:52:LYS:H	34:D8:53:PRO:HD2	1.78	0.45
36:DA:185:U:H2'	36:DA:186:G:H8	1.80	0.45
36:DA:1220:A:H3'	36:DA:1221:C:C5'	2.41	0.45
36:DA:1668:A:N3	36:DA:1670:C:C4	2.84	0.45
40:DE:111:ARG:CG	49:DR:2:ARG:HG2	2.39	0.45
43:DH:13:LYS:HA	43:DH:13:LYS:CE	2.40	0.45
43:DH:86:GLU:N	43:DH:86:GLU:OE1	2.49	0.45
45:DN:13:TRP:O	45:DN:135:PRO:HD2	2.17	0.45
47:DP:95:VAL:CG2	47:DP:125:VAL:HG23	2.44	0.45
48:DQ:110:THR:CG2	48:DQ:113:GLN:HG3	2.47	0.45
54:DW:52:GLU:C	54:DW:54:ALA:H	2.24	0.45
55:DX:47:PHE:CD2	55:DX:89:ILE:HG21	2.50	0.45
56:DY:13:VAL:HG23	56:DY:73:ARG:O	2.16	0.45
56:DY:39:VAL:HG12	56:DY:40:GLU:H	1.82	0.45
57:DZ:24:LEU:CD2	57:DZ:25:PRO:O	2.63	0.45
57:DZ:167:PRO:O	57:DZ:168:GLU:HB3	2.17	0.45
1:AA:217:C:O2'	1:AA:470:C:N4	2.49	0.45
1:AA:500:G:H5'	12:AL:124:LYS:NZ	2.32	0.45
1:AA:765:G:H1	1:AA:812:C:H2'	1.82	0.45
1:AA:811:C:H4'	1:AA:900:A:N6	2.31	0.45
1:AA:826:C:C2	1:AA:827:U:C5	3.05	0.45
1:AA:1008:C:H6	1:AA:1008:C:O5'	1.99	0.45
1:AA:1026:G:H3'	1:AA:1027:C:C5'	2.46	0.45
1:AA:1328:C:H2'	1:AA:1329:A:H8	1.81	0.45
2:AB:21:ARG:NH2	2:AB:38:GLY:HA3	2.31	0.45
7:AG:23:VAL:O	7:AG:27:ILE:HB	2.16	0.45
7:AG:80:VAL:HG23	7:AG:83:ALA:HB3	1.95	0.45
8:AH:32:LYS:C	8:AH:34:GLU:N	2.72	0.45
8:AH:121:ASP:O	8:AH:122:ARG:C	2.58	0.45
10:AJ:32:ALA:HB2	10:AJ:76:ASN:ND2	2.28	0.45
10:AJ:54:PHE:CD2	10:AJ:55:LYS:HD2	2.49	0.45
16:AP:80:PHE:O	16:AP:81:ARG:C	2.59	0.45
20:AT:48:LYS:HD2	20:AT:51:GLU:OE2	2.16	0.45
21:AU:6:ARG:NH2	21:AU:15:ARG:NH2	2.64	0.45
25:AY:100:VAL:O	25:AY:329:ARG:NH1	2.50	0.45
25:AY:191:ASP:HB3	25:AY:265:LYS:HB3	1.99	0.45
25:AY:214:GLU:O	25:AY:218:GLU:N	2.50	0.45
25:AY:445:GLU:HA	25:AY:445:GLU:OE1	2.15	0.45
25:AY:462:ILE:O	25:AY:466:LEU:HB2	2.16	0.45
27:B1:89:GLU:O	27:B1:93:GLU:HG2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:49:VAL:O	34:B8:53:PRO:HG3	2.15	0.45
34:B8:52:LYS:H	34:B8:53:PRO:HD2	1.80	0.45
35:B9:29:ASN:HD21	35:B9:32:HIS:CG	2.35	0.45
36:BA:29:U:O2'	36:BA:30:G:H5'	2.16	0.45
36:BA:548:A:C3'	36:BA:549:G:H5'	2.47	0.45
36:BA:557:U:H2'	36:BA:558:G:H8	1.81	0.45
36:BA:588:U:H1'	41:BF:90:PHE:HB3	1.97	0.45
36:BA:644:A:C2	36:BA:2369:A:H1'	2.51	0.45
36:BA:654(P):C:H2'	36:BA:654(Q):C:H5'	1.97	0.45
36:BA:861:A:C2'	36:BA:862:G:H5'	2.47	0.45
36:BA:903:C:C2'	36:BA:904:C:C5'	2.94	0.45
36:BA:918:A:H5''	37:BB:98:G:O2'	2.16	0.45
36:BA:1244:G:O2'	36:BA:1245:G:H5'	2.16	0.45
36:BA:1248:G:C5	52:BU:3:ARG:HD2	2.51	0.45
36:BA:1544:A:O2'	36:BA:1545:A:H5'	2.17	0.45
36:BA:1756:G:H4'	36:BA:1758:G:O4'	2.16	0.45
36:BA:2720:U:H2'	36:BA:2721:A:O4'	2.15	0.45
38:BC:115:VAL:HB	38:BC:150:ILE:HD11	1.98	0.45
38:BC:191:ARG:HH11	38:BC:191:ARG:HG3	1.82	0.45
39:BD:241:PRO:C	39:BD:242:ARG:HG3	2.41	0.45
40:BE:51:PHE:HD1	40:BE:52:LEU:N	2.15	0.45
41:BF:68:LYS:HG3	41:BF:69:HIS:HD2	1.81	0.45
45:BN:55:VAL:HG22	45:BN:56:ASN:N	2.31	0.45
46:BO:13:ASN:C	46:BO:15:GLY:N	2.74	0.45
46:BO:22:ILE:HB	46:BO:40:VAL:O	2.16	0.45
47:BP:50:ARG:HG2	47:BP:50:ARG:NH1	2.30	0.45
47:BP:71:VAL:HG12	47:BP:72:PRO:HD3	1.97	0.45
47:BP:147:LEU:C	47:BP:148:LEU:HD12	2.41	0.45
50:BS:42:ASP:O	50:BS:43:GLU:HB2	2.16	0.45
52:BU:84:LYS:C	52:BU:86:ALA:N	2.72	0.45
56:BY:2:ARG:C	56:BY:4:LYS:N	2.74	0.45
56:BY:76:CYS:O	56:BY:77:PRO:C	2.59	0.45
57:BZ:27:VAL:O	57:BZ:27:VAL:HG13	2.17	0.45
1:CA:261:U:O2	1:CA:263:A:C8	2.70	0.45
1:CA:417:C:H2'	1:CA:418:C:C6	2.51	0.45
1:CA:967:C:H2'	1:CA:968:A:C8	2.51	0.45
1:CA:1216:G:H2'	1:CA:1217:C:H6	1.82	0.45
5:CE:15:ARG:CZ	5:CE:26:PHE:CE2	3.00	0.45
5:CE:36:ASP:O	5:CE:37:ARG:HB2	2.16	0.45
10:CJ:32:ALA:HB1	10:CJ:75:ILE:CG1	2.46	0.45
11:CK:66:LEU:HD23	11:CK:66:LEU:HA	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:15:LYS:O	14:CN:16:PHE:O	2.34	0.45
15:CO:27:VAL:O	15:CO:30:ALA:N	2.49	0.45
25:CY:121:VAL:HG23	25:CY:122:TRP:N	2.30	0.45
25:CY:141:LYS:O	25:CY:144:ALA:HB2	2.15	0.45
27:D1:52:ARG:HD3	27:D1:52:ARG:HA	1.74	0.45
27:D1:64:ALA:HA	27:D1:67:ILE:CG1	2.47	0.45
28:D2:32:LEU:CA	28:D2:53:LEU:HD13	2.41	0.45
36:DA:482:A:H1'	36:DA:498:G:N2	2.32	0.45
36:DA:869:G:C2'	36:DA:870:A:H5'	2.46	0.45
36:DA:1177:A:N3	36:DA:1178:C:H5	2.14	0.45
36:DA:1776:G:N2	36:DA:1789:A:H1'	2.31	0.45
36:DA:2330:G:H2'	36:DA:2331:G:O4'	2.17	0.45
36:DA:2547:U:H2'	36:DA:2548:G:C8	2.48	0.45
38:DC:11:LEU:HD23	38:DC:14:LYS:HZ3	1.80	0.45
42:DG:67:LYS:HD3	42:DG:68:PRO:CD	2.47	0.45
45:DN:43:THR:HB	45:DN:46:VAL:HG11	1.99	0.45
48:DQ:43:THR:OG1	48:DQ:45:GLN:HG2	2.15	0.45
49:DR:59:ASP:O	49:DR:60:LEU:C	2.60	0.45
50:DS:15:ARG:CB	50:DS:18:ILE:HD11	2.46	0.45
53:DV:38:LEU:HD23	53:DV:38:LEU:C	2.40	0.45
56:DY:2:ARG:C	56:DY:4:LYS:N	2.74	0.45
56:DY:76:CYS:O	56:DY:77:PRO:C	2.60	0.45
57:DZ:72:ARG:HG3	57:DZ:72:ARG:NH1	2.32	0.45
1:AA:269:C:H2'	1:AA:270:A:H8	1.80	0.45
1:AA:797:C:H2'	1:AA:798:G:C8	2.52	0.45
1:AA:1157:A:H1'	1:AA:1181:G:H21	1.82	0.45
1:AA:1264:C:O2'	1:AA:1265:G:H5'	2.17	0.45
2:AB:25:ASN:OD1	2:AB:25:ASN:C	2.58	0.45
9:AI:59:PHE:N	9:AI:59:PHE:CD1	2.84	0.45
10:AJ:49:VAL:HG21	14:AN:41:ARG:O	2.15	0.45
12:AL:20:LYS:H	12:AL:20:LYS:CD	2.21	0.45
19:AS:37:ARG:H	19:AS:37:ARG:HG3	1.37	0.45
20:AT:37:SER:O	20:AT:41:ILE:HG12	2.15	0.45
21:AU:8:THR:O	21:AU:9:ARG:C	2.59	0.45
24:AX:12:A:H5''	24:AX:13:A:OP1	2.15	0.45
25:AY:133:ILE:HD12	25:AY:272:LEU:HD11	1.97	0.45
25:AY:164:MET:HE1	25:AY:246:ILE:HG21	1.99	0.45
25:AY:490:PRO:CG	25:AY:516:PRO:HD2	2.30	0.45
25:AY:523:PHE:CD1	25:AY:550:MET:HE1	2.50	0.45
29:B3:4:LEU:HD23	29:B3:58:VAL:HA	1.99	0.45
30:B4:48:ARG:O	30:B4:49:PHE:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:9:LEU:HD13	32:B6:9:LEU:O	2.15	0.45
33:B7:11:LYS:HE2	36:BA:686:G:H5'	1.98	0.45
36:BA:187:G:N3	36:BA:1365:A:H2	2.14	0.45
36:BA:201:C:C2'	36:BA:202:U:H5'	2.46	0.45
36:BA:464:U:H2'	36:BA:465:G:O4'	2.17	0.45
36:BA:481:G:H2'	36:BA:507:A:C2	2.50	0.45
36:BA:566:U:O4	53:BV:78:LYS:HE3	2.16	0.45
36:BA:848:G:H5'	36:BA:849:A:OP2	2.17	0.45
36:BA:975(A):G:HO2'	36:BA:976:C:H5'	1.79	0.45
36:BA:1017:G:O2'	36:BA:1018:C:H5'	2.16	0.45
36:BA:1632:A:H2'	36:BA:1633:G:C8	2.51	0.45
36:BA:1799:G:H8	39:BD:181:GLU:OE1	1.99	0.45
36:BA:1930:G:HO2'	36:BA:1968:G:H1	1.63	0.45
36:BA:2290:G:H4'	36:BA:2381:C:O2'	2.17	0.45
36:BA:2364:C:H2'	36:BA:2365:G:O4'	2.16	0.45
36:BA:2778:A:C5'	36:BA:2779:U:OP2	2.59	0.45
38:BC:149:ASN:C	38:BC:149:ASN:ND2	2.72	0.45
39:BD:141:VAL:O	39:BD:141:VAL:HG23	2.16	0.45
39:BD:144:ALA:HB3	39:BD:192:THR:CG2	2.41	0.45
40:BE:31:CYS:C	40:BE:90:THR:HG23	2.42	0.45
40:BE:69:LYS:HG2	40:BE:90:THR:OG1	2.15	0.45
40:BE:82:ARG:HH11	40:BE:82:ARG:HG3	1.80	0.45
51:BT:32:TYR:O	51:BT:41:ARG:O	2.35	0.45
56:BY:20:TYR:N	56:BY:20:TYR:CD1	2.84	0.45
1:CA:392:G:H2'	1:CA:393:A:C8	2.50	0.45
1:CA:907:A:H2'	1:CA:908:A:O4'	2.16	0.45
1:CA:935:A:H2'	1:CA:936:C:C6	2.51	0.45
1:CA:1053:G:N7	1:CA:1199:U:H2'	2.32	0.45
1:CA:1270:C:O2'	1:CA:1271:G:H5'	2.17	0.45
1:CA:1389:C:H2'	1:CA:1390:U:O4'	2.17	0.45
2:CB:80:ILE:HD12	2:CB:80:ILE:N	2.30	0.45
2:CB:174:VAL:HG13	2:CB:184:VAL:HG11	1.98	0.45
3:CC:121:ALA:O	3:CC:124:ILE:HB	2.17	0.45
3:CC:139:GLN:O	3:CC:140:ARG:C	2.60	0.45
4:CD:19:LEU:O	4:CD:26:CYS:SG	2.75	0.45
4:CD:49:ARG:HE	4:CD:49:ARG:CA	2.13	0.45
5:CE:43:LEU:N	5:CE:136:MET:HE2	2.32	0.45
9:CI:70:LYS:O	9:CI:74:ILE:HG13	2.16	0.45
10:CJ:62:HIS:CD2	10:CJ:62:HIS:H	2.34	0.45
13:CM:56:LEU:HD13	13:CM:60:VAL:HG23	1.99	0.45
25:CY:100:VAL:O	25:CY:329:ARG:HD3	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:42:GLY:HA3	36:DA:2331:G:H4'	1.99	0.45
27:D1:43:TYR:N	27:D1:43:TYR:CD1	2.84	0.45
28:D2:35:LEU:HD23	28:D2:35:LEU:C	2.41	0.45
30:D4:33:VAL:HG12	30:D4:34:GLU:N	2.32	0.45
31:D5:7:PRO:HA	36:DA:2615:U:C2	2.52	0.45
32:D6:24:GLU:OE2	36:DA:2346:A:H8	1.99	0.45
36:DA:234:C:H2'	36:DA:235:U:C6	2.50	0.45
36:DA:864:G:OP2	48:DQ:22:LYS:HE2	2.16	0.45
36:DA:962:G:C2'	36:DA:963:U:H5'	2.45	0.45
36:DA:1275:A:N1	36:DA:1295:C:O2'	2.45	0.45
36:DA:1276:A:H1'	49:DR:16:HIS:HE1	1.81	0.45
36:DA:1568:G:OP2	39:DD:63:ARG:NH2	2.44	0.45
36:DA:1794:U:H2'	36:DA:1795:C:C6	2.49	0.45
36:DA:2031:A:C6	36:DA:2498:C:H1'	2.51	0.45
36:DA:2261:C:O2'	36:DA:2262:U:H5'	2.17	0.45
36:DA:2345:G:C3'	36:DA:2346:A:H5'	2.46	0.45
36:DA:2425:A:H5''	36:DA:2426:A:H3'	1.97	0.45
36:DA:2439:A:H3'	36:DA:2600:A:OP1	2.16	0.45
36:DA:2472:G:H3'	36:DA:2475:C:H42	1.80	0.45
36:DA:2542:A:H4'	36:DA:2543:G:C8	2.51	0.45
36:DA:2557:G:H2'	36:DA:2558:C:C6	2.52	0.45
36:DA:2679:A:H2'	36:DA:2680:C:H6	1.80	0.45
36:DA:2697:G:C2	36:DA:2711:A:C2	3.04	0.45
36:DA:2745:C:H2'	36:DA:2746:U:C6	2.52	0.45
36:DA:2870:C:O2'	36:DA:2871:C:H5'	2.17	0.45
40:DE:34:VAL:HG11	40:DE:78:LEU:CD2	2.47	0.45
40:DE:93:VAL:HG12	40:DE:175:VAL:HG21	1.99	0.45
40:DE:132:HIS:CD2	40:DE:135:HIS:NE2	2.84	0.45
41:DF:5:ALA:HB3	41:DF:18:ARG:O	2.16	0.45
41:DF:81:PRO:C	41:DF:83:PHE:N	2.74	0.45
42:DG:64:THR:HG23	42:DG:65:GLY:N	2.32	0.45
44:DJ:139:UNK:C	44:DJ:141:UNK:N	2.79	0.45
45:DN:10:GLU:OE2	45:DN:11:PRO:HD2	2.16	0.45
50:DS:101:LEU:O	50:DS:102:ALA:O	2.34	0.45
51:DT:8:LYS:C	51:DT:10:VAL:H	2.25	0.45
51:DT:128:GLU:O	51:DT:130:ALA:N	2.50	0.45
52:DU:72:HIS:HE1	52:DU:107:ALA:HB2	1.81	0.45
55:DX:8:ILE:HD11	55:DX:42:ALA:O	2.17	0.45
56:DY:38:ILE:O	56:DY:39:VAL:C	2.58	0.45
56:DY:42:VAL:HG23	56:DY:67:LEU:HD13	1.98	0.45
56:DY:76:CYS:SG	56:DY:77:PRO:CD	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:14:LYS:C	57:DZ:16:SER:N	2.74	0.45
1:AA:22:G:O2'	1:AA:913:A:N1	2.43	0.45
1:AA:248:C:O2'	1:AA:249:U:H5'	2.17	0.45
1:AA:622:A:C8	1:AA:623:C:C5	3.04	0.45
1:AA:745:C:H5''	1:AA:851:G:H1'	1.99	0.45
1:AA:797:C:H2'	1:AA:798:G:H8	1.80	0.45
1:AA:1005:A:H3'	1:AA:1006:C:O4'	2.17	0.45
1:AA:1163:C:H2'	1:AA:1164:G:C8	2.51	0.45
1:AA:1325:C:C2	1:AA:1326:C:C5	3.05	0.45
2:AB:73:THR:HG23	2:AB:170:GLU:OE2	2.16	0.45
2:AB:170:GLU:O	2:AB:171:ALA:C	2.59	0.45
2:AB:215:LEU:N	2:AB:215:LEU:HD22	2.31	0.45
4:AD:78:LEU:HD21	4:AD:96:LEU:HB2	1.98	0.45
4:AD:157:LEU:HG	4:AD:161:ASN:HD21	1.82	0.45
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.85	0.45
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.16	0.45
5:AE:64:ARG:NH1	5:AE:64:ARG:CG	2.80	0.45
5:AE:90:VAL:O	5:AE:120:THR:HA	2.17	0.45
6:AF:97:PHE:CD2	18:AR:65:ILE:CD1	3.00	0.45
7:AG:108:ALA:C	7:AG:110:GLN:N	2.74	0.45
9:AI:79:LEU:HD13	9:AI:83:ARG:HB2	1.98	0.45
10:AJ:62:HIS:H	10:AJ:62:HIS:CD2	2.35	0.45
12:AL:79:GLU:CB	25:AY:442:THR:OG1	2.65	0.45
14:AN:12:ARG:HB2	14:AN:12:ARG:CZ	2.46	0.45
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.17	0.45
18:AR:44:LEU:CD2	18:AR:79:LEU:HD22	2.46	0.45
25:AY:185:ALA:HB3	25:AY:200:PRO:HA	1.98	0.45
25:AY:464:ASP:O	25:AY:468:ARG:CB	2.63	0.45
26:B0:53:MET:HA	26:B0:58:THR:O	2.17	0.45
28:B2:33:MET:HE3	28:B2:37:PHE:CE1	2.51	0.45
31:B5:25:LEU:HD12	54:BW:19:LEU:C	2.42	0.45
32:B6:24:GLU:OE2	36:BA:2346:A:H8	2.00	0.45
33:B7:8:ASN:ND2	33:B7:9:ARG:N	2.62	0.45
36:BA:25:U:H2'	36:BA:26:G:O4'	2.17	0.45
36:BA:78:A:H2'	36:BA:79:G:H8	1.82	0.45
36:BA:262:A:H2'	36:BA:263:C:O4'	2.16	0.45
36:BA:458:G:O2'	36:BA:469:G:O6	2.35	0.45
36:BA:465:G:C6	36:BA:466:A:N6	2.84	0.45
36:BA:915:C:H2'	36:BA:916:G:H8	1.82	0.45
36:BA:1568:G:P	39:BD:63:ARG:HH22	2.39	0.45
36:BA:2320:A:C2	36:BA:2333:A:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2401:U:H2'	36:BA:2402:C:C1'	2.46	0.45
38:BC:115:VAL:HA	38:BC:145:THR:HG22	1.98	0.45
39:BD:31:LYS:HZ2	39:BD:33:LEU:CB	2.27	0.45
43:BH:120:GLY:C	43:BH:121:ILE:HG13	2.41	0.45
45:BN:14:VAL:HG21	45:BN:137:LYS:NZ	2.32	0.45
46:BO:35:VAL:CG1	46:BO:103:ALA:HB3	2.39	0.45
48:BQ:136:ALA:C	48:BQ:138:ASP:N	2.66	0.45
49:BR:50:HIS:O	49:BR:51:LEU:C	2.59	0.45
52:BU:98:LEU:O	52:BU:106:PHE:HB2	2.16	0.45
55:BX:3:THR:O	55:BX:4:ALA:HB3	2.16	0.45
1:CA:500:G:H5'	12:CL:124:LYS:NZ	2.31	0.45
1:CA:711:G:H2'	1:CA:712:A:C8	2.52	0.45
1:CA:720:C:O5'	1:CA:720:C:H6	2.00	0.45
1:CA:724:G:O2'	1:CA:725:G:H5'	2.17	0.45
1:CA:858:G:O2'	1:CA:859:A:H5''	2.16	0.45
1:CA:975:A:H5'	1:CA:975:A:C8	2.49	0.45
1:CA:1065:U:O2'	1:CA:1066:C:OP2	2.35	0.45
1:CA:1131:G:C6	1:CA:1132:C:N4	2.85	0.45
1:CA:1239:A:H62	1:CA:1299:A:H62	1.65	0.45
1:CA:1508:G:H2'	1:CA:1509:C:H6	1.82	0.45
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.86	0.45
2:CB:194:PRO:O	2:CB:197:VAL:HG23	2.15	0.45
2:CB:194:PRO:HG2	2:CB:195:ASP:H	1.81	0.45
7:CG:79:ARG:HD2	7:CG:79:ARG:C	2.42	0.45
10:CJ:22:LYS:C	10:CJ:22:LYS:HD2	2.42	0.45
13:CM:118:ALA:CB	13:CM:120:LYS:HE3	2.46	0.45
20:CT:73:HIS:HB3	20:CT:74:LYS:CE	2.47	0.45
20:CT:89:ARG:HD2	20:CT:104:LEU:CG	2.47	0.45
23:CW:61:C:O2'	38:DC:53:ARG:HB2	2.17	0.45
25:CY:179:ASP:OD2	25:CY:182:ARG:HB2	2.15	0.45
25:CY:262:SER:HB3	25:CY:265:LYS:HB2	1.99	0.45
26:D0:74:ARG:CG	37:DB:13:A:OP2	2.62	0.45
27:D1:46:LEU:HD22	27:D1:46:LEU:N	2.20	0.45
27:D1:67:ILE:N	27:D1:68:PRO:CD	2.79	0.45
30:D4:50:VAL:HG12	30:D4:51:ASP:N	2.32	0.45
36:DA:310:A:OP2	56:DY:18:GLY:HA2	2.15	0.45
36:DA:552:G:O2'	36:DA:553:G:H5'	2.17	0.45
36:DA:570:G:O6	36:DA:2499:C:OP1	2.34	0.45
36:DA:644:A:C2	36:DA:2369:A:H1'	2.52	0.45
36:DA:756:C:C2'	36:DA:757:U:H5'	2.47	0.45
36:DA:775:G:C4	36:DA:794:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:848:G:C4	36:DA:933:A:H8	2.33	0.45
36:DA:958:U:H3'	36:DA:958:U:C6	2.50	0.45
36:DA:1245:G:C5'	41:DF:34:TRP:HZ2	2.30	0.45
36:DA:1517:G:O2'	36:DA:1518:U:H5'	2.15	0.45
36:DA:2081:C:H2'	36:DA:2082:A:H8	1.82	0.45
37:DB:79:C:H2'	37:DB:80:U:O4'	2.16	0.45
38:DC:16:ASP:C	38:DC:18:ASN:H	2.25	0.45
39:DD:153:ALA:C	39:DD:154:LYS:HG3	2.42	0.45
39:DD:154:LYS:C	39:DD:155:LEU:HD12	2.41	0.45
39:DD:176:ARG:HH11	39:DD:176:ARG:CG	2.30	0.45
41:DF:103:LYS:C	41:DF:105:VAL:N	2.75	0.45
43:DH:18:GLU:HB3	43:DH:19:VAL:H	1.63	0.45
43:DH:65:HIS:HE1	43:DH:69:ARG:NH1	2.15	0.45
43:DH:150:ALA:O	43:DH:151:ILE:C	2.59	0.45
43:DH:163:TYR:HD1	43:DH:163:TYR:H	1.63	0.45
47:DP:13:ASN:O	47:DP:14:LYS:CB	2.64	0.45
48:DQ:68:ILE:HG23	48:DQ:103:MET:HA	1.98	0.45
49:DR:28:LEU:HB2	49:DR:34:ILE:HG13	1.99	0.45
49:DR:56:LYS:C	49:DR:58:GLY:H	2.24	0.45
50:DS:49:VAL:CG1	50:DS:50:SER:H	2.27	0.45
52:DU:91:ASP:CG	52:DU:96:ALA:HB2	2.41	0.45
55:DX:35:THR:HB	55:DX:38:GLU:H	1.81	0.45
55:DX:41:ASN:C	55:DX:43:VAL:H	2.24	0.45
56:DY:42:VAL:O	56:DY:65:ALA:N	2.35	0.45
57:DZ:108:PRO:HA	57:DZ:142:SER:HA	1.98	0.45
1:AA:491:G:H2'	1:AA:492:G:C8	2.45	0.45
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.52	0.45
1:AA:1131:G:C6	1:AA:1132:C:N4	2.84	0.45
1:AA:1220:G:H2'	1:AA:1221:G:C8	2.42	0.45
4:AD:160:GLN:O	4:AD:163:GLU:HB3	2.17	0.45
5:AE:81:GLU:HA	5:AE:89:ILE:O	2.17	0.45
6:AF:97:PHE:HB2	18:AR:32:ARG:HH21	1.82	0.45
11:AK:111:ASP:OD1	18:AR:84:LYS:HE2	2.16	0.45
12:AL:117:ARG:O	12:AL:118:SER:C	2.60	0.45
13:AM:59:TYR:O	13:AM:60:VAL:C	2.60	0.45
15:AO:64:ARG:CG	15:AO:64:ARG:NH1	2.79	0.45
18:AR:40:LEU:O	18:AR:42:ARG:N	2.48	0.45
19:AS:12:ASP:H	19:AS:38:SER:HB3	1.80	0.45
25:AY:413:ILE:HG23	25:AY:413:ILE:O	2.16	0.45
25:AY:512:ILE:HD13	25:AY:512:ILE:N	2.28	0.45
25:AY:656:ALA:O	25:AY:660:ARG:HD2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B3:36:VAL:C	29:B3:37:LEU:HD23	2.42	0.45
36:BA:64:A:O2'	55:BX:71:GLY:HA3	2.17	0.45
36:BA:221:A:H4'	36:BA:222:A:O5'	2.17	0.45
36:BA:272(G):C:C3'	36:BA:272(H):C:H5''	2.45	0.45
36:BA:280:C:H3'	36:BA:281:G:H8	1.82	0.45
36:BA:1022:G:O2'	36:BA:1023:U:P	2.75	0.45
36:BA:1177:A:N3	36:BA:1178:C:H5	2.14	0.45
36:BA:1240:U:O2'	36:BA:1241:A:H5'	2.17	0.45
36:BA:1827:C:H2'	36:BA:1828:G:C5'	2.46	0.45
36:BA:2292:C:H2'	36:BA:2293:C:C6	2.51	0.45
36:BA:2425:A:H5''	36:BA:2426:A:H3'	1.97	0.45
36:BA:2742:C:C2'	36:BA:2743:C:H5'	2.46	0.45
36:BA:2809:A:OP2	36:BA:2891:G:N1	2.36	0.45
42:BG:111:LEU:O	42:BG:114:ILE:HG13	2.16	0.45
43:BH:91:GLY:HA2	43:BH:160:LYS:HG2	1.99	0.45
43:BH:163:TYR:H	43:BH:163:TYR:HD1	1.63	0.45
43:BH:173:PRO:O	43:BH:174:GLY:C	2.59	0.45
44:BJ:4:UNK:O	44:BJ:5:UNK:C	2.64	0.45
45:BN:23:LEU:C	45:BN:25:ARG:H	2.24	0.45
46:BO:61:VAL:HG21	46:BO:111:PHE:CE2	2.52	0.45
47:BP:9:ASN:N	47:BP:10:PRO:HD2	2.32	0.45
47:BP:16:ARG:HD3	47:BP:17:LYS:N	2.31	0.45
48:BQ:108:GLY:O	48:BQ:109:VAL:HG23	2.16	0.45
49:BR:37:THR:HG23	49:BR:40:LYS:HE2	1.98	0.45
50:BS:101:LEU:O	50:BS:102:ALA:O	2.35	0.45
51:BT:64:ARG:HD2	51:BT:73:GLU:OE2	2.16	0.45
52:BU:64:ARG:O	52:BU:68:ALA:N	2.49	0.45
52:BU:72:HIS:HE1	52:BU:107:ALA:HB2	1.82	0.45
53:BV:19:LYS:HB3	53:BV:94:LEU:O	2.17	0.45
56:BY:32:PRO:C	56:BY:35:TYR:H	2.24	0.45
57:BZ:56:VAL:HG13	57:BZ:69:THR:O	2.16	0.45
57:BZ:122:ARG:HG2	57:BZ:122:ARG:NH1	2.30	0.45
1:CA:413:G:N2	1:CA:428:G:H1'	2.32	0.45
1:CA:437:U:H2'	1:CA:438:G:O4'	2.17	0.45
1:CA:539:A:OP2	12:CL:115:LYS:HE3	2.16	0.45
1:CA:657:G:H4'	15:CO:28:GLN:HG2	1.99	0.45
1:CA:973:G:OP1	10:CJ:57:LYS:HD3	2.16	0.45
1:CA:1005:A:H3'	1:CA:1006:C:O4'	2.16	0.45
1:CA:1226:C:C4	13:CM:104:ARG:HB2	2.51	0.45
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.32	0.45
1:CA:1303:C:O2'	1:CA:1304:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1315:U:O2	1:CA:1360:A:H2	1.99	0.45
1:CA:1328:C:H2'	1:CA:1329:A:H8	1.81	0.45
1:CA:1444:C:C2	1:CA:1445:C:C5	3.05	0.45
3:CC:25:GLY:C	3:CC:27:LYS:N	2.65	0.45
3:CC:52:LEU:HA	3:CC:70:VAL:HG22	1.99	0.45
3:CC:133:ALA:O	3:CC:137:ALA:HB2	2.15	0.45
4:CD:31:CYS:O	4:CD:32:ALA:CB	2.64	0.45
4:CD:107:ARG:HH21	4:CD:194:LEU:HD13	1.80	0.45
4:CD:157:LEU:HG	4:CD:161:ASN:ND2	2.32	0.45
5:CE:144:THR:C	5:CE:146:ALA:N	2.70	0.45
6:CF:15:ASP:O	6:CF:17:SER:N	2.50	0.45
6:CF:97:PHE:N	18:CR:30:ASP:OD1	2.50	0.45
7:CG:41:ARG:HG2	7:CG:41:ARG:NH1	2.32	0.45
7:CG:113:GLU:CG	7:CG:119:ARG:HG2	2.47	0.45
8:CH:31:PHE:O	8:CH:34:GLU:HB2	2.17	0.45
8:CH:38:ILE:C	8:CH:40:ALA:N	2.73	0.45
8:CH:39:LEU:H	8:CH:39:LEU:HD22	1.81	0.45
8:CH:111:ILE:CG2	8:CH:112:LEU:N	2.80	0.45
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.47	0.45
23:CW:1:C:N3	23:CW:73:A:C2	2.84	0.45
25:CY:293:THR:C	25:CY:295:GLU:N	2.73	0.45
25:CY:448:GLN:OE1	25:CY:480:GLN:HG2	2.17	0.45
59:CY:701:FUA:H211	59:CY:701:FUA:O2	2.16	0.45
27:D1:80:LEU:HB3	27:D1:82:LEU:HD11	1.97	0.45
29:D3:54:VAL:HG12	29:D3:55:ARG:N	2.31	0.45
31:D5:55:ARG:HH22	49:DR:33:ARG:CD	2.29	0.45
32:D6:15:GLU:HB3	32:D6:20:ASN:HB2	1.97	0.45
32:D6:54:ILE:O	32:D6:54:ILE:CD1	2.61	0.45
36:DA:294:A:H2'	36:DA:295:G:H5'	1.98	0.45
36:DA:409:C:H2'	36:DA:410:G:C8	2.52	0.45
36:DA:658:C:H2'	36:DA:659:C:H6	1.78	0.45
36:DA:724:U:O2'	36:DA:725:G:H5'	2.16	0.45
36:DA:1859:A:N1	36:DA:1884:A:H1'	2.32	0.45
36:DA:2256:G:O2'	36:DA:2257:U:H5'	2.17	0.45
36:DA:2570:G:H2'	36:DA:2571:C:O4'	2.17	0.45
36:DA:2597:G:H5''	39:DD:243:GLY:HA2	1.98	0.45
37:DB:104:U:O3'	57:DZ:72:ARG:NH1	2.50	0.45
42:DG:67:LYS:CD	42:DG:68:PRO:O	2.65	0.45
45:DN:14:VAL:HG21	45:DN:137:LYS:NZ	2.32	0.45
45:DN:55:VAL:HG22	45:DN:56:ASN:N	2.32	0.45
45:DN:82:LEU:HD23	45:DN:82:LEU:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DO:13:ASN:C	46:DO:15:GLY:N	2.73	0.45
46:DO:108:GLU:OE1	46:DO:108:GLU:N	2.43	0.45
47:DP:7:ARG:NH1	47:DP:7:ARG:CA	2.76	0.45
47:DP:59:LEU:CA	47:DP:61:ARG:NE	2.69	0.45
52:DU:76:TYR:C	52:DU:76:TYR:CD1	2.94	0.45
56:DY:11:ASP:O	56:DY:27:VAL:HA	2.16	0.45
56:DY:17:SER:HB3	56:DY:71:LYS:HB3	1.98	0.45
57:DZ:166:SER:HB3	57:DZ:168:GLU:HG3	1.98	0.45
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.17	0.45
1:AA:628:G:O2'	1:AA:629:G:H5'	2.17	0.45
1:AA:703:G:C2'	1:AA:704:A:OP2	2.65	0.45
1:AA:935:A:H2'	1:AA:936:C:C6	2.52	0.45
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.51	0.45
1:AA:1226:C:C4	13:AM:104:ARG:HB2	2.51	0.45
1:AA:1368:G:H5'	9:AI:112:LYS:O	2.17	0.45
1:AA:1392:G:H21	1:AA:1502:A:H8	1.64	0.45
3:AC:127:ARG:HG2	3:AC:127:ARG:NH1	2.32	0.45
18:AR:55:ARG:HG3	18:AR:55:ARG:NH1	2.31	0.45
23:AW:76:A:N6	36:BA:2422:A:O5'	2.50	0.45
25:AY:106:VAL:CG2	25:AY:132:ARG:HG3	2.46	0.45
27:B1:47:GLN:HG3	36:BA:2091:U:H1'	1.99	0.45
30:B4:31:ILE:CG2	30:B4:33:VAL:HG23	2.46	0.45
31:B5:34:PRO:HG3	36:BA:2885:C:O2'	2.17	0.45
34:B8:30:ARG:HA	34:B8:30:ARG:NE	2.31	0.45
36:BA:307:G:H21	36:BA:330:A:N6	2.13	0.45
36:BA:613:G:C2	36:BA:615:G:C5	3.05	0.45
36:BA:1142(A):A:C5	36:BA:1144:G:C5	3.04	0.45
36:BA:1441:G:O2'	36:BA:1442:G:H5'	2.17	0.45
36:BA:1493:C:H4'	36:BA:1494:A:OP1	2.17	0.45
36:BA:1639:U:H2'	36:BA:1640:C:C5'	2.47	0.45
36:BA:2466:C:H2'	36:BA:2467:C:H6	1.82	0.45
36:BA:2852:G:H1	36:BA:2865:U:H3	1.64	0.45
41:BF:195:ASP:HB3	41:BF:198:ALA:HB3	1.99	0.45
42:BG:111:LEU:HD21	42:BG:120:LEU:HD21	1.98	0.45
42:BG:165:THR:O	42:BG:168:GLU:N	2.40	0.45
43:BH:33:LEU:HD21	43:BH:136:ILE:HG22	1.97	0.45
44:BJ:124:UNK:N	44:BJ:127:UNK:CB	2.80	0.45
45:BN:133:GLN:CG	45:BN:134:ARG:N	2.79	0.45
47:BP:83:VAL:H	47:BP:115:LEU:HD21	1.81	0.45
47:BP:95:VAL:HA	47:BP:99:LEU:CD2	2.42	0.45
48:BQ:110:THR:HG23	48:BQ:113:GLN:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BS:96:GLY:O	50:BS:98:VAL:HG23	2.17	0.45
52:BU:27:LEU:O	52:BU:31:SER:HB3	2.16	0.45
52:BU:65:ILE:HD11	52:BU:96:ALA:CB	2.46	0.45
53:BV:72:VAL:HG23	53:BV:85:LYS:HB2	1.97	0.45
56:BY:47:LYS:HG3	56:BY:60:PHE:HE1	1.81	0.45
57:BZ:129:SER:C	57:BZ:131:ARG:N	2.74	0.45
1:CA:319:G:O2'	1:CA:320:C:H5'	2.16	0.45
1:CA:357:G:H2'	1:CA:358:U:H6	1.82	0.45
1:CA:980:C:O2	14:CN:19:ARG:HA	2.17	0.45
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.51	0.45
4:CD:98:GLU:CG	4:CD:189:PRO:HG3	2.46	0.45
5:CE:33:VAL:HG12	5:CE:34:VAL:H	1.81	0.45
5:CE:64:ARG:HG3	5:CE:64:ARG:NH1	2.24	0.45
5:CE:76:ILE:HD11	5:CE:142:LEU:CD2	2.46	0.45
7:CG:86:GLN:NE2	23:CW:31:G:H21	2.15	0.45
15:CO:54:ARG:O	15:CO:55:GLY:C	2.60	0.45
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.17	0.45
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.16	0.45
23:CW:5:G:H2'	23:CW:6:G:H8	1.82	0.45
25:CY:65:ILE:O	25:CY:65:ILE:CG1	2.63	0.45
25:CY:208:GLN:HA	25:CY:211:GLU:OE2	2.17	0.45
34:D8:50:LEU:C	34:D8:52:LYS:N	2.75	0.45
36:DA:76:C:O2'	36:DA:77:C:H5'	2.16	0.45
36:DA:280:C:H42	36:DA:360:G:H1	1.65	0.45
36:DA:682:G:H2'	36:DA:683:C:C6	2.50	0.45
36:DA:696:G:C2	36:DA:767:U:O2	2.70	0.45
36:DA:811:U:O2	36:DA:1251:C:C6	2.69	0.45
36:DA:993:G:OP1	52:DU:50:ARG:HD2	2.17	0.45
36:DA:1400:G:H2'	36:DA:1401:G:C8	2.52	0.45
36:DA:1462:C:H4'	36:DA:2703:C:O4'	2.16	0.45
36:DA:1485:G:H2'	36:DA:1486:A:H8	1.82	0.45
36:DA:2111:C:C2	36:DA:2147:G:N2	2.82	0.45
36:DA:2266:A:H4'	36:DA:2267:A:N3	2.32	0.45
36:DA:2320:A:N3	36:DA:2320:A:H2'	2.32	0.45
36:DA:2401:U:H2'	36:DA:2402:C:C1'	2.47	0.45
36:DA:2681:C:H5	36:DA:2725:A:N6	2.09	0.45
36:DA:2712(A):A:OP2	36:DA:2714:G:OP2	2.35	0.45
38:DC:197:LEU:O	38:DC:198:GLU:C	2.58	0.45
39:DD:148:GLU:HB2	39:DD:151:LYS:CD	2.47	0.45
39:DD:181:GLU:HA	39:DD:273:ARG:O	2.17	0.45
40:DE:31:CYS:HB3	40:DE:49:LEU:HB3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:62:ARG:HH21	41:DF:64:ILE:HA	1.82	0.45
42:DG:168:GLU:C	42:DG:170:ARG:H	2.25	0.45
46:DO:19:ILE:HD12	46:DO:41:ALA:HB3	1.97	0.45
47:DP:110:TYR:CE2	47:DP:111:ARG:NH1	2.83	0.45
47:DP:112:LEU:HD11	47:DP:114:ILE:HG22	1.99	0.45
49:DR:7:GLY:HA3	49:DR:8:ARG:NH2	2.31	0.45
52:DU:37:GLU:O	52:DU:40:PHE:HB2	2.17	0.45
54:DW:13:SER:HA	54:DW:14:PRO:HD3	1.81	0.45
1:AA:437:U:H2'	1:AA:438:G:O4'	2.17	0.45
1:AA:552:U:H2'	1:AA:553:A:C8	2.52	0.45
1:AA:1026:G:H3'	1:AA:1027:C:H5'	1.97	0.45
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.17	0.45
1:AA:1191:A:P	3:AC:3:ASN:HD21	2.40	0.45
2:AB:233:SER:OG	2:AB:234:PRO:HD2	2.17	0.45
3:AC:80:GLY:HA3	3:AC:82:GLU:OE2	2.17	0.45
3:AC:87:LEU:C	3:AC:89:GLU:N	2.73	0.45
3:AC:179:ARG:HG3	3:AC:179:ARG:H	1.54	0.45
5:AE:65:ASN:O	5:AE:65:ASN:CG	2.59	0.45
9:AI:9:ARG:HG2	9:AI:14:VAL:HA	1.98	0.45
10:AJ:17:ASP:OD1	10:AJ:70:ARG:NH1	2.50	0.45
10:AJ:22:LYS:HD2	10:AJ:22:LYS:C	2.42	0.45
13:AM:116:THR:CG2	13:AM:117:VAL:N	2.80	0.45
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.50	0.45
20:AT:89:ARG:HD2	20:AT:104:LEU:HG	1.98	0.45
22:AV:19:G:H4'	22:AV:20:U:OP2	2.17	0.45
23:AW:28:C:H42	23:AW:42:G:H1	1.64	0.45
25:AY:141:LYS:O	25:AY:144:ALA:CB	2.59	0.45
25:AY:272:LEU:HD12	25:AY:275:ALA:HB3	1.98	0.45
25:AY:340:TYR:CZ	25:AY:351:ARG:HD3	2.52	0.45
25:AY:499:ARG:HH12	25:AY:506:GLN:HG2	1.82	0.45
26:B0:21:LEU:HD22	26:B0:39:ARG:O	2.16	0.45
27:B1:41:ARG:HH21	36:BA:1365:A:H5'	1.82	0.45
27:B1:45:ASN:ND2	27:B1:47:GLN:NE2	2.64	0.45
30:B4:31:ILE:HG23	30:B4:33:VAL:HG23	1.99	0.45
31:B5:33:CYS:HB3	31:B5:38:ALA:O	2.16	0.45
31:B5:40:LYS:CE	31:B5:46:CYS:H	2.27	0.45
31:B5:44:THR:CG2	49:BR:101:ALA:HB2	2.43	0.45
32:B6:26:ASN:HB3	32:B6:27:LYS:H	1.34	0.45
36:BA:271(B):C:O2'	36:BA:271(C):C:H5'	2.16	0.45
36:BA:566:U:C2'	36:BA:567:A:H5'	2.47	0.45
36:BA:598:G:C5'	47:BP:15:ARG:HB2	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:777:A:C2	36:BA:778:G:C4	3.05	0.45
36:BA:955:C:OP2	48:BQ:14:ARG:HD2	2.16	0.45
36:BA:1036:G:OP2	43:BH:59:ARG:NH1	2.50	0.45
36:BA:1288:U:C2	36:BA:1327:C:C2	3.05	0.45
36:BA:1306:C:H2'	36:BA:1307:A:C8	2.44	0.45
36:BA:1667:G:H22	36:BA:1992:G:H5'	1.82	0.45
36:BA:1668:A:N3	36:BA:1670:C:C4	2.85	0.45
36:BA:2009:G:H1'	49:BR:107:ASP:C	2.40	0.45
36:BA:2011:U:C2'	36:BA:2012:G:H5'	2.46	0.45
36:BA:2079:U:H2'	36:BA:2080:G:C8	2.52	0.45
36:BA:2154:G:N2	36:BA:2155:G:H1'	2.31	0.45
36:BA:2308:G:H2'	36:BA:2309:A:C8	2.52	0.45
36:BA:2476:A:C2	36:BA:2477:C:C6	3.05	0.45
37:BB:20:C:C2'	37:BB:21:G:C5'	2.92	0.45
38:BC:11:LEU:O	38:BC:13:GLU:N	2.50	0.45
40:BE:4:ILE:HG12	40:BE:5:LEU:N	2.31	0.45
40:BE:28:ALA:HB3	40:BE:93:VAL:HG22	1.99	0.45
42:BG:51:ARG:HA	42:BG:51:ARG:NE	2.26	0.45
42:BG:134:GLY:HA2	42:BG:156:ASP:HA	1.99	0.45
43:BH:150:ALA:O	43:BH:151:ILE:C	2.59	0.45
45:BN:29:LYS:O	45:BN:33:LEU:HD13	2.16	0.45
46:BO:47:ILE:O	46:BO:48:PRO:C	2.59	0.45
47:BP:46:LYS:O	47:BP:47:ASP:HB2	2.16	0.45
47:BP:58:THR:O	47:BP:61:ARG:CG	2.64	0.45
47:BP:99:LEU:HD12	47:BP:99:LEU:O	2.17	0.45
51:BT:27:THR:C	51:BT:28:VAL:HG23	2.41	0.45
56:BY:84:ARG:HG2	56:BY:84:ARG:NH1	2.31	0.45
57:BZ:98:MET:HE2	57:BZ:99:TYR:C	2.42	0.45
1:CA:69:G:H2'	1:CA:70:G:H8	1.82	0.45
1:CA:217:C:O2'	1:CA:470:C:N4	2.49	0.45
1:CA:628:G:O2'	1:CA:629:G:H5'	2.17	0.45
1:CA:770:C:O2'	1:CA:771:G:H5'	2.17	0.45
1:CA:1281:U:H5''	1:CA:1282:C:H5	1.82	0.45
1:CA:1320:C:N4	19:CS:36:ARG:HG3	2.31	0.45
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.16	0.45
2:CB:20:GLU:HG3	2:CB:189:ASP:OD2	2.16	0.45
2:CB:77:ALA:O	2:CB:78:GLN:O	2.35	0.45
5:CE:101:ILE:CD1	5:CE:118:ILE:O	2.65	0.45
5:CE:139:LEU:C	5:CE:141:GLN:H	2.24	0.45
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.99	0.45
9:CI:99:LEU:HB2	9:CI:101:PHE:CD2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:16:LEU:CD1	10:CJ:70:ARG:HD3	2.46	0.45
13:CM:14:ARG:HB3	13:CM:16:ASP:OD1	2.16	0.45
14:CN:14:PRO:O	14:CN:15:LYS:O	2.35	0.45
19:CS:5:LEU:HG	19:CS:10:PHE:HD1	1.82	0.45
22:CV:36:A:C2	24:CX:16:U:N3	2.82	0.45
23:CW:11:A:H2'	23:CW:12:G:C8	2.51	0.45
25:CY:453:GLY:HA3	25:CY:459:LEU:HG	1.98	0.45
25:CY:458:HIS:O	25:CY:462:ILE:HG13	2.17	0.45
25:CY:541:ALA:HB2	25:CY:579:GLU:HG2	1.98	0.45
28:D2:38:GLN:C	28:D2:41:ILE:HG12	2.40	0.45
29:D3:15:TYR:CD1	29:D3:15:TYR:N	2.85	0.45
30:D4:9:LEU:O	30:D4:10:VAL:HB	2.17	0.45
33:D7:24:THR:C	33:D7:26:GLY:H	2.24	0.45
36:DA:244:A:H1'	36:DA:255:A:N6	2.31	0.45
36:DA:271(H):G:H2'	36:DA:271(I):G:O4'	2.17	0.45
36:DA:363(F):A:O2'	36:DA:364:C:P	2.75	0.45
36:DA:526:A:N6	36:DA:2626:C:H4'	2.32	0.45
36:DA:528:A:N1	36:DA:2042:A:H2'	2.32	0.45
36:DA:532:A:N3	36:DA:532:A:H2'	2.32	0.45
36:DA:844:C:H2'	36:DA:845:G:O4'	2.16	0.45
36:DA:1141:U:H1'	36:DA:1142(A):A:C2	2.50	0.45
36:DA:1556:C:H2'	36:DA:1557:C:H6	1.82	0.45
36:DA:1801:G:H3'	36:DA:1802:A:H5'	1.98	0.45
36:DA:1932:A:H2'	36:DA:1933:G:O4'	2.17	0.45
36:DA:2224:G:H4'	36:DA:2226:C:C2	2.52	0.45
39:DD:155:LEU:N	39:DD:155:LEU:CD1	2.80	0.45
40:DE:196:VAL:C	40:DE:197:ILE:HG22	2.41	0.45
44:DJ:35:UNK:C	44:DJ:37:UNK:N	2.77	0.45
45:DN:3:THR:HG22	45:DN:5:VAL:HG23	1.99	0.45
46:DO:105:GLU:O	46:DO:109:LYS:CG	2.65	0.45
51:DT:11:GLU:CD	51:DT:11:GLU:N	2.74	0.45
51:DT:28:VAL:HG22	51:DT:47:GLY:H	1.81	0.45
52:DU:59:ARG:O	52:DU:60:LEU:C	2.59	0.45
52:DU:83:LEU:CD1	52:DU:83:LEU:N	2.80	0.45
53:DV:32:THR:CG2	53:DV:33:VAL:N	2.80	0.45
54:DW:25:ARG:HH11	54:DW:25:ARG:CB	2.30	0.45
57:DZ:9:TYR:HB3	57:DZ:35:ARG:NH2	2.31	0.45
1:AA:183:G:H2'	1:AA:184:G:H8	1.82	0.45
1:AA:956:U:C2'	1:AA:957:U:H5'	2.47	0.45
1:AA:1065:U:O2'	1:AA:1066:C:OP2	2.32	0.45
1:AA:1101:A:H4'	1:AA:1102:A:C4'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.47	0.45
1:AA:1258:G:C6	1:AA:1259:C:N4	2.85	0.45
1:AA:1314:C:C2	1:AA:1315:U:C5	3.04	0.45
1:AA:1338:G:C6	1:AA:1339:A:C6	3.05	0.45
1:AA:1405:G:O2'	1:AA:1406:U:H5'	2.17	0.45
2:AB:21:ARG:O	2:AB:21:ARG:HG3	2.17	0.45
5:AE:10:MET:HB2	5:AE:32:VAL:HG13	1.98	0.45
5:AE:144:THR:O	5:AE:145:LYS:C	2.60	0.45
8:AH:36:LEU:C	8:AH:38:ILE:N	2.73	0.45
9:AI:64:THR:O	9:AI:64:THR:HG22	2.17	0.45
9:AI:97:LYS:O	9:AI:98:PRO:C	2.58	0.45
9:AI:99:LEU:HB2	9:AI:101:PHE:CD2	2.52	0.45
11:AK:87:THR:O	11:AK:88:GLY:C	2.59	0.45
13:AM:51:ALA:O	13:AM:52:GLU:C	2.60	0.45
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.17	0.45
15:AO:76:GLU:O	15:AO:78:TYR:N	2.50	0.45
16:AP:28:ARG:NH1	16:AP:28:ARG:HG2	2.31	0.45
25:AY:238:THR:HG22	25:AY:241:GLU:CG	2.33	0.45
25:AY:359:HIS:HB2	25:AY:362:HIS:O	2.17	0.45
29:B3:42:ALA:O	29:B3:43:ILE:C	2.59	0.45
32:B6:8:LYS:HA	32:B6:27:LYS:HA	1.99	0.45
36:BA:158:U:H3'	36:BA:158:U:O2	2.16	0.45
36:BA:222:A:N6	36:BA:224:G:C2	2.85	0.45
36:BA:294:A:H2'	36:BA:295:G:H5'	1.97	0.45
36:BA:601:C:O2	36:BA:605:C:H4'	2.17	0.45
36:BA:695:G:C6	36:BA:768:G:C6	3.05	0.45
36:BA:727:A:H5'	36:BA:728:G:OP2	2.17	0.45
36:BA:851:U:H2'	36:BA:852:G:H8	1.82	0.45
36:BA:1316:U:O2'	36:BA:1317:A:H5'	2.16	0.45
36:BA:1902:C:O2'	39:BD:244:ARG:HB2	2.17	0.45
36:BA:1972:A:H2'	36:BA:1973:G:C8	2.52	0.45
36:BA:2039:C:H2'	36:BA:2040:C:C6	2.52	0.45
36:BA:2468:G:H5'	48:BQ:120:ILE:HD12	1.99	0.45
36:BA:2636:U:P	40:BE:80:GLU:HG3	2.57	0.45
36:BA:2850:A:H2	49:BR:61:HIS:CD2	2.35	0.45
38:BC:16:ASP:O	38:BC:18:ASN:N	2.50	0.45
38:BC:226:ASN:HD22	38:BC:229:SER:HB3	1.82	0.45
39:BD:26:LYS:O	39:BD:27:THR:CG2	2.65	0.45
39:BD:155:LEU:HD23	39:BD:177:LEU:HD22	1.99	0.45
39:BD:165:ILE:HA	39:BD:175:LEU:HD23	1.99	0.45
39:BD:222:ARG:O	39:BD:223:GLY:C	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:88:VAL:HG22	41:BF:89:VAL:N	2.32	0.45
42:BG:54:GLU:HA	42:BG:57:ALA:HB3	1.98	0.45
42:BG:67:LYS:HA	42:BG:68:PRO:HD3	1.81	0.45
42:BG:169:ALA:O	42:BG:170:ARG:C	2.60	0.45
43:BH:163:TYR:N	43:BH:163:TYR:CD1	2.85	0.45
45:BN:76:SER:O	45:BN:78:TYR:N	2.50	0.45
49:BR:56:LYS:C	49:BR:58:GLY:H	2.23	0.45
52:BU:74:LEU:HD13	52:BU:74:LEU:C	2.41	0.45
53:BV:18:LEU:CD1	53:BV:19:LYS:H	2.29	0.45
54:BW:79:GLY:O	54:BW:100:THR:CG2	2.65	0.45
57:BZ:81:ARG:CZ	57:BZ:81:ARG:HB3	2.47	0.45
57:BZ:115:GLY:N	57:BZ:177:PRO:CG	2.76	0.45
1:CA:147:G:N2	1:CA:148:G:H1'	2.31	0.45
1:CA:797:C:H2'	1:CA:798:G:C8	2.52	0.45
1:CA:853:G:H2'	1:CA:854:G:H8	1.80	0.45
1:CA:954:G:H2'	1:CA:955:U:C6	2.52	0.45
1:CA:1095:U:P	1:CA:1108:G:H1	2.40	0.45
1:CA:1324:A:H2'	1:CA:1325:C:C6	2.51	0.45
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.17	0.45
3:CC:25:GLY:O	3:CC:27:LYS:N	2.49	0.45
6:CF:97:PHE:HB2	18:CR:32:ARG:NH2	2.31	0.45
10:CJ:12:ASP:OD1	10:CJ:12:ASP:C	2.59	0.45
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.47	0.45
18:CR:68:LYS:O	18:CR:69:THR:C	2.58	0.45
23:CW:33:U:O2	23:CW:36:U:OP2	2.33	0.45
25:CY:20:HIS:N	25:CY:121:VAL:HG11	2.32	0.45
25:CY:149:VAL:O	25:CY:152:THR:CG2	2.65	0.45
25:CY:302:HIS:C	25:CY:304:ASP:H	2.25	0.45
25:CY:488:THR:O	25:CY:516:PRO:HG3	2.16	0.45
25:CY:514:VAL:CG1	25:CY:515:GLU:N	2.79	0.45
28:D2:6:VAL:HG12	28:D2:6:VAL:O	2.16	0.45
34:D8:54:GLU:H	34:D8:54:GLU:HG3	1.53	0.45
36:DA:319:C:OP1	41:DF:137:LYS:NZ	2.50	0.45
36:DA:614(B):G:H5''	36:DA:614(C):A:OP1	2.17	0.45
36:DA:654(R):C:O2'	36:DA:654(S):G:H8	2.00	0.45
36:DA:814:C:C5	47:DP:27:HIS:ND1	2.85	0.45
36:DA:1062:G:H22	36:DA:1077:A:H1'	1.80	0.45
36:DA:1301:A:O2'	36:DA:1302:A:C2'	2.49	0.45
36:DA:2334:G:N3	50:DS:18:ILE:HD13	2.32	0.45
36:DA:2377:A:H2'	36:DA:2378:A:C8	2.52	0.45
36:DA:2461:C:O2	36:DA:2461:C:C2'	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2466:C:H2'	36:DA:2467:C:H6	1.81	0.45
37:DB:82:G:C2'	37:DB:83:G:H5'	2.46	0.45
39:DD:218:ARG:HH11	39:DD:218:ARG:HG3	1.81	0.45
40:DE:4:ILE:HG12	40:DE:5:LEU:N	2.32	0.45
40:DE:28:ALA:HB3	40:DE:93:VAL:HG22	1.98	0.45
40:DE:68:ALA:C	40:DE:70:ALA:H	2.24	0.45
40:DE:132:HIS:CG	40:DE:135:HIS:NE2	2.85	0.45
43:DH:94:TYR:HA	43:DH:106:THR:O	2.17	0.45
43:DH:163:TYR:N	43:DH:163:TYR:CD1	2.85	0.45
44:DJ:123:UNK:O	44:DJ:124:UNK:C	2.65	0.45
46:DO:60:ALA:HA	46:DO:87:ILE:CD1	2.47	0.45
47:DP:96:THR:O	47:DP:97:PRO:C	2.58	0.45
48:DQ:52:VAL:O	48:DQ:54:MET:N	2.50	0.45
51:DT:32:TYR:CD1	51:DT:81:PRO:O	2.69	0.45
52:DU:50:ARG:C	52:DU:52:ARG:N	2.69	0.45
1:AA:298:A:H2'	1:AA:299:G:O4'	2.17	0.45
2:AB:215:LEU:O	2:AB:218:ALA:HB3	2.17	0.45
3:AC:72:LYS:HA	3:AC:72:LYS:HE3	1.99	0.45
3:AC:106:VAL:O	3:AC:107:GLN:C	2.59	0.45
4:AD:26:CYS:HA	4:AD:31:CYS:HA	1.98	0.45
6:AF:14:LEU:HD22	6:AF:18:GLN:NE2	2.31	0.45
8:AH:111:ILE:CG2	8:AH:112:LEU:N	2.79	0.45
9:AI:114:TYR:HE2	10:AJ:60:ARG:N	2.08	0.45
10:AJ:32:ALA:HB1	10:AJ:76:ASN:HB3	1.98	0.45
13:AM:57:ARG:HH12	30:B4:34:GLU:HG3	1.80	0.45
15:AO:71:GLN:HB2	15:AO:78:TYR:CE1	2.52	0.45
19:AS:24:ALA:O	19:AS:25:LYS:CB	2.65	0.45
25:AY:29:THR:C	25:AY:31:ARG:H	2.24	0.45
25:AY:119:GLU:HB2	25:AY:120:THR:H	1.56	0.45
25:AY:156:ARG:HB2	25:AY:157:LEU:HD23	1.99	0.45
25:AY:486:THR:HG21	25:AY:602:LEU:HG	1.99	0.45
29:B3:46:ASN:O	29:B3:47:VAL:C	2.59	0.45
31:B5:10:LYS:HB2	36:BA:2017:U:O2	2.18	0.45
32:B6:51:GLU:HG2	32:B6:52:VAL:N	2.32	0.45
36:BA:271(H):G:H2'	36:BA:271(I):G:O4'	2.16	0.45
36:BA:1062:G:H22	36:BA:1077:A:H1'	1.81	0.45
36:BA:1086:A:H3'	36:BA:1086:A:N3	2.31	0.45
36:BA:1097:U:H2'	36:BA:1098:A:H5'	1.99	0.45
36:BA:1682:G:H2'	36:BA:1683:C:H6	1.80	0.45
36:BA:2031:A:C6	36:BA:2498:C:H1'	2.53	0.45
36:BA:2150:U:H2'	36:BA:2151:G:H8	1.78	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2416:C:P	47:BP:66:GLY:HA3	2.57	0.45
37:BB:40:U:H3'	37:BB:41:U:C5'	2.45	0.45
37:BB:86:G:C6	37:BB:92:C:N3	2.84	0.45
40:BE:111:ARG:HD2	40:BE:160:TYR:CE2	2.52	0.45
40:BE:117:MET:HE1	40:BE:136:ARG:HA	1.98	0.45
41:BF:125:LEU:HD23	41:BF:125:LEU:H	1.80	0.45
42:BG:34:LEU:CD1	42:BG:34:LEU:O	2.64	0.45
42:BG:110:ALA:HB1	42:BG:140:ILE:HD13	1.99	0.45
42:BG:144:ILE:O	42:BG:144:ILE:HG23	2.16	0.45
47:BP:6:LEU:HG	47:BP:7:ARG:N	2.31	0.45
47:BP:24:GLY:N	47:BP:33:ARG:CZ	2.80	0.45
47:BP:114:ILE:O	47:BP:130:PHE:HA	2.17	0.45
54:BW:36:LEU:HD12	54:BW:48:ALA:HA	1.98	0.45
55:BX:18:TYR:C	55:BX:20:GLY:N	2.75	0.45
56:BY:88:LYS:C	56:BY:90:LEU:H	2.24	0.45
57:BZ:171:ILE:O	57:BZ:171:ILE:HD12	2.17	0.45
1:CA:183:G:H2'	1:CA:184:G:H8	1.80	0.45
1:CA:500:G:C5'	12:CL:124:LYS:NZ	2.80	0.45
1:CA:797:C:H2'	1:CA:798:G:H8	1.81	0.45
1:CA:955:U:O2'	1:CA:956:U:H5'	2.17	0.45
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.52	0.45
1:CA:1325:C:C2	1:CA:1326:C:C5	3.05	0.45
3:CC:32:LEU:HD22	3:CC:59:ARG:HH12	1.82	0.45
10:CJ:79:ARG:HA	10:CJ:79:ARG:HD3	1.68	0.45
12:CL:105:TYR:N	12:CL:105:TYR:CD1	2.85	0.45
13:CM:63:THR:HG22	13:CM:64:TRP:H	1.81	0.45
22:CV:17:C:O2'	22:CV:18:G:OP2	2.34	0.45
25:CY:20:HIS:CE1	25:CY:21:ILE:HD11	2.52	0.45
28:D2:13:ALA:O	28:D2:14:ARG:C	2.58	0.45
30:D4:48:ARG:O	30:D4:49:PHE:HB2	2.16	0.45
31:D5:25:LEU:HD12	54:DW:19:LEU:C	2.42	0.45
33:D7:36:GLN:C	33:D7:38:GLY:H	2.25	0.45
36:DA:191:A:H2'	36:DA:192:C:H6	1.81	0.45
36:DA:523:C:H2'	36:DA:524:U:O4'	2.17	0.45
36:DA:752:A:HO2'	36:DA:753:C:P	2.39	0.45
36:DA:1446:C:H2'	36:DA:1447:G:H8	1.81	0.45
36:DA:1639:U:H2'	36:DA:1640:C:C5'	2.47	0.45
36:DA:1763:G:H2'	36:DA:1764:G:H5'	1.99	0.45
36:DA:1770:G:O2'	36:DA:1771:C:H5'	2.17	0.45
36:DA:2075:U:O2'	36:DA:2076:U:H5''	2.17	0.45
36:DA:2116:G:N7	36:DA:2117:A:C6	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2272:U:H5''	36:DA:2273:A:OP1	2.17	0.45
36:DA:2559:C:O2'	36:DA:2560:C:H5'	2.17	0.45
36:DA:2821:A:OP2	36:DA:2822:G:OP2	2.35	0.45
36:DA:2884:U:C2'	36:DA:2885:C:H5'	2.47	0.45
38:DC:76:LEU:HD12	38:DC:94:TYR:HB2	1.99	0.45
39:DD:35:LYS:HD2	39:DD:36:PRO:HA	1.98	0.45
39:DD:91:ARG:O	39:DD:107:ALA:HB3	2.17	0.45
39:DD:112:GLN:HB2	39:DD:115:GLN:HE21	1.81	0.45
40:DE:50:GLY:CA	40:DE:74:PRO:HG3	2.47	0.45
40:DE:64:LYS:C	40:DE:66:HIS:N	2.69	0.45
42:DG:91:ARG:HD2	42:DG:92:VAL:CA	2.47	0.45
45:DN:58:ASP:OD1	45:DN:124:ALA:HB1	2.17	0.45
47:DP:16:ARG:NE	47:DP:18:ARG:HB2	2.32	0.45
47:DP:102:ARG:HB3	47:DP:102:ARG:CZ	2.46	0.45
48:DQ:53:ALA:HA	48:DQ:56:ARG:HB2	1.99	0.45
49:DR:18:LEU:HD21	49:DR:22:ARG:CZ	2.47	0.45
49:DR:101:ALA:O	49:DR:102:GLU:HB2	2.17	0.45
51:DT:106:SER:CA	51:DT:110:ILE:HG12	2.45	0.45
53:DV:18:LEU:CD1	53:DV:19:LYS:H	2.30	0.45
55:DX:14:SER:H	55:DX:17:ALA:HB3	1.82	0.45
56:DY:13:VAL:CG2	56:DY:73:ARG:O	2.64	0.45
56:DY:47:LYS:O	56:DY:48:ALA:O	2.34	0.45
57:DZ:29:TYR:O	57:DZ:90:VAL:HG23	2.17	0.45
1:AA:256:U:H2'	1:AA:257:G:C8	2.51	0.44
1:AA:319:G:O2'	1:AA:320:C:H5'	2.16	0.44
1:AA:489:C:H2'	1:AA:490:G:H8	1.82	0.44
1:AA:930:C:C2'	1:AA:931:C:H5'	2.48	0.44
4:AD:132:ARG:C	4:AD:132:ARG:HD2	2.42	0.44
4:AD:159:ARG:O	4:AD:160:GLN:C	2.60	0.44
6:AF:22:GLU:O	6:AF:24:GLU:N	2.50	0.44
12:AL:86:ARG:NH2	12:AL:99:HIS:CD2	2.85	0.44
13:AM:56:LEU:HD13	13:AM:60:VAL:HG23	1.98	0.44
17:AQ:6:LEU:C	17:AQ:7:THR:HG22	2.42	0.44
19:AS:17:GLU:C	19:AS:19:VAL:H	2.25	0.44
25:AY:14:ASN:HB2	25:AY:102:ASP:CG	2.42	0.44
25:AY:251:ILE:HG22	25:AY:251:ILE:O	2.16	0.44
25:AY:359:HIS:C	25:AY:361:ASN:N	2.75	0.44
25:AY:359:HIS:O	25:AY:361:ASN:N	2.50	0.44
25:AY:442:THR:O	25:AY:443:HIS:C	2.59	0.44
25:AY:485:GLU:HG3	25:AY:558:PHE:H	1.82	0.44
27:B1:81:LYS:NZ	36:BA:271(H):G:O3'	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B5:36:CYS:SG	31:B5:49:CYS:CB	3.04	0.44
32:B6:52:VAL:HG22	32:B6:53:LYS:N	2.32	0.44
36:BA:487:C:H1'	54:BW:53:SER:HA	1.98	0.44
36:BA:528:A:N1	36:BA:2042:A:H2'	2.32	0.44
36:BA:552:G:O2'	36:BA:553:G:H5'	2.17	0.44
36:BA:637:A:N6	36:BA:652:C:H4'	2.32	0.44
36:BA:773:U:H2'	36:BA:774:A:H5'	1.98	0.44
36:BA:811:U:H6	47:BP:24:GLY:O	2.00	0.44
36:BA:1275:A:N1	36:BA:1295:C:O2'	2.44	0.44
36:BA:1276:A:H1'	49:BR:16:HIS:HE1	1.82	0.44
36:BA:2116:G:N7	36:BA:2117:A:C6	2.86	0.44
36:BA:2712:U:O2	36:BA:2712:U:O4'	2.35	0.44
36:BA:2756:U:C4'	36:BA:2757:A:OP1	2.63	0.44
36:BA:2870:C:O2'	36:BA:2871:C:H5'	2.17	0.44
37:BB:18:G:H2'	37:BB:19:G:H8	1.82	0.44
37:BB:21:G:O2'	37:BB:22:U:P	2.75	0.44
37:BB:92:C:H2'	37:BB:93:G:H8	1.82	0.44
38:BC:76:LEU:HD12	38:BC:94:TYR:HB2	2.00	0.44
38:BC:225:ILE:HD12	38:BC:225:ILE:O	2.17	0.44
39:BD:267:SER:C	39:BD:270:ILE:HD11	2.43	0.44
40:BE:77:ILE:C	40:BE:78:LEU:HG	2.41	0.44
41:BF:110:LEU:HA	41:BF:183:VAL:CG1	2.48	0.44
41:BF:132:VAL:CG2	41:BF:133:ASN:N	2.76	0.44
42:BG:45:GLU:O	42:BG:51:ARG:HD3	2.17	0.44
42:BG:77:ILE:HG22	42:BG:80:PHE:C	2.42	0.44
46:BO:69:ILE:N	46:BO:69:ILE:CD1	2.80	0.44
47:BP:25:SER:O	47:BP:30:THR:CG2	2.65	0.44
51:BT:106:SER:O	51:BT:107:ASP:CB	2.65	0.44
51:BT:108:ARG:HA	51:BT:111:ARG:HH11	1.82	0.44
51:BT:117:ASP:O	51:BT:118:ARG:C	2.60	0.44
56:BY:47:LYS:O	56:BY:48:ALA:O	2.34	0.44
56:BY:57:GLN:C	56:BY:59:GLY:H	2.25	0.44
57:BZ:42:VAL:CG1	57:BZ:43:GLU:N	2.80	0.44
57:BZ:118:GLN:NE2	57:BZ:120:ILE:HD11	2.32	0.44
1:CA:375:U:H4'	16:CP:17:TYR:CE2	2.52	0.44
1:CA:781:A:C2'	1:CA:782:A:H5'	2.47	0.44
1:CA:954:G:N2	1:CA:1228:C:N3	2.65	0.44
1:CA:1110:A:H8	1:CA:1110:A:O5'	2.00	0.44
1:CA:1226:C:C6	13:CM:103:THR:O	2.70	0.44
1:CA:1324:A:O2'	1:CA:1325:C:H5'	2.16	0.44
1:CA:1413:A:C2	1:CA:1488:G:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1458:G:OP1	20:CT:35:THR:HG21	2.16	0.44
1:CA:1508:G:H2'	1:CA:1509:C:C6	2.52	0.44
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.52	0.44
2:CB:121:LEU:O	2:CB:122:PHE:C	2.60	0.44
3:CC:120:VAL:O	3:CC:121:ALA:C	2.61	0.44
4:CD:64:LEU:HD23	4:CD:75:PHE:CZ	2.46	0.44
7:CG:143:ARG:O	7:CG:145:ALA:O	2.35	0.44
8:CH:36:LEU:O	8:CH:38:ILE:N	2.49	0.44
9:CI:58:HIS:C	9:CI:59:PHE:CD1	2.96	0.44
10:CJ:17:ASP:OD1	10:CJ:70:ARG:NH1	2.50	0.44
11:CK:61:ALA:O	11:CK:62:GLN:C	2.60	0.44
13:CM:3:ARG:CA	13:CM:9:ILE:HG13	2.47	0.44
13:CM:10:PRO:HB2	13:CM:18:ALA:CB	2.44	0.44
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	2.32	0.44
19:CS:46:GLY:N	19:CS:62:ILE:HG23	2.32	0.44
19:CS:51:VAL:O	19:CS:58:VAL:HG22	2.17	0.44
23:CW:72:A:H4'	23:CW:73:A:OP1	2.17	0.44
25:CY:137:ASN:ND2	25:CY:263:ALA:CB	2.78	0.44
25:CY:286:ILE:HA	25:CY:287:PRO:HD3	1.81	0.44
25:CY:341:VAL:HG13	25:CY:352:VAL:HG12	1.99	0.44
25:CY:490:PRO:HB3	25:CY:515:GLU:HA	2.00	0.44
26:D0:38:VAL:O	26:D0:58:THR:HG23	2.17	0.44
26:D0:53:MET:HA	26:D0:58:THR:O	2.16	0.44
28:D2:53:LEU:O	28:D2:53:LEU:HD23	2.16	0.44
29:D3:4:LEU:HD23	29:D3:58:VAL:HA	1.99	0.44
29:D3:31:LEU:HD22	29:D3:32:GLN:H	1.83	0.44
31:D5:42:PRO:O	31:D5:43:HIS:HB2	2.17	0.44
34:D8:51:ALA:N	34:D8:53:PRO:HD2	2.31	0.44
36:DA:245:G:OP1	47:DP:69:GLY:HA3	2.17	0.44
36:DA:783:A:C8	36:DA:784:A:H4'	2.47	0.44
36:DA:807:U:H2'	36:DA:808:G:H8	1.82	0.44
36:DA:1224:C:O2'	53:DV:85:LYS:HG2	2.17	0.44
36:DA:1423:G:H2'	36:DA:1424:G:H8	1.81	0.44
36:DA:1667:G:H22	36:DA:1992:G:H5'	1.82	0.44
36:DA:1889:A:N1	36:DA:2234:G:H1'	2.32	0.44
36:DA:2247:A:O2'	36:DA:2248:C:H5'	2.17	0.44
39:DD:266:SER:O	39:DD:267:SER:O	2.35	0.44
40:DE:60:ASN:O	40:DE:61:ARG:C	2.59	0.44
40:DE:82:ARG:HG3	40:DE:82:ARG:HH11	1.82	0.44
40:DE:111:ARG:CA	49:DR:2:ARG:HB3	2.31	0.44
41:DF:110:LEU:HA	41:DF:183:VAL:CG1	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:176:LEU:HG	41:DF:177:ALA:O	2.17	0.44
42:DG:85:GLY:O	42:DG:86:MET:C	2.58	0.44
45:DN:26:LEU:HA	45:DN:29:LYS:NZ	2.32	0.44
45:DN:43:THR:HG22	45:DN:45:ASN:HD22	1.81	0.44
47:DP:16:ARG:CZ	47:DP:18:ARG:CG	2.94	0.44
47:DP:46:LYS:O	47:DP:47:ASP:HB2	2.17	0.44
48:DQ:14:ARG:HH11	48:DQ:14:ARG:HG2	1.82	0.44
50:DS:29:PHE:HD1	50:DS:30:ARG:N	2.15	0.44
51:DT:30:VAL:HG21	51:DT:83:ILE:CG1	2.41	0.44
51:DT:102:ILE:O	51:DT:103:ARG:C	2.60	0.44
57:DZ:7:ALA:C	57:DZ:8:TYR:CD1	2.95	0.44
57:DZ:163:LEU:HD11	57:DZ:167:PRO:HB3	1.99	0.44
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.52	0.44
1:AA:1370:G:C2	1:AA:1371:G:N7	2.85	0.44
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.17	0.44
1:AA:1422:G:C2	1:AA:1423:G:C5	3.05	0.44
1:AA:1442:G:C5	1:AA:1442(B):A:H2	2.33	0.44
2:AB:20:GLU:HG3	2:AB:189:ASP:OD2	2.17	0.44
2:AB:121:LEU:HD22	2:AB:126:GLU:HB2	1.98	0.44
2:AB:140:HIS:O	2:AB:143:GLU:HB2	2.17	0.44
3:AC:78:GLY:CA	3:AC:83:ARG:HB3	2.47	0.44
3:AC:91:LEU:C	3:AC:93:LYS:N	2.75	0.44
3:AC:129:ALA:O	3:AC:130:VAL:C	2.60	0.44
3:AC:206:GLU:O	3:AC:207:VAL:C	2.60	0.44
4:AD:31:CYS:O	4:AD:32:ALA:CB	2.65	0.44
4:AD:111:ALA:HA	4:AD:116:GLN:OE1	2.17	0.44
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.18	0.44
7:AG:62:PHE:O	7:AG:65:ALA:N	2.50	0.44
8:AH:38:ILE:C	8:AH:40:ALA:N	2.73	0.44
9:AI:63:ILE:HD11	9:AI:81:ILE:HD11	1.99	0.44
9:AI:70:LYS:O	9:AI:74:ILE:HG13	2.17	0.44
9:AI:89:ASN:O	9:AI:92:TYR:HB2	2.17	0.44
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.17	0.44
13:AM:61:GLU:OE2	42:BG:113:ARG:NH2	2.50	0.44
13:AM:68:GLY:C	13:AM:70:LEU:H	2.25	0.44
17:AQ:52:LYS:HD2	17:AQ:52:LYS:N	2.21	0.44
19:AS:31:ILE:CG2	19:AS:49:ILE:HA	2.45	0.44
25:AY:117:GLN:C	25:AY:119:GLU:N	2.70	0.44
25:AY:223:PHE:HB3	25:AY:248:LYS:HD3	1.99	0.44
25:AY:417:THR:C	25:AY:419:ALA:N	2.75	0.44
28:B2:63:VAL:O	28:B2:64:LEU:C	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B3:4:LEU:HD11	29:B3:39:ASP:OD1	2.17	0.44
32:B6:48:VAL:CG2	32:B6:49:HIS:H	2.27	0.44
32:B6:53:LYS:HE2	36:BA:2398:U:O2'	2.16	0.44
33:B7:39:ARG:HD3	36:BA:458:G:O2'	2.17	0.44
36:BA:14:A:C6	36:BA:526:A:C2	3.05	0.44
36:BA:76:C:O2'	36:BA:77:C:H5'	2.17	0.44
36:BA:280:C:H42	36:BA:360:G:H1	1.64	0.44
36:BA:389:G:O4'	36:BA:2413:G:H4'	2.17	0.44
36:BA:532:A:H2'	36:BA:532:A:N3	2.32	0.44
36:BA:688:U:H4'	36:BA:1780:A:H2	1.73	0.44
36:BA:1341:U:O4'	55:BX:57:LEU:HD12	2.17	0.44
36:BA:2020:A:C2'	36:BA:2021:C:C5'	2.94	0.44
36:BA:2026:C:C4	36:BA:2027:G:N7	2.86	0.44
36:BA:2111:C:C2	36:BA:2147:G:N2	2.82	0.44
36:BA:2115:G:H3'	36:BA:2116:G:H5''	1.99	0.44
36:BA:2309:A:H2'	36:BA:2310:A:C5'	2.46	0.44
36:BA:2579:C:O2'	36:BA:2580:U:H5'	2.16	0.44
36:BA:2667:C:H1'	43:BH:109:PHE:CD1	2.52	0.44
37:BB:38:C:O2	37:BB:48:A:H1'	2.16	0.44
40:BE:26:ILE:CG2	40:BE:196:VAL:HG21	2.46	0.44
40:BE:111:ARG:CA	49:BR:2:ARG:HB3	2.31	0.44
41:BF:5:ALA:HB3	41:BF:18:ARG:O	2.17	0.44
41:BF:167:ALA:CB	41:BF:173:VAL:HG11	2.20	0.44
41:BF:176:LEU:HG	41:BF:177:ALA:O	2.17	0.44
42:BG:55:LYS:HA	42:BG:58:GLN:CG	2.47	0.44
43:BH:29:PRO:HD2	43:BH:79:VAL:O	2.16	0.44
47:BP:13:ASN:HD22	47:BP:13:ASN:H	1.65	0.44
48:BQ:37:LEU:HG	48:BQ:129:THR:HA	1.98	0.44
48:BQ:68:ILE:HG23	48:BQ:103:MET:HA	1.98	0.44
1:CA:112:G:H4'	1:CA:389:A:H5''	1.99	0.44
1:CA:159:G:C3'	1:CA:160:A:H5''	2.48	0.44
1:CA:185:A:N3	20:CT:81:LYS:NZ	2.66	0.44
1:CA:610:G:H5'	1:CA:611:A:OP2	2.18	0.44
1:CA:676:A:H1'	11:CK:115:PRO:HB3	1.99	0.44
1:CA:819:A:H4'	1:CA:820:U:OP2	2.17	0.44
1:CA:907:A:C2	1:CA:908:A:C4	3.04	0.44
1:CA:930:C:C2'	1:CA:931:C:H5'	2.47	0.44
1:CA:1152:A:OP1	10:CJ:68:HIS:HD2	1.99	0.44
2:CB:181:PHE:HD1	8:CH:70:GLN:HB3	1.82	0.44
2:CB:188:ALA:O	2:CB:202:PRO:HA	2.17	0.44
3:CC:106:VAL:O	3:CC:107:GLN:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:17:VAL:O	4:CD:19:LEU:HD12	2.17	0.44
5:CE:10:MET:HB2	5:CE:32:VAL:HG13	1.99	0.44
5:CE:86:ALA:HB3	5:CE:125:SER:HB3	1.98	0.44
7:CG:134:ALA:O	7:CG:137:LYS:N	2.43	0.44
13:CM:23:TYR:CE1	13:CM:70:LEU:HD22	2.52	0.44
13:CM:51:ALA:O	13:CM:52:GLU:C	2.61	0.44
14:CN:42:ILE:HG22	14:CN:43:CYS:N	2.31	0.44
15:CO:71:GLN:HB2	15:CO:78:TYR:CE1	2.52	0.44
16:CP:80:PHE:O	16:CP:81:ARG:C	2.59	0.44
20:CT:97:ALA:O	20:CT:99:LEU:N	2.51	0.44
25:CY:146:LEU:CD2	25:CY:150:ILE:HD11	2.47	0.44
25:CY:166:LEU:O	25:CY:177:ILE:HG23	2.17	0.44
25:CY:181:LEU:CD1	25:CY:242:LEU:HD13	2.48	0.44
25:CY:316:ILE:HG21	25:CY:324:ARG:CZ	2.47	0.44
25:CY:679:VAL:CG2	25:CY:684:GLN:HB2	2.47	0.44
28:D2:63:VAL:C	28:D2:65:ASN:N	2.73	0.44
30:D4:26:SER:HB3	42:DG:105:LYS:HZ1	1.82	0.44
32:D6:43:CYS:O	32:D6:44:ARG:CB	2.64	0.44
36:DA:201:C:C2'	36:DA:202:U:H5'	2.48	0.44
36:DA:212:G:H8	36:DA:212:G:C5'	2.21	0.44
36:DA:603:A:O2'	36:DA:604:G:OP2	2.35	0.44
36:DA:809:G:O2'	36:DA:810:U:H5'	2.17	0.44
36:DA:828:U:C5	36:DA:829:A:N6	2.85	0.44
36:DA:1017:G:O2'	36:DA:1018:C:H5'	2.17	0.44
36:DA:1654:A:OP1	49:DR:3:HIS:HB2	2.17	0.44
36:DA:2132:U:C5	38:DC:6:LYS:HD2	2.53	0.44
36:DA:2464:C:O2'	36:DA:2465:C:P	2.75	0.44
36:DA:2750:A:H2'	36:DA:2752:C:H41	1.82	0.44
37:DB:20:C:C2'	37:DB:21:G:C5'	2.93	0.44
37:DB:68:C:H2'	37:DB:69:G:O4'	2.18	0.44
38:DC:226:ASN:HD22	38:DC:229:SER:HB3	1.82	0.44
39:DD:148:GLU:HB2	39:DD:151:LYS:HD2	1.99	0.44
39:DD:165:ILE:HA	39:DD:175:LEU:HD23	1.99	0.44
41:DF:46:ARG:HG3	41:DF:46:ARG:NH1	2.31	0.44
41:DF:187:VAL:HG13	47:DP:5:ASP:O	2.17	0.44
45:DN:73:THR:CG2	45:DN:82:LEU:HD11	2.47	0.44
47:DP:85:LEU:HA	47:DP:88:LEU:HB3	1.99	0.44
48:DQ:47:ILE:HD12	48:DQ:70:PRO:HD3	1.99	0.44
48:DQ:135:ASP:O	48:DQ:138:ASP:OD2	2.36	0.44
49:DR:31:HIS:HB2	49:DR:34:ILE:HD11	1.99	0.44
49:DR:72:ASP:OD2	49:DR:75:LEU:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DU:84:LYS:C	52:DU:86:ALA:N	2.69	0.44
54:DW:79:GLY:O	54:DW:100:THR:CG2	2.65	0.44
56:DY:31:LEU:N	56:DY:31:LEU:CD2	2.79	0.44
56:DY:32:PRO:O	56:DY:35:TYR:N	2.49	0.44
57:DZ:9:TYR:CD2	57:DZ:35:ARG:NH1	2.82	0.44
57:DZ:77:ASP:HA	57:DZ:84:GLU:CD	2.42	0.44
57:DZ:145:GLU:C	57:DZ:147:GLY:N	2.76	0.44
1:AA:301:G:H2'	1:AA:302:G:C8	2.47	0.44
1:AA:470:C:C2'	1:AA:471:G:OP1	2.65	0.44
1:AA:653:A:P	8:AH:56:LYS:HZ1	2.40	0.44
1:AA:756:C:H2'	1:AA:757:U:O4'	2.17	0.44
1:AA:1004:A:N1	1:AA:1034:G:H2'	2.33	0.44
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.32	0.44
1:AA:1315:U:O2	1:AA:1360:A:H2	2.00	0.44
1:AA:1339:A:H2'	1:AA:1340:A:H5'	1.99	0.44
1:AA:1343:G:C6	1:AA:1344:C:N4	2.86	0.44
1:AA:1348:U:O3'	9:AI:120:ARG:HG3	2.17	0.44
1:AA:1389:C:H2'	1:AA:1390:U:O4'	2.18	0.44
3:AC:50:ALA:CB	3:AC:70:VAL:HG11	2.39	0.44
5:AE:143:ARG:NH1	8:AH:77:GLU:OE1	2.50	0.44
6:AF:72:VAL:CG1	6:AF:73:ASN:N	2.79	0.44
7:AG:7:ALA:O	7:AG:8:GLU:HB2	2.16	0.44
7:AG:15:ASP:HB3	7:AG:20:ASP:H	1.83	0.44
8:AH:101:PRO:HG2	8:AH:133:LEU:HD11	1.98	0.44
9:AI:84:ALA:C	9:AI:86:VAL:N	2.76	0.44
12:AL:20:LYS:N	12:AL:20:LYS:CD	2.80	0.44
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.99	0.44
18:AR:31:LEU:CD2	18:AR:31:LEU:N	2.80	0.44
19:AS:58:VAL:HG21	19:AS:75:ALA:CB	2.48	0.44
25:AY:65:ILE:HD13	25:AY:65:ILE:H	1.82	0.44
25:AY:124:GLN:CA	25:AY:127:LYS:HD3	2.46	0.44
25:AY:138:LYS:HE2	60:AY:702:GDP:N9	2.32	0.44
25:AY:201:ILE:HG21	25:AY:206:LEU:HA	1.98	0.44
25:AY:216:LEU:HD23	25:AY:216:LEU:O	2.17	0.44
25:AY:544:LYS:O	25:AY:548:GLU:CB	2.66	0.44
26:B0:3:HIS:CD2	36:BA:2602:A:H2	2.35	0.44
27:B1:5:CYS:SG	27:B1:62:VAL:HA	2.58	0.44
28:B2:31:GLU:O	28:B2:35:LEU:N	2.47	0.44
29:B3:10:LYS:NZ	29:B3:15:TYR:OH	2.38	0.44
32:B6:45:LYS:HD3	36:BA:2371:G:O3'	2.17	0.44
36:BA:425:G:O2'	36:BA:426:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:437:G:H2'	36:BA:438:G:C8	2.52	0.44
36:BA:782:A:N3	39:BD:226:MET:HG2	2.32	0.44
36:BA:844:C:H2'	36:BA:845:G:O4'	2.17	0.44
36:BA:848:G:H5'	36:BA:849:A:P	2.58	0.44
36:BA:947:G:H2'	36:BA:948:G:H8	1.83	0.44
36:BA:993:G:OP1	52:BU:50:ARG:HD2	2.18	0.44
36:BA:1141:U:H1'	36:BA:1142(A):A:C2	2.53	0.44
36:BA:1216:G:H2'	36:BA:1217:C:C6	2.53	0.44
36:BA:1744:C:C2'	36:BA:1745:C:H5'	2.48	0.44
36:BA:2307:G:H3'	36:BA:2308:G:C5'	2.46	0.44
36:BA:2573:C:OP1	36:BA:2574:G:OP1	2.36	0.44
36:BA:2845:G:O2'	36:BA:2846:G:H5'	2.18	0.44
37:BB:30:C:H2'	37:BB:31:C:O4'	2.18	0.44
37:BB:68:C:O2'	37:BB:69:G:H5'	2.18	0.44
38:BC:211:ARG:HG3	38:BC:211:ARG:NH1	2.26	0.44
41:BF:18:ARG:C	41:BF:19:GLU:HG2	2.42	0.44
41:BF:116:ASP:OD2	47:BP:5:ASP:HB2	2.16	0.44
42:BG:11:TYR:HA	42:BG:15:VAL:CG2	2.47	0.44
45:BN:45:ASN:ND2	45:BN:45:ASN:N	2.43	0.44
47:BP:7:ARG:NH1	47:BP:7:ARG:CA	2.77	0.44
47:BP:16:ARG:HB2	47:BP:16:ARG:CZ	2.47	0.44
50:BS:56:LEU:O	50:BS:58:LEU:N	2.50	0.44
54:BW:25:ARG:HH11	54:BW:25:ARG:CB	2.30	0.44
56:BY:22:GLY:O	56:BY:23:ARG:HG2	2.18	0.44
56:BY:37:VAL:HG23	56:BY:38:ILE:H	1.82	0.44
56:BY:77:PRO:O	56:BY:78:ALA:CB	2.65	0.44
57:BZ:22:GLY:C	57:BZ:23:LYS:HG3	2.42	0.44
57:BZ:86:VAL:CG1	57:BZ:87:ASP:N	2.76	0.44
1:CA:46:G:H2'	1:CA:366:C:H5	1.82	0.44
1:CA:600:C:H4'	8:CH:128:GLY:O	2.18	0.44
1:CA:948:C:OP1	13:CM:107:ALA:HA	2.16	0.44
1:CA:1319:A:OP2	19:CS:5:LEU:HD23	2.17	0.44
1:CA:1392:G:N2	1:CA:1502:A:C8	2.86	0.44
1:CA:1399:C:C4'	1:CA:1400:C:H5'	2.36	0.44
2:CB:121:LEU:HD22	2:CB:126:GLU:HB2	1.99	0.44
7:CG:7:ALA:O	7:CG:8:GLU:HB2	2.16	0.44
7:CG:108:ALA:C	7:CG:110:GLN:N	2.75	0.44
8:CH:104:ARG:HB3	8:CH:108:GLY:H	1.82	0.44
13:CM:23:TYR:HE1	13:CM:70:LEU:HD22	1.82	0.44
13:CM:68:GLY:N	13:CM:71:ARG:HB3	2.32	0.44
25:CY:15:ILE:HD12	25:CY:15:ILE:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:88:VAL:HB	25:CY:90:PHE:HE1	1.77	0.44
25:CY:98:MET:C	25:CY:100:VAL:H	2.24	0.44
25:CY:122:TRP:CH2	25:CY:256:THR:OG1	2.70	0.44
25:CY:487:ILE:HB	25:CY:597:GLY:O	2.16	0.44
25:CY:680:PRO:C	25:CY:682:GLN:H	2.24	0.44
26:D0:60:PHE:HE2	36:DA:2365:G:H4'	1.80	0.44
32:D6:27:LYS:NZ	32:D6:30:THR:HB	2.32	0.44
32:D6:29:ASN:O	32:D6:30:THR:C	2.60	0.44
34:D8:55:ALA:O	34:D8:59:LYS:NZ	2.44	0.44
35:D9:32:HIS:O	35:D9:34:GLN:HG3	2.16	0.44
36:DA:372:G:O2'	36:DA:400:G:O6	2.29	0.44
36:DA:481:G:H2'	36:DA:507:A:C2	2.52	0.44
36:DA:903:C:C2'	36:DA:904:C:C5'	2.94	0.44
36:DA:1024:G:OP2	36:DA:1026:U:OP1	2.36	0.44
36:DA:1281:G:H1	36:DA:1289:C:H42	1.65	0.44
36:DA:1818:U:H5''	39:DD:157:ARG:HB2	1.98	0.44
36:DA:2327:A:H2'	36:DA:2328:A:C8	2.52	0.44
36:DA:2688:U:O2	36:DA:2688:U:C3'	2.66	0.44
39:DD:227:ASN:HB3	39:DD:228:PRO:HD2	1.99	0.44
41:DF:81:PRO:O	41:DF:83:PHE:N	2.51	0.44
41:DF:100:THR:HG22	41:DF:100:THR:O	2.17	0.44
42:DG:123:ASN:OD1	42:DG:123:ASN:N	2.50	0.44
42:DG:165:THR:HG22	42:DG:167:GLU:HB2	1.99	0.44
42:DG:181:ARG:HB2	42:DG:181:ARG:NH1	2.32	0.44
43:DH:44:VAL:HG12	43:DH:45:VAL:N	2.32	0.44
47:DP:99:LEU:HD12	47:DP:99:LEU:O	2.17	0.44
49:DR:21:TYR:OH	49:DR:43:GLU:HG2	2.17	0.44
49:DR:77:ARG:C	49:DR:79:LEU:H	2.26	0.44
51:DT:93:ARG:HD2	51:DT:93:ARG:HA	1.73	0.44
51:DT:117:ASP:O	51:DT:118:ARG:C	2.59	0.44
53:DV:66:ARG:NH1	53:DV:88:ARG:HE	2.16	0.44
55:DX:43:VAL:C	55:DX:45:THR:H	2.24	0.44
55:DX:57:LEU:N	55:DX:57:LEU:CD1	2.80	0.44
57:DZ:102:LEU:HD21	57:DZ:124:ILE:HG12	1.98	0.44
57:DZ:104:PHE:CE1	57:DZ:139:VAL:HG21	2.52	0.44
1:AA:96:U:O2'	1:AA:97:G:H8	2.00	0.44
1:AA:624:C:H4'	16:AP:10:GLY:C	2.42	0.44
1:AA:824:C:H2'	1:AA:825:G:C8	2.49	0.44
1:AA:967:C:H2'	1:AA:968:A:C8	2.53	0.44
1:AA:1379:G:C6	1:AA:1380:U:C4	3.05	0.44
1:AA:1458:G:C6	1:AA:1459:C:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:19:HIS:CD2	2:AB:20:GLU:HG2	2.52	0.44
2:AB:174:VAL:HG13	2:AB:184:VAL:HG11	1.98	0.44
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.45	0.44
3:AC:20:SER:HA	3:AC:57:ILE:O	2.17	0.44
4:AD:64:LEU:HD23	4:AD:75:PHE:CZ	2.47	0.44
5:AE:127:ASN:HA	5:AE:128:PRO:HD3	1.88	0.44
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	2.00	0.44
9:AI:9:ARG:HB3	9:AI:104:ARG:HH12	1.83	0.44
9:AI:33:PHE:O	9:AI:35:GLU:N	2.47	0.44
9:AI:85:LEU:C	9:AI:85:LEU:HD12	2.43	0.44
15:AO:17:ARG:HD3	15:AO:26:GLU:CG	2.29	0.44
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.66	0.44
20:AT:90:GLN:CA	20:AT:93:GLU:OE2	2.66	0.44
22:AV:35:A:O2'	22:AV:36:A:H5'	2.18	0.44
25:AY:141:LYS:NZ	60:AY:702:GDP:HN22	2.14	0.44
25:AY:451:ILE:HG23	25:AY:451:ILE:O	2.17	0.44
26:B0:34:GLY:HA3	36:BA:2353:G:H1'	1.98	0.44
27:B1:41:ARG:HH22	36:BA:1365:A:C5'	2.30	0.44
27:B1:50:ARG:CG	27:B1:59:THR:HG22	2.48	0.44
30:B4:6:HIS:HB3	30:B4:7:PRO:CD	2.47	0.44
31:B5:55:ARG:NH2	49:BR:33:ARG:HD3	2.32	0.44
36:BA:59:U:H3	36:BA:68:G:H1	1.65	0.44
36:BA:177:G:H3'	36:BA:178:G:C8	2.52	0.44
36:BA:272(H):C:H2'	36:BA:272(I):U:C5'	2.44	0.44
36:BA:436:C:H2'	36:BA:437:G:H8	1.82	0.44
36:BA:654(S):G:H3'	36:BA:654(T):C:C4'	2.47	0.44
36:BA:676:A:H1'	36:BA:2443:C:C1'	2.46	0.44
36:BA:1237:A:O2'	36:BA:1238:G:P	2.76	0.44
36:BA:1423:G:H2'	36:BA:1424:G:H8	1.82	0.44
36:BA:1599:C:OP2	55:BX:36:LYS:HD2	2.17	0.44
36:BA:2076:U:H5'	36:BA:2238:G:N2	2.32	0.44
36:BA:2317:C:O2'	36:BA:2318:G:H5'	2.14	0.44
36:BA:2334:G:C2	50:BS:15:ARG:NH1	2.85	0.44
36:BA:2508:G:HO2'	36:BA:2509:G:H5'	1.82	0.44
36:BA:2740:A:N6	36:BA:2764:A:C8	2.86	0.44
38:BC:16:ASP:C	38:BC:18:ASN:H	2.25	0.44
38:BC:97:GLY:C	38:BC:99:GLU:N	2.73	0.44
39:BD:46:GLN:OE1	39:BD:46:GLN:N	2.51	0.44
39:BD:130:ALA:HB2	39:BD:192:THR:HB	2.00	0.44
39:BD:133:LEU:HB3	39:BD:173:VAL:HG11	1.98	0.44
39:BD:148:GLU:HB2	39:BD:151:LYS:CD	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:55:ASN:ND2	40:BE:75:VAL:HG22	2.33	0.44
42:BG:170:ARG:HE	42:BG:180:PHE:HD2	1.62	0.44
46:BO:88:ASN:C	46:BO:90:GLN:H	2.26	0.44
47:BP:23:PRO:HD2	47:BP:33:ARG:NH2	2.31	0.44
47:BP:99:LEU:HG	47:BP:100:LEU:HD22	1.99	0.44
48:BQ:19:GLY:HA3	57:BZ:79:ARG:NH1	2.33	0.44
51:BT:74:ARG:C	51:BT:75:ILE:HD12	2.42	0.44
52:BU:74:LEU:HD12	52:BU:74:LEU:N	2.32	0.44
57:BZ:72:ARG:O	57:BZ:73:GLN:HB2	2.16	0.44
1:CA:47:C:H6	1:CA:365:U:H2'	1.82	0.44
1:CA:50:A:N6	1:CA:361:G:H4'	2.32	0.44
1:CA:622:A:C8	1:CA:623:C:C6	3.06	0.44
1:CA:688:G:H5'	11:CK:47:VAL:HA	2.00	0.44
1:CA:745:C:H5''	1:CA:851:G:H1'	1.98	0.44
1:CA:765:G:H1	1:CA:812:C:H2'	1.82	0.44
1:CA:815:A:O2'	1:CA:1527:C:H1'	2.18	0.44
1:CA:965:A:C2	1:CA:969:A:N1	2.86	0.44
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.52	0.44
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.17	0.44
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.16	0.44
3:CC:127:ARG:HG2	3:CC:127:ARG:NH1	2.32	0.44
6:CF:22:GLU:O	6:CF:24:GLU:N	2.50	0.44
6:CF:46:ARG:HH22	18:CR:37:VAL:CG2	2.28	0.44
7:CG:146:GLU:OE2	7:CG:149:ARG:HD2	2.17	0.44
9:CI:103:THR:O	9:CI:104:ARG:C	2.60	0.44
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	2.17	0.44
12:CL:28:LYS:HB2	12:CL:33:ARG:NH2	2.32	0.44
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.89	0.44
13:CM:68:GLY:H	13:CM:71:ARG:CB	2.30	0.44
15:CO:76:GLU:O	15:CO:78:TYR:N	2.50	0.44
16:CP:21:VAL:HG11	16:CP:59:TRP:NE1	2.33	0.44
18:CR:40:LEU:O	18:CR:42:ARG:N	2.50	0.44
20:CT:81:LYS:O	20:CT:83:ARG:N	2.50	0.44
25:CY:74:TRP:CD1	25:CY:273:LEU:HB3	2.52	0.44
25:CY:117:GLN:HE22	25:CY:120:THR:HG23	1.83	0.44
25:CY:238:THR:C	25:CY:240:GLU:N	2.76	0.44
25:CY:343:ASN:O	25:CY:347:GLY:CA	2.65	0.44
25:CY:681:LYS:O	25:CY:681:LYS:HD2	2.17	0.44
31:D5:25:LEU:HD12	54:DW:19:LEU:O	2.17	0.44
32:D6:6:ARG:C	32:D6:8:LYS:N	2.75	0.44
32:D6:45:LYS:HD3	36:DA:2371:G:O3'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:71:A:H5''	36:DA:72:U:O5'	2.17	0.44
36:DA:192:C:OP1	36:DA:2243:U:OP1	2.35	0.44
36:DA:325:G:O2'	36:DA:326:G:H5'	2.17	0.44
36:DA:389:G:O4'	36:DA:2413:G:H4'	2.16	0.44
36:DA:759:G:H2'	36:DA:760:G:C8	2.49	0.44
36:DA:861:A:C2'	36:DA:862:G:H5'	2.47	0.44
36:DA:943:U:OP2	47:DP:38:GLN:OE1	2.36	0.44
36:DA:958:U:C6	36:DA:958:U:C3'	3.00	0.44
36:DA:1086:A:N3	36:DA:1086:A:H3'	2.32	0.44
36:DA:1655:A:H4'	40:DE:115:GLY:N	2.31	0.44
36:DA:2636:U:P	40:DE:80:GLU:HG3	2.57	0.44
36:DA:2667:C:H1'	43:DH:109:PHE:CD1	2.53	0.44
41:DF:123:LEU:HD12	41:DF:124:LEU:N	2.32	0.44
42:DG:37:VAL:HG21	42:DG:103:LEU:HD11	1.98	0.44
52:DU:65:ILE:HG12	52:DU:96:ALA:HB1	1.98	0.44
54:DW:68:ARG:O	54:DW:109:GLU:HA	2.17	0.44
56:DY:26:LYS:HG2	56:DY:27:VAL:H	1.82	0.44
56:DY:37:VAL:HG23	56:DY:38:ILE:H	1.83	0.44
56:DY:49:VAL:O	56:DY:51:VAL:HG23	2.17	0.44
56:DY:94:LYS:HG3	56:DY:102:CYS:SG	2.57	0.44
57:DZ:155:LEU:N	57:DZ:155:LEU:CD2	2.80	0.44
57:DZ:181:GLU:O	57:DZ:182:LYS:HG3	2.18	0.44
1:AA:187:C:OP1	20:AT:82:SER:HB2	2.18	0.44
1:AA:261:U:O2	1:AA:263:A:C8	2.71	0.44
1:AA:751:U:C2'	1:AA:752:G:H5'	2.48	0.44
1:AA:791:G:N2	1:AA:1497:G:O3'	2.45	0.44
1:AA:963:G:N2	10:AJ:55:LYS:HD3	2.31	0.44
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.52	0.44
1:AA:1493:A:O2'	1:AA:1494:G:OP1	2.31	0.44
2:AB:11:LEU:O	2:AB:12:GLU:O	2.35	0.44
2:AB:86:GLU:C	2:AB:88:ALA:N	2.75	0.44
5:AE:10:MET:HE3	5:AE:10:MET:HB3	1.94	0.44
18:AR:30:ASP:C	18:AR:32:ARG:H	2.22	0.44
22:AV:17:C:H1'	22:AV:18:G:OP2	2.17	0.44
25:AY:331:TYR:CD2	25:AY:399:LEU:HD21	2.53	0.44
34:B8:48:PHE:HB3	34:B8:49:VAL:H	1.61	0.44
36:BA:71:A:H5''	36:BA:72:U:O5'	2.17	0.44
36:BA:406:G:O2'	36:BA:407:G:C8	2.62	0.44
36:BA:548:A:H2'	36:BA:548:A:N3	2.33	0.44
36:BA:840:C:C3'	36:BA:841:A:H5''	2.47	0.44
36:BA:2131:G:C8	36:BA:2158:A:N6	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2316:C:H1'	42:BG:128:ARG:CZ	2.47	0.44
36:BA:2389:G:H5''	36:BA:2390:U:C5'	2.44	0.44
36:BA:2531:A:H5''	43:BH:157:TYR:CZ	2.52	0.44
36:BA:2628:C:O2'	36:BA:2781:A:H2'	2.17	0.44
37:BB:5:C:H2'	37:BB:6:C:H6	1.82	0.44
37:BB:87:G:O3'	37:BB:88:C:C6	2.70	0.44
38:BC:8:TYR:O	38:BC:9:ARG:C	2.60	0.44
38:BC:65:LEU:HD21	38:BC:162:ILE:HD11	1.99	0.44
38:BC:182:PRO:HD2	38:BC:185:LYS:CG	2.47	0.44
41:BF:132:VAL:HG22	41:BF:133:ASN:ND2	2.32	0.44
42:BG:97:ASP:HB3	42:BG:98:ARG:NH1	2.32	0.44
45:BN:90:MET:HB3	45:BN:98:VAL:HG22	2.00	0.44
47:BP:107:LYS:HG3	47:BP:107:LYS:O	2.17	0.44
51:BT:8:LYS:C	51:BT:10:VAL:H	2.25	0.44
51:BT:29:ARG:HD2	51:BT:29:ARG:HA	1.80	0.44
53:BV:52:VAL:HG22	53:BV:52:VAL:O	2.17	0.44
54:BW:79:GLY:O	54:BW:100:THR:HG22	2.17	0.44
56:BY:31:LEU:N	56:BY:31:LEU:CD2	2.78	0.44
56:BY:52:SER:O	56:BY:53:PRO:C	2.61	0.44
1:CA:67:C:O2'	1:CA:171:A:H1'	2.18	0.44
1:CA:193:C:H2'	1:CA:194:C:C6	2.53	0.44
1:CA:559:A:P	5:CE:126:ARG:HH22	2.40	0.44
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.52	0.44
1:CA:1490:C:H2'	1:CA:1491:G:C5'	2.47	0.44
2:CB:29:ALA:HA	2:CB:32:ILE:HG22	2.00	0.44
3:CC:141:VAL:HG11	3:CC:202:ILE:CD1	2.47	0.44
5:CE:10:MET:HG3	5:CE:32:VAL:HG22	1.99	0.44
5:CE:12:LEU:HD13	5:CE:31:LEU:HB3	1.99	0.44
9:CI:9:ARG:HG2	9:CI:14:VAL:HA	1.99	0.44
13:CM:15:VAL:HG11	13:CM:48:LEU:HD11	1.98	0.44
17:CQ:52:LYS:HD2	17:CQ:52:LYS:N	2.23	0.44
18:CR:32:ARG:HA	18:CR:69:THR:CG2	2.46	0.44
18:CR:74:ARG:HD3	18:CR:81:PHE:CD1	2.52	0.44
21:CU:6:ARG:NH2	21:CU:15:ARG:HH21	2.15	0.44
25:CY:182:ARG:HH11	25:CY:182:ARG:HG3	1.82	0.44
25:CY:191:ASP:HB3	25:CY:265:LYS:HD2	1.99	0.44
25:CY:309:LEU:O	25:CY:390:VAL:HA	2.17	0.44
25:CY:656:ALA:O	25:CY:660:ARG:HD2	2.17	0.44
27:D1:24:ALA:O	27:D1:27:GLU:O	2.34	0.44
28:D2:36:ARG:C	28:D2:38:GLN:N	2.74	0.44
32:D6:54:ILE:HD13	36:DA:2420:C:H4'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:94:C:H2'	36:DA:94:C:O2	2.17	0.44
36:DA:216:A:H2'	36:DA:217:G:O4'	2.18	0.44
36:DA:876:C:H2'	36:DA:877:U:O4'	2.18	0.44
36:DA:936:C:H2'	36:DA:937:U:C5	2.52	0.44
36:DA:1029:A:H5''	48:DQ:128:LYS:HE3	2.00	0.44
36:DA:1131:G:C2	36:DA:1132:A:C5	3.06	0.44
36:DA:1245:G:H5''	41:DF:34:TRP:HZ2	1.82	0.44
36:DA:1676:A:H2'	36:DA:1677:A:O4'	2.17	0.44
36:DA:2134:A:H2	36:DA:2159:G:O2'	1.99	0.44
36:DA:2476:A:C2	36:DA:2477:C:C6	3.06	0.44
36:DA:2840:C:H2'	36:DA:2841:C:H6	1.83	0.44
39:DD:133:LEU:HB3	39:DD:173:VAL:HG11	1.98	0.44
41:DF:10:PRO:HG2	41:DF:13:SER:OG	2.17	0.44
41:DF:88:VAL:HG22	41:DF:89:VAL:N	2.32	0.44
42:DG:98:ARG:HH11	42:DG:98:ARG:HG2	1.81	0.44
43:DH:105:LEU:HD23	43:DH:113:VAL:O	2.17	0.44
45:DN:67:LEU:HB3	45:DN:88:GLU:HG3	1.98	0.44
45:DN:73:THR:HG23	45:DN:82:LEU:HD11	1.99	0.44
46:DO:32:TYR:CD1	46:DO:32:TYR:N	2.85	0.44
50:DS:59:LYS:HD2	50:DS:61:ASN:HB2	1.98	0.44
53:DV:1:MET:HB3	53:DV:2:PHE:H	1.46	0.44
53:DV:40:LEU:HD13	53:DV:46:VAL:H	1.82	0.44
53:DV:52:VAL:HG22	53:DV:52:VAL:O	2.17	0.44
1:AA:69:G:H2'	1:AA:70:G:H8	1.82	0.44
1:AA:357:G:H2'	1:AA:358:U:H6	1.82	0.44
1:AA:813:U:O2'	1:AA:814:A:H5'	2.18	0.44
1:AA:954:G:H2'	1:AA:955:U:C6	2.52	0.44
1:AA:1494:G:O2'	36:BA:1912:A:O2'	2.32	0.44
4:AD:126:ILE:O	4:AD:132:ARG:HB2	2.18	0.44
8:AH:104:ARG:O	8:AH:107:LEU:N	2.50	0.44
10:AJ:32:ALA:HB1	10:AJ:75:ILE:CG1	2.47	0.44
16:AP:67:THR:HB	16:AP:70:ALA:CB	2.47	0.44
17:AQ:53:LEU:HD23	17:AQ:53:LEU:C	2.43	0.44
20:AT:16:HIS:O	20:AT:17:ARG:C	2.60	0.44
22:AV:21:A:N1	22:AV:46:G:C2	2.86	0.44
23:AW:1:C:C2	23:AW:2:G:C8	3.06	0.44
23:AW:38:A:N7	23:AW:39:C:C5	2.85	0.44
25:AY:33:LEU:N	25:AY:33:LEU:CD1	2.80	0.44
25:AY:95:GLU:HB3	25:AY:99:ARG:NH1	2.33	0.44
25:AY:175:SER:O	25:AY:188:TYR:HB2	2.17	0.44
25:AY:244:ALA:O	25:AY:248:LYS:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:296:GLY:O	25:AY:297:GLU:HB3	2.18	0.44
25:AY:342:TYR:CE2	25:AY:396:ARG:HD2	2.52	0.44
25:AY:356:LEU:HD21	25:AY:363:ARG:HB3	1.98	0.44
25:AY:515:GLU:O	25:AY:515:GLU:HG2	2.18	0.44
25:AY:689:LYS:CG	25:AY:690:GLY:N	2.80	0.44
26:B0:49:LYS:O	26:B0:50:ASN:HB2	2.17	0.44
27:B1:45:ASN:CB	36:BA:2230:G:H1'	2.48	0.44
28:B2:3:LEU:O	28:B2:3:LEU:HD23	2.18	0.44
30:B4:33:VAL:CG1	30:B4:34:GLU:N	2.80	0.44
36:BA:996:A:O3'	52:BU:92:ARG:HG3	2.17	0.44
36:BA:1484:G:O6	36:BA:1506:C:N3	2.51	0.44
36:BA:2039:C:O2'	36:BA:2040:C:H5'	2.17	0.44
36:BA:2513:G:H2'	36:BA:2514:U:C6	2.53	0.44
36:BA:2850:A:OP2	36:BA:2866:U:C5	2.70	0.44
39:BD:210:GLY:C	39:BD:212:SER:N	2.67	0.44
40:BE:101:ARG:CZ	40:BE:171:GLU:HB2	2.48	0.44
41:BF:68:LYS:O	41:BF:70:THR:N	2.45	0.44
42:BG:99:MET:O	42:BG:102:PHE:HB3	2.18	0.44
43:BH:17:VAL:HB	43:BH:45:VAL:HG13	1.98	0.44
45:BN:13:TRP:O	45:BN:135:PRO:HD2	2.18	0.44
46:BO:86:ILE:HD12	46:BO:86:ILE:N	2.31	0.44
47:BP:16:ARG:NH2	47:BP:18:ARG:CG	2.81	0.44
49:BR:31:HIS:HB2	49:BR:34:ILE:HD11	2.00	0.44
50:BS:12:PHE:O	50:BS:13:ARG:C	2.60	0.44
51:BT:41:ARG:NH2	51:BT:43:GLN:HB2	2.33	0.44
52:BU:83:LEU:HD12	52:BU:83:LEU:N	2.32	0.44
53:BV:43:GLU:O	53:BV:44:LYS:HB2	2.17	0.44
53:BV:49:THR:HB	53:BV:50:PRO:CD	2.47	0.44
54:BW:29:LEU:HD12	54:BW:29:LEU:O	2.17	0.44
57:BZ:129:SER:HB2	57:BZ:131:ARG:HG3	1.99	0.44
1:CA:116:A:O2'	1:CA:117:G:H5'	2.18	0.44
1:CA:334:C:H2'	1:CA:335:C:C6	2.53	0.44
1:CA:403:C:H5''	4:CD:136:PRO:HD2	1.99	0.44
1:CA:540:G:H2'	1:CA:541:G:O4'	2.18	0.44
1:CA:975:A:N6	1:CA:1367:C:O4'	2.50	0.44
2:CB:15:VAL:HG23	2:CB:16:HIS:CE1	2.52	0.44
2:CB:221:LEU:HD13	2:CB:221:LEU:O	2.17	0.44
4:CD:160:GLN:O	4:CD:163:GLU:HB3	2.18	0.44
5:CE:150:ARG:HB2	5:CE:150:ARG:CZ	2.47	0.44
5:CE:150:ARG:HA	5:CE:153:LYS:HE2	1.98	0.44
7:CG:16:LEU:HD12	9:CI:42:ARG:HA	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:59:PHE:CD1	9:CI:59:PHE:N	2.86	0.44
13:CM:59:TYR:O	13:CM:60:VAL:C	2.60	0.44
13:CM:116:THR:CG2	13:CM:117:VAL:N	2.80	0.44
15:CO:21:ASP:OD1	15:CO:21:ASP:C	2.61	0.44
15:CO:39:LEU:CD2	15:CO:43:LEU:HG	2.47	0.44
16:CP:57:ARG:O	16:CP:58:TYR:C	2.59	0.44
16:CP:82:GLN:O	16:CP:83:GLU:C	2.61	0.44
20:CT:53:LEU:HB3	20:CT:102:GLY:HA3	1.99	0.44
22:CV:64:A:H2'	22:CV:65:G:C8	2.52	0.44
25:CY:93:GLU:HG3	59:CY:701:FUA:H72	2.00	0.44
25:CY:342:TYR:O	25:CY:389:LEU:HA	2.18	0.44
25:CY:659:LEU:HD11	25:CY:668:SER:N	2.33	0.44
27:D1:5:CYS:SG	27:D1:63:ALA:N	2.84	0.44
28:D2:28:LYS:HB3	28:D2:57:ILE:HD13	2.00	0.44
30:D4:12:ALA:HB2	30:D4:29:PRO:HA	1.96	0.44
36:DA:25:U:H2'	36:DA:26:G:O4'	2.18	0.44
36:DA:272(H):C:H2'	36:DA:272(I):U:C5'	2.45	0.44
36:DA:272(H):C:H6	36:DA:272(H):C:C5'	2.30	0.44
36:DA:624:C:H41	47:DP:107:LYS:NZ	2.15	0.44
36:DA:1012:U:C5	45:DN:28:THR:HG21	2.52	0.44
36:DA:1016:G:O2'	36:DA:1017:G:H5'	2.18	0.44
36:DA:1599:C:H2'	36:DA:1600:C:C6	2.53	0.44
36:DA:1951:U:H2'	36:DA:1953:A:OP2	2.18	0.44
36:DA:2026:C:C4	36:DA:2027:G:N7	2.86	0.44
36:DA:2401:U:H2'	36:DA:2402:C:H1'	1.99	0.44
36:DA:2870:C:H2'	36:DA:2871:C:O4'	2.18	0.44
37:DB:5:C:H2'	37:DB:6:C:H6	1.82	0.44
39:DD:4:LYS:NZ	39:DD:20:ASP:HA	2.33	0.44
39:DD:39:LYS:HB2	39:DD:62:TYR:CB	2.41	0.44
39:DD:65:ILE:HD13	39:DD:65:ILE:N	2.32	0.44
39:DD:81:ALA:HA	39:DD:113:VAL:CG2	2.47	0.44
39:DD:227:ASN:O	39:DD:230:ASP:N	2.45	0.44
42:DG:38:VAL:CG2	42:DG:158:ALA:HB3	2.46	0.44
44:DJ:130:UNK:O	44:DJ:132:UNK:N	2.51	0.44
46:DO:19:ILE:HD12	46:DO:41:ALA:CB	2.48	0.44
47:DP:125:VAL:O	47:DP:125:VAL:HG13	2.18	0.44
50:DS:58:LEU:HD12	50:DS:59:LYS:H	1.82	0.44
51:DT:14:TYR:O	51:DT:15:VAL:C	2.60	0.44
51:DT:50:ILE:N	51:DT:50:ILE:CD1	2.81	0.44
56:DY:17:SER:O	56:DY:21:LYS:HG2	2.18	0.44
56:DY:58:GLY:O	56:DY:59:GLY:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:56:VAL:HA	57:DZ:70:LEU:HD23	2.00	0.44
1:AA:300:A:H2'	1:AA:301:G:O4'	2.18	0.44
1:AA:453:A:N6	1:AA:480:U:O2	2.51	0.44
1:AA:622:A:C8	1:AA:623:C:C6	3.05	0.44
1:AA:1053:G:N7	1:AA:1199:U:H2'	2.33	0.44
1:AA:1298:C:O2'	1:AA:1299:A:C2	2.71	0.44
1:AA:1408:A:O2'	1:AA:1409:C:H5'	2.16	0.44
2:AB:194:PRO:HG2	2:AB:195:ASP:H	1.81	0.44
4:AD:58:LEU:C	4:AD:58:LEU:CD2	2.90	0.44
7:AG:108:ALA:O	7:AG:110:GLN:N	2.50	0.44
12:AL:105:TYR:N	12:AL:105:TYR:CD1	2.84	0.44
13:AM:14:ARG:NH2	13:AM:42:ALA:HA	2.32	0.44
13:AM:66:LEU:HA	13:AM:70:LEU:HD12	1.98	0.44
13:AM:68:GLY:CA	13:AM:71:ARG:HB3	2.48	0.44
17:AQ:52:LYS:CD	17:AQ:55:ASP:OD2	2.66	0.44
19:AS:51:VAL:O	19:AS:58:VAL:HG22	2.17	0.44
22:AV:19:G:O4'	22:AV:57:G:N2	2.51	0.44
22:AV:22:G:O2'	22:AV:23:A:H5'	2.18	0.44
25:AY:5:VAL:CG1	25:AY:6:GLU:H	2.31	0.44
25:AY:92:ILE:CG2	25:AY:454:MET:HE1	2.47	0.44
25:AY:122:TRP:C	25:AY:124:GLN:H	2.25	0.44
25:AY:259:PHE:CE1	25:AY:275:ALA:HB1	2.52	0.44
25:AY:414:GLU:HA	25:AY:415:PRO:HD2	1.74	0.44
30:B4:5:ILE:N	30:B4:5:ILE:HD13	2.32	0.44
30:B4:50:VAL:HG12	30:B4:51:ASP:N	2.33	0.44
31:B5:2:ALA:CA	36:BA:2015:A:C1'	2.90	0.44
33:B7:46:VAL:CG1	33:B7:47:ARG:N	2.80	0.44
34:B8:34:TRP:HB2	36:BA:2420:C:OP1	2.18	0.44
36:BA:74:A:H5''	36:BA:75:G:O4'	2.18	0.44
36:BA:265:A:H1'	36:BA:266:G:H1'	2.00	0.44
36:BA:265:A:H1'	36:BA:266:G:C1'	2.48	0.44
36:BA:300:A:P	56:BY:97:ARG:HE	2.41	0.44
36:BA:621:A:C2'	36:BA:622:G:H5'	2.40	0.44
36:BA:1196:C:O2'	36:BA:1227:G:H4'	2.17	0.44
36:BA:1555:G:N3	36:BA:1555:G:H2'	2.33	0.44
36:BA:1680:U:O2	36:BA:1763:G:H3'	2.18	0.44
36:BA:1818:U:H3'	39:BD:157:ARG:HG3	1.99	0.44
36:BA:2394:C:P	47:BP:63:PRO:HD2	2.58	0.44
36:BA:2701:C:H2'	36:BA:2702:U:H2'	1.99	0.44
36:BA:2809:A:C2	36:BA:2892:A:N3	2.86	0.44
40:BE:199:ARG:HB2	40:BE:199:ARG:HH11	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:201:THR:OG1	40:BE:202:LYS:N	2.50	0.44
41:BF:177:ALA:HB1	41:BF:178:PRO:HD2	1.99	0.44
42:BG:34:LEU:HD11	42:BG:100:TRP:CZ2	2.53	0.44
42:BG:166:ASP:N	42:BG:166:ASP:OD1	2.50	0.44
45:BN:128:HIS:HE1	45:BN:134:ARG:HH11	1.66	0.44
47:BP:23:PRO:O	47:BP:29:LYS:O	2.36	0.44
47:BP:85:LEU:HA	47:BP:88:LEU:HB3	1.99	0.44
49:BR:55:ALA:HB2	49:BR:79:LEU:CD1	2.46	0.44
49:BR:86:ARG:HB3	49:BR:118:GLU:OE2	2.17	0.44
50:BS:42:ASP:C	50:BS:44:LYS:N	2.76	0.44
51:BT:79:HIS:O	51:BT:80:SER:CB	2.66	0.44
52:BU:8:VAL:CG2	52:BU:12:ARG:HE	2.31	0.44
52:BU:116:ALA:O	52:BU:117:GLN:NE2	2.51	0.44
53:BV:40:LEU:N	53:BV:40:LEU:CD2	2.81	0.44
57:BZ:3:TYR:CD2	57:BZ:51:ALA:HB2	2.53	0.44
1:CA:441:A:H2'	1:CA:442:C:H5'	1.99	0.44
1:CA:953:G:O6	1:CA:1228:C:N4	2.51	0.44
1:CA:1008:C:O5'	1:CA:1008:C:H6	2.00	0.44
3:CC:206:GLU:O	3:CC:207:VAL:C	2.60	0.44
6:CF:60:PHE:CE2	18:CR:78:LEU:HD21	2.52	0.44
6:CF:61:LEU:O	6:CF:62:TRP:HB2	2.18	0.44
10:CJ:8:LEU:HA	10:CJ:95:GLU:O	2.17	0.44
13:CM:113:PRO:O	13:CM:114:ARG:C	2.61	0.44
13:CM:120:LYS:N	13:CM:120:LYS:HD2	2.33	0.44
17:CQ:46:ASP:CG	17:CQ:49:GLU:HA	2.43	0.44
17:CQ:76:LEU:HD21	17:CQ:79:SER:HB2	1.99	0.44
25:CY:8:ASP:C	25:CY:10:LYS:H	2.25	0.44
25:CY:251:ILE:CG2	25:CY:281:PRO:HB3	2.43	0.44
25:CY:329:ARG:CG	25:CY:331:TYR:CZ	3.00	0.44
25:CY:512:ILE:HB	25:CY:565:VAL:HG12	2.00	0.44
25:CY:555:LEU:HD11	25:CY:599:PRO:HG2	1.99	0.44
25:CY:674:ASP:HB3	25:CY:675:HIS:H	1.67	0.44
26:D0:41:ARG:NH2	36:DA:2387:U:H4'	2.33	0.44
27:D1:35:THR:O	27:D1:35:THR:HG23	2.18	0.44
28:D2:67:LYS:C	28:D2:69:ARG:N	2.76	0.44
30:D4:5:ILE:HD13	30:D4:5:ILE:N	2.33	0.44
31:D5:35:GLU:O	31:D5:36:CYS:HB3	2.17	0.44
33:D7:46:VAL:CG1	33:D7:47:ARG:N	2.80	0.44
36:DA:92:A:H2'	36:DA:92:A:N3	2.32	0.44
36:DA:186:G:C2	36:DA:211:A:C2	3.06	0.44
36:DA:548:A:H2'	36:DA:548:A:N3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:548:A:C3'	36:DA:549:G:H5'	2.47	0.44
36:DA:685:A:C5	36:DA:774:A:C2	3.05	0.44
36:DA:766:C:O2'	36:DA:767:U:H5'	2.17	0.44
36:DA:814:C:O2'	36:DA:815:C:H5'	2.18	0.44
36:DA:1845:G:O2'	36:DA:1846:G:H5''	2.16	0.44
36:DA:2092:U:H4'	36:DA:2093:G:O5'	2.18	0.44
36:DA:2367:G:H2'	36:DA:2368:C:H6	1.83	0.44
36:DA:2468:G:H5'	48:DQ:120:ILE:HD12	2.00	0.44
36:DA:2840:C:H2'	36:DA:2841:C:C6	2.53	0.44
37:DB:18:G:H2'	37:DB:19:G:H8	1.83	0.44
38:DC:97:GLY:C	38:DC:99:GLU:N	2.73	0.44
39:DD:13:ARG:HG2	39:DD:13:ARG:O	2.17	0.44
39:DD:77:ALA:CB	39:DD:97:TYR:HA	2.48	0.44
39:DD:77:ALA:HA	39:DD:97:TYR:HA	2.00	0.44
39:DD:81:ALA:HA	39:DD:113:VAL:HG21	2.00	0.44
39:DD:260:ARG:O	39:DD:260:ARG:HG3	2.18	0.44
40:DE:119:ARG:HD2	40:DE:120:TRP:CE2	2.53	0.44
42:DG:34:LEU:CD1	42:DG:34:LEU:O	2.66	0.44
42:DG:47:LYS:HD3	42:DG:47:LYS:H	1.83	0.44
42:DG:71:THR:HG23	42:DG:89:GLY:CA	2.45	0.44
45:DN:57:ALA:C	45:DN:58:ASP:O	2.61	0.44
48:DQ:108:GLY:HA3	57:DZ:116:VAL:HG11	1.98	0.44
48:DQ:108:GLY:O	48:DQ:109:VAL:HG23	2.17	0.44
49:DR:26:LYS:CE	49:DR:71:GLN:H	2.31	0.44
52:DU:27:LEU:O	52:DU:31:SER:HB3	2.17	0.44
52:DU:83:LEU:N	52:DU:83:LEU:HD12	2.32	0.44
53:DV:49:THR:HB	53:DV:50:PRO:CD	2.47	0.44
53:DV:52:VAL:O	53:DV:52:VAL:HG13	2.18	0.44
55:DX:27:THR:CB	55:DX:80:ILE:HG22	2.48	0.44
56:DY:12:THR:HG22	56:DY:75:ILE:HG21	2.00	0.44
56:DY:28:LYS:HG2	56:DY:39:VAL:HG22	2.00	0.44
56:DY:32:PRO:C	56:DY:35:TYR:H	2.26	0.44
56:DY:89:PHE:HB3	56:DY:90:LEU:HD23	1.99	0.44
57:DZ:14:LYS:HB2	57:DZ:17:ALA:CB	2.48	0.44
57:DZ:125:LEU:HD12	57:DZ:126:VAL:N	2.32	0.44
57:DZ:145:GLU:HG3	57:DZ:146:ILE:N	2.33	0.44
1:AA:108:G:OP2	1:AA:109:A:C2	2.71	0.44
1:AA:383:A:H2'	1:AA:384:G:H5'	1.99	0.44
1:AA:540:G:H2'	1:AA:541:G:O4'	2.17	0.44
1:AA:1067:A:N1	1:AA:1108:G:O2'	2.48	0.44
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1256:A:C2	1:AA:1277:C:C4	3.05	0.44
2:AB:29:ALA:HA	2:AB:32:ILE:HG22	2.00	0.44
3:AC:92:ALA:HB2	3:AC:99:VAL:HG22	1.99	0.44
5:AE:7:GLU:HG2	5:AE:112:LEU:CD2	2.46	0.44
5:AE:32:VAL:O	5:AE:43:LEU:HD12	2.18	0.44
13:AM:23:TYR:CE1	13:AM:70:LEU:HD22	2.53	0.44
13:AM:23:TYR:HE1	13:AM:70:LEU:HD22	1.83	0.44
13:AM:33:ALA:HA	13:AM:59:TYR:HE2	1.83	0.44
18:AR:55:ARG:O	18:AR:56:THR:C	2.60	0.44
20:AT:75:ASN:O	20:AT:76:ALA:C	2.59	0.44
21:AU:18:TYR:CD2	21:AU:24:ARG:HG3	2.53	0.44
25:AY:130:VAL:HA	25:AY:131:PRO:HD3	1.76	0.44
25:AY:247:ARG:NH1	25:AY:251:ILE:HD11	2.33	0.44
25:AY:411:VAL:HG12	25:AY:412:ALA:H	1.81	0.44
25:AY:416:LYS:NZ	25:AY:417:THR:HG23	2.32	0.44
25:AY:487:ILE:O	25:AY:600:VAL:HG12	2.17	0.44
25:AY:526:VAL:HG12	25:AY:528:ALA:HB2	2.00	0.44
28:B2:38:GLN:HA	28:B2:41:ILE:HG12	2.00	0.44
32:B6:27:LYS:NZ	32:B6:30:THR:HB	2.32	0.44
34:B8:50:LEU:C	34:B8:52:LYS:N	2.76	0.44
35:B9:34:GLN:O	35:B9:35:ARG:CB	2.59	0.44
36:BA:191:A:H2'	36:BA:192:C:H6	1.82	0.44
36:BA:876:C:H2'	36:BA:877:U:O4'	2.17	0.44
36:BA:1006:C:O2'	45:BN:106:MET:HB3	2.18	0.44
36:BA:1029:A:H5''	48:BQ:128:LYS:HE3	1.99	0.44
36:BA:1245:G:C5'	41:BF:34:TRP:HZ2	2.31	0.44
36:BA:2649:U:O2'	36:BA:2650:U:H5'	2.17	0.44
36:BA:2835:A:N6	36:BA:2878:U:C6	2.86	0.44
36:BA:2884:U:C2'	36:BA:2885:C:H5'	2.48	0.44
37:BB:79:C:H2'	37:BB:80:U:O4'	2.18	0.44
38:BC:104:ILE:HG22	38:BC:131:ILE:HG21	2.00	0.44
38:BC:128:LEU:HD12	38:BC:132:LEU:CG	2.45	0.44
39:BD:43:ARG:NH1	39:BD:49:ILE:HG22	2.32	0.44
41:BF:31:HIS:O	41:BF:32:LEU:C	2.61	0.44
41:BF:187:VAL:HG13	47:BP:5:ASP:O	2.18	0.44
42:BG:61:ALA:HB2	42:BG:68:PRO:HD3	2.00	0.44
42:BG:109:VAL:HG11	42:BG:142:PRO:HB3	1.98	0.44
43:BH:87:LEU:N	43:BH:131:VAL:O	2.43	0.44
47:BP:7:ARG:CB	47:BP:8:PRO:CD	2.93	0.44
47:BP:101:VAL:HA	47:BP:107:LYS:H	1.83	0.44
49:BR:36:THR:OG1	49:BR:37:THR:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:72:ASP:OD2	49:BR:75:LEU:HB2	2.18	0.44
49:BR:100:LEU:HD11	49:BR:113:LEU:HB2	1.99	0.44
49:BR:103:ARG:HD2	54:BW:40:ASN:OD1	2.18	0.44
51:BT:33:LYS:HE2	51:BT:43:GLN:OE1	2.16	0.44
51:BT:67:SER:O	51:BT:68:TYR:HB2	2.18	0.44
52:BU:101:ARG:C	52:BU:102:GLU:HG2	2.43	0.44
54:BW:14:PRO:HG2	54:BW:78:GLU:CB	2.47	0.44
54:BW:52:GLU:C	54:BW:54:ALA:N	2.75	0.44
56:BY:54:LYS:NZ	56:BY:54:LYS:CB	2.81	0.44
57:BZ:153:SER:CB	57:BZ:163:LEU:HD13	2.43	0.44
1:CA:125:U:H2'	1:CA:126:G:C8	2.53	0.44
1:CA:248:C:O2'	1:CA:249:U:H5'	2.18	0.44
1:CA:423:G:C2'	1:CA:424:G:H5'	2.47	0.44
1:CA:766:A:C2'	1:CA:767:A:H5'	2.48	0.44
1:CA:1030(A):G:H1'	1:CA:1031:G:N1	2.31	0.44
1:CA:1256:A:C2	1:CA:1277:C:C4	3.05	0.44
1:CA:1316:G:H4'	14:CN:18:VAL:CG1	2.47	0.44
1:CA:1362:C:O2'	1:CA:1363:C:H5''	2.18	0.44
1:CA:1370:G:C2	1:CA:1371:G:N7	2.86	0.44
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.18	0.44
2:CB:140:HIS:O	2:CB:143:GLU:HB2	2.18	0.44
4:CD:4:TYR:CG	4:CD:5:ILE:N	2.84	0.44
7:CG:57:GLU:O	7:CG:58:PRO:C	2.61	0.44
7:CG:93:PRO:HG2	7:CG:94:ARG:H	1.82	0.44
7:CG:136:LYS:HB3	7:CG:136:LYS:HE3	1.80	0.44
12:CL:11:VAL:HG13	17:CQ:29:HIS:CD2	2.52	0.44
12:CL:17:LYS:NZ	12:CL:18:VAL:HG22	2.32	0.44
13:CM:51:ALA:O	13:CM:55:ARG:HB3	2.17	0.44
25:CY:74:TRP:HB3	25:CY:79:ILE:HD11	2.00	0.44
25:CY:206:LEU:O	25:CY:209:ALA:HB3	2.18	0.44
25:CY:415:PRO:C	25:CY:420:ASP:HB2	2.43	0.44
25:CY:468:ARG:HH11	25:CY:468:ARG:CB	2.31	0.44
29:D3:15:TYR:O	29:D3:20:LYS:HE2	2.18	0.44
31:D5:40:LYS:HZ1	31:D5:46:CYS:N	2.14	0.44
36:DA:37:C:H2'	36:DA:37:C:O2	2.18	0.44
36:DA:566:U:O4	53:DV:78:LYS:HE3	2.18	0.44
36:DA:605:C:C4	36:DA:606:U:C5	3.06	0.44
36:DA:675:A:H4'	41:DF:67:GLN:OE1	2.17	0.44
36:DA:986:C:C2'	36:DA:987:G:H5'	2.48	0.44
36:DA:1108:U:H3'	36:DA:1109:C:O4'	2.18	0.44
36:DA:1362:C:H2'	36:DA:1363:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1442:G:H1	36:DA:1549:C:H42	1.66	0.44
36:DA:1448:G:O2'	36:DA:1528(A):A:N1	2.48	0.44
36:DA:1544:A:O2'	36:DA:1545:A:H5'	2.18	0.44
36:DA:2203:U:O2	36:DA:2203:U:H2'	2.17	0.44
36:DA:2443:C:C2'	36:DA:2444:G:H5'	2.48	0.44
36:DA:2508:G:O2'	36:DA:2509:G:H5'	2.18	0.44
36:DA:2540:C:O2'	36:DA:2541:A:H5'	2.18	0.44
36:DA:2628:C:O2'	36:DA:2781:A:H2'	2.18	0.44
36:DA:2701:C:H2'	36:DA:2702:U:H2'	1.99	0.44
36:DA:2850:A:OP2	36:DA:2866:U:C5	2.71	0.44
38:DC:37:LYS:O	38:DC:38:PHE:HB3	2.18	0.44
41:DF:206:ILE:HG22	41:DF:207:GLY:H	1.83	0.44
43:DH:83:TYR:HB2	43:DH:84:SER:H	1.47	0.44
43:DH:173:PRO:O	43:DH:174:GLY:C	2.60	0.44
46:DO:88:ASN:HD21	46:DO:90:GLN:HB2	1.83	0.44
47:DP:16:ARG:HB2	47:DP:16:ARG:CZ	2.47	0.44
48:DQ:6:ARG:C	48:DQ:7:MET:HG3	2.43	0.44
48:DQ:120:ILE:O	48:DQ:123:HIS:HB2	2.18	0.44
57:DZ:13:GLU:O	57:DZ:18:LEU:HD11	2.17	0.44
1:AA:47:C:H6	1:AA:365:U:H2'	1.83	0.44
1:AA:66:G:H4'	1:AA:173:U:H5	1.81	0.44
1:AA:66:G:C4'	1:AA:173:U:C5	2.99	0.44
1:AA:236:G:C6	1:AA:237:C:C4	3.06	0.44
1:AA:500:G:C5'	12:AL:124:LYS:NZ	2.81	0.44
1:AA:1030(A):G:H1'	1:AA:1031:G:N1	2.31	0.44
1:AA:1465:C:O2'	1:AA:1466:C:H5'	2.17	0.44
3:AC:159:GLY:HA2	3:AC:193:TYR:CE1	2.53	0.44
4:AD:78:LEU:HB3	4:AD:93:PHE:HE1	1.82	0.44
5:AE:129:ILE:O	5:AE:132:ALA:HB3	2.18	0.44
6:AF:76:ALA:C	6:AF:78:GLU:N	2.75	0.44
7:AG:88:PRO:HB3	7:AG:145:ALA:HA	1.99	0.44
12:AL:104:VAL:HG12	12:AL:105:TYR:CD1	2.53	0.44
13:AM:57:ARG:C	13:AM:59:TYR:N	2.73	0.44
16:AP:5:ARG:NH2	16:AP:26:ARG:HB2	2.33	0.44
18:AR:74:ARG:HD3	18:AR:81:PHE:CD1	2.53	0.44
25:AY:122:TRP:CZ2	25:AY:159:ALA:HB2	2.52	0.44
25:AY:614:GLU:HA	25:AY:617:MET:CB	2.47	0.44
28:B2:48:HIS:CD2	36:BA:96:G:H4'	2.52	0.44
36:BA:296:C:OP1	56:BY:5:MET:HE1	2.18	0.44
36:BA:654(N):G:H2'	36:BA:654(O):G:H5'	2.00	0.44
36:BA:1042:G:H2'	36:BA:1043:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1108:U:H3'	36:BA:1109:C:O4'	2.18	0.44
36:BA:1349:A:N6	36:BA:1598:C:N4	2.66	0.44
36:BA:1528:A:O2'	36:BA:1528(A):A:O5'	2.35	0.44
36:BA:1542:A:C8	36:BA:1544:A:H5''	2.53	0.44
36:BA:1599:C:H2'	36:BA:1600:C:C6	2.53	0.44
36:BA:1754:C:P	51:BT:96:ARG:NH1	2.91	0.44
36:BA:1845:G:O2'	36:BA:1846:G:H5''	2.18	0.44
36:BA:2143:C:O2'	36:BA:2144:U:H5'	2.18	0.44
36:BA:2259:G:O2'	36:BA:2260:C:H5'	2.18	0.44
36:BA:2447:G:C4	36:BA:2501:C:C4	3.06	0.44
38:BC:18:ASN:N	38:BC:18:ASN:OD1	2.51	0.44
39:BD:155:LEU:N	39:BD:155:LEU:CD1	2.81	0.44
40:BE:93:VAL:C	40:BE:95:ILE:N	2.75	0.44
42:BG:5:VAL:O	42:BG:7:LEU:N	2.51	0.44
42:BG:33:ARG:HE	42:BG:33:ARG:HB2	1.53	0.44
46:BO:24:VAL:HA	46:BO:39:ILE:HG22	1.99	0.44
50:BS:35:ILE:HD11	50:BS:99:LYS:CE	2.47	0.44
51:BT:28:VAL:HG22	51:BT:47:GLY:H	1.83	0.44
57:BZ:80:ARG:O	57:BZ:81:ARG:HG2	2.18	0.44
1:CA:181:G:N2	1:CA:195:A:C4	2.86	0.44
1:CA:321:A:C2	1:CA:333:G:C2	3.06	0.44
1:CA:346:G:H2'	1:CA:347:G:O4'	2.18	0.44
1:CA:476:G:H2'	1:CA:477:A:C8	2.52	0.44
1:CA:784:C:H4'	36:DA:1837:C:OP1	2.18	0.44
1:CA:977:A:C2'	1:CA:978:A:H5'	2.46	0.44
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.52	0.44
1:CA:1313:U:P	19:CS:6:LYS:HG3	2.58	0.44
1:CA:1442:G:H2'	51:DT:118:ARG:HH12	1.83	0.44
2:CB:215:LEU:O	2:CB:218:ALA:HB3	2.18	0.44
3:CC:52:LEU:HD12	3:CC:55:VAL:CG2	2.48	0.44
3:CC:128:PHE:O	3:CC:130:VAL:N	2.50	0.44
3:CC:146:ALA:O	3:CC:148:GLY:N	2.51	0.44
3:CC:195:VAL:C	3:CC:196:LEU:HD22	2.43	0.44
4:CD:111:ALA:HA	4:CD:116:GLN:OE1	2.17	0.44
7:CG:52:GLU:O	7:CG:53:LYS:C	2.60	0.44
8:CH:104:ARG:O	8:CH:107:LEU:N	2.51	0.44
9:CI:128:ARG:OXT	9:CI:128:ARG:HG2	2.18	0.44
10:CJ:54:PHE:CD1	10:CJ:55:LYS:HE3	2.52	0.44
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.24	0.44
13:CM:68:GLY:C	13:CM:70:LEU:H	2.25	0.44
13:CM:83:ASP:OD1	13:CM:85:GLY:N	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:48:LYS:HD2	20:CT:51:GLU:OE2	2.17	0.44
20:CT:73:HIS:HB3	20:CT:74:LYS:HE2	1.98	0.44
23:CW:19:G:H4'	23:CW:20:U:OP2	2.17	0.44
25:CY:66:THR:O	25:CY:67:ALA:HB2	2.16	0.44
25:CY:294:PRO:HG2	25:CY:295:GLU:OE2	2.18	0.44
32:D6:10:LEU:HD23	32:D6:10:LEU:N	2.25	0.44
35:D9:29:ASN:C	35:D9:31:LYS:H	2.25	0.44
36:DA:29:U:O2'	36:DA:30:G:H5'	2.17	0.44
36:DA:276:A:OP1	36:DA:276:A:H4'	2.18	0.44
36:DA:871:U:H4'	48:DQ:69:PHE:CE2	2.52	0.44
36:DA:1057:A:H2'	36:DA:1058:G:H8	1.83	0.44
36:DA:1660:C:H5'	36:DA:2712(A):A:H61	1.83	0.44
36:DA:2126:A:H1'	36:DA:2127:G:O4'	2.18	0.44
36:DA:2202:C:H2'	39:DD:151:LYS:NZ	2.31	0.44
36:DA:2310:A:N7	42:DG:75:LYS:HD2	2.33	0.44
36:DA:2416:C:P	47:DP:66:GLY:HA3	2.57	0.44
36:DA:2677:G:O2'	36:DA:2678:C:H5'	2.18	0.44
36:DA:2771:C:H2'	36:DA:2772:C:H6	1.83	0.44
36:DA:2810:A:O2'	40:DE:61:ARG:HB2	2.17	0.44
37:DB:53:A:N3	37:DB:53:A:H2'	2.33	0.44
39:DD:43:ARG:NH1	39:DD:49:ILE:HG22	2.33	0.44
44:DJ:74:UNK:O	44:DJ:76:UNK:N	2.51	0.44
48:DQ:51:ARG:HG2	48:DQ:51:ARG:NH1	2.33	0.44
51:DT:8:LYS:C	51:DT:10:VAL:N	2.76	0.44
51:DT:12:SER:O	51:DT:13:ARG:NH2	2.51	0.44
52:DU:70:ARG:HA	52:DU:74:LEU:O	2.18	0.44
56:DY:37:VAL:O	56:DY:38:ILE:HB	2.18	0.44
57:DZ:43:GLU:O	57:DZ:47:VAL:HG23	2.18	0.44
1:AA:157:G:H2'	1:AA:158:G:H8	1.83	0.43
1:AA:405:U:OP2	4:AD:3:ARG:HD2	2.18	0.43
1:AA:441:A:H2'	1:AA:442:C:H5'	1.99	0.43
1:AA:865:A:H5'	1:AA:1078:U:O4	2.18	0.43
1:AA:1030:C:N4	1:AA:1032:G:C2	2.86	0.43
1:AA:1056:U:C5'	3:AC:163:ALA:HB2	2.48	0.43
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.17	0.43
1:AA:1129:C:H5'	1:AA:1129:C:C6	2.42	0.43
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.53	0.43
2:AB:101:MET:HE3	2:AB:152:PHE:CD2	2.53	0.43
6:AF:46:ARG:HH22	18:AR:37:VAL:CG2	2.29	0.43
9:AI:40:LEU:C	9:AI:42:ARG:N	2.72	0.43
10:AJ:12:ASP:OD1	10:AJ:12:ASP:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:39:VAL:O	12:AL:56:ALA:HA	2.18	0.43
13:AM:72:ALA:O	13:AM:75:ALA:N	2.51	0.43
23:AW:14:A:C6	23:AW:22:G:C2	3.06	0.43
23:AW:68:C:O2'	23:AW:69:C:H5'	2.18	0.43
25:AY:350:GLU:HB3	25:AY:380:LEU:HG	1.99	0.43
25:AY:420:ASP:HB3	25:AY:472:VAL:HG13	1.99	0.43
25:AY:443:HIS:HE1	25:AY:445:GLU:HB2	1.83	0.43
31:B5:58:LEU:HD22	31:B5:58:LEU:C	2.42	0.43
36:BA:27:G:C2'	36:BA:28:A:OP2	2.66	0.43
36:BA:438:G:H2'	36:BA:440:G:H8	1.83	0.43
36:BA:863:A:O2'	36:BA:864:G:H5'	2.18	0.43
36:BA:910:A:H62	48:BQ:12:GLN:HA	1.82	0.43
36:BA:965:C:O2'	36:BA:966:G:H5'	2.18	0.43
36:BA:1556:C:H2'	36:BA:1557:C:H6	1.80	0.43
36:BA:1654:A:P	49:BR:3:HIS:HB2	2.58	0.43
36:BA:1796:U:H2'	36:BA:1797:C:C6	2.53	0.43
36:BA:2132:U:C5	38:BC:6:LYS:HD2	2.53	0.43
36:BA:2203:U:O2	36:BA:2203:U:H2'	2.18	0.43
36:BA:2224:G:H4'	36:BA:2226:C:C2	2.53	0.43
36:BA:2247:A:O2'	36:BA:2248:C:H5'	2.18	0.43
36:BA:2261:C:O2'	36:BA:2262:U:H5'	2.18	0.43
36:BA:2307:G:N2	36:BA:2308:G:H5''	2.33	0.43
36:BA:2810:A:H2'	40:BE:61:ARG:NH2	2.33	0.43
38:BC:37:LYS:O	38:BC:38:PHE:HB3	2.17	0.43
39:BD:13:ARG:HG2	39:BD:13:ARG:O	2.18	0.43
39:BD:30:GLU:OE1	39:BD:63:ARG:HG2	2.18	0.43
41:BF:103:LYS:C	41:BF:105:VAL:N	2.75	0.43
42:BG:57:ALA:O	42:BG:68:PRO:HG2	2.18	0.43
43:BH:44:VAL:HG12	43:BH:45:VAL:N	2.33	0.43
45:BN:35:ARG:O	45:BN:42:TRP:CZ3	2.71	0.43
47:BP:102:ARG:CB	47:BP:102:ARG:HH11	2.31	0.43
48:BQ:109:VAL:HG12	48:BQ:110:THR:N	2.32	0.43
49:BR:21:TYR:OH	49:BR:43:GLU:HG2	2.18	0.43
52:BU:93:LYS:O	52:BU:96:ALA:HB3	2.18	0.43
53:BV:19:LYS:HG3	53:BV:20:LEU:N	2.32	0.43
55:BX:26:TYR:N	55:BX:26:TYR:CD1	2.86	0.43
56:BY:42:VAL:HG23	56:BY:67:LEU:HD13	2.00	0.43
57:BZ:69:THR:HG22	57:BZ:90:VAL:CA	2.23	0.43
1:CA:115:G:H1'	1:CA:116:A:N7	2.33	0.43
1:CA:308:C:H2'	1:CA:309:G:H8	1.83	0.43
1:CA:811:C:H4'	1:CA:900:A:N6	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:937:A:C2	1:CA:1379:G:O6	2.71	0.43
1:CA:956:U:H2'	1:CA:957:U:H6	1.83	0.43
1:CA:1269:A:N1	1:CA:1312:G:O2'	2.41	0.43
1:CA:1489:G:C5	1:CA:1490:C:C5	3.06	0.43
2:CB:21:ARG:O	2:CB:21:ARG:HG3	2.18	0.43
2:CB:34:ALA:O	2:CB:41:ILE:HB	2.18	0.43
2:CB:44:LEU:H	2:CB:44:LEU:CD1	2.20	0.43
3:CC:35:GLU:OE1	3:CC:97:LYS:HE3	2.18	0.43
4:CD:53:ASP:O	4:CD:57:ARG:HD2	2.18	0.43
4:CD:111:ALA:HB3	4:CD:117:ALA:HB2	2.00	0.43
5:CE:144:THR:O	5:CE:145:LYS:C	2.61	0.43
6:CF:72:VAL:CG1	6:CF:73:ASN:N	2.81	0.43
6:CF:97:PHE:CD2	18:CR:65:ILE:CD1	3.00	0.43
7:CG:62:PHE:O	7:CG:65:ALA:N	2.51	0.43
10:CJ:56:HIS:O	10:CJ:58:ASP:N	2.51	0.43
15:CO:17:ARG:NH1	15:CO:77:ARG:NH1	2.66	0.43
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	2.18	0.43
20:CT:84:LEU:C	20:CT:86:ARG:H	2.25	0.43
23:CW:1:C:C2	23:CW:2:G:C8	3.06	0.43
25:CY:134:ALA:HB3	25:CY:258:VAL:HA	2.00	0.43
25:CY:170:ARG:O	25:CY:171:GLU:CG	2.65	0.43
25:CY:462:ILE:CG2	25:CY:466:LEU:HD13	2.48	0.43
31:D5:55:ARG:HD3	31:D5:56:LYS:N	2.32	0.43
33:D7:24:THR:HG23	33:D7:27:GLY:CA	2.48	0.43
34:D8:51:ALA:C	34:D8:53:PRO:HD2	2.42	0.43
35:D9:29:ASN:O	35:D9:31:LYS:N	2.51	0.43
36:DA:78:A:H2'	36:DA:79:G:H8	1.82	0.43
36:DA:106:C:H2'	36:DA:106:C:O2	2.18	0.43
36:DA:222:A:N6	36:DA:224:G:C2	2.86	0.43
36:DA:271(C):C:H2'	36:DA:271(D):G:H8	1.82	0.43
36:DA:727:A:H2	39:DD:9:TYR:CD2	2.36	0.43
36:DA:786:C:O2'	36:DA:787:U:H5'	2.18	0.43
36:DA:848:G:H5'	36:DA:849:A:P	2.58	0.43
36:DA:955:C:C2'	36:DA:956:G:H5'	2.48	0.43
36:DA:975(A):G:HO2'	36:DA:976:C:H5'	1.83	0.43
36:DA:1015:G:H2'	36:DA:1016:G:C8	2.53	0.43
36:DA:1074:G:H2'	36:DA:1075:C:C6	2.53	0.43
36:DA:1493:C:O2	36:DA:1493:C:C2'	2.66	0.43
36:DA:1805:U:C2	36:DA:1813:G:N2	2.86	0.43
36:DA:2481:G:C2'	36:DA:2482:G:OP2	2.66	0.43
36:DA:2693:A:H2'	36:DA:2694:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2840:C:H4'	49:DR:53:HIS:HD2	1.83	0.43
40:DE:147:PRO:HG2	40:DE:148:GLY:H	1.83	0.43
41:DF:52:LYS:HD3	41:DF:56:GLU:O	2.18	0.43
41:DF:167:ALA:CB	41:DF:173:VAL:HG11	2.19	0.43
41:DF:177:ALA:HB1	41:DF:178:PRO:HD2	2.00	0.43
42:DG:86:MET:N	42:DG:87:PRO:CD	2.79	0.43
46:DO:13:ASN:ND2	46:DO:97:ARG:HG3	2.33	0.43
48:DQ:59:ARG:CB	57:DZ:180:VAL:HG23	2.48	0.43
51:DT:27:THR:C	51:DT:28:VAL:HG23	2.42	0.43
51:DT:62:THR:HG22	51:DT:75:ILE:HG23	2.00	0.43
52:DU:65:ILE:HD11	52:DU:96:ALA:CB	2.48	0.43
53:DV:15:GLU:O	53:DV:96:ILE:HG21	2.18	0.43
56:DY:52:SER:O	56:DY:53:PRO:C	2.61	0.43
56:DY:74:PRO:O	56:DY:75:ILE:HB	2.18	0.43
57:DZ:56:VAL:HG12	57:DZ:57:ILE:N	2.33	0.43
57:DZ:121:HIS:N	57:DZ:171:ILE:O	2.51	0.43
1:AA:112:G:H4'	1:AA:389:A:H5''	2.00	0.43
1:AA:260:G:H2'	1:AA:261:U:C6	2.53	0.43
1:AA:525:C:OP1	12:AL:91:LYS:HE2	2.18	0.43
1:AA:784:C:H2'	1:AA:785:G:H8	1.83	0.43
1:AA:1216:G:H2'	1:AA:1217:C:H6	1.82	0.43
1:AA:1244:C:H2'	1:AA:1245:A:H8	1.82	0.43
2:AB:203:GLY:O	2:AB:204:ASN:C	2.61	0.43
4:AD:203:VAL:O	4:AD:206:PHE:HB3	2.17	0.43
6:AF:33:TYR:O	6:AF:34:GLY:C	2.61	0.43
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.17	0.43
7:AG:140:ASP:HA	7:AG:143:ARG:HH11	1.82	0.43
10:AJ:94:VAL:HG12	10:AJ:95:GLU:H	1.82	0.43
15:AO:9:GLN:HB3	15:AO:13:GLN:NE2	2.33	0.43
19:AS:5:LEU:HG	19:AS:10:PHE:HD1	1.83	0.43
20:AT:38:LYS:C	20:AT:40:ALA:N	2.74	0.43
25:AY:157:LEU:N	25:AY:157:LEU:CD2	2.79	0.43
26:B0:42:GLY:HA3	36:BA:2331:G:H4'	2.00	0.43
27:B1:67:ILE:N	27:B1:68:PRO:CD	2.81	0.43
31:B5:2:ALA:O	31:B5:3:LYS:HB3	2.18	0.43
31:B5:53:ALA:O	31:B5:55:ARG:N	2.51	0.43
34:B8:31:HIS:HE1	36:BA:2392:A:OP2	2.01	0.43
36:BA:92:A:H2'	36:BA:92:A:N3	2.32	0.43
36:BA:94:C:O2	36:BA:94:C:H2'	2.18	0.43
36:BA:529:A:C5	36:BA:2042:A:C2	3.07	0.43
36:BA:788:A:H8	36:BA:788:A:OP2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:886:C:H2'	36:BA:887:A:O4'	2.18	0.43
36:BA:938:G:C2	36:BA:939:G:N7	2.86	0.43
36:BA:1185:C:H5'	36:BA:1186:G:OP1	2.18	0.43
36:BA:1313:U:C2	36:BA:1610:A:H2	2.36	0.43
36:BA:1531:C:H2'	36:BA:1532:C:H6	1.82	0.43
36:BA:1565:C:H3'	39:BD:18:VAL:HG21	2.01	0.43
36:BA:1801:G:H3'	36:BA:1802:A:H5'	2.00	0.43
36:BA:1910:G:O2'	36:BA:1911:U:H5'	2.17	0.43
36:BA:2170:A:H5''	38:BC:135:ARG:HE	1.84	0.43
36:BA:2444:G:H2'	36:BA:2445:G:O4'	2.18	0.43
36:BA:2636:U:O5'	40:BE:80:GLU:HG3	2.17	0.43
36:BA:2721:A:H2'	36:BA:2722:G:O4'	2.18	0.43
39:BD:62:TYR:CE2	39:BD:64:ILE:HA	2.53	0.43
39:BD:69:ARG:O	39:BD:71:ASP:N	2.51	0.43
41:BF:6:VAL:HG12	41:BF:6:VAL:O	2.18	0.43
41:BF:100:THR:O	41:BF:100:THR:HG22	2.18	0.43
41:BF:119:ARG:HG2	41:BF:119:ARG:NH1	2.33	0.43
42:BG:41:GLN:NE2	42:BG:153:ARG:HG3	2.33	0.43
46:BO:119:PRO:O	46:BO:120:GLU:CB	2.66	0.43
47:BP:112:LEU:HD22	47:BP:113:LYS:N	2.33	0.43
48:BQ:134:ARG:NE	57:BZ:122:ARG:HH21	2.16	0.43
48:BQ:135:ASP:O	48:BQ:138:ASP:OD2	2.37	0.43
49:BR:28:LEU:HB2	49:BR:34:ILE:HG13	2.00	0.43
51:BT:32:TYR:CD1	51:BT:81:PRO:O	2.69	0.43
53:BV:39:LEU:HB3	53:BV:47:VAL:HG11	2.00	0.43
55:BX:58:HIS:O	55:BX:59:VAL:HG23	2.18	0.43
57:BZ:151:HIS:O	57:BZ:152:ALA:O	2.37	0.43
1:CA:72:C:H2'	1:CA:73:G:H8	1.83	0.43
1:CA:186:C:H1'	20:CT:81:LYS:HE2	2.00	0.43
1:CA:747:C:H2'	1:CA:748:C:O4'	2.17	0.43
1:CA:773:G:C2'	1:CA:774:G:H5'	2.48	0.43
1:CA:1004:A:N1	1:CA:1034:G:H2'	2.33	0.43
1:CA:1319:A:OP1	19:CS:10:PHE:CZ	2.71	0.43
2:CB:86:GLU:C	2:CB:88:ALA:N	2.76	0.43
3:CC:129:ALA:O	3:CC:130:VAL:C	2.61	0.43
5:CE:78:HIS:CE1	5:CE:80:ILE:HG23	2.54	0.43
7:CG:103:TRP:NE1	7:CG:137:LYS:HD3	2.34	0.43
7:CG:103:TRP:O	7:CG:104:LEU:C	2.62	0.43
15:CO:9:GLN:HB3	15:CO:13:GLN:NE2	2.33	0.43
15:CO:57:LEU:N	15:CO:57:LEU:CD2	2.81	0.43
16:CP:23:ASP:OD1	16:CP:24:ALA:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:18:TYR:CD2	21:CU:24:ARG:HG3	2.53	0.43
23:CW:4:G:C2	23:CW:5:G:C4	3.05	0.43
25:CY:105:ILE:N	25:CY:105:ILE:HD12	2.33	0.43
25:CY:573:HIS:CD2	25:CY:576:ASP:HB2	2.53	0.43
25:CY:644:ARG:O	25:CY:645:ALA:HB2	2.18	0.43
26:D0:23:VAL:HG11	26:D0:69:PHE:CZ	2.49	0.43
27:D1:45:ASN:ND2	36:DA:2090:G:H21	2.07	0.43
30:D4:6:HIS:HB3	30:D4:7:PRO:CD	2.48	0.43
30:D4:50:VAL:O	30:D4:51:ASP:CG	2.61	0.43
36:DA:630:G:H4'	36:DA:640:C:H4'	1.99	0.43
36:DA:812:C:H1'	36:DA:1250:G:N2	2.32	0.43
36:DA:904:C:O2'	36:DA:905:U:H5'	2.18	0.43
36:DA:1127:A:C2'	36:DA:1128:A:H5''	2.47	0.43
36:DA:1678:G:C5	36:DA:1679:U:C5	3.07	0.43
36:DA:1756:G:H4'	36:DA:1758:G:O4'	2.18	0.43
36:DA:1782:C:C6	36:DA:2609:U:C5	3.06	0.43
36:DA:2126:A:N1	36:DA:2162:G:O2'	2.51	0.43
36:DA:2550:G:C6	36:DA:2551:C:N4	2.86	0.43
36:DA:2649:U:O2'	36:DA:2650:U:H5'	2.18	0.43
36:DA:2695:C:H2'	36:DA:2696:U:H6	1.82	0.43
38:DC:74:ARG:H	38:DC:112:ASP:HB2	1.84	0.43
39:DD:145:VAL:CG1	39:DD:146:GLU:N	2.80	0.43
40:DE:31:CYS:O	40:DE:91:VAL:N	2.52	0.43
40:DE:176:ILE:CG2	40:DE:178:GLU:HB3	2.48	0.43
45:DN:29:LYS:O	45:DN:30:ILE:C	2.61	0.43
46:DO:71:ARG:HB3	46:DO:72:PRO:HD2	2.00	0.43
47:DP:124:LYS:HD3	47:DP:143:GLY:CA	2.48	0.43
51:DT:28:VAL:HG21	51:DT:46:GLU:CG	2.47	0.43
52:DU:25:TRP:CD1	52:DU:26:GLY:N	2.86	0.43
57:DZ:12:GLY:HA2	57:DZ:36:LYS:HZ1	1.82	0.43
57:DZ:24:LEU:C	57:DZ:24:LEU:CD2	2.90	0.43
57:DZ:30:ASN:O	57:DZ:32:HIS:N	2.51	0.43
57:DZ:48:PHE:O	57:DZ:50:GLN:N	2.52	0.43
1:AA:155:C:H2'	1:AA:156:G:H8	1.83	0.43
1:AA:689:C:H6	1:AA:689:C:O5'	2.01	0.43
1:AA:965:A:C2	1:AA:969:A:N1	2.86	0.43
1:AA:1010:G:C2	1:AA:1011:G:C8	3.06	0.43
1:AA:1227:A:O2'	13:AM:117:VAL:HG21	2.18	0.43
1:AA:1371:G:C6	1:AA:1372:U:C4	3.06	0.43
2:AB:137:ARG:C	2:AB:137:ARG:CD	2.90	0.43
10:AJ:80:LYS:HB3	10:AJ:80:LYS:HZ3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:70:LEU:C	13:AM:70:LEU:CD2	2.91	0.43
13:AM:99:ARG:O	13:AM:100:GLY:C	2.59	0.43
15:AO:85:LEU:O	15:AO:85:LEU:HD23	2.19	0.43
22:AV:4:C:O2'	22:AV:5:G:P	2.76	0.43
23:AW:23:C:H2'	23:AW:24:U:H6	1.83	0.43
25:AY:64:THR:HG23	25:AY:66:THR:HB	1.99	0.43
25:AY:181:LEU:HD11	25:AY:242:LEU:HD22	2.00	0.43
25:AY:434:GLU:OE1	25:AY:465:ARG:NH2	2.52	0.43
25:AY:485:GLU:HB2	25:AY:558:PHE:O	2.17	0.43
25:AY:507:TYR:C	25:AY:507:TYR:HD1	2.25	0.43
25:AY:517:LEU:HD11	25:AY:564:LYS:HB3	2.00	0.43
25:AY:603:GLU:OE2	25:AY:628:ARG:NH2	2.51	0.43
25:AY:635:GLU:CD	25:AY:635:GLU:N	2.76	0.43
26:B0:48:GLY:HA3	26:B0:80:HIS:ND1	2.33	0.43
26:B0:79:VAL:O	26:B0:79:VAL:HG12	2.17	0.43
27:B1:76:ARG:HH22	27:B1:95:LEU:CG	2.29	0.43
27:B1:86:SER:O	27:B1:87:PRO:C	2.61	0.43
28:B2:29:LYS:O	28:B2:30:ARG:C	2.61	0.43
31:B5:3:LYS:NZ	36:BA:2613:U:O2'	2.49	0.43
33:B7:12:ARG:HG3	33:B7:12:ARG:NH1	2.34	0.43
33:B7:24:THR:HG23	33:B7:27:GLY:CA	2.48	0.43
35:B9:29:ASN:O	35:B9:31:LYS:N	2.51	0.43
36:BA:203:C:C3'	36:BA:204:A:H5''	2.48	0.43
36:BA:212:G:O2'	36:BA:213:A:H5'	2.17	0.43
36:BA:276:A:H4'	36:BA:276:A:OP1	2.18	0.43
36:BA:603:A:O2'	36:BA:604:G:P	2.76	0.43
36:BA:653:A:H5'	36:BA:654:A:P	2.58	0.43
36:BA:654(R):C:O2'	36:BA:654(S):G:H8	2.00	0.43
36:BA:1258:C:O4'	41:BF:84:VAL:HG21	2.18	0.43
36:BA:1516:C:C2'	36:BA:1517:G:C5'	2.83	0.43
36:BA:1932:A:H2'	36:BA:1933:G:O4'	2.18	0.43
36:BA:2312:U:OP1	42:BG:73:ALA:HA	2.18	0.43
36:BA:2481:G:C2'	36:BA:2482:G:OP2	2.65	0.43
36:BA:2840:C:H2'	36:BA:2841:C:C6	2.54	0.43
38:BC:62:THR:OG1	38:BC:161:ARG:HD2	2.17	0.43
38:BC:65:LEU:HD13	38:BC:189:ASN:HD22	1.83	0.43
39:BD:145:VAL:CG1	39:BD:146:GLU:N	2.80	0.43
40:BE:134:ILE:N	40:BE:134:ILE:CD1	2.78	0.43
42:BG:93:THR:C	42:BG:94:LEU:HD23	2.40	0.43
43:BH:18:GLU:CB	43:BH:25:LYS:HB2	2.48	0.43
44:BJ:125:UNK:C	44:BJ:127:UNK:N	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BN:133:GLN:O	45:BN:134:ARG:CB	2.62	0.43
48:BQ:32:TYR:CE2	48:BQ:111:GLU:HG3	2.53	0.43
49:BR:18:LEU:HD21	49:BR:22:ARG:CZ	2.48	0.43
50:BS:89:ARG:HG3	50:BS:92:TYR:N	2.33	0.43
51:BT:12:SER:O	51:BT:13:ARG:NH2	2.51	0.43
51:BT:100:TYR:CD1	51:BT:100:TYR:N	2.86	0.43
52:BU:25:TRP:CD1	52:BU:26:GLY:N	2.87	0.43
52:BU:91:ASP:CG	52:BU:96:ALA:HB2	2.41	0.43
57:BZ:121:HIS:CD2	57:BZ:123:ASP:O	2.71	0.43
1:CA:61:G:H2'	1:CA:62:U:O4'	2.17	0.43
1:CA:150:C:H6	1:CA:150:C:O5'	2.01	0.43
1:CA:347:G:C2	1:CA:348:G:C8	3.06	0.43
1:CA:470:C:C2'	1:CA:471:G:OP1	2.66	0.43
1:CA:630:G:H2'	1:CA:631:G:H5'	2.00	0.43
1:CA:693:G:N2	23:CW:37:A:H2	2.15	0.43
1:CA:1126:U:O4	10:CJ:7:LYS:HE2	2.18	0.43
1:CA:1129:C:H1'	1:CA:1130:A:N7	2.34	0.43
1:CA:1299:A:C2	1:CA:1301:U:C2	3.07	0.43
1:CA:1339:A:H2'	1:CA:1340:A:H5'	1.98	0.43
1:CA:1490:C:H2'	1:CA:1491:G:H5'	2.00	0.43
3:CC:91:LEU:C	3:CC:93:LYS:N	2.75	0.43
5:CE:140:ARG:HE	5:CE:140:ARG:HB2	1.45	0.43
7:CG:64:GLN:HE21	7:CG:68:ASN:HD21	1.67	0.43
8:CH:122:ARG:HH11	8:CH:122:ARG:HB3	1.83	0.43
9:CI:119:ALA:O	9:CI:120:ARG:CG	2.55	0.43
13:CM:87:TYR:O	13:CM:88:ARG:C	2.62	0.43
20:CT:45:GLN:C	20:CT:45:GLN:CD	2.86	0.43
21:CU:8:THR:O	21:CU:9:ARG:C	2.60	0.43
22:CV:16:U:O2'	22:CV:60:U:O3'	2.34	0.43
25:CY:16:GLY:HA3	25:CY:101:LEU:HD21	2.00	0.43
25:CY:192:LEU:HD12	25:CY:194:THR:HG23	2.00	0.43
25:CY:462:ILE:O	25:CY:462:ILE:HG22	2.18	0.43
25:CY:468:ARG:NH1	25:CY:468:ARG:CB	2.82	0.43
25:CY:496:LYS:HE2	25:CY:498:ILE:CD1	2.49	0.43
25:CY:501:THR:HG22	25:CY:501:THR:O	2.18	0.43
25:CY:678:GLU:HG2	25:CY:679:VAL:N	2.32	0.43
28:D2:6:VAL:O	28:D2:10:LEU:HD12	2.19	0.43
32:D6:9:LEU:HD13	32:D6:9:LEU:O	2.18	0.43
32:D6:27:LYS:NZ	36:DA:2285:C:OP1	2.45	0.43
34:D8:33:ASN:HA	34:D8:36:LYS:CG	2.48	0.43
36:DA:886:C:H2'	36:DA:887:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:915:C:H2'	36:DA:916:G:H8	1.83	0.43
36:DA:1034:G:C6	36:DA:1035:U:N3	2.86	0.43
36:DA:1416:G:HO2'	36:DA:1417:C:H5	1.62	0.43
36:DA:1445(A):C:O2	36:DA:1445(A):C:H2'	2.18	0.43
36:DA:1541:G:H5''	36:DA:1542:A:OP1	2.18	0.43
36:DA:1654:A:P	49:DR:3:HIS:HB2	2.58	0.43
36:DA:2079:U:H2'	36:DA:2080:G:H8	1.82	0.43
36:DA:2307:G:H3'	36:DA:2308:G:C5'	2.47	0.43
36:DA:2389:G:C5'	36:DA:2390:U:H5'	2.41	0.43
36:DA:2742:C:C2'	36:DA:2743:C:H5'	2.47	0.43
37:DB:87:G:O3'	37:DB:88:C:C6	2.71	0.43
37:DB:92:C:H2'	37:DB:93:G:H8	1.83	0.43
39:DD:34:VAL:CG2	39:DD:35:LYS:H	2.28	0.43
39:DD:240:ALA:HB1	39:DD:241:PRO:HD2	2.01	0.43
40:DE:14:ILE:HG13	40:DE:21:VAL:HG23	2.00	0.43
41:DF:28:ILE:CD1	41:DF:28:ILE:N	2.78	0.43
41:DF:31:HIS:O	41:DF:32:LEU:C	2.62	0.43
42:DG:125:PHE:HZ	42:DG:173:LEU:HD12	1.83	0.43
43:DH:114:VAL:O	43:DH:114:VAL:HG23	2.18	0.43
45:DN:46:VAL:HG22	45:DN:47:ALA:N	2.32	0.43
47:DP:46:LYS:CG	47:DP:52:GLU:HG2	2.45	0.43
47:DP:101:VAL:HA	47:DP:107:LYS:H	1.83	0.43
50:DS:12:PHE:O	50:DS:13:ARG:C	2.61	0.43
50:DS:96:GLY:O	50:DS:98:VAL:HG23	2.19	0.43
51:DT:50:ILE:HA	51:DT:99:LEU:HD11	2.00	0.43
51:DT:55:ASN:ND2	51:DT:55:ASN:O	2.51	0.43
51:DT:79:HIS:O	51:DT:80:SER:CB	2.65	0.43
51:DT:83:ILE:CG1	51:DT:84:GLN:HG2	2.49	0.43
51:DT:100:TYR:CD1	51:DT:100:TYR:N	2.86	0.43
52:DU:5:LYS:O	52:DU:6:THR:C	2.61	0.43
53:DV:28:GLU:HB3	53:DV:29:PRO:HD2	1.99	0.43
56:DY:20:TYR:N	56:DY:20:TYR:CD1	2.85	0.43
1:AA:116:A:H8	1:AA:116:A:O5'	2.00	0.43
1:AA:398:C:H2'	1:AA:399:G:H8	1.84	0.43
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.54	0.43
1:AA:1133:G:N2	1:AA:1143:G:H1'	2.34	0.43
1:AA:1270:C:O2'	1:AA:1271:G:H5'	2.18	0.43
2:AB:28:PHE:O	2:AB:29:ALA:C	2.62	0.43
2:AB:34:ALA:O	2:AB:41:ILE:HB	2.18	0.43
2:AB:121:LEU:O	2:AB:122:PHE:C	2.62	0.43
4:AD:111:ALA:HB3	4:AD:117:ALA:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:34:VAL:O	5:AE:34:VAL:HG13	2.18	0.43
5:AE:51:VAL:O	5:AE:52:PRO:C	2.61	0.43
5:AE:76:ILE:HD11	5:AE:142:LEU:CD2	2.48	0.43
5:AE:78:HIS:HD2	8:AH:107:LEU:HD12	1.84	0.43
6:AF:97:PHE:N	18:AR:30:ASP:OD1	2.51	0.43
7:AG:93:PRO:HG2	7:AG:94:ARG:H	1.83	0.43
8:AH:10:LEU:O	8:AH:13:ILE:HB	2.18	0.43
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.84	0.43
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.26	0.43
11:AK:61:ALA:O	11:AK:62:GLN:C	2.62	0.43
12:AL:70:ILE:HG21	12:AL:77:LEU:HD12	1.99	0.43
16:AP:82:GLN:O	16:AP:83:GLU:C	2.60	0.43
17:AQ:76:LEU:HD12	17:AQ:77:VAL:N	2.33	0.43
20:AT:97:ALA:O	20:AT:99:LEU:N	2.51	0.43
25:AY:64:THR:O	25:AY:66:THR:N	2.39	0.43
25:AY:178:ILE:HD11	25:AY:185:ALA:HB1	2.00	0.43
25:AY:461:ILE:HD12	25:AY:462:ILE:N	2.33	0.43
25:AY:592:GLU:O	25:AY:592:GLU:HG2	2.18	0.43
26:B0:36:ILE:O	26:B0:36:ILE:HG13	2.14	0.43
27:B1:86:SER:CB	27:B1:90:ILE:HG12	2.43	0.43
28:B2:61:LEU:O	28:B2:64:LEU:HB3	2.18	0.43
32:B6:43:CYS:CB	32:B6:44:ARG:HH21	2.30	0.43
36:BA:37:C:O2	36:BA:37:C:H2'	2.18	0.43
36:BA:64:A:H2'	36:BA:65:C:C6	2.53	0.43
36:BA:137:C:H42	36:BA:143:G:H1	1.67	0.43
36:BA:194:G:H2'	36:BA:195:A:O4'	2.18	0.43
36:BA:227:A:N6	36:BA:410:G:H21	2.16	0.43
36:BA:1217:C:H2'	36:BA:1218:C:C6	2.53	0.43
36:BA:2327:A:H2'	36:BA:2328:A:C8	2.53	0.43
36:BA:2389:G:C5'	36:BA:2390:U:H5'	2.45	0.43
36:BA:2461:C:O2	36:BA:2461:C:C2'	2.64	0.43
38:BC:60:ARG:HG2	38:BC:61:GLY:H	1.83	0.43
38:BC:134:PRO:C	38:BC:135:ARG:HD2	2.42	0.43
39:BD:172:TYR:HD1	39:BD:185:VAL:C	2.25	0.43
39:BD:261:LYS:NZ	39:BD:263:ARG:HH22	2.16	0.43
40:BE:14:ILE:HG13	40:BE:21:VAL:HG23	2.00	0.43
40:BE:54:GLN:HE21	40:BE:54:GLN:HB3	1.56	0.43
40:BE:111:ARG:HD2	40:BE:160:TYR:HE2	1.83	0.43
42:BG:49:ASP:O	42:BG:50:ALA:CB	2.66	0.43
45:BN:73:THR:CG2	45:BN:82:LEU:HD11	2.49	0.43
45:BN:120:LEU:HD11	45:BN:122:VAL:CG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:32:TYR:CD1	46:BO:32:TYR:N	2.86	0.43
46:BO:97:ARG:NH1	46:BO:97:ARG:HG3	2.33	0.43
48:BQ:51:ARG:HG2	48:BQ:51:ARG:NH1	2.33	0.43
48:BQ:58:PHE:O	48:BQ:58:PHE:CD1	2.71	0.43
48:BQ:59:ARG:HG3	48:BQ:59:ARG:NH1	2.34	0.43
50:BS:106:ARG:NH1	50:BS:107:GLU:O	2.51	0.43
50:BS:106:ARG:O	50:BS:107:GLU:HB2	2.18	0.43
51:BT:64:ARG:HA	51:BT:72:VAL:O	2.19	0.43
57:BZ:30:ASN:C	57:BZ:32:HIS:N	2.75	0.43
1:CA:445:G:H2'	1:CA:446:G:H8	1.84	0.43
1:CA:719:C:O2	18:CR:50:ILE:HG12	2.18	0.43
1:CA:929:G:O2'	1:CA:930:C:H5'	2.18	0.43
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.53	0.43
4:CD:179:GLU:O	4:CD:181:MET:HG3	2.18	0.43
5:CE:76:ILE:HD11	5:CE:142:LEU:HD22	1.99	0.43
6:CF:91:VAL:HG12	6:CF:92:LYS:N	2.33	0.43
8:CH:35:ILE:HG22	8:CH:39:LEU:CD2	2.47	0.43
8:CH:137:VAL:HG12	8:CH:138:TRP:N	2.32	0.43
9:CI:50:LEU:HD23	9:CI:85:LEU:HD23	2.01	0.43
12:CL:115:LYS:O	12:CL:117:ARG:N	2.51	0.43
16:CP:33:ILE:O	16:CP:34:GLU:CB	2.61	0.43
20:CT:73:HIS:HB3	20:CT:74:LYS:CD	2.48	0.43
20:CT:75:ASN:O	20:CT:76:ALA:C	2.59	0.43
22:CV:43:C:O2	22:CV:43:C:H2'	2.17	0.43
23:CW:68:C:O2'	23:CW:69:C:H5'	2.18	0.43
25:CY:34:TYR:CD2	25:CY:35:TYR:CE1	3.06	0.43
25:CY:344:THR:C	25:CY:346:LYS:N	2.76	0.43
28:D2:59:ARG:O	28:D2:60:LEU:C	2.61	0.43
30:D4:13:ARG:C	30:D4:14:ILE:HD12	2.44	0.43
32:D6:7:ILE:N	32:D6:7:ILE:CD1	2.80	0.43
32:D6:54:ILE:HD13	36:DA:2420:C:C4'	2.48	0.43
36:DA:210:C:H2'	36:DA:211:A:C8	2.53	0.43
36:DA:336:C:H1'	56:DY:70:SER:OG	2.19	0.43
36:DA:519:U:H2'	36:DA:520:G:C8	2.49	0.43
36:DA:575:A:O2'	36:DA:576:U:H5'	2.19	0.43
36:DA:643:A:H2'	36:DA:644:A:O4'	2.17	0.43
36:DA:654(S):G:H3'	36:DA:654(T):C:C4'	2.47	0.43
36:DA:1216:G:H2'	36:DA:1217:C:C6	2.53	0.43
36:DA:1651:G:C2	36:DA:2007:C:C2	3.07	0.43
36:DA:1789:A:OP1	39:DD:221:VAL:HA	2.18	0.43
36:DA:2292:C:H2'	36:DA:2293:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:225:ILE:HD12	38:DC:225:ILE:O	2.17	0.43
39:DD:91:ARG:O	39:DD:107:ALA:N	2.50	0.43
39:DD:131:LEU:N	39:DD:131:LEU:CD1	2.76	0.43
40:DE:45:THR:O	40:DE:46:ALA:CB	2.66	0.43
41:DF:121:GLY:C	41:DF:123:LEU:H	2.27	0.43
49:DR:103:ARG:HD2	54:DW:40:ASN:OD1	2.19	0.43
52:DU:112:ARG:HD2	52:DU:112:ARG:HA	1.82	0.43
55:DX:58:HIS:O	55:DX:59:VAL:HG23	2.19	0.43
56:DY:47:LYS:HG3	56:DY:60:PHE:HE1	1.84	0.43
57:DZ:56:VAL:HA	57:DZ:70:LEU:CD2	2.49	0.43
1:AA:334:C:H2'	1:AA:335:C:C6	2.53	0.43
1:AA:415:A:H2'	1:AA:416:G:H8	1.82	0.43
1:AA:923:A:OP1	5:AE:21:ALA:HB2	2.18	0.43
1:AA:927:G:O2'	1:AA:928:G:H5'	2.19	0.43
1:AA:937:A:C2	1:AA:1379:G:O6	2.71	0.43
1:AA:1054:C:H3'	1:AA:1054:C:O2	2.18	0.43
1:AA:1065:U:C2'	1:AA:1066:C:OP2	2.66	0.43
1:AA:1116:C:O2'	1:AA:1117:G:H5''	2.19	0.43
2:AB:23:ARG:HA	2:AB:23:ARG:HD2	1.79	0.43
4:AD:179:GLU:C	4:AD:181:MET:N	2.77	0.43
8:AH:27:PRO:HA	8:AH:58:TYR:CD1	2.54	0.43
18:AR:32:ARG:HA	18:AR:69:THR:CG2	2.48	0.43
18:AR:58:LEU:N	18:AR:58:LEU:CD1	2.81	0.43
18:AR:68:LYS:O	18:AR:71:LYS:N	2.49	0.43
20:AT:28:ALA:C	20:AT:30:LYS:N	2.76	0.43
23:AW:49:G:C3'	23:AW:50:U:H5''	2.48	0.43
25:AY:13:ARG:O	25:AY:79:ILE:HG23	2.18	0.43
25:AY:665:GLY:C	25:AY:667:GLY:H	2.26	0.43
31:B5:3:LYS:HG2	36:BA:747:U:H5	1.81	0.43
31:B5:3:LYS:HE2	36:BA:2613:U:H2'	1.99	0.43
32:B6:54:ILE:HD13	36:BA:2420:C:H4'	2.01	0.43
33:B7:24:THR:HG23	33:B7:27:GLY:N	2.34	0.43
34:B8:50:LEU:CD1	34:B8:51:ALA:H	2.25	0.43
36:BA:48:G:N2	36:BA:177:G:N2	2.67	0.43
36:BA:87:C:OP2	36:BA:90:U:O4	2.36	0.43
36:BA:272(H):C:H5'	36:BA:272(H):C:C6	2.48	0.43
36:BA:658:C:H2'	36:BA:659:C:H6	1.78	0.43
36:BA:779:U:OP1	39:BD:49:ILE:HG23	2.18	0.43
36:BA:786:C:O2'	36:BA:787:U:H5'	2.18	0.43
36:BA:881:G:H2'	36:BA:882:G:C5'	2.47	0.43
36:BA:996:A:O3'	52:BU:92:ARG:CG	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1224:C:O2'	53:BV:85:LYS:HG2	2.19	0.43
36:BA:2517:C:C6	36:BA:2542:A:C2	3.06	0.43
36:BA:2680:C:O2	36:BA:2680:C:H2'	2.18	0.43
37:BB:53:A:H2'	37:BB:53:A:N3	2.33	0.43
41:BF:10:PRO:HG2	41:BF:13:SER:OG	2.19	0.43
43:BH:136:ILE:N	43:BH:136:ILE:CD1	2.81	0.43
46:BO:71:ARG:HB3	46:BO:72:PRO:HD2	2.00	0.43
48:BQ:47:ILE:HD12	48:BQ:70:PRO:HD3	2.01	0.43
51:BT:8:LYS:C	51:BT:10:VAL:N	2.76	0.43
51:BT:40:THR:O	51:BT:41:ARG:O	2.37	0.43
53:BV:40:LEU:HD13	53:BV:46:VAL:H	1.82	0.43
54:BW:17:VAL:C	54:BW:19:LEU:N	2.74	0.43
1:CA:17:U:H2'	1:CA:18:C:C6	2.54	0.43
1:CA:184:G:H2'	1:CA:185:A:H8	1.83	0.43
1:CA:518:C:H5''	1:CA:519:C:C6	2.54	0.43
1:CA:680:C:O2'	1:CA:681:C:H5'	2.18	0.43
1:CA:930:C:O2'	1:CA:931:C:H5'	2.19	0.43
1:CA:1226:C:H5	13:CM:104:ARG:HB2	1.80	0.43
1:CA:1259:C:C5	1:CA:1260:C:O2	2.71	0.43
1:CA:1378:C:O2	7:CG:76:ARG:NH2	2.51	0.43
2:CB:238:LEU:O	2:CB:239:VAL:C	2.62	0.43
3:CC:20:SER:HA	3:CC:57:ILE:O	2.17	0.43
3:CC:87:LEU:C	3:CC:89:GLU:N	2.75	0.43
3:CC:174:PRO:C	3:CC:176:HIS:N	2.77	0.43
9:CI:40:LEU:C	9:CI:42:ARG:N	2.73	0.43
9:CI:85:LEU:C	9:CI:85:LEU:HD12	2.43	0.43
11:CK:29:ILE:HB	11:CK:44:SER:HB2	1.99	0.43
12:CL:39:VAL:O	12:CL:56:ALA:HA	2.18	0.43
12:CL:69:TYR:O	12:CL:71:PRO:HD3	2.19	0.43
25:CY:312:LEU:O	25:CY:328:ILE:CA	2.66	0.43
25:CY:554:PRO:HG3	25:CY:594:VAL:CG1	2.48	0.43
25:CY:631:ILE:HG21	36:DA:1067:A:C4	2.53	0.43
26:D0:3:HIS:NE2	36:DA:2602:A:H2	2.16	0.43
27:D1:20:ARG:HG2	27:D1:20:ARG:NH1	2.32	0.43
27:D1:76:ARG:CZ	27:D1:95:LEU:HD22	2.49	0.43
28:D2:40:SER:C	28:D2:42:GLY:N	2.72	0.43
30:D4:33:VAL:CG1	30:D4:34:GLU:N	2.81	0.43
31:D5:34:PRO:O	31:D5:35:GLU:CB	2.52	0.43
31:D5:40:LYS:HZ3	31:D5:46:CYS:N	2.11	0.43
31:D5:41:PRO:O	31:D5:44:THR:OG1	2.27	0.43
34:D8:56:GLU:O	34:D8:59:LYS:HE3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:187:G:N3	36:DA:1365:A:H2	2.17	0.43
36:DA:191:A:H8	36:DA:191:A:O5'	2.01	0.43
36:DA:311:A:H5'	36:DA:332:A:C2	2.54	0.43
36:DA:487:C:H1'	54:DW:53:SER:HA	2.00	0.43
36:DA:744:G:OP1	40:DE:132:HIS:HB3	2.18	0.43
36:DA:1199:U:H2'	36:DA:1200:C:C6	2.53	0.43
36:DA:1767:C:H2'	36:DA:1768:U:O4'	2.18	0.43
36:DA:1805:U:C2	36:DA:1813:G:C2	3.06	0.43
36:DA:2134:A:N3	36:DA:2134:A:H2'	2.33	0.43
36:DA:2182:G:H2'	36:DA:2183:C:C6	2.53	0.43
36:DA:2303:G:O2'	42:DG:132:ASN:HB2	2.17	0.43
36:DA:2744:G:C2	36:DA:2761:G:C4	3.06	0.43
36:DA:2835:A:N6	36:DA:2878:U:C6	2.87	0.43
39:DD:233:HIS:O	39:DD:234:GLY:O	2.36	0.43
40:DE:39:PRO:HG2	40:DE:40:GLU:OE2	2.18	0.43
41:DF:185:ASP:O	41:DF:186:ILE:C	2.60	0.43
43:DH:17:VAL:HB	43:DH:45:VAL:HG13	1.99	0.43
47:DP:13:ASN:N	47:DP:13:ASN:ND2	2.65	0.43
47:DP:24:GLY:N	47:DP:33:ARG:CZ	2.80	0.43
47:DP:47:ASP:CB	47:DP:48:PRO:CA	2.91	0.43
47:DP:98:GLU:H	47:DP:101:VAL:HG13	1.83	0.43
48:DQ:108:GLY:C	48:DQ:109:VAL:HG23	2.43	0.43
48:DQ:109:VAL:HG12	48:DQ:110:THR:N	2.32	0.43
49:DR:9:LYS:O	49:DR:10:LEU:CD2	2.66	0.43
49:DR:86:ARG:HB3	49:DR:118:GLU:OE2	2.18	0.43
52:DU:49:HIS:O	52:DU:52:ARG:HB2	2.19	0.43
52:DU:74:LEU:HD12	52:DU:74:LEU:N	2.34	0.43
52:DU:116:ALA:O	52:DU:117:GLN:NE2	2.51	0.43
53:DV:40:LEU:N	53:DV:40:LEU:CD2	2.81	0.43
1:AA:64:G:N2	1:AA:67:C:C4	2.86	0.43
1:AA:103:C:H3'	1:AA:104:G:H8	1.83	0.43
1:AA:159:G:C3'	1:AA:160:A:H5''	2.49	0.43
1:AA:277:C:C2'	1:AA:278:G:H5'	2.49	0.43
1:AA:980:C:O2	14:AN:19:ARG:HA	2.18	0.43
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.83	0.43
5:AE:9:LYS:NZ	5:AE:111:GLU:OE1	2.52	0.43
5:AE:33:VAL:HG12	5:AE:34:VAL:H	1.82	0.43
5:AE:76:ILE:HD11	5:AE:142:LEU:HD22	1.99	0.43
7:AG:41:ARG:HG2	7:AG:41:ARG:HH11	1.84	0.43
8:AH:11:THR:O	8:AH:12:ARG:C	2.61	0.43
9:AI:97:LYS:N	9:AI:98:PRO:CD	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:103:THR:O	9:AI:104:ARG:C	2.61	0.43
13:AM:124:PRO:HG2	25:AY:574:GLU:N	2.32	0.43
14:AN:2:ALA:O	14:AN:6:LEU:HD12	2.18	0.43
20:AT:100:ILE:HG13	20:AT:101:GLY:H	1.84	0.43
22:AV:36:A:N3	25:AY:502:GLY:HA2	2.34	0.43
25:AY:5:VAL:CG1	25:AY:6:GLU:N	2.80	0.43
25:AY:206:LEU:O	25:AY:209:ALA:HB3	2.18	0.43
25:AY:404:VAL:H	25:AY:405:PRO:HD3	1.81	0.43
25:AY:512:ILE:HG12	25:AY:514:VAL:HG23	1.99	0.43
25:AY:635:GLU:HA	25:AY:636:PRO:HD2	1.85	0.43
27:B1:12:PRO:HG2	36:BA:1365:A:H5'	2.00	0.43
27:B1:29:GLY:O	27:B1:31:GLY:N	2.52	0.43
27:B1:94:LEU:C	27:B1:96:LYS:N	2.74	0.43
29:B3:27:GLY:C	29:B3:28:LEU:HD23	2.44	0.43
29:B3:31:LEU:HD22	29:B3:32:GLN:H	1.83	0.43
32:B6:33:LYS:CG	32:B6:34:LEU:H	2.30	0.43
36:BA:154(A):C:H42	36:BA:172:C:N4	2.17	0.43
36:BA:418:G:H2'	36:BA:419:C:C6	2.54	0.43
36:BA:759:G:H2'	36:BA:760:G:C8	2.49	0.43
36:BA:869:G:C2'	36:BA:870:A:H5'	2.49	0.43
36:BA:1024:G:OP2	36:BA:1026:U:OP1	2.36	0.43
36:BA:1107:G:H2'	36:BA:1108:U:C6	2.53	0.43
36:BA:1245:G:H5''	41:BF:34:TRP:HZ2	1.84	0.43
36:BA:1637:A:H4'	36:BA:2711:A:O2'	2.19	0.43
36:BA:1773:A:C2	36:BA:1977:A:N1	2.86	0.43
36:BA:1783:A:C2	36:BA:2587:A:C4	3.07	0.43
36:BA:2012:G:O3'	54:BW:96:ILE:HG13	2.19	0.43
36:BA:2081:C:H2'	36:BA:2082:A:C8	2.54	0.43
36:BA:2345:G:C3'	36:BA:2346:A:H5'	2.49	0.43
36:BA:2358:G:O2'	36:BA:2359:C:H5'	2.19	0.43
36:BA:2818:G:H4'	36:BA:2837:G:C4'	2.49	0.43
38:BC:84:ILE:O	38:BC:95:VAL:HG11	2.18	0.43
40:BE:31:CYS:HB3	40:BE:49:LEU:HB3	2.00	0.43
41:BF:192:LEU:CD2	41:BF:194:MET:HG3	2.45	0.43
42:BG:63:ILE:CD1	42:BG:64:THR:HB	2.48	0.43
42:BG:97:ASP:CB	42:BG:98:ARG:NH1	2.81	0.43
42:BG:170:ARG:HH21	42:BG:180:PHE:CB	2.31	0.43
43:BH:105:LEU:HD23	43:BH:113:VAL:HB	2.00	0.43
45:BN:29:LYS:O	45:BN:30:ILE:C	2.61	0.43
46:BO:19:ILE:HD12	46:BO:41:ALA:HB3	1.99	0.43
46:BO:61:VAL:O	46:BO:61:VAL:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:90:GLN:C	46:BO:91:LEU:HD22	2.44	0.43
49:BR:76:VAL:HG13	49:BR:77:ARG:N	2.33	0.43
50:BS:15:ARG:CB	50:BS:18:ILE:HD11	2.48	0.43
51:BT:55:ASN:HD22	51:BT:58:ASN:HD21	1.67	0.43
1:CA:129(A):G:H5''	1:CA:129(A):G:H8	1.84	0.43
1:CA:157:G:H2'	1:CA:158:G:H8	1.84	0.43
1:CA:826:C:H2'	1:CA:827:U:C6	2.50	0.43
1:CA:939:G:H5''	7:CG:102:ARG:HH22	1.81	0.43
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.43	0.43
2:CB:19:HIS:CD2	2:CB:20:GLU:HG2	2.54	0.43
3:CC:50:ALA:CB	3:CC:70:VAL:HG11	2.39	0.43
3:CC:67:THR:HG23	3:CC:102:ASN:HB2	2.00	0.43
4:CD:40:PRO:HB2	4:CD:41:GLY:H	1.63	0.43
4:CD:126:ILE:O	4:CD:132:ARG:HB2	2.18	0.43
4:CD:159:ARG:O	4:CD:160:GLN:C	2.60	0.43
5:CE:77:PRO:HG2	5:CE:78:HIS:H	1.84	0.43
7:CG:15:ASP:HB3	7:CG:20:ASP:H	1.82	0.43
13:CM:91:ARG:CD	13:CM:97:PRO:O	2.64	0.43
14:CN:29:ARG:NH1	14:CN:29:ARG:CG	2.81	0.43
20:CT:13:LEU:C	20:CT:15:ARG:N	2.76	0.43
25:CY:13:ARG:O	25:CY:79:ILE:HG23	2.18	0.43
25:CY:64:THR:HG23	25:CY:64:THR:O	2.18	0.43
25:CY:97:SER:O	25:CY:101:LEU:N	2.52	0.43
25:CY:124:GLN:CA	25:CY:127:LYS:HD2	2.44	0.43
25:CY:264:LEU:HD23	25:CY:264:LEU:C	2.43	0.43
25:CY:309:LEU:HD21	25:CY:335:LEU:HD13	2.01	0.43
25:CY:313:ALA:HA	25:CY:327:PHE:O	2.18	0.43
25:CY:346:LYS:HZ3	25:CY:384:ILE:HG12	1.83	0.43
26:D0:25:ARG:HA	26:D0:29:GLN:HE22	1.83	0.43
26:D0:81:VAL:O	26:D0:81:VAL:HG12	2.18	0.43
27:D1:3:LYS:NZ	36:DA:1364:G:N7	2.65	0.43
31:D5:6:VAL:CG1	36:DA:2016:U:H1'	2.48	0.43
31:D5:27:PRO:HG3	54:DW:23:LEU:CD1	2.45	0.43
31:D5:43:HIS:CD2	36:DA:2815:C:O2'	2.71	0.43
31:D5:55:ARG:NH2	49:DR:33:ARG:HD3	2.33	0.43
32:D6:27:LYS:CD	32:D6:30:THR:HB	2.44	0.43
35:D9:22:ARG:O	35:D9:24:TYR:HD1	2.01	0.43
36:DA:137:C:H42	36:DA:143:G:H1	1.65	0.43
36:DA:218:A:C2	36:DA:235:U:H4'	2.53	0.43
36:DA:299:A:H5'	56:DY:97:ARG:HE	1.82	0.43
36:DA:363(E):U:O2'	36:DA:363(F):A:O4'	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:418:G:H2'	36:DA:419:C:C6	2.54	0.43
36:DA:1317:A:H2'	36:DA:1318:C:C6	2.54	0.43
36:DA:1376:C:H2'	36:DA:1376:C:O2	2.18	0.43
36:DA:1682:G:H5'	36:DA:1762:A:HO2'	1.83	0.43
36:DA:2154:G:C2	36:DA:2155:G:C4	3.06	0.43
36:DA:2170:A:OP1	38:DC:135:ARG:NH2	2.52	0.43
36:DA:2573:C:OP1	36:DA:2574:G:OP1	2.36	0.43
36:DA:2776:A:C6	36:DA:2782:G:H1'	2.52	0.43
37:DB:36:C:H2'	37:DB:37:C:H6	1.83	0.43
37:DB:75:G:H1'	57:DZ:27:VAL:HG11	2.01	0.43
39:DD:8:PRO:C	39:DD:10:THR:H	2.25	0.43
39:DD:85:ASP:HB2	39:DD:92:ILE:HG23	2.00	0.43
41:DF:7:TYR:OH	41:DF:10:PRO:HG3	2.17	0.43
41:DF:68:LYS:HG3	41:DF:69:HIS:HD2	1.81	0.43
41:DF:195:ASP:HB3	41:DF:198:ALA:HB2	2.01	0.43
42:DG:114:ILE:C	42:DG:116:ASP:N	2.76	0.43
45:DN:35:ARG:C	45:DN:37:LYS:N	2.76	0.43
46:DO:104:ARG:C	46:DO:106:LEU:H	2.26	0.43
47:DP:112:LEU:HD22	47:DP:113:LYS:N	2.33	0.43
48:DQ:51:ARG:HG2	48:DQ:51:ARG:HH11	1.84	0.43
49:DR:78:LYS:O	49:DR:78:LYS:CG	2.65	0.43
51:DT:117:ASP:OD2	51:DT:120:ARG:HG3	2.18	0.43
52:DU:64:ARG:O	52:DU:68:ALA:N	2.51	0.43
54:DW:79:GLY:O	54:DW:100:THR:HG22	2.19	0.43
57:DZ:109:ALA:C	57:DZ:111:VAL:N	2.74	0.43
1:AA:505:G:H5'	1:AA:534:U:H2'	2.00	0.43
1:AA:954:G:N2	1:AA:1228:C:N3	2.66	0.43
1:AA:1129:C:H1'	1:AA:1130:A:N7	2.34	0.43
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.54	0.43
1:AA:1378:C:O2	7:AG:76:ARG:NH2	2.51	0.43
2:AB:80:ILE:HD12	2:AB:80:ILE:N	2.32	0.43
3:AC:41:GLY:C	3:AC:45:LYS:NZ	2.77	0.43
5:AE:103:GLY:O	5:AE:104:ALA:C	2.61	0.43
7:AG:41:ARG:HG2	7:AG:41:ARG:NH1	2.33	0.43
10:AJ:16:LEU:HD13	10:AJ:16:LEU:O	2.19	0.43
13:AM:54:VAL:HA	13:AM:57:ARG:HE	1.83	0.43
16:AP:75:ARG:C	16:AP:77:ALA:N	2.77	0.43
18:AR:44:LEU:N	18:AR:44:LEU:CD1	2.81	0.43
23:AW:6:G:H1	23:AW:67:C:N4	2.14	0.43
23:AW:40:C:O2'	23:AW:41:C:H5'	2.18	0.43
25:AY:380:LEU:O	25:AY:381:LYS:CE	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:680:PRO:C	25:AY:682:GLN:N	2.71	0.43
26:B0:25:ARG:HH11	26:B0:25:ARG:HG2	1.83	0.43
26:B0:49:LYS:HE3	26:B0:80:HIS:CD2	2.54	0.43
30:B4:39:CYS:SG	30:B4:42:PHE:CD2	2.99	0.43
32:B6:6:ARG:C	32:B6:8:LYS:N	2.76	0.43
32:B6:8:LYS:O	32:B6:9:LEU:O	2.36	0.43
33:B7:34:ARG:NH1	33:B7:39:ARG:HG3	2.32	0.43
36:BA:271(K):U:H3'	36:BA:271(L):U:C5'	2.48	0.43
36:BA:310:A:OP2	56:BY:18:GLY:HA2	2.17	0.43
36:BA:569:U:H2'	36:BA:570:G:O4'	2.18	0.43
36:BA:685:A:C5	36:BA:774:A:C2	3.06	0.43
36:BA:754:C:H2'	36:BA:755:C:H6	1.83	0.43
36:BA:1219:G:C2	36:BA:1221:C:N4	2.87	0.43
36:BA:1445(A):C:H2'	36:BA:1445(A):C:O2	2.18	0.43
36:BA:1754:C:H2'	36:BA:1755:A:O4'	2.19	0.43
36:BA:2464:C:O2'	36:BA:2465:C:P	2.77	0.43
36:BA:2570:G:H2'	36:BA:2571:C:O4'	2.18	0.43
36:BA:2773:C:O2'	36:BA:2774:C:H5'	2.19	0.43
36:BA:2872:G:C2	36:BA:2873:A:N6	2.87	0.43
38:BC:98:GLU:HA	38:BC:101:ILE:HD13	1.99	0.43
39:BD:136:ILE:HD12	39:BD:136:ILE:N	2.33	0.43
39:BD:197:GLY:O	39:BD:198:ASN:HB3	2.18	0.43
39:BD:268:ARG:HB3	39:BD:268:ARG:CZ	2.49	0.43
42:BG:110:ALA:HA	42:BG:140:ILE:O	2.18	0.43
42:BG:159:VAL:HG13	42:BG:159:VAL:O	2.19	0.43
43:BH:114:VAL:HG23	43:BH:114:VAL:O	2.18	0.43
44:BJ:72:UNK:O	44:BJ:73:UNK:CB	2.66	0.43
45:BN:57:ALA:C	45:BN:58:ASP:O	2.61	0.43
47:BP:124:LYS:HD3	47:BP:143:GLY:CA	2.48	0.43
48:BQ:37:LEU:HD12	48:BQ:128:LYS:HB3	2.00	0.43
48:BQ:137:TYR:CD1	48:BQ:137:TYR:N	2.86	0.43
50:BS:101:LEU:C	50:BS:101:LEU:CD1	2.92	0.43
54:BW:68:ARG:O	54:BW:109:GLU:HA	2.19	0.43
55:BX:34:ALA:HA	55:BX:38:GLU:OE1	2.19	0.43
57:BZ:4:ARG:O	57:BZ:5:LEU:HB2	2.19	0.43
1:CA:116:A:H8	1:CA:116:A:O5'	2.02	0.43
1:CA:151:A:C2'	1:CA:152:A:H5'	2.49	0.43
1:CA:370:C:O2'	1:CA:371:G:H5'	2.19	0.43
1:CA:909:A:H2'	1:CA:910:C:O4'	2.19	0.43
1:CA:1299:A:C2	1:CA:1301:U:N3	2.87	0.43
1:CA:1522:U:H2'	1:CA:1523:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:6:HIS:HD2	3:CC:7:PRO:CD	2.31	0.43
3:CC:78:GLY:CA	3:CC:83:ARG:HB3	2.49	0.43
4:CD:58:LEU:C	4:CD:58:LEU:CD2	2.91	0.43
6:CF:18:GLN:HE21	6:CF:18:GLN:HB2	1.62	0.43
8:CH:49:GLU:O	8:CH:49:GLU:HG3	2.19	0.43
10:CJ:92:THR:HG23	10:CJ:93:GLY:H	1.83	0.43
11:CK:48:ILE:O	11:CK:49:GLY:C	2.61	0.43
11:CK:122:LYS:O	11:CK:123:LYS:C	2.62	0.43
12:CL:87:GLY:HA2	12:CL:98:TYR:HA	2.00	0.43
13:CM:54:VAL:HA	13:CM:57:ARG:HE	1.82	0.43
13:CM:70:LEU:C	13:CM:70:LEU:CD2	2.91	0.43
14:CN:2:ALA:O	14:CN:6:LEU:HD12	2.19	0.43
16:CP:3:LYS:HG2	16:CP:65:GLN:HB2	1.99	0.43
16:CP:22:THR:OG1	16:CP:23:ASP:N	2.52	0.43
16:CP:67:THR:O	16:CP:70:ALA:HB3	2.18	0.43
17:CQ:6:LEU:C	17:CQ:7:THR:HG22	2.44	0.43
17:CQ:59:ILE:HD13	17:CQ:59:ILE:HA	1.85	0.43
25:CY:126:GLU:HB3	25:CY:132:ARG:HH12	1.84	0.43
25:CY:146:LEU:HD22	25:CY:150:ILE:HD11	2.01	0.43
25:CY:227:ILE:O	25:CY:227:ILE:CG2	2.65	0.43
25:CY:326:THR:OG1	25:CY:377:VAL:HG22	2.18	0.43
25:CY:340:TYR:O	25:CY:392:GLU:HB3	2.19	0.43
25:CY:549:ALA:HB2	25:CY:587:SER:CB	2.48	0.43
25:CY:680:PRO:O	25:CY:682:GLN:N	2.47	0.43
26:D0:46:LYS:HD2	26:D0:78:TYR:CZ	2.53	0.43
26:D0:67:VAL:HG12	26:D0:68:GLU:N	2.33	0.43
26:D0:79:VAL:O	26:D0:79:VAL:HG12	2.18	0.43
27:D1:86:SER:HB3	27:D1:89:GLU:HB2	2.01	0.43
33:D7:24:THR:HG23	33:D7:27:GLY:N	2.34	0.43
36:DA:1097:U:H2'	36:DA:1098:A:H5'	1.99	0.43
36:DA:1429:G:H2'	36:DA:1430:C:C6	2.53	0.43
36:DA:1996:C:H4'	36:DA:1997:G:H5'	2.01	0.43
36:DA:2076:U:H5'	36:DA:2238:G:N2	2.31	0.43
36:DA:2545:G:N3	36:DA:2565:A:H2	2.16	0.43
36:DA:2697:G:H2'	36:DA:2698:U:O4'	2.19	0.43
36:DA:2873:A:H4'	49:DR:8:ARG:NH2	2.34	0.43
38:DC:31:LYS:HD3	38:DC:31:LYS:O	2.19	0.43
39:DD:127:VAL:HA	39:DD:193:VAL:HG13	2.00	0.43
39:DD:196:VAL:O	39:DD:196:VAL:HG12	2.18	0.43
40:DE:101:ARG:CZ	40:DE:171:GLU:HB2	2.49	0.43
42:DG:41:GLN:O	42:DG:43:LEU:N	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:59:GLU:HA	42:DG:62:LEU:HD13	2.01	0.43
42:DG:107:LEU:HD13	42:DG:177:GLY:O	2.18	0.43
45:DN:131:GLN:NE2	45:DN:133:GLN:H	2.16	0.43
46:DO:11:ALA:O	46:DO:98:VAL:HA	2.19	0.43
47:DP:114:ILE:O	47:DP:130:PHE:HA	2.19	0.43
49:DR:37:THR:HG23	49:DR:40:LYS:HE2	2.00	0.43
50:DS:42:ASP:C	50:DS:44:LYS:N	2.76	0.43
51:DT:32:TYR:O	51:DT:41:ARG:O	2.36	0.43
51:DT:35:LYS:NZ	51:DT:41:ARG:HD2	2.31	0.43
54:DW:86:LEU:N	54:DW:94:ASP:O	2.42	0.43
57:DZ:139:VAL:CG1	57:DZ:141:VAL:HG23	2.48	0.43
1:AA:35:G:C6	1:AA:36:C:N4	2.87	0.43
1:AA:476:G:H2'	1:AA:477:A:C8	2.50	0.43
1:AA:720:C:H6	1:AA:720:C:O5'	2.02	0.43
1:AA:779:C:O2'	1:AA:780:A:H5'	2.19	0.43
1:AA:1008:C:H2'	1:AA:1009:G:C8	2.51	0.43
1:AA:1074:G:O2'	1:AA:1075:C:H5'	2.18	0.43
2:AB:43:ASP:OD2	2:AB:46:LYS:HE3	2.19	0.43
2:AB:144:ARG:O	2:AB:145:LEU:C	2.62	0.43
3:AC:11:ARG:O	3:AC:12:LEU:C	2.61	0.43
9:AI:79:LEU:O	9:AI:80:GLY:C	2.60	0.43
10:AJ:8:LEU:HA	10:AJ:95:GLU:O	2.18	0.43
12:AL:86:ARG:NH2	12:AL:99:HIS:CG	2.87	0.43
20:AT:45:GLN:CD	20:AT:45:GLN:C	2.86	0.43
22:AV:2:C:H2'	22:AV:3:C:C6	2.54	0.43
22:AV:16:U:O2'	22:AV:60:U:O3'	2.37	0.43
25:AY:223:PHE:CD2	25:AY:245:ALA:O	2.72	0.43
25:AY:544:LYS:O	25:AY:548:GLU:HB2	2.19	0.43
27:B1:19:GLN:O	27:B1:35:THR:N	2.44	0.43
28:B2:55:ARG:HH11	28:B2:55:ARG:HG3	1.84	0.43
36:BA:567:A:N1	36:BA:571:A:H8	2.16	0.43
36:BA:709:U:O2'	36:BA:710:G:H5'	2.18	0.43
36:BA:1252:G:O2'	36:BA:1253:A:O5'	2.33	0.43
36:BA:1541:G:H5''	36:BA:1542:A:OP1	2.18	0.43
36:BA:1654:A:OP1	49:BR:3:HIS:HB2	2.18	0.43
36:BA:2134:A:H2	36:BA:2159:G:O2'	2.00	0.43
36:BA:2202:C:H42	36:BA:2221:G:H1	1.66	0.43
36:BA:2545:G:N3	36:BA:2565:A:H2	2.16	0.43
36:BA:2693:A:H2'	36:BA:2694:G:H8	1.83	0.43
36:BA:2750:A:H2'	36:BA:2752:C:H41	1.83	0.43
36:BA:2787:C:C2	40:BE:61:ARG:HD3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:4:LYS:NZ	39:BD:20:ASP:HA	2.34	0.43
40:BE:93:VAL:HG12	40:BE:175:VAL:HG21	2.00	0.43
41:BF:160:ASN:HD21	41:BF:162:LEU:HB2	1.83	0.43
42:BG:42:GLY:O	42:BG:88:ILE:HG23	2.18	0.43
42:BG:44:GLY:C	42:BG:46:ALA:H	2.27	0.43
42:BG:87:PRO:O	42:BG:88:ILE:HD12	2.18	0.43
42:BG:117:PHE:CE1	42:BG:119:GLY:HA2	2.54	0.43
42:BG:126:ASP:CG	42:BG:130:ASN:HB2	2.44	0.43
44:BJ:54:UNK:O	44:BJ:56:UNK:N	2.52	0.43
48:BQ:75:THR:HG21	48:BQ:87:LYS:HG2	2.01	0.43
55:BX:24:GLY:HA3	55:BX:82:GLN:NE2	2.33	0.43
57:BZ:131:ARG:HG2	57:BZ:131:ARG:NH1	2.34	0.43
1:CA:179:A:H2'	1:CA:180:U:H6	1.81	0.43
1:CA:254:G:O2'	1:CA:255:G:H5'	2.19	0.43
1:CA:301:G:H2'	1:CA:302:G:C8	2.47	0.43
1:CA:489:C:H2'	1:CA:490:G:H8	1.83	0.43
1:CA:921:U:O2'	5:CE:18:ARG:HB2	2.19	0.43
1:CA:965:A:C2	1:CA:969:A:C2	3.07	0.43
2:CB:179:LYS:HB2	2:CB:179:LYS:HZ2	1.84	0.43
4:CD:37:PRO:O	4:CD:38:TYR:HB3	2.19	0.43
5:CE:34:VAL:O	5:CE:34:VAL:HG13	2.18	0.43
7:CG:41:ARG:HG2	7:CG:41:ARG:HH11	1.83	0.43
8:CH:1:MET:HE2	8:CH:1:MET:N	2.34	0.43
8:CH:56:LYS:HA	8:CH:57:PRO:HD2	1.75	0.43
9:CI:99:LEU:HB2	9:CI:101:PHE:HD2	1.84	0.43
16:CP:55:ARG:O	16:CP:58:TYR:N	2.52	0.43
24:CX:11:A:O4'	24:CX:12:A:H8	2.01	0.43
25:CY:13:ARG:HH21	25:CY:282:SER:HB2	1.83	0.43
25:CY:147:TRP:HE3	25:CY:150:ILE:HD12	1.84	0.43
25:CY:443:HIS:HB2	25:CY:448:GLN:O	2.19	0.43
25:CY:624:LEU:HA	25:CY:627:ARG:HB2	2.01	0.43
26:D0:55:ARG:HE	26:D0:55:ARG:HB3	1.39	0.43
27:D1:51:VAL:HG13	27:D1:58:ILE:HG22	2.01	0.43
31:D5:33:CYS:HB3	31:D5:38:ALA:O	2.19	0.43
35:D9:5:ALA:HB3	36:DA:2465:C:O3'	2.18	0.43
36:DA:262:A:H2'	36:DA:263:C:O4'	2.19	0.43
36:DA:590:A:OP1	41:DF:95:ARG:NH1	2.52	0.43
36:DA:705:A:C2	36:DA:727:A:H1'	2.54	0.43
36:DA:949:C:H2'	36:DA:950:G:C8	2.53	0.43
36:DA:1036:G:OP2	43:DH:59:ARG:NH1	2.51	0.43
36:DA:1240:U:O2'	36:DA:1241:A:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1593:G:H3'	36:DA:1594:G:H8	1.84	0.43
36:DA:2079:U:H2'	36:DA:2080:G:C8	2.54	0.43
36:DA:2293:C:OP1	50:DS:92:TYR:OH	2.36	0.43
36:DA:2450:A:O2'	36:DA:2451:A:H5'	2.19	0.43
36:DA:2513:G:H2'	36:DA:2514:U:C6	2.53	0.43
37:DB:21:G:O2'	37:DB:22:U:P	2.76	0.43
37:DB:90:A:H5'	37:DB:91:C:OP2	2.19	0.43
38:DC:11:LEU:O	38:DC:13:GLU:N	2.52	0.43
39:DD:96:HIS:CE1	39:DD:102:LYS:NZ	2.87	0.43
39:DD:141:VAL:HG23	39:DD:141:VAL:O	2.19	0.43
41:DF:123:LEU:HD12	41:DF:192:LEU:HD22	2.01	0.43
43:DH:109:PHE:C	43:DH:111:HIS:H	2.27	0.43
44:DJ:77:UNK:O	44:DJ:78:UNK:C	2.66	0.43
45:DN:34:LEU:HD12	45:DN:119:ARG:HB2	2.00	0.43
46:DO:104:ARG:NH2	51:DT:33:LYS:HE3	2.33	0.43
47:DP:6:LEU:HG	47:DP:7:ARG:N	2.34	0.43
50:DS:33:LYS:HG2	50:DS:34:HIS:CD2	2.53	0.43
51:DT:112:ARG:O	51:DT:115:ARG:HD3	2.19	0.43
53:DV:13:ARG:HH11	53:DV:13:ARG:CG	2.31	0.43
54:DW:36:LEU:HD12	54:DW:48:ALA:HA	2.01	0.43
54:DW:52:GLU:C	54:DW:54:ALA:N	2.76	0.43
55:DX:24:GLY:HA3	55:DX:82:GLN:NE2	2.34	0.43
55:DX:26:TYR:N	55:DX:26:TYR:CD1	2.85	0.43
57:DZ:5:LEU:HD23	57:DZ:43:GLU:CD	2.44	0.43
57:DZ:44:PHE:CD1	57:DZ:44:PHE:C	2.97	0.43
57:DZ:55:HIS:O	57:DZ:57:ILE:HD12	2.19	0.43
57:DZ:154:ASP:OD1	57:DZ:154:ASP:N	2.49	0.43
1:AA:8:A:N6	4:AD:205:GLU:O	2.52	0.43
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.48	0.43
1:AA:663:A:C2'	1:AA:664:G:H5'	2.48	0.43
1:AA:1404:C:H5'	1:AA:1405:G:P	2.58	0.43
1:AA:1457:G:H8	1:AA:1457:G:O5'	2.01	0.43
2:AB:119:GLU:O	2:AB:121:LEU:N	2.50	0.43
4:AD:86:LYS:HA	4:AD:86:LYS:HD3	1.87	0.43
7:AG:113:GLU:CG	7:AG:119:ARG:HG2	2.48	0.43
10:AJ:79:ARG:C	10:AJ:81:THR:N	2.77	0.43
13:AM:15:VAL:HG11	13:AM:48:LEU:HD11	2.01	0.43
16:AP:21:VAL:HG11	16:AP:59:TRP:NE1	2.34	0.43
19:AS:35:SER:C	19:AS:37:ARG:N	2.75	0.43
20:AT:38:LYS:O	20:AT:39:LYS:C	2.62	0.43
21:AU:6:ARG:NH2	21:AU:15:ARG:HH21	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:10:ARG:O	21:AU:11:GLY:C	2.61	0.43
23:AW:54:5MU:H2'	23:AW:55:U:O4'	2.19	0.43
25:AY:171:GLU:CG	25:AY:172:ASP:N	2.81	0.43
25:AY:613:PRO:HD3	25:AY:666:ARG:O	2.19	0.43
25:AY:616:TYR:CE1	25:AY:666:ARG:HD3	2.54	0.43
26:B0:17:GLN:HB2	36:BA:2261:C:OP2	2.19	0.43
27:B1:71:TYR:HA	27:B1:74:VAL:CG2	2.46	0.43
30:B4:9:LEU:CD1	30:B4:10:VAL:H	2.31	0.43
36:BA:205:G:O2'	36:BA:206:U:P	2.77	0.43
36:BA:216:A:H2'	36:BA:217:G:O4'	2.19	0.43
36:BA:271(U):G:O2'	36:BA:271(V):G:H5'	2.18	0.43
36:BA:519:U:H5''	54:BW:25:ARG:NH2	2.33	0.43
36:BA:1655:A:H4'	40:BE:115:GLY:N	2.33	0.43
36:BA:1796:U:P	39:BD:276:LYS:HE3	2.59	0.43
36:BA:2134:A:N9	36:BA:2158:A:C2	2.87	0.43
38:BC:29:LEU:C	38:BC:29:LEU:CD2	2.92	0.43
38:BC:184:GLU:O	38:BC:187:ALA:HB3	2.19	0.43
39:BD:227:ASN:HB3	39:BD:228:PRO:HD2	2.00	0.43
39:BD:261:LYS:HZ1	39:BD:263:ARG:NH2	2.17	0.43
40:BE:9:VAL:HG13	40:BE:25:VAL:O	2.19	0.43
41:BF:123:LEU:HD12	41:BF:124:LEU:N	2.33	0.43
43:BH:54:ARG:HG2	43:BH:54:ARG:NH1	2.33	0.43
43:BH:89:ILE:HG13	43:BH:129:THR:O	2.19	0.43
43:BH:92:ILE:O	43:BH:94:TYR:N	2.45	0.43
43:BH:141:VAL:O	43:BH:143:GLN:N	2.52	0.43
45:BN:15:LEU:O	45:BN:136:GLU:HA	2.19	0.43
47:BP:115:LEU:N	47:BP:115:LEU:CD2	2.80	0.43
47:BP:131:SER:OG	47:BP:134:ALA:HB3	2.19	0.43
48:BQ:53:ALA:HA	48:BQ:56:ARG:HB2	2.01	0.43
48:BQ:75:THR:HG22	48:BQ:76:LYS:H	1.81	0.43
49:BR:116:LEU:O	49:BR:117:VAL:HB	2.18	0.43
50:BS:20:ARG:HG2	50:BS:20:ARG:HH11	1.84	0.43
52:BU:83:LEU:CD1	52:BU:83:LEU:N	2.81	0.43
53:BV:35:LEU:HD22	53:BV:35:LEU:N	2.34	0.43
56:BY:13:VAL:CG2	56:BY:73:ARG:O	2.67	0.43
56:BY:26:LYS:HG2	56:BY:27:VAL:H	1.83	0.43
56:BY:74:PRO:O	56:BY:75:ILE:HB	2.19	0.43
57:BZ:56:VAL:HG11	57:BZ:68:PRO:HB2	2.01	0.43
1:CA:325:A:N6	1:CA:326:G:N1	2.66	0.43
1:CA:591:U:O2'	1:CA:592:G:H5'	2.19	0.43
1:CA:939:G:C5'	7:CG:102:ARG:HH22	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1030:C:N4	1:CA:1032:G:C2	2.87	0.43
1:CA:1227:A:O2'	13:CM:117:VAL:HG21	2.17	0.43
1:CA:1422:G:H2'	1:CA:1423:G:H8	1.83	0.43
1:CA:1495:U:H2'	1:CA:1496:C:C6	2.51	0.43
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.34	0.43
7:CG:111:ARG:HD2	7:CG:123:GLU:HB2	2.01	0.43
9:CI:64:THR:O	9:CI:64:THR:HG22	2.18	0.43
16:CP:60:LEU:HD23	16:CP:60:LEU:HA	1.92	0.43
20:CT:36:LEU:HD12	20:CT:59:ALA:CB	2.48	0.43
20:CT:90:GLN:CA	20:CT:93:GLU:OE2	2.65	0.43
22:CV:30:G:C2'	22:CV:31:A:H5'	2.48	0.43
22:CV:42:C:O2	22:CV:42:C:C2'	2.67	0.43
22:CV:61:C:HO2'	22:CV:62:C:H5'	1.82	0.43
23:CW:44:A:C6	23:CW:45:G:C2	3.06	0.43
25:CY:34:TYR:CD2	25:CY:35:TYR:HE1	2.37	0.43
25:CY:112:GLN:HG3	25:CY:115:GLU:CB	2.45	0.43
25:CY:133:ILE:CD1	25:CY:272:LEU:HD11	2.49	0.43
25:CY:142:THR:HG22	25:CY:143:GLY:N	2.33	0.43
26:D0:3:HIS:CD2	36:DA:2602:A:H2	2.37	0.43
27:D1:52:ARG:O	27:D1:56:GLN:O	2.37	0.43
33:D7:32:LYS:HE2	36:DA:180:G:P	2.58	0.43
36:DA:729:G:H2'	36:DA:1775:U:O2	2.19	0.43
36:DA:863:A:O2'	36:DA:864:G:H5'	2.18	0.43
36:DA:903:C:O2'	36:DA:904:C:H5''	2.18	0.43
36:DA:924:C:H6	36:DA:924:C:H5''	1.83	0.43
36:DA:946:G:H2'	36:DA:947:G:C8	2.53	0.43
36:DA:1185:C:H5'	36:DA:1186:G:OP1	2.18	0.43
36:DA:2288:A:C2	36:DA:2325:G:N7	2.87	0.43
36:DA:2444:G:H2'	36:DA:2445:G:O4'	2.19	0.43
36:DA:2639:A:H2'	36:DA:2640:G:O4'	2.19	0.43
36:DA:2721:A:H2'	36:DA:2722:G:O4'	2.19	0.43
36:DA:2771:C:H2'	36:DA:2772:C:C6	2.53	0.43
38:DC:60:ARG:HG2	38:DC:61:GLY:H	1.83	0.43
40:DE:59:VAL:O	40:DE:60:ASN:CG	2.62	0.43
41:DF:139:PHE:HB2	41:DF:166:ALA:HB1	2.00	0.43
42:DG:103:LEU:HA	42:DG:106:LEU:HB3	2.01	0.43
43:DH:38:SER:HA	43:DH:39:PRO:HD3	1.83	0.43
45:DN:55:VAL:CG2	45:DN:127:ASP:N	2.82	0.43
47:DP:64:LYS:O	47:DP:64:LYS:HD3	2.18	0.43
51:DT:56:GLY:O	51:DT:59:THR:HG23	2.18	0.43
52:DU:5:LYS:HE3	52:DU:5:LYS:HB2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DW:29:LEU:O	54:DW:29:LEU:HD12	2.19	0.43
56:DY:77:PRO:O	56:DY:78:ALA:CB	2.66	0.43
57:DZ:16:SER:OG	57:DZ:17:ALA:N	2.52	0.43
1:AA:125:U:H2'	1:AA:126:G:C8	2.54	0.43
1:AA:423:G:C2'	1:AA:424:G:H5'	2.48	0.43
1:AA:973:G:C1'	10:AJ:55:LYS:CE	2.86	0.43
1:AA:1133:G:C1'	1:AA:1142:G:H22	2.32	0.43
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	2.01	0.43
3:AC:11:ARG:HH11	3:AC:11:ARG:HG2	1.84	0.43
3:AC:25:GLY:O	3:AC:27:LYS:N	2.52	0.43
3:AC:34:LEU:CD2	3:AC:38:ARG:HD2	2.38	0.43
3:AC:52:LEU:HD12	3:AC:55:VAL:CG2	2.49	0.43
4:AD:25:ARG:NH1	4:AD:30:LYS:HD2	2.34	0.43
5:AE:77:PRO:HG2	5:AE:78:HIS:H	1.84	0.43
5:AE:150:ARG:HB2	5:AE:150:ARG:CZ	2.49	0.43
6:AF:51:PRO:HA	6:AF:55:ASP:O	2.18	0.43
8:AH:46:LYS:HE3	8:AH:64:LYS:HG3	2.01	0.43
8:AH:114:THR:C	8:AH:116:LYS:H	2.27	0.43
12:AL:22:SER:C	12:AL:24:VAL:N	2.77	0.43
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.54	0.43
15:AO:11:VAL:O	15:AO:14:GLU:CB	2.64	0.43
16:AP:3:LYS:HG2	16:AP:65:GLN:HB2	2.00	0.43
19:AS:31:ILE:HG21	19:AS:49:ILE:HG12	2.01	0.43
20:AT:21:LYS:O	20:AT:22:ARG:C	2.62	0.43
22:AV:16:U:HO2'	22:AV:61:C:P	2.42	0.43
23:AW:28:C:N4	23:AW:42:G:H1	2.17	0.43
25:AY:17:ILE:HG22	25:AY:25:LYS:HG2	2.01	0.43
25:AY:211:GLU:HG3	25:AY:212:TYR:N	2.34	0.43
25:AY:415:PRO:O	25:AY:416:LYS:C	2.62	0.43
25:AY:424:LEU:HA	25:AY:427:ALA:HB3	2.01	0.43
25:AY:608:VAL:C	25:AY:609:GLU:HG3	2.43	0.43
25:AY:619:ASP:HB3	43:BH:175:LYS:NZ	2.34	0.43
27:B1:76:ARG:HH12	27:B1:95:LEU:CD2	2.28	0.43
27:B1:90:ILE:O	27:B1:91:LYS:C	2.62	0.43
30:B4:50:VAL:O	30:B4:51:ASP:CG	2.62	0.43
31:B5:43:HIS:HD2	36:BA:2815:C:O2'	2.02	0.43
33:B7:19:ARG:HH11	33:B7:19:ARG:HG2	1.84	0.43
34:B8:31:HIS:O	34:B8:32:LEU:C	2.61	0.43
36:BA:36:G:H2'	36:BA:37:C:H6	1.83	0.43
36:BA:740:U:H5''	36:BA:1784:A:H3'	2.00	0.43
36:BA:814:C:O2'	36:BA:815:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:864:G:N2	36:BA:913:U:O2	2.52	0.43
36:BA:948:G:O2'	36:BA:949:C:H5'	2.19	0.43
36:BA:991:C:H5'	36:BA:991:C:C6	2.45	0.43
36:BA:1074:G:H2'	36:BA:1075:C:C6	2.53	0.43
36:BA:1131:G:C2	36:BA:1132:A:C5	3.07	0.43
36:BA:1331:A:C2'	36:BA:1332:G:H5''	2.49	0.43
36:BA:1838:C:O2'	36:BA:1839:G:P	2.77	0.43
36:BA:2182:G:H2'	36:BA:2183:C:C6	2.53	0.43
36:BA:2312:U:H5''	42:BG:72:ARG:O	2.19	0.43
36:BA:2729:G:H2'	36:BA:2730:C:H6	1.83	0.43
36:BA:2771:C:H2'	36:BA:2772:C:H6	1.84	0.43
38:BC:60:ARG:HG3	38:BC:165:ARG:CG	2.48	0.43
38:BC:197:LEU:O	38:BC:200:HIS:N	2.43	0.43
39:BD:8:PRO:C	39:BD:10:THR:H	2.27	0.43
39:BD:80:ALA:O	39:BD:81:ALA:HB2	2.18	0.43
40:BE:24:THR:HG23	40:BE:184:VAL:CG2	2.47	0.43
40:BE:45:THR:O	40:BE:46:ALA:CB	2.66	0.43
42:BG:56:ALA:C	42:BG:59:GLU:OE1	2.62	0.43
45:BN:73:THR:HG23	45:BN:82:LEU:HD11	2.01	0.43
45:BN:94:HIS:C	45:BN:96:GLU:H	2.27	0.43
51:BT:62:THR:HG22	51:BT:75:ILE:HG23	2.00	0.43
53:BV:13:ARG:HH11	53:BV:13:ARG:CG	2.32	0.43
55:BX:14:SER:H	55:BX:17:ALA:HB3	1.84	0.43
57:BZ:111:VAL:O	57:BZ:112:ARG:CB	2.66	0.43
1:CA:96:U:O2'	1:CA:97:G:H8	2.02	0.43
1:CA:246:A:O2'	17:CQ:99:SER:HA	2.19	0.43
1:CA:946:A:H5'	1:CA:947:G:OP2	2.19	0.43
1:CA:1058:G:C6	1:CA:1059:C:C4	3.06	0.43
1:CA:1191:A:P	3:CC:3:ASN:ND2	2.91	0.43
2:CB:11:LEU:O	2:CB:12:GLU:O	2.36	0.43
3:CC:47:LEU:CD1	3:CC:76:VAL:HG12	2.47	0.43
3:CC:116:VAL:O	3:CC:117:ALA:C	2.62	0.43
4:CD:25:ARG:NH1	4:CD:30:LYS:HD2	2.34	0.43
5:CE:7:GLU:HG2	5:CE:112:LEU:CD2	2.49	0.43
7:CG:22:LEU:HD22	7:CG:62:PHE:CE2	2.54	0.43
7:CG:66:VAL:HG21	7:CG:101:LEU:HD23	2.01	0.43
7:CG:99:LEU:O	7:CG:100:ALA:C	2.62	0.43
9:CI:80:GLY:O	9:CI:84:ALA:N	2.52	0.43
10:CJ:99:LYS:HA	10:CJ:99:LYS:HD3	1.80	0.43
11:CK:20:TYR:CD1	11:CK:83:ILE:HB	2.54	0.43
18:CR:30:ASP:C	18:CR:32:ARG:H	2.25	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:26:ASN:ND2	20:CT:26:ASN:N	2.66	0.43
20:CT:45:GLN:CB	20:CT:91:LEU:HD22	2.48	0.43
25:CY:126:GLU:C	25:CY:128:TYR:H	2.27	0.43
25:CY:330:VAL:O	25:CY:372:GLY:N	2.51	0.43
25:CY:629:GLY:HA3	25:CY:647:VAL:CG1	2.49	0.43
25:CY:632:LEU:HG	25:CY:645:ALA:CA	2.34	0.43
28:D2:24:LEU:C	28:D2:24:LEU:CD2	2.91	0.43
31:D5:34:PRO:HG3	36:DA:2885:C:O2'	2.19	0.43
31:D5:43:HIS:HD2	36:DA:2815:C:O2'	2.02	0.43
32:D6:11:LEU:HD23	32:D6:51:GLU:CG	2.40	0.43
35:D9:19:ARG:O	35:D9:20:HIS:HB2	2.19	0.43
36:DA:292:C:H2'	36:DA:293:U:C6	2.54	0.43
36:DA:436:C:H2'	36:DA:437:G:H8	1.84	0.43
36:DA:602:G:N2	36:DA:654(V):A:N7	2.67	0.43
36:DA:737:C:C2'	36:DA:738:G:H5'	2.48	0.43
36:DA:948:G:OP1	36:DA:962:G:OP1	2.36	0.43
36:DA:964:C:O2'	36:DA:2273:A:N3	2.49	0.43
36:DA:1107:G:H2'	36:DA:1108:U:C6	2.54	0.43
36:DA:1313:U:C2	36:DA:1610:A:H2	2.37	0.43
36:DA:2378:A:C2	50:DS:19:LYS:HD3	2.54	0.43
36:DA:2712:U:O2	36:DA:2712:U:O4'	2.36	0.43
38:DC:109:MET:O	38:DC:111:PHE:N	2.49	0.43
39:DD:62:TYR:CE2	39:DD:64:ILE:HA	2.54	0.43
39:DD:222:ARG:O	39:DD:223:GLY:C	2.62	0.43
41:DF:199:TRP:CZ3	41:DF:203:GLN:HG2	2.54	0.43
42:DG:14:GLU:O	42:DG:18:GLU:CB	2.67	0.43
42:DG:63:ILE:CG2	42:DG:143:GLU:HB2	2.48	0.43
46:DO:104:ARG:HB2	46:DO:104:ARG:NH1	2.34	0.43
47:DP:75:ILE:N	47:DP:75:ILE:CD1	2.82	0.43
48:DQ:32:TYR:CE2	48:DQ:111:GLU:HG3	2.54	0.43
49:DR:12:ARG:HD3	49:DR:16:HIS:CD2	2.54	0.43
52:DU:74:LEU:C	52:DU:74:LEU:HD13	2.44	0.43
53:DV:2:PHE:O	53:DV:14:VAL:O	2.37	0.43
56:DY:22:GLY:O	56:DY:23:ARG:HG2	2.19	0.43
57:DZ:63:ASP:O	57:DZ:65:GLN:N	2.52	0.43
1:AA:141:A:H1'	1:AA:182:U:O2	2.19	0.42
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.49	0.42
1:AA:600:C:H4'	8:AH:128:GLY:O	2.19	0.42
1:AA:954:G:H21	1:AA:1227:A:H62	1.67	0.42
1:AA:1134:G:O2'	1:AA:1135:U:H5'	2.19	0.42
1:AA:1219:U:H2'	1:AA:1220:G:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1290:G:H2'	1:AA:1290:G:N3	2.34	0.42
1:AA:1316:G:H4'	14:AN:18:VAL:CG1	2.48	0.42
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.34	0.42
1:AA:1501:C:OP2	1:AA:1504:G:H2'	2.19	0.42
2:AB:212:GLN:O	2:AB:213:LEU:C	2.62	0.42
4:AD:104:VAL:O	4:AD:108:LEU:HB2	2.19	0.42
4:AD:131:ARG:HD3	4:AD:131:ARG:N	2.29	0.42
6:AF:19:LEU:HD23	6:AF:19:LEU:O	2.19	0.42
6:AF:37:VAL:HG12	6:AF:38:GLU:H	1.84	0.42
6:AF:95:GLU:HA	6:AF:96:PRO:HD3	1.86	0.42
7:AG:134:ALA:O	7:AG:135:VAL:C	2.62	0.42
9:AI:63:ILE:CG2	9:AI:64:THR:N	2.81	0.42
13:AM:68:GLY:N	13:AM:71:ARG:HB3	2.33	0.42
16:AP:23:ASP:OD1	16:AP:25:ARG:N	2.47	0.42
18:AR:44:LEU:HA	18:AR:49:LYS:O	2.19	0.42
19:AS:9:VAL:C	19:AS:11:VAL:H	2.27	0.42
25:AY:73:PHE:CE1	25:AY:78:ARG:HB2	2.54	0.42
25:AY:276:VAL:O	25:AY:280:LEU:HB2	2.20	0.42
25:AY:610:VAL:HG12	25:AY:659:LEU:HG	2.00	0.42
26:B0:14:ARG:HH11	26:B0:14:ARG:CB	2.28	0.42
26:B0:23:VAL:HG11	26:B0:69:PHE:CZ	2.51	0.42
31:B5:2:ALA:HB2	36:BA:2015:A:O4'	2.18	0.42
32:B6:8:LYS:NZ	36:BA:2285:C:C5	2.66	0.42
32:B6:10:LEU:H	32:B6:10:LEU:HD22	1.80	0.42
32:B6:15:GLU:HB2	32:B6:49:HIS:NE2	2.34	0.42
34:B8:23:VAL:HG12	34:B8:46:ARG:HH11	1.84	0.42
34:B8:56:GLU:C	34:B8:58:ILE:H	2.27	0.42
36:BA:360:G:O2'	36:BA:361:G:H5'	2.19	0.42
36:BA:514:A:H2'	36:BA:515:A:H8	1.84	0.42
36:BA:560:C:H4'	52:BU:52:ARG:NH2	2.34	0.42
36:BA:651:G:C2'	36:BA:652:C:H5'	2.48	0.42
36:BA:1767:C:C2'	36:BA:1768:U:H5'	2.49	0.42
36:BA:1818:U:H5''	39:BD:157:ARG:HB2	2.01	0.42
36:BA:2275:C:O2	48:BQ:85:LYS:HD3	2.18	0.42
36:BA:2597:G:H5''	39:BD:243:GLY:HA2	2.01	0.42
36:BA:2639:A:H2'	36:BA:2640:G:O4'	2.19	0.42
38:BC:43:GLU:HG3	38:BC:216:THR:HG23	2.01	0.42
40:BE:32:PRO:CA	40:BE:90:THR:HG23	2.49	0.42
41:BF:5:ALA:HB1	41:BF:125:LEU:HD21	2.01	0.42
41:BF:84:VAL:C	41:BF:86:GLY:N	2.77	0.42
45:BN:43:THR:HB	45:BN:46:VAL:HG11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:51:ARG:HG2	48:BQ:51:ARG:HH11	1.83	0.42
48:BQ:52:VAL:HG12	48:BQ:56:ARG:HG3	2.01	0.42
50:BS:20:ARG:NE	50:BS:20:ARG:CA	2.79	0.42
51:BT:28:VAL:HG21	51:BT:46:GLU:CG	2.49	0.42
51:BT:65:LYS:O	51:BT:72:VAL:N	2.39	0.42
51:BT:117:ASP:OD2	51:BT:120:ARG:HG3	2.19	0.42
53:BV:28:GLU:HB3	53:BV:29:PRO:HD2	2.01	0.42
56:BY:8:LYS:N	56:BY:8:LYS:CD	2.76	0.42
56:BY:12:THR:HG22	56:BY:75:ILE:HG21	2.01	0.42
1:CA:429:U:C1'	1:CA:430:A:H5''	2.49	0.42
1:CA:1134:G:O2'	1:CA:1135:U:H5'	2.19	0.42
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.19	0.42
1:CA:1296:C:C5'	1:CA:1297:C:OP2	2.62	0.42
1:CA:1368:G:C2'	1:CA:1369:C:H5'	2.49	0.42
2:CB:73:THR:O	2:CB:75:LYS:N	2.51	0.42
2:CB:152:PHE:O	2:CB:153:ARG:HB2	2.19	0.42
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.76	0.42
5:CE:102:ALA:O	5:CE:107:ARG:NH1	2.52	0.42
5:CE:139:LEU:C	5:CE:141:GLN:N	2.77	0.42
7:CG:91:VAL:HG12	7:CG:92:SER:H	1.84	0.42
11:CK:20:TYR:O	11:CK:30:VAL:HA	2.18	0.42
11:CK:33:THR:HB	11:CK:38:ASN:O	2.19	0.42
13:CM:119:GLY:C	13:CM:121:LYS:H	2.27	0.42
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.99	0.42
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.18	0.42
24:CX:18:C:H1'	25:CY:503:GLY:HA3	2.01	0.42
25:CY:84:THR:CG2	59:CY:701:FUA:H152	2.48	0.42
25:CY:90:PHE:CE2	59:CY:701:FUA:C11	3.02	0.42
25:CY:319:ASP:OD2	25:CY:322:VAL:HG22	2.19	0.42
26:D0:20:ARG:CG	26:D0:20:ARG:NH1	2.81	0.42
30:D4:9:LEU:CD1	30:D4:10:VAL:H	2.32	0.42
30:D4:16:CYS:HB3	30:D4:20:ASN:O	2.19	0.42
33:D7:12:ARG:HG3	33:D7:12:ARG:NH1	2.34	0.42
34:D8:26:LYS:HB3	34:D8:44:LYS:HG3	2.01	0.42
36:DA:9:U:C5	36:DA:2629:A:N6	2.86	0.42
36:DA:143:G:H2'	36:DA:143(A):C:H6	1.82	0.42
36:DA:271(K):U:H3'	36:DA:271(L):U:C5'	2.48	0.42
36:DA:325:G:H2'	36:DA:326:G:H8	1.84	0.42
36:DA:569:U:H2'	36:DA:570:G:O4'	2.19	0.42
36:DA:676:A:H1'	36:DA:2443:C:C1'	2.48	0.42
36:DA:869:G:O2'	36:DA:870:A:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:903:C:C2'	36:DA:904:C:H5'	2.46	0.42
36:DA:999:U:H5''	36:DA:1154:G:O6	2.19	0.42
36:DA:1070:A:C2	36:DA:1097:U:H4'	2.54	0.42
36:DA:1328:G:O5'	36:DA:1328:G:C8	2.61	0.42
36:DA:1531:C:H2'	36:DA:1532:C:H6	1.82	0.42
36:DA:2134:A:N9	36:DA:2158:A:C2	2.87	0.42
36:DA:2197:U:H1'	36:DA:2198:A:C8	2.53	0.42
36:DA:2358:G:O2'	36:DA:2359:C:H5'	2.19	0.42
36:DA:2729:G:H2'	36:DA:2730:C:C6	2.54	0.42
36:DA:2807:G:H3'	36:DA:2808:U:C5'	2.36	0.42
37:DB:60:C:H2'	37:DB:61:G:C8	2.51	0.42
38:DC:8:TYR:O	38:DC:9:ARG:C	2.62	0.42
39:DD:11:PRO:C	39:DD:13:ARG:N	2.75	0.42
40:DE:9:VAL:HG22	40:DE:25:VAL:HB	2.02	0.42
40:DE:87:GLU:O	40:DE:89:ASP:N	2.52	0.42
40:DE:126:PRO:C	40:DE:128:SER:N	2.76	0.42
41:DF:101:LEU:HB3	41:DF:106:ARG:HD3	2.00	0.42
41:DF:132:VAL:HG22	41:DF:133:ASN:ND2	2.34	0.42
42:DG:131:TYR:HB3	42:DG:159:VAL:HG13	2.01	0.42
45:DN:51:PHE:CD1	45:DN:51:PHE:N	2.87	0.42
45:DN:63:THR:HB	45:DN:64:GLY:H	1.56	0.42
48:DQ:59:ARG:HG3	48:DQ:59:ARG:NH1	2.34	0.42
50:DS:49:VAL:CG1	50:DS:50:SER:N	2.81	0.42
50:DS:89:ARG:HG3	50:DS:92:TYR:CB	2.49	0.42
52:DU:40:PHE:HB3	53:DV:75:PHE:CD2	2.54	0.42
52:DU:47:TYR:HE2	53:DV:74:LYS:HZ2	1.63	0.42
1:AA:34:C:O2'	1:AA:35:G:H5'	2.19	0.42
1:AA:78:G:H22	1:AA:91:C:N4	2.17	0.42
1:AA:109:A:C6	1:AA:326:G:C5	3.07	0.42
1:AA:349:A:H2'	1:AA:350:G:C5'	2.45	0.42
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.00	0.42
1:AA:781:A:C2'	1:AA:782:A:H5'	2.49	0.42
1:AA:999:C:H6	1:AA:999:C:H3'	1.83	0.42
1:AA:1058:G:C6	1:AA:1059:C:C4	3.07	0.42
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.18	0.42
4:AD:17:VAL:O	4:AD:18:LYS:C	2.62	0.42
5:AE:64:ARG:HH11	5:AE:64:ARG:CG	2.22	0.42
5:AE:147:ASP:HA	5:AE:150:ARG:NH1	2.32	0.42
7:AG:95:ARG:O	7:AG:96:GLN:C	2.62	0.42
10:AJ:28:ARG:NH1	10:AJ:28:ARG:HG2	2.34	0.42
10:AJ:79:ARG:NH1	10:AJ:79:ARG:HG2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:34:ASP:OD1	11:AK:34:ASP:C	2.60	0.42
12:AL:27:LEU:O	12:AL:28:LYS:C	2.62	0.42
12:AL:98:TYR:CD1	12:AL:98:TYR:N	2.87	0.42
13:AM:54:VAL:O	13:AM:56:LEU:N	2.51	0.42
17:AQ:31:LEU:HG	17:AQ:32:TYR:CE1	2.54	0.42
25:AY:210:ARG:C	25:AY:214:GLU:HG2	2.44	0.42
25:AY:216:LEU:HD23	25:AY:216:LEU:C	2.44	0.42
25:AY:447:GLY:O	25:AY:448:GLN:C	2.61	0.42
27:B1:14:VAL:HG21	36:BA:188:G:H5'	2.00	0.42
30:B4:7:PRO:HD2	42:BG:65:GLY:O	2.19	0.42
30:B4:27:THR:O	30:B4:27:THR:HG23	2.18	0.42
31:B5:43:HIS:CD2	36:BA:2815:C:O2'	2.72	0.42
31:B5:46:CYS:SG	31:B5:47:PRO:CD	3.06	0.42
34:B8:21:LYS:HD3	34:B8:48:PHE:CE1	2.55	0.42
36:BA:82:G:C5'	36:BA:296:C:H5'	2.47	0.42
36:BA:186:G:C2	36:BA:211:A:C2	3.06	0.42
36:BA:271(C):C:H2'	36:BA:271(D):G:H8	1.84	0.42
36:BA:338:G:O2'	36:BA:339:U:H5'	2.19	0.42
36:BA:645:C:H3'	36:BA:645:C:O2	2.19	0.42
36:BA:1376:C:O2	36:BA:1376:C:H2'	2.19	0.42
36:BA:1668:A:C5	36:BA:1674:G:C5	3.07	0.42
36:BA:1843:C:H5'	39:BD:253:GLN:NE2	2.34	0.42
36:BA:1859:A:N1	36:BA:1884:A:H1'	2.33	0.42
36:BA:2154:G:C2	36:BA:2155:G:C4	3.07	0.42
36:BA:2260:C:H2'	36:BA:2261:C:H6	1.84	0.42
36:BA:2395:C:C2	36:BA:2396:G:C8	3.07	0.42
36:BA:2445:G:OP1	41:BF:74:ARG:NH2	2.47	0.42
36:BA:2557:G:H2'	36:BA:2558:C:C6	2.54	0.42
36:BA:2580:U:H4'	40:BE:130:GLY:CA	2.50	0.42
37:BB:82:G:C2'	37:BB:83:G:H5'	2.48	0.42
38:BC:157:ILE:C	38:BC:159:ALA:N	2.77	0.42
41:BF:9:ILE:HG12	41:BF:14:PRO:HA	2.01	0.42
41:BF:123:LEU:HD12	41:BF:192:LEU:HD22	2.00	0.42
41:BF:206:ILE:HG22	41:BF:207:GLY:H	1.82	0.42
42:BG:91:ARG:HD2	42:BG:92:VAL:CA	2.48	0.42
42:BG:109:VAL:O	42:BG:112:PRO:HD2	2.19	0.42
44:BJ:69:UNK:O	44:BJ:70:UNK:C	2.67	0.42
46:BO:35:VAL:HG23	46:BO:65:THR:HG23	2.02	0.42
47:BP:23:PRO:CG	47:BP:33:ARG:HE	2.32	0.42
47:BP:41:ARG:CB	47:BP:41:ARG:NH1	2.81	0.42
47:BP:112:LEU:N	47:BP:128:HIS:CD2	2.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BQ:6:ARG:C	48:BQ:7:MET:HG3	2.44	0.42
48:BQ:21:THR:CG2	48:BQ:101:ARG:HB2	2.49	0.42
50:BS:88:ASP:O	50:BS:89:ARG:HB3	2.19	0.42
55:BX:12:VAL:CB	55:BX:17:ALA:HB1	2.21	0.42
56:BY:39:VAL:HG12	56:BY:40:GLU:H	1.80	0.42
56:BY:58:GLY:O	56:BY:59:GLY:C	2.61	0.42
56:BY:98:VAL:O	56:BY:98:VAL:HG12	2.19	0.42
57:BZ:37:VAL:O	57:BZ:38:TYR:HB3	2.19	0.42
1:CA:663:A:C2'	1:CA:664:G:H5'	2.49	0.42
1:CA:999:C:H3'	1:CA:999:C:H6	1.85	0.42
1:CA:1329:A:OP1	13:CM:29:ARG:HG3	2.19	0.42
1:CA:1367:C:N3	1:CA:1368:G:C8	2.87	0.42
2:CB:102:LEU:HD23	2:CB:182:ILE:HD12	2.01	0.42
4:CD:105:VAL:HG13	4:CD:110:PHE:HB2	2.01	0.42
4:CD:129:ASN:HD21	4:CD:144:ASP:HB3	1.84	0.42
4:CD:132:ARG:HD2	4:CD:132:ARG:C	2.43	0.42
4:CD:203:VAL:O	4:CD:206:PHE:HB3	2.19	0.42
5:CE:65:ASN:O	5:CE:65:ASN:CG	2.62	0.42
5:CE:71:LEU:HD11	5:CE:114:GLY:CA	2.48	0.42
5:CE:81:GLU:HA	5:CE:89:ILE:O	2.19	0.42
6:CF:80:ARG:HG2	6:CF:88:VAL:CG2	2.49	0.42
8:CH:36:LEU:O	8:CH:37:ARG:C	2.61	0.42
9:CI:63:ILE:CG2	9:CI:64:THR:N	2.83	0.42
13:CM:88:ARG:HH11	13:CM:88:ARG:HG2	1.85	0.42
25:CY:65:ILE:O	25:CY:67:ALA:N	2.44	0.42
25:CY:179:ASP:OD2	25:CY:182:ARG:HD2	2.19	0.42
25:CY:526:VAL:HG11	25:CY:566:THR:HG23	2.01	0.42
25:CY:558:PHE:O	25:CY:559:PRO:C	2.62	0.42
25:CY:590:ILE:HA	25:CY:593:ALA:CB	2.49	0.42
25:CY:614:GLU:CG	25:CY:641:GLN:NE2	2.81	0.42
25:CY:679:VAL:HG23	25:CY:684:GLN:HB2	2.00	0.42
59:CY:701:FUA:C12	59:CY:701:FUA:C23	2.84	0.42
28:D2:25:VAL:HG22	28:D2:60:LEU:HD13	2.01	0.42
29:D3:4:LEU:HD11	29:D3:39:ASP:OD1	2.20	0.42
33:D7:34:ARG:NH1	33:D7:39:ARG:HG3	2.35	0.42
36:DA:613:G:C2	36:DA:615:G:C5	3.06	0.42
36:DA:694:U:H2'	36:DA:695:G:O5'	2.19	0.42
36:DA:727:A:H5'	36:DA:728:G:OP2	2.18	0.42
36:DA:1059:G:H2'	36:DA:1060:U:C6	2.54	0.42
36:DA:1247:A:O2'	36:DA:1248:G:H5'	2.19	0.42
36:DA:1367:A:C2'	36:DA:1368:G:H5'	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1396:U:O2	36:DA:1396:U:C2'	2.68	0.42
36:DA:1479:G:N2	36:DA:1513:C:H1'	2.34	0.42
36:DA:2447:G:C4	36:DA:2501:C:C4	3.07	0.42
36:DA:2704:C:C2'	36:DA:2705:A:H5'	2.49	0.42
37:DB:92:C:H2'	37:DB:93:G:C8	2.55	0.42
38:DC:98:GLU:C	38:DC:100:ILE:H	2.26	0.42
39:DD:261:LYS:NZ	39:DD:263:ARG:HH12	2.17	0.42
40:DE:201:THR:OG1	40:DE:202:LYS:N	2.52	0.42
41:DF:68:LYS:O	41:DF:70:THR:N	2.48	0.42
43:DH:146:ALA:HA	43:DH:149:ARG:HB3	2.01	0.42
47:DP:7:ARG:CZ	47:DP:7:ARG:CA	2.93	0.42
47:DP:35:HIS:O	47:DP:36:LYS:CB	2.64	0.42
49:DR:55:ALA:HB2	49:DR:79:LEU:CD1	2.48	0.42
49:DR:100:LEU:HD11	49:DR:113:LEU:HB2	1.99	0.42
51:DT:82:LEU:O	51:DT:83:ILE:C	2.62	0.42
52:DU:113:ALA:C	52:DU:115:ALA:N	2.70	0.42
53:DV:47:VAL:O	53:DV:48:GLY:C	2.62	0.42
57:DZ:109:ALA:HB3	57:DZ:144:LEU:O	2.19	0.42
1:AA:150:C:O5'	1:AA:150:C:H6	2.01	0.42
1:AA:930:C:C4	1:AA:931:C:C5	3.07	0.42
1:AA:1103:C:C4	1:AA:1104:G:N7	2.87	0.42
1:AA:1329:A:OP1	13:AM:28:ALA:HB3	2.19	0.42
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.18	0.42
1:AA:1517:G:H1'	36:BA:1919:A:O3'	2.19	0.42
2:AB:144:ARG:HG3	2:AB:145:LEU:N	2.34	0.42
4:AD:152:SER:O	4:AD:153:ARG:C	2.62	0.42
5:AE:11:ILE:HG22	5:AE:12:LEU:H	1.82	0.42
5:AE:139:LEU:C	5:AE:141:GLN:H	2.27	0.42
5:AE:143:ARG:HA	5:AE:143:ARG:HD3	1.87	0.42
7:AG:16:LEU:HD12	9:AI:42:ARG:HA	1.99	0.42
7:AG:79:ARG:HD2	7:AG:79:ARG:C	2.43	0.42
9:AI:4:TYR:HA	9:AI:88:TYR:CD1	2.54	0.42
9:AI:93:ARG:O	9:AI:95:LYS:N	2.52	0.42
9:AI:119:ALA:O	9:AI:120:ARG:CG	2.58	0.42
13:AM:63:THR:CG2	13:AM:64:TRP:H	2.32	0.42
15:AO:21:ASP:OD1	15:AO:21:ASP:C	2.61	0.42
19:AS:20:LEU:HA	19:AS:23:ASN:HB2	2.01	0.42
25:AY:90:PHE:CB	25:AY:454:MET:HB2	2.49	0.42
25:AY:109:ASP:OD1	25:AY:138:LYS:HG3	2.19	0.42
25:AY:130:VAL:O	25:AY:132:ARG:CZ	2.68	0.42
25:AY:276:VAL:O	25:AY:280:LEU:HD23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:285:ASP:C	25:AY:286:ILE:HD12	2.44	0.42
28:B2:69:ARG:HH22	36:BA:111:A:C4'	2.27	0.42
30:B4:27:THR:O	30:B4:28:LYS:CB	2.67	0.42
32:B6:7:ILE:O	32:B6:7:ILE:CG2	2.67	0.42
32:B6:39:TYR:OH	36:BA:2347:C:OP1	2.34	0.42
32:B6:54:ILE:HD11	36:BA:2419:U:O2'	2.20	0.42
36:BA:332:A:O2'	36:BA:333:G:P	2.77	0.42
36:BA:605:C:C4	36:BA:606:U:C5	3.07	0.42
36:BA:694:U:H2'	36:BA:695:G:O5'	2.18	0.42
36:BA:1142(A):A:C3'	36:BA:1143:A:H5''	2.49	0.42
36:BA:1156:A:C2'	36:BA:1157:G:OP1	2.67	0.42
36:BA:1308:A:H2'	36:BA:1309:G:O4'	2.20	0.42
36:BA:1678:G:C5	36:BA:1679:U:C5	3.07	0.42
36:BA:1798:U:C4	36:BA:1819:A:C2	3.07	0.42
36:BA:2262:U:O2'	36:BA:2263:C:C5'	2.67	0.42
36:BA:2305:A:C4	42:BG:154:GLY:HA3	2.54	0.42
36:BA:2450:A:O2'	36:BA:2451:A:H5'	2.19	0.42
37:BB:40:U:O2'	37:BB:43:C:C5	2.71	0.42
37:BB:77:U:OP1	57:BZ:19:ARG:NH2	2.48	0.42
37:BB:95:C:O2'	37:BB:96:U:H5'	2.19	0.42
38:BC:98:GLU:C	38:BC:100:ILE:H	2.26	0.42
40:BE:30:PRO:O	40:BE:32:PRO:HD3	2.19	0.42
40:BE:47:VAL:HG23	40:BE:84:PHE:O	2.19	0.42
41:BF:108:LYS:C	41:BF:112:MET:HE3	2.45	0.42
41:BF:133:ASN:N	41:BF:133:ASN:ND2	2.67	0.42
41:BF:198:ALA:HA	41:BF:201:VAL:HG12	2.01	0.42
45:BN:96:GLU:N	45:BN:96:GLU:CD	2.77	0.42
50:BS:40:ILE:CG2	50:BS:41:ASP:N	2.74	0.42
51:BT:35:LYS:NZ	51:BT:41:ARG:HD2	2.31	0.42
53:BV:2:PHE:O	53:BV:14:VAL:O	2.37	0.42
53:BV:47:VAL:O	53:BV:48:GLY:C	2.62	0.42
53:BV:47:VAL:HB	53:BV:50:PRO:O	2.19	0.42
55:BX:18:TYR:O	55:BX:20:GLY:N	2.52	0.42
55:BX:65:ARG:HH11	55:BX:65:ARG:HG2	1.83	0.42
57:BZ:107:THR:HG23	57:BZ:111:VAL:CB	2.48	0.42
57:BZ:171:ILE:HD12	57:BZ:171:ILE:C	2.44	0.42
1:CA:401:C:H1'	1:CA:622:A:H1'	2.01	0.42
1:CA:501:C:OP1	12:CL:117:ARG:NH2	2.48	0.42
1:CA:552:U:H2'	1:CA:553:A:C8	2.53	0.42
1:CA:584:G:H2'	1:CA:585:G:C8	2.54	0.42
1:CA:689:C:P	11:CK:46:GLY:HA3	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:766:A:H2'	1:CA:767:A:H5'	2.02	0.42
1:CA:1065:U:C2'	1:CA:1066:C:OP2	2.67	0.42
1:CA:1134:G:H2'	1:CA:1135:U:H5'	2.01	0.42
1:CA:1150:U:H1'	1:CA:1280:A:N6	2.34	0.42
1:CA:1313:U:H2'	1:CA:1314:C:C6	2.54	0.42
1:CA:1348:U:O3'	9:CI:120:ARG:HG3	2.18	0.42
3:CC:48:TYR:HE1	3:CC:118:GLN:HE21	1.68	0.42
3:CC:157:ILE:O	3:CC:159:GLY:N	2.52	0.42
3:CC:179:ARG:HG3	3:CC:179:ARG:H	1.53	0.42
8:CH:1:MET:HE3	8:CH:3:THR:HG23	2.00	0.42
9:CI:79:LEU:O	9:CI:80:GLY:C	2.62	0.42
10:CJ:22:LYS:C	10:CJ:22:LYS:CD	2.93	0.42
11:CK:120:ARG:HA	11:CK:121:PRO:HD3	1.87	0.42
12:CL:20:LYS:N	12:CL:20:LYS:CD	2.82	0.42
13:CM:49:THR:C	13:CM:51:ALA:N	2.74	0.42
13:CM:54:VAL:O	13:CM:56:LEU:N	2.53	0.42
14:CN:27:CYS:O	14:CN:28:GLY:C	2.62	0.42
16:CP:4:ILE:CG1	16:CP:64:ALA:HB1	2.48	0.42
18:CR:35:ARG:O	18:CR:37:VAL:N	2.48	0.42
18:CR:46:GLU:C	18:CR:48:GLY:H	2.27	0.42
18:CR:58:LEU:CD1	18:CR:58:LEU:H	2.31	0.42
20:CT:11:SER:HA	20:CT:13:LEU:HD11	2.00	0.42
20:CT:16:HIS:O	20:CT:17:ARG:C	2.62	0.42
20:CT:50:GLU:HB2	20:CT:100:ILE:CG2	2.49	0.42
23:CW:25:C:O2'	23:CW:26:G:H5'	2.20	0.42
25:CY:346:LYS:CE	25:CY:384:ILE:HG12	2.49	0.42
25:CY:366:VAL:HG23	25:CY:367:GLU:N	2.34	0.42
25:CY:411:VAL:HG23	25:CY:459:LEU:CD2	2.48	0.42
25:CY:646:PHE:HE1	25:CY:674:ASP:OD2	2.02	0.42
27:D1:51:VAL:HG13	27:D1:58:ILE:CG2	2.49	0.42
27:D1:82:LEU:C	27:D1:83:GLU:CG	2.90	0.42
28:D2:69:ARG:NH2	36:DA:111:A:H5''	2.31	0.42
34:D8:48:PHE:O	34:D8:49:VAL:CG1	2.63	0.42
36:DA:74:A:H5''	36:DA:75:G:O4'	2.18	0.42
36:DA:82:G:C5'	36:DA:296:C:H5'	2.47	0.42
36:DA:87:C:OP2	36:DA:90:U:O4	2.38	0.42
36:DA:271(U):G:O2'	36:DA:271(V):G:H5'	2.19	0.42
36:DA:437:G:H2'	36:DA:438:G:H8	1.84	0.42
36:DA:640:C:H2'	36:DA:641:C:C6	2.54	0.42
36:DA:653:A:H5'	36:DA:654:A:P	2.59	0.42
36:DA:948:G:O2'	36:DA:949:C:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1288:U:C2	36:DA:1327:C:C2	3.07	0.42
36:DA:1338:G:N2	36:DA:1339:G:H1'	2.35	0.42
36:DA:1653:G:O6	49:DR:11:ASN:HB2	2.18	0.42
36:DA:1836:C:C2'	36:DA:1837:C:H5'	2.50	0.42
36:DA:2223:G:O2'	36:DA:2224:G:H5'	2.19	0.42
36:DA:2531:A:OP2	43:DH:176:ALA:HB3	2.19	0.42
39:DD:17:THR:O	39:DD:211:ARG:NH2	2.52	0.42
40:DE:76:ARG:O	40:DE:77:ILE:O	2.37	0.42
41:DF:18:ARG:C	41:DF:19:GLU:HG2	2.44	0.42
41:DF:31:HIS:O	41:DF:34:TRP:N	2.53	0.42
41:DF:108:LYS:O	41:DF:112:MET:HE3	2.19	0.42
41:DF:133:ASN:N	41:DF:133:ASN:ND2	2.67	0.42
41:DF:160:ASN:HD21	41:DF:162:LEU:HB2	1.83	0.42
42:DG:98:ARG:HG2	42:DG:98:ARG:NH1	2.34	0.42
44:DJ:146:UNK:C	44:DJ:148:UNK:N	2.80	0.42
47:DP:32:THR:CG2	47:DP:37:GLY:HA2	2.47	0.42
52:DU:110:VAL:C	52:DU:112:ARG:N	2.78	0.42
53:DV:67:GLY:O	53:DV:88:ARG:HB3	2.18	0.42
56:DY:13:VAL:CG2	56:DY:73:ARG:C	2.90	0.42
56:DY:44:ILE:O	56:DY:62:GLU:OE1	2.38	0.42
1:AA:152:A:N6	1:AA:170:U:C2	2.87	0.42
1:AA:373:A:C2	1:AA:482:A:C6	3.06	0.42
1:AA:687:A:H62	1:AA:703:G:H1'	1.83	0.42
1:AA:1042:G:C2'	1:AA:1043:C:H5'	2.49	0.42
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.55	0.42
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.85	0.42
1:AA:1423:G:C5	1:AA:1424:C:C4	3.07	0.42
2:AB:12:GLU:HB2	2:AB:13:ALA:H	1.57	0.42
2:AB:17:PHE:H	2:AB:17:PHE:HD1	1.68	0.42
3:AC:146:ALA:C	3:AC:148:GLY:N	2.78	0.42
5:AE:12:LEU:HD13	5:AE:31:LEU:HB3	2.02	0.42
8:AH:1:MET:N	8:AH:1:MET:HE2	2.34	0.42
9:AI:3:GLN:NE2	9:AI:20:ARG:NH2	2.66	0.42
9:AI:58:HIS:C	9:AI:59:PHE:CD1	2.97	0.42
11:AK:126:ARG:HH11	11:AK:126:ARG:HG2	1.84	0.42
13:AM:68:GLY:H	13:AM:71:ARG:CB	2.32	0.42
14:AN:21:TYR:HE2	14:AN:23:ARG:NH2	2.17	0.42
15:AO:21:ASP:OD1	15:AO:24:SER:HB3	2.19	0.42
16:AP:2:VAL:HG22	16:AP:64:ALA:HA	2.00	0.42
16:AP:5:ARG:HE	16:AP:22:THR:HG21	1.84	0.42
20:AT:36:LEU:HD12	20:AT:59:ALA:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:73:HIS:HB3	20:AT:74:LYS:HD3	2.01	0.42
25:AY:89:ASP:HB2	25:AY:90:PHE:H	1.66	0.42
25:AY:115:GLU:HA	25:AY:116:PRO:HD2	1.93	0.42
25:AY:431:LEU:HD22	25:AY:466:LEU:CD1	2.40	0.42
25:AY:465:ARG:HD2	25:AY:469:GLU:HG2	2.01	0.42
26:B0:20:ARG:CG	26:B0:20:ARG:NH1	2.81	0.42
26:B0:49:LYS:HE3	26:B0:80:HIS:CG	2.54	0.42
27:B1:61:ARG:HH11	27:B1:61:ARG:HG2	1.85	0.42
27:B1:81:LYS:HE2	36:BA:271(H):G:C4'	2.38	0.42
28:B2:50:ILE:C	28:B2:52:ASP:N	2.76	0.42
32:B6:54:ILE:O	32:B6:54:ILE:CD1	2.60	0.42
33:B7:29:LYS:NZ	36:BA:210:C:OP2	2.45	0.42
33:B7:43:THR:O	33:B7:44:PRO:C	2.62	0.42
36:BA:87:C:H5''	36:BA:88:G:H5'	2.01	0.42
36:BA:614(B):G:H5''	36:BA:614(C):A:OP1	2.20	0.42
36:BA:666:G:C5	36:BA:667:U:C5	3.07	0.42
36:BA:924:C:H6	36:BA:924:C:H5''	1.84	0.42
36:BA:1238:G:O2'	36:BA:1239:G:H5'	2.19	0.42
36:BA:1590:U:O2'	36:BA:1591:G:H5'	2.19	0.42
36:BA:1851:U:H2'	36:BA:1852:C:O4'	2.20	0.42
36:BA:1952:A:C2	46:BO:22:ILE:HG23	2.54	0.42
36:BA:2282:G:O2'	36:BA:2283:C:OP2	2.35	0.42
36:BA:2330:G:H2'	36:BA:2331:G:O4'	2.18	0.42
36:BA:2656:U:H3	36:BA:2665:A:H2	1.68	0.42
37:BB:88:C:H2'	37:BB:89:G:C8	2.54	0.42
41:BF:135:LYS:HB3	41:BF:138:GLU:HB2	2.00	0.42
41:BF:185:ASP:O	41:BF:186:ILE:C	2.62	0.42
42:BG:133:LEU:HD12	42:BG:133:LEU:O	2.20	0.42
43:BH:152:ARG:O	43:BH:153:LYS:C	2.61	0.42
45:BN:26:LEU:HA	45:BN:29:LYS:NZ	2.34	0.42
45:BN:60:ILE:HG22	45:BN:61:ARG:N	2.35	0.42
46:BO:19:ILE:HD12	46:BO:41:ALA:CB	2.50	0.42
47:BP:16:ARG:NE	47:BP:18:ARG:HB2	2.33	0.42
48:BQ:139:GLU:CD	57:BZ:99:TYR:HE2	2.28	0.42
50:BS:29:PHE:HD1	50:BS:30:ARG:N	2.18	0.42
56:BY:13:VAL:CG2	56:BY:73:ARG:C	2.91	0.42
56:BY:28:LYS:HG2	56:BY:39:VAL:HG22	1.99	0.42
56:BY:51:VAL:CG1	56:BY:53:PRO:HD2	2.35	0.42
1:CA:106:C:O2	1:CA:379:C:H4'	2.20	0.42
1:CA:186:C:H2'	1:CA:187:C:C6	2.55	0.42
1:CA:601:C:H2'	1:CA:602:A:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:741:G:C2'	1:CA:742:G:H5'	2.49	0.42
1:CA:779:C:H1'	11:CK:120:ARG:HD2	2.00	0.42
1:CA:1133:G:C1'	1:CA:1142:G:H22	2.32	0.42
2:CB:203:GLY:O	2:CB:204:ASN:C	2.62	0.42
4:CD:15:GLU:HG3	4:CD:63:LYS:HE2	2.01	0.42
7:CG:92:SER:O	7:CG:96:GLN:HG3	2.19	0.42
12:CL:104:VAL:HG12	12:CL:105:TYR:CD1	2.54	0.42
14:CN:41:ARG:C	14:CN:41:ARG:HD2	2.44	0.42
15:CO:33:THR:CG2	15:CO:85:LEU:HD21	2.42	0.42
17:CQ:43:LEU:HD12	17:CQ:68:ARG:HB3	2.00	0.42
20:CT:82:SER:O	20:CT:86:ARG:CB	2.64	0.42
25:CY:98:MET:C	25:CY:100:VAL:N	2.77	0.42
25:CY:122:TRP:HH2	25:CY:256:THR:OG1	2.03	0.42
25:CY:406:GLU:HB3	25:CY:407:PRO:CD	2.48	0.42
25:CY:461:ILE:HD11	59:CY:701:FUA:H21	2.00	0.42
25:CY:610:VAL:HG11	25:CY:655:TYR:OH	2.20	0.42
28:D2:6:VAL:HA	28:D2:9:GLN:OE1	2.19	0.42
28:D2:15:LYS:O	28:D2:15:LYS:HG3	2.19	0.42
28:D2:46:GLN:O	28:D2:47:ASN:O	2.38	0.42
34:D8:56:GLU:C	34:D8:58:ILE:H	2.27	0.42
36:DA:28:A:H1'	36:DA:513:A:C2	2.55	0.42
36:DA:552:G:H5'	36:DA:552:G:H8	1.85	0.42
36:DA:654(N):G:H2'	36:DA:654(O):G:H5'	2.01	0.42
36:DA:709:U:H6	36:DA:709:U:O5'	2.02	0.42
36:DA:1087:G:H5''	36:DA:1088:A:OP2	2.18	0.42
36:DA:1173:G:H5'	36:DA:1174:A:O5'	2.19	0.42
36:DA:1838:C:O2'	36:DA:1839:G:P	2.78	0.42
36:DA:2003:G:C6	36:DA:2004:G:C5	3.07	0.42
36:DA:2157:G:O2'	36:DA:2158:A:O5'	2.33	0.42
36:DA:2376:A:H2'	36:DA:2377:A:O4'	2.20	0.42
38:DC:43:GLU:HG3	38:DC:216:THR:HG23	2.02	0.42
39:DD:241:PRO:C	39:DD:242:ARG:HG3	2.43	0.42
42:DG:6:ALA:O	42:DG:10:LYS:HB2	2.19	0.42
42:DG:23:PHE:CD1	42:DG:23:PHE:N	2.88	0.42
42:DG:97:ASP:H	42:DG:100:TRP:HD1	1.67	0.42
42:DG:101:ILE:HG22	42:DG:102:PHE:N	2.34	0.42
42:DG:140:ILE:C	42:DG:140:ILE:HD12	2.44	0.42
43:DH:121:ILE:HA	43:DH:134:SER:O	2.19	0.42
45:DN:78:TYR:CD1	45:DN:78:TYR:N	2.88	0.42
45:DN:90:MET:HB3	45:DN:98:VAL:HG22	2.00	0.42
45:DN:128:HIS:HE1	45:DN:134:ARG:HH11	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DP:25:SER:O	47:DP:30:THR:CG2	2.66	0.42
48:DQ:21:THR:CG2	48:DQ:101:ARG:HB2	2.50	0.42
49:DR:7:GLY:C	49:DR:8:ARG:NE	2.77	0.42
50:DS:101:LEU:C	50:DS:101:LEU:CD1	2.93	0.42
51:DT:1:MET:H1	51:DT:7:ILE:HD11	1.84	0.42
52:DU:26:GLY:C	52:DU:28:ARG:H	2.27	0.42
52:DU:98:LEU:O	52:DU:106:PHE:HB2	2.19	0.42
52:DU:101:ARG:C	52:DU:102:GLU:HG2	2.44	0.42
54:DW:12:ILE:HG13	54:DW:42:ARG:NH1	2.35	0.42
54:DW:17:VAL:O	54:DW:18:ARG:C	2.63	0.42
54:DW:47:VAL:HA	54:DW:50:VAL:CG1	2.49	0.42
56:DY:8:LYS:HE3	56:DY:74:PRO:HD3	2.02	0.42
57:DZ:18:LEU:O	57:DZ:21:ALA:N	2.47	0.42
57:DZ:23:LYS:CD	57:DZ:38:TYR:HE1	2.33	0.42
1:AA:67:C:O2'	1:AA:171:A:H1'	2.20	0.42
1:AA:186:C:H1'	20:AT:81:LYS:HE2	2.00	0.42
1:AA:538:G:O2'	1:AA:539:A:H5'	2.19	0.42
1:AA:779:C:H1'	11:AK:120:ARG:HD2	2.02	0.42
1:AA:965:A:C2	1:AA:969:A:C2	3.08	0.42
3:AC:66:VAL:O	3:AC:66:VAL:HG12	2.18	0.42
4:AD:50:ARG:HA	4:AD:51:PRO:HD3	1.89	0.42
4:AD:100:ARG:O	4:AD:103:ASN:HB3	2.18	0.42
4:AD:129:ASN:HD21	4:AD:145:GLU:N	2.18	0.42
7:AG:91:VAL:HG12	7:AG:92:SER:H	1.84	0.42
13:AM:57:ARG:CG	13:AM:58:GLU:N	2.82	0.42
13:AM:68:GLY:C	13:AM:70:LEU:N	2.78	0.42
17:AQ:52:LYS:HD3	17:AQ:55:ASP:OD2	2.19	0.42
20:AT:11:SER:HA	20:AT:13:LEU:HD12	2.02	0.42
22:AV:70:G:O2'	22:AV:71:G:H5'	2.19	0.42
23:AW:33:U:O2	23:AW:33:U:H2'	2.19	0.42
25:AY:14:ASN:ND2	25:AY:80:ASN:HD22	2.16	0.42
25:AY:25:LYS:HB2	60:AY:702:GDP:O2B	2.19	0.42
25:AY:35:TYR:HE2	25:AY:269:VAL:CB	2.28	0.42
25:AY:136:ALA:HB3	25:AY:260:LEU:CB	2.50	0.42
25:AY:138:LYS:HE2	60:AY:702:GDP:C4	2.55	0.42
25:AY:414:GLU:O	25:AY:474:ALA:HB1	2.19	0.42
25:AY:427:ALA:O	25:AY:431:LEU:HB2	2.20	0.42
25:AY:616:TYR:OH	25:AY:666:ARG:HD3	2.19	0.42
25:AY:673:PHE:CG	25:AY:674:ASP:N	2.88	0.42
25:AY:681:LYS:HD2	25:AY:681:LYS:C	2.45	0.42
30:B4:9:LEU:HD13	30:B4:10:VAL:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:54:ILE:HD13	36:BA:2420:C:C4'	2.49	0.42
36:BA:292:C:H2'	36:BA:293:U:C6	2.53	0.42
36:BA:299:A:H5'	56:BY:97:ARG:HE	1.84	0.42
36:BA:327:G:O2'	36:BA:328:U:H5'	2.19	0.42
36:BA:531:C:OP1	36:BA:561:G:N1	2.51	0.42
36:BA:784:A:N6	39:BD:229:VAL:HG11	2.35	0.42
36:BA:948:G:OP1	36:BA:962:G:OP1	2.38	0.42
36:BA:1015:G:H2'	36:BA:1016:G:C8	2.55	0.42
36:BA:1400:G:H2'	36:BA:1401:G:C8	2.55	0.42
36:BA:1453:U:P	49:BR:77:ARG:HH11	2.42	0.42
36:BA:1479:G:N2	36:BA:1513:C:H1'	2.35	0.42
36:BA:2103:C:C1'	36:BA:2187:G:H1	2.30	0.42
36:BA:2286:A:H8	36:BA:2287:A:C6	2.38	0.42
36:BA:2292:C:H2'	36:BA:2293:C:H6	1.83	0.42
36:BA:2296:U:C4'	36:BA:2297:C:OP1	2.62	0.42
36:BA:2662:A:H2'	36:BA:2663:G:O4'	2.19	0.42
36:BA:2733:A:H2	40:BE:203:LYS:O	2.02	0.42
36:BA:2840:C:H2'	36:BA:2841:C:H6	1.84	0.42
38:BC:79:ALA:HB1	38:BC:83:LYS:CB	2.48	0.42
40:BE:59:VAL:O	40:BE:60:ASN:CG	2.62	0.42
40:BE:109:LYS:HE2	40:BE:191:PRO:HA	2.01	0.42
40:BE:147:PRO:HG2	40:BE:148:GLY:H	1.83	0.42
41:BF:8:GLN:NE2	41:BF:9:ILE:N	2.67	0.42
42:BG:9:ARG:O	42:BG:10:LYS:C	2.63	0.42
42:BG:42:GLY:O	42:BG:44:GLY:N	2.52	0.42
42:BG:55:LYS:CD	42:BG:58:GLN:HE21	2.32	0.42
42:BG:110:ALA:C	42:BG:112:PRO:HD2	2.45	0.42
45:BN:129:PRO:O	45:BN:130:HIS:CB	2.59	0.42
46:BO:10:VAL:O	46:BO:10:VAL:HG23	2.18	0.42
46:BO:77:ILE:HD11	51:BT:72:VAL:HG11	2.02	0.42
47:BP:48:PRO:O	47:BP:49:ARG:C	2.63	0.42
49:BR:26:LYS:CE	49:BR:71:GLN:H	2.31	0.42
49:BR:41:ALA:O	49:BR:43:GLU:N	2.52	0.42
51:BT:28:VAL:HG22	51:BT:46:GLU:HG3	2.02	0.42
51:BT:81:PRO:C	51:BT:82:LEU:HD12	2.43	0.42
52:BU:5:LYS:O	52:BU:6:THR:C	2.61	0.42
56:BY:96:ILE:CG2	56:BY:99:CYS:HB3	2.49	0.42
57:BZ:7:ALA:HB3	57:BZ:61:LEU:HD23	2.01	0.42
1:CA:300:A:H2'	1:CA:301:G:O4'	2.19	0.42
1:CA:376:G:N3	1:CA:389:A:C2	2.88	0.42
1:CA:923:A:O2'	1:CA:924:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1054:C:OP1	1:CA:1198:G:OP2	2.37	0.42
1:CA:1108:G:H5'	3:CC:176:HIS:CD2	2.55	0.42
1:CA:1216:G:H2'	1:CA:1217:C:C6	2.55	0.42
1:CA:1271:G:H2'	1:CA:1272:G:C8	2.55	0.42
2:CB:50:GLU:O	2:CB:51:LEU:C	2.62	0.42
2:CB:144:ARG:O	2:CB:145:LEU:C	2.62	0.42
2:CB:147:LYS:HE2	2:CB:148:TYR:CE1	2.54	0.42
6:CF:33:TYR:O	6:CF:34:GLY:C	2.62	0.42
6:CF:37:VAL:HG12	6:CF:38:GLU:O	2.19	0.42
9:CI:84:ALA:C	9:CI:86:VAL:N	2.77	0.42
10:CJ:4:ILE:N	10:CJ:4:ILE:CD1	2.79	0.42
10:CJ:49:VAL:HG22	10:CJ:50:ILE:N	2.35	0.42
13:CM:74:VAL:O	13:CM:78:ILE:HG13	2.20	0.42
15:CO:11:VAL:O	15:CO:12:ILE:C	2.61	0.42
15:CO:56:LEU:HD21	36:DA:715:G:N3	2.35	0.42
16:CP:12:LYS:O	16:CP:13:HIS:HB2	2.20	0.42
19:CS:15:LEU:HD21	19:CS:33:THR:OG1	2.20	0.42
19:CS:42:PRO:C	19:CS:43:GLU:HG3	2.45	0.42
23:CW:34:C:O2	23:CW:34:C:O4'	2.37	0.42
25:CY:687:LEU:C	25:CY:688:ILE:HD12	2.44	0.42
26:D0:21:LEU:HD22	26:D0:39:ARG:O	2.18	0.42
31:D5:2:ALA:N	36:DA:2015:A:H1'	2.35	0.42
32:D6:5:VAL:HG21	36:DA:2283:C:O3'	2.19	0.42
32:D6:15:GLU:HG3	32:D6:47:THR:CG2	2.41	0.42
33:D7:27:GLY:HA2	33:D7:30:VAL:HG23	2.01	0.42
36:DA:206:U:O2	36:DA:206:U:H2'	2.20	0.42
36:DA:216:A:C4	36:DA:432:A:C2	3.07	0.42
36:DA:742:G:H2'	36:DA:743:G:H8	1.85	0.42
36:DA:751:A:C5'	54:DW:90:ARG:HA	2.48	0.42
36:DA:783:A:H2'	36:DA:784:A:O5'	2.20	0.42
36:DA:948:G:H1	36:DA:969:U:H3	1.68	0.42
36:DA:1188:U:C5'	53:DV:79:VAL:CG1	2.98	0.42
36:DA:1230:C:H2'	36:DA:1231:G:C8	2.54	0.42
36:DA:1308:A:N6	36:DA:1606:G:H1'	2.34	0.42
36:DA:1555:G:H2'	36:DA:1555:G:N3	2.34	0.42
36:DA:1677:A:H2'	36:DA:1678:G:H8	1.81	0.42
36:DA:1930:G:HO2'	36:DA:1968:G:H1	1.67	0.42
36:DA:2262:U:O2'	36:DA:2263:C:C5'	2.68	0.42
36:DA:2579:C:O2'	36:DA:2580:U:H5'	2.19	0.42
36:DA:2636:U:O5'	40:DE:80:GLU:HG3	2.19	0.42
37:DB:30:C:H2'	37:DB:31:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:38:C:O2	37:DB:48:A:H1'	2.18	0.42
38:DC:11:LEU:CD2	38:DC:14:LYS:HZ3	2.33	0.42
38:DC:46:ALA:HA	38:DC:212:SER:O	2.19	0.42
38:DC:92:ALA:HB3	38:DC:95:VAL:HG22	2.02	0.42
39:DD:30:GLU:OE1	39:DD:63:ARG:HG2	2.19	0.42
39:DD:228:PRO:HD3	39:DD:235:GLY:CA	2.49	0.42
39:DD:242:ARG:HB2	39:DD:243:GLY:H	1.58	0.42
40:DE:26:ILE:CG2	40:DE:196:VAL:HG21	2.50	0.42
40:DE:27:LEU:HD12	40:DE:180:ASN:O	2.20	0.42
40:DE:65:GLY:O	40:DE:67:PHE:N	2.52	0.42
41:DF:9:ILE:HG12	41:DF:14:PRO:HA	2.00	0.42
45:DN:34:LEU:O	45:DN:49:GLY:HA3	2.19	0.42
45:DN:43:THR:O	45:DN:44:PRO:C	2.61	0.42
47:DP:23:PRO:O	47:DP:29:LYS:O	2.37	0.42
50:DS:20:ARG:NE	50:DS:20:ARG:CA	2.82	0.42
57:DZ:5:LEU:O	57:DZ:59:LEU:HA	2.19	0.42
57:DZ:17:ALA:HA	57:DZ:20:ARG:HD3	2.00	0.42
57:DZ:78:LYS:NZ	57:DZ:84:GLU:OE1	2.53	0.42
1:AA:72:C:H2'	1:AA:73:G:H8	1.83	0.42
1:AA:161:A:O2'	1:AA:162:A:H5'	2.19	0.42
1:AA:193:C:H2'	1:AA:194:C:C6	2.55	0.42
1:AA:238:G:O2'	1:AA:239:U:H5'	2.19	0.42
1:AA:474:G:H2'	1:AA:475:G:H8	1.84	0.42
1:AA:773:G:C2'	1:AA:774:G:H5'	2.50	0.42
1:AA:1112:C:H1'	3:AC:179:ARG:HD3	2.00	0.42
1:AA:1299:A:C2	1:AA:1301:U:C2	3.07	0.42
2:AB:73:THR:O	2:AB:75:LYS:N	2.52	0.42
2:AB:77:ALA:O	2:AB:78:GLN:O	2.38	0.42
3:AC:51:GLY:O	3:AC:115:LEU:HD21	2.19	0.42
3:AC:139:GLN:O	3:AC:140:ARG:C	2.61	0.42
6:AF:60:PHE:CE2	18:AR:78:LEU:HD21	2.55	0.42
9:AI:95:LYS:NZ	9:AI:96:LEU:HD13	2.25	0.42
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.52	0.42
10:AJ:79:ARG:C	10:AJ:81:THR:H	2.26	0.42
14:AN:21:TYR:CE2	14:AN:23:ARG:NH2	2.87	0.42
22:AV:49:C:H2'	22:AV:50:U:C6	2.55	0.42
25:AY:137:ASN:ND2	25:AY:263:ALA:H	2.17	0.42
25:AY:409:ILE:O	25:AY:459:LEU:HD21	2.20	0.42
25:AY:555:LEU:HG	25:AY:599:PRO:CB	2.44	0.42
25:AY:632:LEU:HD11	25:AY:646:PHE:CE2	2.55	0.42
59:AY:701:FUA:C15	59:AY:701:FUA:H323	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:46:LYS:HD2	26:B0:78:TYR:CZ	2.54	0.42
27:B1:71:TYR:N	27:B1:71:TYR:HD1	2.18	0.42
27:B1:83:GLU:O	27:B1:84:GLY:O	2.38	0.42
28:B2:38:GLN:HA	28:B2:41:ILE:HG23	2.00	0.42
31:B5:53:ALA:C	31:B5:55:ARG:N	2.77	0.42
34:B8:56:GLU:O	34:B8:59:LYS:HE3	2.20	0.42
36:BA:173:G:N3	36:BA:173:G:H2'	2.35	0.42
36:BA:271(M):G:H2'	36:BA:271(N):U:H5''	2.02	0.42
36:BA:649:G:H2'	36:BA:650:C:C6	2.55	0.42
36:BA:650:C:C2'	36:BA:651:G:H5''	2.50	0.42
36:BA:662:G:H2'	36:BA:663:G:H8	1.84	0.42
36:BA:695:G:OP1	36:BA:1380:G:H4'	2.19	0.42
36:BA:752:A:H4'	36:BA:753:C:O5'	2.20	0.42
36:BA:870:A:C2	36:BA:871:U:H1'	2.54	0.42
36:BA:1338:G:N2	36:BA:1339:G:H1'	2.34	0.42
36:BA:1485:G:H2'	36:BA:1486:A:H8	1.81	0.42
36:BA:1662:C:H2'	36:BA:1663:C:C6	2.54	0.42
36:BA:1782:C:H1'	36:BA:2609:U:C5'	2.36	0.42
36:BA:2075:U:O2'	36:BA:2076:U:H5''	2.20	0.42
36:BA:2293:C:OP1	50:BS:92:TYR:OH	2.38	0.42
36:BA:2439:A:H3'	36:BA:2600:A:OP1	2.19	0.42
36:BA:2559:C:H2'	36:BA:2560:C:H6	1.85	0.42
36:BA:2881:C:C2	36:BA:2882:A:C8	3.07	0.42
40:BE:60:ASN:O	40:BE:61:ARG:C	2.62	0.42
41:BF:101:LEU:HB3	41:BF:106:ARG:HD3	2.02	0.42
43:BH:35:VAL:O	43:BH:37:VAL:HG23	2.19	0.42
43:BH:89:ILE:HG22	43:BH:162:ILE:HG22	2.01	0.42
46:BO:87:ILE:HG22	46:BO:93:PRO:HA	2.01	0.42
48:BQ:43:THR:OG1	48:BQ:45:GLN:HG2	2.19	0.42
48:BQ:108:GLY:C	48:BQ:109:VAL:HG23	2.45	0.42
50:BS:77:ALA:O	50:BS:80:LEU:N	2.52	0.42
53:BV:66:ARG:NH1	53:BV:88:ARG:NE	2.67	0.42
53:BV:99:ILE:HD13	53:BV:99:ILE:H	1.82	0.42
54:BW:20:VAL:CG2	54:BW:47:VAL:HG21	2.49	0.42
56:BY:8:LYS:HE3	56:BY:74:PRO:HD3	2.02	0.42
1:CA:152:A:N6	1:CA:170:U:C2	2.87	0.42
1:CA:187:C:OP1	20:CT:82:SER:HB2	2.19	0.42
1:CA:260:G:H2'	1:CA:261:U:C6	2.55	0.42
1:CA:375:U:H2'	1:CA:376:G:C8	2.54	0.42
1:CA:505:G:H5'	1:CA:534:U:H2'	2.02	0.42
1:CA:537:G:H2'	1:CA:538:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:821:G:H2'	1:CA:822:C:C6	2.54	0.42
1:CA:1248:A:C5	1:CA:1249:C:C5	3.08	0.42
1:CA:1346:A:N6	1:CA:1375:A:OP2	2.45	0.42
1:CA:1401:G:C2'	1:CA:1402:C:H5'	2.50	0.42
2:CB:119:GLU:O	2:CB:121:LEU:N	2.51	0.42
2:CB:187:LEU:CD1	2:CB:205:ASP:HA	2.50	0.42
2:CB:231:GLU:HB2	2:CB:232:PRO:CD	2.50	0.42
3:CC:87:LEU:O	3:CC:88:ARG:C	2.62	0.42
4:CD:26:CYS:HA	4:CD:31:CYS:HA	2.01	0.42
4:CD:168:ARG:HA	4:CD:168:ARG:HH11	1.83	0.42
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.85	0.42
4:CD:173:TRP:CZ3	4:CD:193:ASP:HB3	2.54	0.42
4:CD:179:GLU:C	4:CD:181:MET:N	2.77	0.42
7:CG:23:VAL:CG1	7:CG:43:PHE:CE2	3.01	0.42
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	2.01	0.42
8:CH:121:ASP:O	8:CH:122:ARG:C	2.63	0.42
9:CI:93:ARG:O	9:CI:95:LYS:N	2.52	0.42
10:CJ:63:PHE:HB3	14:CN:58:LYS:CA	2.41	0.42
10:CJ:79:ARG:NH1	10:CJ:79:ARG:HG2	2.34	0.42
12:CL:8:ASN:HB2	17:CQ:34:LYS:NZ	2.34	0.42
12:CL:20:LYS:H	12:CL:20:LYS:CD	2.23	0.42
20:CT:38:LYS:C	20:CT:40:ALA:N	2.76	0.42
25:CY:117:GLN:C	25:CY:119:GLU:N	2.66	0.42
25:CY:141:LYS:CE	60:CY:702:GDP:HN22	2.31	0.42
25:CY:157:LEU:N	25:CY:157:LEU:CD2	2.74	0.42
25:CY:188:TYR:CE1	25:CY:196:ILE:HG22	2.54	0.42
25:CY:217:VAL:HA	25:CY:220:ALA:HB3	2.01	0.42
25:CY:350:GLU:HA	25:CY:350:GLU:OE1	2.19	0.42
25:CY:438:PHE:HD2	25:CY:462:ILE:CD1	2.32	0.42
25:CY:491:VAL:CG2	25:CY:597:GLY:HA2	2.49	0.42
25:CY:584:ILE:C	25:CY:586:GLY:H	2.28	0.42
32:D6:8:LYS:O	32:D6:9:LEU:O	2.37	0.42
34:D8:33:ASN:O	34:D8:34:TRP:CB	2.66	0.42
36:DA:657:U:H2'	36:DA:658:C:C5	2.54	0.42
36:DA:718:A:H3'	36:DA:719:C:H6	1.84	0.42
36:DA:803:U:H2'	36:DA:804:A:H5'	2.01	0.42
36:DA:857:C:N4	36:DA:858:U:O4	2.52	0.42
36:DA:1131:G:N3	36:DA:1132:A:C8	2.87	0.42
36:DA:1197:G:H2'	36:DA:1198:U:C6	2.48	0.42
36:DA:1565:C:H3'	39:DD:18:VAL:HG21	2.01	0.42
36:DA:1722:A:O2'	36:DA:1739:U:C5'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2647:U:H2'	36:DA:2648:C:H6	1.83	0.42
36:DA:2662:A:H2'	36:DA:2663:G:O4'	2.19	0.42
36:DA:2762:G:H8	36:DA:2762:G:C5'	2.30	0.42
40:DE:31:CYS:HA	40:DE:32:PRO:HD3	1.78	0.42
40:DE:31:CYS:C	40:DE:90:THR:HG23	2.44	0.42
41:DF:89:VAL:CG1	41:DF:90:PHE:H	2.19	0.42
42:DG:133:LEU:CD1	42:DG:133:LEU:C	2.93	0.42
43:DH:143:GLN:C	43:DH:145:ALA:N	2.76	0.42
44:DJ:94:UNK:O	44:DJ:95:UNK:C	2.66	0.42
45:DN:46:VAL:CG2	45:DN:48:MET:HG3	2.49	0.42
47:DP:23:PRO:CG	47:DP:33:ARG:HE	2.32	0.42
47:DP:102:ARG:CB	47:DP:102:ARG:HH11	2.33	0.42
48:DQ:137:TYR:CD1	48:DQ:137:TYR:N	2.87	0.42
49:DR:87:TYR:C	49:DR:89:ASP:N	2.61	0.42
53:DV:35:LEU:C	53:DV:37:VAL:H	2.26	0.42
56:DY:11:ASP:HA	56:DY:27:VAL:HG22	2.02	0.42
1:AA:703:G:O2'	1:AA:704:A:OP2	2.35	0.42
1:AA:948:C:OP1	13:AM:107:ALA:HA	2.18	0.42
1:AA:949:A:C2	1:AA:1233:G:C4	3.08	0.42
1:AA:1107:C:C4	1:AA:1108:G:C8	3.08	0.42
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.20	0.42
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.55	0.42
1:AA:1362:C:O2'	1:AA:1363:C:H5''	2.20	0.42
2:AB:81:VAL:O	2:AB:82:ARG:C	2.63	0.42
2:AB:238:LEU:O	2:AB:239:VAL:C	2.62	0.42
3:AC:116:VAL:O	3:AC:117:ALA:C	2.63	0.42
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	2.02	0.42
4:AD:98:GLU:CG	4:AD:189:PRO:HG3	2.49	0.42
4:AD:150:GLU:C	4:AD:152:SER:N	2.76	0.42
4:AD:173:TRP:CZ3	4:AD:193:ASP:HB3	2.55	0.42
5:AE:11:ILE:CG2	5:AE:12:LEU:H	2.32	0.42
6:AF:61:LEU:O	6:AF:62:TRP:HB2	2.19	0.42
10:AJ:22:LYS:C	10:AJ:22:LYS:CD	2.93	0.42
10:AJ:99:LYS:HD3	10:AJ:99:LYS:HA	1.80	0.42
12:AL:43:VAL:HG13	12:AL:55:VAL:HG21	2.00	0.42
13:AM:87:TYR:O	13:AM:88:ARG:C	2.62	0.42
13:AM:119:GLY:C	13:AM:121:LYS:H	2.27	0.42
15:AO:39:LEU:O	15:AO:40:SER:C	2.62	0.42
16:AP:74:LEU:O	16:AP:79:VAL:HG23	2.19	0.42
18:AR:40:LEU:C	18:AR:42:ARG:N	2.76	0.42
18:AR:46:GLU:C	18:AR:48:GLY:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:16:LEU:O	19:AS:20:LEU:N	2.46	0.42
19:AS:42:PRO:HB3	30:B4:50:VAL:CG2	2.22	0.42
19:AS:42:PRO:C	19:AS:43:GLU:HG3	2.44	0.42
25:AY:259:PHE:CZ	25:AY:275:ALA:HB1	2.54	0.42
25:AY:414:GLU:C	25:AY:474:ALA:HB1	2.45	0.42
25:AY:498:ILE:O	25:AY:498:ILE:HG13	2.19	0.42
25:AY:555:LEU:HD11	25:AY:599:PRO:C	2.42	0.42
26:B0:27:GLU:CD	36:BA:856:C:H4'	2.44	0.42
27:B1:86:SER:HA	27:B1:89:GLU:OE2	2.19	0.42
30:B4:10:VAL:CG2	30:B4:11:PRO:CD	2.97	0.42
30:B4:25:TYR:N	30:B4:25:TYR:CD1	2.87	0.42
32:B6:27:LYS:CD	32:B6:30:THR:HB	2.45	0.42
36:BA:244:A:H1'	36:BA:255:A:N6	2.35	0.42
36:BA:438:G:H2'	36:BA:440:G:C8	2.55	0.42
36:BA:598:G:H5'	47:BP:15:ARG:HD3	2.02	0.42
36:BA:611:C:H2'	36:BA:612:C:C6	2.54	0.42
36:BA:904:C:O2'	36:BA:905:U:H5'	2.19	0.42
36:BA:1023:U:H2'	36:BA:1024:G:H5'	2.01	0.42
36:BA:1057:A:H2'	36:BA:1058:G:H8	1.84	0.42
36:BA:1317:A:H2'	36:BA:1318:C:C6	2.55	0.42
36:BA:1493:C:O2	36:BA:1493:C:C2'	2.67	0.42
36:BA:2197:U:H1'	36:BA:2198:A:C8	2.54	0.42
39:BD:183:ARG:HD2	39:BD:270:ILE:CG2	2.49	0.42
39:BD:267:SER:C	39:BD:269:PHE:N	2.75	0.42
40:BE:50:GLY:CA	40:BE:74:PRO:HG3	2.48	0.42
40:BE:145:LYS:HD3	40:BE:145:LYS:HA	1.94	0.42
41:BF:24:LEU:CB	41:BF:25:PRO:HD2	2.31	0.42
43:BH:41:MET:HE3	43:BH:43:VAL:HA	2.02	0.42
43:BH:65:HIS:HE1	43:BH:69:ARG:NH1	2.17	0.42
45:BN:58:ASP:OD1	45:BN:124:ALA:HB1	2.19	0.42
45:BN:102:ALA:O	45:BN:106:MET:HE2	2.20	0.42
50:BS:14:VAL:HG12	50:BS:15:ARG:N	2.34	0.42
50:BS:77:ALA:HB1	50:BS:82:ILE:HB	2.00	0.42
50:BS:79:ALA:C	50:BS:81:GLY:H	2.27	0.42
50:BS:89:ARG:HG3	50:BS:92:TYR:CB	2.49	0.42
51:BT:85:LYS:O	51:BT:86:ILE:C	2.62	0.42
51:BT:112:ARG:O	51:BT:115:ARG:HD3	2.19	0.42
53:BV:2:PHE:O	53:BV:3:ALA:CB	2.68	0.42
53:BV:12:TYR:CE2	53:BV:22:VAL:HG12	2.55	0.42
53:BV:52:VAL:O	53:BV:52:VAL:HG13	2.18	0.42
54:BW:82:LEU:N	54:BW:82:LEU:CD1	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BX:7:VAL:CG1	55:BX:39:ILE:HD13	2.50	0.42
55:BX:67:GLY:C	55:BX:69:TYR:H	2.28	0.42
57:BZ:153:SER:O	57:BZ:155:LEU:HD23	2.19	0.42
1:CA:383:A:H2'	1:CA:384:G:H5'	2.01	0.42
1:CA:474:G:H2'	1:CA:475:G:H8	1.85	0.42
1:CA:897:C:O2'	1:CA:898:G:H5'	2.20	0.42
1:CA:1103:C:C4	1:CA:1104:G:N7	2.88	0.42
2:CB:17:PHE:CD1	2:CB:17:PHE:N	2.86	0.42
2:CB:215:LEU:O	2:CB:216:SER:C	2.62	0.42
3:CC:155:GLY:O	3:CC:196:LEU:HD13	2.19	0.42
4:CD:104:VAL:O	4:CD:108:LEU:HB2	2.19	0.42
9:CI:50:LEU:HG	9:CI:81:ILE:HG21	2.02	0.42
11:CK:34:ASP:OD1	11:CK:34:ASP:C	2.62	0.42
13:CM:66:LEU:HA	13:CM:70:LEU:CD1	2.49	0.42
15:CO:26:GLU:HA	15:CO:81:LEU:CD2	2.47	0.42
15:CO:85:LEU:O	15:CO:85:LEU:HD23	2.20	0.42
20:CT:74:LYS:HB2	20:CT:75:ASN:H	1.44	0.42
22:CV:70:G:O2'	22:CV:71:G:H5'	2.20	0.42
25:CY:230:LYS:HD2	25:CY:235:GLU:OE1	2.19	0.42
25:CY:253:LEU:HD12	25:CY:253:LEU:N	2.34	0.42
25:CY:295:GLU:HB2	25:CY:296:GLY:H	1.72	0.42
25:CY:601:ILE:HD13	25:CY:687:LEU:HD12	2.02	0.42
26:D0:14:ARG:HH11	26:D0:14:ARG:CB	2.27	0.42
26:D0:41:ARG:O	26:D0:42:GLY:O	2.37	0.42
27:D1:25:LYS:HB2	36:DA:388:G:H5'	2.01	0.42
30:D4:27:THR:O	30:D4:28:LYS:CB	2.67	0.42
36:DA:27:G:C2'	36:DA:28:A:OP2	2.68	0.42
36:DA:252:G:H2'	36:DA:253:C:H6	1.84	0.42
36:DA:465:G:H2'	36:DA:466:A:C8	2.55	0.42
36:DA:560:C:H4'	52:DU:52:ARG:NH2	2.35	0.42
36:DA:587:C:C5	36:DA:671:C:H1'	2.55	0.42
36:DA:688:U:H2'	36:DA:689:A:C8	2.54	0.42
36:DA:955:C:H2'	36:DA:956:G:H5'	2.02	0.42
36:DA:1049:C:H2'	36:DA:1050:A:C8	2.46	0.42
36:DA:1052:C:O2'	36:DA:1053:C:O5'	2.38	0.42
36:DA:1161:C:H2'	36:DA:1162:G:C8	2.54	0.42
36:DA:1308:A:H2'	36:DA:1309:G:O4'	2.19	0.42
36:DA:1545:A:N7	36:DA:1546:C:C2	2.88	0.42
36:DA:2147:G:C2'	36:DA:2148:G:H5'	2.49	0.42
36:DA:2277:G:C6	36:DA:2278:A:N7	2.88	0.42
36:DA:2410:G:H2'	36:DA:2411:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2442:C:H2'	36:DA:2443:C:H6	1.85	0.42
36:DA:2740:A:C6	36:DA:2741:A:C6	3.08	0.42
38:DC:69:LEU:HD21	38:DC:175:PRO:C	2.44	0.42
40:DE:51:PHE:N	40:DE:74:PRO:HG3	2.35	0.42
41:DF:38:ARG:O	41:DF:42:ALA:CB	2.68	0.42
42:DG:77:ILE:CG2	42:DG:80:PHE:CB	2.93	0.42
43:DH:61:HIS:O	43:DH:62:LYS:C	2.62	0.42
45:DN:1:MET:HE2	45:DN:2:LYS:N	2.34	0.42
45:DN:96:GLU:O	45:DN:97:ARG:C	2.62	0.42
47:DP:112:LEU:O	47:DP:112:LEU:HD13	2.19	0.42
49:DR:76:VAL:HG13	49:DR:77:ARG:N	2.34	0.42
51:DT:106:SER:O	51:DT:107:ASP:CB	2.66	0.42
52:DU:112:ARG:NH2	53:DV:46:VAL:HG21	2.34	0.42
57:DZ:10:ARG:NH2	57:DZ:26:GLY:H	2.07	0.42
57:DZ:43:GLU:HG3	57:DZ:44:PHE:N	2.35	0.42
1:AA:181:G:N2	1:AA:195:A:C4	2.88	0.42
1:AA:189(B):C:C2	1:AA:189(J):G:C2	3.08	0.42
1:AA:375:U:O2'	16:AP:28:ARG:HD2	2.19	0.42
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.50	0.42
1:AA:1095:U:P	1:AA:1108:G:H1	2.42	0.42
1:AA:1248:A:C5	1:AA:1249:C:C5	3.07	0.42
1:AA:1300:G:O2'	1:AA:1301:U:OP2	2.38	0.42
4:AD:122:ARG:NH1	4:AD:134:ASP:O	2.52	0.42
8:AH:1:MET:HE3	8:AH:3:THR:HG23	2.01	0.42
8:AH:122:ARG:HH11	8:AH:122:ARG:HB3	1.85	0.42
9:AI:125:TYR:CE1	9:AI:127:LYS:HB2	2.54	0.42
11:AK:99:GLN:HG2	11:AK:105:VAL:CG2	2.44	0.42
12:AL:11:VAL:HG13	17:AQ:29:HIS:HD2	1.84	0.42
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.20	0.42
13:AM:76:ALA:O	13:AM:77:ASN:C	2.61	0.42
13:AM:79:LYS:HA	13:AM:82:MET:HG3	2.00	0.42
15:AO:48:LYS:HD3	15:AO:48:LYS:HA	1.63	0.42
20:AT:13:LEU:C	20:AT:15:ARG:N	2.76	0.42
20:AT:14:LYS:N	20:AT:17:ARG:HH21	2.18	0.42
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.19	0.42
20:AT:104:LEU:HD23	20:AT:105:SER:O	2.18	0.42
25:AY:302:HIS:O	25:AY:304:ASP:N	2.40	0.42
25:AY:546:ILE:HG21	25:AY:565:VAL:HG21	2.01	0.42
25:AY:580:MET:O	25:AY:583:LYS:CB	2.67	0.42
26:B0:51:VAL:HG13	26:B0:60:PHE:O	2.20	0.42
27:B1:71:TYR:N	27:B1:71:TYR:CD1	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:82:LEU:N	27:B1:82:LEU:CD1	2.81	0.42
28:B2:63:VAL:C	28:B2:65:ASN:N	2.77	0.42
36:BA:8:A:H2'	36:BA:9:U:C5	2.55	0.42
36:BA:186:G:H2'	36:BA:187:G:H8	1.85	0.42
36:BA:320:A:H4'	36:BA:322:A:N7	2.34	0.42
36:BA:570:G:O6	36:BA:2499:C:OP1	2.37	0.42
36:BA:1070:A:C2	36:BA:1097:U:H4'	2.55	0.42
36:BA:1087:G:H5''	36:BA:1088:A:OP2	2.19	0.42
36:BA:1568:G:OP2	39:BD:63:ARG:NH2	2.48	0.42
36:BA:1722:A:C2	36:BA:1740:G:C8	3.07	0.42
36:BA:1952:A:C5	46:BO:22:ILE:HD12	2.55	0.42
36:BA:2256:G:O2'	36:BA:2257:U:H5'	2.20	0.42
36:BA:2334:G:N3	50:BS:18:ILE:HD13	2.34	0.42
36:BA:2464:C:O2'	36:BA:2465:C:C6	2.67	0.42
36:BA:2724:C:OP1	40:BE:111:ARG:HD3	2.20	0.42
37:BB:68:C:H2'	37:BB:69:G:O4'	2.19	0.42
37:BB:92:C:H2'	37:BB:93:G:C8	2.54	0.42
38:BC:197:LEU:C	38:BC:199:ALA:N	2.77	0.42
39:BD:30:GLU:CD	39:BD:63:ARG:NE	2.78	0.42
39:BD:179:SER:C	39:BD:181:GLU:N	2.78	0.42
39:BD:181:GLU:HA	39:BD:273:ARG:O	2.19	0.42
39:BD:223:GLY:O	39:BD:225:ALA:N	2.53	0.42
40:BE:76:ARG:O	40:BE:77:ILE:O	2.37	0.42
40:BE:93:VAL:O	40:BE:95:ILE:N	2.53	0.42
41:BF:81:PRO:C	41:BF:83:PHE:N	2.77	0.42
41:BF:192:LEU:C	41:BF:192:LEU:CD2	2.92	0.42
43:BH:61:HIS:O	43:BH:62:LYS:C	2.62	0.42
45:BN:26:LEU:C	45:BN:26:LEU:CD1	2.86	0.42
45:BN:43:THR:O	45:BN:44:PRO:C	2.63	0.42
45:BN:51:PHE:CD1	45:BN:51:PHE:N	2.88	0.42
46:BO:64:ARG:O	46:BO:82:ASN:HA	2.20	0.42
49:BR:7:GLY:C	49:BR:8:ARG:NE	2.78	0.42
49:BR:23:ASN:O	49:BR:27:SER:HB2	2.20	0.42
52:BU:62:ILE:HG23	52:BU:76:TYR:CE2	2.55	0.42
56:BY:61:ILE:CG1	56:BY:62:GLU:N	2.83	0.42
57:BZ:80:ARG:O	57:BZ:81:ARG:O	2.38	0.42
1:CA:78:G:H22	1:CA:91:C:N4	2.18	0.42
1:CA:400:C:H2'	1:CA:401:C:C6	2.55	0.42
1:CA:557:G:H2'	1:CA:558:G:O4'	2.19	0.42
1:CA:636:U:H5''	17:CQ:2:PRO:HG3	2.00	0.42
1:CA:784:C:H2'	1:CA:785:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:973:G:C1'	10:CJ:55:LYS:CE	2.84	0.42
1:CA:1277:C:H2'	1:CA:1278:U:C5'	2.36	0.42
1:CA:1379:G:C6	1:CA:1380:U:C4	3.08	0.42
1:CA:1490:C:C6	1:CA:1490:C:C5'	2.97	0.42
2:CB:81:VAL:O	2:CB:82:ARG:C	2.63	0.42
3:CC:52:LEU:HD12	3:CC:55:VAL:HG22	2.02	0.42
3:CC:80:GLY:HA3	3:CC:82:GLU:OE2	2.19	0.42
12:CL:23:LYS:HE3	12:CL:89:ARG:HE	1.85	0.42
13:CM:72:ALA:O	13:CM:75:ALA:N	2.52	0.42
13:CM:106:ASN:O	13:CM:107:ALA:CB	2.64	0.42
17:CQ:76:LEU:HD12	17:CQ:77:VAL:N	2.35	0.42
18:CR:40:LEU:C	18:CR:42:ARG:N	2.77	0.42
19:CS:15:LEU:HD22	19:CS:15:LEU:HA	1.86	0.42
23:CW:33:U:O2	23:CW:33:U:H2'	2.19	0.42
23:CW:38:A:C3'	23:CW:39:C:P	3.04	0.42
27:D1:29:GLY:C	27:D1:30:VAL:HG22	2.44	0.42
28:D2:59:ARG:O	28:D2:61:LEU:N	2.53	0.42
30:D4:26:SER:HB3	42:DG:105:LYS:NZ	2.35	0.42
32:D6:12:GLU:HB3	32:D6:23:THR:HG22	2.02	0.42
32:D6:15:GLU:HB2	32:D6:49:HIS:NE2	2.34	0.42
36:DA:26:G:P	54:DW:80:PRO:HB3	2.59	0.42
36:DA:614:U:H2'	36:DA:614(A):U:O4'	2.19	0.42
36:DA:624:C:N4	47:DP:107:LYS:NZ	2.67	0.42
36:DA:649:G:C2	36:DA:650:C:C2	3.08	0.42
36:DA:662:G:H2'	36:DA:663:G:C8	2.54	0.42
36:DA:1052:C:H3'	36:DA:1052:C:C6	2.53	0.42
36:DA:1052:C:O2'	36:DA:1053:C:P	2.78	0.42
36:DA:1287:A:C2	36:DA:1288:U:C2	3.07	0.42
36:DA:1292:U:H2'	36:DA:1293:C:C6	2.55	0.42
36:DA:1528:A:C2	36:DA:1542:A:H2	2.38	0.42
36:DA:1836:C:O2'	36:DA:1837:C:H5'	2.19	0.42
36:DA:1902:C:C4'	39:DD:244:ARG:HB2	2.49	0.42
36:DA:1984:G:H2'	36:DA:1985:G:H8	1.85	0.42
36:DA:2453:A:O2'	36:DA:2454:G:H5'	2.20	0.42
36:DA:2561:A:H2'	36:DA:2562:U:O4'	2.19	0.42
36:DA:2778:A:C5'	36:DA:2779:U:OP2	2.58	0.42
36:DA:2869:G:C5	36:DA:2870:C:C4	3.07	0.42
37:DB:45:A:C1'	42:DG:95:ARG:NH1	2.79	0.42
37:DB:82:G:C2	37:DB:83:G:C8	3.07	0.42
38:DC:79:ALA:HB1	38:DC:83:LYS:CB	2.46	0.42
38:DC:217:THR:O	38:DC:218:THR:C	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:24:ILE:HG23	39:DD:25:THR:N	2.25	0.42
39:DD:111:LEU:HD23	39:DD:127:VAL:HG12	2.01	0.42
39:DD:155:LEU:HD23	39:DD:177:LEU:HD22	2.01	0.42
39:DD:183:ARG:NH1	39:DD:183:ARG:CG	2.77	0.42
40:DE:93:VAL:C	40:DE:95:ILE:N	2.77	0.42
41:DF:5:ALA:HB1	41:DF:125:LEU:HD21	2.02	0.42
42:DG:56:ALA:HA	42:DG:59:GLU:OE2	2.20	0.42
43:DH:20:ALA:CB	43:DH:21:PRO:CD	2.95	0.42
45:DN:62:VAL:HG22	45:DN:66:LYS:CG	2.46	0.42
47:DP:99:LEU:O	47:DP:103:ALA:HB2	2.19	0.42
49:DR:28:LEU:CD2	49:DR:29:LEU:HD12	2.45	0.42
51:DT:81:PRO:C	51:DT:82:LEU:HD12	2.44	0.42
53:DV:64:HIS:HA	53:DV:92:THR:HA	2.01	0.42
54:DW:82:LEU:N	54:DW:82:LEU:CD1	2.82	0.42
55:DX:34:ALA:HA	55:DX:38:GLU:OE1	2.19	0.42
56:DY:26:LYS:O	56:DY:27:VAL:C	2.63	0.42
56:DY:46:LYS:H	56:DY:62:GLU:CB	2.15	0.42
56:DY:99:CYS:O	56:DY:100:ALA:O	2.38	0.42
1:AA:33:A:O2'	1:AA:363:A:N3	2.52	0.42
1:AA:179:A:O2'	1:AA:180:U:H5'	2.19	0.42
1:AA:342:C:C5	1:AA:343:U:C5	3.07	0.42
1:AA:417:C:H2'	1:AA:418:C:C6	2.54	0.42
1:AA:858:G:O2'	1:AA:859:A:H5''	2.19	0.42
1:AA:1010:G:H2'	1:AA:1011:G:H8	1.85	0.42
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	2.02	0.42
2:AB:50:GLU:O	2:AB:51:LEU:C	2.63	0.42
4:AD:168:ARG:HA	4:AD:168:ARG:HH11	1.83	0.42
5:AE:143:ARG:NH1	8:AH:77:GLU:OE2	2.52	0.42
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.34	0.42
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.55	0.42
10:AJ:78:ASN:HB2	10:AJ:81:THR:CG2	2.48	0.42
11:AK:122:LYS:O	11:AK:123:LYS:C	2.62	0.42
13:AM:10:PRO:HB2	13:AM:18:ALA:CB	2.44	0.42
14:AN:41:ARG:HD2	14:AN:41:ARG:C	2.44	0.42
15:AO:11:VAL:O	15:AO:12:ILE:C	2.63	0.42
16:AP:75:ARG:C	16:AP:77:ALA:H	2.27	0.42
25:AY:36:THR:HG21	25:AY:72:CYS:SG	2.60	0.42
25:AY:380:LEU:C	25:AY:381:LYS:HD2	2.45	0.42
25:AY:413:ILE:HG22	25:AY:449:THR:O	2.19	0.42
25:AY:641:GLN:HE21	25:AY:641:GLN:HB2	1.67	0.42
59:AY:701:FUA:H231	59:AY:701:FUA:C12	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:20:GLU:O	28:B2:21:LEU:C	2.63	0.42
32:B6:12:GLU:HB3	32:B6:23:THR:HG22	2.02	0.42
36:BA:205:G:O2'	36:BA:206:U:OP2	2.37	0.42
36:BA:465:G:H2'	36:BA:466:A:C8	2.54	0.42
36:BA:901:A:H2'	36:BA:901:A:N3	2.35	0.42
36:BA:948:G:H1	36:BA:969:U:H3	1.68	0.42
36:BA:1247:A:O2'	36:BA:1248:G:H5'	2.20	0.42
36:BA:1536:C:H2'	36:BA:1537:G:C4'	2.46	0.42
36:BA:1722:A:O2'	36:BA:1739:U:C5'	2.67	0.42
36:BA:2205:C:H5'	36:BA:2206:G:OP2	2.19	0.42
36:BA:2492:U:H2'	36:BA:2493:U:H6	1.85	0.42
36:BA:2767:C:H2'	36:BA:2768:C:C6	2.55	0.42
36:BA:2840:C:H4'	49:BR:53:HIS:HD2	1.83	0.42
37:BB:60:C:H2'	37:BB:61:G:C8	2.50	0.42
37:BB:113:G:H2'	37:BB:113:G:N3	2.33	0.42
38:BC:15:VAL:O	38:BC:15:VAL:HG23	2.20	0.42
40:BE:188:VAL:O	40:BE:189:PRO:O	2.38	0.42
44:BJ:123:UNK:C	44:BJ:124:UNK:O	2.68	0.42
45:BN:34:LEU:HD12	45:BN:119:ARG:HB2	2.01	0.42
46:BO:60:ALA:HA	46:BO:87:ILE:CD1	2.50	0.42
47:BP:112:LEU:O	47:BP:112:LEU:HD13	2.20	0.42
47:BP:125:VAL:O	47:BP:125:VAL:HG13	2.20	0.42
52:BU:76:TYR:CD1	52:BU:76:TYR:C	2.97	0.42
52:BU:113:ALA:O	52:BU:115:ALA:N	2.53	0.42
53:BV:35:LEU:C	53:BV:37:VAL:H	2.28	0.42
57:BZ:4:ARG:HA	57:BZ:58:VAL:O	2.19	0.42
57:BZ:53:ILE:HG22	57:BZ:71:VAL:HB	2.02	0.42
57:BZ:168:GLU:OE1	57:BZ:168:GLU:CA	2.67	0.42
57:BZ:176:PRO:HA	57:BZ:177:PRO:HD3	1.78	0.42
1:CA:110:C:H2'	1:CA:111:G:O4'	2.20	0.42
1:CA:161:A:O2'	1:CA:162:A:H5'	2.20	0.42
1:CA:192:U:C4'	20:CT:103:GLY:HA2	2.49	0.42
1:CA:345:C:C5'	1:CA:346:G:OP1	2.67	0.42
1:CA:1042:G:O2'	1:CA:1043:C:H5'	2.20	0.42
1:CA:1321:C:C5'	1:CA:1322:C:C5'	2.96	0.42
2:CB:23:ARG:HD2	2:CB:23:ARG:HA	1.77	0.42
2:CB:59:GLU:HB2	2:CB:221:LEU:HD11	2.02	0.42
2:CB:194:PRO:O	2:CB:197:VAL:N	2.52	0.42
3:CC:136:GLN:C	3:CC:138:VAL:N	2.76	0.42
4:CD:116:GLN:O	4:CD:117:ALA:C	2.63	0.42
4:CD:170:VAL:O	4:CD:171:GLY:C	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:76:ILE:CG1	5:CE:77:PRO:HD2	2.50	0.42
7:CG:95:ARG:O	7:CG:96:GLN:C	2.63	0.42
8:CH:63:LEU:H	8:CH:63:LEU:CD2	2.32	0.42
8:CH:109:ILE:HG12	8:CH:110:ALA:H	1.83	0.42
12:CL:70:ILE:HG21	12:CL:77:LEU:CD1	2.50	0.42
12:CL:98:TYR:CD1	12:CL:98:TYR:N	2.88	0.42
12:CL:117:ARG:O	12:CL:118:SER:C	2.62	0.42
18:CR:37:VAL:O	18:CR:39:VAL:N	2.53	0.42
18:CR:44:LEU:HA	18:CR:49:LYS:O	2.20	0.42
22:CV:35:A:H2'	22:CV:36:A:H8	1.85	0.42
25:CY:93:GLU:HG3	59:CY:701:FUA:C7	2.50	0.42
25:CY:138:LYS:HE2	60:CY:702:GDP:C1'	2.50	0.42
25:CY:147:TRP:CE3	25:CY:150:ILE:HD12	2.54	0.42
25:CY:344:THR:C	25:CY:346:LYS:H	2.26	0.42
25:CY:346:LYS:HE2	25:CY:384:ILE:CG2	2.47	0.42
25:CY:541:ALA:CB	25:CY:579:GLU:HG2	2.50	0.42
26:D0:5:LYS:HB2	48:DQ:80:GLU:O	2.20	0.42
26:D0:40:GLN:HE22	26:D0:43:THR:CA	2.31	0.42
27:D1:82:LEU:O	27:D1:83:GLU:CG	2.67	0.42
30:D4:27:THR:O	30:D4:27:THR:HG23	2.19	0.42
31:D5:4:HIS:CB	31:D5:5:PRO:CD	2.92	0.42
31:D5:53:ALA:O	31:D5:55:ARG:N	2.53	0.42
33:D7:43:THR:O	33:D7:44:PRO:C	2.63	0.42
34:D8:62:LEU:HD13	36:DA:242:G:C5'	2.47	0.42
36:DA:36:G:H2'	36:DA:37:C:H6	1.85	0.42
36:DA:64:A:O2'	36:DA:65:C:H5'	2.20	0.42
36:DA:85:G:N3	36:DA:103:A:C2	2.87	0.42
36:DA:650:C:C2'	36:DA:651:G:H5''	2.50	0.42
36:DA:654(D):G:O2'	36:DA:654(E):G:H5'	2.20	0.42
36:DA:752:A:H4'	36:DA:753:C:O5'	2.20	0.42
36:DA:784:A:N6	39:DD:229:VAL:HG11	2.35	0.42
36:DA:892:G:O2'	36:DA:893:C:H5'	2.19	0.42
36:DA:938:G:C2	36:DA:939:G:N7	2.88	0.42
36:DA:996:A:H2'	36:DA:997:G:H8	1.83	0.42
36:DA:1045:A:O2'	36:DA:1047:G:C5	2.71	0.42
36:DA:1493:C:H4'	36:DA:1494:A:OP1	2.19	0.42
36:DA:1590:U:O2'	36:DA:1591:G:H5'	2.19	0.42
36:DA:1636:C:H2'	36:DA:1637:A:C8	2.55	0.42
36:DA:2028:U:O4	36:DA:2033:A:OP1	2.38	0.42
36:DA:2202:C:H42	36:DA:2221:G:H1	1.68	0.42
36:DA:2260:C:H2'	36:DA:2261:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2559:C:H2'	36:DA:2560:C:H6	1.84	0.42
36:DA:2866:U:C6	36:DA:2868:A:H1'	2.54	0.42
38:DC:52:PRO:HB2	38:DC:168:LYS:O	2.20	0.42
38:DC:97:GLY:C	38:DC:99:GLU:H	2.28	0.42
38:DC:191:ARG:O	38:DC:195:ARG:HG3	2.19	0.42
39:DD:26:LYS:O	39:DD:27:THR:HB	2.19	0.42
39:DD:46:GLN:OE1	39:DD:46:GLN:N	2.53	0.42
40:DE:116:VAL:HG21	40:DE:122:PHE:CD2	2.55	0.42
42:DG:81:LYS:O	42:DG:82:LEU:C	2.62	0.42
42:DG:106:LEU:HD12	42:DG:110:ALA:CB	2.50	0.42
42:DG:145:THR:CG2	42:DG:148:MET:HB3	2.50	0.42
43:DH:28:GLY:HA3	43:DH:79:VAL:CG2	2.50	0.42
43:DH:70:THR:C	43:DH:72:ILE:N	2.77	0.42
45:DN:19:GLU:HB2	45:DN:59:LYS:CB	2.50	0.42
47:DP:131:SER:OG	47:DP:134:ALA:HB3	2.20	0.42
48:DQ:56:ARG:HH21	57:DZ:180:VAL:CG2	2.28	0.42
51:DT:16:ARG:HH11	51:DT:16:ARG:HG3	1.85	0.42
51:DT:108:ARG:HA	51:DT:111:ARG:HH11	1.84	0.42
52:DU:79:PHE:CE1	52:DU:83:LEU:CD1	3.03	0.42
53:DV:39:LEU:HB3	53:DV:47:VAL:HG11	2.01	0.42
1:AA:184:G:H2'	1:AA:185:A:H8	1.85	0.42
1:AA:238:G:C6	1:AA:239:U:C4	3.07	0.42
1:AA:534:U:H5'	1:AA:534:U:H6	1.84	0.42
1:AA:630:G:H2'	1:AA:631:G:H5'	2.00	0.42
1:AA:711:G:H2'	1:AA:712:A:C8	2.55	0.42
1:AA:793:U:C3'	1:AA:794:A:C5'	2.87	0.42
1:AA:953:G:O6	1:AA:1228:C:N4	2.52	0.42
1:AA:1431:C:H2'	1:AA:1432:G:C5'	2.49	0.42
1:AA:1473:A:O2'	1:AA:1474:G:H5'	2.20	0.42
2:AB:30:ARG:NH2	2:AB:31:TYR:OH	2.53	0.42
2:AB:69:LEU:HD12	2:AB:69:LEU:C	2.45	0.42
2:AB:114:ARG:CD	2:AB:114:ARG:O	2.68	0.42
2:AB:147:LYS:HE2	2:AB:148:TYR:CE1	2.55	0.42
2:AB:152:PHE:O	2:AB:153:ARG:HB2	2.19	0.42
2:AB:166:ASP:HA	2:AB:167:PRO:HD2	1.87	0.42
3:AC:92:ALA:HB2	3:AC:99:VAL:CG2	2.50	0.42
3:AC:141:VAL:HG11	3:AC:202:ILE:CD1	2.50	0.42
4:AD:110:PHE:N	4:AD:110:PHE:HD1	2.17	0.42
4:AD:159:ARG:O	4:AD:162:LEU:N	2.53	0.42
7:AG:103:TRP:O	7:AG:104:LEU:C	2.60	0.42
9:AI:84:ALA:O	9:AI:86:VAL:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:20:TYR:CD1	11:AK:83:ILE:HB	2.54	0.42
16:AP:70:ALA:O	16:AP:71:ARG:C	2.62	0.42
23:AW:27:U:O5'	23:AW:27:U:H6	2.02	0.42
25:AY:121:VAL:HG23	25:AY:122:TRP:N	2.29	0.42
25:AY:238:THR:HG23	25:AY:241:GLU:H	1.85	0.42
25:AY:603:GLU:C	25:AY:676:TYR:HD1	2.28	0.42
25:AY:659:LEU:CD1	25:AY:667:GLY:C	2.93	0.42
26:B0:7:LEU:HD22	48:BQ:81:VAL:HG23	2.02	0.42
27:B1:56:GLN:HA	27:B1:56:GLN:NE2	2.22	0.42
27:B1:94:LEU:O	27:B1:96:LYS:N	2.53	0.42
35:B9:5:ALA:HB3	36:BA:2465:C:O3'	2.19	0.42
36:BA:64:A:O2'	36:BA:65:C:H5'	2.20	0.42
36:BA:225:A:N6	36:BA:226:G:C2	2.88	0.42
36:BA:418:G:H2'	36:BA:419:C:H6	1.85	0.42
36:BA:640:C:H2'	36:BA:641:C:C6	2.55	0.42
36:BA:654(S):G:O5'	36:BA:654(T):C:H5''	2.20	0.42
36:BA:839:U:H2'	36:BA:840:C:C6	2.55	0.42
36:BA:918:A:H1'	37:BB:80:U:O2'	2.20	0.42
36:BA:1052:C:H3'	36:BA:1052:C:C6	2.53	0.42
36:BA:1799:G:C8	39:BD:177:LEU:HD12	2.55	0.42
36:BA:2414:G:H1'	47:BP:70:GLN:HE22	1.85	0.42
36:BA:2468:G:H2'	36:BA:2476:A:N7	2.35	0.42
37:BB:35:U:O2	37:BB:35:U:C2'	2.67	0.42
37:BB:86:G:H2'	37:BB:87:G:C8	2.55	0.42
39:BD:26:LYS:O	39:BD:27:THR:HB	2.19	0.42
39:BD:131:LEU:HB3	39:BD:132:PRO:CD	2.49	0.42
40:BE:23:VAL:HA	40:BE:184:VAL:O	2.20	0.42
40:BE:49:LEU:HD11	40:BE:91:VAL:CG2	2.50	0.42
41:BF:38:ARG:O	41:BF:42:ALA:CB	2.65	0.42
41:BF:199:TRP:CZ3	41:BF:203:GLN:HG2	2.54	0.42
43:BH:121:ILE:HA	43:BH:134:SER:O	2.19	0.42
44:BJ:7:UNK:O	44:BJ:8:UNK:C	2.66	0.42
45:BN:96:GLU:O	45:BN:97:ARG:C	2.62	0.42
46:BO:104:ARG:CZ	51:BT:33:LYS:HD2	2.49	0.42
46:BO:108:GLU:OE1	46:BO:108:GLU:N	2.46	0.42
48:BQ:84:GLY:O	48:BQ:85:LYS:HB2	2.20	0.42
48:BQ:108:GLY:O	48:BQ:109:VAL:CG2	2.68	0.42
52:BU:79:PHE:CE1	52:BU:83:LEU:CD1	3.02	0.42
54:BW:96:ILE:O	54:BW:96:ILE:HG23	2.20	0.42
56:BY:13:VAL:HG23	56:BY:73:ARG:O	2.18	0.42
1:CA:64:G:N2	1:CA:67:C:N4	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:671:G:H2'	1:CA:672:U:O4'	2.19	0.42
1:CA:703:G:C2'	1:CA:704:A:OP2	2.67	0.42
1:CA:958:A:C6	1:CA:959:A:N1	2.88	0.42
1:CA:1008:C:H2'	1:CA:1009:G:C8	2.51	0.42
1:CA:1010:G:C2	1:CA:1011:G:C8	3.08	0.42
1:CA:1042:G:C2'	1:CA:1043:C:H5'	2.50	0.42
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.19	0.42
1:CA:1442(A):G:H2'	51:DT:118:ARG:NH1	2.27	0.42
1:CA:1442(B):A:H4'	1:CA:1443:G:OP1	2.20	0.42
1:CA:1519:A:H3'	1:CA:1520:G:C5'	2.50	0.42
2:CB:43:ASP:OD2	2:CB:46:LYS:HE3	2.19	0.42
2:CB:119:GLU:C	2:CB:121:LEU:N	2.78	0.42
5:CE:12:LEU:HD13	5:CE:12:LEU:C	2.45	0.42
8:CH:83:ILE:HD12	8:CH:137:VAL:CG2	2.38	0.42
10:CJ:22:LYS:NZ	10:CJ:23:ILE:HA	2.35	0.42
10:CJ:83:GLU:O	10:CJ:84:GLN:C	2.61	0.42
12:CL:22:SER:C	12:CL:24:VAL:N	2.76	0.42
13:CM:112:GLY:O	13:CM:113:PRO:C	2.63	0.42
25:CY:68:ALA:H	25:CY:327:PHE:HE2	1.68	0.42
25:CY:71:THR:HB	25:CY:78:ARG:NH1	2.35	0.42
25:CY:486:THR:CG2	25:CY:600:VAL:HG13	2.47	0.42
25:CY:491:VAL:HG12	25:CY:492:ASP:N	2.35	0.42
26:D0:27:GLU:CD	36:DA:856:C:H4'	2.45	0.42
36:DA:205:G:O2'	36:DA:206:U:P	2.77	0.42
36:DA:332:A:O2'	36:DA:333:G:P	2.78	0.42
36:DA:901:A:H2'	36:DA:901:A:N3	2.34	0.42
36:DA:956:G:N2	36:DA:959:A:H3'	2.35	0.42
36:DA:1009:A:OP2	36:DA:1010:A:OP2	2.38	0.42
36:DA:1266:G:OP2	54:DW:15:ARG:NH2	2.53	0.42
36:DA:1349:A:N6	36:DA:1598:C:N4	2.67	0.42
36:DA:2019:A:C4'	52:DU:34:LYS:HD2	2.50	0.42
36:DA:2286:A:H8	36:DA:2287:A:C6	2.37	0.42
36:DA:2307:G:N2	36:DA:2308:G:H5''	2.35	0.42
36:DA:2631:G:H2'	36:DA:2632:A:O4'	2.19	0.42
36:DA:2645:G:H4'	36:DA:2732:G:HO2'	1.81	0.42
36:DA:2724:C:OP1	40:DE:111:ARG:HD3	2.19	0.42
36:DA:2810:A:H2'	40:DE:61:ARG:NH2	2.35	0.42
38:DC:84:ILE:O	38:DC:95:VAL:HG11	2.20	0.42
39:DD:261:LYS:HZ1	39:DD:263:ARG:NH2	2.13	0.42
40:DE:21:VAL:HG23	40:DE:21:VAL:O	2.20	0.42
40:DE:49:LEU:HD11	40:DE:91:VAL:CG2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:7:LEU:O	42:DG:11:TYR:N	2.37	0.42
42:DG:41:GLN:NE2	42:DG:153:ARG:HD2	2.35	0.42
42:DG:131:TYR:HB3	42:DG:159:VAL:CG1	2.50	0.42
46:DO:90:GLN:C	46:DO:91:LEU:HD22	2.45	0.42
48:DQ:21:THR:OG1	48:DQ:99:PRO:O	2.37	0.42
50:DS:88:ASP:O	50:DS:89:ARG:HB3	2.18	0.42
51:DT:48:ILE:HD12	51:DT:48:ILE:N	2.35	0.42
53:DV:35:LEU:HD22	53:DV:35:LEU:N	2.35	0.42
53:DV:47:VAL:HB	53:DV:50:PRO:O	2.20	0.42
53:DV:64:HIS:ND1	53:DV:92:THR:CG2	2.83	0.42
56:DY:76:CYS:O	56:DY:99:CYS:SG	2.78	0.42
1:AA:179:A:H2'	1:AA:180:U:H6	1.82	0.41
1:AA:276:G:C2'	1:AA:277:C:H5'	2.49	0.41
1:AA:807:A:C5	1:AA:808:C:C4	3.08	0.41
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.35	0.41
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.19	0.41
1:AA:1148:U:H2'	1:AA:1149:C:H5'	2.01	0.41
1:AA:1239:A:H62	1:AA:1299:A:H62	1.68	0.41
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.60	0.41
1:AA:1493:A:N6	25:AY:579:GLU:HG3	2.32	0.41
2:AB:235:SER:C	2:AB:237:ALA:N	2.78	0.41
3:AC:61:ALA:O	3:AC:62:ASP:HB2	2.20	0.41
6:AF:52:ILE:O	6:AF:52:ILE:HG22	2.19	0.41
8:AH:41:ARG:NH2	8:AH:123:GLU:OE1	2.49	0.41
8:AH:83:ILE:HD12	8:AH:137:VAL:CG2	2.38	0.41
8:AH:104:ARG:HB3	8:AH:108:GLY:H	1.84	0.41
9:AI:63:ILE:HG22	9:AI:64:THR:N	2.35	0.41
13:AM:10:PRO:HG2	13:AM:11:ARG:H	1.85	0.41
13:AM:121:LYS:HB2	13:AM:121:LYS:NZ	2.35	0.41
14:AN:60:SER:O	14:AN:61:TRP:HB3	2.20	0.41
15:AO:64:ARG:HB2	15:AO:64:ARG:CZ	2.50	0.41
18:AR:37:VAL:O	18:AR:39:VAL:N	2.53	0.41
20:AT:45:GLN:CB	20:AT:91:LEU:HD22	2.48	0.41
20:AT:47:GLY:C	20:AT:49:ALA:H	2.24	0.41
25:AY:149:VAL:O	25:AY:152:THR:CG2	2.59	0.41
25:AY:312:LEU:O	25:AY:328:ILE:HA	2.20	0.41
25:AY:607:ARG:HA	25:AY:645:ALA:O	2.20	0.41
25:AY:617:MET:HE1	25:AY:641:GLN:CD	2.45	0.41
26:B0:29:GLN:OE1	36:BA:922:U:O2'	2.38	0.41
28:B2:46:GLN:OE1	36:BA:95:G:H4'	2.20	0.41
30:B4:16:CYS:HB3	30:B4:20:ASN:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B9:29:ASN:N	35:B9:29:ASN:ND2	2.66	0.41
36:BA:363(E):U:O2'	36:BA:363(F):A:O4'	2.37	0.41
36:BA:630:G:H4'	36:BA:640:C:H4'	2.02	0.41
36:BA:955:C:C2'	36:BA:956:G:H5'	2.50	0.41
36:BA:1308:A:N6	36:BA:1606:G:H1'	2.35	0.41
36:BA:1333:C:H6	36:BA:1333:C:O5'	2.03	0.41
36:BA:1396:U:O2	36:BA:1396:U:C2'	2.68	0.41
36:BA:1515:G:H2'	36:BA:1516:C:C6	2.55	0.41
36:BA:1666:G:O2'	36:BA:1667:G:H5'	2.20	0.41
36:BA:1836:C:O2'	36:BA:1837:C:H5'	2.20	0.41
36:BA:2126:A:H1'	36:BA:2127:G:O4'	2.20	0.41
36:BA:2508:G:H2'	36:BA:2509:G:H8	1.85	0.41
36:BA:2543:G:H2'	36:BA:2544:G:C8	2.55	0.41
36:BA:2754:U:H2'	36:BA:2756:U:OP1	2.20	0.41
36:BA:2892:A:H62	36:BA:2893:G:N2	2.18	0.41
37:BB:81:G:C2	37:BB:82:G:N7	2.88	0.41
38:BC:21:TYR:CD1	38:BC:21:TYR:N	2.87	0.41
38:BC:84:ILE:HG12	38:BC:96:GLY:O	2.20	0.41
39:BD:96:HIS:CE1	39:BD:102:LYS:CE	3.03	0.41
39:BD:206:LEU:HD23	39:BD:206:LEU:HA	1.83	0.41
41:BF:50:SER:OG	41:BF:94:PRO:HD3	2.20	0.41
41:BF:52:LYS:HD3	41:BF:56:GLU:O	2.19	0.41
42:BG:47:LYS:HG2	42:BG:81:LYS:HB2	2.01	0.41
43:BH:70:THR:HG22	43:BH:74:ASN:HD21	1.85	0.41
43:BH:89:ILE:HG13	43:BH:89:ILE:O	2.19	0.41
45:BN:1:MET:HE2	45:BN:2:LYS:N	2.35	0.41
45:BN:76:SER:C	45:BN:78:TYR:H	2.28	0.41
45:BN:131:GLN:NE2	45:BN:133:GLN:H	2.17	0.41
47:BP:35:HIS:O	47:BP:36:LYS:CB	2.68	0.41
47:BP:64:LYS:O	47:BP:64:LYS:HD3	2.19	0.41
47:BP:64:LYS:O	47:BP:66:GLY:N	2.44	0.41
47:BP:112:LEU:HD11	47:BP:114:ILE:HG22	2.01	0.41
48:BQ:34:LEU:HD11	48:BQ:129:THR:HB	2.02	0.41
51:BT:10:VAL:O	51:BT:11:GLU:C	2.61	0.41
51:BT:48:ILE:HD12	51:BT:48:ILE:N	2.35	0.41
51:BT:72:VAL:HG12	51:BT:73:GLU:N	2.35	0.41
51:BT:83:ILE:CG1	51:BT:84:GLN:HG2	2.49	0.41
53:BV:36:PRO:HA	53:BV:56:SER:HB2	2.02	0.41
56:BY:11:ASP:O	56:BY:27:VAL:HA	2.19	0.41
1:CA:342:C:C5	1:CA:343:U:C5	3.07	0.41
1:CA:429:U:H4'	1:CA:430:A:O5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:584:G:H2'	1:CA:585:G:H8	1.85	0.41
1:CA:1073:U:O2'	1:CA:1074:G:H5'	2.20	0.41
1:CA:1107:C:C4	1:CA:1108:G:C8	3.08	0.41
1:CA:1133:G:N2	1:CA:1143:G:H1'	2.35	0.41
2:CB:69:LEU:HD13	2:CB:91:PRO:HB2	2.01	0.41
2:CB:83:MET:SD	2:CB:234:PRO:HG3	2.60	0.41
4:CD:152:SER:O	4:CD:153:ARG:C	2.63	0.41
4:CD:165:MET:O	4:CD:167:GLY:N	2.53	0.41
5:CE:64:ARG:CG	5:CE:64:ARG:NH1	2.81	0.41
9:CI:25:LYS:HE3	9:CI:25:LYS:HB2	1.87	0.41
9:CI:33:PHE:C	9:CI:35:GLU:N	2.78	0.41
9:CI:49:PRO:HD3	9:CI:101:PHE:CE1	2.55	0.41
11:CK:79:SER:CB	11:CK:106:LYS:HD2	2.50	0.41
12:CL:23:LYS:C	12:CL:24:VAL:HG23	2.45	0.41
16:CP:2:VAL:HG22	16:CP:64:ALA:HA	2.01	0.41
17:CQ:31:LEU:HG	17:CQ:32:TYR:CE1	2.55	0.41
19:CS:9:VAL:C	19:CS:11:VAL:H	2.27	0.41
20:CT:38:LYS:O	20:CT:39:LYS:C	2.63	0.41
21:CU:13:ILE:C	21:CU:15:ARG:N	2.76	0.41
25:CY:120:THR:O	25:CY:124:GLN:HG3	2.20	0.41
25:CY:201:ILE:HD12	25:CY:201:ILE:H	1.85	0.41
25:CY:448:GLN:O	25:CY:448:GLN:HG3	2.20	0.41
25:CY:500:GLN:HE21	25:CY:500:GLN:HB2	1.58	0.41
25:CY:507:TYR:CD1	25:CY:507:TYR:C	2.98	0.41
25:CY:510:VAL:CA	25:CY:570:GLY:HA3	2.21	0.41
25:CY:616:TYR:HE2	25:CY:664:GLN:NE2	2.14	0.41
25:CY:621:ILE:HD12	36:DA:1095:A:H1'	2.01	0.41
26:D0:48:GLY:HA3	26:D0:80:HIS:ND1	2.33	0.41
27:D1:57:GLU:HG2	27:D1:58:ILE:H	1.84	0.41
27:D1:73:LEU:CD2	27:D1:94:LEU:HD22	2.49	0.41
27:D1:90:ILE:O	27:D1:94:LEU:HG	2.20	0.41
28:D2:16:LEU:O	28:D2:20:GLU:HB3	2.19	0.41
30:D4:9:LEU:HD13	30:D4:10:VAL:H	1.84	0.41
30:D4:25:TYR:N	30:D4:25:TYR:CD1	2.88	0.41
36:DA:271(M):G:H2'	36:DA:271(N):U:H5''	2.02	0.41
36:DA:274:G:N3	36:DA:274:G:C2'	2.81	0.41
36:DA:529:A:C5	36:DA:2042:A:C2	3.08	0.41
36:DA:565:C:H1'	36:DA:577:G:N2	2.35	0.41
36:DA:610:G:H2'	36:DA:611:C:C6	2.55	0.41
36:DA:811:U:H6	47:DP:24:GLY:O	2.03	0.41
36:DA:1156:A:C2'	36:DA:1157:G:OP1	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1526:G:H2'	36:DA:1527:G:C8	2.55	0.41
36:DA:1587:A:H3'	36:DA:1588:C:C6	2.55	0.41
36:DA:2053:G:O2'	36:DA:2054:A:H5'	2.20	0.41
36:DA:2372:G:H1	36:DA:2381:C:H42	1.67	0.41
36:DA:2395:C:C2	36:DA:2396:G:C8	3.07	0.41
36:DA:2584:U:C2'	36:DA:2585:U:C5'	2.85	0.41
36:DA:2842:G:C6	36:DA:2876:G:C6	3.08	0.41
37:DB:88:C:H2'	37:DB:89:G:C8	2.55	0.41
37:DB:113:G:H2'	37:DB:113:G:N3	2.35	0.41
39:DD:30:GLU:HB2	39:DD:35:LYS:HZ2	1.84	0.41
39:DD:206:LEU:HD23	39:DD:206:LEU:HA	1.78	0.41
41:DF:8:GLN:NE2	41:DF:9:ILE:N	2.68	0.41
41:DF:181:LEU:HD23	41:DF:202:PHE:HD1	1.86	0.41
45:DN:79:PRO:C	45:DN:81:GLY:N	2.78	0.41
46:DO:12:ASP:O	46:DO:14:THR:N	2.53	0.41
46:DO:86:ILE:HD12	46:DO:86:ILE:N	2.30	0.41
49:DR:12:ARG:CG	49:DR:12:ARG:NH1	2.83	0.41
49:DR:52:ILE:HD13	49:DR:79:LEU:HD21	2.02	0.41
50:DS:20:ARG:HG2	50:DS:20:ARG:HH11	1.85	0.41
50:DS:104:GLY:C	50:DS:106:ARG:N	2.77	0.41
51:DT:76:PHE:HA	51:DT:77:PRO:HD3	1.88	0.41
51:DT:124:ASP:O	51:DT:127:ALA:HB3	2.19	0.41
52:DU:24:TYR:HE2	52:DU:39:LEU:CD2	2.33	0.41
52:DU:50:ARG:C	52:DU:52:ARG:H	2.28	0.41
52:DU:91:ASP:OD1	52:DU:91:ASP:C	2.63	0.41
52:DU:113:ALA:O	52:DU:115:ALA:N	2.53	0.41
55:DX:18:TYR:C	55:DX:20:GLY:N	2.77	0.41
1:AA:78:G:H1	1:AA:91:C:N4	2.18	0.41
1:AA:452:A:O2'	1:AA:453:A:H8	2.02	0.41
1:AA:939:G:C5'	7:AG:102:ARG:HH22	2.32	0.41
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.19	0.41
1:AA:1271:G:H2'	1:AA:1272:G:C8	2.54	0.41
2:AB:15:VAL:HG23	2:AB:16:HIS:CE1	2.55	0.41
2:AB:153:ARG:C	2:AB:155:LEU:H	2.26	0.41
2:AB:194:PRO:O	2:AB:197:VAL:HG23	2.20	0.41
3:AC:136:GLN:C	3:AC:138:VAL:N	2.75	0.41
4:AD:3:ARG:HG2	4:AD:118:ARG:NE	2.35	0.41
5:AE:12:LEU:HD13	5:AE:12:LEU:C	2.44	0.41
6:AF:24:GLU:C	6:AF:26:ILE:N	2.75	0.41
9:AI:49:PRO:HD3	9:AI:101:PHE:CE1	2.54	0.41
10:AJ:83:GLU:O	10:AJ:84:GLN:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:46:GLY:N	19:AS:62:ILE:HG23	2.35	0.41
20:AT:50:GLU:HB2	20:AT:100:ILE:CB	2.48	0.41
22:AV:27:G:H2'	22:AV:28:G:H8	1.85	0.41
23:AW:9:G:C2	23:AW:45:G:C6	3.08	0.41
23:AW:31:G:C6	23:AW:32:C:C4	3.08	0.41
25:AY:21:ILE:O	25:AY:22:ASP:HB2	2.20	0.41
25:AY:71:THR:HB	25:AY:78:ARG:NH1	2.34	0.41
25:AY:166:LEU:HD12	25:AY:166:LEU:N	2.34	0.41
25:AY:216:LEU:HD21	25:AY:246:ILE:HD11	2.01	0.41
25:AY:453:GLY:CA	25:AY:458:HIS:HD2	2.21	0.41
25:AY:486:THR:CG2	25:AY:602:LEU:HG	2.50	0.41
25:AY:604:PRO:HB2	25:AY:673:PHE:HE1	1.85	0.41
25:AY:661:SER:OG	36:BA:2660:A:N6	2.54	0.41
26:B0:81:VAL:O	26:B0:81:VAL:HG12	2.20	0.41
27:B1:82:LEU:HD23	27:B1:90:ILE:HD12	2.03	0.41
30:B4:43:TYR:CD2	30:B4:44:THR:HG23	2.55	0.41
34:B8:13:ARG:HD2	47:BP:61:ARG:HH11	1.85	0.41
35:B9:19:ARG:O	35:B9:20:HIS:HB2	2.20	0.41
35:B9:34:GLN:HB3	35:B9:35:ARG:H	1.53	0.41
36:BA:192:C:OP1	36:BA:2243:U:OP1	2.39	0.41
36:BA:383:U:H2'	36:BA:385:C:H5	1.84	0.41
36:BA:797:C:OP1	41:BF:62:ARG:HG3	2.19	0.41
36:BA:892:G:O2'	36:BA:893:C:H5'	2.20	0.41
36:BA:1034:G:C6	36:BA:1035:U:N3	2.88	0.41
36:BA:1059:G:H2'	36:BA:1060:U:C6	2.55	0.41
36:BA:1680:U:O2'	36:BA:1681:G:H5'	2.20	0.41
36:BA:1836:C:C2'	36:BA:1837:C:H5'	2.50	0.41
36:BA:1963:U:O2	36:BA:1963:U:C2'	2.65	0.41
36:BA:2202:C:H2'	39:BD:151:LYS:NZ	2.35	0.41
36:BA:2376:A:H2'	36:BA:2377:A:O4'	2.20	0.41
36:BA:2547:U:O2'	36:BA:2548:G:H5'	2.20	0.41
36:BA:2561:A:H2'	36:BA:2562:U:O4'	2.20	0.41
36:BA:2873:A:H4'	49:BR:8:ARG:NH2	2.35	0.41
38:BC:109:MET:O	38:BC:111:PHE:N	2.45	0.41
39:BD:81:ALA:HA	39:BD:113:VAL:CG2	2.50	0.41
39:BD:176:ARG:CZ	39:BD:176:ARG:HB3	2.51	0.41
40:BE:31:CYS:HA	40:BE:32:PRO:HD3	1.77	0.41
40:BE:101:ARG:HD3	40:BE:171:GLU:HA	2.02	0.41
40:BE:119:ARG:HD2	40:BE:120:TRP:CE2	2.55	0.41
43:BH:70:THR:C	43:BH:72:ILE:N	2.77	0.41
46:BO:11:ALA:O	46:BO:98:VAL:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BO:53:LYS:O	46:BO:54:GLU:C	2.62	0.41
46:BO:104:ARG:C	46:BO:106:LEU:H	2.27	0.41
51:BT:55:ASN:O	51:BT:55:ASN:ND2	2.53	0.41
53:BV:64:HIS:HA	53:BV:92:THR:HA	2.01	0.41
55:BX:35:THR:CB	55:BX:38:GLU:HB2	2.30	0.41
57:BZ:14:LYS:O	57:BZ:16:SER:N	2.54	0.41
57:BZ:59:LEU:HD11	57:BZ:88:PHE:CD2	2.55	0.41
1:CA:108:G:OP2	1:CA:109:A:C2	2.73	0.41
1:CA:323:U:H5'	20:CT:23:ARG:HB2	2.02	0.41
1:CA:779:C:H5''	11:CK:122:LYS:HG2	2.02	0.41
1:CA:1234:C:C2'	1:CA:1235:U:H5'	2.50	0.41
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.55	0.41
2:CB:21:ARG:HB3	2:CB:39:ILE:HA	2.02	0.41
3:CC:73:PRO:HA	3:CC:76:VAL:HG22	2.01	0.41
3:CC:92:ALA:HB2	3:CC:99:VAL:CG2	2.49	0.41
4:CD:13:ARG:NH1	4:CD:40:PRO:HA	2.36	0.41
4:CD:61:LYS:NZ	4:CD:72:GLU:OE1	2.49	0.41
4:CD:159:ARG:O	4:CD:162:LEU:N	2.54	0.41
8:CH:8:ASP:O	8:CH:12:ARG:HG3	2.19	0.41
9:CI:97:LYS:N	9:CI:98:PRO:CD	2.83	0.41
10:CJ:28:ARG:NH1	10:CJ:28:ARG:HG2	2.35	0.41
12:CL:15:ARG:HD3	12:CL:15:ARG:HA	1.84	0.41
15:CO:31:LEU:N	15:CO:31:LEU:CD2	2.82	0.41
16:CP:20:VAL:HG21	16:CP:32:TYR:CD1	2.55	0.41
18:CR:51:LEU:HA	18:CR:52:PRO:HD3	1.79	0.41
20:CT:21:LYS:O	20:CT:22:ARG:C	2.63	0.41
25:CY:168:ILE:HD12	25:CY:176:GLY:C	2.45	0.41
25:CY:188:TYR:C	25:CY:190:ASN:H	2.27	0.41
25:CY:289:ILE:C	25:CY:290:LYS:HG3	2.42	0.41
25:CY:489:LYS:CD	25:CY:598:ASP:OD1	2.66	0.41
28:D2:46:GLN:O	28:D2:47:ASN:C	2.63	0.41
36:DA:154(A):C:H42	36:DA:172:C:N4	2.18	0.41
36:DA:186:G:H2'	36:DA:187:G:H8	1.85	0.41
36:DA:301:G:C6	36:DA:317:G:C6	3.08	0.41
36:DA:320:A:H4'	36:DA:322:A:N7	2.34	0.41
36:DA:601:C:O2	36:DA:605:C:H4'	2.19	0.41
36:DA:654(S):G:O5'	36:DA:654(T):C:H5''	2.21	0.41
36:DA:665:C:H2'	36:DA:666:G:C8	2.55	0.41
36:DA:918:A:H5''	37:DB:98:G:O2'	2.20	0.41
36:DA:1177:A:H4'	36:DA:1178:C:O5'	2.21	0.41
36:DA:1185:C:C5'	36:DA:1186:G:P	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1219:G:C2	36:DA:1221:C:N4	2.88	0.41
36:DA:1316:U:O2'	36:DA:1317:A:H5'	2.19	0.41
36:DA:1754:C:P	51:DT:96:ARG:NH1	2.93	0.41
36:DA:1925:C:O2'	36:DA:1926:U:H5'	2.21	0.41
36:DA:2028:U:H2'	36:DA:2029:G:O4'	2.20	0.41
36:DA:2543:G:H2'	36:DA:2544:G:C8	2.55	0.41
36:DA:2579:C:C2'	36:DA:2580:U:H5'	2.50	0.41
37:DB:40:U:O2'	37:DB:43:C:C5	2.70	0.41
37:DB:95:C:O2'	37:DB:96:U:H5'	2.20	0.41
39:DD:136:ILE:HD12	39:DD:136:ILE:N	2.35	0.41
40:DE:107:THR:HA	40:DE:163:GLU:O	2.19	0.41
41:DF:118:ALA:O	41:DF:121:GLY:N	2.51	0.41
41:DF:157:VAL:CG2	41:DF:157:VAL:O	2.68	0.41
42:DG:130:ASN:OD1	42:DG:160:VAL:HA	2.19	0.41
43:DH:97:ARG:O	43:DH:98:LEU:C	2.62	0.41
43:DH:154:PRO:C	43:DH:156:ALA:H	2.28	0.41
47:DP:120:ALA:HB3	47:DP:137:LYS:O	2.20	0.41
49:DR:30:THR:HG23	49:DR:78:LYS:HZ3	1.84	0.41
51:DT:28:VAL:O	51:DT:29:ARG:HD3	2.20	0.41
53:DV:34:GLU:HG2	53:DV:36:PRO:HD3	2.02	0.41
55:DX:40:LYS:HG3	55:DX:51:VAL:HG23	2.02	0.41
55:DX:56:THR:C	55:DX:57:LEU:HD13	2.45	0.41
57:DZ:117:LEU:CD1	57:DZ:174:VAL:HG22	2.50	0.41
1:AA:185:A:N3	20:AT:81:LYS:NZ	2.67	0.41
1:AA:187:C:O2'	20:AT:89:ARG:HD3	2.20	0.41
1:AA:347:G:C2	1:AA:348:G:C8	3.08	0.41
1:AA:675:A:O2'	1:AA:676:A:H5'	2.20	0.41
1:AA:897:C:O2'	1:AA:898:G:H5'	2.19	0.41
1:AA:929:G:O2'	1:AA:930:C:H5'	2.20	0.41
2:AB:12:GLU:OE1	2:AB:12:GLU:N	2.41	0.41
2:AB:19:HIS:O	2:AB:20:GLU:O	2.39	0.41
2:AB:69:LEU:HD13	2:AB:91:PRO:HB2	2.02	0.41
2:AB:142:LEU:O	2:AB:143:GLU:C	2.63	0.41
3:AC:155:GLY:O	3:AC:196:LEU:HD13	2.20	0.41
4:AD:3:ARG:CG	4:AD:118:ARG:HE	2.33	0.41
5:AE:42:GLY:CA	5:AE:66:MET:HG2	2.50	0.41
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.20	0.41
8:AH:35:ILE:HG22	8:AH:39:LEU:CD2	2.50	0.41
9:AI:23:ASN:OD1	9:AI:24:GLY:N	2.53	0.41
13:AM:56:LEU:O	13:AM:59:TYR:N	2.39	0.41
13:AM:68:GLY:O	13:AM:70:LEU:N	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:2:PRO:O	15:AO:3:ILE:C	2.64	0.41
16:AP:42:ARG:O	16:AP:43:LYS:C	2.63	0.41
19:AS:40:ILE:HG21	19:AS:66:MET:O	2.20	0.41
20:AT:8:ARG:HD3	20:AT:8:ARG:HA	1.82	0.41
21:AU:13:ILE:C	21:AU:15:ARG:N	2.75	0.41
25:AY:21:ILE:CG2	25:AY:88:VAL:HG13	2.49	0.41
25:AY:329:ARG:CA	25:AY:374:LEU:HG	2.47	0.41
25:AY:406:GLU:CB	25:AY:407:PRO:HD2	2.37	0.41
25:AY:578:SER:HB3	25:AY:581:ALA:H	1.85	0.41
29:B3:6:VAL:HG12	29:B3:56:VAL:HA	2.02	0.41
34:B8:51:ALA:C	34:B8:53:PRO:HD2	2.42	0.41
36:BA:324:A:OP2	36:BA:1205:U:N3	2.48	0.41
36:BA:408:G:O2'	36:BA:409:C:H5'	2.20	0.41
36:BA:657:U:H2'	36:BA:658:C:C5	2.55	0.41
36:BA:1141:U:H6	45:BN:63:THR:CG2	2.33	0.41
36:BA:1144:G:C6	36:BA:1145:C:C4	3.08	0.41
36:BA:2134:A:H2'	36:BA:2134:A:N3	2.34	0.41
36:BA:2470:G:P	48:BQ:56:ARG:HH12	2.43	0.41
36:BA:2631:G:H2'	36:BA:2632:A:O4'	2.20	0.41
38:BC:3:LYS:O	38:BC:3:LYS:HD3	2.20	0.41
39:BD:261:LYS:NZ	39:BD:263:ARG:HH12	2.18	0.41
40:BE:27:LEU:HD12	40:BE:180:ASN:O	2.19	0.41
40:BE:47:VAL:CG1	40:BE:48:GLN:H	2.19	0.41
40:BE:51:PHE:N	40:BE:74:PRO:HG3	2.34	0.41
40:BE:55:ASN:C	40:BE:57:LYS:N	2.78	0.41
40:BE:108:SER:O	40:BE:162:ALA:N	2.53	0.41
41:BF:65:TRP:HA	41:BF:66:PRO:HD3	1.90	0.41
46:BO:104:ARG:CZ	51:BT:33:LYS:HE3	2.50	0.41
47:BP:38:GLN:HG3	47:BP:39:LYS:N	2.24	0.41
47:BP:110:TYR:O	47:BP:111:ARG:O	2.39	0.41
48:BQ:130:LYS:HZ2	57:BZ:80:ARG:NH1	2.18	0.41
49:BR:52:ILE:HD13	49:BR:79:LEU:HD21	2.02	0.41
50:BS:17:ARG:C	50:BS:19:LYS:N	2.75	0.41
50:BS:33:LYS:HG2	50:BS:34:HIS:CD2	2.55	0.41
50:BS:42:ASP:C	50:BS:43:GLU:HG3	2.44	0.41
55:BX:70:LEU:C	55:BX:70:LEU:CD2	2.92	0.41
56:BY:96:ILE:CD1	56:BY:99:CYS:SG	3.08	0.41
1:CA:47:C:H5	1:CA:365:U:H3'	1.84	0.41
1:CA:155:C:H2'	1:CA:156:G:C8	2.56	0.41
1:CA:243:A:C2	1:CA:245:C:C2	3.08	0.41
1:CA:707:C:O2'	1:CA:708:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1315:U:O2'	1:CA:1360:A:N3	2.50	0.41
2:CB:153:ARG:C	2:CB:155:LEU:H	2.27	0.41
3:CC:43:LEU:C	3:CC:45:LYS:N	2.79	0.41
3:CC:108:ASN:C	3:CC:110:ASN:N	2.77	0.41
4:CD:202:LEU:HD23	4:CD:202:LEU:HA	1.81	0.41
5:CE:147:ASP:HA	5:CE:150:ARG:HH12	1.85	0.41
6:CF:43:LEU:HD11	18:CR:35:ARG:NH1	2.34	0.41
9:CI:60:ASP:O	9:CI:61:ALA:O	2.38	0.41
10:CJ:50:ILE:N	10:CJ:50:ILE:CD1	2.70	0.41
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.35	0.41
11:CK:23:ALA:O	11:CK:86:GLY:HA3	2.21	0.41
11:CK:95:ILE:O	11:CK:98:LEU:N	2.53	0.41
13:CM:68:GLY:C	13:CM:70:LEU:N	2.78	0.41
14:CN:21:TYR:HE2	14:CN:23:ARG:NH2	2.18	0.41
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.35	0.41
20:CT:100:ILE:HG13	20:CT:101:GLY:H	1.85	0.41
25:CY:138:LYS:HE2	60:CY:702:GDP:C8	2.55	0.41
25:CY:206:LEU:CD1	25:CY:210:ARG:HH12	2.34	0.41
25:CY:327:PHE:CD1	25:CY:376:ALA:CB	3.03	0.41
25:CY:339:SER:HB2	25:CY:352:VAL:HG13	2.01	0.41
25:CY:552:SER:HB3	25:CY:591:LYS:HZ1	1.84	0.41
25:CY:661:SER:O	25:CY:663:THR:N	2.52	0.41
26:D0:49:LYS:H	26:D0:49:LYS:HG3	1.67	0.41
27:D1:8:SER:HB3	27:D1:66:HIS:CD2	2.54	0.41
27:D1:83:GLU:HB2	27:D1:84:GLY:H	1.75	0.41
28:D2:7:ARG:HG3	28:D2:7:ARG:HH11	1.86	0.41
31:D5:19:ARG:HA	36:DA:2046:G:H5''	2.02	0.41
31:D5:46:CYS:SG	31:D5:47:PRO:CD	3.05	0.41
32:D6:54:ILE:HD11	36:DA:2419:U:O2'	2.20	0.41
36:DA:129:C:H2'	36:DA:130:C:C6	2.55	0.41
36:DA:654(S):G:H3'	36:DA:654(T):C:H4'	2.01	0.41
36:DA:655:A:H1'	36:DA:656:G:C1'	2.50	0.41
36:DA:688:U:H4'	36:DA:1780:A:H2	1.79	0.41
36:DA:856:C:H2'	36:DA:857:C:C6	2.55	0.41
36:DA:1042:G:H2'	36:DA:1043:C:C6	2.55	0.41
36:DA:1203:G:O2'	36:DA:1242:A:N6	2.53	0.41
36:DA:1669:A:O3'	36:DA:2549:G:H5'	2.21	0.41
36:DA:1680:U:O2'	36:DA:1681:G:H5'	2.20	0.41
36:DA:2086:U:H2'	36:DA:2087:G:C8	2.55	0.41
36:DA:2722:G:O2'	49:DR:5:LYS:HB2	2.21	0.41
36:DA:2809:A:OP2	36:DA:2891:G:N1	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:75:G:H1'	57:DZ:27:VAL:CG1	2.51	0.41
38:DC:84:ILE:HG12	38:DC:96:GLY:O	2.21	0.41
38:DC:100:ILE:O	38:DC:102:GLN:N	2.53	0.41
39:DD:268:ARG:HB3	39:DD:268:ARG:CZ	2.50	0.41
42:DG:57:ALA:O	42:DG:60:LEU:CB	2.69	0.41
42:DG:57:ALA:O	42:DG:68:PRO:HG2	2.20	0.41
42:DG:91:ARG:C	42:DG:91:ARG:CD	2.93	0.41
42:DG:170:ARG:HE	42:DG:180:PHE:HD2	1.62	0.41
43:DH:91:GLY:HA2	43:DH:160:LYS:HG2	2.01	0.41
43:DH:136:ILE:N	43:DH:136:ILE:CD1	2.83	0.41
45:DN:133:GLN:CG	45:DN:134:ARG:N	2.78	0.41
48:DQ:34:LEU:HD11	48:DQ:129:THR:HB	2.01	0.41
49:DR:41:ALA:O	49:DR:43:GLU:N	2.54	0.41
50:DS:77:ALA:O	50:DS:80:LEU:N	2.53	0.41
51:DT:19:LEU:HA	51:DT:20:PRO:HD3	1.89	0.41
51:DT:54:ARG:HH11	51:DT:54:ARG:HG2	1.85	0.41
57:DZ:61:LEU:C	57:DZ:63:ASP:N	2.77	0.41
57:DZ:153:SER:C	57:DZ:155:LEU:H	2.29	0.41
1:AA:151:A:C2'	1:AA:152:A:H5'	2.50	0.41
1:AA:222:U:H2'	1:AA:223:U:C6	2.55	0.41
1:AA:688:G:H5'	11:AK:47:VAL:HA	2.03	0.41
1:AA:928:G:O2'	1:AA:929:G:H5'	2.19	0.41
1:AA:955:U:O2'	1:AA:956:U:H5'	2.20	0.41
1:AA:1134:G:H2'	1:AA:1135:U:H5'	2.02	0.41
1:AA:1259:C:C5	1:AA:1260:C:O2	2.73	0.41
1:AA:1299:A:C2	1:AA:1301:U:N3	2.88	0.41
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.21	0.41
1:AA:1516:G:N1	1:AA:1519:A:OP2	2.54	0.41
2:AB:107:THR:HA	2:AB:110:GLN:NE2	2.23	0.41
4:AD:30:LYS:O	4:AD:32:ALA:N	2.53	0.41
4:AD:165:MET:O	4:AD:167:GLY:N	2.53	0.41
6:AF:8:ILE:CG2	6:AF:85:VAL:HG13	2.48	0.41
6:AF:14:LEU:HD23	6:AF:14:LEU:HA	1.90	0.41
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.27	0.41
7:AG:6:ARG:O	7:AG:7:ALA:C	2.63	0.41
11:AK:21:ILE:HD12	11:AK:21:ILE:N	2.35	0.41
13:AM:57:ARG:O	13:AM:58:GLU:C	2.63	0.41
13:AM:91:ARG:CD	13:AM:97:PRO:O	2.65	0.41
15:AO:74:ASP:O	15:AO:76:GLU:N	2.54	0.41
16:AP:75:ARG:O	16:AP:78:GLY:N	2.50	0.41
19:AS:6:LYS:N	19:AS:6:LYS:CD	2.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:81:LYS:O	20:AT:83:ARG:N	2.52	0.41
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	2.03	0.41
23:AW:53:G:C2	23:AW:62:C:N3	2.88	0.41
25:AY:65:ILE:H	25:AY:65:ILE:CD1	2.34	0.41
25:AY:264:LEU:HD23	25:AY:264:LEU:C	2.45	0.41
25:AY:276:VAL:HB	25:AY:277:VAL:H	1.62	0.41
25:AY:609:GLU:HB2	25:AY:670:VAL:CG2	2.49	0.41
27:B1:90:ILE:O	27:B1:93:GLU:N	2.53	0.41
29:B3:54:VAL:CG1	29:B3:55:ARG:N	2.83	0.41
34:B8:33:ASN:O	34:B8:34:TRP:CB	2.68	0.41
36:BA:9:U:H5	36:BA:2629:A:N6	2.06	0.41
36:BA:271(D):G:C2	36:BA:271(E):U:C2	3.08	0.41
36:BA:342:G:O2'	36:BA:343:C:H5'	2.20	0.41
36:BA:372:G:O2'	36:BA:400:G:O6	2.32	0.41
36:BA:624:C:H41	47:BP:107:LYS:NZ	2.19	0.41
36:BA:651:G:H2'	36:BA:652:C:H5'	2.01	0.41
36:BA:742:G:H2'	36:BA:743:G:H8	1.84	0.41
36:BA:826:U:H5''	36:BA:2428:G:O3'	2.19	0.41
36:BA:867:C:O5'	36:BA:867:C:H6	2.04	0.41
36:BA:949:C:H2'	36:BA:950:G:C8	2.54	0.41
36:BA:956:G:O4'	48:BQ:83:MET:HE1	2.20	0.41
36:BA:1541:G:O2'	36:BA:1542:A:H5''	2.21	0.41
36:BA:1653:G:O6	49:BR:11:ASN:HB2	2.20	0.41
36:BA:1677:A:H2'	36:BA:1678:G:H8	1.84	0.41
36:BA:1814:G:H2'	36:BA:1815:A:C8	2.55	0.41
36:BA:2016:U:O2'	36:BA:2017:U:H5'	2.20	0.41
36:BA:2072:G:C6	36:BA:2073:C:C4	3.08	0.41
36:BA:2485:G:C2	36:BA:2486:G:C8	3.08	0.41
38:BC:156:GLU:O	38:BC:159:ALA:HB3	2.19	0.41
39:BD:132:PRO:O	39:BD:136:ILE:HD13	2.20	0.41
39:BD:249:PRO:HG2	39:BD:250:TRP:CE3	2.55	0.41
40:BE:26:ILE:HD12	40:BE:198:VAL:HG21	2.02	0.41
40:BE:69:LYS:C	40:BE:71:GLY:N	2.77	0.41
41:BF:168:ARG:O	41:BF:170:LEU:N	2.53	0.41
43:BH:86:GLU:HB2	43:BH:132:ARG:HB3	2.02	0.41
43:BH:141:VAL:C	43:BH:143:GLN:N	2.76	0.41
47:BP:114:ILE:HG23	47:BP:130:PHE:CD1	2.55	0.41
51:BT:16:ARG:HG3	51:BT:16:ARG:HH11	1.85	0.41
51:BT:90:GLN:HG2	51:BT:120:ARG:NH2	2.35	0.41
52:BU:59:ARG:HH11	52:BU:59:ARG:CG	2.30	0.41
53:BV:64:HIS:ND1	53:BV:92:THR:CG2	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BX:56:THR:C	55:BX:57:LEU:HD13	2.45	0.41
56:BY:15:VAL:HG12	56:BY:20:TYR:O	2.21	0.41
56:BY:26:LYS:O	56:BY:27:VAL:C	2.63	0.41
56:BY:28:LYS:O	56:BY:29:GLU:C	2.63	0.41
57:BZ:63:ASP:OD2	57:BZ:65:GLN:NE2	2.54	0.41
57:BZ:107:THR:CG2	57:BZ:111:VAL:HB	2.49	0.41
1:CA:66:G:H4'	1:CA:173:U:H5	1.81	0.41
1:CA:390:C:H2'	1:CA:391:G:H8	1.82	0.41
1:CA:815:A:N6	1:CA:1509:C:H1'	2.34	0.41
1:CA:892:A:H2'	1:CA:893:C:C6	2.55	0.41
1:CA:949:A:C2	1:CA:1233:G:C4	3.08	0.41
1:CA:1368:G:H5'	9:CI:112:LYS:O	2.21	0.41
1:CA:1497:G:O2'	1:CA:1498:U:H5'	2.20	0.41
2:CB:69:LEU:HD12	2:CB:69:LEU:C	2.46	0.41
5:CE:9:LYS:NZ	5:CE:111:GLU:OE1	2.52	0.41
8:CH:11:THR:O	8:CH:12:ARG:C	2.63	0.41
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.20	0.41
14:CN:21:TYR:CE2	14:CN:23:ARG:NH2	2.89	0.41
15:CO:43:LEU:C	15:CO:45:VAL:H	2.27	0.41
19:CS:6:LYS:CD	19:CS:6:LYS:N	2.81	0.41
19:CS:41:VAL:O	19:CS:41:VAL:CG2	2.68	0.41
25:CY:92:ILE:CG2	25:CY:93:GLU:H	2.34	0.41
25:CY:182:ARG:C	25:CY:184:LYS:N	2.78	0.41
25:CY:227:ILE:HD13	25:CY:242:LEU:HD23	2.03	0.41
25:CY:282:SER:C	25:CY:284:LEU:N	2.77	0.41
25:CY:510:VAL:HG12	25:CY:511:LYS:H	1.85	0.41
25:CY:669:PHE:HE2	25:CY:671:MET:HB2	1.85	0.41
29:D3:17:LYS:HA	29:D3:17:LYS:HD3	1.77	0.41
31:D5:48:GLU:O	31:D5:49:CYS:HB3	2.21	0.41
32:D6:22:ALA:C	32:D6:23:THR:CG2	2.93	0.41
32:D6:28:ARG:NH1	32:D6:28:ARG:CB	2.65	0.41
32:D6:45:LYS:HG2	36:DA:2371:G:H5''	2.03	0.41
34:D8:15:LYS:NZ	36:DA:630:G:OP2	2.48	0.41
36:DA:411:G:OP2	36:DA:2407:G:P	2.79	0.41
36:DA:455:C:N3	36:DA:472:A:H2'	2.36	0.41
36:DA:634:C:H2'	36:DA:635:C:O4'	2.20	0.41
36:DA:637:A:C6	36:DA:652:C:H4'	2.55	0.41
36:DA:832:G:O2'	47:DP:52:GLU:HB3	2.20	0.41
36:DA:1044:G:O2'	36:DA:1045:A:H5''	2.20	0.41
36:DA:1123:C:H2'	36:DA:1124:C:C6	2.46	0.41
36:DA:1278:A:H4'	49:DR:34:ILE:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1331:A:C2'	36:DA:1332:G:H5''	2.50	0.41
36:DA:1484:G:O6	36:DA:1506:C:N3	2.53	0.41
36:DA:1744:C:C2'	36:DA:1745:C:H5'	2.50	0.41
36:DA:1767:C:C2'	36:DA:1768:U:H5'	2.51	0.41
36:DA:1851:U:H2'	36:DA:1852:C:O4'	2.20	0.41
36:DA:2348:U:C3'	36:DA:2349:G:C5'	2.98	0.41
36:DA:2454:G:C2'	36:DA:2455:G:H5'	2.51	0.41
36:DA:2531:A:OP1	43:DH:177:GLY:N	2.53	0.41
36:DA:2688:U:C5	36:DA:2720:U:OP2	2.73	0.41
36:DA:2724:C:OP1	40:DE:118:LYS:HE3	2.21	0.41
37:DB:87:G:N2	37:DB:89:G:H5''	2.35	0.41
38:DC:140:ASN:OD1	38:DC:141:PRO:HD2	2.20	0.41
39:DD:28:GLU:OE1	39:DD:29:PRO:HD2	2.21	0.41
40:DE:69:LYS:C	40:DE:71:GLY:N	2.78	0.41
41:DF:135:LYS:HB3	41:DF:138:GLU:HB2	2.02	0.41
41:DF:152:GLU:O	41:DF:154:VAL:HG23	2.20	0.41
42:DG:58:GLN:O	42:DG:61:ALA:HB3	2.21	0.41
42:DG:95:ARG:O	42:DG:96:ARG:O	2.39	0.41
43:DH:89:ILE:O	43:DH:89:ILE:HG13	2.20	0.41
46:DO:10:VAL:O	46:DO:10:VAL:HG23	2.20	0.41
47:DP:16:ARG:NH2	47:DP:18:ARG:CG	2.83	0.41
48:DQ:58:PHE:O	48:DQ:58:PHE:CD1	2.72	0.41
48:DQ:137:TYR:H	48:DQ:137:TYR:HD1	1.67	0.41
48:DQ:139:GLU:CD	57:DZ:99:TYR:HE2	2.27	0.41
50:DS:17:ARG:C	50:DS:19:LYS:N	2.75	0.41
50:DS:24:LEU:O	50:DS:85:VAL:HB	2.20	0.41
52:DU:8:VAL:CG2	52:DU:12:ARG:HE	2.32	0.41
53:DV:2:PHE:O	53:DV:3:ALA:CB	2.67	0.41
53:DV:38:LEU:C	53:DV:39:LEU:HD22	2.45	0.41
57:DZ:54:HIS:HA	57:DZ:98:MET:CE	2.47	0.41
57:DZ:145:GLU:C	57:DZ:147:GLY:H	2.19	0.41
1:AA:129(A):G:H8	1:AA:129(A):G:H5''	1.86	0.41
1:AA:304:U:O2'	1:AA:305:G:H5'	2.20	0.41
1:AA:376:G:N3	1:AA:389:A:C2	2.89	0.41
1:AA:657:G:H4'	15:AO:28:GLN:HG2	2.02	0.41
1:AA:707:C:O2'	1:AA:708:C:H5'	2.19	0.41
1:AA:986:A:H2'	1:AA:987:G:O4'	2.20	0.41
1:AA:1256:A:C2	1:AA:1277:C:C5	3.08	0.41
1:AA:1347:G:H2'	1:AA:1373:G:O6	2.21	0.41
1:AA:1489:G:H2'	1:AA:1490:C:C5'	2.29	0.41
2:AB:231:GLU:HB2	2:AB:232:PRO:CD	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:52:LEU:HD12	3:AC:55:VAL:HG22	2.03	0.41
3:AC:154:SER:CB	3:AC:197:GLY:H	2.34	0.41
3:AC:155:GLY:O	3:AC:156:ARG:CB	2.66	0.41
6:AF:4:TYR:CE1	6:AF:92:LYS:HD2	2.56	0.41
7:AG:111:ARG:HD2	7:AG:123:GLU:HB2	2.01	0.41
13:AM:34:LEU:HD13	13:AM:41:PRO:HB3	2.03	0.41
20:AT:50:GLU:HB2	20:AT:100:ILE:CG2	2.51	0.41
22:AV:9:A:O2'	22:AV:10:G:N7	2.53	0.41
24:AX:11:A:C5'	24:AX:12:A:H5'	2.51	0.41
25:AY:9:LEU:HD13	25:AY:284:LEU:HD13	2.02	0.41
25:AY:162:VAL:O	25:AY:164:MET:N	2.54	0.41
25:AY:192:LEU:HD12	25:AY:194:THR:HG23	2.02	0.41
25:AY:236:GLU:O	25:AY:236:GLU:HG3	2.18	0.41
25:AY:309:LEU:O	25:AY:390:VAL:HA	2.20	0.41
30:B4:15:ILE:HB	30:B4:32:TYR:HA	2.03	0.41
31:B5:42:PRO:O	31:B5:43:HIS:HB2	2.20	0.41
34:B8:54:GLU:H	34:B8:54:GLU:HG3	1.54	0.41
36:BA:85:G:N3	36:BA:103:A:C2	2.88	0.41
36:BA:252:G:H2'	36:BA:253:C:H6	1.86	0.41
36:BA:301:G:C6	36:BA:317:G:C6	3.08	0.41
36:BA:311:A:H5'	36:BA:332:A:C2	2.55	0.41
36:BA:589:C:O2'	36:BA:590:A:H5'	2.20	0.41
36:BA:610:G:H2'	36:BA:611:C:C6	2.56	0.41
36:BA:654(S):G:H3'	36:BA:654(T):C:H4'	2.02	0.41
36:BA:729:G:O2'	36:BA:763:G:H4'	2.21	0.41
36:BA:903:C:O2'	36:BA:904:C:H5''	2.19	0.41
36:BA:1215:G:O2'	36:BA:1216:G:H5'	2.20	0.41
36:BA:1593:G:H3'	36:BA:1594:G:H8	1.85	0.41
36:BA:2442:C:H2'	36:BA:2443:C:H6	1.85	0.41
36:BA:2659:G:H2'	36:BA:2661:G:OP2	2.20	0.41
36:BA:2668:G:C2'	36:BA:2669:G:H5'	2.50	0.41
36:BA:2821:A:OP2	36:BA:2822:G:OP2	2.38	0.41
38:BC:197:LEU:O	38:BC:199:ALA:N	2.53	0.41
39:BD:52:ARG:H	39:BD:52:ARG:HG3	1.70	0.41
39:BD:249:PRO:HG2	39:BD:250:TRP:CD2	2.55	0.41
40:BE:37:ARG:O	40:BE:38:THR:C	2.63	0.41
41:BF:31:HIS:O	41:BF:34:TRP:N	2.53	0.41
41:BF:157:VAL:CG2	41:BF:157:VAL:O	2.69	0.41
43:BH:97:ARG:O	43:BH:98:LEU:C	2.64	0.41
47:BP:98:GLU:H	47:BP:101:VAL:HG13	1.84	0.41
47:BP:102:ARG:HG2	47:BP:102:ARG:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BP:136:GLU:C	47:BP:138:LEU:H	2.28	0.41
48:BQ:63:LYS:HD2	57:BZ:175:VAL:HG21	2.03	0.41
49:BR:77:ARG:C	49:BR:79:LEU:H	2.27	0.41
49:BR:79:LEU:C	49:BR:79:LEU:HD13	2.45	0.41
51:BT:104:ASN:O	51:BT:105:LEU:C	2.63	0.41
52:BU:110:VAL:C	52:BU:112:ARG:N	2.77	0.41
53:BV:54:GLY:O	53:BV:55:ALA:HB2	2.21	0.41
54:BW:12:ILE:HG13	54:BW:42:ARG:NH1	2.35	0.41
55:BX:27:THR:CB	55:BX:80:ILE:HG22	2.49	0.41
1:CA:360:A:O2'	1:CA:361:G:H5'	2.21	0.41
1:CA:703:G:O2'	1:CA:704:A:OP2	2.39	0.41
1:CA:930:C:C4	1:CA:931:C:C5	3.09	0.41
1:CA:1054:C:O2	1:CA:1054:C:H3'	2.21	0.41
1:CA:1157:A:H1'	1:CA:1181:G:H21	1.84	0.41
1:CA:1180:A:OP1	9:CI:103:THR:HG23	2.20	0.41
1:CA:1258:G:C6	1:CA:1259:C:N4	2.88	0.41
1:CA:1308:U:OP1	13:CM:98:VAL:N	2.48	0.41
1:CA:1338:G:C6	1:CA:1339:A:C6	3.08	0.41
1:CA:1442:G:H3'	1:CA:1442:G:H8	1.86	0.41
1:CA:1473:A:O2'	1:CA:1474:G:H5'	2.20	0.41
5:CE:53:LEU:N	5:CE:53:LEU:HD23	2.34	0.41
10:CJ:78:ASN:HB2	10:CJ:81:THR:CG2	2.49	0.41
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	2.03	0.41
12:CL:47:LYS:HD2	12:CL:48:PRO:N	2.35	0.41
16:CP:71:ARG:HA	16:CP:74:LEU:HB2	2.01	0.41
19:CS:14:HIS:CD2	19:CS:14:HIS:C	2.98	0.41
20:CT:81:LYS:C	20:CT:83:ARG:N	2.79	0.41
25:CY:134:ALA:CB	25:CY:258:VAL:HG22	2.50	0.41
25:CY:210:ARG:NH1	25:CY:210:ARG:CG	2.80	0.41
25:CY:335:LEU:HD11	25:CY:352:VAL:HG11	2.02	0.41
25:CY:416:LYS:HG2	25:CY:417:THR:N	2.34	0.41
25:CY:456:GLU:O	25:CY:459:LEU:HD12	2.21	0.41
25:CY:627:ARG:HD3	25:CY:652:MET:HE1	2.03	0.41
25:CY:647:VAL:HG21	25:CY:652:MET:SD	2.61	0.41
27:D1:11:ARG:HB2	27:D1:12:PRO:HD2	2.03	0.41
27:D1:13:ILE:HG12	27:D1:42:GLN:HB2	2.01	0.41
27:D1:65:SER:OG	27:D1:66:HIS:ND1	2.43	0.41
28:D2:61:LEU:O	28:D2:64:LEU:N	2.53	0.41
30:D4:55:ARG:HE	30:D4:55:ARG:H	1.68	0.41
36:DA:695:G:OP1	36:DA:1380:G:H4'	2.21	0.41
36:DA:740:U:H5''	36:DA:1784:A:H3'	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:848:G:H5'	36:DA:849:A:OP2	2.20	0.41
36:DA:859:G:N2	36:DA:2268:A:C2	2.88	0.41
36:DA:882:G:H22	36:DA:894:C:H42	1.69	0.41
36:DA:978:G:N1	36:DA:985:C:N4	2.59	0.41
36:DA:1009:A:OP2	45:DN:37:LYS:NZ	2.47	0.41
36:DA:1374:G:H2'	36:DA:1375:C:C6	2.56	0.41
36:DA:1451:C:H4'	36:DA:1452:A:C8	2.56	0.41
36:DA:1583:A:H4'	36:DA:1586:A:C4	2.55	0.41
36:DA:2306:C:C5	36:DA:2307:G:O2'	2.71	0.41
36:DA:2322:A:O2'	36:DA:2323:G:H5'	2.21	0.41
36:DA:2543:G:H2'	36:DA:2544:G:O4'	2.20	0.41
36:DA:2767:C:H2'	36:DA:2768:C:C6	2.56	0.41
37:DB:81:G:C2	37:DB:82:G:N7	2.88	0.41
37:DB:81:G:H2'	37:DB:82:G:H5'	2.03	0.41
38:DC:11:LEU:O	38:DC:12:LEU:C	2.64	0.41
38:DC:197:LEU:O	38:DC:199:ALA:N	2.53	0.41
39:DD:4:LYS:NZ	39:DD:21:PHE:H	2.18	0.41
39:DD:27:THR:CG2	39:DD:27:THR:O	2.68	0.41
39:DD:61:LEU:HA	39:DD:61:LEU:HD13	1.80	0.41
39:DD:69:ARG:C	39:DD:71:ASP:H	2.28	0.41
40:DE:72:VAL:O	40:DE:73:GLU:C	2.64	0.41
43:DH:89:ILE:HG22	43:DH:162:ILE:HG22	2.02	0.41
45:DN:76:SER:O	45:DN:78:TYR:N	2.53	0.41
47:DP:39:LYS:HE2	47:DP:40:SER:N	2.20	0.41
47:DP:58:THR:O	47:DP:58:THR:HG22	2.20	0.41
47:DP:92:GLU:HG3	47:DP:93:GLY:N	2.28	0.41
49:DR:39:PRO:O	49:DR:40:LYS:C	2.64	0.41
49:DR:44:LEU:HD13	49:DR:44:LEU:C	2.44	0.41
51:DT:65:LYS:CE	51:DT:66:VAL:N	2.73	0.41
1:AA:288:A:H2'	1:AA:289:G:H4'	2.02	0.41
1:AA:892:A:H2'	1:AA:893:C:C6	2.55	0.41
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.51	0.41
1:AA:1351:U:O4'	7:AG:33:ASP:HB3	2.20	0.41
3:AC:182:ILE:HA	3:AC:202:ILE:O	2.20	0.41
4:AD:165:MET:HE2	4:AD:176:LEU:CD2	2.51	0.41
7:AG:23:VAL:CG1	7:AG:43:PHE:CE2	3.01	0.41
7:AG:103:TRP:NE1	7:AG:137:LYS:HD3	2.36	0.41
7:AG:136:LYS:HB3	7:AG:136:LYS:HE3	1.82	0.41
8:AH:36:LEU:O	8:AH:37:ARG:C	2.64	0.41
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	2.02	0.41
9:AI:46:ALA:HB3	9:AI:47:LEU:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:23:LYS:HE3	12:AL:89:ARG:HE	1.85	0.41
15:AO:57:LEU:HD23	15:AO:57:LEU:N	2.35	0.41
18:AR:36:ASN:OD1	18:AR:36:ASN:O	2.39	0.41
18:AR:69:THR:O	18:AR:72:ARG:HB2	2.20	0.41
19:AS:33:THR:OG1	19:AS:34:TRP:N	2.54	0.41
20:AT:43:LEU:O	20:AT:44:ALA:C	2.63	0.41
23:AW:31:G:H2'	23:AW:32:C:C6	2.55	0.41
23:AW:49:G:C6	23:AW:50:U:C4	3.08	0.41
25:AY:230:LYS:O	25:AY:235:GLU:O	2.39	0.41
25:AY:236:GLU:HA	25:AY:237:PRO:HD3	1.95	0.41
25:AY:269:VAL:C	25:AY:271:LEU:H	2.28	0.41
26:B0:40:GLN:HE22	26:B0:43:THR:CA	2.34	0.41
29:B3:43:ILE:O	29:B3:47:VAL:HG23	2.21	0.41
36:BA:6:A:HO2'	45:BN:130:HIS:HB2	1.82	0.41
36:BA:56:A:C2	36:BA:57:C:C2	3.08	0.41
36:BA:350:U:H2'	36:BA:351:G:O4'	2.20	0.41
36:BA:483:A:H4'	56:BY:49:VAL:HA	2.03	0.41
36:BA:587:C:C5	36:BA:671:C:H1'	2.55	0.41
36:BA:614:U:H2'	36:BA:614(A):U:O4'	2.20	0.41
36:BA:664:C:H4'	36:BA:941:A:OP1	2.20	0.41
36:BA:727:A:H2	39:BD:9:TYR:CD2	2.38	0.41
36:BA:729:G:C4	36:BA:1775:U:C2	3.07	0.41
36:BA:871:U:H4'	48:BQ:69:PHE:CE2	2.55	0.41
36:BA:1044:G:O2'	36:BA:1045:A:H5''	2.21	0.41
36:BA:1107:G:H2'	36:BA:1108:U:H6	1.86	0.41
36:BA:1146:C:H2'	36:BA:1147:C:H5'	2.02	0.41
36:BA:1161:C:H2'	36:BA:1162:G:C8	2.55	0.41
36:BA:1374:G:H2'	36:BA:1375:C:C6	2.55	0.41
36:BA:1465:G:C4	36:BA:1466:G:C8	3.09	0.41
36:BA:1479:G:O2'	36:BA:1480:G:H5'	2.20	0.41
36:BA:1541:G:H4'	36:BA:1542:A:O4'	2.20	0.41
36:BA:2138:C:O2'	36:BA:2139:C:H5'	2.20	0.41
36:BA:2410:G:H2'	36:BA:2411:A:C8	2.55	0.41
36:BA:2647:U:H2'	36:BA:2648:C:H6	1.85	0.41
36:BA:2677:G:O2'	36:BA:2678:C:H5'	2.20	0.41
36:BA:2771:C:H2'	36:BA:2772:C:C6	2.55	0.41
37:BB:81:G:H2'	37:BB:82:G:H5'	2.03	0.41
38:BC:97:GLY:C	38:BC:99:GLU:H	2.27	0.41
38:BC:100:ILE:C	38:BC:102:GLN:N	2.79	0.41
38:BC:127:LYS:O	38:BC:128:LEU:CD2	2.68	0.41
38:BC:217:THR:O	38:BC:218:THR:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:85:ASP:HB2	39:BD:92:ILE:HG23	2.01	0.41
40:BE:182:LEU:C	40:BE:183:LEU:HD12	2.46	0.41
41:BF:139:PHE:HB2	41:BF:166:ALA:HB1	2.01	0.41
42:BG:9:ARG:C	42:BG:11:TYR:H	2.29	0.41
42:BG:75:LYS:O	42:BG:76:SER:OG	2.25	0.41
43:BH:130:ARG:HB3	43:BH:130:ARG:HH11	1.85	0.41
45:BN:34:LEU:O	45:BN:49:GLY:HA3	2.21	0.41
47:BP:24:GLY:HA3	47:BP:33:ARG:NH1	2.36	0.41
47:BP:32:THR:CG2	47:BP:37:GLY:HA2	2.49	0.41
47:BP:124:LYS:HA	47:BP:143:GLY:HA3	2.01	0.41
48:BQ:59:ARG:CA	57:BZ:180:VAL:HG23	2.45	0.41
48:BQ:75:THR:CG2	48:BQ:76:LYS:N	2.81	0.41
48:BQ:110:THR:CG2	48:BQ:113:GLN:HG3	2.51	0.41
55:BX:64:LYS:NZ	55:BX:73:ARG:NH2	2.68	0.41
57:BZ:24:LEU:HD23	57:BZ:24:LEU:C	2.46	0.41
57:BZ:115:GLY:HA2	57:BZ:177:PRO:CG	2.49	0.41
1:CA:78:G:H1	1:CA:91:C:N4	2.18	0.41
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.56	0.41
1:CA:197:A:H4'	1:CA:198:G:H5'	2.02	0.41
1:CA:236:G:C6	1:CA:237:C:C4	3.08	0.41
1:CA:256:U:H2'	1:CA:257:G:H8	1.86	0.41
1:CA:288:A:H2'	1:CA:289:G:H4'	2.01	0.41
1:CA:311:C:HO2'	1:CA:312:C:H5'	1.86	0.41
1:CA:329:A:H3'	1:CA:330:C:H5'	2.01	0.41
1:CA:397:A:H5'	1:CA:398:C:OP1	2.21	0.41
1:CA:500:G:N2	1:CA:546:G:H1'	2.36	0.41
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	2.20	0.41
1:CA:1010:G:H2'	1:CA:1011:G:H8	1.86	0.41
1:CA:1495:U:C2	1:CA:1496:C:C5	3.08	0.41
2:CB:11:LEU:HB3	2:CB:213:LEU:HD11	2.02	0.41
2:CB:118:LEU:CB	2:CB:142:LEU:HD12	2.47	0.41
3:CC:94:LEU:O	3:CC:94:LEU:HD12	2.19	0.41
4:CD:3:ARG:HG2	4:CD:118:ARG:NE	2.36	0.41
4:CD:30:LYS:O	4:CD:32:ALA:N	2.52	0.41
4:CD:129:ASN:ND2	4:CD:145:GLU:N	2.64	0.41
7:CG:108:ALA:O	7:CG:110:GLN:N	2.54	0.41
13:CM:11:ARG:HG2	13:CM:12:ASN:H	1.86	0.41
13:CM:33:ALA:HA	13:CM:59:TYR:HE2	1.85	0.41
13:CM:91:ARG:HH21	19:CS:81:ARG:NH2	2.19	0.41
15:CO:18:PHE:CD1	15:CO:18:PHE:C	2.99	0.41
16:CP:67:THR:H	16:CP:70:ALA:CB	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:44:ALA:HA	17:CQ:71:PHE:O	2.21	0.41
24:CX:12:A:N3	24:CX:12:A:C2'	2.83	0.41
25:CY:18:ALA:HA	25:CY:85:PRO:CB	2.51	0.41
25:CY:159:ALA:O	25:CY:161:PRO:HD3	2.21	0.41
25:CY:603:GLU:HG2	25:CY:677:GLN:O	2.20	0.41
29:D3:31:LEU:HD22	29:D3:32:GLN:N	2.36	0.41
32:D6:33:LYS:CG	32:D6:34:LEU:H	2.29	0.41
36:DA:225:A:N6	36:DA:226:G:C2	2.88	0.41
36:DA:265:A:H1'	36:DA:266:G:O4'	2.20	0.41
36:DA:322:A:OP2	41:DF:169:ASN:HB2	2.20	0.41
36:DA:438:G:H2'	36:DA:440:G:C8	2.56	0.41
36:DA:438:G:H2'	36:DA:440:G:H8	1.85	0.41
36:DA:512:G:O2'	36:DA:513:A:C8	2.72	0.41
36:DA:937:U:O2'	36:DA:938:G:H5'	2.20	0.41
36:DA:1018:C:O2'	36:DA:1019:U:H5'	2.21	0.41
36:DA:1169:G:N2	36:DA:1181:C:N3	2.69	0.41
36:DA:1171:G:C5	36:DA:1173:G:O2'	2.74	0.41
36:DA:1186:G:H2'	36:DA:1187:G:C5'	2.51	0.41
36:DA:1721:G:O6	36:DA:1739:U:H5'	2.18	0.41
36:DA:2115:G:H5''	36:DA:2116:G:OP2	2.20	0.41
36:DA:2118:U:OP1	36:DA:2148:G:H4'	2.21	0.41
36:DA:2428:G:C4'	36:DA:2429:G:O5'	2.69	0.41
36:DA:2552:U:C2	36:DA:2554:U:H5'	2.56	0.41
36:DA:2580:U:H4'	40:DE:130:GLY:CA	2.50	0.41
42:DG:40:ASN:ND2	42:DG:90:LEU:O	2.52	0.41
42:DG:133:LEU:HD11	42:DG:157:ILE:HB	2.01	0.41
46:DO:77:ILE:HD11	51:DT:72:VAL:HG11	2.03	0.41
47:DP:102:ARG:O	47:DP:102:ARG:HG2	2.20	0.41
48:DQ:84:GLY:O	48:DQ:85:LYS:HB2	2.19	0.41
52:DU:12:ARG:O	52:DU:13:LYS:C	2.63	0.41
52:DU:17:ILE:C	52:DU:19:LYS:N	2.75	0.41
56:DY:84:ARG:HB2	56:DY:97:ARG:HB2	2.02	0.41
1:AA:186:C:H2'	1:AA:187:C:C6	2.55	0.41
1:AA:429:U:C1'	1:AA:430:A:H5''	2.51	0.41
1:AA:939:G:H5''	7:AG:102:ARG:HH22	1.83	0.41
1:AA:961:U:O2'	1:AA:962:C:H5'	2.21	0.41
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.53	0.41
1:AA:1303:C:O2'	1:AA:1304:G:H5'	2.20	0.41
2:AB:215:LEU:O	2:AB:216:SER:C	2.63	0.41
2:AB:228:GLY:O	2:AB:229:VAL:C	2.64	0.41
4:AD:80:GLU:OE1	4:AD:80:GLU:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:135:LEU:O	4:AD:136:PRO:C	2.63	0.41
4:AD:170:VAL:O	4:AD:171:GLY:C	2.64	0.41
6:AF:67:MET:CE	6:AF:72:VAL:HA	2.51	0.41
6:AF:67:MET:HE2	6:AF:72:VAL:HA	2.02	0.41
8:AH:34:GLU:OE1	8:AH:34:GLU:HA	2.20	0.41
9:AI:99:LEU:HB2	9:AI:101:PHE:HD2	1.85	0.41
11:AK:126:ARG:HG2	11:AK:126:ARG:NH1	2.35	0.41
13:AM:26:GLY:C	13:AM:28:ALA:N	2.78	0.41
18:AR:87:ARG:NH1	18:AR:87:ARG:CB	2.72	0.41
20:AT:62:LEU:O	20:AT:65:LYS:HB2	2.21	0.41
25:AY:20:HIS:O	25:AY:23:ALA:HB2	2.20	0.41
25:AY:31:ARG:O	25:AY:32:ILE:C	2.61	0.41
25:AY:102:ASP:O	25:AY:130:VAL:CG2	2.66	0.41
25:AY:219:VAL:O	25:AY:222:ASP:OD2	2.38	0.41
25:AY:315:LYS:HD2	25:AY:317:MET:HG3	2.02	0.41
25:AY:529:ILE:HD11	25:AY:567:LEU:HG	2.03	0.41
26:B0:11:ARG:C	26:B0:12:ASN:ND2	2.79	0.41
26:B0:41:ARG:NH2	36:BA:2387:U:H4'	2.35	0.41
27:B1:46:LEU:HD13	27:B1:46:LEU:H	1.85	0.41
30:B4:13:ARG:C	30:B4:14:ILE:HD12	2.44	0.41
36:BA:30:G:H2'	36:BA:31:C:C6	2.56	0.41
36:BA:303:U:H2'	36:BA:304:G:H8	1.82	0.41
36:BA:319:C:OP1	41:BF:137:LYS:NZ	2.51	0.41
36:BA:325:G:H2'	36:BA:326:G:H8	1.86	0.41
36:BA:602:G:N2	36:BA:654(V):A:N7	2.68	0.41
36:BA:637:A:C6	36:BA:652:C:H4'	2.55	0.41
36:BA:836:G:H2'	36:BA:837:C:C6	2.55	0.41
36:BA:938:G:N3	36:BA:939:G:C8	2.89	0.41
36:BA:1142(A):A:N6	36:BA:1144:G:C2	2.89	0.41
36:BA:1422:G:H1'	36:BA:1496:A:N6	2.35	0.41
36:BA:1472:A:H2'	36:BA:1473:G:H8	1.85	0.41
36:BA:1635:G:C2	36:BA:1636:C:C2	3.09	0.41
36:BA:1660:C:H5'	36:BA:2712(A):A:H61	1.86	0.41
36:BA:2118:U:OP1	36:BA:2148:G:H4'	2.20	0.41
36:BA:2378:A:C2	50:BS:19:LYS:HD3	2.56	0.41
36:BA:2406:U:H5''	36:BA:2408:U:OP2	2.21	0.41
36:BA:2762:G:H2'	36:BA:2763:G:H5'	2.03	0.41
36:BA:2807:G:H3'	36:BA:2808:U:C5'	2.37	0.41
37:BB:114:C:O2'	50:BS:46:VAL:HG13	2.21	0.41
38:BC:46:ALA:HA	38:BC:212:SER:O	2.21	0.41
39:BD:43:ARG:HB3	39:BD:54:ARG:CB	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:81:ALA:HA	39:BD:113:VAL:HG21	2.02	0.41
40:BE:147:PRO:HG2	40:BE:148:GLY:N	2.36	0.41
41:BF:10:PRO:HB3	41:BF:127:GLU:CG	2.51	0.41
41:BF:10:PRO:HG2	41:BF:11:VAL:H	1.86	0.41
41:BF:36:VAL:CG1	41:BF:183:VAL:HG21	2.51	0.41
41:BF:81:PRO:O	41:BF:83:PHE:N	2.54	0.41
41:BF:121:GLY:C	41:BF:123:LEU:H	2.28	0.41
42:BG:47:LYS:HG3	42:BG:82:LEU:HB2	2.01	0.41
42:BG:77:ILE:HG22	42:BG:80:PHE:CA	2.50	0.41
43:BH:76:VAL:O	43:BH:78:GLY:N	2.54	0.41
45:BN:57:ALA:HB3	45:BN:124:ALA:HB2	2.01	0.41
51:BT:50:ILE:HA	51:BT:99:LEU:HD11	2.03	0.41
55:BX:12:VAL:HA	55:BX:27:THR:O	2.21	0.41
56:BY:14:LEU:HD13	56:BY:24:VAL:HG23	2.03	0.41
56:BY:17:SER:O	56:BY:21:LYS:HG2	2.20	0.41
56:BY:76:CYS:SG	56:BY:77:PRO:CD	2.87	0.41
1:CA:1347:G:H2'	1:CA:1373:G:C6	2.56	0.41
1:CA:1513:A:C4	1:CA:1514:C:C5	3.09	0.41
3:CC:120:VAL:HG12	3:CC:121:ALA:N	2.35	0.41
6:CF:70:ASP:C	6:CF:72:VAL:H	2.29	0.41
15:CO:74:ASP:HA	15:CO:75:PRO:HD2	1.96	0.41
19:CS:17:GLU:C	19:CS:19:VAL:H	2.28	0.41
23:CW:28:C:H2'	23:CW:29:G:C8	2.51	0.41
25:CY:9:LEU:HD23	25:CY:9:LEU:C	2.43	0.41
25:CY:17:ILE:CD1	25:CY:81:ILE:HG21	2.50	0.41
25:CY:120:THR:O	25:CY:124:GLN:OE1	2.38	0.41
25:CY:315:LYS:C	25:CY:316:ILE:HD13	2.45	0.41
26:D0:10:THR:CG2	26:D0:11:ARG:N	2.79	0.41
26:D0:51:VAL:HG13	26:D0:60:PHE:O	2.20	0.41
26:D0:82:ARG:HA	26:D0:83:PRO:HD3	1.91	0.41
28:D2:52:ASP:O	28:D2:53:LEU:C	2.62	0.41
29:D3:34:GLU:O	29:D3:35:ARG:HB2	2.21	0.41
29:D3:43:ILE:O	29:D3:47:VAL:HG23	2.19	0.41
30:D4:14:ILE:HG22	30:D4:15:ILE:N	2.36	0.41
31:D5:36:CYS:SG	31:D5:49:CYS:CB	3.07	0.41
32:D6:51:GLU:HG2	32:D6:52:VAL:N	2.35	0.41
36:DA:56:A:C2	36:DA:57:C:C2	3.09	0.41
36:DA:64:A:H2'	36:DA:65:C:C6	2.55	0.41
36:DA:99:U:H5''	36:DA:102:G:H1'	2.02	0.41
36:DA:383:U:H2'	36:DA:385:C:H5	1.84	0.41
36:DA:525:U:C2'	36:DA:526:A:H5''	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:973:A:O4'	36:DA:1188:U:C6	2.74	0.41
36:DA:1257:C:H4'	41:DF:83:PHE:CD1	2.55	0.41
36:DA:1301:A:O2'	36:DA:1302:A:O5'	2.39	0.41
36:DA:1666:G:O2'	36:DA:1667:G:H5'	2.21	0.41
36:DA:1772:G:H5'	36:DA:1773:A:OP2	2.21	0.41
36:DA:1899:G:N2	36:DA:1902:C:C4	2.87	0.41
36:DA:2014:A:H2'	36:DA:2015:A:C8	2.56	0.41
36:DA:2103:C:C2'	36:DA:2103:C:O2	2.69	0.41
36:DA:2680:C:O2	36:DA:2680:C:H2'	2.19	0.41
36:DA:2691:C:H6	36:DA:2691:C:H5'	1.85	0.41
36:DA:2716:U:H2'	36:DA:2717:G:H8	1.86	0.41
36:DA:2733:A:H2	40:DE:203:LYS:O	2.03	0.41
36:DA:2880:C:H1'	49:DR:92:GLY:O	2.20	0.41
36:DA:2892:A:H62	36:DA:2893:G:N2	2.18	0.41
39:DD:71:ASP:HB2	39:DD:103:ARG:NH2	2.25	0.41
40:DE:37:ARG:O	40:DE:38:THR:C	2.63	0.41
40:DE:108:SER:O	40:DE:162:ALA:N	2.54	0.41
42:DG:71:THR:HG23	42:DG:89:GLY:O	2.18	0.41
42:DG:77:ILE:O	42:DG:78:SER:C	2.63	0.41
42:DG:105:LYS:O	42:DG:109:VAL:N	2.53	0.41
43:DH:13:LYS:O	43:DH:15:VAL:N	2.47	0.41
43:DH:35:VAL:O	43:DH:37:VAL:HG23	2.20	0.41
43:DH:130:ARG:HB3	43:DH:130:ARG:HH11	1.86	0.41
43:DH:148:ILE:O	43:DH:162:ILE:HD11	2.20	0.41
45:DN:96:GLU:N	45:DN:96:GLU:CD	2.79	0.41
46:DO:35:VAL:HG23	46:DO:65:THR:HG23	2.02	0.41
49:DR:85:PRO:C	49:DR:87:TYR:H	2.29	0.41
51:DT:94:ALA:C	51:DT:96:ARG:H	2.29	0.41
52:DU:10:ARG:O	52:DU:11:ARG:C	2.61	0.41
56:DY:57:GLN:C	56:DY:59:GLY:H	2.29	0.41
56:DY:95:LYS:HE2	56:DY:101:LYS:N	2.32	0.41
1:AA:197:A:H4'	1:AA:198:G:H5'	2.03	0.41
1:AA:246:A:C2	1:AA:279:A:N1	2.89	0.41
1:AA:375:U:H2'	1:AA:376:G:H8	1.85	0.41
1:AA:550:G:C6	1:AA:551:U:C4	3.09	0.41
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.41
1:AA:1216:G:H2'	1:AA:1217:C:C6	2.55	0.41
3:AC:157:ILE:O	3:AC:159:GLY:N	2.53	0.41
5:AE:78:HIS:CE1	5:AE:80:ILE:HG23	2.56	0.41
10:AJ:29:ARG:HH11	10:AJ:29:ARG:CG	2.33	0.41
15:AO:82:ILE:C	15:AO:82:ILE:CD1	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:4:ILE:CG1	16:AP:64:ALA:HB1	2.49	0.41
16:AP:55:ARG:O	16:AP:58:TYR:N	2.54	0.41
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.36	0.41
25:AY:33:LEU:HD11	25:AY:81:ILE:HD12	2.03	0.41
25:AY:95:GLU:O	25:AY:99:ARG:HD2	2.21	0.41
25:AY:125:ALA:C	25:AY:127:LYS:N	2.78	0.41
25:AY:160:ARG:NH2	25:AY:222:ASP:OD2	2.53	0.41
25:AY:241:GLU:HG3	25:AY:242:LEU:N	2.36	0.41
25:AY:607:ARG:O	25:AY:671:MET:HA	2.21	0.41
25:AY:610:VAL:HG23	25:AY:643:ILE:HD12	2.02	0.41
28:B2:16:LEU:O	28:B2:20:GLU:CB	2.68	0.41
31:B5:35:GLU:O	31:B5:36:CYS:HB3	2.21	0.41
34:B8:50:LEU:C	34:B8:53:PRO:CD	2.94	0.41
36:BA:370:G:C6	36:BA:424:G:N7	2.89	0.41
36:BA:455:C:N3	36:BA:473:G:H5'	2.35	0.41
36:BA:526:A:N6	36:BA:2626:C:H4'	2.36	0.41
36:BA:803:U:H2'	36:BA:804:A:H5'	2.01	0.41
36:BA:807:U:H2'	36:BA:808:G:H8	1.84	0.41
36:BA:807:U:O2'	36:BA:808:G:H5'	2.21	0.41
36:BA:812:C:H2'	36:BA:813:U:C6	2.56	0.41
36:BA:882:G:H22	36:BA:894:C:H42	1.69	0.41
36:BA:954:G:H4'	48:BQ:13:GLN:NE2	2.36	0.41
36:BA:1002:G:H8	36:BA:1002:G:O5'	2.04	0.41
36:BA:1177:A:H4'	36:BA:1178:C:O5'	2.20	0.41
36:BA:1278:A:H4'	49:BR:34:ILE:HG21	2.02	0.41
36:BA:1567:A:OP2	39:BD:84:TYR:OH	2.37	0.41
36:BA:2492:U:H2'	36:BA:2493:U:C6	2.55	0.41
37:BB:27:C:O3'	50:BS:36:TYR:OH	2.38	0.41
38:BC:11:LEU:CD2	38:BC:14:LYS:HZ1	2.33	0.41
38:BC:140:ASN:OD1	38:BC:141:PRO:HD2	2.20	0.41
39:BD:27:THR:CG2	39:BD:27:THR:O	2.69	0.41
41:BF:133:ASN:O	41:BF:134:GLY:C	2.64	0.41
42:BG:152:LEU:CD2	42:BG:152:LEU:N	2.80	0.41
46:BO:104:ARG:NE	51:BT:33:LYS:CE	2.75	0.41
48:BQ:18:LYS:HD2	48:BQ:18:LYS:N	2.33	0.41
51:BT:50:ILE:N	51:BT:50:ILE:CD1	2.83	0.41
52:BU:10:ARG:O	52:BU:11:ARG:C	2.62	0.41
52:BU:112:ARG:HA	52:BU:112:ARG:HD2	1.82	0.41
53:BV:39:LEU:HD12	53:BV:47:VAL:HG11	2.02	0.41
54:BW:84:ARG:O	54:BW:96:ILE:HG22	2.21	0.41
56:BY:88:LYS:HE2	56:BY:93:GLY:HA3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:23:LYS:HB3	57:BZ:38:TYR:CD2	2.56	0.41
57:BZ:72:ARG:HD3	57:BZ:72:ARG:HA	1.96	0.41
57:BZ:100:VAL:HG23	57:BZ:126:VAL:HG22	2.01	0.41
1:CA:294:U:H2'	1:CA:295:C:H6	1.85	0.41
1:CA:771:G:H2'	1:CA:772:U:C6	2.55	0.41
1:CA:832:C:H2'	1:CA:833:U:O4'	2.20	0.41
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.86	0.41
2:CB:39:ILE:HG22	2:CB:40:HIS:O	2.20	0.41
3:CC:72:LYS:HA	3:CC:72:LYS:HE3	2.02	0.41
3:CC:94:LEU:O	3:CC:94:LEU:CD1	2.68	0.41
4:CD:102:ASP:HA	4:CD:121:VAL:HG21	2.01	0.41
6:CF:76:ALA:C	6:CF:78:GLU:N	2.76	0.41
10:CJ:79:ARG:C	10:CJ:81:THR:H	2.28	0.41
12:CL:45:PRO:HG3	12:CL:53:ARG:HD3	2.02	0.41
12:CL:91:LYS:NZ	12:CL:91:LYS:HA	2.36	0.41
13:CM:14:ARG:NH2	13:CM:42:ALA:HA	2.35	0.41
13:CM:84:ILE:HG13	19:CS:66:MET:HE1	2.03	0.41
20:CT:104:LEU:HD23	20:CT:105:SER:O	2.21	0.41
22:CV:46:G:H8	22:CV:46:G:OP2	2.04	0.41
25:CY:69:VAL:O	25:CY:69:VAL:HG13	2.21	0.41
25:CY:102:ASP:OD1	25:CY:102:ASP:N	2.52	0.41
25:CY:138:LYS:HG2	60:CY:702:GDP:C6	2.55	0.41
25:CY:260:LEU:HD13	25:CY:260:LEU:N	2.36	0.41
25:CY:587:SER:O	25:CY:591:LYS:HG2	2.21	0.41
25:CY:610:VAL:O	25:CY:610:VAL:HG23	2.20	0.41
30:D4:14:ILE:HD13	30:D4:22:ILE:C	2.46	0.41
35:D9:10:ILE:HD12	35:D9:32:HIS:CB	2.50	0.41
36:DA:309:G:C6	36:DA:330:A:C2	3.09	0.41
36:DA:603:A:N6	36:DA:626:U:H4'	2.36	0.41
36:DA:611:C:H2'	36:DA:612:C:C6	2.55	0.41
36:DA:715:G:H2'	36:DA:716:A:O4'	2.21	0.41
36:DA:836:G:H2'	36:DA:837:C:C6	2.56	0.41
36:DA:948:G:H21	36:DA:985:C:P	2.43	0.41
36:DA:1126:A:OP1	36:DA:1126:A:H8	2.04	0.41
36:DA:1175:U:P	36:DA:1176:G:H5''	2.60	0.41
36:DA:1290:C:O5'	36:DA:1290:C:H6	2.04	0.41
36:DA:1326:U:H2'	36:DA:1327:C:C6	2.55	0.41
36:DA:1477:A:H2'	36:DA:1477:A:N3	2.36	0.41
36:DA:1680:U:O2	36:DA:1763:G:H3'	2.21	0.41
36:DA:1709:U:H2'	36:DA:1710:C:C6	2.55	0.41
36:DA:1814:G:H2'	36:DA:1815:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1843:C:H2'	36:DA:1844:C:H6	1.84	0.41
36:DA:2010:G:O2'	36:DA:2011:U:H5'	2.21	0.41
36:DA:2016:U:O2'	36:DA:2017:U:H5'	2.21	0.41
36:DA:2061:G:OP2	36:DA:2502:G:OP2	2.39	0.41
36:DA:2656:U:H3	36:DA:2665:A:H2	1.67	0.41
37:DB:15:A:C3'	37:DB:16:G:C5'	2.97	0.41
37:DB:102:A:H5'	37:DB:103:G:OP2	2.20	0.41
39:DD:24:ILE:C	39:DD:25:THR:O	2.64	0.41
39:DD:176:ARG:CZ	39:DD:176:ARG:HB3	2.51	0.41
40:DE:9:VAL:HG13	40:DE:25:VAL:O	2.21	0.41
41:DF:84:VAL:C	41:DF:86:GLY:N	2.77	0.41
41:DF:168:ARG:O	41:DF:170:LEU:N	2.53	0.41
42:DG:172:LEU:HD23	42:DG:176:LEU:HD12	2.02	0.41
43:DH:141:VAL:C	43:DH:143:GLN:N	2.77	0.41
46:DO:47:ILE:HG23	46:DO:48:PRO:HD2	2.01	0.41
50:DS:89:ARG:HG3	50:DS:92:TYR:N	2.35	0.41
50:DS:90:GLY:C	50:DS:92:TYR:H	2.29	0.41
51:DT:55:ASN:HD22	51:DT:58:ASN:HD21	1.67	0.41
52:DU:76:TYR:CE1	52:DU:80:ILE:HG13	2.56	0.41
55:DX:67:GLY:C	55:DX:69:TYR:H	2.27	0.41
57:DZ:69:THR:HG22	57:DZ:90:VAL:HG13	2.03	0.41
1:AA:47:C:H5	1:AA:365:U:H3'	1.86	0.41
1:AA:177:C:H2'	1:AA:178:C:H6	1.86	0.41
1:AA:221:C:O2	1:AA:221:C:H2'	2.20	0.41
1:AA:254:G:O2'	1:AA:255:G:H5'	2.20	0.41
1:AA:294:U:H2'	1:AA:295:C:H6	1.85	0.41
1:AA:329:A:H3'	1:AA:330:C:H5'	2.03	0.41
1:AA:429:U:H4'	1:AA:430:A:O5'	2.20	0.41
1:AA:495:A:H4'	1:AA:496:A:OP1	2.21	0.41
1:AA:505:G:H2'	1:AA:506:G:H8	1.86	0.41
1:AA:537:G:H2'	1:AA:538:G:H8	1.85	0.41
1:AA:676:A:H1'	11:AK:115:PRO:HB3	2.02	0.41
1:AA:741:G:C2'	1:AA:742:G:H5'	2.50	0.41
1:AA:747:C:H2'	1:AA:748:C:O4'	2.21	0.41
1:AA:778:G:C5	1:AA:779:C:C5	3.08	0.41
1:AA:832:C:H2'	1:AA:833:U:O4'	2.21	0.41
1:AA:1001(A):G:H2'	1:AA:1002:G:C8	2.56	0.41
1:AA:1010:G:N3	1:AA:1011:G:C8	2.89	0.41
1:AA:1060:C:H4'	10:AJ:52:GLY:H	1.86	0.41
2:AB:131:PRO:HG2	2:AB:134:GLU:CG	2.51	0.41
2:AB:194:PRO:O	2:AB:197:VAL:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:35:GLU:OE1	3:AC:97:LYS:HE3	2.20	0.41
3:AC:188:LEU:N	3:AC:188:LEU:HD22	2.35	0.41
4:AD:8:VAL:HG23	4:AD:9:CYS:N	2.35	0.41
4:AD:165:MET:O	4:AD:166:LYS:C	2.64	0.41
6:AF:97:PHE:HB2	18:AR:32:ARG:NH2	2.35	0.41
7:AG:73:MET:HG2	7:AG:90:GLU:HA	2.02	0.41
7:AG:79:ARG:O	7:AG:80:VAL:HG13	2.20	0.41
7:AG:97:GLN:O	7:AG:98:SER:C	2.63	0.41
7:AG:99:LEU:O	7:AG:100:ALA:C	2.64	0.41
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	2.02	0.41
7:AG:145:ALA:O	7:AG:147:ALA:N	2.51	0.41
8:AH:36:LEU:O	8:AH:38:ILE:N	2.54	0.41
8:AH:53:VAL:HB	8:AH:58:TYR:CD2	2.55	0.41
9:AI:19:LEU:HB3	9:AI:59:PHE:CD2	2.55	0.41
10:AJ:3:LYS:HZ2	10:AJ:76:ASN:HA	1.85	0.41
10:AJ:22:LYS:NZ	10:AJ:23:ILE:HA	2.36	0.41
11:AK:20:TYR:O	11:AK:30:VAL:HA	2.21	0.41
12:AL:25:PRO:C	12:AL:27:LEU:N	2.58	0.41
13:AM:49:THR:C	13:AM:51:ALA:N	2.73	0.41
13:AM:112:GLY:O	13:AM:113:PRO:C	2.63	0.41
13:AM:113:PRO:O	13:AM:114:ARG:C	2.63	0.41
14:AN:29:ARG:NH1	14:AN:29:ARG:CG	2.80	0.41
16:AP:12:LYS:O	16:AP:13:HIS:HB2	2.19	0.41
18:AR:47:THR:O	18:AR:82:THR:HA	2.20	0.41
20:AT:18:GLN:O	20:AT:22:ARG:HG3	2.21	0.41
20:AT:73:HIS:HB3	20:AT:74:LYS:CD	2.51	0.41
23:AW:25:C:C2'	23:AW:26:G:H5'	2.51	0.41
23:AW:27:U:H2'	23:AW:28:C:H6	1.86	0.41
25:AY:5:VAL:C	25:AY:7:TYR:H	2.29	0.41
25:AY:8:ASP:C	25:AY:10:LYS:H	2.29	0.41
25:AY:32:ILE:HG22	25:AY:33:LEU:HD12	2.03	0.41
25:AY:145:ASP:HB3	25:AY:148:LEU:CD2	2.50	0.41
25:AY:202:PRO:O	25:AY:203:GLU:C	2.63	0.41
25:AY:211:GLU:O	25:AY:215:LYS:HG3	2.21	0.41
25:AY:228:MET:O	25:AY:232:LEU:CD2	2.66	0.41
25:AY:256:THR:O	25:AY:258:VAL:HG23	2.21	0.41
25:AY:302:HIS:HA	25:AY:303:PRO:HD2	1.76	0.41
25:AY:328:ILE:O	25:AY:374:LEU:HA	2.21	0.41
25:AY:329:ARG:CB	25:AY:374:LEU:HG	2.51	0.41
25:AY:453:GLY:HA2	25:AY:458:HIS:CD2	2.29	0.41
25:AY:553:GLY:N	25:AY:557:GLY:HA2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:686:LYS:HD3	25:AY:686:LYS:C	2.46	0.41
32:B6:15:GLU:N	32:B6:49:HIS:CD2	2.88	0.41
34:B8:53:PRO:O	34:B8:56:GLU:CB	2.69	0.41
36:BA:176:G:C2'	36:BA:177:G:H5'	2.50	0.41
36:BA:271(M):G:C2'	36:BA:271(N):U:H5''	2.51	0.41
36:BA:294:A:C2'	36:BA:295:G:H5'	2.51	0.41
36:BA:404:C:O2'	36:BA:405:U:OP2	2.38	0.41
36:BA:411:G:OP2	36:BA:2407:G:P	2.79	0.41
36:BA:447:A:H4'	36:BA:449:A:N7	2.36	0.41
36:BA:649:G:C2	36:BA:650:C:C2	3.09	0.41
36:BA:654(O):G:H2'	36:BA:654(P):C:C5	2.56	0.41
36:BA:797:C:OP2	41:BF:62:ARG:HG3	2.19	0.41
36:BA:833:U:OP1	47:BP:45:LEU:HD21	2.21	0.41
36:BA:946:G:H2'	36:BA:947:G:H8	1.86	0.41
36:BA:986:C:C2'	36:BA:987:G:H5'	2.51	0.41
36:BA:1173:G:H5'	36:BA:1174:A:O5'	2.20	0.41
36:BA:1292:U:H2'	36:BA:1293:C:C6	2.55	0.41
36:BA:1420:U:H2'	36:BA:1421:G:H5'	2.03	0.41
36:BA:1591:G:H2'	36:BA:1592:C:C6	2.55	0.41
36:BA:1991:U:H2'	36:BA:1992:G:H5''	2.02	0.41
36:BA:2223:G:O2'	36:BA:2224:G:H5'	2.20	0.41
36:BA:2320:A:N3	36:BA:2320:A:C2'	2.83	0.41
36:BA:2322:A:O2'	36:BA:2323:G:H5'	2.21	0.41
36:BA:2468:G:C5'	48:BQ:120:ILE:HD12	2.51	0.41
36:BA:2532:G:H2'	36:BA:2533:A:O4'	2.21	0.41
36:BA:2577:A:C5'	36:BA:2578:G:C5'	2.99	0.41
36:BA:2695:C:H2'	36:BA:2696:U:H6	1.85	0.41
36:BA:2697:G:H2'	36:BA:2698:U:O4'	2.19	0.41
37:BB:36:C:H2'	37:BB:37:C:H6	1.84	0.41
37:BB:42:C:O2	42:BG:93:THR:N	2.51	0.41
37:BB:114:C:H2'	37:BB:115:G:H8	1.81	0.41
38:BC:11:LEU:O	38:BC:12:LEU:C	2.62	0.41
38:BC:98:GLU:O	38:BC:101:ILE:HD13	2.21	0.41
38:BC:191:ARG:O	38:BC:195:ARG:HG3	2.21	0.41
39:BD:61:LEU:HB3	39:BD:63:ARG:NH1	2.26	0.41
39:BD:127:VAL:HA	39:BD:193:VAL:HG13	2.01	0.41
39:BD:187:GLY:C	39:BD:189:CYS:N	2.78	0.41
40:BE:39:PRO:HG2	40:BE:40:GLU:OE2	2.20	0.41
40:BE:137:HIS:CB	40:BE:138:PRO:HD2	2.50	0.41
40:BE:177:PRO:HG2	40:BE:178:GLU:H	1.86	0.41
41:BF:66:PRO:O	41:BF:68:LYS:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:63:ILE:HD12	42:BG:64:THR:CB	2.50	0.41
42:BG:96:ARG:O	42:BG:97:ASP:HB2	2.21	0.41
42:BG:135:LEU:HD11	42:BG:155:MET:CG	2.32	0.41
43:BH:28:GLY:HA3	43:BH:79:VAL:CG2	2.51	0.41
45:BN:19:GLU:HB2	45:BN:59:LYS:CB	2.51	0.41
47:BP:39:LYS:HE2	47:BP:40:SER:N	2.20	0.41
49:BR:12:ARG:HD3	49:BR:16:HIS:CD2	2.56	0.41
50:BS:70:GLY:O	50:BS:72:ALA:N	2.54	0.41
50:BS:90:GLY:C	50:BS:92:TYR:H	2.28	0.41
51:BT:10:VAL:O	51:BT:13:ARG:HG2	2.20	0.41
52:BU:19:LYS:HB3	52:BU:20:LEU:HD22	2.03	0.41
52:BU:26:GLY:C	52:BU:28:ARG:H	2.29	0.41
52:BU:62:ILE:HG12	52:BU:76:TYR:CE2	2.56	0.41
52:BU:85:LYS:HG2	52:BU:85:LYS:O	2.21	0.41
52:BU:112:ARG:NH2	53:BV:46:VAL:HG21	2.35	0.41
56:BY:23:ARG:O	56:BY:24:VAL:C	2.64	0.41
56:BY:89:PHE:HB3	56:BY:90:LEU:HD23	2.01	0.41
57:BZ:48:PHE:CE2	57:BZ:74:VAL:HG21	2.56	0.41
57:BZ:57:ILE:HD12	57:BZ:57:ILE:N	2.36	0.41
57:BZ:150:LEU:N	57:BZ:150:LEU:CD2	2.82	0.41
57:BZ:153:SER:HB2	57:BZ:167:PRO:HB3	2.02	0.41
57:BZ:167:PRO:O	57:BZ:168:GLU:HB2	2.21	0.41
1:CA:33:A:O2'	1:CA:363:A:N3	2.52	0.41
1:CA:187:C:O2'	20:CT:89:ARG:HD3	2.20	0.41
1:CA:189(B):C:C2	1:CA:189(J):G:C2	3.08	0.41
1:CA:238:G:C6	1:CA:239:U:C4	3.09	0.41
1:CA:278:G:OP2	17:CQ:41:LYS:HE2	2.21	0.41
1:CA:316:G:C6	1:CA:338:A:C6	3.09	0.41
1:CA:411:A:O2'	1:CA:413:G:H5'	2.20	0.41
1:CA:579:G:H4'	1:CA:728:A:H1'	2.03	0.41
1:CA:894:G:O2'	1:CA:895:G:H5'	2.21	0.41
1:CA:913:A:H1'	1:CA:914:A:O4'	2.21	0.41
1:CA:913:A:H4'	1:CA:914:A:H4'	2.02	0.41
1:CA:1031:G:H2'	1:CA:1032:G:H5'	2.03	0.41
1:CA:1068:G:OP1	1:CA:1387:G:O2'	2.38	0.41
1:CA:1190:G:OP1	3:CC:5:ILE:HG23	2.21	0.41
1:CA:1207:G:O2'	1:CA:1208:C:H5'	2.21	0.41
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.20	0.41
1:CA:1422:G:H2'	1:CA:1423:G:C8	2.56	0.41
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.21	0.41
2:CB:223:ILE:HA	2:CB:226:ARG:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:42:LEU:HD12	3:CC:46:GLU:OE2	2.20	0.41
3:CC:91:LEU:C	3:CC:93:LYS:H	2.29	0.41
3:CC:94:LEU:HD12	3:CC:94:LEU:C	2.46	0.41
3:CC:123:GLN:HB3	3:CC:128:PHE:CD2	2.44	0.41
5:CE:12:LEU:CD1	5:CE:12:LEU:H	2.33	0.41
5:CE:32:VAL:O	5:CE:43:LEU:HD12	2.21	0.41
5:CE:33:VAL:CG1	5:CE:34:VAL:N	2.82	0.41
6:CF:25:ILE:HA	6:CF:28:ARG:HD3	2.03	0.41
6:CF:40:VAL:O	6:CF:40:VAL:HG13	2.20	0.41
6:CF:52:ILE:O	6:CF:53:ALA:HB3	2.19	0.41
7:CG:30:ILE:HD13	7:CG:105:VAL:HG22	2.03	0.41
8:CH:53:VAL:HB	8:CH:58:TYR:CD2	2.56	0.41
11:CK:95:ILE:O	11:CK:96:ARG:C	2.64	0.41
11:CK:122:LYS:O	11:CK:124:LYS:N	2.54	0.41
12:CL:117:ARG:O	12:CL:119:LYS:O	2.39	0.41
12:CL:119:LYS:HB2	12:CL:120:TYR:CD1	2.55	0.41
13:CM:34:LEU:HD13	13:CM:41:PRO:HB3	2.03	0.41
13:CM:57:ARG:C	13:CM:59:TYR:N	2.74	0.41
15:CO:64:ARG:CZ	15:CO:64:ARG:HB2	2.50	0.41
16:CP:5:ARG:NH2	16:CP:26:ARG:HB2	2.35	0.41
18:CR:42:ARG:HE	18:CR:42:ARG:HB2	1.73	0.41
18:CR:44:LEU:N	18:CR:44:LEU:CD1	2.83	0.41
19:CS:35:SER:C	19:CS:37:ARG:N	2.77	0.41
19:CS:47:HIS:O	19:CS:62:ILE:CG2	2.69	0.41
20:CT:69:GLY:O	20:CT:73:HIS:NE2	2.54	0.41
23:CW:9:G:C2	23:CW:45:G:C6	3.09	0.41
23:CW:56:C:O2	23:CW:56:C:C2'	2.69	0.41
24:CX:11:A:C5'	24:CX:12:A:H5'	2.50	0.41
25:CY:18:ALA:O	25:CY:19:ALA:HB2	2.20	0.41
25:CY:20:HIS:NE2	25:CY:117:GLN:HB3	2.36	0.41
25:CY:21:ILE:HG13	36:DA:2661:G:H5''	2.02	0.41
25:CY:145:ASP:HB3	25:CY:148:LEU:HB3	2.03	0.41
25:CY:159:ALA:O	25:CY:161:PRO:HD2	2.20	0.41
25:CY:204:GLU:C	25:CY:206:LEU:N	2.77	0.41
25:CY:259:PHE:CD1	25:CY:259:PHE:N	2.88	0.41
25:CY:299:VAL:O	25:CY:301:ILE:HD13	2.20	0.41
25:CY:336:THR:HG23	25:CY:368:GLU:HB3	2.01	0.41
25:CY:377:VAL:HG23	25:CY:380:LEU:HD13	2.03	0.41
25:CY:424:LEU:O	25:CY:428:LEU:CD2	2.67	0.41
25:CY:510:VAL:CG1	25:CY:567:LEU:HD13	2.50	0.41
25:CY:613:PRO:C	25:CY:615:GLU:H	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:15:ASP:HA	36:DA:2262:U:O4	2.20	0.41
28:D2:3:LEU:O	28:D2:6:VAL:HB	2.21	0.41
28:D2:8:LYS:O	28:D2:12:GLU:HG3	2.21	0.41
28:D2:13:ALA:O	28:D2:15:LYS:N	2.54	0.41
28:D2:33:MET:HE3	28:D2:37:PHE:HE2	1.84	0.41
28:D2:57:ILE:O	28:D2:58:ALA:C	2.63	0.41
29:D3:16:PRO:CB	29:D3:18:ASP:OD1	2.69	0.41
30:D4:7:PRO:HG2	42:DG:61:ALA:HB1	2.02	0.41
32:D6:17:LYS:O	32:D6:20:ASN:ND2	2.54	0.41
32:D6:39:TYR:HB3	32:D6:49:HIS:CE1	2.56	0.41
35:D9:22:ARG:HB2	35:D9:24:TYR:CE1	2.51	0.41
36:DA:8:A:H2'	36:DA:9:U:C5	2.55	0.41
36:DA:15:G:O2'	36:DA:16:G:H5'	2.21	0.41
36:DA:87:C:H5''	36:DA:88:G:H5'	2.02	0.41
36:DA:227:A:N6	36:DA:410:G:H21	2.19	0.41
36:DA:271(D):G:C2	36:DA:271(E):U:C2	3.08	0.41
36:DA:271(V):G:H2'	36:DA:271(W):G:O4'	2.21	0.41
36:DA:272(D):G:H1	36:DA:364:C:H42	1.69	0.41
36:DA:484:C:OP1	56:DY:50:ARG:NE	2.54	0.41
36:DA:598:G:H5'	47:DP:15:ARG:HD3	2.03	0.41
36:DA:605:C:C2	36:DA:606:U:C6	3.08	0.41
36:DA:709:U:O2'	36:DA:710:G:H5'	2.21	0.41
36:DA:722:A:H2'	36:DA:722:A:N3	2.35	0.41
36:DA:729:G:C4	36:DA:1775:U:C2	3.09	0.41
36:DA:786:C:H2'	36:DA:787:U:O4'	2.21	0.41
36:DA:807:U:O2'	36:DA:808:G:H5'	2.21	0.41
36:DA:825:C:H2'	36:DA:826:U:O4'	2.21	0.41
36:DA:857:C:C4	36:DA:858:U:C4	3.09	0.41
36:DA:956:G:O4'	48:DQ:83:MET:HE1	2.20	0.41
36:DA:1002:G:H8	36:DA:1002:G:O5'	2.03	0.41
36:DA:1023:U:H2'	36:DA:1024:G:H5'	2.02	0.41
36:DA:1097:U:C2'	36:DA:1098:A:H5'	2.51	0.41
36:DA:1142(A):A:N6	36:DA:1144:G:C2	2.89	0.41
36:DA:1155:A:OP2	52:DU:58:ARG:NH1	2.54	0.41
36:DA:1238:G:O2'	36:DA:1239:G:H5'	2.20	0.41
36:DA:1420:U:H2'	36:DA:1421:G:H5'	2.02	0.41
36:DA:1422:G:H1'	36:DA:1496:A:N6	2.35	0.41
36:DA:1465:G:C4	36:DA:1466:G:C8	3.09	0.41
36:DA:1683:C:H2'	36:DA:1684:C:H6	1.86	0.41
36:DA:1773:A:C2	36:DA:1977:A:N1	2.89	0.41
36:DA:1784:A:OP2	36:DA:1784:A:C8	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1791:A:N6	36:DA:1828:G:O2'	2.54	0.41
36:DA:2045:C:C2	36:DA:2624:G:N2	2.89	0.41
36:DA:2205:C:H5'	36:DA:2206:G:OP2	2.20	0.41
36:DA:2320:A:N3	36:DA:2320:A:C2'	2.83	0.41
36:DA:2345:G:O2'	36:DA:2381:C:H2'	2.21	0.41
36:DA:2394:C:P	47:DP:63:PRO:HD2	2.59	0.41
36:DA:2668:G:C2'	36:DA:2669:G:H5'	2.50	0.41
36:DA:2787:C:C2	40:DE:61:ARG:HD3	2.56	0.41
36:DA:2818:G:H4'	36:DA:2837:G:O4'	2.21	0.41
36:DA:2850:A:N7	36:DA:2868:A:O2'	2.54	0.41
37:DB:40:U:H5''	37:DB:41:U:OP2	2.21	0.41
38:DC:57:GLN:NE2	38:DC:204:GLY:O	2.54	0.41
38:DC:76:LEU:HD23	38:DC:114:VAL:HG13	2.03	0.41
38:DC:184:GLU:O	38:DC:187:ALA:HB3	2.21	0.41
39:DD:70:TRP:CZ3	39:DD:146:GLU:OE2	2.69	0.41
40:DE:26:ILE:HD12	40:DE:198:VAL:HG21	2.03	0.41
40:DE:32:PRO:CA	40:DE:90:THR:HG23	2.51	0.41
40:DE:68:ALA:C	40:DE:70:ALA:N	2.75	0.41
40:DE:185:LYS:O	40:DE:186:GLY:O	2.39	0.41
41:DF:46:ARG:HG3	41:DF:48:THR:HG23	2.03	0.41
42:DG:31:VAL:O	42:DG:31:VAL:HG13	2.21	0.41
42:DG:71:THR:CG2	42:DG:89:GLY:C	2.85	0.41
42:DG:102:PHE:C	42:DG:104:GLU:N	2.77	0.41
42:DG:181:ARG:CG	42:DG:181:ARG:NH1	2.82	0.41
43:DH:41:MET:HE3	43:DH:43:VAL:HA	2.03	0.41
43:DH:86:GLU:HB2	43:DH:132:ARG:HB3	2.02	0.41
44:DJ:148:UNK:O	44:DJ:150:UNK:N	2.54	0.41
46:DO:13:ASN:C	46:DO:15:GLY:H	2.28	0.41
46:DO:47:ILE:O	46:DO:48:PRO:C	2.63	0.41
46:DO:91:LEU:HB3	46:DO:111:PHE:HE1	1.86	0.41
47:DP:101:VAL:CG2	47:DP:102:ARG:N	2.84	0.41
47:DP:135:LEU:HD13	47:DP:135:LEU:C	2.46	0.41
48:DQ:108:GLY:O	48:DQ:109:VAL:CG2	2.69	0.41
49:DR:33:ARG:HA	49:DR:114:VAL:O	2.20	0.41
49:DR:116:LEU:O	49:DR:117:VAL:HB	2.21	0.41
50:DS:79:ALA:C	50:DS:81:GLY:H	2.28	0.41
51:DT:10:VAL:O	51:DT:11:GLU:C	2.63	0.41
51:DT:28:VAL:HG22	51:DT:47:GLY:N	2.35	0.41
51:DT:64:ARG:HA	51:DT:72:VAL:O	2.21	0.41
54:DW:20:VAL:CG2	54:DW:47:VAL:HG21	2.50	0.41
54:DW:47:VAL:CA	54:DW:50:VAL:HG12	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DY:23:ARG:O	56:DY:24:VAL:C	2.64	0.41
56:DY:62:GLU:CD	56:DY:63:LYS:H	2.28	0.41
57:DZ:4:ARG:HD2	57:DZ:60:GLU:OE2	2.20	0.41
57:DZ:80:ARG:O	57:DZ:81:ARG:C	2.64	0.41
57:DZ:145:GLU:HG3	57:DZ:146:ILE:H	1.86	0.41
57:DZ:175:VAL:HB	57:DZ:176:PRO:CD	2.50	0.41
1:AA:284:G:N3	1:AA:285:G:C8	2.89	0.41
1:AA:608:A:O2'	1:AA:609:A:H5'	2.21	0.41
1:AA:707:C:H2'	1:AA:708:C:C6	2.56	0.41
1:AA:779:C:O2'	11:AK:120:ARG:HD3	2.20	0.41
1:AA:894:G:O2'	1:AA:895:G:H5'	2.21	0.41
1:AA:1071:C:O2'	1:AA:1072:G:H5'	2.21	0.41
1:AA:1190:G:OP1	3:AC:5:ILE:HG23	2.20	0.41
1:AA:1418:A:H2	36:BA:1948:G:N3	2.19	0.41
3:AC:43:LEU:C	3:AC:45:LYS:N	2.79	0.41
4:AD:105:VAL:HG13	4:AD:110:PHE:HB2	2.03	0.41
4:AD:129:ASN:HD21	4:AD:144:ASP:HB3	1.85	0.41
7:AG:57:GLU:O	7:AG:58:PRO:C	2.62	0.41
7:AG:64:GLN:HE21	7:AG:68:ASN:HD21	1.69	0.41
8:AH:91:ARG:HB2	12:AL:7:ILE:HG21	2.02	0.41
9:AI:50:LEU:HG	9:AI:81:ILE:HG21	2.03	0.41
9:AI:80:GLY:O	9:AI:84:ALA:N	2.52	0.41
11:AK:29:ILE:HB	11:AK:44:SER:HB3	2.02	0.41
11:AK:95:ILE:O	11:AK:96:ARG:C	2.64	0.41
15:AO:74:ASP:OD2	15:AO:77:ARG:HG2	2.21	0.41
18:AR:42:ARG:HE	18:AR:42:ARG:HB2	1.71	0.41
18:AR:53:ARG:C	18:AR:55:ARG:N	2.79	0.41
22:AV:52:G:H2'	22:AV:53:G:C8	2.55	0.41
23:AW:34:C:H2'	23:AW:35:A:C4'	2.31	0.41
25:AY:415:PRO:HG3	25:AY:421:GLN:CG	2.41	0.41
25:AY:505:GLY:HA3	25:AY:576:ASP:CB	2.51	0.41
25:AY:510:VAL:CG1	25:AY:511:LYS:N	2.82	0.41
25:AY:605:ILE:O	25:AY:605:ILE:HG22	2.21	0.41
25:AY:616:TYR:CD2	25:AY:663:THR:HA	2.55	0.41
27:B1:20:ARG:HH12	36:BA:387:U:P	2.44	0.41
27:B1:52:ARG:HD3	27:B1:52:ARG:HA	1.87	0.41
31:B5:25:LEU:HD12	54:BW:19:LEU:CB	2.49	0.41
36:BA:206:U:O2	36:BA:206:U:H2'	2.20	0.41
36:BA:545:C:OP1	36:BA:545:C:C6	2.69	0.41
36:BA:601:C:O2'	36:BA:605:C:H5''	2.21	0.41
36:BA:665:C:H2'	36:BA:666:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:812:C:H1'	36:BA:1250:G:C2	2.55	0.41
36:BA:975:C:OP2	36:BA:975:C:H4'	2.21	0.41
36:BA:996:A:H2'	36:BA:997:G:H8	1.85	0.41
36:BA:1052:C:O2'	36:BA:1053:C:O5'	2.38	0.41
36:BA:1509(B):A:H2'	36:BA:1510:G:C8	2.56	0.41
36:BA:1697:G:C3'	36:BA:1698:A:C5'	2.95	0.41
36:BA:2019:A:H2'	36:BA:2020:A:O5'	2.21	0.41
36:BA:2143:C:C2	36:BA:2149:G:C2	3.09	0.41
36:BA:2219:G:C2'	36:BA:2220:G:H5'	2.51	0.41
36:BA:2277:G:C6	36:BA:2278:A:N7	2.88	0.41
36:BA:2377:A:H2'	36:BA:2378:A:C8	2.56	0.41
36:BA:2416:C:H2'	36:BA:2417:C:C6	2.56	0.41
36:BA:2579:C:C2'	36:BA:2580:U:H5'	2.51	0.41
38:BC:52:PRO:HB2	38:BC:168:LYS:O	2.21	0.41
41:BF:7:TYR:OH	41:BF:10:PRO:HG3	2.20	0.41
41:BF:118:ALA:O	41:BF:121:GLY:N	2.53	0.41
41:BF:153:SER:HA	41:BF:172:TRP:HB2	2.02	0.41
41:BF:199:TRP:CE3	41:BF:199:TRP:O	2.74	0.41
42:BG:130:ASN:OD1	42:BG:160:VAL:HA	2.20	0.41
43:BH:148:ILE:O	43:BH:151:ILE:HG12	2.21	0.41
47:BP:75:ILE:N	47:BP:75:ILE:CD1	2.81	0.41
49:BR:39:PRO:O	49:BR:40:LYS:C	2.62	0.41
51:BT:106:SER:CA	51:BT:110:ILE:HG12	2.46	0.41
52:BU:35:ALA:O	52:BU:36:ARG:C	2.63	0.41
53:BV:1:MET:HB3	53:BV:2:PHE:H	1.48	0.41
53:BV:19:LYS:HE2	53:BV:20:LEU:H	1.85	0.41
53:BV:38:LEU:C	53:BV:39:LEU:HD22	2.46	0.41
57:BZ:14:LYS:C	57:BZ:16:SER:N	2.78	0.41
1:CA:28:G:O2'	1:CA:296:U:OP1	2.38	0.41
1:CA:235:C:H1'	17:CQ:61:GLU:OE2	2.21	0.41
1:CA:238:G:O2'	1:CA:239:U:H5'	2.21	0.41
1:CA:268:C:O2	1:CA:268:C:C2'	2.62	0.41
1:CA:386:C:H2'	1:CA:387:U:O4'	2.21	0.41
1:CA:600:C:H2'	1:CA:601:C:C6	2.56	0.41
1:CA:826:C:C2	1:CA:827:U:C5	3.09	0.41
1:CA:1116:C:O2'	1:CA:1117:G:H5''	2.20	0.41
1:CA:1117:G:O2'	9:CI:104:ARG:CD	2.66	0.41
1:CA:1234:C:C4'	1:CA:1364:U:H1'	2.51	0.41
1:CA:1256:A:C2	1:CA:1277:C:C5	3.08	0.41
2:CB:144:ARG:HG3	2:CB:145:LEU:N	2.36	0.41
3:CC:188:LEU:HD22	3:CC:188:LEU:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:92:VAL:O	4:CD:93:PHE:C	2.64	0.41
4:CD:112:VAL:HG12	4:CD:116:GLN:CD	2.46	0.41
4:CD:128:VAL:O	4:CD:129:ASN:C	2.64	0.41
4:CD:185:PHE:O	4:CD:186:LEU:C	2.64	0.41
6:CF:19:LEU:HD21	6:CF:23:LYS:HE2	2.03	0.41
6:CF:44:GLY:HA2	6:CF:59:TYR:CE1	2.56	0.41
6:CF:51:PRO:HA	6:CF:55:ASP:O	2.20	0.41
6:CF:67:MET:HE2	6:CF:72:VAL:HA	2.02	0.41
7:CG:73:MET:HG2	7:CG:90:GLU:HA	2.03	0.41
20:CT:90:GLN:C	20:CT:93:GLU:OE2	2.64	0.41
25:CY:31:ARG:HA	25:CY:31:ARG:HH11	1.83	0.41
25:CY:65:ILE:HD13	25:CY:65:ILE:N	2.34	0.41
25:CY:74:TRP:CD1	25:CY:273:LEU:HD22	2.56	0.41
25:CY:188:TYR:C	25:CY:190:ASN:N	2.78	0.41
25:CY:224:ASP:OD2	25:CY:245:ALA:HB2	2.21	0.41
25:CY:380:LEU:HD12	25:CY:380:LEU:N	2.36	0.41
27:D1:25:LYS:O	27:D1:26:ARG:C	2.64	0.41
27:D1:95:LEU:HD12	27:D1:95:LEU:HA	1.89	0.41
28:D2:57:ILE:HG12	28:D2:57:ILE:H	1.63	0.41
28:D2:61:LEU:HD12	36:DA:72:U:O4'	2.20	0.41
31:D5:2:ALA:HB2	36:DA:2015:A:O4'	2.21	0.41
34:D8:62:LEU:N	34:D8:63:PRO:HD2	2.34	0.41
36:DA:25:U:OP1	54:DW:102:HIS:HE1	2.04	0.41
36:DA:77:C:H2'	36:DA:78:A:C8	2.56	0.41
36:DA:173:G:N3	36:DA:173:G:H2'	2.35	0.41
36:DA:271(M):G:C2'	36:DA:271(N):U:H5''	2.51	0.41
36:DA:460:A:C2	36:DA:470:A:C4	3.08	0.41
36:DA:580:C:OP2	52:DU:33:ARG:NH2	2.54	0.41
36:DA:589:C:O2'	36:DA:590:A:H5'	2.21	0.41
36:DA:654(E):G:C2'	36:DA:654(F):C:H5'	2.51	0.41
36:DA:691:C:O2'	36:DA:692:C:H5'	2.21	0.41
36:DA:805:G:H4'	36:DA:806:C:OP2	2.20	0.41
36:DA:1052:C:C6	36:DA:1052:C:C3'	3.04	0.41
36:DA:1146:C:H2'	36:DA:1147:C:H5'	2.03	0.41
36:DA:1217:C:H2'	36:DA:1218:C:C6	2.56	0.41
36:DA:1591:G:H2'	36:DA:1592:C:C6	2.56	0.41
36:DA:1596:A:O2'	36:DA:1597:A:H5'	2.21	0.41
36:DA:1782:C:H1'	36:DA:2609:U:C5'	2.38	0.41
36:DA:2577:A:C5'	36:DA:2578:G:C5'	2.98	0.41
36:DA:2584:U:O2'	36:DA:2585:U:H5'	2.21	0.41
36:DA:2842:G:C6	36:DA:2876:G:N1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2849:U:O2	36:DA:2849:U:O4'	2.39	0.41
38:DC:132:LEU:HB3	38:DC:138:LEU:N	2.36	0.41
39:DD:34:VAL:HG23	39:DD:35:LYS:N	2.35	0.41
39:DD:131:LEU:HB3	39:DD:132:PRO:CD	2.51	0.41
39:DD:204:ILE:O	39:DD:204:ILE:HG13	2.20	0.41
39:DD:252:TRP:CD1	39:DD:252:TRP:H	2.38	0.41
40:DE:4:ILE:HD12	40:DE:92:THR:O	2.21	0.41
40:DE:57:LYS:HZ3	40:DE:63:LEU:CG	2.31	0.41
41:DF:6:VAL:O	41:DF:6:VAL:HG12	2.21	0.41
41:DF:39:TRP:O	41:DF:43:LYS:HG2	2.21	0.41
42:DG:20:ILE:O	42:DG:24:GLY:HA2	2.21	0.41
42:DG:61:ALA:O	42:DG:62:LEU:C	2.63	0.41
42:DG:111:LEU:N	42:DG:112:PRO:CD	2.84	0.41
47:DP:122:PRO:O	47:DP:123:LEU:CB	2.64	0.41
49:DR:9:LYS:C	49:DR:10:LEU:HG	2.46	0.41
50:DS:14:VAL:HG12	50:DS:15:ARG:N	2.36	0.41
50:DS:30:ARG:O	50:DS:30:ARG:HG3	2.21	0.41
50:DS:106:ARG:O	50:DS:107:GLU:HB2	2.20	0.41
53:DV:39:LEU:HD12	53:DV:47:VAL:HG11	2.02	0.41
53:DV:99:ILE:HD13	53:DV:99:ILE:H	1.84	0.41
56:DY:86:ARG:H	56:DY:88:LYS:NZ	2.19	0.41
57:DZ:137:ILE:HG23	57:DZ:156:LYS:O	2.21	0.41
1:AA:16:A:N1	1:AA:919:A:C2	2.89	0.40
1:AA:72:C:H2'	1:AA:73:G:C8	2.56	0.40
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.21	0.40
1:AA:335:C:O2'	1:AA:336:C:H5'	2.21	0.40
1:AA:489:C:H2'	1:AA:490:G:C8	2.56	0.40
1:AA:671:G:H2'	1:AA:672:U:O4'	2.21	0.40
1:AA:771:G:H2'	1:AA:772:U:C6	2.56	0.40
1:AA:1056:U:H5'	3:AC:163:ALA:CB	2.51	0.40
1:AA:1256:A:H2	1:AA:1277:C:C4	2.39	0.40
1:AA:1347:G:H2'	1:AA:1373:G:C6	2.56	0.40
3:AC:5:ILE:N	3:AC:5:ILE:HD13	2.36	0.40
5:AE:76:ILE:CG1	5:AE:77:PRO:HD2	2.51	0.40
5:AE:152:ARG:HB3	8:AH:43:GLY:HA3	2.03	0.40
8:AH:63:LEU:H	8:AH:63:LEU:CD2	2.33	0.40
9:AI:55:ALA:HA	9:AI:58:HIS:HD2	1.84	0.40
11:AK:122:LYS:O	11:AK:124:LYS:N	2.55	0.40
12:AL:53:ARG:NH1	12:AL:53:ARG:HG2	2.35	0.40
12:AL:117:ARG:O	12:AL:119:LYS:O	2.38	0.40
17:AQ:9:VAL:HG12	17:AQ:56:VAL:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:82:ILE:HG13	25:AY:101:LEU:HD23	2.03	0.40
26:B0:15:ASP:HA	36:BA:2262:U:O4	2.21	0.40
26:B0:65:GLY:HA3	26:B0:83:PRO:HA	2.04	0.40
27:B1:62:VAL:C	27:B1:63:ALA:O	2.64	0.40
28:B2:45:SER:O	28:B2:46:GLN:CD	2.64	0.40
28:B2:65:ASN:O	28:B2:68:ARG:N	2.54	0.40
29:B3:16:PRO:CB	29:B3:18:ASP:OD1	2.69	0.40
30:B4:1:MET:CE	30:B4:1:MET:H3	2.31	0.40
32:B6:17:LYS:O	32:B6:20:ASN:ND2	2.54	0.40
33:B7:27:GLY:HA2	33:B7:30:VAL:HG23	2.02	0.40
34:B8:2:PRO:O	34:B8:3:LYS:O	2.39	0.40
34:B8:30:ARG:CZ	36:BA:2419:U:O4	2.69	0.40
35:B9:18:ARG:O	35:B9:18:ARG:CG	2.63	0.40
36:BA:15:G:O2'	36:BA:16:G:H5'	2.20	0.40
36:BA:123:G:O2'	36:BA:124:G:H5'	2.21	0.40
36:BA:143:G:H2'	36:BA:143(A):C:H6	1.83	0.40
36:BA:565:C:H1'	36:BA:577:G:N2	2.36	0.40
36:BA:769:G:H2'	36:BA:770:G:C8	2.55	0.40
36:BA:775:G:C4	36:BA:794:G:C8	3.08	0.40
36:BA:1016:G:O2'	36:BA:1017:G:H5'	2.21	0.40
36:BA:1018:C:O2'	36:BA:1019:U:H5'	2.21	0.40
36:BA:1022:G:O6	45:BN:66:LYS:CE	2.69	0.40
36:BA:1336:A:O2'	36:BA:1337:G:H5'	2.21	0.40
36:BA:1788:C:C2'	36:BA:1789:A:H5'	2.51	0.40
36:BA:1942:C:C3'	36:BA:1943:U:H5''	2.46	0.40
36:BA:2003:G:C6	36:BA:2004:G:C5	3.09	0.40
36:BA:2034:U:C2'	36:BA:2035:G:H5'	2.51	0.40
36:BA:2126:A:O2'	36:BA:2127:G:OP2	2.39	0.40
36:BA:2602:A:H4'	36:BA:2603:G:H5'	2.00	0.40
36:BA:2688:U:C5	36:BA:2720:U:OP2	2.74	0.40
36:BA:2880:C:H1'	49:BR:92:GLY:O	2.21	0.40
37:BB:45:A:H1'	42:BG:95:ARG:NH2	2.36	0.40
37:BB:77:U:P	57:BZ:19:ARG:NH2	2.94	0.40
40:BE:65:GLY:O	40:BE:67:PHE:N	2.53	0.40
41:BF:22:ALA:C	41:BF:24:LEU:N	2.76	0.40
41:BF:105:VAL:O	41:BF:105:VAL:HG12	2.21	0.40
41:BF:135:LYS:HB3	41:BF:138:GLU:HG3	2.02	0.40
41:BF:150:GLY:HA2	41:BF:172:TRP:CE3	2.56	0.40
42:BG:46:ALA:HA	42:BG:51:ARG:HG3	2.02	0.40
42:BG:133:LEU:C	42:BG:133:LEU:CD1	2.94	0.40
43:BH:143:GLN:C	43:BH:145:ALA:N	2.76	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:146:ALA:HA	43:BH:149:ARG:HB3	2.01	0.40
44:BJ:73:UNK:O	44:BJ:74:UNK:C	2.68	0.40
45:BN:55:VAL:CG2	45:BN:127:ASP:N	2.83	0.40
47:BP:46:LYS:CG	47:BP:52:GLU:HG2	2.46	0.40
47:BP:99:LEU:O	47:BP:103:ALA:HB2	2.21	0.40
47:BP:135:LEU:HD13	47:BP:135:LEU:C	2.46	0.40
48:BQ:62:GLY:O	57:BZ:178:GLU:HB2	2.21	0.40
48:BQ:78:PRO:O	48:BQ:81:VAL:CG1	2.69	0.40
49:BR:85:PRO:C	49:BR:87:TYR:H	2.28	0.40
51:BT:27:THR:O	51:BT:28:VAL:CG2	2.69	0.40
51:BT:108:ARG:HG3	51:BT:109:GLU:H	1.84	0.40
54:BW:13:SER:HA	54:BW:14:PRO:HD3	1.82	0.40
56:BY:87:LYS:HE2	56:BY:87:LYS:HB3	1.92	0.40
57:BZ:96:VAL:CG2	57:BZ:97:GLU:N	2.84	0.40
1:CA:15:G:H8	1:CA:1396:A:O2'	2.04	0.40
1:CA:608:A:O2'	1:CA:609:A:H5'	2.22	0.40
1:CA:1104:G:P	2:CB:111:ARG:HD2	2.61	0.40
1:CA:1236:A:H2'	1:CA:1237:C:C6	2.56	0.40
1:CA:1253:G:C2	1:CA:1254:C:C2	3.09	0.40
2:CB:114:ARG:O	2:CB:114:ARG:CD	2.69	0.40
5:CE:136:MET:O	5:CE:137:GLU:C	2.64	0.40
6:CF:21:LEU:O	6:CF:25:ILE:HG12	2.22	0.40
8:CH:10:LEU:O	8:CH:13:ILE:HB	2.21	0.40
8:CH:30:ARG:NH1	8:CH:30:ARG:CB	2.85	0.40
12:CL:30:ALA:HA	12:CL:31:PRO:HD3	1.90	0.40
12:CL:43:VAL:HG13	12:CL:55:VAL:HG21	2.03	0.40
13:CM:99:ARG:O	13:CM:100:GLY:C	2.64	0.40
15:CO:21:ASP:OD1	15:CO:24:SER:HB3	2.21	0.40
16:CP:70:ALA:O	16:CP:71:ARG:C	2.63	0.40
17:CQ:18:THR:HG23	17:CQ:69:LYS:HE3	2.03	0.40
18:CR:35:ARG:O	18:CR:37:VAL:HG13	2.21	0.40
18:CR:69:THR:O	18:CR:72:ARG:HB2	2.21	0.40
19:CS:20:LEU:HA	19:CS:23:ASN:HB2	2.03	0.40
25:CY:85:PRO:CA	25:CY:94:VAL:HG13	2.51	0.40
25:CY:353:ALA:O	25:CY:354:ARG:CB	2.57	0.40
25:CY:389:LEU:HD12	25:CY:389:LEU:N	2.36	0.40
27:D1:62:VAL:HG22	27:D1:63:ALA:N	2.36	0.40
28:D2:55:ARG:O	28:D2:58:ALA:CB	2.61	0.40
30:D4:39:CYS:HG	30:D4:42:PHE:HE2	1.53	0.40
31:D5:2:ALA:O	31:D5:3:LYS:HB3	2.20	0.40
32:D6:6:ARG:O	32:D6:7:ILE:CB	2.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:327:G:O2'	36:DA:328:U:H5'	2.20	0.40
36:DA:537:C:H2'	36:DA:538:G:C8	2.56	0.40
36:DA:640:C:C4	36:DA:641:C:N4	2.89	0.40
36:DA:1020:A:C6	36:DA:1141:U:H2'	2.54	0.40
36:DA:1230:C:H2'	36:DA:1231:G:H8	1.86	0.40
36:DA:1286:A:O2'	36:DA:1287:A:H5'	2.21	0.40
36:DA:1423:G:H2'	36:DA:1424:G:C8	2.56	0.40
36:DA:1829:A:H2'	36:DA:1830:C:O4'	2.21	0.40
36:DA:2416:C:H2'	36:DA:2417:C:C6	2.56	0.40
36:DA:2693:A:C6	36:DA:2717:G:C6	3.09	0.40
36:DA:2718:G:C6	36:DA:2719:G:C5	3.09	0.40
39:DD:108:PRO:HB3	39:DD:143:HIS:CE1	2.55	0.40
40:DE:76:ARG:O	40:DE:77:ILE:C	2.64	0.40
40:DE:182:LEU:C	40:DE:183:LEU:HD12	2.46	0.40
42:DG:22:ARG:HB3	42:DG:23:PHE:H	1.68	0.40
42:DG:26:GLN:HB2	42:DG:27:ASN:H	1.75	0.40
42:DG:107:LEU:HD13	42:DG:177:GLY:C	2.46	0.40
42:DG:138:GLN:NE2	42:DG:149:VAL:HG23	2.36	0.40
43:DH:162:ILE:HG13	43:DH:162:ILE:O	2.21	0.40
47:DP:110:TYR:O	47:DP:111:ARG:O	2.39	0.40
47:DP:124:LYS:HA	47:DP:143:GLY:HA3	2.03	0.40
48:DQ:35:VAL:HG23	48:DQ:101:ARG:O	2.21	0.40
48:DQ:116:GLU:O	48:DQ:120:ILE:HG12	2.22	0.40
51:DT:67:SER:O	51:DT:68:TYR:HB2	2.21	0.40
52:DU:93:LYS:O	52:DU:96:ALA:HB3	2.20	0.40
52:DU:94:ASN:HD22	52:DU:95:LEU:HG	1.86	0.40
54:DW:84:ARG:O	54:DW:96:ILE:HG22	2.21	0.40
55:DX:7:VAL:CG1	55:DX:39:ILE:HD13	2.51	0.40
55:DX:65:ARG:HH11	55:DX:65:ARG:HG2	1.85	0.40
57:DZ:102:LEU:HD21	57:DZ:124:ILE:HD13	2.02	0.40
1:AA:243:A:C2	1:AA:245:C:C2	3.10	0.40
1:AA:246:A:O2'	17:AQ:99:SER:HA	2.21	0.40
1:AA:559:A:OP2	5:AE:126:ARG:NH2	2.54	0.40
1:AA:923:A:O2'	1:AA:924:C:H5'	2.21	0.40
1:AA:1056:U:H4'	3:AC:163:ALA:HB2	2.02	0.40
1:AA:1226:C:H5	13:AM:104:ARG:HB2	1.82	0.40
1:AA:1325:C:O2'	1:AA:1326:C:H5'	2.22	0.40
2:AB:32:ILE:CD1	2:AB:40:HIS:HD2	2.34	0.40
2:AB:83:MET:SD	2:AB:234:PRO:HG3	2.61	0.40
3:AC:91:LEU:C	3:AC:93:LYS:H	2.29	0.40
5:AE:69:VAL:HA	5:AE:70:PRO:HD2	1.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:102:ALA:HB2	5:AE:120:THR:HG1	1.82	0.40
23:AW:70:G:N1	23:AW:71:C:N4	2.69	0.40
25:AY:90:PHE:HB3	25:AY:454:MET:HB2	2.03	0.40
25:AY:96:ARG:CG	25:AY:97:SER:N	2.84	0.40
25:AY:207:ASP:O	25:AY:208:GLN:C	2.64	0.40
25:AY:337:SER:HB3	25:AY:367:GLU:HG2	2.03	0.40
26:B0:82:ARG:HA	26:B0:83:PRO:HD3	1.90	0.40
28:B2:9:GLN:OE1	28:B2:56:GLN:CD	2.64	0.40
28:B2:36:ARG:O	28:B2:37:PHE:C	2.64	0.40
31:B5:7:PRO:HA	36:BA:2615:U:C2	2.55	0.40
36:BA:128:C:O2'	36:BA:129:C:O5'	2.37	0.40
36:BA:191:A:O2'	36:BA:192:C:H5'	2.21	0.40
36:BA:629:G:H5''	36:BA:650:C:O2'	2.21	0.40
36:BA:634:C:H2'	36:BA:635:C:O4'	2.21	0.40
36:BA:686:G:N2	36:BA:788:A:H61	2.18	0.40
36:BA:688:U:H2'	36:BA:689:A:C8	2.54	0.40
36:BA:718:A:H3'	36:BA:719:C:H6	1.86	0.40
36:BA:725:G:C6	36:BA:726:G:N1	2.88	0.40
36:BA:960:A:C8	36:BA:962:G:C8	3.10	0.40
36:BA:1071:G:N2	36:BA:1090:U:C5	2.90	0.40
36:BA:1185:C:C5'	36:BA:1186:G:P	3.09	0.40
36:BA:1314:C:OP1	36:BA:1315:C:OP2	2.39	0.40
36:BA:1354:A:H2'	36:BA:1355:G:O4'	2.21	0.40
36:BA:1587:A:H3'	36:BA:1588:C:C6	2.56	0.40
36:BA:2147:G:H2'	36:BA:2148:G:C4'	2.51	0.40
36:BA:2147:G:C2'	36:BA:2148:G:H5'	2.50	0.40
36:BA:2319:G:C2	36:BA:2320:A:N1	2.89	0.40
36:BA:2367:G:H2'	36:BA:2368:C:H6	1.85	0.40
36:BA:2776:A:C6	36:BA:2782:G:H1'	2.56	0.40
37:BB:39:A:C2	37:BB:44:G:C2	3.09	0.40
38:BC:71:LYS:CG	38:BC:72:GLN:N	2.82	0.40
41:BF:13:SER:HA	41:BF:14:PRO:HD3	1.89	0.40
42:BG:114:ILE:HG12	42:BG:140:ILE:HG21	2.04	0.40
42:BG:162:THR:O	42:BG:163:ALA:C	2.64	0.40
44:BJ:51:UNK:CB	44:BJ:89:UNK:CB	2.99	0.40
46:BO:9:GLU:HA	46:BO:9:GLU:OE1	2.21	0.40
50:BS:20:ARG:NH1	50:BS:20:ARG:HG2	2.37	0.40
50:BS:70:GLY:C	50:BS:101:LEU:HD22	2.46	0.40
51:BT:65:LYS:NZ	51:BT:66:VAL:H	2.19	0.40
1:CA:52:G:H2'	1:CA:53:A:O4'	2.22	0.40
1:CA:222:U:H2'	1:CA:223:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:945:G:C2	1:CA:946:A:C8	3.10	0.40
1:CA:1256:A:H2	1:CA:1277:C:C4	2.39	0.40
1:CA:1371:G:C6	1:CA:1372:U:C4	3.10	0.40
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.20	0.40
2:CB:30:ARG:NH2	2:CB:31:TYR:OH	2.55	0.40
2:CB:52:GLU:O	2:CB:56:ARG:HG2	2.22	0.40
4:CD:57:ARG:NH1	4:CD:205:GLU:OE1	2.47	0.40
4:CD:150:GLU:HG2	4:CD:151:LYS:N	2.36	0.40
5:CE:10:MET:HE3	5:CE:10:MET:HB3	1.90	0.40
5:CE:92:LYS:HA	5:CE:93:PRO:HD2	1.79	0.40
6:CF:19:LEU:CD2	6:CF:23:LYS:HE2	2.51	0.40
9:CI:19:LEU:HB3	9:CI:59:PHE:CD2	2.57	0.40
9:CI:19:LEU:HB3	9:CI:59:PHE:HD2	1.86	0.40
12:CL:27:LEU:O	12:CL:28:LYS:C	2.64	0.40
14:CN:12:ARG:O	14:CN:14:PRO:CD	2.57	0.40
15:CO:17:ARG:HD3	15:CO:26:GLU:CG	2.29	0.40
18:CR:37:VAL:C	18:CR:39:VAL:N	2.78	0.40
19:CS:33:THR:OG1	19:CS:34:TRP:N	2.54	0.40
20:CT:105:SER:O	20:CT:106:ALA:C	2.64	0.40
25:CY:512:ILE:N	25:CY:512:ILE:CD1	2.84	0.40
25:CY:553:GLY:HA3	25:CY:558:PHE:H	1.87	0.40
25:CY:681:LYS:HD2	25:CY:681:LYS:C	2.46	0.40
26:D0:43:THR:HG22	36:DA:2331:G:O2'	2.22	0.40
27:D1:24:ALA:CB	27:D1:32:LYS:HE3	2.44	0.40
31:D5:25:LEU:HD12	54:DW:19:LEU:CB	2.49	0.40
31:D5:53:ALA:C	31:D5:55:ARG:N	2.79	0.40
34:D8:61:LEU:H	34:D8:61:LEU:HG	1.47	0.40
36:DA:28:A:H2'	36:DA:28:A:N3	2.36	0.40
36:DA:191:A:O2'	36:DA:192:C:H5'	2.21	0.40
36:DA:343:C:O2'	36:DA:344:G:H5'	2.21	0.40
36:DA:350:U:H2'	36:DA:351:G:O4'	2.22	0.40
36:DA:418:G:H2'	36:DA:419:C:H6	1.85	0.40
36:DA:483:A:H4'	56:DY:49:VAL:HA	2.02	0.40
36:DA:654(O):G:H2'	36:DA:654(P):C:C5	2.57	0.40
36:DA:793:A:OP2	36:DA:2072:G:H5'	2.21	0.40
36:DA:855:G:O2'	36:DA:856:C:H5'	2.21	0.40
36:DA:1161:C:H2'	36:DA:1162:G:H8	1.86	0.40
36:DA:1351:C:H5'	36:DA:1352:U:OP2	2.21	0.40
36:DA:1472:A:H2'	36:DA:1473:G:H8	1.86	0.40
36:DA:1541:G:H4'	36:DA:1542:A:O4'	2.20	0.40
36:DA:1587:A:H3'	36:DA:1588:C:H6	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2021:C:H4'	36:DA:2022:U:OP2	2.21	0.40
36:DA:2713:A:OP2	36:DA:2713:A:H4'	2.21	0.40
36:DA:2754:U:H2'	36:DA:2756:U:OP1	2.21	0.40
37:DB:86:G:H2'	37:DB:87:G:C8	2.56	0.40
38:DC:111:PHE:HE1	38:DC:137:LEU:HD13	1.87	0.40
38:DC:114:VAL:O	38:DC:145:THR:CG2	2.70	0.40
39:DD:30:GLU:CD	39:DD:63:ARG:NE	2.78	0.40
41:DF:83:PHE:O	41:DF:84:VAL:C	2.62	0.40
42:DG:6:ALA:HB3	42:DG:104:GLU:OE2	2.21	0.40
42:DG:23:PHE:CE2	42:DG:168:GLU:HG2	2.56	0.40
42:DG:34:LEU:HD21	42:DG:100:TRP:CH2	2.56	0.40
43:DH:84:SER:O	43:DH:85:LYS:HB3	2.20	0.40
43:DH:141:VAL:O	43:DH:143:GLN:N	2.53	0.40
45:DN:41:ASP:C	52:DU:64:ARG:NH1	2.76	0.40
45:DN:57:ALA:HB3	45:DN:124:ALA:HB2	2.03	0.40
45:DN:94:HIS:C	45:DN:96:GLU:H	2.29	0.40
48:DQ:59:ARG:HA	57:DZ:180:VAL:HG23	2.02	0.40
48:DQ:75:THR:HG22	48:DQ:76:LYS:H	1.84	0.40
51:DT:1:MET:H2	51:DT:7:ILE:HD11	1.86	0.40
57:DZ:27:VAL:CG2	57:DZ:28:MET:N	2.83	0.40
57:DZ:165:VAL:HG11	57:DZ:169:GLU:HB2	2.03	0.40
1:AA:110:C:H2'	1:AA:111:G:O4'	2.21	0.40
1:AA:501:C:O2'	1:AA:502:G:H5'	2.22	0.40
1:AA:513:C:H2'	1:AA:514:C:C6	2.56	0.40
1:AA:610:G:N3	1:AA:610:G:H2'	2.37	0.40
2:AB:36:ARG:C	2:AB:38:GLY:H	2.29	0.40
3:AC:65:ALA:O	3:AC:66:VAL:CB	2.69	0.40
3:AC:141:VAL:C	3:AC:143:GLU:N	2.78	0.40
3:AC:173:VAL:N	3:AC:174:PRO:HD3	2.36	0.40
4:AD:54:TYR:O	4:AD:55:ALA:C	2.64	0.40
6:AF:19:LEU:HD21	6:AF:23:LYS:HE2	2.04	0.40
9:AI:49:PRO:HD3	9:AI:101:PHE:HE1	1.86	0.40
11:AK:48:ILE:O	11:AK:49:GLY:C	2.65	0.40
11:AK:54:ARG:C	11:AK:56:GLY:N	2.80	0.40
12:AL:47:LYS:NZ	12:AL:47:LYS:HB3	2.25	0.40
13:AM:56:LEU:O	13:AM:57:ARG:C	2.64	0.40
13:AM:124:PRO:CG	25:AY:574:GLU:HB2	2.49	0.40
14:AN:12:ARG:O	14:AN:14:PRO:CD	2.57	0.40
20:AT:40:ALA:C	20:AT:42:GLN:N	2.79	0.40
22:AV:53:G:C4	22:AV:54:U:C5	3.08	0.40
25:AY:434:GLU:HG2	25:AY:434:GLU:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:467:LYS:HA	25:AY:472:VAL:O	2.21	0.40
25:AY:561:VAL:O	25:AY:562:ASP:HB2	2.21	0.40
25:AY:568:TYR:CD2	25:AY:569:ASP:HB2	2.55	0.40
26:B0:38:VAL:O	26:B0:58:THR:HG23	2.21	0.40
29:B3:31:LEU:HD22	29:B3:32:GLN:N	2.36	0.40
30:B4:2:LYS:HG2	37:BB:44:G:OP2	2.20	0.40
36:BA:252:G:O2'	36:BA:253:C:H5'	2.20	0.40
36:BA:445:C:H2'	36:BA:446:G:O4'	2.21	0.40
36:BA:484:C:OP1	56:BY:50:ARG:NE	2.54	0.40
36:BA:512:G:O2'	36:BA:513:A:C8	2.74	0.40
36:BA:662:G:H2'	36:BA:663:G:C8	2.57	0.40
36:BA:877:U:O2'	36:BA:878:A:H5''	2.20	0.40
36:BA:917:A:H2'	36:BA:918:A:C8	2.56	0.40
36:BA:1009:A:OP2	36:BA:1010:A:OP2	2.39	0.40
36:BA:1052:C:O2'	36:BA:1053:C:P	2.79	0.40
36:BA:1097:U:C2'	36:BA:1098:A:H5'	2.51	0.40
36:BA:1131:G:N3	36:BA:1132:A:C8	2.89	0.40
36:BA:1171:G:C5	36:BA:1173:G:O2'	2.74	0.40
36:BA:1301:A:O2'	36:BA:1302:A:O5'	2.38	0.40
36:BA:1512:U:H2'	36:BA:1513:C:C6	2.56	0.40
36:BA:1610:A:H4'	36:BA:1611:C:OP2	2.21	0.40
36:BA:1748:G:H2'	36:BA:1749:A:O4'	2.22	0.40
36:BA:1804:C:H6	36:BA:1804:C:O5'	2.04	0.40
36:BA:1960:A:C5'	36:BA:1960:A:C8	3.05	0.40
36:BA:2056:G:N2	36:BA:2057:A:N9	2.69	0.40
36:BA:2118:U:O4	36:BA:2149:G:H1'	2.21	0.40
36:BA:2345:G:O2'	36:BA:2381:C:H2'	2.21	0.40
36:BA:2540:C:O2'	36:BA:2541:A:H5'	2.21	0.40
36:BA:2543:G:H2'	36:BA:2544:G:O4'	2.21	0.40
38:BC:51:ASP:OD2	38:BC:53:ARG:HG3	2.22	0.40
38:BC:100:ILE:O	38:BC:102:GLN:N	2.53	0.40
38:BC:148:PHE:C	38:BC:150:ILE:H	2.30	0.40
38:BC:225:ILE:C	38:BC:225:ILE:CD1	2.94	0.40
40:BE:25:VAL:CG1	40:BE:181:LEU:HD12	2.52	0.40
40:BE:47:VAL:HG21	40:BE:86:PRO:HD3	2.03	0.40
40:BE:126:PRO:C	40:BE:128:SER:N	2.76	0.40
43:BH:53:GLU:OE1	43:BH:53:GLU:HA	2.22	0.40
43:BH:148:ILE:O	43:BH:162:ILE:HD11	2.21	0.40
45:BN:87:LEU:O	45:BN:90:MET:N	2.54	0.40
47:BP:105:LEU:H	47:BP:105:LEU:CD1	2.33	0.40
49:BR:28:LEU:CD2	49:BR:29:LEU:HD12	2.43	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:113:LYS:HA	51:BT:113:LYS:HD3	1.92	0.40
53:BV:34:GLU:HG2	53:BV:36:PRO:HD3	2.04	0.40
56:BY:95:LYS:HE2	56:BY:101:LYS:N	2.29	0.40
1:CA:349:A:H2'	1:CA:350:G:C5'	2.45	0.40
1:CA:505:G:H2'	1:CA:506:G:H8	1.86	0.40
1:CA:719:C:C2	18:CR:50:ILE:HG12	2.57	0.40
1:CA:922:G:O2'	1:CA:1398:A:N1	2.42	0.40
1:CA:956:U:C2'	1:CA:957:U:H5'	2.50	0.40
1:CA:992:U:O2'	1:CA:993:G:OP2	2.37	0.40
1:CA:1314:C:C2	1:CA:1315:U:C5	3.10	0.40
1:CA:1460:A:H2'	1:CA:1461:G:O4'	2.20	0.40
3:CC:41:GLY:C	3:CC:45:LYS:NZ	2.79	0.40
3:CC:54:ARG:NH1	3:CC:56:ASP:OD1	2.54	0.40
4:CD:165:MET:O	4:CD:166:LYS:C	2.63	0.40
5:CE:78:HIS:HD2	8:CH:107:LEU:HD12	1.86	0.40
9:CI:49:PRO:HD3	9:CI:101:PHE:HE1	1.86	0.40
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	2.03	0.40
13:CM:82:MET:HA	13:CM:93:ARG:NH2	2.23	0.40
20:CT:11:SER:HA	20:CT:13:LEU:HD12	2.01	0.40
20:CT:100:ILE:HG13	20:CT:101:GLY:N	2.36	0.40
22:CV:21:A:N6	22:CV:46:G:C4	2.90	0.40
25:CY:137:ASN:ND2	25:CY:263:ALA:HB2	2.37	0.40
25:CY:170:ARG:NH1	25:CY:205:TYR:OH	2.54	0.40
25:CY:178:ILE:CD1	25:CY:185:ALA:CB	2.99	0.40
25:CY:260:LEU:HB2	25:CY:261:GLY:H	1.50	0.40
25:CY:488:THR:HG23	25:CY:600:VAL:HG11	2.02	0.40
26:D0:65:GLY:HA3	26:D0:83:PRO:HA	2.04	0.40
27:D1:93:GLU:O	27:D1:95:LEU:N	2.52	0.40
30:D4:1:MET:HG3	42:DG:66:GLN:HG3	2.03	0.40
32:D6:44:ARG:HB3	32:D6:45:LYS:H	1.58	0.40
33:D7:48:LYS:HE2	33:D7:48:LYS:HB3	1.95	0.40
36:DA:14:A:C6	36:DA:526:A:C2	3.10	0.40
36:DA:30:G:H2'	36:DA:31:C:C6	2.56	0.40
36:DA:406:G:O2'	36:DA:407:G:C8	2.63	0.40
36:DA:851:U:H2'	36:DA:852:G:C8	2.57	0.40
36:DA:864:G:H21	36:DA:866:A:H61	1.69	0.40
36:DA:960:A:C8	36:DA:962:G:C8	3.08	0.40
36:DA:1333:C:H6	36:DA:1333:C:O5'	2.03	0.40
36:DA:1635:G:C2	36:DA:1636:C:C2	3.10	0.40
36:DA:1644:C:O2	36:DA:1644:C:C2'	2.54	0.40
36:DA:1859:A:C2	36:DA:1884:A:H1'	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1942:C:C3'	36:DA:1943:U:H5''	2.46	0.40
36:DA:1952:A:C2	46:DO:22:ILE:HG23	2.56	0.40
36:DA:1956:U:C2'	36:DA:1957:C:H5'	2.51	0.40
36:DA:2308:G:N7	36:DA:2310:A:C5'	2.66	0.40
36:DA:2690:C:H5	49:DR:14:SER:OG	2.04	0.40
36:DA:2757:A:N1	43:DH:67:LEU:HD13	2.36	0.40
36:DA:2785:C:O2'	36:DA:2786:U:H5'	2.22	0.40
38:DC:10:ALA:O	38:DC:13:GLU:HG2	2.21	0.40
38:DC:98:GLU:HA	38:DC:101:ILE:CD1	2.52	0.40
39:DD:10:THR:C	39:DD:11:PRO:O	2.60	0.40
39:DD:44:ASN:OD1	39:DD:44:ASN:N	2.54	0.40
39:DD:112:GLN:N	39:DD:115:GLN:NE2	2.59	0.40
39:DD:229:VAL:HG23	39:DD:230:ASP:N	2.36	0.40
40:DE:109:LYS:HE2	40:DE:191:PRO:HA	2.03	0.40
41:DF:106:ARG:HG3	41:DF:106:ARG:NH1	2.36	0.40
43:DH:13:LYS:C	43:DH:15:VAL:H	2.29	0.40
45:DN:111:PRO:HA	45:DN:114:ARG:NH1	2.36	0.40
46:DO:9:GLU:HA	46:DO:9:GLU:OE1	2.21	0.40
46:DO:22:ILE:HG12	46:DO:41:ALA:HA	2.03	0.40
46:DO:35:VAL:CG1	46:DO:103:ALA:HB3	2.38	0.40
46:DO:104:ARG:CZ	46:DO:104:ARG:HB3	2.51	0.40
51:DT:29:ARG:HD2	51:DT:29:ARG:HA	1.77	0.40
51:DT:90:GLN:HE21	51:DT:90:GLN:HB2	1.63	0.40
56:DY:61:ILE:CG1	56:DY:62:GLU:N	2.84	0.40
56:DY:88:LYS:HE2	56:DY:93:GLY:HA3	2.03	0.40
56:DY:98:VAL:O	56:DY:98:VAL:HG12	2.21	0.40
57:DZ:28:MET:O	57:DZ:34:ASN:HA	2.21	0.40
1:AA:182:U:O2	1:AA:182:U:H2'	2.21	0.40
1:AA:391:G:C6	1:AA:392:G:N7	2.89	0.40
1:AA:680:C:O2'	1:AA:681:C:H5'	2.22	0.40
1:AA:983:A:HO2'	1:AA:1049:U:HO2'	1.68	0.40
1:AA:1059:C:H2'	1:AA:1060:C:H6	1.87	0.40
1:AA:1505:G:H4'	1:AA:1506:U:H5''	2.02	0.40
3:AC:121:ALA:O	3:AC:124:ILE:HB	2.21	0.40
4:AD:40:PRO:HB2	4:AD:41:GLY:H	1.61	0.40
11:AK:31:THR:O	11:AK:31:THR:HG23	2.21	0.40
12:AL:60:LEU:N	12:AL:60:LEU:HD22	2.37	0.40
14:AN:47:LEU:O	14:AN:49:HIS:N	2.54	0.40
17:AQ:46:ASP:CG	17:AQ:49:GLU:HA	2.46	0.40
20:AT:13:LEU:H	20:AT:13:LEU:CD1	2.11	0.40
20:AT:26:ASN:HA	20:AT:29:LYS:CG	2.48	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AY:87:HIS:CE1	25:AY:120:THR:CB	3.04	0.40
25:AY:616:TYR:CZ	25:AY:666:ARG:HD3	2.57	0.40
59:AY:701:FUA:H212	59:AY:701:FUA:H72	1.88	0.40
30:B4:35:VAL:HG21	42:BG:113:ARG:HH21	1.85	0.40
35:B9:22:ARG:O	35:B9:24:TYR:HD1	2.04	0.40
36:BA:272(I):U:O4	36:BA:363(A):A:N1	2.54	0.40
36:BA:455:C:N3	36:BA:472:A:H2'	2.36	0.40
36:BA:474:G:C6	36:BA:510:C:N4	2.89	0.40
36:BA:655:A:H1'	36:BA:656:G:C1'	2.51	0.40
36:BA:722:A:N3	36:BA:722:A:H2'	2.37	0.40
36:BA:1052:C:C6	36:BA:1052:C:C3'	3.04	0.40
36:BA:1203:G:O2'	36:BA:1242:A:N6	2.54	0.40
36:BA:1528:A:C2	36:BA:1542:A:H2	2.40	0.40
36:BA:1616:A:H4'	36:BA:1617:C:OP2	2.22	0.40
36:BA:1775:U:O2'	36:BA:1776:G:H5'	2.21	0.40
36:BA:1899:G:N2	36:BA:1902:C:C4	2.88	0.40
36:BA:2526:G:H5'	36:BA:2742:C:O2'	2.21	0.40
36:BA:2584:U:O2'	36:BA:2585:U:H5'	2.18	0.40
38:BC:74:ARG:HG3	38:BC:112:ASP:CG	2.47	0.40
39:BD:106:ILE:HD11	39:BD:196:VAL:CG1	2.43	0.40
39:BD:176:ARG:CG	39:BD:176:ARG:NH1	2.81	0.40
40:BE:8:LYS:HE2	40:BE:192:ASN:HD22	1.87	0.40
40:BE:9:VAL:HG22	40:BE:25:VAL:HB	2.02	0.40
40:BE:72:VAL:O	40:BE:73:GLU:C	2.65	0.40
40:BE:89:ASP:O	40:BE:90:THR:O	2.40	0.40
40:BE:176:ILE:CG2	40:BE:178:GLU:HB3	2.51	0.40
41:BF:84:VAL:CG1	41:BF:85:GLY:N	2.59	0.40
41:BF:139:PHE:O	41:BF:140:LEU:C	2.65	0.40
46:BO:66:LYS:HE2	46:BO:80:ASP:O	2.21	0.40
47:BP:108:LYS:C	47:BP:110:TYR:N	2.68	0.40
47:BP:114:ILE:HG23	47:BP:130:PHE:CE1	2.56	0.40
48:BQ:137:TYR:H	48:BQ:137:TYR:HD1	1.65	0.40
49:BR:33:ARG:HA	49:BR:114:VAL:O	2.22	0.40
49:BR:45:ARG:CG	49:BR:46:GLY:N	2.77	0.40
53:BV:18:LEU:CD1	53:BV:18:LEU:N	2.85	0.40
54:BW:11:ARG:HA	54:BW:11:ARG:HE	1.86	0.40
56:BY:36:ALA:HB1	56:BY:67:LEU:O	2.22	0.40
56:BY:99:CYS:O	56:BY:100:ALA:O	2.38	0.40
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.21	0.40
1:CA:221:C:O2	1:CA:221:C:H2'	2.21	0.40
1:CA:452:A:O2'	1:CA:453:A:H8	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:538:G:O2'	1:CA:539:A:H5'	2.21	0.40
1:CA:571:U:H2'	1:CA:572:A:H5''	2.02	0.40
1:CA:925:G:C2	1:CA:927:G:C8	3.10	0.40
1:CA:953:G:O2'	13:CM:122:LYS:HB2	2.21	0.40
1:CA:1150:U:O4	1:CA:1151:A:N6	2.52	0.40
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.52	0.40
1:CA:1472:U:O2'	1:CA:1473:A:H5'	2.20	0.40
1:CA:1505:G:H4'	1:CA:1506:U:H5''	2.02	0.40
2:CB:130:ARG:HA	2:CB:131:PRO:HD2	1.86	0.40
3:CC:5:ILE:HG22	10:CJ:51:ARG:HH22	1.86	0.40
3:CC:182:ILE:HA	3:CC:202:ILE:O	2.20	0.40
4:CD:3:ARG:CG	4:CD:118:ARG:HE	2.34	0.40
4:CD:17:VAL:O	4:CD:18:LYS:C	2.64	0.40
4:CD:101:LEU:C	4:CD:103:ASN:N	2.79	0.40
4:CD:132:ARG:HG2	4:CD:132:ARG:HH11	1.87	0.40
4:CD:170:VAL:HG12	4:CD:174:LEU:HB2	2.03	0.40
5:CE:150:ARG:NH1	5:CE:150:ARG:CB	2.84	0.40
6:CF:10:LEU:HA	6:CF:84:ASN:O	2.20	0.40
6:CF:43:LEU:H	6:CF:43:LEU:CD1	2.23	0.40
7:CG:25:ALA:O	7:CG:28:ASN:HB2	2.20	0.40
9:CI:84:ALA:O	9:CI:86:VAL:N	2.54	0.40
19:CS:46:GLY:O	19:CS:47:HIS:C	2.64	0.40
22:CV:64:A:C4	22:CV:65:G:C8	3.09	0.40
23:CW:49:G:H3'	23:CW:50:U:H5''	2.01	0.40
25:CY:133:ILE:HD11	25:CY:272:LEU:HD11	2.04	0.40
25:CY:411:VAL:CG1	25:CY:412:ALA:N	2.84	0.40
25:CY:539:ILE:HD12	25:CY:567:LEU:CD2	2.31	0.40
26:D0:49:LYS:O	26:D0:50:ASN:HB2	2.21	0.40
27:D1:81:LYS:HZ3	36:DA:271(H):G:C5'	2.34	0.40
34:D8:31:HIS:HE1	36:DA:2392:A:OP2	2.03	0.40
36:DA:67:U:H2'	36:DA:68:G:H8	1.86	0.40
36:DA:83:G:O2'	36:DA:84:A:C8	2.55	0.40
36:DA:139:G:H1	36:DA:142(A):C:H42	1.70	0.40
36:DA:176:G:C2'	36:DA:177:G:H5'	2.51	0.40
36:DA:324:A:H2'	36:DA:325:G:O4'	2.21	0.40
36:DA:603:A:O2'	36:DA:604:G:P	2.80	0.40
36:DA:651:G:C2'	36:DA:652:C:H5'	2.50	0.40
36:DA:651:G:H2'	36:DA:652:C:H5'	2.04	0.40
36:DA:965:C:O2'	36:DA:966:G:H5'	2.20	0.40
36:DA:1210:A:C8	36:DA:1210:A:H5'	2.56	0.40
36:DA:1215:G:O2'	36:DA:1216:G:H5'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1796:U:P	39:DD:276:LYS:HE3	2.61	0.40
36:DA:2012:G:O3'	54:DW:96:ILE:HG13	2.22	0.40
36:DA:2485:G:C2	36:DA:2486:G:C8	3.09	0.40
36:DA:2584:U:O2	36:DA:2584:U:O5'	2.40	0.40
36:DA:2811:G:H22	36:DA:2891:G:H1'	1.86	0.40
38:DC:197:LEU:C	38:DC:199:ALA:N	2.78	0.40
39:DD:76:PRO:CG	39:DD:98:VAL:HG21	2.49	0.40
39:DD:80:ALA:O	39:DD:81:ALA:HB2	2.21	0.40
39:DD:128:GLY:O	39:DD:129:ASN:C	2.64	0.40
39:DD:186:HIS:O	39:DD:189:CYS:HB2	2.21	0.40
39:DD:267:SER:C	39:DD:270:ILE:HD11	2.46	0.40
40:DE:47:VAL:HG21	40:DE:86:PRO:HD3	2.04	0.40
40:DE:103:ASP:CG	40:DE:168:MET:HE2	2.47	0.40
41:DF:10:PRO:HB3	41:DF:127:GLU:CG	2.51	0.40
41:DF:192:LEU:C	41:DF:192:LEU:CD2	2.92	0.40
42:DG:85:GLY:C	42:DG:87:PRO:CD	2.87	0.40
42:DG:111:LEU:HD21	42:DG:120:LEU:HD21	2.03	0.40
44:DJ:123:UNK:O	44:DJ:124:UNK:O	2.39	0.40
45:DN:18:ALA:O	45:DN:21:LYS:HB2	2.21	0.40
45:DN:131:GLN:HE22	45:DN:133:GLN:HA	1.86	0.40
45:DN:135:PRO:O	45:DN:136:GLU:C	2.65	0.40
47:DP:48:PRO:O	47:DP:49:ARG:C	2.64	0.40
48:DQ:75:THR:HG21	48:DQ:87:LYS:HG2	2.02	0.40
56:DY:15:VAL:HG12	56:DY:20:TYR:O	2.22	0.40
56:DY:39:VAL:O	56:DY:40:GLU:CD	2.64	0.40
57:DZ:14:LYS:O	57:DZ:15:PRO:C	2.65	0.40
57:DZ:30:ASN:C	57:DZ:32:HIS:H	2.29	0.40
57:DZ:112:ARG:HG2	57:DZ:112:ARG:NH1	2.36	0.40
1:AA:186:C:H2'	1:AA:187:C:H6	1.87	0.40
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.56	0.40
1:AA:370:C:O2'	1:AA:371:G:H5'	2.22	0.40
1:AA:958:A:C6	1:AA:959:A:N1	2.90	0.40
1:AA:975:A:N6	1:AA:1367:C:O4'	2.55	0.40
1:AA:1500:A:OP2	1:AA:1505:G:OP2	2.39	0.40
2:AB:42:ILE:O	2:AB:42:ILE:HG23	2.22	0.40
2:AB:163:PHE:HA	2:AB:185:ILE:HG13	2.03	0.40
3:AC:21:ARG:H	3:AC:21:ARG:HG2	1.76	0.40
3:AC:174:PRO:C	3:AC:176:HIS:N	2.78	0.40
9:AI:69:GLY:O	9:AI:73:GLN:HG3	2.22	0.40
10:AJ:3:LYS:N	10:AJ:74:ILE:O	2.55	0.40
10:AJ:16:LEU:HD13	10:AJ:16:LEU:C	2.47	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:111:LYS:HG2	12:AL:112:ASP:OD1	2.22	0.40
13:AM:93:ARG:HD3	36:BA:888:C:OP1	2.21	0.40
13:AM:96:LEU:CB	13:AM:97:PRO:HD2	2.44	0.40
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.65	0.40
18:AR:35:ARG:O	18:AR:37:VAL:HG13	2.21	0.40
20:AT:61:SER:O	20:AT:62:LEU:C	2.64	0.40
20:AT:87:LYS:HD2	20:AT:87:LYS:HA	1.87	0.40
25:AY:15:ILE:C	25:AY:101:LEU:HD22	2.47	0.40
25:AY:428:LEU:CD1	25:AY:440:VAL:HG11	2.42	0.40
25:AY:461:ILE:HD12	25:AY:461:ILE:C	2.47	0.40
30:B4:1:MET:SD	30:B4:1:MET:N	2.76	0.40
31:B5:48:GLU:O	31:B5:49:CYS:HB3	2.20	0.40
35:B9:2:LYS:HE3	35:B9:2:LYS:HB3	1.97	0.40
35:B9:33:LYS:HE3	36:BA:2526:G:O2'	2.21	0.40
36:BA:325:G:H2'	36:BA:326:G:C8	2.56	0.40
36:BA:475:U:C4	36:BA:481:G:O6	2.75	0.40
36:BA:525:U:C2'	36:BA:526:A:H5''	2.51	0.40
36:BA:654(E):G:C2'	36:BA:654(F):C:H5'	2.51	0.40
36:BA:779:U:O2'	36:BA:780:G:H5'	2.21	0.40
36:BA:817:C:H2'	36:BA:818:G:O4'	2.21	0.40
36:BA:1210:A:C8	36:BA:1210:A:H5'	2.57	0.40
36:BA:1290:C:O5'	36:BA:1290:C:H6	2.04	0.40
36:BA:1545:A:N7	36:BA:1546:C:C2	2.89	0.40
36:BA:1796:U:O2	36:BA:1824:G:C2	2.74	0.40
36:BA:1984:G:H2'	36:BA:1985:G:H8	1.85	0.40
36:BA:2097:C:H2'	36:BA:2098:U:H6	1.86	0.40
36:BA:2107:C:N4	36:BA:2182:G:H1	2.18	0.40
36:BA:2115:G:H5''	36:BA:2116:G:OP2	2.22	0.40
36:BA:2337:G:H2'	36:BA:2338:G:H8	1.86	0.40
36:BA:2509:G:O2'	36:BA:2510:C:H5'	2.21	0.40
36:BA:2744:G:C2	36:BA:2761:G:C4	3.10	0.40
37:BB:14:U:H5'	37:BB:71:C:O4'	2.22	0.40
40:BE:144:ARG:HB3	40:BE:145:LYS:H	1.75	0.40
41:BF:29:ASN:OD1	41:BF:31:HIS:HB3	2.22	0.40
41:BF:83:PHE:O	41:BF:84:VAL:C	2.65	0.40
42:BG:55:LYS:C	42:BG:58:GLN:HG3	2.47	0.40
43:BH:68:THR:C	43:BH:70:THR:N	2.80	0.40
43:BH:154:PRO:C	43:BH:156:ALA:H	2.29	0.40
47:BP:98:GLU:HA	47:BP:101:VAL:HG22	2.03	0.40
50:BS:48:LEU:C	50:BS:49:VAL:HG23	2.47	0.40
51:BT:45:PHE:HE2	51:BT:74:ARG:HB2	1.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BT:132:LYS:CG	51:BT:133:GLU:N	2.82	0.40
53:BV:6:LYS:HE2	53:BV:6:LYS:HB3	1.97	0.40
53:BV:21:ARG:O	53:BV:22:VAL:CG1	2.68	0.40
54:BW:25:ARG:NH1	54:BW:25:ARG:CB	2.84	0.40
1:CA:276:G:C2'	1:CA:277:C:H5'	2.51	0.40
1:CA:375:U:O2'	16:CP:28:ARG:HD2	2.21	0.40
1:CA:610:G:N3	1:CA:610:G:H2'	2.35	0.40
1:CA:767:A:H2'	1:CA:768:A:O4'	2.20	0.40
1:CA:803:G:C6	1:CA:804:U:C4	3.10	0.40
1:CA:880:C:H2'	1:CA:881:G:H8	1.85	0.40
1:CA:902:G:H2'	1:CA:903:G:H8	1.86	0.40
1:CA:946:A:C5'	1:CA:947:G:OP2	2.70	0.40
1:CA:952:U:O2'	1:CA:953:G:H5'	2.22	0.40
1:CA:998:G:N3	1:CA:999:C:O2	2.55	0.40
1:CA:1001(A):G:H2'	1:CA:1002:G:C8	2.56	0.40
1:CA:1068:G:N2	1:CA:1191:A:N3	2.68	0.40
1:CA:1130:A:H5'	9:CI:18:PHE:HE2	1.86	0.40
1:CA:1163:C:O2'	1:CA:1164:G:H5'	2.21	0.40
1:CA:1526:G:H2'	1:CA:1527:C:C6	2.57	0.40
2:CB:73:THR:O	2:CB:74:LYS:C	2.65	0.40
3:CC:65:ALA:O	3:CC:66:VAL:CB	2.70	0.40
3:CC:182:ILE:HG23	3:CC:202:ILE:O	2.22	0.40
4:CD:5:ILE:CA	4:CD:115:ARG:HH12	2.28	0.40
7:CG:119:ARG:O	7:CG:120:ILE:C	2.64	0.40
9:CI:23:ASN:OD1	9:CI:24:GLY:N	2.55	0.40
9:CI:42:ARG:HH22	9:CI:75:ASP:CG	2.29	0.40
11:CK:31:THR:O	11:CK:31:THR:HG23	2.21	0.40
12:CL:42:THR:O	12:CL:42:THR:CG2	2.69	0.40
12:CL:83:VAL:HG12	12:CL:100:ILE:HG23	2.04	0.40
13:CM:63:THR:CG2	13:CM:64:TRP:H	2.34	0.40
13:CM:73:GLU:O	13:CM:76:ALA:HB3	2.21	0.40
16:CP:42:ARG:O	16:CP:43:LYS:C	2.64	0.40
20:CT:43:LEU:O	20:CT:44:ALA:C	2.64	0.40
23:CW:1:C:O2	23:CW:73:A:H2	2.05	0.40
23:CW:42:G:C2'	23:CW:43:A:H5'	2.52	0.40
25:CY:119:GLU:O	25:CY:121:VAL:N	2.45	0.40
25:CY:302:HIS:O	25:CY:304:ASP:N	2.51	0.40
25:CY:370:LYS:O	25:CY:371:ALA:C	2.64	0.40
28:D2:19:VAL:O	28:D2:20:GLU:C	2.64	0.40
36:DA:177:G:H3'	36:DA:178:G:H8	1.86	0.40
36:DA:291:C:H2'	36:DA:292:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:325:G:H2'	36:DA:326:G:C8	2.56	0.40
36:DA:365:C:H2'	36:DA:366:C:O4'	2.21	0.40
36:DA:389:G:O4'	36:DA:2413:G:C4'	2.70	0.40
36:DA:545:C:OP1	36:DA:545:C:C6	2.70	0.40
36:DA:563:G:N2	36:DA:564:C:C2	2.90	0.40
36:DA:666:G:C5	36:DA:667:U:C5	3.09	0.40
36:DA:1319:G:C6	36:DA:1320:C:N4	2.90	0.40
36:DA:1616:A:H4'	36:DA:1617:C:OP2	2.21	0.40
36:DA:1804:C:O5'	36:DA:1804:C:H6	2.05	0.40
36:DA:2094:G:O2'	36:DA:2095:C:H5'	2.21	0.40
36:DA:2107:C:N4	36:DA:2182:G:H1	2.19	0.40
36:DA:2405:G:HO2'	36:DA:2406:U:P	2.44	0.40
36:DA:2526:G:H5'	36:DA:2742:C:O2'	2.21	0.40
36:DA:2832:U:C5	36:DA:2884:U:H5''	2.57	0.40
36:DA:2881:C:H2'	36:DA:2882:A:H8	1.86	0.40
39:DD:72:LYS:HB3	39:DD:75:ILE:HB	2.03	0.40
40:DE:101:ARG:HD3	40:DE:171:GLU:HA	2.04	0.40
40:DE:108:SER:O	40:DE:162:ALA:CA	2.70	0.40
40:DE:113:PHE:C	40:DE:113:PHE:CD1	3.00	0.40
40:DE:116:VAL:HG22	40:DE:122:PHE:CG	2.56	0.40
41:DF:150:GLY:HA2	41:DF:172:TRP:CE3	2.56	0.40
43:DH:21:PRO:HB2	43:DH:22:GLY:H	1.74	0.40
45:DN:66:LYS:C	45:DN:67:LEU:HD23	2.47	0.40
46:DO:88:ASN:C	46:DO:90:GLN:H	2.29	0.40
47:DP:112:LEU:CD1	47:DP:127:ALA:HB1	2.52	0.40
47:DP:114:ILE:HG23	47:DP:130:PHE:CE1	2.56	0.40
47:DP:136:GLU:C	47:DP:138:LEU:H	2.30	0.40
50:DS:42:ASP:C	50:DS:43:GLU:HG3	2.46	0.40
51:DT:51:ARG:O	51:DT:61:PHE:HB2	2.22	0.40
51:DT:65:LYS:NZ	51:DT:66:VAL:H	2.19	0.40
53:DV:12:TYR:CE2	53:DV:22:VAL:HG12	2.57	0.40
53:DV:17:GLY:O	53:DV:18:LEU:CB	2.70	0.40
53:DV:45:THR:CG2	53:DV:52:VAL:HG21	2.51	0.40
55:DX:65:ARG:HG2	55:DX:66:LEU:N	2.36	0.40
57:DZ:179:ASP:HB3	57:DZ:182:LYS:HE2	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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%)	148 (64%)	52 (22%)	33 (14%)	0	3
2	CB	233/256 (91%)	148 (64%)	52 (22%)	33 (14%)	0	3
3	AC	205/239 (86%)	146 (71%)	32 (16%)	27 (13%)	0	3
3	CC	205/239 (86%)	148 (72%)	31 (15%)	26 (13%)	0	4
4	AD	206/209 (99%)	138 (67%)	47 (23%)	21 (10%)	0	6
4	CD	206/209 (99%)	138 (67%)	49 (24%)	19 (9%)	0	8
5	AE	149/162 (92%)	117 (78%)	26 (17%)	6 (4%)	2	22
5	CE	149/162 (92%)	118 (79%)	26 (17%)	5 (3%)	3	26
6	AF	99/101 (98%)	69 (70%)	26 (26%)	4 (4%)	2	22
6	CF	99/101 (98%)	69 (70%)	26 (26%)	4 (4%)	2	22
7	AG	153/156 (98%)	112 (73%)	27 (18%)	14 (9%)	0	8
7	CG	153/156 (98%)	112 (73%)	29 (19%)	12 (8%)	1	11
8	AH	136/138 (99%)	106 (78%)	26 (19%)	4 (3%)	3	28
8	CH	136/138 (99%)	105 (77%)	27 (20%)	4 (3%)	3	28
9	AI	121/128 (94%)	85 (70%)	27 (22%)	9 (7%)	1	12
9	CI	121/128 (94%)	87 (72%)	25 (21%)	9 (7%)	1	12
10	AJ	97/105 (92%)	67 (69%)	19 (20%)	11 (11%)	0	5
10	CJ	97/105 (92%)	68 (70%)	18 (19%)	11 (11%)	0	5
11	AK	117/129 (91%)	85 (73%)	23 (20%)	9 (8%)	1	11
11	CK	117/129 (91%)	85 (73%)	23 (20%)	9 (8%)	1	11
12	AL	123/132 (93%)	84 (68%)	19 (15%)	20 (16%)	0	2
12	CL	123/132 (93%)	84 (68%)	19 (15%)	20 (16%)	0	2
13	AM	123/126 (98%)	75 (61%)	30 (24%)	18 (15%)	0	3
13	CM	123/126 (98%)	75 (61%)	30 (24%)	18 (15%)	0	3
14	AN	58/61 (95%)	43 (74%)	10 (17%)	5 (9%)	0	9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CN	58/61 (95%)	42 (72%)	11 (19%)	5 (9%)	0	9
15	AO	86/89 (97%)	55 (64%)	24 (28%)	7 (8%)	1	10
15	CO	86/89 (97%)	54 (63%)	25 (29%)	7 (8%)	1	10
16	AP	82/88 (93%)	62 (76%)	15 (18%)	5 (6%)	1	15
16	CP	82/88 (93%)	63 (77%)	14 (17%)	5 (6%)	1	15
17	AQ	98/105 (93%)	80 (82%)	15 (15%)	3 (3%)	3	27
17	CQ	98/105 (93%)	80 (82%)	15 (15%)	3 (3%)	3	27
18	AR	68/88 (77%)	47 (69%)	13 (19%)	8 (12%)	0	4
18	CR	68/88 (77%)	48 (71%)	12 (18%)	8 (12%)	0	4
19	AS	77/93 (83%)	42 (54%)	17 (22%)	18 (23%)	0	0
19	CS	77/93 (83%)	40 (52%)	19 (25%)	18 (23%)	0	0
20	AT	97/106 (92%)	57 (59%)	28 (29%)	12 (12%)	0	4
20	CT	97/106 (92%)	57 (59%)	27 (28%)	13 (13%)	0	3
21	AU	23/27 (85%)	13 (56%)	7 (30%)	3 (13%)	0	4
21	CU	23/27 (85%)	13 (56%)	7 (30%)	3 (13%)	0	4
25	AY	663/691 (96%)	458 (69%)	126 (19%)	79 (12%)	0	4
25	CY	663/691 (96%)	482 (73%)	125 (19%)	56 (8%)	0	9
26	B0	82/85 (96%)	63 (77%)	15 (18%)	4 (5%)	2	18
26	D0	82/85 (96%)	63 (77%)	15 (18%)	4 (5%)	2	18
27	B1	92/98 (94%)	74 (80%)	8 (9%)	10 (11%)	0	5
27	D1	92/98 (94%)	71 (77%)	12 (13%)	9 (10%)	0	7
28	B2	69/72 (96%)	40 (58%)	21 (30%)	8 (12%)	0	4
28	D2	69/72 (96%)	34 (49%)	26 (38%)	9 (13%)	0	4
29	B3	58/60 (97%)	35 (60%)	19 (33%)	4 (7%)	1	13
29	D3	58/60 (97%)	35 (60%)	19 (33%)	4 (7%)	1	13
30	B4	56/71 (79%)	27 (48%)	14 (25%)	15 (27%)	0	0
30	D4	56/71 (79%)	27 (48%)	14 (25%)	15 (27%)	0	0
31	B5	57/60 (95%)	37 (65%)	10 (18%)	10 (18%)	0	2
31	D5	57/60 (95%)	37 (65%)	10 (18%)	10 (18%)	0	2
32	B6	48/54 (89%)	21 (44%)	13 (27%)	14 (29%)	0	0
32	D6	48/54 (89%)	21 (44%)	13 (27%)	14 (29%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
33	B7	47/49 (96%)	38 (81%)	8 (17%)	1 (2%)	5	33
33	D7	47/49 (96%)	38 (81%)	8 (17%)	1 (2%)	5	33
34	B8	62/65 (95%)	30 (48%)	18 (29%)	14 (23%)	0	0
34	D8	62/65 (95%)	30 (48%)	18 (29%)	14 (23%)	0	0
35	B9	35/37 (95%)	25 (71%)	6 (17%)	4 (11%)	0	5
35	D9	35/37 (95%)	25 (71%)	6 (17%)	4 (11%)	0	5
38	BC	226/229 (99%)	175 (77%)	42 (19%)	9 (4%)	2	22
38	DC	226/229 (99%)	176 (78%)	40 (18%)	10 (4%)	2	20
39	BD	273/276 (99%)	184 (67%)	54 (20%)	35 (13%)	0	4
39	DD	273/276 (99%)	185 (68%)	53 (19%)	35 (13%)	0	4
40	BE	203/206 (98%)	123 (61%)	39 (19%)	41 (20%)	0	1
40	DE	203/206 (98%)	122 (60%)	39 (19%)	42 (21%)	0	1
41	BF	206/210 (98%)	138 (67%)	45 (22%)	23 (11%)	0	5
41	DF	206/210 (98%)	138 (67%)	44 (21%)	24 (12%)	0	4
42	BG	177/182 (97%)	116 (66%)	39 (22%)	22 (12%)	0	4
42	DG	177/182 (97%)	112 (63%)	44 (25%)	21 (12%)	0	4
43	BH	165/180 (92%)	89 (54%)	40 (24%)	36 (22%)	0	1
43	DH	165/180 (92%)	90 (54%)	40 (24%)	35 (21%)	0	1
45	BN	137/140 (98%)	87 (64%)	26 (19%)	24 (18%)	0	2
45	DN	137/140 (98%)	88 (64%)	25 (18%)	24 (18%)	0	2
46	BO	120/122 (98%)	97 (81%)	13 (11%)	10 (8%)	0	9
46	DO	120/122 (98%)	97 (81%)	13 (11%)	10 (8%)	0	9
47	BP	144/150 (96%)	79 (55%)	38 (26%)	27 (19%)	0	1
47	DP	144/150 (96%)	79 (55%)	39 (27%)	26 (18%)	0	1
48	BQ	139/141 (99%)	106 (76%)	25 (18%)	8 (6%)	1	16
48	DQ	139/141 (99%)	107 (77%)	25 (18%)	7 (5%)	1	18
49	BR	115/118 (98%)	81 (70%)	23 (20%)	11 (10%)	0	7
49	DR	115/118 (98%)	81 (70%)	22 (19%)	12 (10%)	0	6
50	BS	97/112 (87%)	42 (43%)	32 (33%)	23 (24%)	0	0
50	DS	97/112 (87%)	41 (42%)	34 (35%)	22 (23%)	0	0
51	BT	136/146 (93%)	77 (57%)	32 (24%)	27 (20%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	DT	136/146 (93%)	78 (57%)	31 (23%)	27 (20%)	0	1
52	BU	115/118 (98%)	78 (68%)	30 (26%)	7 (6%)	1	15
52	DU	115/118 (98%)	76 (66%)	31 (27%)	8 (7%)	1	13
53	BV	99/101 (98%)	69 (70%)	17 (17%)	13 (13%)	0	3
53	DV	99/101 (98%)	68 (69%)	18 (18%)	13 (13%)	0	3
54	BW	111/113 (98%)	78 (70%)	23 (21%)	10 (9%)	0	8
54	DW	111/113 (98%)	76 (68%)	25 (22%)	10 (9%)	0	8
55	BX	91/96 (95%)	55 (60%)	27 (30%)	9 (10%)	0	7
55	DX	91/96 (95%)	55 (60%)	26 (29%)	10 (11%)	0	5
56	BY	105/110 (96%)	44 (42%)	32 (30%)	29 (28%)	0	0
56	DY	105/110 (96%)	44 (42%)	32 (30%)	29 (28%)	0	0
57	BZ	183/206 (89%)	116 (63%)	39 (21%)	28 (15%)	0	3
57	DZ	183/206 (89%)	118 (64%)	34 (19%)	31 (17%)	0	2
All	All	12924/13672 (94%)	8641 (67%)	2723 (21%)	1560 (12%)	0	4

All (1560) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	12	GLU
2	AB	13	ALA
2	AB	15	VAL
2	AB	74	LYS
2	AB	75	LYS
2	AB	95	GLN
2	AB	128	GLU
2	AB	129	GLU
2	AB	153	ARG
2	AB	157	ARG
2	AB	195	ASP
2	AB	233	SER
2	AB	239	VAL
3	AC	12	LEU
3	AC	47	LEU
3	AC	61	ALA
3	AC	65	ALA
3	AC	95	THR
3	AC	96	GLY

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Mol	Chain	Res	Type
3	AC	154	SER
3	AC	168	ALA
3	AC	207	VAL
4	AD	3	ARG
4	AD	13	ARG
4	AD	14	ARG
4	AD	18	LYS
4	AD	30	LYS
4	AD	40	PRO
4	AD	44	GLY
4	AD	153	ARG
4	AD	186	LEU
5	AE	11	ILE
6	AF	39	LYS
6	AF	43	LEU
7	AG	8	GLU
7	AG	36	LYS
8	AH	105	ARG
9	AI	41	VAL
9	AI	61	ALA
9	AI	89	ASN
10	AJ	36	GLY
10	AJ	51	ARG
10	AJ	75	ILE
10	AJ	83	GLU
11	AK	127	LYS
12	AL	18	VAL
12	AL	28	LYS
12	AL	71	PRO
12	AL	91	LYS
13	AM	5	ALA
13	AM	7	VAL
13	AM	12	ASN
13	AM	63	THR
13	AM	67	GLU
13	AM	83	ASP
13	AM	118	ALA
13	AM	124	PRO
14	AN	14	PRO
14	AN	15	LYS
14	AN	16	PHE
14	AN	29	ARG

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Mol	Chain	Res	Type
16	AP	34	GLU
16	AP	83	GLU
17	AQ	49	GLU
18	AR	45	SER
19	AS	10	PHE
19	AS	28	LYS
19	AS	29	ARG
19	AS	61	TYR
19	AS	62	ILE
20	AT	48	LYS
20	AT	49	ALA
20	AT	99	LEU
25	AY	21	ILE
25	AY	23	ALA
25	AY	39	ILE
25	AY	66	THR
25	AY	84	THR
25	AY	85	PRO
25	AY	89	ASP
25	AY	92	ILE
25	AY	112	GLN
25	AY	121	VAL
25	AY	129	LYS
25	AY	203	GLU
25	AY	204	GLU
25	AY	205	TYR
25	AY	206	LEU
25	AY	209	ALA
25	AY	210	ARG
25	AY	276	VAL
25	AY	380	LEU
25	AY	385	THR
25	AY	399	LEU
25	AY	402	ILE
25	AY	448	GLN
25	AY	498	ILE
25	AY	505	GLY
25	AY	530	VAL
25	AY	535	PRO
25	AY	628	ARG
26	B0	74	ARG
27	B1	30	VAL

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Mol	Chain	Res	Type
27	B1	85	LEU
28	B2	18	PRO
28	B2	19	VAL
28	B2	47	ASN
28	B2	48	HIS
30	B4	26	SER
30	B4	38	LYS
30	B4	43	TYR
30	B4	44	THR
30	B4	50	VAL
30	B4	51	ASP
31	B5	4	HIS
31	B5	35	GLU
31	B5	36	CYS
31	B5	49	CYS
31	B5	53	ALA
31	B5	56	LYS
31	B5	57	VAL
32	B6	9	LEU
32	B6	18	ARG
32	B6	20	ASN
32	B6	31	PRO
32	B6	44	ARG
34	B8	31	HIS
34	B8	33	ASN
34	B8	43	GLN
34	B8	49	VAL
35	B9	2	LYS
35	B9	35	ARG
39	BD	24	ILE
39	BD	25	THR
39	BD	27	THR
39	BD	34	VAL
39	BD	36	PRO
39	BD	239	ARG
39	BD	273	ARG
40	BE	35	GLN
40	BE	71	GLY
40	BE	77	ILE
40	BE	129	HIS
40	BE	145	LYS
40	BE	189	PRO

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Mol	Chain	Res	Type
41	BF	11	VAL
41	BF	21	ALA
41	BF	89	VAL
41	BF	126	VAL
41	BF	127	GLU
41	BF	167	ALA
42	BG	4	ASP
42	BG	6	ALA
42	BG	14	GLU
42	BG	75	LYS
42	BG	81	LYS
42	BG	87	PRO
42	BG	96	ARG
42	BG	150	ASP
42	BG	181	ARG
43	BH	13	LYS
43	BH	20	ALA
43	BH	21	PRO
43	BH	46	GLU
43	BH	55	PRO
43	BH	83	TYR
43	BH	138	LYS
43	BH	155	SER
43	BH	156	ALA
43	BH	157	TYR
43	BH	160	LYS
43	BH	173	PRO
45	BN	8	GLN
45	BN	46	VAL
45	BN	47	ALA
45	BN	58	ASP
45	BN	63	THR
45	BN	130	HIS
45	BN	133	GLN
45	BN	134	ARG
46	BO	29	ASN
46	BO	35	VAL
46	BO	48	PRO
47	BP	12	ALA
47	BP	14	LYS
47	BP	31	ALA
47	BP	47	ASP

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Mol	Chain	Res	Type
47	BP	52	GLU
47	BP	57	THR
47	BP	58	THR
47	BP	111	ARG
47	BP	147	LEU
48	BQ	27	VAL
48	BQ	135	ASP
49	BR	8	ARG
49	BR	45	ARG
49	BR	107	ASP
49	BR	117	VAL
50	BS	13	ARG
50	BS	23	ARG
50	BS	57	LYS
50	BS	59	LYS
50	BS	94	TYR
50	BS	97	ARG
50	BS	102	ALA
51	BT	5	ALA
51	BT	6	LEU
51	BT	24	PRO
51	BT	30	VAL
51	BT	58	ASN
51	BT	80	SER
51	BT	91	ARG
51	BT	97	ALA
51	BT	104	ASN
51	BT	107	ASP
51	BT	129	ARG
51	BT	130	ALA
51	BT	132	LYS
51	BT	135	ALA
52	BU	91	ASP
52	BU	93	LYS
53	BV	2	PHE
53	BV	18	LEU
53	BV	46	VAL
54	BW	63	ASP
56	BY	7	VAL
56	BY	24	VAL
56	BY	38	ILE
56	BY	48	ALA

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Mol	Chain	Res	Type
56	BY	60	PHE
56	BY	67	LEU
56	BY	74	PRO
56	BY	77	PRO
56	BY	78	ALA
56	BY	99	CYS
56	BY	100	ALA
56	BY	101	LYS
56	BY	104	GLY
57	BZ	27	VAL
57	BZ	78	LYS
57	BZ	81	ARG
57	BZ	128	VAL
57	BZ	142	SER
57	BZ	152	ALA
57	BZ	166	SER
57	BZ	168	GLU
57	BZ	186	GLU
2	CB	12	GLU
2	CB	13	ALA
2	CB	15	VAL
2	CB	74	LYS
2	CB	75	LYS
2	CB	95	GLN
2	CB	128	GLU
2	CB	129	GLU
2	CB	153	ARG
2	CB	157	ARG
2	CB	195	ASP
2	CB	233	SER
2	CB	239	VAL
3	CC	12	LEU
3	CC	47	LEU
3	CC	61	ALA
3	CC	65	ALA
3	CC	95	THR
3	CC	96	GLY
3	CC	154	SER
3	CC	168	ALA
3	CC	207	VAL
4	CD	3	ARG
4	CD	13	ARG

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Mol	Chain	Res	Type
4	CD	14	ARG
4	CD	18	LYS
4	CD	30	LYS
4	CD	40	PRO
4	CD	44	GLY
4	CD	153	ARG
4	CD	186	LEU
5	CE	11	ILE
6	CF	39	LYS
6	CF	43	LEU
7	CG	8	GLU
7	CG	36	LYS
8	CH	105	ARG
9	CI	41	VAL
9	CI	61	ALA
9	CI	89	ASN
10	CJ	36	GLY
10	CJ	51	ARG
10	CJ	75	ILE
10	CJ	83	GLU
11	CK	127	LYS
12	CL	18	VAL
12	CL	28	LYS
12	CL	71	PRO
12	CL	91	LYS
13	CM	5	ALA
13	CM	7	VAL
13	CM	12	ASN
13	CM	63	THR
13	CM	67	GLU
13	CM	83	ASP
13	CM	118	ALA
13	CM	124	PRO
14	CN	15	LYS
14	CN	16	PHE
14	CN	29	ARG
16	CP	34	GLU
16	CP	83	GLU
17	CQ	49	GLU
18	CR	45	SER
19	CS	10	PHE
19	CS	28	LYS

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Mol	Chain	Res	Type
19	CS	29	ARG
19	CS	44	MET
19	CS	61	TYR
19	CS	62	ILE
20	CT	48	LYS
20	CT	49	ALA
20	CT	99	LEU
25	CY	21	ILE
25	CY	39	ILE
25	CY	129	LYS
25	CY	203	GLU
25	CY	299	VAL
25	CY	354	ARG
25	CY	366	VAL
25	CY	416	LYS
25	CY	498	ILE
25	CY	505	GLY
25	CY	681	LYS
26	D0	74	ARG
27	D1	83	GLU
28	D2	47	ASN
28	D2	48	HIS
30	D4	26	SER
30	D4	38	LYS
30	D4	43	TYR
30	D4	44	THR
30	D4	50	VAL
30	D4	51	ASP
31	D5	4	HIS
31	D5	35	GLU
31	D5	36	CYS
31	D5	49	CYS
31	D5	53	ALA
31	D5	56	LYS
31	D5	57	VAL
32	D6	9	LEU
32	D6	18	ARG
32	D6	20	ASN
32	D6	27	LYS
32	D6	31	PRO
32	D6	44	ARG
34	D8	31	HIS

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Mol	Chain	Res	Type
34	D8	33	ASN
34	D8	43	GLN
34	D8	49	VAL
35	D9	2	LYS
35	D9	35	ARG
39	DD	24	ILE
39	DD	25	THR
39	DD	27	THR
39	DD	34	VAL
39	DD	36	PRO
39	DD	239	ARG
39	DD	273	ARG
40	DE	35	GLN
40	DE	71	GLY
40	DE	77	ILE
40	DE	129	HIS
40	DE	145	LYS
40	DE	189	PRO
41	DF	11	VAL
41	DF	14	PRO
41	DF	21	ALA
41	DF	89	VAL
41	DF	126	VAL
41	DF	127	GLU
41	DF	167	ALA
42	DG	3	LEU
42	DG	48	GLU
42	DG	75	LYS
42	DG	82	LEU
42	DG	87	PRO
42	DG	96	ARG
43	DH	13	LYS
43	DH	20	ALA
43	DH	21	PRO
43	DH	46	GLU
43	DH	55	PRO
43	DH	83	TYR
43	DH	138	LYS
43	DH	155	SER
43	DH	156	ALA
43	DH	157	TYR
43	DH	160	LYS

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Mol	Chain	Res	Type
43	DH	173	PRO
45	DN	8	GLN
45	DN	46	VAL
45	DN	47	ALA
45	DN	58	ASP
45	DN	63	THR
45	DN	130	HIS
45	DN	133	GLN
45	DN	134	ARG
46	DO	29	ASN
46	DO	35	VAL
46	DO	48	PRO
47	DP	12	ALA
47	DP	14	LYS
47	DP	47	ASP
47	DP	52	GLU
47	DP	57	THR
47	DP	58	THR
47	DP	111	ARG
47	DP	147	LEU
48	DQ	27	VAL
48	DQ	135	ASP
48	DQ	140	ALA
49	DR	8	ARG
49	DR	45	ARG
49	DR	107	ASP
49	DR	117	VAL
50	DS	13	ARG
50	DS	23	ARG
50	DS	57	LYS
50	DS	59	LYS
50	DS	94	TYR
50	DS	97	ARG
50	DS	102	ALA
51	DT	5	ALA
51	DT	6	LEU
51	DT	24	PRO
51	DT	30	VAL
51	DT	58	ASN
51	DT	80	SER
51	DT	91	ARG
51	DT	97	ALA

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Mol	Chain	Res	Type
51	DT	104	ASN
51	DT	107	ASP
51	DT	129	ARG
51	DT	130	ALA
51	DT	132	LYS
51	DT	135	ALA
52	DU	91	ASP
52	DU	93	LYS
53	DV	2	PHE
53	DV	18	LEU
53	DV	46	VAL
53	DV	53	GLU
54	DW	63	ASP
56	DY	7	VAL
56	DY	24	VAL
56	DY	38	ILE
56	DY	48	ALA
56	DY	60	PHE
56	DY	67	LEU
56	DY	74	PRO
56	DY	77	PRO
56	DY	78	ALA
56	DY	99	CYS
56	DY	100	ALA
56	DY	104	GLY
57	DZ	38	TYR
57	DZ	80	ARG
57	DZ	112	ARG
57	DZ	146	ILE
57	DZ	168	GLU
57	DZ	177	PRO
57	DZ	186	GLU
2	AB	18	GLY
2	AB	20	GLU
2	AB	78	GLN
2	AB	190	THR
2	AB	236	TYR
3	AC	66	VAL
3	AC	107	GLN
3	AC	147	LYS
3	AC	175	LEU
3	AC	205	GLY

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Mol	Chain	Res	Type
4	AD	5	ILE
4	AD	41	GLY
4	AD	69	GLY
4	AD	156	GLU
4	AD	166	LYS
4	AD	171	GLY
6	AF	34	GLY
7	AG	7	ALA
7	AG	9	VAL
7	AG	82	GLY
7	AG	90	GLU
7	AG	109	ASN
8	AH	121	ASP
9	AI	55	ALA
9	AI	85	LEU
9	AI	120	ARG
10	AJ	33	GLN
10	AJ	57	LYS
10	AJ	59	SER
11	AK	49	GLY
11	AK	88	GLY
12	AL	37	CYS
12	AL	38	THR
12	AL	46	LYS
12	AL	121	GLY
13	AM	55	ARG
13	AM	70	LEU
13	AM	100	GLY
13	AM	114	ARG
15	AO	14	GLU
15	AO	24	SER
18	AR	41	LYS
18	AR	68	LYS
19	AS	26	GLY
19	AS	44	MET
19	AS	46	GLY
19	AS	54	GLY
19	AS	73	GLU
19	AS	80	TYR
20	AT	63	ILE
20	AT	74	LYS
20	AT	97	ALA

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Mol	Chain	Res	Type
21	AU	3	LYS
21	AU	6	ARG
25	AY	25	LYS
25	AY	42	ILE
25	AY	88	VAL
25	AY	111	SER
25	AY	114	VAL
25	AY	119	GLU
25	AY	137	ASN
25	AY	211	GLU
25	AY	347	GLY
25	AY	416	LYS
25	AY	418	LYS
25	AY	447	GLY
25	AY	502	GLY
25	AY	519	ARG
25	AY	614	GLU
25	AY	680	PRO
26	B0	13	GLY
26	B0	75	LEU
27	B1	28	GLY
27	B1	53	VAL
27	B1	84	GLY
28	B2	20	GLU
28	B2	43	GLN
29	B3	3	ARG
29	B3	13	ILE
29	B3	45	GLY
30	B4	5	ILE
30	B4	20	ASN
30	B4	48	ARG
30	B4	57	GLU
31	B5	58	LEU
31	B5	59	GLU
32	B6	7	ILE
32	B6	16	CYS
32	B6	27	LYS
32	B6	28	ARG
32	B6	36	LEU
32	B6	52	VAL
34	B8	3	LYS
34	B8	34	TRP

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Mol	Chain	Res	Type
38	BC	14	LYS
38	BC	127	LYS
39	BD	3	VAL
39	BD	41	GLY
39	BD	70	TRP
39	BD	127	VAL
39	BD	225	ALA
39	BD	234	GLY
39	BD	236	GLY
39	BD	242	ARG
39	BD	246	PRO
39	BD	267	SER
39	BD	268	ARG
40	BE	46	ALA
40	BE	54	GLN
40	BE	64	LYS
40	BE	66	HIS
40	BE	69	LYS
40	BE	70	ALA
40	BE	72	VAL
40	BE	83	ASP
40	BE	88	GLY
40	BE	90	THR
40	BE	185	LYS
40	BE	186	GLY
41	BF	5	ALA
41	BF	10	PRO
41	BF	14	PRO
41	BF	85	GLY
41	BF	90	PHE
41	BF	134	GLY
41	BF	206	ILE
41	BF	207	GLY
42	BG	34	LEU
42	BG	110	ALA
42	BG	163	ALA
42	BG	166	ASP
43	BH	18	GLU
43	BH	41	MET
43	BH	45	VAL
43	BH	98	LEU
43	BH	154	PRO

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Mol	Chain	Res	Type
43	BH	169	VAL
43	BH	174	GLY
43	BH	176	ALA
45	BN	57	ALA
45	BN	81	GLY
46	BO	5	GLN
46	BO	13	ASN
46	BO	54	GLU
46	BO	68	GLU
46	BO	120	GLU
47	BP	17	LYS
47	BP	19	VAL
47	BP	48	PRO
47	BP	49	ARG
47	BP	70	GLN
47	BP	83	VAL
47	BP	98	GLU
47	BP	123	LEU
48	BQ	137	TYR
48	BQ	139	GLU
48	BQ	140	ALA
49	BR	14	SER
49	BR	58	GLY
49	BR	88	ARG
50	BS	39	ILE
50	BS	85	VAL
50	BS	100	ALA
50	BS	103	GLU
50	BS	104	GLY
51	BT	15	VAL
51	BT	28	VAL
51	BT	41	ARG
51	BT	55	ASN
51	BT	92	GLY
51	BT	105	LEU
51	BT	133	GLU
53	BV	19	LYS
53	BV	22	VAL
53	BV	31	ALA
53	BV	53	GLU
53	BV	54	GLY
53	BV	67	GLY

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Mol	Chain	Res	Type
54	BW	6	ILE
54	BW	18	ARG
54	BW	67	ASP
55	BX	12	VAL
55	BX	87	GLN
56	BY	3	VAL
56	BY	30	VAL
56	BY	37	VAL
56	BY	39	VAL
56	BY	41	GLY
56	BY	98	VAL
56	BY	107	ASP
57	BZ	80	ARG
57	BZ	104	PHE
57	BZ	112	ARG
57	BZ	120	ILE
57	BZ	121	HIS
57	BZ	146	ILE
57	BZ	148	ASP
57	BZ	159	PRO
57	BZ	185	GLU
2	CB	18	GLY
2	CB	20	GLU
2	CB	78	GLN
2	CB	236	TYR
3	CC	26	LYS
3	CC	66	VAL
3	CC	107	GLN
3	CC	147	LYS
3	CC	156	ARG
3	CC	160	ALA
3	CC	175	LEU
3	CC	205	GLY
4	CD	5	ILE
4	CD	41	GLY
4	CD	69	GLY
4	CD	156	GLU
4	CD	166	LYS
4	CD	171	GLY
6	CF	34	GLY
7	CG	7	ALA
7	CG	9	VAL

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Mol	Chain	Res	Type
7	CG	82	GLY
7	CG	90	GLU
7	CG	109	ASN
8	CH	121	ASP
9	CI	55	ALA
9	CI	85	LEU
9	CI	120	ARG
10	CJ	33	GLN
10	CJ	57	LYS
10	CJ	59	SER
11	CK	49	GLY
11	CK	50	TYR
11	CK	88	GLY
12	CL	37	CYS
12	CL	38	THR
12	CL	45	PRO
12	CL	46	LYS
12	CL	121	GLY
13	CM	55	ARG
13	CM	70	LEU
13	CM	100	GLY
13	CM	114	ARG
14	CN	14	PRO
15	CO	14	GLU
15	CO	24	SER
15	CO	86	GLY
18	CR	38	GLU
18	CR	41	LYS
18	CR	68	LYS
19	CS	26	GLY
19	CS	46	GLY
19	CS	54	GLY
19	CS	80	TYR
20	CT	63	ILE
20	CT	74	LYS
20	CT	82	SER
20	CT	97	ALA
21	CU	3	LYS
21	CU	6	ARG
25	CY	23	ALA
25	CY	34	TYR
25	CY	85	PRO

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Mol	Chain	Res	Type
25	CY	92	ILE
25	CY	112	GLN
25	CY	192	LEU
25	CY	289	ILE
25	CY	297	GLU
25	CY	371	ALA
25	CY	401	SER
25	CY	479	PRO
25	CY	504	ARG
25	CY	530	VAL
25	CY	531	GLY
25	CY	532	GLY
25	CY	559	PRO
25	CY	662	LYS
25	CY	674	ASP
25	CY	680	PRO
26	D0	13	GLY
26	D0	75	LEU
27	D1	30	VAL
27	D1	53	VAL
27	D1	84	GLY
27	D1	85	LEU
27	D1	95	LEU
28	D2	58	ALA
29	D3	3	ARG
29	D3	13	ILE
29	D3	45	GLY
29	D3	52	HIS
30	D4	5	ILE
30	D4	20	ASN
30	D4	40	HIS
30	D4	48	ARG
30	D4	57	GLU
31	D5	58	LEU
31	D5	59	GLU
32	D6	7	ILE
32	D6	16	CYS
32	D6	28	ARG
32	D6	36	LEU
32	D6	52	VAL
34	D8	3	LYS
34	D8	34	TRP

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Mol	Chain	Res	Type
34	D8	40	GLU
38	DC	14	LYS
38	DC	17	PRO
38	DC	127	LYS
39	DD	3	VAL
39	DD	41	GLY
39	DD	70	TRP
39	DD	127	VAL
39	DD	225	ALA
39	DD	234	GLY
39	DD	236	GLY
39	DD	242	ARG
39	DD	246	PRO
39	DD	267	SER
39	DD	268	ARG
40	DE	46	ALA
40	DE	54	GLN
40	DE	64	LYS
40	DE	66	HIS
40	DE	69	LYS
40	DE	70	ALA
40	DE	72	VAL
40	DE	83	ASP
40	DE	88	GLY
40	DE	90	THR
40	DE	185	LYS
40	DE	186	GLY
41	DF	5	ALA
41	DF	10	PRO
41	DF	85	GLY
41	DF	90	PHE
41	DF	134	GLY
41	DF	206	ILE
41	DF	207	GLY
42	DG	4	ASP
42	DG	14	GLU
42	DG	76	SER
42	DG	81	LYS
43	DH	18	GLU
43	DH	45	VAL
43	DH	98	LEU
43	DH	154	PRO

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Mol	Chain	Res	Type
43	DH	169	VAL
43	DH	174	GLY
43	DH	176	ALA
45	DN	57	ALA
45	DN	81	GLY
46	DO	5	GLN
46	DO	13	ASN
46	DO	54	GLU
46	DO	68	GLU
46	DO	120	GLU
47	DP	19	VAL
47	DP	31	ALA
47	DP	48	PRO
47	DP	49	ARG
47	DP	70	GLN
47	DP	83	VAL
47	DP	123	LEU
48	DQ	137	TYR
48	DQ	139	GLU
49	DR	14	SER
49	DR	58	GLY
49	DR	88	ARG
50	DS	39	ILE
50	DS	85	VAL
50	DS	100	ALA
50	DS	103	GLU
50	DS	104	GLY
51	DT	15	VAL
51	DT	17	THR
51	DT	28	VAL
51	DT	41	ARG
51	DT	55	ASN
51	DT	92	GLY
51	DT	105	LEU
51	DT	133	GLU
53	DV	19	LYS
53	DV	22	VAL
53	DV	31	ALA
53	DV	54	GLY
53	DV	67	GLY
54	DW	6	ILE
54	DW	18	ARG

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Mol	Chain	Res	Type
54	DW	67	ASP
55	DX	12	VAL
55	DX	87	GLN
56	DY	3	VAL
56	DY	30	VAL
56	DY	37	VAL
56	DY	39	VAL
56	DY	41	GLY
56	DY	98	VAL
56	DY	101	LYS
56	DY	107	ASP
57	DZ	12	GLY
57	DZ	30	ASN
57	DZ	31	ARG
57	DZ	37	VAL
57	DZ	49	ARG
57	DZ	136	PHE
57	DZ	142	SER
57	DZ	181	GLU
57	DZ	185	GLU
2	AB	24	TRP
2	AB	63	MET
2	AB	64	ARG
2	AB	120	ALA
2	AB	131	PRO
2	AB	237	ALA
3	AC	4	LYS
3	AC	26	LYS
3	AC	129	ALA
3	AC	130	VAL
3	AC	135	LYS
3	AC	156	ARG
3	AC	160	ALA
4	AD	4	TYR
4	AD	47	ARG
5	AE	71	LEU
7	AG	80	VAL
7	AG	121	ALA
8	AH	2	LEU
9	AI	34	ASN
9	AI	94	ALA
10	AJ	61	GLU

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Mol	Chain	Res	Type
10	AJ	85	LEU
11	AK	45	GLY
11	AK	50	TYR
11	AK	57	THR
11	AK	62	GLN
12	AL	27	LEU
12	AL	45	PRO
12	AL	51	ALA
12	AL	81	SER
12	AL	89	ARG
12	AL	116	SER
13	AM	53	VAL
13	AM	116	THR
15	AO	77	ARG
15	AO	84	LYS
15	AO	86	GLY
17	AQ	25	ARG
17	AQ	66	SER
18	AR	38	GLU
18	AR	87	ARG
19	AS	14	HIS
19	AS	27	GLU
19	AS	81	ARG
20	AT	71	THR
20	AT	82	SER
20	AT	96	GLY
20	AT	98	PRO
21	AU	25	LYS
25	AY	6	GLU
25	AY	24	GLY
25	AY	99	ARG
25	AY	142	THR
25	AY	360	ALA
25	AY	471	LYS
25	AY	486	THR
25	AY	497	PHE
25	AY	559	PRO
25	AY	681	LYS
29	B3	52	HIS
30	B4	40	HIS
30	B4	46	GLN
32	B6	19	ARG

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Mol	Chain	Res	Type
32	B6	43	CYS
33	B7	17	GLY
34	B8	37	SER
34	B8	40	GLU
34	B8	64	TYR
35	B9	12	ASP
38	BC	17	PRO
38	BC	142	LYS
39	BD	12	SER
39	BD	19	ALA
39	BD	30	GLU
39	BD	129	ASN
39	BD	206	LEU
39	BD	223	GLY
39	BD	224	ALA
40	BE	86	PRO
40	BE	94	GLU
40	BE	118	LYS
40	BE	121	ASN
40	BE	130	GLY
40	BE	162	ALA
41	BF	3	GLU
41	BF	69	HIS
41	BF	84	VAL
41	BF	104	LYS
41	BF	168	ARG
41	BF	169	ASN
42	BG	10	LYS
42	BG	82	LEU
42	BG	97	ASP
43	BH	42	ARG
43	BH	47	GLU
43	BH	48	GLY
43	BH	69	ARG
43	BH	81	GLU
43	BH	171	LEU
45	BN	59	LYS
45	BN	125	GLY
46	BO	89	ASN
47	BP	23	PRO
47	BP	135	LEU
48	BQ	54	MET

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Mol	Chain	Res	Type
49	BR	12	ARG
50	BS	88	ASP
50	BS	96	GLY
50	BS	107	GLU
51	BT	11	GLU
51	BT	12	SER
51	BT	17	THR
51	BT	88	ILE
52	BU	83	LEU
53	BV	16	PRO
53	BV	55	ALA
54	BW	25	ARG
54	BW	60	ASN
54	BW	72	LYS
54	BW	93	ALA
54	BW	110	LYS
55	BX	19	ALA
55	BX	33	LYS
56	BY	81	LYS
56	BY	92	ASN
57	BZ	5	LEU
57	BZ	134	PRO
57	BZ	149	SER
57	BZ	158	PRO
2	CB	24	TRP
2	CB	63	MET
2	CB	64	ARG
2	CB	76	GLN
2	CB	120	ALA
2	CB	131	PRO
2	CB	190	THR
2	CB	207	ALA
2	CB	216	SER
2	CB	237	ALA
3	CC	4	LYS
3	CC	129	ALA
3	CC	130	VAL
3	CC	135	LYS
4	CD	4	TYR
4	CD	47	ARG
5	CE	71	LEU
7	CG	80	VAL

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Mol	Chain	Res	Type
7	CG	117	ALA
7	CG	121	ALA
8	CH	2	LEU
9	CI	34	ASN
9	CI	94	ALA
10	CJ	61	GLU
10	CJ	85	LEU
11	CK	45	GLY
11	CK	57	THR
11	CK	62	GLN
12	CL	23	LYS
12	CL	27	LEU
12	CL	51	ALA
12	CL	81	SER
12	CL	89	ARG
12	CL	116	SER
13	CM	53	VAL
13	CM	121	LYS
15	CO	77	ARG
15	CO	84	LYS
17	CQ	25	ARG
18	CR	69	THR
18	CR	87	ARG
19	CS	14	HIS
19	CS	27	GLU
19	CS	73	GLU
19	CS	81	ARG
20	CT	71	THR
20	CT	96	GLY
20	CT	98	PRO
21	CU	25	LYS
25	CY	66	THR
25	CY	84	THR
25	CY	91	THR
25	CY	127	LYS
25	CY	174	PHE
25	CY	380	LEU
25	CY	519	ARG
25	CY	554	PRO
25	CY	671	MET
26	D0	42	GLY
27	D1	24	ALA

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Mol	Chain	Res	Type
28	D2	20	GLU
28	D2	49	LYS
30	D4	46	GLN
32	D6	19	ARG
32	D6	43	CYS
34	D8	37	SER
34	D8	64	TYR
38	DC	142	LYS
39	DD	12	SER
39	DD	19	ALA
39	DD	129	ASN
39	DD	206	LEU
39	DD	224	ALA
40	DE	86	PRO
40	DE	118	LYS
40	DE	130	GLY
40	DE	162	ALA
41	DF	3	GLU
41	DF	69	HIS
41	DF	104	LYS
41	DF	168	ARG
41	DF	169	ASN
42	DG	47	LYS
43	DH	41	MET
43	DH	42	ARG
43	DH	47	GLU
43	DH	48	GLY
43	DH	81	GLU
43	DH	171	LEU
45	DN	59	LYS
45	DN	125	GLY
47	DP	17	LYS
47	DP	23	PRO
47	DP	98	GLU
47	DP	135	LEU
48	DQ	54	MET
49	DR	12	ARG
50	DS	24	LEU
50	DS	88	ASP
50	DS	107	GLU
51	DT	12	SER
51	DT	88	ILE

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Mol	Chain	Res	Type
52	DU	83	LEU
53	DV	16	PRO
53	DV	55	ALA
54	DW	25	ARG
54	DW	60	ASN
54	DW	72	LYS
54	DW	93	ALA
54	DW	110	LYS
55	DX	24	GLY
55	DX	33	LYS
56	DY	81	LYS
56	DY	92	ASN
57	DZ	17	ALA
57	DZ	18	LEU
57	DZ	108	PRO
2	AB	76	GLN
2	AB	130	ARG
2	AB	171	ALA
2	AB	207	ALA
2	AB	216	SER
3	AC	165	THR
4	AD	9	CYS
5	AE	77	PRO
7	AG	52	GLU
7	AG	117	ALA
9	AI	44	VAL
10	AJ	19	SER
11	AK	123	LYS
12	AL	23	LYS
12	AL	79	GLU
13	AM	106	ASN
13	AM	121	LYS
18	AR	31	LEU
18	AR	69	THR
20	AT	73	HIS
25	AY	34	TYR
25	AY	65	ILE
25	AY	120	THR
25	AY	371	ALA
25	AY	400	GLU
25	AY	645	ALA
25	AY	666	ARG

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Mol	Chain	Res	Type
25	AY	671	MET
26	B0	42	GLY
27	B1	52	ARG
27	B1	63	ALA
28	B2	21	LEU
32	B6	23	THR
34	B8	29	LYS
34	B8	57	ARG
35	B9	30	PRO
38	BC	38	PHE
38	BC	110	ASP
39	BD	28	GLU
39	BD	35	LYS
39	BD	196	VAL
39	BD	260	ARG
40	BE	2	LYS
40	BE	30	PRO
40	BE	53	PRO
40	BE	57	LYS
40	BE	98	PRO
40	BE	180	ASN
41	BF	67	GLN
42	BG	8	LYS
42	BG	43	LEU
42	BG	115	ARG
43	BH	85	LYS
43	BH	151	ILE
45	BN	40	PRO
45	BN	77	GLY
45	BN	127	ASP
45	BN	129	PRO
45	BN	136	GLU
47	BP	89	ALA
48	BQ	53	ALA
50	BS	24	LEU
50	BS	80	LEU
51	BT	57	PHE
52	BU	114	LYS
55	BX	11	PRO
55	BX	24	GLY
55	BX	42	ALA
56	BY	106	LEU

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Mol	Chain	Res	Type
57	BZ	31	ARG
57	BZ	62	PRO
57	BZ	85	HIS
2	CB	130	ARG
2	CB	171	ALA
3	CC	165	THR
5	CE	72	GLN
5	CE	77	PRO
7	CG	116	ALA
10	CJ	19	SER
11	CK	123	LYS
12	CL	72	GLY
12	CL	79	GLU
13	CM	106	ASN
13	CM	116	THR
14	CN	17	LYS
16	CP	54	GLU
17	CQ	66	SER
18	CR	31	LEU
19	CS	30	LEU
20	CT	73	HIS
25	CY	67	ALA
25	CY	87	HIS
25	CY	133	ILE
25	CY	288	PRO
25	CY	303	PRO
25	CY	399	LEU
27	D1	63	ALA
28	D2	18	PRO
28	D2	68	ARG
32	D6	23	THR
34	D8	29	LYS
35	D9	12	ASP
35	D9	30	PRO
39	DD	26	LYS
39	DD	28	GLU
39	DD	30	GLU
39	DD	35	LYS
39	DD	223	GLY
39	DD	260	ARG
40	DE	2	LYS
40	DE	30	PRO

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Mol	Chain	Res	Type
40	DE	53	PRO
40	DE	57	LYS
40	DE	94	GLU
40	DE	98	PRO
40	DE	121	ASN
40	DE	180	ASN
41	DF	67	GLN
41	DF	84	VAL
42	DG	12	TYR
42	DG	50	ALA
42	DG	181	ARG
43	DH	69	ARG
43	DH	85	LYS
43	DH	151	ILE
45	DN	40	PRO
45	DN	127	ASP
45	DN	129	PRO
45	DN	136	GLU
46	DO	89	ASN
47	DP	36	LYS
47	DP	89	ALA
50	DS	80	LEU
50	DS	96	GLY
51	DT	11	GLU
52	DU	27	LEU
52	DU	114	LYS
55	DX	11	PRO
55	DX	19	ALA
56	DY	106	LEU
57	DZ	53	ILE
57	DZ	81	ARG
57	DZ	95	PRO
2	AB	9	GLU
2	AB	152	PHE
4	AD	32	ALA
6	AF	36	ARG
7	AG	113	GLU
7	AG	116	ALA
8	AH	20	TYR
10	AJ	84	GLN
11	AK	95	ILE
12	AL	29	GLY

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Mol	Chain	Res	Type
12	AL	47	LYS
13	AM	4	ILE
14	AN	17	LYS
15	AO	76	GLU
16	AP	54	GLU
16	AP	76	GLN
19	AS	30	LEU
20	AT	61	SER
25	AY	163	VAL
25	AY	239	GLU
25	AY	257	PRO
25	AY	277	VAL
25	AY	406	GLU
25	AY	415	PRO
25	AY	483	TYR
25	AY	504	ARG
25	AY	598	ASP
27	B1	95	LEU
31	B5	54	GLY
34	B8	58	ILE
38	BC	12	LEU
39	BD	26	LYS
40	BE	17	ASP
40	BE	29	GLY
40	BE	55	ASN
40	BE	117	MET
41	BF	66	PRO
43	BH	84	SER
43	BH	126	PRO
43	BH	170	ARG
45	BN	51	PHE
45	BN	95	PRO
45	BN	135	PRO
47	BP	36	LYS
47	BP	71	VAL
50	BS	62	LYS
50	BS	90	GLY
50	BS	99	LYS
51	BT	81	PRO
52	BU	27	LEU
53	BV	78	LYS
54	BW	111	HIS

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Mol	Chain	Res	Type
56	BY	75	ILE
2	CB	9	GLU
3	CC	29	TYR
4	CD	9	CYS
6	CF	36	ARG
7	CG	52	GLU
9	CI	44	VAL
11	CK	95	ILE
12	CL	47	LYS
13	CM	4	ILE
13	CM	68	GLY
15	CO	76	GLU
16	CP	56	ALA
20	CT	61	SER
25	CY	172	ASP
25	CY	183	MET
25	CY	406	GLU
28	D2	14	ARG
28	D2	60	LEU
33	D7	17	GLY
34	D8	42	ARG
34	D8	57	ARG
34	D8	58	ILE
38	DC	38	PHE
38	DC	101	ILE
38	DC	110	ASP
39	DD	196	VAL
40	DE	17	ASP
40	DE	29	GLY
40	DE	55	ASN
40	DE	144	ARG
41	DF	66	PRO
42	DG	104	GLU
42	DG	110	ALA
42	DG	120	LEU
42	DG	146	TYR
43	DH	126	PRO
43	DH	170	ARG
45	DN	51	PHE
45	DN	135	PRO
47	DP	71	VAL
49	DR	42	LYS

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Mol	Chain	Res	Type
50	DS	62	LYS
50	DS	90	GLY
50	DS	99	LYS
51	DT	57	PHE
51	DT	81	PRO
52	DU	85	LYS
53	DV	78	LYS
54	DW	9	TYR
55	DX	42	ALA
55	DX	85	PRO
56	DY	75	ILE
57	DZ	134	PRO
3	AC	29	TYR
3	AC	73	PRO
3	AC	206	GLU
4	AD	7	PRO
4	AD	179	GLU
5	AE	138	ALA
5	AE	140	ARG
7	AG	62	PHE
13	AM	68	GLY
16	AP	56	ALA
19	AS	42	PRO
25	AY	171	GLU
25	AY	303	PRO
27	B1	27	GLU
27	B1	87	PRO
34	B8	42	ARG
38	BC	101	ILE
38	BC	120	VAL
39	BD	45	ASN
40	BE	34	VAL
40	BE	52	LEU
42	BG	50	ALA
42	BG	99	MET
43	BH	49	VAL
46	BO	98	VAL
47	BP	43	GLY
48	BQ	52	VAL
49	BR	42	LYS
55	BX	85	PRO
56	BY	59	GLY

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Mol	Chain	Res	Type
2	CB	152	PHE
10	CJ	84	GLN
12	CL	29	GLY
16	CP	76	GLN
19	CS	42	PRO
20	CT	95	ALA
25	CY	257	PRO
25	CY	470	PHE
25	CY	598	ASP
25	CY	628	ARG
38	DC	120	VAL
39	DD	32	SER
40	DE	34	VAL
40	DE	52	LEU
43	DH	84	SER
45	DN	77	GLY
45	DN	95	PRO
46	DO	98	VAL
47	DP	43	GLY
49	DR	102	GLU
55	DX	6	ASP
56	DY	59	GLY
57	DZ	14	LYS
57	DZ	154	ASP
57	DZ	158	PRO
57	DZ	165	VAL
57	DZ	166	SER
5	AE	154	GLY
19	AS	41	VAL
25	AY	196	ILE
25	AY	408	VAL
25	AY	520	GLY
25	AY	636	PRO
30	B4	19	GLY
30	B4	28	LYS
30	B4	29	PRO
34	B8	63	PRO
45	BN	5	VAL
49	BR	106	GLY
53	BV	50	PRO
55	BX	59	VAL
56	BY	31	LEU

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Mol	Chain	Res	Type
3	CC	73	PRO
4	CD	7	PRO
5	CE	154	GLY
19	CS	41	VAL
25	CY	160	ARG
30	D4	19	GLY
30	D4	28	LYS
30	D4	29	PRO
31	D5	54	GLY
34	D8	63	PRO
40	DE	134	ILE
42	DG	42	GLY
43	DH	49	VAL
45	DN	5	VAL
45	DN	44	PRO
48	DQ	52	VAL
49	DR	46	GLY
49	DR	106	GLY
50	DS	35	ILE
52	DU	26	GLY
56	DY	31	LEU
57	DZ	15	PRO
2	AB	232	PRO
3	AC	158	GLY
12	AL	72	GLY
12	AL	88	GLY
25	AY	305	PRO
25	AY	560	VAL
28	B2	41	ILE
39	BD	180	GLY
39	BD	228	PRO
40	BE	14	ILE
40	BE	134	ILE
43	BH	111	HIS
45	BN	11	PRO
45	BN	44	PRO
47	BP	109	GLY
49	BR	46	GLY
50	BS	35	ILE
52	BU	26	GLY
57	BZ	83	PRO
2	CB	232	PRO

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Mol	Chain	Res	Type
12	CL	88	GLY
25	CY	277	VAL
25	CY	408	VAL
27	D1	22	GLY
39	DD	180	GLY
39	DD	228	PRO
40	DE	61	ARG
41	DF	82	ILE
42	DG	140	ILE
45	DN	11	PRO
45	DN	60	ILE
47	DP	109	GLY
53	DV	50	PRO
55	DX	59	VAL
2	AB	26	PRO
40	BE	61	ARG
40	BE	75	VAL
40	BE	197	ILE
43	BH	142	GLY
56	BY	66	PRO
57	BZ	133	ILE
57	BZ	165	VAL
40	DE	14	ILE
40	DE	75	VAL
42	DG	101	ILE
43	DH	111	HIS
47	DP	69	GLY
50	DS	22	GLY
3	AC	55	VAL
19	AS	9	VAL
39	BD	244	ARG
41	BF	64	ILE
42	BG	129	GLY
43	BH	14	GLY
45	BN	60	ILE
47	BP	69	GLY
50	BS	22	GLY
52	BU	90	VAL
56	BY	53	PRO
2	CB	26	PRO
3	CC	55	VAL
3	CC	158	GLY

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Mol	Chain	Res	Type
8	CH	57	PRO
15	CO	87	ILE
25	CY	405	PRO
38	DC	122	GLY
39	DD	244	ARG
43	DH	14	GLY
43	DH	142	GLY
52	DU	90	VAL
56	DY	27	VAL
56	DY	53	PRO
56	DY	66	PRO
57	DZ	42	VAL
57	DZ	120	ILE
15	AO	87	ILE
18	AR	37	VAL
43	BH	24	VAL
47	BP	11	GLY
47	BP	146	VAL
50	BS	14	VAL
56	BY	27	VAL
18	CR	37	VAL
19	CS	9	VAL
38	DC	139	PRO
40	DE	56	PRO
40	DE	190	GLY
41	DF	64	ILE
47	DP	11	GLY
39	BD	245	PRO
39	DD	245	PRO

5.3.2 Protein sidechains ⓘ

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%)	182 (90%)	20 (10%)	6	27
2	CB	202/220 (92%)	183 (91%)	19 (9%)	7	29

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	AC	160/188 (85%)	137 (86%)	23 (14%)	2	16
3	CC	160/188 (85%)	137 (86%)	23 (14%)	2	16
4	AD	180/181 (99%)	158 (88%)	22 (12%)	4	20
4	CD	180/181 (99%)	158 (88%)	22 (12%)	4	20
5	AE	115/123 (94%)	103 (90%)	12 (10%)	5	25
5	CE	115/123 (94%)	103 (90%)	12 (10%)	5	25
6	AF	90/90 (100%)	84 (93%)	6 (7%)	13	40
6	CF	90/90 (100%)	85 (94%)	5 (6%)	17	45
7	AG	126/127 (99%)	114 (90%)	12 (10%)	7	29
7	CG	126/127 (99%)	114 (90%)	12 (10%)	7	29
8	AH	119/119 (100%)	107 (90%)	12 (10%)	6	26
8	CH	119/119 (100%)	108 (91%)	11 (9%)	7	30
9	AI	98/99 (99%)	91 (93%)	7 (7%)	12	39
9	CI	98/99 (99%)	91 (93%)	7 (7%)	12	39
10	AJ	88/92 (96%)	75 (85%)	13 (15%)	2	15
10	CJ	88/92 (96%)	74 (84%)	14 (16%)	2	13
11	AK	90/99 (91%)	84 (93%)	6 (7%)	13	40
11	CK	90/99 (91%)	84 (93%)	6 (7%)	13	40
12	AL	104/109 (95%)	94 (90%)	10 (10%)	7	28
12	CL	104/109 (95%)	94 (90%)	10 (10%)	7	28
13	AM	99/101 (98%)	90 (91%)	9 (9%)	7	30
13	CM	99/101 (98%)	90 (91%)	9 (9%)	7	30
14	AN	49/50 (98%)	45 (92%)	4 (8%)	9	34
14	CN	49/50 (98%)	45 (92%)	4 (8%)	9	34
15	AO	79/80 (99%)	74 (94%)	5 (6%)	15	42
15	CO	79/80 (99%)	74 (94%)	5 (6%)	15	42
16	AP	72/74 (97%)	68 (94%)	4 (6%)	17	45
16	CP	72/74 (97%)	68 (94%)	4 (6%)	17	45
17	AQ	94/97 (97%)	88 (94%)	6 (6%)	14	42
17	CQ	94/97 (97%)	87 (93%)	7 (7%)	11	37
18	AR	61/77 (79%)	59 (97%)	2 (3%)	33	57

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	CR	61/77 (79%)	59 (97%)	2 (3%)	33	57
19	AS	69/80 (86%)	60 (87%)	9 (13%)	3	19
19	CS	69/80 (86%)	60 (87%)	9 (13%)	3	19
20	AT	76/82 (93%)	67 (88%)	9 (12%)	4	21
20	CT	76/82 (93%)	67 (88%)	9 (12%)	4	21
21	AU	19/22 (86%)	18 (95%)	1 (5%)	19	46
21	CU	19/22 (86%)	18 (95%)	1 (5%)	19	46
25	AY	563/582 (97%)	486 (86%)	77 (14%)	3	17
25	CY	563/582 (97%)	494 (88%)	69 (12%)	4	20
26	B0	66/67 (98%)	59 (89%)	7 (11%)	5	25
26	D0	66/67 (98%)	59 (89%)	7 (11%)	5	25
27	B1	78/83 (94%)	68 (87%)	10 (13%)	3	19
27	D1	78/83 (94%)	73 (94%)	5 (6%)	14	42
28	B2	66/67 (98%)	59 (89%)	7 (11%)	5	25
28	D2	66/67 (98%)	59 (89%)	7 (11%)	5	25
29	B3	51/52 (98%)	47 (92%)	4 (8%)	10	36
29	D3	51/52 (98%)	47 (92%)	4 (8%)	10	36
30	B4	51/63 (81%)	38 (74%)	13 (26%)	0	4
30	D4	51/63 (81%)	38 (74%)	13 (26%)	0	4
31	B5	51/52 (98%)	48 (94%)	3 (6%)	16	44
31	D5	51/52 (98%)	48 (94%)	3 (6%)	16	44
32	B6	49/52 (94%)	37 (76%)	12 (24%)	0	4
32	D6	49/52 (94%)	37 (76%)	12 (24%)	0	4
33	B7	41/42 (98%)	38 (93%)	3 (7%)	11	38
33	D7	41/42 (98%)	38 (93%)	3 (7%)	11	38
34	B8	53/55 (96%)	46 (87%)	7 (13%)	3	18
34	D8	53/55 (96%)	46 (87%)	7 (13%)	3	18
35	B9	34/34 (100%)	31 (91%)	3 (9%)	8	32
35	D9	34/34 (100%)	31 (91%)	3 (9%)	8	32
38	BC	180/181 (99%)	169 (94%)	11 (6%)	15	43
38	DC	180/181 (99%)	167 (93%)	13 (7%)	12	38

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	BD	217/218 (100%)	176 (81%)	41 (19%)	1	8
39	DD	217/218 (100%)	176 (81%)	41 (19%)	1	8
40	BE	165/166 (99%)	136 (82%)	29 (18%)	1	10
40	DE	165/166 (99%)	136 (82%)	29 (18%)	1	10
41	BF	165/166 (99%)	153 (93%)	12 (7%)	11	38
41	DF	165/166 (99%)	153 (93%)	12 (7%)	11	38
42	BG	155/156 (99%)	131 (84%)	24 (16%)	2	14
42	DG	155/156 (99%)	128 (83%)	27 (17%)	1	10
43	BH	136/148 (92%)	122 (90%)	14 (10%)	6	25
43	DH	136/148 (92%)	122 (90%)	14 (10%)	6	25
45	BN	117/119 (98%)	104 (89%)	13 (11%)	5	24
45	DN	117/119 (98%)	104 (89%)	13 (11%)	5	24
46	BO	100/100 (100%)	90 (90%)	10 (10%)	6	26
46	DO	100/100 (100%)	89 (89%)	11 (11%)	5	24
47	BP	112/116 (97%)	94 (84%)	18 (16%)	2	13
47	DP	112/116 (97%)	95 (85%)	17 (15%)	2	14
48	BQ	111/111 (100%)	99 (89%)	12 (11%)	5	24
48	DQ	111/111 (100%)	99 (89%)	12 (11%)	5	24
49	BR	100/101 (99%)	88 (88%)	12 (12%)	4	20
49	DR	100/101 (99%)	88 (88%)	12 (12%)	4	20
50	BS	77/88 (88%)	69 (90%)	8 (10%)	5	25
50	DS	77/88 (88%)	69 (90%)	8 (10%)	5	25
51	BT	120/127 (94%)	93 (78%)	27 (22%)	1	5
51	DT	120/127 (94%)	93 (78%)	27 (22%)	1	5
52	BU	92/94 (98%)	81 (88%)	11 (12%)	4	20
52	DU	92/94 (98%)	81 (88%)	11 (12%)	4	20
53	BV	82/82 (100%)	71 (87%)	11 (13%)	3	18
53	DV	82/82 (100%)	71 (87%)	11 (13%)	3	18
54	BW	91/92 (99%)	83 (91%)	8 (9%)	8	32
54	DW	91/92 (99%)	83 (91%)	8 (9%)	8	32
55	BX	74/78 (95%)	64 (86%)	10 (14%)	3	18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
55	DX	74/78 (95%)	64 (86%)	10 (14%)	3	18
56	BY	87/91 (96%)	74 (85%)	13 (15%)	2	15
56	DY	87/91 (96%)	74 (85%)	13 (15%)	2	15
57	BZ	162/179 (90%)	140 (86%)	22 (14%)	3	18
57	DZ	162/179 (90%)	147 (91%)	15 (9%)	7	30
All	All	10872/11344 (96%)	9600 (88%)	1272 (12%)	4	22

All (1272) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	16	HIS
2	AB	17	PHE
2	AB	36	ARG
2	AB	43	ASP
2	AB	67	THR
2	AB	69	LEU
2	AB	79	ASP
2	AB	94	ASN
2	AB	101	MET
2	AB	129	GLU
2	AB	146	GLN
2	AB	155	LEU
2	AB	162	ILE
2	AB	172	ILE
2	AB	178	ARG
2	AB	179	LYS
2	AB	200	ILE
2	AB	204	ASN
2	AB	221	LEU
3	AC	5	ILE
3	AC	14	ILE
3	AC	16	ARG
3	AC	34	LEU
3	AC	46	GLU
3	AC	52	LEU
3	AC	54	ARG
3	AC	56	ASP
3	AC	67	THR
3	AC	72	LYS

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Mol	Chain	Res	Type
3	AC	79	ARG
3	AC	90	GLU
3	AC	95	THR
3	AC	98	ASN
3	AC	119	ARG
3	AC	120	VAL
3	AC	131	ARG
3	AC	152	ILE
3	AC	167	TRP
3	AC	178	LEU
3	AC	179	ARG
3	AC	188	LEU
3	AC	190	ARG
4	AD	3	ARG
4	AD	9	CYS
4	AD	12	CYS
4	AD	15	GLU
4	AD	22	LYS
4	AD	33	MET
4	AD	36	ARG
4	AD	39	PRO
4	AD	49	ARG
4	AD	58	LEU
4	AD	70	ILE
4	AD	73	ARG
4	AD	78	LEU
4	AD	86	LYS
4	AD	96	LEU
4	AD	108	LEU
4	AD	127	THR
4	AD	129	ASN
4	AD	135	LEU
4	AD	146	ILE
4	AD	162	LEU
4	AD	168	ARG
5	AE	12	LEU
5	AE	20	GLN
5	AE	41	VAL
5	AE	53	LEU
5	AE	68	GLU
5	AE	72	GLN
5	AE	76	ILE

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Mol	Chain	Res	Type
5	AE	79	GLU
5	AE	101	ILE
5	AE	117	ASP
5	AE	125	SER
5	AE	144	THR
6	AF	32	ASN
6	AF	43	LEU
6	AF	47	ARG
6	AF	64	GLN
6	AF	83	ASP
6	AF	98	LEU
7	AG	24	THR
7	AG	27	ILE
7	AG	30	ILE
7	AG	57	GLU
7	AG	66	VAL
7	AG	79	ARG
7	AG	104	LEU
7	AG	111	ARG
7	AG	113	GLU
7	AG	137	LYS
7	AG	151	TYR
7	AG	156	TRP
8	AH	1	MET
8	AH	11	THR
8	AH	26	VAL
8	AH	41	ARG
8	AH	50	ARG
8	AH	83	ILE
8	AH	91	ARG
8	AH	93	VAL
8	AH	109	ILE
8	AH	118	VAL
8	AH	129	VAL
8	AH	133	LEU
9	AI	10	ARG
9	AI	41	VAL
9	AI	47	LEU
9	AI	95	LYS
9	AI	99	LEU
9	AI	114	TYR
9	AI	128	ARG

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Mol	Chain	Res	Type
10	AJ	22	LYS
10	AJ	40	LEU
10	AJ	45	ARG
10	AJ	50	ILE
10	AJ	55	LYS
10	AJ	62	HIS
10	AJ	63	PHE
10	AJ	70	ARG
10	AJ	74	ILE
10	AJ	76	ASN
10	AJ	80	LYS
10	AJ	92	THR
10	AJ	96	ILE
11	AK	29	ILE
11	AK	63	LEU
11	AK	87	THR
11	AK	92	GLU
11	AK	108	ILE
11	AK	124	LYS
12	AL	7	ILE
12	AL	27	LEU
12	AL	37	CYS
12	AL	41	ARG
12	AL	44	THR
12	AL	47	LYS
12	AL	57	LYS
12	AL	70	ILE
12	AL	85	ILE
12	AL	91	LYS
13	AM	64	TRP
13	AM	66	LEU
13	AM	70	LEU
13	AM	108	ARG
13	AM	113	PRO
13	AM	115	LYS
13	AM	121	LYS
13	AM	122	LYS
13	AM	124	PRO
14	AN	14	PRO
14	AN	16	PHE
14	AN	29	ARG
14	AN	41	ARG

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Mol	Chain	Res	Type
15	AO	10	LYS
15	AO	31	LEU
15	AO	39	LEU
15	AO	57	LEU
15	AO	82	ILE
16	AP	1	MET
16	AP	2	VAL
16	AP	21	VAL
16	AP	72	ARG
17	AQ	7	THR
17	AQ	23	VAL
17	AQ	35	VAL
17	AQ	38	ARG
17	AQ	48	GLU
17	AQ	52	LYS
18	AR	29	PHE
18	AR	31	LEU
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	11	VAL
19	AS	15	LEU
19	AS	29	ARG
19	AS	37	ARG
19	AS	66	MET
19	AS	71	LEU
20	AT	13	LEU
20	AT	24	LEU
20	AT	26	ASN
20	AT	36	LEU
20	AT	42	GLN
20	AT	73	HIS
20	AT	74	LYS
20	AT	84	LEU
20	AT	93	GLU
21	AU	10	ARG
25	AY	12	LEU
25	AY	17	ILE
25	AY	21	ILE
25	AY	27	THR
25	AY	28	THR
25	AY	40	HIS

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Mol	Chain	Res	Type
25	AY	65	ILE
25	AY	85	PRO
25	AY	88	VAL
25	AY	92	ILE
25	AY	100	VAL
25	AY	102	ASP
25	AY	105	ILE
25	AY	109	ASP
25	AY	119	GLU
25	AY	122	TRP
25	AY	124	GLN
25	AY	130	VAL
25	AY	132	ARG
25	AY	137	ASN
25	AY	157	LEU
25	AY	165	GLN
25	AY	173	THR
25	AY	177	ILE
25	AY	201	ILE
25	AY	204	GLU
25	AY	214	GLU
25	AY	216	LEU
25	AY	230	LYS
25	AY	240	GLU
25	AY	242	LEU
25	AY	252	ASP
25	AY	255	ILE
25	AY	260	LEU
25	AY	277	VAL
25	AY	285	ASP
25	AY	288	PRO
25	AY	326	THR
25	AY	328	ILE
25	AY	330	VAL
25	AY	336	THR
25	AY	349	LYS
25	AY	356	LEU
25	AY	367	GLU
25	AY	374	LEU
25	AY	377	VAL
25	AY	381	LYS
25	AY	421	GLN

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Mol	Chain	Res	Type
25	AY	426	GLN
25	AY	428	LEU
25	AY	438	PHE
25	AY	440	VAL
25	AY	456	GLU
25	AY	468	ARG
25	AY	481	VAL
25	AY	487	ILE
25	AY	499	ARG
25	AY	501	THR
25	AY	504	ARG
25	AY	506	GLN
25	AY	512	ILE
25	AY	533	VAL
25	AY	535	PRO
25	AY	567	LEU
25	AY	574	GLU
25	AY	579	GLU
25	AY	580	MET
25	AY	595	GLN
25	AY	605	ILE
25	AY	610	VAL
25	AY	614	GLU
25	AY	624	LEU
25	AY	630	GLN
25	AY	631	ILE
25	AY	647	VAL
25	AY	657	THR
25	AY	684	GLN
26	B0	5	LYS
26	B0	20	ARG
26	B0	27	GLU
26	B0	41	ARG
26	B0	49	LYS
26	B0	75	LEU
26	B0	84	LEU
27	B1	3	LYS
27	B1	18	ILE
27	B1	35	THR
27	B1	46	LEU
27	B1	56	GLN
27	B1	69	LYS

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Mol	Chain	Res	Type
27	B1	72	GLU
27	B1	73	LEU
27	B1	82	LEU
27	B1	83	GLU
28	B2	3	LEU
28	B2	30	ARG
28	B2	31	GLU
28	B2	32	LEU
28	B2	44	LEU
28	B2	59	ARG
28	B2	64	LEU
29	B3	28	LEU
29	B3	29	ARG
29	B3	38	GLU
29	B3	48	GLU
30	B4	1	MET
30	B4	5	ILE
30	B4	9	LEU
30	B4	28	LYS
30	B4	29	PRO
30	B4	30	GLU
30	B4	32	TYR
30	B4	40	HIS
30	B4	42	PHE
30	B4	43	TYR
30	B4	48	ARG
30	B4	49	PHE
30	B4	55	ARG
31	B5	4	HIS
31	B5	55	ARG
31	B5	58	LEU
32	B6	9	LEU
32	B6	10	LEU
32	B6	11	LEU
32	B6	15	GLU
32	B6	18	ARG
32	B6	23	THR
32	B6	27	LYS
32	B6	30	THR
32	B6	31	PRO
32	B6	38	LYS
32	B6	39	TYR

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Mol	Chain	Res	Type
32	B6	42	TRP
33	B7	1	MET
33	B7	4	THR
33	B7	41	ARG
34	B8	31	HIS
34	B8	32	LEU
34	B8	33	ASN
34	B8	34	TRP
34	B8	40	GLU
34	B8	49	VAL
34	B8	61	LEU
35	B9	1	MET
35	B9	7	VAL
35	B9	29	ASN
38	BC	31	LYS
38	BC	43	GLU
38	BC	56	ASP
38	BC	58	ASN
38	BC	64	SER
38	BC	74	ARG
38	BC	128	LEU
38	BC	149	ASN
38	BC	184	GLU
38	BC	185	LYS
38	BC	211	ARG
39	BD	10	THR
39	BD	23	GLU
39	BD	24	ILE
39	BD	26	LYS
39	BD	35	LYS
39	BD	37	LEU
39	BD	43	ARG
39	BD	61	LEU
39	BD	65	ILE
39	BD	67	PHE
39	BD	84	TYR
39	BD	87	ASN
39	BD	92	ILE
39	BD	94	LEU
39	BD	95	LEU
39	BD	104	TYR
39	BD	106	ILE

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Mol	Chain	Res	Type
39	BD	117	VAL
39	BD	131	LEU
39	BD	138	VAL
39	BD	157	ARG
39	BD	166	GLN
39	BD	169	GLU
39	BD	173	VAL
39	BD	177	LEU
39	BD	183	ARG
39	BD	189	CYS
39	BD	192	THR
39	BD	200	ASP
39	BD	205	VAL
39	BD	211	ARG
39	BD	221	VAL
39	BD	226	MET
39	BD	227	ASN
39	BD	228	PRO
39	BD	244	ARG
39	BD	246	PRO
39	BD	257	LEU
39	BD	260	ARG
39	BD	270	ILE
39	BD	275	LYS
40	BE	4	ILE
40	BE	9	VAL
40	BE	14	ILE
40	BE	26	ILE
40	BE	36	ARG
40	BE	40	GLU
40	BE	49	LEU
40	BE	54	GLN
40	BE	55	ASN
40	BE	61	ARG
40	BE	67	PHE
40	BE	69	LYS
40	BE	76	ARG
40	BE	78	LEU
40	BE	94	GLU
40	BE	95	ILE
40	BE	111	ARG
40	BE	118	LYS

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Mol	Chain	Res	Type
40	BE	119	ARG
40	BE	121	ASN
40	BE	134	ILE
40	BE	143	ASN
40	BE	178	GLU
40	BE	179	GLU
40	BE	188	VAL
40	BE	197	ILE
40	BE	200	GLU
40	BE	202	LYS
40	BE	203	LYS
41	BF	19	GLU
41	BF	28	ILE
41	BF	41	LEU
41	BF	62	ARG
41	BF	64	ILE
41	BF	66	PRO
41	BF	83	PHE
41	BF	125	LEU
41	BF	149	ASP
41	BF	165	ARG
41	BF	175	THR
41	BF	179	GLU
42	BG	4	ASP
42	BG	5	VAL
42	BG	16	ARG
42	BG	33	ARG
42	BG	34	LEU
42	BG	36	LYS
42	BG	45	GLU
42	BG	47	LYS
42	BG	60	LEU
42	BG	71	THR
42	BG	77	ILE
42	BG	80	PHE
42	BG	82	LEU
42	BG	83	ARG
42	BG	87	PRO
42	BG	88	ILE
42	BG	92	VAL
42	BG	139	LEU
42	BG	147	ASP

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Mol	Chain	Res	Type
42	BG	148	MET
42	BG	149	VAL
42	BG	152	LEU
42	BG	156	ASP
42	BG	166	ASP
43	BH	45	VAL
43	BH	46	GLU
43	BH	49	VAL
43	BH	53	GLU
43	BH	54	ARG
43	BH	71	LEU
43	BH	83	TYR
43	BH	89	ILE
43	BH	104	GLU
43	BH	111	HIS
43	BH	136	ILE
43	BH	143	GLN
43	BH	158	HIS
43	BH	163	TYR
45	BN	1	MET
45	BN	4	TYR
45	BN	25	ARG
45	BN	26	LEU
45	BN	39	ARG
45	BN	41	ASP
45	BN	45	ASN
45	BN	48	MET
45	BN	63	THR
45	BN	65	LYS
45	BN	96	GLU
45	BN	101	HIS
45	BN	109	LYS
46	BO	14	THR
46	BO	23	ARG
46	BO	24	VAL
46	BO	38	VAL
46	BO	40	VAL
46	BO	48	PRO
46	BO	49	ARG
46	BO	52	VAL
46	BO	87	ILE
46	BO	114	ILE

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Mol	Chain	Res	Type
47	BP	7	ARG
47	BP	13	ASN
47	BP	16	ARG
47	BP	18	ARG
47	BP	39	LYS
47	BP	41	ARG
47	BP	42	SER
47	BP	57	THR
47	BP	61	ARG
47	BP	62	LEU
47	BP	70	GLN
47	BP	81	GLN
47	BP	85	LEU
47	BP	91	PHE
47	BP	92	GLU
47	BP	112	LEU
47	BP	114	ILE
47	BP	149	GLU
48	BQ	14	ARG
48	BQ	17	LEU
48	BQ	45	GLN
48	BQ	46	GLN
48	BQ	55	VAL
48	BQ	56	ARG
48	BQ	67	ARG
48	BQ	76	LYS
48	BQ	79	LEU
48	BQ	81	VAL
48	BQ	134	ARG
48	BQ	135	ASP
49	BR	18	LEU
49	BR	27	SER
49	BR	30	THR
49	BR	33	ARG
49	BR	54	LEU
49	BR	65	LEU
49	BR	74	LYS
49	BR	75	LEU
49	BR	94	TYR
49	BR	97	VAL
49	BR	99	LYS
49	BR	100	LEU

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Mol	Chain	Res	Type
50	BS	11	LYS
50	BS	12	PHE
50	BS	15	ARG
50	BS	35	ILE
50	BS	36	TYR
50	BS	97	ARG
50	BS	103	GLU
50	BS	106	ARG
51	BT	6	LEU
51	BT	13	ARG
51	BT	16	ARG
51	BT	17	THR
51	BT	24	PRO
51	BT	32	TYR
51	BT	38	ASN
51	BT	46	GLU
51	BT	49	VAL
51	BT	53	ARG
51	BT	58	ASN
51	BT	65	LYS
51	BT	66	VAL
51	BT	74	ARG
51	BT	75	ILE
51	BT	78	LEU
51	BT	82	LEU
51	BT	85	LYS
51	BT	90	GLN
51	BT	99	LEU
51	BT	108	ARG
51	BT	111	ARG
51	BT	115	ARG
51	BT	124	ASP
51	BT	125	ARG
51	BT	129	ARG
51	BT	132	LYS
52	BU	8	VAL
52	BU	20	LEU
52	BU	34	LYS
52	BU	38	THR
52	BU	54	LYS
52	BU	60	LEU
52	BU	74	LEU

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Mol	Chain	Res	Type
52	BU	92	ARG
52	BU	101	ARG
52	BU	102	GLU
52	BU	108	GLU
53	BV	1	MET
53	BV	18	LEU
53	BV	19	LYS
53	BV	21	ARG
53	BV	39	LEU
53	BV	46	VAL
53	BV	51	VAL
53	BV	61	VAL
53	BV	89	GLN
53	BV	95	LEU
53	BV	99	ILE
54	BW	11	ARG
54	BW	19	LEU
54	BW	39	THR
54	BW	40	ASN
54	BW	52	GLU
54	BW	82	LEU
54	BW	88	ARG
54	BW	107	LEU
55	BX	3	THR
55	BX	8	ILE
55	BX	11	PRO
55	BX	28	PHE
55	BX	37	THR
55	BX	51	VAL
55	BX	56	THR
55	BX	57	LEU
55	BX	68	ARG
55	BX	83	VAL
56	BY	2	ARG
56	BY	7	VAL
56	BY	9	LYS
56	BY	32	PRO
56	BY	51	VAL
56	BY	53	PRO
56	BY	54	LYS
56	BY	55	TYR
56	BY	66	PRO

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Mol	Chain	Res	Type
56	BY	77	PRO
56	BY	83	THR
56	BY	90	LEU
56	BY	102	CYS
57	BZ	5	LEU
57	BZ	6	LYS
57	BZ	28	MET
57	BZ	41	LEU
57	BZ	55	HIS
57	BZ	67	LEU
57	BZ	83	PRO
57	BZ	92	SER
57	BZ	94	GLU
57	BZ	103	ARG
57	BZ	107	THR
57	BZ	118	GLN
57	BZ	123	ASP
57	BZ	127	LYS
57	BZ	140	ASP
57	BZ	146	ILE
57	BZ	150	LEU
57	BZ	154	ASP
57	BZ	158	PRO
57	BZ	171	ILE
57	BZ	179	ASP
57	BZ	186	GLU
2	CB	15	VAL
2	CB	16	HIS
2	CB	17	PHE
2	CB	36	ARG
2	CB	43	ASP
2	CB	67	THR
2	CB	69	LEU
2	CB	79	ASP
2	CB	94	ASN
2	CB	101	MET
2	CB	129	GLU
2	CB	146	GLN
2	CB	162	ILE
2	CB	172	ILE
2	CB	178	ARG
2	CB	179	LYS

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Mol	Chain	Res	Type
2	CB	200	ILE
2	CB	204	ASN
2	CB	221	LEU
3	CC	5	ILE
3	CC	14	ILE
3	CC	16	ARG
3	CC	34	LEU
3	CC	46	GLU
3	CC	52	LEU
3	CC	54	ARG
3	CC	56	ASP
3	CC	67	THR
3	CC	72	LYS
3	CC	79	ARG
3	CC	90	GLU
3	CC	95	THR
3	CC	98	ASN
3	CC	119	ARG
3	CC	120	VAL
3	CC	131	ARG
3	CC	152	ILE
3	CC	167	TRP
3	CC	178	LEU
3	CC	179	ARG
3	CC	188	LEU
3	CC	190	ARG
4	CD	3	ARG
4	CD	9	CYS
4	CD	12	CYS
4	CD	15	GLU
4	CD	22	LYS
4	CD	33	MET
4	CD	36	ARG
4	CD	39	PRO
4	CD	49	ARG
4	CD	58	LEU
4	CD	70	ILE
4	CD	73	ARG
4	CD	78	LEU
4	CD	86	LYS
4	CD	96	LEU
4	CD	108	LEU

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Mol	Chain	Res	Type
4	CD	127	THR
4	CD	129	ASN
4	CD	135	LEU
4	CD	146	ILE
4	CD	162	LEU
4	CD	168	ARG
5	CE	12	LEU
5	CE	20	GLN
5	CE	41	VAL
5	CE	53	LEU
5	CE	68	GLU
5	CE	72	GLN
5	CE	76	ILE
5	CE	79	GLU
5	CE	101	ILE
5	CE	117	ASP
5	CE	125	SER
5	CE	144	THR
6	CF	32	ASN
6	CF	47	ARG
6	CF	64	GLN
6	CF	83	ASP
6	CF	98	LEU
7	CG	24	THR
7	CG	27	ILE
7	CG	30	ILE
7	CG	57	GLU
7	CG	66	VAL
7	CG	79	ARG
7	CG	104	LEU
7	CG	111	ARG
7	CG	113	GLU
7	CG	137	LYS
7	CG	151	TYR
7	CG	156	TRP
8	CH	1	MET
8	CH	26	VAL
8	CH	41	ARG
8	CH	50	ARG
8	CH	83	ILE
8	CH	91	ARG
8	CH	93	VAL

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Mol	Chain	Res	Type
8	CH	109	ILE
8	CH	118	VAL
8	CH	129	VAL
8	CH	133	LEU
9	CI	10	ARG
9	CI	41	VAL
9	CI	47	LEU
9	CI	95	LYS
9	CI	99	LEU
9	CI	114	TYR
9	CI	128	ARG
10	CJ	4	ILE
10	CJ	22	LYS
10	CJ	40	LEU
10	CJ	45	ARG
10	CJ	50	ILE
10	CJ	55	LYS
10	CJ	62	HIS
10	CJ	63	PHE
10	CJ	70	ARG
10	CJ	74	ILE
10	CJ	76	ASN
10	CJ	80	LYS
10	CJ	92	THR
10	CJ	96	ILE
11	CK	29	ILE
11	CK	63	LEU
11	CK	87	THR
11	CK	92	GLU
11	CK	108	ILE
11	CK	124	LYS
12	CL	7	ILE
12	CL	27	LEU
12	CL	37	CYS
12	CL	41	ARG
12	CL	44	THR
12	CL	47	LYS
12	CL	57	LYS
12	CL	70	ILE
12	CL	85	ILE
12	CL	91	LYS
13	CM	64	TRP

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Mol	Chain	Res	Type
13	CM	66	LEU
13	CM	70	LEU
13	CM	108	ARG
13	CM	113	PRO
13	CM	115	LYS
13	CM	121	LYS
13	CM	122	LYS
13	CM	124	PRO
14	CN	14	PRO
14	CN	16	PHE
14	CN	29	ARG
14	CN	41	ARG
15	CO	10	LYS
15	CO	31	LEU
15	CO	39	LEU
15	CO	57	LEU
15	CO	82	ILE
16	CP	1	MET
16	CP	2	VAL
16	CP	21	VAL
16	CP	72	ARG
17	CQ	7	THR
17	CQ	23	VAL
17	CQ	35	VAL
17	CQ	38	ARG
17	CQ	48	GLU
17	CQ	52	LYS
17	CQ	87	LYS
18	CR	29	PHE
18	CR	31	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	11	VAL
19	CS	15	LEU
19	CS	29	ARG
19	CS	37	ARG
19	CS	66	MET
19	CS	71	LEU
20	CT	13	LEU
20	CT	24	LEU
20	CT	26	ASN

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Mol	Chain	Res	Type
20	CT	36	LEU
20	CT	42	GLN
20	CT	73	HIS
20	CT	74	LYS
20	CT	84	LEU
20	CT	93	GLU
21	CU	10	ARG
25	CY	13	ARG
25	CY	14	ASN
25	CY	21	ILE
25	CY	22	ASP
25	CY	65	ILE
25	CY	79	ILE
25	CY	81	ILE
25	CY	84	THR
25	CY	88	VAL
25	CY	92	ILE
25	CY	100	VAL
25	CY	102	ASP
25	CY	117	GLN
25	CY	123	ARG
25	CY	128	TYR
25	CY	130	VAL
25	CY	132	ARG
25	CY	137	ASN
25	CY	146	LEU
25	CY	153	MET
25	CY	157	LEU
25	CY	178	ILE
25	CY	192	LEU
25	CY	203	GLU
25	CY	218	GLU
25	CY	225	GLU
25	CY	230	LYS
25	CY	232	LEU
25	CY	260	LEU
25	CY	273	LEU
25	CY	277	VAL
25	CY	278	ASP
25	CY	299	VAL
25	CY	304	ASP
25	CY	312	LEU

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Mol	Chain	Res	Type
25	CY	316	ILE
25	CY	336	THR
25	CY	340	TYR
25	CY	357	ARG
25	CY	377	VAL
25	CY	381	LYS
25	CY	388	THR
25	CY	403	GLU
25	CY	421	GLN
25	CY	428	LEU
25	CY	438	PHE
25	CY	460	GLU
25	CY	476	VAL
25	CY	487	ILE
25	CY	488	THR
25	CY	492	ASP
25	CY	512	ILE
25	CY	533	VAL
25	CY	536	LYS
25	CY	548	GLU
25	CY	575	VAL
25	CY	579	GLU
25	CY	580	MET
25	CY	592	GLU
25	CY	614	GLU
25	CY	616	TYR
25	CY	624	LEU
25	CY	631	ILE
25	CY	634	MET
25	CY	641	GLN
25	CY	647	VAL
25	CY	661	SER
25	CY	674	ASP
25	CY	688	ILE
26	D0	5	LYS
26	D0	20	ARG
26	D0	27	GLU
26	D0	41	ARG
26	D0	49	LYS
26	D0	75	LEU
26	D0	84	LEU
27	D1	46	LEU

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Mol	Chain	Res	Type
27	D1	61	ARG
27	D1	69	LYS
27	D1	80	LEU
27	D1	83	GLU
28	D2	20	GLU
28	D2	24	LEU
28	D2	56	GLN
28	D2	57	ILE
28	D2	59	ARG
28	D2	60	LEU
28	D2	64	LEU
29	D3	28	LEU
29	D3	29	ARG
29	D3	38	GLU
29	D3	48	GLU
30	D4	1	MET
30	D4	5	ILE
30	D4	9	LEU
30	D4	28	LYS
30	D4	29	PRO
30	D4	30	GLU
30	D4	32	TYR
30	D4	40	HIS
30	D4	42	PHE
30	D4	43	TYR
30	D4	48	ARG
30	D4	49	PHE
30	D4	55	ARG
31	D5	4	HIS
31	D5	55	ARG
31	D5	58	LEU
32	D6	9	LEU
32	D6	10	LEU
32	D6	11	LEU
32	D6	15	GLU
32	D6	18	ARG
32	D6	23	THR
32	D6	27	LYS
32	D6	30	THR
32	D6	31	PRO
32	D6	38	LYS
32	D6	39	TYR

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Mol	Chain	Res	Type
32	D6	42	TRP
33	D7	1	MET
33	D7	4	THR
33	D7	41	ARG
34	D8	31	HIS
34	D8	32	LEU
34	D8	33	ASN
34	D8	34	TRP
34	D8	40	GLU
34	D8	49	VAL
34	D8	61	LEU
35	D9	1	MET
35	D9	7	VAL
35	D9	29	ASN
38	DC	28	ARG
38	DC	31	LYS
38	DC	43	GLU
38	DC	54	ARG
38	DC	56	ASP
38	DC	58	ASN
38	DC	64	SER
38	DC	74	ARG
38	DC	128	LEU
38	DC	149	ASN
38	DC	184	GLU
38	DC	185	LYS
38	DC	211	ARG
39	DD	10	THR
39	DD	23	GLU
39	DD	24	ILE
39	DD	26	LYS
39	DD	35	LYS
39	DD	37	LEU
39	DD	43	ARG
39	DD	61	LEU
39	DD	65	ILE
39	DD	67	PHE
39	DD	84	TYR
39	DD	87	ASN
39	DD	92	ILE
39	DD	94	LEU
39	DD	95	LEU

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Mol	Chain	Res	Type
39	DD	104	TYR
39	DD	106	ILE
39	DD	117	VAL
39	DD	131	LEU
39	DD	138	VAL
39	DD	157	ARG
39	DD	166	GLN
39	DD	169	GLU
39	DD	173	VAL
39	DD	177	LEU
39	DD	183	ARG
39	DD	189	CYS
39	DD	192	THR
39	DD	200	ASP
39	DD	205	VAL
39	DD	211	ARG
39	DD	221	VAL
39	DD	226	MET
39	DD	227	ASN
39	DD	228	PRO
39	DD	244	ARG
39	DD	246	PRO
39	DD	257	LEU
39	DD	260	ARG
39	DD	270	ILE
39	DD	275	LYS
40	DE	4	ILE
40	DE	9	VAL
40	DE	14	ILE
40	DE	26	ILE
40	DE	36	ARG
40	DE	40	GLU
40	DE	49	LEU
40	DE	54	GLN
40	DE	55	ASN
40	DE	61	ARG
40	DE	67	PHE
40	DE	69	LYS
40	DE	76	ARG
40	DE	78	LEU
40	DE	94	GLU
40	DE	95	ILE

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Mol	Chain	Res	Type
40	DE	111	ARG
40	DE	118	LYS
40	DE	119	ARG
40	DE	121	ASN
40	DE	134	ILE
40	DE	143	ASN
40	DE	178	GLU
40	DE	179	GLU
40	DE	188	VAL
40	DE	197	ILE
40	DE	200	GLU
40	DE	202	LYS
40	DE	203	LYS
41	DF	19	GLU
41	DF	28	ILE
41	DF	41	LEU
41	DF	62	ARG
41	DF	64	ILE
41	DF	66	PRO
41	DF	83	PHE
41	DF	125	LEU
41	DF	149	ASP
41	DF	165	ARG
41	DF	175	THR
41	DF	179	GLU
42	DG	4	ASP
42	DG	26	GLN
42	DG	34	LEU
42	DG	38	VAL
42	DG	39	ILE
42	DG	45	GLU
42	DG	47	LYS
42	DG	49	ASP
42	DG	51	ARG
42	DG	63	ILE
42	DG	71	THR
42	DG	80	PHE
42	DG	83	ARG
42	DG	87	PRO
42	DG	88	ILE
42	DG	92	VAL
42	DG	93	THR

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Mol	Chain	Res	Type
42	DG	101	ILE
42	DG	103	LEU
42	DG	105	LYS
42	DG	118	ARG
42	DG	123	ASN
42	DG	135	LEU
42	DG	139	LEU
42	DG	145	THR
42	DG	152	LEU
42	DG	153	ARG
43	DH	45	VAL
43	DH	46	GLU
43	DH	49	VAL
43	DH	53	GLU
43	DH	54	ARG
43	DH	71	LEU
43	DH	83	TYR
43	DH	89	ILE
43	DH	104	GLU
43	DH	111	HIS
43	DH	136	ILE
43	DH	143	GLN
43	DH	158	HIS
43	DH	163	TYR
45	DN	1	MET
45	DN	4	TYR
45	DN	25	ARG
45	DN	26	LEU
45	DN	39	ARG
45	DN	41	ASP
45	DN	45	ASN
45	DN	48	MET
45	DN	63	THR
45	DN	65	LYS
45	DN	96	GLU
45	DN	101	HIS
45	DN	109	LYS
46	DO	14	THR
46	DO	23	ARG
46	DO	24	VAL
46	DO	38	VAL
46	DO	40	VAL

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Mol	Chain	Res	Type
46	DO	48	PRO
46	DO	49	ARG
46	DO	52	VAL
46	DO	87	ILE
46	DO	91	LEU
46	DO	114	ILE
47	DP	7	ARG
47	DP	13	ASN
47	DP	16	ARG
47	DP	18	ARG
47	DP	39	LYS
47	DP	41	ARG
47	DP	42	SER
47	DP	57	THR
47	DP	61	ARG
47	DP	62	LEU
47	DP	70	GLN
47	DP	85	LEU
47	DP	91	PHE
47	DP	92	GLU
47	DP	112	LEU
47	DP	114	ILE
47	DP	149	GLU
48	DQ	14	ARG
48	DQ	17	LEU
48	DQ	45	GLN
48	DQ	46	GLN
48	DQ	55	VAL
48	DQ	56	ARG
48	DQ	67	ARG
48	DQ	76	LYS
48	DQ	79	LEU
48	DQ	81	VAL
48	DQ	134	ARG
48	DQ	135	ASP
49	DR	18	LEU
49	DR	27	SER
49	DR	30	THR
49	DR	33	ARG
49	DR	54	LEU
49	DR	65	LEU
49	DR	74	LYS

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Mol	Chain	Res	Type
49	DR	75	LEU
49	DR	94	TYR
49	DR	97	VAL
49	DR	99	LYS
49	DR	100	LEU
50	DS	11	LYS
50	DS	12	PHE
50	DS	15	ARG
50	DS	35	ILE
50	DS	36	TYR
50	DS	97	ARG
50	DS	103	GLU
50	DS	106	ARG
51	DT	6	LEU
51	DT	13	ARG
51	DT	16	ARG
51	DT	17	THR
51	DT	24	PRO
51	DT	32	TYR
51	DT	38	ASN
51	DT	46	GLU
51	DT	49	VAL
51	DT	53	ARG
51	DT	58	ASN
51	DT	65	LYS
51	DT	66	VAL
51	DT	74	ARG
51	DT	75	ILE
51	DT	78	LEU
51	DT	82	LEU
51	DT	85	LYS
51	DT	90	GLN
51	DT	99	LEU
51	DT	108	ARG
51	DT	111	ARG
51	DT	115	ARG
51	DT	124	ASP
51	DT	125	ARG
51	DT	129	ARG
51	DT	132	LYS
52	DU	8	VAL
52	DU	20	LEU

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Mol	Chain	Res	Type
52	DU	34	LYS
52	DU	38	THR
52	DU	54	LYS
52	DU	60	LEU
52	DU	74	LEU
52	DU	92	ARG
52	DU	101	ARG
52	DU	102	GLU
52	DU	108	GLU
53	DV	1	MET
53	DV	18	LEU
53	DV	19	LYS
53	DV	21	ARG
53	DV	39	LEU
53	DV	46	VAL
53	DV	51	VAL
53	DV	61	VAL
53	DV	89	GLN
53	DV	95	LEU
53	DV	99	ILE
54	DW	11	ARG
54	DW	19	LEU
54	DW	39	THR
54	DW	40	ASN
54	DW	52	GLU
54	DW	82	LEU
54	DW	88	ARG
54	DW	107	LEU
55	DX	3	THR
55	DX	8	ILE
55	DX	11	PRO
55	DX	28	PHE
55	DX	37	THR
55	DX	51	VAL
55	DX	56	THR
55	DX	57	LEU
55	DX	68	ARG
55	DX	83	VAL
56	DY	2	ARG
56	DY	7	VAL
56	DY	9	LYS
56	DY	32	PRO

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Mol	Chain	Res	Type
56	DY	51	VAL
56	DY	53	PRO
56	DY	54	LYS
56	DY	55	TYR
56	DY	66	PRO
56	DY	77	PRO
56	DY	83	THR
56	DY	90	LEU
56	DY	102	CYS
57	DZ	5	LEU
57	DZ	6	LYS
57	DZ	20	ARG
57	DZ	24	LEU
57	DZ	28	MET
57	DZ	41	LEU
57	DZ	81	ARG
57	DZ	85	HIS
57	DZ	112	ARG
57	DZ	127	LYS
57	DZ	135	GLU
57	DZ	150	LEU
57	DZ	154	ASP
57	DZ	163	LEU
57	DZ	171	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (384) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	37	ASN
2	AB	40	HIS
2	AB	78	GLN
2	AB	110	GLN
2	AB	113	HIS
2	AB	146	GLN
2	AB	204	ASN
2	AB	212	GLN
3	AC	3	ASN
3	AC	28	GLN
3	AC	110	ASN
3	AC	118	GLN
3	AC	170	GLN
3	AC	181	ASN

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Mol	Chain	Res	Type
4	AD	62	GLN
4	AD	74	GLN
4	AD	77	ASN
4	AD	129	ASN
4	AD	161	ASN
5	AE	20	GLN
5	AE	72	GLN
5	AE	73	ASN
5	AE	78	HIS
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	64	GLN
7	AG	84	ASN
8	AH	82	HIS
9	AI	3	GLN
9	AI	38	GLN
9	AI	58	HIS
9	AI	73	GLN
9	AI	89	ASN
9	AI	124	GLN
10	AJ	56	HIS
10	AJ	76	ASN
10	AJ	78	ASN
10	AJ	84	GLN
11	AK	13	GLN
11	AK	22	HIS
11	AK	62	GLN
11	AK	93	GLN
11	AK	99	GLN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	99	HIS
13	AM	12	ASN
13	AM	40	ASN
13	AM	77	ASN
13	AM	106	ASN
14	AN	49	HIS

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Mol	Chain	Res	Type
15	AO	9	GLN
15	AO	13	GLN
15	AO	28	GLN
15	AO	37	ASN
15	AO	53	HIS
16	AP	13	HIS
16	AP	16	HIS
17	AQ	16	GLN
17	AQ	93	GLN
17	AQ	94	ASN
19	AS	47	HIS
20	AT	16	HIS
20	AT	18	GLN
20	AT	26	ASN
20	AT	42	GLN
20	AT	75	ASN
25	AY	14	ASN
25	AY	124	GLN
25	AY	137	ASN
25	AY	154	GLN
25	AY	208	GLN
25	AY	226	ASN
25	AY	266	ASN
25	AY	302	HIS
25	AY	343	ASN
25	AY	362	HIS
25	AY	421	GLN
25	AY	443	HIS
25	AY	458	HIS
25	AY	500	GLN
25	AY	506	GLN
25	AY	527	ASN
25	AY	573	HIS
25	AY	625	ASN
25	AY	641	GLN
26	B0	12	ASN
26	B0	29	GLN
26	B0	70	GLN
27	B1	45	ASN
28	B2	38	GLN
28	B2	56	GLN
29	B3	19	GLN

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Mol	Chain	Res	Type
30	B4	6	HIS
30	B4	40	HIS
31	B5	22	HIS
31	B5	43	HIS
32	B6	20	ASN
32	B6	26	ASN
32	B6	32	ASN
33	B7	8	ASN
33	B7	36	GLN
34	B8	31	HIS
34	B8	33	ASN
35	B9	29	ASN
38	BC	58	ASN
38	BC	67	HIS
38	BC	149	ASN
38	BC	189	ASN
38	BC	200	HIS
38	BC	226	ASN
39	BD	58	HIS
39	BD	96	HIS
39	BD	115	GLN
39	BD	126	GLN
39	BD	143	HIS
39	BD	166	GLN
39	BD	186	HIS
39	BD	198	ASN
39	BD	227	ASN
39	BD	253	GLN
40	BE	48	GLN
40	BE	55	ASN
40	BE	129	HIS
40	BE	143	ASN
40	BE	169	ASN
40	BE	192	ASN
41	BF	8	GLN
41	BF	31	HIS
41	BF	69	HIS
41	BF	75	HIS
41	BF	133	ASN
41	BF	160	ASN
41	BF	169	ASN
42	BG	41	GLN

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Mol	Chain	Res	Type
42	BG	58	GLN
43	BH	65	HIS
43	BH	74	ASN
43	BH	147	ASN
43	BH	158	HIS
45	BN	45	ASN
45	BN	131	GLN
46	BO	3	GLN
46	BO	5	GLN
46	BO	82	ASN
47	BP	9	ASN
47	BP	13	ASN
47	BP	27	HIS
47	BP	35	HIS
47	BP	68	GLN
47	BP	128	HIS
48	BQ	12	GLN
48	BQ	13	GLN
48	BQ	45	GLN
49	BR	13	HIS
49	BR	23	ASN
49	BR	24	GLN
49	BR	61	HIS
50	BS	68	GLN
51	BT	38	ASN
51	BT	55	ASN
51	BT	58	ASN
51	BT	79	HIS
51	BT	84	GLN
51	BT	90	GLN
52	BU	49	HIS
52	BU	66	ASN
52	BU	81	HIS
52	BU	94	ASN
52	BU	117	GLN
53	BV	11	GLN
54	BW	34	ASN
54	BW	102	HIS
55	BX	41	ASN
55	BX	55	ASN
55	BX	82	GLN
56	BY	43	ASN

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Mol	Chain	Res	Type
56	BY	92	ASN
57	BZ	54	HIS
57	BZ	65	GLN
57	BZ	75	ASN
57	BZ	118	GLN
2	CB	37	ASN
2	CB	40	HIS
2	CB	78	GLN
2	CB	110	GLN
2	CB	113	HIS
2	CB	146	GLN
2	CB	204	ASN
2	CB	212	GLN
3	CC	3	ASN
3	CC	28	GLN
3	CC	110	ASN
3	CC	118	GLN
3	CC	170	GLN
3	CC	181	ASN
4	CD	62	GLN
4	CD	74	GLN
4	CD	77	ASN
4	CD	129	ASN
4	CD	161	ASN
5	CE	20	GLN
5	CE	72	GLN
5	CE	73	ASN
5	CE	78	HIS
6	CF	18	GLN
6	CF	27	GLN
6	CF	32	ASN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
7	CG	64	GLN
7	CG	84	ASN
7	CG	86	GLN
7	CG	106	GLN
8	CH	82	HIS
9	CI	3	GLN
9	CI	38	GLN
9	CI	58	HIS

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Mol	Chain	Res	Type
9	CI	87	GLN
9	CI	89	ASN
9	CI	124	GLN
10	CJ	56	HIS
10	CJ	76	ASN
10	CJ	78	ASN
10	CJ	84	GLN
11	CK	13	GLN
11	CK	62	GLN
11	CK	93	GLN
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
13	CM	12	ASN
13	CM	40	ASN
13	CM	77	ASN
13	CM	101	GLN
13	CM	106	ASN
14	CN	49	HIS
15	CO	9	GLN
15	CO	13	GLN
15	CO	28	GLN
15	CO	37	ASN
16	CP	16	HIS
17	CQ	16	GLN
17	CQ	93	GLN
17	CQ	94	ASN
19	CS	47	HIS
19	CS	65	ASN
20	CT	16	HIS
20	CT	18	GLN
20	CT	26	ASN
20	CT	42	GLN
20	CT	75	ASN
25	CY	40	HIS
25	CY	87	HIS
25	CY	117	GLN
25	CY	124	GLN
25	CY	137	ASN
25	CY	165	GLN
25	CY	190	ASN
25	CY	208	GLN

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Mol	Chain	Res	Type
25	CY	306	ASN
25	CY	359	HIS
25	CY	421	GLN
25	CY	443	HIS
25	CY	448	GLN
25	CY	458	HIS
25	CY	480	GLN
25	CY	500	GLN
25	CY	506	GLN
25	CY	527	ASN
25	CY	543	GLN
25	CY	551	GLN
25	CY	573	HIS
25	CY	625	ASN
25	CY	630	GLN
25	CY	641	GLN
26	D0	12	ASN
26	D0	29	GLN
26	D0	70	GLN
27	D1	45	ASN
27	D1	56	GLN
28	D2	38	GLN
28	D2	47	ASN
28	D2	65	ASN
29	D3	19	GLN
29	D3	52	HIS
30	D4	6	HIS
30	D4	40	HIS
31	D5	22	HIS
31	D5	43	HIS
32	D6	20	ASN
32	D6	26	ASN
32	D6	32	ASN
33	D7	8	ASN
33	D7	36	GLN
34	D8	31	HIS
34	D8	33	ASN
35	D9	29	ASN
38	DC	58	ASN
38	DC	67	HIS
38	DC	149	ASN
38	DC	166	ASN

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Mol	Chain	Res	Type
38	DC	189	ASN
38	DC	200	HIS
38	DC	226	ASN
39	DD	96	HIS
39	DD	115	GLN
39	DD	126	GLN
39	DD	143	HIS
39	DD	166	GLN
39	DD	186	HIS
39	DD	198	ASN
39	DD	220	HIS
39	DD	227	ASN
39	DD	253	GLN
40	DE	48	GLN
40	DE	55	ASN
40	DE	129	HIS
40	DE	143	ASN
40	DE	169	ASN
40	DE	192	ASN
41	DF	8	GLN
41	DF	69	HIS
41	DF	75	HIS
41	DF	133	ASN
41	DF	160	ASN
41	DF	169	ASN
41	DF	204	ASN
42	DG	41	GLN
42	DG	138	GLN
43	DH	65	HIS
43	DH	74	ASN
43	DH	147	ASN
43	DH	158	HIS
45	DN	45	ASN
45	DN	131	GLN
46	DO	3	GLN
46	DO	5	GLN
46	DO	82	ASN
47	DP	9	ASN
47	DP	13	ASN
47	DP	35	HIS
47	DP	68	GLN
47	DP	81	GLN

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Mol	Chain	Res	Type
47	DP	84	ASN
47	DP	128	HIS
48	DQ	12	GLN
48	DQ	13	GLN
48	DQ	45	GLN
49	DR	13	HIS
49	DR	23	ASN
49	DR	24	GLN
49	DR	61	HIS
49	DR	71	GLN
50	DS	68	GLN
50	DS	95	HIS
51	DT	38	ASN
51	DT	55	ASN
51	DT	58	ASN
51	DT	79	HIS
51	DT	84	GLN
51	DT	90	GLN
52	DU	49	HIS
52	DU	66	ASN
52	DU	81	HIS
52	DU	94	ASN
52	DU	117	GLN
53	DV	11	GLN
54	DW	34	ASN
54	DW	102	HIS
55	DX	41	ASN
55	DX	55	ASN
55	DX	82	GLN
56	DY	43	ASN
56	DY	92	ASN
57	DZ	54	HIS
57	DZ	73	GLN
57	DZ	151	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	256 (17%)	36 (2%)
1	CA	1503/1522 (98%)	253 (16%)	34 (2%)
22	AV	75/76 (98%)	13 (17%)	1 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
22	CV	75/76 (98%)	15 (20%)	1 (1%)
23	AW	76/77 (98%)	27 (35%)	1 (1%)
23	CW	76/77 (98%)	27 (35%)	1 (1%)
24	AX	12/25 (48%)	8 (66%)	2 (16%)
24	CX	12/25 (48%)	7 (58%)	2 (16%)
36	BA	2900/2915 (99%)	590 (20%)	61 (2%)
36	DA	2900/2915 (99%)	587 (20%)	63 (2%)
37	BB	118/122 (96%)	25 (21%)	0
37	DB	118/122 (96%)	25 (21%)	0
All	All	9368/9474 (98%)	1833 (19%)	202 (2%)

All (1833) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	33	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	60	A
1	AA	61	G
1	AA	79	G
1	AA	81	U
1	AA	88	A
1	AA	89	C
1	AA	90	U
1	AA	91	C
1	AA	97	G
1	AA	98	G
1	AA	104	G
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	129(A)	G
1	AA	131	C
1	AA	144	G
1	AA	146	G
1	AA	147	G

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Mol	Chain	Res	Type
1	AA	149	A
1	AA	160	A
1	AA	181	G
1	AA	182	U
1	AA	183	G
1	AA	189(G)	G
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	202	U
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	243	A
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	289	G
1	AA	316	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	350	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	397	A
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

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Mol	Chain	Res	Type
1	AA	437	U
1	AA	439	A
1	AA	441	A
1	AA	444	C
1	AA	460	G
1	AA	461	A
1	AA	471	G
1	AA	481	G
1	AA	484	G
1	AA	485	G
1	AA	496	A
1	AA	498	U
1	AA	509	A
1	AA	510	A
1	AA	518	C
1	AA	527	G
1	AA	530	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	535	A
1	AA	536	C
1	AA	547	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	631	G
1	AA	632	A
1	AA	650	G
1	AA	653	A
1	AA	665	A
1	AA	682	G
1	AA	683	G
1	AA	686	U
1	AA	687	A

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Mol	Chain	Res	Type
1	AA	688	G
1	AA	704	A
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	728	A
1	AA	731	G
1	AA	744	C
1	AA	748	C
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	813	U
1	AA	817	C
1	AA	828	A
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	907	A
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	951	G
1	AA	960	U
1	AA	961	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C

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Mol	Chain	Res	Type
1	AA	981	U
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	997	U
1	AA	1003	G
1	AA	1004	A
1	AA	1010	G
1	AA	1025	U
1	AA	1027	C
1	AA	1030	C
1	AA	1030(B)	C
1	AA	1050	G
1	AA	1054	C
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G
1	AA	1124	G
1	AA	1125	U
1	AA	1130	A
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1159	U
1	AA	1196	U
1	AA	1197	G
1	AA	1201	A
1	AA	1202	G
1	AA	1212	U
1	AA	1214	C
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A

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Mol	Chain	Res	Type
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1249	C
1	AA	1253	G
1	AA	1256	A
1	AA	1257	U
1	AA	1273	G
1	AA	1280	A
1	AA	1281	U
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1336	C
1	AA	1338	G
1	AA	1346	A
1	AA	1348	U
1	AA	1353	G
1	AA	1363	C
1	AA	1364	U
1	AA	1375	A
1	AA	1385	G
1	AA	1394	A
1	AA	1397	C
1	AA	1398	A
1	AA	1404	C
1	AA	1419	G
1	AA	1434	A
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1443	G

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Mol	Chain	Res	Type
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1490	C
1	AA	1492	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1503	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
22	AV	5	G
22	AV	8	U
22	AV	16	U
22	AV	17	C
22	AV	18	G
22	AV	19	G
22	AV	20	U
22	AV	21	A
22	AV	43	C
22	AV	46	G
22	AV	48	C
22	AV	74	C
22	AV	76	A
23	AW	5	G
23	AW	7	G
23	AW	8	U
23	AW	9	G
23	AW	10	G
23	AW	15	G
23	AW	17(A)	U
23	AW	18	G
23	AW	19	G
23	AW	20	U
23	AW	21	A

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Mol	Chain	Res	Type
23	AW	23	C
23	AW	31	G
23	AW	33	U
23	AW	34	C
23	AW	35	A
23	AW	47	U
23	AW	48	C
23	AW	50	U
23	AW	52	G
23	AW	56	C
23	AW	61	C
23	AW	67	C
23	AW	68	C
23	AW	71	C
23	AW	73	A
23	AW	74	C
24	AX	12	A
24	AX	13	A
24	AX	14	U
24	AX	15	G
24	AX	16	U
24	AX	18	C
24	AX	19	A
24	AX	20	A
36	BA	9	U
36	BA	18	C
36	BA	28	A
36	BA	34	C
36	BA	35	G
36	BA	42	G
36	BA	43	A
36	BA	45	C
36	BA	49	A
36	BA	50	U
36	BA	63	U
36	BA	69	C
36	BA	72	U
36	BA	75	G
36	BA	83	G
36	BA	84	A
36	BA	85	G
36	BA	88	G

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Mol	Chain	Res	Type
36	BA	90	U
36	BA	92	A
36	BA	94	C
36	BA	95	G
36	BA	100	G
36	BA	102	G
36	BA	106	C
36	BA	116	C
36	BA	118	A
36	BA	119	A
36	BA	121	G
36	BA	125	G
36	BA	129	C
36	BA	139(A)	G
36	BA	141	A
36	BA	142(A)	C
36	BA	143(A)	C
36	BA	155	U
36	BA	156	U
36	BA	157	U
36	BA	174	C
36	BA	190	A
36	BA	196	A
36	BA	199	A
36	BA	204	A
36	BA	205	G
36	BA	212	G
36	BA	215	G
36	BA	216	A
36	BA	221	A
36	BA	222	A
36	BA	227	A
36	BA	229	A
36	BA	233	A
36	BA	237	C
36	BA	241	A
36	BA	248	G
36	BA	252	G
36	BA	261	G
36	BA	271(J)	C
36	BA	271(K)	U
36	BA	271(L)	U

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Mol	Chain	Res	Type
36	BA	271(O)	C
36	BA	271(Y)	U
36	BA	272	G
36	BA	272(A)	U
36	BA	272(B)	G
36	BA	272(H)	C
36	BA	272(I)	U
36	BA	274	G
36	BA	276	A
36	BA	280	C
36	BA	283	A
36	BA	286	C
36	BA	299	A
36	BA	310	A
36	BA	311	A
36	BA	329	G
36	BA	330	A
36	BA	332	A
36	BA	333	G
36	BA	345	A
36	BA	346	A
36	BA	352	G
36	BA	353	G
36	BA	362	U
36	BA	363	G
36	BA	363(F)	A
36	BA	364	C
36	BA	365	C
36	BA	371	A
36	BA	372	G
36	BA	386	G
36	BA	390	A
36	BA	395	U
36	BA	405	U
36	BA	406	G
36	BA	407	G
36	BA	411	G
36	BA	412	A
36	BA	428	A
36	BA	444	C
36	BA	448	U
36	BA	449	A

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Mol	Chain	Res	Type
36	BA	455	C
36	BA	458	G
36	BA	475	U
36	BA	480	A
36	BA	481	G
36	BA	504	U
36	BA	505	A
36	BA	508	G
36	BA	509	C
36	BA	526	A
36	BA	527	C
36	BA	528	A
36	BA	529	A
36	BA	530	G
36	BA	531	C
36	BA	532	A
36	BA	544	G
36	BA	548	A
36	BA	552	G
36	BA	555	U
36	BA	556	G
36	BA	562	U
36	BA	563	G
36	BA	573	G
36	BA	575	A
36	BA	587	C
36	BA	591	C
36	BA	592	G
36	BA	604	G
36	BA	607	U
36	BA	613	G
36	BA	614(B)	G
36	BA	614(C)	A
36	BA	615	G
36	BA	622	G
36	BA	627	A
36	BA	637	A
36	BA	645	C
36	BA	646	A
36	BA	651	G
36	BA	653	A
36	BA	654	A

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Mol	Chain	Res	Type
36	BA	654(I)	C
36	BA	654(J)	A
36	BA	654(K)	C
36	BA	654(M)	C
36	BA	654(T)	C
36	BA	655	A
36	BA	675	A
36	BA	686	G
36	BA	699	A
36	BA	722	A
36	BA	727	A
36	BA	729	G
36	BA	730	C
36	BA	740	U
36	BA	745	G
36	BA	753	C
36	BA	764	A
36	BA	765	G
36	BA	775	G
36	BA	776	G
36	BA	782	A
36	BA	784	A
36	BA	785	G
36	BA	788	A
36	BA	789	A
36	BA	790	C
36	BA	791	C
36	BA	792	G
36	BA	793	A
36	BA	794	G
36	BA	800	A
36	BA	805	G
36	BA	811	U
36	BA	812	C
36	BA	827	U
36	BA	828	U
36	BA	830	G
36	BA	840	C
36	BA	841	A
36	BA	859	G
36	BA	878	A
36	BA	889	C

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Mol	Chain	Res	Type
36	BA	896	A
36	BA	897	C
36	BA	900	A
36	BA	904	C
36	BA	910	A
36	BA	926	A
36	BA	932	G
36	BA	940	G
36	BA	941	A
36	BA	945	A
36	BA	946	G
36	BA	959	A
36	BA	961	C
36	BA	962	G
36	BA	973	A
36	BA	974	G
36	BA	975	C
36	BA	980	A
36	BA	983	A
36	BA	985	C
36	BA	990	A
36	BA	991	C
36	BA	996	A
36	BA	1005	C
36	BA	1011	G
36	BA	1012	U
36	BA	1013	C
36	BA	1021	A
36	BA	1022	G
36	BA	1023	U
36	BA	1026	U
36	BA	1033	U
36	BA	1034	G
36	BA	1036	G
36	BA	1039	G
36	BA	1044	G
36	BA	1045	A
36	BA	1047	G
36	BA	1048	A
36	BA	1049	C
36	BA	1052	C
36	BA	1053	C

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Mol	Chain	Res	Type
36	BA	1054	A
36	BA	1058	G
36	BA	1062	G
36	BA	1067	A
36	BA	1070	A
36	BA	1073	A
36	BA	1076	C
36	BA	1083	U
36	BA	1088	A
36	BA	1090	U
36	BA	1109	C
36	BA	1110	G
36	BA	1111	A
36	BA	1112	G
36	BA	1114	G
36	BA	1115	G
36	BA	1122	G
36	BA	1126	A
36	BA	1135	C
36	BA	1136	G
36	BA	1141	U
36	BA	1142(A)	A
36	BA	1143	A
36	BA	1146	C
36	BA	1155	A
36	BA	1157	G
36	BA	1158	C
36	BA	1159	U
36	BA	1170	G
36	BA	1173	G
36	BA	1174	A
36	BA	1175	U
36	BA	1176	G
36	BA	1177	A
36	BA	1204	A
36	BA	1205	U
36	BA	1210	A
36	BA	1211	U
36	BA	1212	G
36	BA	1213	A
36	BA	1220	A
36	BA	1221	C

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Mol	Chain	Res	Type
36	BA	1224	C
36	BA	1238	G
36	BA	1247	A
36	BA	1248	G
36	BA	1250	G
36	BA	1252	G
36	BA	1255	U
36	BA	1256	G
36	BA	1261	C
36	BA	1266	G
36	BA	1271	G
36	BA	1272	A
36	BA	1273	U
36	BA	1287	A
36	BA	1300	U
36	BA	1302	A
36	BA	1314	C
36	BA	1326	U
36	BA	1329	U
36	BA	1330	C
36	BA	1332	G
36	BA	1345	C
36	BA	1349	A
36	BA	1359	A
36	BA	1368	G
36	BA	1379	A
36	BA	1380	G
36	BA	1384	A
36	BA	1385	G
36	BA	1386	C
36	BA	1396	U
36	BA	1403	C
36	BA	1406	U
36	BA	1411	C
36	BA	1416	G
36	BA	1417	C
36	BA	1421	G
36	BA	1427	A
36	BA	1428	C
36	BA	1434	A
36	BA	1435	G
36	BA	1445	A

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Mol	Chain	Res	Type
36	BA	1445(A)	C
36	BA	1449	A
36	BA	1453	U
36	BA	1455	G
36	BA	1459	G
36	BA	1460	A
36	BA	1461	G
36	BA	1467	C
36	BA	1476	C
36	BA	1477	A
36	BA	1478	G
36	BA	1482	G
36	BA	1484	G
36	BA	1485	G
36	BA	1488	G
36	BA	1490	A
36	BA	1491	G
36	BA	1493	C
36	BA	1494	A
36	BA	1495	A
36	BA	1496	A
36	BA	1497	U
36	BA	1505	C
36	BA	1509	C
36	BA	1509(A)	A
36	BA	1517	G
36	BA	1528(A)	A
36	BA	1541	G
36	BA	1542	A
36	BA	1544	A
36	BA	1553	A
36	BA	1554	A
36	BA	1558	A
36	BA	1559	G
36	BA	1569	A
36	BA	1578	U
36	BA	1579	A
36	BA	1584	C
36	BA	1586	A
36	BA	1588	C
36	BA	1608	A
36	BA	1609	A

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Mol	Chain	Res	Type
36	BA	1610	A
36	BA	1615	C
36	BA	1616	A
36	BA	1618	A
36	BA	1634	A
36	BA	1640	C
36	BA	1644	C
36	BA	1648	C
36	BA	1674	G
36	BA	1699	G
36	BA	1718	G
36	BA	1722	A
36	BA	1739	U
36	BA	1740	G
36	BA	1744	C
36	BA	1748	G
36	BA	1759	A
36	BA	1763	G
36	BA	1764	G
36	BA	1773	A
36	BA	1780	A
36	BA	1781	C
36	BA	1784	A
36	BA	1791	A
36	BA	1799	G
36	BA	1800	C
36	BA	1801	G
36	BA	1815	A
36	BA	1816	G
36	BA	1820	U
36	BA	1821	A
36	BA	1829	A
36	BA	1839	G
36	BA	1846	G
36	BA	1847	A
36	BA	1850	G
36	BA	1858	G
36	BA	1862	G
36	BA	1866	C
36	BA	1877	A
36	BA	1878	G
36	BA	1885	A

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Mol	Chain	Res	Type
36	BA	1888	G
36	BA	1889	A
36	BA	1900	A
36	BA	1906	G
36	BA	1912	A
36	BA	1929	G
36	BA	1930	G
36	BA	1931	U
36	BA	1937	A
36	BA	1938	A
36	BA	1943	U
36	BA	1944	U
36	BA	1945	G
36	BA	1948	G
36	BA	1955	U
36	BA	1960	A
36	BA	1963	U
36	BA	1964	G
36	BA	1967	C
36	BA	1969	A
36	BA	1970	A
36	BA	1971	A
36	BA	1972	A
36	BA	1993	U
36	BA	1997	G
36	BA	2004	G
36	BA	2021	C
36	BA	2022	U
36	BA	2031	A
36	BA	2033	A
36	BA	2034	U
36	BA	2043	C
36	BA	2055	C
36	BA	2056	G
36	BA	2060	A
36	BA	2061	G
36	BA	2062	A
36	BA	2065	C
36	BA	2069	G
36	BA	2076	U
36	BA	2100	G
36	BA	2103	C

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Mol	Chain	Res	Type
36	BA	2104	G
36	BA	2111	C
36	BA	2116	G
36	BA	2118	U
36	BA	2127	G
36	BA	2132	U
36	BA	2133	G
36	BA	2134	A
36	BA	2147	G
36	BA	2158	A
36	BA	2159	G
36	BA	2163	C
36	BA	2172	U
36	BA	2173	A
36	BA	2185	C
36	BA	2187	G
36	BA	2189	U
36	BA	2190	G
36	BA	2193	G
36	BA	2198	A
36	BA	2199	A
36	BA	2200	C
36	BA	2203	U
36	BA	2205	C
36	BA	2206	G
36	BA	2207	G
36	BA	2208	A
36	BA	2219	G
36	BA	2225	A
36	BA	2226	C
36	BA	2238	G
36	BA	2239	G
36	BA	2263	C
36	BA	2273	A
36	BA	2283	C
36	BA	2288	A
36	BA	2297	C
36	BA	2305	A
36	BA	2307	G
36	BA	2308	G
36	BA	2309	A
36	BA	2311	A

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Mol	Chain	Res	Type
36	BA	2313	C
36	BA	2319	G
36	BA	2320	A
36	BA	2325	G
36	BA	2334	G
36	BA	2336	A
36	BA	2345	G
36	BA	2346	A
36	BA	2347	C
36	BA	2348	U
36	BA	2349	G
36	BA	2350	C
36	BA	2383	G
36	BA	2385	C
36	BA	2402	C
36	BA	2406	U
36	BA	2423	U
36	BA	2424	C
36	BA	2425	A
36	BA	2427	C
36	BA	2428	G
36	BA	2429	G
36	BA	2430	A
36	BA	2431	U
36	BA	2434	A
36	BA	2435	A
36	BA	2439	A
36	BA	2441	C
36	BA	2448	A
36	BA	2461	C
36	BA	2465	C
36	BA	2469	A
36	BA	2470	G
36	BA	2473	U
36	BA	2474	C
36	BA	2476	A
36	BA	2477	C
36	BA	2478	A
36	BA	2482	G
36	BA	2484	G
36	BA	2497	A
36	BA	2502	G

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Mol	Chain	Res	Type
36	BA	2503	A
36	BA	2505	G
36	BA	2520	C
36	BA	2524	G
36	BA	2529	G
36	BA	2554	U
36	BA	2566	A
36	BA	2567	G
36	BA	2572	A
36	BA	2573	C
36	BA	2577	A
36	BA	2582	G
36	BA	2585	U
36	BA	2586	C
36	BA	2602	A
36	BA	2609	U
36	BA	2610	C
36	BA	2611	U
36	BA	2612	C
36	BA	2630	G
36	BA	2646	C
36	BA	2655	G
36	BA	2657	A
36	BA	2658	C
36	BA	2670	A
36	BA	2673	G
36	BA	2682	U
36	BA	2690	C
36	BA	2691	C
36	BA	2702	U
36	BA	2703	C
36	BA	2712	U
36	BA	2712(A)	A
36	BA	2713	A
36	BA	2726	U
36	BA	2733	A
36	BA	2750	A
36	BA	2751	G
36	BA	2755	C
36	BA	2756	U
36	BA	2757	A
36	BA	2758	A

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Mol	Chain	Res	Type
36	BA	2762	G
36	BA	2764	A
36	BA	2765	A
36	BA	2766	G
36	BA	2778	A
36	BA	2779	U
36	BA	2790	A
36	BA	2791	C
36	BA	2796	U
36	BA	2799	C
36	BA	2801	A
36	BA	2802	G
36	BA	2803	C
36	BA	2808	U
36	BA	2820	A
36	BA	2821	A
36	BA	2824	C
36	BA	2833	G
36	BA	2836	U
36	BA	2849	U
36	BA	2872	G
36	BA	2879	C
36	BA	2880	C
36	BA	2892	A
36	BA	2894	G
36	BA	2895	U
37	BB	8	U
37	BB	13	A
37	BB	15	A
37	BB	16	G
37	BB	22	U
37	BB	25	A
37	BB	35	U
37	BB	41	U
37	BB	42	C
37	BB	45	A
37	BB	52	A
37	BB	53	A
37	BB	56	G
37	BB	67	G
37	BB	73	A
37	BB	81	G

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Mol	Chain	Res	Type
37	BB	82	G
37	BB	88	C
37	BB	89	G
37	BB	90	A
37	BB	91	C
37	BB	103	G
37	BB	104	U
37	BB	110	G
37	BB	113	G
1	CA	7	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	33	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	60	A
1	CA	61	G
1	CA	79	G
1	CA	81	U
1	CA	88	A
1	CA	89	C
1	CA	90	U
1	CA	91	C
1	CA	97	G
1	CA	98	G
1	CA	104	G
1	CA	116	A
1	CA	120	A
1	CA	121	C
1	CA	129(A)	G
1	CA	131	C
1	CA	144	G
1	CA	146	G
1	CA	147	G
1	CA	149	A
1	CA	160	A
1	CA	181	G
1	CA	182	U
1	CA	189(G)	G

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Mol	Chain	Res	Type
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	202	U
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	243	A
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	289	G
1	CA	316	G
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	345	C
1	CA	346	G
1	CA	350	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	397	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	437	U
1	CA	439	A
1	CA	441	A
1	CA	444	C
1	CA	460	G
1	CA	461	A

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Mol	Chain	Res	Type
1	CA	471	G
1	CA	481	G
1	CA	484	G
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	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	535	A
1	CA	536	C
1	CA	547	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
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	631	G
1	CA	632	A
1	CA	650	G
1	CA	653	A
1	CA	665	A
1	CA	682	G
1	CA	683	G
1	CA	686	U
1	CA	687	A
1	CA	688	G
1	CA	704	A
1	CA	721	G
1	CA	723	U
1	CA	724	G

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Mol	Chain	Res	Type
1	CA	728	A
1	CA	731	G
1	CA	744	C
1	CA	748	C
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	813	U
1	CA	817	C
1	CA	828	A
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	907	A
1	CA	914	A
1	CA	921	U
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	951	G
1	CA	960	U
1	CA	961	U
1	CA	968	A
1	CA	969	A
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	981	U
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	997	U
1	CA	1003	G

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Mol	Chain	Res	Type
1	CA	1004	A
1	CA	1010	G
1	CA	1025	U
1	CA	1027	C
1	CA	1030	C
1	CA	1030(B)	C
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1102	A
1	CA	1117	G
1	CA	1124	G
1	CA	1125	U
1	CA	1130	A
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	1154	G
1	CA	1159	U
1	CA	1196	U
1	CA	1197	G
1	CA	1201	A
1	CA	1202	G
1	CA	1212	U
1	CA	1214	C
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1249	C
1	CA	1253	G
1	CA	1256	A

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Mol	Chain	Res	Type
1	CA	1257	U
1	CA	1273	G
1	CA	1280	A
1	CA	1281	U
1	CA	1285	A
1	CA	1286	A
1	CA	1287	A
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1335	C
1	CA	1336	C
1	CA	1338	G
1	CA	1346	A
1	CA	1348	U
1	CA	1353	G
1	CA	1363	C
1	CA	1364	U
1	CA	1375	A
1	CA	1385	G
1	CA	1394	A
1	CA	1397	C
1	CA	1398	A
1	CA	1400	C
1	CA	1404	C
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1490	C
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G

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Mol	Chain	Res	Type
1	CA	1499	A
1	CA	1503	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
22	CV	5	G
22	CV	8	U
22	CV	16	U
22	CV	17	C
22	CV	18	G
22	CV	19	G
22	CV	20	U
22	CV	21	A
22	CV	43	C
22	CV	46	G
22	CV	48	C
22	CV	67	C
22	CV	73	A
22	CV	74	C
22	CV	76	A
23	CW	5	G
23	CW	7	G
23	CW	8	U
23	CW	9	G
23	CW	10	G
23	CW	15	G
23	CW	17(A)	U
23	CW	18	G
23	CW	19	G
23	CW	20	U
23	CW	21	A
23	CW	23	C
23	CW	31	G
23	CW	33	U
23	CW	34	C
23	CW	35	A
23	CW	47	U

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Mol	Chain	Res	Type
23	CW	48	C
23	CW	50	U
23	CW	52	G
23	CW	56	C
23	CW	67	C
23	CW	68	C
23	CW	71	C
23	CW	73	A
23	CW	74	C
23	CW	75	C
24	CX	12	A
24	CX	13	A
24	CX	14	U
24	CX	15	G
24	CX	16	U
24	CX	18	C
24	CX	19	A
36	DA	9	U
36	DA	18	C
36	DA	28	A
36	DA	34	C
36	DA	35	G
36	DA	42	G
36	DA	43	A
36	DA	45	C
36	DA	49	A
36	DA	50	U
36	DA	63	U
36	DA	69	C
36	DA	72	U
36	DA	75	G
36	DA	83	G
36	DA	84	A
36	DA	85	G
36	DA	88	G
36	DA	90	U
36	DA	92	A
36	DA	94	C
36	DA	95	G
36	DA	100	G
36	DA	102	G
36	DA	106	C

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Mol	Chain	Res	Type
36	DA	116	C
36	DA	118	A
36	DA	119	A
36	DA	121	G
36	DA	125	G
36	DA	129	C
36	DA	139(A)	G
36	DA	141	A
36	DA	142(A)	C
36	DA	143(A)	C
36	DA	155	U
36	DA	156	U
36	DA	157	U
36	DA	174	C
36	DA	190	A
36	DA	196	A
36	DA	199	A
36	DA	204	A
36	DA	205	G
36	DA	212	G
36	DA	215	G
36	DA	216	A
36	DA	221	A
36	DA	222	A
36	DA	227	A
36	DA	229	A
36	DA	233	A
36	DA	237	C
36	DA	241	A
36	DA	248	G
36	DA	252	G
36	DA	261	G
36	DA	271(J)	C
36	DA	271(K)	U
36	DA	271(L)	U
36	DA	271(O)	C
36	DA	271(Y)	U
36	DA	272	G
36	DA	272(A)	U
36	DA	272(B)	G
36	DA	272(H)	C
36	DA	272(I)	U

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Mol	Chain	Res	Type
36	DA	274	G
36	DA	276	A
36	DA	280	C
36	DA	283	A
36	DA	286	C
36	DA	299	A
36	DA	310	A
36	DA	311	A
36	DA	329	G
36	DA	330	A
36	DA	332	A
36	DA	333	G
36	DA	345	A
36	DA	346	A
36	DA	352	G
36	DA	353	G
36	DA	362	U
36	DA	363	G
36	DA	363(F)	A
36	DA	364	C
36	DA	365	C
36	DA	371	A
36	DA	372	G
36	DA	386	G
36	DA	390	A
36	DA	405	U
36	DA	406	G
36	DA	407	G
36	DA	411	G
36	DA	412	A
36	DA	428	A
36	DA	444	C
36	DA	448	U
36	DA	449	A
36	DA	455	C
36	DA	458	G
36	DA	475	U
36	DA	480	A
36	DA	481	G
36	DA	504	U
36	DA	505	A
36	DA	508	G

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Mol	Chain	Res	Type
36	DA	509	C
36	DA	526	A
36	DA	527	C
36	DA	529	A
36	DA	530	G
36	DA	531	C
36	DA	532	A
36	DA	544	G
36	DA	548	A
36	DA	552	G
36	DA	555	U
36	DA	556	G
36	DA	562	U
36	DA	563	G
36	DA	573	G
36	DA	575	A
36	DA	587	C
36	DA	591	C
36	DA	592	G
36	DA	604	G
36	DA	607	U
36	DA	613	G
36	DA	614(B)	G
36	DA	614(C)	A
36	DA	615	G
36	DA	622	G
36	DA	627	A
36	DA	637	A
36	DA	645	C
36	DA	646	A
36	DA	651	G
36	DA	653	A
36	DA	654	A
36	DA	654(I)	C
36	DA	654(J)	A
36	DA	654(K)	C
36	DA	654(M)	C
36	DA	654(T)	C
36	DA	655	A
36	DA	675	A
36	DA	686	G
36	DA	699	A

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Mol	Chain	Res	Type
36	DA	722	A
36	DA	727	A
36	DA	729	G
36	DA	730	C
36	DA	740	U
36	DA	745	G
36	DA	753	C
36	DA	764	A
36	DA	765	G
36	DA	775	G
36	DA	776	G
36	DA	782	A
36	DA	784	A
36	DA	785	G
36	DA	788	A
36	DA	789	A
36	DA	790	C
36	DA	791	C
36	DA	792	G
36	DA	793	A
36	DA	794	G
36	DA	800	A
36	DA	805	G
36	DA	811	U
36	DA	812	C
36	DA	827	U
36	DA	828	U
36	DA	830	G
36	DA	840	C
36	DA	841	A
36	DA	859	G
36	DA	878	A
36	DA	889	C
36	DA	896	A
36	DA	897	C
36	DA	900	A
36	DA	904	C
36	DA	910	A
36	DA	926	A
36	DA	932	G
36	DA	940	G
36	DA	941	A

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Mol	Chain	Res	Type
36	DA	945	A
36	DA	946	G
36	DA	959	A
36	DA	961	C
36	DA	962	G
36	DA	973	A
36	DA	974	G
36	DA	975	C
36	DA	980	A
36	DA	983	A
36	DA	985	C
36	DA	990	A
36	DA	991	C
36	DA	996	A
36	DA	1005	C
36	DA	1011	G
36	DA	1012	U
36	DA	1013	C
36	DA	1021	A
36	DA	1022	G
36	DA	1023	U
36	DA	1026	U
36	DA	1033	U
36	DA	1034	G
36	DA	1036	G
36	DA	1039	G
36	DA	1044	G
36	DA	1045	A
36	DA	1047	G
36	DA	1048	A
36	DA	1049	C
36	DA	1052	C
36	DA	1053	C
36	DA	1054	A
36	DA	1058	G
36	DA	1062	G
36	DA	1067	A
36	DA	1070	A
36	DA	1073	A
36	DA	1076	C
36	DA	1083	U
36	DA	1088	A

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Mol	Chain	Res	Type
36	DA	1090	U
36	DA	1109	C
36	DA	1110	G
36	DA	1111	A
36	DA	1112	G
36	DA	1114	G
36	DA	1115	G
36	DA	1122	G
36	DA	1126	A
36	DA	1135	C
36	DA	1136	G
36	DA	1141	U
36	DA	1142(A)	A
36	DA	1143	A
36	DA	1146	C
36	DA	1155	A
36	DA	1157	G
36	DA	1158	C
36	DA	1159	U
36	DA	1170	G
36	DA	1173	G
36	DA	1174	A
36	DA	1175	U
36	DA	1176	G
36	DA	1177	A
36	DA	1204	A
36	DA	1205	U
36	DA	1210	A
36	DA	1211	U
36	DA	1212	G
36	DA	1213	A
36	DA	1220	A
36	DA	1221	C
36	DA	1224	C
36	DA	1238	G
36	DA	1247	A
36	DA	1248	G
36	DA	1250	G
36	DA	1252	G
36	DA	1255	U
36	DA	1256	G
36	DA	1261	C

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Mol	Chain	Res	Type
36	DA	1266	G
36	DA	1271	G
36	DA	1272	A
36	DA	1273	U
36	DA	1287	A
36	DA	1300	U
36	DA	1302	A
36	DA	1314	C
36	DA	1326	U
36	DA	1329	U
36	DA	1330	C
36	DA	1332	G
36	DA	1345	C
36	DA	1349	A
36	DA	1359	A
36	DA	1365	A
36	DA	1368	G
36	DA	1379	A
36	DA	1380	G
36	DA	1384	A
36	DA	1385	G
36	DA	1386	C
36	DA	1396	U
36	DA	1403	C
36	DA	1406	U
36	DA	1411	C
36	DA	1416	G
36	DA	1421	G
36	DA	1427	A
36	DA	1428	C
36	DA	1434	A
36	DA	1435	G
36	DA	1445	A
36	DA	1445(A)	C
36	DA	1449	A
36	DA	1453	U
36	DA	1455	G
36	DA	1459	G
36	DA	1460	A
36	DA	1461	G
36	DA	1467	C
36	DA	1476	C

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Mol	Chain	Res	Type
36	DA	1477	A
36	DA	1478	G
36	DA	1482	G
36	DA	1484	G
36	DA	1485	G
36	DA	1488	G
36	DA	1490	A
36	DA	1491	G
36	DA	1493	C
36	DA	1494	A
36	DA	1495	A
36	DA	1496	A
36	DA	1497	U
36	DA	1505	C
36	DA	1509	C
36	DA	1509(A)	A
36	DA	1517	G
36	DA	1528(A)	A
36	DA	1541	G
36	DA	1542	A
36	DA	1544	A
36	DA	1553	A
36	DA	1554	A
36	DA	1558	A
36	DA	1559	G
36	DA	1569	A
36	DA	1578	U
36	DA	1579	A
36	DA	1584	C
36	DA	1586	A
36	DA	1588	C
36	DA	1608	A
36	DA	1609	A
36	DA	1610	A
36	DA	1616	A
36	DA	1618	A
36	DA	1634	A
36	DA	1640	C
36	DA	1644	C
36	DA	1648	C
36	DA	1674	G
36	DA	1699	G

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Mol	Chain	Res	Type
36	DA	1718	G
36	DA	1722	A
36	DA	1739	U
36	DA	1744	C
36	DA	1748	G
36	DA	1756	G
36	DA	1759	A
36	DA	1763	G
36	DA	1764	G
36	DA	1773	A
36	DA	1780	A
36	DA	1781	C
36	DA	1784	A
36	DA	1791	A
36	DA	1799	G
36	DA	1800	C
36	DA	1801	G
36	DA	1815	A
36	DA	1816	G
36	DA	1820	U
36	DA	1821	A
36	DA	1829	A
36	DA	1839	G
36	DA	1846	G
36	DA	1847	A
36	DA	1850	G
36	DA	1858	G
36	DA	1862	G
36	DA	1866	C
36	DA	1877	A
36	DA	1878	G
36	DA	1885	A
36	DA	1888	G
36	DA	1889	A
36	DA	1900	A
36	DA	1906	G
36	DA	1912	A
36	DA	1929	G
36	DA	1930	G
36	DA	1931	U
36	DA	1937	A
36	DA	1938	A

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Mol	Chain	Res	Type
36	DA	1943	U
36	DA	1944	U
36	DA	1945	G
36	DA	1948	G
36	DA	1955	U
36	DA	1960	A
36	DA	1963	U
36	DA	1964	G
36	DA	1967	C
36	DA	1969	A
36	DA	1970	A
36	DA	1971	A
36	DA	1972	A
36	DA	1993	U
36	DA	1997	G
36	DA	2004	G
36	DA	2021	C
36	DA	2022	U
36	DA	2031	A
36	DA	2033	A
36	DA	2034	U
36	DA	2043	C
36	DA	2055	C
36	DA	2056	G
36	DA	2060	A
36	DA	2061	G
36	DA	2062	A
36	DA	2065	C
36	DA	2069	G
36	DA	2076	U
36	DA	2100	G
36	DA	2103	C
36	DA	2104	G
36	DA	2111	C
36	DA	2116	G
36	DA	2118	U
36	DA	2127	G
36	DA	2132	U
36	DA	2133	G
36	DA	2134	A
36	DA	2147	G
36	DA	2158	A

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Mol	Chain	Res	Type
36	DA	2159	G
36	DA	2163	C
36	DA	2172	U
36	DA	2173	A
36	DA	2185	C
36	DA	2187	G
36	DA	2189	U
36	DA	2190	G
36	DA	2193	G
36	DA	2198	A
36	DA	2199	A
36	DA	2200	C
36	DA	2203	U
36	DA	2205	C
36	DA	2206	G
36	DA	2207	G
36	DA	2208	A
36	DA	2219	G
36	DA	2225	A
36	DA	2226	C
36	DA	2238	G
36	DA	2239	G
36	DA	2263	C
36	DA	2273	A
36	DA	2283	C
36	DA	2288	A
36	DA	2297	C
36	DA	2305	A
36	DA	2307	G
36	DA	2308	G
36	DA	2309	A
36	DA	2311	A
36	DA	2313	C
36	DA	2319	G
36	DA	2320	A
36	DA	2325	G
36	DA	2334	G
36	DA	2336	A
36	DA	2345	G
36	DA	2346	A
36	DA	2347	C
36	DA	2348	U

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Mol	Chain	Res	Type
36	DA	2349	G
36	DA	2350	C
36	DA	2361	A
36	DA	2383	G
36	DA	2385	C
36	DA	2402	C
36	DA	2423	U
36	DA	2424	C
36	DA	2425	A
36	DA	2427	C
36	DA	2428	G
36	DA	2429	G
36	DA	2430	A
36	DA	2431	U
36	DA	2434	A
36	DA	2435	A
36	DA	2439	A
36	DA	2441	C
36	DA	2448	A
36	DA	2461	C
36	DA	2465	C
36	DA	2469	A
36	DA	2470	G
36	DA	2473	U
36	DA	2474	C
36	DA	2476	A
36	DA	2477	C
36	DA	2478	A
36	DA	2482	G
36	DA	2484	G
36	DA	2502	G
36	DA	2503	A
36	DA	2505	G
36	DA	2520	C
36	DA	2524	G
36	DA	2529	G
36	DA	2543	G
36	DA	2554	U
36	DA	2566	A
36	DA	2567	G
36	DA	2572	A
36	DA	2573	C

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Mol	Chain	Res	Type
36	DA	2577	A
36	DA	2582	G
36	DA	2585	U
36	DA	2586	C
36	DA	2602	A
36	DA	2609	U
36	DA	2610	C
36	DA	2611	U
36	DA	2612	C
36	DA	2630	G
36	DA	2646	C
36	DA	2655	G
36	DA	2657	A
36	DA	2658	C
36	DA	2670	A
36	DA	2673	G
36	DA	2682	U
36	DA	2690	C
36	DA	2691	C
36	DA	2702	U
36	DA	2703	C
36	DA	2712	U
36	DA	2712(A)	A
36	DA	2713	A
36	DA	2726	U
36	DA	2733	A
36	DA	2750	A
36	DA	2751	G
36	DA	2755	C
36	DA	2756	U
36	DA	2757	A
36	DA	2758	A
36	DA	2762	G
36	DA	2764	A
36	DA	2765	A
36	DA	2766	G
36	DA	2778	A
36	DA	2779	U
36	DA	2790	A
36	DA	2791	C
36	DA	2796	U
36	DA	2799	C

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Mol	Chain	Res	Type
36	DA	2801	A
36	DA	2802	G
36	DA	2803	C
36	DA	2808	U
36	DA	2820	A
36	DA	2821	A
36	DA	2824	C
36	DA	2833	G
36	DA	2836	U
36	DA	2849	U
36	DA	2872	G
36	DA	2879	C
36	DA	2880	C
36	DA	2892	A
36	DA	2894	G
36	DA	2895	U
37	DB	8	U
37	DB	13	A
37	DB	14	U
37	DB	15	A
37	DB	16	G
37	DB	22	U
37	DB	25	A
37	DB	35	U
37	DB	41	U
37	DB	42	C
37	DB	45	A
37	DB	52	A
37	DB	53	A
37	DB	56	G
37	DB	67	G
37	DB	73	A
37	DB	81	G
37	DB	82	G
37	DB	88	C
37	DB	89	G
37	DB	90	A
37	DB	91	C
37	DB	104	U
37	DB	110	G
37	DB	113	G

All (202) 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	203	U
1	AA	243	A
1	AA	250	A
1	AA	315	A
1	AA	328	C
1	AA	345	C
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	438	G
1	AA	533	A
1	AA	534	U
1	AA	575	G
1	AA	703	G
1	AA	748	C
1	AA	812	C
1	AA	913	A
1	AA	992	U
1	AA	1049	U
1	AA	1065	U
1	AA	1101	A
1	AA	1201	A
1	AA	1225	A
1	AA	1226	C
1	AA	1281	U
1	AA	1285	A
1	AA	1300	G
1	AA	1347	G
1	AA	1493	A
1	AA	1498	U
1	AA	1505	G
1	AA	1529	G
22	AV	17	C
23	AW	72	A
24	AX	11	A
24	AX	12	A
36	BA	27	G
36	BA	49	A
36	BA	74	A

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Mol	Chain	Res	Type
36	BA	128	C
36	BA	221	A
36	BA	226	G
36	BA	329	G
36	BA	331	A
36	BA	332	A
36	BA	363(F)	A
36	BA	474	G
36	BA	503	A
36	BA	603	A
36	BA	614(A)	U
36	BA	614(C)	A
36	BA	728	G
36	BA	739	G
36	BA	752	A
36	BA	1020	A
36	BA	1022	G
36	BA	1052	C
36	BA	1057	A
36	BA	1156	A
36	BA	1210	A
36	BA	1212	G
36	BA	1237	A
36	BA	1301	A
36	BA	1378	A
36	BA	1427	A
36	BA	1453	U
36	BA	1494	A
36	BA	1541	G
36	BA	1558	A
36	BA	1799	G
36	BA	1819	A
36	BA	1838	C
36	BA	1846	G
36	BA	1930	G
36	BA	1943	U
36	BA	1948	G
36	BA	1992	G
36	BA	2033	A
36	BA	2111	C
36	BA	2126	A
36	BA	2157	G

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Mol	Chain	Res	Type
36	BA	2172	U
36	BA	2198	A
36	BA	2225	A
36	BA	2282	G
36	BA	2296	U
36	BA	2344	U
36	BA	2345	G
36	BA	2422	A
36	BA	2425	A
36	BA	2481	G
36	BA	2611	U
36	BA	2689	U
36	BA	2690	C
36	BA	2756	U
36	BA	2778	A
36	BA	2799	C
1	CA	30	U
1	CA	60	A
1	CA	115	G
1	CA	119	A
1	CA	203	U
1	CA	243	A
1	CA	250	A
1	CA	315	A
1	CA	328	C
1	CA	345	C
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	438	G
1	CA	533	A
1	CA	534	U
1	CA	575	G
1	CA	703	G
1	CA	748	C
1	CA	812	C
1	CA	913	A
1	CA	992	U
1	CA	1049	U
1	CA	1065	U
1	CA	1101	A
1	CA	1201	A

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Mol	Chain	Res	Type
1	CA	1225	A
1	CA	1226	C
1	CA	1281	U
1	CA	1285	A
1	CA	1300	G
1	CA	1347	G
1	CA	1493	A
1	CA	1498	U
22	CV	17	C
23	CW	72	A
24	CX	11	A
24	CX	12	A
36	DA	27	G
36	DA	49	A
36	DA	74	A
36	DA	128	C
36	DA	221	A
36	DA	226	G
36	DA	329	G
36	DA	331	A
36	DA	332	A
36	DA	363(F)	A
36	DA	474	G
36	DA	503	A
36	DA	603	A
36	DA	614(A)	U
36	DA	614(C)	A
36	DA	728	G
36	DA	739	G
36	DA	752	A
36	DA	961	C
36	DA	1020	A
36	DA	1022	G
36	DA	1052	C
36	DA	1057	A
36	DA	1156	A
36	DA	1210	A
36	DA	1212	G
36	DA	1237	A
36	DA	1301	A
36	DA	1378	A
36	DA	1427	A

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Mol	Chain	Res	Type
36	DA	1453	U
36	DA	1494	A
36	DA	1541	G
36	DA	1558	A
36	DA	1799	G
36	DA	1819	A
36	DA	1838	C
36	DA	1846	G
36	DA	1930	G
36	DA	1943	U
36	DA	1948	G
36	DA	1992	G
36	DA	2033	A
36	DA	2111	C
36	DA	2126	A
36	DA	2157	G
36	DA	2172	U
36	DA	2198	A
36	DA	2225	A
36	DA	2282	G
36	DA	2296	U
36	DA	2344	U
36	DA	2345	G
36	DA	2422	A
36	DA	2425	A
36	DA	2481	G
36	DA	2689	U
36	DA	2690	C
36	DA	2756	U
36	DA	2778	A
36	DA	2799	C
36	DA	2835	A
36	DA	2849	U

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

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	$\# Z > 2$
23	5MU	CW	54	23	19,22,23	0.21	0	27,32,35	0.38	0
23	5MU	AW	54	23	19,22,23	0.25	0	27,32,35	0.30	0

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
23	5MU	CW	54	23	-	0/7/25/26	0/2/2/2
23	5MU	AW	54	23	-	0/7/25/26	0/2/2/2

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.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
23	CW	54	5MU	2	0
23	AW	54	5MU	2	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 14 ligands modelled in this entry, 10 are monoatomic - leaving 4 for Mogul analysis.

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$
60	GDP	AY	702	61	25,30,30	1.28	2 (8%)	30,47,47	1.39	4 (13%)
59	FUA	CY	701	-	39,40,40	1.71	7 (17%)	50,64,64	1.56	10 (20%)
60	GDP	CY	702	61	25,30,30	1.42	3 (12%)	30,47,47	1.61	7 (23%)
59	FUA	AY	701	-	39,40,40	1.70	7 (17%)	50,64,64	1.70	8 (16%)

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
60	GDP	AY	702	61	-	2/12/32/32	0/3/3/3
59	FUA	CY	701	-	-	8/16/92/92	0/4/4/4
60	GDP	CY	702	61	-	0/12/32/32	0/3/3/3
59	FUA	AY	701	-	-	7/16/92/92	0/4/4/4

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	CY	701	FUA	C23-C22	-4.55	1.39	1.51
59	AY	701	FUA	C23-C22	-4.43	1.39	1.51
59	AY	701	FUA	C23-C24	-4.35	1.39	1.53
59	CY	701	FUA	C23-C24	-4.35	1.39	1.53
59	AY	701	FUA	C29-C22	4.24	1.53	1.47
60	CY	702	GDP	C5-C6	-4.13	1.39	1.47
59	CY	701	FUA	C29-C22	3.95	1.53	1.47
59	CY	701	FUA	C24-C25	-3.67	1.39	1.50
59	AY	701	FUA	C24-C25	-3.54	1.39	1.50
60	AY	702	GDP	C5-C6	-3.36	1.40	1.47
59	AY	701	FUA	C14-C8	-3.25	1.53	1.59
59	CY	701	FUA	C14-C8	-3.22	1.53	1.59
60	CY	702	GDP	O4'-C1'	2.85	1.44	1.40
60	AY	702	GDP	O4'-C1'	2.49	1.44	1.40
59	CY	701	FUA	C25-C26	2.42	1.39	1.32
59	AY	701	FUA	C25-C26	2.25	1.39	1.32
59	CY	701	FUA	C10-C9	-2.24	1.53	1.57
59	AY	701	FUA	C10-C9	-2.20	1.53	1.57
60	CY	702	GDP	C6-N1	2.07	1.41	1.37

All (29) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	AY	701	FUA	C24-C23-C22	5.35	124.11	112.72
60	CY	702	GDP	C4'-O4'-C1'	-4.40	105.89	109.92
59	CY	701	FUA	C16-O2-C31	-4.26	110.67	117.00
59	AY	701	FUA	C13-C12-C11	-4.18	105.84	111.90
59	CY	701	FUA	C24-C23-C22	4.09	121.43	112.72
59	AY	701	FUA	C16-O2-C31	-3.96	111.12	117.00
59	AY	701	FUA	C8-C9-C10	-3.35	112.82	116.42
60	AY	702	GDP	C8-N7-C5	3.25	108.08	102.55
60	AY	702	GDP	C4'-O4'-C1'	-3.10	107.08	109.92
59	CY	701	FUA	C13-C12-C11	-3.05	107.47	111.90
59	AY	701	FUA	O2-C31-C32	3.04	116.52	111.09
60	CY	702	GDP	C2'-C3'-C4'	-2.97	96.87	102.61
60	CY	702	GDP	C2-N1-C6	-2.85	119.89	125.11
59	CY	701	FUA	C8-C9-C10	-2.81	113.40	116.42
60	CY	702	GDP	C8-N7-C5	2.77	107.27	102.55
60	AY	702	GDP	C2-N1-C6	-2.76	120.06	125.11
60	AY	702	GDP	O4'-C1'-N9	2.36	111.88	108.75
59	CY	701	FUA	O2-C31-C32	2.36	115.29	111.09
59	CY	701	FUA	C28-C26-C27	2.32	119.93	114.59
60	CY	702	GDP	N2-C2-N1	2.27	121.55	116.76
59	AY	701	FUA	C28-C26-C27	2.24	119.75	114.59
60	CY	702	GDP	O4'-C4'-C3'	-2.24	100.72	105.15
59	CY	701	FUA	C10-C5-C4	-2.21	110.51	113.20
59	CY	701	FUA	C21-C14-C8	-2.20	110.41	112.23
59	CY	701	FUA	C24-C25-C26	-2.17	120.39	127.64
59	AY	701	FUA	C21-C14-C8	-2.16	110.44	112.23
60	CY	702	GDP	C5-C6-N1	2.12	118.11	114.07
59	CY	701	FUA	C19-C10-C9	-2.08	108.03	113.19
59	AY	701	FUA	C10-C5-C4	-2.05	110.71	113.20

There are no chirality outliers.

All (17) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
59	AY	701	FUA	C13-C17-C22-C23
59	AY	701	FUA	C13-C17-C22-C29
59	CY	701	FUA	C13-C17-C22-C23
59	CY	701	FUA	C13-C17-C22-C29
60	AY	702	GDP	C5'-O5'-PA-O1A
59	AY	701	FUA	C32-C31-O2-C16
59	AY	701	FUA	O3-C31-O2-C16

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Mol	Chain	Res	Type	Atoms
59	AY	701	FUA	C29-C22-C23-C24
59	CY	701	FUA	C29-C22-C23-C24
59	AY	701	FUA	C17-C22-C23-C24
59	CY	701	FUA	C17-C22-C23-C24
59	CY	701	FUA	C23-C22-C29-O4
59	CY	701	FUA	C23-C22-C29-O5
60	AY	702	GDP	C5'-O5'-PA-O3A
59	CY	701	FUA	C17-C16-O2-C31
59	CY	701	FUA	C23-C24-C25-C26
59	AY	701	FUA	C23-C24-C25-C26

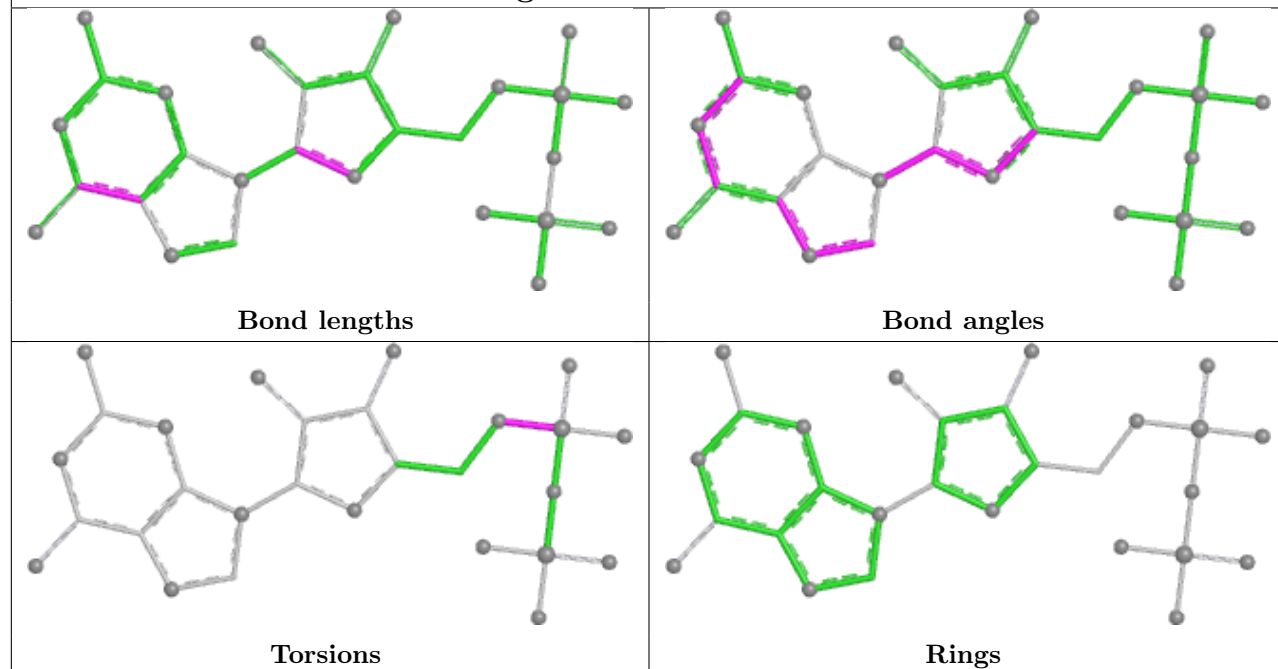
There are no ring outliers.

4 monomers are involved in 65 short contacts:

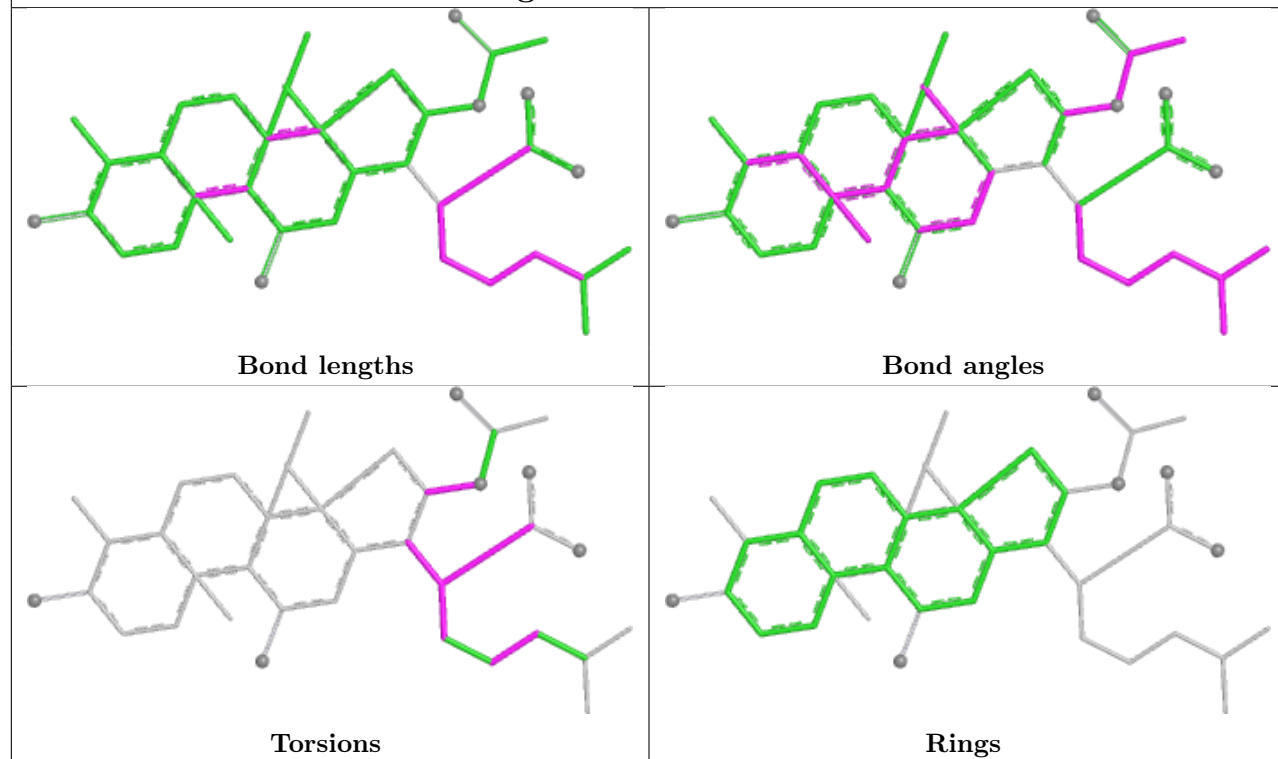
Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	AY	702	GDP	14	0
59	CY	701	FUA	26	0
60	CY	702	GDP	10	0
59	AY	701	FUA	15	0

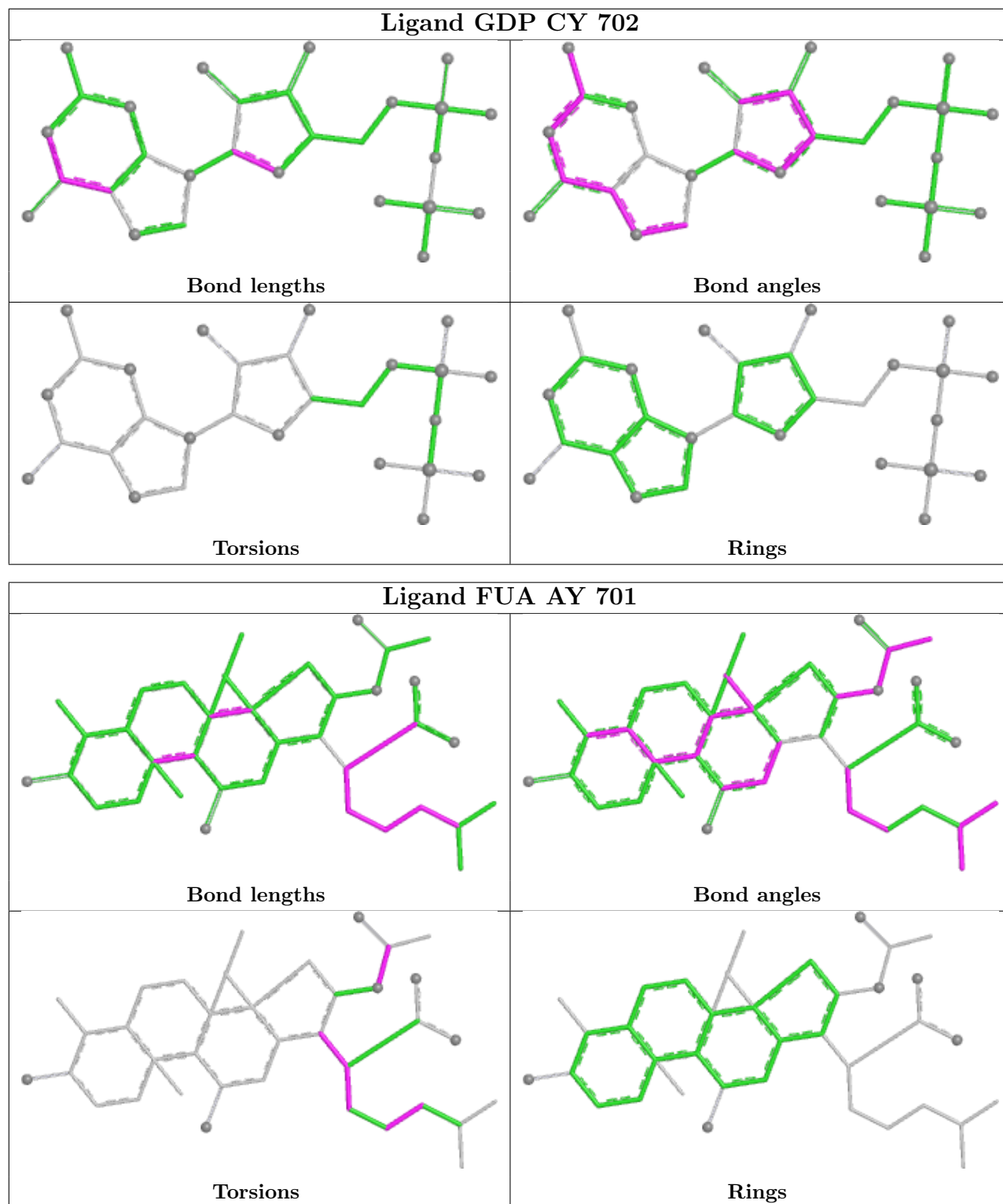
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand GDP AY 702



Ligand FUA CY 701





5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
9	CI	2
9	AI	2
42	BG	1
42	DG	1
23	CW	1
38	BC	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	BG	112:PRO	C	113:ARG	N	3.28
1	DG	112:PRO	C	113:ARG	N	3.21
1	CI	53:VAL	C	54:ASP	N	3.01
1	AI	53:VAL	C	54:ASP	N	3.00
1	CI	104:ARG	C	105:ASP	N	2.58
1	AI	104:ARG	C	105:ASP	N	2.54
1	CW	38:A	O3'	39:C	P	2.06
1	BC	54:ARG	C	55:SER	N	0.98

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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1504/1522 (98%)	-0.04	39 (2%) 57 41	34, 72, 165, 200	0
1	CA	1504/1522 (98%)	0.05	34 (2%) 61 43	43, 89, 174, 200	0
2	AB	235/256 (91%)	-0.14	1 (0%) 89 76	40, 82, 172, 190	0
2	CB	235/256 (91%)	-0.02	2 (0%) 81 64	53, 102, 164, 194	0
3	AC	207/239 (86%)	-0.21	0 100 100	23, 69, 122, 174	0
3	CC	207/239 (86%)	-0.15	2 (0%) 79 61	45, 93, 143, 190	0
4	AD	208/209 (99%)	0.01	3 (1%) 73 54	46, 95, 144, 166	0
4	CD	208/209 (99%)	0.03	3 (1%) 73 54	48, 107, 157, 188	0
5	AE	151/162 (93%)	-0.44	1 (0%) 84 68	27, 62, 107, 187	0
5	CE	151/162 (93%)	-0.25	1 (0%) 84 68	45, 76, 117, 200	0
6	AF	101/101 (100%)	-0.31	0 100 100	44, 85, 125, 174	0
6	CF	101/101 (100%)	0.04	0 100 100	72, 115, 152, 183	0
7	AG	155/156 (99%)	-0.23	2 (1%) 74 55	36, 80, 126, 182	0
7	CG	155/156 (99%)	-0.02	6 (3%) 44 32	63, 108, 150, 193	0
8	AH	138/138 (100%)	-0.32	1 (0%) 84 68	35, 65, 111, 136	0
8	CH	138/138 (100%)	-0.24	0 100 100	44, 79, 117, 147	0
9	AI	127/128 (99%)	-0.05	0 100 100	41, 79, 135, 157	0
9	CI	127/128 (99%)	0.01	1 (0%) 82 66	68, 111, 151, 175	0
10	AJ	99/105 (94%)	0.35	1 (1%) 79 61	33, 87, 180, 193	0
10	CJ	99/105 (94%)	0.41	3 (3%) 52 37	60, 127, 179, 190	0
11	AK	119/129 (92%)	-0.34	1 (0%) 82 66	27, 62, 109, 171	0
11	CK	119/129 (92%)	-0.17	2 (1%) 69 50	48, 89, 126, 181	0
12	AL	125/132 (94%)	-0.19	0 100 100	37, 76, 118, 180	0
12	CL	125/132 (94%)	-0.06	1 (0%) 82 66	42, 82, 124, 200	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	125/126 (99%)	0.24	6 (4%) 36 27	52, 98, 165, 200	0
13	CM	125/126 (99%)	0.33	8 (6%) 27 21	63, 126, 171, 200	0
14	AN	60/61 (98%)	-0.08	1 (1%) 69 50	35, 62, 103, 131	0
14	CN	60/61 (98%)	0.05	1 (1%) 69 50	58, 91, 127, 146	0
15	AO	88/89 (98%)	-0.32	0 100 100	27, 71, 116, 144	0
15	CO	88/89 (98%)	-0.21	1 (1%) 77 59	31, 82, 119, 141	0
16	AP	84/88 (95%)	0.07	1 (1%) 76 57	36, 85, 130, 160	0
16	CP	84/88 (95%)	-0.13	0 100 100	58, 95, 126, 166	0
17	AQ	100/105 (95%)	-0.21	0 100 100	40, 78, 112, 139	0
17	CQ	100/105 (95%)	-0.20	0 100 100	60, 84, 120, 147	0
18	AR	70/88 (79%)	-0.29	0 100 100	38, 72, 119, 167	0
18	CR	70/88 (79%)	-0.09	0 100 100	60, 95, 142, 167	0
19	AS	79/93 (84%)	0.12	4 (5%) 34 26	63, 95, 174, 182	0
19	CS	79/93 (84%)	0.32	5 (6%) 27 22	74, 117, 181, 199	0
20	AT	99/106 (93%)	0.01	1 (1%) 79 61	55, 95, 147, 176	0
20	CT	99/106 (93%)	0.09	0 100 100	72, 103, 153, 173	0
21	AU	25/27 (92%)	0.48	1 (4%) 43 31	33, 84, 132, 167	0
21	CU	25/27 (92%)	0.71	2 (8%) 20 16	77, 115, 145, 164	0
22	AV	76/76 (100%)	0.36	3 (3%) 44 32	51, 94, 154, 200	0
22	CV	76/76 (100%)	0.38	3 (3%) 44 32	67, 107, 165, 200	0
23	AW	76/77 (98%)	1.45	15 (19%) 3 5	97, 182, 200, 200	0
23	CW	76/77 (98%)	1.29	11 (14%) 7 10	97, 190, 200, 200	0
24	AX	12/25 (48%)	4.94	11 (91%) 0 0	52, 114, 167, 193	0
24	CX	12/25 (48%)	4.36	11 (91%) 0 0	52, 114, 172, 193	0
25	AY	667/691 (96%)	0.20	24 (3%) 46 34	71, 142, 179, 200	0
25	CY	667/691 (96%)	0.33	26 (3%) 44 32	84, 151, 186, 200	0
26	B0	84/85 (98%)	0.07	0 100 100	61, 87, 134, 191	0
26	D0	84/85 (98%)	0.36	4 (4%) 36 27	78, 109, 144, 172	0
27	B1	94/98 (95%)	-0.06	2 (2%) 63 45	50, 88, 142, 151	0
27	D1	94/98 (95%)	0.06	1 (1%) 77 59	59, 99, 153, 181	0
28	B2	71/72 (98%)	-0.03	0 100 100	79, 127, 176, 194	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
28	D2	71/72 (98%)	-0.15	0	100	100	82, 134, 172, 186	0
29	B3	60/60 (100%)	-0.11	0	100	100	55, 95, 148, 180	0
29	D3	60/60 (100%)	0.07	0	100	100	61, 105, 145, 174	0
30	B4	58/71 (81%)	0.59	2 (3%)	48	34	90, 141, 200, 200	0
30	D4	58/71 (81%)	0.38	1 (1%)	69	50	106, 166, 200, 200	0
31	B5	59/60 (98%)	0.29	3 (5%)	34	26	46, 96, 175, 192	0
31	D5	59/60 (98%)	0.35	3 (5%)	34	26	50, 104, 167, 200	0
32	B6	50/54 (92%)	0.53	7 (14%)	7	10	55, 97, 142, 173	0
32	D6	50/54 (92%)	0.22	2 (4%)	43	31	71, 111, 153, 178	0
33	B7	49/49 (100%)	0.28	3 (6%)	28	22	51, 79, 117, 200	0
33	D7	49/49 (100%)	0.19	1 (2%)	64	47	64, 91, 127, 166	0
34	B8	64/65 (98%)	0.51	5 (7%)	20	17	51, 81, 124, 148	0
34	D8	64/65 (98%)	0.81	9 (14%)	7	10	67, 104, 137, 168	0
35	B9	37/37 (100%)	0.07	2 (5%)	32	24	66, 89, 127, 141	0
35	D9	37/37 (100%)	0.20	2 (5%)	32	24	65, 91, 151, 187	0
36	BA	2901/2915 (99%)	0.15	55 (1%)	66	47	36, 88, 184, 200	0
36	DA	2901/2915 (99%)	0.19	45 (1%)	70	51	42, 102, 186, 200	0
37	BB	119/122 (97%)	0.19	3 (2%)	58	42	68, 101, 129, 160	0
37	DB	119/122 (97%)	0.38	4 (3%)	48	34	83, 126, 154, 189	0
38	BC	228/229 (99%)	-0.09	2 (0%)	81	64	44, 101, 163, 195	0
38	DC	228/229 (99%)	0.01	3 (1%)	74	55	66, 125, 187, 199	0
39	BD	275/276 (99%)	-0.27	1 (0%)	89	76	31, 64, 106, 155	0
39	DD	275/276 (99%)	-0.16	3 (1%)	77	59	40, 74, 115, 163	0
40	BE	205/206 (99%)	0.08	3 (1%)	71	53	37, 88, 146, 184	0
40	DE	205/206 (99%)	0.04	1 (0%)	87	72	50, 97, 157, 200	0
41	BF	208/210 (99%)	0.04	1 (0%)	87	72	53, 111, 183, 200	0
41	DF	208/210 (99%)	0.18	5 (2%)	59	43	58, 131, 186, 200	0
42	BG	181/182 (99%)	-0.05	2 (1%)	77	59	51, 99, 144, 194	0
42	DG	181/182 (99%)	0.01	2 (1%)	77	59	67, 122, 168, 192	0
43	BH	167/180 (92%)	0.14	4 (2%)	59	43	87, 131, 174, 185	0
43	DH	167/180 (92%)	0.18	4 (2%)	59	43	76, 133, 175, 185	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BJ	0/173	-	-	-	-
44	DJ	0/173	-	-	-	-
45	BN	139/140 (99%)	-0.07	1 (0%) 84 68	60, 99, 148, 177	0
45	DN	139/140 (99%)	0.09	2 (1%) 73 54	64, 108, 162, 176	0
46	BO	122/122 (100%)	-0.37	0 100 100	34, 72, 107, 128	0
46	DO	122/122 (100%)	-0.29	0 100 100	40, 79, 108, 156	0
47	BP	146/150 (97%)	0.37	5 (3%) 48 34	48, 104, 158, 195	0
47	DP	146/150 (97%)	0.41	3 (2%) 63 45	52, 127, 173, 195	0
48	BQ	141/141 (100%)	-0.20	1 (0%) 84 68	39, 77, 122, 173	0
48	DQ	141/141 (100%)	-0.09	1 (0%) 84 68	52, 86, 127, 185	0
49	BR	117/118 (99%)	-0.10	2 (1%) 69 50	36, 89, 128, 177	0
49	DR	117/118 (99%)	0.01	3 (2%) 57 41	46, 95, 135, 181	0
50	BS	99/112 (88%)	0.36	1 (1%) 79 61	53, 109, 156, 191	0
50	DS	99/112 (88%)	0.41	4 (4%) 43 31	51, 121, 164, 192	0
51	BT	138/146 (94%)	-0.02	2 (1%) 73 54	53, 95, 168, 200	0
51	DT	138/146 (94%)	0.14	1 (0%) 84 68	56, 103, 172, 200	0
52	BU	117/118 (99%)	0.04	1 (0%) 81 64	55, 91, 138, 200	0
52	DU	117/118 (99%)	0.17	2 (1%) 69 50	66, 104, 147, 191	0
53	BV	101/101 (100%)	0.10	3 (2%) 52 37	43, 112, 158, 177	0
53	DV	101/101 (100%)	0.25	4 (3%) 43 31	64, 126, 171, 193	0
54	BW	113/113 (100%)	-0.04	0 100 100	56, 95, 150, 195	0
54	DW	113/113 (100%)	-0.09	0 100 100	73, 106, 158, 194	0
55	BX	93/96 (96%)	0.17	1 (1%) 77 59	60, 101, 133, 176	0
55	DX	93/96 (96%)	0.17	1 (1%) 77 59	63, 111, 141, 154	0
56	BY	107/110 (97%)	0.52	3 (2%) 55 39	93, 138, 178, 187	0
56	DY	107/110 (97%)	0.46	4 (3%) 45 33	87, 147, 182, 200	0
57	BZ	185/206 (89%)	-0.06	0 100 100	50, 108, 163, 190	0
57	DZ	185/206 (89%)	0.15	0 100 100	54, 122, 170, 199	0
All	All	22516/23492 (95%)	0.09	469 (2%) 63 45	23, 98, 175, 200	0

All (469) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
23	CW	34	C	11.2
24	AX	12	A	8.5
24	AX	11	A	7.6
24	CX	14	U	7.1
24	AX	14	U	7.0
23	AW	17	C	6.7
22	AV	17	C	6.4
23	CW	35	A	6.3
24	CX	12	A	6.2
36	DA	654(E)	G	6.1
23	AW	34	C	6.1
24	AX	13	A	6.1
34	D8	65	GLU	6.1
24	AX	16	U	6.0
36	BA	1541	G	5.8
23	CW	17(A)	U	5.6
24	AX	15	G	5.6
24	CX	15	G	5.5
36	BA	654(H)	G	5.5
24	CX	13	A	5.4
1	AA	1036	G	5.4
23	CW	37	A	5.2
24	CX	11	A	5.1
1	AA	89	C	5.1
1	CA	1036	G	5.0
24	AX	17	U	5.0
7	CG	82	GLY	4.9
1	CA	81	U	4.9
1	AA	1028	C	4.9
33	B7	49	ARG	4.8
1	AA	1026	G	4.8
23	CW	36	U	4.7
36	BA	654(K)	C	4.7
36	BA	654(D)	G	4.7
23	AW	17(A)	U	4.7
24	CX	16	U	4.7
31	B5	2	ALA	4.7
13	CM	123	ALA	4.6
7	AG	84	ASN	4.6
1	AA	1029	C	4.6
1	CA	89	C	4.6
1	CA	80	G	4.5
24	CX	17	U	4.5

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Mol	Chain	Res	Type	RSRZ
25	AY	116	PRO	4.5
24	CX	18	C	4.5
36	BA	654(F)	C	4.5
36	BA	2802	G	4.4
36	DA	654(D)	G	4.4
23	CW	17	C	4.4
36	DA	654(S)	G	4.4
24	AX	18	C	4.4
36	BA	654(I)	C	4.4
34	B8	65	GLU	4.2
7	AG	82	GLY	4.2
13	AM	124	PRO	4.2
25	CY	504	ARG	4.1
31	D5	2	ALA	4.1
56	DY	28	LYS	4.1
1	AA	1030(A)	G	4.0
38	BC	2	PRO	4.0
56	BY	82	PRO	4.0
36	BA	654(E)	G	4.0
36	BA	1542	A	4.0
19	AS	82	GLY	4.0
16	AP	68	ASP	3.9
47	BP	107	LYS	3.9
23	AW	35	A	3.9
30	B4	26	SER	3.9
1	CA	1001(A)	G	3.9
25	CY	118	SER	3.9
36	DA	1541	G	3.9
34	D8	45	GLY	3.8
36	DA	654(L)	G	3.8
22	CV	47	U	3.7
36	DA	884	C	3.7
23	AW	36	U	3.7
31	D5	60	VAL	3.7
13	AM	123	ALA	3.7
36	DA	654(J)	A	3.7
1	AA	532	A	3.6
49	DR	2	ARG	3.6
36	BA	654(L)	G	3.6
1	AA	1030(B)	C	3.6
25	AY	89	ASP	3.6
52	DU	91	ASP	3.6

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Mol	Chain	Res	Type	RSRZ
34	D8	64	TYR	3.6
13	CM	125	ARG	3.6
19	AS	81	ARG	3.6
41	DF	161	GLU	3.5
7	CG	81	GLY	3.5
19	AS	10	PHE	3.5
10	CJ	23	ILE	3.5
3	CC	161	GLU	3.5
25	CY	121	VAL	3.4
36	DA	1542	A	3.4
36	DA	2897	U	3.4
1	AA	1027	C	3.4
36	DA	2892	A	3.4
1	CA	88	A	3.4
36	BA	654(G)	C	3.4
36	DA	2802	G	3.4
36	DA	654(K)	C	3.3
11	CK	129	SER	3.3
35	D9	37	GLY	3.3
25	CY	529	ILE	3.3
1	CA	1030(A)	G	3.3
1	CA	1030	C	3.3
32	B6	42	TRP	3.3
35	B9	37	GLY	3.3
36	BA	2894	G	3.3
53	BV	101	GLY	3.2
22	CV	17	C	3.2
36	DA	654(F)	C	3.2
1	AA	1030(C)	G	3.2
1	CA	82	U	3.2
1	CA	79	G	3.2
23	AW	6	G	3.2
4	AD	26	CYS	3.1
25	CY	104	ALA	3.1
23	AW	1	C	3.1
1	AA	918	A	3.1
36	BA	1051	G	3.1
36	DA	654(O)	G	3.1
36	DA	1051	G	3.1
39	BD	12	SER	3.1
1	AA	1025	U	3.1
1	CA	1037	C	3.1

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Mol	Chain	Res	Type	RSRZ
7	CG	84	ASN	3.1
22	AV	1	G	3.1
56	DY	82	PRO	3.1
1	AA	1498	U	3.1
14	AN	2	ALA	3.1
1	CA	1030(D)	A	3.1
42	BG	77	ILE	3.1
25	AY	88	VAL	3.1
36	DA	2893	G	3.0
55	DX	73	ARG	3.0
19	CS	67	VAL	3.0
25	AY	451	ILE	3.0
25	CY	105	ILE	3.0
51	BT	105	LEU	3.0
34	D8	32	LEU	3.0
36	DA	654(R)	C	3.0
1	CA	1032	G	2.9
25	AY	119	GLU	2.9
1	AA	1038	C	2.9
1	AA	90	U	2.9
36	DA	2506	U	2.9
49	DR	3	HIS	2.9
50	DS	14	VAL	2.9
36	BA	2795	G	2.9
36	BA	2801	A	2.9
36	DA	1174	A	2.9
19	CS	81	ARG	2.9
26	D0	71	ASP	2.9
25	CY	133	ILE	2.9
25	CY	531	GLY	2.9
32	B6	22	ALA	2.9
1	AA	1531	A	2.9
1	AA	93	G	2.9
1	CA	1002	G	2.9
36	DA	654(N)	G	2.9
21	AU	25	LYS	2.9
13	CM	121	LYS	2.9
1	AA	88	A	2.9
43	DH	174	GLY	2.9
1	AA	1024	G	2.9
34	B8	35	GLN	2.9
34	D8	29	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
25	CY	107	VAL	2.8
31	B5	60	VAL	2.8
13	CM	122	LYS	2.8
32	B6	24	GLU	2.8
36	DA	527	C	2.8
14	CN	2	ALA	2.8
43	BH	178	ALA	2.8
52	DU	97	ASP	2.8
1	AA	1030(D)	A	2.8
23	AW	37	A	2.8
1	CA	1028	C	2.8
36	DA	1914	C	2.8
25	CY	525	PHE	2.8
53	DV	101	GLY	2.8
36	BA	1449	A	2.8
8	AH	1	MET	2.8
36	DA	654(T)	C	2.8
26	D0	6	GLY	2.8
21	CU	9	ARG	2.8
50	BS	33	LYS	2.8
36	BA	527	C	2.7
1	AA	1456	G	2.7
36	DA	654(C)	G	2.7
36	DA	1033	U	2.7
23	CW	38	A	2.7
24	CX	21	A	2.7
50	DS	12	PHE	2.7
36	BA	1534	U	2.7
1	CA	78	G	2.7
36	BA	654(J)	A	2.7
36	BA	654(S)	G	2.7
26	D0	7	LEU	2.7
25	AY	122	TRP	2.7
56	BY	81	LYS	2.7
31	B5	4	HIS	2.7
56	DY	3	VAL	2.7
43	DH	173	PRO	2.7
47	DP	20	GLY	2.7
24	AX	19	A	2.7
22	CV	1	G	2.7
41	DF	35	GLU	2.7
1	CA	470	C	2.7

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Mol	Chain	Res	Type	RSRZ
23	CW	1	C	2.7
25	CY	527	ASN	2.7
2	CB	7	VAL	2.6
1	AA	80	G	2.6
13	AM	125	ARG	2.6
51	BT	3	ARG	2.6
25	AY	90	PHE	2.6
22	AV	16	U	2.6
25	CY	567	LEU	2.6
26	D0	13	GLY	2.6
34	D8	35	GLN	2.6
38	DC	204	GLY	2.6
25	AY	514	VAL	2.6
34	D8	34	TRP	2.6
4	CD	42	GLN	2.6
27	D1	32	LYS	2.6
34	D8	63	PRO	2.6
36	DA	654(H)	G	2.6
34	B8	64	TYR	2.6
1	AA	1005	A	2.6
1	CA	1035	A	2.6
50	DS	90	GLY	2.6
25	AY	535	PRO	2.6
1	CA	999	C	2.6
36	BA	272(J)	C	2.6
41	DF	50	SER	2.6
23	AW	7	G	2.6
1	AA	81	U	2.6
25	CY	17	ILE	2.6
42	DG	137	GLU	2.6
1	AA	1447	A	2.6
24	AX	21	A	2.6
36	BA	654(V)	A	2.6
43	BH	140	LYS	2.6
38	DC	78	ILE	2.6
47	BP	104	GLY	2.6
5	CE	81	GLU	2.5
47	BP	41	ARG	2.5
7	CG	33	ASP	2.5
40	BE	89	ASP	2.5
36	BA	2062	A	2.5
36	DA	331	A	2.5

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Mol	Chain	Res	Type	RSRZ
25	AY	113	GLY	2.5
25	AY	501	THR	2.5
23	AW	16	C	2.5
25	CY	83	ASP	2.5
1	AA	79	G	2.5
1	AA	1031	G	2.5
25	AY	114	VAL	2.5
25	CY	501	THR	2.5
36	DA	156	U	2.5
36	DA	654(M)	C	2.5
36	BA	275	G	2.5
53	DV	74	LYS	2.5
25	AY	533	VAL	2.5
42	DG	142	PRO	2.5
4	CD	26	CYS	2.5
1	AA	1030	C	2.5
1	AA	1037	C	2.5
1	CA	1029	C	2.5
36	DA	654(G)	C	2.5
37	BB	88	C	2.5
1	AA	1003	G	2.4
36	DA	883	G	2.4
36	BA	2506	U	2.4
49	BR	2	ARG	2.4
25	CY	530	VAL	2.4
36	BA	2804	C	2.4
36	BA	2896	C	2.4
36	DA	654(I)	C	2.4
49	BR	3	HIS	2.4
24	CX	20	A	2.4
38	DC	168	LYS	2.4
32	B6	40	CYS	2.4
1	AA	631	G	2.4
36	BA	2793	G	2.4
1	CA	1000	U	2.4
49	DR	102	GLU	2.4
39	DD	276	LYS	2.4
25	AY	431	LEU	2.4
36	BA	2803	C	2.4
25	CY	594	VAL	2.4
25	CY	116	PRO	2.4
13	AM	122	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
1	CA	84	U	2.4
37	DB	1	U	2.4
41	DF	168	ARG	2.4
32	D6	42	TRP	2.4
36	BA	1350	C	2.4
36	DA	654(B)	C	2.4
1	AA	1256	A	2.4
11	CK	52	GLY	2.4
25	CY	620	VAL	2.4
27	B1	36	GLY	2.4
5	AE	155	GLU	2.4
21	CU	10	ARG	2.4
36	DA	1173	G	2.4
25	CY	97	SER	2.3
47	BP	87	ASP	2.3
11	AK	127	LYS	2.3
48	BQ	140	ALA	2.3
30	D4	34	GLU	2.3
36	BA	1528	A	2.3
10	AJ	75	ILE	2.3
33	B7	48	LYS	2.3
19	CS	68	GLY	2.3
47	DP	15	ARG	2.3
1	CA	1034	G	2.3
37	BB	89	G	2.3
2	AB	237	ALA	2.3
1	CA	90	U	2.3
36	BA	1540	U	2.3
13	CM	4	ILE	2.3
20	AT	74	LYS	2.3
43	BH	141	VAL	2.3
40	BE	67	PHE	2.3
3	CC	110	ASN	2.3
25	AY	457	LEU	2.3
51	DT	6	LEU	2.3
50	DS	102	ALA	2.3
43	BH	173	PRO	2.3
36	BA	2794	C	2.3
25	AY	536	LYS	2.3
1	AA	1034	G	2.3
24	CX	22	A	2.3
36	DA	2793	G	2.3

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Mol	Chain	Res	Type	RSRZ
37	DB	89	G	2.3
37	DB	119	G	2.3
1	CA	1257	U	2.3
32	B6	37	ARG	2.3
56	BY	73	ARG	2.3
13	CM	100	GLY	2.3
13	CM	120	LYS	2.2
19	AS	42	PRO	2.2
25	AY	131	PRO	2.2
45	DN	109	LYS	2.2
45	BN	139	GLU	2.2
4	AD	19	LEU	2.2
36	DA	2791	C	2.2
1	CA	532	A	2.2
1	CA	1001	A	2.2
36	BA	528	A	2.2
23	CW	20	U	2.2
1	AA	1002	G	2.2
35	B9	1	MET	2.2
36	BA	1533	G	2.2
36	BA	2893	G	2.2
25	CY	94	VAL	2.2
19	CS	82	GLY	2.2
13	CM	124	PRO	2.2
19	CS	42	PRO	2.2
30	B4	29	PRO	2.2
1	CA	1027	C	2.2
1	CA	1030(B)	C	2.2
36	DA	2471	C	2.2
1	AA	204	U	2.2
1	CA	1041	A	2.2
36	DA	1073	A	2.2
25	CY	146	LEU	2.2
1	AA	1032	G	2.2
34	D8	28	GLY	2.2
36	BA	1559	G	2.2
2	CB	133	LYS	2.2
10	CJ	38	ILE	2.2
42	BG	142	PRO	2.2
48	DQ	79	LEU	2.2
4	AD	9	CYS	2.2
25	AY	118	SER	2.2

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Mol	Chain	Res	Type	RSRZ
41	DF	181	LEU	2.2
1	AA	1013	G	2.2
1	CA	93	G	2.2
1	CA	1456	G	2.2
36	DA	2588	G	2.2
37	BB	23	G	2.2
25	AY	579	GLU	2.2
47	BP	74	GLU	2.2
43	DH	178	ALA	2.2
4	CD	3	ARG	2.2
23	CW	72	A	2.2
36	BA	1049	C	2.2
36	BA	2310	A	2.2
12	CL	28	LYS	2.1
43	DH	85	LYS	2.1
27	B1	27	GLU	2.1
41	BF	35	GLU	2.1
33	D7	36	GLN	2.1
33	B7	23	ARG	2.1
1	AA	1001(A)	G	2.1
23	AW	31	G	2.1
34	B8	32	LEU	2.1
36	BA	274	G	2.1
36	BA	1173	G	2.1
36	BA	1997	G	2.1
36	BA	2308	G	2.1
47	DP	72	PRO	2.1
39	DD	237	GLU	2.1
1	CA	83	U	2.1
23	AW	33	U	2.1
23	CW	33	U	2.1
36	BA	120	U	2.1
36	DA	1026	U	2.1
13	AM	84	ILE	2.1
25	CY	147	TRP	2.1
25	AY	111	SER	2.1
1	CA	1190	G	2.1
36	BA	882	G	2.1
36	BA	2805	G	2.1
23	AW	68	C	2.1
36	BA	1914	C	2.1
36	DA	2896	C	2.1

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Mol	Chain	Res	Type	RSRZ
53	DV	7	THR	2.1
35	D9	1	MET	2.1
10	CJ	59	SER	2.1
25	CY	95	GLU	2.1
25	CY	115	GLU	2.1
15	CO	20	GLY	2.1
32	B6	20	ASN	2.1
32	B6	35	GLU	2.1
45	DN	113	GLY	2.1
9	CI	119	ALA	2.1
53	BV	20	LEU	2.1
55	BX	78	LYS	2.1
36	BA	654(C)	G	2.1
36	DA	27	G	2.1
36	DA	882	G	2.1
25	CY	651	GLU	2.1
7	CG	83	ALA	2.1
24	AX	20	A	2.1
36	BA	92	A	2.1
36	BA	2799	C	2.1
37	DB	6	C	2.1
34	B8	63	PRO	2.1
25	AY	504	ARG	2.1
52	BU	58	ARG	2.1
38	BC	168	LYS	2.1
7	CG	9	VAL	2.1
25	AY	440	VAL	2.1
36	BA	504	U	2.0
36	BA	2032	G	2.0
36	DA	1494	A	2.0
36	DA	2820	A	2.0
13	AM	114	ARG	2.0
32	D6	10	LEU	2.0
40	BE	69	LYS	2.0
25	AY	593	ALA	2.0
25	AY	83	ASP	2.0
40	DE	127	ASP	2.0
53	BV	21	ARG	2.0
23	AW	20	U	2.0
53	DV	20	LEU	2.0
23	AW	72	A	2.0
36	BA	544	G	2.0

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Mol	Chain	Res	Type	RSRZ
36	BA	1087	G	2.0
1	AA	92	C	2.0
36	BA	334	C	2.0
31	D5	47	PRO	2.0
39	DD	275	LYS	2.0
56	DY	77	PRO	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, 95th 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
23	5MU	CW	54	21/22	0.58	0.12	200,200,200,200	0
23	5MU	AW	54	21/22	0.62	0.16	200,200,200,200	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, 95th 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	FUA	CY	701	37/37	0.19	0.29	102,104,107,109	0
59	FUA	AY	701	37/37	0.33	0.30	98,102,110,111	0
61	MG	AY	703	1/1	0.82	0.15	55,55,55,55	0
58	ZN	D4	1000	1/1	0.83	0.10	200,200,200,200	0
60	GDP	AY	702	28/28	0.90	0.10	93,97,99,99	0
58	ZN	B4	101	1/1	0.90	0.08	172,172,172,172	0
60	GDP	CY	702	28/28	0.94	0.07	96,102,109,110	0
61	MG	CY	703	1/1	0.94	0.11	46,46,46,46	0
58	ZN	CD	301	1/1	0.98	0.12	69,69,69,69	0
58	ZN	AD	301	1/1	0.98	0.18	78,78,78,78	0

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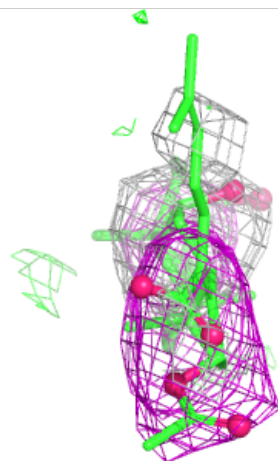
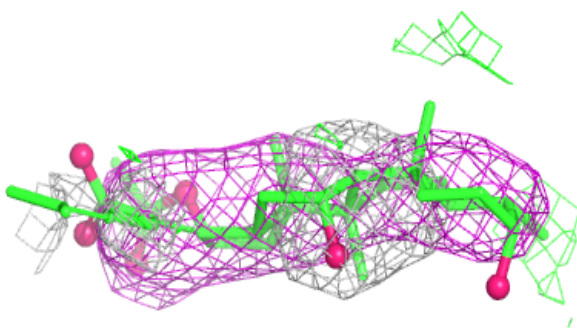
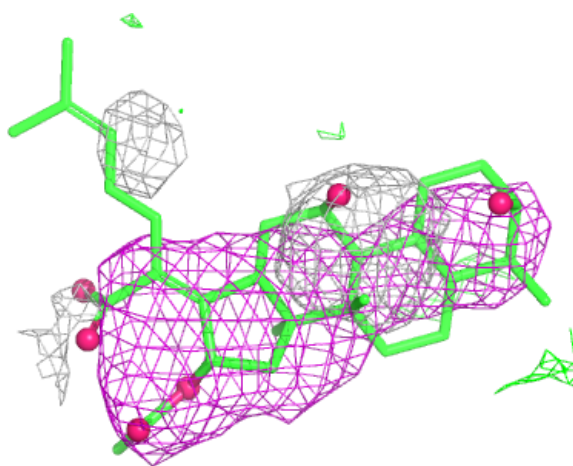
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
58	ZN	AN	101	1/1	0.99	0.08	84,84,84,84	0
58	ZN	CN	101	1/1	0.99	0.03	86,86,86,86	0
58	ZN	B9	101	1/1	0.99	0.03	93,93,93,93	0
58	ZN	D9	1000	1/1	1.00	0.02	123,123,123,123	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

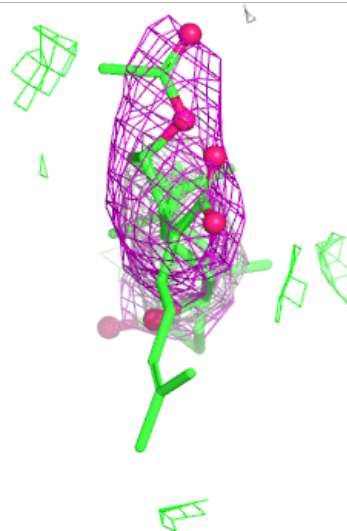
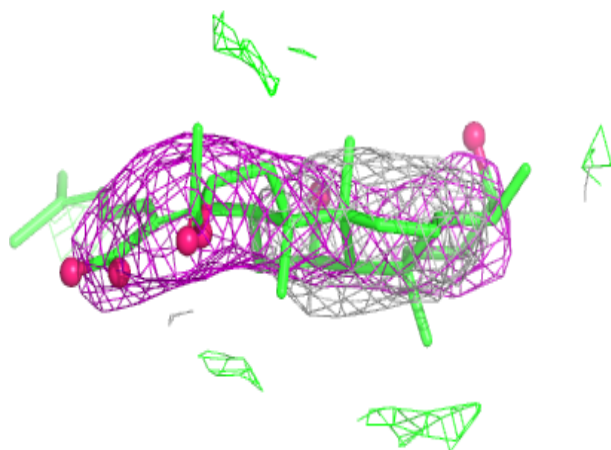
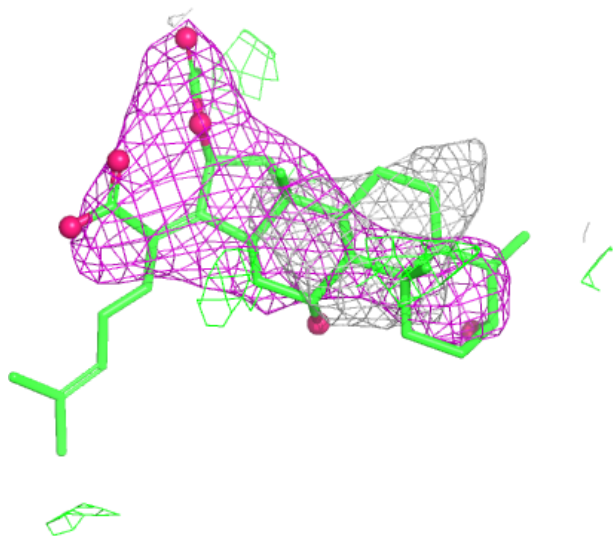
Electron density around FUA CY 701:

2mF_o-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



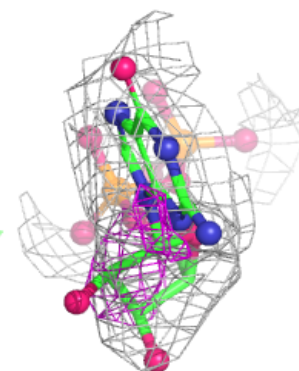
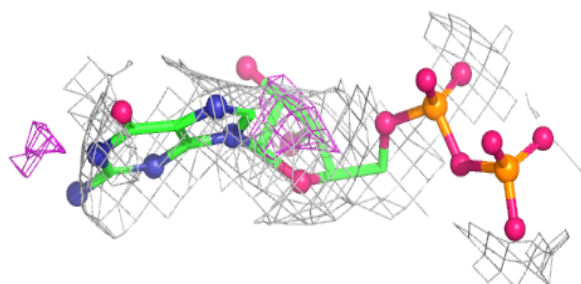
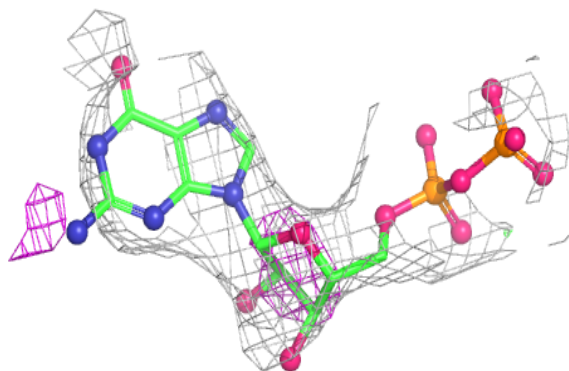
Electron density around FUA AY 701:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

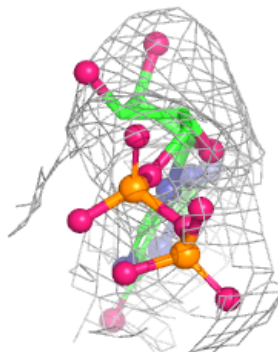
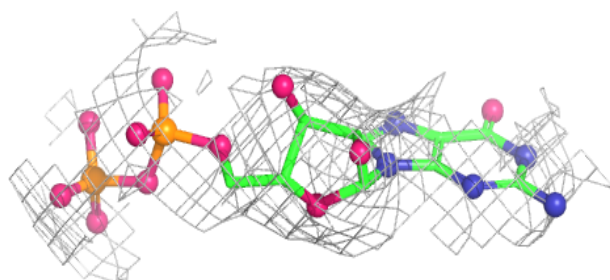
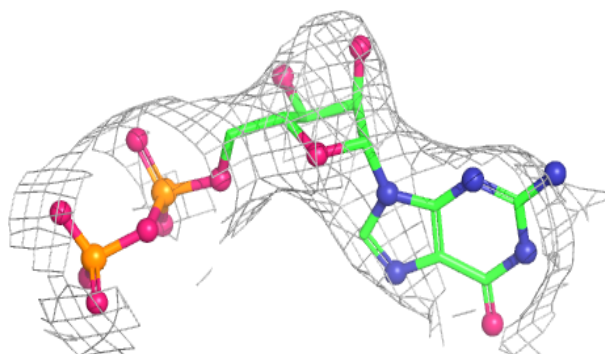


Electron density around GDP AY 702:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around GDP CY 702:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



6.5 Other polymers [i](#)

There are no such residues in this entry.