



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 7, 2020 – 04:44 am BST

PDB ID : 4V5R
Title : The crystal structure of EF-Tu and Trp-tRNA-Trp bound to a cognate codon on the 70S ribosome.
Authors : Schmeing, T.M.; Voorhees, R.M.; Ramakrishnan, V.
Deposited on : 2010-12-07
Resolution : 3.10 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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.11
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

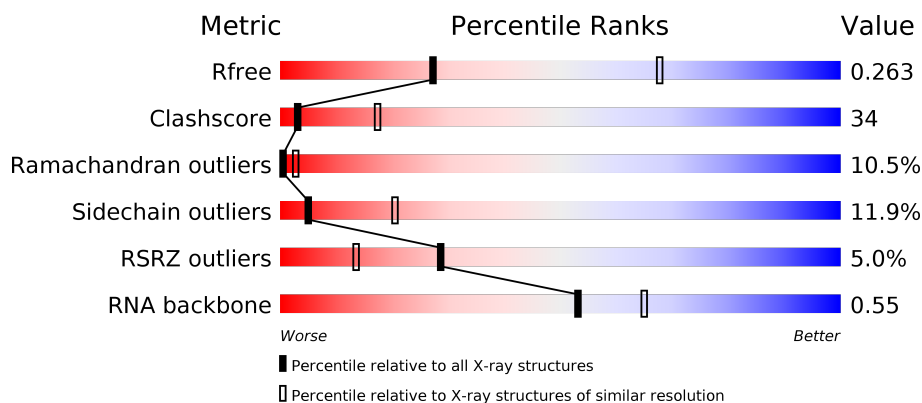
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1094 (3.10-3.10)
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)
RNA backbone	3102	1116 (3.40-2.80)

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 on 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	<div> <div>0%</div> <div> <div></div> <div>38%</div> <div>48%</div> <div>11%</div> <div>••</div> </div> </div>
1	CA	1522	<div> <div>2%</div> <div> <div></div> <div>42%</div> <div>45%</div> <div>10%</div> <div>••</div> </div> </div>
2	AB	256	<div> <div>2%</div> <div> <div></div> <div>30%</div> <div>50%</div> <div>10%</div> <div>•</div> <div>9%</div> </div> </div>
2	CB	256	<div> <div>0%</div> <div> <div></div> <div>33%</div> <div>46%</div> <div>11%</div> <div>•</div> <div>9%</div> </div> </div>



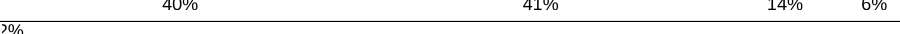
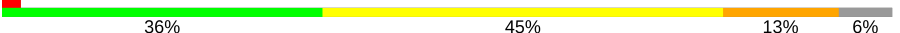

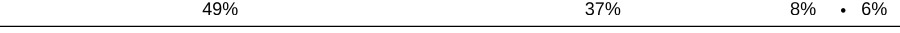

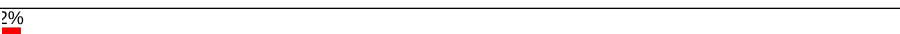
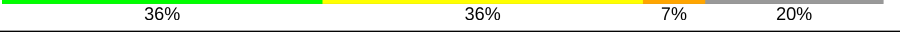
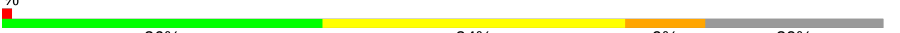
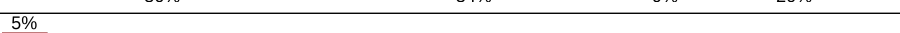


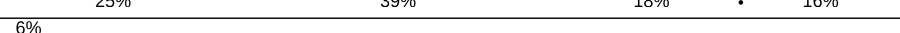
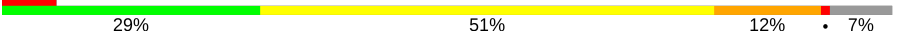

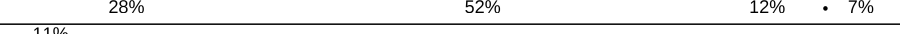


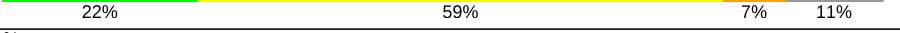

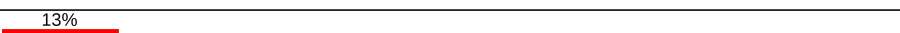
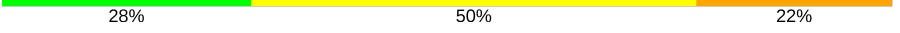


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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	131	
12	CL	131	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	

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Mol	Chain	Length	Quality of chain
15	CO	89	
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	AW	76	
22	CV	76	
22	CW	76	
23	AX	27	
23	CX	27	
24	AY	77	
24	CY	77	
25	AZ	405	
25	CZ	405	
26	B0	85	
26	D0	85	

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Mol	Chain	Length	Quality of chain
27	B1	98	
27	D1	98	
28	B2	72	
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	

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Mol	Chain	Length	Quality of chain
39	DD	276	
40	BE	206	
40	DE	206	
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	BK	147	
45	DK	147	
46	BN	140	
46	DN	140	
47	BO	122	
47	DO	122	
48	BP	150	
48	DP	150	
49	BQ	141	
49	DQ	141	
50	BR	118	
50	DR	118	
51	BS	112	
51	DS	112	

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Mol	Chain	Length	Quality of chain
52	BT	146	
52	DT	146	
53	BU	118	
53	DU	118	
54	BV	101	
54	DV	101	
55	BW	113	
55	DW	113	
56	BX	96	
56	DX	96	
57	BY	110	
57	DY	110	
58	BZ	206	
58	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
24	H2U	AY	16	-	-	-	X
24	H2U	CY	16	-	-	-	X
24	H2U	CY	17	-	-	-	X
59	ZN	AD	301	-	-	X	-
59	ZN	AN	101	-	-	X	-
59	ZN	CD	301	-	-	X	-
59	ZN	CN	101	-	-	X	-
60	GDP	AZ	501	-	-	X	-
61	KIR	AZ	502	-	-	-	X

2 Entry composition

There are 61 unique types of molecules in this entry. The entry contains 307330 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1510	Total	C	N	O	P	0	0	0
			32451	14445	6010	10487	1509			
1	CA	1510	Total	C	N	O	P	0	0	0
			32451	14445	6010	10487	1509			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			
2	CB	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			
3	CC	206	Total	C	N	O	S	0	0	0
			1612	1016	314	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	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			
5	CE	150	Total	C	N	O	S	0	0	0
			1146	724	217	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	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	98	Total	C	N	O	S	0	0	0
			794	499	156	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	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			
12	CL	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	124	Total	C	N	O	S	0	0	0
			987	611	205	169	2			
13	CM	124	Total	C	N	O	S	0	0	0
			987	611	205	169	2			

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S14.

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

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S15.

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

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			
16	CP	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			823	528	151	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	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			
19	CS	78	Total	C	N	O	S	0	0	0
			629	403	114	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	24	Total	C	N	O	0	0	0
			208	128	50	30			
21	CU	24	Total	C	N	O	0	0	0
			208	128	50	30			

- Molecule 22 is a RNA chain called E-SITE TRNA PHE OR P-SITE TRNA PHE.

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

- Molecule 23 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AX	17	Total	C	N	O	P	0	0	0
			362	164	68	114	16			
23	CX	17	Total	C	N	O	P	0	0	0
			362	164	68	114	16			

- Molecule 24 is a RNA chain called A-SITE TRNA TRP-TRNA TRP.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	AY	77	Total	C	N	O	P	S	0	0	0
			1645	742	289	536	76	2			
24	CY	77	Total	C	N	O	P	S	0	0	0
			1645	742	289	536	76	2			

- Molecule 25 is a protein called ELONGATION FACTOR TU.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	AZ	385	Total	C	N	O	S	0	0	0
			2984	1885	524	563	12			
25	CZ	385	Total	C	N	O	S	0	0	0
			2984	1885	524	563	12			

- 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			
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	93	Total	C	N	O	S	0	0	0
			731	460	145	125	1			
27	D1	93	Total	C	N	O	S	0	0	0
			731	460	145	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	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			
29	D3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B4	44	Total	C	N	O	S	0	0	0
			340	218	57	61	4			
30	D4	44	Total	C	N	O	S	0	0	0
			340	218	57	61	4			

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
33	D7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	B8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			
34	D8	63	Total	C	N	O	S	0	0	0
			507	326	101	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
			62477	27807	11683	20087	2900			
36	DA	2901	Total	C	N	O	P	0	0	0
			62477	27807	11683	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	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			
40	DE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			
41	DF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	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			
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	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			
43	DH	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BJ	130	Total	C	N	O	0	0	0
			651	391	130	130			
44	DJ	130	Total	C	N	O	0	0	0
			651	391	130	130			

- Molecule 45 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
45	BK	140	Total	C	N	O	0	0	0
			700	420	140	140			
45	DK	140	Total	C	N	O	0	0	0
			700	420	140	140			

- Molecule 46 is a protein called 50S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
46	DN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 47 is a protein called 50S RIBOSOMAL PROTEIN L14.

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

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

- Molecule 48 is a protein called 50S RIBOSOMAL PROTEIN L15.

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

- Molecule 49 is a protein called 50S RIBOSOMAL PROTEIN L16.

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

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

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

- Molecule 51 is a protein called 50S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	BS	98	Total	C	N	O		0	0	0
			770	486	154	130				
51	DS	98	Total	C	N	O		0	0	0
			770	486	154	130				

- Molecule 52 is a protein called 50S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
52	DT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 53 is a protein called 50S RIBOSOMAL PROTEIN L20.

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

- Molecule 54 is a protein called 50S RIBOSOMAL PROTEIN L21.

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

- Molecule 55 is a protein called 50S RIBOSOMAL PROTEIN L22.

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

- Molecule 56 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
56	BX	92	Total	C	N	O	0	0	0
			725	471	131	123			
56	DX	92	Total	C	N	O	0	0	0
			725	471	131	123			

- Molecule 57 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			
57	DY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			

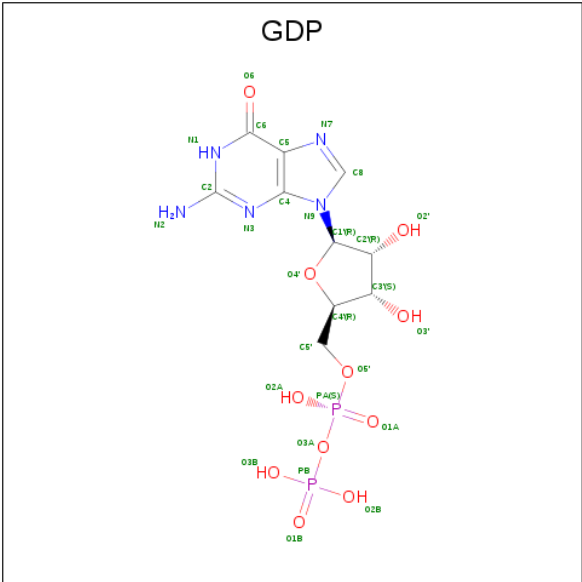
- Molecule 58 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	BZ	176	Total	C	N	O	S	0	0	0
			1403	897	252	252	2			
58	DZ	176	Total	C	N	O	S	0	0	0
			1403	897	252	252	2			

- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

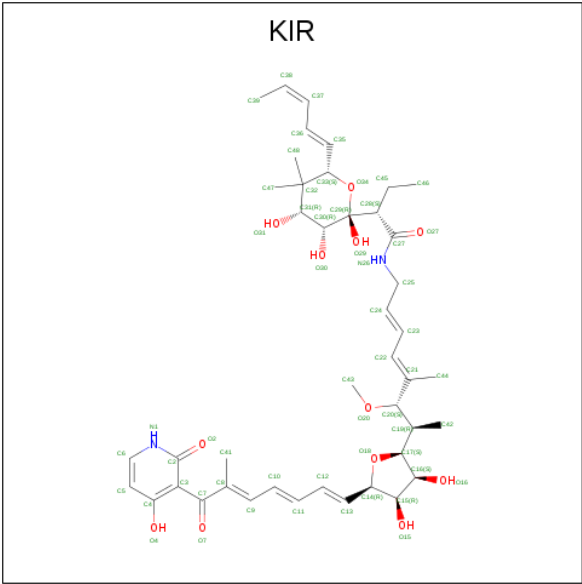
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	B4	1	Total	Zn	0	0
			1	1		
59	CN	1	Total	Zn	0	0
			1	1		
59	AN	1	Total	Zn	0	0
			1	1		
59	B9	1	Total	Zn	0	0
			1	1		
59	D9	1	Total	Zn	0	0
			1	1		
59	D4	1	Total	Zn	0	0
			1	1		
59	CD	1	Total	Zn	0	0
			1	1		
59	AD	1	Total	Zn	0	0
			1	1		

- Molecule 60 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: C₁₀H₁₅N₅O₁₁P₂).



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

- Molecule 61 is KIRROMYCIN (three-letter code: KIR) (formula: C₄₃H₆₀N₂O₁₂).

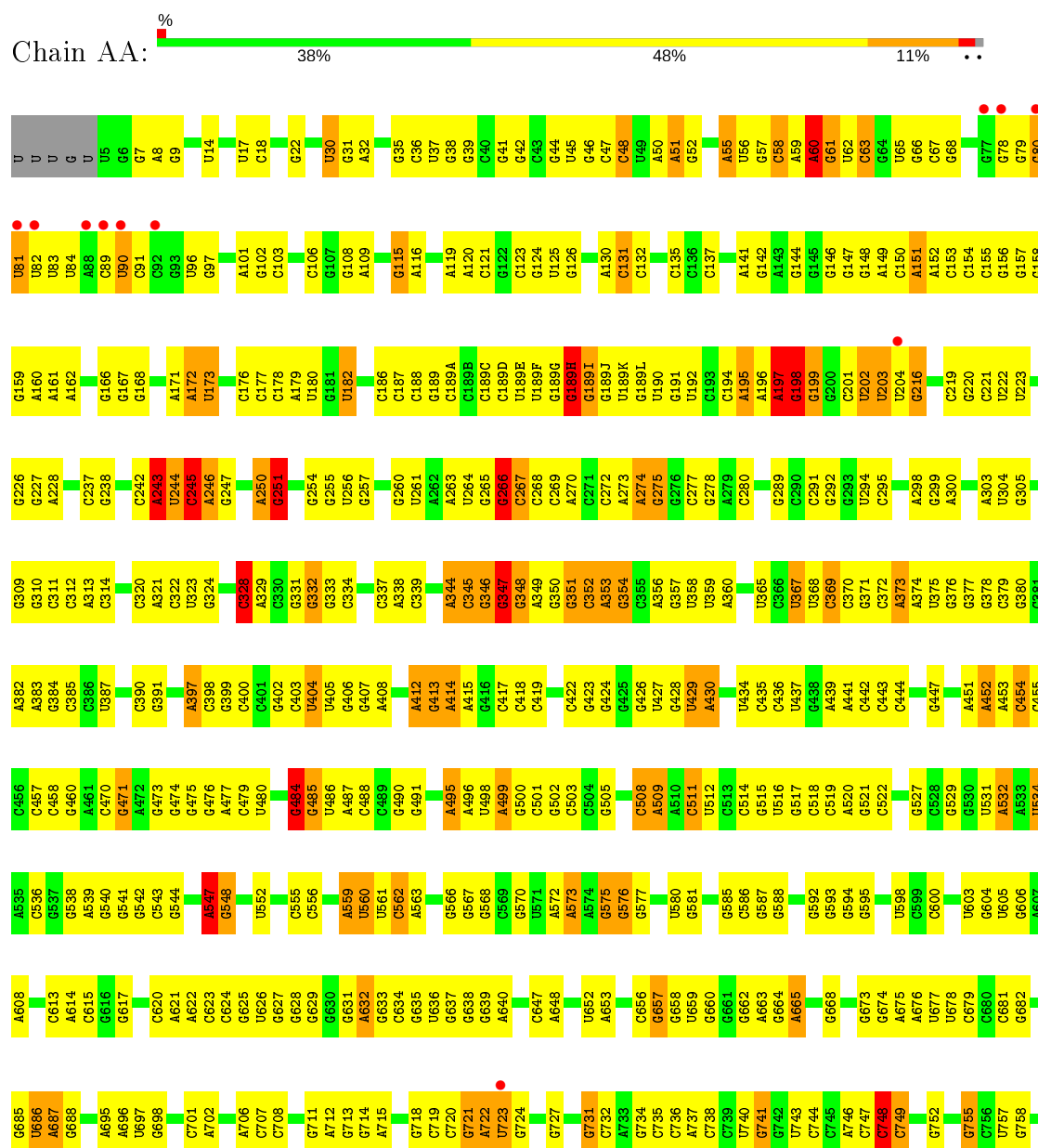


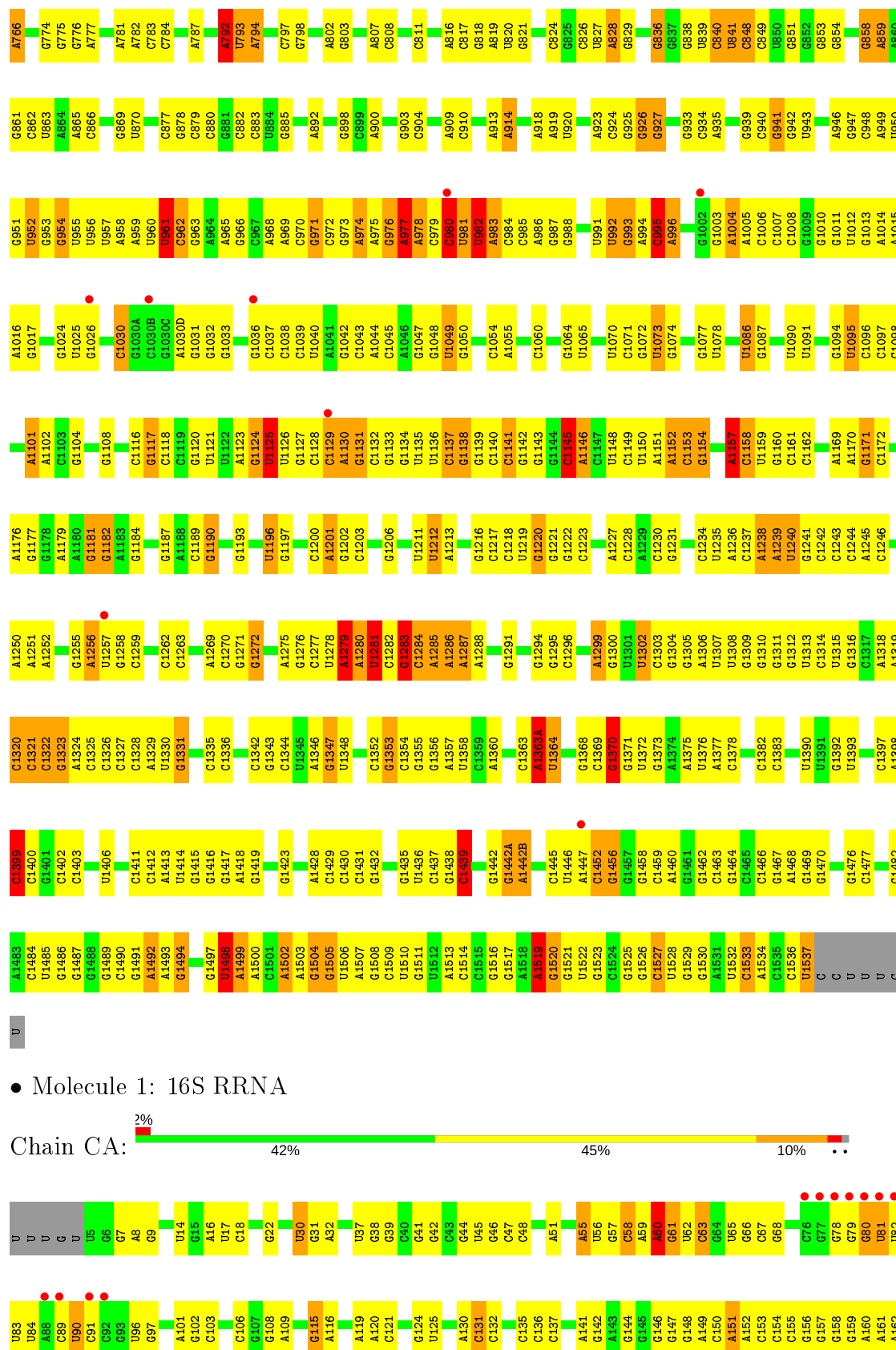
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
61	AZ	1	Total	C	N	O		0	0
			57	43	2	12			
61	CZ	1	Total	C	N	O		0	0
			57	43	2	12			

3 Residue-property plots

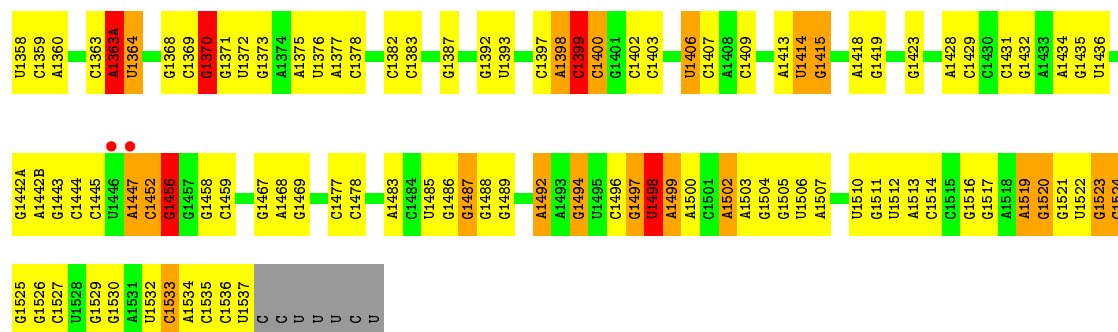
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are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

• Molecule 1: 16S rRNA

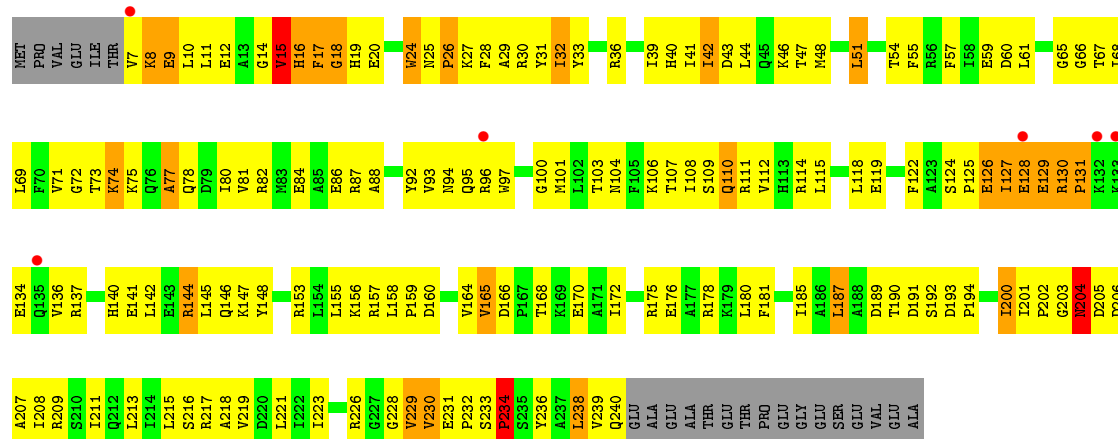




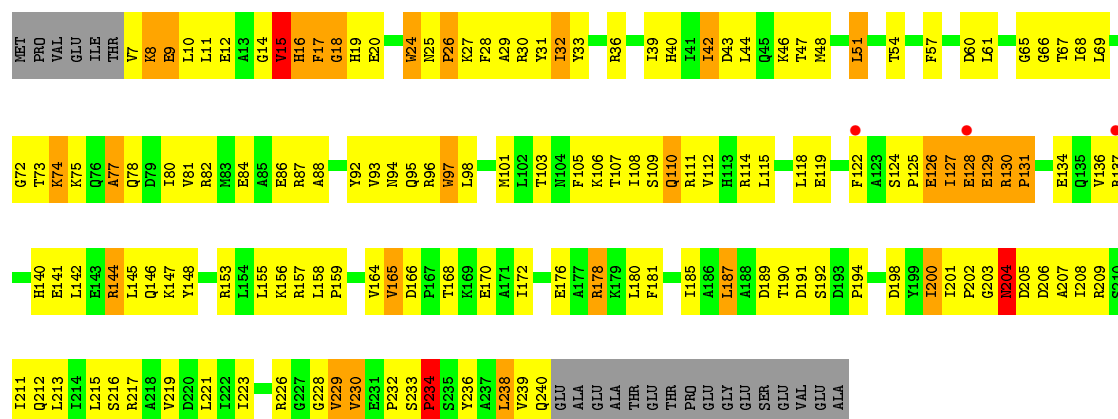
A1286	A1287	A1288	G1291	G1294	G1295	G1296	A1299	G1300	G1301	G1302	A1227	G1303	G1304	G1305	A1306	U1307	U1308	G1310	G1309	G1311	G1312	A1238	A1239	U1240	G1314	G1315	G1316	G1317	A1318	A1319	G1320	G1321	G1322	G1323	A1324	G1325	A1256	U1257	G1258	G1259	A1329	U1330	G1331	G1335	G1336	C1342	G1343	U1345	A1346	G1347	U1348	G1353	G1354	G1355	G1356	A1357
U1211	U1212	A1213	G1216	G1217	G1218	G1219	G1220	G1221	G1222	G1223	A1227	G1228	A1229	G1230	G1231	G1232	G1233	G1234	G1235	A1238	A1239	A1240	G1241	G1242	A1245	G1246	A1250	A1251	G1255	A1256	U1257	G1258	G1259	G1262	G1263	A1269	G1270	G1271	G1272	A1275	G1276	G1277	U1278	A1279	A1280	U1281	G1282	G1283	G1284	A1285						
G1133	G1134	U1135	U1136	G1137	G1138	G1139	G1140	G1141	G1142	G1143	G1144	G1145	A1146	G1147	G1148	G1149	U1150	A1151	A1152	G1153	G1154	A1157	G1158	U1159	G1160	U1086	G1087	A1169	A1170	G1171	G1172	U1095	G1096	G1097	G1098	A1101	A1102	G1103	G1104	G1108	G1187	A1188	G1189	G1190	G1193	U1196	G1197	G1198	U1199	A1201	G1202	G1203	G1204	A1205		
A1044	C1045	A1046	G1047	G1048	U1049	G1050	G1053	G1054	A1055	G1058	C1059	G1064	U1065	U1070	C1071	G1072	U1073	G1074	G1077	U1078	U1086	G1087	G1094	U1095	C1096	G1097	C1098	A1101	A1102	G1103	G1104	G1108	C1116	G1117	C1118	G1119	G1120	U1121	A1123	G1124	U1125	U1126	G1127	G1128	A1129	G1130	G1131	G1132								
G976	A977	A978	G979	G980	U981	U982	A983	G984	G987	G988	U991	U992	G993	A994	A995	A996	A1001	G1001A	G1002	G1003	A1004	A1005	G1006	G1007	C1008	U1012	G1013	A1014	A1015	A1016	G1017	G1024	U1025	G1026	G1027	C1028	C1029	C1030	G1030A	G1030B	G1030C	A1030D	G1031	G1032	G1033	G1036	G1037	G1038	G1039	U1040	A1041	G1042	G1043			
A900	G903	C904	A909	C910	A913	A914	A918	A919	U920	U921	G922	A923	C924	G925	G926	G927	G933	C934	A935	G939	C940	G941	G942	U943	G944	G945	A946	G947	G948	G958	A859	A860	C861	C862	U863	A864	A865	C866	G869	C877	G878	C879	C880	G881	C882	C883	U884	G885	A892	U893	A894					
A794	A802	G803	A807	C808	C811	C812	C817	A818	A819	U820	G821	G822	G823	G824	C826	U827	A828	G829	G836	G837	G838	U839	C840	U841	C843	C849	G853	G854	G858	A859	A860	C861	C862	U863	A864	A865	C866	G869	C877	G878	C879	C880	G881	C882	C883	U884	G885	A892	U893	A894						
A712	G713	G714	A715	G719	G720	G721	A722	G723	G724	G727	G731	G732	A733	G734	G735	G736	A737	G738	G740	G741	G742	U743	G744	A746	A747	C747	C748	C749	G752	G755	C756	U757	G758	G765	A766	A767	A768	G769	G775	G776	A777	A781	A782	C783	C784	A787	A792	U793								
G631	A632	G633	C634	G635	U636	G637	G638	G639	A640	G644	G645	U646	C647	A648	U652	A653	G657	G658	U659	G660	G661	G662	A663	G664	A665	G668	G673	G674	A675	A676	U677	U678	C680	C681	G682	U686	A687	G688	A695	A696	U697	G698	C701	A702	A706	C707	C708	G711								
C555	C556	A559	U560	U561	C562	A563	G566	G567	U568	C569	U570	U571	A572	A573	A574	G575	G576	G577	U580	G581	G585	C586	G587	G592	G593	C594	G595	U598	U603	G604	U605	G606	A607	A608	C613	A614	C615	G616	G617	C620	A621	C624	G625	U626	G627	G628	G629	G630								
A321	C322	U323	G324	C328	A329	C330	G332	G333	C334	C337	A338	C339	A344	C345	U346	G347	G348	A349	G350	G351	C352	A353	C355	A356	G357	U358	U359	U367	U368	C370	G371	C372	A373	A452	U453	U375	G376	C379	G380	C381	A382	A383	G384	C385	U387	C390	G391	A397	C398							
G399	C400	C401	A403	U404	U405	G406	G407	A408	A412	G413	A414	A415	C417	C418	C419	C422	U427	G428	U429	A430	U434	C435	C436	U437	G438	A439	A441	C442	C443	C444	G447	A451	A452	U453	C454	C455	C456	C457	C458	G460	A461	C470	A472	G473	G474	G475	G476	A477	C479	U480						
G484	U486	A487	C488	C489	G490	G491	A495	A496	U498	A499	G500	C501	G502	C503	C504	G505	C508	A509	A510	C511	U512	C513	C514	G515	U516	G517	C518	C519	A520	G521	C522	G527	C528	G529	G530	U531	A532	A533	U534	A535	G536	G537	G538	U539	G540	G541	C542	C543	G544	A547	G548	U552				



• Molecule 2: 30S RIBOSOMAL PROTEIN S2

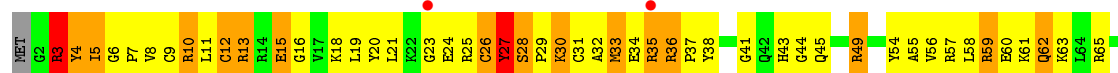


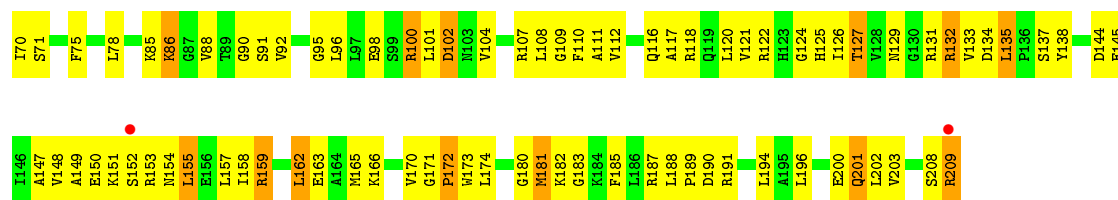
• Molecule 2: 30S RIBOSOMAL PROTEIN S2



• Molecule 3: 30S RIBOSOMAL PROTEIN S3

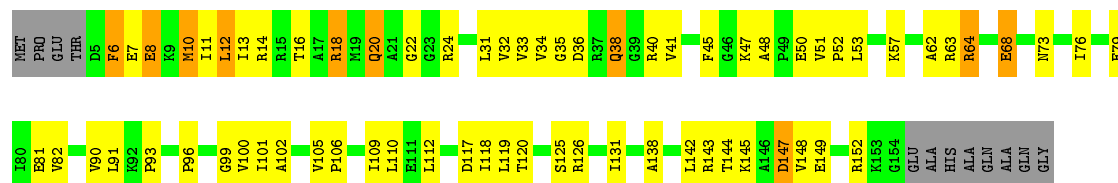






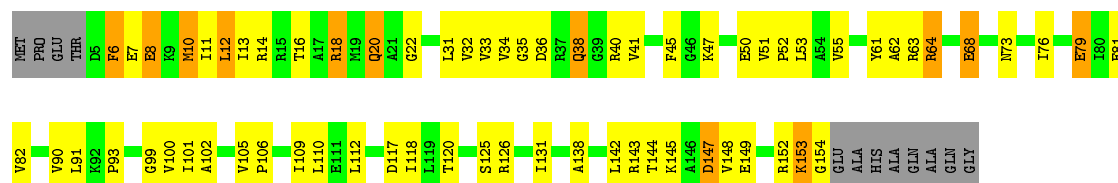
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain AE: 51% 36% 6% 7%



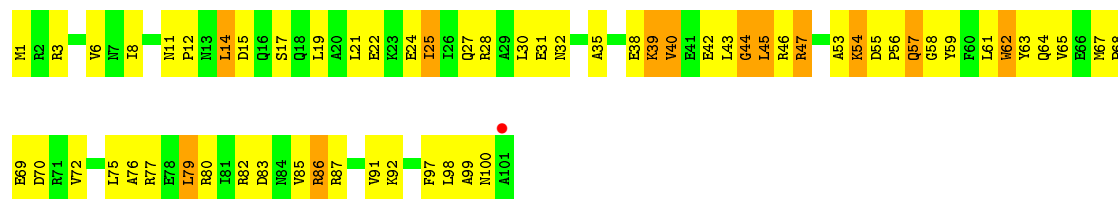
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain CE: 51% 34% 7% 7%



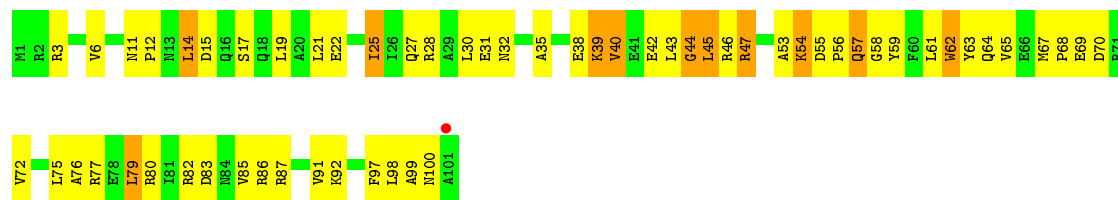
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain AF: 39% 50% 12%



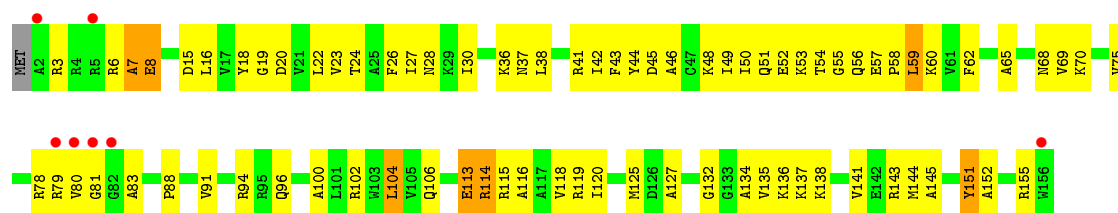
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain CF: 42% 48% 11%

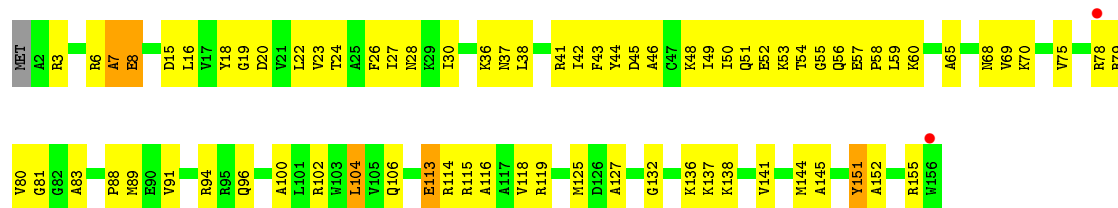


• Molecule 7: 30S RIBOSOMAL PROTEIN S7

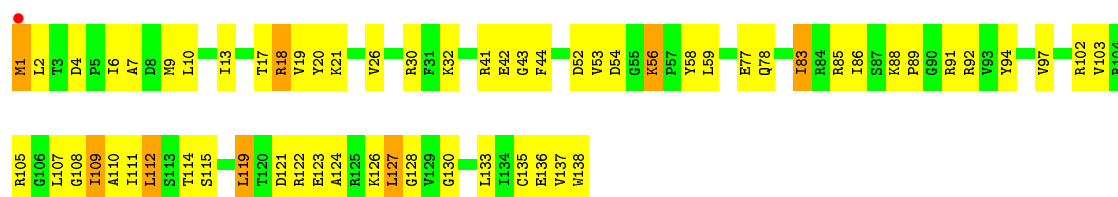
Chain AG: 4% 49% 46%



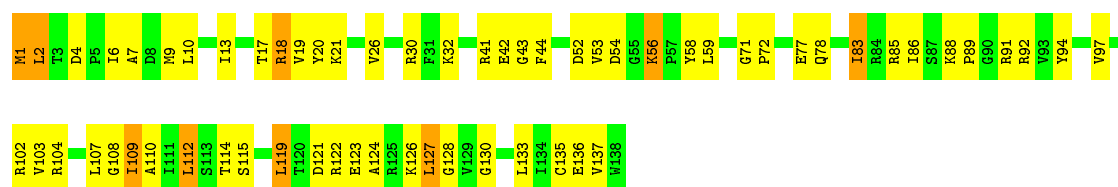
• Molecule 7: 30S RIBOSOMAL PROTEIN S7



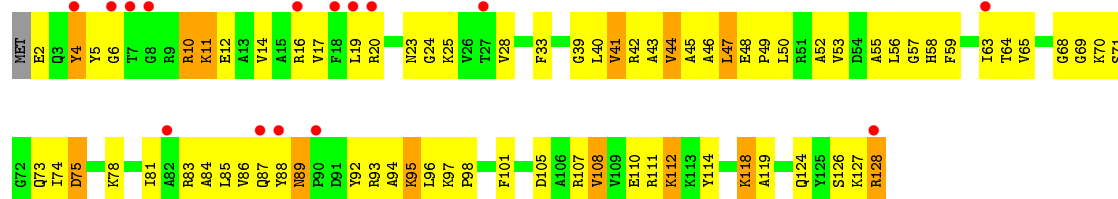
• Molecule 8: 30S RIBOSOMAL PROTEIN S8



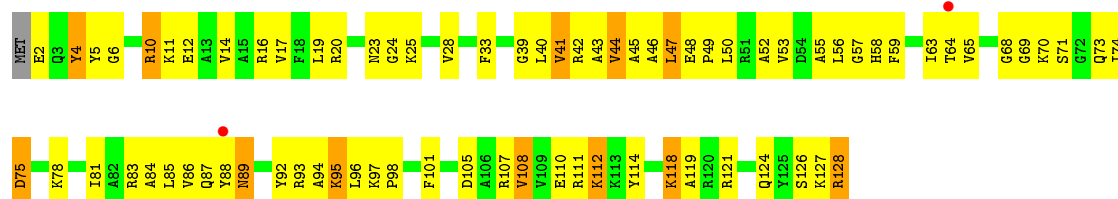
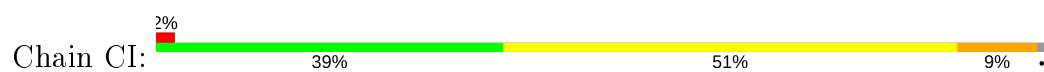
• Molecule 8: 30S RIBOSOMAL PROTEIN S8



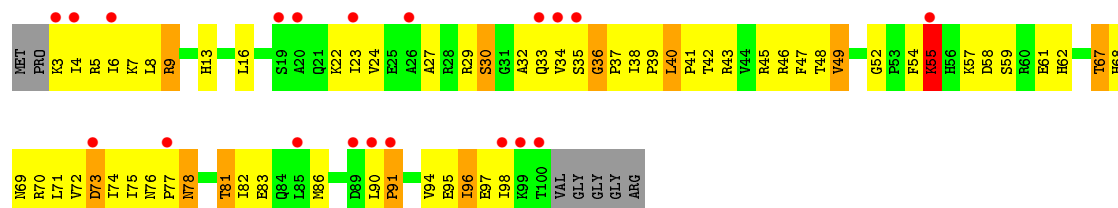
• Molecule 9: 30S RIBOSOMAL PROTEIN S9



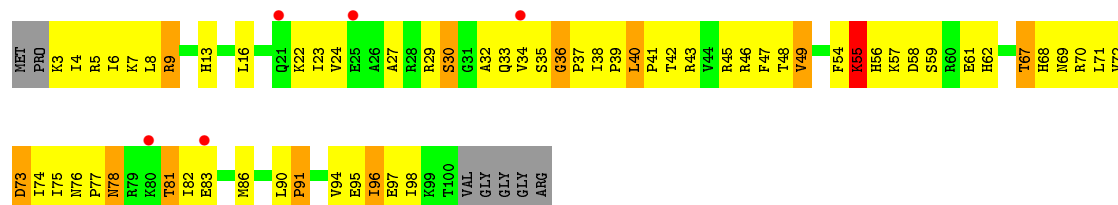
• Molecule 9: 30S RIBOSOMAL PROTEIN S9



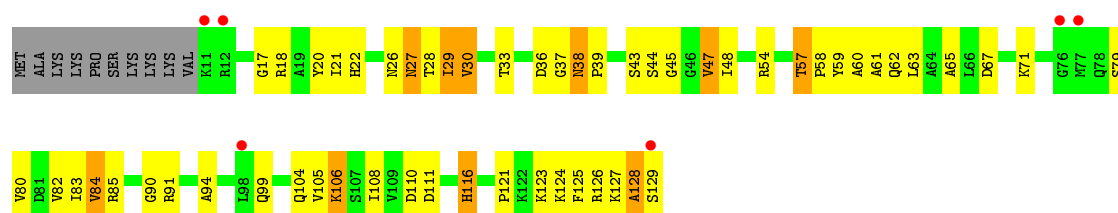
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



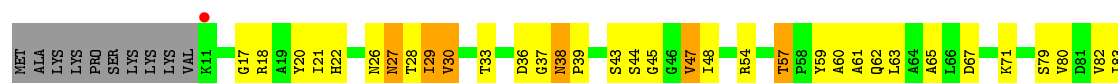
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



• Molecule 11: 30S RIBOSOMAL PROTEIN S11

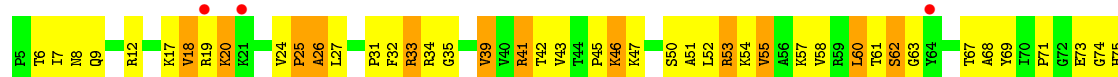


• Molecule 11: 30S RIBOSOMAL PROTEIN S11

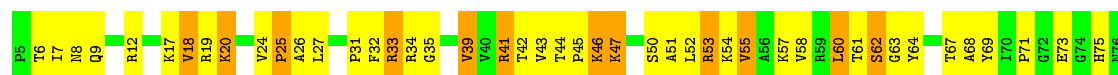




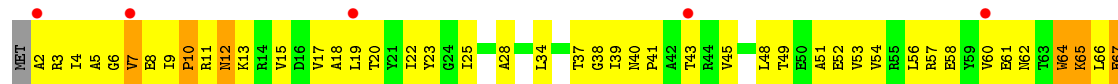
• Molecule 12: 30S RIBOSOMAL PROTEIN S12



• Molecule 12: 30S RIBOSOMAL PROTEIN S12



• Molecule 13: 30S RIBOSOMAL PROTEIN S13

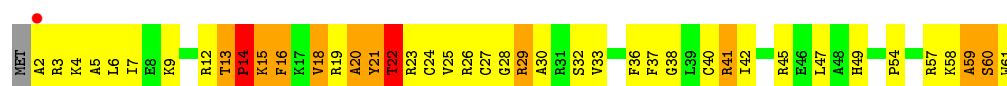


• Molecule 13: 30S RIBOSOMAL PROTEIN S13

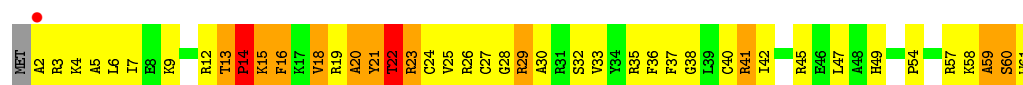


• Molecule 14: 30S RIBOSOMAL PROTEIN S14

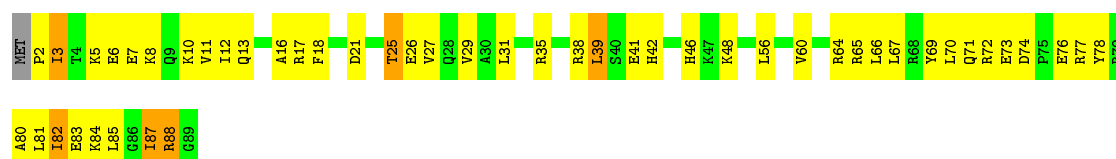




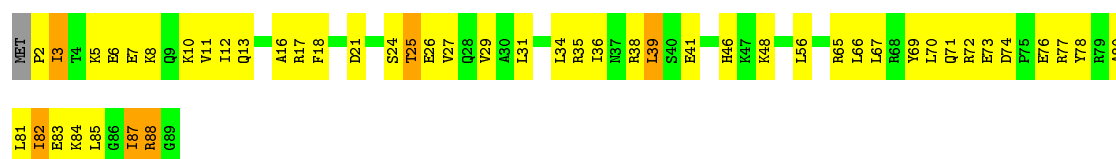
• Molecule 14: 30S RIBOSOMAL PROTEIN S14



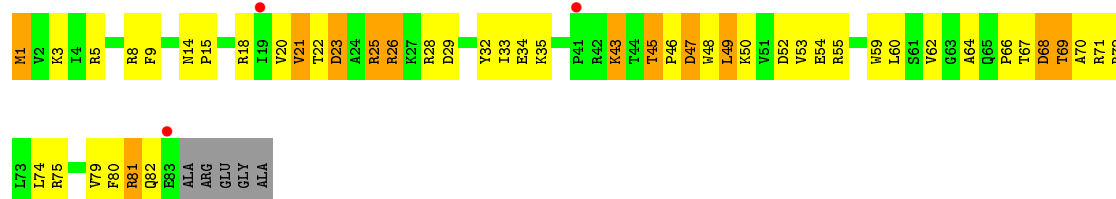
• Molecule 15: 30S RIBOSOMAL PROTEIN S15



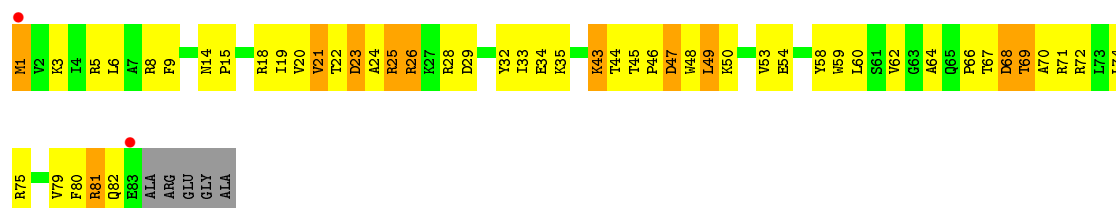
• Molecule 15: 30S RIBOSOMAL PROTEIN S15



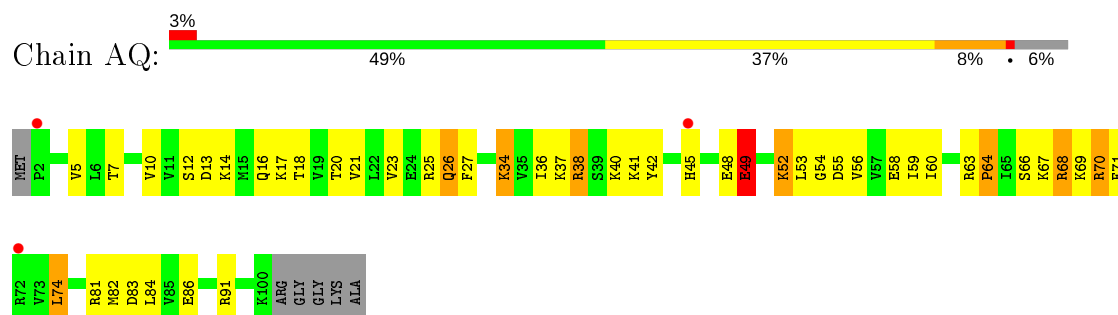
• Molecule 16: 30S RIBOSOMAL PROTEIN S16



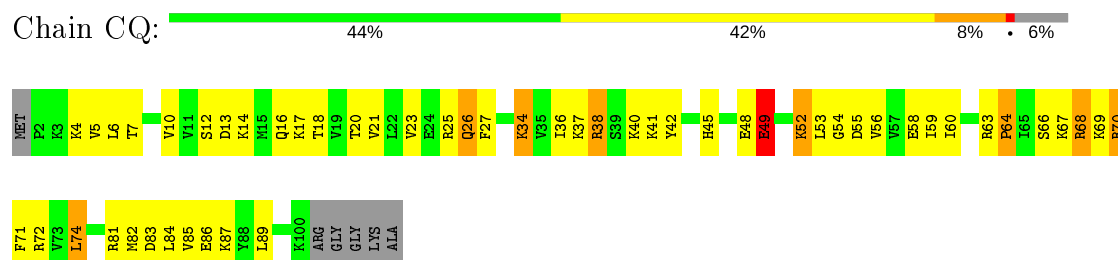
• Molecule 16: 30S RIBOSOMAL PROTEIN S16



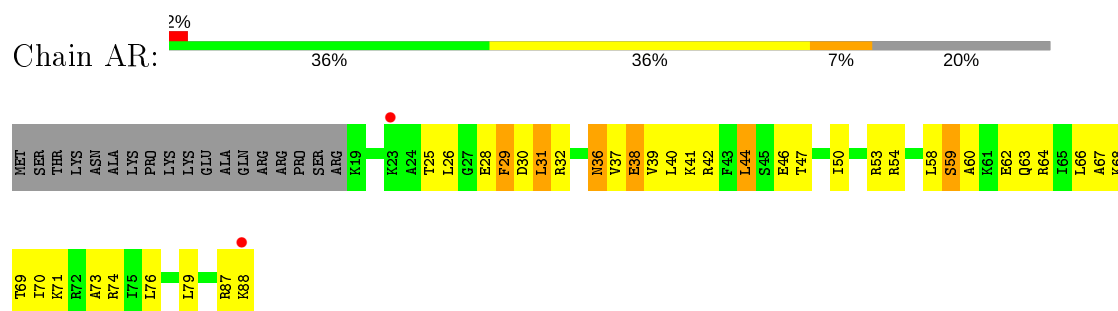
- Molecule 17: 30S RIBOSOMAL PROTEIN S17



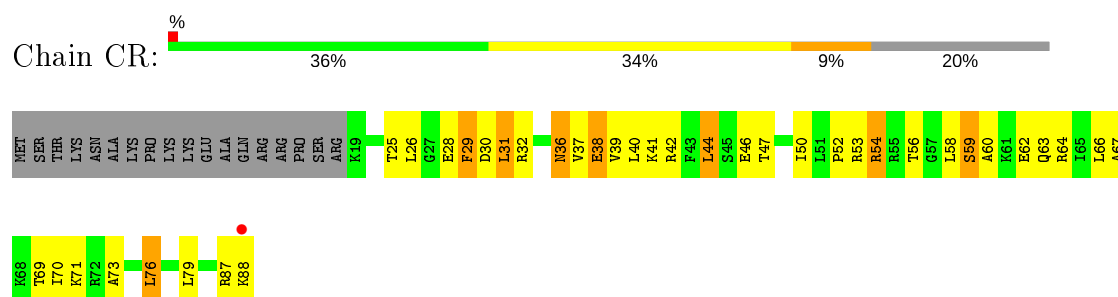
- Molecule 17: 30S RIBOSOMAL PROTEIN S17



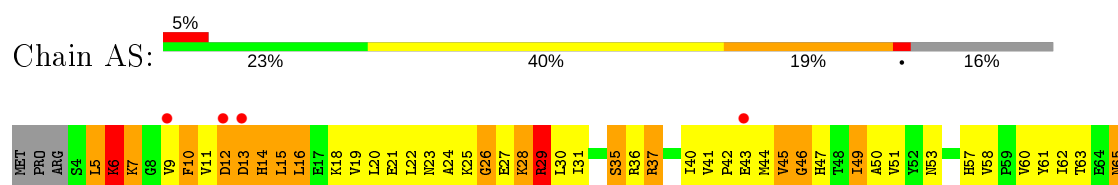
- Molecule 18: 30S RIBOSOMAL PROTEIN S18

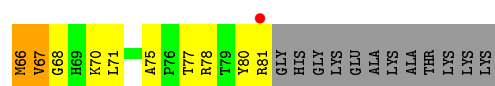


- Molecule 18: 30S RIBOSOMAL PROTEIN S18

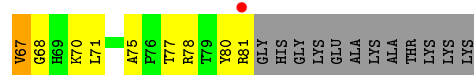
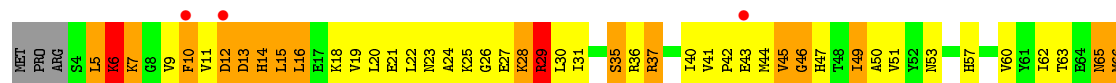


- Molecule 19: 30S RIBOSOMAL PROTEIN S19

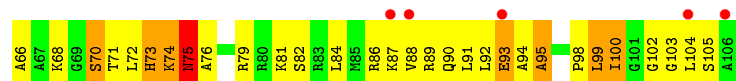
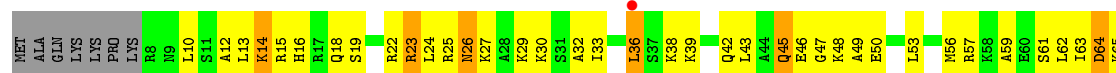




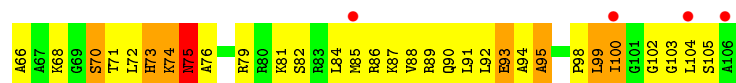
• Molecule 19: 30S RIBOSOMAL PROTEIN S19



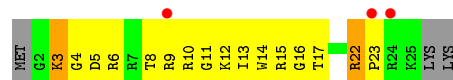
• Molecule 20: 30S RIBOSOMAL PROTEIN S20



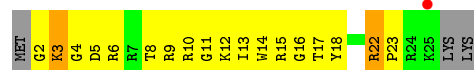
• Molecule 20: 30S RIBOSOMAL PROTEIN S20



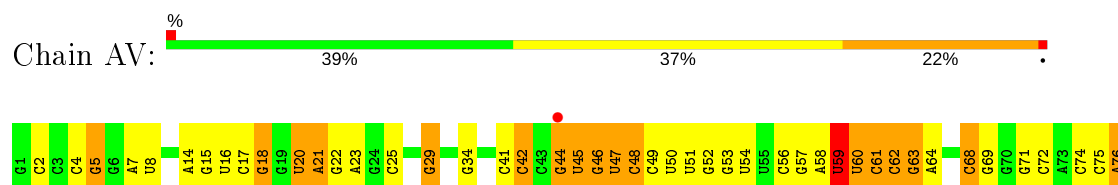
• Molecule 21: 30S RIBOSOMAL PROTEIN THX



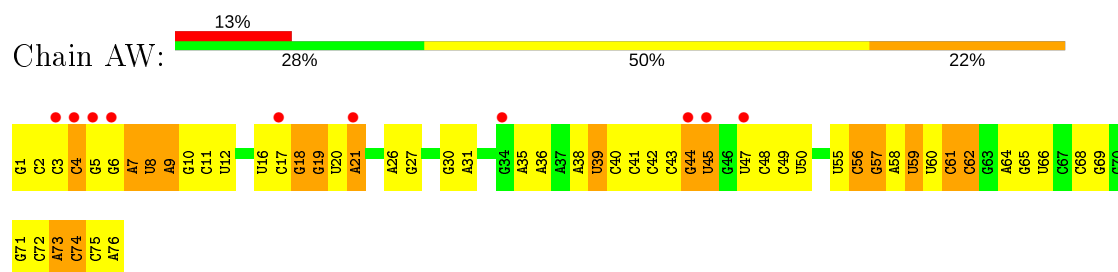
• Molecule 21: 30S RIBOSOMAL PROTEIN THX



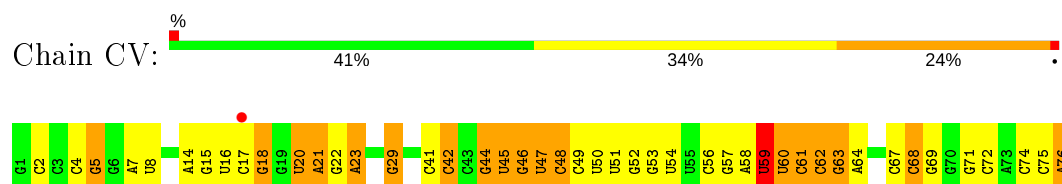
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



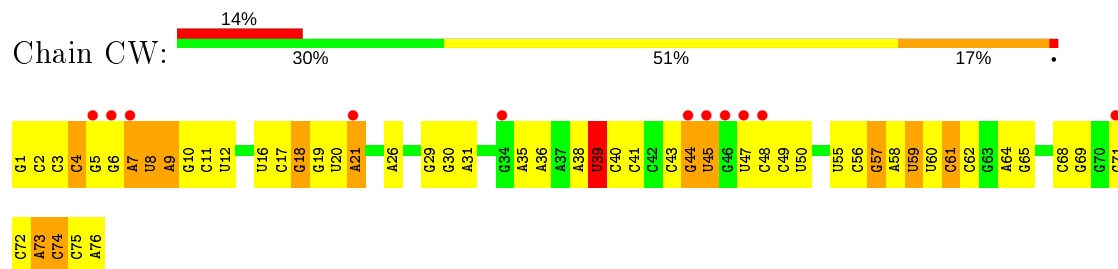
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



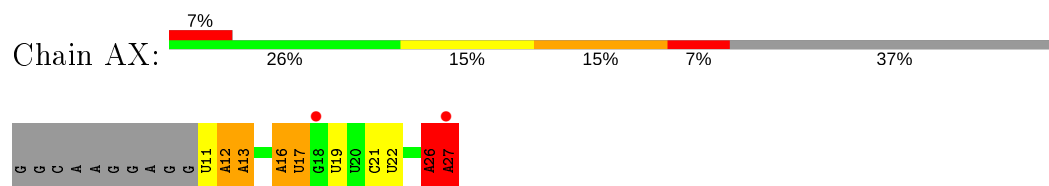
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



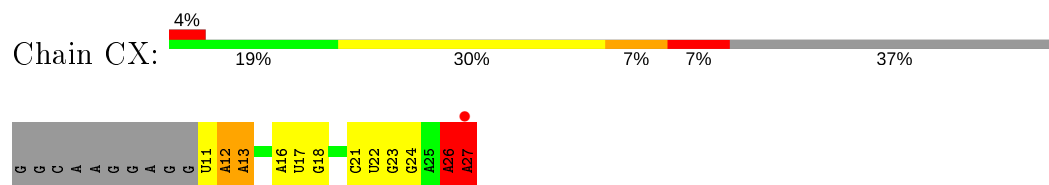
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



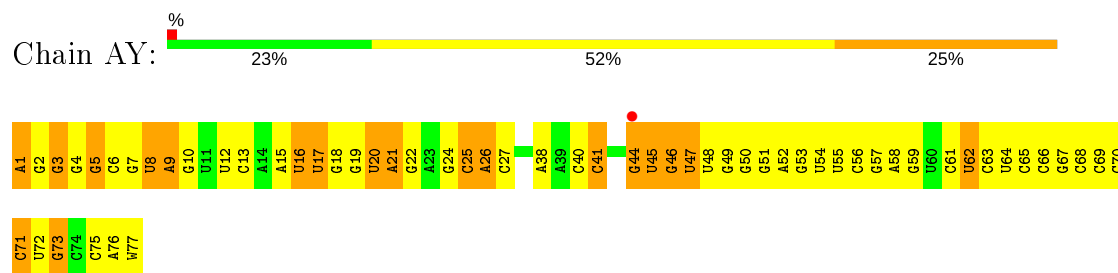
- Molecule 23: MRNA



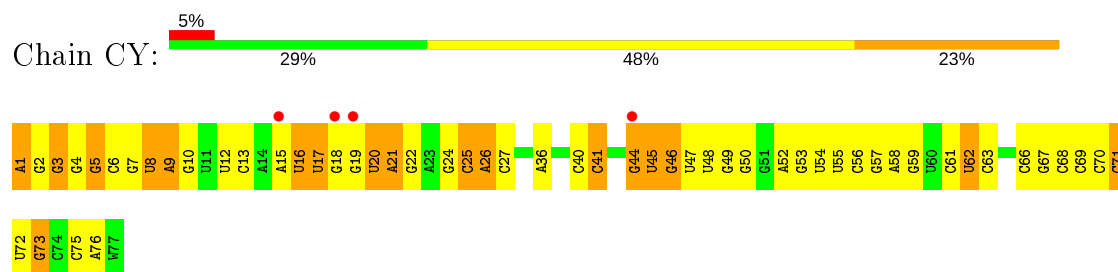
- Molecule 23: MRNA



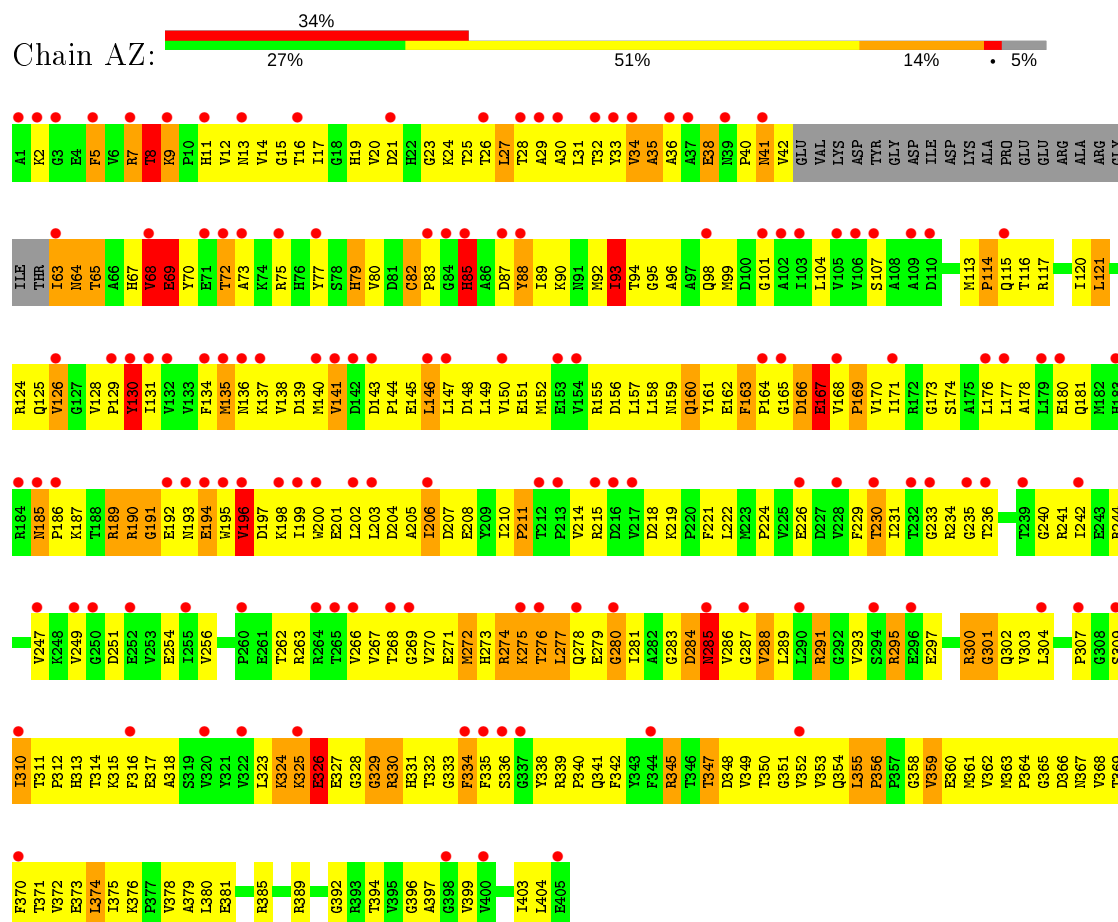
- Molecule 24: A-SITE TRNA TRP-TRNA TRP



- Molecule 24: A-SITE tRNA TRP-tRNA TRP

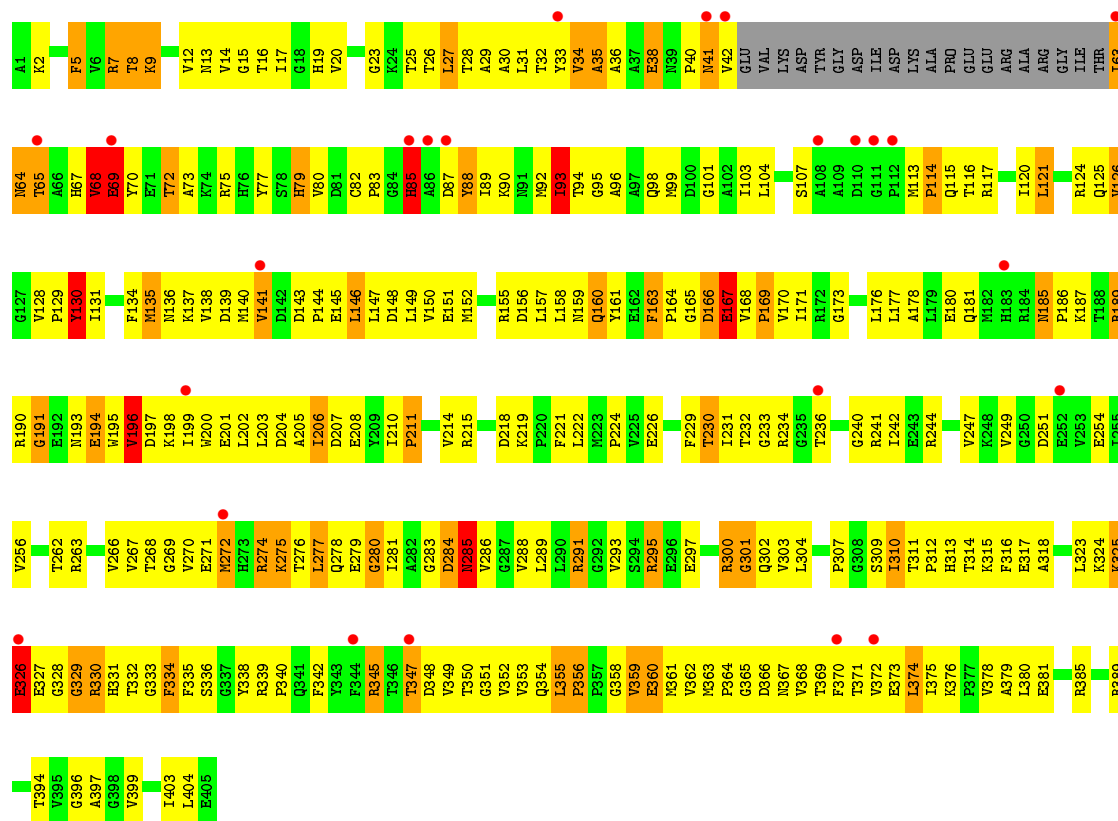


- Molecule 25: ELONGATION FACTOR TU

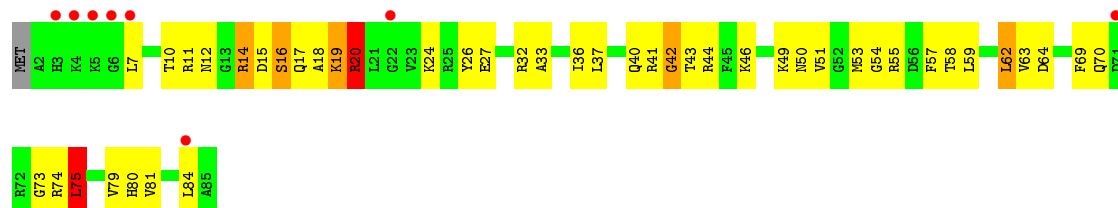


- Molecule 25: ELONGATION FACTOR TU

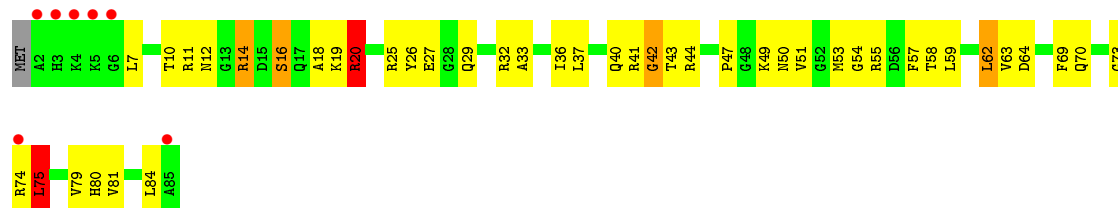




• Molecule 26: 50S RIBOSOMAL PROTEIN L27

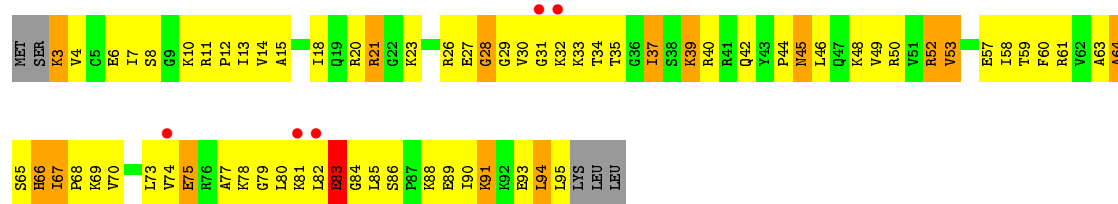


• Molecule 26: 50S RIBOSOMAL PROTEIN L27

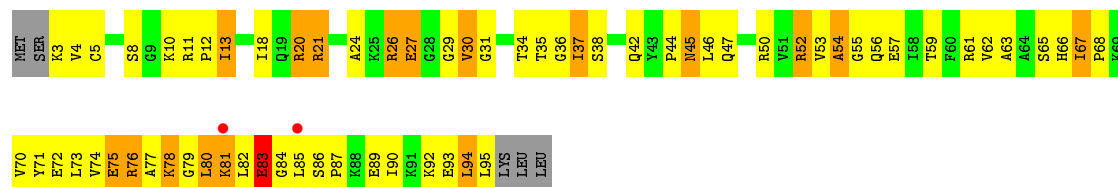


• Molecule 27: 50S RIBOSOMAL PROTEIN L28

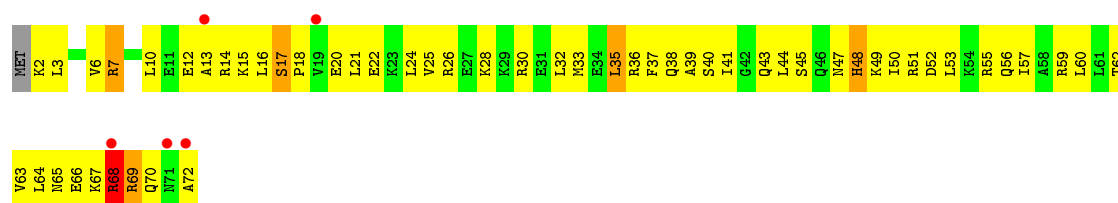




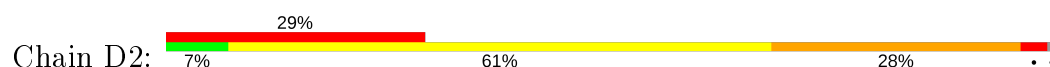
• Molecule 27: 50S RIBOSOMAL PROTEIN L28



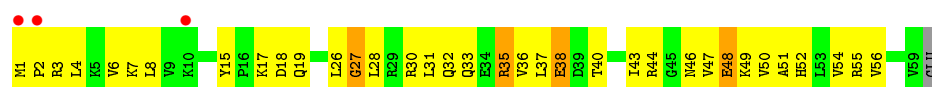
• Molecule 28: 50S RIBOSOMAL PROTEIN L29



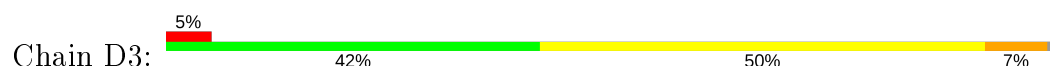
• Molecule 28: 50S RIBOSOMAL PROTEIN L29

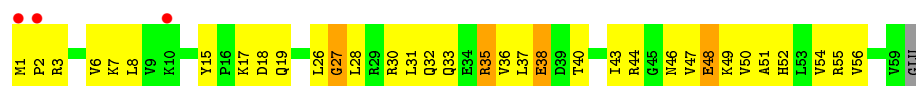


• Molecule 29: 50S RIBOSOMAL PROTEIN L30

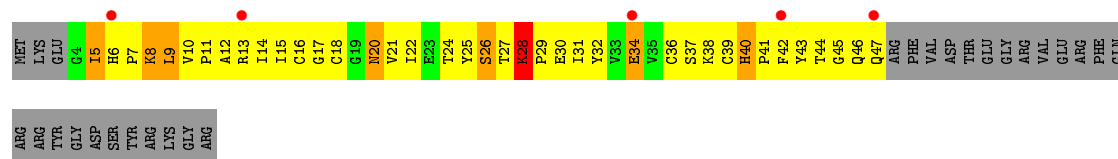


• Molecule 29: 50S RIBOSOMAL PROTEIN L30

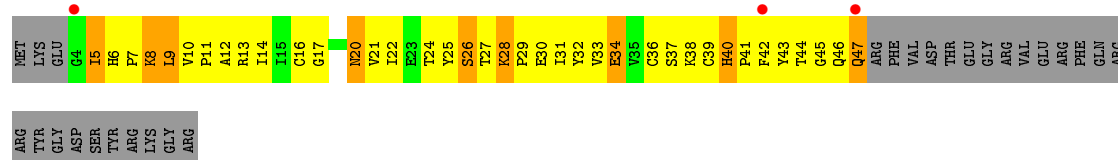




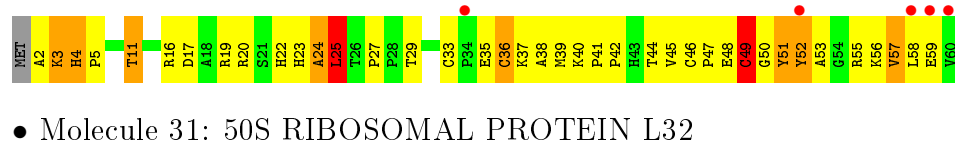
• Molecule 30: 50S RIBOSOMAL PROTEIN L31



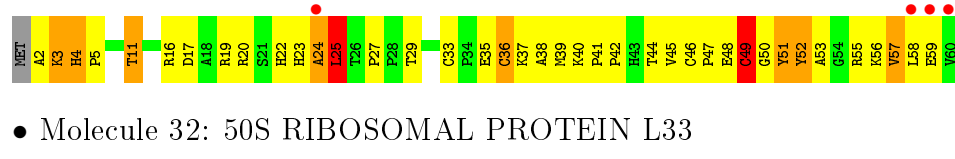
• Molecule 30: 50S RIBOSOMAL PROTEIN L31



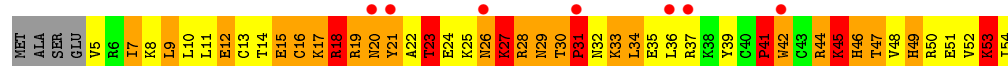
• Molecule 31: 50S RIBOSOMAL PROTEIN L32



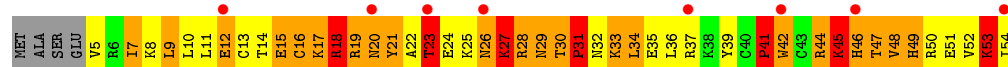
• Molecule 31: 50S RIBOSOMAL PROTEIN L32



• Molecule 32: 50S RIBOSOMAL PROTEIN L33



• Molecule 32: 50S RIBOSOMAL PROTEIN L33



- Molecule 33: 50S RIBOSOMAL PROTEIN L34

Chain B7: 




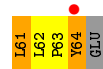
- Molecule 33: 50S RIBOSOMAL PROTEIN L34

Chain D7: 



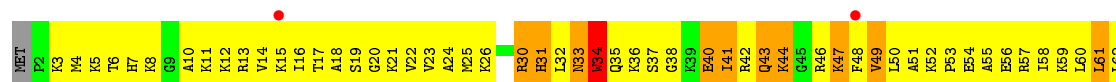
- Molecule 34: 50S RIBOSOMAL PROTEIN L35

Chain B8: 



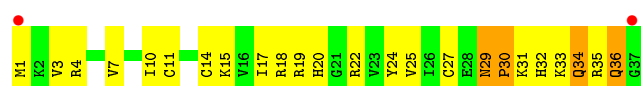
- Molecule 34: 50S RIBOSOMAL PROTEIN L35

Chain D8: 



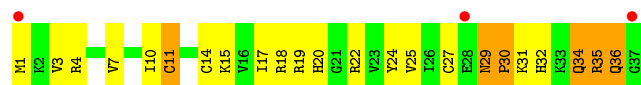
- Molecule 35: 50S RIBOSOMAL PROTEIN L36

Chain B9: 



- Molecule 35: 50S RIBOSOMAL PROTEIN L36

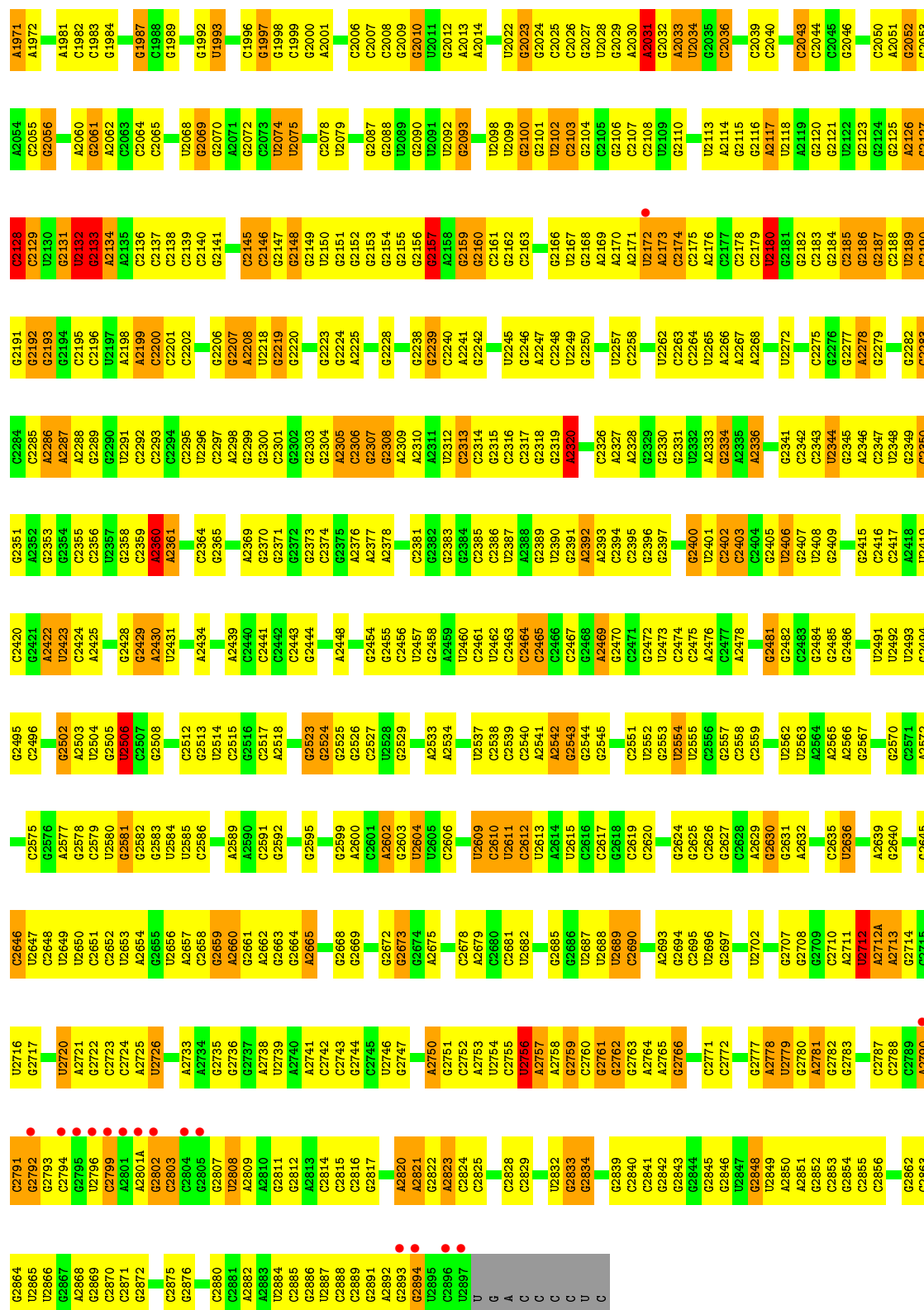
Chain D9: 



- Molecule 36: 23S RIBOSOMAL RNA



C1881	A1803	G1719	A1477	G1410	A1336	G1258	C1179	U1105	G1041	C961	C888
C1882	C1894	U1720	G1478	C1411	G1337	G1259	C1180	G1106	G1042	U969	C889
G1883	U1805	G1721	G1479	A1412	G1338	C1260	G1186	U1108	C1043	G970	A890
A1884	C1806	A1722	C1480	G1413	G1339	C1261	G1187	U1109	A1045	C893	G892
A1886	G1807	U1739	U1481	G1416	U1341	G1264	U1188	G1110	A1046	C894	C893
G1887	C1638	C1548	G1482	C1417	G1344	A1265	A1189	A1111	G1047	U995	C894
G1888	U1639	C1549	G1484	G1418	G1347	A1268	G1190	G1112	A1048	A973	U896
A1889	A1641	G1552	G1486	A1419	G1348	A1269	G1191	U1113	C1049	A974	A896
G1890	G1642	A1553	A1488	G1419	G1349	C1270	G1192	G1114	A1050	C975	C897
G1891	G1643	A1554	U1490	U1420	A1348	G1271	G1193	G1115	G1051	A983	A899
G1892	G1647	G1557	G1491	G1425	U1352	G1272	U1199	C1116	C1052	A984	A900
U1893	C1648	A1558	G1492	G1426	A1353	U1273	C1200	G1120	C1053	A985	A901
A1894	G1649	G1559	C1493	G1427	A1354	A1274	G1203	C1121	A1054	C986	C902
G1895	G1650	G1560	A1495	C1428	G1355	A1275	G1204	G1124	G1055	G987	C903
G1896	C1651	A1496	A1496	G1429	U1356	A1278	A1204	C1125	A1056	A990	U905
G1897	A1652	G1561	U1497	C1430	U1357	G1279	U1205	G1126	A1057	C991	U906
G1898	G1653	A1498	C1498	U1431	G1358	A1286	C1208	G1131	G1058	C992	U907
G1899	A1654	A1499	C1499	U1432	A1359	A1287	G1209	A1132	U1060	C993	C908
G1900	C1657	A1571	G1500	C1433	A1360	U1288	U1300	U1133	U1061	C994	A909
G1901	C1648	U1578	C1501	A1434	G1361	C1289	A1210	C1135	G1062	C995	A910
G1902	A1749	A1579	U1503	G1435	C1362	C1290	U1211	G1136	C1063	C996	A911
G1903	G1750	G1580	C1504	G1436	C1363	C1291	G1212	G1137	U1064	G997	C912
G1904	C1751	G1581	C1505	G1437	G1364	C1292	A1213	G1138	U1065	C998	U913
G1905	C1752	C1582	C1506	U1438	A1365	U1293	A1214	G1139	U1066	U999	C914
G1906	A1655	A1583	U1507	A1439	A1366	C1294	G1215	U1141	G1067	A1000	C915
G1907	G1658	C1584	A1508	G1440	A1367	U1295	C1221	U1142	A1069	A1001	G916
G1908	G1659	C1585	C1509	G1441	G1368	U1296	C1222	A1142A	A1070	G1002	A917
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G1910	C1657	U1578	A1509B	C1445A	C1375	C1298	C1222	A1142A	C1072	C1006	U923
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G1912	A1665	A1580	C1511	G1447	G1377	U1300	G1231	A1148	A1009	A926	A926
G1913	G1666	G1581	U1512	G1448	A1378	A1302	G1232	G1149	C1075	G927	G927
G1914	G1667	C1582	C1513	U1449	A1379	G1303	G1233	U1150	C1076	G928	G928
G1915	G1668	G1583	U1514	G1450	G1380	C1304	U1234	G1151	U1077	U932	U932
G1916	A1669	C1584	C1515	C1450A	A1384	C1305	G1235	C1152	G1078	C1013	G932
G1917	C1670	A1586	G1516	U1453	G1385	C1306	U1236	C1153	G1079	U1014	A933
G1918	C1671	A1587	G1517	G1455	C1386	G1311	G1237	G1154	A1084	C1018	G940
G1919	A1673	C1588	U1518	C1458	G1387	U1312	A1237	A1155	U1019	A941	A941
G1920	G1674	G1589	C1519	G1459	G1388	U1313	G1238	A1156	A1088	G942	G942
G1921	A1677	U1590	U1520	C1459	G1389	C1314	G1239	A1157	U1021	U943	U943
G1922	C1678	G1591	C1521	A1460	U1390	C1315	U1240	G1157	G1089	G944	G944
G1923	U1679	C1592	U1514	G1461	A1393	U1316	A1241	U1090	U1090	A945	A945
G1924	G1680	G1593	G1515	C1464	A1396	G1318	G1242	G1162	G1091	G946	G946
G1925	G1681	G1594	C1516	G1465	U1396	C1319	G1243	G1163	C1092	G947	G947
G1926	G1682	G1595	G1517	G1466	G1400	C1320	G1245	U1165	U1026	G948	G948
G1927	C1683	A1596	U1518	C1467	G1401	G1327	A1246	C1166	A1094	C949	C949
G1928	A1684	C1597	U1519	G1468	G1402	U1328	A1247	U1096	A1095	G950	G950
G1929	G1688	C1598	U1523	C1469	C1403	G1329	G1248	U1097	G1030	A953	A953
G1930	A1689	G1600	G1524	A1471	C1404	U1330	C1251	U1170	G1034	G954	G954
G1931	G1697	U1601	G1525	A1472	U1405	A1331	G1252	G1173	U1035	C955	C955
G1932	C1697	A1603	G1526	G1473	U1406	G1332	A1253	U1175	G1036	G956	G956
G1933	G1699	C1607	A1528A	C1474	A1407	C1333	G1256	G1176	U1037	A957	A957
G1934	A1700	A1608	G1529	G1475	C1408	G1334	U1266	A1177	G1038	U958	U958
G1935	A1701	A1609	U1534	C1476	A1542	U1335	C1257	C1178	A1103	A959	A959
G1936	U1709	A1610	A1535	G1477	G1409				C1104	A960	A960
G1937	C1710	A1614	C1536	A1469							
G1938	C1711	G1615	G1537	A1471							
G1939	C1712	C1616	G1538	A1472							
G1940	C1713	C1617	G1539	A1473							
G1941	C1714	A1618	U1540	C1474							
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G1965	C1738										
G1966	C1739										
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G1970	C1743										



• Molecule 36: 23S RIBOSOMAL RNA



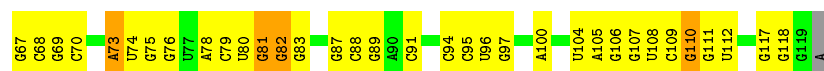
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A900	C825	G824	G669	G628	G556	G327	G327	G271S	A222	C143A	U
A901	C826	G825	A670	G629	G557	U403	G328	C271T	A225	C144	C
C902	U827	A670	G671	A630	G558	A479	G329	G271U	G226	G145	A
C903	U828	G631	C672	A631	G559	U405	A330	G271V	A227	G146	A6
A829	U828	A632	C673	A632	G560	U406	A331	G271W	A228	G147	G7
G830	C673	A633	G674	A482	U662	G407	A332	U272A	A229	G148	A8
G831	C674	A634	C675	A483	G563	U408	G333	G272B	G83	G149	U9
G832	C676	A635	C677	A484	G564	U409	G334	G272C	A84	G150	G10
U833	A676	C678	A676	C679	C565	C410	G335	G272D	G85	G151	G11
C834	G637	G638	G638	A637	G566	G411	G336	G272E	G88	U156	U12
	G639	G639	G639	G639	U669	C414	G337	C272H	G89	G157	G15
	G640	G640	G640	G640	G573	A415	G338	U272I	U90	U158	G16
	G641	G641	G641	G641	G574	G494	G339	C272J	G17	U159	G17
	G642	G642	G642	G642	A575	C419	G340	G272K	A92	G171	G18
	G643	G643	G643	G643		C420	G341	G272L	G93	C172	C18
	G644	G644	G644	G644	U409	C421	G342	G272M	G94	G173	C19
	G645	G645	G645	G645	G500	U421	G343	A276	G94A	G174	C20
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	G671	G671	G671	G671	G609	C456	G369	G304	A204	G204	G58
	G672	G672	G672	G672	G610	A457	G370	C271B	G205	A205	U59
	G673	G673	G673	G673	C611	G458	G371	C271C	U206	G206	G60
	G674	G674	G674	G674	G612	U459	G372	G271D	C207	G207	G61
	G675	G675	G675	G675	G613	A460	G373	U271E	C208	G208	
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G1907	G1650	A1820	G1750	G1650	A1569	C1493	G1425	A1349	G1270	A1189	G1114	A1050
C1908	G1651	G1822	G1751	G1651	G1574	A1494	G1425	A1349	G1271	G1190	G1115	G1051
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G2000	G1653	G1822	G1753	G1653	G1574	A1496	C1428	A1353	U1273	A1054	G1055	C1053
A2001	A1654	G1822	C1754	A1654	U1578	U1497	G1429	A1354	A1274	G1120	G1056	A984
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A2014	C1928	A1669	C1767	A1669	C1588	A1507	U1438	G1364	C1209	U1065	U1065	A996
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C2029	A1938	A1849	U1780	G1683	C1599	G1516	U1452	A1379	C1304	C1075	C1075	A1010
A2030	U1939	U1851	C1781	C1684	C1600	U1517	G1455	G1380	C1305	A1077	A1077	U1011
A2031	U1940	A1854	C1782	U1688	G1601	U1518	G1456	A1384	C1306	C1078	C1078	U1012
C2032	C1946	G1855	A1783	A1689	U1602	U1523	G1458	G1385	G1306	C1079	C1079	U1013
A2033	U1947	G1856	A1784	A1690	A1603	G1524	G1459	G1386	C1307	U1081	U1081	U1014
U2034	C1947	G1857	A1785	G1697	C1607	G1525	A1460	C1387	U1311	U1082	U1082	C1018
G2035	G1948	G1858	A1786	G1698	A1608	G1526	G1461	G1388	U1312	G1087	G1087	A1020
C2036	A1952	G1859	A1787	G1699	A1609	G1527	G1462	G1389	C1313	A1088	A1088	A1021
C2039	A1953	G1860	C1788	A1700	A1610	A1528A	G1463	U1390	C1314	G1089	G1089	G1022
C2040	G1954	U1864	A1789	A1701	A1611	G1529	G1464	A1393	C1315	U1090	U1090	U1023
C2043	U1955	G1865	C1790	U1701	A1612	G1530	G1465	U1396	A1317	G1091	G1091	G1024
C2044	G1959	G1866	A1791	U1709	C1615	U1534	G1466	U1400	C1318	G1092	G1092	U1025
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G2046	C2046	A1877	C1797	C1711	C1617	A1536	A1469	C1402	C1320	A1095	A1095	A1029
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A2051	G1968	C1880	C1801	G1717	G1620	U1539	A1473	C1405	U1329	G1170	G1170	U1035
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A2054	A1970	G1883	A1803	G1719	A1634	A1541	G1475	A1253	A1331	C1100	C1100	G1037
C2055	A1971	A1884	C1804	G1720	G1635	A1542	G1476	C1407	G1332	U1175	U1175	G1038
G2056	A1972	U1885	U1805	G1721	C1636	A1543	A1477	C1408	C1333	G1176	G1176	G1039
A2060	A1981	C1886	G1806	A1722	A1637	A1544	G1478	C1409	G1334	A1177	A1177	G1040
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C2065	G1988	G1813	C1744	G1744	G1642	C1557	G1483	G1414	U1339	U1108	U1108	A1046
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G2069	G1992	G1817	G1747A	G1747A	G1647	G1559	A1486	G1416	G1344	G1110	G1110	A1048
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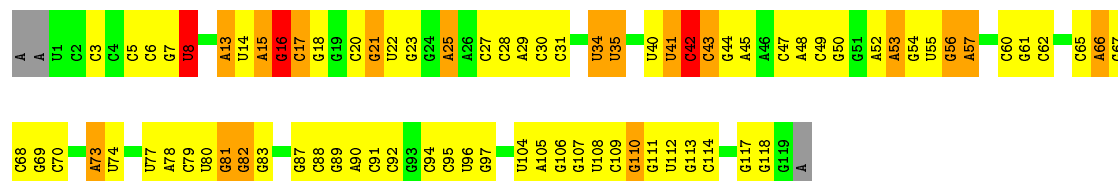
Frequency	Percentage
Daily	33%
Often	48%
Sometimes	15%
Rarely	4%





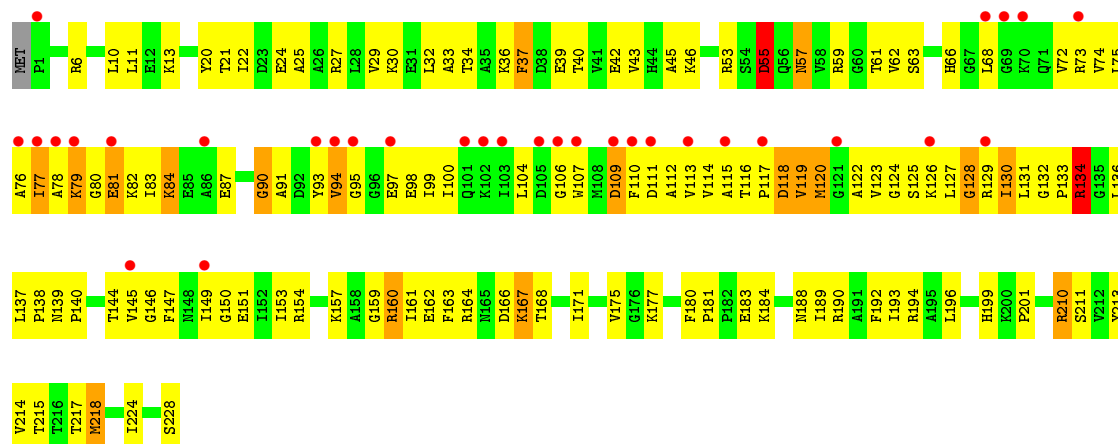
• Molecule 37: 5S RIBOSOMAL RNA

Chain DB: 32% 49% 14%



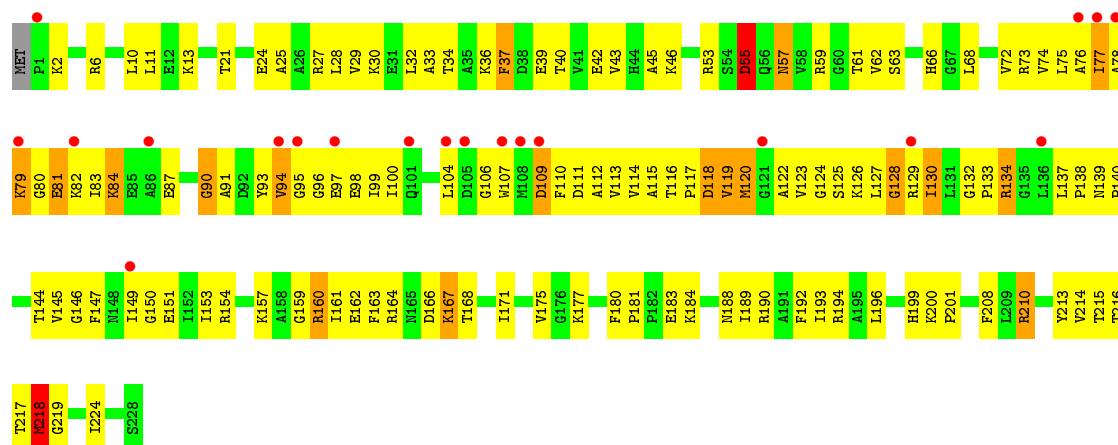
• Molecule 38: 50S RIBOSOMAL PROTEIN L1

Chain BC: 14% 42% 49% 8%



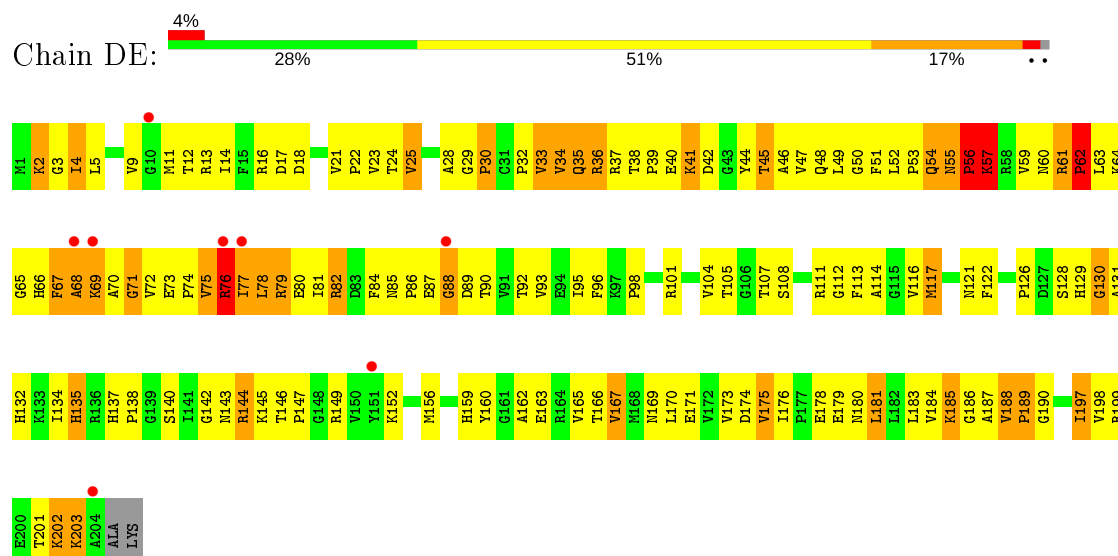
• Molecule 38: 50S RIBOSOMAL PROTEIN L1

Chain DC: 9% 41% 49% 8%

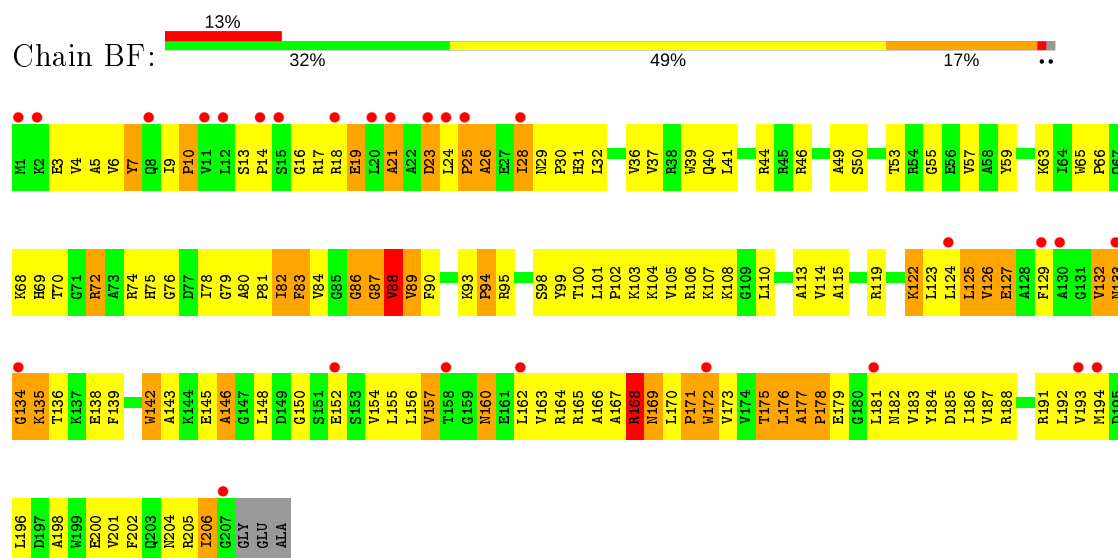


• Molecule 39: 50S RIBOSOMAL PROTEIN L2

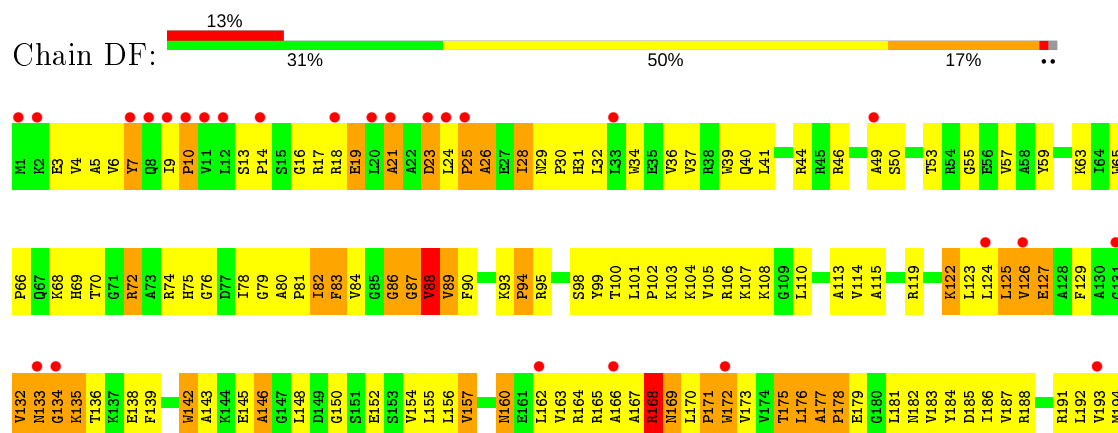
• Molecule 40: 50S RIBOSOMAL PROTEIN L3

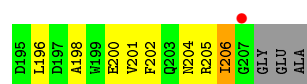


• Molecule 41: 50S RIBOSOMAL PROTEIN L4

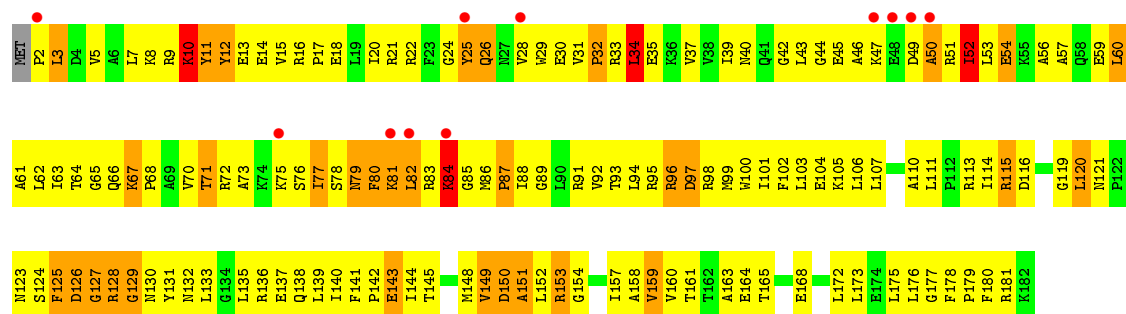


• Molecule 41: 50S RIBOSOMAL PROTEIN L4

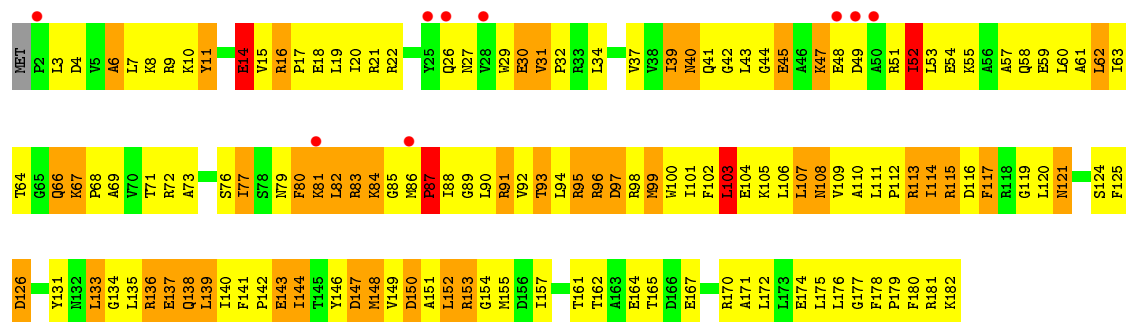




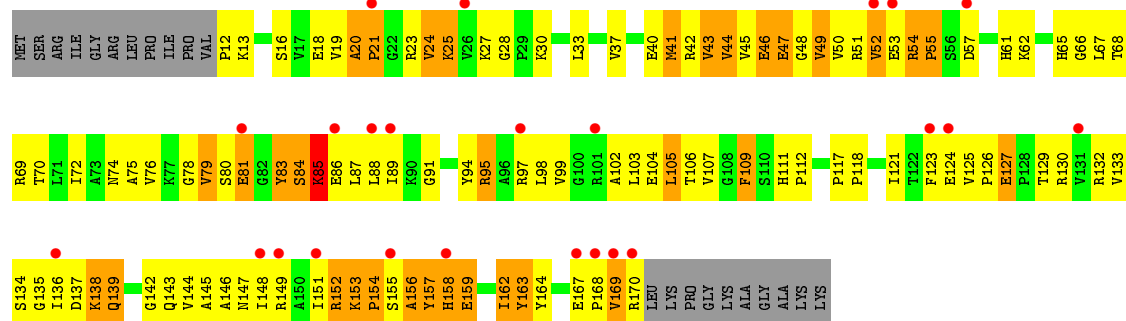
• Molecule 42: 50S RIBOSOMAL PROTEIN L5



• Molecule 42: 50S RIBOSOMAL PROTEIN L5

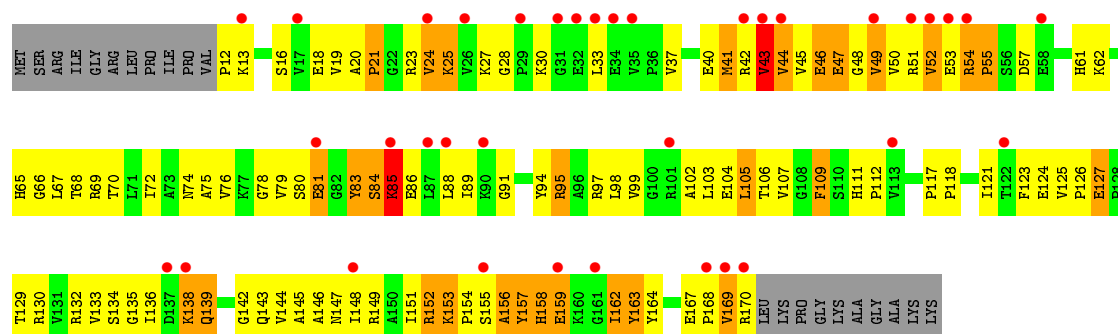


• Molecule 43: 50S RIBOSOMAL PROTEIN L6



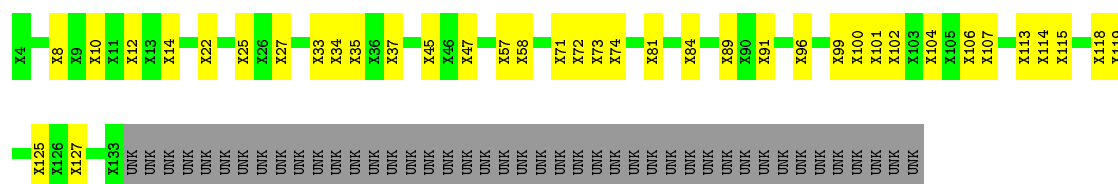
• Molecule 43: 50S RIBOSOMAL PROTEIN L6





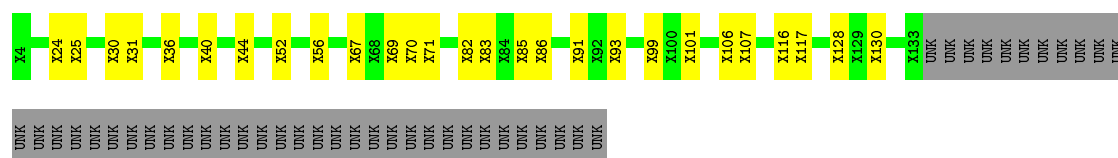
● Molecule 44: 50S RIBOSOMAL PROTEIN L10

Chain BJ:  53% 22% 25%




• Molecule 44: 50S RIBOSOMAL PROTEIN L10

Chain DJ: 




- Molecule 45: 50S RIBOSOMAL PROTEIN L11

Chain BK: 



- Molecule 45: 50S RIBOSOMAL PROTEIN L11

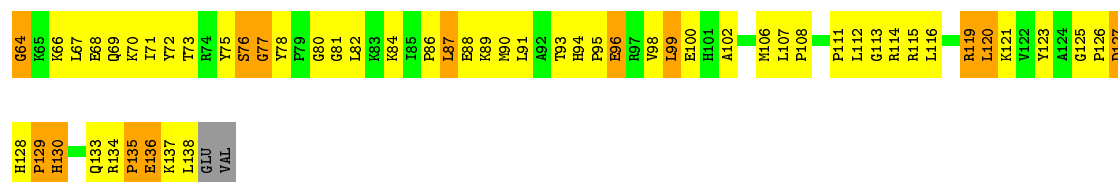
Chain DK: 



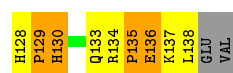
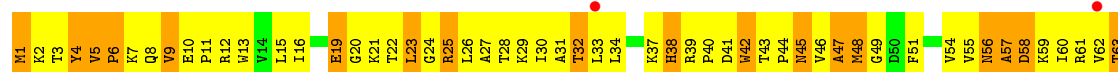
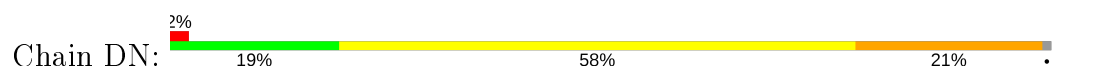
- Molecule 46: 50S RIBOSOMAL PROTEIN L13

Chain BN: 

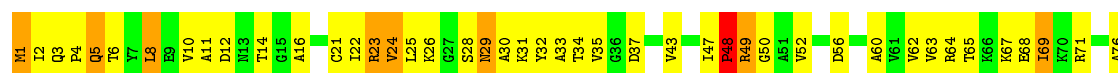




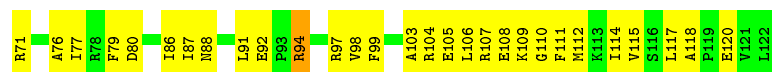
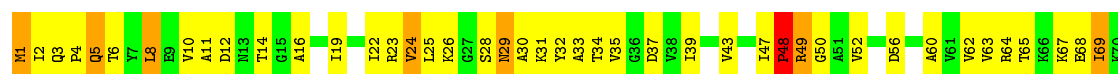
• Molecule 46: 50S RIBOSOMAL PROTEIN L13



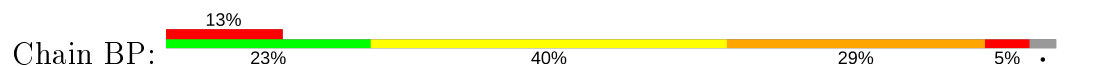
• Molecule 47: 50S RIBOSOMAL PROTEIN L14



• Molecule 47: 50S RIBOSOMAL PROTEIN L14

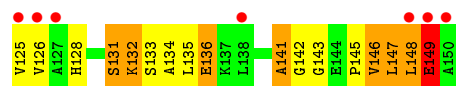
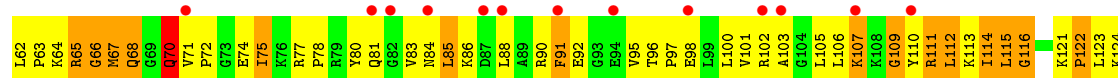
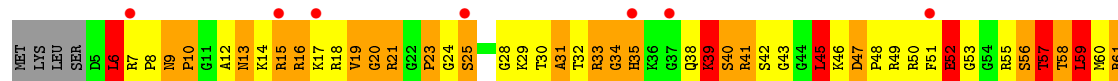
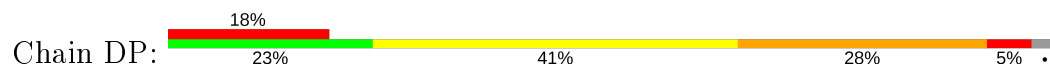


• Molecule 48: 50S RIBOSOMAL PROTEIN L15

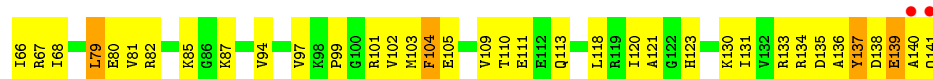
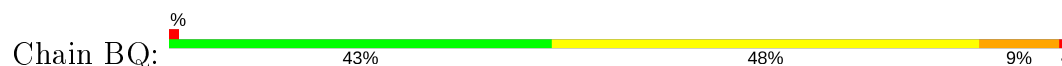




• Molecule 48: 50S RIBOSOMAL PROTEIN L15



• Molecule 49: 50S RIBOSOMAL PROTEIN L16

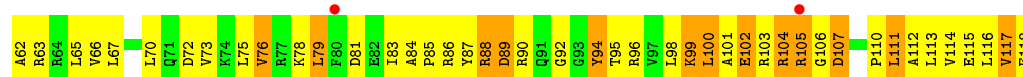


• Molecule 49: 50S RIBOSOMAL PROTEIN L16

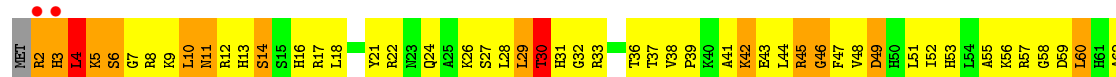


• Molecule 50: 50S RIBOSOMAL PROTEIN L17

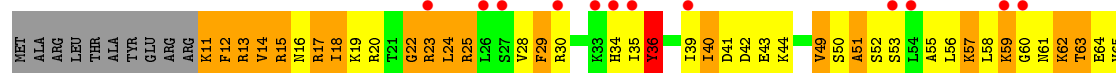
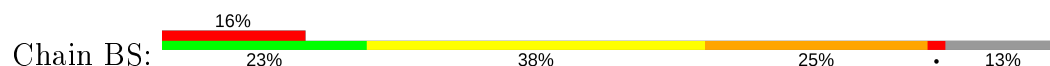




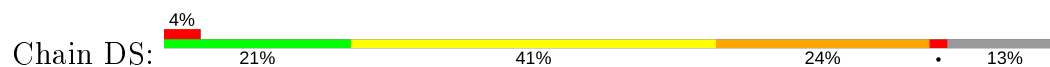
• Molecule 50: 50S RIBOSOMAL PROTEIN L17



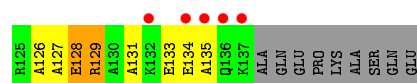
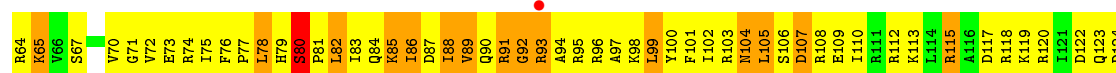
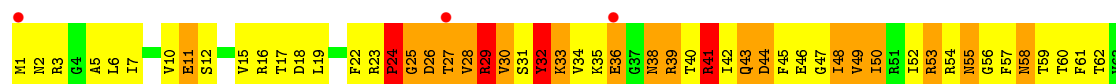
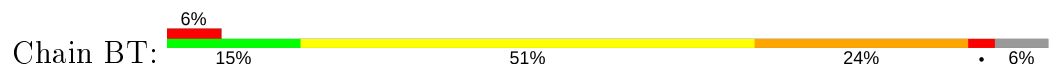
• Molecule 51: 50S RIBOSOMAL PROTEIN L18



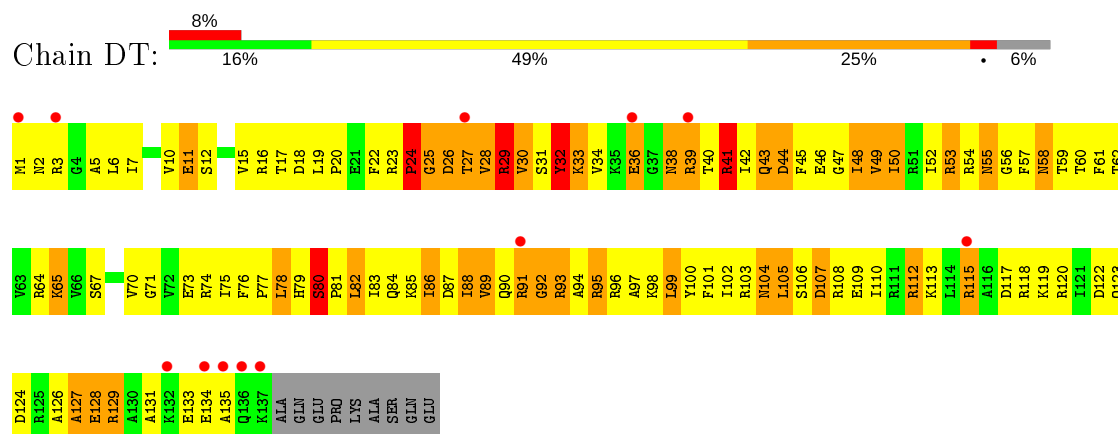
• Molecule 51: 50S RIBOSOMAL PROTEIN L18



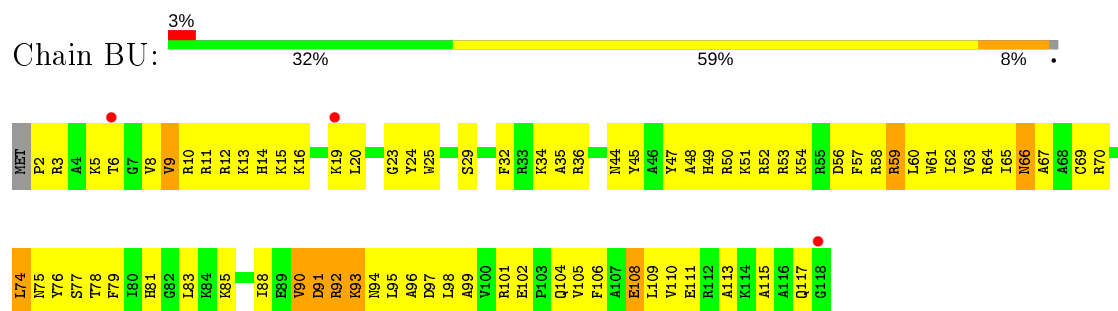
• Molecule 52: 50S RIBOSOMAL PROTEIN L19



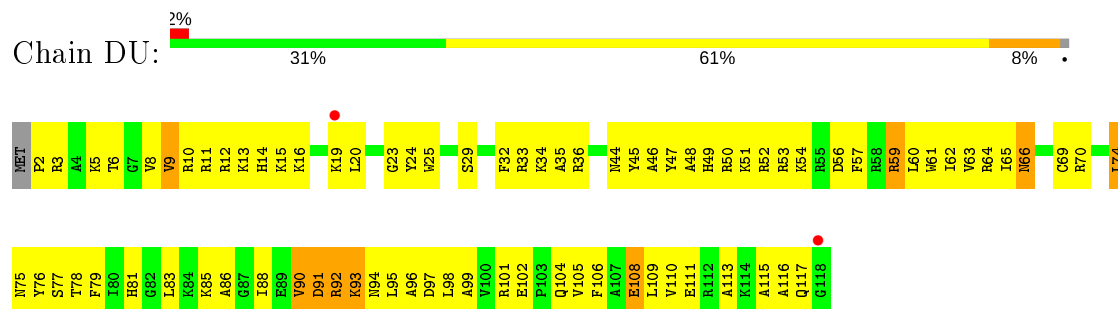
- Molecule 52: 50S RIBOSOMAL PROTEIN L19



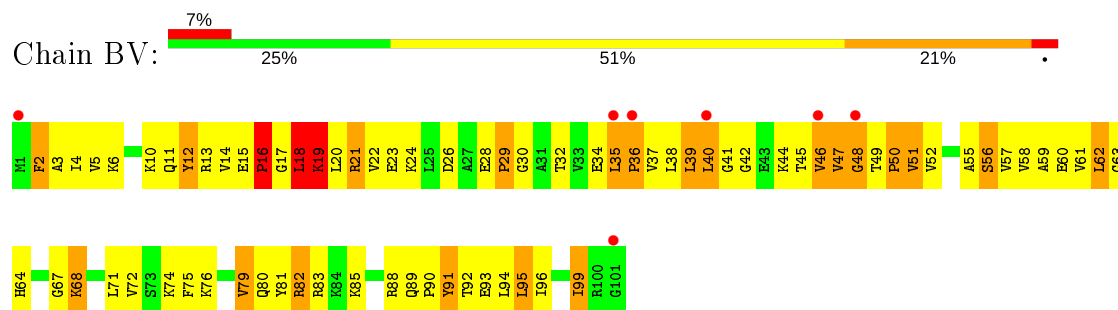
- Molecule 53: 50S RIBOSOMAL PROTEIN L20



- Molecule 53: 50S RIBOSOMAL PROTEIN L20

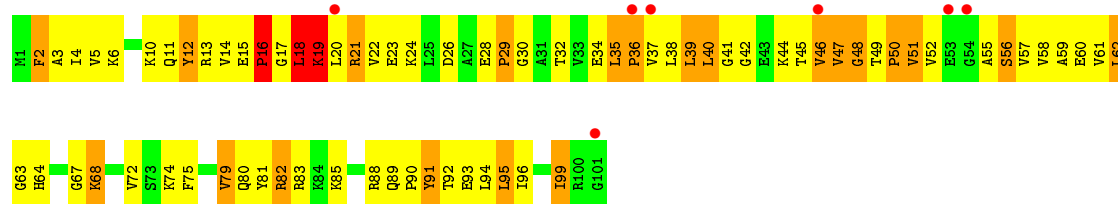


- Molecule 54: 50S RIBOSOMAL PROTEIN L21

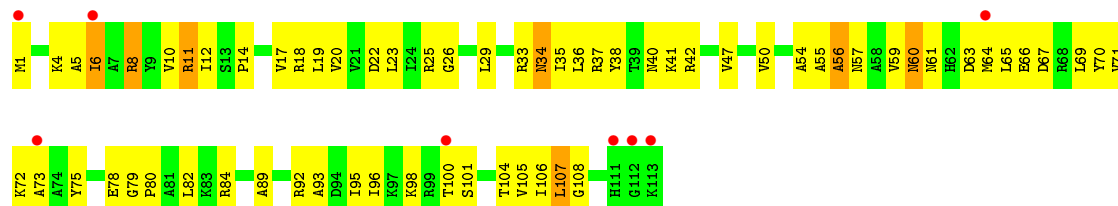
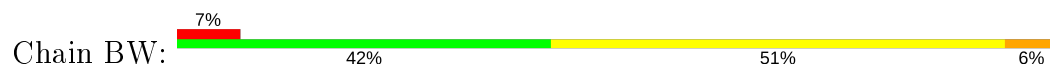


- Molecule 54: 50S RIBOSOMAL PROTEIN L21

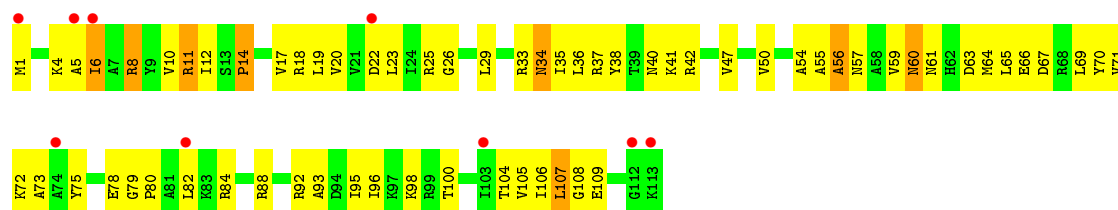
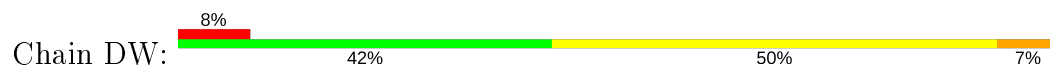




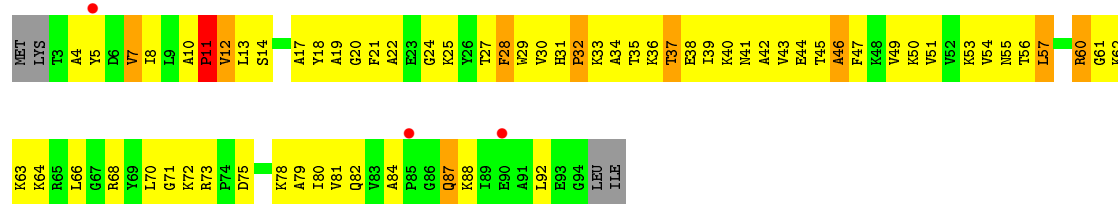
• Molecule 55: 50S RIBOSOMAL PROTEIN L22



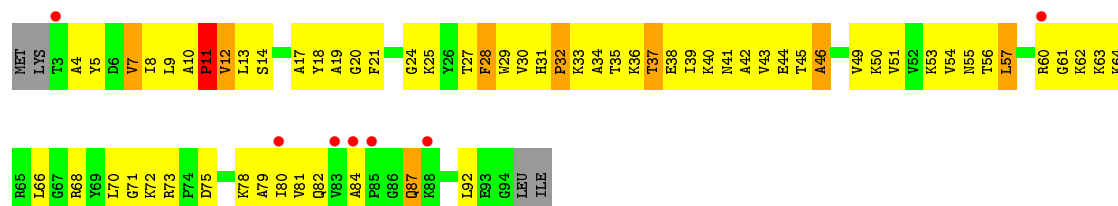
• Molecule 55: 50S RIBOSOMAL PROTEIN L22



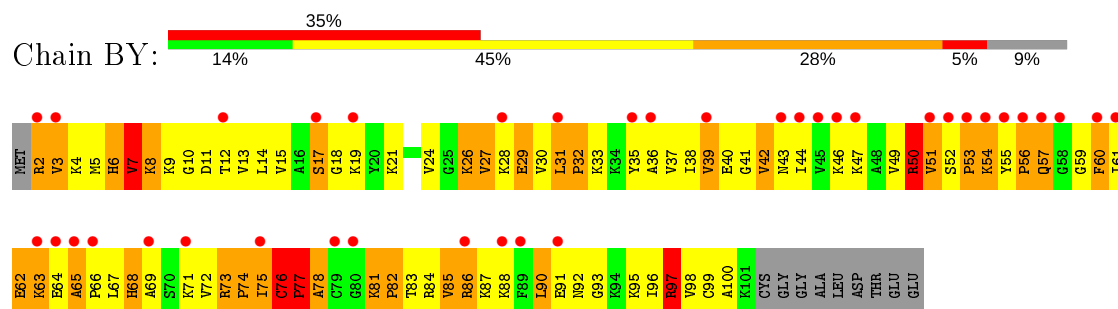
• Molecule 56: 50S RIBOSOMAL PROTEIN L23



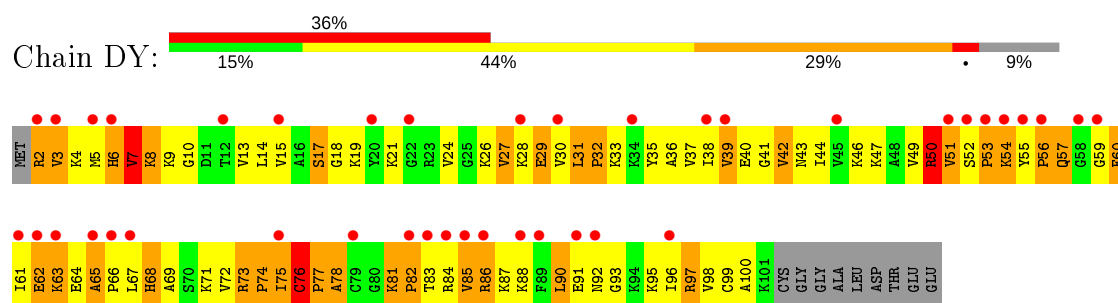
• Molecule 56: 50S RIBOSOMAL PROTEIN L23



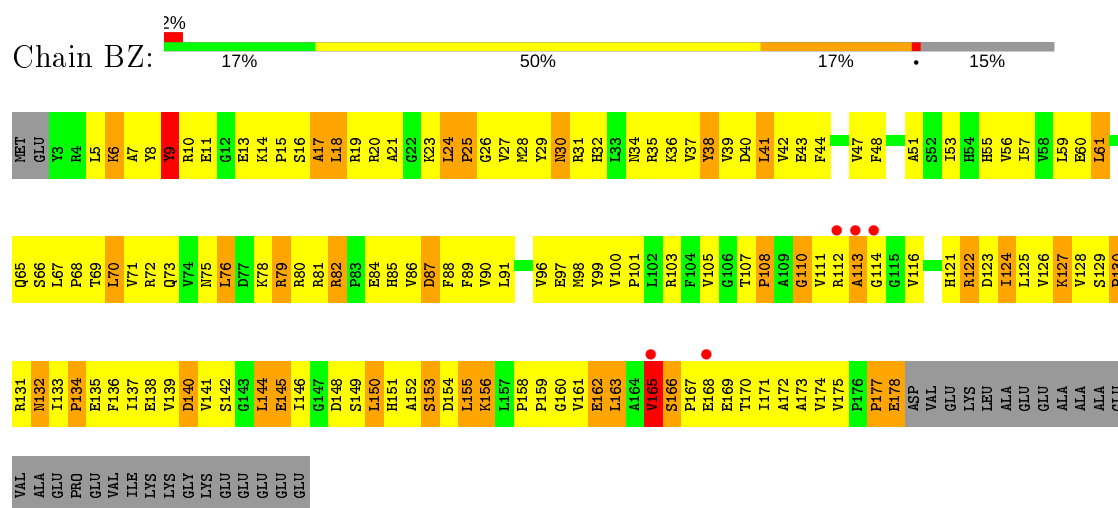
• Molecule 57: 50S RIBOSOMAL PROTEIN L24



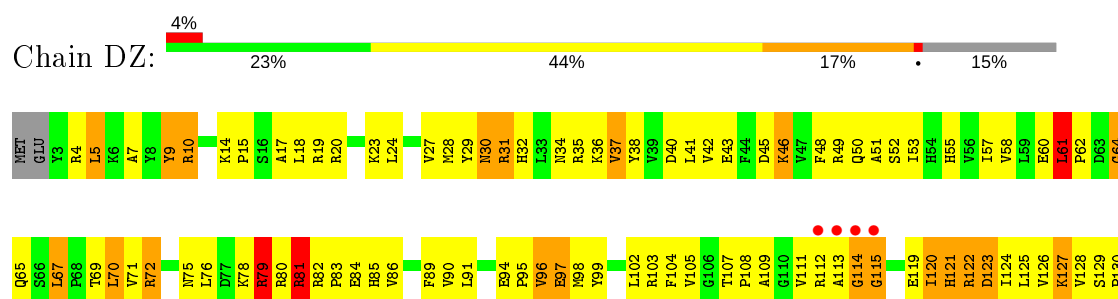
• Molecule 57: 50S RIBOSOMAL PROTEIN L24

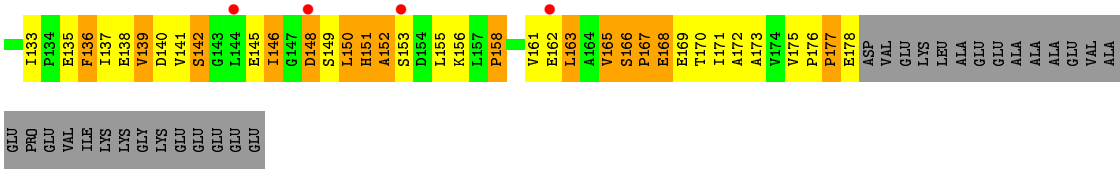


• Molecule 58: 50S RIBOSOMAL PROTEIN L25



• Molecule 58: 50S RIBOSOMAL PROTEIN L25





4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	290.20Å 269.20Å 404.00Å 90.00° 91.54° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10 49.51 – 2.90	Depositor EDS
% Data completeness (in resolution range)	99.8 (50.00-3.10) 92.4 (49.51-2.90)	Depositor EDS
R_{merge}	0.02	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.36 (at 2.91Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.237 , 0.264 0.236 , 0.263	Depositor DCC
R_{free} test set	62894 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å ²)	79.7	Xtriage
Anisotropy	0.030	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 67.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.27$	Xtriage
Estimated twinning fraction	0.026 for h,-k,-l	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	307330	wwPDB-VP
Average B, all atoms (Å ²)	100.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.44% 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: OMC, GDP, ZN, H2U, KIR, MIA, 4SU, 7MG, 5MU, PSU

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	AA	0.57	6/36325 (0.0%)	0.75	35/56695 (0.1%)
1	CA	0.64	11/36325 (0.0%)	0.76	45/56695 (0.1%)
2	AB	0.49	0/1935	0.69	0/2609
2	CB	0.49	0/1935	0.69	0/2609
3	AC	0.53	0/1636	0.72	1/2205 (0.0%)
3	CC	0.58	0/1636	0.73	1/2205 (0.0%)
4	AD	0.45	0/1733	0.69	1/2318 (0.0%)
4	CD	0.43	0/1733	0.68	1/2318 (0.0%)
5	AE	0.56	0/1162	0.75	0/1564
5	CE	0.59	0/1162	0.76	0/1564
6	AF	0.43	0/856	0.68	0/1154
6	CF	0.42	0/856	0.67	0/1154
7	AG	0.45	0/1276	0.64	0/1709
7	CG	0.47	0/1276	0.64	0/1709
8	AH	0.48	0/1136	0.73	0/1527
8	CH	0.49	0/1136	0.75	0/1527
9	AI	0.45	0/1029	0.68	0/1379
9	CI	0.46	0/1029	0.68	0/1379
10	AJ	0.44	0/807	0.73	0/1085
10	CJ	0.47	0/807	0.74	0/1085
11	AK	0.49	0/900	0.72	0/1213
11	CK	0.52	0/900	0.72	0/1213
12	AL	0.49	0/986	0.77	0/1320
12	CL	0.51	0/986	0.78	0/1320
13	AM	0.45	0/998	0.73	0/1336
13	CM	0.46	0/998	0.73	0/1336
14	AN	0.62	0/501	0.81	0/664
14	CN	0.56	0/501	0.80	0/664
15	AO	0.47	0/745	0.67	0/992
15	CO	0.47	0/745	0.67	0/992
16	AP	0.43	0/716	0.70	0/963
16	CP	0.43	0/716	0.70	0/963

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.50	0/836	0.70	0/1117
17	CQ	0.50	0/836	0.70	0/1117
18	AR	0.50	0/579	0.66	0/768
18	CR	0.47	0/579	0.65	0/768
19	AS	0.47	0/642	0.71	0/865
19	CS	0.49	0/642	0.72	0/865
20	AT	0.40	0/765	0.66	0/1007
20	CT	0.42	0/765	0.67	0/1007
21	AU	0.51	0/212	0.65	0/277
21	CU	0.47	0/212	0.64	0/277
22	AV	0.66	0/1809	0.83	1/2819 (0.0%)
22	AW	0.55	0/1809	0.75	0/2819
22	CV	0.72	0/1809	0.82	1/2819 (0.0%)
22	CW	0.57	1/1809 (0.1%)	0.76	0/2819
23	AX	0.69	0/406	0.87	2/631 (0.3%)
23	CX	0.80	0/406	0.90	3/631 (0.5%)
24	AY	0.49	1/1619 (0.1%)	0.70	0/2516
24	CY	0.50	1/1619 (0.1%)	0.70	0/2516
25	AZ	0.67	3/3042 (0.1%)	0.76	7/4129 (0.2%)
25	CZ	0.65	4/3042 (0.1%)	0.76	6/4129 (0.1%)
26	B0	0.45	0/671	0.70	0/892
26	D0	0.44	0/671	0.70	0/892
27	B1	0.43	0/738	0.72	0/981
27	D1	0.51	0/738	0.83	0/981
28	B2	0.35	0/600	0.63	0/793
28	D2	0.40	0/600	0.82	0/793
29	B3	0.35	0/472	0.60	0/634
29	D3	0.36	0/472	0.61	0/634
30	B4	0.41	0/349	0.64	0/474
30	D4	0.42	0/349	0.65	0/474
31	B5	0.40	0/473	0.64	0/639
31	D5	0.39	0/473	0.63	0/639
32	B6	0.62	0/440	0.95	0/586
32	D6	0.67	0/440	0.97	0/586
33	B7	0.45	0/426	0.71	0/561
33	D7	0.43	0/426	0.72	0/561
34	B8	0.55	0/515	0.77	0/679
34	D8	0.58	0/515	0.77	0/679
35	B9	0.53	0/310	0.70	0/407
35	D9	0.50	0/310	0.69	0/407
36	BA	0.52	5/69976 (0.0%)	0.72	27/109244 (0.0%)
36	DA	0.53	5/69976 (0.0%)	0.72	35/109244 (0.0%)
37	BB	0.49	0/2853	0.74	0/4451

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
37	DB	0.44	0/2853	0.74	1/4451 (0.0%)
38	BC	0.42	1/1774 (0.1%)	0.74	3/2391 (0.1%)
38	DC	0.43	2/1774 (0.1%)	0.75	3/2391 (0.1%)
39	BD	0.52	0/2195	0.88	4/2955 (0.1%)
39	DD	0.54	0/2195	0.90	4/2955 (0.1%)
40	BE	0.43	0/1596	0.71	0/2153
40	DE	0.44	0/1596	0.71	0/2153
41	BF	0.38	0/1658	0.74	3/2244 (0.1%)
41	DF	0.36	0/1658	0.74	3/2244 (0.1%)
42	BG	0.39	0/1499	0.70	1/2016 (0.0%)
42	DG	0.47	0/1499	0.80	0/2016
43	BH	0.35	0/1245	0.67	0/1682
43	DH	0.35	0/1245	0.67	0/1682
46	BN	0.39	0/1131	0.71	1/1525 (0.1%)
46	DN	0.39	0/1131	0.71	1/1525 (0.1%)
47	BO	0.52	1/943 (0.1%)	0.71	0/1269
47	DO	0.51	0/943	0.72	0/1269
48	BP	0.43	0/1131	0.89	3/1504 (0.2%)
48	DP	0.44	0/1131	0.90	4/1504 (0.3%)
49	BQ	0.51	0/1143	0.72	1/1527 (0.1%)
49	DQ	0.54	0/1143	0.72	1/1527 (0.1%)
50	BR	0.38	0/974	0.72	1/1302 (0.1%)
50	DR	0.39	0/974	0.72	1/1302 (0.1%)
51	BS	0.43	0/778	0.75	0/1036
51	DS	0.41	0/778	0.75	0/1036
52	BT	0.44	0/1155	0.76	2/1542 (0.1%)
52	DT	0.45	0/1155	0.77	2/1542 (0.1%)
53	BU	0.44	0/975	0.67	0/1297
53	DU	0.42	0/975	0.67	0/1297
54	BV	0.38	0/790	0.67	0/1057
54	DV	0.36	0/790	0.67	0/1057
55	BW	0.38	0/907	0.64	0/1216
55	DW	0.37	0/907	0.65	0/1216
56	BX	0.43	0/739	0.91	3/993 (0.3%)
56	DX	0.42	0/739	0.89	3/993 (0.3%)
57	BY	0.37	0/788	0.68	1/1051 (0.1%)
57	DY	0.37	0/788	0.68	1/1051 (0.1%)
58	BZ	0.46	0/1435	0.74	0/1949
58	DZ	0.49	0/1435	0.79	3/1949 (0.2%)
All	All	0.53	41/330278 (0.0%)	0.73	216/493462 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected

by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	4	59
1	CA	4	49
22	AV	0	3
22	CV	0	2
23	AX	0	2
23	CX	0	1
36	BA	2	63
36	DA	2	72
37	BB	0	2
37	DB	0	2
49	BQ	0	1
49	DQ	0	1
All	All	12	257

All (41) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	CZ	68	VAL	C-O	-20.43	0.84	1.23
25	AZ	68	VAL	C-O	-19.95	0.85	1.23
36	DA	761	A	C5-C6	-10.79	1.31	1.41
36	BA	761	A	C5-C6	-10.15	1.31	1.41
1	CA	858	G	C5-C6	-10.08	1.32	1.42
25	CZ	69	GLU	CG-CD	-8.68	1.39	1.51
36	BA	2506	U	N1-C2	8.44	1.46	1.38
25	AZ	69	GLU	CG-CD	-8.39	1.39	1.51
36	DA	2506	U	N1-C2	7.62	1.45	1.38
24	CY	1	A	OP3-P	-7.14	1.52	1.61
24	AY	1	A	OP3-P	-7.07	1.52	1.61
1	AA	858	G	C5-C6	-6.99	1.35	1.42
1	CA	858	G	N1-C2	6.52	1.43	1.37
1	CA	980	C	C4-C5	6.46	1.48	1.43
25	AZ	68	VAL	CA-CB	-6.43	1.41	1.54
1	AA	858	G	N1-C2	6.33	1.42	1.37
25	CZ	68	VAL	CA-CB	-6.29	1.41	1.54
1	CA	1125	U	O3'-P	6.21	1.68	1.61
1	CA	1108	G	C6-O6	6.06	1.29	1.24
38	BC	120	MET	CG-SD	5.98	1.96	1.81
1	AA	766	A	P-OP2	5.93	1.59	1.49
1	CA	1125	U	C3'-O3'	5.88	1.50	1.42
1	CA	1125	U	O5'-C5'	5.85	1.53	1.44
36	DA	2180	U	N1-C2	5.85	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	DA	761	A	C5-C4	5.80	1.42	1.38
1	CA	766	A	P-OP2	5.79	1.58	1.49
1	AA	858	G	C5-C4	5.77	1.42	1.38
1	CA	299	G	C6-O6	5.69	1.29	1.24
1	CA	858	G	C5-C4	5.61	1.42	1.38
38	DC	120	MET	CG-SD	5.61	1.95	1.81
25	CZ	68	VAL	CB-CG1	-5.53	1.41	1.52
36	DA	1678	G	C5-C6	-5.48	1.36	1.42
1	AA	1125	U	O3'-P	5.37	1.67	1.61
36	BA	761	A	C5-C4	5.28	1.42	1.38
36	BA	2180	U	N1-C2	5.20	1.43	1.38
38	DC	218	MET	CG-SD	5.20	1.94	1.81
1	AA	1125	U	C3'-O3'	5.19	1.49	1.42
36	BA	1968	G	C5-C6	-5.12	1.37	1.42
22	CW	39	U	N1-C2	5.08	1.43	1.38
1	CA	980	C	C5-C6	5.04	1.38	1.34
47	BO	21	CYS	CB-SG	-5.00	1.73	1.81

All (216) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	DC	134	ARG	NE-CZ-NH2	-14.36	113.12	120.30
39	DD	43	ARG	NE-CZ-NH1	14.15	127.37	120.30
41	BF	168	ARG	NE-CZ-NH2	-13.66	113.47	120.30
38	DC	134	ARG	NE-CZ-NH1	13.54	127.07	120.30
38	BC	134	ARG	NE-CZ-NH2	-13.34	113.63	120.30
39	DD	43	ARG	NE-CZ-NH2	-13.29	113.65	120.30
56	BX	60	ARG	NE-CZ-NH1	13.14	126.87	120.30
38	BC	134	ARG	NE-CZ-NH1	13.12	126.86	120.30
41	DF	168	ARG	NE-CZ-NH2	-13.06	113.77	120.30
56	BX	60	ARG	NE-CZ-NH2	-12.98	113.81	120.30
41	BF	168	ARG	NE-CZ-NH1	12.88	126.74	120.30
41	DF	168	ARG	NE-CZ-NH1	12.52	126.56	120.30
56	DX	60	ARG	NE-CZ-NH2	-12.24	114.18	120.30
39	BD	43	ARG	NE-CZ-NH1	12.21	126.41	120.30
56	DX	60	ARG	NE-CZ-NH1	11.98	126.29	120.30
39	BD	43	ARG	NE-CZ-NH2	-11.71	114.45	120.30
1	CA	1498	U	C2'-C3'-O3'	11.22	134.18	109.50
1	AA	1498	U	C2'-C3'-O3'	10.97	133.63	109.50
25	CZ	68	VAL	O-C-N	-10.97	105.15	122.70
25	AZ	68	VAL	O-C-N	-10.79	105.43	122.70
1	CA	1363(A)	A	C2'-C3'-O3'	10.75	133.16	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1363(A)	A	C2'-C3'-O3'	10.24	132.02	109.50
1	CA	508	C	C2'-C3'-O3'	10.13	131.78	109.50
25	AZ	68	VAL	CA-C-N	10.07	139.35	117.20
1	AA	508	C	C2'-C3'-O3'	9.90	131.29	109.50
25	CZ	68	VAL	CA-C-N	9.76	138.68	117.20
36	DA	1820	U	C2'-C3'-O3'	9.58	130.58	109.50
36	BA	1786	A	N9-C1'-C2'	9.32	126.12	114.00
1	AA	1399	C	C2'-C3'-O3'	9.21	129.77	109.50
36	DA	1786	A	N9-C1'-C2'	9.19	125.95	114.00
36	BA	1820	U	C2'-C3'-O3'	9.11	129.54	109.50
25	AZ	69	GLU	OE1-CD-OE2	8.86	133.93	123.30
25	CZ	69	GLU	OE1-CD-OE2	8.74	133.79	123.30
1	CA	115	G	C2'-C3'-O3'	8.60	128.42	109.50
1	AA	115	G	C2'-C3'-O3'	8.47	128.14	109.50
4	AD	12	CYS	CA-CB-SG	8.40	129.12	114.00
1	CA	687	A	C2'-C3'-O3'	8.37	127.92	109.50
1	AA	243	A	C2'-C3'-O3'	8.37	127.91	109.50
1	CA	1101	A	C2'-C3'-O3'	8.27	127.69	109.50
1	AA	687	A	C2'-C3'-O3'	8.25	127.66	109.50
36	BA	1819	A	C2'-C3'-O3'	8.20	127.55	109.50
1	CA	982	U	C2'-C3'-O3'	8.13	127.40	109.50
1	CA	961	U	N1-C1'-C2'	-8.12	103.06	112.00
36	DA	1819	A	C2'-C3'-O3'	8.11	127.35	109.50
1	CA	243	A	C2'-C3'-O3'	8.10	127.33	109.50
1	AA	982	U	C2'-C3'-O3'	7.97	127.04	109.50
1	CA	547	A	C2'-C3'-O3'	7.90	126.89	109.50
36	BA	1427	A	C2'-C3'-O3'	7.84	126.74	109.50
36	DA	1948	G	C5'-C4'-O4'	-7.83	99.71	109.10
1	AA	547	A	C2'-C3'-O3'	7.81	126.68	109.50
48	DP	52	GLU	N-CA-C	7.80	132.05	111.00
48	BP	52	GLU	N-CA-C	7.77	131.97	111.00
1	CA	1399	C	C2'-C3'-O3'	7.76	126.56	109.50
39	DD	43	ARG	CD-NE-CZ	7.68	134.36	123.60
1	AA	1101	A	C2'-C3'-O3'	7.68	126.40	109.50
1	AA	961	U	N1-C1'-C2'	-7.67	103.56	112.00
36	DA	1427	A	C2'-C3'-O3'	7.67	126.36	109.50
36	DA	1799	G	C2'-C3'-O3'	7.58	126.19	109.50
1	AA	60	A	C2'-C3'-O3'	7.54	126.08	109.50
1	CA	792	A	C2'-C3'-O3'	7.47	125.94	109.50
36	DA	1970	A	C5'-C4'-O4'	7.47	118.06	109.10
1	CA	995	C	N1-C1'-C2'	-7.44	103.81	112.00
36	DA	1653	G	C2'-C3'-O3'	7.44	125.87	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	60	A	C2'-C3'-O3'	7.38	125.75	109.50
38	BC	134	ARG	CD-NE-CZ	7.22	133.70	123.60
48	DP	53	GLY	N-CA-C	-7.20	95.11	113.10
36	BA	945	A	N9-C1'-C2'	7.20	123.35	114.00
1	CA	980	C	N1-C1'-C2'	7.19	123.34	114.00
36	BA	1653	G	C2'-C3'-O3'	7.18	125.29	109.50
48	BP	53	GLY	N-CA-C	-7.17	95.17	113.10
36	BA	2610	C	C2'-C3'-O3'	7.10	125.12	109.50
1	AA	792	A	C2'-C3'-O3'	7.09	125.10	109.50
39	BD	43	ARG	CD-NE-CZ	7.08	133.50	123.60
1	CA	1502	A	N9-C1'-C2'	7.06	123.18	114.00
36	BA	1799	G	C2'-C3'-O3'	7.02	124.95	109.50
36	BA	1698	A	O4'-C1'-N9	6.97	113.77	108.20
25	CZ	189	ARG	NE-CZ-NH2	-6.95	116.83	120.30
38	DC	134	ARG	CD-NE-CZ	6.94	133.32	123.60
36	DA	2360	A	N9-C1'-C2'	-6.89	104.42	112.00
36	BA	2360	A	N9-C1'-C2'	-6.88	104.44	112.00
36	DA	1698	A	O4'-C1'-N9	6.87	113.70	108.20
36	DA	2610	C	C2'-C3'-O3'	6.83	124.64	113.70
1	AA	495	A	C2'-C3'-O3'	6.83	124.63	113.70
1	AA	995	C	N1-C1'-C2'	-6.80	104.52	112.00
36	BA	1970	A	C5'-C4'-O4'	6.77	117.22	109.10
1	AA	980	C	N1-C1'-C2'	6.69	122.70	114.00
4	CD	12	CYS	CA-CB-SG	6.69	126.05	114.00
1	CA	495	A	C2'-C3'-O3'	6.69	124.40	113.70
25	AZ	69	GLU	CG-CD-OE1	-6.58	105.13	118.30
56	BX	60	ARG	CD-NE-CZ	6.57	132.79	123.60
36	BA	1948	G	C5'-C4'-O4'	-6.53	101.26	109.10
1	AA	1283	G	N9-C1'-C2'	-6.46	104.90	112.00
41	BF	168	ARG	CD-NE-CZ	6.39	132.55	123.60
36	DA	945	A	N9-C1'-C2'	6.39	122.31	114.00
41	DF	168	ARG	CD-NE-CZ	6.36	132.50	123.60
36	BA	1300	U	C2'-C3'-O3'	6.35	123.86	113.70
22	CV	59	U	N1-C1'-C2'	-6.35	105.02	112.00
39	BD	35	LYS	N-CA-C	6.34	128.11	111.00
1	CA	1283	G	N9-C1'-C2'	-6.32	105.05	112.00
56	DX	60	ARG	CD-NE-CZ	6.30	132.43	123.60
22	AV	59	U	N1-C1'-C2'	-6.29	105.08	112.00
39	DD	35	LYS	N-CA-C	6.22	127.78	111.00
36	DA	1300	U	C2'-C3'-O3'	6.20	123.62	113.70
58	DZ	79	ARG	N-CA-C	-6.19	94.28	111.00
25	CZ	69	GLU	CG-CD-OE1	-6.19	105.93	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1399	C	C4'-C3'-O3'	6.17	125.34	113.00
1	CA	977	A	C5'-C4'-C3'	-6.15	106.16	116.00
1	CA	1125	U	C4'-C3'-O3'	6.13	125.25	113.00
42	BG	34	LEU	CA-CB-CG	6.02	129.15	115.30
36	BA	1495	A	N9-C1'-C2'	5.97	121.77	114.00
58	DZ	115	GLY	N-CA-C	5.95	127.97	113.10
1	AA	686	U	N1-C1'-C2'	5.92	121.70	114.00
1	CA	1279	A	N9-C1'-C2'	5.89	121.66	114.00
36	DA	1987	G	C5'-C4'-C3'	-5.89	106.57	116.00
36	BA	1970	A	C5'-C4'-C3'	5.89	125.42	116.00
49	DQ	19	GLY	N-CA-C	5.88	127.81	113.10
1	CA	197	A	N9-C1'-C2'	5.85	121.61	114.00
36	BA	1987	G	C5'-C4'-C3'	-5.84	106.65	116.00
1	AA	197	A	N9-C1'-C2'	5.84	121.59	114.00
36	DA	1819	A	C4'-C3'-O3'	5.82	124.63	113.00
1	CA	328	C	N1-C1'-C2'	5.82	121.56	114.00
1	AA	266	G	C2'-C3'-O3'	5.81	123.00	113.70
36	DA	1495	A	N9-C1'-C2'	5.81	121.55	114.00
1	CA	686	U	N1-C1'-C2'	5.79	121.53	114.00
52	DT	29	ARG	N-CA-C	5.77	126.57	111.00
36	DA	1970	A	C5'-C4'-C3'	5.76	125.22	116.00
36	DA	857	C	C5'-C4'-C3'	-5.73	106.83	116.00
52	BT	29	ARG	N-CA-C	5.71	126.43	111.00
23	AX	27	A	C2'-C3'-O3'	5.70	122.82	113.70
49	BQ	19	GLY	N-CA-C	5.68	127.30	113.10
36	DA	2128	C	N1-C1'-C2'	-5.68	105.75	112.00
1	AA	1125	U	C4'-C3'-O3'	5.67	124.34	113.00
36	DA	2278	A	C5'-C4'-C3'	5.67	125.07	116.00
1	CA	1125	U	O4'-C1'-C2'	-5.67	100.13	105.80
1	AA	977	A	C5'-C4'-C3'	-5.66	106.94	116.00
36	BA	527	C	O4'-C1'-N1	5.65	112.72	108.20
50	DR	4	LEU	CA-CB-CG	5.62	128.24	115.30
48	DP	45	LEU	N-CA-C	-5.59	95.91	111.00
23	CX	27	A	C2'-C3'-O3'	5.58	122.64	113.70
36	DA	2405	G	N9-C1'-C2'	5.57	121.24	114.00
1	CA	189(H)	G	N9-C1'-C2'	-5.57	105.87	112.00
36	BA	857	C	C5'-C4'-C3'	-5.57	107.09	116.00
1	CA	245	C	N1-C1'-C2'	-5.57	105.88	112.00
36	BA	906	G	C5'-C4'-C3'	-5.56	107.10	116.00
1	CA	858	G	C6-C5-N7	-5.56	127.06	130.40
3	AC	196	LEU	CA-CB-CG	5.55	128.07	115.30
23	CX	26	A	C5'-C4'-C3'	5.54	124.87	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	BT	80	SER	N-CA-C	5.53	125.92	111.00
25	AZ	68	VAL	C-N-CA	5.52	135.50	121.70
48	BP	45	LEU	N-CA-C	-5.51	96.11	111.00
23	AX	26	A	C5'-C4'-C3'	5.51	124.82	116.00
1	AA	328	C	N1-C1'-C2'	5.50	121.14	114.00
1	AA	1502	A	N9-C1'-C2'	5.49	121.14	114.00
1	CA	1498	U	N1-C1'-C2'	5.49	121.14	114.00
3	CC	196	LEU	CA-CB-CG	5.49	127.92	115.30
36	BA	2278	A	C5'-C4'-C3'	5.49	124.78	116.00
36	BA	1819	A	C4'-C3'-O3'	5.47	123.95	113.00
1	AA	1279	A	N9-C1'-C2'	5.46	121.10	114.00
1	AA	189(H)	G	N9-C1'-C2'	-5.44	106.01	112.00
36	DA	387	U	C2'-C3'-O3'	5.44	122.41	113.70
52	DT	80	SER	N-CA-C	5.44	125.69	111.00
58	DZ	61	LEU	CA-CB-CG	5.43	127.79	115.30
50	BR	4	LEU	CA-CB-CG	5.42	127.77	115.30
1	CA	563	A	N9-C1'-C2'	5.41	121.04	114.00
36	DA	2756	U	C2'-C3'-O3'	5.41	122.36	113.70
36	DA	527	C	O4'-C1'-N1	5.41	112.53	108.20
46	DN	77	GLY	N-CA-C	-5.40	99.59	113.10
36	DA	1947	C	C5'-C4'-C3'	-5.40	107.36	116.00
23	CX	16	A	C5'-C4'-C3'	5.39	124.63	116.00
1	CA	858	G	N1-C6-O6	5.36	123.12	119.90
25	AZ	288	VAL	CG1-CB-CG2	-5.36	102.33	110.90
1	AA	245	C	N1-C1'-C2'	-5.35	106.11	112.00
57	DY	54	LYS	N-CA-C	-5.34	96.58	111.00
46	BN	77	GLY	N-CA-C	-5.31	99.83	113.10
36	BA	387	U	C2'-C3'-O3'	5.30	122.18	113.70
25	CZ	68	VAL	C-N-CA	5.29	134.92	121.70
1	AA	1125	U	O4'-C1'-C2'	-5.25	100.55	105.80
1	CA	266	G	C2'-C3'-O3'	5.25	122.10	113.70
36	BA	2405	G	N9-C1'-C2'	5.24	120.81	114.00
1	CA	1145	C	C2'-C3'-O3'	5.23	122.07	113.70
1	AA	347	G	N9-C1'-C2'	-5.23	106.25	112.00
25	AZ	68	VAL	CA-CB-CG1	-5.22	103.06	110.90
1	AA	484	G	N9-C1'-C2'	5.22	120.79	114.00
36	DA	761	A	C6-C5-N7	-5.21	128.65	132.30
1	CA	30	U	N1-C1'-C2'	5.21	120.78	114.00
57	BY	54	LYS	N-CA-C	-5.21	96.94	111.00
1	CA	960	U	N1-C1'-C2'	5.20	120.76	114.00
36	DA	1701	A	C5'-C4'-C3'	-5.20	107.68	116.00
36	DA	2286	A	N9-C1'-C2'	5.20	120.76	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	DB	8	U	C5'-C4'-O4'	-5.19	102.87	109.10
1	CA	1053	G	OP1-P-O3'	5.19	116.61	105.20
36	DA	958	U	N1-C1'-C2'	5.18	120.74	114.00
1	CA	1198	G	O5'-P-OP2	5.17	116.91	110.70
36	BA	2756	U	C2'-C3'-O3'	5.17	121.97	113.70
1	CA	1124	G	N9-C1'-C2'	5.16	120.71	114.00
36	BA	2559	C	C5'-C4'-C3'	-5.16	107.75	116.00
1	CA	1280	A	OP1-P-O3'	5.15	116.53	105.20
1	CA	347	G	N9-C1'-C2'	-5.14	106.34	112.00
36	DA	906	G	C5'-C4'-C3'	-5.14	107.78	116.00
1	AA	1145	C	C2'-C3'-O3'	5.14	121.92	113.70
36	DA	2031	A	N9-C1'-C2'	5.14	120.68	114.00
36	DA	2132	U	N1-C1'-C2'	5.14	120.68	114.00
36	DA	856	C	C2'-C3'-O3'	5.11	121.87	113.70
1	CA	1387	G	C5'-C4'-C3'	-5.10	107.84	116.00
36	DA	761	A	N1-C6-N6	5.08	121.65	118.60
1	AA	858	G	N1-C6-O6	5.04	122.92	119.90
1	CA	484	G	N9-C1'-C2'	5.03	120.54	114.00
1	AA	858	G	O4'-C1'-N9	-5.02	104.18	108.20
1	AA	1399	C	C4'-C3'-O3'	5.02	123.05	113.00
48	DP	59	LEU	CA-CB-CG	5.02	126.85	115.30
36	BA	2286	A	N9-C1'-C2'	5.02	120.53	114.00
36	BA	2128	C	N1-C1'-C2'	-5.02	106.48	112.00
1	CA	836	G	C5'-C4'-C3'	5.02	124.03	116.00
1	CA	1456	G	N9-C1'-C2'	5.02	120.52	114.00
1	AA	836	G	C5'-C4'-C3'	5.01	124.01	116.00
36	DA	1986	A	C5'-C4'-C3'	-5.00	107.99	116.00

All (12) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	508	C	C3'
1	AA	1363(A)	A	C3'
1	AA	1399	C	C3'
1	AA	1498	U	C3'
36	BA	1819	A	C3'
36	BA	1820	U	C3'
1	CA	508	C	C3'
1	CA	1363(A)	A	C3'
1	CA	1399	C	C3'
1	CA	1498	U	C3'
36	DA	1819	A	C3'

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Mol	Chain	Res	Type	Atom
36	DA	1820	U	C3'

All (257) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1073	U	Sidechain
1	AA	1077	G	Sidechain
1	AA	1086	U	Sidechain
1	AA	1125	U	Sidechain
1	AA	1153	C	Sidechain
1	AA	1157	A	Sidechain
1	AA	1181	G	Sidechain
1	AA	1190	G	Sidechain
1	AA	1196	U	Sidechain
1	AA	1220	G	Sidechain
1	AA	1279	A	Sidechain
1	AA	1281	U	Sidechain
1	AA	1283	G	Sidechain
1	AA	1370	G	Sidechain
1	AA	1390	U	Sidechain
1	AA	14	U	Sidechain
1	AA	1406	U	Sidechain
1	AA	1414	U	Sidechain
1	AA	1439	C	Sidechain
1	AA	1498	U	Sidechain
1	AA	1504	G	Sidechain
1	AA	1505	G	Sidechain
1	AA	1516	G	Sidechain
1	AA	1519	A	Sidechain
1	AA	1527	C	Sidechain
1	AA	1528	U	Sidechain
1	AA	189(G)	G	Sidechain
1	AA	189(H)	G	Sidechain
1	AA	197	A	Sidechain
1	AA	198	G	Sidechain
1	AA	244	U	Sidechain
1	AA	245	C	Sidechain
1	AA	251	G	Sidechain
1	AA	30	U	Sidechain
1	AA	347	G	Sidechain
1	AA	37	U	Sidechain
1	AA	380	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	387	U	Sidechain
1	AA	404	U	Sidechain
1	AA	498	U	Sidechain
1	AA	529	G	Sidechain
1	AA	560	U	Sidechain
1	AA	570	G	Sidechain
1	AA	573	A	Sidechain
1	AA	60	A	Sidechain
1	AA	657	G	Sidechain
1	AA	727	G	Sidechain
1	AA	741	G	Sidechain
1	AA	748	C	Sidechain
1	AA	898	G	Sidechain
1	AA	941	G	Sidechain
1	AA	952	U	Sidechain
1	AA	954	G	Sidechain
1	AA	961	U	Sidechain
1	AA	970	C	Sidechain
1	AA	971	G	Sidechain
1	AA	980	C	Sidechain
1	AA	982	U	Sidechain
1	AA	995	C	Sidechain
22	AV	25	C	Sidechain
22	AV	29	G	Sidechain
22	AV	59	U	Sidechain
23	AX	19	U	Sidechain
23	AX	26	A	Sidechain
36	BA	1156	A	Sidechain
36	BA	1162	G	Sidechain
36	BA	1238	G	Sidechain
36	BA	1393	A	Sidechain
36	BA	1425	G	Sidechain
36	BA	15	G	Sidechain
36	BA	1647	G	Sidechain
36	BA	1649	G	Sidechain
36	BA	1673	U	Sidechain
36	BA	1772	G	Sidechain
36	BA	1773	A	Sidechain
36	BA	1798	U	Sidechain
36	BA	1801	G	Sidechain
36	BA	1807	G	Sidechain
36	BA	1822	G	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	1831	G	Sidechain
36	BA	1841	U	Sidechain
36	BA	1954	G	Sidechain
36	BA	2000	G	Sidechain
36	BA	201	C	Sidechain
36	BA	2010	G	Sidechain
36	BA	2031	A	Sidechain
36	BA	2052	G	Sidechain
36	BA	2061	G	Sidechain
36	BA	2074	U	Sidechain
36	BA	2075	U	Sidechain
36	BA	2128	C	Sidechain
36	BA	2132	U	Sidechain
36	BA	2133	G	Sidechain
36	BA	2134	A	Sidechain
36	BA	2157	G	Sidechain
36	BA	2250	G	Sidechain
36	BA	2320	A	Sidechain
36	BA	2344	U	Sidechain
36	BA	2360	A	Sidechain
36	BA	2464	C	Sidechain
36	BA	2481	G	Sidechain
36	BA	2504	U	Sidechain
36	BA	2506	U	Sidechain
36	BA	2508	G	Sidechain
36	BA	2523	G	Sidechain
36	BA	2542	A	Sidechain
36	BA	2581	G	Sidechain
36	BA	2595	G	Sidechain
36	BA	2659	G	Sidechain
36	BA	2665	A	Sidechain
36	BA	2685	G	Sidechain
36	BA	2712	U	Sidechain
36	BA	2848	G	Sidechain
36	BA	383	U	Sidechain
36	BA	631	A	Sidechain
36	BA	632	A	Sidechain
36	BA	686	G	Sidechain
36	BA	688	U	Sidechain
36	BA	700	G	Sidechain
36	BA	746	A	Sidechain
36	BA	760	G	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	792	G	Sidechain
36	BA	813	U	Sidechain
36	BA	913	U	Sidechain
36	BA	945	A	Sidechain
36	BA	956	G	Sidechain
36	BA	958	U	Sidechain
37	BB	16	G	Sidechain
37	BB	42	C	Sidechain
49	BQ	9	TYR	Sidechain
1	CA	1048	G	Sidechain
1	CA	1073	U	Sidechain
1	CA	1077	G	Sidechain
1	CA	1125	U	Sidechain
1	CA	1153	C	Sidechain
1	CA	1157	A	Sidechain
1	CA	1181	G	Sidechain
1	CA	1190	G	Sidechain
1	CA	1196	U	Sidechain
1	CA	1279	A	Sidechain
1	CA	1281	U	Sidechain
1	CA	1283	G	Sidechain
1	CA	1330	U	Sidechain
1	CA	1370	G	Sidechain
1	CA	1397	C	Sidechain
1	CA	14	U	Sidechain
1	CA	1406	U	Sidechain
1	CA	1414	U	Sidechain
1	CA	1415	G	Sidechain
1	CA	1467	G	Sidechain
1	CA	1494	G	Sidechain
1	CA	1498	U	Sidechain
1	CA	1516	G	Sidechain
1	CA	1523	G	Sidechain
1	CA	189(G)	G	Sidechain
1	CA	189(H)	G	Sidechain
1	CA	197	A	Sidechain
1	CA	198	G	Sidechain
1	CA	202	U	Sidechain
1	CA	245	C	Sidechain
1	CA	251	G	Sidechain
1	CA	309	G	Sidechain
1	CA	347	G	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	37	U	Sidechain
1	CA	380	G	Sidechain
1	CA	387	U	Sidechain
1	CA	404	U	Sidechain
1	CA	498	U	Sidechain
1	CA	529	G	Sidechain
1	CA	570	G	Sidechain
1	CA	573	A	Sidechain
1	CA	657	G	Sidechain
1	CA	727	G	Sidechain
1	CA	748	C	Sidechain
1	CA	941	G	Sidechain
1	CA	952	U	Sidechain
1	CA	961	U	Sidechain
1	CA	980	C	Sidechain
1	CA	995	C	Sidechain
22	CV	29	G	Sidechain
22	CV	59	U	Sidechain
23	CX	26	A	Sidechain
36	DA	1060	U	Sidechain
36	DA	114	U	Sidechain
36	DA	1156	A	Sidechain
36	DA	1162	G	Sidechain
36	DA	1393	A	Sidechain
36	DA	1425	G	Sidechain
36	DA	15	G	Sidechain
36	DA	1569	A	Sidechain
36	DA	1647	G	Sidechain
36	DA	1649	G	Sidechain
36	DA	1772	G	Sidechain
36	DA	1773	A	Sidechain
36	DA	1784	A	Sidechain
36	DA	1801	G	Sidechain
36	DA	1807	G	Sidechain
36	DA	1822	G	Sidechain
36	DA	1831	G	Sidechain
36	DA	1841	U	Sidechain
36	DA	1900	A	Sidechain
36	DA	1928	A	Sidechain
36	DA	1940	U	Sidechain
36	DA	1952	A	Sidechain
36	DA	1954	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	201	C	Sidechain
36	DA	2031	A	Sidechain
36	DA	2052	G	Sidechain
36	DA	2061	G	Sidechain
36	DA	2074	U	Sidechain
36	DA	2075	U	Sidechain
36	DA	2128	C	Sidechain
36	DA	2133	G	Sidechain
36	DA	2134	A	Sidechain
36	DA	2157	G	Sidechain
36	DA	2250	G	Sidechain
36	DA	2320	A	Sidechain
36	DA	2344	U	Sidechain
36	DA	2360	A	Sidechain
36	DA	2391	G	Sidechain
36	DA	2464	C	Sidechain
36	DA	2475	C	Sidechain
36	DA	2481	G	Sidechain
36	DA	2504	U	Sidechain
36	DA	2506	U	Sidechain
36	DA	2508	G	Sidechain
36	DA	2523	G	Sidechain
36	DA	2525	G	Sidechain
36	DA	2542	A	Sidechain
36	DA	2582	G	Sidechain
36	DA	2595	G	Sidechain
36	DA	2665	A	Sidechain
36	DA	2685	G	Sidechain
36	DA	2746	U	Sidechain
36	DA	2818	G	Sidechain
36	DA	2848	G	Sidechain
36	DA	383	U	Sidechain
36	DA	463	G	Sidechain
36	DA	467	G	Sidechain
36	DA	528	A	Sidechain
36	DA	631	A	Sidechain
36	DA	632	A	Sidechain
36	DA	686	G	Sidechain
36	DA	688	U	Sidechain
36	DA	700	G	Sidechain
36	DA	746	A	Sidechain
36	DA	760	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	792	G	Sidechain
36	DA	813	U	Sidechain
36	DA	913	U	Sidechain
36	DA	945	A	Sidechain
36	DA	946	G	Sidechain
36	DA	956	G	Sidechain
36	DA	958	U	Sidechain
37	DB	16	G	Sidechain
37	DB	42	C	Sidechain
49	DQ	9	TYR	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	32451	0	16382	929	0
1	CA	32451	0	16382	850	0
2	AB	1900	0	1951	185	2
2	CB	1900	0	1951	176	2
3	AC	1612	0	1677	145	0
3	CC	1612	0	1677	141	0
4	AD	1703	0	1765	170	0
4	CD	1703	0	1765	157	0
5	AE	1146	0	1207	69	0
5	CE	1146	0	1207	69	0
6	AF	843	0	857	64	0
6	CF	843	0	857	59	0
7	AG	1257	0	1296	70	0
7	CG	1257	0	1296	63	0
8	AH	1116	0	1177	55	0
8	CH	1116	0	1177	49	0
9	AI	1010	0	1037	109	0
9	CI	1010	0	1037	109	0
10	AJ	794	0	840	116	0
10	CJ	794	0	840	116	0
11	AK	885	0	904	58	0
11	CK	885	0	904	57	0
12	AL	970	0	1057	99	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	CL	970	0	1057	97	0
13	AM	987	0	1059	116	0
13	CM	987	0	1059	116	0
14	AN	492	0	530	58	0
14	CN	492	0	530	63	0
15	AO	734	0	771	44	0
15	CO	734	0	771	43	0
16	AP	700	0	720	75	0
16	CP	700	0	720	80	0
17	AQ	823	0	891	60	0
17	CQ	823	0	891	62	0
18	AR	574	0	644	46	0
18	CR	574	0	644	50	0
19	AS	629	0	652	76	0
19	CS	629	0	652	73	0
20	AT	763	0	861	97	0
20	CT	763	0	861	99	0
21	AU	208	0	221	25	0
21	CU	208	0	221	29	0
22	AV	1619	0	822	59	0
22	AW	1619	0	822	79	0
22	CV	1619	0	822	58	0
22	CW	1619	0	822	73	0
23	AX	362	0	184	15	0
23	CX	362	0	184	14	0
24	AY	1645	0	853	132	0
24	CY	1645	0	853	89	0
25	AZ	2984	0	2997	475	0
25	CZ	2984	0	2997	384	0
26	B0	662	0	688	66	0
26	D0	662	0	688	65	0
27	B1	731	0	808	84	0
27	D1	731	0	808	80	0
28	B2	598	0	653	87	0
28	D2	598	0	653	215	0
29	B3	467	0	523	35	0
29	D3	467	0	523	35	0
30	B4	340	0	337	53	0
30	D4	340	0	336	58	0
31	B5	459	0	480	84	0
31	D5	459	0	480	76	0
32	B6	433	0	461	123	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	D6	433	0	461	121	0
33	B7	418	0	467	38	0
33	D7	418	0	467	37	0
34	B8	507	0	576	130	0
34	D8	507	0	576	128	0
35	B9	307	0	337	33	0
35	D9	307	0	335	31	0
36	BA	62477	0	31497	2071	0
36	DA	62477	0	31497	2074	0
37	BB	2551	0	1295	93	0
37	DB	2551	0	1295	101	0
38	BC	1742	0	1800	162	2
38	DC	1742	0	1800	153	2
39	BD	2145	0	2234	254	0
39	DD	2145	0	2234	240	0
40	BE	1563	0	1629	237	0
40	DE	1563	0	1629	235	0
41	BF	1623	0	1677	214	0
41	DF	1623	0	1677	216	0
42	BG	1474	0	1535	236	0
42	DG	1474	0	1535	269	0
43	BH	1222	0	1282	159	0
43	DH	1222	0	1282	155	0
44	BJ	651	0	156	23	0
44	DJ	651	0	166	16	0
45	BK	700	0	167	9	0
45	DK	700	0	167	9	0
46	BN	1104	0	1180	160	0
46	DN	1104	0	1180	157	0
47	BO	933	0	996	86	0
47	DO	933	0	996	88	0
48	BP	1114	0	1187	267	0
48	DP	1114	0	1187	264	0
49	BQ	1122	0	1179	119	0
49	DQ	1122	0	1179	128	0
50	BR	960	0	1021	151	0
50	DR	960	0	1021	150	0
51	BS	770	0	832	135	0
51	DS	770	0	832	138	0
52	BT	1141	0	1202	207	0
52	DT	1141	0	1202	207	0
53	BU	958	0	1015	129	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	DU	958	0	1015	132	0
54	BV	779	0	852	139	0
54	DV	779	0	852	141	0
55	BW	896	0	953	84	0
55	DW	896	0	953	84	0
56	BX	725	0	778	100	0
56	DX	725	0	778	92	0
57	BY	775	0	870	177	0
57	DY	775	0	870	169	0
58	BZ	1403	0	1432	211	0
58	DZ	1403	0	1432	189	0
59	AD	1	0	0	3	0
59	AN	1	0	0	2	0
59	B4	1	0	0	1	0
59	B9	1	0	0	1	0
59	CD	1	0	0	2	0
59	CN	1	0	0	2	0
59	D4	1	0	0	0	0
59	D9	1	0	0	0	0
60	AZ	28	0	12	15	0
60	CZ	28	0	12	8	0
61	AZ	57	0	58	13	0
61	CZ	57	0	58	9	0
All	All	307330	0	208699	17314	4

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 34.

All (17314) 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)
25:AZ:355:LEU:CD2	25:AZ:370:PHE:HB3	1.63	1.28
25:CZ:355:LEU:CD2	25:CZ:370:PHE:HB3	1.63	1.24
39:DD:35:LYS:HG3	39:DD:104:TYR:CE2	1.73	1.23
25:AZ:2:LYS:O	25:AZ:275:LYS:HE3	1.42	1.20
25:CZ:355:LEU:HD23	25:CZ:370:PHE:CB	1.73	1.19
39:BD:35:LYS:HG3	39:BD:104:TYR:CE2	1.77	1.19
25:AZ:355:LEU:HD23	25:AZ:370:PHE:CB	1.72	1.18
36:BA:2645:G:H3'	36:BA:2646:C:H5'	1.25	1.18
36:BA:1484:G:H2'	36:BA:1485:G:H5''	1.24	1.18
25:AZ:355:LEU:HB2	25:AZ:356:PRO:CD	1.73	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1378:A:O2'	36:DA:1379:A:H5'	1.44	1.17
36:DA:2092:U:H4'	36:DA:2093:G:H5''	1.21	1.17
42:BG:139:LEU:HA	42:BG:144:ILE:HG12	1.27	1.15
25:CZ:355:LEU:HB2	25:CZ:356:PRO:CD	1.73	1.15
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.07	1.15
39:DD:43:ARG:HH11	39:DD:44:ASN:ND2	1.44	1.15
36:DA:2833:G:H3'	36:DA:2834:G:H5''	1.29	1.15
56:BX:35:THR:HG22	56:BX:37:THR:H	1.05	1.14
36:DA:2645:G:H3'	36:DA:2646:C:H5'	1.27	1.14
20:CT:57:ARG:HH11	20:CT:102:GLY:HA2	1.12	1.14
24:CY:25:C:H2'	24:CY:26:A:H5'	1.28	1.14
36:BA:2833:G:H3'	36:BA:2834:G:H5''	1.29	1.13
29:D3:35:ARG:HH11	29:D3:35:ARG:HB2	1.12	1.13
36:BA:2092:U:H4'	36:BA:2093:G:H5''	1.19	1.13
36:BA:925:C:H2'	36:BA:926:A:H5''	1.29	1.13
36:BA:1899:G:N2	36:BA:1902:C:H41	1.48	1.12
24:AY:25:C:H2'	24:AY:26:A:H5'	1.28	1.12
22:CV:46:G:H3'	22:CV:47:U:H5''	1.13	1.12
25:CZ:2:LYS:O	25:CZ:275:LYS:HE3	1.45	1.11
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.14	1.11
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.10	1.11
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.22	1.11
36:BA:1378:A:O2'	36:BA:1379:A:H5'	1.48	1.11
48:DP:58:THR:HG22	48:DP:61:ARG:HE	1.06	1.11
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.13	1.10
56:BX:12:VAL:HB	56:BX:17:ALA:HB1	1.34	1.10
56:DX:35:THR:HG22	56:DX:37:THR:H	1.05	1.10
32:D6:30:THR:HG22	32:D6:31:PRO:HD2	1.29	1.10
51:DS:30:ARG:HH22	51:DS:62:LYS:HD3	1.11	1.10
28:D2:47:ASN:HA	28:D2:50:ILE:HB	1.32	1.10
22:AV:46:G:H3'	22:AV:47:U:H5''	1.13	1.10
24:AY:4:G:H2'	24:AY:5:G:H5''	1.28	1.10
36:DA:628:G:H2'	36:DA:629:G:H5''	1.32	1.10
28:D2:39:ALA:HA	28:D2:45:SER:HB3	1.18	1.09
57:DY:8:LYS:H	57:DY:8:LYS:HD2	1.17	1.09
56:BX:12:VAL:HG23	56:BX:13:LEU:H	1.14	1.09
36:DA:1484:G:H2'	36:DA:1485:G:H5''	1.24	1.09
31:B5:4:HIS:HB2	31:B5:5:PRO:HD3	1.31	1.09
36:DA:1899:G:N2	36:DA:1902:C:H41	1.48	1.09
56:DX:12:VAL:HG23	56:DX:13:LEU:H	1.13	1.08
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.31	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:24:LEU:HB3	41:BF:25:PRO:HD2	1.36	1.08
24:CY:4:G:H2'	24:CY:5:G:H5''	1.28	1.08
28:D2:34:GLU:HA	28:D2:37:PHE:HB2	1.09	1.07
34:B8:62:LEU:HD13	36:BA:242:G:H5''	1.31	1.07
54:BV:62:LEU:HD21	54:BV:95:LEU:HB2	1.33	1.07
25:CZ:29:ALA:O	25:CZ:33:TYR:HD2	1.37	1.07
24:AY:77:TRP:O	25:AZ:273:HIS:HA	1.55	1.07
48:BP:58:THR:HG22	48:BP:61:ARG:HE	1.09	1.07
32:B6:30:THR:HG22	32:B6:31:PRO:HD2	1.29	1.07
36:DA:2187:G:H2'	36:DA:2188:C:H5'	1.35	1.07
54:DV:62:LEU:HD21	54:DV:95:LEU:HB2	1.34	1.07
32:D6:35:GLU:HB3	32:D6:51:GLU:HB2	1.34	1.07
28:B2:35:LEU:HD11	28:B2:50:ILE:HG13	1.31	1.06
24:AY:24:G:H2'	24:AY:25:C:H5''	1.36	1.06
34:D8:62:LEU:HD13	36:DA:242:G:H5''	1.30	1.06
28:D2:21:LEU:HB3	28:D2:64:LEU:HG	1.34	1.06
36:DA:925:C:H2'	36:DA:926:A:H5''	1.30	1.06
24:CY:24:G:H2'	24:CY:25:C:H5''	1.38	1.06
31:D5:4:HIS:HB2	31:D5:5:PRO:HD3	1.31	1.06
20:AT:57:ARG:HH11	20:AT:102:GLY:HA2	1.11	1.06
1:AA:975:A:H4'	1:AA:976:G:H5''	1.38	1.06
36:DA:2761:G:H2'	36:DA:2762:G:H5''	1.37	1.06
42:DG:67:LYS:H	42:DG:67:LYS:HD3	1.18	1.06
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.31	1.06
28:D2:47:ASN:HD22	28:D2:51:ARG:HG3	0.97	1.06
52:BT:82:LEU:HD12	52:BT:82:LEU:H	1.19	1.05
56:BX:63:LYS:HE2	56:BX:72:LYS:HE3	1.39	1.05
25:AZ:355:LEU:HB2	25:AZ:356:PRO:HD3	1.36	1.05
32:D6:18:ARG:HG2	32:D6:18:ARG:HH11	1.18	1.05
52:DT:82:LEU:H	52:DT:82:LEU:HD12	1.19	1.05
1:AA:1532:U:H2'	1:AA:1533:C:H5''	1.34	1.05
1:CA:1532:U:H2'	1:CA:1533:C:H5''	1.30	1.05
26:B0:10:THR:HG22	26:B0:12:ASN:H	1.17	1.05
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.20	1.05
36:DA:272(H):C:H2'	36:DA:272(I):U:H5''	1.38	1.05
29:B3:35:ARG:HB2	29:B3:35:ARG:HH11	1.13	1.05
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.20	1.05
7:CG:54:THR:HG22	7:CG:56:GLN:H	1.19	1.05
25:CZ:241:ARG:HB3	25:CZ:241:ARG:HH11	1.21	1.05
36:BA:2761:G:H2'	36:BA:2762:G:H5''	1.38	1.05
32:B6:18:ARG:HG2	32:B6:18:ARG:HH11	1.20	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2603:G:H2'	36:BA:2604:U:H5''	1.35	1.04
40:BE:57:LYS:HA	40:BE:57:LYS:HE3	1.39	1.04
28:D2:29:LYS:HA	28:D2:32:LEU:HB3	1.39	1.04
36:BA:628:G:H2'	36:BA:629:G:H5''	1.34	1.04
36:BA:1301:A:O2'	36:BA:1302:A:H2'	1.55	1.04
51:BS:30:ARG:HH22	51:BS:62:LYS:HD3	1.13	1.04
28:D2:35:LEU:HD21	28:D2:50:ILE:HA	1.30	1.04
42:DG:55:LYS:HA	42:DG:58:GLN:HG2	1.37	1.04
42:BG:72:ARG:HB2	42:BG:87:PRO:HD2	1.37	1.04
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.19	1.04
38:BC:175:VAL:HG12	38:BC:188:ASN:HB3	1.40	1.04
41:BF:192:LEU:HD21	41:BF:194:MET:HG3	1.37	1.04
1:CA:979:C:H3'	1:CA:980:C:H5''	1.35	1.04
22:CV:4:C:H2'	22:CV:5:G:H5''	1.39	1.04
51:DS:49:VAL:HG12	51:DS:50:SER:H	1.20	1.04
51:BS:49:VAL:HG12	51:BS:50:SER:H	1.20	1.04
57:BY:8:LYS:H	57:BY:8:LYS:HD2	1.17	1.04
41:DF:192:LEU:HD21	41:DF:194:MET:HG3	1.37	1.04
36:DA:1024:G:H3'	36:DA:1025:G:H5''	1.39	1.04
56:DX:12:VAL:HB	56:DX:17:ALA:HB1	1.35	1.04
25:AZ:29:ALA:O	25:AZ:33:TYR:HD2	1.41	1.03
36:DA:2603:G:H2'	36:DA:2604:U:H5''	1.36	1.03
36:DA:1301:A:O2'	36:DA:1302:A:H2'	1.58	1.03
41:DF:24:LEU:HB3	41:DF:25:PRO:HD2	1.37	1.03
36:DA:2012:G:H4'	55:DW:96:ILE:HD11	1.40	1.03
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HA	1.73	1.03
40:DE:57:LYS:HA	40:DE:57:LYS:HE3	1.38	1.03
27:B1:65:SER:O	27:B1:66:HIS:HB2	1.55	1.03
32:B6:19:ARG:HG2	32:B6:20:ASN:H	1.20	1.03
36:BA:1665:A:H2'	36:BA:1666:G:H5''	1.38	1.03
36:DA:1747(A):G:H2'	36:DA:1748:G:H5''	1.40	1.03
37:DB:20:C:H2'	37:DB:21:G:H5''	1.39	1.03
36:DA:2312:U:O3'	42:DG:71:THR:HG21	1.58	1.03
1:AA:979:C:H3'	1:AA:980:C:H5''	1.39	1.03
2:AB:200:ILE:HD12	2:AB:200:ILE:H	1.23	1.03
32:D6:19:ARG:HG2	32:D6:20:ASN:H	1.19	1.03
38:DC:175:VAL:HG12	38:DC:188:ASN:HB3	1.39	1.03
36:BA:272(H):C:H2'	36:BA:272(I):U:H5''	1.38	1.03
39:DD:30:GLU:HB3	39:DD:35:LYS:HZ3	1.19	1.03
28:B2:68:ARG:HB2	28:B2:68:ARG:HH11	1.18	1.02
32:B6:35:GLU:HB3	32:B6:51:GLU:HB2	1.34	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1271:G:H2'	1:CA:1272:G:H5''	1.37	1.02
49:DQ:60:ARG:HB3	49:DQ:60:ARG:HH11	1.22	1.02
1:AA:1271:G:H2'	1:AA:1272:G:H5''	1.37	1.02
22:AV:42:C:H6	22:AV:42:C:H5'	1.24	1.02
36:BA:1959:G:H2'	36:BA:1960:A:H5''	1.40	1.02
37:BB:20:C:H2'	37:BB:21:G:H5''	1.41	1.02
36:DA:1665:A:H2'	36:DA:1666:G:H5''	1.36	1.02
49:DQ:141:GLN:HE21	58:DZ:72:ARG:HA	0.87	1.02
43:BH:85:LYS:HZ3	43:BH:133:VAL:N	1.57	1.02
52:BT:28:VAL:O	52:BT:29:ARG:HD2	1.60	1.02
36:DA:1884:A:H2'	36:DA:1885:A:H5''	1.37	1.02
7:AG:54:THR:HG22	7:AG:56:GLN:H	1.22	1.02
36:BA:2187:G:H2'	36:BA:2188:C:H5'	1.41	1.02
25:CZ:355:LEU:HB2	25:CZ:356:PRO:HD3	1.38	1.02
36:BA:1884:A:H2'	36:BA:1885:A:H5''	1.40	1.02
1:CA:975:A:H4'	1:CA:976:G:H5''	1.38	1.02
43:DH:106:THR:HG22	43:DH:112:PRO:HB3	1.42	1.02
52:DT:80:SER:HB3	52:DT:81:PRO:HD3	1.41	1.02
43:BH:153:LYS:H	43:BH:153:LYS:HD3	1.25	1.01
22:AV:4:C:H2'	22:AV:5:G:H5''	1.38	1.01
36:BA:330:A:HO2'	36:BA:331:A:H8	1.05	1.01
1:AA:358:U:H4'	25:AZ:234:ARG:C	1.79	1.01
36:BA:1024:G:H3'	36:BA:1025:G:H5''	1.41	1.01
1:CA:1537:U:H5'	18:CR:54:ARG:HH22	1.23	1.01
1:AA:1305:G:N2	1:AA:1331:G:H2'	1.74	1.01
49:BQ:60:ARG:HH11	49:BQ:60:ARG:HB3	1.21	1.01
22:AW:18:G:H1	22:AW:55:U:H1'	1.26	1.01
28:D2:23:LYS:HA	28:D2:26:ARG:HB3	1.42	1.01
36:DA:654(H):G:H2'	36:DA:654(I):C:H5'	1.42	1.01
41:DF:155:LEU:HD11	41:DF:176:LEU:HD22	1.41	1.00
2:CB:200:ILE:HD12	2:CB:200:ILE:H	1.22	1.00
36:BA:2012:G:H4'	55:BW:96:ILE:HD11	1.40	1.00
36:DA:27:G:H22	36:DA:512:G:H2'	1.25	1.00
48:DP:62:LEU:H	48:DP:62:LEU:HD23	1.24	1.00
36:BA:1747(A):G:H2'	36:BA:1748:G:H5''	1.40	1.00
28:D2:48:HIS:HA	36:DA:95:G:O3'	1.61	1.00
48:BP:62:LEU:HD23	48:BP:62:LEU:H	1.24	1.00
43:BH:106:THR:HG22	43:BH:112:PRO:HB3	1.42	1.00
26:D0:10:THR:HG22	26:D0:12:ASN:H	1.20	1.00
41:BF:155:LEU:HD11	41:BF:176:LEU:HD22	1.41	0.99
39:BD:30:GLU:HB3	39:BD:35:LYS:HZ3	1.25	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1305:G:N2	1:CA:1331:G:H2'	1.75	0.99
22:CV:42:C:H6	22:CV:42:C:H5'	1.24	0.99
32:D6:19:ARG:CG	32:D6:20:ASN:H	1.76	0.99
36:DA:1959:G:H2'	36:DA:1960:A:H5''	1.42	0.99
57:BY:13:VAL:HG11	57:BY:28:LYS:HD3	1.44	0.99
22:CW:18:G:H1	22:CW:55:U:H1'	1.25	0.99
40:DE:38:THR:HG22	40:DE:40:GLU:H	1.25	0.99
36:BA:27:G:H22	36:BA:512:G:H2'	1.28	0.99
25:AZ:241:ARG:HH11	25:AZ:241:ARG:HB3	1.23	0.99
28:D2:47:ASN:HD22	28:D2:51:ARG:CG	1.76	0.99
36:DA:2833:G:H3'	36:DA:2834:G:C5'	1.93	0.99
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.22	0.99
52:DT:28:VAL:O	52:DT:29:ARG:HD2	1.61	0.99
39:BD:34:VAL:HG23	39:BD:35:LYS:H	1.27	0.98
52:BT:53:ARG:HH11	52:BT:53:ARG:HB3	1.28	0.98
36:BA:654(H):G:H2'	36:BA:654(I):C:H5'	1.42	0.98
43:BH:169:VAL:HG22	43:BH:170:ARG:H	1.28	0.98
32:B6:19:ARG:CG	32:B6:20:ASN:H	1.76	0.98
1:CA:858:G:C6	1:CA:869:G:N7	2.31	0.98
36:BA:271(L):U:H5''	36:BA:271(M):G:H5'	1.45	0.98
46:BN:23:LEU:HD23	46:BN:24:GLY:N	1.78	0.98
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.25	0.98
28:D2:29:LYS:HD2	28:D2:32:LEU:HD13	1.41	0.98
43:DH:85:LYS:HZ3	43:DH:133:VAL:N	1.61	0.98
41:BF:37:VAL:HG11	48:BP:7:ARG:HH22	1.27	0.98
4:CD:59:ARG:HA	4:CD:59:ARG:HE	1.28	0.98
19:CS:16:LEU:H	19:CS:16:LEU:HD12	1.27	0.98
41:DF:37:VAL:HG11	48:DP:7:ARG:HH22	1.28	0.98
28:D2:47:ASN:ND2	28:D2:51:ARG:HG3	1.76	0.98
48:DP:146:VAL:HG22	48:DP:147:LEU:H	1.24	0.98
52:DT:53:ARG:HH11	52:DT:53:ARG:HB3	1.29	0.98
36:BA:2833:G:H3'	36:BA:2834:G:C5'	1.93	0.98
1:CA:1534:A:H62	23:CX:12:A:H2	1.11	0.98
36:DA:1948:G:H5'	36:DA:1948:G:H8	1.27	0.98
19:AS:16:LEU:H	19:AS:16:LEU:HD12	1.28	0.98
24:CY:25:C:H2'	24:CY:26:A:C5'	1.93	0.98
36:DA:2307:G:H21	36:DA:2308:G:H5''	1.28	0.98
46:DN:23:LEU:HD23	46:DN:24:GLY:N	1.79	0.97
37:BB:8:U:H5'	37:BB:8:U:H6	1.29	0.97
40:BE:38:THR:HG22	40:BE:40:GLU:H	1.27	0.97
42:BG:67:LYS:H	42:BG:67:LYS:HD3	1.29	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:41:C:H2'	22:CV:42:C:H5''	1.45	0.97
24:CY:24:G:H2'	24:CY:25:C:C5'	1.94	0.97
56:DX:63:LYS:HD3	56:DX:70:LEU:HD21	1.47	0.97
36:BA:1948:G:H8	36:BA:1948:G:H5'	1.27	0.97
57:DY:13:VAL:HG11	57:DY:28:LYS:HD3	1.44	0.97
36:BA:2307:G:H21	36:BA:2308:G:H5''	1.30	0.97
28:D2:51:ARG:HB3	28:D2:51:ARG:HH11	1.29	0.97
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	1.46	0.97
24:AY:25:C:H2'	24:AY:26:A:C5'	1.94	0.97
36:DA:271(L):U:H5''	36:DA:271(M):G:H5'	1.45	0.97
56:DX:63:LYS:HE2	56:DX:72:LYS:HE3	1.44	0.97
26:B0:49:LYS:N	26:B0:80:HIS:HD1	1.63	0.97
36:BA:2317:C:H2'	36:BA:2318:G:H5'	1.45	0.97
46:DN:111:PRO:HA	46:DN:114:ARG:HH12	1.26	0.97
47:DO:104:ARG:HH21	52:DT:33:LYS:HE2	1.29	0.97
57:DY:50:ARG:HD2	57:DY:53:PRO:HA	1.47	0.97
1:AA:452:A:HO2'	1:AA:453:A:H8	1.06	0.97
4:AD:59:ARG:HA	4:AD:59:ARG:HE	1.27	0.97
24:AY:24:G:C2'	24:AY:25:C:H5''	1.95	0.97
25:AZ:359:VAL:O	25:AZ:362:VAL:HG23	1.64	0.97
4:CD:28:SER:HB3	4:CD:29:PRO:HD2	1.44	0.97
42:DG:103:LEU:HD23	42:DG:107:LEU:HD21	1.44	0.96
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.45	0.96
24:AY:24:G:H2'	24:AY:25:C:C5'	1.94	0.96
57:BY:50:ARG:HD2	57:BY:53:PRO:HA	1.47	0.96
32:D6:16:CYS:SG	32:D6:48:VAL:HG22	2.05	0.96
41:BF:132:VAL:HG22	41:BF:133:ASN:H	1.27	0.96
36:BA:1887:C:H2'	36:BA:1888:G:H5''	1.47	0.96
1:AA:150:C:H2'	1:AA:151:A:H5''	1.45	0.96
25:CZ:359:VAL:O	25:CZ:362:VAL:HG23	1.64	0.96
36:BA:1069:A:H1'	36:BA:1070:A:OP2	1.66	0.96
31:B5:44:THR:HG21	50:BR:101:ALA:HB2	1.48	0.96
36:DA:2603:G:C2'	36:DA:2604:U:H5''	1.94	0.96
46:BN:111:PRO:HA	46:BN:114:ARG:HH12	1.25	0.96
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.44	0.96
32:B6:16:CYS:SG	32:B6:48:VAL:HG22	2.04	0.96
28:D2:30:ARG:HA	28:D2:33:MET:HB2	1.46	0.96
36:DA:2317:C:H2'	36:DA:2318:G:H5'	1.48	0.95
36:BA:2603:G:C2'	36:BA:2604:U:H5''	1.95	0.95
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.44	0.95
52:BT:28:VAL:HG22	52:BT:47:GLY:N	1.80	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:259:G:H21	36:BA:621:A:H8	1.08	0.95
36:DA:1899:G:H21	36:DA:1902:C:H41	0.99	0.95
52:DT:28:VAL:HG22	52:DT:47:GLY:N	1.81	0.95
5:AE:10:MET:HG3	5:AE:13:ILE:HD11	1.48	0.95
13:AM:101:GLN:H	13:AM:101:GLN:HE21	1.15	0.95
24:CY:24:G:C2'	24:CY:25:C:H5''	1.96	0.95
39:DD:34:VAL:HG23	39:DD:35:LYS:H	1.28	0.95
36:BA:1543:C:H3'	36:BA:1544:A:H5''	1.48	0.95
26:D0:49:LYS:N	26:D0:80:HIS:HD1	1.62	0.95
47:BO:104:ARG:HH21	52:BT:33:LYS:HE2	1.28	0.95
36:DA:2248:C:H2'	36:DA:2249:U:H5'	1.49	0.95
4:AD:26:CYS:HG	4:AD:31:CYS:HG	1.07	0.95
39:BD:267:SER:O	39:BD:269:PHE:N	1.99	0.95
57:BY:10:GLY:HA2	57:BY:27:VAL:HG13	1.48	0.95
43:DH:169:VAL:HG22	43:DH:170:ARG:H	1.31	0.95
33:B7:37:LYS:HD2	33:B7:39:ARG:HD3	1.49	0.95
39:DD:267:SER:O	39:DD:269:PHE:N	1.99	0.95
1:CA:150:C:H2'	1:CA:151:A:H5''	1.45	0.95
36:DA:1887:C:H2'	36:DA:1888:G:H5''	1.48	0.95
1:AA:858:G:C6	1:AA:869:G:N7	2.34	0.94
32:B6:41:PRO:HD2	32:B6:46:HIS:H	1.29	0.94
36:DA:1543:C:H3'	36:DA:1544:A:H5''	1.49	0.94
36:DA:330:A:HO2'	36:DA:331:A:H8	1.06	0.94
57:DY:10:GLY:HA2	57:DY:27:VAL:HG13	1.48	0.94
24:AY:76:A:P	25:AZ:274:ARG:HG3	2.07	0.94
41:DF:132:VAL:HG22	41:DF:133:ASN:H	1.28	0.94
41:BF:6:VAL:HG12	41:BF:7:TYR:H	1.33	0.94
42:BG:63:ILE:HA	42:BG:143:GLU:HG3	1.48	0.94
32:D6:15:GLU:CD	32:D6:18:ARG:CZ	2.36	0.94
32:D6:41:PRO:HD2	32:D6:46:HIS:H	1.30	0.94
36:DA:1069:A:H1'	36:DA:1070:A:OP2	1.66	0.94
37:DB:8:U:H5'	37:DB:8:U:H6	1.31	0.94
41:DF:6:VAL:HG12	41:DF:7:TYR:H	1.32	0.94
42:DG:77:ILE:HD13	42:DG:83:ARG:HB3	1.49	0.94
31:D5:44:THR:HG21	50:DR:101:ALA:HB2	1.46	0.94
20:AT:57:ARG:NH1	20:AT:102:GLY:HA2	1.83	0.94
36:DA:2245:U:H5'	36:DA:2246:G:H5'	1.47	0.94
36:BA:1826:G:H4'	39:BD:242:ARG:HH21	1.29	0.94
28:D2:34:GLU:HA	28:D2:37:PHE:CB	1.96	0.94
22:AV:46:G:H3'	22:AV:47:U:C5'	1.98	0.94
24:AY:77:TRP:O	25:AZ:273:HIS:CA	2.15	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:15:LYS:HD3	48:BP:65:ARG:HH22	1.32	0.94
56:BX:63:LYS:HD3	56:BX:70:LEU:HD21	1.49	0.94
56:BX:8:ILE:H	56:BX:8:ILE:HD12	1.28	0.94
55:DW:5:ALA:HB2	55:DW:54:ALA:HB2	1.49	0.94
36:BA:2101:G:H2'	36:BA:2102:U:H5''	1.49	0.94
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.33	0.94
14:CN:22:THR:HB	14:CN:33:VAL:HG21	1.49	0.94
36:BA:628:G:C2'	36:BA:629:G:H5''	1.98	0.94
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	1.48	0.94
36:DA:654(E):G:N2	36:DA:654(Q):C:H1'	1.81	0.94
56:DX:8:ILE:H	56:DX:8:ILE:HD12	1.31	0.94
36:BA:1190:G:H5'	48:BP:35:HIS:H	1.31	0.94
48:DP:47:ASP:HB2	48:DP:51:PHE:HB2	1.50	0.94
24:AY:4:G:C2'	24:AY:5:G:H5''	1.97	0.93
48:BP:47:ASP:HB2	48:BP:51:PHE:HB2	1.50	0.93
1:CA:351:G:H4'	1:CA:352:C:OP1	1.69	0.93
5:CE:10:MET:HG3	5:CE:13:ILE:HD11	1.50	0.93
36:BA:654(E):G:N2	36:BA:654(Q):C:H1'	1.82	0.93
47:BO:14:THR:HG21	47:BO:86:ILE:HD13	1.48	0.93
33:D7:37:LYS:HD2	33:D7:39:ARG:HD3	1.51	0.93
58:DZ:102:LEU:HD23	58:DZ:137:ILE:HB	1.49	0.93
42:BG:32:PRO:HB2	42:BG:172:LEU:HG	1.48	0.93
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.65	0.93
58:BZ:163:LEU:HD11	58:BZ:165:VAL:HG13	1.47	0.93
36:DA:2101:G:H2'	36:DA:2102:U:H5''	1.49	0.93
43:DH:153:LYS:H	43:DH:153:LYS:HD3	1.29	0.93
36:BA:1948:G:C8	36:BA:1948:G:H5'	2.04	0.93
52:BT:85:LYS:NZ	52:BT:85:LYS:HB3	1.84	0.93
22:AV:41:C:H2'	22:AV:42:C:H5''	1.47	0.93
20:CT:57:ARG:NH1	20:CT:102:GLY:HA2	1.84	0.93
36:DA:259:G:H21	36:DA:621:A:H8	1.09	0.93
40:DE:52:LEU:HD11	52:DT:1:MET:HG2	1.49	0.93
48:DP:147:LEU:HG	48:DP:148:LEU:H	1.32	0.93
57:DY:28:LYS:HB3	57:DY:39:VAL:H	1.33	0.93
36:BA:1602:U:H3'	36:BA:1603:A:H5'	1.50	0.93
36:BA:1047:G:H2'	36:BA:1110:G:H21	1.32	0.93
40:BE:52:LEU:HD11	52:BT:1:MET:HG2	1.51	0.93
41:BF:28:ILE:HD13	41:BF:28:ILE:H	1.34	0.93
42:BG:125:PHE:HD1	42:BG:126:ASP:H	1.14	0.93
1:AA:351:G:H4'	1:AA:352:C:OP1	1.67	0.93
42:BG:5:VAL:HB	42:BG:8:LYS:HB2	1.51	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:6:THR:HB	34:D8:11:LYS:NZ	1.84	0.93
34:B8:62:LEU:HD13	36:BA:242:G:C5'	2.00	0.92
22:CV:46:G:H3'	22:CV:47:U:C5'	1.98	0.92
36:BA:2160:G:H8	36:BA:2160:G:H5'	1.34	0.92
48:BP:147:LEU:HG	48:BP:148:LEU:H	1.31	0.92
25:CZ:29:ALA:O	25:CZ:33:TYR:CD2	2.22	0.92
25:CZ:355:LEU:HD23	25:CZ:370:PHE:HB3	0.92	0.92
36:DA:1047:G:H2'	36:DA:1110:G:H21	1.33	0.92
36:DA:1484:G:C2'	36:DA:1485:G:H5''	1.98	0.92
1:AA:367:U:C5'	25:AZ:291:ARG:HE	1.82	0.92
36:BA:2245:U:H5'	36:BA:2246:G:H5'	1.47	0.92
36:BA:654(E):G:H22	36:BA:654(Q):C:H1'	1.34	0.92
36:DA:654(E):G:H22	36:DA:654(Q):C:H1'	1.34	0.92
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.33	0.92
24:AY:65:C:H4'	25:AZ:341:GLN:HG2	1.49	0.92
34:B8:6:THR:HB	34:B8:11:LYS:NZ	1.84	0.92
40:BE:16:ARG:HD3	40:BE:21:VAL:HG11	1.51	0.92
51:DS:52:SER:HB3	51:DS:55:ALA:HB3	1.49	0.92
32:B6:33:LYS:HA	32:B6:33:LYS:HE2	1.49	0.92
58:DZ:115:GLY:HA2	58:DZ:177:PRO:HD3	1.52	0.92
42:BG:73:ALA:H	42:BG:87:PRO:HG2	1.35	0.92
36:DA:761:A:O5'	36:DA:761:A:H8	1.53	0.92
36:DA:1826:G:H4'	39:DD:242:ARG:HH21	1.31	0.92
42:DG:52:ILE:HG12	42:DG:53:LEU:H	1.35	0.92
36:DA:1190:G:H5'	48:DP:35:HIS:H	1.34	0.92
48:DP:58:THR:HG22	48:DP:61:ARG:NE	1.84	0.92
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.05	0.92
48:DP:132:LYS:HD2	48:DP:132:LYS:H	1.35	0.92
9:CI:4:TYR:CZ	9:CI:88:TYR:HB2	2.04	0.92
28:D2:39:ALA:CA	28:D2:45:SER:HB3	1.99	0.92
41:DF:28:ILE:HD13	41:DF:28:ILE:H	1.34	0.92
48:DP:65:ARG:HB3	48:DP:68:GLN:HE22	1.35	0.92
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.33	0.92
36:BA:654(C):G:H2'	36:BA:654(D):G:H5'	1.51	0.92
24:CY:4:G:C2'	24:CY:5:G:H5''	1.97	0.92
43:DH:85:LYS:HZ3	43:DH:133:VAL:H	1.14	0.92
51:DS:106:ARG:HB3	51:DS:106:ARG:NH1	1.84	0.92
52:DT:53:ARG:HB3	52:DT:53:ARG:NH1	1.85	0.92
36:BA:2248:C:H2'	36:BA:2249:U:H5'	1.48	0.91
57:BY:28:LYS:HB3	57:BY:39:VAL:H	1.34	0.91
36:DA:2160:G:H8	36:DA:2160:G:H5'	1.32	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:85:LYS:HZ3	43:BH:133:VAL:H	1.12	0.91
36:BA:1484:G:C2'	36:BA:1485:G:H5''	1.99	0.91
6:CF:97:PHE:HD1	18:CR:31:LEU:HD21	1.36	0.91
36:BA:761:A:H8	36:BA:761:A:O5'	1.53	0.91
52:BT:53:ARG:NH1	52:BT:53:ARG:HB3	1.83	0.91
14:CN:13:THR:N	14:CN:14:PRO:HD2	1.85	0.91
34:D8:15:LYS:HD3	48:DP:65:ARG:HH22	1.32	0.91
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.06	0.91
24:AY:65:C:H4'	25:AZ:341:GLN:CG	1.99	0.91
25:AZ:89:ILE:O	25:AZ:93:ILE:HG22	1.70	0.91
1:CA:1281:U:H5'	1:CA:1282:C:C5	2.06	0.91
25:CZ:113:MET:HG3	25:CZ:114:PRO:HD2	1.50	0.91
25:CZ:277:LEU:HD13	25:CZ:278:GLN:H	1.36	0.91
36:DA:628:G:C2'	36:DA:629:G:H5''	1.99	0.91
39:DD:35:LYS:HG3	39:DD:104:TYR:HE2	1.35	0.91
25:AZ:355:LEU:HD23	25:AZ:370:PHE:HB3	0.92	0.91
39:BD:35:LYS:HD3	39:BD:63:ARG:HG2	1.53	0.91
37:DB:3:C:H42	37:DB:118:G:H1	1.15	0.91
31:B5:3:LYS:HD3	36:BA:747:U:OP1	1.71	0.91
27:B1:45:ASN:HD21	36:BA:2090:G:H21	1.14	0.91
36:DA:654(C):G:H2'	36:DA:654(D):G:H5'	1.52	0.91
26:D0:50:ASN:HD22	26:D0:63:VAL:HG21	1.34	0.91
28:D2:66:GLU:OE2	28:D2:67:LYS:HB2	1.69	0.91
40:DE:16:ARG:HD3	40:DE:21:VAL:HG11	1.53	0.91
42:DG:7:LEU:HD21	42:DG:176:LEU:HD21	1.50	0.91
48:DP:9:ASN:H	48:DP:10:PRO:HD2	1.34	0.91
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.00	0.90
36:BA:1779:U:H5	36:BA:1784:A:N7	1.69	0.90
36:BA:925:C:C2'	36:BA:926:A:H5''	2.00	0.90
1:CA:1532:U:C2'	1:CA:1533:C:H5''	2.02	0.90
29:D3:35:ARG:NH1	29:D3:35:ARG:HB2	1.87	0.90
36:DA:1948:G:H5'	36:DA:1948:G:C8	2.06	0.90
25:AZ:7:ARG:NH2	25:AZ:281:ILE:HD11	1.87	0.90
34:B8:61:LEU:HD12	34:B8:61:LEU:H	1.35	0.90
48:BP:16:ARG:HB2	48:BP:16:ARG:NH1	1.86	0.90
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.32	0.90
36:DA:925:C:C2'	36:DA:926:A:H5''	2.01	0.90
42:DG:40:ASN:HB2	42:DG:91:ARG:HB2	1.52	0.90
42:DG:97:ASP:H	42:DG:99:MET:CE	1.84	0.90
48:DP:16:ARG:NH1	48:DP:16:ARG:HB2	1.86	0.90
52:DT:85:LYS:NZ	52:DT:85:LYS:HB3	1.84	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:50:ASN:HD22	26:B0:63:VAL:HG21	1.33	0.90
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.00	0.90
24:AY:77:TRP:N	25:AZ:285:ASN:O	2.05	0.90
36:BA:1899:G:H21	36:BA:1902:C:H41	1.00	0.90
42:BG:133:LEU:HD11	42:BG:157:ILE:HD12	1.53	0.90
36:DA:1076:C:H4'	58:DZ:112:ARG:HH21	1.36	0.90
54:DV:18:LEU:HD23	54:DV:19:LYS:H	1.36	0.90
5:AE:11:ILE:HB	5:AE:31:LEU:HD12	1.52	0.90
42:BG:60:LEU:HD22	42:BG:63:ILE:HD11	1.51	0.90
32:D6:33:LYS:HA	32:D6:33:LYS:HE2	1.51	0.90
1:AA:358:U:H1'	25:AZ:233:GLY:HA2	1.54	0.90
25:AZ:277:LEU:HD13	25:AZ:278:GLN:H	1.36	0.90
13:CM:23:TYR:HB3	13:CM:67:GLU:HB3	1.54	0.90
48:BP:132:LYS:H	48:BP:132:LYS:HD2	1.35	0.90
1:CA:1537:U:H5'	18:CR:54:ARG:NH2	1.87	0.90
49:DQ:56:ARG:HG3	49:DQ:56:ARG:HH11	1.36	0.90
25:AZ:29:ALA:O	25:AZ:33:TYR:CD2	2.25	0.89
42:BG:135:LEU:HD13	42:BG:140:ILE:HD11	1.52	0.89
48:BP:58:THR:HG22	48:BP:61:ARG:NE	1.87	0.89
10:CJ:54:PHE:CZ	10:CJ:55:LYS:NZ	2.39	0.89
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.54	0.89
36:BA:2092:U:C4'	36:BA:2093:G:H5''	2.02	0.89
36:BA:2068:U:H3	36:BA:2430:A:H2	0.91	0.89
25:CZ:7:ARG:NH2	25:CZ:281:ILE:HD11	1.87	0.89
31:D5:3:LYS:HD3	36:DA:747:U:OP1	1.72	0.89
31:D5:40:LYS:HZ1	31:D5:46:CYS:H	1.17	0.89
36:DA:1877:A:H2'	36:DA:1878:G:H5'	1.51	0.89
34:D8:62:LEU:HD13	36:DA:242:G:C5'	2.00	0.89
6:AF:97:PHE:HD1	18:AR:31:LEU:HD21	1.37	0.89
51:BS:106:ARG:HB3	51:BS:106:ARG:NH1	1.86	0.89
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.53	0.89
9:AI:4:TYR:CZ	9:AI:88:TYR:HB2	2.07	0.89
13:AM:23:TYR:HB3	13:AM:67:GLU:HB3	1.51	0.89
36:BA:27:G:N2	36:BA:512:G:H2'	1.86	0.89
48:BP:9:ASN:H	48:BP:10:PRO:HD2	1.35	0.89
58:BZ:18:LEU:H	58:BZ:18:LEU:HD12	1.36	0.89
51:DS:97:ARG:NH2	51:DS:98:VAL:HA	1.87	0.89
1:AA:975:A:C4'	1:AA:976:G:H5''	2.03	0.89
24:AY:2:G:C2'	24:AY:3:G:H5''	2.03	0.89
37:BB:3:C:H42	37:BB:118:G:H1	1.15	0.89
40:BE:111:ARG:HG3	40:BE:160:TYR:CD2	2.08	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:97:ARG:NH2	51:BS:98:VAL:HA	1.87	0.89
54:DV:39:LEU:HA	54:DV:47:VAL:HG11	1.55	0.89
58:DZ:151:HIS:CB	58:DZ:170:THR:HA	2.03	0.89
31:B5:40:LYS:NZ	31:B5:46:CYS:H	1.71	0.89
51:BS:59:LYS:HG2	51:BS:60:GLY:H	1.38	0.89
36:DA:2092:U:C4'	36:DA:2093:G:H5''	2.02	0.89
36:DA:2712:U:O2'	36:DA:2712(A):A:H5''	1.73	0.89
48:DP:23:PRO:HD2	48:DP:33:ARG:HE	1.38	0.89
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.55	0.89
42:BG:77:ILE:H	42:BG:77:ILE:HD13	1.36	0.89
47:DO:14:THR:HG21	47:DO:86:ILE:HD13	1.53	0.89
56:DX:35:THR:HG22	56:DX:37:THR:N	1.88	0.89
12:AL:20:LYS:H	12:AL:20:LYS:HD3	1.38	0.89
48:BP:65:ARG:HB3	48:BP:68:GLN:HE22	1.37	0.89
54:BV:18:LEU:HD23	54:BV:19:LYS:H	1.37	0.89
24:CY:2:G:H2'	24:CY:3:G:H5''	1.51	0.89
36:DA:1602:U:H3'	36:DA:1603:A:H5'	1.52	0.89
36:DA:1902:C:O2'	39:DD:244:ARG:HB3	1.71	0.89
36:DA:27:G:N2	36:DA:512:G:H2'	1.86	0.89
40:DE:4:ILE:HD11	40:DE:28:ALA:HB1	1.55	0.89
24:AY:2:G:H2'	24:AY:3:G:H5''	1.52	0.89
36:BA:2415:G:O3'	48:BP:66:GLY:HA3	1.69	0.89
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.55	0.89
9:CI:19:LEU:HD11	9:CI:59:PHE:HD2	1.38	0.89
25:AZ:113:MET:HG3	25:AZ:114:PRO:HD2	1.52	0.89
36:BA:1877:A:H2'	36:BA:1878:G:H5'	1.52	0.89
50:BR:99:LYS:H	50:BR:99:LYS:HD2	1.38	0.89
52:BT:28:VAL:HG13	52:BT:46:GLU:HA	1.54	0.89
58:BZ:166:SER:HB2	58:BZ:168:GLU:N	1.88	0.89
36:DA:2756:U:H1'	36:DA:2757:A:H5''	1.55	0.89
41:BF:160:ASN:HD21	41:BF:162:LEU:HB2	1.38	0.88
40:DE:77:ILE:HG22	40:DE:78:LEU:HD12	1.55	0.88
36:BA:2580:U:H5'	40:BE:131:ALA:HB2	1.54	0.88
24:CY:2:G:C2'	24:CY:3:G:H5''	2.03	0.88
34:D8:59:LYS:HE2	48:DP:50:ARG:HB3	1.54	0.88
36:BA:1293:C:H2'	36:BA:1294:U:H5''	1.54	0.88
27:D1:46:LEU:O	27:D1:46:LEU:HD12	1.73	0.88
31:D5:3:LYS:H	31:D5:3:LYS:HD2	1.38	0.88
39:DD:226:MET:HE2	39:DD:231:HIS:HB2	1.55	0.88
40:DE:111:ARG:HG3	40:DE:160:TYR:CD2	2.08	0.88
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.03	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:7:ARG:HH11	25:AZ:7:ARG:HG2	1.36	0.88
40:BE:77:ILE:HG22	40:BE:78:LEU:HD12	1.55	0.88
12:CL:20:LYS:H	12:CL:20:LYS:HD3	1.37	0.88
1:AA:1271:G:C2'	1:AA:1272:G:H5''	2.02	0.88
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	2.03	0.88
32:D6:53:LYS:HG2	32:D6:54:ILE:H	1.39	0.88
20:AT:45:GLN:HB3	20:AT:91:LEU:HD13	1.56	0.88
1:CA:1271:G:C2'	1:CA:1272:G:H5''	2.04	0.88
33:D7:10:ARG:HH12	33:D7:14:LYS:HE3	1.39	0.88
36:DA:1747(A):G:C2'	36:DA:1748:G:H5''	2.03	0.88
29:B3:35:ARG:NH1	29:B3:35:ARG:HB2	1.87	0.88
41:BF:122:LYS:HG3	41:BF:191:ARG:HG3	1.55	0.88
56:BX:35:THR:HG22	56:BX:37:THR:N	1.89	0.88
5:CE:11:ILE:HB	5:CE:31:LEU:HD12	1.56	0.88
36:DA:2068:U:H3	36:DA:2430:A:H2	0.92	0.88
57:DY:81:LYS:HD3	57:DY:97:ARG:O	1.74	0.88
32:B6:53:LYS:HG2	32:B6:54:ILE:H	1.38	0.88
20:CT:45:GLN:HB3	20:CT:91:LEU:HD13	1.55	0.88
36:DA:2762:G:H8	36:DA:2762:G:H5'	1.38	0.88
39:DD:30:GLU:CB	39:DD:35:LYS:HZ3	1.87	0.88
52:DT:85:LYS:HZ3	52:DT:85:LYS:HB3	1.38	0.88
41:BF:32:LEU:O	41:BF:36:VAL:HG23	1.74	0.88
51:BS:34:HIS:HB2	51:BS:36:TYR:HE1	1.39	0.88
55:BW:26:GLY:H	55:BW:71:VAL:HG23	1.39	0.88
36:DA:1293:C:H2'	36:DA:1294:U:H5''	1.53	0.88
36:DA:2415:G:O3'	48:DP:66:GLY:HA3	1.73	0.88
41:BF:125:LEU:H	41:BF:125:LEU:HD23	1.38	0.88
58:DZ:4:ARG:HG2	58:DZ:58:VAL:HB	1.56	0.88
36:BA:1058:G:H2'	36:BA:1059:G:H5''	1.56	0.87
27:D1:90:ILE:O	27:D1:94:LEU:HD23	1.74	0.87
34:D8:61:LEU:HD12	34:D8:61:LEU:H	1.38	0.87
36:DA:2656:U:H3	36:DA:2665:A:H2	1.21	0.87
56:DX:35:THR:HB	56:DX:38:GLU:HB2	1.53	0.87
56:BX:35:THR:HB	56:BX:38:GLU:HB2	1.55	0.87
28:D2:34:GLU:CA	28:D2:37:PHE:HB2	2.01	0.87
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.56	0.87
36:BA:2675:A:H5'	47:BO:31:LYS:HE3	1.56	0.87
40:BE:4:ILE:HD11	40:BE:28:ALA:HB1	1.55	0.87
16:CP:53:VAL:HG23	16:CP:54:GLU:H	1.39	0.87
32:D6:15:GLU:HB2	32:D6:20:ASN:HB3	1.56	0.87
32:B6:15:GLU:HB2	32:B6:20:ASN:HB3	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2712:U:O2'	36:BA:2712(A):A:H5''	1.73	0.87
54:BV:39:LEU:HA	54:BV:47:VAL:HG11	1.56	0.87
56:DX:11:PRO:HA	56:DX:28:PHE:HB3	1.56	0.87
16:AP:53:VAL:HG23	16:AP:54:GLU:H	1.40	0.87
36:BA:2761:G:C2'	36:BA:2762:G:H5''	2.03	0.87
40:BE:3:GLY:HA3	40:BE:81:ILE:HD12	1.56	0.87
36:DA:2126:A:H4'	36:DA:2127:G:O5'	1.75	0.87
42:DG:39:ILE:HG22	42:DG:157:ILE:HG12	1.55	0.87
25:AZ:277:LEU:HD13	25:AZ:278:GLN:N	1.89	0.87
48:BP:126:VAL:HA	48:BP:145:PRO:HG2	1.55	0.87
51:BS:106:ARG:HB3	51:BS:106:ARG:HH11	1.40	0.87
58:BZ:30:ASN:HD22	58:BZ:32:HIS:H	1.23	0.87
22:CV:41:C:C2'	22:CV:42:C:H5''	2.03	0.87
36:DA:2761:G:C2'	36:DA:2762:G:H5''	2.04	0.87
52:DT:27:THR:O	52:DT:28:VAL:HB	1.72	0.87
4:AD:194:LEU:HB3	4:AD:196:LEU:HD13	1.57	0.87
34:B8:59:LYS:HE2	48:BP:50:ARG:HB3	1.55	0.87
36:BA:2126:A:H4'	36:BA:2127:G:O5'	1.73	0.87
36:BA:2491:U:H5'	36:BA:2570:G:H5''	1.55	0.87
48:BP:23:PRO:HD2	48:BP:33:ARG:HE	1.39	0.87
31:D5:40:LYS:NZ	31:D5:46:CYS:H	1.71	0.87
31:B5:50:GLY:HA3	31:B5:56:LYS:HD3	1.57	0.87
17:CQ:10:VAL:HG22	17:CQ:55:ASP:H	1.39	0.87
36:DA:2580:U:H5'	40:DE:131:ALA:HB2	1.57	0.87
54:DV:15:GLU:HB3	54:DV:16:PRO:HD2	1.56	0.87
36:BA:1747(A):G:C2'	36:BA:1748:G:H5''	2.03	0.87
36:BA:2756:U:H1'	36:BA:2757:A:H5''	1.55	0.87
14:CN:57:ARG:HB2	14:CN:57:ARG:HH11	1.40	0.87
39:DD:176:ARG:HH11	39:DD:176:ARG:HG2	1.38	0.87
39:DD:63:ARG:HG3	39:DD:63:ARG:HH11	1.40	0.87
51:DS:59:LYS:HG2	51:DS:60:GLY:H	1.38	0.87
36:BA:1517:G:H8	36:BA:1517:G:H5'	1.40	0.86
54:BV:15:GLU:HB3	54:BV:16:PRO:HD2	1.57	0.86
58:BZ:51:ALA:HB1	58:BZ:57:ILE:HD11	1.54	0.86
36:DA:1697:G:H3'	36:DA:1698:A:H5''	1.56	0.86
4:AD:158:ILE:O	4:AD:162:LEU:HB2	1.74	0.86
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.54	0.86
22:AV:41:C:C2'	22:AV:42:C:H5''	2.04	0.86
58:BZ:79:ARG:HB3	58:BZ:79:ARG:HH11	1.38	0.86
4:CD:158:ILE:O	4:CD:162:LEU:HB2	1.75	0.86
41:DF:125:LEU:HD23	41:DF:125:LEU:H	1.38	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:32:LEU:O	41:DF:36:VAL:HG23	1.74	0.86
55:DW:107:LEU:H	55:DW:107:LEU:HD12	1.41	0.86
36:BA:1876:A:H2'	36:BA:1877:A:H5''	1.56	0.86
12:CL:102:ARG:NH1	12:CL:110:VAL:HG22	1.89	0.86
25:CZ:89:ILE:O	25:CZ:93:ILE:HG22	1.73	0.86
34:D8:32:LEU:HD23	34:D8:36:LYS:HZ1	1.38	0.86
48:DP:126:VAL:HA	48:DP:145:PRO:HG2	1.56	0.86
1:AA:706:A:O4'	11:AK:29:ILE:HD11	1.73	0.86
49:BQ:56:ARG:HG3	49:BQ:56:ARG:HH11	1.39	0.86
53:BU:92:ARG:NH2	54:BV:10:LYS:HB3	1.89	0.86
36:DA:1012:U:O4	46:DN:28:THR:HG21	1.76	0.86
36:BA:1012:U:O4	46:BN:28:THR:HG21	1.74	0.86
28:D2:51:ARG:NE	36:DA:94(A):G:H21	1.72	0.86
58:BZ:89:PHE:HE2	58:BZ:96:VAL:HG21	1.41	0.86
13:CM:101:GLN:HE21	13:CM:101:GLN:H	1.21	0.86
25:CZ:277:LEU:HD13	25:CZ:278:GLN:N	1.89	0.86
41:DF:160:ASN:HD21	41:DF:162:LEU:HB2	1.39	0.86
54:DV:2:PHE:HB2	54:DV:42:GLY:HA2	1.56	0.86
1:AA:1439:C:H41	1:AA:1462:G:H1	1.23	0.86
17:AQ:10:VAL:HG22	17:AQ:55:ASP:H	1.39	0.86
19:AS:16:LEU:HA	19:AS:19:VAL:HB	1.58	0.86
54:BV:2:PHE:HB2	54:BV:42:GLY:HA2	1.56	0.86
49:BQ:141:GLN:HE21	58:BZ:72:ARG:HA	1.38	0.86
36:DA:1678:G:N2	36:DA:1989:G:H22	1.74	0.86
49:DQ:141:GLN:HE21	58:DZ:72:ARG:CA	1.82	0.86
57:BY:81:LYS:HD3	57:BY:97:ARG:O	1.75	0.86
9:CI:53:VAL:HG13	9:CI:95:LYS:NZ	1.91	0.86
36:DA:1665:A:C2'	36:DA:1666:G:H5''	2.06	0.86
41:DF:3:GLU:HA	41:DF:24:LEU:HG	1.58	0.86
52:DT:28:VAL:HG13	52:DT:46:GLU:HA	1.58	0.86
36:BA:2131:G:H1'	36:BA:2133:G:N2	1.90	0.86
1:CA:189(H):G:HO2'	1:CA:189(I):G:H8	1.22	0.86
3:CC:8:ILE:HG23	3:CC:16:ARG:HG2	1.58	0.86
16:CP:20:VAL:HG21	16:CP:32:TYR:HB2	1.55	0.86
36:DA:1517:G:H5'	36:DA:1517:G:H8	1.39	0.86
50:DR:73:VAL:O	50:DR:76:VAL:HG12	1.76	0.86
27:B1:21:ARG:HH11	27:B1:21:ARG:HB3	1.39	0.86
41:BF:3:GLU:HA	41:BF:24:LEU:HG	1.58	0.86
57:BY:49:VAL:O	57:BY:50:ARG:HB2	1.76	0.86
15:CO:87:ILE:HG22	15:CO:88:ARG:N	1.90	0.86
28:D2:25:VAL:HG13	28:D2:29:LYS:HG3	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:111:ARG:HB3	50:BR:2:ARG:HH12	1.41	0.85
52:BT:28:VAL:HG11	52:BT:46:GLU:HG3	1.56	0.85
25:CZ:277:LEU:CD1	25:CZ:280:GLY:H	1.88	0.85
36:DA:2491:U:H5'	36:DA:2570:G:H5''	1.57	0.85
49:DQ:60:ARG:HB3	49:DQ:60:ARG:NH1	1.90	0.85
50:DR:99:LYS:H	50:DR:99:LYS:HD2	1.41	0.85
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.06	0.85
1:CA:1502:A:H2	1:CA:1505:G:H1	1.23	0.85
25:CZ:163:PHE:HD1	25:CZ:164:PRO:HD2	1.41	0.85
36:DA:2131:G:H1'	36:DA:2133:G:N2	1.90	0.85
36:DA:2187:G:C2'	36:DA:2188:C:H5'	2.06	0.85
36:DA:2604:U:H6	36:DA:2604:U:H5'	1.42	0.85
36:DA:330:A:H2	36:DA:1210:A:H2'	1.41	0.85
42:DG:77:ILE:H	42:DG:77:ILE:HD13	1.39	0.85
51:DS:106:ARG:HH11	51:DS:106:ARG:HB3	1.38	0.85
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.58	0.85
9:AI:19:LEU:HD11	9:AI:59:PHE:HD2	1.41	0.85
26:B0:43:THR:H	36:BA:2331:G:H4'	1.40	0.85
39:DD:35:LYS:HD3	39:DD:63:ARG:HG2	1.55	0.85
1:AA:1502:A:H2	1:AA:1505:G:H1	1.25	0.85
26:D0:43:THR:H	36:DA:2331:G:H4'	1.41	0.85
30:D4:25:TYR:HB2	42:DG:101:ILE:HD13	1.58	0.85
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.59	0.85
14:AN:13:THR:N	14:AN:14:PRO:HD2	1.90	0.85
49:BQ:60:ARG:HB3	49:BQ:60:ARG:NH1	1.90	0.85
58:DZ:120:ILE:HG22	58:DZ:121:HIS:H	1.42	0.85
1:AA:358:U:O3'	25:AZ:235:GLY:HA2	1.76	0.85
32:B6:15:GLU:CD	32:B6:18:ARG:CZ	2.44	0.85
36:BA:1697:G:H3'	36:BA:1698:A:H5''	1.57	0.85
42:BG:131:TYR:HB3	42:BG:159:VAL:HG13	1.57	0.85
50:BR:73:VAL:O	50:BR:76:VAL:HG12	1.75	0.85
1:CA:502:G:OP1	12:CL:118:SER:HB3	1.77	0.85
38:DC:119:VAL:HG23	38:DC:120:MET:HE2	1.59	0.85
50:DR:38:VAL:HB	50:DR:39:PRO:HD3	1.58	0.85
54:DV:99:ILE:H	54:DV:99:ILE:HD13	1.40	0.85
1:AA:358:U:H1'	25:AZ:233:GLY:CA	2.07	0.85
15:AO:82:ILE:HD13	15:AO:83:GLU:N	1.92	0.85
33:B7:10:ARG:HH12	33:B7:14:LYS:HE3	1.41	0.85
50:BR:38:VAL:HB	50:BR:39:PRO:HD3	1.58	0.85
40:DE:111:ARG:HB3	50:DR:2:ARG:NH1	1.91	0.85
2:AB:114:ARG:HH11	2:AB:118:LEU:HD21	1.41	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:4:C:C2'	22:AV:5:G:H5''	2.06	0.85
36:BA:1279:G:H4'	50:BR:31:HIS:CD2	2.11	0.85
36:BA:2604:U:H5'	36:BA:2604:U:H6	1.42	0.85
7:AG:18:TYR:HB3	7:AG:59:LEU:HD22	1.57	0.85
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB2	1.57	0.85
12:AL:102:ARG:NH1	12:AL:110:VAL:HG22	1.92	0.85
34:B8:59:LYS:HB2	34:B8:59:LYS:NZ	1.92	0.85
25:CZ:7:ARG:HG2	25:CZ:7:ARG:HH11	1.42	0.85
33:D7:34:ARG:HD2	33:D7:39:ARG:HG3	1.58	0.85
36:DA:1876:A:H2'	36:DA:1877:A:H5''	1.58	0.85
1:AA:8:A:H62	4:AD:208:SER:HB2	1.42	0.85
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.41	0.85
36:BA:1959:G:C2'	36:BA:1960:A:H5''	2.07	0.85
52:BT:27:THR:O	52:BT:28:VAL:HB	1.74	0.85
57:BY:28:LYS:O	57:BY:38:ILE:HG22	1.76	0.85
4:CD:12:CYS:HA	4:CD:19:LEU:HD12	1.59	0.85
36:DA:321:G:H21	41:DF:165:ARG:HH21	1.24	0.85
51:DS:34:HIS:HB2	51:DS:36:TYR:HE1	1.40	0.85
36:BA:2762:G:H8	36:BA:2762:G:H5'	1.40	0.84
39:BD:63:ARG:HH11	39:BD:63:ARG:HG3	1.42	0.84
55:BW:107:LEU:H	55:BW:107:LEU:HD12	1.42	0.84
4:CD:194:LEU:HB3	4:CD:196:LEU:HD13	1.58	0.84
19:CS:16:LEU:HA	19:CS:19:VAL:HB	1.59	0.84
20:CT:23:ARG:O	20:CT:27:LYS:HB2	1.77	0.84
31:D5:50:GLY:HA3	31:D5:56:LYS:HD3	1.58	0.84
32:D6:11:LEU:HD21	32:D6:51:GLU:CG	2.07	0.84
36:DA:2189:U:C3'	36:DA:2190:G:H4'	2.07	0.84
10:AJ:54:PHE:CZ	10:AJ:55:LYS:NZ	2.45	0.84
56:BX:11:PRO:HA	56:BX:28:PHE:HB3	1.59	0.84
49:BQ:141:GLN:HG3	58:BZ:72:ARG:NH1	1.92	0.84
1:CA:706:A:O4'	11:CK:29:ILE:HD11	1.77	0.84
12:CL:33:ARG:HH11	12:CL:62:SER:HB3	1.40	0.84
15:CO:82:ILE:HD13	15:CO:83:GLU:N	1.92	0.84
22:CV:4:C:C2'	22:CV:5:G:H5''	2.06	0.84
24:CY:25:C:C2'	24:CY:26:A:H5'	2.07	0.84
41:DF:122:LYS:HG3	41:DF:191:ARG:HG3	1.57	0.84
52:DT:28:VAL:HG22	52:DT:47:GLY:H	1.42	0.84
31:B5:3:LYS:H	31:B5:3:LYS:HD2	1.40	0.84
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.59	0.84
39:DD:267:SER:C	39:DD:269:PHE:H	1.81	0.84
55:DW:26:GLY:H	55:DW:71:VAL:HG23	1.42	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:12:CYS:HA	4:AD:19:LEU:HD12	1.58	0.84
12:AL:102:ARG:HH11	12:AL:102:ARG:HG2	1.42	0.84
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.57	0.84
28:B2:25:VAL:HG22	28:B2:60:LEU:HD13	1.57	0.84
36:BA:1050:A:H2'	36:BA:1051:G:H5'	1.59	0.84
36:BA:1665:A:C2'	36:BA:1666:G:H5''	2.06	0.84
36:BA:2189:U:C3'	36:BA:2190:G:H4'	2.07	0.84
43:BH:103:LEU:HB2	43:BH:123:PHE:HD2	1.42	0.84
58:BZ:7:ALA:HB3	58:BZ:61:LEU:HD23	1.58	0.84
28:D2:3:LEU:HA	28:D2:7:ARG:HG3	1.57	0.84
36:DA:1378:A:H4'	36:DA:1379:A:OP1	1.76	0.84
40:DE:111:ARG:HB3	50:DR:2:ARG:HH12	1.40	0.84
40:BE:111:ARG:HB3	50:BR:2:ARG:NH1	1.93	0.84
58:BZ:163:LEU:HG	58:BZ:165:VAL:HG22	1.57	0.84
58:DZ:30:ASN:ND2	58:DZ:32:HIS:H	1.74	0.84
36:BA:321:G:H21	41:BF:165:ARG:HH21	1.25	0.84
54:BV:99:ILE:H	54:BV:99:ILE:HD13	1.43	0.84
38:DC:53:ARG:HH11	38:DC:53:ARG:HB3	1.41	0.84
33:B7:34:ARG:HD2	33:B7:39:ARG:HG3	1.57	0.84
38:BC:119:VAL:HG23	38:BC:120:MET:HE2	1.60	0.84
25:CZ:241:ARG:NH1	25:CZ:241:ARG:HB3	1.91	0.84
36:DA:1678:G:H22	36:DA:1989:G:H22	1.23	0.84
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.60	0.84
36:BA:2317:C:C2'	36:BA:2318:G:H5'	2.06	0.84
38:BC:53:ARG:HB3	38:BC:53:ARG:HH11	1.43	0.84
36:DA:1539:G:H2'	36:DA:1540:U:H5'	1.60	0.84
36:DA:1884:A:C2'	36:DA:1885:A:H5''	2.07	0.84
53:DU:92:ARG:NH2	54:DV:10:LYS:HB3	1.92	0.84
1:AA:1363(A):A:H4'	1:AA:1364:U:H5''	1.59	0.84
1:AA:353:A:H5'	1:AA:353:A:H8	1.42	0.84
34:B8:32:LEU:HD23	34:B8:36:LYS:HZ1	1.38	0.84
46:BN:111:PRO:HA	46:BN:114:ARG:NH1	1.92	0.84
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.42	0.84
36:DA:1050:A:H2'	36:DA:1051:G:H5'	1.59	0.84
36:DA:1058:G:H2'	36:DA:1059:G:H5''	1.57	0.84
40:DE:132:HIS:HA	40:DE:135:HIS:CE1	2.13	0.84
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.77	0.84
9:AI:105:ASP:OD1	9:AI:107:ARG:HD3	1.77	0.84
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.76	0.84
42:BG:79:ASN:O	42:BG:80:PHE:HB2	1.76	0.84
1:CA:975:A:C4'	1:CA:976:G:H5''	2.07	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB2	1.57	0.84
37:DB:16:G:HO2'	37:DB:17:C:H6	1.23	0.84
46:DN:111:PRO:HA	46:DN:114:ARG:NH1	1.91	0.84
22:AW:43:C:H2'	22:AW:44:G:H1'	1.60	0.83
36:BA:2159:G:C2'	36:BA:2160:G:H5''	2.08	0.83
36:BA:673:C:H6	36:BA:673:C:H5'	1.42	0.83
36:DA:2317:C:C2'	36:DA:2318:G:H5'	2.07	0.83
36:DA:2068:U:N3	36:DA:2430:A:H2	1.74	0.83
36:DA:272(H):C:C2'	36:DA:272(I):U:H5''	2.08	0.83
48:DP:40:SER:C	48:DP:41:ARG:HD2	1.98	0.83
36:BA:1539:G:H2'	36:BA:1540:U:H5'	1.60	0.83
48:BP:58:THR:C	48:BP:60:MET:H	1.79	0.83
1:CA:942:G:H21	9:CI:124:GLN:NE2	1.75	0.83
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.43	0.83
36:DA:673:C:H5'	36:DA:673:C:H6	1.43	0.83
42:DG:47:LYS:HG3	42:DG:81:LYS:HG3	1.58	0.83
52:DT:100:TYR:HD2	52:DT:103:ARG:HH21	1.27	0.83
1:AA:453:A:H4'	16:AP:72:ARG:HG3	1.59	0.83
4:AD:100:ARG:HH21	4:AD:118:ARG:HH12	1.26	0.83
15:AO:87:ILE:HG22	15:AO:88:ARG:N	1.92	0.83
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.61	0.83
36:BA:1602:U:H3'	36:BA:1603:A:C5'	2.08	0.83
52:BT:32:TYR:CD2	52:BT:81:PRO:HB2	2.13	0.83
1:CA:8:A:H62	4:CD:208:SER:HB2	1.43	0.83
57:DY:28:LYS:O	57:DY:38:ILE:HG22	1.76	0.83
36:BA:1378:A:H4'	36:BA:1379:A:OP1	1.76	0.83
58:BZ:162:GLU:O	58:BZ:163:LEU:HD23	1.76	0.83
25:CZ:355:LEU:HB2	25:CZ:356:PRO:HD2	1.58	0.83
52:DT:32:TYR:CD2	52:DT:81:PRO:HB2	2.13	0.83
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	1.59	0.83
25:AZ:241:ARG:NH1	25:AZ:241:ARG:HB3	1.93	0.83
36:BA:612:C:H2'	36:BA:613:G:C5'	2.08	0.83
42:BG:131:TYR:HB3	42:BG:159:VAL:CG1	2.08	0.83
36:BA:1227:G:OP1	53:BU:13:LYS:HD2	1.78	0.83
58:BZ:6:LYS:HG3	58:BZ:60:GLU:CG	2.09	0.83
9:CI:105:ASP:OD1	9:CI:107:ARG:HD3	1.77	0.83
25:CZ:135:MET:HE3	25:CZ:150:VAL:HG11	1.60	0.83
43:DH:41:MET:HG3	43:DH:42:ARG:H	1.44	0.83
4:AD:100:ARG:NH2	4:AD:118:ARG:HH12	1.76	0.83
36:BA:272(H):C:C2'	36:BA:272(I):U:H5''	2.09	0.83
36:BA:330:A:H2	36:BA:1210:A:H2'	1.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:860:U:H5	36:BA:917:A:N7	1.75	0.83
41:BF:101:LEU:HD12	41:BF:102:PRO:HD2	1.58	0.83
9:CI:16:ARG:HB2	9:CI:64:THR:HB	1.59	0.83
25:CZ:159:ASN:ND2	25:CZ:166:ASP:OD1	2.11	0.83
27:D1:36:GLY:O	27:D1:37:ILE:HG13	1.78	0.83
36:DA:1279:G:H4'	50:DR:31:HIS:CD2	2.13	0.83
57:DY:49:VAL:O	57:DY:50:ARG:HB2	1.76	0.83
58:DZ:151:HIS:HB3	58:DZ:170:THR:HA	1.60	0.83
25:AZ:163:PHE:HD1	25:AZ:164:PRO:HD2	1.42	0.83
25:AZ:277:LEU:CD1	25:AZ:280:GLY:H	1.91	0.83
35:B9:4:ARG:O	35:B9:36:GLN:HA	1.78	0.83
36:BA:1899:G:N2	36:BA:1902:C:N4	2.25	0.83
1:CA:353:A:H5'	1:CA:353:A:H8	1.41	0.83
8:CH:114:THR:HG22	8:CH:130:GLY:O	1.77	0.83
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.57	0.83
22:CW:38:A:H2'	22:CW:39:U:H5''	1.60	0.83
25:CZ:277:LEU:HD12	25:CZ:280:GLY:H	1.41	0.83
31:D5:4:HIS:HB2	31:D5:5:PRO:CD	2.07	0.83
34:D8:32:LEU:HD11	36:DA:2391:G:P	2.18	0.83
5:AE:148:VAL:HG21	8:AH:107:LEU:HD13	1.60	0.83
24:AY:25:C:C2'	24:AY:26:A:H5'	2.07	0.83
58:BZ:163:LEU:CD1	58:BZ:165:VAL:HG13	2.09	0.83
1:CA:1532:U:H2'	1:CA:1533:C:C5'	2.07	0.83
7:CG:18:TYR:HB3	7:CG:59:LEU:HD22	1.61	0.83
17:CQ:60:ILE:HB	17:CQ:74:LEU:HD23	1.60	0.83
43:DH:126:PRO:O	43:DH:127:GLU:HG2	1.77	0.83
25:AZ:274:ARG:HG2	25:AZ:274:ARG:HH11	1.42	0.83
36:BA:2777:G:H5''	36:BA:2778:A:H5'	1.61	0.83
48:BP:40:SER:C	48:BP:41:ARG:HD2	1.99	0.83
51:BS:24:LEU:HB3	51:BS:85:VAL:HG12	1.61	0.83
40:DE:14:ILE:HD11	40:DE:173:VAL:HG11	1.60	0.83
9:AI:53:VAL:HG13	9:AI:95:LYS:NZ	1.94	0.83
34:B8:32:LEU:HD11	36:BA:2391:G:P	2.18	0.83
39:BD:43:ARG:HH21	39:BD:44:ASN:ND2	1.77	0.83
42:BG:82:LEU:HD13	42:BG:87:PRO:HA	1.60	0.83
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.61	0.83
42:DG:66:GLN:HG3	42:DG:94:LEU:HD21	1.59	0.83
43:DH:103:LEU:HB2	43:DH:123:PHE:HD2	1.44	0.83
43:DH:70:THR:HG22	43:DH:74:ASN:HD21	1.43	0.83
36:DA:2675:A:H5'	47:DO:31:LYS:HE3	1.60	0.83
4:AD:150:GLU:CD	4:AD:151:LYS:H	1.83	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:176:ARG:HG2	39:BD:176:ARG:HH11	1.40	0.82
40:BE:132:HIS:HA	40:BE:135:HIS:CE1	2.14	0.82
54:BV:19:LYS:HG2	54:BV:94:LEU:HB2	1.61	0.82
36:DA:2110:G:H1	36:DA:2178:C:H5	1.26	0.82
57:DY:95:LYS:HE3	57:DY:99:CYS:O	1.78	0.82
3:AC:5:ILE:CD1	3:AC:5:ILE:H	1.92	0.82
21:AU:6:ARG:HD3	21:AU:15:ARG:NH1	1.95	0.82
3:CC:5:ILE:CD1	3:CC:5:ILE:H	1.92	0.82
4:CD:26:CYS:SG	59:CD:301:ZN:ZN	1.68	0.82
36:DA:1779:U:H5	36:DA:1784:A:N7	1.76	0.82
36:DA:2159:G:C2'	36:DA:2160:G:H5''	2.09	0.82
41:DF:37:VAL:CG1	48:DP:7:ARG:HH22	1.93	0.82
14:AN:57:ARG:HH11	14:AN:57:ARG:HB2	1.44	0.82
43:BH:41:MET:HG3	43:BH:42:ARG:H	1.44	0.82
36:DA:1602:U:H3'	36:DA:1603:A:C5'	2.08	0.82
36:DA:1959:G:C2'	36:DA:1960:A:H5''	2.08	0.82
52:DT:28:VAL:HG11	52:DT:46:GLU:HG3	1.58	0.82
1:AA:502:G:OP1	12:AL:118:SER:HB3	1.79	0.82
25:AZ:64:ASN:N	25:AZ:64:ASN:HD22	1.73	0.82
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	2.10	0.82
41:BF:37:VAL:HG11	48:BP:7:ARG:NH2	1.94	0.82
49:DQ:51:ARG:O	49:DQ:55:VAL:HG12	1.79	0.82
11:AK:18:ARG:HH21	11:AK:37:GLY:N	1.78	0.82
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.61	0.82
26:B0:10:THR:HG22	26:B0:12:ASN:N	1.95	0.82
31:B5:40:LYS:HZ1	31:B5:46:CYS:H	1.24	0.82
36:BA:2656:U:H3	36:BA:2665:A:H2	1.21	0.82
36:BA:658:C:H2'	36:BA:659:C:C6	2.14	0.82
46:BN:73:THR:CG2	46:BN:82:LEU:HD11	2.09	0.82
1:CA:1432:G:OP1	52:DT:107:ASP:HB2	1.78	0.82
4:CD:100:ARG:NH2	4:CD:118:ARG:HH12	1.76	0.82
36:DA:860:U:H5	36:DA:917:A:N7	1.76	0.82
39:DD:43:ARG:HH11	39:DD:44:ASN:HD21	1.21	0.82
48:DP:7:ARG:O	48:DP:10:PRO:HD2	1.79	0.82
25:AZ:355:LEU:HB2	25:AZ:356:PRO:HD2	1.61	0.82
36:BA:1434:A:H61	36:BA:1558:A:H62	1.28	0.82
36:BA:2189:U:H2'	36:BA:2190:G:H4'	1.60	0.82
1:CA:1363(A):A:H4'	1:CA:1364:U:H5''	1.61	0.82
3:CC:16:ARG:HB2	3:CC:16:ARG:HH11	1.44	0.82
24:CY:9:A:H2	24:CY:44:G:HO2'	1.25	0.82
25:CZ:64:ASN:N	25:CZ:64:ASN:HD22	1.75	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:658:C:H2'	36:DA:659:C:C6	2.14	0.82
25:AZ:135:MET:HE3	25:AZ:150:VAL:HG11	1.62	0.82
25:AZ:159:ASN:ND2	25:AZ:166:ASP:OD1	2.12	0.82
26:B0:62:LEU:H	26:B0:62:LEU:HD23	1.44	0.82
36:BA:2179:C:H4'	36:BA:2180:U:C2	2.15	0.82
13:CM:119:GLY:O	13:CM:120:LYS:HB2	1.80	0.82
25:CZ:145:GLU:HG2	25:CZ:149:LEU:HB2	1.59	0.82
33:D7:10:ARG:NH1	33:D7:14:LYS:HE3	1.94	0.82
36:DA:1899:G:N2	36:DA:1902:C:N4	2.26	0.82
4:AD:108:LEU:HD11	4:AD:174:LEU:HD13	1.61	0.82
2:CB:114:ARG:HH11	2:CB:118:LEU:HD21	1.42	0.82
41:DF:29:ASN:HD22	41:DF:32:LEU:HB2	1.43	0.82
42:DG:114:ILE:CG2	42:DG:117:PHE:HB2	2.10	0.82
42:DG:52:ILE:HD13	42:DG:52:ILE:H	1.43	0.82
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.45	0.82
25:AZ:274:ARG:HG2	25:AZ:274:ARG:NH1	1.95	0.82
32:B6:11:LEU:HD21	32:B6:51:GLU:CG	2.09	0.82
36:BA:2068:U:N3	36:BA:2430:A:H2	1.74	0.82
1:CA:1442(B):A:OP1	1:CA:1442(B):A:H3'	1.79	0.82
1:CA:1096:C:H5"	2:CB:137:ARG:HH21	1.43	0.82
3:CC:26:LYS:HE3	3:CC:26:LYS:H	1.43	0.82
4:CD:150:GLU:CD	4:CD:151:LYS:H	1.83	0.82
25:CZ:274:ARG:HH11	25:CZ:274:ARG:HG2	1.41	0.82
28:D2:47:ASN:HA	28:D2:50:ILE:CB	2.09	0.82
36:DA:321:G:N2	41:DF:165:ARG:HH21	1.77	0.82
11:AK:79:SER:OG	11:AK:106:LYS:HD2	1.80	0.82
48:BP:124:LYS:HD3	48:BP:143:GLY:HA3	1.62	0.82
58:BZ:6:LYS:HG3	58:BZ:60:GLU:HG3	1.60	0.82
30:D4:9:LEU:HD13	30:D4:10:VAL:H	1.44	0.82
41:DF:178:PRO:HG2	41:DF:179:GLU:OE1	1.79	0.82
42:DG:62:LEU:HD12	42:DG:62:LEU:H	1.43	0.82
57:DY:8:LYS:HD2	57:DY:8:LYS:N	1.95	0.82
25:AZ:145:GLU:HG2	25:AZ:149:LEU:HB2	1.61	0.81
1:AA:358:U:H4'	25:AZ:235:GLY:N	1.94	0.81
33:B7:10:ARG:NH1	33:B7:14:LYS:HE3	1.94	0.81
36:BA:321:G:N2	41:BF:165:ARG:HH21	1.77	0.81
42:BG:85:GLY:C	42:BG:87:PRO:HD3	2.00	0.81
32:D6:11:LEU:HD21	32:D6:51:GLU:HG2	1.63	0.81
35:D9:4:ARG:O	35:D9:36:GLN:HA	1.80	0.81
36:DA:1899:G:O2'	36:DA:1900:A:H5"	1.80	0.81
31:B5:4:HIS:HB2	31:B5:5:PRO:CD	2.09	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1678:G:H22	36:BA:1989:G:H22	1.27	0.81
38:BC:6:ARG:O	38:BC:10:LEU:HD23	1.80	0.81
48:BP:7:ARG:O	48:BP:10:PRO:HD2	1.78	0.81
22:CW:57:G:C2'	22:CW:58:A:H5'	2.10	0.81
25:CZ:65:THR:CG2	25:CZ:80:VAL:HG13	2.10	0.81
46:DN:30:ILE:O	46:DN:34:LEU:HB2	1.80	0.81
2:AB:75:LYS:HA	2:AB:78:GLN:HE21	1.45	0.81
1:AA:367:U:H4'	25:AZ:291:ARG:HE	1.45	0.81
30:B4:9:LEU:HD13	30:B4:10:VAL:H	1.45	0.81
36:BA:2524:G:H8	36:BA:2524:G:H5'	1.44	0.81
41:BF:37:VAL:CG1	48:BP:7:ARG:HH22	1.93	0.81
49:BQ:51:ARG:O	49:BQ:55:VAL:HG12	1.81	0.81
58:BZ:151:HIS:HB3	58:BZ:170:THR:HA	1.60	0.81
36:DA:2777:G:H5''	36:DA:2778:A:H5'	1.62	0.81
36:BA:1884:A:C2'	36:BA:1885:A:H5''	2.10	0.81
39:BD:267:SER:C	39:BD:269:PHE:H	1.82	0.81
25:CZ:193:ASN:C	25:CZ:195:TRP:H	1.82	0.81
36:DA:733:G:N7	36:DA:761:A:C6	2.48	0.81
39:DD:35:LYS:HD2	39:DD:36:PRO:N	1.96	0.81
40:DE:105:THR:HB	40:DE:197:ILE:HG23	1.63	0.81
40:DE:3:GLY:HA3	40:DE:81:ILE:HD12	1.62	0.81
48:DP:124:LYS:HD3	48:DP:143:GLY:HA3	1.62	0.81
51:DS:85:VAL:HG23	51:DS:106:ARG:HG3	1.61	0.81
36:BA:910:A:H62	49:BQ:12:GLN:HA	1.45	0.81
37:BB:16:G:HO2'	37:BB:17:C:H6	1.27	0.81
39:BD:8:PRO:HB3	39:BD:14:ARG:HB3	1.61	0.81
4:CD:108:LEU:HD11	4:CD:174:LEU:HD13	1.61	0.81
13:CM:88:ARG:HG3	13:CM:98:VAL:HG13	1.63	0.81
51:DS:78:LEU:HD11	51:DS:103:GLU:HG3	1.62	0.81
25:AZ:277:LEU:HD12	25:AZ:280:GLY:H	1.44	0.81
32:B6:35:GLU:CB	32:B6:51:GLU:HB2	2.10	0.81
51:BS:89:ARG:HB3	51:BS:92:TYR:HB3	1.61	0.81
36:BA:1348:G:H2'	36:BA:1349:A:H5''	1.63	0.81
36:BA:2185:C:H2'	36:BA:2186:G:H5'	1.63	0.81
52:BT:100:TYR:HD2	52:BT:103:ARG:HH21	1.28	0.81
53:BU:65:ILE:HD11	53:BU:96:ALA:HB3	1.62	0.81
12:CL:102:ARG:HG2	12:CL:102:ARG:HH11	1.45	0.81
26:D0:10:THR:HG22	26:D0:12:ASN:N	1.95	0.81
28:D2:47:ASN:CA	28:D2:50:ILE:HB	2.10	0.81
36:DA:612:C:H2'	36:DA:613:G:C5'	2.10	0.81
42:DG:77:ILE:H	42:DG:83:ARG:HB3	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.81	0.81
46:DN:73:THR:CG2	46:DN:82:LEU:HD11	2.10	0.81
50:DR:72:ASP:HB3	50:DR:75:LEU:HB3	1.61	0.81
22:AW:38:A:H2'	22:AW:39:U:H5''	1.63	0.81
36:BA:2110:G:H1	36:BA:2178:C:H5	1.25	0.81
38:BC:181:PRO:HG2	38:BC:184:LYS:HG2	1.61	0.81
39:BD:35:LYS:HD2	39:BD:36:PRO:N	1.96	0.81
43:BH:70:THR:HG22	43:BH:74:ASN:HD21	1.45	0.81
58:BZ:122:ARG:HH11	58:BZ:122:ARG:HG2	1.44	0.81
8:CH:42:GLU:HG3	8:CH:109:ILE:HD12	1.61	0.81
36:DA:2189:U:H2'	36:DA:2190:G:H4'	1.61	0.81
41:DF:37:VAL:HG11	48:DP:7:ARG:NH2	1.94	0.81
48:DP:58:THR:HB	48:DP:61:ARG:HH21	1.46	0.81
35:B9:14:CYS:SG	59:B9:101:ZN:ZN	1.69	0.81
39:BD:35:LYS:HG3	39:BD:104:TYR:HE2	1.39	0.81
50:BR:24:GLN:NE2	50:BR:36:THR:HG21	1.96	0.81
1:CA:961:U:HO2'	1:CA:962:C:H6	1.27	0.81
4:CD:187:ARG:HH11	4:CD:187:ARG:HB3	1.45	0.81
11:CK:82:VAL:HG13	11:CK:108:ILE:HA	1.63	0.81
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.11	0.81
41:DF:29:ASN:ND2	41:DF:32:LEU:HB2	1.96	0.81
36:DA:1227:G:OP1	53:DU:13:LYS:HD2	1.79	0.81
54:DV:64:HIS:ND1	54:DV:92:THR:HG22	1.96	0.81
14:AN:22:THR:CB	14:AN:33:VAL:HG21	2.10	0.81
24:AY:76:A:OP2	25:AZ:274:ARG:CG	2.28	0.81
36:BA:122:G:H1	36:BA:129:C:H42	1.29	0.81
36:BA:2131:G:N3	36:BA:2133:G:N2	2.29	0.81
51:BS:36:TYR:HD1	51:BS:36:TYR:N	1.78	0.81
27:D1:42:GLN:HE22	36:DA:379:G:H21	1.28	0.81
48:DP:58:THR:C	48:DP:60:MET:H	1.80	0.81
12:AL:33:ARG:HH11	12:AL:62:SER:HB3	1.44	0.80
34:B8:52:LYS:N	34:B8:53:PRO:HD2	1.96	0.80
43:BH:126:PRO:O	43:BH:127:GLU:HG2	1.80	0.80
36:DA:1689:A:H62	36:DA:1698:A:H2	1.27	0.80
36:DA:2179:C:H4'	36:DA:2180:U:C2	2.16	0.80
28:B2:35:LEU:HD11	28:B2:50:ILE:CG1	2.10	0.80
36:BA:1683:C:H2'	36:BA:1684:C:H6	1.46	0.80
57:BY:8:LYS:HD2	57:BY:8:LYS:N	1.95	0.80
48:DP:47:ASP:HB3	48:DP:48:PRO:CA	2.10	0.80
50:DR:24:GLN:NE2	50:DR:36:THR:HG21	1.95	0.80
58:DZ:104:PHE:HA	58:DZ:139:VAL:HG22	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1086:U:H2'	1:AA:1087:G:H5'	1.62	0.80
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.64	0.80
32:B6:11:LEU:HD21	32:B6:51:GLU:HG2	1.63	0.80
36:BA:1689:A:H62	36:BA:1698:A:H2	1.27	0.80
36:BA:2248:C:C2'	36:BA:2249:U:H5'	2.11	0.80
40:BE:14:ILE:HD11	40:BE:173:VAL:HG11	1.62	0.80
51:BS:78:LEU:HD11	51:BS:103:GLU:HG3	1.61	0.80
53:BU:15:LYS:O	53:BU:19:LYS:HG2	1.82	0.80
1:CA:150:C:C2'	1:CA:151:A:H5''	2.11	0.80
22:CW:43:C:H2'	22:CW:44:G:H1'	1.61	0.80
36:DA:122:G:H1	36:DA:129:C:H42	1.29	0.80
36:DA:1348:G:H2'	36:DA:1349:A:H5''	1.63	0.80
36:DA:2645:G:H3'	36:DA:2646:C:C5'	2.11	0.80
37:DB:48:A:H4'	51:DS:95:HIS:HD2	1.46	0.80
58:DZ:104:PHE:HA	58:DZ:139:VAL:CG2	2.11	0.80
1:AA:1532:U:C2'	1:AA:1533:C:H5''	2.09	0.80
25:AZ:219:LYS:HB3	25:AZ:244:ARG:HD2	1.64	0.80
25:AZ:137:LYS:HG2	60:AZ:501:GDP:C2	2.16	0.80
57:BY:95:LYS:HE3	57:BY:99:CYS:O	1.80	0.80
11:CK:18:ARG:HH21	11:CK:37:GLY:N	1.78	0.80
24:CY:41:C:H6	24:CY:41:C:H5'	1.46	0.80
32:D6:12:GLU:HG3	32:D6:23:THR:CG2	2.11	0.80
36:DA:1434:A:H61	36:DA:1558:A:H62	1.27	0.80
52:DT:115:ARG:HH11	52:DT:115:ARG:HG3	1.44	0.80
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.62	0.80
1:AA:1439:C:N4	1:AA:1462:G:H1	1.80	0.80
25:AZ:164:PRO:HB2	25:AZ:167:GLU:OE2	1.82	0.80
30:B4:31:ILE:HG21	42:BG:142:PRO:HB2	1.63	0.80
46:BN:22:THR:HA	46:BN:61:ARG:HB2	1.63	0.80
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.63	0.80
25:CZ:274:ARG:HG2	25:CZ:274:ARG:NH1	1.93	0.80
43:DH:42:ARG:O	43:DH:43:VAL:HG13	1.81	0.80
46:DN:72:TYR:HD2	46:DN:90:MET:HG3	1.46	0.80
58:DZ:166:SER:HB2	58:DZ:168:GLU:H	1.45	0.80
1:AA:1532:U:H2'	1:AA:1533:C:C5'	2.12	0.80
8:AH:114:THR:HG22	8:AH:130:GLY:O	1.82	0.80
24:AY:41:C:H6	24:AY:41:C:H5'	1.44	0.80
32:B6:12:GLU:HG3	32:B6:23:THR:CG2	2.11	0.80
32:B6:7:ILE:HB	32:B6:27:LYS:HZ2	1.47	0.80
36:BA:1678:G:N2	36:BA:1989:G:H22	1.80	0.80
46:BN:72:TYR:HD2	46:BN:90:MET:HG3	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:30:ASN:ND2	58:BZ:32:HIS:H	1.78	0.80
2:CB:7:VAL:O	2:CB:11:LEU:HB2	1.81	0.80
50:DR:92:GLY:H	50:DR:94:TYR:HE1	1.29	0.80
51:DS:36:TYR:HD1	51:DS:36:TYR:N	1.78	0.80
1:AA:1378:C:H4'	7:AG:94:ARG:HH22	1.44	0.80
1:AA:975:A:H5''	1:AA:976:G:H5''	1.64	0.80
3:AC:26:LYS:H	3:AC:26:LYS:HE3	1.45	0.80
11:AK:121:PRO:HG2	11:AK:126:ARG:HB2	1.64	0.80
42:BG:67:LYS:HD3	42:BG:67:LYS:N	1.97	0.80
46:BN:72:TYR:CD2	46:BN:90:MET:HG3	2.16	0.80
47:BO:47:ILE:HG23	47:BO:48:PRO:HD2	1.62	0.80
11:CK:27:ASN:HD22	11:CK:28:THR:H	1.28	0.80
17:CQ:69:LYS:C	17:CQ:70:ARG:HD2	2.02	0.80
31:D5:40:LYS:HE2	31:D5:46:CYS:HB3	1.62	0.80
34:D8:59:LYS:HB2	34:D8:59:LYS:NZ	1.95	0.80
46:DN:72:TYR:CD2	46:DN:90:MET:HG3	2.16	0.80
36:BA:1876:A:C2'	36:BA:1877:A:H5''	2.12	0.80
40:BE:105:THR:HB	40:BE:197:ILE:HG23	1.64	0.80
41:BF:178:PRO:HG2	41:BF:179:GLU:OE1	1.81	0.80
50:BR:92:GLY:H	50:BR:94:TYR:HE1	1.30	0.80
36:DA:2131:G:N3	36:DA:2133:G:N2	2.29	0.80
42:DG:77:ILE:N	42:DG:83:ARG:HB3	1.96	0.80
49:DQ:134:ARG:NH1	58:DZ:122:ARG:HH21	1.79	0.80
36:BA:2189:U:C2'	36:BA:2190:G:H4'	2.10	0.80
42:BG:47:LYS:HD3	42:BG:81:LYS:HG3	1.64	0.80
36:DA:654(H):G:C2'	36:DA:654(I):C:H5'	2.12	0.80
25:AZ:2:LYS:O	25:AZ:275:LYS:CE	2.29	0.80
36:BA:654(H):G:C2'	36:BA:654(I):C:H5'	2.12	0.80
52:BT:24:PRO:HD3	52:BT:52:ILE:HD12	1.63	0.80
58:BZ:23:LYS:O	58:BZ:24:LEU:HB3	1.82	0.80
1:CA:1086:U:H2'	1:CA:1087:G:H5'	1.62	0.80
1:AA:1096:C:H5''	2:AB:137:ARG:HH21	1.46	0.79
24:AY:77:TRP:CA	25:AZ:285:ASN:O	2.31	0.79
28:B2:10:LEU:HD21	28:B2:14:ARG:CZ	2.11	0.79
31:B5:33:CYS:HG	31:B5:49:CYS:HG	1.03	0.79
32:B6:18:ARG:HG2	32:B6:18:ARG:NH1	1.90	0.79
34:B8:17:THR:CG2	34:B8:21:LYS:HB2	2.12	0.79
1:CA:1378:C:H4'	7:CG:94:ARG:HH22	1.45	0.79
2:CB:75:LYS:HA	2:CB:78:GLN:HE21	1.45	0.79
4:CD:100:ARG:HH21	4:CD:118:ARG:HH12	1.27	0.79
36:DA:2189:U:C2'	36:DA:2190:G:H4'	2.11	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:44:ASN:HB3	39:DD:49:ILE:HA	1.63	0.79
52:DT:23:ARG:HG2	52:DT:120:ARG:HH12	1.47	0.79
4:AD:187:ARG:HH11	4:AD:187:ARG:HB3	1.45	0.79
11:AK:126:ARG:HH11	11:AK:126:ARG:HB3	1.47	0.79
28:B2:68:ARG:O	28:B2:69:ARG:HG3	1.83	0.79
36:BA:296:C:O2'	36:BA:297:C:H5'	1.82	0.79
36:BA:621:A:H2'	36:BA:622:G:H5'	1.65	0.79
52:BT:23:ARG:HG2	52:BT:120:ARG:HH12	1.46	0.79
52:BT:28:VAL:HG22	52:BT:47:GLY:H	1.41	0.79
3:CC:46:GLU:O	3:CC:47:LEU:HB2	1.81	0.79
22:CW:9:A:H2	22:CW:45:U:O4	1.64	0.79
32:D6:35:GLU:CB	32:D6:51:GLU:HB2	2.12	0.79
33:D7:10:ARG:HH11	33:D7:10:ARG:HG2	1.47	0.79
36:DA:2485:G:H5''	49:DQ:46:GLN:HE21	1.46	0.79
4:AD:26:CYS:SG	59:AD:301:ZN:ZN	1.71	0.79
36:BA:1865:G:H5'	36:BA:1866:C:OP2	1.82	0.79
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.47	0.79
52:BT:115:ARG:HG3	52:BT:115:ARG:HH11	1.44	0.79
28:D2:35:LEU:HD23	28:D2:53:LEU:HD12	1.64	0.79
36:DA:586:A:H5'	41:DF:89:VAL:HG21	1.64	0.79
41:DF:101:LEU:HD12	41:DF:102:PRO:HD2	1.62	0.79
57:DY:10:GLY:CA	57:DY:27:VAL:HG13	2.12	0.79
40:BE:111:ARG:HA	50:BR:2:ARG:HG3	1.64	0.79
53:BU:92:ARG:O	53:BU:94:ASN:N	2.15	0.79
16:CP:25:ARG:CB	16:CP:25:ARG:HH11	1.96	0.79
25:CZ:191:GLY:HA2	25:CZ:197:ASP:OD1	1.81	0.79
36:DA:2248:C:C2'	36:DA:2249:U:H5'	2.13	0.79
36:DA:2524:G:H8	36:DA:2524:G:H5'	1.47	0.79
38:DC:181:PRO:HG2	38:DC:184:LYS:HG2	1.63	0.79
1:AA:358:U:H2'	1:AA:359:U:C6	2.16	0.79
2:AB:7:VAL:O	2:AB:11:LEU:HB2	1.82	0.79
16:AP:25:ARG:HH11	16:AP:25:ARG:CB	1.96	0.79
38:BC:76:ALA:HB3	38:BC:94:VAL:HG13	1.65	0.79
56:BX:24:GLY:O	56:BX:82:GLN:HA	1.83	0.79
57:BY:10:GLY:CA	57:BY:27:VAL:HG13	2.13	0.79
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.18	0.79
4:CD:200:GLU:HG2	4:CD:201:GLN:N	1.97	0.79
25:CZ:359:VAL:O	25:CZ:362:VAL:CG2	2.31	0.79
40:DE:111:ARG:HA	50:DR:2:ARG:HG3	1.63	0.79
3:AC:5:ILE:N	3:AC:5:ILE:HD13	1.98	0.79
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.03	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1279:G:H4'	50:BR:31:HIS:HD2	1.45	0.79
36:BA:2645:G:H3'	36:BA:2646:C:C5'	2.10	0.79
36:BA:586:A:H5'	41:BF:89:VAL:HG21	1.64	0.79
42:BG:51:ARG:HD3	42:BG:53:LEU:HD21	1.64	0.79
25:CZ:7:ARG:HH22	25:CZ:281:ILE:HD11	1.47	0.79
25:CZ:64:ASN:HD22	25:CZ:64:ASN:H	1.30	0.79
38:DC:6:ARG:O	38:DC:10:LEU:HD23	1.82	0.79
48:DP:41:ARG:HH11	48:DP:41:ARG:CA	1.96	0.79
53:DU:15:LYS:O	53:DU:19:LYS:HG2	1.83	0.79
54:DV:19:LYS:HG2	54:DV:94:LEU:HB2	1.63	0.79
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.47	0.79
13:AM:101:GLN:HE21	13:AM:101:GLN:N	1.81	0.79
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.62	0.79
22:AW:57:G:C2'	22:AW:58:A:H5'	2.11	0.79
22:AW:9:A:H2	22:AW:45:U:O4	1.65	0.79
25:AZ:7:ARG:HG2	25:AZ:7:ARG:NH1	1.98	0.79
36:BA:2187:G:C2'	36:BA:2188:C:H5'	2.12	0.79
36:BA:1902:C:O2'	39:BD:244:ARG:HB3	1.83	0.79
41:BF:29:ASN:HD22	41:BF:32:LEU:HB2	1.45	0.79
57:BY:8:LYS:H	57:BY:8:LYS:CD	1.96	0.79
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.18	0.79
4:CD:108:LEU:CD1	4:CD:174:LEU:HD13	2.12	0.79
1:CA:453:A:H4'	16:CP:72:ARG:HG3	1.62	0.79
36:DA:886:C:O2'	36:DA:887:A:H4'	1.82	0.79
39:DD:186:HIS:HD2	39:DD:188:GLU:H	1.30	0.79
46:DN:47:ALA:HB2	46:DN:112:LEU:HD11	1.63	0.79
46:DN:22:THR:HA	46:DN:61:ARG:HB2	1.65	0.79
47:DO:47:ILE:HG23	47:DO:48:PRO:HD2	1.62	0.79
1:AA:150:C:C2'	1:AA:151:A:H5''	2.12	0.79
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.64	0.79
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.63	0.79
11:AK:82:VAL:HG13	11:AK:108:ILE:HA	1.64	0.79
36:BA:655:A:H4'	36:BA:656:G:H5'	1.65	0.79
36:BA:886:C:O2'	36:BA:887:A:H4'	1.83	0.79
51:BS:85:VAL:HG23	51:BS:106:ARG:HG3	1.62	0.79
52:BT:55:ASN:H	52:BT:59:THR:HG22	1.48	0.79
21:CU:6:ARG:HD3	21:CU:15:ARG:NH1	1.96	0.79
25:CZ:8:THR:OG1	25:CZ:9:LYS:HG2	1.82	0.79
36:DA:1887:C:C2'	36:DA:1888:G:H5''	2.12	0.79
36:DA:512:G:HO2'	36:DA:513:A:H8	1.27	0.79
38:DC:76:ALA:HB3	38:DC:94:VAL:HG13	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2159:G:H2'	36:BA:2160:G:H5''	1.65	0.79
36:BA:612:C:H2'	36:BA:613:G:H5'	1.63	0.79
41:BF:46:ARG:HH11	41:BF:46:ARG:HG2	1.48	0.79
50:BR:18:LEU:HD11	50:BR:22:ARG:CZ	2.13	0.79
28:D2:25:VAL:HG22	28:D2:29:LYS:HD3	1.64	0.79
36:DA:1681:G:O2'	36:DA:1762:A:H2'	1.82	0.79
36:DA:2185:C:H2'	36:DA:2186:G:H5'	1.64	0.79
36:DA:296:C:O2'	36:DA:297:C:H5'	1.82	0.79
1:AA:368:U:OP2	25:AZ:268:THR:HG21	1.82	0.79
2:AB:168:THR:OG1	2:AB:192:SER:HB2	1.82	0.79
57:BY:13:VAL:HG23	57:BY:73:ARG:O	1.82	0.79
34:D8:52:LYS:N	34:D8:53:PRO:HD2	1.97	0.79
36:DA:330:A:C2	36:DA:1210:A:H2'	2.18	0.79
36:DA:2875:C:H4'	52:DT:5:ALA:HB3	1.65	0.79
1:AA:1030:C:H41	1:AA:1032:G:H21	1.31	0.78
1:AA:1502:A:H2	1:AA:1505:G:N1	1.79	0.78
1:AA:664:G:H22	1:AA:741:G:H1	1.31	0.78
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.81	0.78
4:AD:108:LEU:CD1	4:AD:174:LEU:HD13	2.13	0.78
16:AP:25:ARG:HH11	16:AP:25:ARG:CG	1.96	0.78
22:AW:59:U:H2'	22:AW:60:U:H5'	1.65	0.78
25:AZ:359:VAL:O	25:AZ:362:VAL:CG2	2.31	0.78
36:BA:1803:A:O3'	39:BD:259:THR:HG21	1.83	0.78
42:BG:63:ILE:HG22	42:BG:143:GLU:HB2	1.63	0.78
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.65	0.78
28:D2:3:LEU:HG	28:D2:7:ARG:HD3	1.65	0.78
52:DT:24:PRO:HD3	52:DT:52:ILE:HD12	1.65	0.78
53:DU:65:ILE:HD11	53:DU:96:ALA:HB3	1.64	0.78
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.18	0.78
1:AA:722:A:H2'	1:AA:722:A:N3	1.98	0.78
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.18	0.78
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.82	0.78
24:AY:76:A:P	25:AZ:274:ARG:CG	2.72	0.78
25:AZ:397:ALA:HB2	61:AZ:502:KIR:H252	1.64	0.78
25:AZ:65:THR:CG2	25:AZ:80:VAL:HG13	2.14	0.78
32:B6:17:LYS:HB3	32:B6:18:ARG:HH12	1.48	0.78
36:BA:733:G:N7	36:BA:761:A:C6	2.51	0.78
41:BF:24:LEU:HB3	41:BF:25:PRO:CD	2.13	0.78
42:BG:114:ILE:O	42:BG:116:ASP:N	2.15	0.78
56:BX:12:VAL:HG23	56:BX:13:LEU:N	1.97	0.78
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.19	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:2:LYS:HG3	28:D2:6:VAL:HG21	1.63	0.78
36:DA:1683:C:H2'	36:DA:1684:C:H6	1.47	0.78
36:DA:1865:G:H5'	36:DA:1866:C:OP2	1.81	0.78
36:DA:2760:C:H2'	36:DA:2761:G:H5''	1.64	0.78
41:DF:53:THR:HG23	41:DF:55:GLY:H	1.47	0.78
50:DR:18:LEU:HD11	50:DR:22:ARG:CZ	2.13	0.78
40:BE:167:VAL:HG12	40:BE:189:PRO:HD3	1.65	0.78
54:BV:64:HIS:ND1	54:BV:92:THR:HG22	1.98	0.78
11:CK:126:ARG:HH11	11:CK:126:ARG:HB3	1.47	0.78
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	1.83	0.78
22:CV:42:C:C6	22:CV:42:C:H5'	2.15	0.78
36:DA:2801(A):A:H4'	36:DA:2802:G:H5'	1.65	0.78
36:DA:655:A:H4'	36:DA:656:G:H5'	1.66	0.78
42:DG:67:LYS:CD	42:DG:67:LYS:H	1.95	0.78
46:DN:46:VAL:CG1	46:DN:48:MET:HG3	2.14	0.78
56:DX:12:VAL:HG23	56:DX:13:LEU:N	1.97	0.78
57:DY:8:LYS:CD	57:DY:8:LYS:H	1.95	0.78
13:AM:119:GLY:O	13:AM:120:LYS:HB2	1.82	0.78
25:AZ:193:ASN:C	25:AZ:195:TRP:H	1.82	0.78
34:B8:4:MET:O	34:B8:62:LEU:HD11	1.83	0.78
10:CJ:4:ILE:HB	10:CJ:74:ILE:HD11	1.64	0.78
51:DS:30:ARG:NH2	51:DS:62:LYS:HD3	1.94	0.78
51:DS:89:ARG:HB3	51:DS:92:TYR:HB3	1.64	0.78
17:AQ:60:ILE:HB	17:AQ:74:LEU:HD23	1.63	0.78
24:AY:77:TRP:O	25:AZ:273:HIS:N	2.16	0.78
36:BA:1887:C:C2'	36:BA:1888:G:H5''	2.12	0.78
36:BA:2101:G:C2'	36:BA:2102:U:H5''	2.14	0.78
41:BF:29:ASN:ND2	41:BF:32:LEU:HB2	1.98	0.78
4:CD:62:GLN:HA	4:CD:62:GLN:HE21	1.47	0.78
36:DA:612:C:H2'	36:DA:613:G:H5'	1.64	0.78
13:AM:88:ARG:HG3	13:AM:98:VAL:HG13	1.64	0.78
22:AW:74:C:H5'	22:AW:74:C:H6	1.49	0.78
1:AA:367:U:H4'	25:AZ:291:ARG:NE	1.98	0.78
30:B4:18:CYS:SG	59:B4:101:ZN:ZN	1.70	0.78
32:B6:11:LEU:HD22	32:B6:12:GLU:H	1.48	0.78
36:BA:2572:A:C8	40:BE:144:ARG:HD2	2.19	0.78
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.65	0.78
39:DD:8:PRO:HB3	39:DD:14:ARG:HB3	1.66	0.78
25:AZ:8:THR:OG1	25:AZ:9:LYS:HG2	1.84	0.78
36:BA:1720:U:H3'	36:BA:1721:G:H5''	1.66	0.78
25:AZ:7:ARG:HH22	25:AZ:281:ILE:HD11	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1039:G:H1	36:BA:1116:C:H42	1.32	0.78
36:BA:2801(A):A:H4'	36:BA:2802:G:H5'	1.65	0.78
43:BH:42:ARG:O	43:BH:43:VAL:HG13	1.82	0.78
46:BN:30:ILE:O	46:BN:34:LEU:HB2	1.83	0.78
56:BX:12:VAL:CG2	56:BX:13:LEU:H	1.95	0.78
58:BZ:151:HIS:CB	58:BZ:170:THR:HA	2.14	0.78
1:CA:1030:C:H41	1:CA:1032:G:H21	1.32	0.78
34:D8:4:MET:O	34:D8:62:LEU:HD11	1.84	0.78
38:BC:123:VAL:HG23	38:BC:127:LEU:HD13	1.65	0.78
48:BP:41:ARG:CA	48:BP:41:ARG:HH11	1.97	0.78
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.66	0.78
32:D6:17:LYS:HB3	32:D6:18:ARG:HH12	1.49	0.78
36:DA:1039:G:H1	36:DA:1116:C:H42	1.32	0.78
46:DN:51:PHE:CZ	46:DN:119:ARG:HD2	2.19	0.78
36:DA:1279:G:H4'	50:DR:31:HIS:HD2	1.48	0.78
53:DU:48:ALA:O	53:DU:52:ARG:HG3	1.84	0.78
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.32	0.78
3:AC:46:GLU:O	3:AC:47:LEU:HB2	1.82	0.78
27:B1:8:SER:HB3	27:B1:66:HIS:CE1	2.19	0.78
36:BA:225:A:O2'	36:BA:257:A:H4'	1.83	0.78
51:BS:12:PHE:HD1	51:BS:12:PHE:C	1.86	0.78
58:BZ:152:ALA:O	58:BZ:155:LEU:HD22	1.84	0.78
16:CP:25:ARG:HH11	16:CP:25:ARG:CG	1.96	0.78
31:D5:3:LYS:HD3	36:DA:747:U:P	2.23	0.78
36:DA:970:C:H2'	36:DA:971:C:H6	1.49	0.78
57:DY:2:ARG:HD3	57:DY:3:VAL:HG23	1.66	0.78
1:AA:723:U:C4	1:AA:1537:U:H2'	2.18	0.77
2:AB:114:ARG:NH1	2:AB:118:LEU:HD21	1.98	0.77
19:AS:29:ARG:HD2	19:AS:30:LEU:N	1.99	0.77
24:AY:25:C:H6	24:AY:25:C:H5'	1.49	0.77
28:B2:33:MET:O	28:B2:37:PHE:HB2	1.84	0.77
36:BA:2760:C:H2'	36:BA:2761:G:H5''	1.64	0.77
41:BF:53:THR:HG23	41:BF:55:GLY:H	1.49	0.77
53:BU:48:ALA:O	53:BU:52:ARG:HG3	1.84	0.77
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.18	0.77
36:DA:1059:G:H5'	36:DA:1060:U:H2'	1.66	0.77
36:DA:1876:A:C2'	36:DA:1877:A:H5''	2.13	0.77
36:DA:621:A:H2'	36:DA:622:G:H5'	1.65	0.77
42:DG:59:GLU:HA	42:DG:62:LEU:HD13	1.66	0.77
51:DS:12:PHE:C	51:DS:12:PHE:HD1	1.88	0.77
24:AY:45:U:H3'	24:AY:46:7MG:H5''	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:14:ARG:HH11	26:B0:14:ARG:HG3	1.49	0.77
36:BA:2173:A:H2'	36:BA:2173:A:N3	1.99	0.77
31:B5:3:LYS:HD3	36:BA:747:U:P	2.24	0.77
46:BN:47:ALA:HB2	46:BN:112:LEU:HD11	1.63	0.77
31:D5:24:ALA:O	31:D5:25:LEU:HB2	1.82	0.77
42:DG:97:ASP:H	42:DG:99:MET:HE1	1.46	0.77
36:BA:2131:G:H1'	36:BA:2133:G:H21	1.48	0.77
39:BD:186:HIS:HD2	39:BD:188:GLU:H	1.31	0.77
43:BH:85:LYS:NZ	43:BH:133:VAL:H	1.81	0.77
46:BN:46:VAL:CG1	46:BN:48:MET:HG3	2.12	0.77
58:BZ:24:LEU:O	58:BZ:24:LEU:HD23	1.84	0.77
58:BZ:9:TYR:HE1	58:BZ:35:ARG:CZ	1.98	0.77
13:CM:57:ARG:NH1	30:D4:34:GLU:HG3	1.98	0.77
34:D8:15:LYS:CD	48:DP:65:ARG:HH22	1.97	0.77
39:DD:69:ARG:NH2	39:DD:128:GLY:O	2.17	0.77
40:DE:167:VAL:HG12	40:DE:189:PRO:HD3	1.67	0.77
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.47	0.77
1:AA:975:A:H4'	1:AA:976:G:C5'	2.15	0.77
27:B1:15:ALA:HB2	27:B1:42:GLN:HG3	1.66	0.77
36:BA:1264:G:H3'	36:BA:1265:A:H5''	1.65	0.77
36:BA:330:A:C2	36:BA:1210:A:H2'	2.18	0.77
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.20	0.77
27:D1:45:ASN:ND2	36:DA:2090:G:H21	1.81	0.77
34:D8:8:LYS:HB3	34:D8:12:LYS:HE3	1.65	0.77
37:DB:20:C:C2'	37:DB:21:G:H5''	2.15	0.77
51:DS:101:LEU:O	51:DS:101:LEU:HD12	1.85	0.77
53:DU:3:ARG:HH12	53:DU:5:LYS:HB3	1.49	0.77
22:AW:35:A:H2'	22:AW:36:A:H8	1.50	0.77
28:B2:68:ARG:HA	28:B2:72:ALA:HB3	1.67	0.77
34:B8:8:LYS:HB3	34:B8:12:LYS:HE3	1.66	0.77
36:BA:1038:C:H2'	36:BA:1039:G:H5''	1.65	0.77
36:BA:512:G:HO2'	36:BA:513:A:H8	1.29	0.77
52:BT:55:ASN:N	52:BT:59:THR:HG22	2.00	0.77
57:BY:2:ARG:HD3	57:BY:3:VAL:HG23	1.66	0.77
1:CA:1534:A:N6	23:CX:12:A:H2	1.82	0.77
36:DA:141:A:H8	36:DA:1408:C:HO2'	1.30	0.77
38:DC:123:VAL:HG23	38:DC:127:LEU:HD13	1.66	0.77
51:DS:13:ARG:HG3	51:DS:14:VAL:H	1.50	0.77
52:DT:39:ARG:H	52:DT:39:ARG:HD2	1.48	0.77
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.66	0.77
12:AL:24:VAL:HG11	12:AL:27:LEU:HD22	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:112:LEU:H	48:BP:128:HIS:HD2	1.33	0.77
57:BY:7:VAL:HG21	57:BY:8:LYS:NZ	2.00	0.77
36:DA:2305:A:H3'	36:DA:2306:C:H5''	1.67	0.77
36:DA:225:A:O2'	36:DA:257:A:H4'	1.83	0.77
36:DA:2604:U:C6	36:DA:2604:U:H5'	2.20	0.77
42:DG:99:MET:HG3	42:DG:100:TRP:CD1	2.18	0.77
43:DH:117:PRO:HB3	43:DH:123:PHE:CE1	2.20	0.77
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.67	0.77
39:BD:69:ARG:NH2	39:BD:128:GLY:O	2.17	0.77
57:BY:28:LYS:HD2	57:BY:39:VAL:HG22	1.66	0.77
34:D8:17:THR:CG2	34:D8:21:LYS:HB2	2.15	0.77
36:DA:2173:A:N3	36:DA:2173:A:H2'	1.99	0.77
39:DD:31:LYS:NZ	39:DD:33:LEU:HG	2.00	0.77
53:DU:92:ARG:O	53:DU:94:ASN:N	2.18	0.77
54:DV:15:GLU:HB3	54:DV:16:PRO:CD	2.15	0.77
56:DX:24:GLY:O	56:DX:82:GLN:HA	1.85	0.77
58:DZ:114:GLY:CA	58:DZ:146:ILE:HG21	2.15	0.77
19:AS:13:ASP:O	19:AS:14:HIS:HB3	1.85	0.77
22:AV:42:C:C6	22:AV:42:C:H5'	2.15	0.77
24:AY:76:A:OP2	25:AZ:274:ARG:HG3	1.83	0.77
25:AZ:191:GLY:HA2	25:AZ:197:ASP:OD1	1.84	0.77
31:B5:24:ALA:O	31:B5:25:LEU:HB2	1.82	0.77
36:BA:1403:C:H5''	36:BA:1471:A:H1'	1.67	0.77
36:BA:2186:G:H2'	36:BA:2187:G:C8	2.20	0.77
36:BA:672:C:C2'	36:BA:673:C:H5''	2.14	0.77
43:BH:16:SER:HB2	43:BH:27:LYS:HB2	1.66	0.77
56:BX:12:VAL:HB	56:BX:17:ALA:CB	2.13	0.77
2:CB:200:ILE:HD12	2:CB:200:ILE:N	1.98	0.77
3:CC:5:ILE:N	3:CC:5:ILE:HD13	2.00	0.77
36:DA:2668:G:O2'	36:DA:2669:G:H5'	1.85	0.77
51:DS:66:ALA:HA	51:DS:69:VAL:HG12	1.65	0.77
4:AD:200:GLU:HG2	4:AD:201:GLN:N	1.99	0.77
25:AZ:70:TYR:O	25:AZ:77:TYR:HB2	1.84	0.77
32:B6:19:ARG:HG2	32:B6:20:ASN:N	1.98	0.77
36:BA:2485:G:H5''	49:BQ:46:GLN:HE21	1.48	0.77
48:BP:58:THR:HB	48:BP:61:ARG:HH21	1.49	0.77
2:CB:15:VAL:H	2:CB:16:HIS:CE1	2.03	0.77
41:DF:24:LEU:HB3	41:DF:25:PRO:CD	2.15	0.77
48:DP:38:GLN:HG3	48:DP:39:LYS:H	1.48	0.77
48:DP:58:THR:O	48:DP:61:ARG:NE	2.17	0.77
51:DS:24:LEU:HB3	51:DS:85:VAL:HG12	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:12:VAL:CG2	56:DX:13:LEU:H	1.95	0.77
1:AA:627:G:O2'	1:AA:628:G:H5'	1.84	0.77
1:AA:975:A:C5'	1:AA:976:G:H5''	2.15	0.77
2:AB:75:LYS:HA	2:AB:78:GLN:NE2	2.00	0.77
4:AD:62:GLN:HE21	4:AD:62:GLN:HA	1.50	0.77
29:B3:6:VAL:HG12	29:B3:56:VAL:HG22	1.67	0.77
34:B8:32:LEU:HD13	36:BA:2391:G:H3'	1.67	0.77
36:BA:28:A:N6	36:BA:512:G:H1'	2.00	0.77
22:CW:59:U:H2'	22:CW:60:U:H5'	1.64	0.77
36:DA:2186:G:H2'	36:DA:2187:G:C8	2.20	0.77
36:DA:28:A:N6	36:DA:512:G:H1'	2.00	0.77
36:BA:1826:G:H4'	39:BD:242:ARG:NH2	2.00	0.76
36:BA:658:C:H2'	36:BA:659:C:H6	1.51	0.76
46:BN:51:PHE:CZ	46:BN:119:ARG:HD2	2.20	0.76
50:BR:72:ASP:HB3	50:BR:75:LEU:HB3	1.65	0.76
54:BV:29:PRO:HA	54:BV:61:VAL:HG23	1.65	0.76
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.65	0.76
1:CA:963:G:H21	10:CJ:55:LYS:CE	1.98	0.76
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.67	0.76
41:DF:132:VAL:HG13	41:DF:133:ASN:ND2	2.00	0.76
46:DN:46:VAL:HG13	46:DN:48:MET:HG3	1.67	0.76
54:DV:29:PRO:HA	54:DV:61:VAL:HG23	1.67	0.76
58:DZ:70:LEU:HD22	58:DZ:91:LEU:HD21	1.67	0.76
2:CB:114:ARG:NH1	2:CB:118:LEU:HD21	2.00	0.76
36:DA:2101:G:C2'	36:DA:2102:U:H5''	2.14	0.76
36:DA:2796:U:H3'	36:DA:2799:C:H5'	1.66	0.76
38:DC:82:LYS:HA	38:DC:82:LYS:HE2	1.67	0.76
39:DD:25:THR:HG22	39:DD:26:LYS:HE2	1.67	0.76
42:DG:51:ARG:HE	42:DG:51:ARG:HA	1.50	0.76
22:AW:57:G:H2'	22:AW:58:A:H5'	1.66	0.76
33:B7:10:ARG:HG2	33:B7:10:ARG:HH11	1.51	0.76
36:BA:1681:G:O2'	36:BA:1762:A:H2'	1.85	0.76
36:BA:2305:A:H3'	36:BA:2306:C:H5''	1.68	0.76
51:BS:66:ALA:HA	51:BS:69:VAL:HG12	1.66	0.76
3:CC:95:THR:HG22	3:CC:95:THR:O	1.85	0.76
4:CD:28:SER:HB3	4:CD:29:PRO:CD	2.15	0.76
22:CW:74:C:H6	22:CW:74:C:H5'	1.50	0.76
29:D3:35:ARG:HH11	29:D3:35:ARG:CB	1.96	0.76
32:D6:19:ARG:HG2	32:D6:20:ASN:N	1.97	0.76
36:DA:1038:C:H2'	36:DA:1039:G:H5''	1.66	0.76
36:DA:2036:C:H6	36:DA:2036:C:H5'	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:30:GLU:CB	39:BD:35:LYS:HZ3	1.99	0.76
41:BF:132:VAL:HG13	41:BF:133:ASN:ND2	2.00	0.76
2:CB:168:THR:OG1	2:CB:192:SER:HB2	1.85	0.76
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.00	0.76
26:D0:62:LEU:H	26:D0:62:LEU:HD23	1.48	0.76
38:DC:77:ILE:HB	38:DC:115:ALA:HB2	1.68	0.76
43:DH:16:SER:HB2	43:DH:27:LYS:HB2	1.67	0.76
11:AK:27:ASN:HD22	11:AK:28:THR:H	1.33	0.76
36:BA:2875:C:H4'	52:BT:5:ALA:CB	2.15	0.76
51:BS:13:ARG:CG	51:BS:14:VAL:H	1.99	0.76
51:BS:30:ARG:HH22	51:BS:62:LYS:CD	1.98	0.76
27:D1:8:SER:OG	27:D1:10:LYS:HG2	1.85	0.76
36:DA:1803:A:O3'	39:DD:259:THR:HG21	1.85	0.76
36:DA:2131:G:H1'	36:DA:2133:G:H21	1.49	0.76
36:DA:760:G:H2'	36:DA:761:A:H5'	1.67	0.76
36:BA:2796:U:H3'	36:BA:2799:C:H5'	1.67	0.76
36:BA:2853:C:H2'	36:BA:2854:G:H8	1.50	0.76
37:BB:20:C:C2'	37:BB:21:G:H5''	2.16	0.76
40:BE:35:GLN:HB3	40:BE:48:GLN:HB3	1.68	0.76
47:BO:76:ALA:HB3	52:BT:75:ILE:HD13	1.67	0.76
22:CW:57:G:H2'	22:CW:58:A:H5'	1.65	0.76
36:DA:2875:C:H4'	52:DT:5:ALA:CB	2.15	0.76
57:DY:13:VAL:HG23	57:DY:73:ARG:O	1.85	0.76
1:AA:1036:G:H5''	1:AA:1037:C:C5	2.21	0.76
1:AA:265:G:H2'	1:AA:266:G:H5''	1.67	0.76
39:BD:44:ASN:HB3	39:BD:49:ILE:HA	1.65	0.76
46:BN:46:VAL:HG13	46:BN:48:MET:HG3	1.67	0.76
34:B8:15:LYS:CD	48:BP:65:ARG:HH22	1.97	0.76
58:BZ:24:LEU:HD21	58:BZ:86:VAL:HG23	1.66	0.76
1:CA:1036:G:H5''	1:CA:1037:C:C5	2.20	0.76
11:CK:79:SER:OG	11:CK:106:LYS:HD2	1.84	0.76
28:D2:40:SER:O	28:D2:41:ILE:HG23	1.85	0.76
36:DA:1434:A:H61	36:DA:1558:A:N6	1.84	0.76
43:DH:158:HIS:O	43:DH:159:GLU:HB2	1.85	0.76
51:DS:36:TYR:N	51:DS:36:TYR:CD1	2.50	0.76
4:AD:28:SER:HB3	4:AD:29:PRO:CD	2.15	0.76
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.21	0.76
22:AW:4:C:H2'	22:AW:5:G:C8	2.21	0.76
31:B5:29:THR:HG21	36:BA:2814:C:O2'	1.86	0.76
36:BA:650:C:H3'	36:BA:651:G:H5''	1.68	0.76
38:BC:77:ILE:HB	38:BC:115:ALA:HB2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:82:LYS:HE2	38:BC:82:LYS:HA	1.68	0.76
52:BT:65:LYS:HE3	52:BT:67:SER:HB2	1.68	0.76
2:CB:75:LYS:HA	2:CB:78:GLN:NE2	2.00	0.76
36:DA:760:G:C2'	36:DA:761:A:H5'	2.14	0.76
39:DD:34:VAL:HG23	39:DD:35:LYS:N	2.00	0.76
39:DD:43:ARG:NH1	39:DD:44:ASN:ND2	2.29	0.76
2:AB:15:VAL:H	2:AB:16:HIS:CE1	2.04	0.76
24:AY:9:A:H2	24:AY:44:G:HO2'	1.33	0.76
30:B4:12:ALA:HB1	30:B4:29:PRO:O	1.86	0.76
36:BA:2875:C:H4'	52:BT:5:ALA:HB3	1.65	0.76
39:BD:31:LYS:NZ	39:BD:33:LEU:HG	2.00	0.76
40:BE:101:ARG:CZ	40:BE:171:GLU:HB2	2.16	0.76
43:BH:28:GLY:HA3	43:BH:79:VAL:HB	1.68	0.76
28:B2:40:SER:HB3	56:BX:13:LEU:HD11	1.68	0.76
58:BZ:114:GLY:O	58:BZ:146:ILE:HB	1.85	0.76
36:DA:1720:U:H3'	36:DA:1721:G:H5''	1.68	0.76
36:DA:2160:G:H5'	36:DA:2160:G:C8	2.19	0.76
39:DD:226:MET:CE	39:DD:231:HIS:HB2	2.15	0.76
40:DE:35:GLN:HB3	40:DE:48:GLN:HB3	1.67	0.76
8:AH:86:ILE:HD11	8:AH:136:GLU:HG2	1.68	0.76
16:AP:20:VAL:HG23	16:AP:34:GLU:O	1.85	0.76
25:AZ:19:HIS:ND1	25:AZ:113:MET:HB3	1.99	0.76
25:AZ:137:LYS:HA	60:AZ:501:GDP:N1	2.00	0.76
25:AZ:64:ASN:H	25:AZ:64:ASN:HD22	1.30	0.76
29:B3:15:TYR:HD2	29:B3:19:GLN:HE22	1.34	0.76
36:BA:1542:A:H5'	36:BA:1543:C:OP2	1.86	0.76
36:BA:330:A:O2'	36:BA:331:A:H8	1.69	0.76
43:BH:158:HIS:O	43:BH:159:GLU:HB2	1.85	0.76
48:BP:47:ASP:HB3	48:BP:48:PRO:HA	1.68	0.76
50:BR:103:ARG:HG3	55:BW:40:ASN:OD1	1.85	0.76
25:CZ:164:PRO:HB2	25:CZ:167:GLU:OE2	1.85	0.76
33:D7:22:MET:HE2	33:D7:28:ARG:HG2	1.68	0.76
36:DA:1061:U:H4'	36:DA:1070:A:H1'	1.68	0.76
57:DY:7:VAL:HG21	57:DY:8:LYS:NZ	2.01	0.76
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.68	0.75
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.33	0.75
36:BA:1059:G:H5'	36:BA:1060:U:H2'	1.67	0.75
36:BA:1434:A:H61	36:BA:1558:A:N6	1.84	0.75
52:BT:39:ARG:HD2	52:BT:39:ARG:H	1.51	0.75
53:BU:85:LYS:HD3	53:BU:117:GLN:HE22	1.51	0.75
1:CA:1321:C:H5''	1:CA:1322:C:H5''	1.66	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:29:LYS:O	28:D2:33:MET:HG3	1.86	0.75
32:D6:15:GLU:OE1	32:D6:18:ARG:NE	2.19	0.75
38:DC:175:VAL:CG1	38:DC:188:ASN:HB3	2.14	0.75
41:DF:46:ARG:HG2	41:DF:46:ARG:HH11	1.51	0.75
36:DA:910:A:H62	49:DQ:12:GLN:HA	1.50	0.75
34:B8:54:GLU:O	34:B8:58:ILE:HG12	1.86	0.75
39:BD:25:THR:HG22	39:BD:26:LYS:HE2	1.68	0.75
42:BG:83:ARG:HB2	42:BG:84:LYS:HD2	1.68	0.75
46:BN:129:PRO:O	46:BN:130:HIS:HB3	1.86	0.75
36:DA:444:C:OP2	53:DU:2:PRO:HD3	1.86	0.75
36:DA:672:C:C2'	36:DA:673:C:H5''	2.15	0.75
38:DC:119:VAL:HG23	38:DC:120:MET:CE	2.16	0.75
58:DZ:155:LEU:HD23	58:DZ:155:LEU:H	1.51	0.75
58:DZ:96:VAL:HG22	58:DZ:97:GLU:H	1.51	0.75
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.85	0.75
36:BA:1040:C:H2'	36:BA:1041:G:C8	2.21	0.75
36:BA:2523:G:C2'	36:BA:2524:G:H5''	2.15	0.75
36:BA:760:G:C2'	36:BA:761:A:H5'	2.16	0.75
37:BB:40:U:H3'	37:BB:41:U:H5''	1.68	0.75
52:BT:58:ASN:HD22	52:BT:58:ASN:H	1.33	0.75
1:CA:1117:G:H5'	1:CA:1117:G:H8	1.50	0.75
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	1.67	0.75
14:CN:22:THR:CB	14:CN:33:VAL:HG21	2.15	0.75
32:D6:18:ARG:NH1	32:D6:18:ARG:HG2	1.88	0.75
32:D6:15:GLU:HG2	32:D6:18:ARG:NH1	2.01	0.75
36:DA:1542:A:H5'	36:DA:1543:C:OP2	1.85	0.75
36:DA:1599:C:H2'	36:DA:1600:C:H6	1.51	0.75
36:DA:2307:G:N2	36:DA:2308:G:H5''	2.02	0.75
36:DA:2464:C:HO2'	36:DA:2465:C:H6	1.31	0.75
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.21	0.75
34:B8:33:ASN:HB3	34:B8:36:LYS:HD2	1.69	0.75
36:BA:2160:G:C8	36:BA:2160:G:H5'	2.21	0.75
39:BD:43:ARG:HE	39:BD:44:ASN:ND2	1.82	0.75
41:BF:3:GLU:CA	41:BF:24:LEU:HG	2.17	0.75
50:BR:14:SER:HA	50:BR:17:ARG:HH12	1.50	0.75
51:BS:56:LEU:O	51:BS:56:LEU:HD23	1.86	0.75
57:BY:36:ALA:HB1	57:BY:67:LEU:O	1.86	0.75
22:CW:35:A:H2'	22:CW:36:A:H8	1.49	0.75
24:CY:25:C:H5'	24:CY:25:C:H6	1.49	0.75
34:D8:32:LEU:HD13	36:DA:2391:G:H3'	1.68	0.75
55:DW:29:LEU:HG	55:DW:33:ARG:HD2	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1899:G:O2'	36:BA:1900:A:H5''	1.86	0.75
38:BC:119:VAL:HG23	38:BC:120:MET:CE	2.17	0.75
52:BT:85:LYS:HZ3	52:BT:85:LYS:HB3	1.49	0.75
1:CA:265:G:H2'	1:CA:266:G:H5''	1.68	0.75
1:CA:963:G:N3	10:CJ:55:LYS:NZ	2.33	0.75
19:CS:13:ASP:O	19:CS:14:HIS:HB3	1.85	0.75
36:DA:1403:C:H5''	36:DA:1471:A:H1'	1.67	0.75
36:DA:658:C:H2'	36:DA:659:C:H6	1.50	0.75
58:DZ:166:SER:HB2	58:DZ:168:GLU:N	2.01	0.75
58:DZ:72:ARG:HG3	58:DZ:89:PHE:HB2	1.68	0.75
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.85	0.75
1:AA:186:C:H2'	1:AA:187:C:H6	1.51	0.75
32:B6:53:LYS:HG2	32:B6:54:ILE:N	2.01	0.75
36:BA:1061:U:H4'	36:BA:1070:A:H1'	1.69	0.75
36:BA:272(D):G:H1	36:BA:364:C:H42	1.35	0.75
54:BV:15:GLU:HB3	54:BV:16:PRO:CD	2.16	0.75
1:CA:1016:A:H2'	1:CA:1017:G:O4'	1.86	0.75
1:CA:1129:C:O5'	1:CA:1130:A:H5'	1.86	0.75
17:CQ:10:VAL:HG21	17:CQ:52:LYS:O	1.87	0.75
42:DG:77:ILE:O	42:DG:83:ARG:HG2	1.87	0.75
43:DH:118:PRO:HG2	43:DH:121:ILE:HD12	1.67	0.75
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.69	0.75
11:AK:67:ASP:OD1	11:AK:71:LYS:HE3	1.87	0.75
16:AP:25:ARG:HH11	16:AP:25:ARG:HB2	1.50	0.75
24:AY:10:G:H1	24:AY:25:C:H42	1.34	0.75
36:BA:2036:C:H5'	36:BA:2036:C:H6	1.51	0.75
36:BA:760:G:H2'	36:BA:761:A:H5'	1.68	0.75
53:BU:3:ARG:HH12	53:BU:5:LYS:HB3	1.51	0.75
1:CA:1423:G:H5'	47:DO:49:ARG:HH22	1.51	0.75
36:DA:2853:C:H2'	36:DA:2854:G:H8	1.50	0.75
52:DT:83:ILE:HG13	52:DT:84:GLN:N	2.01	0.75
56:DX:12:VAL:HB	56:DX:17:ALA:CB	2.14	0.75
58:DZ:78:LYS:O	58:DZ:79:ARG:HB3	1.86	0.75
4:AD:3:ARG:NH1	4:AD:118:ARG:HD3	2.01	0.75
22:AV:41:C:H2'	22:AV:42:C:C5'	2.15	0.75
1:AA:367:U:C4'	25:AZ:291:ARG:HE	1.99	0.75
27:B1:29:GLY:O	27:B1:30:VAL:HG22	1.87	0.75
36:BA:1880:C:C3'	36:BA:1881:C:H5''	2.17	0.75
34:B8:34:TRP:HB2	36:BA:2420:C:OP1	1.87	0.75
36:BA:2645:G:C3'	36:BA:2646:C:H5'	2.12	0.75
38:BC:10:LEU:HD12	38:BC:32:LEU:HA	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:226:MET:CE	39:BD:231:HIS:HB2	2.16	0.75
39:BD:34:VAL:HG23	39:BD:35:LYS:N	2.00	0.75
43:BH:118:PRO:HG2	43:BH:121:ILE:HD12	1.68	0.75
56:BX:55:ASN:HB2	56:BX:80:ILE:HG12	1.68	0.75
36:DA:1960:A:H8	36:DA:1960:A:H5'	1.51	0.75
42:DG:60:LEU:O	42:DG:63:ILE:HG12	1.87	0.75
50:DR:92:GLY:N	50:DR:94:TYR:HE1	1.85	0.75
49:DQ:63:LYS:HD2	58:DZ:175:VAL:HG21	1.67	0.75
1:AA:1493:A:H5''	1:AA:1494:G:OP2	1.87	0.75
25:CZ:191:GLY:HA2	25:CZ:197:ASP:CG	2.07	0.75
25:CZ:271:GLU:HG2	25:CZ:276:THR:HA	1.69	0.75
36:DA:2159:G:H2'	36:DA:2160:G:H5''	1.69	0.75
38:DC:53:ARG:NH1	38:DC:53:ARG:HB3	2.01	0.75
40:DE:101:ARG:CZ	40:DE:171:GLU:HB2	2.16	0.75
57:DY:28:LYS:HD2	57:DY:39:VAL:HG22	1.67	0.75
3:AC:34:LEU:HD22	3:AC:38:ARG:HE	1.49	0.74
40:BE:128:SER:OG	40:BE:129:HIS:N	2.19	0.74
52:BT:29:ARG:HB3	52:BT:85:LYS:HA	1.69	0.74
58:BZ:37:VAL:HG23	58:BZ:38:TYR:N	2.00	0.74
1:CA:1392:G:H21	1:CA:1502:A:H8	1.34	0.74
25:CZ:7:ARG:NH1	25:CZ:7:ARG:HG2	2.02	0.74
36:DA:272(D):G:H1	36:DA:364:C:H42	1.35	0.74
43:DH:85:LYS:NZ	43:DH:133:VAL:H	1.83	0.74
4:AD:25:ARG:O	4:AD:27:TYR:N	2.20	0.74
13:AM:88:ARG:HG3	13:AM:98:VAL:CG1	2.17	0.74
25:AZ:93:ILE:HD11	61:AZ:502:KIR:H371	1.69	0.74
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.51	0.74
52:BT:27:THR:HG23	52:BT:28:VAL:H	1.52	0.74
54:BV:35:LEU:HD23	54:BV:57:VAL:HG13	1.69	0.74
16:CP:74:LEU:HB3	16:CP:79:VAL:HG21	1.69	0.74
36:DA:1040:C:H2'	36:DA:1041:G:C8	2.22	0.74
36:DA:1494:A:C2'	36:DA:1495:A:H5''	2.17	0.74
37:DB:40:U:H3'	37:DB:41:U:H5''	1.67	0.74
41:DF:3:GLU:CA	41:DF:24:LEU:HG	2.16	0.74
48:DP:64:LYS:O	48:DP:66:GLY:N	2.20	0.74
1:AA:1129:C:O5'	1:AA:1130:A:H5'	1.87	0.74
1:AA:723:U:N3	1:AA:1537:U:H2'	2.02	0.74
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	1.87	0.74
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.34	0.74
36:BA:271(L):U:H4'	36:BA:271(M):G:C8	2.22	0.74
4:CD:8:VAL:HB	4:CD:21:LEU:HD12	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	1.87	0.74
31:D5:29:THR:HG21	36:DA:2814:C:O2'	1.87	0.74
36:DA:614(A):U:H4'	36:DA:614(B):G:H5''	1.68	0.74
50:DR:103:ARG:HG3	55:DW:40:ASN:OD1	1.86	0.74
56:DX:55:ASN:HB2	56:DX:80:ILE:HG12	1.69	0.74
1:AA:1152:A:O2'	1:AA:1153:C:H5'	1.86	0.74
25:AZ:121:LEU:HD13	61:AZ:502:KIR:O4	1.88	0.74
36:BA:1221(A):C:H2'	36:BA:1222:C:C6	2.22	0.74
36:BA:2523:G:H2'	36:BA:2524:G:H5''	1.68	0.74
36:BA:2668:G:O2'	36:BA:2669:G:H5'	1.87	0.74
58:BZ:126:VAL:HA	58:BZ:163:LEU:HA	1.68	0.74
17:CQ:26:GLN:HB3	17:CQ:37:LYS:HA	1.68	0.74
24:CY:72:U:H2'	24:CY:73:G:H5''	1.70	0.74
26:D0:14:ARG:HG3	26:D0:14:ARG:HH11	1.52	0.74
36:DA:1264:G:H3'	36:DA:1265:A:H5''	1.67	0.74
27:D1:81:LYS:HZ3	36:DA:156:U:H5'	1.53	0.74
48:DP:62:LEU:H	48:DP:62:LEU:CD2	1.98	0.74
57:DY:36:ALA:HB1	57:DY:67:LEU:O	1.87	0.74
1:AA:1321:C:H5''	1:AA:1322:C:H5''	1.69	0.74
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG22	1.69	0.74
31:B5:40:LYS:HE2	31:B5:46:CYS:HB3	1.67	0.74
36:BA:500:G:N2	36:BA:502:A:H3'	2.01	0.74
41:BF:57:VAL:HG21	41:BF:87:GLY:HA2	1.69	0.74
48:BP:16:ARG:HD3	48:BP:16:ARG:O	1.86	0.74
52:BT:82:LEU:N	52:BT:82:LEU:HD12	2.01	0.74
53:BU:90:VAL:O	53:BU:92:ARG:N	2.20	0.74
1:CA:664:G:H22	1:CA:741:G:H1	1.34	0.74
2:CB:165:VAL:HG23	2:CB:166:ASP:N	1.98	0.74
11:CK:67:ASP:OD1	11:CK:71:LYS:HE3	1.86	0.74
25:CZ:139:ASP:O	25:CZ:140:MET:HG2	1.86	0.74
25:CZ:263:ARG:HD2	25:CZ:297:GLU:OE2	1.87	0.74
36:DA:1880:C:C3'	36:DA:1881:C:H5''	2.17	0.74
36:DA:1880:C:H3'	36:DA:1881:C:H5''	1.70	0.74
36:DA:2523:G:C2'	36:DA:2524:G:H5''	2.18	0.74
36:DA:650:C:H3'	36:DA:651:G:H5''	1.68	0.74
38:DC:132:GLY:N	38:DC:133:PRO:HD2	2.02	0.74
52:DT:65:LYS:HE3	52:DT:67:SER:HB2	1.70	0.74
58:DZ:130:PRO:HA	58:DZ:133:ILE:HD11	1.69	0.74
20:AT:82:SER:O	20:AT:86:ARG:HB2	1.88	0.74
36:BA:2179:C:H5''	36:BA:2180:U:OP1	1.87	0.74
37:BB:17:C:H2'	37:BB:18:G:O4'	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:33:VAL:HG13	40:BE:69:LYS:HE3	1.69	0.74
47:BO:87:ILE:CG2	47:BO:91:LEU:HA	2.17	0.74
24:CY:45:U:H3'	24:CY:46:7MG:H5''	1.68	0.74
28:D2:29:LYS:CA	28:D2:32:LEU:HB3	2.15	0.74
36:DA:2689:U:H5''	36:DA:2690:C:H5'	1.69	0.74
36:DA:271(L):U:H4'	36:DA:271(M):G:C8	2.22	0.74
37:DB:17:C:H2'	37:DB:18:G:O4'	1.87	0.74
48:DP:16:ARG:O	48:DP:16:ARG:HD3	1.87	0.74
36:DA:2378:A:N1	51:DS:19:LYS:HE3	2.03	0.74
1:CA:1442(B):A:H5'	52:DT:122:ASP:OD1	1.86	0.74
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.88	0.74
1:AA:963:G:H21	10:AJ:55:LYS:CE	1.99	0.74
36:BA:1683:C:H2'	36:BA:1684:C:C6	2.22	0.74
36:BA:970:C:H2'	36:BA:971:C:H6	1.50	0.74
43:BH:156:ALA:C	43:BH:158:HIS:H	1.89	0.74
51:BS:101:LEU:O	51:BS:101:LEU:HD12	1.87	0.74
57:BY:90:LEU:HD23	57:BY:90:LEU:H	1.53	0.74
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	2.03	0.74
15:CO:71:GLN:O	15:CO:71:GLN:HG2	1.87	0.74
25:CZ:274:ARG:HH11	25:CZ:274:ARG:CG	2.00	0.74
32:D6:53:LYS:HG2	32:D6:54:ILE:N	2.02	0.74
36:DA:1543:C:H3'	36:DA:1544:A:C5'	2.18	0.74
40:DE:9:VAL:CG1	40:DE:25:VAL:HB	2.18	0.74
50:DR:27:SER:O	50:DR:30:THR:HG23	1.87	0.74
22:AV:61:C:H5'	22:AV:62:C:OP2	1.88	0.74
25:AZ:326:GLU:O	61:AZ:502:KIR:H101	1.87	0.74
27:B1:13:ILE:CD1	36:BA:396:G:H5'	2.18	0.74
36:BA:1494:A:C2'	36:BA:1495:A:H5''	2.17	0.74
1:CA:59:A:H3'	1:CA:331:G:H22	1.51	0.74
1:CA:722:A:N3	1:CA:722:A:H2'	2.01	0.74
22:CV:20:U:H3'	22:CV:21:A:H5'	1.68	0.74
25:CZ:219:LYS:HB3	25:CZ:244:ARG:HD2	1.68	0.74
25:CZ:16:THR:HG23	25:CZ:79:HIS:NE2	2.02	0.74
28:D2:25:VAL:C	28:D2:27:GLU:H	1.91	0.74
34:D8:54:GLU:O	34:D8:58:ILE:HG12	1.87	0.74
36:DA:1170:G:H1	36:DA:1179:C:H42	1.36	0.74
36:DA:1826:G:H4'	39:DD:242:ARG:NH2	2.03	0.74
36:DA:2188:C:H2'	36:DA:2189:U:C6	2.22	0.74
48:DP:112:LEU:H	48:DP:128:HIS:HD2	1.33	0.74
48:DP:148:LEU:O	48:DP:149:GLU:HB2	1.86	0.74
58:DZ:96:VAL:HG13	58:DZ:97:GLU:N	2.02	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:192:U:H1'	20:AT:103:GLY:HA2	1.70	0.74
24:AY:76:A:C6	25:AZ:271:GLU:HG3	2.23	0.74
36:BA:1543:C:H3'	36:BA:1544:A:C5'	2.17	0.74
36:BA:1880:C:H3'	36:BA:1881:C:H5''	1.70	0.74
41:BF:177:ALA:HB1	41:BF:178:PRO:HD2	1.70	0.74
42:BG:34:LEU:HA	42:BG:161:THR:HA	1.68	0.74
48:BP:62:LEU:CD2	48:BP:62:LEU:H	1.99	0.74
52:BT:23:ARG:HG2	52:BT:120:ARG:NH1	2.02	0.74
56:BX:29:TRP:CZ3	56:BX:78:LYS:HB3	2.23	0.74
1:CA:1003:G:N2	1:CA:1039:C:H42	1.85	0.74
1:CA:358:U:H2'	1:CA:359:U:C6	2.23	0.74
1:CA:1492:A:OP1	12:CL:47:LYS:HG2	1.88	0.74
15:CO:17:ARG:HG3	15:CO:17:ARG:HH11	1.50	0.74
30:D4:12:ALA:HB1	30:D4:29:PRO:O	1.86	0.74
42:DG:61:ALA:HA	42:DG:64:THR:HG22	1.68	0.74
42:DG:67:LYS:N	42:DG:67:LYS:HD3	1.98	0.74
44:DJ:85:UNK:HG3	44:DJ:86:UNK:H	1.52	0.74
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.69	0.74
9:AI:4:TYR:CD2	9:AI:87:GLN:HB3	2.23	0.74
15:AO:87:ILE:CG2	15:AO:88:ARG:H	1.93	0.74
25:AZ:263:ARG:HD2	25:AZ:297:GLU:OE2	1.87	0.74
36:BA:614(A):U:H4'	36:BA:614(B):G:H5''	1.69	0.74
40:BE:116:VAL:O	40:BE:117:MET:HB2	1.88	0.74
50:BR:27:SER:O	50:BR:30:THR:HG23	1.88	0.74
51:BS:83:LYS:HG2	51:BS:105:ALA:HB3	1.69	0.74
58:BZ:69:THR:CG2	58:BZ:90:VAL:HA	2.10	0.74
1:CA:186:C:H2'	1:CA:187:C:H6	1.53	0.74
4:CD:25:ARG:O	4:CD:27:TYR:N	2.21	0.74
28:D2:6:VAL:HG11	28:D2:59:ARG:NE	2.03	0.74
31:D5:50:GLY:HA3	31:D5:56:LYS:CD	2.18	0.74
36:DA:330:A:O2'	36:DA:331:A:H8	1.70	0.74
38:DC:10:LEU:HD12	38:DC:32:LEU:HA	1.68	0.74
40:DE:128:SER:OG	40:DE:129:HIS:N	2.21	0.74
41:DF:57:VAL:HG21	41:DF:87:GLY:HA2	1.69	0.74
48:DP:47:ASP:HB3	48:DP:48:PRO:HA	1.68	0.74
53:DU:90:VAL:O	53:DU:92:ARG:N	2.21	0.74
56:DX:29:TRP:CZ3	56:DX:78:LYS:HB3	2.23	0.74
1:AA:1116:C:O2'	9:AI:108:VAL:HG21	1.88	0.73
27:B1:37:ILE:HD13	27:B1:37:ILE:H	1.52	0.73
36:BA:1899:G:H21	36:BA:1902:C:N4	1.81	0.73
41:BF:7:TYR:HB3	41:BF:16:GLY:O	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:117:PRO:HB3	43:BH:123:PHE:CE1	2.22	0.73
46:BN:107:LEU:HB3	46:BN:108:PRO:HD2	1.70	0.73
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.87	0.73
4:CD:187:ARG:NH1	4:CD:187:ARG:HB3	2.03	0.73
28:D2:6:VAL:HG11	28:D2:59:ARG:HE	1.53	0.73
29:D3:6:VAL:HG12	29:D3:56:VAL:HG22	1.69	0.73
50:DR:2:ARG:HD2	50:DR:2:ARG:C	2.08	0.73
51:DS:56:LEU:O	51:DS:56:LEU:HD23	1.87	0.73
54:DV:35:LEU:HD23	54:DV:57:VAL:HG13	1.69	0.73
36:BA:1301:A:O2'	36:BA:1302:A:C2'	2.35	0.73
36:BA:1599:C:H2'	36:BA:1600:C:H6	1.54	0.73
36:BA:2604:U:C6	36:BA:2604:U:H5'	2.22	0.73
38:BC:175:VAL:CG1	38:BC:188:ASN:HB3	2.15	0.73
38:BC:53:ARG:HB3	38:BC:53:ARG:NH1	2.01	0.73
58:BZ:114:GLY:H	58:BZ:146:ILE:HG21	1.53	0.73
9:CI:4:TYR:CD2	9:CI:87:GLN:HB3	2.23	0.73
22:CW:4:C:H2'	22:CW:5:G:C8	2.23	0.73
25:CZ:121:LEU:HD13	61:CZ:502:KIR:O4	1.87	0.73
27:D1:42:GLN:NE2	36:DA:379:G:H21	1.86	0.73
36:DA:1019:U:H3	36:DA:1142(A):A:H62	1.37	0.73
41:DF:177:ALA:HB1	41:DF:178:PRO:HD2	1.71	0.73
51:DS:83:LYS:HG2	51:DS:105:ALA:HB3	1.68	0.73
53:DU:92:ARG:NH2	54:DV:11:GLN:H	1.86	0.73
54:DV:35:LEU:O	54:DV:37:VAL:N	2.19	0.73
25:AZ:191:GLY:HA2	25:AZ:197:ASP:CG	2.08	0.73
32:B6:42:TRP:CE3	32:B6:42:TRP:HA	2.22	0.73
36:BA:2100:G:H2'	36:BA:2101:G:C8	2.24	0.73
36:BA:2378:A:N1	51:BS:19:LYS:HE3	2.03	0.73
38:BC:127:LEU:O	38:BC:129:ARG:N	2.22	0.73
36:BA:442:G:C4'	41:BF:46:ARG:HD3	2.18	0.73
42:BG:73:ALA:H	42:BG:87:PRO:CG	2.01	0.73
42:BG:46:ALA:HB2	42:BG:88:ILE:HG13	1.70	0.73
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.85	0.73
10:CJ:78:ASN:HB2	10:CJ:81:THR:HG22	1.70	0.73
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.18	0.73
25:CZ:70:TYR:O	25:CZ:77:TYR:HB2	1.87	0.73
36:DA:2572:A:C8	40:DE:144:ARG:HD2	2.23	0.73
40:DE:116:VAL:O	40:DE:117:MET:HB2	1.87	0.73
48:DP:16:ARG:HB2	48:DP:16:ARG:HH11	1.52	0.73
1:AA:1003:G:N2	1:AA:1039:C:H42	1.86	0.73
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:22:ARG:HG2	21:AU:22:ARG:HH11	1.53	0.73
13:CM:65:LYS:HD3	13:CM:65:LYS:H	1.52	0.73
25:CZ:301:GLY:HA3	25:CZ:347:THR:HG23	1.70	0.73
32:D6:11:LEU:HD22	32:D6:12:GLU:H	1.53	0.73
51:DS:30:ARG:HH22	51:DS:62:LYS:CD	1.95	0.73
57:DY:90:LEU:HD23	57:DY:90:LEU:H	1.52	0.73
4:AD:187:ARG:NH1	4:AD:187:ARG:HB3	2.02	0.73
13:AM:108:ARG:HH11	13:AM:108:ARG:HG3	1.52	0.73
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.89	0.73
31:B5:50:GLY:HA3	31:B5:56:LYS:CD	2.18	0.73
34:B8:49:VAL:HG12	34:B8:53:PRO:HD3	1.69	0.73
52:BT:92:GLY:O	52:BT:94:ALA:N	2.22	0.73
53:BU:24:TYR:HB2	53:BU:29:SER:HB3	1.69	0.73
54:BV:29:PRO:HB3	54:BV:63:GLY:HA2	1.70	0.73
12:CL:110:VAL:H	12:CL:122:THR:HG22	1.52	0.73
12:CL:24:VAL:HG11	12:CL:27:LEU:HD22	1.69	0.73
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.33	0.73
13:CM:22:ILE:HG21	13:CM:66:LEU:HD23	1.69	0.73
40:DE:33:VAL:HG13	40:DE:69:LYS:HE3	1.71	0.73
41:DF:7:TYR:HB3	41:DF:16:GLY:O	1.88	0.73
43:DH:88:LEU:HD23	43:DH:164:TYR:O	1.88	0.73
47:DO:87:ILE:CG2	47:DO:91:LEU:HA	2.18	0.73
51:DS:12:PHE:C	51:DS:12:PHE:CD1	2.61	0.73
1:AA:1320:C:H5'	1:AA:1320:C:H6	1.53	0.73
1:AA:677:U:H3	1:AA:713:G:H22	1.34	0.73
24:AY:72:U:H2'	24:AY:73:G:H5''	1.71	0.73
25:AZ:139:ASP:O	25:AZ:140:MET:HG2	1.86	0.73
29:B3:35:ARG:CB	29:B3:35:ARG:HH11	1.96	0.73
36:BA:2591:C:H2'	36:BA:2592:G:C8	2.23	0.73
39:BD:35:LYS:HD2	39:BD:36:PRO:CD	2.18	0.73
53:BU:3:ARG:HH11	53:BU:3:ARG:HG2	1.54	0.73
10:CJ:54:PHE:CD2	10:CJ:55:LYS:HD3	2.23	0.73
25:CZ:281:ILE:HD12	25:CZ:284:ASP:OD1	1.88	0.73
52:DT:23:ARG:HG2	52:DT:120:ARG:NH1	2.04	0.73
52:DT:27:THR:HG23	52:DT:28:VAL:H	1.52	0.73
8:AH:9:MET:SD	8:AH:32:LYS:HG2	2.28	0.73
36:BA:1960:A:H8	36:BA:1960:A:H5'	1.52	0.73
36:BA:2360:A:C2	36:BA:2361:A:H1'	2.24	0.73
36:BA:2408:U:H2'	36:BA:2409:G:C8	2.23	0.73
36:BA:2853:C:H2'	36:BA:2854:G:C8	2.23	0.73
50:BR:117:VAL:HG22	50:BR:118:GLU:H	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:49:VAL:HG12	51:BS:50:SER:N	2.01	0.73
52:BT:83:ILE:HG13	52:BT:84:GLN:N	2.02	0.73
1:CA:627:G:O2'	1:CA:628:G:H5'	1.88	0.73
1:CA:677:U:H3	1:CA:713:G:H22	1.34	0.73
13:CM:88:ARG:HG3	13:CM:98:VAL:CG1	2.19	0.73
27:D1:47:GLN:HA	27:D1:47:GLN:OE1	1.88	0.73
38:DC:127:LEU:O	38:DC:129:ARG:N	2.22	0.73
40:DE:57:LYS:HA	40:DE:57:LYS:CE	2.18	0.73
3:AC:5:ILE:HD13	3:AC:5:ILE:H	1.53	0.73
25:AZ:16:THR:HG23	25:AZ:79:HIS:NE2	2.03	0.73
34:B8:6:THR:HB	34:B8:11:LYS:HZ1	1.52	0.73
17:CQ:52:LYS:H	17:CQ:52:LYS:HD3	1.53	0.73
25:CZ:2:LYS:O	25:CZ:275:LYS:CE	2.32	0.73
34:D8:49:VAL:HG12	34:D8:53:PRO:HD3	1.69	0.73
42:DG:99:MET:HG3	42:DG:100:TRP:H	1.54	0.73
43:DH:28:GLY:HA3	43:DH:79:VAL:HB	1.70	0.73
50:DR:14:SER:HA	50:DR:17:ARG:HH12	1.51	0.73
51:DS:13:ARG:CG	51:DS:14:VAL:H	2.00	0.73
25:AZ:301:GLY:HA3	25:AZ:347:THR:HG23	1.71	0.73
42:BG:138:GLN:OE1	42:BG:153:ARG:HG2	1.88	0.73
36:BA:1190:G:H5'	48:BP:35:HIS:N	2.02	0.73
54:BV:13:ARG:HG3	54:BV:13:ARG:HH11	1.53	0.73
3:CC:26:LYS:CE	3:CC:26:LYS:H	2.01	0.73
16:CP:25:ARG:HB2	16:CP:25:ARG:HH11	1.52	0.73
36:DA:2298:A:H62	36:DA:2318:G:H8	1.34	0.73
40:DE:28:ALA:HB3	40:DE:93:VAL:HG22	1.71	0.73
47:DO:76:ALA:HB3	52:DT:75:ILE:HD13	1.69	0.73
7:AG:45:ASP:O	7:AG:49:ILE:HG12	1.89	0.73
48:BP:148:LEU:O	48:BP:149:GLU:HB2	1.87	0.73
56:BX:49:VAL:HG12	56:BX:87:GLN:HE21	1.54	0.73
58:BZ:72:ARG:CG	58:BZ:89:PHE:HB2	2.19	0.73
1:CA:1152:A:O2'	1:CA:1153:C:H5'	1.88	0.73
1:CA:633:G:H5'	1:CA:634:C:OP2	1.89	0.73
5:CE:50:GLU:HG3	5:CE:52:PRO:HD2	1.71	0.73
28:D2:67:LYS:O	28:D2:70:GLN:HG2	1.88	0.73
34:D8:33:ASN:HB3	34:D8:36:LYS:HD2	1.71	0.73
36:DA:1683:C:H2'	36:DA:1684:C:C6	2.23	0.73
36:DA:2108:C:O2	36:DA:2108:C:H2'	1.88	0.73
28:D2:51:ARG:HD3	36:DA:95:G:H1'	1.69	0.73
36:DA:991:C:H5'	36:DA:991:C:H6	1.54	0.73
38:DC:78:ALA:HA	38:DC:116:THR:H	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:75:ILE:HG23	57:DY:76:CYS:N	2.03	0.73
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.19	0.72
4:AD:18:LYS:HE3	4:AD:31:CYS:CB	2.19	0.72
24:AY:45:U:H3'	24:AY:46:7MG:C5'	2.18	0.72
38:BC:132:GLY:N	38:BC:133:PRO:HD2	2.03	0.72
40:BE:36:ARG:NH2	40:BE:88:GLY:HA2	2.04	0.72
43:BH:83:TYR:CB	43:BH:135:GLY:H	2.02	0.72
55:BW:29:LEU:HG	55:BW:33:ARG:HD2	1.69	0.72
4:CD:18:LYS:HE3	4:CD:31:CYS:CB	2.18	0.72
20:CT:45:GLN:HE22	20:CT:46:GLU:HG3	1.54	0.72
25:CZ:93:ILE:HD11	61:CZ:502:KIR:H371	1.70	0.72
25:CZ:64:ASN:N	25:CZ:64:ASN:ND2	2.37	0.72
29:D3:43:ILE:O	29:D3:47:VAL:HG23	1.89	0.72
36:DA:676:A:H8	36:DA:2069:G:H21	1.37	0.72
36:DA:914:C:H2'	36:DA:915:C:H5'	1.71	0.72
39:DD:186:HIS:CD2	39:DD:188:GLU:H	2.07	0.72
51:DS:106:ARG:NH1	51:DS:108:GLY:H	1.86	0.72
17:AQ:26:GLN:HB3	17:AQ:37:LYS:HA	1.71	0.72
31:B5:41:PRO:HG2	31:B5:44:THR:OG1	1.89	0.72
32:B6:15:GLU:HG2	32:B6:18:ARG:NH1	2.04	0.72
36:BA:676:A:H8	36:BA:2069:G:H21	1.37	0.72
40:BE:132:HIS:HA	40:BE:135:HIS:HE1	1.54	0.72
40:BE:171:GLU:HB3	40:BE:185:LYS:HG2	1.71	0.72
48:BP:101:VAL:HA	48:BP:105:LEU:O	1.88	0.72
52:BT:58:ASN:N	52:BT:58:ASN:HD22	1.87	0.72
56:BX:40:LYS:HG2	56:BX:51:VAL:HB	1.70	0.72
57:BY:87:LYS:HG3	57:BY:88:LYS:H	1.55	0.72
7:CG:22:LEU:O	7:CG:22:LEU:HD23	1.89	0.72
19:CS:49:ILE:HD12	19:CS:49:ILE:H	1.54	0.72
20:CT:72:LEU:O	20:CT:73:HIS:O	2.07	0.72
24:CY:10:G:H1	24:CY:25:C:H42	1.35	0.72
31:D5:41:PRO:HG2	31:D5:44:THR:OG1	1.89	0.72
32:D6:42:TRP:HA	32:D6:42:TRP:CE3	2.22	0.72
36:DA:2523:G:H2'	36:DA:2524:G:H5''	1.71	0.72
39:DD:35:LYS:HD2	39:DD:36:PRO:CD	2.19	0.72
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.24	0.72
2:AB:28:PHE:CD2	2:AB:190:THR:HA	2.25	0.72
2:AB:200:ILE:HD12	2:AB:200:ILE:N	2.03	0.72
5:AE:34:VAL:HG12	5:AE:62:ALA:HB1	1.71	0.72
27:B1:18:ILE:HG23	27:B1:37:ILE:HG22	1.70	0.72
36:BA:1019:U:H3	36:BA:1142(A):A:H62	1.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2781:A:C5'	36:BA:2782:G:H5'	2.19	0.72
47:BO:63:VAL:HG23	47:BO:64:ARG:HG3	1.70	0.72
1:CA:274:A:O2'	1:CA:275:G:H8	1.71	0.72
1:CA:858:G:C5'	1:CA:858:G:H8	2.03	0.72
11:CK:27:ASN:HD22	11:CK:28:THR:N	1.87	0.72
25:CZ:191:GLY:CA	25:CZ:197:ASP:OD1	2.37	0.72
25:CZ:349:VAL:HG23	25:CZ:374:LEU:HD22	1.70	0.72
28:D2:23:LYS:CA	28:D2:26:ARG:HB3	2.17	0.72
41:DF:25:PRO:HB3	41:DF:119:ARG:HB2	1.71	0.72
48:DP:41:ARG:HH11	48:DP:41:ARG:HA	1.55	0.72
53:DU:3:ARG:HH11	53:DU:3:ARG:HG2	1.55	0.72
12:AL:110:VAL:H	12:AL:122:THR:HG22	1.54	0.72
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.53	0.72
24:AY:51:G:O2'	25:AZ:338:TYR:CD1	2.41	0.72
2:CB:124:SER:OG	2:CB:125:PRO:HD2	1.89	0.72
22:CW:38:A:C2'	22:CW:39:U:H5''	2.19	0.72
36:DA:1293:C:C2'	36:DA:1294:U:H5''	2.19	0.72
36:DA:1341:U:H4'	56:DX:57:LEU:HB3	1.71	0.72
36:DA:500:G:N2	36:DA:502:A:H3'	2.04	0.72
42:DG:60:LEU:HD12	42:DG:68:PRO:HG3	1.71	0.72
46:DN:129:PRO:O	46:DN:130:HIS:HB3	1.87	0.72
52:DT:92:GLY:O	52:DT:94:ALA:N	2.22	0.72
53:DU:24:TYR:HB2	53:DU:29:SER:HB3	1.70	0.72
27:B1:45:ASN:ND2	36:BA:2090:G:H21	1.86	0.72
36:BA:2307:G:N2	36:BA:2308:G:H5''	2.02	0.72
43:BH:20:ALA:HB1	43:BH:21:PRO:CD	2.20	0.72
4:CD:3:ARG:HE	4:CD:5:ILE:HG13	1.53	0.72
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.71	0.72
28:D2:10:LEU:HD22	28:D2:63:VAL:HG21	1.70	0.72
36:DA:2591:C:H2'	36:DA:2592:G:C8	2.24	0.72
42:DG:71:THR:HB	42:DG:89:GLY:O	1.90	0.72
1:AA:358:U:H4'	25:AZ:234:ARG:CA	2.19	0.72
1:AA:45:U:H2'	1:AA:46:G:C8	2.25	0.72
43:BH:42:ARG:HG2	43:BH:43:VAL:H	1.55	0.72
46:BN:23:LEU:HD23	46:BN:24:GLY:H	1.50	0.72
51:BS:36:TYR:N	51:BS:36:TYR:CD1	2.50	0.72
1:CA:1320:C:H6	1:CA:1320:C:H5'	1.53	0.72
4:CD:3:ARG:NH1	4:CD:118:ARG:HD3	2.03	0.72
4:CD:200:GLU:HG2	4:CD:201:GLN:H	1.55	0.72
14:CN:57:ARG:CB	14:CN:57:ARG:HH11	2.01	0.72
25:CZ:191:GLY:N	25:CZ:197:ASP:OD1	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:40:HIS:HA	30:D4:42:PHE:HD1	1.54	0.72
36:DA:1053:C:H2'	36:DA:1054:A:C8	2.25	0.72
36:DA:1540:U:H3'	36:DA:1541:G:H3'	1.71	0.72
38:DC:77:ILE:HD13	38:DC:95:GLY:HA3	1.71	0.72
1:AA:59:A:H3'	1:AA:331:G:H22	1.54	0.72
17:AQ:67:LYS:O	17:AQ:68:ARG:HB2	1.89	0.72
41:BF:196:LEU:O	41:BF:200:GLU:HB2	1.89	0.72
48:BP:41:ARG:HA	48:BP:41:ARG:HH11	1.55	0.72
58:BZ:81:ARG:O	58:BZ:82:ARG:HB2	1.89	0.72
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.69	0.72
11:CK:121:PRO:HG2	11:CK:126:ARG:HB2	1.72	0.72
12:CL:24:VAL:HG12	12:CL:24:VAL:O	1.87	0.72
36:DA:1539:G:C2'	36:DA:1540:U:H5'	2.20	0.72
36:DA:2159:G:O2'	36:DA:2160:G:H5''	1.90	0.72
42:DG:77:ILE:H	42:DG:77:ILE:CD1	2.03	0.72
43:DH:156:ALA:C	43:DH:158:HIS:H	1.92	0.72
52:DT:82:LEU:N	52:DT:82:LEU:HD12	2.00	0.72
17:AQ:52:LYS:HD3	17:AQ:52:LYS:H	1.53	0.72
20:AT:47:GLY:O	20:AT:49:ALA:N	2.20	0.72
28:B2:38:GLN:HB3	28:B2:44:LEU:HB2	1.71	0.72
34:B8:59:LYS:HB2	34:B8:59:LYS:HZ2	1.53	0.72
36:BA:672:C:H2'	36:BA:673:C:C5'	2.20	0.72
38:BC:78:ALA:HA	38:BC:116:THR:H	1.54	0.72
53:BU:92:ARG:NH2	54:BV:11:GLN:H	1.86	0.72
22:CV:61:C:H5'	22:CV:62:C:OP2	1.89	0.72
32:D6:19:ARG:CG	32:D6:20:ASN:N	2.52	0.72
36:DA:2408:U:H2'	36:DA:2409:G:C8	2.24	0.72
40:DE:171:GLU:HB3	40:DE:185:LYS:HG2	1.72	0.72
2:AB:124:SER:OG	2:AB:125:PRO:HD2	1.90	0.72
13:AM:65:LYS:HD3	13:AM:65:LYS:H	1.52	0.72
16:AP:21:VAL:O	16:AP:33:ILE:HB	1.90	0.72
33:B7:22:MET:HE2	33:B7:28:ARG:HG2	1.70	0.72
36:BA:1053:C:H2'	36:BA:1054:A:C8	2.25	0.72
36:BA:2291:U:H2'	36:BA:2292:C:C6	2.23	0.72
54:BV:18:LEU:HD23	54:BV:19:LYS:N	2.05	0.72
21:CU:22:ARG:HH11	21:CU:22:ARG:HG2	1.55	0.72
32:D6:15:GLU:OE2	32:D6:18:ARG:NH2	2.23	0.72
50:DR:117:VAL:HG22	50:DR:118:GLU:H	1.53	0.72
56:DX:40:LYS:HG2	56:DX:51:VAL:HB	1.70	0.72
1:AA:274:A:O2'	1:AA:275:G:H8	1.73	0.72
10:AJ:61:GLU:OE1	14:AN:45:ARG:HD2	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:76:A:C4	25:AZ:271:GLU:HB2	2.25	0.72
25:AZ:349:VAL:HG23	25:AZ:374:LEU:HD22	1.72	0.72
30:B4:40:HIS:HA	30:B4:42:PHE:HD1	1.55	0.72
39:BD:37:LEU:HD12	39:BD:64:ILE:HD11	1.71	0.72
41:BF:25:PRO:HB3	41:BF:119:ARG:HB2	1.72	0.72
48:BP:58:THR:O	48:BP:61:ARG:NE	2.23	0.72
51:BS:106:ARG:NH1	51:BS:108:GLY:H	1.87	0.72
2:CB:118:LEU:HB3	2:CB:142:LEU:HD12	1.71	0.72
13:CM:101:GLN:HE21	13:CM:101:GLN:N	1.87	0.72
1:CA:1534:A:N6	23:CX:12:A:C2	2.58	0.72
36:DA:1068:G:H1'	36:DA:1069:A:OP1	1.90	0.72
39:DD:124:PRO:HG2	39:DD:129:ASN:ND2	2.05	0.72
41:DF:157:VAL:HG22	41:DF:194:MET:HA	1.72	0.72
57:DY:87:LYS:HG3	57:DY:88:LYS:H	1.55	0.72
4:AD:3:ARG:HE	4:AD:5:ILE:HG13	1.55	0.71
17:AQ:10:VAL:HG21	17:AQ:52:LYS:O	1.89	0.71
38:BC:77:ILE:HD13	38:BC:95:GLY:HA3	1.71	0.71
42:BG:47:LYS:HE3	42:BG:81:LYS:HB2	1.72	0.71
50:BR:92:GLY:N	50:BR:94:TYR:HE1	1.86	0.71
56:BX:57:LEU:HD22	56:BX:57:LEU:O	1.89	0.71
58:BZ:168:GLU:O	58:BZ:168:GLU:HG3	1.88	0.71
10:CJ:32:ALA:H	10:CJ:78:ASN:HD21	1.37	0.71
43:DH:42:ARG:HG2	43:DH:43:VAL:H	1.55	0.71
48:DP:30:THR:HG22	48:DP:31:ALA:N	2.05	0.71
52:DT:55:ASN:H	52:DT:59:THR:HG22	1.53	0.71
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.33	0.71
7:AG:113:GLU:HG3	7:AG:119:ARG:HB3	1.71	0.71
7:AG:16:LEU:HD13	9:AI:42:ARG:HA	1.72	0.71
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.36	0.71
16:AP:74:LEU:HB3	16:AP:79:VAL:HG21	1.71	0.71
25:AZ:281:ILE:HD12	25:AZ:284:ASP:OD1	1.89	0.71
28:B2:32:LEU:O	28:B2:35:LEU:HB3	1.90	0.71
29:B3:43:ILE:O	29:B3:47:VAL:HG23	1.89	0.71
40:BE:57:LYS:HA	40:BE:57:LYS:CE	2.18	0.71
40:BE:9:VAL:CG1	40:BE:25:VAL:HB	2.20	0.71
43:BH:12:PRO:N	43:BH:48:GLY:HA2	2.04	0.71
48:BP:64:LYS:C	48:BP:66:GLY:H	1.94	0.71
51:BS:12:PHE:HD1	51:BS:13:ARG:N	1.88	0.71
51:BS:30:ARG:NH2	51:BS:62:LYS:HD3	1.97	0.71
55:BW:6:ILE:HG12	55:BW:104:THR:CG2	2.19	0.71
36:BA:1341:U:H4'	56:BX:57:LEU:HB3	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1134:G:H2'	1:CA:1135:U:H5'	1.72	0.71
1:CA:1499:A:O2'	1:CA:1500:A:H5'	1.90	0.71
8:CH:86:ILE:HD11	8:CH:136:GLU:HG2	1.72	0.71
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.38	0.71
31:D5:50:GLY:HA3	31:D5:56:LYS:CE	2.20	0.71
36:DA:1409:C:H2'	36:DA:1410:G:C8	2.25	0.71
36:DA:2472:G:H5'	36:DA:2473:U:H5''	1.71	0.71
43:DH:83:TYR:CB	43:DH:135:GLY:H	2.02	0.71
43:DH:54:ARG:HB2	43:DH:55:PRO:HD2	1.70	0.71
47:DO:63:VAL:HG23	47:DO:64:ARG:HG3	1.71	0.71
58:DZ:156:LYS:O	58:DZ:158:PRO:HD3	1.89	0.71
58:DZ:165:VAL:HG12	58:DZ:166:SER:N	2.05	0.71
4:AD:26:CYS:HG	59:AD:301:ZN:ZN	1.00	0.71
4:AD:8:VAL:HB	4:AD:21:LEU:HD12	1.70	0.71
36:BA:1652:A:H2'	36:BA:1653:G:H5'	1.72	0.71
36:BA:2401:U:H2'	36:BA:2402:C:H5''	1.72	0.71
39:BD:186:HIS:CD2	39:BD:188:GLU:H	2.07	0.71
42:BG:76:SER:OG	42:BG:84:LYS:N	2.23	0.71
50:BR:55:ALA:HB2	50:BR:79:LEU:HD11	1.73	0.71
1:CA:585:G:H4'	12:CL:8:ASN:HD21	1.55	0.71
2:CB:111:ARG:HG2	2:CB:111:ARG:HH11	1.55	0.71
4:CD:43:HIS:O	4:CD:45:GLN:N	2.23	0.71
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.73	0.71
13:CM:4:ILE:N	13:CM:4:ILE:HD12	2.04	0.71
13:CM:97:PRO:HA	13:CM:110:ARG:HD3	1.72	0.71
1:CA:192:U:C1'	20:CT:103:GLY:HA2	2.20	0.71
24:CY:45:U:H3'	24:CY:46:7MG:C5'	2.20	0.71
25:CZ:88:TYR:HD1	25:CZ:88:TYR:N	1.89	0.71
34:D8:50:LEU:HD12	34:D8:51:ALA:N	2.05	0.71
48:DP:30:THR:CG2	48:DP:31:ALA:N	2.52	0.71
58:DZ:70:LEU:CD2	58:DZ:91:LEU:HD21	2.19	0.71
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.00	0.71
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.70	0.71
9:AI:20:ARG:HG3	9:AI:20:ARG:HH11	1.55	0.71
36:BA:1170:G:H1	36:BA:1179:C:H42	1.36	0.71
36:BA:1409:C:H2'	36:BA:1410:G:C8	2.25	0.71
36:BA:2298:A:H62	36:BA:2318:G:H8	1.35	0.71
39:BD:43:ARG:HH21	39:BD:44:ASN:HD21	1.39	0.71
50:BR:2:ARG:HD2	50:BR:2:ARG:C	2.10	0.71
58:BZ:113:ALA:HB1	58:BZ:146:ILE:HD13	1.72	0.71
6:CF:45:LEU:H	6:CF:59:TYR:HA	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:148:VAL:HG21	8:CH:107:LEU:HD13	1.72	0.71
1:CA:1116:C:O2'	9:CI:108:VAL:HG21	1.88	0.71
36:DA:1221(A):C:H2'	36:DA:1222:C:C6	2.25	0.71
36:DA:1301:A:O2'	36:DA:1302:A:C2'	2.38	0.71
39:DD:37:LEU:HD12	39:DD:64:ILE:HD11	1.72	0.71
40:DE:132:HIS:HA	40:DE:135:HIS:HE1	1.55	0.71
50:DR:29:LEU:HD11	50:DR:52:ILE:HD11	1.72	0.71
36:DA:481:G:OP2	57:DY:47:LYS:HD3	1.90	0.71
10:AJ:6:ILE:HD11	10:AJ:23:ILE:HG21	1.72	0.71
10:AJ:54:PHE:CD2	10:AJ:55:LYS:HD3	2.25	0.71
20:AT:45:GLN:HE22	20:AT:46:GLU:HG3	1.55	0.71
25:AZ:117:ARG:HD3	25:AZ:157:LEU:HD11	1.71	0.71
42:BG:34:LEU:HD12	42:BG:34:LEU:O	1.90	0.71
43:BH:51:ARG:HG3	43:BH:52:VAL:H	1.56	0.71
1:CA:265:G:H5'	17:CQ:64:PRO:O	1.90	0.71
1:CA:192:U:H1'	20:CT:103:GLY:HA2	1.70	0.71
48:DP:64:LYS:C	48:DP:66:GLY:H	1.93	0.71
4:AD:163:GLU:O	4:AD:166:LYS:HG2	1.90	0.71
22:AV:20:U:H3'	22:AV:21:A:H5'	1.73	0.71
28:B2:25:VAL:O	28:B2:28:LYS:HB2	1.91	0.71
34:B8:50:LEU:HD12	34:B8:51:ALA:N	2.05	0.71
36:BA:1539:G:C2'	36:BA:1540:U:H5'	2.20	0.71
26:B0:42:GLY:HA3	36:BA:2331:G:O4'	1.89	0.71
36:BA:984:A:H5"	36:BA:985:C:H5	1.56	0.71
40:BE:79:ARG:HH11	40:BE:79:ARG:HG2	1.55	0.71
42:BG:139:LEU:CA	42:BG:144:ILE:HG12	2.16	0.71
50:BR:117:VAL:HG22	50:BR:118:GLU:N	2.05	0.71
9:CI:20:ARG:HH11	9:CI:20:ARG:HG3	1.53	0.71
16:CP:20:VAL:HG23	16:CP:34:GLU:O	1.90	0.71
16:CP:70:ALA:O	16:CP:74:LEU:HD12	1.90	0.71
25:CZ:25:THR:HB	60:CZ:501:GDP:O2B	1.91	0.71
29:D3:15:TYR:HD2	29:D3:19:GLN:HE22	1.39	0.71
36:DA:2853:C:H2'	36:DA:2854:G:C8	2.23	0.71
36:DA:298:G:H5'	36:DA:299:A:OP1	1.90	0.71
28:D2:3:LEU:HB3	36:DA:98:G:OP1	1.91	0.71
40:DE:79:ARG:HH11	40:DE:79:ARG:HG2	1.56	0.71
43:DH:46:GLU:OE1	43:DH:50:VAL:HG13	1.90	0.71
58:DZ:94:GLU:HB3	58:DZ:95:PRO:HD2	1.73	0.71
1:AA:660:G:OP2	15:AO:5:LYS:HE2	1.91	0.71
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	1.70	0.71
12:AL:24:VAL:O	12:AL:24:VAL:HG12	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:4:ILE:HD12	13:AM:4:ILE:N	2.05	0.71
25:AZ:19:HIS:HD2	25:AZ:20:VAL:O	1.73	0.71
25:AZ:272:MET:HE3	25:AZ:284:ASP:HB2	1.72	0.71
28:B2:51:ARG:HB2	28:B2:55:ARG:HH12	1.54	0.71
36:BA:1803:A:O3'	39:BD:259:THR:CG2	2.38	0.71
36:BA:661:C:O3'	48:BP:18:ARG:HD2	1.90	0.71
36:BA:991:C:H6	36:BA:991:C:H5'	1.55	0.71
39:BD:158:ALA:HB3	39:BD:161:THR:HG21	1.73	0.71
48:BP:75:ILE:HD13	48:BP:77:ARG:NH2	2.06	0.71
1:CA:723:U:H3	1:CA:1537:U:H2'	1.55	0.71
1:CA:45:U:H2'	1:CA:46:G:C8	2.26	0.71
3:CC:94:LEU:O	3:CC:95:THR:HB	1.90	0.71
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.73	0.71
10:CJ:54:PHE:CG	10:CJ:55:LYS:HD3	2.25	0.71
25:CZ:397:ALA:HB2	61:CZ:502:KIR:H252	1.71	0.71
36:DA:2645:G:C3'	36:DA:2646:C:H5'	2.14	0.71
39:DD:28:GLU:H	39:DD:29:PRO:CD	2.03	0.71
41:DF:196:LEU:O	41:DF:200:GLU:HB2	1.89	0.71
43:DH:20:ALA:HB1	43:DH:21:PRO:CD	2.21	0.71
43:DH:12:PRO:N	43:DH:48:GLY:HA2	2.06	0.71
43:DH:51:ARG:HG3	43:DH:52:VAL:H	1.56	0.71
43:DH:70:THR:HG22	43:DH:74:ASN:ND2	2.05	0.71
48:DP:101:VAL:HA	48:DP:105:LEU:O	1.90	0.71
54:DV:61:VAL:HG23	54:DV:61:VAL:O	1.90	0.71
57:DY:9:LYS:HG2	57:DY:10:GLY:H	1.56	0.71
1:AA:731:G:OP1	1:AA:766:A:H1'	1.90	0.71
1:AA:8:A:N6	4:AD:208:SER:HB2	2.05	0.71
25:AZ:274:ARG:CG	25:AZ:274:ARG:HH11	2.03	0.71
36:BA:2657:A:H5''	36:BA:2658:C:H5	1.55	0.71
36:BA:2801(A):A:C4'	36:BA:2802:G:H5'	2.20	0.71
39:BD:28:GLU:H	39:BD:29:PRO:CD	2.03	0.71
42:BG:99:MET:O	42:BG:103:LEU:HB2	1.91	0.71
43:BH:88:LEU:HD23	43:BH:164:TYR:O	1.90	0.71
43:BH:46:GLU:OE1	43:BH:50:VAL:HG13	1.90	0.71
1:CA:975:A:H5''	1:CA:976:G:H5''	1.70	0.71
4:CD:78:LEU:HD22	4:CD:96:LEU:HB3	1.72	0.71
9:CI:92:TYR:O	9:CI:96:LEU:HB2	1.90	0.71
20:CT:16:HIS:O	20:CT:19:SER:HB3	1.90	0.71
22:CV:41:C:H2'	22:CV:42:C:C5'	2.18	0.71
27:D1:52:ARG:HH11	27:D1:52:ARG:HA	1.56	0.71
28:D2:25:VAL:HG21	28:D2:61:LEU:CG	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:7:ILE:HB	32:D6:27:LYS:HZ2	1.53	0.71
36:DA:1301:A:H4'	36:DA:1302:A:OP1	1.91	0.71
54:DV:13:ARG:HG3	54:DV:13:ARG:HH11	1.54	0.71
58:DZ:67:LEU:H	58:DZ:67:LEU:HD12	1.55	0.71
5:AE:7:GLU:O	5:AE:8:GLU:HB3	1.90	0.71
24:AY:76:A:C5	25:AZ:271:GLU:CD	2.64	0.71
36:BA:2455:G:H2'	36:BA:2456:C:C6	2.26	0.71
36:BA:2866:U:C6	36:BA:2868:A:H1'	2.26	0.71
40:BE:28:ALA:HB3	40:BE:93:VAL:HG22	1.72	0.71
43:BH:66:GLY:HA2	43:BH:69:ARG:HB3	1.73	0.71
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.71	0.71
27:D1:45:ASN:HD21	36:DA:2090:G:H21	1.37	0.71
36:DA:442:G:C4'	41:DF:46:ARG:HD3	2.21	0.71
43:DH:66:GLY:HA2	43:DH:69:ARG:HB3	1.72	0.71
6:AF:62:TRP:C	6:AF:63:TYR:HD1	1.94	0.71
10:AJ:54:PHE:CG	10:AJ:55:LYS:HD3	2.26	0.71
25:AZ:355:LEU:CB	25:AZ:356:PRO:CD	2.60	0.71
32:B6:8:LYS:HE3	32:B6:25:LYS:HD3	1.73	0.71
35:B9:15:LYS:HB3	35:B9:15:LYS:NZ	2.06	0.71
36:BA:197:A:H5'	36:BA:197:A:H8	1.54	0.71
36:BA:2134:A:N6	36:BA:2157:G:H1'	2.06	0.71
36:BA:444:C:OP2	53:BU:2:PRO:HD3	1.89	0.71
53:BU:90:VAL:HG12	53:BU:91:ASP:N	2.06	0.71
20:CT:82:SER:O	20:CT:86:ARG:HB2	1.91	0.71
24:CY:8:4SU:H6	24:CY:8:4SU:H5''	1.71	0.71
25:CZ:324:LYS:HB2	25:CZ:326:GLU:HG2	1.72	0.71
36:DA:2801(A):A:C4'	36:DA:2802:G:H5'	2.21	0.71
42:DG:48:GLU:HG3	42:DG:81:LYS:HE3	1.72	0.71
46:DN:107:LEU:HB3	46:DN:108:PRO:HD2	1.72	0.71
53:DU:85:LYS:HD3	53:DU:117:GLN:HE22	1.54	0.71
1:AA:194:C:H2'	1:AA:195:A:H5''	1.73	0.70
24:AY:8:4SU:H5''	24:AY:8:4SU:H6	1.73	0.70
25:AZ:323:LEU:H	25:AZ:323:LEU:HD12	1.56	0.70
27:B1:90:ILE:O	27:B1:94:LEU:HD13	1.91	0.70
36:BA:1293:C:C2'	36:BA:1294:U:H5''	2.20	0.70
36:BA:2136:C:H2'	36:BA:2137:C:H6	1.54	0.70
36:BA:633:A:H2'	36:BA:634:C:H5'	1.73	0.70
40:BE:132:HIS:CA	40:BE:135:HIS:HE1	2.03	0.70
42:BG:5:VAL:HB	42:BG:8:LYS:CB	2.20	0.70
43:BH:70:THR:HG22	43:BH:74:ASN:ND2	2.06	0.70
46:BN:58:ASP:C	46:BN:60:ILE:H	1.93	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:43:THR:HG22	49:BQ:94:VAL:HG12	1.72	0.70
1:CA:194:C:H2'	1:CA:195:A:H5''	1.73	0.70
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.56	0.70
34:D8:34:TRP:HB2	36:DA:2420:C:OP1	1.90	0.70
36:DA:984:A:H5''	36:DA:985:C:H5	1.56	0.70
42:DG:96:ARG:HA	42:DG:99:MET:SD	2.31	0.70
50:DR:116:LEU:O	50:DR:117:VAL:HG12	1.91	0.70
54:DV:18:LEU:HD23	54:DV:19:LYS:N	2.04	0.70
54:DV:29:PRO:HB3	54:DV:63:GLY:HA2	1.70	0.70
9:AI:92:TYR:O	9:AI:96:LEU:HB2	1.91	0.70
15:AO:71:GLN:O	15:AO:71:GLN:HG2	1.89	0.70
36:BA:1709:U:H2'	36:BA:1710:C:C6	2.26	0.70
36:BA:2103:C:H2'	36:BA:2186:G:N2	2.06	0.70
36:BA:271(C):C:H2'	36:BA:271(D):G:H8	1.56	0.70
39:BD:30:GLU:HB3	39:BD:35:LYS:NZ	2.04	0.70
47:BO:8:LEU:HD23	47:BO:8:LEU:N	2.06	0.70
48:BP:16:ARG:HH11	48:BP:16:ARG:HB2	1.52	0.70
49:BQ:134:ARG:NE	58:BZ:122:ARG:HH21	1.89	0.70
1:CA:1392:G:N2	1:CA:1502:A:H8	1.89	0.70
32:D6:42:TRP:HA	32:D6:42:TRP:HE3	1.55	0.70
36:DA:1005:C:H2'	36:DA:1006:C:H6	1.55	0.70
36:DA:1709:U:H2'	36:DA:1710:C:C6	2.25	0.70
36:DA:2134:A:N6	36:DA:2157:G:H1'	2.06	0.70
46:DN:58:ASP:C	46:DN:60:ILE:H	1.94	0.70
47:DO:104:ARG:HH21	52:DT:33:LYS:CE	2.04	0.70
48:DP:126:VAL:HA	48:DP:145:PRO:CG	2.20	0.70
36:DA:1190:G:H5'	48:DP:35:HIS:N	2.05	0.70
51:DS:49:VAL:HG12	51:DS:50:SER:N	2.01	0.70
24:AY:76:A:N7	25:AZ:271:GLU:OE1	2.25	0.70
42:BG:101:ILE:O	42:BG:105:LYS:HG2	1.91	0.70
42:BG:145:THR:HB	42:BG:148:MET:HB3	1.72	0.70
48:BP:30:THR:CG2	48:BP:31:ALA:N	2.53	0.70
51:BS:12:PHE:CD1	51:BS:12:PHE:C	2.60	0.70
54:BV:35:LEU:O	54:BV:37:VAL:N	2.17	0.70
49:BQ:134:ARG:HD2	58:BZ:122:ARG:NH2	2.06	0.70
58:BZ:153:SER:HB2	58:BZ:167:PRO:CB	2.21	0.70
1:CA:382:A:H2'	1:CA:383:A:H8	1.57	0.70
7:CG:38:LEU:HD12	7:CG:38:LEU:O	1.91	0.70
9:CI:19:LEU:HD11	9:CI:59:PHE:CD2	2.26	0.70
13:CM:108:ARG:HG3	13:CM:108:ARG:HH11	1.55	0.70
14:CN:57:ARG:NH1	14:CN:57:ARG:CB	2.54	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:42:GLY:HA3	36:DA:2331:G:O4'	1.92	0.70
39:DD:70:TRP:CH2	39:DD:150:LYS:HA	2.25	0.70
42:DG:90:LEU:C	42:DG:90:LEU:HD12	2.11	0.70
51:DS:30:ARG:NH2	51:DS:62:LYS:HB3	2.06	0.70
52:DT:55:ASN:N	52:DT:59:THR:HG22	2.06	0.70
54:DV:72:VAL:HG23	54:DV:85:LYS:HB3	1.74	0.70
58:DZ:9:TYR:OH	58:DZ:35:ARG:HG3	1.91	0.70
4:AD:78:LEU:HD22	4:AD:96:LEU:HB3	1.73	0.70
14:AN:27:CYS:SG	59:AN:101:ZN:ZN	1.80	0.70
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.22	0.70
36:BA:1400:G:H2'	36:BA:1401:G:C8	2.26	0.70
37:BB:30:C:H1'	37:BB:57:A:H61	1.55	0.70
42:BG:177:GLY:O	42:BG:179:PRO:HD3	1.91	0.70
52:BT:30:VAL:HG12	52:BT:44:ASP:CG	2.11	0.70
54:BV:47:VAL:HG12	54:BV:52:VAL:HB	1.73	0.70
1:CA:731:G:OP1	1:CA:766:A:H1'	1.92	0.70
19:CS:42:PRO:O	19:CS:44:MET:SD	2.49	0.70
27:D1:11:ARG:HB2	27:D1:12:PRO:HD2	1.73	0.70
39:DD:33:LEU:O	39:DD:36:PRO:HD2	1.91	0.70
50:DR:51:LEU:HD23	50:DR:70:LEU:HD11	1.73	0.70
53:DU:90:VAL:HG12	53:DU:91:ASP:N	2.06	0.70
1:AA:1347:G:H2'	9:AI:108:VAL:O	1.91	0.70
3:AC:25:GLY:C	3:AC:27:LYS:H	1.94	0.70
14:AN:57:ARG:HH11	14:AN:57:ARG:CB	2.04	0.70
25:AZ:88:TYR:N	25:AZ:88:TYR:HD1	1.89	0.70
36:BA:747:U:O2	36:BA:2014:A:H1'	1.91	0.70
36:BA:2392:A:H2	36:BA:2424:C:H42	1.38	0.70
36:BA:549:G:O2'	36:BA:551:G:H5'	1.91	0.70
42:BG:42:GLY:O	42:BG:89:GLY:HA2	1.90	0.70
43:BH:85:LYS:NZ	43:BH:132:ARG:HA	2.07	0.70
43:BH:54:ARG:HB2	43:BH:55:PRO:HD2	1.72	0.70
1:CA:975:A:H4'	1:CA:976:G:C5'	2.17	0.70
9:CI:53:VAL:HG13	9:CI:95:LYS:HZ1	1.53	0.70
13:CM:3:ARG:NH2	13:CM:7:VAL:HG13	2.06	0.70
31:D5:4:HIS:C	36:DA:2056:G:H22	1.94	0.70
36:DA:2092:U:H4'	36:DA:2093:G:C5'	2.12	0.70
36:DA:2179:C:H5''	36:DA:2180:U:OP1	1.91	0.70
39:DD:28:GLU:N	39:DD:29:PRO:CD	2.54	0.70
48:DP:75:ILE:HD13	48:DP:77:ARG:NH2	2.07	0.70
51:DS:28:VAL:HG12	51:DS:29:PHE:N	2.06	0.70
4:AD:43:HIS:O	4:AD:45:GLN:N	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:62:ILE:HD12	19:AS:66:MET:HG3	1.73	0.70
22:AV:20:U:H3'	22:AV:21:A:C5'	2.21	0.70
36:BA:2796:U:H3'	36:BA:2799:C:C5'	2.22	0.70
39:BD:28:GLU:N	39:BD:29:PRO:CD	2.54	0.70
48:BP:126:VAL:HA	48:BP:145:PRO:CG	2.20	0.70
52:BT:12:SER:O	52:BT:15:VAL:HG12	1.91	0.70
53:BU:92:ARG:HH21	54:BV:10:LYS:HB3	1.54	0.70
31:B5:25:LEU:HD12	55:BW:19:LEU:HG	1.73	0.70
3:CC:25:GLY:C	3:CC:27:LYS:H	1.94	0.70
25:CZ:193:ASN:C	25:CZ:195:TRP:N	2.45	0.70
31:D5:39:MET:HG3	55:DW:34:ASN:OD1	1.91	0.70
36:DA:2103:C:H2'	36:DA:2186:G:N2	2.05	0.70
36:DA:2781:A:C5'	36:DA:2782:G:H5'	2.21	0.70
39:DD:162:SER:O	39:DD:178:PRO:HG3	1.90	0.70
43:DH:158:HIS:ND1	43:DH:168:PRO:HB2	2.06	0.70
55:DW:6:ILE:HG12	55:DW:104:THR:CG2	2.22	0.70
2:AB:118:LEU:HB3	2:AB:142:LEU:HD12	1.71	0.70
7:AG:22:LEU:HD23	7:AG:22:LEU:O	1.91	0.70
28:B2:41:ILE:HD11	28:B2:44:LEU:HD12	1.72	0.70
36:BA:1105:U:H2'	36:BA:1106:G:C8	2.26	0.70
36:BA:1348:G:C2'	36:BA:1349:A:H5''	2.22	0.70
36:BA:1540:U:H3'	36:BA:1541:G:H3'	1.71	0.70
36:BA:2472:G:H5'	36:BA:2473:U:H5''	1.72	0.70
36:BA:581:C:H2'	36:BA:582:G:H8	1.57	0.70
41:BF:103:LYS:HG3	41:BF:106:ARG:NH2	2.07	0.70
46:BN:3:THR:HG22	46:BN:4:TYR:H	1.57	0.70
47:BO:104:ARG:HH21	52:BT:33:LYS:CE	2.03	0.70
50:BR:12:ARG:HD3	50:BR:16:HIS:ND1	2.06	0.70
8:CH:112:LEU:HD23	8:CH:112:LEU:N	2.06	0.70
25:CZ:117:ARG:HD3	25:CZ:157:LEU:HD11	1.72	0.70
36:DA:1652:A:H2'	36:DA:1653:G:H5'	1.74	0.70
36:DA:2657:A:H5''	36:DA:2658:C:H5	1.57	0.70
36:DA:672:C:H2'	36:DA:673:C:C5'	2.21	0.70
39:DD:158:ALA:HB3	39:DD:161:THR:HG21	1.74	0.70
36:DA:674:G:H1'	41:DF:74:ARG:HD2	1.73	0.70
46:DN:119:ARG:CB	46:DN:119:ARG:HH11	2.04	0.70
51:DS:12:PHE:HD1	51:DS:13:ARG:N	1.90	0.70
55:DW:82:LEU:HB3	55:DW:84:ARG:NH1	2.06	0.70
1:AA:176:C:H2'	1:AA:177:C:H6	1.57	0.70
1:AA:265:G:H5'	17:AQ:64:PRO:O	1.91	0.70
1:AA:382:A:H2'	1:AA:383:A:H8	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:77:TRP:HB2	25:AZ:285:ASN:HB3	1.73	0.70
25:AZ:164:PRO:O	25:AZ:167:GLU:HG3	1.91	0.70
25:AZ:195:TRP:C	25:AZ:197:ASP:H	1.94	0.70
29:B3:8:LEU:HD22	29:B3:31:LEU:HD23	1.72	0.70
36:BA:2108:C:O2	36:BA:2108:C:H2'	1.90	0.70
36:BA:674:G:H1'	41:BF:74:ARG:HD2	1.72	0.70
39:BD:70:TRP:CH2	39:BD:150:LYS:HA	2.26	0.70
42:BG:83:ARG:HD2	42:BG:84:LYS:NZ	2.07	0.70
43:BH:50:VAL:HG12	43:BH:52:VAL:HG23	1.73	0.70
56:BX:8:ILE:H	56:BX:8:ILE:CD1	2.05	0.70
58:BZ:9:TYR:OH	58:BZ:35:ARG:HG3	1.91	0.70
3:CC:5:ILE:CD1	3:CC:5:ILE:N	2.54	0.70
6:CF:87:ARG:HG2	6:CF:87:ARG:HH11	1.55	0.70
11:CK:57:THR:HG23	11:CK:60:ALA:H	1.57	0.70
17:CQ:67:LYS:O	17:CQ:68:ARG:HB2	1.91	0.70
25:CZ:176:LEU:HD22	60:CZ:501:GDP:N3	2.07	0.70
41:DF:41:LEU:HD23	41:DF:44:ARG:HD3	1.74	0.70
46:DN:23:LEU:HD23	46:DN:24:GLY:H	1.52	0.70
57:DY:28:LYS:HG2	57:DY:39:VAL:HA	1.74	0.70
15:AO:27:VAL:O	15:AO:31:LEU:HD13	1.92	0.70
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.71	0.70
19:AS:29:ARG:HD2	19:AS:30:LEU:H	1.57	0.70
19:AS:45:VAL:HA	19:AS:62:ILE:HG13	1.73	0.70
25:AZ:64:ASN:N	25:AZ:64:ASN:ND2	2.36	0.70
36:BA:1817:G:H2'	36:BA:1818:U:H5'	1.73	0.70
32:B6:25:LYS:HD2	36:BA:2285:C:H41	1.57	0.70
36:BA:2761:G:H2'	36:BA:2762:G:C5'	2.18	0.70
42:BG:39:ILE:HD12	42:BG:60:LEU:HD11	1.74	0.70
48:BP:95:VAL:HG23	48:BP:125:VAL:HA	1.72	0.70
48:BP:122:PRO:HA	48:BP:141:ALA:O	1.92	0.70
58:BZ:144:LEU:HD12	58:BZ:174:VAL:HG23	1.74	0.70
1:CA:1368:G:OP2	9:CI:112:LYS:HD3	1.91	0.70
25:CZ:195:TRP:C	25:CZ:197:ASP:H	1.94	0.70
36:DA:549:G:O2'	36:DA:551:G:H5'	1.92	0.70
36:DA:863:A:O2'	36:DA:864:G:H5'	1.92	0.70
37:DB:30:C:H1'	37:DB:57:A:H61	1.57	0.70
40:DE:116:VAL:O	40:DE:117:MET:CB	2.40	0.70
42:DG:96:ARG:CA	42:DG:99:MET:SD	2.80	0.70
52:DT:58:ASN:HD22	52:DT:58:ASN:H	1.39	0.70
53:DU:61:TRP:O	53:DU:65:ILE:HD13	1.91	0.70
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:26:LYS:CE	3:AC:26:LYS:H	2.03	0.70
5:AE:63:ARG:O	5:AE:64:ARG:HB2	1.91	0.70
7:AG:78:ARG:HG3	7:AG:79:ARG:N	2.07	0.70
27:B1:13:ILE:HD11	36:BA:396:G:H5'	1.73	0.70
36:BA:1141:U:H2'	46:BN:63:THR:CG2	2.22	0.70
51:BS:99:LYS:O	51:BS:99:LYS:HG2	1.92	0.70
57:BY:28:LYS:HG2	57:BY:39:VAL:HA	1.74	0.70
4:CD:163:GLU:O	4:CD:166:LYS:HG2	1.92	0.70
24:CY:61:C:C2'	24:CY:62:U:H5''	2.22	0.70
25:CZ:187:LYS:HD2	25:CZ:187:LYS:N	2.07	0.70
29:D3:8:LEU:HD22	29:D3:31:LEU:HD23	1.73	0.70
36:DA:1409:C:H2'	36:DA:1410:G:H8	1.57	0.70
36:DA:2291:U:H2'	36:DA:2292:C:C6	2.27	0.70
36:DA:2502:G:H5''	36:DA:2503:A:H5''	1.74	0.70
36:DA:519:U:H2'	36:DA:520:G:H8	1.56	0.70
40:DE:132:HIS:CA	40:DE:135:HIS:HE1	2.04	0.70
40:DE:63:LEU:HD23	40:DE:63:LEU:O	1.92	0.70
42:DG:71:THR:HG22	42:DG:72:ARG:N	2.07	0.70
42:DG:85:GLY:C	42:DG:87:PRO:HD3	2.11	0.70
51:DS:49:VAL:CG1	51:DS:50:SER:H	2.03	0.70
52:DT:56:GLY:O	52:DT:59:THR:HG23	1.91	0.70
1:AA:858:G:C5'	1:AA:858:G:H8	2.05	0.69
8:AH:112:LEU:N	8:AH:112:LEU:HD23	2.06	0.69
34:B8:8:LYS:O	34:B8:12:LYS:HG3	1.91	0.69
34:B8:32:LEU:HB3	34:B8:36:LYS:NZ	2.07	0.69
36:BA:1107:G:H4'	44:BJ:81:UNK:CB	2.22	0.69
36:BA:1779:U:C5	36:BA:1784:A:N7	2.59	0.69
36:BA:914:C:H2'	36:BA:915:C:H5'	1.72	0.69
43:BH:98:LEU:HD12	43:BH:102:ALA:O	1.92	0.69
47:BO:94:ARG:HG2	47:BO:94:ARG:HH11	1.57	0.69
48:BP:85:LEU:HA	48:BP:88:LEU:CB	2.21	0.69
51:BS:30:ARG:NH2	51:BS:62:LYS:HB3	2.07	0.69
52:BT:56:GLY:O	52:BT:59:THR:HG23	1.92	0.69
22:CW:38:A:H3'	22:CW:39:U:H5''	1.74	0.69
24:CY:24:G:O2'	24:CY:25:C:H5''	1.92	0.69
25:CZ:19:HIS:ND1	25:CZ:113:MET:HB3	2.07	0.69
28:D2:2:LYS:HB2	36:DA:97:C:H5''	1.74	0.69
33:D7:34:ARG:HG3	33:D7:34:ARG:HH11	1.57	0.69
34:D8:6:THR:HB	34:D8:11:LYS:HZ1	1.57	0.69
39:DD:241:PRO:O	39:DD:242:ARG:HB2	1.92	0.69
40:DE:38:THR:HB	40:DE:41:LYS:HE2	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:127:GLU:HB2	41:DF:196:LEU:HD12	1.73	0.69
49:DQ:56:ARG:CG	49:DQ:56:ARG:HH11	2.04	0.69
50:DR:117:VAL:HG22	50:DR:118:GLU:N	2.07	0.69
57:DY:2:ARG:CD	57:DY:3:VAL:HG23	2.22	0.69
3:AC:95:THR:HG22	3:AC:95:THR:O	1.90	0.69
36:BA:298:G:H5'	36:BA:299:A:OP1	1.91	0.69
40:BE:48:GLN:HB2	40:BE:80:GLU:HG2	1.74	0.69
42:BG:73:ALA:HB3	42:BG:87:PRO:HG3	1.74	0.69
42:BG:73:ALA:O	42:BG:85:GLY:HA2	1.92	0.69
43:BH:158:HIS:ND1	43:BH:168:PRO:HB2	2.06	0.69
50:BR:44:LEU:O	50:BR:44:LEU:HD13	1.92	0.69
52:BT:58:ASN:ND2	52:BT:58:ASN:H	1.89	0.69
6:CF:25:ILE:HD13	6:CF:25:ILE:O	1.91	0.69
12:CL:45:PRO:HG3	12:CL:53:ARG:HD3	1.74	0.69
19:CS:62:ILE:HD12	19:CS:66:MET:HG3	1.74	0.69
24:CY:6:C:O2'	24:CY:7:G:H5'	1.92	0.69
36:DA:106:C:H2'	36:DA:107:C:H6	1.57	0.69
36:DA:1666:G:H2'	36:DA:1667:G:H5'	1.73	0.69
36:DA:244:A:H4'	48:DP:74:GLU:CG	2.22	0.69
36:DA:852:G:O2'	36:DA:853:G:H5'	1.92	0.69
40:DE:38:THR:CB	40:DE:41:LYS:HE2	2.22	0.69
48:DP:81:GLN:NE2	48:DP:106:LEU:HA	2.08	0.69
1:AA:559:A:P	5:AE:126:ARG:HH22	2.16	0.69
9:AI:19:LEU:HD21	9:AI:59:PHE:CD2	2.28	0.69
19:AS:42:PRO:O	19:AS:44:MET:SD	2.50	0.69
22:AW:38:A:C2'	22:AW:39:U:H5''	2.22	0.69
25:AZ:193:ASN:C	25:AZ:195:TRP:N	2.45	0.69
32:B6:42:TRP:HA	32:B6:42:TRP:HE3	1.56	0.69
36:BA:1068:G:H1'	36:BA:1069:A:OP1	1.92	0.69
36:BA:1188:U:O2'	36:BA:1189:A:H5'	1.91	0.69
48:BP:112:LEU:H	48:BP:128:HIS:CD2	2.09	0.69
48:BP:81:GLN:NE2	48:BP:106:LEU:HA	2.07	0.69
57:BY:75:ILE:HG23	57:BY:76:CYS:N	2.05	0.69
10:CJ:61:GLU:OE1	14:CN:45:ARG:HD2	1.92	0.69
11:CK:126:ARG:HB3	11:CK:126:ARG:NH1	2.06	0.69
15:CO:17:ARG:NH1	15:CO:77:ARG:NH1	2.40	0.69
15:CO:87:ILE:CG2	15:CO:88:ARG:H	1.91	0.69
28:D2:51:ARG:HB3	28:D2:51:ARG:NH1	2.06	0.69
32:D6:5:VAL:HG11	36:DA:2283:C:H5'	1.74	0.69
36:DA:127:A:H5''	36:DA:128:C:O4'	1.92	0.69
36:DA:259:G:N2	36:DA:621:A:H8	1.87	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:181:LEU:HD21	52:DT:7:ILE:CG2	2.22	0.69
42:DG:76:SER:HA	42:DG:84:LYS:H	1.56	0.69
43:DH:50:VAL:HG12	43:DH:52:VAL:HG23	1.75	0.69
48:DP:95:VAL:HG23	48:DP:125:VAL:HA	1.72	0.69
52:DT:96:ARG:HB2	52:DT:96:ARG:NH1	2.06	0.69
6:AF:43:LEU:HD22	6:AF:43:LEU:H	1.57	0.69
6:AF:45:LEU:H	6:AF:59:TYR:HA	1.56	0.69
6:AF:87:ARG:HH11	6:AF:87:ARG:HG2	1.56	0.69
36:BA:479:A:O2'	36:BA:481:G:H5'	1.92	0.69
42:BG:20:ILE:O	42:BG:24:GLY:HA2	1.92	0.69
54:BV:49:THR:HB	54:BV:50:PRO:HD2	1.75	0.69
1:CA:1502:A:H2	1:CA:1505:G:N1	1.90	0.69
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	1.91	0.69
22:CW:38:A:H2'	22:CW:39:U:C5'	2.22	0.69
25:CZ:323:LEU:HD12	25:CZ:323:LEU:H	1.57	0.69
36:DA:1105:U:H2'	36:DA:1106:G:C8	2.27	0.69
36:DA:1141:U:H2'	46:DN:63:THR:CG2	2.22	0.69
36:DA:2136:C:H2'	36:DA:2137:C:H6	1.56	0.69
36:DA:2866:U:C6	36:DA:2868:A:H1'	2.27	0.69
36:DA:633:A:H2'	36:DA:634:C:H5'	1.74	0.69
57:DY:27:VAL:HG12	57:DY:29:GLU:H	1.56	0.69
1:AA:1134:G:H2'	1:AA:1135:U:H5'	1.73	0.69
2:AB:30:ARG:HH21	2:AB:194:PRO:HG2	1.57	0.69
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	2.05	0.69
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.40	0.69
19:AS:49:ILE:HD12	19:AS:49:ILE:H	1.58	0.69
21:AU:8:THR:O	21:AU:12:LYS:HB2	1.92	0.69
36:BA:1005:C:H2'	36:BA:1006:C:H6	1.56	0.69
37:BB:3:C:N4	37:BB:118:G:H1	1.90	0.69
39:BD:26:LYS:O	39:BD:27:THR:HG22	1.92	0.69
36:BA:2050:C:H1'	40:BE:156:MET:CE	2.21	0.69
41:BF:157:VAL:HG22	41:BF:194:MET:HA	1.73	0.69
48:BP:30:THR:HG22	48:BP:31:ALA:N	2.06	0.69
52:BT:96:ARG:HB2	52:BT:96:ARG:NH1	2.06	0.69
3:CC:16:ARG:HH11	3:CC:16:ARG:CB	2.05	0.69
34:D8:11:LYS:NZ	34:D8:63:PRO:HG3	2.08	0.69
36:DA:1494:A:H2'	36:DA:1495:A:H5''	1.74	0.69
40:DE:203:LYS:HD2	40:DE:203:LYS:O	1.92	0.69
50:DR:2:ARG:HH11	50:DR:2:ARG:N	1.90	0.69
25:AZ:191:GLY:N	25:AZ:197:ASP:OD1	2.26	0.69
40:BE:38:THR:HB	40:BE:41:LYS:HE2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:113:ALA:HB1	41:BF:186:ILE:HG21	1.73	0.69
52:BT:3:ARG:O	52:BT:6:LEU:HD12	1.93	0.69
54:BV:72:VAL:HG23	54:BV:85:LYS:HB3	1.72	0.69
4:CD:59:ARG:HH21	4:CD:62:GLN:HG3	1.55	0.69
5:CE:7:GLU:O	5:CE:8:GLU:HB3	1.91	0.69
34:D8:50:LEU:HD12	34:D8:51:ALA:H	1.58	0.69
42:DG:133:LEU:HD12	42:DG:157:ILE:HB	1.73	0.69
46:DN:46:VAL:O	46:DN:47:ALA:HB3	1.91	0.69
47:DO:8:LEU:HD23	47:DO:8:LEU:N	2.08	0.69
48:DP:122:PRO:HA	48:DP:141:ALA:O	1.92	0.69
1:AA:149:A:H2'	1:AA:150:C:C6	2.28	0.69
1:AA:633:G:H5'	1:AA:634:C:OP2	1.93	0.69
13:AM:22:ILE:HG21	13:AM:66:LEU:HD23	1.74	0.69
24:AY:61:C:C2'	24:AY:62:U:H5''	2.22	0.69
25:AZ:324:LYS:HB2	25:AZ:326:GLU:HG2	1.73	0.69
34:B8:50:LEU:HD12	34:B8:51:ALA:H	1.58	0.69
36:BA:127:A:H5''	36:BA:128:C:O4'	1.92	0.69
36:BA:2502:G:H5''	36:BA:2503:A:H5''	1.74	0.69
36:BA:519:U:H2'	36:BA:520:G:H8	1.56	0.69
39:BD:33:LEU:O	39:BD:36:PRO:HD2	1.92	0.69
41:BF:127:GLU:HB2	41:BF:196:LEU:HD12	1.74	0.69
36:BA:244:A:H4'	48:BP:74:GLU:CG	2.23	0.69
51:BS:89:ARG:O	51:BS:92:TYR:HB3	1.92	0.69
58:BZ:29:TYR:HB3	58:BZ:34:ASN:HB2	1.75	0.69
7:CG:78:ARG:HG3	7:CG:79:ARG:N	2.06	0.69
25:CZ:19:HIS:HD2	25:CZ:20:VAL:O	1.75	0.69
28:D2:26:ARG:O	28:D2:27:GLU:HB2	1.91	0.69
36:DA:1400:G:H2'	36:DA:1401:G:C8	2.26	0.69
36:DA:2557:G:H2'	36:DA:2558:C:C6	2.28	0.69
39:DD:25:THR:HG22	39:DD:26:LYS:CE	2.21	0.69
43:DH:98:LEU:HD12	43:DH:102:ALA:O	1.92	0.69
48:DP:101:VAL:HG12	48:DP:106:LEU:HB2	1.75	0.69
49:DQ:43:THR:HG22	49:DQ:94:VAL:HG12	1.72	0.69
51:DS:15:ARG:HD2	51:DS:15:ARG:O	1.92	0.69
52:DT:27:THR:O	52:DT:28:VAL:CB	2.40	0.69
52:DT:82:LEU:H	52:DT:82:LEU:CD1	2.01	0.69
56:DX:49:VAL:HG12	56:DX:87:GLN:HE21	1.56	0.69
1:AA:1486:G:H2'	1:AA:1487:G:O4'	1.93	0.69
3:AC:79:ARG:HB2	3:AC:79:ARG:HH11	1.58	0.69
28:B2:68:ARG:CB	28:B2:68:ARG:HH11	1.98	0.69
36:BA:1223:G:H5'	36:BA:1223:G:H8	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2396:G:O2'	36:BA:2397:G:H5'	1.92	0.69
36:BA:581:C:H2'	36:BA:582:G:C8	2.27	0.69
40:BE:181:LEU:HD21	52:BT:7:ILE:CG2	2.23	0.69
40:BE:30:PRO:HD3	40:BE:180:ASN:ND2	2.08	0.69
41:BF:41:LEU:HD23	41:BF:44:ARG:HD3	1.73	0.69
26:B0:7:LEU:HD13	49:BQ:85:LYS:HD2	1.73	0.69
51:BS:28:VAL:HG12	51:BS:29:PHE:N	2.08	0.69
10:CJ:6:ILE:HD11	10:CJ:23:ILE:HG21	1.75	0.69
22:CW:38:A:C3'	22:CW:39:U:H5''	2.23	0.69
25:CZ:72:THR:HG22	25:CZ:203:LEU:HD21	1.74	0.69
36:DA:197:A:H5'	36:DA:197:A:H8	1.56	0.69
36:DA:2100:G:H2'	36:DA:2101:G:C8	2.28	0.69
36:DA:322:A:H5'	36:DA:340:A:H1'	1.75	0.69
39:DD:43:ARG:NH1	39:DD:44:ASN:HD21	1.89	0.69
48:DP:112:LEU:H	48:DP:128:HIS:CD2	2.10	0.69
52:DT:78:LEU:O	52:DT:79:HIS:HD2	1.76	0.69
54:DV:51:VAL:HG12	54:DV:52:VAL:H	1.58	0.69
56:DX:57:LEU:HD22	56:DX:57:LEU:O	1.91	0.69
58:DZ:104:PHE:HD1	58:DZ:139:VAL:HG21	1.58	0.69
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.72	0.69
14:AN:6:LEU:HB3	14:AN:23:ARG:NH2	2.08	0.69
24:AY:76:A:OP2	25:AZ:274:ARG:HG2	1.92	0.69
31:B5:50:GLY:HA3	31:B5:56:LYS:CE	2.23	0.69
54:BV:21:ARG:HG2	54:BV:91:TYR:HD2	1.58	0.69
57:BY:27:VAL:HG12	57:BY:29:GLU:H	1.57	0.69
1:CA:559:A:P	5:CE:126:ARG:HH22	2.15	0.69
7:CG:45:ASP:O	7:CG:49:ILE:HG12	1.92	0.69
28:D2:7:ARG:HB3	28:D2:11:GLU:OE2	1.93	0.69
31:D5:55:ARG:C	31:D5:56:LYS:HG3	2.13	0.69
35:D9:15:LYS:HB3	35:D9:15:LYS:NZ	2.08	0.69
38:DC:40:THR:HG22	38:DC:177:LYS:HD2	1.75	0.69
48:DP:41:ARG:HA	48:DP:41:ARG:NH1	2.08	0.69
54:DV:47:VAL:HG12	54:DV:52:VAL:HB	1.73	0.69
55:DW:107:LEU:N	55:DW:107:LEU:HD12	2.08	0.69
2:AB:157:ARG:NH1	2:AB:157:ARG:HB3	2.08	0.69
6:AF:25:ILE:O	6:AF:25:ILE:HD13	1.91	0.69
20:AT:72:LEU:O	20:AT:73:HIS:O	2.10	0.69
21:AU:3:LYS:HD3	21:AU:14:TRP:CD1	2.28	0.69
1:CA:176:C:H2'	1:CA:177:C:H6	1.57	0.69
3:CC:26:LYS:N	3:CC:26:LYS:HE3	2.08	0.69
14:CN:27:CYS:SG	59:CN:101:ZN:ZN	1.80	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D1:75:GLU:C	27:D1:77:ALA:H	1.96	0.69
36:DA:2145:C:H5''	36:DA:2146:C:OP2	1.93	0.69
42:DG:83:ARG:O	42:DG:84:LYS:HB2	1.91	0.69
52:DT:29:ARG:HB3	52:DT:85:LYS:HA	1.73	0.69
3:AC:5:ILE:N	3:AC:5:ILE:CD1	2.54	0.69
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.57	0.69
13:AM:3:ARG:NH2	13:AM:7:VAL:HG13	2.06	0.69
25:AZ:326:GLU:H	25:AZ:326:GLU:CD	1.96	0.69
34:B8:11:LYS:NZ	34:B8:63:PRO:HG3	2.08	0.69
36:BA:425:G:H2'	36:BA:426:C:H6	1.57	0.69
40:BE:38:THR:CB	40:BE:41:LYS:HE2	2.23	0.69
47:BO:4:PRO:O	47:BO:5:GLN:HB2	1.93	0.69
48:BP:64:LYS:O	48:BP:66:GLY:N	2.22	0.69
51:BS:17:ARG:O	51:BS:20:ARG:HG2	1.93	0.69
58:BZ:23:LYS:HD3	58:BZ:38:TYR:CE1	2.28	0.69
4:CD:107:ARG:HH21	4:CD:194:LEU:HD12	1.58	0.69
7:CG:16:LEU:HD13	9:CI:42:ARG:HA	1.74	0.69
20:CT:47:GLY:O	20:CT:49:ALA:N	2.22	0.69
32:D6:26:ASN:ND2	32:D6:32:ASN:HD21	1.91	0.69
43:DH:41:MET:HG3	43:DH:42:ARG:N	2.08	0.69
58:DZ:119:GLU:HA	58:DZ:172:ALA:HA	1.74	0.69
3:AC:30:ARG:HH21	3:AC:31:HIS:CE1	2.11	0.68
9:AI:114:TYR:HE2	10:AJ:59:SER:HA	1.57	0.68
9:AI:53:VAL:HG13	9:AI:95:LYS:HZ1	1.57	0.68
1:AA:255:G:OP1	17:AQ:69:LYS:HE2	1.93	0.68
24:AY:6:C:O2'	24:AY:7:G:H5'	1.93	0.68
25:AZ:126:VAL:O	25:AZ:126:VAL:HG12	1.93	0.68
25:AZ:176:LEU:HD13	60:AZ:501:GDP:O2'	1.93	0.68
25:AZ:191:GLY:CA	25:AZ:197:ASP:OD1	2.40	0.68
25:AZ:63:ILE:HA	25:AZ:88:TYR:HE2	1.58	0.68
33:B7:34:ARG:HG3	33:B7:34:ARG:HH11	1.58	0.68
34:B8:16:ILE:HD12	34:B8:57:ARG:HG2	1.75	0.68
36:BA:1115:G:H2'	36:BA:1116:C:C6	2.28	0.68
36:BA:1409:C:H2'	36:BA:1410:G:H8	1.58	0.68
36:BA:2145:C:H5''	36:BA:2146:C:OP2	1.92	0.68
36:BA:811:U:O2'	36:BA:812:C:H5''	1.92	0.68
39:BD:124:PRO:HG2	39:BD:129:ASN:ND2	2.08	0.68
39:BD:30:GLU:CB	39:BD:35:LYS:NZ	2.56	0.68
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.74	0.68
10:CJ:54:PHE:HZ	10:CJ:55:LYS:HZ2	1.33	0.68
1:CA:255:G:OP1	17:CQ:69:LYS:HE2	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:32:LEU:HB3	34:D8:36:LYS:NZ	2.08	0.68
39:DD:30:GLU:CB	39:DD:35:LYS:NZ	2.56	0.68
40:DE:117:MET:HA	40:DE:122:PHE:H	1.58	0.68
48:DP:24:GLY:CA	48:DP:33:ARG:NH1	2.55	0.68
14:AN:57:ARG:CB	14:AN:57:ARG:NH1	2.57	0.68
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.07	0.68
25:AZ:151:GLU:HG2	25:AZ:155:ARG:HE	1.58	0.68
36:BA:2125:G:OP1	38:BC:40:THR:HG21	1.93	0.68
36:BA:2557:G:H2'	36:BA:2558:C:C6	2.28	0.68
36:BA:2811:G:OP1	40:BE:60:ASN:HB2	1.94	0.68
36:BA:583:G:OP2	53:BU:10:ARG:HD2	1.93	0.68
36:BA:672:C:H2'	36:BA:673:C:H5''	1.75	0.68
36:BA:852:G:O2'	36:BA:853:G:H5'	1.92	0.68
39:BD:45:ASN:CG	39:BD:46:GLN:H	1.95	0.68
46:BN:46:VAL:O	46:BN:47:ALA:HB3	1.93	0.68
48:BP:80:TYR:HD1	48:BP:111:ARG:HB3	1.58	0.68
1:CA:382:A:H2'	1:CA:383:A:C8	2.29	0.68
1:CA:954:G:H4'	13:CM:120:LYS:HD2	1.76	0.68
5:CE:63:ARG:O	5:CE:64:ARG:HB2	1.92	0.68
16:CP:53:VAL:HG23	16:CP:54:GLU:N	2.06	0.68
19:CS:45:VAL:HA	19:CS:62:ILE:HG13	1.76	0.68
36:DA:140:G:H1'	36:DA:141:A:C2	2.27	0.68
36:DA:2401:U:H2'	36:DA:2402:C:H5''	1.73	0.68
36:DA:2443:C:O2'	36:DA:2444:G:H5'	1.94	0.68
36:DA:747:U:O2	36:DA:2014:A:H1'	1.93	0.68
38:DC:120:MET:HA	38:DC:123:VAL:HG12	1.75	0.68
43:DH:85:LYS:NZ	43:DH:132:ARG:HA	2.06	0.68
48:DP:85:LEU:HA	48:DP:88:LEU:CB	2.23	0.68
57:DY:73:ARG:HA	57:DY:73:ARG:HE	1.58	0.68
1:AA:1129:C:N4	1:AA:1135:U:H3	1.91	0.68
1:AA:1368:G:OP2	9:AI:112:LYS:HD3	1.93	0.68
1:AA:1468:A:H2'	1:AA:1469:G:O4'	1.93	0.68
11:AK:126:ARG:NH1	11:AK:126:ARG:HB3	2.08	0.68
36:BA:139:G:C6	36:BA:140:G:H2'	2.28	0.68
39:BD:226:MET:HE2	39:BD:231:HIS:HB2	1.75	0.68
51:BS:28:VAL:HG12	51:BS:29:PHE:H	1.58	0.68
1:CA:1524:C:H6	1:CA:1524:C:H5'	1.58	0.68
1:CA:975:A:C5'	1:CA:976:G:H5''	2.22	0.68
10:CJ:9:ARG:HG3	10:CJ:69:ASN:OD1	1.94	0.68
32:D6:30:THR:O	32:D6:31:PRO:C	2.32	0.68
36:DA:585:G:H2'	36:DA:1251:C:H42	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2110:G:N1	36:DA:2178:C:H5	1.91	0.68
37:DB:3:C:N4	37:DB:118:G:H1	1.89	0.68
50:DR:45:ARG:HG3	50:DR:46:GLY:H	1.58	0.68
52:DT:12:SER:O	52:DT:15:VAL:HG12	1.93	0.68
1:AA:41:G:H2'	1:AA:42:G:C8	2.28	0.68
5:AE:12:LEU:HD23	5:AE:13:ILE:N	2.09	0.68
8:AH:18:ARG:CA	8:AH:18:ARG:HH11	2.05	0.68
1:AA:954:G:H4'	13:AM:120:LYS:HD2	1.76	0.68
13:AM:83:ASP:CG	13:AM:84:ILE:H	1.97	0.68
24:AY:24:G:O2'	24:AY:25:C:H5''	1.93	0.68
31:B5:3:LYS:HA	31:B5:3:LYS:HE3	1.75	0.68
36:BA:2689:U:H5''	36:BA:2690:C:H5'	1.74	0.68
37:BB:8:U:H5'	37:BB:8:U:C6	2.21	0.68
39:BD:94:LEU:HB2	39:BD:104:TYR:HE1	1.56	0.68
46:BN:119:ARG:CB	46:BN:119:ARG:HH11	2.05	0.68
57:BY:9:LYS:HG2	57:BY:10:GLY:H	1.58	0.68
1:CA:660:G:OP2	15:CO:5:LYS:HE2	1.93	0.68
16:CP:21:VAL:O	16:CP:33:ILE:HB	1.93	0.68
25:CZ:151:GLU:HG2	25:CZ:155:ARG:HE	1.58	0.68
25:CZ:164:PRO:O	25:CZ:167:GLU:HG3	1.94	0.68
42:DG:114:ILE:HG21	42:DG:117:PHE:HB2	1.73	0.68
51:DS:89:ARG:O	51:DS:92:TYR:HB3	1.93	0.68
52:DT:48:ILE:HD12	52:DT:49:VAL:N	2.08	0.68
1:AA:17:U:H2'	1:AA:18:C:C6	2.29	0.68
4:AD:129:ASN:ND2	4:AD:145:GLU:H	1.91	0.68
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.57	0.68
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	1.94	0.68
22:AW:38:A:H3'	22:AW:39:U:H5''	1.75	0.68
39:BD:25:THR:HG22	39:BD:26:LYS:CE	2.23	0.68
48:BP:101:VAL:HG12	48:BP:106:LEU:HB2	1.74	0.68
49:BQ:56:ARG:CG	49:BQ:56:ARG:HH11	2.05	0.68
1:AA:1442(B):A:C8	52:BT:118:ARG:HD3	2.27	0.68
58:BZ:126:VAL:HG12	58:BZ:163:LEU:HB3	1.74	0.68
1:CA:266:G:H5''	1:CA:267:C:H5	1.57	0.68
3:CC:79:ARG:HB2	3:CC:79:ARG:HH11	1.57	0.68
6:CF:62:TRP:C	6:CF:63:TYR:HD1	1.97	0.68
18:CR:58:LEU:HD22	18:CR:62:GLU:HB3	1.76	0.68
22:CV:20:U:H3'	22:CV:21:A:C5'	2.23	0.68
25:CZ:152:MET:HE2	25:CZ:156:ASP:HB2	1.75	0.68
32:D6:18:ARG:CG	32:D6:18:ARG:HH11	2.02	0.68
32:D6:25:LYS:HD2	36:DA:2285:C:H41	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:16:ILE:HD12	34:D8:57:ARG:HG2	1.76	0.68
35:D9:10:ILE:O	35:D9:14:CYS:SG	2.52	0.68
36:DA:1348:G:C2'	36:DA:1349:A:H5''	2.22	0.68
36:DA:654(C):G:C2'	36:DA:654(D):G:H5'	2.24	0.68
28:D2:2:LYS:HB2	36:DA:97:C:C5'	2.24	0.68
40:DE:30:PRO:HD3	40:DE:180:ASN:ND2	2.09	0.68
43:DH:68:THR:O	43:DH:72:ILE:HG12	1.93	0.68
51:DS:28:VAL:HG12	51:DS:29:PHE:H	1.58	0.68
52:DT:3:ARG:O	52:DT:6:LEU:HD12	1.93	0.68
1:AA:382:A:H2'	1:AA:383:A:C8	2.28	0.68
1:AA:961:U:HO2'	1:AA:962:C:H6	1.40	0.68
25:AZ:187:LYS:HD2	25:AZ:187:LYS:N	2.08	0.68
36:BA:528:A:H2	36:BA:2043:C:O5'	1.76	0.68
36:BA:2110:G:N1	36:BA:2178:C:H5	1.91	0.68
42:BG:60:LEU:O	42:BG:63:ILE:HG12	1.93	0.68
47:BO:107:ARG:NH1	52:BT:36:GLU:HG2	2.09	0.68
1:CA:149:A:H2'	1:CA:150:C:C6	2.28	0.68
36:DA:140:G:H1'	36:DA:141:A:H2	1.59	0.68
50:DR:55:ALA:HB2	50:DR:79:LEU:HD11	1.74	0.68
37:DB:48:A:H4'	51:DS:95:HIS:CD2	2.28	0.68
22:AW:38:A:H2'	22:AW:39:U:C5'	2.24	0.68
26:B0:62:LEU:HD23	26:B0:62:LEU:N	2.09	0.68
30:B4:40:HIS:HA	30:B4:42:PHE:H	1.57	0.68
36:BA:143:G:H2'	36:BA:143(A):C:C6	2.29	0.68
36:BA:1494:A:H2'	36:BA:1495:A:H5''	1.73	0.68
36:BA:2312:U:H2'	36:BA:2313:C:C5'	2.24	0.68
40:BE:63:LEU:O	40:BE:63:LEU:HD23	1.93	0.68
36:BA:674:G:H1'	41:BF:74:ARG:CD	2.23	0.68
42:BG:120:LEU:HD21	42:BG:133:LEU:HD22	1.74	0.68
48:BP:135:LEU:HD13	48:BP:135:LEU:O	1.94	0.68
48:BP:66:GLY:O	48:BP:67:MET:HB2	1.92	0.68
50:BR:45:ARG:HG3	50:BR:46:GLY:H	1.57	0.68
52:BT:50:ILE:HD11	52:BT:102:ILE:HD11	1.75	0.68
1:CA:250:A:H4'	1:CA:251:G:O5'	1.94	0.68
2:CB:30:ARG:HH21	2:CB:194:PRO:HG2	1.59	0.68
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.59	0.68
27:D1:53:VAL:O	27:D1:53:VAL:HG12	1.93	0.68
31:D5:33:CYS:HB3	31:D5:36:CYS:O	1.94	0.68
33:D7:22:MET:HA	33:D7:22:MET:CE	2.24	0.68
36:DA:1223:G:H5'	36:DA:1223:G:H8	1.57	0.68
36:DA:2455:G:H2'	36:DA:2456:C:C6	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:59:U:H3	36:DA:68:G:H1	1.41	0.68
49:DQ:141:GLN:CG	58:DZ:72:ARG:HD3	2.24	0.68
1:AA:1525:G:O2'	1:AA:1526:G:H5'	1.94	0.68
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.74	0.68
20:AT:57:ARG:HH11	20:AT:102:GLY:CA	2.00	0.68
25:AZ:251:ASP:O	25:AZ:267:VAL:HG12	1.94	0.68
22:AW:75:C:OP1	27:B1:30:VAL:HG21	1.93	0.68
36:BA:863:A:O2'	36:BA:864:G:H5'	1.94	0.68
38:BC:83:ILE:HD11	38:BC:97:GLU:OE2	1.94	0.68
40:BE:101:ARG:NH1	40:BE:171:GLU:HB2	2.09	0.68
48:BP:105:LEU:HD12	48:BP:105:LEU:N	2.09	0.68
48:BP:147:LEU:HG	48:BP:148:LEU:N	2.08	0.68
51:BS:40:ILE:HG13	51:BS:41:ASP:N	2.08	0.68
52:BT:90:GLN:O	52:BT:92:GLY:N	2.26	0.68
56:BX:12:VAL:CB	56:BX:17:ALA:HB1	2.20	0.68
57:BY:2:ARG:CD	57:BY:3:VAL:HG23	2.23	0.68
25:CZ:126:VAL:O	25:CZ:126:VAL:HG12	1.92	0.68
36:DA:1331:A:O2'	36:DA:1332:G:H8	1.77	0.68
36:DA:1600:C:O2'	36:DA:1601:G:H5'	1.93	0.68
36:DA:402:A:O2'	36:DA:403:U:H5'	1.93	0.68
42:DG:87:PRO:O	42:DG:88:ILE:HG12	1.94	0.68
36:DA:661:C:O3'	48:DP:18:ARG:HD2	1.94	0.68
51:DS:99:LYS:HG2	51:DS:99:LYS:O	1.94	0.68
57:DY:7:VAL:HG21	57:DY:8:LYS:HZ2	1.58	0.68
1:AA:1439:C:N4	1:AA:1462:G:N1	2.38	0.68
1:AA:358:U:H2'	1:AA:359:U:H6	1.56	0.68
1:AA:1216:G:OP1	14:AN:2:ALA:HB3	1.94	0.68
16:AP:70:ALA:O	16:AP:74:LEU:HD12	1.94	0.68
31:B5:48:GLU:O	31:B5:49:CYS:SG	2.52	0.68
36:BA:2472:G:C5'	36:BA:2473:U:H5''	2.24	0.68
36:BA:302:C:H2'	36:BA:303:U:C6	2.28	0.68
39:BD:241:PRO:O	39:BD:242:ARG:HB2	1.93	0.68
48:BP:41:ARG:HA	48:BP:41:ARG:NH1	2.09	0.68
49:BQ:6:ARG:O	49:BQ:7:MET:HG3	1.94	0.68
54:BV:49:THR:HB	54:BV:50:PRO:CD	2.24	0.68
58:BZ:99:TYR:HD2	58:BZ:123:ASP:HB3	1.58	0.68
1:CA:1129:C:N4	1:CA:1135:U:H3	1.91	0.68
6:CF:11:ASN:HB3	6:CF:14:LEU:HD23	1.76	0.68
10:CJ:61:GLU:OE2	14:CN:58:LYS:HE2	1.93	0.68
25:CZ:326:GLU:O	61:CZ:502:KIR:H101	1.94	0.68
36:DA:2360:A:C2	36:DA:2361:A:H1'	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2811:G:OP1	40:DE:60:ASN:HB2	1.94	0.68
1:AA:1282:C:O2'	1:AA:1283:G:H5'	1.93	0.68
1:AA:250:A:H4'	1:AA:251:G:O5'	1.94	0.68
13:AM:5:ALA:HB2	13:AM:66:LEU:HD23	1.76	0.68
36:BA:1301:A:H4'	36:BA:1302:A:OP1	1.93	0.68
36:BA:1600:C:O2'	36:BA:1601:G:H5'	1.94	0.68
38:BC:94:VAL:HG12	38:BC:95:GLY:N	2.09	0.68
42:BG:91:ARG:HD2	42:BG:92:VAL:N	2.09	0.68
58:BZ:18:LEU:CD1	58:BZ:18:LEU:H	2.06	0.68
15:CO:27:VAL:O	15:CO:31:LEU:HD13	1.93	0.68
25:CZ:309:SER:O	25:CZ:310:ILE:HG22	1.94	0.68
30:D4:12:ALA:CB	30:D4:29:PRO:HA	2.24	0.68
36:DA:1517:G:C8	36:DA:1517:G:H5'	2.28	0.68
36:DA:2463:C:O2'	36:DA:2464:C:H5'	1.93	0.68
40:DE:36:ARG:NH2	40:DE:88:GLY:HA2	2.08	0.68
36:DA:2334:G:H21	51:DS:18:ILE:HG23	1.59	0.68
52:DT:98:LYS:HB3	52:DT:100:TYR:CE1	2.28	0.68
36:DA:329:G:H22	57:DY:19:LYS:HE3	1.59	0.68
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.75	0.67
25:AZ:7:ARG:O	25:AZ:8:THR:HG22	1.95	0.67
36:BA:1503:U:O2'	36:BA:1504:C:H5'	1.94	0.67
36:BA:657:U:H2'	36:BA:658:C:C6	2.29	0.67
40:BE:117:MET:HA	40:BE:122:PHE:H	1.58	0.67
43:BH:144:VAL:O	43:BH:148:ILE:HG12	1.94	0.67
50:BR:100:LEU:N	50:BR:100:LEU:HD13	2.09	0.67
54:BV:72:VAL:CG2	54:BV:85:LYS:HB3	2.24	0.67
55:BW:22:ASP:HA	55:BW:25:ARG:HH12	1.58	0.67
3:CC:34:LEU:HD22	3:CC:38:ARG:HE	1.59	0.67
3:CC:5:ILE:HG12	3:CC:10:PHE:HB2	1.76	0.67
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	1.76	0.67
25:CZ:324:LYS:HD3	25:CZ:365:GLY:HA3	1.76	0.67
36:DA:2472:G:C5'	36:DA:2473:U:H5''	2.23	0.67
36:DA:1803:A:O3'	39:DD:259:THR:CG2	2.42	0.67
41:DF:154:VAL:HG22	41:DF:191:ARG:HB3	1.76	0.67
50:DR:44:LEU:HD13	50:DR:44:LEU:O	1.94	0.67
51:DS:36:TYR:HD1	51:DS:36:TYR:H	1.41	0.67
52:DT:129:ARG:CZ	52:DT:131:ALA:HB3	2.24	0.67
1:AA:1492:A:OP1	12:AL:47:LYS:HG2	1.95	0.67
25:AZ:72:THR:HG22	25:AZ:203:LEU:HD21	1.76	0.67
29:B3:8:LEU:HD22	29:B3:31:LEU:CD2	2.24	0.67
31:B5:46:CYS:SG	31:B5:47:PRO:HD2	2.34	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2159:G:O2'	36:BA:2160:G:H5''	1.94	0.67
36:BA:322:A:H5'	36:BA:340:A:H1'	1.74	0.67
36:BA:402:A:O2'	36:BA:403:U:H5'	1.94	0.67
37:BB:106:G:H5''	58:BZ:31:ARG:HG2	1.76	0.67
41:BF:185:ASP:HA	41:BF:188:ARG:CD	2.25	0.67
1:CA:80:G:N1	1:CA:90:U:H5'	2.10	0.67
1:CA:979:C:H3'	1:CA:980:C:C5'	2.20	0.67
5:CE:34:VAL:HG12	5:CE:62:ALA:HB1	1.74	0.67
1:CA:1537:U:C5'	18:CR:54:ARG:HH22	2.05	0.67
19:CS:29:ARG:HD2	19:CS:30:LEU:H	1.57	0.67
28:D2:18:PRO:O	28:D2:21:LEU:HB2	1.94	0.67
36:DA:581:C:H2'	36:DA:582:G:H8	1.59	0.67
36:DA:709:U:H2'	36:DA:710:G:C8	2.29	0.67
38:DC:107:TRP:CZ2	38:DC:109:ASP:HA	2.29	0.67
39:DD:43:ARG:HH11	39:DD:44:ASN:HD22	1.37	0.67
49:DQ:101:ARG:HD2	49:DQ:102:VAL:H	1.60	0.67
51:DS:42:ASP:O	51:DS:43:GLU:HB3	1.94	0.67
1:AA:1131:G:H1	1:AA:1143:G:H21	1.42	0.67
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.09	0.67
1:AA:176:C:H2'	1:AA:177:C:C6	2.30	0.67
31:B5:55:ARG:C	31:B5:56:LYS:HG3	2.13	0.67
32:B6:7:ILE:HB	32:B6:27:LYS:NZ	2.09	0.67
36:BA:1208:C:O2	36:BA:1208:C:H2'	1.94	0.67
36:BA:1536:C:H2'	36:BA:1537:G:H4'	1.75	0.67
36:BA:2604:U:C5'	36:BA:2604:U:H6	2.07	0.67
36:BA:59:U:H3	36:BA:68:G:H1	1.42	0.67
40:BE:16:ARG:CD	40:BE:21:VAL:HG11	2.24	0.67
41:BF:101:LEU:HD12	41:BF:102:PRO:CD	2.24	0.67
43:BH:41:MET:HG3	43:BH:42:ARG:N	2.09	0.67
31:D5:3:LYS:HE3	31:D5:3:LYS:HA	1.76	0.67
36:DA:2192:G:H2'	36:DA:2193:G:H5''	1.77	0.67
36:DA:271(C):C:H2'	36:DA:271(D):G:H8	1.58	0.67
36:DA:2852:G:H2'	36:DA:2853:C:C6	2.29	0.67
39:DD:94:LEU:HB2	39:DD:104:TYR:HE1	1.58	0.67
43:DH:136:ILE:HD12	43:DH:136:ILE:N	2.10	0.67
48:DP:23:PRO:O	48:DP:33:ARG:HD2	1.93	0.67
50:DR:12:ARG:HD3	50:DR:16:HIS:ND1	2.08	0.67
1:AA:865:A:H2	1:AA:918:A:H4'	1.58	0.67
2:AB:42:ILE:HD12	2:AB:202:PRO:HB2	1.77	0.67
11:AK:84:VAL:HG23	11:AK:110:ASP:HA	1.76	0.67
36:BA:2334:G:H5'	51:BS:13:ARG:HD3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:82:G:O2'	37:BB:83:G:H5'	1.95	0.67
42:BG:60:LEU:O	42:BG:64:THR:HG22	1.94	0.67
43:BH:83:TYR:HB2	43:BH:134:SER:HA	1.76	0.67
49:BQ:79:LEU:HD23	49:BQ:80:GLU:H	1.58	0.67
58:BZ:141:VAL:HG13	58:BZ:144:LEU:HB2	1.76	0.67
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.17	0.67
1:CA:356:A:H2'	1:CA:357:G:H8	1.58	0.67
1:CA:8:A:N6	4:CD:208:SER:HB2	2.08	0.67
2:CB:42:ILE:HD12	2:CB:202:PRO:HB2	1.75	0.67
22:CW:1:G:N3	22:CW:1:G:H2'	2.10	0.67
25:CZ:134:PHE:CD1	25:CZ:202:LEU:HD22	2.29	0.67
36:DA:139:G:C6	36:DA:140:G:H2'	2.29	0.67
36:DA:1536:C:H2'	36:DA:1537:G:H4'	1.75	0.67
36:DA:811:U:O2'	36:DA:812:C:H5''	1.93	0.67
39:DD:267:SER:HA	39:DD:270:ILE:HG13	1.77	0.67
46:DN:10:GLU:OE2	46:DN:11:PRO:HD2	1.95	0.67
52:DT:90:GLN:O	52:DT:92:GLY:N	2.27	0.67
1:AA:80:G:N1	1:AA:90:U:H5'	2.10	0.67
4:AD:107:ARG:HH21	4:AD:194:LEU:HD12	1.58	0.67
10:AJ:61:GLU:OE2	14:AN:58:LYS:HE2	1.95	0.67
25:AZ:195:TRP:O	25:AZ:197:ASP:N	2.28	0.67
25:AZ:271:GLU:HG2	25:AZ:276:THR:HA	1.76	0.67
36:BA:2557:G:O2'	36:BA:2558:C:H5'	1.95	0.67
46:BN:47:ALA:HB2	46:BN:112:LEU:CD1	2.25	0.67
50:BR:116:LEU:O	50:BR:117:VAL:HG12	1.93	0.67
52:BT:107:ASP:H	52:BT:110:ILE:HG12	1.60	0.67
1:CA:1523:G:H2'	1:CA:1524:C:H5'	1.75	0.67
10:CJ:33:GLN:HB2	10:CJ:75:ILE:CD1	2.24	0.67
12:CL:110:VAL:H	12:CL:122:THR:CG2	2.07	0.67
13:CM:12:ASN:H	13:CM:12:ASN:HD22	1.42	0.67
13:CM:5:ALA:HB2	13:CM:66:LEU:HD23	1.75	0.67
24:CY:72:U:C3'	24:CY:73:G:H5''	2.25	0.67
27:D1:89:GLU:O	27:D1:93:GLU:HG2	1.93	0.67
36:DA:1314:C:H6	36:DA:1314:C:H5'	1.59	0.67
36:DA:2050:C:H1'	40:DE:156:MET:CE	2.25	0.67
36:DA:2312:U:H2'	36:DA:2313:C:C5'	2.25	0.67
38:DC:94:VAL:HG12	38:DC:95:GLY:N	2.09	0.67
38:DC:83:ILE:HD11	38:DC:97:GLU:OE2	1.95	0.67
39:DD:261:LYS:HZ1	39:DD:263:ARG:NH2	1.92	0.67
48:DP:33:ARG:O	48:DP:34:GLY:C	2.33	0.67
53:DU:92:ARG:HH21	54:DV:10:LYS:HB3	1.57	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:52:G:H1	22:AV:62:C:H42	1.39	0.67
36:BA:106:C:H2'	36:BA:107:C:H6	1.59	0.67
36:BA:2524:G:C8	36:BA:2524:G:H5'	2.29	0.67
36:BA:267:C:H2'	36:BA:268:C:H6	1.58	0.67
40:BE:116:VAL:O	40:BE:117:MET:CB	2.42	0.67
50:BR:29:LEU:HD11	50:BR:52:ILE:HD11	1.75	0.67
58:BZ:141:VAL:HG13	58:BZ:144:LEU:CB	2.25	0.67
11:CK:84:VAL:HG23	11:CK:110:ASP:HA	1.76	0.67
13:CM:83:ASP:CG	13:CM:84:ILE:H	1.98	0.67
24:CY:66:C:H2'	24:CY:67:G:C8	2.29	0.67
27:D1:8:SER:HB3	27:D1:66:HIS:CG	2.29	0.67
36:DA:1543:C:C3'	36:DA:1544:A:H5''	2.24	0.67
36:DA:2781:A:H5'	36:DA:2782:G:H5'	1.77	0.67
36:DA:2796:U:H3'	36:DA:2799:C:C5'	2.22	0.67
47:DO:4:PRO:O	47:DO:5:GLN:HB2	1.93	0.67
51:DS:17:ARG:O	51:DS:20:ARG:HG2	1.94	0.67
1:AA:1124:G:H5'	10:AJ:35:SER:HB2	1.76	0.67
10:AJ:9:ARG:HG3	10:AJ:69:ASN:OD1	1.95	0.67
17:AQ:53:LEU:HD23	17:AQ:54:GLY:N	2.10	0.67
36:BA:130:C:O3'	36:BA:1349:A:H1'	1.94	0.67
36:BA:34:C:H41	36:BA:447:A:H61	1.43	0.67
36:BA:484:C:H2'	36:BA:485:C:C6	2.30	0.67
36:BA:6:A:O2'	46:BN:130:HIS:HB2	1.95	0.67
36:BA:860:U:C5	36:BA:917:A:N7	2.62	0.67
42:BG:67:LYS:H	42:BG:67:LYS:CD	2.01	0.67
1:CA:713:G:H2'	1:CA:714:G:C8	2.29	0.67
2:CB:131:PRO:HG2	2:CB:134:GLU:HG2	1.77	0.67
25:CZ:195:TRP:O	25:CZ:197:ASP:N	2.28	0.67
30:D4:40:HIS:HA	30:D4:42:PHE:H	1.58	0.67
34:D8:52:LYS:N	34:D8:53:PRO:CD	2.58	0.67
36:DA:1050:A:C2'	36:DA:1051:G:H5'	2.24	0.67
36:DA:1301:A:HO2'	36:DA:1302:A:H2'	1.57	0.67
36:DA:2023:G:H5'	36:DA:2617:C:H4'	1.77	0.67
38:DC:78:ALA:HA	38:DC:116:THR:N	2.09	0.67
40:DE:4:ILE:HG21	40:DE:96:PHE:HE2	1.60	0.67
54:DV:49:THR:HB	54:DV:50:PRO:CD	2.25	0.67
25:AZ:313:HIS:HB2	25:AZ:380:LEU:HD12	1.77	0.67
27:B1:67:ILE:N	27:B1:68:PRO:HD2	2.10	0.67
36:BA:1810:A:H2'	36:BA:1811:G:O4'	1.95	0.67
39:BD:261:LYS:HZ1	39:BD:263:ARG:NH2	1.92	0.67
39:BD:34:VAL:CG2	39:BD:35:LYS:H	2.06	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:10:GLU:OE2	46:BN:11:PRO:HD2	1.94	0.67
48:BP:84:ASN:CG	48:BP:116:GLY:HA2	2.15	0.67
51:BS:15:ARG:O	51:BS:15:ARG:HD2	1.94	0.67
52:BT:27:THR:O	52:BT:28:VAL:CB	2.42	0.67
7:CG:113:GLU:HG3	7:CG:119:ARG:HB3	1.76	0.67
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.60	0.67
29:D3:8:LEU:HD22	29:D3:31:LEU:CD2	2.24	0.67
36:DA:1810:A:H2'	36:DA:1811:G:O4'	1.94	0.67
36:DA:234:C:H2'	36:DA:235:U:H6	1.60	0.67
36:DA:2756:U:H1'	36:DA:2757:A:C5'	2.25	0.67
36:DA:581:C:H2'	36:DA:582:G:C8	2.30	0.67
40:DE:101:ARG:CB	40:DE:201:THR:HG21	2.25	0.67
1:AA:1280:A:O2'	1:AA:1281:U:OP1	2.12	0.67
1:AA:266:G:H5''	1:AA:267:C:H5	1.58	0.67
1:AA:356:A:H2'	1:AA:357:G:H8	1.60	0.67
1:AA:706:A:C4'	11:AK:29:ILE:HD11	2.24	0.67
4:AD:124:GLY:O	4:AD:126:ILE:N	2.28	0.67
36:BA:1050:A:C2'	36:BA:1051:G:H5'	2.25	0.67
36:BA:1242:A:H5'	36:BA:1243:G:OP2	1.94	0.67
36:BA:1331:A:O2'	36:BA:1332:G:H8	1.78	0.67
36:BA:1465:G:H5'	36:BA:1528:A:H1'	1.76	0.67
41:BF:154:VAL:HG22	41:BF:191:ARG:HB3	1.77	0.67
43:BH:83:TYR:HB3	43:BH:135:GLY:H	1.60	0.67
48:BP:23:PRO:O	48:BP:33:ARG:HD2	1.95	0.67
57:BY:88:LYS:NZ	57:BY:93:GLY:HA3	2.10	0.67
58:BZ:10:ARG:HH21	58:BZ:26:GLY:H	1.40	0.67
1:CA:1314:C:OP2	19:CS:6:LYS:HG3	1.95	0.67
9:CI:4:TYR:CE2	9:CI:88:TYR:HB2	2.29	0.67
12:CL:39:VAL:HG12	12:CL:57:LYS:HB3	1.75	0.67
28:D2:25:VAL:HG13	28:D2:29:LYS:CG	2.25	0.67
36:DA:2185:C:H2'	36:DA:2186:G:C5'	2.24	0.67
41:DF:132:VAL:HG22	41:DF:133:ASN:N	2.07	0.67
1:AA:1534:A:H62	23:AX:12:A:H2	1.42	0.67
2:AB:131:PRO:HG2	2:AB:134:GLU:HG2	1.77	0.67
7:AG:57:GLU:O	7:AG:60:LYS:HB3	1.95	0.67
12:AL:110:VAL:H	12:AL:122:THR:CG2	2.08	0.67
36:BA:2185:C:H2'	36:BA:2186:G:C5'	2.24	0.67
36:BA:2756:U:H1'	36:BA:2757:A:C5'	2.24	0.67
36:BA:325:G:H2'	36:BA:326:G:H8	1.59	0.67
36:BA:654(C):G:C2'	36:BA:654(D):G:H5'	2.24	0.67
38:BC:120:MET:HA	38:BC:123:VAL:HG12	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:58:ASP:O	46:BN:60:ILE:N	2.28	0.67
46:BN:76:SER:HB3	46:BN:81:GLY:HA3	1.77	0.67
48:BP:146:VAL:HG22	48:BP:147:LEU:N	2.06	0.67
52:BT:129:ARG:CZ	52:BT:131:ALA:HB3	2.25	0.67
52:BT:78:LEU:O	52:BT:79:HIS:HD2	1.77	0.67
36:BA:64:A:C4	56:BX:66:LEU:HD12	2.30	0.67
1:CA:1131:G:H1	1:CA:1143:G:H21	1.42	0.67
1:CA:1216:G:OP1	14:CN:2:ALA:HB3	1.94	0.67
3:CC:30:ARG:HH21	3:CC:31:HIS:CE1	2.13	0.67
6:CF:43:LEU:H	6:CF:43:LEU:HD22	1.60	0.67
25:CZ:267:VAL:HG23	25:CZ:288:VAL:HG13	1.77	0.67
28:D2:47:ASN:HB3	28:D2:51:ARG:HG3	1.77	0.67
36:DA:1332:G:N2	36:DA:1610:A:C8	2.62	0.67
36:DA:1817:G:H2'	36:DA:1818:U:H5'	1.77	0.67
36:DA:2138:C:H2'	36:DA:2139:C:H6	1.60	0.67
36:DA:2762:G:H5'	36:DA:2762:G:C8	2.28	0.67
36:DA:425:G:H2'	36:DA:426:C:H6	1.58	0.67
54:DV:99:ILE:HD13	54:DV:99:ILE:N	2.10	0.67
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.59	0.66
11:AK:85:ARG:HG2	11:AK:111:ASP:O	1.95	0.66
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HB3	1.76	0.66
34:B8:52:LYS:N	34:B8:53:PRO:CD	2.57	0.66
36:BA:1332:G:N2	36:BA:1610:A:C8	2.62	0.66
36:BA:234:C:H2'	36:BA:235:U:C6	2.30	0.66
36:BA:2463:C:O2'	36:BA:2464:C:H5'	1.94	0.66
36:BA:612:C:H2'	36:BA:613:G:H5''	1.76	0.66
38:BC:72:VAL:HG23	38:BC:111:ASP:HB3	1.77	0.66
43:BH:41:MET:CG	43:BH:42:ARG:H	2.07	0.66
55:BW:107:LEU:HD12	55:BW:107:LEU:N	2.09	0.66
57:BY:73:ARG:HE	57:BY:73:ARG:HA	1.59	0.66
20:CT:86:ARG:O	20:CT:90:GLN:HG3	1.95	0.66
34:D8:6:THR:HB	34:D8:11:LYS:HZ3	1.58	0.66
34:D8:8:LYS:O	34:D8:12:LYS:HG3	1.95	0.66
36:DA:267:C:H2'	36:DA:268:C:H6	1.59	0.66
36:DA:944:G:H5'	36:DA:945:A:O5'	1.95	0.66
39:DD:35:LYS:CG	39:DD:104:TYR:CE2	2.67	0.66
48:DP:66:GLY:O	48:DP:67:MET:HB2	1.94	0.66
52:DT:50:ILE:HD11	52:DT:102:ILE:HD11	1.77	0.66
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.18	0.66
1:AA:1314:C:OP2	19:AS:6:LYS:HG3	1.96	0.66
5:AE:53:LEU:H	5:AE:53:LEU:HD12	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:11:ASN:HB3	6:AF:14:LEU:HD23	1.77	0.66
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.96	0.66
25:AZ:149:LEU:O	25:AZ:152:MET:HB3	1.96	0.66
31:B5:33:CYS:HB3	31:B5:36:CYS:O	1.95	0.66
31:B5:3:LYS:HG3	36:BA:2611:U:O2'	1.95	0.66
36:BA:259:G:N2	36:BA:621:A:H8	1.87	0.66
38:BC:40:THR:HG22	38:BC:177:LYS:HD2	1.77	0.66
43:BH:68:THR:O	43:BH:72:ILE:HG12	1.95	0.66
48:BP:46:LYS:HB2	48:BP:52:GLU:HG2	1.78	0.66
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.30	0.66
1:CA:1452:C:H4'	1:CA:1456:G:N2	2.10	0.66
25:CZ:163:PHE:CD1	25:CZ:164:PRO:HD2	2.29	0.66
35:D9:17:ILE:HG22	35:D9:18:ARG:N	2.10	0.66
36:DA:176:G:O2'	36:DA:177:G:H5'	1.95	0.66
36:DA:2138:C:H2'	36:DA:2139:C:C6	2.31	0.66
39:DD:273:ARG:HG2	39:DD:273:ARG:HH11	1.60	0.66
40:DE:51:PHE:O	40:DE:74:PRO:HB2	1.96	0.66
42:DG:68:PRO:HB2	42:DG:90:LEU:HD13	1.77	0.66
43:DH:41:MET:CG	43:DH:42:ARG:H	2.07	0.66
50:DR:62:ALA:O	50:DR:66:VAL:HG23	1.95	0.66
36:DA:2377:A:H4'	51:DS:107:GLU:O	1.95	0.66
54:DV:72:VAL:CG2	54:DV:85:LYS:HB3	2.25	0.66
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.10	0.66
4:AD:200:GLU:HG2	4:AD:201:GLN:H	1.60	0.66
27:B1:65:SER:O	27:B1:66:HIS:CB	2.40	0.66
30:B4:12:ALA:CB	30:B4:29:PRO:HA	2.25	0.66
31:B5:39:MET:HG3	55:BW:34:ASN:OD1	1.93	0.66
36:BA:1353:A:H2'	36:BA:1354:A:C8	2.30	0.66
36:BA:2491:U:H4'	36:BA:2570:G:OP1	1.96	0.66
40:BE:4:ILE:HG21	40:BE:96:PHE:HE2	1.60	0.66
52:BT:60:THR:HG22	52:BT:77:PRO:HA	1.77	0.66
55:BW:82:LEU:HB3	55:BW:84:ARG:NH1	2.10	0.66
1:CA:1124:G:H5'	10:CJ:35:SER:HB2	1.77	0.66
1:CA:1285:A:H4'	1:CA:1286:A:O5'	1.95	0.66
1:CA:673:G:H2'	1:CA:674:G:C8	2.31	0.66
4:CD:124:GLY:O	4:CD:126:ILE:N	2.28	0.66
1:CA:1347:G:H2'	9:CI:108:VAL:O	1.95	0.66
11:CK:59:TYR:CZ	11:CK:63:LEU:HD11	2.31	0.66
25:CZ:326:GLU:CD	25:CZ:326:GLU:H	1.97	0.66
36:DA:244:A:H4'	48:DP:74:GLU:HG3	1.76	0.66
36:DA:2604:U:C5'	36:DA:2604:U:H6	2.08	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2852:G:H2'	36:DA:2853:C:H6	1.60	0.66
40:DE:2:LYS:HD3	40:DE:95:ILE:HG22	1.77	0.66
36:DA:6:A:O2'	46:DN:130:HIS:HB2	1.95	0.66
46:DN:3:THR:HG22	46:DN:4:TYR:H	1.59	0.66
2:AB:44:LEU:HD12	2:AB:44:LEU:H	1.61	0.66
7:AG:38:LEU:O	7:AG:38:LEU:HD12	1.95	0.66
13:AM:87:TYR:HD1	19:AS:81:ARG:HH22	1.43	0.66
24:AY:76:A:C8	25:AZ:271:GLU:OE1	2.48	0.66
31:B5:44:THR:HG23	50:BR:101:ALA:N	2.11	0.66
35:B9:17:ILE:HG22	35:B9:18:ARG:N	2.09	0.66
36:BA:1294:U:H5'	36:BA:1294:U:H6	1.60	0.66
36:BA:585:G:H2'	36:BA:1251:C:H42	1.61	0.66
39:BD:162:SER:O	39:BD:178:PRO:HG3	1.96	0.66
41:DF:160:ASN:OD1	41:DF:163:VAL:HG23	1.94	0.66
4:AD:31:CYS:SG	59:AD:301:ZN:ZN	1.85	0.66
25:AZ:163:PHE:CD1	25:AZ:164:PRO:HD2	2.29	0.66
25:AZ:309:SER:O	25:AZ:310:ILE:HG22	1.95	0.66
27:B1:50:ARG:HG2	27:B1:59:THR:HG22	1.76	0.66
36:BA:1543:C:C3'	36:BA:1544:A:H5''	2.23	0.66
36:BA:2192:G:H2'	36:BA:2193:G:H5''	1.78	0.66
36:BA:2312:U:H2'	36:BA:2313:C:H5''	1.78	0.66
36:BA:2852:G:H2'	36:BA:2853:C:C6	2.31	0.66
4:CD:129:ASN:ND2	4:CD:145:GLU:H	1.93	0.66
8:CH:9:MET:SD	8:CH:32:LYS:HG2	2.35	0.66
25:CZ:149:LEU:O	25:CZ:152:MET:HB3	1.95	0.66
25:CZ:251:ASP:O	25:CZ:267:VAL:HG12	1.95	0.66
36:DA:1337:G:H2'	36:DA:1338:G:H8	1.59	0.66
36:DA:130:C:O3'	36:DA:1349:A:H1'	1.96	0.66
36:DA:2557:G:O2'	36:DA:2558:C:H5'	1.94	0.66
36:DA:302:C:H2'	36:DA:303:U:C6	2.29	0.66
36:DA:528:A:H2	36:DA:2043:C:O5'	1.78	0.66
43:DH:83:TYR:HB2	43:DH:134:SER:HA	1.76	0.66
43:DH:18:GLU:HB2	43:DH:25:LYS:HB2	1.77	0.66
52:DT:106:SER:C	52:DT:107:ASP:OD1	2.34	0.66
47:DO:107:ARG:NH1	52:DT:36:GLU:HG2	2.10	0.66
54:DV:39:LEU:HA	54:DV:47:VAL:CG1	2.26	0.66
54:DV:21:ARG:HG2	54:DV:91:TYR:HD2	1.58	0.66
55:DW:82:LEU:HB3	55:DW:84:ARG:HH12	1.59	0.66
4:AD:129:ASN:HD21	4:AD:145:GLU:H	1.42	0.66
11:AK:59:TYR:CZ	11:AK:63:LEU:HD11	2.30	0.66
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:38:A:C3'	22:AW:39:U:H5''	2.26	0.66
27:B1:82:LEU:HD21	27:B1:90:ILE:HG23	1.77	0.66
36:BA:582:G:H2'	36:BA:583:G:C8	2.31	0.66
38:BC:107:TRP:CZ2	38:BC:109:ASP:HA	2.31	0.66
41:BF:160:ASN:OD1	41:BF:163:VAL:HG23	1.94	0.66
42:BG:106:LEU:HD12	42:BG:110:ALA:HB3	1.78	0.66
46:BN:43:THR:O	46:BN:46:VAL:HG12	1.95	0.66
48:BP:80:TYR:CD1	48:BP:111:ARG:HB3	2.30	0.66
52:BT:82:LEU:CD1	52:BT:82:LEU:H	2.02	0.66
54:BV:61:VAL:HG23	54:BV:61:VAL:O	1.94	0.66
1:CA:1282:C:O2'	1:CA:1283:G:H5'	1.95	0.66
1:CA:176:C:H2'	1:CA:177:C:C6	2.30	0.66
36:DA:1465:G:H5'	36:DA:1528:A:H1'	1.77	0.66
36:DA:654(P):C:H2'	36:DA:654(Q):C:O4'	1.96	0.66
37:DB:8:U:H5'	37:DB:8:U:C6	2.22	0.66
36:DA:1658:C:OP1	40:DE:132:HIS:O	2.13	0.66
40:DE:101:ARG:NH1	40:DE:171:GLU:HB2	2.10	0.66
42:DG:138:GLN:O	42:DG:144:ILE:HD13	1.96	0.66
42:DG:47:LYS:HZ1	42:DG:82:LEU:HB2	1.59	0.66
47:DO:104:ARG:HE	52:DT:33:LYS:HE3	1.60	0.66
52:DT:80:SER:HB3	52:DT:81:PRO:CD	2.24	0.66
55:DW:22:ASP:HA	55:DW:25:ARG:HH12	1.61	0.66
57:DY:88:LYS:NZ	57:DY:93:GLY:HA3	2.11	0.66
58:DZ:10:ARG:HH11	58:DZ:10:ARG:HG2	1.59	0.66
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.61	0.66
24:AY:66:C:H2'	24:AY:67:G:C8	2.30	0.66
24:AY:72:U:C3'	24:AY:73:G:H5''	2.25	0.66
25:AZ:134:PHE:CD1	25:AZ:202:LEU:HD22	2.30	0.66
27:B1:7:ILE:HD11	27:B1:70:VAL:HG22	1.78	0.66
32:B6:26:ASN:ND2	32:B6:32:ASN:HD21	1.94	0.66
32:B6:22:ALA:HB2	32:B6:39:TYR:CE2	2.31	0.66
36:BA:234:C:H2'	36:BA:235:U:H6	1.61	0.66
36:BA:2023:G:H5'	36:BA:2617:C:H4'	1.76	0.66
36:BA:2022:U:O2'	36:BA:2617:C:H5'	1.96	0.66
36:BA:481:G:OP2	57:BY:47:LYS:HD3	1.95	0.66
36:BA:83:G:N2	36:BA:102:G:H2'	2.10	0.66
50:BR:94:TYR:CD1	50:BR:94:TYR:N	2.62	0.66
52:BT:106:SER:C	52:BT:107:ASP:OD1	2.34	0.66
52:BT:28:VAL:O	52:BT:29:ARG:HB2	1.95	0.66
58:BZ:24:LEU:HD21	58:BZ:86:VAL:CG2	2.25	0.66
1:CA:961:U:O2'	1:CA:962:C:P	2.53	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:31:ILE:HG21	42:DG:142:PRO:HB2	1.77	0.66
32:D6:14:THR:O	32:D6:49:HIS:HA	1.96	0.66
36:DA:143:G:H2'	36:DA:143(A):C:C6	2.31	0.66
36:DA:1813:G:H1'	39:DD:50:THR:OG1	1.95	0.66
36:DA:2334:G:H5'	51:DS:13:ARG:HD3	1.77	0.66
41:DF:103:LYS:HG3	41:DF:106:ARG:NH2	2.10	0.66
43:DH:85:LYS:HZ1	43:DH:132:ARG:HA	1.59	0.66
58:DZ:128:VAL:HG22	58:DZ:129:SER:N	2.11	0.66
1:AA:186:C:H2'	1:AA:187:C:C6	2.29	0.66
12:AL:33:ARG:HD3	12:AL:62:SER:HB3	1.78	0.66
32:B6:5:VAL:N	32:B6:9:LEU:H	1.94	0.66
38:BC:78:ALA:HA	38:BC:116:THR:N	2.10	0.66
40:BE:101:ARG:CB	40:BE:201:THR:HG21	2.26	0.66
41:BF:39:TRP:CD1	41:BF:101:LEU:HB2	2.31	0.66
48:BP:24:GLY:CA	48:BP:33:ARG:NH1	2.59	0.66
50:BR:51:LEU:HD23	50:BR:70:LEU:HD11	1.77	0.66
53:BU:3:ARG:HG2	53:BU:3:ARG:NH1	2.11	0.66
55:BW:73:ALA:HB3	55:BW:106:ILE:HD11	1.76	0.66
2:CB:18:GLY:H	2:CB:42:ILE:HG23	1.60	0.66
10:CJ:29:ARG:O	10:CJ:30:SER:HB3	1.96	0.66
32:D6:22:ALA:HB2	32:D6:39:TYR:CE2	2.31	0.66
36:DA:2790:A:H2'	36:DA:2791:C:H5''	1.78	0.66
36:DA:325:G:H2'	36:DA:326:G:H8	1.60	0.66
36:DA:657:U:H2'	36:DA:658:C:C6	2.31	0.66
41:DF:32:LEU:HD21	41:DF:105:VAL:HG13	1.77	0.66
37:DB:42:C:N3	42:DG:93:THR:HG23	2.11	0.66
36:DA:1453:U:H5'	50:DR:63:ARG:NE	2.11	0.66
55:DW:4:LYS:HG2	55:DW:5:ALA:N	2.11	0.66
1:AA:713:G:H2'	1:AA:714:G:C8	2.30	0.66
1:AA:953:G:C5'	1:AA:965:A:H61	2.09	0.66
2:AB:18:GLY:H	2:AB:42:ILE:HG23	1.60	0.66
9:AI:95:LYS:HZ2	9:AI:96:LEU:HD13	1.61	0.66
42:BG:87:PRO:O	42:BG:88:ILE:HG12	1.95	0.66
43:BH:136:ILE:HD12	43:BH:136:ILE:N	2.11	0.66
36:BA:2467:C:H4'	49:BQ:123:HIS:ND1	2.11	0.66
51:BS:42:ASP:O	51:BS:43:GLU:HB3	1.95	0.66
52:BT:23:ARG:O	52:BT:25:GLY:N	2.28	0.66
1:CA:1280:A:O2'	1:CA:1281:U:OP1	2.13	0.66
1:CA:963:G:H21	10:CJ:55:LYS:NZ	1.93	0.66
2:CB:44:LEU:HA	2:CB:47:THR:HB	1.77	0.66
5:CE:101:ILE:O	5:CE:120:THR:HB	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:68:VAL:HG22	25:CZ:69:GLU:N	2.09	0.66
36:DA:145:G:H2'	36:DA:146:G:H5''	1.76	0.66
36:DA:2845:G:O2'	36:DA:2846:G:H5'	1.96	0.66
36:DA:479:A:O2'	36:DA:481:G:H5'	1.96	0.66
41:DF:101:LEU:HD12	41:DF:102:PRO:CD	2.26	0.66
48:DP:45:LEU:HD13	48:DP:46:LYS:H	1.59	0.66
52:DT:58:ASN:ND2	52:DT:58:ASN:H	1.93	0.66
54:DV:49:THR:HB	54:DV:50:PRO:HD2	1.75	0.66
57:DY:6:HIS:HE1	57:DY:30:VAL:HG11	1.60	0.66
1:AA:1125:U:H5''	1:AA:1126:U:H5	1.61	0.66
2:AB:44:LEU:HA	2:AB:47:THR:HB	1.76	0.66
10:AJ:38:ILE:CG1	10:AJ:71:LEU:HB3	2.26	0.66
25:AZ:26:THR:HG23	60:AZ:501:GDP:O2A	1.95	0.66
31:B5:49:CYS:O	31:B5:56:LYS:HD3	1.96	0.66
32:B6:30:THR:O	32:B6:31:PRO:C	2.34	0.66
36:BA:1453:U:H5'	50:BR:63:ARG:NE	2.11	0.66
40:BE:9:VAL:HG12	40:BE:25:VAL:O	1.96	0.66
42:BG:121:ASN:HB3	42:BG:124:SER:HB2	1.78	0.66
48:BP:40:SER:O	48:BP:41:ARG:NH1	2.28	0.66
52:BT:62:THR:HG22	52:BT:75:ILE:HG13	1.77	0.66
36:BA:996:A:H4'	53:BU:92:ARG:NE	2.11	0.66
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.11	0.66
1:CA:1321:C:H5''	1:CA:1322:C:C5'	2.25	0.66
2:CB:28:PHE:CD2	2:CB:190:THR:HA	2.30	0.66
11:CK:38:ASN:N	11:CK:38:ASN:HD22	1.94	0.66
12:CL:79:GLU:O	12:CL:80:HIS:HB2	1.95	0.66
13:CM:80:ARG:O	13:CM:83:ASP:HB3	1.96	0.66
6:CF:97:PHE:O	18:CR:31:LEU:HD23	1.96	0.66
27:D1:75:GLU:O	27:D1:77:ALA:N	2.26	0.66
36:DA:1058:G:C2'	36:DA:1059:G:H5''	2.27	0.66
36:DA:672:C:H2'	36:DA:673:C:H5''	1.75	0.66
40:DE:16:ARG:CD	40:DE:21:VAL:HG11	2.24	0.66
43:DH:105:LEU:H	43:DH:105:LEU:HD23	1.61	0.66
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.96	0.65
1:AA:45:U:H2'	1:AA:46:G:H8	1.62	0.65
13:AM:80:ARG:O	13:AM:83:ASP:HB3	1.96	0.65
17:AQ:5:VAL:HG22	17:AQ:60:ILE:HD12	1.77	0.65
19:AS:43:GLU:C	19:AS:45:VAL:H	2.00	0.65
24:AY:77:TRP:N	25:AZ:273:HIS:H	1.93	0.65
36:BA:145:G:H2'	36:BA:146:G:H5''	1.78	0.65
36:BA:1947:C:C2'	36:BA:1948:G:H5''	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2720:U:H2'	36:BA:2720:U:O2	1.95	0.65
36:BA:654(P):C:H2'	36:BA:654(Q):C:O4'	1.96	0.65
39:BD:183:ARG:HD2	39:BD:269:PHE:O	1.95	0.65
41:BF:32:LEU:HD21	41:BF:105:VAL:HG13	1.78	0.65
41:BF:185:ASP:HA	41:BF:188:ARG:HG2	1.78	0.65
47:BO:35:VAL:HG21	47:BO:69:ILE:HD13	1.78	0.65
50:BR:62:ALA:O	50:BR:66:VAL:HG23	1.96	0.65
58:BZ:151:HIS:HB2	58:BZ:169:GLU:O	1.96	0.65
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.44	0.65
10:CJ:46:ARG:HH11	10:CJ:46:ARG:HG2	1.61	0.65
34:D8:32:LEU:CD2	34:D8:36:LYS:HZ1	2.09	0.65
36:DA:1963:U:O2	36:DA:1963:U:H2'	1.96	0.65
36:DA:484:C:H2'	36:DA:485:C:C6	2.30	0.65
36:DA:907:U:OP1	49:DQ:24:GLY:N	2.24	0.65
38:DC:114:VAL:HG12	38:DC:144:THR:HB	1.77	0.65
39:DD:267:SER:HB3	39:DD:270:ILE:HD11	1.76	0.65
39:DD:48:ARG:HG3	39:DD:48:ARG:HH11	1.60	0.65
41:DF:113:ALA:HB1	41:DF:186:ILE:HG21	1.78	0.65
42:DG:137:GLU:O	42:DG:138:GLN:HB3	1.96	0.65
47:DO:69:ILE:HG13	47:DO:77:ILE:HG23	1.77	0.65
55:DW:73:ALA:HB3	55:DW:106:ILE:HD11	1.78	0.65
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	1.97	0.65
11:AK:57:THR:HG23	11:AK:60:ALA:H	1.59	0.65
12:AL:39:VAL:HG12	12:AL:57:LYS:HB3	1.77	0.65
13:AM:12:ASN:HD22	13:AM:12:ASN:H	1.44	0.65
36:BA:140:G:H1'	36:BA:141:A:C2	2.30	0.65
36:BA:1473:G:H2'	36:BA:1474:C:O4'	1.96	0.65
36:BA:1720:U:C3'	36:BA:1721:G:H5''	2.25	0.65
36:BA:2334:G:H21	51:BS:18:ILE:HG23	1.61	0.65
36:BA:2408:U:H2'	36:BA:2409:G:H8	1.61	0.65
28:B2:2:LYS:HB2	36:BA:97:C:H5''	1.76	0.65
40:BE:203:LYS:O	40:BE:203:LYS:HD2	1.95	0.65
53:BU:85:LYS:CD	53:BU:117:GLN:HE22	2.08	0.65
54:BV:51:VAL:HG12	54:BV:52:VAL:H	1.62	0.65
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.78	0.65
9:CI:126:SER:O	9:CI:127:LYS:HB3	1.96	0.65
14:CN:23:ARG:HD2	14:CN:28:GLY:O	1.97	0.65
24:CY:40:C:C2'	24:CY:41:C:H5''	2.26	0.65
36:DA:1019:U:O2'	36:DA:1021:A:H2	1.80	0.65
36:DA:2392:A:H2	36:DA:2424:C:H42	1.41	0.65
39:DD:35:LYS:HG3	39:DD:104:TYR:CD2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:57:LYS:HE3	40:DE:57:LYS:CA	2.20	0.65
36:DA:674:G:H1'	41:DF:74:ARG:CD	2.25	0.65
48:DP:105:LEU:HD12	48:DP:105:LEU:N	2.10	0.65
54:DV:40:LEU:H	54:DV:47:VAL:HG13	1.60	0.65
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.60	0.65
9:AI:4:TYR:CE2	9:AI:88:TYR:HB2	2.31	0.65
11:AK:27:ASN:HD22	11:AK:28:THR:N	1.92	0.65
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	1.78	0.65
25:AZ:27:LEU:HD12	25:AZ:31:LEU:HG	1.76	0.65
27:B1:13:ILE:HD12	27:B1:13:ILE:N	2.11	0.65
28:B2:39:ALA:HA	28:B2:45:SER:HB3	1.77	0.65
36:BA:1337:G:H2'	36:BA:1338:G:H8	1.61	0.65
36:BA:2781:A:H5'	36:BA:2782:G:H5'	1.77	0.65
36:BA:612:C:C2'	36:BA:613:G:H5''	2.26	0.65
39:BD:267:SER:HA	39:BD:270:ILE:HG13	1.77	0.65
57:BY:6:HIS:HE1	57:BY:30:VAL:HG11	1.61	0.65
1:CA:961:U:O2'	1:CA:962:C:O5'	2.13	0.65
2:CB:17:PHE:O	2:CB:18:GLY:O	2.15	0.65
26:D0:27:GLU:N	26:D0:27:GLU:OE1	2.25	0.65
28:D2:23:LYS:HG3	28:D2:26:ARG:HD3	1.77	0.65
36:DA:833:U:H5''	48:DP:48:PRO:HB2	1.77	0.65
26:D0:27:GLU:OE1	36:DA:856:C:H1'	1.97	0.65
51:DS:11:LYS:N	51:DS:11:LYS:HD2	2.11	0.65
57:DY:46:LYS:HG2	57:DY:47:LYS:N	2.11	0.65
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.96	0.65
3:AC:5:ILE:HG12	3:AC:10:PHE:HB2	1.77	0.65
3:AC:26:LYS:N	3:AC:26:LYS:HE3	2.10	0.65
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.26	0.65
22:AW:30:G:H2'	22:AW:31:A:H8	1.61	0.65
24:AY:61:C:H2'	24:AY:62:U:H5''	1.79	0.65
27:B1:84:GLY:O	27:B1:90:ILE:HD11	1.97	0.65
36:BA:106:C:H1'	57:BY:2:ARG:NH2	2.11	0.65
36:BA:140:G:H1'	36:BA:141:A:H2	1.62	0.65
36:BA:2443:C:O2'	36:BA:2444:G:H5'	1.95	0.65
36:BA:813:U:H2'	36:BA:814:C:C6	2.32	0.65
36:BA:83:G:HO2'	36:BA:84:A:H8	1.41	0.65
36:BA:89:G:H3'	36:BA:90:U:C5'	2.27	0.65
41:BF:132:VAL:HG22	41:BF:133:ASN:N	2.07	0.65
43:BH:121:ILE:HD13	43:BH:144:VAL:HG21	1.79	0.65
51:BS:89:ARG:HG2	51:BS:92:TYR:HA	1.78	0.65
52:BT:98:LYS:HB3	52:BT:100:TYR:CE1	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:74:PRO:O	57:BY:75:ILE:HB	1.97	0.65
58:BZ:123:ASP:O	58:BZ:124:ILE:HG23	1.95	0.65
10:CJ:38:ILE:CG1	10:CJ:71:LEU:HB3	2.26	0.65
14:CN:6:LEU:HB3	14:CN:23:ARG:NH2	2.11	0.65
20:CT:57:ARG:HH11	20:CT:102:GLY:CA	2.00	0.65
25:CZ:270:VAL:HG13	25:CZ:286:VAL:HG21	1.77	0.65
25:CZ:27:LEU:HD12	25:CZ:31:LEU:HG	1.77	0.65
36:DA:108:U:H2'	36:DA:109:G:H8	1.61	0.65
36:DA:1503:U:O2'	36:DA:1504:C:H5'	1.97	0.65
36:DA:234:C:H2'	36:DA:235:U:C6	2.30	0.65
36:DA:2635:C:OP1	40:DE:77:ILE:HG21	1.96	0.65
36:DA:286:C:H2'	36:DA:287:C:C6	2.30	0.65
28:D2:62:THR:HG21	36:DA:76:C:C4'	2.26	0.65
40:DE:9:VAL:HG12	40:DE:25:VAL:O	1.96	0.65
42:DG:152:LEU:H	42:DG:152:LEU:HD23	1.62	0.65
46:DN:47:ALA:HB2	46:DN:112:LEU:CD1	2.26	0.65
46:DN:43:THR:O	46:DN:46:VAL:HG12	1.97	0.65
52:DT:28:VAL:O	52:DT:29:ARG:HB2	1.95	0.65
58:DZ:178:GLU:OE1	58:DZ:178:GLU:N	2.29	0.65
1:AA:1321:C:H5''	1:AA:1322:C:C5'	2.26	0.65
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.32	0.65
1:AA:673:G:H2'	1:AA:674:G:C8	2.30	0.65
2:AB:119:GLU:O	2:AB:122:PHE:HB3	1.96	0.65
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.77	0.65
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.79	0.65
12:AL:79:GLU:O	12:AL:80:HIS:HB2	1.95	0.65
13:AM:10:PRO:HB3	13:AM:18:ALA:HB1	1.79	0.65
13:AM:2:ALA:O	13:AM:9:ILE:HA	1.97	0.65
28:B2:35:LEU:CD1	28:B2:50:ILE:HG13	2.20	0.65
32:B6:17:LYS:HB3	32:B6:18:ARG:NH1	2.11	0.65
36:BA:108:U:H2'	36:BA:109:G:H8	1.61	0.65
36:BA:2138:C:H2'	36:BA:2139:C:C6	2.31	0.65
32:B6:5:VAL:HG11	36:BA:2283:C:H5'	1.78	0.65
36:BA:744:G:OP1	40:BE:132:HIS:HB3	1.96	0.65
43:BH:18:GLU:HB2	43:BH:25:LYS:HB2	1.79	0.65
2:CB:119:GLU:O	2:CB:122:PHE:HB3	1.97	0.65
9:CI:19:LEU:HD21	9:CI:59:PHE:CD2	2.31	0.65
13:CM:2:ALA:O	13:CM:9:ILE:HA	1.96	0.65
16:CP:20:VAL:CG2	16:CP:32:TYR:HB2	2.26	0.65
17:CQ:53:LEU:HD23	17:CQ:54:GLY:N	2.12	0.65
19:CS:24:ALA:O	19:CS:25:LYS:HB2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:43:GLU:C	19:CS:45:VAL:H	2.00	0.65
36:DA:2467:C:H4'	49:DQ:123:HIS:ND1	2.10	0.65
36:DA:2629:A:N3	36:DA:2629:A:H2'	2.11	0.65
49:DQ:79:LEU:HD23	49:DQ:80:GLU:H	1.61	0.65
50:DR:96:ARG:NH1	50:DR:117:VAL:HG23	2.12	0.65
36:DA:64:A:C4	56:DX:66:LEU:HD12	2.30	0.65
57:DY:74:PRO:O	57:DY:75:ILE:HB	1.94	0.65
3:AC:16:ARG:CB	3:AC:16:ARG:HH11	2.09	0.65
3:AC:94:LEU:O	3:AC:95:THR:HB	1.96	0.65
25:AZ:107:SER:OG	25:AZ:137:LYS:HD2	1.97	0.65
25:AZ:88:TYR:N	25:AZ:88:TYR:CD1	2.61	0.65
36:BA:2712:U:H1'	36:BA:2712(A):A:C8	2.31	0.65
36:BA:2760:C:C2'	36:BA:2761:G:H5''	2.27	0.65
36:BA:2790:A:H2'	36:BA:2791:C:H5''	1.77	0.65
42:BG:173:LEU:O	42:BG:178:PHE:HB2	1.96	0.65
50:BR:2:ARG:N	50:BR:2:ARG:HH11	1.95	0.65
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.96	0.65
54:BV:40:LEU:H	54:BV:47:VAL:HG13	1.60	0.65
55:BW:59:VAL:HG21	55:BW:66:GLU:N	2.12	0.65
1:CA:1104:G:O5'	2:CB:111:ARG:HD2	1.97	0.65
16:CP:21:VAL:HG22	16:CP:21:VAL:O	1.96	0.65
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.12	0.65
22:CV:52:G:H1	22:CV:62:C:H42	1.44	0.65
25:CZ:88:TYR:N	25:CZ:88:TYR:CD1	2.61	0.65
32:D6:7:ILE:HB	32:D6:27:LYS:NZ	2.11	0.65
36:DA:1353:A:H2'	36:DA:1354:A:C8	2.32	0.65
36:DA:2125:G:OP1	38:DC:40:THR:HG21	1.96	0.65
36:DA:34:C:H41	36:DA:447:A:H61	1.43	0.65
47:DO:94:ARG:HG2	47:DO:94:ARG:HH11	1.61	0.65
48:DP:135:LEU:HD13	48:DP:135:LEU:O	1.96	0.65
52:DT:27:THR:H	52:DT:49:VAL:HG12	1.62	0.65
1:AA:1065:U:H6	1:AA:1190:G:H21	1.44	0.65
10:AJ:46:ARG:HH11	10:AJ:46:ARG:HG2	1.62	0.65
25:AZ:270:VAL:HG13	25:AZ:286:VAL:HG21	1.78	0.65
25:AZ:324:LYS:HD3	25:AZ:365:GLY:HA3	1.77	0.65
32:B6:14:THR:O	32:B6:49:HIS:HA	1.96	0.65
36:BA:448:U:H1'	41:BF:84:VAL:HG13	1.78	0.65
26:B0:27:GLU:OE1	36:BA:856:C:H1'	1.96	0.65
36:BA:944:G:H5'	36:BA:945:A:O5'	1.96	0.65
40:BE:11:MET:HB2	40:BE:23:VAL:O	1.97	0.65
36:BA:244:A:H4'	48:BP:74:GLU:HG3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:104:ARG:HE	52:BT:33:LYS:HE3	1.61	0.65
9:CI:88:TYR:O	9:CI:89:ASN:HB2	1.95	0.65
28:D2:2:LYS:HG3	28:D2:59:ARG:NH2	2.12	0.65
36:DA:2712:U:H1'	36:DA:2712(A):A:C8	2.31	0.65
41:DF:192:LEU:C	41:DF:192:LEU:HD23	2.16	0.65
42:DG:47:LYS:NZ	42:DG:82:LEU:HB2	2.11	0.65
46:DN:58:ASP:O	46:DN:60:ILE:N	2.30	0.65
50:DR:117:VAL:O	50:DR:118:GLU:HB2	1.97	0.65
52:DT:62:THR:HG22	52:DT:75:ILE:HG13	1.77	0.65
53:DU:85:LYS:CD	53:DU:117:GLN:HE22	2.10	0.65
11:AK:38:ASN:HD22	11:AK:38:ASN:N	1.95	0.65
25:AZ:131:ILE:O	25:AZ:168:VAL:HG13	1.96	0.65
1:AA:358:U:C4'	25:AZ:234:ARG:C	2.61	0.65
25:AZ:114:PRO:HB2	36:BA:2660:A:O2'	1.96	0.65
42:BG:139:LEU:HD11	42:BG:149:VAL:HG11	1.78	0.65
43:BH:52:VAL:HG21	43:BH:69:ARG:CG	2.27	0.65
57:BY:46:LYS:HG2	57:BY:47:LYS:N	2.12	0.65
58:BZ:123:ASP:O	58:BZ:124:ILE:HG12	1.97	0.65
58:BZ:133:ILE:N	58:BZ:134:PRO:HD3	2.11	0.65
58:BZ:30:ASN:HD22	58:BZ:30:ASN:C	2.00	0.65
49:BQ:141:GLN:HG2	58:BZ:72:ARG:HD3	1.78	0.65
11:CK:57:THR:CG2	11:CK:60:ALA:H	2.09	0.65
13:CM:11:ARG:HG2	13:CM:12:ASN:ND2	2.12	0.65
24:CY:61:C:H2'	24:CY:62:U:C5'	2.27	0.65
24:CY:62:U:H6	24:CY:62:U:H5'	1.62	0.65
24:CY:72:U:C2'	24:CY:73:G:H5''	2.27	0.65
32:D6:5:VAL:N	32:D6:9:LEU:H	1.95	0.65
36:DA:1473:G:H2'	36:DA:1474:C:O4'	1.96	0.65
36:DA:1516:C:C2'	36:DA:1517:G:H5''	2.26	0.65
36:DA:83:G:N2	36:DA:102:G:H2'	2.12	0.65
36:DA:89:G:H3'	36:DA:90:U:C5'	2.27	0.65
39:DD:26:LYS:O	39:DD:27:THR:HG22	1.96	0.65
55:DW:69:LEU:HA	55:DW:108:GLY:O	1.96	0.65
1:AA:1325:C:P	21:AU:15:ARG:NH2	2.70	0.65
2:AB:96:ARG:HD3	2:AB:148:TYR:HE1	1.62	0.65
4:AD:59:ARG:HH21	4:AD:62:GLN:HG3	1.62	0.65
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.32	0.65
27:B1:8:SER:HB3	27:B1:66:HIS:NE2	2.12	0.65
36:BA:1499:C:O2'	36:BA:1500:G:H5'	1.97	0.65
36:BA:2777:G:H5''	36:BA:2778:A:C5'	2.26	0.65
36:BA:774:A:H2	36:BA:787:U:HO2'	1.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:25:A:H2'	37:BB:25:A:N3	2.12	0.65
39:BD:148:GLU:HB2	39:BD:151:LYS:HD2	1.79	0.65
42:BG:12:TYR:HA	42:BG:16:ARG:HG2	1.78	0.65
42:BG:2:PRO:O	42:BG:3:LEU:HB2	1.97	0.65
48:BP:58:THR:C	48:BP:60:MET:N	2.50	0.65
52:BT:27:THR:H	52:BT:49:VAL:HG12	1.62	0.65
1:CA:1065:U:H6	1:CA:1190:G:H21	1.44	0.65
1:CA:108:G:H5'	1:CA:109:A:H5''	1.78	0.65
1:CA:186:C:H2'	1:CA:187:C:C6	2.31	0.65
6:CF:19:LEU:HD23	6:CF:19:LEU:O	1.97	0.65
10:CJ:40:LEU:HD23	10:CJ:40:LEU:N	2.09	0.65
12:CL:33:ARG:HD3	12:CL:62:SER:HB3	1.77	0.65
41:DF:185:ASP:HA	41:DF:188:ARG:CD	2.27	0.65
48:DP:146:VAL:HG22	48:DP:147:LEU:N	2.06	0.65
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CZ	2.31	0.65
51:DS:40:ILE:HG13	51:DS:41:ASP:N	2.10	0.65
55:DW:14:PRO:HG2	55:DW:78:GLU:HG3	1.78	0.65
57:DY:75:ILE:HG13	57:DY:76:CYS:H	1.61	0.65
1:AA:359:U:P	25:AZ:235:GLY:HA2	2.37	0.65
1:AA:405:U:H3'	1:AA:406:G:H5'	1.79	0.65
5:AE:144:THR:O	5:AE:148:VAL:HG23	1.96	0.65
18:AR:58:LEU:HD22	18:AR:62:GLU:HB3	1.79	0.65
22:AV:42:C:H6	22:AV:42:C:C5'	2.05	0.65
25:AZ:152:MET:HE2	25:AZ:156:ASP:HB2	1.79	0.65
36:BA:1658:C:OP1	40:BE:132:HIS:ND1	2.30	0.65
36:BA:191:A:H2'	36:BA:192:C:C6	2.32	0.65
36:BA:197:A:C8	36:BA:197:A:H5'	2.32	0.65
40:BE:57:LYS:HE3	40:BE:57:LYS:CA	2.21	0.65
40:BE:51:PHE:O	40:BE:74:PRO:HB2	1.96	0.65
41:BF:201:VAL:HA	41:BF:204:ASN:HD22	1.62	0.65
43:BH:85:LYS:O	43:BH:85:LYS:HE2	1.96	0.65
48:BP:45:LEU:HD13	48:BP:46:LYS:H	1.62	0.65
48:BP:58:THR:O	48:BP:60:MET:N	2.29	0.65
55:BW:4:LYS:HG2	55:BW:5:ALA:N	2.11	0.65
1:CA:260:G:H2'	1:CA:261:U:C6	2.32	0.65
5:CE:12:LEU:HD23	5:CE:13:ILE:N	2.12	0.65
12:CL:33:ARG:HG2	12:CL:60:LEU:HD12	1.77	0.65
16:CP:25:ARG:HG3	16:CP:25:ARG:HH11	1.61	0.65
31:D5:48:GLU:O	31:D5:49:CYS:SG	2.55	0.65
36:DA:1887:C:C3'	36:DA:1888:G:H5''	2.27	0.65
36:DA:197:A:H5'	36:DA:197:A:C8	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2524:G:C8	36:DA:2524:G:H5'	2.31	0.65
48:DP:84:ASN:CG	48:DP:116:GLY:HA2	2.17	0.65
50:DR:28:LEU:O	50:DR:30:THR:N	2.29	0.65
58:DZ:151:HIS:HB2	58:DZ:169:GLU:O	1.97	0.65
1:AA:882:C:O2'	1:AA:883:C:H5'	1.97	0.64
1:AA:950:U:H2'	1:AA:951:G:C8	2.31	0.64
3:AC:23:TYR:CD1	3:AC:24:ALA:N	2.65	0.64
13:AM:54:VAL:O	13:AM:58:GLU:HG2	1.98	0.64
13:AM:9:ILE:HD12	13:AM:9:ILE:N	2.12	0.64
24:AY:10:G:H1	24:AY:25:C:N4	1.95	0.64
24:AY:61:C:H2'	24:AY:62:U:C5'	2.27	0.64
32:B6:11:LEU:HB3	32:B6:24:GLU:O	1.97	0.64
36:BA:1666:G:H2'	36:BA:1667:G:H5'	1.78	0.64
36:BA:176:G:O2'	36:BA:177:G:H5'	1.98	0.64
39:BD:186:HIS:CD2	39:BD:188:GLU:HB2	2.32	0.64
49:BQ:101:ARG:HD2	49:BQ:102:VAL:H	1.62	0.64
52:BT:32:TYR:O	52:BT:33:LYS:HB2	1.96	0.64
52:BT:48:ILE:HD12	52:BT:49:VAL:N	2.12	0.64
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.97	0.64
1:CA:41:G:H2'	1:CA:42:G:C8	2.32	0.64
2:CB:157:ARG:NH1	2:CB:157:ARG:HB3	2.12	0.64
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.62	0.64
25:CZ:90:LYS:HE3	25:CZ:348:ASP:OD2	1.96	0.64
26:D0:62:LEU:HD23	26:D0:62:LEU:N	2.12	0.64
32:D6:17:LYS:HB3	32:D6:18:ARG:NH1	2.11	0.64
36:DA:970:C:H2'	36:DA:971:C:C6	2.30	0.64
40:DE:38:THR:HB	40:DE:41:LYS:HG2	1.78	0.64
43:DH:89:ILE:O	43:DH:89:ILE:HG13	1.97	0.64
36:DA:958:U:H5''	49:DQ:14:ARG:CD	2.27	0.64
1:AA:723:U:H2'	1:AA:723:U:O2	1.96	0.64
1:AA:953:G:H5'	1:AA:965:A:H61	1.61	0.64
1:AA:977:A:H2'	1:AA:977:A:N3	2.11	0.64
2:AB:200:ILE:CD1	2:AB:200:ILE:H	1.99	0.64
8:AH:19:VAL:HG23	8:AH:21:LYS:HG3	1.80	0.64
14:AN:23:ARG:HD2	14:AN:28:GLY:O	1.98	0.64
22:AW:1:G:H2'	22:AW:1:G:N3	2.11	0.64
24:AY:40:C:C2'	24:AY:41:C:H5''	2.26	0.64
36:BA:1221(A):C:H2'	36:BA:1222:C:H6	1.60	0.64
36:BA:1516:C:C2'	36:BA:1517:G:H5''	2.27	0.64
36:BA:1858:G:H2'	36:BA:1883:G:H22	1.62	0.64
36:BA:208:C:H2'	36:BA:209:C:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2801(A):A:H5'	36:BA:2802:G:C8	2.32	0.64
38:BC:214:VAL:CG2	38:BC:224:ILE:HD13	2.26	0.64
38:BC:43:VAL:HG23	38:BC:175:VAL:HG21	1.80	0.64
36:BA:1813:G:H1'	39:BD:50:THR:OG1	1.97	0.64
43:BH:105:LEU:HD23	43:BH:105:LEU:H	1.62	0.64
43:BH:89:ILE:O	43:BH:89:ILE:HG13	1.97	0.64
48:BP:23:PRO:HB2	48:BP:33:ARG:CD	2.27	0.64
53:BU:61:TRP:O	53:BU:65:ILE:HD13	1.96	0.64
57:BY:75:ILE:HG13	57:BY:76:CYS:H	1.62	0.64
58:BZ:89:PHE:CE2	58:BZ:96:VAL:HG21	2.29	0.64
3:CC:16:ARG:HD3	3:CC:17:ASP:H	1.62	0.64
21:CU:8:THR:O	21:CU:12:LYS:HB2	1.97	0.64
22:CW:38:A:H2'	22:CW:39:U:C4'	2.27	0.64
25:CZ:191:GLY:CA	25:CZ:197:ASP:CG	2.65	0.64
25:CZ:7:ARG:O	25:CZ:8:THR:HG22	1.98	0.64
36:DA:2022:U:O2'	36:DA:2617:C:H5'	1.97	0.64
36:DA:2720:U:O2	36:DA:2720:U:H2'	1.97	0.64
36:DA:448:U:H1'	41:DF:84:VAL:HG13	1.79	0.64
42:DG:144:ILE:HG23	42:DG:144:ILE:O	1.98	0.64
43:DH:85:LYS:O	43:DH:85:LYS:HE2	1.97	0.64
48:DP:80:TYR:HD1	48:DP:111:ARG:HB3	1.61	0.64
51:DS:15:ARG:O	51:DS:18:ILE:HD11	1.97	0.64
56:DX:64:LYS:NZ	56:DX:73:ARG:HH21	1.94	0.64
58:DZ:151:HIS:HB2	58:DZ:170:THR:HA	1.80	0.64
1:AA:950:U:H2'	1:AA:951:G:H8	1.63	0.64
3:AC:134:ILE:O	3:AC:138:VAL:HG12	1.96	0.64
4:AD:3:ARG:HH11	4:AD:118:ARG:HD3	1.61	0.64
10:AJ:33:GLN:HB2	10:AJ:75:ILE:CD1	2.27	0.64
21:AU:6:ARG:CD	21:AU:15:ARG:NH1	2.60	0.64
32:B6:15:GLU:OE1	32:B6:18:ARG:NE	2.30	0.64
36:BA:1278:A:H5''	50:BR:36:THR:HG22	1.80	0.64
36:BA:1290:C:H2'	36:BA:1291:C:C6	2.32	0.64
36:BA:2377:A:O2'	36:BA:2378:A:H5'	1.97	0.64
36:BA:2580:U:H4'	40:BE:130:GLY:HA3	1.80	0.64
36:BA:708:C:H42	36:BA:723:G:H1	1.45	0.64
36:BA:902:C:H2'	36:BA:903:C:C6	2.32	0.64
38:BC:190:ARG:O	38:BC:194:ARG:HG3	1.97	0.64
36:BA:2635:C:OP1	40:BE:77:ILE:HG21	1.97	0.64
40:BE:33:VAL:HG12	40:BE:90:THR:HA	1.78	0.64
42:BG:114:ILE:HG23	42:BG:116:ASP:O	1.98	0.64
48:BP:23:PRO:CD	48:BP:33:ARG:HE	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:28:LEU:O	50:BR:30:THR:N	2.29	0.64
36:BA:2870:C:H5"	50:BR:65:LEU:HD21	1.79	0.64
52:BT:27:THR:HG23	52:BT:28:VAL:N	2.12	0.64
56:BX:64:LYS:NZ	56:BX:73:ARG:HH21	1.95	0.64
1:CA:636:U:H2'	1:CA:637:G:C8	2.33	0.64
2:CB:172:ILE:CD1	2:CB:172:ILE:H	2.10	0.64
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	1.77	0.64
12:CL:77:LEU:HD21	12:CL:107:ALA:HA	1.78	0.64
13:CM:83:ASP:OD1	13:CM:84:ILE:N	2.30	0.64
24:CY:61:C:H2'	24:CY:62:U:H5"	1.79	0.64
36:DA:1208:C:O2	36:DA:1208:C:H2'	1.97	0.64
36:DA:2760:C:C2'	36:DA:2761:G:H5"	2.27	0.64
43:DH:121:ILE:HD13	43:DH:144:VAL:HG21	1.79	0.64
48:DP:40:SER:O	48:DP:41:ARG:HD2	1.98	0.64
50:DR:96:ARG:HH12	50:DR:117:VAL:HG23	1.61	0.64
52:DT:30:VAL:HG12	52:DT:44:ASP:CG	2.17	0.64
54:DV:18:LEU:CD2	54:DV:19:LYS:H	2.10	0.64
1:AA:108:G:H5'	1:AA:109:A:H5"	1.80	0.64
5:AE:33:VAL:HG12	5:AE:112:LEU:HD12	1.78	0.64
10:AJ:40:LEU:N	10:AJ:40:LEU:HD23	2.11	0.64
17:AQ:18:THR:HG23	17:AQ:69:LYS:NZ	2.12	0.64
34:B8:6:THR:HG23	34:B8:62:LEU:HD12	1.78	0.64
36:BA:1542:A:C8	36:BA:1544:A:H5'	2.32	0.64
36:BA:1639:U:C2'	36:BA:1640:C:H5"	2.28	0.64
36:BA:2208:A:H1'	36:BA:2219:G:C5	2.33	0.64
36:BA:2308:G:N7	36:BA:2310:A:H5'	2.12	0.64
36:BA:286:C:H2'	36:BA:287:C:C6	2.32	0.64
36:BA:709:U:H2'	36:BA:710:G:C8	2.32	0.64
36:BA:969:U:H2'	36:BA:970:C:C6	2.33	0.64
36:BA:970:C:H2'	36:BA:971:C:C6	2.32	0.64
38:BC:34:THR:HG22	38:BC:34:THR:O	1.97	0.64
40:BE:61:ARG:HB3	40:BE:62:PRO:HD3	1.78	0.64
43:BH:169:VAL:HG22	43:BH:170:ARG:N	2.08	0.64
48:BP:33:ARG:O	48:BP:34:GLY:C	2.35	0.64
52:BT:78:LEU:C	52:BT:79:HIS:HD2	2.00	0.64
36:BA:105:C:O2'	57:BY:2:ARG:HG3	1.97	0.64
1:CA:299:G:H2'	1:CA:300:A:C8	2.33	0.64
4:CD:98:GLU:HG2	4:CD:189:PRO:HG3	1.80	0.64
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.13	0.64
13:CM:22:ILE:HB	13:CM:25:ILE:HD12	1.80	0.64
31:D5:49:CYS:O	31:D5:56:LYS:HD3	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:8:LYS:HE3	32:D6:25:LYS:HD3	1.79	0.64
36:DA:1188:U:O2'	36:DA:1189:A:H5'	1.97	0.64
36:DA:2472:G:H5'	36:DA:2473:U:C5'	2.27	0.64
36:DA:2688:U:H1'	36:DA:2721:A:N6	2.12	0.64
36:DA:645:C:H5'	36:DA:646:A:OP1	1.98	0.64
42:DG:72:ARG:HD3	42:DG:86:MET:HA	1.78	0.64
46:DN:76:SER:HB3	46:DN:81:GLY:HA3	1.78	0.64
52:DT:100:TYR:HD2	52:DT:103:ARG:NH2	1.96	0.64
52:DT:58:ASN:N	52:DT:58:ASN:HD22	1.92	0.64
24:AY:72:U:C2'	24:AY:73:G:H5''	2.28	0.64
1:AA:358:U:C5'	25:AZ:234:ARG:O	2.45	0.64
36:BA:2219:G:O2'	36:BA:2220:G:H5'	1.97	0.64
36:BA:907:U:OP1	49:BQ:24:GLY:N	2.24	0.64
46:BN:73:THR:HG22	46:BN:82:LEU:HD11	1.80	0.64
48:BP:96:THR:HG22	48:BP:126:VAL:HB	1.79	0.64
36:BA:958:U:H5''	49:BQ:14:ARG:CD	2.27	0.64
54:BV:68:LYS:HA	54:BV:68:LYS:HE2	1.78	0.64
36:BA:26:G:OP1	55:BW:80:PRO:HB3	1.98	0.64
57:BY:84:ARG:CZ	57:BY:97:ARG:HB3	2.28	0.64
58:BZ:72:ARG:HG3	58:BZ:89:PHE:HB2	1.79	0.64
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.46	0.64
1:CA:1525:G:O2'	1:CA:1526:G:H5'	1.98	0.64
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.33	0.64
36:DA:2189:U:H2'	36:DA:2190:G:C4'	2.28	0.64
43:DH:144:VAL:O	43:DH:148:ILE:HG12	1.96	0.64
48:DP:58:THR:C	48:DP:60:MET:N	2.51	0.64
51:DS:66:ALA:HA	51:DS:69:VAL:CG1	2.27	0.64
54:DV:52:VAL:HG13	54:DV:55:ALA:HB3	1.79	0.64
36:DA:105:C:O2'	57:DY:2:ARG:HG3	1.97	0.64
1:AA:1239:A:H4'	1:AA:1240:U:O5'	1.98	0.64
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.80	0.64
1:AA:260:G:H2'	1:AA:261:U:C6	2.33	0.64
5:AE:7:GLU:HG2	5:AE:112:LEU:HD21	1.79	0.64
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	1.79	0.64
27:B1:88:LYS:O	27:B1:91:LYS:HB3	1.97	0.64
34:B8:30:ARG:HA	34:B8:30:ARG:HE	1.62	0.64
36:BA:2309:A:H2'	36:BA:2310:A:H5''	1.79	0.64
36:BA:2377:A:H4'	51:BS:107:GLU:O	1.97	0.64
36:BA:645:C:H5'	36:BA:646:A:OP1	1.97	0.64
28:B2:3:LEU:HB3	36:BA:98:G:OP1	1.98	0.64
39:BD:26:LYS:N	39:BD:26:LYS:HE2	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:30:GLU:CD	39:BD:63:ARG:HH21	2.01	0.64
55:BW:69:LEU:HA	55:BW:108:GLY:O	1.98	0.64
1:CA:1537:U:C5'	18:CR:54:ARG:NH2	2.59	0.64
1:CA:353:A:H5'	1:CA:353:A:C8	2.29	0.64
1:CA:405:U:H3'	1:CA:406:G:H5'	1.78	0.64
5:CE:33:VAL:HG12	5:CE:112:LEU:HD12	1.78	0.64
25:CZ:202:LEU:O	25:CZ:206:ILE:HB	1.98	0.64
28:D2:9:GLN:O	28:D2:10:LEU:HD23	1.96	0.64
28:D2:29:LYS:CD	28:D2:32:LEU:HD13	2.21	0.64
31:D5:3:LYS:O	31:D5:4:HIS:C	2.36	0.64
36:DA:597:U:O2'	48:DP:15:ARG:HG2	1.97	0.64
39:DD:37:LEU:HD23	39:DD:38:LYS:N	2.13	0.64
40:DE:61:ARG:HB3	40:DE:62:PRO:HD3	1.80	0.64
42:DG:114:ILE:HG22	42:DG:117:PHE:HB2	1.80	0.64
42:DG:96:ARG:O	42:DG:98:ARG:HG2	1.98	0.64
43:DH:83:TYR:HB3	43:DH:135:GLY:H	1.61	0.64
53:DU:110:VAL:O	53:DU:113:ALA:HB3	1.98	0.64
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.33	0.64
4:AD:98:GLU:HG2	4:AD:189:PRO:HG3	1.80	0.64
18:AR:53:ARG:HH11	18:AR:60:ALA:HA	1.62	0.64
31:B5:3:LYS:O	31:B5:4:HIS:C	2.35	0.64
36:BA:329:G:H22	57:BY:19:LYS:HE3	1.62	0.64
36:BA:943:U:OP2	48:BP:38:GLN:CD	2.36	0.64
38:BC:78:ALA:O	38:BC:79:LYS:HB2	1.98	0.64
39:BD:31:LYS:HZ1	39:BD:33:LEU:HG	1.62	0.64
41:BF:125:LEU:HD23	41:BF:125:LEU:N	2.13	0.64
41:BF:25:PRO:HB3	41:BF:119:ARG:HD3	1.79	0.64
50:BR:117:VAL:O	50:BR:118:GLU:HB2	1.97	0.64
50:BR:12:ARG:HD3	50:BR:16:HIS:CE1	2.32	0.64
52:BT:33:LYS:NZ	52:BT:43:GLN:HE21	1.95	0.64
52:BT:84:GLN:O	52:BT:85:LYS:HG3	1.97	0.64
53:BU:3:ARG:HH12	53:BU:5:LYS:HE2	1.62	0.64
58:BZ:60:GLU:OE1	58:BZ:60:GLU:HA	1.97	0.64
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.80	0.64
1:CA:950:U:H2'	1:CA:951:G:C8	2.32	0.64
4:CD:148:VAL:HG12	4:CD:152:SER:HB2	1.79	0.64
1:CA:963:G:N2	10:CJ:55:LYS:HE2	2.12	0.64
12:CL:75:HIS:HA	12:CL:102:ARG:NH2	2.13	0.64
13:CM:17:VAL:O	13:CM:20:THR:HB	1.97	0.64
13:CM:9:ILE:N	13:CM:9:ILE:HD12	2.12	0.64
20:CT:30:LYS:HD3	20:CT:72:LEU:HD21	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2761:G:H2'	36:DA:2762:G:C5'	2.20	0.64
36:DA:2870:C:H5''	50:DR:65:LEU:HD21	1.80	0.64
39:DD:45:ASN:CG	39:DD:46:GLN:H	1.97	0.64
40:DE:48:GLN:HB2	40:DE:80:GLU:HG2	1.80	0.64
48:DP:147:LEU:HG	48:DP:148:LEU:N	2.08	0.64
50:DR:28:LEU:HD13	50:DR:114:VAL:HG23	1.79	0.64
51:DS:89:ARG:HG2	51:DS:92:TYR:HA	1.79	0.64
53:DU:91:ASP:O	53:DU:95:LEU:HB2	1.97	0.64
31:D5:25:LEU:HD12	55:DW:19:LEU:HG	1.79	0.64
55:DW:59:VAL:HG21	55:DW:66:GLU:N	2.11	0.64
7:AG:6:ARG:HH21	7:AG:94:ARG:HH12	1.43	0.64
1:AA:473:G:H5''	16:AP:81:ARG:NE	2.13	0.64
24:AY:24:G:H2'	24:AY:25:C:H5'	1.80	0.64
24:AY:64:U:H4'	25:AZ:392:GLY:H	1.61	0.64
26:B0:27:GLU:OE1	26:B0:27:GLU:N	2.25	0.64
33:B7:34:ARG:NH1	33:B7:34:ARG:HG3	2.12	0.64
36:BA:1019:U:O2'	36:BA:1021:A:H2	1.79	0.64
36:BA:1294:U:C5'	36:BA:1294:U:H6	2.10	0.64
36:BA:2189:U:H2'	36:BA:2190:G:C4'	2.27	0.64
36:BA:259:G:H1'	36:BA:621:A:O2'	1.98	0.64
36:BA:2657:A:H5''	36:BA:2658:C:C5	2.33	0.64
39:BD:63:ARG:NH1	39:BD:63:ARG:HG3	2.13	0.64
40:BE:2:LYS:HD3	40:BE:95:ILE:HG22	1.80	0.64
48:BP:121:LYS:O	48:BP:123:LEU:HD23	1.96	0.64
50:BR:96:ARG:HH12	50:BR:117:VAL:HG23	1.63	0.64
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	1.98	0.64
1:CA:636:U:H2'	1:CA:637:G:H8	1.63	0.64
1:CA:977:A:N3	1:CA:977:A:H2'	2.11	0.64
2:CB:114:ARG:HD3	2:CB:114:ARG:O	1.97	0.64
3:CC:5:ILE:H	3:CC:5:ILE:HD13	1.56	0.64
12:CL:25:PRO:C	12:CL:27:LEU:H	2.01	0.64
19:CS:45:VAL:HG23	19:CS:46:GLY:N	2.12	0.64
25:CZ:152:MET:CE	25:CZ:156:ASP:HB2	2.28	0.64
25:CZ:355:LEU:CB	25:CZ:356:PRO:HD3	2.22	0.64
36:DA:2186:G:H2'	36:DA:2187:G:N9	2.13	0.64
36:DA:2777:G:H5''	36:DA:2778:A:C5'	2.26	0.64
46:DN:19:GLU:HA	46:DN:59:LYS:HB2	1.80	0.64
51:DS:88:ASP:OD2	51:DS:89:ARG:N	2.29	0.64
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.80	0.64
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.98	0.64
12:AL:43:VAL:CG2	12:AL:93:LEU:HD22	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:51:VAL:HG21	26:B0:79:VAL:O	1.96	0.64
28:B2:52:ASP:HA	28:B2:55:ARG:HB2	1.80	0.64
28:B2:63:VAL:HA	28:B2:66:GLU:HG2	1.80	0.64
31:B5:44:THR:CG2	50:BR:101:ALA:N	2.61	0.64
36:BA:1301:A:HO2'	36:BA:1302:A:H2'	1.58	0.64
36:BA:2101:G:C3'	36:BA:2102:U:H5''	2.28	0.64
36:BA:2629:A:N3	36:BA:2629:A:H2'	2.11	0.64
36:BA:2688:U:H1'	36:BA:2721:A:N6	2.12	0.64
36:BA:848:G:C4	36:BA:933:A:H8	2.16	0.64
38:BC:30:LYS:HE2	38:BC:180:PHE:O	1.97	0.64
39:BD:267:SER:HB3	39:BD:270:ILE:HD11	1.80	0.64
48:BP:49:ARG:HG3	48:BP:49:ARG:HH11	1.61	0.64
54:BV:99:ILE:N	54:BV:99:ILE:HD13	2.13	0.64
1:CA:979:C:C3'	1:CA:980:C:H5''	2.20	0.64
2:CB:200:ILE:CD1	2:CB:200:ILE:H	1.98	0.64
8:CH:18:ARG:HH11	8:CH:18:ARG:CA	2.10	0.64
13:CM:87:TYR:HD1	19:CS:81:ARG:HH22	1.44	0.64
22:CW:30:G:H2'	22:CW:31:A:H8	1.63	0.64
25:CZ:63:ILE:HA	25:CZ:88:TYR:HE2	1.61	0.64
31:D5:44:THR:HG23	50:DR:101:ALA:N	2.12	0.64
36:DA:2101:G:C3'	36:DA:2102:U:H5''	2.28	0.64
38:DC:119:VAL:O	38:DC:123:VAL:HG12	1.98	0.64
39:DD:176:ARG:NH1	39:DD:176:ARG:HG2	2.13	0.64
40:DE:33:VAL:HG12	40:DE:90:THR:HA	1.79	0.64
42:DG:64:THR:HG23	42:DG:66:GLN:N	2.13	0.64
48:DP:105:LEU:O	48:DP:106:LEU:HB2	1.96	0.64
58:DZ:51:ALA:HB1	58:DZ:57:ILE:HD11	1.79	0.64
1:AA:1310:G:O2'	1:AA:1311:G:H5'	1.97	0.64
1:AA:1217:C:OP1	14:AN:9:LYS:HE3	1.98	0.64
20:AT:30:LYS:HD3	20:AT:72:LEU:HD21	1.80	0.64
21:AU:6:ARG:CZ	21:AU:15:ARG:CZ	2.76	0.64
22:AW:38:A:H2'	22:AW:39:U:C4'	2.27	0.64
25:AZ:145:GLU:OE2	25:AZ:149:LEU:HD22	1.98	0.64
25:AZ:90:LYS:HE3	25:AZ:348:ASP:OD2	1.97	0.64
31:B5:4:HIS:C	36:BA:2056:G:H22	2.00	0.64
36:BA:833:U:H5''	48:BP:48:PRO:HB2	1.78	0.64
55:BW:14:PRO:HG2	55:BW:78:GLU:HG3	1.78	0.64
1:CA:189(H):G:O2'	1:CA:189(I):G:H8	1.81	0.64
1:CA:346:G:H2'	1:CA:346:G:N3	2.13	0.64
3:CC:91:LEU:HB2	3:CC:99:VAL:HG21	1.80	0.64
5:CE:7:GLU:HG2	5:CE:112:LEU:HD21	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:10:PRO:HB3	13:CM:18:ALA:HB1	1.79	0.64
24:CY:16:H2U:H5'	24:CY:17:H2U:C5'	2.28	0.64
25:CZ:272:MET:HE3	25:CZ:284:ASP:HB2	1.78	0.64
36:DA:2801(A):A:H5'	36:DA:2802:G:C8	2.32	0.64
36:DA:612:C:C2'	36:DA:613:G:H5''	2.28	0.64
36:DA:745:G:H2'	36:DA:746:A:H5'	1.78	0.64
43:DH:127:GLU:HB2	43:DH:130:ARG:HB2	1.80	0.64
36:DA:106:C:H1'	57:DY:2:ARG:NH2	2.12	0.64
1:AA:189(H):G:O2'	1:AA:189(I):G:H8	1.81	0.63
1:AA:487:A:H2'	1:AA:488:C:O4'	1.97	0.63
3:AC:16:ARG:HD3	3:AC:17:ASP:H	1.63	0.63
4:AD:148:VAL:HG12	4:AD:152:SER:HB2	1.79	0.63
1:AA:963:G:H21	10:AJ:55:LYS:NZ	1.95	0.63
11:AK:121:PRO:HG2	11:AK:126:ARG:CB	2.28	0.63
36:BA:1887:C:C3'	36:BA:1888:G:H5''	2.28	0.63
36:BA:2138:C:H2'	36:BA:2139:C:H6	1.61	0.63
36:BA:2186:G:H2'	36:BA:2187:G:N9	2.13	0.63
41:BF:104:LYS:O	41:BF:108:LYS:HG2	1.98	0.63
42:BG:86:MET:N	42:BG:87:PRO:HD3	2.13	0.63
1:CA:45:U:H2'	1:CA:46:G:H8	1.63	0.63
2:CB:215:LEU:O	2:CB:219:VAL:HG23	1.98	0.63
13:CM:108:ARG:HG3	13:CM:108:ARG:NH1	2.11	0.63
24:CY:24:G:H2'	24:CY:25:C:H5'	1.80	0.63
24:CY:57:G:H2'	24:CY:58:A:H5'	1.80	0.63
35:D9:10:ILE:N	35:D9:10:ILE:HD12	2.13	0.63
36:DA:1242:A:H5'	36:DA:1243:G:OP2	1.97	0.63
36:DA:1599:C:H2'	36:DA:1600:C:C6	2.33	0.63
36:DA:1858:G:H2'	36:DA:1883:G:H22	1.63	0.63
36:DA:191:A:H2'	36:DA:192:C:C6	2.33	0.63
36:DA:2630:G:H21	36:DA:2892:A:H1'	1.63	0.63
36:DA:612:C:H2'	36:DA:613:G:H5''	1.79	0.63
36:DA:259:G:H1'	36:DA:621:A:O2'	1.98	0.63
36:DA:744:G:OP1	40:DE:132:HIS:HB3	1.97	0.63
39:DD:109:ASP:HB2	39:DD:197:GLY:HA2	1.79	0.63
39:DD:26:LYS:N	39:DD:26:LYS:HE2	2.12	0.63
36:DA:1569:A:O2'	39:DD:38:LYS:HG3	1.97	0.63
41:DF:39:TRP:CD1	41:DF:101:LEU:HB2	2.32	0.63
44:DJ:128:UNK:C	44:DJ:130:UNK:H	2.11	0.63
46:DN:6:PRO:HB2	46:DN:9:VAL:CG2	2.29	0.63
52:DT:23:ARG:O	52:DT:25:GLY:N	2.31	0.63
52:DT:80:SER:CB	52:DT:81:PRO:HD3	2.22	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:34:GLU:HG3	54:DV:58:VAL:HG22	1.81	0.63
1:AA:346:G:N3	1:AA:346:G:H2'	2.13	0.63
1:AA:624:C:H2'	1:AA:625:G:H8	1.64	0.63
2:AB:114:ARG:HD3	2:AB:114:ARG:O	1.99	0.63
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.78	0.63
5:AE:101:ILE:O	5:AE:120:THR:HB	1.99	0.63
22:AV:47:U:H3'	22:AV:48:C:H5'	1.80	0.63
35:B9:7:VAL:HG22	35:B9:34:GLN:HG2	1.81	0.63
42:BG:136:ARG:O	42:BG:154:GLY:HA2	1.99	0.63
42:BG:64:THR:HG23	42:BG:66:GLN:H	1.62	0.63
42:BG:8:LYS:O	42:BG:11:TYR:HB3	1.98	0.63
51:BS:15:ARG:O	51:BS:18:ILE:HD11	1.99	0.63
52:BT:115:ARG:HG3	52:BT:115:ARG:NH1	2.13	0.63
54:BV:52:VAL:HG13	54:BV:55:ALA:HB3	1.80	0.63
54:BV:34:GLU:HG3	54:BV:58:VAL:HG22	1.80	0.63
57:BY:7:VAL:HG12	57:BY:83:THR:HG21	1.80	0.63
4:CD:3:ARG:HH11	4:CD:118:ARG:HD3	1.61	0.63
1:CA:706:A:C4'	11:CK:29:ILE:HD11	2.27	0.63
25:CZ:193:ASN:HB2	25:CZ:196:VAL:HB	1.80	0.63
36:DA:1720:U:C3'	36:DA:1721:G:H5''	2.28	0.63
36:DA:208:C:H2'	36:DA:209:C:C6	2.34	0.63
26:D0:14:ARG:HD2	36:DA:2279:G:O6	1.98	0.63
36:DA:2396:G:O2'	36:DA:2397:G:H5'	1.96	0.63
36:DA:860:U:C5	36:DA:917:A:N7	2.63	0.63
40:DE:11:MET:HB2	40:DE:23:VAL:O	1.97	0.63
48:DP:85:LEU:HA	48:DP:88:LEU:HB3	1.80	0.63
57:DY:27:VAL:HG12	57:DY:29:GLU:OE1	1.98	0.63
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.12	0.63
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.80	0.63
13:AM:87:TYR:HD1	19:AS:81:ARG:NH2	1.96	0.63
20:AT:50:GLU:H	20:AT:99:LEU:HD12	1.64	0.63
24:AY:57:G:H2'	24:AY:58:A:H5'	1.80	0.63
36:BA:110:G:O2'	36:BA:111:A:H5'	1.99	0.63
36:BA:2201:C:O2'	36:BA:2202:C:H5'	1.99	0.63
36:BA:2313:C:H5'	36:BA:2313:C:H6	1.62	0.63
36:BA:2389:G:H5''	36:BA:2390:U:O4'	1.99	0.63
36:BA:2303:G:H4'	42:BG:124:SER:O	1.97	0.63
42:BG:16:ARG:N	42:BG:17:PRO:HD2	2.14	0.63
48:BP:20:GLY:O	48:BP:21:ARG:HB2	1.97	0.63
49:BQ:135:ASP:H	49:BQ:137:TYR:HD2	1.44	0.63
54:BV:19:LYS:NZ	54:BV:20:LEU:H	1.96	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:39:LEU:HA	54:BV:47:VAL:CG1	2.27	0.63
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.99	0.63
1:CA:487:A:H2'	1:CA:488:C:O4'	1.98	0.63
13:CM:116:THR:O	13:CM:116:THR:HG22	1.98	0.63
16:CP:64:ALA:O	16:CP:66:PRO:HD3	1.98	0.63
20:CT:84:LEU:C	20:CT:86:ARG:H	2.02	0.63
30:D4:12:ALA:HB2	30:D4:29:PRO:HA	1.81	0.63
32:D6:11:LEU:HB3	32:D6:24:GLU:O	1.98	0.63
36:DA:1057:A:H2'	36:DA:1058:G:H8	1.63	0.63
36:DA:1222:C:H2'	36:DA:1223:G:H5''	1.79	0.63
36:DA:2219:G:O2'	36:DA:2220:G:H5'	1.99	0.63
36:DA:2469:A:O2'	49:DQ:56:ARG:HD2	1.97	0.63
36:DA:813:U:H2'	36:DA:814:C:C6	2.32	0.63
36:DA:83:G:HO2'	36:DA:84:A:H8	1.44	0.63
38:DC:72:VAL:HG23	38:DC:111:ASP:HB3	1.79	0.63
39:DD:34:VAL:CG2	39:DD:35:LYS:H	2.07	0.63
42:DG:11:TYR:HA	42:DG:15:VAL:CG2	2.27	0.63
36:DA:2744:G:N2	43:DH:143:GLN:OE1	2.31	0.63
48:DP:20:GLY:O	48:DP:21:ARG:HB2	1.98	0.63
49:DQ:101:ARG:HD2	49:DQ:102:VAL:N	2.13	0.63
50:DR:103:ARG:NE	55:DW:40:ASN:HD21	1.96	0.63
58:DZ:18:LEU:HD22	58:DZ:18:LEU:H	1.62	0.63
6:AF:97:PHE:O	18:AR:31:LEU:HD23	1.98	0.63
10:AJ:29:ARG:O	10:AJ:30:SER:HB3	1.99	0.63
12:AL:110:VAL:HG23	12:AL:120:TYR:HB3	1.81	0.63
25:AZ:19:HIS:NE2	36:BA:2661:G:OP1	2.32	0.63
25:AZ:34:VAL:HG21	25:AZ:199:ILE:HG21	1.79	0.63
35:B9:14:CYS:SG	35:B9:27:CYS:HB2	2.38	0.63
40:BE:4:ILE:HD11	40:BE:28:ALA:CB	2.27	0.63
42:BG:13:GLU:HG3	42:BG:14:GLU:HG3	1.81	0.63
48:BP:97:PRO:O	48:BP:98:GLU:HB3	1.98	0.63
1:CA:1325:C:P	21:CU:15:ARG:NH2	2.72	0.63
1:CA:532:A:N6	1:CA:1206:G:O2'	2.31	0.63
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.62	0.63
4:CD:18:LYS:HE3	4:CD:31:CYS:HB2	1.78	0.63
9:CI:114:TYR:HE2	10:CJ:59:SER:HA	1.62	0.63
19:CS:5:LEU:C	19:CS:6:LYS:HD3	2.19	0.63
24:CY:75:C:C5	25:CZ:232:THR:OG1	2.52	0.63
25:CZ:187:LYS:HD2	25:CZ:187:LYS:H	1.63	0.63
27:D1:66:HIS:O	27:D1:67:ILE:HG13	1.98	0.63
28:D2:10:LEU:HD13	28:D2:63:VAL:HG21	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:7:PRO:O	30:D4:8:LYS:HB3	1.99	0.63
36:DA:1278:A:H5''	50:DR:36:THR:HG22	1.80	0.63
36:DA:1542:A:C8	36:DA:1544:A:H5'	2.34	0.63
36:DA:268:C:H2'	36:DA:268:C:O2	1.98	0.63
39:DD:131:LEU:HB2	39:DD:136:ILE:HD11	1.80	0.63
39:DD:183:ARG:HD2	39:DD:269:PHE:O	1.98	0.63
48:DP:23:PRO:C	48:DP:33:ARG:CZ	2.67	0.63
48:DP:46:LYS:HB2	48:DP:52:GLU:HG2	1.80	0.63
36:DA:666:G:H4'	48:DP:49:ARG:NH1	2.14	0.63
48:DP:80:TYR:CD1	48:DP:111:ARG:HB3	2.33	0.63
50:DR:12:ARG:HD3	50:DR:16:HIS:CE1	2.33	0.63
52:DT:32:TYR:O	52:DT:33:LYS:HB2	1.97	0.63
58:DZ:122:ARG:HH11	58:DZ:122:ARG:HB3	1.63	0.63
58:DZ:128:VAL:HG22	58:DZ:129:SER:H	1.63	0.63
1:AA:1228:C:OP1	13:AM:115:LYS:HE3	1.99	0.63
9:AI:118:LYS:O	9:AI:119:ALA:HB3	1.99	0.63
20:AT:91:LEU:O	20:AT:94:ALA:HB3	1.99	0.63
24:AY:16:H2U:H5'	24:AY:17:H2U:C5'	2.28	0.63
36:BA:2672:G:C3'	36:BA:2673:G:H5''	2.29	0.63
36:BA:693:C:O2'	36:BA:694:U:H5'	1.98	0.63
38:BC:119:VAL:O	38:BC:123:VAL:HG12	1.98	0.63
39:BD:108:PRO:HD2	39:BD:111:LEU:HD12	1.81	0.63
39:BD:273:ARG:HH11	39:BD:273:ARG:HG2	1.62	0.63
41:BF:135:LYS:HB3	41:BF:138:GLU:CD	2.19	0.63
41:BF:89:VAL:HG12	41:BF:90:PHE:N	2.14	0.63
42:BG:86:MET:O	42:BG:86:MET:HG2	1.99	0.63
51:BS:89:ARG:HB3	51:BS:92:TYR:CB	2.28	0.63
54:BV:2:PHE:CB	54:BV:42:GLY:HA2	2.27	0.63
57:BY:13:VAL:O	57:BY:24:VAL:HG13	1.98	0.63
1:CA:723:U:O2	1:CA:723:U:H2'	1.98	0.63
1:CA:865:A:H2	1:CA:918:A:H4'	1.64	0.63
1:CA:950:U:H2'	1:CA:951:G:H8	1.64	0.63
2:CB:134:GLU:C	2:CB:136:VAL:H	2.02	0.63
16:CP:25:ARG:HB2	16:CP:25:ARG:NH1	2.12	0.63
12:CL:8:ASN:HD22	17:CQ:34:LYS:NZ	1.96	0.63
25:CZ:196:VAL:O	25:CZ:196:VAL:HG13	1.98	0.63
25:CZ:355:LEU:CB	25:CZ:356:PRO:CD	2.60	0.63
36:DA:1068:G:H2'	36:DA:1068:G:N3	2.13	0.63
36:DA:1221(A):C:H2'	36:DA:1222:C:H6	1.62	0.63
36:DA:1294:U:H6	36:DA:1294:U:H5'	1.62	0.63
36:DA:2842:G:O2'	36:DA:2843:G:H5'	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:611:C:H2'	36:DA:612:C:C6	2.34	0.63
42:DG:102:PHE:O	42:DG:103:LEU:HB2	1.98	0.63
42:DG:91:ARG:HD3	42:DG:93:THR:HG22	1.81	0.63
48:DP:115:LEU:HA	48:DP:131:SER:OG	1.98	0.63
49:DQ:68:ILE:HG23	49:DQ:103:MET:HA	1.81	0.63
52:DT:78:LEU:C	52:DT:79:HIS:HD2	2.01	0.63
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.14	0.63
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.81	0.63
24:AY:62:U:H5'	24:AY:62:U:H6	1.62	0.63
25:AZ:187:LYS:H	25:AZ:187:LYS:HD2	1.64	0.63
25:AZ:234:ARG:O	25:AZ:289:LEU:HD11	1.98	0.63
36:BA:1058:G:C2'	36:BA:1059:G:H5''	2.27	0.63
36:BA:2199:A:H5'	36:BA:2200:C:OP2	1.98	0.63
36:BA:2314:C:O2'	36:BA:2315:G:H5'	1.98	0.63
38:BC:81:GLU:O	38:BC:84:LYS:HD3	1.98	0.63
39:BD:37:LEU:HD23	39:BD:38:LYS:N	2.14	0.63
41:BF:103:LYS:HG3	41:BF:106:ARG:HH21	1.64	0.63
50:BR:52:ILE:HB	50:BR:94:TYR:HD2	1.63	0.63
58:BZ:9:TYR:CE1	58:BZ:35:ARG:CZ	2.82	0.63
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.13	0.63
9:CI:95:LYS:HZ2	9:CI:96:LEU:HD13	1.62	0.63
26:D0:51:VAL:HG21	26:D0:79:VAL:O	1.99	0.63
35:D9:14:CYS:SG	35:D9:27:CYS:HB2	2.38	0.63
36:DA:1639:U:C2'	36:DA:1640:C:H5''	2.29	0.63
36:DA:1970:A:H5''	36:DA:1971:A:OP1	1.99	0.63
36:DA:2176:A:H8	36:DA:2176:A:O5'	1.82	0.63
36:DA:2309:A:H2'	36:DA:2310:A:H5''	1.80	0.63
36:DA:708:C:H42	36:DA:723:G:H1	1.46	0.63
48:DP:40:SER:O	48:DP:41:ARG:NH1	2.31	0.63
49:DQ:6:ARG:O	49:DQ:7:MET:HG3	1.98	0.63
53:DU:3:ARG:HG2	53:DU:3:ARG:NH1	2.12	0.63
53:DU:3:ARG:HH12	53:DU:5:LYS:HE2	1.63	0.63
57:DY:67:LEU:HD21	57:DY:71:LYS:HE2	1.81	0.63
1:AA:452:A:O2'	1:AA:453:A:H8	1.80	0.63
7:AG:23:VAL:HG13	7:AG:43:PHE:CE2	2.33	0.63
7:AG:7:ALA:O	7:AG:8:GLU:HB2	1.99	0.63
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.79	0.63
11:AK:57:THR:CG2	11:AK:60:ALA:H	2.11	0.63
16:AP:25:ARG:HH11	16:AP:25:ARG:HG3	1.62	0.63
24:AY:70:C:C2'	24:AY:71:C:H5'	2.29	0.63
25:AZ:267:VAL:HG23	25:AZ:288:VAL:HG13	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:9:LYS:HZ3	25:AZ:73:ALA:C	2.01	0.63
32:B6:12:GLU:HG3	32:B6:23:THR:HG22	1.80	0.63
36:BA:1314:C:H5'	36:BA:1314:C:H6	1.62	0.63
36:BA:2636:U:H4'	40:BE:80:GLU:OE1	1.98	0.63
42:BG:72:ARG:HB2	42:BG:87:PRO:CD	2.22	0.63
51:BS:52:SER:CB	51:BS:55:ALA:HB3	2.27	0.63
52:BT:90:GLN:C	52:BT:92:GLY:H	2.02	0.63
58:BZ:81:ARG:NH1	58:BZ:81:ARG:HB3	2.13	0.63
1:CA:452:A:O2'	1:CA:453:A:H8	1.82	0.63
2:CB:96:ARG:HD3	2:CB:148:TYR:HE1	1.63	0.63
7:CG:23:VAL:O	7:CG:27:ILE:HG13	1.99	0.63
21:CU:3:LYS:HD3	21:CU:14:TRP:CD1	2.34	0.63
21:CU:6:ARG:CD	21:CU:15:ARG:NH1	2.61	0.63
22:CV:44:G:C3'	22:CV:45:U:H5'	2.29	0.63
25:CZ:145:GLU:OE2	25:CZ:149:LEU:HD22	1.98	0.63
36:DA:583:G:OP2	53:DU:10:ARG:HD2	1.98	0.63
38:DC:40:THR:HG22	38:DC:177:LYS:CD	2.29	0.63
39:DD:108:PRO:HD2	39:DD:111:LEU:HD12	1.80	0.63
39:DD:186:HIS:CD2	39:DD:188:GLU:HB2	2.34	0.63
36:DA:1658:C:OP1	40:DE:132:HIS:ND1	2.31	0.63
36:DA:2636:U:H4'	40:DE:80:GLU:OE1	1.98	0.63
42:DG:86:MET:N	42:DG:87:PRO:HD3	2.14	0.63
48:DP:23:PRO:HB2	48:DP:33:ARG:CD	2.29	0.63
48:DP:58:THR:O	48:DP:60:MET:N	2.32	0.63
49:DQ:140:ALA:O	49:DQ:141:GLN:HB2	1.98	0.63
52:DT:107:ASP:H	52:DT:110:ILE:HG12	1.63	0.63
3:AC:34:LEU:O	3:AC:38:ARG:HG2	1.98	0.63
12:AL:55:VAL:HG23	12:AL:68:ALA:O	1.99	0.63
13:AM:108:ARG:HG3	13:AM:108:ARG:NH1	2.08	0.63
16:AP:67:THR:HB	16:AP:70:ALA:HB2	1.80	0.63
24:AY:3:G:H5'	24:AY:3:G:H8	1.64	0.63
25:AZ:196:VAL:HG13	25:AZ:196:VAL:O	1.99	0.63
31:B5:44:THR:HG21	50:BR:101:ALA:CB	2.28	0.63
31:B5:52:TYR:HE2	36:BA:2884:U:H1'	1.63	0.63
36:BA:1057:A:H2'	36:BA:1058:G:H8	1.63	0.63
34:B8:32:LEU:HD22	36:BA:2392:A:OP1	1.99	0.63
36:BA:597:U:O2'	48:BP:15:ARG:HG2	1.98	0.63
36:BA:2050:C:H1'	40:BE:156:MET:HE1	1.78	0.63
48:BP:105:LEU:O	48:BP:106:LEU:HB2	1.97	0.63
49:BQ:66:ILE:HA	49:BQ:104:PHE:HB3	1.81	0.63
50:BR:28:LEU:HD13	50:BR:114:VAL:HG23	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:14:SER:HA	50:BR:17:ARG:NH1	2.14	0.63
51:BS:66:ALA:HA	51:BS:69:VAL:CG1	2.28	0.63
58:BZ:79:ARG:NH1	58:BZ:79:ARG:HB3	2.13	0.63
17:CQ:5:VAL:HG22	17:CQ:60:ILE:HD12	1.80	0.63
24:CY:24:G:C2'	24:CY:25:C:C5'	2.66	0.63
28:D2:33:MET:O	28:D2:37:PHE:HD1	1.81	0.63
28:D2:46:GLN:HB3	28:D2:48:HIS:ND1	2.14	0.63
36:DA:1779:U:C5	36:DA:1784:A:N7	2.65	0.63
22:CW:71:G:OP1	36:DA:1893:C:H4'	1.98	0.63
36:DA:2199:A:H5'	36:DA:2200:C:OP2	1.98	0.63
36:DA:2308:G:N7	36:DA:2310:A:H5'	2.14	0.63
36:DA:902:C:H2'	36:DA:903:C:C6	2.34	0.63
43:DH:52:VAL:HG21	43:DH:69:ARG:CG	2.28	0.63
36:DA:958:U:H5''	49:DQ:14:ARG:HD3	1.80	0.63
50:DR:94:TYR:CD1	50:DR:94:TYR:N	2.64	0.63
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HG13	1.80	0.63
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.14	0.63
22:AW:31:A:N1	22:AW:39:U:O4	2.31	0.63
30:B4:12:ALA:HB2	30:B4:29:PRO:HA	1.81	0.63
32:B6:32:ASN:O	32:B6:33:LYS:HG2	1.99	0.63
36:BA:1068:G:N3	36:BA:1068:G:H2'	2.14	0.63
36:BA:1569:A:O2'	39:BD:38:LYS:HG3	1.98	0.63
36:BA:2512:C:H2'	36:BA:2513:G:O4'	1.98	0.63
36:BA:2852:G:H2'	36:BA:2853:C:H6	1.64	0.63
39:BD:48:ARG:HH11	39:BD:48:ARG:HG3	1.64	0.63
41:BF:185:ASP:HA	41:BF:188:ARG:HD3	1.81	0.63
41:BF:5:ALA:HB3	41:BF:18:ARG:O	1.98	0.63
42:BG:82:LEU:HD13	42:BG:87:PRO:CA	2.28	0.63
46:BN:31:ALA:O	46:BN:34:LEU:HB3	1.99	0.63
48:BP:115:LEU:HA	48:BP:131:SER:OG	1.99	0.63
49:BQ:134:ARG:CD	58:BZ:122:ARG:HH21	2.12	0.63
1:CA:1442(B):A:H2'	1:CA:1442(B):A:N3	2.14	0.63
4:CD:129:ASN:HD21	4:CD:145:GLU:H	1.45	0.63
11:CK:27:ASN:ND2	11:CK:28:THR:N	2.47	0.63
25:CZ:107:SER:OG	25:CZ:137:LYS:HD2	1.99	0.63
36:DA:110:G:O2'	36:DA:111:A:H5'	1.98	0.63
36:DA:943:U:OP2	48:DP:38:GLN:CD	2.36	0.63
37:DB:25:A:H2'	37:DB:25:A:N3	2.13	0.63
40:DE:107:THR:O	40:DE:190:GLY:HA2	1.98	0.63
41:DF:104:LYS:O	41:DF:108:LYS:HG2	1.99	0.63
46:DN:108:PRO:HG2	46:DN:113:GLY:CA	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:34:GLY:O	48:DP:35:HIS:HB2	1.98	0.63
48:DP:96:THR:HG22	48:DP:126:VAL:HB	1.79	0.63
57:DY:84:ARG:CZ	57:DY:97:ARG:HB3	2.29	0.63
1:AA:1438:G:C8	1:AA:1464:G:N2	2.67	0.62
16:AP:25:ARG:NH1	16:AP:25:ARG:HB2	2.13	0.62
36:BA:2206:G:N3	36:BA:2206:G:H3'	2.14	0.62
36:BA:2262:U:H2'	36:BA:2263:C:H6	1.64	0.62
36:BA:613:G:H5'	36:BA:613:G:H8	1.64	0.62
36:BA:845:G:H8	36:BA:845:G:OP2	1.82	0.62
39:BD:65:ILE:HG22	39:BD:104:TYR:HB3	1.81	0.62
40:BE:33:VAL:HG13	40:BE:69:LYS:CE	2.27	0.62
36:BA:958:U:H5''	49:BQ:14:ARG:HD3	1.79	0.62
36:BA:310:A:OP1	57:BY:18:GLY:HA2	1.99	0.62
1:CA:369:C:H5'	1:CA:369:C:H6	1.64	0.62
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.79	0.62
7:CG:7:ALA:O	7:CG:8:GLU:HB2	1.99	0.62
11:CK:33:THR:HG22	11:CK:39:PRO:HA	1.81	0.62
17:CQ:48:GLU:O	17:CQ:49:GLU:C	2.37	0.62
24:CY:70:C:C2'	24:CY:71:C:H5'	2.29	0.62
28:D2:25:VAL:HG21	28:D2:61:LEU:HD11	1.81	0.62
36:DA:1290:C:H2'	36:DA:1291:C:C6	2.34	0.62
36:DA:1294:U:H6	36:DA:1294:U:C5'	2.12	0.62
36:DA:1362:C:O2'	36:DA:1363:C:H5'	1.99	0.62
36:DA:83:G:O2'	36:DA:84:A:H8	1.82	0.62
38:DC:81:GLU:O	38:DC:84:LYS:HD3	1.98	0.62
39:DD:31:LYS:O	39:DD:35:LYS:HE3	1.99	0.62
40:DE:33:VAL:HG11	40:DE:89:ASP:O	1.99	0.62
48:DP:23:PRO:HD2	48:DP:33:ARG:NE	2.11	0.62
48:DP:97:PRO:O	48:DP:98:GLU:HB3	1.99	0.62
50:DR:52:ILE:HB	50:DR:94:TYR:HD2	1.63	0.62
57:DY:7:VAL:HG12	57:DY:83:THR:HG21	1.80	0.62
7:AG:15:ASP:HB3	7:AG:20:ASP:H	1.64	0.62
7:AG:23:VAL:O	7:AG:27:ILE:HG13	1.99	0.62
12:AL:25:PRO:C	12:AL:27:LEU:H	2.02	0.62
13:AM:17:VAL:O	13:AM:20:THR:HB	1.99	0.62
16:AP:49:LEU:HD12	16:AP:50:LYS:N	2.14	0.62
20:AT:45:GLN:HE22	20:AT:46:GLU:CG	2.12	0.62
36:BA:141:A:H8	36:BA:1408:C:HO2'	1.46	0.62
36:BA:745:G:H2'	36:BA:746:A:H5'	1.81	0.62
39:BD:130:ALA:C	39:BD:131:LEU:HD12	2.19	0.62
39:BD:109:ASP:HB2	39:BD:197:GLY:HA2	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:3:GLY:H	40:BE:81:ILE:HG21	1.64	0.62
36:BA:1131:G:H21	46:BN:73:THR:HG21	1.64	0.62
53:BU:56:ASP:O	53:BU:59:ARG:HB2	1.98	0.62
53:BU:85:LYS:HD3	53:BU:117:GLN:NE2	2.14	0.62
57:BY:13:VAL:HA	57:BY:74:PRO:O	1.99	0.62
57:BY:27:VAL:HG12	57:BY:29:GLU:OE1	1.99	0.62
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.30	0.62
36:DA:1024:G:C3'	36:DA:1025:G:H5''	2.22	0.62
36:DA:1210:A:H5'	36:DA:1210:A:H8	1.64	0.62
36:DA:2101:G:H2'	36:DA:2102:U:C5'	2.28	0.62
36:DA:2408:U:H2'	36:DA:2409:G:H8	1.63	0.62
36:DA:848:G:C4	36:DA:933:A:H8	2.18	0.62
39:DD:30:GLU:CD	39:DD:63:ARG:HH21	2.01	0.62
42:DG:114:ILE:CD1	42:DG:115:ARG:H	2.12	0.62
46:DN:61:ARG:HG3	46:DN:61:ARG:HH11	1.64	0.62
49:DQ:135:ASP:H	49:DQ:137:TYR:HD2	1.47	0.62
51:DS:34:HIS:HB3	51:DS:53:SER:HB3	1.81	0.62
51:DS:59:LYS:HG2	51:DS:60:GLY:N	2.13	0.62
52:DT:33:LYS:NZ	52:DT:43:GLN:HE21	1.96	0.62
55:DW:4:LYS:HG2	55:DW:5:ALA:H	1.62	0.62
57:DY:13:VAL:HA	57:DY:74:PRO:O	1.99	0.62
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.98	0.62
1:AA:946:A:H2'	1:AA:947:G:C8	2.34	0.62
12:AL:75:HIS:HA	12:AL:102:ARG:NH2	2.13	0.62
13:AM:15:VAL:HG11	13:AM:48:LEU:HD11	1.81	0.62
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.29	0.62
25:AZ:193:ASN:HB2	25:AZ:196:VAL:HB	1.80	0.62
36:BA:203:C:H3'	36:BA:204:A:H5''	1.81	0.62
36:BA:2092:U:H4'	36:BA:2093:G:C5'	2.11	0.62
40:BE:33:VAL:HG11	40:BE:89:ASP:O	1.98	0.62
36:BA:598:G:H5'	48:BP:15:ARG:HB3	1.79	0.62
49:BQ:136:ALA:O	49:BQ:138:ASP:N	2.32	0.62
49:BQ:140:ALA:O	49:BQ:141:GLN:HB2	1.99	0.62
52:BT:85:LYS:NZ	52:BT:85:LYS:CB	2.60	0.62
58:BZ:122:ARG:HG2	58:BZ:122:ARG:NH1	2.14	0.62
1:CA:624:C:H2'	1:CA:625:G:H8	1.64	0.62
1:CA:657:G:O2'	1:CA:658:G:H5'	2.00	0.62
4:CD:59:ARG:CA	4:CD:59:ARG:HE	2.04	0.62
7:CG:48:LYS:O	7:CG:52:GLU:HG2	1.99	0.62
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.28	0.62
18:CR:26:LEU:CD2	18:CR:39:VAL:HG13	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:53:ARG:HH11	18:CR:60:ALA:HA	1.63	0.62
13:CM:87:TYR:HD1	19:CS:81:ARG:NH2	1.96	0.62
29:D3:31:LEU:HD12	36:DA:1157:G:O2'	1.99	0.62
36:DA:1947:C:C2'	36:DA:1948:G:H5''	2.29	0.62
36:DA:2512:C:H2'	36:DA:2513:G:O4'	2.00	0.62
39:DD:148:GLU:HB2	39:DD:151:LYS:HD2	1.81	0.62
41:DF:135:LYS:HB3	41:DF:138:GLU:CD	2.19	0.62
41:DF:5:ALA:HB3	41:DF:18:ARG:O	1.99	0.62
41:DF:89:VAL:HG12	41:DF:90:PHE:N	2.13	0.62
47:DO:47:ILE:CG2	47:DO:48:PRO:HD2	2.28	0.62
50:DR:36:THR:O	50:DR:111:LEU:HB3	1.99	0.62
51:DS:15:ARG:CD	51:DS:15:ARG:O	2.47	0.62
52:DT:27:THR:HG23	52:DT:28:VAL:N	2.13	0.62
52:DT:34:VAL:HG22	52:DT:39:ARG:HA	1.82	0.62
53:DU:108:GLU:OE2	54:DV:44:LYS:HB3	1.99	0.62
53:DU:34:LYS:HE2	53:DU:34:LYS:HA	1.81	0.62
54:DV:19:LYS:NZ	54:DV:20:LEU:H	1.96	0.62
1:AA:1319:A:H5'	1:AA:1320:C:OP1	1.99	0.62
1:AA:977:A:C2'	1:AA:977:A:N3	2.62	0.62
1:AA:979:C:H3'	1:AA:980:C:C5'	2.23	0.62
3:AC:26:LYS:CD	3:AC:26:LYS:H	2.13	0.62
16:AP:8:ARG:O	16:AP:9:PHE:HD1	1.83	0.62
22:AW:68:C:H2'	22:AW:69:G:C8	2.34	0.62
25:AZ:191:GLY:CA	25:AZ:197:ASP:CG	2.67	0.62
36:BA:1075:C:H2'	36:BA:1076:C:C6	2.33	0.62
36:BA:1290:C:H2'	36:BA:1291:C:H6	1.65	0.62
36:BA:611:C:H2'	36:BA:612:C:C6	2.35	0.62
43:BH:127:GLU:HB2	43:BH:130:ARG:HB2	1.80	0.62
46:BN:6:PRO:HB2	46:BN:9:VAL:CG2	2.28	0.62
48:BP:34:GLY:O	48:BP:35:HIS:HB2	1.99	0.62
48:BP:6:LEU:H	48:BP:6:LEU:HD23	1.65	0.62
52:BT:38:ASN:O	52:BT:38:ASN:ND2	2.33	0.62
52:BT:80:SER:CB	52:BT:81:PRO:HD3	2.25	0.62
7:CG:102:ARG:O	7:CG:106:GLN:HG3	2.00	0.62
13:CM:54:VAL:O	13:CM:58:GLU:HG2	2.00	0.62
39:DD:125:ILE:HG22	39:DD:125:ILE:O	1.98	0.62
39:DD:224:ALA:O	39:DD:225:ALA:HB3	1.98	0.62
46:DN:23:LEU:CD1	46:DN:98:VAL:HG12	2.29	0.62
48:DP:49:ARG:HH11	48:DP:49:ARG:HG3	1.65	0.62
52:DT:60:THR:HG22	52:DT:77:PRO:HA	1.80	0.62
56:DX:35:THR:HB	56:DX:38:GLU:CB	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1456:G:O2'	20:AT:39:LYS:NZ	2.32	0.62
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.00	0.62
18:AR:25:THR:C	18:AR:26:LEU:HD12	2.20	0.62
24:AY:2:G:OP1	25:AZ:90:LYS:HB3	1.99	0.62
36:BA:2630:G:H21	36:BA:2892:A:H1'	1.64	0.62
37:BB:34:U:H5''	37:BB:35:U:OP1	1.99	0.62
38:BC:114:VAL:HG12	38:BC:144:THR:HB	1.79	0.62
39:BD:77:ALA:HB2	39:BD:97:TYR:CD2	2.35	0.62
40:BE:77:ILE:HG22	40:BE:78:LEU:H	1.64	0.62
48:BP:23:PRO:C	48:BP:33:ARG:CZ	2.67	0.62
49:BQ:68:ILE:HG23	49:BQ:103:MET:HA	1.81	0.62
51:BS:11:LYS:N	51:BS:11:LYS:HD2	2.14	0.62
53:BU:95:LEU:O	53:BU:98:LEU:HG	2.00	0.62
57:BY:33:LYS:C	57:BY:35:TYR:H	2.03	0.62
1:CA:1129:C:H41	1:CA:1135:U:H3	1.47	0.62
3:CC:50:ALA:O	3:CC:70:VAL:HG13	1.99	0.62
20:CT:91:LEU:O	20:CT:94:ALA:HB3	1.99	0.62
36:DA:1075:C:H2'	36:DA:1076:C:C6	2.34	0.62
36:DA:1131:G:H21	46:DN:73:THR:HG21	1.64	0.62
36:DA:1203:G:H3'	36:DA:1204:A:H5''	1.81	0.62
36:DA:1960:A:H8	36:DA:1960:A:C5'	2.11	0.62
36:DA:2303:G:H4'	42:DG:124:SER:O	1.98	0.62
37:DB:61:G:O2'	37:DB:62:C:H5'	1.99	0.62
40:DE:52:LEU:HB3	40:DE:75:VAL:HB	1.82	0.62
51:DS:89:ARG:HB3	51:DS:92:TYR:CB	2.30	0.62
58:DZ:114:GLY:HA3	58:DZ:146:ILE:HG21	1.82	0.62
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.81	0.62
3:AC:52:LEU:HD21	3:AC:55:VAL:HG23	1.82	0.62
1:AA:963:G:H21	10:AJ:55:LYS:HE2	1.64	0.62
13:AM:83:ASP:OD1	13:AM:84:ILE:N	2.32	0.62
27:B1:44:PRO:HG2	27:B1:46:LEU:CD1	2.29	0.62
36:BA:1592:C:H2'	36:BA:1593:G:C8	2.34	0.62
36:BA:2472:G:H5'	36:BA:2473:U:C5'	2.29	0.62
36:BA:2845:G:O2'	36:BA:2846:G:H5'	1.99	0.62
37:BB:65:C:O2'	37:BB:66:A:H5'	1.99	0.62
39:BD:181:GLU:HA	39:BD:273:ARG:O	1.99	0.62
53:BU:108:GLU:OE2	54:BV:44:LYS:HB3	1.99	0.62
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	1.82	0.62
57:BY:81:LYS:HE2	57:BY:97:ARG:NH2	2.14	0.62
58:BZ:23:LYS:O	58:BZ:39:VAL:O	2.18	0.62
1:CA:1217:C:OP1	14:CN:9:LYS:HE3	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:3:LYS:N	31:D5:3:LYS:HD2	2.13	0.62
32:D6:12:GLU:HG3	32:D6:23:THR:HG21	1.81	0.62
36:DA:1678:G:N2	36:DA:1989:G:N2	2.46	0.62
36:DA:745:G:C2'	36:DA:746:A:H5'	2.28	0.62
31:D5:44:THR:CG2	50:DR:101:ALA:N	2.63	0.62
50:DR:2:ARG:HG3	50:DR:2:ARG:NH1	2.14	0.62
53:DU:16:LYS:O	53:DU:20:LEU:HD23	2.00	0.62
57:DY:81:LYS:HE2	57:DY:97:ARG:NH2	2.14	0.62
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.48	0.62
1:AA:1277:C:O2'	1:AA:1279:A:H8	1.83	0.62
1:AA:963:G:N2	10:AJ:55:LYS:HE2	2.14	0.62
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.02	0.62
3:AC:34:LEU:HD22	3:AC:38:ARG:NE	2.13	0.62
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.81	0.62
4:AD:109:GLY:O	4:AD:111:ALA:N	2.32	0.62
7:AG:15:ASP:O	7:AG:19:GLY:HA2	2.00	0.62
20:AT:86:ARG:O	20:AT:90:GLN:HG3	1.99	0.62
24:AY:24:G:C2'	24:AY:25:C:C5'	2.65	0.62
36:BA:1516:C:H2'	36:BA:1517:G:C5'	2.30	0.62
36:BA:1652:A:C2'	36:BA:1653:G:H5'	2.29	0.62
39:BD:70:TRP:O	39:BD:73:VAL:HG23	2.00	0.62
12:CL:110:VAL:HG23	12:CL:120:TYR:HB3	1.81	0.62
25:CZ:266:VAL:HB	25:CZ:291:ARG:NH1	2.15	0.62
25:CZ:368:VAL:HG12	25:CZ:369:THR:N	2.15	0.62
28:D2:25:VAL:HG21	28:D2:61:LEU:HG	1.82	0.62
36:DA:1718:G:H2'	36:DA:1719:G:H8	1.63	0.62
36:DA:2543:G:H2'	36:DA:2544:G:C8	2.35	0.62
38:DC:34:THR:O	38:DC:34:THR:HG22	2.00	0.62
38:DC:78:ALA:O	38:DC:79:LYS:HB2	1.98	0.62
40:DE:105:THR:HB	40:DE:197:ILE:CG2	2.30	0.62
40:DE:9:VAL:HG13	40:DE:25:VAL:HB	1.82	0.62
41:DF:143:ALA:HB1	41:DF:148:LEU:HB2	1.82	0.62
41:DF:185:ASP:HA	41:DF:188:ARG:HG2	1.79	0.62
41:DF:25:PRO:HB3	41:DF:119:ARG:HD3	1.80	0.62
42:DG:7:LEU:HD22	42:DG:100:TRP:CE3	2.35	0.62
42:DG:105:LYS:HD2	42:DG:142:PRO:HG3	1.81	0.62
43:DH:149:ARG:HG3	43:DH:162:ILE:HG12	1.82	0.62
46:DN:49:GLY:H	46:DN:119:ARG:HH22	1.48	0.62
49:DQ:1:MET:HE3	49:DQ:44:ALA:HB1	1.82	0.62
50:DR:100:LEU:HD13	50:DR:100:LEU:N	2.14	0.62
50:DR:33:ARG:HG2	50:DR:113:LEU:HD11	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1258:G:O2'	1:AA:1259:C:H5'	1.99	0.62
1:AA:865:A:C2	1:AA:918:A:H4'	2.33	0.62
3:AC:91:LEU:HB2	3:AC:99:VAL:HG21	1.82	0.62
4:AD:121:VAL:O	4:AD:134:ASP:HA	1.99	0.62
1:AA:942:G:H21	9:AI:124:GLN:HE22	1.44	0.62
1:AA:755:G:OP2	15:AO:65:ARG:HD2	1.99	0.62
21:AU:9:ARG:HH12	21:AU:23:PRO:HD2	1.65	0.62
24:AY:2:G:H2'	24:AY:3:G:C5'	2.29	0.62
30:B4:28:LYS:HE3	30:B4:28:LYS:HA	1.82	0.62
29:B3:31:LEU:HD12	36:BA:1157:G:O2'	1.99	0.62
36:BA:1248:G:OP1	53:BU:2:PRO:HD2	2.00	0.62
36:BA:2415:G:H4'	48:BP:66:GLY:C	2.20	0.62
36:BA:2842:G:O2'	36:BA:2843:G:H5'	2.00	0.62
36:BA:83:G:O2'	36:BA:84:A:H8	1.81	0.62
40:BE:38:THR:HB	40:BE:41:LYS:HG2	1.79	0.62
41:BF:192:LEU:HD23	41:BF:192:LEU:C	2.19	0.62
41:BF:6:VAL:HG12	41:BF:7:TYR:N	2.11	0.62
52:BT:64:ARG:HD2	52:BT:73:GLU:OE1	2.00	0.62
53:BU:110:VAL:O	53:BU:113:ALA:HB3	1.99	0.62
58:BZ:108:PRO:HB3	58:BZ:141:VAL:HG11	1.82	0.62
1:CA:358:U:H2'	1:CA:359:U:H6	1.65	0.62
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.80	0.62
1:CA:882:C:O2'	1:CA:883:C:H5'	2.00	0.62
2:CB:155:LEU:HD21	2:CB:159:PRO:HG3	1.82	0.62
13:CM:73:GLU:O	13:CM:76:ALA:HB3	2.00	0.62
25:CZ:131:ILE:O	25:CZ:168:VAL:HG13	1.99	0.62
30:D4:5:ILE:HG12	30:D4:5:ILE:O	1.99	0.62
34:D8:6:THR:HG23	34:D8:62:LEU:HD12	1.80	0.62
36:DA:2787:C:O2'	40:DE:61:ARG:HD3	2.00	0.62
36:DA:2840:C:H5''	50:DR:53:HIS:CD2	2.35	0.62
36:DA:996:A:H4'	53:DU:92:ARG:NE	2.14	0.62
42:DG:47:LYS:N	42:DG:47:LYS:HD2	2.14	0.62
48:DP:102:ARG:HH11	48:DP:102:ARG:HB2	1.64	0.62
53:DU:56:ASP:O	53:DU:59:ARG:HB2	2.00	0.62
53:DU:95:LEU:O	53:DU:98:LEU:HG	2.00	0.62
2:AB:87:ARG:HB3	2:AB:87:ARG:HH11	1.64	0.62
6:AF:30:LEU:HD23	6:AF:35:ALA:HB3	1.81	0.62
13:AM:116:THR:O	13:AM:118:ALA:N	2.33	0.62
14:AN:27:CYS:HG	59:AN:101:ZN:ZN	1.11	0.62
20:AT:50:GLU:OE2	20:AT:100:ILE:HD13	1.99	0.62
20:AT:70:SER:HA	20:AT:73:HIS:CD2	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2787:C:O2'	40:BE:61:ARG:HD3	2.00	0.62
36:BA:2894:G:H2'	36:BA:2894:G:N3	2.14	0.62
41:BF:164:ARG:HH11	41:BF:164:ARG:HG2	1.64	0.62
46:BN:61:ARG:HG3	46:BN:61:ARG:HH11	1.63	0.62
48:BP:85:LEU:HA	48:BP:88:LEU:HB3	1.78	0.62
55:BW:11:ARG:HG2	55:BW:11:ARG:HH11	1.65	0.62
57:BY:36:ALA:HA	57:BY:69:ALA:N	2.15	0.62
3:CC:35:GLU:HG3	3:CC:95:THR:OG1	2.00	0.62
5:CE:143:ARG:HH12	8:CH:77:GLU:CD	2.03	0.62
10:CJ:38:ILE:HG13	10:CJ:71:LEU:HB3	1.81	0.62
12:CL:102:ARG:HH11	12:CL:110:VAL:HG22	1.64	0.62
15:CO:25:THR:O	15:CO:29:VAL:HG23	1.99	0.62
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HB3	1.82	0.62
20:CT:45:GLN:HE22	20:CT:46:GLU:CG	2.11	0.62
22:CW:44:G:H3'	22:CW:45:U:C5	2.35	0.62
28:D2:39:ALA:HA	28:D2:45:SER:CB	2.12	0.62
36:DA:1270:C:H5''	36:DA:1271:G:O5'	2.00	0.62
36:DA:1567:A:H5'	39:DD:58:HIS:CD2	2.34	0.62
36:DA:2389:G:H5''	36:DA:2390:U:O4'	2.00	0.62
36:DA:2894:G:H2'	36:DA:2894:G:N3	2.14	0.62
41:DF:201:VAL:HA	41:DF:204:ASN:HD22	1.62	0.62
48:DP:125:VAL:O	48:DP:145:PRO:HD2	2.00	0.62
58:DZ:145:GLU:HG3	58:DZ:146:ILE:H	1.63	0.62
1:AA:353:A:H5'	1:AA:353:A:C8	2.30	0.62
2:AB:134:GLU:C	2:AB:136:VAL:H	2.01	0.62
2:AB:204:ASN:HD22	2:AB:205:ASP:N	1.98	0.62
22:AW:44:G:H3'	22:AW:45:U:C5	2.35	0.62
25:AZ:202:LEU:O	25:AZ:206:ILE:HB	2.00	0.62
36:BA:1517:G:C8	36:BA:1517:G:H5'	2.29	0.62
36:BA:2287:A:H2	36:BA:2346:A:N1	1.97	0.62
36:BA:268:C:O2	36:BA:268:C:H2'	1.99	0.62
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	1.82	0.62
48:BP:50:ARG:HH11	48:BP:50:ARG:HG2	1.65	0.62
53:BU:34:LYS:HA	53:BU:34:LYS:HE2	1.80	0.62
56:BX:28:PHE:N	56:BX:28:PHE:CD1	2.68	0.62
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.00	0.62
2:CB:87:ARG:HH11	2:CB:87:ARG:HB3	1.65	0.62
7:CG:23:VAL:HG13	7:CG:43:PHE:CE2	2.35	0.62
9:CI:118:LYS:O	9:CI:119:ALA:HB3	1.99	0.62
16:CP:71:ARG:HA	16:CP:74:LEU:HD13	1.82	0.62
19:CS:10:PHE:CE1	19:CS:70:LYS:HE2	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:6:ARG:NH1	21:CU:15:ARG:NH2	2.48	0.62
28:D2:29:LYS:HA	28:D2:32:LEU:CB	2.24	0.62
36:DA:1666:G:C2'	36:DA:1667:G:H5'	2.29	0.62
34:D8:32:LEU:HD22	36:DA:2392:A:OP1	1.99	0.62
36:DA:2580:U:H4'	40:DE:130:GLY:HA3	1.80	0.62
36:DA:533:G:H5'	53:DU:24:TYR:CE1	2.35	0.62
36:DA:824:A:H1'	36:DA:2358:G:N7	2.15	0.62
28:D2:3:LEU:HD13	36:DA:98:G:C5'	2.30	0.62
37:DB:34:U:H5''	37:DB:35:U:OP1	1.99	0.62
37:DB:65:C:O2'	37:DB:66:A:H5'	2.00	0.62
41:DF:164:ARG:HG2	41:DF:164:ARG:HH11	1.64	0.62
42:DG:66:GLN:HE22	42:DG:67:LYS:HE2	1.64	0.62
46:DN:55:VAL:HG22	46:DN:126:PRO:HA	1.81	0.62
48:DP:23:PRO:CD	48:DP:33:ARG:HE	2.10	0.62
49:DQ:136:ALA:O	49:DQ:138:ASP:N	2.33	0.62
58:DZ:72:ARG:CG	58:DZ:89:PHE:HB2	2.30	0.62
1:AA:532:A:N6	1:AA:1206:G:O2'	2.32	0.61
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.11	0.61
1:AA:323:U:O3'	20:AT:22:ARG:HD3	1.99	0.61
25:AZ:313:HIS:CB	25:AZ:380:LEU:HD12	2.30	0.61
36:BA:2098:U:H3	36:BA:2191:G:H1	1.46	0.61
36:BA:2741:A:H2'	36:BA:2742:C:O4'	2.00	0.61
36:BA:2762:G:H5'	36:BA:2762:G:C8	2.29	0.61
48:BP:126:VAL:CA	48:BP:145:PRO:HG2	2.30	0.61
52:BT:28:VAL:CG1	52:BT:46:GLU:HA	2.28	0.61
53:BU:79:PHE:O	53:BU:83:LEU:HD13	2.00	0.61
55:BW:4:LYS:HG2	55:BW:5:ALA:H	1.64	0.61
57:BY:73:ARG:HH22	57:BY:82:PRO:HA	1.64	0.61
57:BY:86:ARG:HH21	57:BY:95:LYS:NZ	1.97	0.61
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.14	0.61
18:CR:25:THR:C	18:CR:26:LEU:HD12	2.20	0.61
21:CU:6:ARG:CZ	21:CU:15:ARG:CZ	2.78	0.61
32:D6:32:ASN:O	32:D6:33:LYS:HG2	2.00	0.61
34:D8:14:VAL:HG21	34:D8:22:VAL:CG1	2.30	0.61
36:DA:1652:A:C2'	36:DA:1653:G:H5'	2.30	0.61
36:DA:208:C:H2'	36:DA:209:C:H6	1.65	0.61
36:DA:310:A:OP1	57:DY:17:SER:O	2.18	0.61
40:DE:77:ILE:HG22	40:DE:78:LEU:H	1.65	0.61
46:DN:73:THR:HG22	46:DN:82:LEU:HD11	1.82	0.61
49:DQ:137:TYR:CE1	58:DZ:81:ARG:NH2	2.68	0.61
49:DQ:66:ILE:HA	49:DQ:104:PHE:HB3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:39:ARG:N	52:DT:39:ARG:HD2	2.15	0.61
53:DU:90:VAL:HG12	53:DU:91:ASP:H	1.65	0.61
55:DW:4:LYS:HA	55:DW:106:ILE:HG22	1.82	0.61
57:DY:36:ALA:HA	57:DY:69:ALA:N	2.15	0.61
1:AA:1129:C:H41	1:AA:1135:U:H3	1.46	0.61
16:AP:21:VAL:HG22	16:AP:21:VAL:O	2.00	0.61
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.00	0.61
25:AZ:68:VAL:HG22	25:AZ:69:GLU:N	2.15	0.61
36:BA:122:G:H1	36:BA:129:C:N4	1.98	0.61
36:BA:1328:G:H2'	36:BA:1330:C:C5	2.35	0.61
36:BA:2176:A:H8	36:BA:2176:A:O5'	1.83	0.61
36:BA:2523:G:H2'	36:BA:2524:G:C5'	2.30	0.61
36:BA:848:G:H8	36:BA:848:G:H5'	1.65	0.61
40:BE:52:LEU:HB3	40:BE:75:VAL:HB	1.82	0.61
41:BF:160:ASN:ND2	41:BF:162:LEU:HB2	2.14	0.61
46:BN:108:PRO:HG2	46:BN:113:GLY:CA	2.29	0.61
46:BN:21:LYS:HD3	46:BN:22:THR:H	1.65	0.61
48:BP:125:VAL:O	48:BP:145:PRO:HD2	2.00	0.61
50:BR:96:ARG:NH1	50:BR:117:VAL:HG23	2.14	0.61
50:BR:94:TYR:N	50:BR:94:TYR:HD1	1.98	0.61
1:CA:260:G:H2'	1:CA:261:U:H6	1.65	0.61
1:CA:963:G:H21	10:CJ:55:LYS:HE2	1.64	0.61
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.35	0.61
36:DA:1105:U:H2'	36:DA:1106:G:H8	1.65	0.61
36:DA:2491:U:H4'	36:DA:2570:G:OP1	2.00	0.61
40:DE:38:THR:HG22	40:DE:40:GLU:N	2.08	0.61
36:DA:598:G:H5'	48:DP:15:ARG:HB3	1.81	0.61
58:DZ:69:THR:HB	58:DZ:89:PHE:O	2.00	0.61
1:AA:299:G:H2'	1:AA:300:A:C8	2.35	0.61
1:AA:473:G:H2'	1:AA:474:G:H8	1.65	0.61
3:AC:7:PRO:O	3:AC:11:ARG:HG2	1.99	0.61
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.34	0.61
7:AG:48:LYS:O	7:AG:52:GLU:HG2	1.99	0.61
13:AM:64:TRP:O	13:AM:66:LEU:HD13	2.00	0.61
24:AY:76:A:N1	25:AZ:271:GLU:HG3	2.15	0.61
26:B0:20:ARG:HG2	26:B0:20:ARG:HH11	1.64	0.61
32:B6:15:GLU:OE2	32:B6:18:ARG:NH2	2.33	0.61
36:BA:1270:C:H5''	36:BA:1271:G:O5'	2.00	0.61
36:BA:1658:C:OP1	40:BE:132:HIS:O	2.18	0.61
36:BA:1854:A:H62	36:BA:1888:G:H8	1.48	0.61
36:BA:745:G:C2'	36:BA:746:A:H5'	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:68:LEU:HD11	38:BC:161:ILE:CG2	2.30	0.61
30:B4:6:HIS:HB3	42:BG:67:LYS:NZ	2.16	0.61
46:BN:23:LEU:CD1	46:BN:98:VAL:HG12	2.31	0.61
49:BQ:109:VAL:CG1	49:BQ:113:GLN:HB2	2.29	0.61
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CE2	2.35	0.61
1:CA:562:C:H4'	1:CA:563:A:H5'	1.82	0.61
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.82	0.61
2:CB:9:GLU:OE1	2:CB:9:GLU:N	2.33	0.61
7:CG:6:ARG:HH21	7:CG:94:ARG:HH12	1.46	0.61
10:CJ:48:THR:HG23	10:CJ:62:HIS:CD2	2.35	0.61
22:CW:68:C:H2'	22:CW:69:G:H8	1.65	0.61
24:CY:16:H2U:H5'	24:CY:17:H2U:O5'	2.00	0.61
25:CZ:355:LEU:HD23	25:CZ:370:PHE:CG	2.35	0.61
36:DA:1040:C:H2'	36:DA:1041:G:H8	1.65	0.61
36:DA:1899:G:H21	36:DA:1902:C:N4	1.82	0.61
36:DA:2192:G:C3'	36:DA:2193:G:H5''	2.31	0.61
36:DA:2208:A:H1'	36:DA:2219:G:C5	2.35	0.61
36:DA:651:G:H2'	36:DA:652:C:H5'	1.82	0.61
36:DA:953:A:OP2	49:DQ:16:ARG:HD2	2.00	0.61
40:DE:4:ILE:HD11	40:DE:28:ALA:CB	2.29	0.61
43:DH:136:ILE:H	43:DH:136:ILE:HD12	1.66	0.61
49:DQ:141:GLN:HG2	58:DZ:72:ARG:HD3	1.81	0.61
51:DS:96:GLY:O	51:DS:98:VAL:N	2.33	0.61
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.33	0.61
6:AF:77:ARG:HG2	6:AF:77:ARG:HH11	1.64	0.61
10:AJ:38:ILE:HG13	10:AJ:71:LEU:HB3	1.82	0.61
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.29	0.61
16:AP:64:ALA:O	16:AP:66:PRO:HD3	2.01	0.61
25:AZ:368:VAL:HG12	25:AZ:369:THR:N	2.15	0.61
32:B6:12:GLU:HG3	32:B6:23:THR:HG21	1.82	0.61
36:BA:1018:C:H2'	36:BA:1019:U:H6	1.65	0.61
36:BA:1053:C:H2'	36:BA:1054:A:H8	1.63	0.61
36:BA:1718:G:H2'	36:BA:1719:G:H8	1.64	0.61
36:BA:2101:G:H2'	36:BA:2102:U:C5'	2.28	0.61
39:BD:125:ILE:O	39:BD:125:ILE:HG22	2.01	0.61
43:BH:52:VAL:HB	43:BH:69:ARG:HD3	1.82	0.61
49:BQ:79:LEU:HD22	49:BQ:80:GLU:HG3	1.82	0.61
36:BA:2840:C:H5''	50:BR:53:HIS:CD2	2.35	0.61
58:BZ:105:VAL:O	58:BZ:140:ASP:HA	2.01	0.61
1:CA:344:A:H4'	1:CA:345:C:OP2	1.98	0.61
6:CF:30:LEU:HD23	6:CF:35:ALA:HB3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:57:GLU:O	7:CG:60:LYS:HB3	1.99	0.61
8:CH:56:LYS:HD2	8:CH:56:LYS:N	2.15	0.61
13:CM:39:ILE:HD12	13:CM:56:LEU:HD23	1.83	0.61
22:CW:68:C:H2'	22:CW:69:G:C8	2.34	0.61
25:CZ:34:VAL:HG21	25:CZ:199:ILE:HG21	1.80	0.61
36:DA:2377:A:O2'	36:DA:2378:A:H5'	2.01	0.61
36:DA:611:C:H2'	36:DA:612:C:H6	1.65	0.61
36:DA:882:G:H2'	36:DA:883:G:H8	1.65	0.61
42:DG:95:ARG:HH11	42:DG:95:ARG:HG2	1.64	0.61
49:DQ:109:VAL:CG1	49:DQ:113:GLN:HB2	2.29	0.61
55:DW:55:ALA:C	55:DW:57:ASN:H	2.04	0.61
1:AA:358:U:C5'	25:AZ:234:ARG:C	2.68	0.61
5:AE:18:ARG:HG3	5:AE:18:ARG:HH11	1.66	0.61
5:AE:81:GLU:HG2	5:AE:90:VAL:HG22	1.82	0.61
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.15	0.61
13:AM:11:ARG:HG2	13:AM:12:ASN:ND2	2.16	0.61
13:AM:58:GLU:O	13:AM:62:ASN:HB2	2.00	0.61
19:AS:10:PHE:CE1	19:AS:70:LYS:HE2	2.35	0.61
25:AZ:215:ARG:HD2	25:AZ:283:GLY:HA3	1.83	0.61
25:AZ:222:LEU:HD11	25:AZ:303:VAL:HB	1.81	0.61
28:B2:51:ARG:HB2	28:B2:55:ARG:NH1	2.16	0.61
30:B4:13:ARG:C	30:B4:14:ILE:HD12	2.20	0.61
34:B8:32:LEU:CD2	34:B8:36:LYS:HZ1	2.11	0.61
36:BA:1105:U:H2'	36:BA:1106:G:H8	1.64	0.61
36:BA:1516:C:H2'	36:BA:1517:G:H5'	1.82	0.61
36:BA:1960:A:H8	36:BA:1960:A:C5'	2.13	0.61
36:BA:2107:C:C1'	36:BA:2182:G:H22	2.13	0.61
36:BA:2262:U:O2'	36:BA:2263:C:H5'	2.00	0.61
50:BR:3:HIS:O	50:BR:5:LYS:N	2.32	0.61
53:BU:16:LYS:O	53:BU:20:LEU:HD23	2.01	0.61
54:BV:18:LEU:CD2	54:BV:19:LYS:H	2.10	0.61
55:BW:4:LYS:HA	55:BW:106:ILE:HG22	1.83	0.61
36:BA:310:A:OP1	57:BY:17:SER:O	2.18	0.61
57:BY:67:LEU:HD21	57:BY:71:LYS:HE2	1.81	0.61
58:BZ:150:LEU:CD2	58:BZ:150:LEU:H	2.14	0.61
1:CA:1228:C:OP1	13:CM:115:LYS:HE3	2.00	0.61
1:CA:1310:G:O2'	1:CA:1311:G:H5'	2.00	0.61
15:CO:3:ILE:HG13	15:CO:3:ILE:O	2.00	0.61
22:CV:42:C:H6	22:CV:42:C:C5'	2.05	0.61
22:CV:47:U:H3'	22:CV:48:C:H5'	1.81	0.61
25:CZ:313:HIS:HB2	25:CZ:380:LEU:HD12	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:8:THR:OG1	25:CZ:9:LYS:N	2.32	0.61
28:D2:43:GLN:O	28:D2:44:LEU:HB2	2.00	0.61
30:D4:28:LYS:HA	30:D4:28:LYS:HE3	1.82	0.61
36:DA:1076:C:H42	36:DA:1088:A:H61	1.48	0.61
36:DA:1248:G:OP1	53:DU:2:PRO:HD2	2.00	0.61
31:D5:4:HIS:O	36:DA:2056:G:N2	2.32	0.61
36:DA:547:A:H2'	36:DA:548:A:C8	2.36	0.61
36:DA:582:G:H2'	36:DA:583:G:C8	2.35	0.61
47:DO:24:VAL:HB	47:DO:33:ALA:HB2	1.83	0.61
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.16	0.61
2:AB:215:LEU:O	2:AB:219:VAL:HG23	2.00	0.61
3:AC:35:GLU:HG3	3:AC:95:THR:OG1	1.99	0.61
20:AT:66:ALA:HB1	20:AT:71:THR:HB	1.82	0.61
22:AW:68:C:H2'	22:AW:69:G:H8	1.65	0.61
25:AZ:8:THR:OG1	25:AZ:9:LYS:N	2.33	0.61
36:BA:2025:C:H2'	36:BA:2026:C:H6	1.66	0.61
36:BA:2287:A:C2	36:BA:2346:A:N1	2.68	0.61
36:BA:2854:G:H2'	36:BA:2855:C:C6	2.36	0.61
36:BA:824:A:H1'	36:BA:2358:G:N7	2.15	0.61
36:BA:848:G:N3	36:BA:933:A:H1'	2.16	0.61
46:BN:13:TRP:O	46:BN:135:PRO:HD2	1.99	0.61
36:BA:1151:G:H5''	53:BU:81:HIS:CE1	2.35	0.61
53:BU:91:ASP:O	53:BU:95:LEU:HB2	2.00	0.61
36:BA:482:A:H4'	57:BY:47:LYS:HG2	1.82	0.61
58:BZ:23:LYS:HD3	58:BZ:38:TYR:CZ	2.36	0.61
1:CA:323:U:O3'	20:CT:22:ARG:HD3	1.99	0.61
3:CC:34:LEU:O	3:CC:38:ARG:HG2	1.99	0.61
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.01	0.61
12:CL:43:VAL:CG2	12:CL:93:LEU:HD22	2.31	0.61
14:CN:13:THR:N	14:CN:14:PRO:CD	2.62	0.61
16:CP:9:PHE:HE2	16:CP:18:ARG:CZ	2.12	0.61
31:D5:3:LYS:HG3	36:DA:2611:U:O2'	1.99	0.61
36:DA:1389:G:H2'	36:DA:1390:U:C6	2.35	0.61
36:DA:2098:U:H3	36:DA:2191:G:H1	1.47	0.61
38:DC:59:ARG:HG3	38:DC:164:ARG:HB3	1.81	0.61
36:DA:1902:C:O2'	39:DD:244:ARG:HD3	2.01	0.61
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.35	0.61
9:AI:126:SER:O	9:AI:128:ARG:HD2	2.01	0.61
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.00	0.61
21:AU:6:ARG:CZ	21:AU:15:ARG:NH2	2.63	0.61
24:AY:41:C:H5'	24:AY:41:C:C6	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B5:36:CYS:C	31:B5:38:ALA:H	2.04	0.61
36:BA:2416:C:P	48:BP:66:GLY:HA3	2.41	0.61
38:BC:91:ALA:HB2	38:BC:153:ILE:HD13	1.83	0.61
40:BE:36:ARG:HH21	40:BE:88:GLY:HA2	1.64	0.61
42:BG:178:PHE:HB3	42:BG:180:PHE:HE1	1.65	0.61
47:BO:43:VAL:HG21	47:BO:52:VAL:HG11	1.82	0.61
47:BO:69:ILE:HG13	47:BO:77:ILE:HG23	1.81	0.61
52:BT:104:ASN:O	52:BT:105:LEU:HB2	2.00	0.61
50:BR:103:ARG:NE	55:BW:40:ASN:HD21	1.97	0.61
55:BW:36:LEU:HD11	55:BW:47:VAL:HG12	1.83	0.61
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.33	0.61
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.01	0.61
3:CC:23:TYR:CD1	3:CC:24:ALA:N	2.69	0.61
16:CP:18:ARG:HD3	16:CP:35:LYS:HD2	1.82	0.61
17:CQ:40:LYS:HD3	17:CQ:42:TYR:CZ	2.36	0.61
28:D2:15:LYS:HG3	28:D2:16:LEU:N	2.15	0.61
39:DD:23:GLU:O	39:DD:25:THR:N	2.34	0.61
42:DG:19:LEU:CD2	42:DG:175:LEU:HD12	2.30	0.61
42:DG:82:LEU:HD13	42:DG:87:PRO:HB3	1.83	0.61
43:DH:103:LEU:HB2	43:DH:123:PHE:CD2	2.31	0.61
47:DO:86:ILE:N	47:DO:86:ILE:HD12	2.16	0.61
53:DU:91:ASP:OD1	53:DU:96:ALA:HB2	1.99	0.61
2:AB:17:PHE:O	2:AB:18:GLY:O	2.17	0.61
15:AO:6:GLU:N	15:AO:6:GLU:OE1	2.33	0.61
22:AV:44:G:C3'	22:AV:45:U:H5'	2.30	0.61
36:BA:1827:C:C2'	36:BA:1828:G:H5'	2.30	0.61
36:BA:547:A:H2'	36:BA:548:A:C8	2.35	0.61
36:BA:612:C:C2'	36:BA:613:G:C5'	2.77	0.61
36:BA:882:G:H2'	36:BA:883:G:H8	1.65	0.61
42:BG:178:PHE:HB3	42:BG:180:PHE:CE1	2.36	0.61
46:BN:49:GLY:H	46:BN:119:ARG:HH22	1.48	0.61
47:BO:47:ILE:CG2	47:BO:48:PRO:HD2	2.30	0.61
51:BS:34:HIS:HB3	51:BS:53:SER:HB3	1.82	0.61
58:BZ:144:LEU:HD12	58:BZ:174:VAL:CG2	2.31	0.61
58:BZ:162:GLU:C	58:BZ:163:LEU:HD23	2.21	0.61
1:CA:1532:U:C3'	1:CA:1533:C:H5''	2.30	0.61
1:CA:96:U:H2'	1:CA:97:G:C8	2.35	0.61
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.15	0.61
20:CT:50:GLU:H	20:CT:99:LEU:HD12	1.65	0.61
20:CT:92:LEU:C	20:CT:94:ALA:H	2.02	0.61
31:D5:52:TYR:HE2	36:DA:2884:U:H1'	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1516:C:H2'	36:DA:1517:G:C5'	2.30	0.61
36:DA:2025:C:H2'	36:DA:2026:C:H6	1.66	0.61
36:DA:2206:G:N3	36:DA:2206:G:H3'	2.16	0.61
36:DA:2262:U:H2'	36:DA:2263:C:H6	1.66	0.61
36:DA:2657:A:H5''	36:DA:2658:C:C5	2.35	0.61
38:DC:75:LEU:O	38:DC:113:VAL:HA	2.01	0.61
40:DE:33:VAL:HG13	40:DE:69:LYS:CE	2.30	0.61
42:DG:94:LEU:HD13	42:DG:98:ARG:HB2	1.83	0.61
47:DO:111:PHE:O	47:DO:115:VAL:HG23	2.01	0.61
51:DS:88:ASP:CG	51:DS:89:ARG:H	1.98	0.61
54:DV:2:PHE:CB	54:DV:42:GLY:HA2	2.28	0.61
57:DY:95:LYS:HG3	57:DY:100:ALA:HA	1.81	0.61
1:AA:1256:A:H2	1:AA:1277:C:H2'	1.65	0.61
1:AA:96:U:H2'	1:AA:97:G:C8	2.35	0.61
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.83	0.61
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.33	0.61
6:AF:12:PRO:HG3	6:AF:55:ASP:HB3	1.82	0.61
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.15	0.61
16:AP:9:PHE:HE2	16:AP:18:ARG:CZ	2.14	0.61
32:B6:33:LYS:HA	32:B6:33:LYS:CE	2.29	0.61
36:BA:2159:G:H2'	36:BA:2160:G:C5'	2.30	0.61
36:BA:2851:A:H2'	36:BA:2852:G:C8	2.35	0.61
39:BD:224:ALA:O	39:BD:225:ALA:HB3	2.00	0.61
46:BN:126:PRO:O	46:BN:127:ASP:HB2	2.01	0.61
56:BX:35:THR:HB	56:BX:38:GLU:CB	2.30	0.61
1:CA:1239:A:H4'	1:CA:1240:U:O5'	2.01	0.61
1:CA:255:G:H1'	17:CQ:16:GLN:NE2	2.15	0.61
12:CL:55:VAL:HG23	12:CL:68:ALA:O	2.01	0.61
13:CM:97:PRO:CA	13:CM:110:ARG:HD3	2.31	0.61
25:CZ:234:ARG:O	25:CZ:289:LEU:HD11	2.00	0.61
36:DA:1827:C:C2'	36:DA:1828:G:H5'	2.31	0.61
36:DA:203:C:H3'	36:DA:204:A:H5''	1.81	0.61
36:DA:2314:C:O2'	36:DA:2315:G:H5'	2.01	0.61
38:DC:87:GLU:HG2	38:DC:94:VAL:CG2	2.31	0.61
39:DD:48:ARG:NH1	39:DD:48:ARG:HG3	2.16	0.61
39:DD:63:ARG:HG3	39:DD:63:ARG:NH1	2.13	0.61
39:DD:65:ILE:HG22	39:DD:104:TYR:HB3	1.82	0.61
40:DE:108:SER:HB3	40:DE:165:VAL:HG21	1.83	0.61
40:DE:23:VAL:HG12	40:DE:173:VAL:HG21	1.83	0.61
43:DH:118:PRO:CG	43:DH:121:ILE:HD12	2.31	0.61
46:DN:31:ALA:O	46:DN:34:LEU:HB3	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:62:PRO:C	58:DZ:64:GLY:H	2.03	0.61
3:AC:139:GLN:NE2	3:AC:170:GLN:HE22	1.99	0.61
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.29	0.61
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.82	0.61
21:AU:6:ARG:NH1	21:AU:15:ARG:NH2	2.48	0.61
34:B8:6:THR:HB	34:B8:11:LYS:HZ3	1.64	0.61
39:BD:35:LYS:HG3	39:BD:104:TYR:CD2	2.34	0.61
43:BH:103:LEU:HB2	43:BH:123:PHE:CD2	2.30	0.61
51:BS:15:ARG:O	51:BS:15:ARG:CD	2.49	0.61
53:BU:101:ARG:HH11	53:BU:101:ARG:HG3	1.66	0.61
1:CA:946:A:H2'	1:CA:947:G:C8	2.36	0.61
2:CB:44:LEU:HA	2:CB:47:THR:CB	2.31	0.61
2:CB:17:PHE:HD2	2:CB:44:LEU:HD11	1.66	0.61
24:CY:40:C:H2'	24:CY:41:C:H5''	1.83	0.61
36:DA:1018:C:H2'	36:DA:1019:U:H6	1.65	0.61
36:DA:181:A:H5'	36:DA:181:A:H8	1.65	0.61
36:DA:1842:G:H2'	36:DA:1843:C:C6	2.36	0.61
36:DA:2287:A:C2	36:DA:2346:A:N1	2.69	0.61
36:DA:2287:A:H2	36:DA:2346:A:N1	1.97	0.61
36:DA:2400:G:C4	36:DA:2401:U:O2	2.54	0.61
36:DA:2712:U:O2'	36:DA:2713:A:H5'	2.00	0.61
36:DA:2741:A:H2'	36:DA:2742:C:O4'	2.00	0.61
36:DA:28:A:H61	36:DA:512:G:H1'	1.66	0.61
36:DA:650:C:C3'	36:DA:651:G:H5''	2.31	0.61
38:DC:30:LYS:HE2	38:DC:180:PHE:O	2.01	0.61
39:DD:27:THR:HG23	39:DD:83:GLU:HG2	1.83	0.61
42:DG:99:MET:CG	42:DG:100:TRP:H	2.14	0.61
53:DU:85:LYS:HD3	53:DU:117:GLN:NE2	2.16	0.61
54:DV:41:GLY:HA3	54:DV:45:THR:OG1	2.01	0.61
56:DX:50:LYS:H	56:DX:87:GLN:HE22	1.49	0.61
57:DY:87:LYS:O	57:DY:88:LYS:HB2	2.01	0.61
1:AA:636:U:H2'	1:AA:637:G:H8	1.66	0.60
1:AA:657:G:O2'	1:AA:658:G:H5'	2.01	0.60
31:B5:16:ARG:HH11	31:B5:20:ARG:NH1	1.98	0.60
36:BA:1963:U:H2'	36:BA:1963:U:O2	1.99	0.60
36:BA:201:C:O2'	36:BA:202:U:H5'	2.01	0.60
36:BA:2309:A:C2'	36:BA:2310:A:H5''	2.31	0.60
36:BA:2840:C:H2'	36:BA:2841:C:C6	2.36	0.60
39:BD:28:GLU:N	39:BD:29:PRO:HD2	2.15	0.60
40:BE:152:LYS:HG2	46:BN:78:TYR:CE1	2.36	0.60
46:BN:19:GLU:HA	46:BN:59:LYS:HB2	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:95:LYS:HG3	57:BY:100:ALA:HA	1.82	0.60
58:BZ:152:ALA:HB3	58:BZ:167:PRO:O	2.01	0.60
58:BZ:72:ARG:HG2	58:BZ:89:PHE:HB2	1.83	0.60
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.03	0.60
25:CZ:170:VAL:O	25:CZ:170:VAL:HG12	2.01	0.60
28:D2:29:LYS:HB3	28:D2:32:LEU:HD22	1.82	0.60
28:D2:3:LEU:H	28:D2:6:VAL:H	1.48	0.60
28:D2:70:GLN:O	28:D2:71:ASN:HB2	1.99	0.60
33:D7:37:LYS:HD2	33:D7:39:ARG:CD	2.28	0.60
34:D8:30:ARG:HE	34:D8:30:ARG:HA	1.65	0.60
36:DA:2184:G:H2'	36:DA:2185:C:C1'	2.31	0.60
36:DA:877:U:O2'	36:DA:878:A:H5''	2.01	0.60
39:DD:28:GLU:N	39:DD:29:PRO:HD2	2.15	0.60
39:DD:77:ALA:HB2	39:DD:97:TYR:CD2	2.36	0.60
41:DF:185:ASP:HA	41:DF:188:ARG:HD3	1.83	0.60
42:DG:97:ASP:N	42:DG:99:MET:CE	2.60	0.60
43:DH:76:VAL:O	43:DH:79:VAL:HG22	2.01	0.60
48:DP:121:LYS:O	48:DP:123:LEU:HD23	2.01	0.60
48:DP:50:ARG:HG2	48:DP:50:ARG:HH11	1.65	0.60
49:DQ:79:LEU:HD22	49:DQ:80:GLU:HG3	1.83	0.60
52:DT:28:VAL:O	52:DT:28:VAL:HG12	2.00	0.60
58:DZ:96:VAL:HG22	58:DZ:97:GLU:N	2.15	0.60
1:AA:1086:U:H2'	1:AA:1087:G:C5'	2.31	0.60
1:AA:1438:G:N7	1:AA:1464:G:N2	2.48	0.60
1:AA:202:U:H4'	1:AA:203:U:OP2	2.01	0.60
1:AA:41:G:H2'	1:AA:42:G:H8	1.64	0.60
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.66	0.60
1:AA:738:C:H5''	6:AF:69:GLU:HB2	1.82	0.60
25:AZ:143:ASP:OD2	25:AZ:146:LEU:HB2	2.01	0.60
30:B4:7:PRO:O	30:B4:8:LYS:HB3	1.99	0.60
31:B5:3:LYS:N	31:B5:3:LYS:HD2	2.15	0.60
36:BA:1665:A:C3'	36:BA:1666:G:H5''	2.31	0.60
36:BA:2192:G:C3'	36:BA:2193:G:H5''	2.31	0.60
36:BA:2341:G:H2'	36:BA:2342:C:C6	2.37	0.60
36:BA:573:G:O2'	36:BA:574:C:H3'	2.02	0.60
36:BA:654(L):G:H2'	36:BA:654(M):C:H4'	1.83	0.60
36:BA:672:C:O2'	36:BA:673:C:H5''	2.01	0.60
37:BB:61:G:O2'	37:BB:62:C:H5'	2.01	0.60
38:BC:123:VAL:O	38:BC:127:LEU:HB3	2.01	0.60
41:BF:39:TRP:CH2	41:BF:106:ARG:HD3	2.37	0.60
43:BH:44:VAL:HG12	43:BH:45:VAL:N	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:22:THR:CA	46:BN:61:ARG:HB2	2.30	0.60
56:BX:8:ILE:HD12	56:BX:8:ILE:N	2.08	0.60
57:BY:42:VAL:CG2	57:BY:67:LEU:HD12	2.31	0.60
57:BY:86:ARG:HH21	57:BY:95:LYS:HZ3	1.48	0.60
58:BZ:57:ILE:N	58:BZ:57:ILE:HD12	2.15	0.60
1:CA:187:C:C2	20:CT:105:SER:HB3	2.36	0.60
3:CC:26:LYS:H	3:CC:26:LYS:CD	2.12	0.60
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.82	0.60
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.17	0.60
16:CP:49:LEU:HD12	16:CP:50:LYS:N	2.16	0.60
17:CQ:18:THR:HG23	17:CQ:69:LYS:NZ	2.16	0.60
33:D7:34:ARG:HG3	33:D7:34:ARG:NH1	2.12	0.60
36:DA:2822:G:H2'	36:DA:2823:A:H5''	1.82	0.60
39:DD:44:ASN:HB2	39:DD:48:ARG:O	2.01	0.60
41:DF:123:LEU:HD12	41:DF:124:LEU:H	1.67	0.60
51:DS:92:TYR:CG	51:DS:93:LYS:N	2.67	0.60
47:DO:80:ASP:OD2	52:DT:71:GLY:HA3	2.01	0.60
57:DY:46:LYS:HG2	57:DY:47:LYS:H	1.66	0.60
1:AA:1282:C:C2'	1:AA:1283:G:H5'	2.31	0.60
2:AB:44:LEU:HA	2:AB:47:THR:CB	2.30	0.60
8:AH:44:PHE:CE2	8:AH:109:ILE:HG21	2.37	0.60
9:AI:19:LEU:HD11	9:AI:59:PHE:CD2	2.29	0.60
9:AI:40:LEU:C	9:AI:42:ARG:H	2.04	0.60
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB2	2.31	0.60
17:AQ:48:GLU:O	17:AQ:49:GLU:C	2.39	0.60
20:AT:92:LEU:C	20:AT:94:ALA:H	2.03	0.60
29:B3:17:LYS:HG2	36:BA:969:U:OP1	2.02	0.60
30:B4:5:ILE:O	30:B4:5:ILE:HG12	2.01	0.60
32:B6:52:VAL:HG22	32:B6:53:LYS:HD3	1.82	0.60
33:B7:37:LYS:HD2	33:B7:39:ARG:CD	2.27	0.60
36:BA:207:A:H2'	36:BA:208:C:O4'	2.00	0.60
38:BC:40:THR:HG22	38:BC:177:LYS:CD	2.31	0.60
39:BD:131:LEU:HB2	39:BD:136:ILE:HD11	1.83	0.60
48:BP:90:ARG:O	48:BP:90:ARG:HD2	2.01	0.60
49:BQ:21:THR:HG22	49:BQ:23:GLY:O	2.01	0.60
52:BT:34:VAL:HG22	52:BT:39:ARG:HA	1.82	0.60
55:BW:82:LEU:HB3	55:BW:84:ARG:HH12	1.66	0.60
1:CA:266:G:C5'	1:CA:267:C:C5	2.84	0.60
30:D4:20:ASN:HD22	30:D4:21:VAL:N	1.99	0.60
30:D4:30:GLU:C	30:D4:31:ILE:HD12	2.22	0.60
32:D6:15:GLU:HG3	32:D6:47:THR:OG1	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:207:A:H2'	36:DA:208:C:O4'	2.00	0.60
36:DA:2192:G:C2'	36:DA:2193:G:H5''	2.31	0.60
36:DA:761:A:O5'	36:DA:761:A:C8	2.44	0.60
36:DA:848:G:H8	36:DA:848:G:H5'	1.65	0.60
37:DB:29:A:H2'	37:DB:30:C:C6	2.36	0.60
39:DD:70:TRP:O	39:DD:73:VAL:HG23	2.01	0.60
40:DE:59:VAL:HG21	40:DE:63:LEU:HA	1.84	0.60
41:DF:39:TRP:CH2	41:DF:106:ARG:HD3	2.36	0.60
41:DF:157:VAL:HG23	41:DF:198:ALA:HB1	1.84	0.60
52:DT:50:ILE:O	52:DT:99:LEU:HD12	2.01	0.60
54:DV:39:LEU:HD22	54:DV:39:LEU:N	2.17	0.60
57:DY:13:VAL:O	57:DY:24:VAL:HG13	2.00	0.60
57:DY:73:ARG:HH22	57:DY:82:PRO:HA	1.65	0.60
3:AC:50:ALA:O	3:AC:70:VAL:HG13	2.01	0.60
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.01	0.60
13:AM:116:THR:O	13:AM:116:THR:HG22	2.01	0.60
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.36	0.60
19:AS:45:VAL:HG23	19:AS:46:GLY:N	2.16	0.60
25:AZ:355:LEU:HD23	25:AZ:370:PHE:CG	2.36	0.60
25:AZ:355:LEU:CB	25:AZ:356:PRO:HD3	2.20	0.60
35:B9:10:ILE:N	35:B9:10:ILE:HD12	2.16	0.60
36:BA:1375:C:H2'	36:BA:1376:C:H6	1.66	0.60
36:BA:1510:G:O2'	36:BA:1511:C:H5'	2.01	0.60
36:BA:2469:A:O2'	49:BQ:56:ARG:HD2	2.02	0.60
36:BA:803:U:O2'	36:BA:804:A:H5'	2.01	0.60
37:BB:16:G:O2'	37:BB:17:C:H6	1.84	0.60
38:BC:122:ALA:O	38:BC:126:LYS:HB2	2.01	0.60
41:BF:143:ALA:HB1	41:BF:148:LEU:HB2	1.82	0.60
41:BF:157:VAL:HG23	41:BF:198:ALA:HB1	1.83	0.60
48:BP:30:THR:CG2	48:BP:31:ALA:H	2.15	0.60
52:BT:25:GLY:O	52:BT:26:ASP:HB2	2.00	0.60
56:BX:50:LYS:H	56:BX:87:GLN:HE22	1.49	0.60
57:BY:42:VAL:HG21	57:BY:67:LEU:HD12	1.83	0.60
57:BY:87:LYS:O	57:BY:88:LYS:HB2	2.02	0.60
58:BZ:161:VAL:HG12	58:BZ:162:GLU:N	2.17	0.60
13:CM:116:THR:O	13:CM:118:ALA:N	2.34	0.60
24:CY:10:G:H1	24:CY:25:C:N4	1.97	0.60
27:D1:73:LEU:HB3	27:D1:94:LEU:HD12	1.83	0.60
28:D2:24:LEU:HD21	28:D2:60:LEU:HD22	1.83	0.60
32:D6:12:GLU:HG3	32:D6:23:THR:HG22	1.81	0.60
36:DA:1090:U:OP2	36:DA:1090:U:H3'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:139(A):G:H22	56:DX:44:GLU:CD	2.04	0.60
1:CA:1418:A:H2	36:DA:1948:G:N3	1.98	0.60
36:DA:2107:C:C1'	36:DA:2182:G:H22	2.13	0.60
36:DA:2415:G:H4'	48:DP:66:GLY:C	2.21	0.60
36:DA:361:G:H2'	36:DA:362:U:H4'	1.83	0.60
34:D8:4:MET:CE	36:DA:666:G:H1'	2.31	0.60
40:DE:75:VAL:O	40:DE:77:ILE:N	2.35	0.60
42:DG:4:ASP:CG	42:DG:9:ARG:HH21	2.05	0.60
43:DH:20:ALA:HB3	43:DH:23:ARG:HB2	1.84	0.60
46:DN:22:THR:CA	46:DN:61:ARG:HB2	2.31	0.60
51:DS:98:VAL:HG12	51:DS:100:ALA:H	1.66	0.60
54:DV:68:LYS:HA	54:DV:68:LYS:HE2	1.83	0.60
1:AA:1256:A:C2	1:AA:1277:C:H2'	2.37	0.60
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	2.16	0.60
1:AA:636:U:H2'	1:AA:637:G:C8	2.36	0.60
1:AA:955:U:O2'	1:AA:956:U:H5'	2.02	0.60
4:AD:100:ARG:O	4:AD:104:VAL:HG23	2.01	0.60
18:AR:36:ASN:OD1	18:AR:38:GLU:HG2	2.01	0.60
25:AZ:139:ASP:CG	25:AZ:177:LEU:HD11	2.21	0.60
28:B2:48:HIS:CE1	28:B2:49:LYS:HG2	2.36	0.60
33:B7:22:MET:CE	33:B7:22:MET:HA	2.32	0.60
36:BA:1222:C:H2'	36:BA:1223:G:H5''	1.82	0.60
36:BA:521:G:H2'	36:BA:522:G:H8	1.66	0.60
37:BB:29:A:H2'	37:BB:30:C:C6	2.37	0.60
38:BC:59:ARG:HG3	38:BC:164:ARG:HB3	1.83	0.60
41:BF:167:ALA:O	41:BF:170:LEU:HB2	2.01	0.60
43:BH:149:ARG:HG3	43:BH:162:ILE:HG12	1.83	0.60
48:BP:102:ARG:HH11	48:BP:102:ARG:HB2	1.65	0.60
48:BP:85:LEU:HB3	48:BP:114:ILE:HD11	1.83	0.60
52:BT:88:ILE:O	52:BT:89:VAL:C	2.40	0.60
53:BU:3:ARG:NH1	53:BU:5:LYS:HB3	2.17	0.60
1:CA:1125:U:H5''	1:CA:1126:U:H5	1.64	0.60
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.02	0.60
11:CK:85:ARG:HG2	11:CK:111:ASP:O	2.02	0.60
20:CT:50:GLU:OE2	20:CT:100:ILE:HD13	2.01	0.60
25:CZ:333:GLY:CA	25:CZ:363:MET:HA	2.31	0.60
32:D6:26:ASN:ND2	32:D6:32:ASN:ND2	2.50	0.60
36:DA:1665:A:C3'	36:DA:1666:G:H5''	2.29	0.60
36:DA:848:G:N3	36:DA:933:A:H1'	2.17	0.60
36:DA:729:G:C5	39:DD:208:LYS:HB2	2.36	0.60
42:DG:146:TYR:O	42:DG:149:VAL:HG22	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:39:ILE:CG2	42:DG:157:ILE:HG12	2.27	0.60
43:DH:94:TYR:HB3	43:DH:107:VAL:HG12	1.84	0.60
48:DP:30:THR:CG2	48:DP:31:ALA:H	2.14	0.60
52:DT:106:SER:O	52:DT:107:ASP:CB	2.49	0.60
52:DT:90:GLN:C	52:DT:92:GLY:H	2.04	0.60
1:AA:723:U:H3	1:AA:1537:U:C2'	2.15	0.60
1:AA:266:G:C5'	1:AA:267:C:C5	2.84	0.60
36:BA:1192:G:O2'	36:BA:1193:G:H5'	2.01	0.60
36:BA:1907:G:O2'	36:BA:1908:C:H5'	2.02	0.60
36:BA:2400:G:C4	36:BA:2401:U:O2	2.54	0.60
36:BA:651:G:H2'	36:BA:652:C:H5'	1.83	0.60
39:BD:31:LYS:O	39:BD:35:LYS:HE3	2.01	0.60
40:BE:75:VAL:O	40:BE:77:ILE:N	2.34	0.60
41:BF:160:ASN:HD21	41:BF:162:LEU:CB	2.13	0.60
42:BG:77:ILE:N	42:BG:77:ILE:HD13	2.14	0.60
46:BN:22:THR:HG22	46:BN:61:ARG:HB2	1.83	0.60
1:AA:1423:G:H5'	47:BO:49:ARG:HH22	1.66	0.60
52:BT:28:VAL:CG1	52:BT:46:GLU:HG3	2.29	0.60
56:BX:49:VAL:HG12	56:BX:87:GLN:NE2	2.17	0.60
57:BY:7:VAL:HB	57:BY:8:LYS:HD2	1.84	0.60
1:CA:266:G:H5''	1:CA:267:C:C5	2.36	0.60
1:CA:473:G:H2'	1:CA:474:G:H8	1.65	0.60
13:CM:82:MET:SD	13:CM:83:ASP:N	2.74	0.60
1:CA:473:G:H5''	16:CP:81:ARG:NE	2.15	0.60
21:CU:5:ASP:O	21:CU:11:GLY:HA3	2.00	0.60
27:D1:45:ASN:HB2	36:DA:2230:G:H1'	1.82	0.60
36:DA:11:G:H2'	36:DA:12:U:C6	2.36	0.60
36:DA:1592:C:H2'	36:DA:1593:G:C8	2.35	0.60
36:DA:969:U:H2'	36:DA:970:C:C6	2.36	0.60
39:DD:267:SER:C	39:DD:269:PHE:N	2.51	0.60
40:DE:3:GLY:H	40:DE:81:ILE:HG21	1.66	0.60
48:DP:6:LEU:H	48:DP:6:LEU:HD23	1.65	0.60
26:D0:7:LEU:HD13	49:DQ:85:LYS:HD2	1.82	0.60
56:DX:12:VAL:CB	56:DX:17:ALA:HB1	2.22	0.60
58:DZ:81:ARG:HB2	58:DZ:81:ARG:CZ	2.28	0.60
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.02	0.60
36:BA:1038:C:C2'	36:BA:1039:G:H5''	2.32	0.60
36:BA:11:G:H2'	36:BA:12:U:C6	2.37	0.60
36:BA:118:A:N3	36:BA:178:G:H1'	2.16	0.60
36:BA:2822:G:H2'	36:BA:2823:A:H5''	1.83	0.60
39:BD:226:MET:HE3	39:BD:231:HIS:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:102:PHE:CZ	42:BG:106:LEU:HD22	2.37	0.60
42:BG:120:LEU:HB2	42:BG:179:PRO:O	2.01	0.60
36:BA:2744:G:N2	43:BH:143:GLN:OE1	2.35	0.60
50:BR:2:ARG:HG3	50:BR:2:ARG:NH1	2.15	0.60
50:BR:33:ARG:HG2	50:BR:113:LEU:HD11	1.83	0.60
58:BZ:9:TYR:CE1	58:BZ:35:ARG:NH1	2.69	0.60
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.82	0.60
2:CB:8:LYS:HB2	2:CB:9:GLU:OE1	2.02	0.60
9:CI:47:LEU:H	9:CI:47:LEU:HD12	1.66	0.60
13:CM:82:MET:HB2	13:CM:93:ARG:NH1	2.17	0.60
16:CP:67:THR:HB	16:CP:70:ALA:HB2	1.82	0.60
25:CZ:363:MET:HB3	25:CZ:364:PRO:HD2	1.83	0.60
28:D2:19:VAL:O	28:D2:22:GLU:HG3	2.01	0.60
28:D2:29:LYS:O	28:D2:33:MET:N	2.35	0.60
28:D2:51:ARG:CB	28:D2:51:ARG:HH11	2.10	0.60
36:DA:2121:G:O4'	38:DC:167:LYS:HE2	2.02	0.60
36:DA:2159:G:H2'	36:DA:2160:G:C5'	2.31	0.60
27:D1:50:ARG:HD3	36:DA:2200:C:OP1	2.02	0.60
37:DB:73:A:C2	58:DZ:34:ASN:ND2	2.70	0.60
38:DC:68:LEU:HD11	38:DC:161:ILE:CG2	2.30	0.60
39:DD:124:PRO:HG2	39:DD:129:ASN:HD21	1.67	0.60
40:DE:34:VAL:O	40:DE:35:GLN:HB2	2.01	0.60
41:DF:10:PRO:HD2	41:DF:13:SER:O	2.02	0.60
46:DN:13:TRP:O	46:DN:135:PRO:HD2	2.02	0.60
52:DT:61:PHE:CE1	52:DT:76:PHE:HB2	2.37	0.60
53:DU:101:ARG:HH11	53:DU:101:ARG:HG3	1.67	0.60
54:DV:62:LEU:HD21	54:DV:95:LEU:CB	2.22	0.60
55:DW:36:LEU:HD11	55:DW:47:VAL:HG12	1.84	0.60
58:DZ:108:PRO:HB3	58:DZ:141:VAL:CG1	2.31	0.60
1:AA:62:U:H2'	1:AA:63:C:H5'	1.83	0.60
1:AA:737:A:H2'	1:AA:738:C:C6	2.36	0.60
10:AJ:48:THR:HG23	10:AJ:62:HIS:CD2	2.36	0.60
12:AL:46:LYS:HG3	12:AL:47:LYS:H	1.67	0.60
25:AZ:117:ARG:CD	25:AZ:157:LEU:HD11	2.31	0.60
30:B4:14:ILE:N	30:B4:14:ILE:HD12	2.17	0.60
36:BA:2303:G:O2'	42:BG:132:ASN:HB2	2.02	0.60
36:BA:761:A:O5'	36:BA:761:A:C8	2.45	0.60
40:BE:107:THR:O	40:BE:190:GLY:HA2	2.00	0.60
42:BG:141:PHE:HB3	42:BG:142:PRO:HD2	1.84	0.60
43:BH:118:PRO:CG	43:BH:121:ILE:HD12	2.32	0.60
54:BV:39:LEU:HD22	54:BV:39:LEU:N	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:39:LEU:CD1	54:BV:51:VAL:HA	2.32	0.60
57:BY:7:VAL:HG21	57:BY:8:LYS:HZ2	1.66	0.60
1:CA:793:U:H3'	1:CA:794:A:H5''	1.84	0.60
1:CA:977:A:N3	1:CA:977:A:C2'	2.64	0.60
9:CI:40:LEU:C	9:CI:42:ARG:H	2.04	0.60
25:CZ:139:ASP:CG	25:CZ:177:LEU:HD11	2.22	0.60
25:CZ:193:ASN:HB3	25:CZ:196:VAL:H	1.67	0.60
27:D1:80:LEU:HB3	27:D1:82:LEU:HD13	1.84	0.60
34:D8:59:LYS:HZ2	34:D8:59:LYS:HB2	1.65	0.60
36:DA:1328:G:H2'	36:DA:1330:C:C5	2.36	0.60
36:DA:2854:G:H2'	36:DA:2855:C:C6	2.37	0.60
38:DC:214:VAL:CG2	38:DC:224:ILE:HD13	2.30	0.60
40:DE:14:ILE:HD11	40:DE:173:VAL:CG1	2.31	0.60
40:DE:92:THR:O	40:DE:95:ILE:HG12	2.02	0.60
41:DF:160:ASN:ND2	41:DF:162:LEU:HB2	2.14	0.60
41:DF:53:THR:HG23	41:DF:55:GLY:N	2.17	0.60
42:DG:32:PRO:HB2	42:DG:172:LEU:HD12	1.84	0.60
42:DG:39:ILE:H	42:DG:39:ILE:HD13	1.66	0.60
47:DO:64:ARG:CZ	52:DT:70:VAL:HG21	2.32	0.60
47:DO:35:VAL:HG21	47:DO:69:ILE:HD13	1.84	0.60
50:DR:3:HIS:O	50:DR:5:LYS:N	2.33	0.60
57:DY:42:VAL:HG12	57:DY:65:ALA:HB3	1.84	0.60
58:DZ:96:VAL:HG13	58:DZ:97:GLU:H	1.65	0.60
1:AA:1442(B):A:C5	52:BT:118:ARG:CZ	2.84	0.60
1:AA:369:C:H6	1:AA:369:C:H5'	1.67	0.60
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.82	0.60
3:AC:7:PRO:HG2	3:AC:184:TYR:HB2	1.84	0.60
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.17	0.60
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.02	0.60
17:AQ:67:LYS:O	17:AQ:68:ARG:CB	2.49	0.60
20:AT:74:LYS:HG3	20:AT:75:ASN:ND2	2.17	0.60
20:AT:84:LEU:C	20:AT:86:ARG:H	2.03	0.60
24:AY:16:H2U:H5'	24:AY:17:H2U:O5'	2.01	0.60
25:AZ:152:MET:CE	25:AZ:156:ASP:HB2	2.31	0.60
25:AZ:333:GLY:CA	25:AZ:363:MET:HA	2.32	0.60
32:B6:9:LEU:O	32:B6:9:LEU:HD13	2.01	0.60
34:B8:17:THR:HG21	34:B8:21:LYS:HB2	1.82	0.60
36:BA:1516:C:O2'	36:BA:1517:G:H5''	2.02	0.60
36:BA:1599:C:H2'	36:BA:1600:C:C6	2.35	0.60
36:BA:1960:A:C8	36:BA:1960:A:H5'	2.36	0.60
36:BA:2184:G:H2'	36:BA:2185:C:C1'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:118:ASP:C	38:BC:120:MET:H	2.05	0.60
39:BD:248:SER:HB2	39:BD:249:PRO:HD2	1.82	0.60
47:BO:86:ILE:HD12	47:BO:86:ILE:N	2.16	0.60
49:BQ:101:ARG:HD2	49:BQ:102:VAL:N	2.17	0.60
51:BS:88:ASP:OD2	51:BS:89:ARG:N	2.31	0.60
36:BA:559:G:H22	53:BU:49:HIS:CD2	2.19	0.60
54:BV:38:LEU:HD23	54:BV:39:LEU:N	2.16	0.60
57:BY:7:VAL:HG21	57:BY:8:LYS:HZ3	1.66	0.60
1:CA:202:U:H4'	1:CA:203:U:OP2	2.01	0.60
1:CA:274:A:O2'	1:CA:275:G:C8	2.54	0.60
7:CG:15:ASP:HB3	7:CG:20:ASP:H	1.67	0.60
21:CU:6:ARG:CZ	21:CU:15:ARG:NH2	2.65	0.60
24:CY:45:U:C3'	24:CY:46:7MG:H5''	2.31	0.60
28:D2:46:GLN:N	28:D2:50:ILE:HD13	2.17	0.60
32:D6:52:VAL:HG22	32:D6:53:LYS:HD3	1.82	0.60
36:DA:1005:C:H2'	36:DA:1006:C:C6	2.37	0.60
36:DA:1510:G:O2'	36:DA:1511:C:H5'	2.01	0.60
36:DA:2672:G:C3'	36:DA:2673:G:H5''	2.30	0.60
36:DA:833:U:H5''	48:DP:48:PRO:CB	2.31	0.60
38:DC:87:GLU:HG2	38:DC:94:VAL:HG23	1.82	0.60
39:DD:4:LYS:NZ	39:DD:20:ASP:HA	2.17	0.60
39:DD:43:ARG:HD2	39:DD:44:ASN:ND2	2.17	0.60
43:DH:44:VAL:HG12	43:DH:45:VAL:N	2.16	0.60
46:DN:21:LYS:HD3	46:DN:22:THR:H	1.67	0.60
52:DT:64:ARG:HD2	52:DT:73:GLU:OE1	2.02	0.60
36:DA:1598:C:H5'	56:DX:36:LYS:CG	2.32	0.60
57:DY:31:LEU:HB2	57:DY:32:PRO:HA	1.83	0.60
1:AA:1325:C:OP1	21:AU:15:ARG:NH2	2.34	0.60
2:AB:82:ARG:O	2:AB:86:GLU:HG3	2.01	0.60
10:AJ:8:LEU:HD22	10:AJ:96:ILE:HG22	1.84	0.60
11:AK:59:TYR:CE1	11:AK:63:LEU:HD11	2.36	0.60
12:AL:102:ARG:NH1	12:AL:102:ARG:HG2	2.15	0.60
14:AN:23:ARG:HH11	14:AN:30:ALA:HB2	1.67	0.60
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.84	0.60
22:AV:62:C:H2'	22:AV:62:C:O2	2.00	0.60
24:AY:40:C:H2'	24:AY:41:C:H5''	1.82	0.60
25:AZ:241:ARG:HB2	25:AZ:285:ASN:ND2	2.17	0.60
28:B2:7:ARG:N	28:B2:7:ARG:HD3	2.17	0.60
33:B7:26:GLY:O	33:B7:30:VAL:HG23	2.02	0.60
34:B8:14:VAL:HG21	34:B8:22:VAL:CG1	2.31	0.60
36:BA:1040:C:H2'	36:BA:1041:G:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1231:G:H2'	36:BA:1232:G:C8	2.37	0.60
36:BA:1362:C:O2'	36:BA:1363:C:H5'	2.01	0.60
36:BA:1842:G:H2'	36:BA:1843:C:C6	2.36	0.60
36:BA:666:G:H4'	48:BP:49:ARG:NH1	2.17	0.60
38:BC:76:ALA:HB1	38:BC:149:ILE:HD11	1.84	0.60
39:BD:35:LYS:CG	39:BD:104:TYR:CE2	2.71	0.60
39:BD:158:ALA:HB3	39:BD:161:THR:CG2	2.31	0.60
42:BG:138:GLN:HB3	42:BG:153:ARG:O	2.02	0.60
42:BG:47:LYS:CD	42:BG:81:LYS:HG3	2.32	0.60
52:BT:85:LYS:HB3	52:BT:85:LYS:HZ2	1.62	0.60
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.37	0.60
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.83	0.60
28:D2:49:LYS:O	28:D2:53:LEU:HB2	2.02	0.60
36:DA:1499:C:O2'	36:DA:1500:G:H5'	2.02	0.60
36:DA:2851:A:H2'	36:DA:2852:G:C8	2.37	0.60
36:DA:612:C:C2'	36:DA:613:G:C5'	2.79	0.60
36:DA:613:G:H8	36:DA:613:G:H5'	1.67	0.60
36:DA:803:U:O2'	36:DA:804:A:H5'	2.02	0.60
42:DG:124:SER:HB2	42:DG:131:TYR:CE1	2.36	0.60
42:DG:88:ILE:CG2	42:DG:89:GLY:N	2.65	0.60
48:DP:83:VAL:HG11	48:DP:112:LEU:HD21	1.83	0.60
51:DS:52:SER:CB	51:DS:55:ALA:HB3	2.29	0.60
36:DA:1151:G:H5''	53:DU:81:HIS:CE1	2.37	0.60
36:DA:26:G:OP1	55:DW:80:PRO:HB3	2.02	0.60
1:AA:865:A:H5'	1:AA:1078:U:O4	2.02	0.59
1:AA:542:G:H2'	1:AA:543:C:H6	1.65	0.59
1:AA:793:U:H3'	1:AA:794:A:H5''	1.84	0.59
1:AA:853:G:O2'	1:AA:854:G:H5'	2.01	0.59
4:AD:30:LYS:C	4:AD:32:ALA:H	2.05	0.59
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.17	0.59
24:AY:40:C:H2'	24:AY:41:C:C5'	2.32	0.59
29:B3:44:ARG:O	29:B3:48:GLU:HG2	2.02	0.59
36:BA:1024:G:C3'	36:BA:1025:G:H5''	2.23	0.59
36:BA:1311:G:H21	36:BA:1603:A:H62	1.49	0.59
36:BA:611:C:H2'	36:BA:612:C:H6	1.65	0.59
36:BA:93:G:H2'	36:BA:94:C:C6	2.37	0.59
40:BE:9:VAL:HG13	40:BE:25:VAL:HB	1.84	0.59
36:BA:442:G:H4'	41:BF:46:ARG:HD3	1.83	0.59
42:BG:51:ARG:HD3	42:BG:53:LEU:CD2	2.32	0.59
43:BH:52:VAL:HG21	43:BH:69:ARG:HG3	1.83	0.59
46:BN:6:PRO:HB2	46:BN:9:VAL:HG21	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:21:TYR:OH	50:BR:43:GLU:HG2	2.02	0.59
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.69	0.59
52:BT:24:PRO:HD3	52:BT:52:ILE:CD1	2.32	0.59
54:BV:21:ARG:HG2	54:BV:91:TYR:CD2	2.37	0.59
1:CA:41:G:H2'	1:CA:42:G:H8	1.67	0.59
1:CA:838:G:C6	1:CA:840:C:H1'	2.37	0.59
7:CG:20:ASP:HB3	7:CG:23:VAL:HG23	1.84	0.59
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HG13	1.83	0.59
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.01	0.59
16:CP:60:LEU:HD21	16:CP:66:PRO:CG	2.32	0.59
22:CW:59:U:C2'	22:CW:60:U:H5'	2.32	0.59
27:D1:50:ARG:HG3	27:D1:59:THR:HG22	1.83	0.59
36:DA:1784:A:H4'	36:DA:1785:A:O5'	2.02	0.59
36:DA:2206:G:N2	36:DA:2207:G:H5'	2.16	0.59
36:DA:2312:U:H2'	36:DA:2313:C:H5''	1.84	0.59
39:DD:158:ALA:HB3	39:DD:161:THR:CG2	2.31	0.59
42:DG:82:LEU:HD13	42:DG:87:PRO:CB	2.31	0.59
46:DN:48:MET:CE	46:DN:48:MET:H	2.14	0.59
52:DT:28:VAL:O	52:DT:29:ARG:CB	2.50	0.59
53:DU:3:ARG:NH1	53:DU:5:LYS:HB3	2.15	0.59
58:DZ:96:VAL:HG12	58:DZ:128:VAL:O	2.02	0.59
1:AA:1117:G:C8	1:AA:1117:G:H5'	2.34	0.59
1:AA:1296:C:H4'	1:AA:1302:U:C5	2.37	0.59
1:AA:961:U:O2'	1:AA:962:C:P	2.60	0.59
2:AB:8:LYS:HB2	2:AB:9:GLU:OE1	2.02	0.59
7:AG:115:ARG:O	7:AG:118:VAL:HG22	2.02	0.59
8:AH:56:LYS:HD2	8:AH:56:LYS:N	2.16	0.59
19:AS:5:LEU:C	19:AS:6:LYS:HD3	2.21	0.59
21:AU:13:ILE:O	21:AU:16:GLY:N	2.35	0.59
22:AW:39:U:C5'	22:AW:39:U:O2	2.50	0.59
36:BA:141:A:H1'	36:BA:1408:C:O2'	2.02	0.59
36:BA:1567:A:H5'	39:BD:58:HIS:CD2	2.37	0.59
40:BE:199:ARG:HB3	40:BE:199:ARG:HH11	1.66	0.59
42:BG:102:PHE:CE2	42:BG:106:LEU:HD22	2.37	0.59
42:BG:52:ILE:HB	42:BG:54:GLU:HG3	1.83	0.59
43:BH:50:VAL:CG1	43:BH:52:VAL:HG23	2.32	0.59
48:BP:83:VAL:HG11	48:BP:112:LEU:HD21	1.83	0.59
51:BS:36:TYR:HD1	51:BS:36:TYR:H	1.43	0.59
55:BW:55:ALA:C	55:BW:57:ASN:H	2.05	0.59
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.84	0.59
1:CA:17:U:H2'	1:CA:18:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:109:SER:C	2:CB:111:ARG:H	2.05	0.59
2:CB:82:ARG:O	2:CB:86:GLU:HG3	2.02	0.59
5:CE:10:MET:HB3	5:CE:32:VAL:HG22	1.85	0.59
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.35	0.59
2:CB:178:ARG:NH1	8:CH:71:GLY:O	2.35	0.59
13:CM:57:ARG:HH12	30:D4:34:GLU:HG3	1.67	0.59
36:DA:1290:C:H2'	36:DA:1291:C:H6	1.66	0.59
36:DA:2777:G:C5'	36:DA:2778:A:H5'	2.32	0.59
36:DA:898:C:H2'	36:DA:899:A:O4'	2.02	0.59
38:DC:123:VAL:O	38:DC:127:LEU:HB3	2.01	0.59
36:DA:2228:G:OP1	39:DD:261:LYS:HE3	2.02	0.59
42:DG:52:ILE:HG12	42:DG:53:LEU:N	2.12	0.59
52:DT:25:GLY:O	52:DT:26:ASP:HB2	2.02	0.59
52:DT:84:GLN:O	52:DT:85:LYS:HG3	2.02	0.59
36:DA:1598:C:H5'	56:DX:36:LYS:HG2	1.84	0.59
57:DY:63:LYS:HG2	57:DY:64:GLU:H	1.66	0.59
1:AA:1039:C:C6	1:AA:1040:U:H5	2.20	0.59
14:AN:32:SER:O	14:AN:40:CYS:HA	2.02	0.59
21:AU:6:ARG:NH1	21:AU:15:ARG:HH22	2.00	0.59
25:AZ:137:LYS:HA	60:AZ:501:GDP:HN1	1.67	0.59
25:AZ:85:HIS:C	25:AZ:87:ASP:H	2.04	0.59
13:AM:57:ARG:NH1	30:B4:34:GLU:HG3	2.17	0.59
34:B8:4:MET:CE	36:BA:666:G:H1'	2.32	0.59
36:BA:1210:A:H5''	36:BA:1212:G:O4'	2.02	0.59
36:BA:1677:A:H2'	36:BA:1678:G:C8	2.37	0.59
36:BA:214:G:H1'	36:BA:216:A:O2'	2.03	0.59
36:BA:729:G:C5	39:BD:208:LYS:HB2	2.37	0.59
37:BB:30:C:H2'	37:BB:31:C:O4'	2.02	0.59
41:BF:123:LEU:HD12	41:BF:124:LEU:H	1.66	0.59
48:BP:101:VAL:HG12	48:BP:106:LEU:CB	2.31	0.59
48:BP:23:PRO:HD2	48:BP:33:ARG:NE	2.14	0.59
52:BT:28:VAL:HG12	52:BT:29:ARG:HD2	1.85	0.59
56:BX:49:VAL:HG12	56:BX:87:GLN:HB3	1.83	0.59
57:BY:46:LYS:HG2	57:BY:47:LYS:H	1.67	0.59
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.83	0.59
5:CE:100:VAL:HG12	5:CE:118:ILE:HG22	1.85	0.59
6:CF:61:LEU:O	6:CF:62:TRP:HB3	2.02	0.59
22:CW:31:A:N1	22:CW:39:U:O4	2.34	0.59
24:CY:61:C:O2'	24:CY:62:U:H5''	2.03	0.59
24:CY:75:C:H5	25:CZ:232:THR:OG1	1.85	0.59
25:CZ:222:LEU:HD11	25:CZ:303:VAL:HB	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:9:LYS:HZ3	25:CZ:73:ALA:C	2.06	0.59
29:D3:40:THR:OG1	29:D3:43:ILE:HG12	2.03	0.59
33:D7:19:ARG:HG2	33:D7:19:ARG:HH11	1.68	0.59
35:D9:22:ARG:HB2	35:D9:24:TYR:HE1	1.67	0.59
36:DA:1053:C:H2'	36:DA:1054:A:H8	1.63	0.59
36:DA:559:G:H22	53:DU:49:HIS:CD2	2.20	0.59
36:DA:703:U:C2'	36:DA:704:G:H5'	2.32	0.59
37:DB:13:A:O2'	37:DB:14:U:H3'	2.02	0.59
38:DC:116:THR:HG22	38:DC:146:GLY:O	2.01	0.59
38:DC:122:ALA:O	38:DC:126:LYS:HB2	2.02	0.59
42:DG:110:ALA:HA	42:DG:140:ILE:O	2.02	0.59
48:DP:58:THR:CB	48:DP:61:ARG:HH21	2.15	0.59
57:DY:33:LYS:C	57:DY:35:TYR:H	2.03	0.59
2:AB:172:ILE:HD12	2:AB:172:ILE:N	2.14	0.59
4:AD:18:LYS:HE3	4:AD:31:CYS:HB2	1.84	0.59
1:AA:585:G:H4'	12:AL:8:ASN:ND2	2.18	0.59
16:AP:60:LEU:HD21	16:AP:66:PRO:CG	2.31	0.59
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.17	0.59
24:AY:16:H2U:H5'	24:AY:17:H2U:H5'	1.84	0.59
36:BA:1590:U:H2'	36:BA:1591:G:C8	2.38	0.59
36:BA:208:C:H2'	36:BA:209:C:H6	1.65	0.59
37:BB:13:A:O2'	37:BB:14:U:H3'	2.01	0.59
38:BC:75:LEU:O	38:BC:113:VAL:HA	2.02	0.59
40:BE:14:ILE:HD11	40:BE:173:VAL:CG1	2.33	0.59
40:BE:59:VAL:HG21	40:BE:63:LEU:HA	1.84	0.59
1:CA:953:G:C5'	1:CA:965:A:H61	2.14	0.59
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.85	0.59
28:D2:11:GLU:O	28:D2:14:ARG:HG3	2.02	0.59
31:D5:46:CYS:SG	31:D5:47:PRO:HD2	2.42	0.59
34:D8:14:VAL:HG23	34:D8:24:ALA:HB2	1.85	0.59
35:D9:7:VAL:HG22	35:D9:34:GLN:HG2	1.84	0.59
36:DA:1061:U:H4'	36:DA:1070:A:C1'	2.32	0.59
36:DA:141:A:H1'	36:DA:1408:C:O2'	2.01	0.59
36:DA:2523:G:H2'	36:DA:2524:G:C5'	2.32	0.59
36:DA:845:G:OP2	36:DA:845:G:H8	1.85	0.59
38:DC:118:ASP:C	38:DC:120:MET:H	2.06	0.59
39:DD:35:LYS:CG	39:DD:104:TYR:HE2	2.11	0.59
39:DD:10:THR:HG23	39:DD:13:ARG:HB2	1.84	0.59
43:DH:52:VAL:HB	43:DH:69:ARG:HD3	1.83	0.59
48:DP:16:ARG:CB	48:DP:16:ARG:HH11	2.16	0.59
52:DT:28:VAL:HG12	52:DT:29:ARG:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:111:GLU:C	53:DU:113:ALA:H	2.05	0.59
58:DZ:103:ARG:HD2	58:DZ:136:PHE:CG	2.37	0.59
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.18	0.59
1:AA:260:G:H2'	1:AA:261:U:H6	1.67	0.59
2:AB:111:ARG:HG2	2:AB:111:ARG:HH11	1.67	0.59
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.03	0.59
20:AT:36:LEU:HD12	20:AT:59:ALA:HB2	1.84	0.59
25:AZ:266:VAL:HB	25:AZ:291:ARG:NH1	2.17	0.59
24:AY:1:A:H5'	25:AZ:300:ARG:NH1	2.17	0.59
25:AZ:363:MET:HB3	25:AZ:364:PRO:HD2	1.83	0.59
25:AZ:137:LYS:HE2	60:AZ:501:GDP:N3	2.17	0.59
30:B4:20:ASN:HD22	30:B4:21:VAL:N	2.00	0.59
31:B5:52:TYR:CE2	36:BA:2884:U:H1'	2.38	0.59
36:BA:1203:G:H3'	36:BA:1204:A:H5''	1.83	0.59
36:BA:1278:A:O2'	36:BA:1279:G:H5'	2.01	0.59
36:BA:1582:C:H2'	36:BA:1583:A:H8	1.66	0.59
36:BA:280:C:H3'	36:BA:281:G:H8	1.67	0.59
43:BH:20:ALA:HB1	43:BH:21:PRO:HD2	1.83	0.59
43:BH:76:VAL:O	43:BH:79:VAL:HG22	2.03	0.59
46:BN:6:PRO:HB3	46:BN:41:ASP:OD2	2.03	0.59
36:BA:2393:A:H5'	48:BP:62:LEU:HB3	1.84	0.59
48:BP:65:ARG:HB3	48:BP:68:GLN:NE2	2.13	0.59
36:BA:2406:U:N3	48:BP:72:PRO:HB2	2.17	0.59
49:BQ:52:VAL:O	49:BQ:56:ARG:HB2	2.02	0.59
50:BR:36:THR:O	50:BR:111:LEU:HB3	2.02	0.59
51:BS:96:GLY:O	51:BS:98:VAL:N	2.31	0.59
57:BY:42:VAL:HG12	57:BY:65:ALA:HB3	1.84	0.59
58:BZ:152:ALA:O	58:BZ:154:ASP:N	2.36	0.59
1:CA:1330:U:H5'	1:CA:1331:G:OP2	2.03	0.59
1:CA:862:C:O2'	1:CA:863:U:H5'	2.02	0.59
1:CA:865:A:C2	1:CA:918:A:H4'	2.37	0.59
5:CE:142:LEU:O	5:CE:143:ARG:HD3	2.02	0.59
6:CF:12:PRO:HG3	6:CF:55:ASP:HB3	1.83	0.59
10:CJ:49:VAL:HG22	14:CN:41:ARG:HB2	1.85	0.59
16:CP:8:ARG:O	16:CP:9:PHE:HD1	1.84	0.59
20:CT:36:LEU:HD12	20:CT:59:ALA:HB2	1.84	0.59
20:CT:74:LYS:HG3	20:CT:75:ASN:ND2	2.17	0.59
21:CU:6:ARG:NH1	21:CU:15:ARG:HH22	2.00	0.59
22:CV:62:C:O2	22:CV:62:C:H2'	2.00	0.59
25:CZ:143:ASP:OD2	25:CZ:146:LEU:HB2	2.02	0.59
28:D2:23:LYS:HE3	28:D2:26:ARG:NH1	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:9:LEU:HD13	32:D6:9:LEU:O	2.02	0.59
34:D8:50:LEU:C	34:D8:53:PRO:HD2	2.23	0.59
36:DA:1222:C:C2'	36:DA:1223:G:H5''	2.31	0.59
36:DA:1378:A:O2'	36:DA:1379:A:C5'	2.35	0.59
36:DA:2108:C:C2'	36:DA:2108:C:O2	2.51	0.59
38:DC:116:THR:HG22	38:DC:147:PHE:HA	1.85	0.59
38:DC:91:ALA:HB2	38:DC:153:ILE:HD13	1.85	0.59
36:DA:956:G:OP2	49:DQ:14:ARG:NH2	2.34	0.59
50:DR:14:SER:HA	50:DR:17:ARG:NH1	2.16	0.59
1:AA:266:G:H5''	1:AA:267:C:C5	2.36	0.59
2:AB:47:THR:HA	2:AB:202:PRO:HG2	1.84	0.59
2:AB:80:ILE:N	2:AB:80:ILE:HD12	2.17	0.59
7:AG:46:ALA:O	7:AG:50:ILE:HG12	2.02	0.59
19:AS:10:PHE:HE1	19:AS:70:LYS:HE2	1.67	0.59
25:AZ:222:LEU:CD1	25:AZ:303:VAL:HB	2.33	0.59
36:BA:1049:C:H2'	36:BA:1050:A:H8	1.68	0.59
36:BA:1210:A:H8	36:BA:1210:A:H5'	1.65	0.59
36:BA:1784:A:H4'	36:BA:1785:A:O5'	2.02	0.59
36:BA:1817:G:C2'	36:BA:1818:U:H5'	2.32	0.59
36:BA:2712:U:O2'	36:BA:2713:A:H5'	2.01	0.59
36:BA:877:U:O2'	36:BA:878:A:H5''	2.02	0.59
37:BB:40:U:O2	37:BB:43:C:H5''	2.03	0.59
39:BD:233:HIS:CE1	39:BD:247:ALA:H	2.21	0.59
43:BH:94:TYR:HB3	43:BH:107:VAL:HG12	1.84	0.59
47:BO:24:VAL:HB	47:BO:33:ALA:HB2	1.85	0.59
50:BR:100:LEU:H	50:BR:100:LEU:HD13	1.67	0.59
51:BS:59:LYS:HG2	51:BS:60:GLY:N	2.13	0.59
53:BU:92:ARG:NH1	53:BU:94:ASN:HD22	1.99	0.59
58:BZ:40:ASP:OD2	58:BZ:43:GLU:HG2	2.01	0.59
4:CD:100:ARG:O	4:CD:104:VAL:HG23	2.02	0.59
10:CJ:96:ILE:H	10:CJ:96:ILE:HD13	1.68	0.59
25:CZ:333:GLY:HA3	25:CZ:363:MET:HA	1.84	0.59
36:DA:482:A:H4'	57:DY:47:LYS:HG2	1.83	0.59
38:DC:68:LEU:HD11	38:DC:161:ILE:HG23	1.84	0.59
42:DG:133:LEU:CD1	42:DG:157:ILE:HB	2.33	0.59
42:DG:72:ARG:HB3	42:DG:87:PRO:HD2	1.83	0.59
46:DN:6:PRO:HB3	46:DN:41:ASP:OD2	2.02	0.59
48:DP:101:VAL:HG12	48:DP:106:LEU:CB	2.32	0.59
48:DP:16:ARG:CZ	48:DP:18:ARG:HG2	2.32	0.59
48:DP:65:ARG:HB3	48:DP:68:GLN:NE2	2.11	0.59
1:AA:1330:U:H5'	1:AA:1331:G:OP2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:614:A:O2'	1:AA:615:C:H5'	2.03	0.59
36:BA:1222:C:C2'	36:BA:1223:G:H5''	2.33	0.59
36:BA:1773:A:C2'	36:BA:1774:C:H5'	2.32	0.59
1:AA:784:C:H4'	36:BA:1837:C:OP1	2.03	0.59
36:BA:2248:C:H2'	36:BA:2249:U:C5'	2.29	0.59
36:BA:997:G:OP1	53:BU:93:LYS:HD3	2.02	0.59
48:BP:16:ARG:NE	48:BP:18:ARG:HG2	2.18	0.59
48:BP:40:SER:O	48:BP:41:ARG:HD2	2.01	0.59
51:BS:97:ARG:NH2	51:BS:98:VAL:CA	2.64	0.59
52:BT:106:SER:O	52:BT:107:ASP:CB	2.50	0.59
52:BT:28:VAL:O	52:BT:29:ARG:CB	2.50	0.59
1:CA:187:C:O2	20:CT:105:SER:HB3	2.02	0.59
1:CA:542:G:H2'	1:CA:543:C:H6	1.65	0.59
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.02	0.59
4:CD:109:GLY:O	4:CD:111:ALA:N	2.33	0.59
6:CF:87:ARG:CG	6:CF:87:ARG:HH11	2.15	0.59
9:CI:111:ARG:HG2	9:CI:112:LYS:N	2.18	0.59
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.17	0.59
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.18	0.59
11:CK:59:TYR:CE1	11:CK:63:LEU:HD11	2.38	0.59
21:CU:22:ARG:HG2	21:CU:22:ARG:NH1	2.16	0.59
25:CZ:19:HIS:CG	25:CZ:115:GLN:HB2	2.37	0.59
28:D2:32:LEU:HA	28:D2:53:LEU:HD13	1.84	0.59
31:D5:50:GLY:CA	31:D5:56:LYS:HD3	2.32	0.59
36:DA:118:A:N3	36:DA:178:G:H1'	2.18	0.59
36:DA:2201:C:O2'	36:DA:2202:C:H5'	2.03	0.59
36:DA:2287:A:H62	36:DA:2344:U:H3	1.50	0.59
36:DA:236:C:H2'	36:DA:237:C:C6	2.38	0.59
36:DA:607:U:H3	36:DA:621:A:H2	1.51	0.59
36:DA:654(L):G:H2'	36:DA:654(M):C:H4'	1.83	0.59
42:DG:120:LEU:HD23	42:DG:131:TYR:OH	2.02	0.59
43:DH:20:ALA:HB1	43:DH:21:PRO:HD2	1.84	0.59
48:DP:23:PRO:HG2	48:DP:33:ARG:HG3	1.84	0.59
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.84	0.59
1:AA:838:G:C6	1:AA:840:C:H1'	2.38	0.59
12:AL:20:LYS:N	12:AL:20:LYS:HD3	2.14	0.59
12:AL:83:VAL:HG11	12:AL:100:ILE:HD13	1.85	0.59
13:AM:22:ILE:HB	13:AM:25:ILE:HD12	1.85	0.59
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.84	0.59
25:AZ:271:GLU:O	25:AZ:286:VAL:HG23	2.02	0.59
27:B1:75:GLU:O	27:B1:78:LYS:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:27:LYS:HE3	32:B6:27:LYS:C	2.23	0.59
33:B7:19:ARG:HH11	33:B7:19:ARG:HG2	1.68	0.59
36:BA:1090:U:OP2	36:BA:1090:U:H3'	2.02	0.59
27:B1:3:LYS:HG3	36:BA:1364:G:OP2	2.02	0.59
36:BA:2781:A:H5''	36:BA:2782:G:H5'	1.85	0.59
36:BA:302:C:H2'	36:BA:303:U:H6	1.68	0.59
40:BE:170:LEU:HB3	40:BE:184:VAL:CG1	2.32	0.59
53:BU:90:VAL:HG12	53:BU:91:ASP:H	1.65	0.59
56:BX:29:TRP:CE3	56:BX:78:LYS:HB3	2.38	0.59
1:CA:953:G:H5'	1:CA:965:A:H61	1.68	0.59
8:CH:19:VAL:HG23	8:CH:21:LYS:HG3	1.84	0.59
12:CL:25:PRO:O	12:CL:27:LEU:N	2.36	0.59
25:CZ:215:ARG:HD2	25:CZ:283:GLY:HA3	1.84	0.59
31:D5:16:ARG:HH11	31:D5:20:ARG:NH1	2.01	0.59
36:DA:1274:A:N3	36:DA:1297:C:H1'	2.17	0.59
36:DA:1335:U:H2'	36:DA:1336:A:H8	1.67	0.59
36:DA:1582:C:H2'	36:DA:1583:A:H8	1.67	0.59
36:DA:2128:C:O2'	36:DA:2129:C:P	2.61	0.59
36:DA:2312:U:H2'	36:DA:2313:C:H5'	1.85	0.59
37:DB:16:G:O2'	37:DB:17:C:H6	1.85	0.59
38:DC:106:GLY:O	38:DC:107:TRP:HB3	2.02	0.59
39:DD:181:GLU:HA	39:DD:273:ARG:O	2.02	0.59
39:DD:35:LYS:HD2	39:DD:36:PRO:HD3	1.85	0.59
42:DG:47:LYS:CG	42:DG:81:LYS:HG3	2.31	0.59
49:DQ:66:ILE:O	49:DQ:66:ILE:HD12	2.02	0.59
50:DR:94:TYR:HD1	50:DR:94:TYR:N	1.99	0.59
51:DS:66:ALA:CA	51:DS:69:VAL:HG12	2.33	0.59
55:DW:11:ARG:HG2	55:DW:11:ARG:HH11	1.67	0.59
57:DY:7:VAL:HB	57:DY:8:LYS:HD2	1.83	0.59
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	2.02	0.59
6:AF:87:ARG:CG	6:AF:87:ARG:HH11	2.15	0.59
30:B4:9:LEU:HD13	30:B4:26:SER:O	2.03	0.59
36:BA:1947:C:C3'	36:BA:1948:G:H5''	2.32	0.59
38:BC:116:THR:HG22	38:BC:147:PHE:HA	1.85	0.59
38:BC:123:VAL:CG2	38:BC:127:LEU:HD13	2.32	0.59
39:BD:45:ASN:CG	39:BD:46:GLN:N	2.56	0.59
40:BE:101:ARG:HB2	40:BE:201:THR:HG21	1.84	0.59
40:BE:116:VAL:HG22	40:BE:122:PHE:CG	2.38	0.59
40:BE:188:VAL:HG23	40:BE:189:PRO:HD2	1.85	0.59
30:B4:6:HIS:HB3	42:BG:67:LYS:HZ1	1.68	0.59
42:BG:71:THR:O	42:BG:71:THR:HG23	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:136:ILE:HD12	43:BH:136:ILE:H	1.67	0.59
43:BH:85:LYS:CE	43:BH:133:VAL:H	2.15	0.59
48:BP:84:ASN:ND2	48:BP:116:GLY:HA2	2.18	0.59
49:BQ:141:GLN:HG3	58:BZ:72:ARG:CZ	2.32	0.59
52:BT:100:TYR:HD2	52:BT:103:ARG:NH2	1.97	0.59
56:BX:80:ILE:HG13	56:BX:80:ILE:O	2.02	0.59
57:BY:86:ARG:NH2	57:BY:95:LYS:NZ	2.50	0.59
58:BZ:18:LEU:N	58:BZ:18:LEU:HD12	2.14	0.59
1:CA:1039:C:C6	1:CA:1040:U:H5	2.20	0.59
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.38	0.59
1:CA:614:A:O2'	1:CA:615:C:H5'	2.03	0.59
3:CC:43:LEU:HD22	3:CC:47:LEU:HD22	1.85	0.59
24:CY:3:G:H5'	24:CY:3:G:H8	1.65	0.59
36:DA:1192:G:O2'	36:DA:1193:G:H5'	2.03	0.59
36:DA:1582:C:H2'	36:DA:1583:A:C8	2.38	0.59
36:DA:1817:G:C2'	36:DA:1818:U:H5'	2.33	0.59
36:DA:2128:C:O2'	36:DA:2129:C:O5'	2.20	0.59
36:DA:280:C:H3'	36:DA:281:G:H8	1.67	0.59
36:DA:1902:C:H4'	39:DD:244:ARG:CB	2.33	0.59
39:DD:30:GLU:HG3	39:DD:63:ARG:HH21	1.67	0.59
43:DH:98:LEU:H	43:DH:125:VAL:HG21	1.67	0.59
48:DP:41:ARG:CA	48:DP:41:ARG:NH1	2.66	0.59
51:DS:35:ILE:H	51:DS:53:SER:HB2	1.68	0.59
52:DT:85:LYS:NZ	52:DT:85:LYS:CB	2.60	0.59
53:DU:79:PHE:O	53:DU:83:LEU:HD13	2.03	0.59
1:AA:56:U:H2'	1:AA:57:G:C8	2.37	0.59
7:AG:70:LYS:HB3	7:AG:96:GLN:HG2	1.85	0.59
17:AQ:18:THR:HG23	17:AQ:69:LYS:HZ3	1.67	0.59
36:BA:139(A):G:H22	56:BX:44:GLU:CD	2.05	0.59
36:BA:1582:C:H2'	36:BA:1583:A:C8	2.38	0.59
36:BA:1678:G:N2	36:BA:1989:G:N2	2.51	0.59
26:B0:14:ARG:HD2	36:BA:2279:G:O6	2.03	0.59
36:BA:2305:A:C4	42:BG:154:GLY:HA3	2.37	0.59
36:BA:2360:A:O2'	36:BA:2361:A:O4'	2.21	0.59
36:BA:363(E):U:H2'	36:BA:363(F):A:C1'	2.33	0.59
43:BH:157:TYR:O	43:BH:158:HIS:CD2	2.56	0.59
48:BP:97:PRO:HD3	48:BP:126:VAL:O	2.02	0.59
52:BT:39:ARG:N	52:BT:39:ARG:HD2	2.18	0.59
58:BZ:30:ASN:HD22	58:BZ:32:HIS:N	1.97	0.59
58:BZ:9:TYR:HE1	58:BZ:35:ARG:NH1	2.00	0.59
1:CA:1283:G:O2'	1:CA:1284:C:P	2.60	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1319:A:H5'	1:CA:1320:C:OP1	2.02	0.59
6:CF:77:ARG:HG2	6:CF:77:ARG:HH11	1.67	0.59
13:CM:49:THR:HB	13:CM:52:GLU:HG3	1.85	0.59
22:CW:39:U:C5'	22:CW:39:U:O2	2.50	0.59
24:CY:40:C:H2'	24:CY:41:C:C5'	2.32	0.59
34:D8:59:LYS:HZ3	34:D8:59:LYS:HB2	1.66	0.59
36:DA:1331:A:HO2'	36:DA:1332:G:H8	1.51	0.59
36:DA:1523:U:H2'	36:DA:1524:G:H8	1.68	0.59
36:DA:2591:C:H2'	36:DA:2592:G:H8	1.66	0.59
36:DA:310:A:OP1	57:DY:18:GLY:HA2	2.03	0.59
36:DA:523:C:C2'	36:DA:524:U:H5'	2.33	0.59
36:DA:556:G:H2'	36:DA:557:U:C6	2.38	0.59
37:DB:30:C:H2'	37:DB:31:C:O4'	2.03	0.59
38:DC:45:ALA:O	38:DC:171:ILE:HG22	2.03	0.59
40:DE:170:LEU:HB3	40:DE:184:VAL:CG1	2.32	0.59
46:DN:126:PRO:O	46:DN:127:ASP:HB2	2.03	0.59
47:DO:88:ASN:HD21	47:DO:92:GLU:HB2	1.67	0.59
51:DS:50:SER:O	51:DS:51:ALA:HB2	2.02	0.59
51:DS:85:VAL:O	51:DS:106:ARG:HG2	2.03	0.59
52:DT:104:ASN:O	52:DT:105:LEU:HB2	2.01	0.59
52:DT:38:ASN:ND2	52:DT:38:ASN:O	2.35	0.59
56:DX:29:TRP:CE3	56:DX:78:LYS:HB3	2.38	0.59
1:AA:1325:C:P	21:AU:15:ARG:HH21	2.25	0.58
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.03	0.58
1:AA:192:U:O2'	20:AT:57:ARG:HG3	2.03	0.58
1:AA:924:C:H5'	1:AA:1399:C:OP2	2.03	0.58
34:B8:14:VAL:HG23	34:B8:24:ALA:HB2	1.85	0.58
34:B8:50:LEU:C	34:B8:53:PRO:HD2	2.24	0.58
34:B8:52:LYS:O	34:B8:55:ALA:HB3	2.03	0.58
36:BA:2121:G:O4'	38:BC:167:LYS:HE2	2.02	0.58
36:BA:2140:C:H2'	36:BA:2141:G:H8	1.68	0.58
36:BA:361:G:H2'	36:BA:362:U:H4'	1.84	0.58
36:BA:512:G:O2'	36:BA:513:A:H8	1.86	0.58
36:BA:523:C:C2'	36:BA:524:U:H5'	2.33	0.58
37:BB:75:G:O2'	58:BZ:27:VAL:HG23	2.03	0.58
38:BC:87:GLU:HG2	38:BC:94:VAL:CG2	2.33	0.58
39:BD:48:ARG:NH1	39:BD:48:ARG:HG3	2.18	0.58
43:BH:74:ASN:HB3	43:BH:138:LYS:HD3	1.85	0.58
46:BN:22:THR:HG22	46:BN:61:ARG:CB	2.32	0.58
50:BR:55:ALA:CB	50:BR:79:LEU:HD11	2.33	0.58
52:BT:50:ILE:O	52:BT:99:LEU:HD12	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:18:LEU:HB3	58:BZ:23:LYS:HB2	1.85	0.58
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.03	0.58
1:CA:755:G:OP2	15:CO:65:ARG:HD2	2.03	0.58
10:CJ:81:THR:HG23	10:CJ:82:ILE:H	1.67	0.58
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.18	0.58
17:CQ:67:LYS:O	17:CQ:68:ARG:CB	2.50	0.58
25:CZ:126:VAL:HG13	61:CZ:502:KIR:C47	2.33	0.58
28:D2:18:PRO:HA	28:D2:21:LEU:CD1	2.33	0.58
28:D2:69:ARG:H	28:D2:69:ARG:HD2	1.68	0.58
36:DA:1516:C:O2'	36:DA:1517:G:H5''	2.03	0.58
32:D6:25:LYS:HD2	36:DA:2285:C:N4	2.18	0.58
36:DA:363(E):U:H2'	36:DA:363(F):A:C1'	2.33	0.58
36:DA:573:G:O2'	36:DA:574:C:H3'	2.02	0.58
36:DA:654(N):G:H2'	36:DA:654(O):G:O4'	2.03	0.58
38:DC:76:ALA:HB1	38:DC:149:ILE:HD11	1.84	0.58
43:DH:52:VAL:HG21	43:DH:69:ARG:HG3	1.85	0.58
48:DP:41:ARG:HB3	48:DP:41:ARG:NH1	2.18	0.58
53:DU:92:ARG:NH1	53:DU:94:ASN:HD22	2.00	0.58
54:DV:38:LEU:HD23	54:DV:39:LEU:N	2.18	0.58
54:DV:59:ALA:HB1	54:DV:95:LEU:O	2.03	0.58
56:DX:49:VAL:HG12	56:DX:87:GLN:HB3	1.85	0.58
1:AA:1278:U:H5''	1:AA:1279:A:O4'	2.02	0.58
1:AA:344:A:H4'	1:AA:345:C:OP2	2.03	0.58
11:AK:105:VAL:HG23	11:AK:105:VAL:O	2.02	0.58
1:AA:187:C:O2	20:AT:105:SER:HB3	2.04	0.58
32:B6:25:LYS:HD2	36:BA:2285:C:N4	2.17	0.58
36:BA:654(M):C:H2'	36:BA:654(N):G:N7	2.18	0.58
40:BE:34:VAL:O	40:BE:35:GLN:HB2	2.02	0.58
54:BV:91:TYR:HD1	54:BV:91:TYR:H	1.49	0.58
57:BY:28:LYS:CB	57:BY:37:VAL:HB	2.33	0.58
12:CL:102:ARG:HG2	12:CL:102:ARG:NH1	2.18	0.58
6:CF:97:PHE:CD1	18:CR:31:LEU:HD21	2.28	0.58
28:D2:27:GLU:O	28:D2:30:ARG:N	2.36	0.58
28:D2:36:ARG:HD3	56:DX:9:LEU:O	2.03	0.58
30:D4:13:ARG:C	30:D4:14:ILE:HD12	2.23	0.58
36:DA:1516:C:H2'	36:DA:1517:G:H5'	1.85	0.58
36:DA:2309:A:C2'	36:DA:2310:A:H5''	2.33	0.58
36:DA:2406:U:N3	48:DP:72:PRO:HB2	2.17	0.58
42:DG:174:GLU:C	42:DG:176:LEU:H	2.06	0.58
47:DO:86:ILE:H	47:DO:86:ILE:HD12	1.67	0.58
48:DP:9:ASN:N	48:DP:10:PRO:HD2	2.14	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:21:TYR:OH	50:DR:43:GLU:HG2	2.03	0.58
52:DT:33:LYS:HE2	52:DT:43:GLN:NE2	2.19	0.58
54:DV:39:LEU:CD1	54:DV:51:VAL:HA	2.33	0.58
1:AA:1240:U:OP1	7:AG:116:ALA:HB2	2.03	0.58
1:AA:187:C:C2	20:AT:105:SER:HB3	2.38	0.58
1:AA:80:G:C2'	1:AA:81:U:H5'	2.34	0.58
4:AD:16:GLY:O	4:AD:33:MET:HE3	2.03	0.58
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.85	0.58
15:AO:3:ILE:O	15:AO:3:ILE:HG13	2.03	0.58
33:B7:22:MET:CE	33:B7:31:LEU:HD12	2.34	0.58
35:B9:22:ARG:HB2	35:B9:24:TYR:HE1	1.68	0.58
36:BA:1061:U:H4'	36:BA:1070:A:C1'	2.32	0.58
36:BA:2183:C:H2'	36:BA:2184:G:H8	1.68	0.58
36:BA:236:C:H2'	36:BA:237:C:C6	2.38	0.58
43:BH:156:ALA:C	43:BH:158:HIS:N	2.56	0.58
48:BP:59:LEU:HA	48:BP:61:ARG:NH1	2.18	0.58
50:BR:99:LYS:HD2	50:BR:99:LYS:N	2.15	0.58
54:BV:41:GLY:HA3	54:BV:45:THR:OG1	2.04	0.58
16:CP:28:ARG:HG2	16:CP:29:ASP:OD1	2.04	0.58
24:CY:16:H2U:H5'	24:CY:17:H2U:H5'	1.86	0.58
28:D2:26:ARG:HG2	28:D2:26:ARG:O	2.03	0.58
28:D2:29:LYS:HD2	28:D2:32:LEU:CD1	2.27	0.58
36:DA:1960:A:C8	36:DA:1960:A:H5'	2.36	0.58
38:DC:73:ARG:O	38:DC:111:ASP:HB2	2.03	0.58
30:D4:34:GLU:HG2	42:DG:113:ARG:NH2	2.18	0.58
55:DW:82:LEU:HD23	55:DW:84:ARG:NH2	2.19	0.58
56:DX:33:LYS:HE2	56:DX:33:LYS:HA	1.84	0.58
57:DY:28:LYS:CB	57:DY:37:VAL:HB	2.33	0.58
1:AA:242:C:H2'	1:AA:243:A:H5'	1.86	0.58
1:AA:961:U:O2'	1:AA:962:C:O5'	2.20	0.58
2:AB:47:THR:HG23	2:AB:202:PRO:O	2.04	0.58
7:AG:20:ASP:HB3	7:AG:23:VAL:HG23	1.86	0.58
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.85	0.58
11:AK:30:VAL:HG11	11:AK:65:ALA:HA	1.85	0.58
25:AZ:333:GLY:HA3	25:AZ:363:MET:HA	1.85	0.58
28:B2:2:LYS:O	28:B2:6:VAL:HG23	2.02	0.58
34:B8:42:ARG:O	34:B8:44:LYS:N	2.33	0.58
34:B8:62:LEU:N	34:B8:63:PRO:HD2	2.19	0.58
36:BA:1446:C:H42	36:BA:1465:G:H1	1.51	0.58
36:BA:2228:G:OP1	39:BD:261:LYS:HE3	2.04	0.58
36:BA:2317:C:H2'	36:BA:2318:G:C5'	2.27	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:218:A:C2	36:BA:235:U:H4'	2.39	0.58
36:BA:898:C:H2'	36:BA:899:A:O4'	2.03	0.58
40:BE:23:VAL:HG12	40:BE:173:VAL:HG21	1.85	0.58
40:BE:92:THR:O	40:BE:95:ILE:HG12	2.03	0.58
52:BT:28:VAL:O	52:BT:28:VAL:HG12	2.03	0.58
52:BT:61:PHE:CE1	52:BT:76:PHE:HB2	2.37	0.58
12:CL:18:VAL:HG23	12:CL:19:ARG:N	2.16	0.58
1:CA:1318:A:H1'	19:CS:37:ARG:HH21	1.68	0.58
25:CZ:117:ARG:CD	25:CZ:157:LEU:HD11	2.33	0.58
25:CZ:363:MET:HB3	25:CZ:364:PRO:CD	2.33	0.58
25:CZ:85:HIS:C	25:CZ:87:ASP:H	2.05	0.58
27:D1:56:GLN:HB3	27:D1:87:PRO:HB3	1.84	0.58
28:D2:62:THR:HG21	36:DA:76:C:C1'	2.33	0.58
36:DA:1049:C:H2'	36:DA:1050:A:H8	1.68	0.58
36:DA:1590:U:H2'	36:DA:1591:G:C8	2.37	0.58
36:DA:1959:G:C3'	36:DA:1960:A:H5''	2.33	0.58
27:D1:30:VAL:H	36:DA:2396:G:H4'	1.68	0.58
36:DA:93:G:H2'	36:DA:94:C:C6	2.38	0.58
37:DB:82:G:O2'	37:DB:83:G:H5'	2.02	0.58
38:DC:114:VAL:HG12	38:DC:144:THR:CB	2.33	0.58
26:D0:7:LEU:HD21	49:DQ:81:VAL:CG1	2.33	0.58
36:DA:2820:A:H4'	50:DR:5:LYS:HE2	1.85	0.58
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.04	0.58
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.33	0.58
1:AA:358:U:H5''	25:AZ:234:ARG:O	2.04	0.58
3:AC:70:VAL:HG12	3:AC:72:LYS:N	2.19	0.58
6:AF:61:LEU:O	6:AF:62:TRP:HB3	2.03	0.58
25:AZ:101:GLY:HA3	25:AZ:210:ILE:HD12	1.86	0.58
25:AZ:19:HIS:CG	25:AZ:115:GLN:HB2	2.37	0.58
34:B8:61:LEU:HD12	34:B8:61:LEU:N	2.13	0.58
36:BA:1001:A:H2'	36:BA:1002:G:O4'	2.03	0.58
36:BA:1146:C:O2'	36:BA:1147:C:H5'	2.04	0.58
40:BE:105:THR:HB	40:BE:197:ILE:CG2	2.32	0.58
41:BF:10:PRO:HD2	41:BF:13:SER:O	2.04	0.58
47:BO:64:ARG:CZ	52:BT:70:VAL:HG21	2.34	0.58
36:BA:953:A:OP2	49:BQ:16:ARG:HD2	2.03	0.58
51:BS:98:VAL:HG12	51:BS:100:ALA:H	1.68	0.58
55:BW:1:MET:HB3	55:BW:64:MET:HE3	1.85	0.58
2:CB:144:ARG:HB2	2:CB:144:ARG:HH11	1.68	0.58
4:CD:170:VAL:HG12	4:CD:171:GLY:N	2.18	0.58
13:CM:58:GLU:O	13:CM:62:ASN:HB2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:6:GLU:N	15:CO:6:GLU:OE1	2.35	0.58
22:CW:39:U:H2'	22:CW:40:C:H5'	1.85	0.58
25:CZ:164:PRO:O	25:CZ:168:VAL:HG23	2.04	0.58
26:D0:43:THR:O	26:D0:43:THR:HG23	2.03	0.58
27:D1:53:VAL:O	27:D1:54:ALA:HB3	2.02	0.58
28:D2:15:LYS:HG3	28:D2:16:LEU:H	1.68	0.58
34:D8:17:THR:HG21	34:D8:21:LYS:HB2	1.85	0.58
36:DA:1209:G:H21	36:DA:1210:A:H62	1.49	0.58
36:DA:1677:A:H2'	36:DA:1678:G:C8	2.38	0.58
36:DA:2313:C:H5'	36:DA:2313:C:H6	1.68	0.58
36:DA:521:G:H2'	36:DA:522:G:H8	1.69	0.58
39:DD:44:ASN:OD1	39:DD:44:ASN:N	2.35	0.58
41:DF:125:LEU:HD23	41:DF:125:LEU:N	2.13	0.58
41:DF:167:ALA:O	41:DF:170:LEU:HB2	2.04	0.58
46:DN:125:GLY:HA2	46:DN:126:PRO:O	2.02	0.58
48:DP:126:VAL:CA	48:DP:145:PRO:HG2	2.30	0.58
49:DQ:45:GLN:H	49:DQ:45:GLN:NE2	2.01	0.58
51:DS:97:ARG:NH2	51:DS:98:VAL:CA	2.64	0.58
52:DT:83:ILE:HG13	52:DT:84:GLN:H	1.69	0.58
55:DW:92:ARG:O	55:DW:93:ALA:HB3	2.03	0.58
57:DY:42:VAL:HG21	57:DY:67:LEU:HD12	1.85	0.58
1:AA:1489:G:O2'	1:AA:1490:C:H5'	2.04	0.58
13:AM:82:MET:SD	13:AM:83:ASP:N	2.76	0.58
16:AP:67:THR:HB	16:AP:70:ALA:CB	2.33	0.58
18:AR:26:LEU:CD2	18:AR:39:VAL:HG13	2.34	0.58
20:AT:26:ASN:ND2	20:AT:26:ASN:H	2.00	0.58
30:B4:28:LYS:O	30:B4:31:ILE:HD11	2.03	0.58
30:B4:30:GLU:C	30:B4:31:ILE:HD12	2.24	0.58
36:BA:1049:C:O2	36:BA:1113:U:H4'	2.04	0.58
36:BA:1076:C:H42	36:BA:1088:A:H61	1.50	0.58
36:BA:1592:C:H2'	36:BA:1593:G:H8	1.69	0.58
36:BA:2192:G:C2'	36:BA:2193:G:H5''	2.33	0.58
36:BA:2415:G:H2'	36:BA:2416:C:C6	2.38	0.58
36:BA:8:A:H2'	36:BA:9:U:C5	2.39	0.58
37:BB:65:C:H41	37:BB:109:C:H2'	1.66	0.58
38:BC:73:ARG:O	38:BC:111:ASP:HB2	2.04	0.58
36:BA:1902:C:H4'	39:BD:244:ARG:CB	2.33	0.58
39:BD:44:ASN:HB2	39:BD:48:ARG:O	2.04	0.58
40:BE:181:LEU:HD21	52:BT:7:ILE:HG23	1.84	0.58
46:BN:62:VAL:HG22	46:BN:66:LYS:HB2	1.85	0.58
50:BR:59:ASP:O	50:BR:60:LEU:HB3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:7:GLY:O	50:BR:8:ARG:CZ	2.51	0.58
53:BU:111:GLU:C	53:BU:113:ALA:H	2.07	0.58
1:CA:80:G:C2'	1:CA:81:U:H5'	2.34	0.58
7:CG:46:ALA:O	7:CG:50:ILE:HG12	2.03	0.58
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.85	0.58
21:CU:17:THR:O	21:CU:22:ARG:NH1	2.37	0.58
27:D1:44:PRO:O	27:D1:46:LEU:N	2.35	0.58
31:D5:36:CYS:C	31:D5:38:ALA:H	2.06	0.58
37:DB:65:C:H41	37:DB:109:C:H2'	1.68	0.58
39:DD:30:GLU:CG	39:DD:63:ARG:HH21	2.17	0.58
40:DE:101:ARG:HB2	40:DE:201:THR:HG21	1.85	0.58
40:DE:132:HIS:C	40:DE:135:HIS:HE1	2.06	0.58
40:DE:38:THR:OG1	40:DE:41:LYS:HE2	2.03	0.58
41:DF:103:LYS:HG3	41:DF:106:ARG:HH21	1.67	0.58
41:DF:139:PHE:HB2	41:DF:166:ALA:HB1	1.85	0.58
46:DN:46:VAL:HG11	46:DN:48:MET:HG3	1.86	0.58
49:DQ:1:MET:HE2	49:DQ:44:ALA:O	2.03	0.58
52:DT:75:ILE:HD12	52:DT:75:ILE:N	2.19	0.58
58:DZ:4:ARG:HG2	58:DZ:58:VAL:CB	2.32	0.58
1:AA:434:U:H2'	1:AA:435:C:C6	2.39	0.58
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.17	0.58
13:AM:39:ILE:HD12	13:AM:56:LEU:HD23	1.85	0.58
15:AO:74:ASP:OD1	15:AO:76:GLU:HB3	2.04	0.58
21:AU:22:ARG:NH1	21:AU:22:ARG:HG2	2.14	0.58
24:AY:70:C:H2'	24:AY:71:C:H5'	1.85	0.58
25:AZ:156:ASP:O	25:AZ:160:GLN:HB3	2.04	0.58
25:AZ:193:ASN:HB3	25:AZ:196:VAL:H	1.68	0.58
32:B6:15:GLU:HG3	32:B6:47:THR:OG1	2.04	0.58
36:BA:1639:U:O2'	36:BA:1640:C:H5''	2.03	0.58
36:BA:2189:U:H3'	36:BA:2190:G:H4'	1.86	0.58
36:BA:2309:A:H2'	36:BA:2310:A:C5'	2.34	0.58
36:BA:285:C:H2'	36:BA:286:C:C6	2.39	0.58
36:BA:672:C:H2'	36:BA:673:C:H5'	1.85	0.58
39:BD:275:LYS:C	39:BD:275:LYS:HD2	2.24	0.58
42:BG:53:LEU:HD22	42:BG:53:LEU:N	2.18	0.58
53:BU:70:ARG:HA	53:BU:74:LEU:O	2.04	0.58
58:BZ:73:GLN:HE21	58:BZ:75:ASN:HD21	1.51	0.58
1:CA:1256:A:H2	1:CA:1277:C:H2'	1.68	0.58
1:CA:711:G:O2'	1:CA:712:A:H5'	2.02	0.58
3:CC:139:GLN:NE2	3:CC:170:GLN:HE22	2.01	0.58
5:CE:38:GLN:HA	5:CE:38:GLN:OE1	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:67:THR:HB	16:CP:70:ALA:CB	2.34	0.58
24:CY:9:A:H2	24:CY:44:G:O2'	1.86	0.58
27:D1:46:LEU:HB3	27:D1:63:ALA:HA	1.84	0.58
27:D1:76:ARG:HH22	27:D1:95:LEU:HA	1.67	0.58
31:D5:52:TYR:CE2	36:DA:2884:U:H1'	2.39	0.58
32:D6:11:LEU:HD21	32:D6:51:GLU:HG3	1.86	0.58
33:D7:26:GLY:O	33:D7:30:VAL:HG23	2.04	0.58
36:DA:2023:G:H4'	36:DA:2617:C:O3'	2.03	0.58
39:DD:27:THR:HG23	39:DD:83:GLU:CG	2.33	0.58
41:DF:110:LEU:HD12	41:DF:206:ILE:HD11	1.86	0.58
42:DG:83:ARG:O	42:DG:84:LYS:CB	2.51	0.58
46:DN:22:THR:HG22	46:DN:61:ARG:HB2	1.85	0.58
52:DT:23:ARG:HB2	52:DT:24:PRO:HD2	1.85	0.58
52:DT:24:PRO:HD3	52:DT:52:ILE:CD1	2.33	0.58
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.39	0.58
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.38	0.58
4:AD:174:LEU:HD23	4:AD:185:PHE:HA	1.86	0.58
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.33	0.58
11:AK:27:ASN:ND2	11:AK:28:THR:N	2.51	0.58
1:AA:1047:G:H5''	14:AN:4:LYS:HG2	1.86	0.58
36:BA:1274:A:N3	36:BA:1297:C:H1'	2.18	0.58
36:BA:1389:G:H2'	36:BA:1390:U:C6	2.38	0.58
36:BA:1932:A:H2'	36:BA:1933:G:O4'	2.04	0.58
36:BA:28:A:H61	36:BA:512:G:H1'	1.68	0.58
36:BA:363:G:H2'	36:BA:363(A):A:H8	1.69	0.58
39:BD:4:LYS:NZ	39:BD:20:ASP:HA	2.19	0.58
41:BF:110:LEU:HD12	41:BF:206:ILE:HD11	1.86	0.58
48:BP:16:ARG:CZ	48:BP:18:ARG:HG2	2.34	0.58
36:BA:833:U:H5''	48:BP:48:PRO:CB	2.33	0.58
50:BR:47:PHE:O	50:BR:51:LEU:HD13	2.03	0.58
54:BV:21:ARG:CG	54:BV:91:TYR:HD2	2.16	0.58
54:BV:62:LEU:HD21	54:BV:95:LEU:CB	2.21	0.58
57:BY:30:VAL:HA	57:BY:37:VAL:HG12	1.86	0.58
57:BY:63:LYS:HG2	57:BY:64:GLU:H	1.68	0.58
1:CA:768:A:H5'	1:CA:1524:C:H1'	1.86	0.58
1:CA:858:G:C8	1:CA:858:G:C5'	2.86	0.58
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB2	2.30	0.58
15:CO:74:ASP:OD1	15:CO:76:GLU:HB3	2.04	0.58
32:D6:26:ASN:HD22	32:D6:32:ASN:ND2	2.01	0.58
36:DA:1375:C:H2'	36:DA:1376:C:H6	1.68	0.58
36:DA:1854:A:H62	36:DA:1888:G:H8	1.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2341:G:H2'	36:DA:2342:C:C6	2.39	0.58
36:DA:672:C:C2'	36:DA:673:C:C5'	2.82	0.58
40:DE:199:ARG:HH11	40:DE:199:ARG:HB3	1.69	0.58
41:DF:157:VAL:HG23	41:DF:198:ALA:CB	2.33	0.58
46:DN:6:PRO:HB2	46:DN:9:VAL:HG21	1.84	0.58
53:DU:70:ARG:HA	53:DU:74:LEU:O	2.04	0.58
54:DV:91:TYR:H	54:DV:91:TYR:HD1	1.50	0.58
57:DY:6:HIS:CE1	57:DY:30:VAL:HG11	2.38	0.58
57:DY:86:ARG:HH21	57:DY:95:LYS:NZ	2.01	0.58
58:DZ:4:ARG:CG	58:DZ:58:VAL:HB	2.33	0.58
37:DB:105:A:OP1	58:DZ:72:ARG:NH1	2.37	0.58
2:AB:17:PHE:HD2	2:AB:44:LEU:HD11	1.68	0.58
10:AJ:81:THR:HG23	10:AJ:82:ILE:H	1.67	0.58
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.04	0.58
16:AP:71:ARG:HA	16:AP:74:LEU:HD13	1.85	0.58
6:AF:97:PHE:CD1	18:AR:31:LEU:HD21	2.29	0.58
22:AW:19:G:N7	36:BA:2169:A:C2	2.72	0.58
32:B6:13:CYS:O	32:B6:21:TYR:HA	2.04	0.58
32:B6:30:THR:CG2	32:B6:31:PRO:HD2	2.20	0.58
32:B6:26:ASN:ND2	32:B6:32:ASN:ND2	2.52	0.58
32:B6:45:LYS:O	32:B6:46:HIS:HB3	2.04	0.58
36:BA:108:U:H2'	36:BA:109:G:C8	2.39	0.58
36:BA:325:G:H2'	36:BA:326:G:C8	2.38	0.58
36:BA:650:C:C3'	36:BA:651:G:H5"	2.32	0.58
38:BC:106:GLY:O	38:BC:107:TRP:HB3	2.03	0.58
39:BD:32:SER:O	39:BD:33:LEU:O	2.21	0.58
36:BA:2580:U:C5'	40:BE:131:ALA:HB2	2.31	0.58
40:BE:132:HIS:C	40:BE:135:HIS:HE1	2.07	0.58
48:BP:41:ARG:CA	48:BP:41:ARG:NH1	2.67	0.58
49:BQ:45:GLN:H	49:BQ:45:GLN:NE2	2.01	0.58
52:BT:23:ARG:HB2	52:BT:24:PRO:HD2	1.86	0.58
2:CB:229:VAL:HG12	2:CB:230:VAL:N	2.18	0.58
13:CM:120:LYS:HE3	13:CM:121:LYS:H	1.69	0.58
1:CA:1325:C:P	21:CU:15:ARG:HH21	2.26	0.58
22:CW:18:G:H22	22:CW:55:U:H6	1.52	0.58
22:CW:43:C:H2'	22:CW:44:G:C1'	2.33	0.58
24:CY:75:C:H5	25:CZ:232:THR:CB	2.16	0.58
30:D4:28:LYS:O	30:D4:31:ILE:HD11	2.04	0.58
36:DA:302:C:H2'	36:DA:303:U:H6	1.67	0.58
36:DA:833:U:H2'	36:DA:834:C:H6	1.68	0.58
38:DC:190:ARG:O	38:DC:194:ARG:HG3	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:142:PRO:HG2	42:DG:143:GLU:OE2	2.04	0.58
42:DG:72:ARG:CB	42:DG:87:PRO:HD2	2.34	0.58
42:DG:39:ILE:HD11	42:DG:92:VAL:HG13	1.85	0.58
48:DP:16:ARG:NE	48:DP:18:ARG:HG2	2.18	0.58
50:DR:75:LEU:HD13	50:DR:75:LEU:O	2.04	0.58
52:DT:28:VAL:CG1	52:DT:46:GLU:HA	2.31	0.58
57:DY:98:VAL:O	57:DY:99:CYS:SG	2.62	0.58
1:AA:624:C:H2'	1:AA:625:G:C8	2.39	0.58
1:AA:961:U:O2'	1:AA:962:C:H6	1.85	0.58
2:AB:155:LEU:HD22	2:AB:157:ARG:O	2.04	0.58
3:AC:71:ALA:HA	3:AC:106:VAL:HG22	1.86	0.58
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.72	0.58
9:AI:95:LYS:NZ	9:AI:96:LEU:HD13	2.18	0.58
12:AL:25:PRO:O	12:AL:27:LEU:N	2.36	0.58
25:AZ:362:VAL:HG12	25:AZ:362:VAL:O	2.03	0.58
28:B2:47:ASN:O	28:B2:49:LYS:N	2.37	0.58
36:BA:20:C:O2'	36:BA:21:A:H5'	2.04	0.58
36:BA:2402:C:H2'	36:BA:2403:C:H5'	1.85	0.58
36:BA:862:G:H2'	36:BA:863:A:O4'	2.04	0.58
39:BD:27:THR:O	39:BD:27:THR:HG23	2.03	0.58
43:BH:41:MET:SD	43:BH:53:GLU:O	2.62	0.58
36:BA:2820:A:H4'	50:BR:5:LYS:HE2	1.86	0.58
54:BV:19:LYS:CE	54:BV:20:LEU:H	2.17	0.58
56:BX:31:HIS:ND1	56:BX:32:PRO:HD2	2.18	0.58
2:CB:109:SER:O	2:CB:111:ARG:N	2.37	0.58
12:CL:20:LYS:N	12:CL:20:LYS:HD3	2.12	0.58
12:CL:46:LYS:HG3	12:CL:47:LYS:H	1.69	0.58
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.86	0.58
22:CV:50:U:O2'	22:CV:51:U:H5'	2.03	0.58
25:CZ:20:VAL:HG12	25:CZ:115:GLN:HG3	1.86	0.58
25:CZ:277:LEU:HD11	25:CZ:280:GLY:H	1.68	0.58
27:D1:42:GLN:HA	36:DA:2231:C:OP1	2.03	0.58
31:D5:44:THR:HG21	50:DR:101:ALA:CB	2.27	0.58
34:D8:7:HIS:CD2	48:DP:50:ARG:HD3	2.39	0.58
36:DA:1771:C:H1'	36:DA:1786:A:C8	2.39	0.58
38:DC:33:ALA:HA	38:DC:39:GLU:OE2	2.03	0.58
39:DD:30:GLU:HG3	39:DD:63:ARG:NH2	2.18	0.58
40:DE:98:PRO:HD3	40:DE:175:VAL:HG12	1.85	0.58
40:DE:34:VAL:O	40:DE:34:VAL:HG22	2.02	0.58
42:DG:170:ARG:O	42:DG:174:GLU:HG2	2.04	0.58
43:DH:41:MET:SD	43:DH:53:GLU:O	2.62	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:85:LYS:CE	43:DH:133:VAL:H	2.16	0.58
46:DN:1:MET:C	46:DN:2:LYS:HD2	2.25	0.58
48:DP:147:LEU:CG	48:DP:148:LEU:H	2.04	0.58
49:DQ:21:THR:HG22	49:DQ:23:GLY:O	2.02	0.58
52:DT:28:VAL:CG1	52:DT:46:GLU:HG3	2.31	0.58
40:DE:181:LEU:HD21	52:DT:7:ILE:HG23	1.85	0.58
53:DU:8:VAL:O	53:DU:12:ARG:HG3	2.04	0.58
1:AA:80:G:C3'	1:AA:81:U:H5'	2.34	0.57
2:AB:109:SER:C	2:AB:111:ARG:H	2.06	0.57
2:AB:92:TYR:HE2	2:AB:94:ASN:ND2	2.02	0.57
8:AH:86:ILE:HG21	8:AH:133:LEU:HD23	1.86	0.57
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.03	0.57
12:AL:102:ARG:HH11	12:AL:110:VAL:HG22	1.67	0.57
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.85	0.57
25:AZ:339:ARG:HE	25:AZ:352:VAL:HG22	1.67	0.57
27:B1:7:ILE:HG22	27:B1:8:SER:N	2.19	0.57
36:BA:1666:G:C2'	36:BA:1667:G:H5'	2.34	0.57
36:BA:1771:C:H1'	36:BA:1786:A:C8	2.39	0.57
36:BA:2023:G:H4'	36:BA:2617:C:O3'	2.04	0.57
38:BC:78:ALA:H	38:BC:115:ALA:HA	1.69	0.57
39:BD:30:GLU:HG3	39:BD:63:ARG:HH21	1.68	0.57
40:BE:108:SER:HB3	40:BE:165:VAL:HG21	1.86	0.57
41:BF:108:LYS:N	41:BF:108:LYS:HD3	2.18	0.57
47:BO:2:ILE:HD12	47:BO:6:THR:HG21	1.85	0.57
47:BO:94:ARG:HG2	47:BO:94:ARG:NH1	2.19	0.57
48:BP:85:LEU:HA	48:BP:88:LEU:HB2	1.84	0.57
50:BR:29:LEU:O	50:BR:75:LEU:HD21	2.04	0.57
52:BT:75:ILE:N	52:BT:75:ILE:HD12	2.19	0.57
1:CA:624:C:H2'	1:CA:625:G:C8	2.38	0.57
1:CA:737:A:H2'	1:CA:738:C:C6	2.39	0.57
5:CE:11:ILE:HD12	5:CE:31:LEU:CD1	2.34	0.57
6:CF:61:LEU:O	6:CF:62:TRP:CB	2.50	0.57
13:CM:12:ASN:N	13:CM:12:ASN:HD22	1.99	0.57
19:CS:22:LEU:HD13	19:CS:22:LEU:O	2.04	0.57
19:CS:67:VAL:HG12	19:CS:68:GLY:N	2.19	0.57
20:CT:26:ASN:O	20:CT:30:LYS:HB2	2.05	0.57
20:CT:70:SER:HA	20:CT:73:HIS:CD2	2.38	0.57
25:CZ:324:LYS:HB2	25:CZ:326:GLU:CG	2.34	0.57
25:CZ:38:GLU:H	25:CZ:38:GLU:CD	2.07	0.57
29:D3:44:ARG:O	29:D3:48:GLU:HG2	2.04	0.57
35:D9:25:VAL:HB	35:D9:34:GLN:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1278:A:O2'	36:DA:1279:G:H5'	2.03	0.57
36:DA:1446:C:H42	36:DA:1465:G:H1	1.49	0.57
36:DA:363:G:H2'	36:DA:363(A):A:H8	1.69	0.57
36:DA:774:A:H2	36:DA:787:U:HO2'	1.51	0.57
38:DC:123:VAL:CG2	38:DC:127:LEU:HD13	2.33	0.57
39:DD:275:LYS:HD2	39:DD:275:LYS:C	2.24	0.57
47:DO:87:ILE:HG22	47:DO:88:ASN:O	2.04	0.57
50:DR:55:ALA:CB	50:DR:79:LEU:HD11	2.34	0.57
52:DT:115:ARG:HG3	52:DT:115:ARG:NH1	2.14	0.57
58:DZ:19:ARG:NH1	58:DZ:84:GLU:O	2.37	0.57
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.03	0.57
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.35	0.57
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.86	0.57
9:AI:56:LEU:HD23	9:AI:56:LEU:H	1.69	0.57
20:AT:25:ARG:HG3	20:AT:25:ARG:HH11	1.68	0.57
25:AZ:38:GLU:H	25:AZ:38:GLU:CD	2.08	0.57
26:B0:7:LEU:HD21	49:BQ:81:VAL:CG1	2.33	0.57
36:BA:139(A):G:H3'	36:BA:140:G:H8	1.69	0.57
36:BA:143:G:H2'	36:BA:143(A):C:H6	1.69	0.57
36:BA:2108:C:O2	36:BA:2108:C:C2'	2.52	0.57
36:BA:2469:A:H2'	36:BA:2470:G:H5'	1.86	0.57
36:BA:782:A:C2	39:BD:226:MET:SD	2.98	0.57
22:AW:56:C:O4'	38:BC:132:GLY:HA3	2.03	0.57
39:BD:176:ARG:HG2	39:BD:176:ARG:NH1	2.15	0.57
40:BE:38:THR:OG1	40:BE:41:LYS:HE2	2.04	0.57
43:BH:43:VAL:HG12	43:BH:46:GLU:OE2	2.03	0.57
47:BO:98:VAL:HG12	47:BO:117:LEU:HB3	1.86	0.57
48:BP:16:ARG:CB	48:BP:16:ARG:HH11	2.15	0.57
52:BT:33:LYS:HE2	52:BT:43:GLN:NE2	2.19	0.57
57:BY:6:HIS:CE1	57:BY:30:VAL:HG11	2.38	0.57
57:BY:88:LYS:HZ2	57:BY:93:GLY:HA3	1.69	0.57
1:CA:1039:C:H2'	1:CA:1040:U:C5	2.39	0.57
1:CA:1256:A:C2	1:CA:1277:C:H2'	2.39	0.57
4:CD:32:ALA:C	4:CD:34:GLU:H	2.08	0.57
9:CI:95:LYS:NZ	9:CI:96:LEU:HD13	2.20	0.57
13:CM:15:VAL:HG11	13:CM:48:LEU:HD11	1.85	0.57
17:CQ:70:ARG:HD2	17:CQ:70:ARG:N	2.19	0.57
20:CT:66:ALA:HB1	20:CT:71:THR:HB	1.87	0.57
21:CU:13:ILE:O	21:CU:16:GLY:N	2.35	0.57
28:D2:18:PRO:HA	28:D2:21:LEU:HG	1.85	0.57
28:D2:21:LEU:HB3	28:D2:64:LEU:CG	2.23	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1038:C:C2'	36:DA:1039:G:H5''	2.32	0.57
36:DA:1049:C:O2	36:DA:1113:U:H4'	2.04	0.57
36:DA:1788:C:O2'	36:DA:1789:A:H5'	2.04	0.57
36:DA:201:C:O2'	36:DA:202:U:H5'	2.03	0.57
36:DA:2402:C:H2'	36:DA:2403:C:H5'	1.85	0.57
36:DA:297:C:H2'	36:DA:298:G:O4'	2.04	0.57
36:DA:512:G:O2'	36:DA:513:A:H8	1.87	0.57
38:DC:43:VAL:HG23	38:DC:175:VAL:HG21	1.86	0.57
42:DG:62:LEU:HD12	42:DG:62:LEU:N	2.16	0.57
42:DG:64:THR:HG23	42:DG:66:GLN:H	1.68	0.57
47:DO:28:SER:O	47:DO:29:ASN:HB3	2.04	0.57
49:DQ:52:VAL:O	49:DQ:56:ARG:HB2	2.04	0.57
53:DU:6:THR:O	53:DU:9:VAL:HG22	2.03	0.57
1:AA:226:G:O2'	1:AA:227:G:H5'	2.04	0.57
4:AD:70:ILE:HG22	4:AD:71:SER:N	2.19	0.57
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.68	0.57
17:AQ:70:ARG:N	17:AQ:70:ARG:HD2	2.19	0.57
24:AY:61:C:O2'	24:AY:62:U:H5''	2.04	0.57
1:AA:55:A:N1	25:AZ:234:ARG:HD3	2.20	0.57
25:AZ:301:GLY:HA2	25:AZ:347:THR:OG1	2.03	0.57
25:AZ:363:MET:HB3	25:AZ:364:PRO:CD	2.33	0.57
27:B1:45:ASN:HD21	36:BA:2090:G:N2	1.95	0.57
36:BA:1019:U:HO2'	36:BA:1021:A:H2	1.42	0.57
36:BA:1101:U:H2'	36:BA:1102:C:H6	1.69	0.57
36:BA:2139:C:O2'	36:BA:2140:C:H5'	2.03	0.57
36:BA:2206:G:N2	36:BA:2207:G:H5'	2.19	0.57
36:BA:527:C:H4'	36:BA:528:A:O4'	2.05	0.57
38:BC:87:GLU:HG2	38:BC:94:VAL:HG23	1.84	0.57
41:BF:24:LEU:O	41:BF:26:ALA:N	2.37	0.57
42:BG:63:ILE:CA	42:BG:143:GLU:HG3	2.29	0.57
43:BH:98:LEU:H	43:BH:125:VAL:HG21	1.69	0.57
46:BN:125:GLY:HA2	46:BN:126:PRO:O	2.04	0.57
46:BN:3:THR:HG22	46:BN:4:TYR:N	2.18	0.57
48:BP:41:ARG:NH1	48:BP:41:ARG:HB3	2.19	0.57
50:BR:52:ILE:HB	50:BR:94:TYR:CD2	2.40	0.57
51:BS:12:PHE:CD1	51:BS:13:ARG:N	2.70	0.57
51:BS:13:ARG:HG3	51:BS:14:VAL:N	2.18	0.57
52:BT:29:ARG:CB	52:BT:85:LYS:HA	2.33	0.57
1:CA:309:G:H1'	1:CA:608:A:C2	2.39	0.57
11:CK:18:ARG:HH21	11:CK:36:ASP:C	2.08	0.57
17:CQ:66:SER:OG	17:CQ:69:LYS:HB2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:5:PHE:CD1	25:CZ:5:PHE:C	2.77	0.57
28:D2:18:PRO:HG3	28:D2:71:ASN:O	2.04	0.57
31:D5:57:VAL:C	31:D5:58:LEU:HD12	2.24	0.57
34:D8:6:THR:HG21	34:D8:63:PRO:HD3	1.85	0.57
36:DA:99:U:H4'	36:DA:102:G:H1'	1.86	0.57
36:DA:1231:G:H2'	36:DA:1232:G:C8	2.39	0.57
36:DA:214:G:H1'	36:DA:216:A:O2'	2.05	0.57
36:DA:218:A:C2	36:DA:235:U:H4'	2.39	0.57
38:DC:99:ILE:O	38:DC:99:ILE:HG22	2.05	0.57
39:DD:27:THR:HG23	39:DD:27:THR:O	2.03	0.57
40:DE:81:ILE:O	40:DE:81:ILE:HG22	2.03	0.57
43:DH:169:VAL:HG22	43:DH:170:ARG:N	2.10	0.57
50:DR:101:ALA:O	50:DR:102:GLU:HB2	2.04	0.57
50:DR:5:LYS:O	50:DR:6:SER:HB2	2.04	0.57
53:DU:88:ILE:C	53:DU:90:VAL:H	2.07	0.57
54:DV:47:VAL:HB	54:DV:51:VAL:O	2.04	0.57
54:DV:21:ARG:HG2	54:DV:91:TYR:CD2	2.38	0.57
56:DX:49:VAL:HG12	56:DX:87:GLN:NE2	2.19	0.57
57:DY:29:GLU:N	57:DY:29:GLU:OE1	2.37	0.57
57:DY:42:VAL:CG2	57:DY:67:LEU:HD12	2.34	0.57
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.50	0.57
2:AB:221:LEU:O	2:AB:221:LEU:HD13	2.04	0.57
12:AL:18:VAL:HG23	12:AL:19:ARG:N	2.17	0.57
22:AV:50:U:O2'	22:AV:51:U:H5'	2.04	0.57
22:AW:59:U:C2'	22:AW:60:U:H5'	2.33	0.57
25:AZ:20:VAL:HG12	25:AZ:115:GLN:HG3	1.85	0.57
25:AZ:69:GLU:HG2	25:AZ:70:TYR:N	2.18	0.57
34:B8:6:THR:HG21	34:B8:63:PRO:HD3	1.85	0.57
35:B9:25:VAL:HB	35:B9:34:GLN:HB2	1.85	0.57
36:BA:1260:G:H2'	36:BA:1261:C:C6	2.38	0.57
36:BA:1959:G:C3'	36:BA:1960:A:H5''	2.33	0.57
39:BD:27:THR:HG23	39:BD:83:GLU:HG2	1.86	0.57
41:BF:139:PHE:HB2	41:BF:166:ALA:HB1	1.86	0.57
47:BO:80:ASP:OD2	52:BT:71:GLY:HA3	2.03	0.57
53:BU:65:ILE:HD11	53:BU:96:ALA:CB	2.31	0.57
57:BY:17:SER:OG	57:BY:18:GLY:N	2.38	0.57
1:CA:1211:U:H5'	1:CA:1212:U:OP1	2.05	0.57
1:CA:1275:A:O2'	1:CA:1276:G:H5'	2.05	0.57
1:CA:1444:C:O2'	1:CA:1445:C:H5'	2.04	0.57
2:CB:204:ASN:HD22	2:CB:205:ASP:N	2.02	0.57
3:CC:134:ILE:O	3:CC:138:VAL:HG12	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:56:LEU:H	9:CI:56:LEU:HD23	1.69	0.57
25:CZ:143:ASP:O	25:CZ:147:LEU:HD23	2.03	0.57
25:CZ:181:GLN:NE2	25:CZ:193:ASN:ND2	2.53	0.57
25:CZ:270:VAL:CG1	25:CZ:286:VAL:HG21	2.33	0.57
25:CZ:63:ILE:HA	25:CZ:88:TYR:CE2	2.39	0.57
26:D0:20:ARG:HG2	26:D0:20:ARG:HH11	1.70	0.57
28:D2:18:PRO:HA	28:D2:21:LEU:HD12	1.85	0.57
36:DA:1210:A:H5''	36:DA:1212:G:O4'	2.04	0.57
36:DA:1567:A:C5'	39:DD:58:HIS:CD2	2.87	0.57
36:DA:2360:A:O2'	36:DA:2361:A:O4'	2.21	0.57
36:DA:363(E):U:H2'	36:DA:363(F):A:H1'	1.87	0.57
36:DA:564:C:O2'	36:DA:565:C:H5'	2.05	0.57
39:DD:32:SER:O	39:DD:33:LEU:O	2.23	0.57
44:DJ:56:UNK:HA	44:DJ:83:UNK:HA	1.85	0.57
46:DN:32:THR:C	46:DN:34:LEU:H	2.07	0.57
48:DP:38:GLN:HG3	48:DP:39:LYS:N	2.19	0.57
48:DP:85:LEU:HB3	48:DP:114:ILE:HD11	1.84	0.57
50:DR:7:GLY:O	50:DR:8:ARG:CZ	2.53	0.57
51:DS:88:ASP:CG	51:DS:89:ARG:N	2.57	0.57
52:DT:16:ARG:HD2	52:DT:18:ASP:OD1	2.04	0.57
52:DT:88:ILE:O	52:DT:89:VAL:C	2.41	0.57
54:DV:19:LYS:CE	54:DV:20:LEU:H	2.17	0.57
56:DX:27:THR:HG22	56:DX:80:ILE:HB	1.86	0.57
57:DY:30:VAL:HA	57:DY:37:VAL:HG12	1.85	0.57
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.05	0.57
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.86	0.57
3:AC:92:ALA:O	3:AC:96:GLY:HA2	2.03	0.57
9:AI:47:LEU:H	9:AI:47:LEU:HD12	1.68	0.57
25:AZ:195:TRP:CE3	25:AZ:195:TRP:HA	2.39	0.57
28:B2:41:ILE:HD11	28:B2:44:LEU:CD1	2.34	0.57
29:B3:40:THR:OG1	29:B3:43:ILE:HG12	2.04	0.57
30:B4:18:CYS:HG	30:B4:39:CYS:HG	1.49	0.57
36:BA:1005:C:H2'	36:BA:1006:C:C6	2.38	0.57
36:BA:1311:G:N2	36:BA:1603:A:H62	2.03	0.57
36:BA:2107:C:H1'	36:BA:2182:G:N2	2.19	0.57
36:BA:2312:U:C2'	36:BA:2313:C:H5''	2.34	0.57
36:BA:756:C:O2'	36:BA:757:U:H5'	2.05	0.57
36:BA:99:U:H4'	36:BA:102:G:H1'	1.85	0.57
42:BG:30:GLU:HG2	42:BG:30:GLU:O	2.05	0.57
46:BN:32:THR:C	46:BN:34:LEU:H	2.08	0.57
49:BQ:141:GLN:CG	58:BZ:72:ARG:HD3	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:49:VAL:CG1	51:BS:50:SER:H	2.03	0.57
51:BS:73:LEU:HD23	51:BS:73:LEU:C	2.25	0.57
1:CA:1134:G:C2'	1:CA:1135:U:H5'	2.33	0.57
1:CA:1282:C:C2'	1:CA:1283:G:H5'	2.34	0.57
1:CA:356:A:H2'	1:CA:357:G:C8	2.37	0.57
1:CA:80:G:C3'	1:CA:81:U:H5'	2.35	0.57
14:CN:57:ARG:NH1	14:CN:57:ARG:HB3	2.19	0.57
24:CY:41:C:C6	24:CY:41:C:H5'	2.34	0.57
25:CZ:361:MET:HG3	25:CZ:363:MET:HG3	1.86	0.57
30:D4:14:ILE:N	30:D4:14:ILE:HD12	2.19	0.57
34:D8:11:LYS:HZ2	34:D8:60:LEU:HD22	1.70	0.57
36:DA:1773:A:C2'	36:DA:1774:C:H5'	2.34	0.57
36:DA:2139:C:O2'	36:DA:2140:C:H5'	2.03	0.57
36:DA:325:G:H2'	36:DA:326:G:C8	2.38	0.57
29:D3:17:LYS:HG2	36:DA:969:U:OP1	2.04	0.57
46:DN:22:THR:HG22	46:DN:61:ARG:CB	2.35	0.57
48:DP:90:ARG:O	48:DP:90:ARG:HD2	2.03	0.57
55:DW:14:PRO:HG2	55:DW:78:GLU:CG	2.34	0.57
57:DY:2:ARG:N	57:DY:4:LYS:HG2	2.20	0.57
6:AF:61:LEU:O	6:AF:62:TRP:CB	2.53	0.57
1:AA:1148:U:O3'	9:AI:14:VAL:HG11	2.05	0.57
13:AM:83:ASP:CG	13:AM:84:ILE:N	2.57	0.57
25:AZ:277:LEU:CD1	25:AZ:278:GLN:N	2.65	0.57
25:AZ:63:ILE:HA	25:AZ:88:TYR:CE2	2.37	0.57
31:B5:48:GLU:C	31:B5:49:CYS:SG	2.83	0.57
36:BA:1070:A:H2'	36:BA:1097:U:OP1	2.05	0.57
36:BA:1209:G:H21	36:BA:1210:A:H62	1.50	0.57
36:BA:141:A:H8	36:BA:1408:C:O2'	1.87	0.57
36:BA:2140:C:H2'	36:BA:2141:G:C8	2.39	0.57
36:BA:2240:C:O2'	36:BA:2241:A:H5'	2.04	0.57
26:B0:36:ILE:HD11	36:BA:2355:C:H4'	1.86	0.57
36:BA:297:C:H2'	36:BA:298:G:O4'	2.05	0.57
49:BQ:134:ARG:HA	49:BQ:137:TYR:CD2	2.39	0.57
36:BA:1248:G:C2	53:BU:3:ARG:HD2	2.40	0.57
56:BX:33:LYS:HA	56:BX:33:LYS:HE2	1.85	0.57
56:BX:27:THR:HG22	56:BX:80:ILE:HB	1.85	0.57
58:BZ:149:SER:CB	58:BZ:173:ALA:HA	2.34	0.57
1:CA:1392:G:N2	1:CA:1502:A:C8	2.72	0.57
1:CA:62:U:H2'	1:CA:63:C:H5'	1.84	0.57
4:CD:174:LEU:HD23	4:CD:185:PHE:HA	1.87	0.57
4:CD:70:ILE:HG22	4:CD:71:SER:N	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:6:LYS:O	19:CS:7:LYS:HD3	2.05	0.57
25:CZ:362:VAL:HG12	25:CZ:362:VAL:O	2.04	0.57
31:D5:40:LYS:HE2	31:D5:46:CYS:CB	2.31	0.57
32:D6:25:LYS:HE2	34:D8:34:TRP:HZ2	1.69	0.57
34:D8:42:ARG:O	34:D8:44:LYS:N	2.32	0.57
36:DA:1305:C:O2'	36:DA:1306:C:H5'	2.05	0.57
36:DA:1344:G:H4'	36:DA:1384:A:C5	2.39	0.57
36:DA:2538:C:H2'	36:DA:2539:C:H6	1.70	0.57
36:DA:862:G:H2'	36:DA:863:A:O4'	2.03	0.57
48:DP:58:THR:HB	48:DP:61:ARG:NH2	2.16	0.57
50:DR:47:PHE:O	50:DR:51:LEU:HD13	2.03	0.57
1:AA:1064:G:H21	1:AA:1190:G:H2'	1.69	0.57
1:AA:436:C:H2'	1:AA:437:U:C6	2.39	0.57
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.05	0.57
25:AZ:170:VAL:O	25:AZ:170:VAL:HG12	2.03	0.57
30:B4:28:LYS:HE2	30:B4:29:PRO:HD2	1.85	0.57
31:B5:57:VAL:C	31:B5:58:LEU:HD12	2.24	0.57
36:BA:1018:C:H2'	36:BA:1019:U:C6	2.39	0.57
36:BA:1495:A:OP1	36:BA:1495:A:H8	1.88	0.57
36:BA:1947:C:H2'	36:BA:1948:G:H5''	1.87	0.57
38:BC:42:GLU:HG3	38:BC:215:THR:HG23	1.86	0.57
38:BC:74:VAL:HG12	38:BC:75:LEU:N	2.20	0.57
39:BD:24:ILE:HD11	39:BD:28:GLU:HB3	1.87	0.57
42:BG:107:LEU:HD22	42:BG:177:GLY:O	2.04	0.57
42:BG:34:LEU:HD11	42:BG:99:MET:HE3	1.87	0.57
48:BP:81:GLN:HE22	48:BP:106:LEU:HA	1.70	0.57
49:BQ:35:VAL:HG12	49:BQ:130:LYS:O	2.04	0.57
51:BS:85:VAL:O	51:BS:106:ARG:HG2	2.05	0.57
51:BS:24:LEU:O	51:BS:85:VAL:HB	2.05	0.57
58:BZ:6:LYS:HG3	58:BZ:60:GLU:CB	2.34	0.57
1:CA:1278:U:H5''	1:CA:1279:A:O4'	2.03	0.57
4:CD:159:ARG:HH11	4:CD:159:ARG:HG3	1.70	0.57
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.19	0.57
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.85	0.57
20:CT:26:ASN:ND2	20:CT:26:ASN:H	2.00	0.57
24:CY:70:C:H2'	24:CY:71:C:H5'	1.85	0.57
25:CZ:314:THR:HG23	25:CZ:374:LEU:O	2.05	0.57
28:D2:3:LEU:HD13	36:DA:98:G:H5'	1.86	0.57
28:D2:5:GLU:HA	28:D2:8:LYS:HD2	1.86	0.57
36:DA:106:C:H2'	36:DA:107:C:C6	2.39	0.57
36:DA:1638:C:H5''	36:DA:2710:C:O2'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2140:C:H2'	36:DA:2141:G:H8	1.69	0.57
36:DA:693:C:O2'	36:DA:694:U:H5'	2.05	0.57
40:DE:77:ILE:HG22	40:DE:78:LEU:N	2.20	0.57
41:DF:160:ASN:HD21	41:DF:162:LEU:CB	2.15	0.57
42:DG:39:ILE:N	42:DG:39:ILE:HD13	2.19	0.57
43:DH:50:VAL:CG1	43:DH:52:VAL:HG23	2.34	0.57
40:DE:152:LYS:HG2	46:DN:78:TYR:CE1	2.39	0.57
1:AA:562:C:H4'	1:AA:563:A:H5'	1.85	0.57
2:AB:72:GLY:O	2:AB:94:ASN:HA	2.05	0.57
7:AG:37:ASN:HD21	9:AI:40:LEU:HA	1.70	0.57
9:AI:2:GLU:N	9:AI:88:TYR:HH	2.01	0.57
14:AN:57:ARG:NH1	14:AN:57:ARG:HB3	2.19	0.57
25:AZ:361:MET:HG3	25:AZ:363:MET:HG3	1.86	0.57
25:AZ:68:VAL:HG13	25:AZ:69:GLU:H	1.69	0.57
26:B0:43:THR:O	26:B0:43:THR:HG23	2.05	0.57
28:B2:25:VAL:HG13	28:B2:57:ILE:HG23	1.86	0.57
30:B4:11:PRO:HB3	30:B4:25:TYR:CE2	2.40	0.57
36:BA:1607:C:H4'	36:BA:1608:A:O5'	2.05	0.57
36:BA:2027:G:H2'	36:BA:2028:U:H6	1.70	0.57
31:B5:4:HIS:O	36:BA:2056:G:N2	2.38	0.57
36:BA:2103:C:H2'	36:BA:2186:G:H22	1.69	0.57
36:BA:2200:C:H5'	36:BA:2201:C:OP2	2.05	0.57
36:BA:614(A):U:H4'	36:BA:614(B):G:C5'	2.35	0.57
36:BA:833:U:H2'	36:BA:834:C:H6	1.69	0.57
37:BB:49:C:H2'	37:BB:50:G:C8	2.40	0.57
22:AW:56:C:O2'	38:BC:129:ARG:HA	2.05	0.57
39:BD:23:GLU:O	39:BD:25:THR:N	2.37	0.57
39:BD:27:THR:HG23	39:BD:83:GLU:CG	2.35	0.57
39:BD:30:GLU:HG3	39:BD:63:ARG:NH2	2.20	0.57
40:BE:56:PRO:O	40:BE:57:LYS:HD2	2.04	0.57
46:BN:34:LEU:HD13	46:BN:34:LEU:O	2.05	0.57
46:BN:48:MET:H	46:BN:48:MET:CE	2.17	0.57
49:BQ:1:MET:HE3	49:BQ:44:ALA:HB1	1.85	0.57
50:BR:52:ILE:CG2	50:BR:94:TYR:HD2	2.17	0.57
51:BS:66:ALA:CA	51:BS:69:VAL:HG12	2.35	0.57
54:BV:2:PHE:CZ	54:BV:13:ARG:NH1	2.73	0.57
55:BW:14:PRO:HG2	55:BW:78:GLU:CG	2.35	0.57
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.86	0.57
2:CB:80:ILE:HD12	2:CB:80:ILE:N	2.20	0.57
2:CB:92:TYR:CE1	2:CB:94:ASN:ND2	2.72	0.57
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:58:LEU:CD1	18:CR:66:LEU:HD22	2.34	0.57
30:D4:28:LYS:HE2	30:D4:29:PRO:HD2	1.85	0.57
36:DA:1018:C:H2'	36:DA:1019:U:C6	2.40	0.57
36:DA:1495:A:H2'	36:DA:1496:A:C2	2.40	0.57
36:DA:2712(A):A:H5'	36:DA:2713:A:OP2	2.05	0.57
36:DA:45:C:H2'	36:DA:47:C:C6	2.40	0.57
36:DA:672:C:H2'	36:DA:673:C:H5'	1.87	0.57
28:D2:51:ARG:HE	36:DA:94(A):G:H21	1.52	0.57
36:DA:8:A:H2'	36:DA:9:U:C5	2.40	0.57
39:DD:270:ILE:H	39:DD:270:ILE:HD12	1.69	0.57
36:DA:2580:U:C5'	40:DE:131:ALA:HB2	2.32	0.57
40:DE:101:ARG:HB3	40:DE:201:THR:HG21	1.86	0.57
41:DF:108:LYS:N	41:DF:108:LYS:HD3	2.18	0.57
41:DF:6:VAL:HG12	41:DF:7:TYR:N	2.10	0.57
42:DG:91:ARG:HD2	42:DG:92:VAL:N	2.20	0.57
46:DN:34:LEU:O	46:DN:34:LEU:HD13	2.05	0.57
47:DO:86:ILE:O	47:DO:87:ILE:HD13	2.05	0.57
54:DV:82:ARG:HH11	54:DV:82:ARG:HG2	1.70	0.57
56:DX:8:ILE:H	56:DX:8:ILE:CD1	2.08	0.57
58:DZ:130:PRO:CA	58:DZ:133:ILE:HD11	2.34	0.57
58:DZ:10:ARG:HD3	58:DZ:38:TYR:HB3	1.86	0.57
58:DZ:67:LEU:N	58:DZ:67:LEU:HD12	2.20	0.57
58:DZ:98:MET:O	58:DZ:125:LEU:HD12	2.05	0.57
9:AI:4:TYR:HD2	9:AI:87:GLN:HB3	1.70	0.57
13:AM:82:MET:HB2	13:AM:93:ARG:NH1	2.18	0.57
16:AP:5:ARG:HB3	16:AP:67:THR:OG1	2.05	0.57
1:AA:719:C:O2	18:AR:50:ILE:HG12	2.05	0.57
25:AZ:143:ASP:HB3	25:AZ:146:LEU:CB	2.35	0.57
27:B1:52:ARG:NH1	27:B1:57:GLU:HB2	2.19	0.57
36:BA:1019:U:H3	36:BA:1142(A):A:N6	2.03	0.57
36:BA:1448:G:H5'	36:BA:1449:A:OP1	2.05	0.57
36:BA:2009:G:O2'	36:BA:2010:G:H5'	2.04	0.57
36:BA:2591:C:H2'	36:BA:2592:G:H8	1.67	0.57
36:BA:321:G:O4'	41:BF:165:ARG:HD3	2.05	0.57
36:BA:703:U:C2'	36:BA:704:G:H5'	2.35	0.57
38:BC:114:VAL:HG12	38:BC:144:THR:CB	2.34	0.57
43:BH:153:LYS:N	43:BH:153:LYS:HD3	2.08	0.57
43:BH:20:ALA:HB3	43:BH:23:ARG:HB2	1.86	0.57
43:BH:51:ARG:HG3	43:BH:52:VAL:N	2.19	0.57
46:BN:9:VAL:HG12	46:BN:10:GLU:N	2.19	0.57
48:BP:41:ARG:CZ	48:BP:41:ARG:HB3	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:30:THR:HG23	50:BR:31:HIS:H	1.69	0.57
52:BT:16:ARG:HD2	52:BT:18:ASP:OD1	2.04	0.57
57:BY:13:VAL:HG22	57:BY:14:LEU:N	2.20	0.57
57:BY:50:ARG:HB3	57:BY:53:PRO:HG3	1.86	0.57
1:CA:858:G:C6	1:CA:869:G:C8	2.93	0.57
2:CB:172:ILE:HD12	2:CB:172:ILE:N	2.12	0.57
2:CB:92:TYR:HE1	2:CB:94:ASN:ND2	2.02	0.57
4:CD:16:GLY:O	4:CD:33:MET:HE3	2.05	0.57
7:CG:15:ASP:O	7:CG:19:GLY:HA2	2.04	0.57
8:CH:97:VAL:HG21	8:CH:128:GLY:HA2	1.87	0.57
16:CP:8:ARG:HB3	16:CP:28:ARG:HH12	1.70	0.57
19:CS:45:VAL:HA	19:CS:62:ILE:CG1	2.35	0.57
33:D7:22:MET:CE	33:D7:31:LEU:HD12	2.35	0.57
36:DA:1001:A:H2'	36:DA:1002:G:O4'	2.04	0.57
36:DA:1479:G:H5'	36:DA:1558:A:H2	1.70	0.57
36:DA:1614:A:C2	55:DW:93:ALA:HB2	2.39	0.57
36:DA:438:G:O2'	36:DA:440:G:H5'	2.05	0.57
34:D8:4:MET:HE1	36:DA:666:G:H1'	1.87	0.57
37:DB:111:G:C2'	37:DB:112:U:H5'	2.34	0.57
42:DG:16:ARG:O	42:DG:20:ILE:HG13	2.05	0.57
43:DH:44:VAL:HG12	43:DH:45:VAL:HG23	1.87	0.57
46:DN:133:GLN:C	46:DN:135:PRO:HD3	2.25	0.57
53:DU:65:ILE:HD11	53:DU:96:ALA:CB	2.35	0.57
54:DV:19:LYS:HD2	54:DV:96:ILE:HD11	1.86	0.57
58:DZ:81:ARG:HG3	58:DZ:81:ARG:O	2.05	0.57
1:AA:1418:A:H2	36:BA:1948:G:N3	2.03	0.57
7:AG:113:GLU:CG	7:AG:119:ARG:HB3	2.35	0.57
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.85	0.57
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.19	0.57
12:AL:24:VAL:CG1	12:AL:27:LEU:HD22	2.34	0.57
18:AR:29:PHE:CD1	18:AR:29:PHE:N	2.72	0.57
19:AS:45:VAL:HA	19:AS:62:ILE:CG1	2.34	0.57
24:AY:9:A:H2	24:AY:44:G:O2'	1.87	0.57
25:AZ:166:ASP:C	25:AZ:167:GLU:HG2	2.25	0.57
30:B4:16:CYS:SG	30:B4:17:GLY:N	2.78	0.57
32:B6:25:LYS:HE2	34:B8:34:TRP:HZ2	1.69	0.57
36:BA:1902:C:O2'	39:BD:244:ARG:HD3	2.05	0.57
36:BA:1567:A:C5'	39:BD:58:HIS:CD2	2.88	0.57
43:BH:44:VAL:HG12	43:BH:45:VAL:HG23	1.86	0.57
45:BK:32:UNK:HA	45:BK:63:UNK:CB	2.35	0.57
46:BN:23:LEU:HB2	46:BN:60:ILE:HG21	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:82:ARG:HG2	54:BV:82:ARG:HH11	1.68	0.57
1:CA:1006:C:H2'	1:CA:1007:C:C6	2.39	0.57
1:CA:333:G:O2'	1:CA:334:C:H5'	2.05	0.57
1:CA:475:G:O2'	1:CA:476:G:H5'	2.05	0.57
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.04	0.57
19:CS:16:LEU:O	19:CS:19:VAL:N	2.37	0.57
21:CU:9:ARG:HH12	21:CU:23:PRO:HD2	1.69	0.57
25:CZ:241:ARG:HB2	25:CZ:285:ASN:ND2	2.20	0.57
26:D0:49:LYS:H	26:D0:80:HIS:HD1	0.78	0.57
32:D6:14:THR:HG23	32:D6:16:CYS:H	1.70	0.57
32:D6:33:LYS:HA	32:D6:33:LYS:CE	2.30	0.57
34:D8:62:LEU:N	34:D8:63:PRO:HD2	2.19	0.57
36:DA:1010:A:H1'	36:DA:1153:C:H1'	1.87	0.57
36:DA:11:G:H2'	36:DA:12:U:H6	1.69	0.57
36:DA:2036:C:C6	36:DA:2036:C:H5'	2.34	0.57
36:DA:2240:C:O2'	36:DA:2241:A:H5'	2.04	0.57
36:DA:2393:A:H5'	48:DP:62:LEU:HB3	1.87	0.57
38:DC:210:ARG:HG2	38:DC:210:ARG:NH1	2.19	0.57
42:DG:114:ILE:HD13	42:DG:115:ARG:H	1.70	0.57
42:DG:51:ARG:NE	42:DG:51:ARG:HA	2.20	0.57
36:DA:2416:C:P	48:DP:66:GLY:HA3	2.44	0.57
50:DR:29:LEU:O	50:DR:75:LEU:HD21	2.03	0.57
52:DT:106:SER:O	52:DT:107:ASP:OD1	2.23	0.57
57:DY:28:LYS:HB2	57:DY:37:VAL:HB	1.87	0.57
1:AA:1134:G:C2'	1:AA:1135:U:H5'	2.33	0.56
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.04	0.56
1:AA:457:C:H2'	1:AA:458:C:C6	2.40	0.56
2:AB:92:TYR:CE2	2:AB:94:ASN:ND2	2.73	0.56
2:AB:9:GLU:N	2:AB:9:GLU:OE1	2.34	0.56
6:AF:15:ASP:OD2	6:AF:17:SER:HB2	2.05	0.56
12:AL:45:PRO:HD3	12:AL:51:ALA:O	2.05	0.56
13:AM:101:GLN:N	13:AM:101:GLN:NE2	2.53	0.56
13:AM:108:ARG:HH11	13:AM:108:ARG:CG	2.18	0.56
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.05	0.56
25:AZ:143:ASP:O	25:AZ:147:LEU:HD23	2.04	0.56
25:AZ:24:LYS:HZ3	60:AZ:501:GDP:PB	2.28	0.56
24:AY:65:C:H4'	25:AZ:341:GLN:CD	2.25	0.56
36:BA:438:G:O2'	36:BA:440:G:H5'	2.04	0.56
39:BD:124:PRO:HG2	39:BD:129:ASN:HD21	1.70	0.56
39:BD:44:ASN:N	39:BD:44:ASN:OD1	2.38	0.56
46:BN:58:ASP:O	46:BN:60:ILE:HG13	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:52:ILE:CB	50:BR:94:TYR:HD2	2.18	0.56
1:CA:1190:G:OP1	3:CC:5:ILE:HD12	2.05	0.56
1:CA:1286:A:O2'	1:CA:1287:A:H5''	2.04	0.56
1:CA:738:C:H5''	6:CF:69:GLU:HB2	1.87	0.56
25:CZ:158:LEU:O	25:CZ:163:PHE:HB2	2.05	0.56
25:CZ:176:LEU:HD13	60:CZ:501:GDP:O2'	2.05	0.56
25:CZ:301:GLY:HA2	25:CZ:347:THR:OG1	2.04	0.56
36:DA:122:G:H1	36:DA:129:C:N4	1.99	0.56
36:DA:1665:A:H2'	36:DA:1666:G:C5'	2.25	0.56
36:DA:2309:A:H2'	36:DA:2310:A:C5'	2.35	0.56
36:DA:654(M):C:H2'	36:DA:654(N):G:N7	2.19	0.56
39:DD:30:GLU:O	39:DD:32:SER:N	2.37	0.56
42:DG:120:LEU:O	42:DG:180:PHE:HD1	1.87	0.56
42:DG:91:ARG:C	42:DG:91:ARG:HD2	2.26	0.56
56:DX:80:ILE:HG13	56:DX:80:ILE:O	2.05	0.56
1:AA:148:G:H2'	1:AA:149:A:H8	1.70	0.56
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.06	0.56
8:AH:18:ARG:HA	8:AH:18:ARG:HH11	1.68	0.56
22:AW:11:C:O2'	22:AW:12:U:H5'	2.05	0.56
22:AW:66:U:H5'	32:B6:28:ARG:HH22	1.71	0.56
25:AZ:231:ILE:HG22	25:AZ:231:ILE:O	2.05	0.56
26:B0:50:ASN:C	26:B0:62:LEU:HD21	2.26	0.56
30:B4:36:CYS:SG	30:B4:37:SER:O	2.63	0.56
36:BA:1010:A:H1'	36:BA:1153:C:H1'	1.86	0.56
36:BA:1405:U:H2'	36:BA:1406:U:C6	2.40	0.56
36:BA:2287:A:H62	36:BA:2344:U:H3	1.51	0.56
39:BD:70:TRP:CZ3	39:BD:150:LYS:HA	2.39	0.56
41:BF:185:ASP:HA	41:BF:188:ARG:CG	2.34	0.56
41:BF:157:VAL:HG23	41:BF:198:ALA:CB	2.34	0.56
49:BQ:141:GLN:C	58:BZ:53:ILE:HD12	2.26	0.56
49:BQ:17:LEU:HD13	49:BQ:39:PRO:HB2	1.87	0.56
51:BS:50:SER:O	51:BS:51:ALA:HB2	2.05	0.56
54:BV:19:LYS:HD2	54:BV:96:ILE:HD11	1.87	0.56
57:BY:96:ILE:HG13	57:BY:99:CYS:HB2	1.87	0.56
2:CB:47:THR:HG23	2:CB:202:PRO:O	2.05	0.56
4:CD:100:ARG:HH21	4:CD:118:ARG:NH1	2.00	0.56
4:CD:30:LYS:C	4:CD:32:ALA:H	2.07	0.56
18:CR:36:ASN:OD1	18:CR:38:GLU:HG2	2.05	0.56
28:D2:8:LYS:C	28:D2:10:LEU:H	2.08	0.56
28:D2:15:LYS:CG	28:D2:16:LEU:H	2.17	0.56
28:D2:25:VAL:HG21	28:D2:61:LEU:CD1	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:46:GLN:HB3	28:D2:48:HIS:CE1	2.40	0.56
28:D2:25:VAL:CB	28:D2:61:LEU:HD21	2.35	0.56
36:DA:614(A):U:H4'	36:DA:614(B):G:C5'	2.34	0.56
39:DD:45:ASN:CG	39:DD:46:GLN:N	2.59	0.56
40:DE:56:PRO:O	40:DE:57:LYS:HD2	2.05	0.56
41:DF:107:LYS:O	41:DF:110:LEU:N	2.38	0.56
50:DR:30:THR:HG23	50:DR:31:HIS:H	1.69	0.56
1:AA:1004:A:H2'	1:AA:1005:A:H5'	1.86	0.56
1:AA:1125:U:C6	1:AA:1125:U:H3'	2.41	0.56
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.88	0.56
3:AC:52:LEU:HD21	3:AC:55:VAL:CG2	2.35	0.56
4:AD:170:VAL:HG12	4:AD:171:GLY:N	2.19	0.56
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.05	0.56
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.87	0.56
22:AW:39:U:H2'	22:AW:40:C:H5'	1.87	0.56
25:AZ:270:VAL:CG1	25:AZ:286:VAL:HG21	2.34	0.56
32:B6:11:LEU:HD21	32:B6:51:GLU:HG3	1.87	0.56
34:B8:43:GLN:C	34:B8:44:LYS:HD2	2.26	0.56
36:BA:1331:A:HO2'	36:BA:1332:G:H8	1.51	0.56
36:BA:1598:C:H5'	56:BX:36:LYS:HG2	1.86	0.56
36:BA:2679:A:H4'	40:BE:165:VAL:HG11	1.87	0.56
36:BA:893:C:H2'	36:BA:894:C:C6	2.40	0.56
36:BA:848:G:N9	36:BA:933:A:H8	2.02	0.56
39:BD:72:LYS:HE2	39:BD:101:GLU:OE1	2.05	0.56
39:BD:70:TRP:HZ3	39:BD:146:GLU:OE2	1.87	0.56
42:BG:51:ARG:HH11	42:BG:53:LEU:HD13	1.71	0.56
46:BN:46:VAL:HG11	46:BN:48:MET:HG3	1.85	0.56
46:BN:89:LYS:O	46:BN:93:THR:HG22	2.05	0.56
47:BO:114:ILE:HD12	47:BO:114:ILE:N	2.21	0.56
47:BO:86:ILE:H	47:BO:86:ILE:HD12	1.69	0.56
48:BP:114:ILE:HD12	48:BP:115:LEU:N	2.20	0.56
49:BQ:134:ARG:HD2	58:BZ:122:ARG:HH21	1.67	0.56
52:BT:91:ARG:O	52:BT:92:GLY:C	2.44	0.56
54:BV:12:TYR:N	54:BV:12:TYR:CD1	2.73	0.56
1:CA:1127:G:O2'	1:CA:1128:C:H5'	2.05	0.56
1:CA:848:C:O2'	1:CA:849:C:H5'	2.05	0.56
3:CC:25:GLY:O	3:CC:27:LYS:N	2.38	0.56
3:CC:7:PRO:HG2	3:CC:184:TYR:HB2	1.86	0.56
4:CD:170:VAL:HG12	4:CD:171:GLY:H	1.70	0.56
11:CK:27:ASN:ND2	11:CK:28:THR:H	2.01	0.56
13:CM:83:ASP:CG	13:CM:84:ILE:N	2.57	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:72:C:H2'	22:CW:73:A:O4'	2.04	0.56
30:D4:11:PRO:HB3	30:D4:25:TYR:CE2	2.41	0.56
36:DA:1335:U:H2'	36:DA:1336:A:C8	2.41	0.56
36:DA:1400:G:H2'	36:DA:1401:G:H8	1.70	0.56
36:DA:1947:C:C3'	36:DA:1948:G:H5''	2.34	0.56
36:DA:2027:G:O2'	36:DA:2028:U:H5'	2.05	0.56
42:DG:137:GLU:O	42:DG:138:GLN:CB	2.53	0.56
47:DO:43:VAL:HG21	47:DO:52:VAL:HG11	1.86	0.56
48:DP:41:ARG:HB3	48:DP:41:ARG:CZ	2.36	0.56
48:DP:50:ARG:NH1	48:DP:50:ARG:HG2	2.20	0.56
54:DV:21:ARG:CG	54:DV:91:TYR:HD2	2.17	0.56
49:DQ:141:GLN:CD	58:DZ:72:ARG:NE	2.59	0.56
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.32	0.56
1:AA:490:G:H2'	1:AA:491:G:H8	1.70	0.56
1:AA:59:A:H5'	1:AA:60:A:H5''	1.87	0.56
20:AT:45:GLN:NE2	20:AT:46:GLU:HG3	2.20	0.56
22:AW:30:G:H2'	22:AW:31:A:C8	2.40	0.56
25:AZ:311:THR:HB	25:AZ:312:PRO:HD2	1.87	0.56
25:AZ:126:VAL:HG13	61:AZ:502:KIR:C47	2.35	0.56
36:BA:1598:C:H5'	56:BX:36:LYS:CG	2.34	0.56
36:BA:669:G:N3	36:BA:669:G:H2'	2.21	0.56
37:BB:44:G:H1'	37:BB:47:C:N4	2.20	0.56
39:BD:35:LYS:HD2	39:BD:36:PRO:HD3	1.85	0.56
39:BD:73:VAL:HG13	39:BD:120:GLY:CA	2.36	0.56
40:BE:111:ARG:HG2	40:BE:160:TYR:O	2.05	0.56
40:BE:38:THR:HG23	40:BE:39:PRO:HD2	1.87	0.56
43:BH:54:ARG:HH11	43:BH:54:ARG:HG2	1.70	0.56
48:BP:23:PRO:HG2	48:BP:33:ARG:HG3	1.87	0.56
54:BV:59:ALA:HB1	54:BV:95:LEU:O	2.05	0.56
1:CA:1128:C:O2'	1:CA:1129:C:H5''	2.05	0.56
1:CA:1296:C:H4'	1:CA:1302:U:C5	2.40	0.56
1:CA:1524:C:H5'	1:CA:1524:C:C6	2.40	0.56
3:CC:70:VAL:HG12	3:CC:72:LYS:N	2.20	0.56
3:CC:92:ALA:O	3:CC:96:GLY:HA2	2.06	0.56
4:CD:126:ILE:HD12	4:CD:126:ILE:N	2.21	0.56
1:CA:1347:G:C6	9:CI:107:ARG:NH2	2.73	0.56
30:D4:16:CYS:SG	30:D4:17:GLY:N	2.78	0.56
32:D6:13:CYS:O	32:D6:21:TYR:HA	2.04	0.56
36:DA:1268:A:H2'	36:DA:1269:A:O4'	2.05	0.56
27:D1:81:LYS:NZ	36:DA:156:U:H5'	2.19	0.56
36:DA:2103:C:H2'	36:DA:2186:G:H22	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2840:C:H2'	36:DA:2841:C:C6	2.40	0.56
36:DA:672:C:O2'	36:DA:673:C:H5'	2.05	0.56
40:DE:111:ARG:HG2	40:DE:160:TYR:O	2.06	0.56
41:DF:160:ASN:ND2	41:DF:162:LEU:H	2.03	0.56
36:DA:442:G:H4'	41:DF:46:ARG:HD3	1.85	0.56
42:DG:180:PHE:O	42:DG:182:LYS:HG3	2.05	0.56
43:DH:156:ALA:C	43:DH:158:HIS:N	2.57	0.56
48:DP:147:LEU:O	48:DP:148:LEU:HB2	2.05	0.56
50:DR:51:LEU:CD2	50:DR:70:LEU:HD11	2.35	0.56
53:DU:88:ILE:O	53:DU:88:ILE:HG22	2.05	0.56
57:DY:17:SER:OG	57:DY:18:GLY:N	2.38	0.56
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.40	0.56
1:AA:274:A:O2'	1:AA:275:G:C8	2.54	0.56
3:AC:165:THR:O	3:AC:165:THR:HG23	2.05	0.56
10:AJ:4:ILE:HB	10:AJ:74:ILE:CD1	2.34	0.56
14:AN:13:THR:N	14:AN:14:PRO:CD	2.66	0.56
36:BA:1268:A:H2'	36:BA:1269:A:O4'	2.05	0.56
36:BA:181:A:H5'	36:BA:181:A:H8	1.70	0.56
36:BA:2543:G:H2'	36:BA:2544:G:C8	2.40	0.56
36:BA:654(N):G:H2'	36:BA:654(O):G:O4'	2.05	0.56
37:BB:65:C:N4	37:BB:109:C:H2'	2.21	0.56
39:BD:30:GLU:CG	39:BD:63:ARG:HH21	2.18	0.56
40:BE:101:ARG:HB3	40:BE:201:THR:HG21	1.87	0.56
55:BW:73:ALA:O	55:BW:106:ILE:HG12	2.05	0.56
55:BW:11:ARG:NH1	55:BW:98:LYS:HB3	2.20	0.56
58:BZ:60:GLU:O	58:BZ:61:LEU:HB2	2.05	0.56
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.87	0.56
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.06	0.56
25:CZ:350:THR:HG22	25:CZ:351:GLY:H	1.71	0.56
25:CZ:313:HIS:CB	25:CZ:380:LEU:HD12	2.36	0.56
25:CZ:176:LEU:HB2	60:CZ:501:GDP:C5	2.40	0.56
34:D8:61:LEU:HD12	34:D8:61:LEU:N	2.15	0.56
36:DA:1495:A:H8	36:DA:1495:A:OP1	1.89	0.56
36:DA:1907:G:O2'	36:DA:1908:C:H5'	2.04	0.56
36:DA:2025:C:H2'	36:DA:2026:C:C6	2.40	0.56
36:DA:20:C:O2'	36:DA:21:A:H5'	2.05	0.56
36:DA:285:C:H2'	36:DA:286:C:C6	2.41	0.56
43:DH:74:ASN:HB3	43:DH:138:LYS:HD3	1.87	0.56
46:DN:108:PRO:HG2	46:DN:113:GLY:HA3	1.87	0.56
1:CA:1423:G:H5'	47:DO:49:ARG:NH2	2.19	0.56
52:DT:50:ILE:HA	52:DT:99:LEU:CD1	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.05	0.56
1:AA:1128:C:O2'	1:AA:1129:C:H5''	2.05	0.56
3:AC:65:ALA:O	3:AC:100:ALA:O	2.24	0.56
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.69	0.56
8:AH:20:TYR:CE1	8:AH:78:GLN:NE2	2.74	0.56
16:AP:74:LEU:O	16:AP:79:VAL:HG23	2.04	0.56
19:AS:67:VAL:HG12	19:AS:68:GLY:N	2.21	0.56
22:AW:57:G:H2'	22:AW:58:A:C5'	2.35	0.56
25:AZ:279:GLU:HG2	25:AZ:279:GLU:O	2.05	0.56
27:B1:82:LEU:HD11	27:B1:90:ILE:CD1	2.35	0.56
28:B2:51:ARG:HD3	28:B2:55:ARG:NH1	2.19	0.56
30:B4:31:ILE:HD12	30:B4:31:ILE:N	2.21	0.56
35:B9:17:ILE:CG2	35:B9:18:ARG:N	2.68	0.56
36:BA:1187:G:H5''	54:BV:81:TYR:CE2	2.40	0.56
36:BA:11:G:H2'	36:BA:12:U:H6	1.69	0.56
36:BA:222:A:H5''	36:BA:421:U:OP1	2.06	0.56
38:BC:139:ASN:OD1	38:BC:140:PRO:HD2	2.04	0.56
40:BE:77:ILE:HG22	40:BE:78:LEU:N	2.19	0.56
48:BP:50:ARG:HG2	48:BP:50:ARG:NH1	2.21	0.56
1:CA:1086:U:C2'	1:CA:1087:G:H5'	2.34	0.56
1:CA:242:C:H2'	1:CA:243:A:H5'	1.86	0.56
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.88	0.56
13:CM:4:ILE:H	13:CM:4:ILE:HD12	1.71	0.56
13:CM:64:TRP:O	13:CM:66:LEU:HD13	2.05	0.56
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.38	0.56
1:CA:280:C:O2	17:CQ:38:ARG:HG3	2.06	0.56
26:D0:36:ILE:HD11	36:DA:2355:C:H4'	1.87	0.56
36:DA:1142(A):A:H8	36:DA:1142(A):A:H5'	1.70	0.56
36:DA:116:C:H2'	36:DA:117:G:O4'	2.06	0.56
36:DA:1642:G:O2'	36:DA:1643:G:H5'	2.04	0.56
36:DA:1805:U:O2	39:DD:50:THR:HB	2.06	0.56
36:DA:2140:C:H2'	36:DA:2141:G:C8	2.41	0.56
36:DA:2189:U:H3'	36:DA:2190:G:H4'	1.85	0.56
36:DA:2401:U:C2'	36:DA:2402:C:H5''	2.35	0.56
36:DA:2807:G:H2'	36:DA:2808:U:H5''	1.87	0.56
36:DA:671:C:H2'	36:DA:672:C:H6	1.70	0.56
39:DD:257:LEU:HD23	39:DD:257:LEU:C	2.26	0.56
39:DD:31:LYS:HE3	39:DD:33:LEU:HD12	1.88	0.56
43:DH:54:ARG:HG2	43:DH:54:ARG:HH11	1.71	0.56
46:DN:62:VAL:HG22	46:DN:66:LYS:HB2	1.86	0.56
48:DP:97:PRO:HD3	48:DP:126:VAL:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:74:ALA:HB2	51:DS:101:LEU:HD22	1.85	0.56
1:AA:1039:C:H2'	1:AA:1040:U:C5	2.39	0.56
2:AB:109:SER:O	2:AB:111:ARG:N	2.39	0.56
2:AB:141:GLU:O	2:AB:145:LEU:HD23	2.05	0.56
20:AT:18:GLN:HG2	20:AT:22:ARG:NH1	2.21	0.56
25:AZ:164:PRO:CB	25:AZ:167:GLU:OE2	2.53	0.56
24:AY:76:A:C2	25:AZ:271:GLU:HG3	2.40	0.56
36:BA:2029:G:H2'	36:BA:2031:A:OP2	2.06	0.56
36:BA:654(H):G:C3'	36:BA:654(I):C:H5'	2.36	0.56
36:BA:2316:C:H1'	42:BG:128:ARG:CZ	2.36	0.56
46:BN:1:MET:C	46:BN:2:LYS:HD2	2.26	0.56
47:BO:87:ILE:HG22	47:BO:88:ASN:O	2.05	0.56
48:BP:100:LEU:O	48:BP:103:ALA:HB3	2.06	0.56
48:BP:147:LEU:O	48:BP:148:LEU:HB2	2.06	0.56
52:BT:54:ARG:HA	52:BT:59:THR:HB	1.87	0.56
1:CA:1086:U:H2'	1:CA:1087:G:C5'	2.32	0.56
1:CA:59:A:H5'	1:CA:60:A:H5''	1.87	0.56
9:CI:11:LYS:O	9:CI:12:GLU:HB2	2.06	0.56
9:CI:78:LYS:HZ1	9:CI:101:PHE:HE1	1.54	0.56
11:CK:121:PRO:HG2	11:CK:126:ARG:CB	2.35	0.56
22:CW:4:C:C4	22:CW:5:G:O6	2.58	0.56
26:D0:50:ASN:C	26:D0:62:LEU:HD21	2.26	0.56
28:D2:27:GLU:O	28:D2:30:ARG:CB	2.54	0.56
30:D4:31:ILE:HD12	30:D4:31:ILE:N	2.20	0.56
32:D6:30:THR:CG2	32:D6:31:PRO:HD2	2.20	0.56
34:D8:11:LYS:CE	34:D8:63:PRO:HG3	2.35	0.56
36:DA:287:C:H2'	36:DA:288:C:C6	2.41	0.56
36:DA:309:G:N3	36:DA:329:G:O2'	2.39	0.56
36:DA:654(V):A:H8	36:DA:655:A:H2'	1.71	0.56
38:DC:132:GLY:N	38:DC:133:PRO:CD	2.68	0.56
49:DQ:141:GLN:HB3	58:DZ:99:TYR:HE2	1.70	0.56
46:DN:41:ASP:C	53:DU:64:ARG:HH12	2.09	0.56
56:DX:8:ILE:N	56:DX:8:ILE:HD12	2.11	0.56
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.36	0.56
1:AA:167:G:O2'	1:AA:168:G:H5'	2.04	0.56
1:AA:862:C:O2'	1:AA:863:U:H5'	2.06	0.56
4:AD:3:ARG:HG2	4:AD:118:ARG:NE	2.21	0.56
10:AJ:6:ILE:CD1	10:AJ:23:ILE:HG21	2.36	0.56
12:AL:75:HIS:CB	12:AL:102:ARG:HH21	2.18	0.56
25:AZ:14:VAL:O	25:AZ:79:HIS:HA	2.05	0.56
25:AZ:358:GLY:C	25:AZ:360:GLU:N	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:75:ARG:HD2	25:AZ:77:TYR:OH	2.05	0.56
26:B0:49:LYS:H	26:B0:80:HIS:HD1	0.79	0.56
31:B5:50:GLY:CA	31:B5:56:LYS:HD3	2.33	0.56
32:B6:11:LEU:HD11	32:B6:51:GLU:HG3	1.88	0.56
33:B7:10:ARG:HG2	33:B7:10:ARG:NH1	2.20	0.56
34:B8:32:LEU:HB3	34:B8:36:LYS:HZ2	1.71	0.56
36:BA:1165:U:H2'	36:BA:1166:C:C6	2.41	0.56
36:BA:2127:G:O2'	36:BA:2128:C:H5'	2.06	0.56
36:BA:993:G:OP1	53:BU:50:ARG:NH1	2.39	0.56
40:BE:4:ILE:HG21	40:BE:96:PHE:CE2	2.40	0.56
41:BF:160:ASN:ND2	41:BF:162:LEU:H	2.02	0.56
46:BN:43:THR:HB	46:BN:46:VAL:HG12	1.87	0.56
46:BN:62:VAL:CG2	46:BN:66:LYS:HB2	2.36	0.56
50:BR:87:TYR:O	50:BR:89:ASP:N	2.39	0.56
51:BS:15:ARG:HG2	51:BS:15:ARG:HH11	1.69	0.56
55:BW:82:LEU:HD23	55:BW:84:ARG:NH2	2.21	0.56
57:BY:29:GLU:N	57:BY:29:GLU:OE1	2.38	0.56
57:BY:90:LEU:HG	57:BY:91:GLU:H	1.71	0.56
58:BZ:10:ARG:O	58:BZ:35:ARG:NH2	2.39	0.56
49:BQ:141:GLN:NE2	58:BZ:72:ARG:HA	2.16	0.56
1:CA:992:U:H4'	1:CA:993:G:O5'	2.05	0.56
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.87	0.56
20:CT:25:ARG:HH11	20:CT:25:ARG:HG3	1.70	0.56
25:CZ:267:VAL:HG23	25:CZ:288:VAL:CG1	2.35	0.56
25:CZ:277:LEU:CD1	25:CZ:278:GLN:N	2.66	0.56
25:CZ:339:ARG:HE	25:CZ:352:VAL:HG22	1.70	0.56
36:DA:2183:C:H2'	36:DA:2184:G:H8	1.69	0.56
36:DA:2603:G:H2'	36:DA:2604:U:C5'	2.25	0.56
36:DA:894:C:O2'	36:DA:895:U:H5'	2.06	0.56
37:DB:7:G:H2'	37:DB:8:U:H5''	1.88	0.56
38:DC:74:VAL:HG12	38:DC:75:LEU:N	2.19	0.56
39:DD:23:GLU:C	39:DD:25:THR:N	2.58	0.56
42:DG:97:ASP:N	42:DG:99:MET:SD	2.79	0.56
46:DN:43:THR:HG22	46:DN:45:ASN:ND2	2.21	0.56
50:DR:12:ARG:HH11	50:DR:12:ARG:HG3	1.70	0.56
51:DS:13:ARG:HG3	51:DS:14:VAL:N	2.19	0.56
51:DS:12:PHE:CD1	51:DS:13:ARG:N	2.71	0.56
1:AA:1158:C:C4	1:AA:1160:G:H1'	2.40	0.56
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.06	0.56
1:AA:475:G:O2'	1:AA:476:G:H5'	2.06	0.56
4:AD:132:ARG:HD2	4:AD:132:ARG:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:40:LEU:CD2	10:AJ:40:LEU:H	2.14	0.56
28:B2:18:PRO:HD3	28:B2:67:LYS:HD3	1.87	0.56
29:B3:26:LEU:O	29:B3:27:GLY:C	2.43	0.56
36:BA:1805:U:O2	39:BD:50:THR:HB	2.06	0.56
36:BA:2647:U:H2'	36:BA:2648:C:C6	2.40	0.56
36:BA:287:C:H2'	36:BA:288:C:C6	2.41	0.56
39:BD:23:GLU:C	39:BD:25:THR:N	2.59	0.56
39:BD:30:GLU:O	39:BD:32:SER:N	2.39	0.56
43:BH:19:VAL:HG12	43:BH:20:ALA:N	2.20	0.56
43:BH:85:LYS:HZ1	43:BH:132:ARG:HA	1.70	0.56
46:BN:108:PRO:HG2	46:BN:113:GLY:HA3	1.87	0.56
54:BV:38:LEU:O	54:BV:39:LEU:HD13	2.06	0.56
58:BZ:150:LEU:H	58:BZ:150:LEU:HD23	1.70	0.56
58:BZ:40:ASP:OD2	58:BZ:42:VAL:HG12	2.05	0.56
1:CA:1442(B):A:O2'	1:CA:1443:G:C8	2.58	0.56
7:CG:16:LEU:CD1	9:CI:42:ARG:HA	2.35	0.56
15:CO:26:GLU:HB3	15:CO:81:LEU:HD23	1.87	0.56
24:CY:2:G:H2'	24:CY:3:G:C5'	2.29	0.56
28:D2:7:ARG:O	28:D2:11:GLU:HG3	2.06	0.56
29:D3:1:MET:HE1	29:D3:40:THR:HA	1.87	0.56
30:D4:39:CYS:O	30:D4:40:HIS:HB2	2.06	0.56
36:DA:1101:U:H2'	36:DA:1102:C:H6	1.70	0.56
36:DA:2107:C:H1'	36:DA:2182:G:N2	2.19	0.56
40:DE:38:THR:HG23	40:DE:39:PRO:HD2	1.88	0.56
40:DE:4:ILE:HG21	40:DE:96:PHE:CE2	2.40	0.56
41:DF:185:ASP:HA	41:DF:188:ARG:CG	2.36	0.56
42:DG:59:GLU:HG3	42:DG:60:LEU:N	2.19	0.56
42:DG:62:LEU:CD1	42:DG:62:LEU:H	2.16	0.56
43:DH:157:TYR:O	43:DH:158:HIS:CD2	2.59	0.56
46:DN:9:VAL:HG12	46:DN:10:GLU:N	2.21	0.56
48:DP:115:LEU:HG	48:DP:116:GLY:H	1.71	0.56
48:DP:39:LYS:HD2	48:DP:40:SER:H	1.69	0.56
50:DR:59:ASP:O	50:DR:60:LEU:HB3	2.06	0.56
52:DT:28:VAL:O	52:DT:29:ARG:CD	2.48	0.56
54:DV:38:LEU:O	54:DV:39:LEU:HD13	2.06	0.56
55:DW:73:ALA:O	55:DW:106:ILE:HG12	2.06	0.56
58:DZ:126:VAL:HA	58:DZ:163:LEU:HA	1.88	0.56
1:AA:1445:C:O2'	1:AA:1446:U:H5'	2.06	0.56
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.86	0.56
1:AA:735:C:H2'	1:AA:736:C:H6	1.71	0.56
8:AH:17:THR:HB	8:AH:78:GLN:OE1	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:973:G:H1'	10:AJ:55:LYS:HE3	1.88	0.56
13:AM:6:GLY:HA3	13:AM:67:GLU:OE2	2.05	0.56
25:AZ:158:LEU:O	25:AZ:163:PHE:HB2	2.06	0.56
25:AZ:272:MET:CG	25:AZ:277:LEU:HD23	2.36	0.56
34:B8:11:LYS:CE	34:B8:63:PRO:HG3	2.36	0.56
36:BA:1335:U:H2'	36:BA:1336:A:H8	1.71	0.56
36:BA:2027:G:O2'	36:BA:2028:U:H5'	2.06	0.56
37:BB:7:G:H4'	51:BS:29:PHE:CD2	2.41	0.56
38:BC:113:VAL:HG12	38:BC:138:PRO:HG3	1.87	0.56
41:BF:107:LYS:O	41:BF:110:LEU:N	2.39	0.56
42:BG:76:SER:HA	42:BG:83:ARG:HA	1.88	0.56
36:BA:956:G:OP2	49:BQ:14:ARG:NH2	2.39	0.56
51:BS:15:ARG:HG2	51:BS:15:ARG:NH1	2.21	0.56
56:BX:12:VAL:HG12	56:BX:27:THR:O	2.06	0.56
56:BX:53:LYS:HB3	56:BX:82:GLN:HB3	1.88	0.56
58:BZ:128:VAL:HG23	58:BZ:160:GLY:O	2.06	0.56
1:CA:1125:U:H3'	1:CA:1125:U:C6	2.41	0.56
1:CA:853:G:O2'	1:CA:854:G:H5'	2.06	0.56
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.20	0.56
4:CD:132:ARG:HD2	4:CD:132:ARG:O	2.05	0.56
6:CF:30:LEU:O	6:CF:30:LEU:HD23	2.04	0.56
1:CA:585:G:H4'	12:CL:8:ASN:ND2	2.20	0.56
20:CT:45:GLN:CB	20:CT:91:LEU:HD13	2.34	0.56
22:CV:44:G:H2'	22:CV:45:U:H5'	1.88	0.56
25:CZ:311:THR:HB	25:CZ:312:PRO:HD2	1.88	0.56
34:D8:32:LEU:HD13	36:DA:2392:A:OP1	2.06	0.56
36:DA:1146:C:O2'	36:DA:1147:C:H5'	2.06	0.56
36:DA:1448:G:H5'	36:DA:1449:A:OP1	2.06	0.56
36:DA:1607:C:H4'	36:DA:1608:A:O5'	2.06	0.56
36:DA:2672:G:H3'	36:DA:2673:G:H5''	1.88	0.56
36:DA:89:G:H3'	36:DA:90:U:H5'	1.87	0.56
38:DC:42:GLU:HG3	38:DC:215:THR:HG23	1.86	0.56
42:DG:111:LEU:N	42:DG:112:PRO:HD2	2.20	0.56
43:DH:43:VAL:HG12	43:DH:46:GLU:OE2	2.06	0.56
46:DN:46:VAL:O	46:DN:47:ALA:CB	2.54	0.56
51:DS:13:ARG:CG	51:DS:14:VAL:N	2.69	0.56
51:DS:58:LEU:HG	51:DS:59:LYS:H	1.71	0.56
56:DX:57:LEU:HD13	56:DX:78:LYS:O	2.06	0.56
57:DY:85:VAL:HG12	57:DY:86:ARG:N	2.21	0.56
22:AW:18:G:H22	22:AW:55:U:H6	1.52	0.56
31:B5:40:LYS:HE2	31:B5:46:CYS:CB	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:4:MET:HE1	36:BA:666:G:H1'	1.87	0.56
36:BA:2777:G:C5'	36:BA:2778:A:H5'	2.32	0.56
36:BA:672:C:C2'	36:BA:673:C:C5'	2.81	0.56
43:BH:66:GLY:CA	43:BH:69:ARG:HB3	2.36	0.56
57:BY:43:ASN:C	57:BY:44:ILE:HD12	2.26	0.56
57:BY:75:ILE:HG23	57:BY:76:CYS:H	1.70	0.56
57:BY:85:VAL:HG12	57:BY:86:ARG:N	2.21	0.56
58:BZ:166:SER:H	58:BZ:167:PRO:HA	1.69	0.56
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.06	0.56
1:CA:337:C:H2'	1:CA:338:A:C8	2.41	0.56
1:CA:490:G:H2'	1:CA:491:G:H8	1.71	0.56
25:CZ:113:MET:CG	25:CZ:114:PRO:HD2	2.32	0.56
25:CZ:222:LEU:CD1	25:CZ:303:VAL:HB	2.35	0.56
25:CZ:68:VAL:HG13	25:CZ:69:GLU:H	1.71	0.56
32:D6:27:LYS:HE3	32:D6:27:LYS:C	2.25	0.56
35:D9:1:MET:HG3	36:DA:2478:A:OP2	2.06	0.56
36:DA:108:U:H2'	36:DA:109:G:C8	2.39	0.56
36:DA:1558:A:O2'	36:DA:1559:G:OP2	2.23	0.56
38:DC:151:GLU:HA	38:DC:154:ARG:HH11	1.69	0.56
39:DD:24:ILE:HD11	39:DD:28:GLU:HB3	1.88	0.56
41:DF:165:ARG:HA	41:DF:168:ARG:HD3	1.89	0.56
41:DF:157:VAL:CG2	41:DF:194:MET:HG2	2.35	0.56
45:DK:32:UNK:HA	45:DK:63:UNK:CB	2.36	0.56
50:DR:52:ILE:HB	50:DR:94:TYR:CD2	2.40	0.56
55:DW:11:ARG:NH1	55:DW:98:LYS:HB3	2.21	0.56
58:DZ:98:MET:O	58:DZ:125:LEU:HA	2.06	0.56
1:AA:1283:G:O2'	1:AA:1284:C:P	2.64	0.55
1:AA:291:C:O2'	1:AA:292:G:H5'	2.06	0.55
5:AE:10:MET:HB3	5:AE:32:VAL:HG22	1.87	0.55
9:AI:40:LEU:HD11	9:AI:70:LYS:CG	2.33	0.55
25:AZ:313:HIS:CD2	25:AZ:403:ILE:HD13	2.41	0.55
25:AZ:324:LYS:HB2	25:AZ:326:GLU:CG	2.36	0.55
25:AZ:356:PRO:HB2	25:AZ:359:VAL:CG2	2.36	0.55
28:B2:25:VAL:HG22	28:B2:60:LEU:CD1	2.33	0.55
36:BA:1614:A:C2	55:BW:93:ALA:HB2	2.41	0.55
36:BA:16:G:O2'	36:BA:17:G:H5'	2.05	0.55
36:BA:2282:G:OP1	36:BA:2283:C:H1'	2.05	0.55
36:BA:89:G:H3'	36:BA:90:U:H5'	1.87	0.55
47:BO:111:PHE:O	47:BO:115:VAL:HG23	2.06	0.55
50:BR:2:ARG:HG3	50:BR:2:ARG:HH11	1.71	0.55
51:BS:74:ALA:HB2	51:BS:101:LEU:HD22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:35:ILE:H	51:BS:53:SER:HB2	1.71	0.55
53:BU:88:ILE:C	53:BU:90:VAL:H	2.10	0.55
58:BZ:68:PRO:O	58:BZ:91:LEU:HB2	2.06	0.55
1:CA:1015:A:H2'	1:CA:1016:A:H8	1.71	0.55
1:CA:148:G:H2'	1:CA:149:A:H8	1.71	0.55
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.70	0.55
11:CK:20:TYR:CE2	11:CK:83:ILE:HD12	2.41	0.55
1:CA:719:C:O2	18:CR:50:ILE:HG12	2.06	0.55
32:D6:11:LEU:HD11	32:D6:51:GLU:HG3	1.88	0.55
36:DA:2415:G:H2'	36:DA:2416:C:C6	2.40	0.55
36:DA:492:A:H2'	36:DA:493:G:O4'	2.06	0.55
36:DA:756:C:O2'	36:DA:757:U:H5'	2.05	0.55
36:DA:786:C:C2'	36:DA:787:U:H5'	2.37	0.55
36:DA:993:G:OP1	53:DU:50:ARG:NH1	2.39	0.55
40:DE:116:VAL:HG22	40:DE:122:PHE:CG	2.41	0.55
40:DE:186:GLY:O	40:DE:187:ALA:HB3	2.06	0.55
42:DG:60:LEU:HD13	42:DG:60:LEU:O	2.05	0.55
46:DN:3:THR:HG22	46:DN:4:TYR:N	2.21	0.55
53:DU:101:ARG:NH1	53:DU:101:ARG:HG3	2.22	0.55
53:DU:95:LEU:HD12	54:DV:11:GLN:HG3	1.88	0.55
56:DX:28:PHE:CD1	56:DX:28:PHE:N	2.68	0.55
1:AA:1004:A:H5"	1:AA:1025:U:C2	2.40	0.55
1:AA:1286:A:O2'	1:AA:1287:A:H5"	2.06	0.55
1:AA:429:U:H1'	1:AA:430:A:H5"	1.88	0.55
7:AG:102:ARG:O	7:AG:106:GLN:HG3	2.05	0.55
13:AM:101:GLN:H	13:AM:101:GLN:NE2	1.96	0.55
13:AM:120:LYS:HE3	13:AM:121:LYS:H	1.70	0.55
17:AQ:66:SER:OG	17:AQ:69:LYS:HB2	2.07	0.55
25:AZ:181:GLN:NE2	25:AZ:193:ASN:ND2	2.54	0.55
27:B1:20:ARG:HB3	27:B1:32:LYS:HB3	1.87	0.55
27:B1:84:GLY:C	27:B1:86:SER:H	2.10	0.55
29:B3:1:MET:HE1	29:B3:40:THR:HA	1.87	0.55
36:BA:1344:G:H4'	36:BA:1384:A:C5	2.41	0.55
36:BA:2199:A:H3'	36:BA:2200:C:H6	1.71	0.55
36:BA:2672:G:H3'	36:BA:2673:G:H5"	1.88	0.55
36:BA:521:G:H2'	36:BA:522:G:C8	2.41	0.55
37:BB:40:U:C2	37:BB:43:C:H5"	2.42	0.55
38:BC:76:ALA:H	38:BC:94:VAL:HA	1.71	0.55
40:BE:202:LYS:HD2	40:BE:202:LYS:N	2.21	0.55
40:BE:34:VAL:O	40:BE:34:VAL:HG22	2.06	0.55
41:BF:28:ILE:H	41:BF:28:ILE:CD1	2.13	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:31:VAL:HG23	42:BG:32:PRO:HD2	1.87	0.55
44:BJ:25:UNK:O	44:BJ:84:UNK:HA	2.05	0.55
48:BP:16:ARG:HD3	48:BP:16:ARG:C	2.26	0.55
56:BX:64:LYS:HE2	56:BX:73:ARG:HE	1.71	0.55
57:BY:2:ARG:N	57:BY:4:LYS:HG2	2.21	0.55
58:BZ:24:LEU:HD12	58:BZ:41:LEU:HD23	1.88	0.55
1:CA:1158:C:C4	1:CA:1160:G:H1'	2.42	0.55
1:CA:434:U:H2'	1:CA:435:C:C6	2.41	0.55
1:CA:436:C:H2'	1:CA:437:U:C6	2.41	0.55
1:CA:192:U:O2'	20:CT:57:ARG:HG3	2.06	0.55
28:D2:30:ARG:CA	28:D2:33:MET:HB2	2.28	0.55
28:D2:39:ALA:CB	28:D2:45:SER:HB3	2.36	0.55
28:D2:56:GLN:HG2	28:D2:59:ARG:NH2	2.21	0.55
35:D9:30:PRO:HB2	36:DA:2527:C:H5'	1.89	0.55
36:DA:142:A:H8	36:DA:1595:G:H21	1.55	0.55
34:D8:41:ILE:HD12	36:DA:2419:U:OP1	2.06	0.55
36:DA:2839:G:H5'	50:DR:46:GLY:HA2	1.88	0.55
39:DD:130:ALA:C	39:DD:131:LEU:HD12	2.27	0.55
42:DG:167:GLU:CD	42:DG:167:GLU:H	2.10	0.55
34:D8:59:LYS:CE	48:DP:50:ARG:HB3	2.33	0.55
49:DQ:27:VAL:HG12	49:DQ:28:ALA:N	2.21	0.55
50:DR:100:LEU:HD13	50:DR:100:LEU:H	1.72	0.55
52:DT:29:ARG:HG2	52:DT:86:ILE:HG22	1.88	0.55
52:DT:91:ARG:O	52:DT:92:GLY:C	2.44	0.55
57:DY:84:ARG:HG2	57:DY:85:VAL:H	1.71	0.55
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.06	0.55
1:AA:356:A:H2'	1:AA:357:G:C8	2.40	0.55
1:AA:399:G:H2'	1:AA:400:C:C6	2.42	0.55
1:AA:447:G:H2'	1:AA:485:G:N2	2.22	0.55
1:AA:80:G:H3'	1:AA:81:U:H5'	1.88	0.55
1:AA:858:G:C5'	1:AA:858:G:C8	2.88	0.55
4:AD:121:VAL:HA	4:AD:126:ILE:HD13	1.89	0.55
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.06	0.55
5:AE:11:ILE:CG2	5:AE:105:VAL:HG22	2.36	0.55
13:AM:2:ALA:HB1	13:AM:4:ILE:HD11	1.89	0.55
22:AW:4:C:C4	22:AW:5:G:O6	2.59	0.55
22:AW:73:A:H2'	22:AW:74:C:H5''	1.88	0.55
29:B3:7:LYS:O	29:B3:54:VAL:HG13	2.05	0.55
30:B4:40:HIS:HD2	30:B4:42:PHE:CE1	2.25	0.55
32:B6:15:GLU:OE2	32:B6:41:PRO:HG3	2.06	0.55
34:B8:26:LYS:NZ	34:B8:47:LYS:HD3	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2584:U:H2'	36:BA:2585:U:H5'	1.88	0.55
36:BA:414:C:O2'	36:BA:415:A:H5'	2.07	0.55
43:BH:41:MET:SD	43:BH:54:ARG:HA	2.46	0.55
47:BO:28:SER:O	47:BO:29:ASN:HB3	2.06	0.55
47:BO:86:ILE:O	47:BO:87:ILE:HD13	2.06	0.55
34:B8:7:HIS:CD2	48:BP:50:ARG:HD3	2.41	0.55
52:BT:50:ILE:HA	52:BT:99:LEU:CD1	2.36	0.55
54:BV:52:VAL:HG22	54:BV:52:VAL:O	2.05	0.55
56:BX:31:HIS:HB3	56:BX:34:ALA:HB2	1.88	0.55
1:CA:56:U:H2'	1:CA:57:G:C8	2.41	0.55
1:CA:625:G:H2'	1:CA:626:U:C6	2.41	0.55
3:CC:34:LEU:HD22	3:CC:38:ARG:NE	2.20	0.55
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.06	0.55
1:CA:323:U:H5'	20:CT:23:ARG:HB2	1.88	0.55
20:CT:64:ASP:OD1	20:CT:81:LYS:HD2	2.06	0.55
27:D1:71:TYR:O	27:D1:74:VAL:HG23	2.06	0.55
30:D4:9:LEU:HD13	30:D4:26:SER:O	2.06	0.55
32:D6:8:LYS:O	32:D6:9:LEU:HB3	2.06	0.55
36:DA:139(A):G:H3'	36:DA:140:G:H8	1.70	0.55
36:DA:141:A:H8	36:DA:1408:C:O2'	1.90	0.55
42:DG:91:ARG:C	42:DG:91:ARG:CD	2.75	0.55
43:DH:124:GLU:HB3	43:DH:126:PRO:HD3	1.88	0.55
49:DQ:3:MET:HB2	49:DQ:4:PRO:HD2	1.89	0.55
57:DY:86:ARG:NH2	57:DY:95:LYS:NZ	2.53	0.55
4:AD:59:ARG:CA	4:AD:59:ARG:HE	2.06	0.55
7:AG:28:ASN:OD1	7:AG:36:LYS:HE2	2.05	0.55
9:AI:11:LYS:HG2	9:AI:11:LYS:O	2.05	0.55
11:AK:20:TYR:CE2	11:AK:83:ILE:HD12	2.42	0.55
22:AW:72:C:H2'	22:AW:73:A:O4'	2.07	0.55
36:BA:1019:U:H2'	36:BA:1021:A:C2	2.42	0.55
36:BA:1722:A:O2'	36:BA:1739:U:H5'	2.07	0.55
36:BA:2823:A:OP1	40:BE:113:PHE:HB2	2.06	0.55
36:BA:363(E):U:H2'	36:BA:363(F):A:H1'	1.88	0.55
36:BA:45:C:H2'	36:BA:47:C:C6	2.42	0.55
36:BA:533:G:H5'	53:BU:24:TYR:CE1	2.41	0.55
38:BC:33:ALA:HA	38:BC:39:GLU:OE2	2.06	0.55
38:BC:99:ILE:HG22	38:BC:99:ILE:O	2.07	0.55
40:BE:176:ILE:HG23	40:BE:178:GLU:HB3	1.88	0.55
41:BF:157:VAL:CG2	41:BF:194:MET:HG2	2.36	0.55
45:BK:3:UNK:O	45:BK:4:UNK:C	2.54	0.55
46:BN:43:THR:HB	46:BN:46:VAL:CG1	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:27:VAL:O	49:BQ:28:ALA:HB3	2.06	0.55
52:BT:55:ASN:H	52:BT:59:THR:CG2	2.18	0.55
52:BT:78:LEU:C	52:BT:79:HIS:CD2	2.79	0.55
1:CA:457:C:H2'	1:CA:458:C:C6	2.41	0.55
1:CA:67:C:H2'	1:CA:68:G:C8	2.41	0.55
8:CH:18:ARG:HH11	8:CH:18:ARG:HA	1.71	0.55
9:CI:19:LEU:HD23	9:CI:19:LEU:C	2.27	0.55
19:CS:16:LEU:C	19:CS:18:LYS:N	2.59	0.55
25:CZ:143:ASP:HB3	25:CZ:146:LEU:CB	2.36	0.55
25:CZ:65:THR:HG23	25:CZ:80:VAL:HG13	1.88	0.55
27:D1:37:ILE:HD12	27:D1:37:ILE:O	2.06	0.55
28:D2:65:ASN:O	28:D2:67:LYS:N	2.39	0.55
32:D6:15:GLU:OE2	32:D6:18:ARG:CZ	2.54	0.55
34:D8:11:LYS:HE3	34:D8:63:PRO:HG3	1.87	0.55
36:DA:2469:A:H2'	36:DA:2470:G:H5'	1.87	0.55
36:DA:2557:G:H2'	36:DA:2558:C:H6	1.71	0.55
38:DC:76:ALA:H	38:DC:94:VAL:HA	1.72	0.55
38:DC:98:GLU:O	38:DC:98:GLU:HG3	2.06	0.55
39:DD:35:LYS:HE2	39:DD:104:TYR:OH	2.06	0.55
41:DF:152:GLU:O	41:DF:154:VAL:HG23	2.06	0.55
30:D4:34:GLU:HG2	42:DG:113:ARG:HH21	1.71	0.55
47:DO:98:VAL:HG12	47:DO:117:LEU:HB3	1.87	0.55
48:DP:24:GLY:HA3	48:DP:33:ARG:NH1	2.22	0.55
48:DP:84:ASN:C	48:DP:86:LYS:N	2.60	0.55
52:DT:102:ILE:O	52:DT:106:SER:HB3	2.06	0.55
54:DV:35:LEU:HD23	54:DV:57:VAL:CG1	2.37	0.55
36:DA:495:G:H21	55:DW:61:ASN:HD21	1.54	0.55
57:DY:50:ARG:HB3	57:DY:53:PRO:HG3	1.87	0.55
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.41	0.55
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.42	0.55
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.21	0.55
19:AS:29:ARG:HH11	19:AS:30:LEU:HB2	1.71	0.55
13:AM:90:LEU:HD12	19:AS:81:ARG:HH21	1.71	0.55
25:AZ:114:PRO:O	25:AZ:117:ARG:HB2	2.07	0.55
26:B0:10:THR:HG21	36:BA:2277:G:OP2	2.06	0.55
32:B6:26:ASN:HD22	32:B6:32:ASN:ND2	2.04	0.55
35:B9:29:ASN:N	35:B9:29:ASN:HD22	2.04	0.55
36:BA:1400:G:H2'	36:BA:1401:G:H8	1.71	0.55
36:BA:1523:U:H2'	36:BA:1524:G:H8	1.72	0.55
36:BA:1754:C:OP1	52:BT:96:ARG:NH1	2.33	0.55
36:BA:2811:G:H1	36:BA:2889:C:H42	1.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:83:G:H5''	36:BA:84:A:OP1	2.05	0.55
38:BC:116:THR:HG22	38:BC:146:GLY:O	2.05	0.55
39:BD:77:ALA:HA	39:BD:97:TYR:HA	1.87	0.55
41:BF:123:LEU:CD1	41:BF:192:LEU:HD22	2.37	0.55
36:BA:1257:C:H4'	41:BF:83:PHE:CD1	2.42	0.55
43:BH:52:VAL:CB	43:BH:69:ARG:HD3	2.37	0.55
48:BP:58:THR:CB	48:BP:61:ARG:HH21	2.17	0.55
53:BU:88:ILE:HG22	53:BU:88:ILE:O	2.06	0.55
55:BW:22:ASP:HA	55:BW:25:ARG:NH1	2.22	0.55
56:BX:35:THR:HG22	56:BX:36:LYS:N	2.22	0.55
1:CA:1431:C:C2'	1:CA:1432:G:H5'	2.37	0.55
7:CG:70:LYS:HB3	7:CG:96:GLN:HG2	1.87	0.55
18:CR:29:PHE:CD1	18:CR:29:PHE:N	2.73	0.55
22:CV:5:G:H8	22:CV:5:G:H5'	1.72	0.55
22:CW:73:A:H2'	22:CW:74:C:H5''	1.89	0.55
25:CZ:300:ARG:O	25:CZ:302:GLN:N	2.40	0.55
28:D2:47:ASN:C	36:DA:95:G:H4'	2.27	0.55
34:D8:43:GLN:C	34:D8:44:LYS:HD2	2.27	0.55
36:DA:1165:U:H2'	36:DA:1166:C:C6	2.41	0.55
36:DA:143:G:H2'	36:DA:143(A):C:H6	1.71	0.55
36:DA:1477:A:C2	36:DA:1515:G:C2	2.94	0.55
36:DA:1762:A:H8	36:DA:1762:A:O5'	1.90	0.55
36:DA:1782:C:H1'	36:DA:2609:U:H5''	1.89	0.55
36:DA:2295:C:O2'	36:DA:2296:U:H5'	2.07	0.55
36:DA:32:C:H5'	36:DA:33:U:OP2	2.06	0.55
39:DD:129:ASN:O	39:DD:193:VAL:HG12	2.07	0.55
41:DF:28:ILE:O	41:DF:30:PRO:HD3	2.05	0.55
42:DG:77:ILE:N	42:DG:77:ILE:HD13	2.14	0.55
47:DO:35:VAL:HG13	47:DO:65:THR:HG23	1.89	0.55
48:DP:114:ILE:HD12	48:DP:115:LEU:N	2.21	0.55
48:DP:85:LEU:HA	48:DP:88:LEU:HB2	1.86	0.55
49:DQ:14:ARG:HG2	49:DQ:41:TRP:HH2	1.72	0.55
50:DR:24:GLN:HE22	50:DR:36:THR:HG21	1.68	0.55
56:DX:31:HIS:ND1	56:DX:32:PRO:HD2	2.21	0.55
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.70	0.55
2:AB:30:ARG:HG3	2:AB:31:TYR:CD1	2.42	0.55
6:AF:21:LEU:C	6:AF:21:LEU:HD13	2.27	0.55
11:AK:18:ARG:HH21	11:AK:36:ASP:C	2.08	0.55
13:AM:4:ILE:HD12	13:AM:4:ILE:H	1.71	0.55
20:AT:62:LEU:O	20:AT:65:LYS:HB2	2.06	0.55
22:AV:44:G:H3'	22:AV:45:U:H5'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:7:A:H5''	22:AW:8:U:OP2	2.06	0.55
1:AA:367:U:H4'	25:AZ:291:ARG:CZ	2.36	0.55
25:AZ:314:THR:HG23	25:AZ:374:LEU:O	2.07	0.55
29:B3:26:LEU:O	29:B3:28:LEU:N	2.40	0.55
36:BA:195:A:H5''	36:BA:196:A:OP2	2.06	0.55
36:BA:2603:G:C3'	36:BA:2604:U:H5''	2.35	0.55
36:BA:271(L):U:C5'	36:BA:271(M):G:H5'	2.30	0.55
36:BA:607:U:H3	36:BA:621:A:H2	1.54	0.55
36:BA:786:C:C2'	36:BA:787:U:H5'	2.36	0.55
37:BB:111:G:C2'	37:BB:112:U:H5'	2.36	0.55
38:BC:210:ARG:HG2	38:BC:210:ARG:NH1	2.22	0.55
38:BC:25:ALA:O	38:BC:29:VAL:HG22	2.07	0.55
42:BG:128:ARG:O	42:BG:130:ASN:N	2.40	0.55
51:BS:88:ASP:CG	51:BS:89:ARG:N	2.59	0.55
52:BT:102:ILE:O	52:BT:106:SER:HB3	2.07	0.55
57:BY:47:LYS:HG3	57:BY:60:PHE:CE1	2.41	0.55
58:BZ:126:VAL:HA	58:BZ:163:LEU:CA	2.37	0.55
1:CA:1007:C:O2'	1:CA:1008:C:H5'	2.07	0.55
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.40	0.55
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.07	0.55
16:CP:5:ARG:HE	16:CP:22:THR:CG2	2.20	0.55
25:CZ:166:ASP:C	25:CZ:167:GLU:HG2	2.26	0.55
28:D2:18:PRO:HA	28:D2:21:LEU:CG	2.37	0.55
28:D2:21:LEU:CB	28:D2:64:LEU:HG	2.23	0.55
36:DA:17:G:H4'	53:DU:25:TRP:CH2	2.42	0.55
36:DA:1946:U:H2'	36:DA:1947:C:C6	2.42	0.55
36:DA:2584:U:H2'	36:DA:2585:U:H5'	1.88	0.55
36:DA:481:G:H1'	36:DA:506:G:H21	1.71	0.55
36:DA:654(H):G:C3'	36:DA:654(I):C:H5'	2.36	0.55
36:DA:659:C:H4'	41:DF:100:THR:O	2.06	0.55
36:DA:893:C:H2'	36:DA:894:C:C6	2.41	0.55
36:DA:997:G:OP1	53:DU:93:LYS:HD3	2.06	0.55
38:DC:53:ARG:CB	38:DC:53:ARG:HH11	2.18	0.55
39:DD:233:HIS:CE1	39:DD:247:ALA:H	2.24	0.55
43:DH:41:MET:SD	43:DH:54:ARG:HA	2.47	0.55
46:DN:23:LEU:HB2	46:DN:60:ILE:HG21	1.88	0.55
50:DR:52:ILE:CB	50:DR:94:TYR:HD2	2.19	0.55
1:AA:1007:C:O2'	1:AA:1008:C:H5'	2.06	0.55
1:AA:1330:U:H3'	1:AA:1331:G:O4'	2.06	0.55
1:AA:919:A:O2'	1:AA:920:U:H5'	2.07	0.55
1:AA:950:U:OP2	13:AM:102:ARG:HD2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:43:ARG:HB2	10:AJ:67:THR:HG23	1.89	0.55
25:AZ:168:VAL:O	25:AZ:169:PRO:C	2.44	0.55
25:AZ:177:LEU:O	25:AZ:181:GLN:HG3	2.06	0.55
25:AZ:5:PHE:C	25:AZ:5:PHE:CD1	2.80	0.55
26:B0:37:LEU:N	26:B0:59:LEU:O	2.32	0.55
36:BA:2401:U:C2'	36:BA:2402:C:H5''	2.35	0.55
36:BA:2584:U:C2'	36:BA:2585:U:H5'	2.37	0.55
36:BA:1638:C:H5''	36:BA:2710:C:O2'	2.06	0.55
36:BA:642:G:H21	36:BA:646:A:H2	1.55	0.55
36:BA:894:C:O2'	36:BA:895:U:H5'	2.06	0.55
42:BG:77:ILE:CD1	42:BG:77:ILE:H	2.16	0.55
36:BA:1141:U:H2'	46:BN:63:THR:HG21	1.89	0.55
1:AA:1442(B):A:H5'	52:BT:122:ASP:OD1	2.07	0.55
52:BT:23:ARG:HA	52:BT:52:ILE:CD1	2.36	0.55
57:BY:8:LYS:HE2	57:BY:72:VAL:HG23	1.88	0.55
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.53	0.55
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.07	0.55
9:CI:6:GLY:N	9:CI:84:ALA:HB2	2.22	0.55
9:CI:95:LYS:HD3	9:CI:96:LEU:N	2.22	0.55
14:CN:27:CYS:HG	59:CN:101:ZN:ZN	1.13	0.55
15:CO:17:ARG:O	15:CO:18:PHE:HB3	2.07	0.55
19:CS:10:PHE:HE1	19:CS:70:LYS:HE2	1.69	0.55
25:CZ:14:VAL:O	25:CZ:79:HIS:HA	2.06	0.55
31:D5:2:ALA:N	36:DA:747:U:C4	2.75	0.55
35:D9:17:ILE:CG2	35:D9:18:ARG:N	2.69	0.55
36:DA:1070:A:H2'	36:DA:1097:U:OP1	2.06	0.55
36:DA:2027:G:H2'	36:DA:2028:U:H6	1.71	0.55
28:D2:62:THR:HG21	36:DA:76:C:H4'	1.88	0.55
36:DA:885:C:H2'	36:DA:886:C:C6	2.42	0.55
37:DB:111:G:O2'	37:DB:112:U:H5'	2.07	0.55
36:DA:1801:G:OP2	39:DD:154:LYS:HE3	2.07	0.55
40:DE:202:LYS:HD2	40:DE:202:LYS:N	2.22	0.55
42:DG:102:PHE:CD1	42:DG:102:PHE:O	2.60	0.55
37:DB:42:C:H4'	42:DG:67:LYS:HG2	1.86	0.55
43:DH:51:ARG:HG3	43:DH:52:VAL:N	2.20	0.55
48:DP:84:ASN:ND2	48:DP:116:GLY:HA2	2.21	0.55
48:DP:45:LEU:CD1	48:DP:46:LYS:H	2.19	0.55
50:DR:52:ILE:CG2	50:DR:94:TYR:HD2	2.20	0.55
56:DX:31:HIS:HB3	56:DX:34:ALA:HB2	1.88	0.55
36:DA:139(A):G:N2	56:DX:44:GLU:OE1	2.37	0.55
57:DY:28:LYS:HB3	57:DY:39:VAL:N	2.14	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:43:ASN:C	57:DY:44:ILE:HD12	2.27	0.55
58:DZ:10:ARG:HD3	58:DZ:37:VAL:O	2.06	0.55
4:AD:59:ARG:HA	4:AD:59:ARG:NE	2.11	0.55
5:AE:12:LEU:HD21	5:AE:14:ARG:HB3	1.89	0.55
25:AZ:30:ALA:O	25:AZ:34:VAL:HG23	2.06	0.55
28:B2:35:LEU:HD13	28:B2:36:ARG:N	2.22	0.55
33:B7:43:THR:HG23	33:B7:44:PRO:HD2	1.88	0.55
36:BA:116:C:H2'	36:BA:117:G:O4'	2.06	0.55
36:BA:2128:C:O2'	36:BA:2129:C:P	2.64	0.55
36:BA:2262:U:H4'	36:BA:2328:A:H2	1.72	0.55
34:B8:32:LEU:HD13	36:BA:2392:A:OP1	2.07	0.55
36:BA:2657:A:H2	36:BA:2664:G:H21	1.54	0.55
36:BA:309:G:N3	36:BA:329:G:O2'	2.39	0.55
36:BA:481:G:H1'	36:BA:506:G:H21	1.72	0.55
36:BA:556:G:H2'	36:BA:557:U:C6	2.42	0.55
38:BC:210:ARG:HH11	38:BC:210:ARG:CG	2.20	0.55
39:BD:257:LEU:C	39:BD:257:LEU:HD23	2.27	0.55
41:BF:152:GLU:O	41:BF:154:VAL:HG23	2.06	0.55
46:BN:41:ASP:C	53:BU:64:ARG:HH12	2.10	0.55
48:BP:102:ARG:CB	48:BP:102:ARG:HH11	2.19	0.55
50:BR:12:ARG:HG3	50:BR:12:ARG:HH11	1.71	0.55
56:BX:57:LEU:HD13	56:BX:78:LYS:O	2.07	0.55
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.35	0.55
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.06	0.55
5:CE:11:ILE:HD11	5:CE:33:VAL:HG21	1.89	0.55
5:CE:18:ARG:HH11	5:CE:18:ARG:HG3	1.72	0.55
6:CF:15:ASP:OD2	6:CF:17:SER:HB2	2.07	0.55
9:CI:2:GLU:N	9:CI:88:TYR:HH	2.04	0.55
10:CJ:8:LEU:HD22	10:CJ:96:ILE:HG22	1.88	0.55
13:CM:120:LYS:HA	13:CM:120:LYS:CE	2.37	0.55
25:CZ:160:GLN:O	25:CZ:160:GLN:HG3	2.06	0.55
25:CZ:126:VAL:HG13	61:CZ:502:KIR:H471	1.89	0.55
25:CZ:7:ARG:NH2	25:CZ:281:ILE:CD1	2.68	0.55
28:D2:11:GLU:HG2	28:D2:14:ARG:HH21	1.72	0.55
28:D2:3:LEU:CA	28:D2:7:ARG:HG3	2.34	0.55
30:D4:9:LEU:HD13	30:D4:10:VAL:N	2.19	0.55
34:D8:50:LEU:N	34:D8:53:PRO:HD3	2.22	0.55
36:DA:1411:C:H2'	36:DA:1412:A:C8	2.42	0.55
36:DA:1592:C:H2'	36:DA:1593:G:H8	1.70	0.55
36:DA:1639:U:O2'	36:DA:1640:C:H5''	2.07	0.55
36:DA:2348:U:O2'	36:DA:2349:G:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2681:C:H5	36:DA:2725:A:H62	1.54	0.55
36:DA:320:A:C8	41:DF:136:THR:HG21	2.42	0.55
36:DA:220:G:H2'	36:DA:427:U:O4	2.07	0.55
36:DA:527:C:H4'	36:DA:528:A:O4'	2.07	0.55
36:DA:669:G:H2'	36:DA:669:G:N3	2.22	0.55
37:DB:49:C:H2'	37:DB:50:G:C8	2.42	0.55
39:DD:69:ARG:HH22	39:DD:117:VAL:CG2	2.19	0.55
43:DH:158:HIS:O	43:DH:159:GLU:CB	2.53	0.55
50:DR:76:VAL:O	50:DR:79:LEU:HB3	2.07	0.55
51:DS:16:ASN:C	51:DS:18:ILE:HD12	2.27	0.55
36:DA:494:G:O2'	55:DW:5:ALA:O	2.25	0.55
49:DQ:141:GLN:O	58:DZ:53:ILE:HB	2.06	0.55
58:DZ:60:GLU:O	58:DZ:61:LEU:O	2.25	0.55
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.42	0.55
2:AB:107:THR:O	2:AB:110:GLN:HG2	2.07	0.55
2:AB:42:ILE:HD13	2:AB:203:GLY:HA2	1.89	0.55
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.21	0.55
15:AO:31:LEU:O	15:AO:35:ARG:HG3	2.07	0.55
21:AU:17:THR:O	21:AU:22:ARG:NH1	2.39	0.55
25:AZ:219:LYS:HB3	25:AZ:244:ARG:CD	2.35	0.55
26:B0:14:ARG:NH1	26:B0:14:ARG:HG3	2.20	0.55
28:B2:10:LEU:HD23	28:B2:10:LEU:C	2.26	0.55
36:BA:1019:U:C2'	36:BA:1021:A:H2	2.20	0.55
36:BA:1209:G:N2	36:BA:1210:A:H62	2.05	0.55
36:BA:1858:G:O2'	36:BA:1884:A:N6	2.40	0.55
36:BA:200:U:H2'	36:BA:201:C:H5'	1.89	0.55
35:B9:30:PRO:HB2	36:BA:2527:C:H5'	1.89	0.55
36:BA:2790:A:H2'	36:BA:2791:C:C5'	2.37	0.55
37:BB:96:U:H2'	37:BB:97:G:H8	1.72	0.55
38:BC:151:GLU:HA	38:BC:154:ARG:HH11	1.70	0.55
41:BF:4:VAL:HG22	41:BF:19:GLU:OE1	2.07	0.55
41:BF:28:ILE:O	41:BF:30:PRO:HD3	2.07	0.55
42:BG:25:TYR:CE2	42:BG:31:VAL:HA	2.42	0.55
22:AV:56:C:O4'	42:BG:76:SER:HB2	2.07	0.55
43:BH:158:HIS:O	43:BH:159:GLU:CB	2.53	0.55
53:BU:6:THR:O	53:BU:9:VAL:HG22	2.06	0.55
36:BA:494:G:O2'	55:BW:5:ALA:O	2.23	0.55
55:BW:92:ARG:O	55:BW:93:ALA:HB3	2.05	0.55
3:CC:12:LEU:O	3:CC:13:GLY:C	2.45	0.55
9:CI:126:SER:O	9:CI:128:ARG:HD2	2.06	0.55
10:CJ:54:PHE:CD1	10:CJ:55:LYS:HD3	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:75:HIS:CB	12:CL:102:ARG:HH21	2.20	0.55
20:CT:18:GLN:HG2	20:CT:22:ARG:NH1	2.21	0.55
22:CV:44:G:H3'	22:CV:45:U:H5'	1.89	0.55
25:CZ:19:HIS:HA	25:CZ:115:GLN:HB2	1.89	0.55
28:D2:12:GLU:O	28:D2:15:LYS:HG2	2.06	0.55
29:D3:31:LEU:C	29:D3:33:GLN:H	2.11	0.55
30:D4:40:HIS:HD2	30:D4:42:PHE:CE1	2.25	0.55
32:D6:27:LYS:HG3	32:D6:30:THR:CB	2.37	0.55
32:D6:45:LYS:O	32:D6:46:HIS:HB3	2.06	0.55
36:DA:1337:G:H2'	36:DA:1338:G:C8	2.40	0.55
36:DA:1405:U:H2'	36:DA:1406:U:C6	2.41	0.55
36:DA:2152:G:O2'	36:DA:2153:G:H5'	2.07	0.55
36:DA:2386:C:H2'	36:DA:2387:U:C6	2.42	0.55
39:DD:72:LYS:HE2	39:DD:101:GLU:OE1	2.07	0.55
40:DE:111:ARG:HD2	50:DR:2:ARG:NH2	2.22	0.55
13:CM:3:ARG:HB2	42:DG:113:ARG:HH22	1.72	0.55
47:DO:114:ILE:HD12	47:DO:114:ILE:N	2.22	0.55
36:DA:1246:A:OP1	48:DP:16:ARG:NH2	2.40	0.55
49:DQ:27:VAL:O	49:DQ:28:ALA:HB3	2.06	0.55
50:DR:37:THR:HA	50:DR:111:LEU:HA	1.89	0.55
55:DW:82:LEU:HD23	55:DW:84:ARG:HH22	1.72	0.55
57:DY:47:LYS:HG3	57:DY:60:PHE:CE1	2.41	0.55
57:DY:75:ILE:HG23	57:DY:76:CYS:H	1.68	0.55
58:DZ:78:LYS:O	58:DZ:79:ARG:CB	2.55	0.55
1:AA:542:G:P	4:AD:10:ARG:HH22	2.30	0.55
2:AB:144:ARG:HB2	2:AB:144:ARG:HH11	1.72	0.55
2:AB:238:LEU:HG	2:AB:239:VAL:N	2.22	0.55
3:AC:25:GLY:O	3:AC:27:LYS:N	2.40	0.55
5:AE:38:GLN:OE1	5:AE:38:GLN:HA	2.07	0.55
7:AG:58:PRO:C	7:AG:60:LYS:H	2.11	0.55
25:AZ:185:ASN:HD22	25:AZ:185:ASN:H	1.55	0.55
36:BA:1536:C:H2'	36:BA:1537:G:C4'	2.37	0.55
36:BA:2195:C:O2'	36:BA:2196:C:H5'	2.07	0.55
35:B9:31:LYS:HE2	36:BA:2478:A:H5'	1.89	0.55
36:BA:2557:G:H2'	36:BA:2558:C:H6	1.70	0.55
36:BA:373:U:H2'	36:BA:374:A:H8	1.72	0.55
36:BA:479:A:HO2'	36:BA:481:G:H8	1.55	0.55
36:BA:500:G:H22	36:BA:502:A:H3'	1.72	0.55
36:BA:654(R):C:H2'	36:BA:654(S):G:C8	2.42	0.55
36:BA:654(V):A:H8	36:BA:655:A:H2'	1.71	0.55
36:BA:885:C:H2'	36:BA:886:C:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:69:ARG:HH22	39:BD:117:VAL:CG2	2.20	0.55
42:BG:119:GLY:O	42:BG:120:LEU:O	2.25	0.55
42:BG:40:ASN:HD22	42:BG:91:ARG:HB2	1.72	0.55
46:BN:19:GLU:HG3	46:BN:20:GLY:N	2.22	0.55
50:BR:76:VAL:O	50:BR:79:LEU:HB3	2.07	0.55
53:BU:101:ARG:HG3	53:BU:101:ARG:NH1	2.22	0.55
54:BV:35:LEU:HD23	54:BV:57:VAL:CG1	2.36	0.55
57:BY:28:LYS:HB2	57:BY:37:VAL:HB	1.88	0.55
57:BY:85:VAL:O	57:BY:86:ARG:HB2	2.07	0.55
1:CA:1064:G:N2	1:CA:1190:G:H2'	2.22	0.55
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.71	0.55
1:CA:222:U:H2'	1:CA:223:U:C6	2.42	0.55
1:CA:80:G:C6	1:CA:90:U:H5'	2.42	0.55
1:CA:80:G:H3'	1:CA:81:U:C5'	2.37	0.55
1:CA:961:U:O2'	1:CA:962:C:H6	1.86	0.55
4:CD:157:LEU:N	4:CD:157:LEU:HD12	2.21	0.55
5:CE:40:ARG:HH11	5:CE:40:ARG:HG2	1.73	0.55
7:CG:59:LEU:O	7:CG:59:LEU:HG	2.07	0.55
7:CG:7:ALA:O	7:CG:8:GLU:CB	2.55	0.55
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HB3	1.88	0.55
10:CJ:40:LEU:H	10:CJ:40:LEU:CD2	2.14	0.55
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD3	2.42	0.55
20:CT:65:LYS:O	20:CT:68:LYS:HB2	2.06	0.55
22:CW:38:A:H2'	22:CW:39:U:O4'	2.07	0.55
22:CW:7:A:N6	22:CW:49:C:H41	2.04	0.55
25:CZ:69:GLU:HG2	25:CZ:70:TYR:N	2.22	0.55
36:DA:1047:G:H2'	36:DA:1110:G:N2	2.14	0.55
36:DA:1248:G:C2	53:DU:3:ARG:HD2	2.42	0.55
36:DA:1839:G:H8	36:DA:1839:G:H5'	1.70	0.55
36:DA:1932:A:H2'	36:DA:1933:G:O4'	2.06	0.55
36:DA:2317:C:H2'	36:DA:2318:G:C5'	2.29	0.55
36:DA:589:C:H2'	36:DA:590:A:C8	2.42	0.55
36:DA:83:G:H5''	36:DA:84:A:OP1	2.06	0.55
36:DA:910:A:H2'	36:DA:911:A:C8	2.42	0.55
36:DA:926:A:H8	36:DA:926:A:H5'	1.71	0.55
40:DE:36:ARG:HH21	40:DE:88:GLY:HA2	1.70	0.55
42:DG:87:PRO:HG2	42:DG:88:ILE:N	2.22	0.55
44:DJ:67:UNK:C	44:DJ:69:UNK:H	2.19	0.55
36:DA:2562:U:H4'	47:DO:25:LEU:HD21	1.88	0.55
48:DP:34:GLY:O	48:DP:35:HIS:CB	2.55	0.55
52:DT:30:VAL:HG22	52:DT:84:GLN:HG3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:120:ILE:HG22	58:DZ:121:HIS:N	2.18	0.55
58:DZ:97:GLU:HA	58:DZ:127:LYS:HA	1.89	0.55
1:AA:194:C:C2'	1:AA:195:A:H5''	2.37	0.54
1:AA:625:G:H2'	1:AA:626:U:C6	2.42	0.54
1:AA:736:C:H2'	1:AA:737:A:C8	2.42	0.54
1:AA:80:G:H3'	1:AA:81:U:C5'	2.37	0.54
1:AA:848:C:O2'	1:AA:849:C:H5'	2.07	0.54
1:AA:992:U:H4'	1:AA:993:G:O5'	2.06	0.54
6:AF:30:LEU:O	6:AF:30:LEU:HD23	2.06	0.54
13:AM:6:GLY:O	13:AM:8:GLU:N	2.40	0.54
16:AP:8:ARG:HB3	16:AP:28:ARG:HH12	1.69	0.54
19:AS:16:LEU:O	19:AS:19:VAL:N	2.40	0.54
19:AS:31:ILE:CG2	19:AS:49:ILE:HA	2.34	0.54
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.07	0.54
22:AW:9:A:C2	22:AW:45:U:O4	2.55	0.54
25:AZ:277:LEU:HD11	25:AZ:280:GLY:H	1.72	0.54
32:B6:36:LEU:HD12	32:B6:50:ARG:CZ	2.38	0.54
36:BA:564:C:O2'	36:BA:565:C:H5'	2.05	0.54
36:BA:675:A:OP1	41:BF:63:LYS:HE2	2.07	0.54
37:BB:7:G:H2'	37:BB:8:U:H5''	1.89	0.54
42:BG:51:ARG:NH1	42:BG:53:LEU:HD13	2.21	0.54
43:BH:163:TYR:CD1	43:BH:163:TYR:N	2.75	0.54
48:BP:91:PHE:CE2	48:BP:95:VAL:HG12	2.42	0.54
48:BP:9:ASN:H	48:BP:10:PRO:CD	2.13	0.54
26:B0:7:LEU:HB3	49:BQ:85:LYS:HD2	1.89	0.54
50:BR:5:LYS:O	50:BR:6:SER:HB2	2.07	0.54
50:BR:75:LEU:O	50:BR:75:LEU:HD13	2.07	0.54
58:BZ:149:SER:OG	58:BZ:173:ALA:HA	2.07	0.54
58:BZ:172:ALA:O	58:BZ:173:ALA:HB2	2.06	0.54
1:CA:1145:C:O2'	1:CA:1146:A:O5'	2.25	0.54
1:CA:1330:U:H3'	1:CA:1331:G:O4'	2.07	0.54
2:CB:126:GLU:O	2:CB:129:GLU:HB2	2.07	0.54
2:CB:213:LEU:C	2:CB:213:LEU:HD23	2.28	0.54
3:CC:165:THR:O	3:CC:165:THR:HG23	2.05	0.54
4:CD:129:ASN:HD21	4:CD:144:ASP:HA	1.73	0.54
18:CR:67:ALA:O	18:CR:71:LYS:HG3	2.08	0.54
25:CZ:168:VAL:O	25:CZ:169:PRO:C	2.45	0.54
27:D1:21:ARG:HH11	27:D1:21:ARG:CB	2.20	0.54
29:D3:26:LEU:O	29:D3:27:GLY:C	2.45	0.54
33:D7:10:ARG:NH1	33:D7:10:ARG:HG2	2.18	0.54
36:DA:201:C:C2'	36:DA:202:U:H5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2133:G:N1	36:DA:2157:G:O6	2.40	0.54
36:DA:2308:G:O6	36:DA:2310:A:H2'	2.07	0.54
38:DC:78:ALA:H	38:DC:115:ALA:HA	1.71	0.54
30:D4:6:HIS:HB3	42:DG:67:LYS:HZ1	1.71	0.54
47:DO:104:ARG:HE	52:DT:33:LYS:CE	2.21	0.54
47:DO:2:ILE:HD12	47:DO:6:THR:HG21	1.88	0.54
48:DP:84:ASN:C	48:DP:86:LYS:H	2.09	0.54
50:DR:2:ARG:HG3	50:DR:2:ARG:HH11	1.71	0.54
50:DR:72:ASP:HB3	50:DR:75:LEU:CB	2.36	0.54
53:DU:105:VAL:O	53:DU:108:GLU:HB2	2.06	0.54
1:AA:792:A:H4'	1:AA:793:U:O5'	2.07	0.54
2:AB:207:ALA:O	2:AB:211:ILE:HG13	2.07	0.54
2:AB:39:ILE:HG22	2:AB:40:HIS:N	2.22	0.54
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.71	0.54
5:AE:100:VAL:HG12	5:AE:118:ILE:HG22	1.88	0.54
13:AM:40:ASN:HD22	13:AM:43:THR:HG23	1.72	0.54
18:AR:58:LEU:CD1	18:AR:66:LEU:HD22	2.38	0.54
26:B0:20:ARG:CG	26:B0:20:ARG:HH11	2.21	0.54
36:BA:18:C:O3'	53:BU:23:GLY:HA2	2.07	0.54
36:BA:2485:G:H5''	49:BQ:46:GLN:NE2	2.21	0.54
36:BA:2538:C:H2'	36:BA:2539:C:H6	1.72	0.54
36:BA:2619:C:O2'	36:BA:2620:C:H5'	2.07	0.54
36:BA:2001:A:H4'	36:BA:2689:U:H2'	1.90	0.54
36:BA:2839:G:H5'	50:BR:46:GLY:HA2	1.88	0.54
36:BA:589:C:H2'	36:BA:590:A:C8	2.42	0.54
39:BD:132:PRO:HG3	39:BD:190:TYR:CE1	2.41	0.54
39:BD:81:ALA:HA	39:BD:113:VAL:CG2	2.36	0.54
41:BF:53:THR:HG23	41:BF:55:GLY:N	2.18	0.54
44:BJ:45:UNK:C	44:BJ:47:UNK:H	2.20	0.54
49:BQ:64:ILE:HG22	49:BQ:65:PHE:N	2.21	0.54
52:BT:83:ILE:HG13	52:BT:84:GLN:H	1.70	0.54
54:BV:19:LYS:HE2	54:BV:19:LYS:HA	1.89	0.54
54:BV:47:VAL:HB	54:BV:51:VAL:O	2.06	0.54
58:BZ:149:SER:HB3	58:BZ:173:ALA:HA	1.89	0.54
58:BZ:166:SER:HB2	58:BZ:167:PRO:C	2.28	0.54
58:BZ:18:LEU:HA	58:BZ:21:ALA:HB3	1.89	0.54
1:CA:1004:A:H5''	1:CA:1025:U:C2	2.41	0.54
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	2.07	0.54
1:CA:80:G:H3'	1:CA:81:U:H5'	1.88	0.54
25:CZ:195:TRP:CE3	25:CZ:195:TRP:HA	2.41	0.54
27:D1:67:ILE:N	27:D1:68:PRO:CD	2.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:25:VAL:HG22	28:D2:29:LYS:CD	2.37	0.54
32:D6:44:ARG:C	32:D6:45:LYS:HD2	2.28	0.54
32:D6:45:LYS:O	32:D6:46:HIS:ND1	2.41	0.54
36:DA:1029:A:H2'	36:DA:1030:G:O4'	2.07	0.54
36:DA:1464:C:HO2'	36:DA:1528:A:H8	1.54	0.54
36:DA:2262:U:O2'	36:DA:2263:C:H5'	2.07	0.54
36:DA:2485:G:H5''	49:DQ:46:GLN:NE2	2.19	0.54
36:DA:419:C:H2'	36:DA:420:C:H6	1.72	0.54
36:DA:848:G:N9	36:DA:933:A:H8	2.05	0.54
38:DC:53:ARG:HH12	38:DC:55:ASP:CG	2.11	0.54
39:DD:81:ALA:HA	39:DD:113:VAL:CG2	2.38	0.54
41:DF:123:LEU:CD1	41:DF:192:LEU:HD22	2.38	0.54
48:DP:59:LEU:HA	48:DP:61:ARG:NH1	2.22	0.54
51:DS:73:LEU:C	51:DS:73:LEU:HD23	2.28	0.54
1:AA:1116:C:H2'	1:AA:1117:G:H5''	1.88	0.54
1:AA:841:U:H3'	1:AA:848:C:O4'	2.07	0.54
4:AD:157:LEU:N	4:AD:157:LEU:HD12	2.22	0.54
10:AJ:38:ILE:CD1	10:AJ:71:LEU:HB3	2.37	0.54
16:AP:53:VAL:CG2	16:AP:54:GLU:H	2.17	0.54
22:AV:44:G:H2'	22:AV:45:U:H5'	1.89	0.54
25:AZ:215:ARG:HG3	25:AZ:215:ARG:HH11	1.73	0.54
25:AZ:27:LEU:O	25:AZ:27:LEU:HD12	2.07	0.54
25:AZ:310:ILE:HG13	25:AZ:381:GLU:HB2	1.90	0.54
36:BA:1472:A:C2'	36:BA:1473:G:H5'	2.38	0.54
36:BA:2185:C:C2'	36:BA:2186:G:H5'	2.35	0.54
36:BA:2712(A):A:H5'	36:BA:2713:A:OP2	2.06	0.54
36:BA:271(E):U:H2'	36:BA:271(F):C:C6	2.42	0.54
37:BB:21:G:H2'	37:BB:22:U:H5'	1.89	0.54
38:BC:114:VAL:HG23	38:BC:149:ILE:HD11	1.88	0.54
38:BC:53:ARG:HH12	38:BC:55:ASP:CG	2.11	0.54
38:BC:68:LEU:HD11	38:BC:161:ILE:HG23	1.87	0.54
38:BC:98:GLU:HG3	38:BC:98:GLU:O	2.07	0.54
39:BD:223:GLY:C	39:BD:224:ALA:O	2.39	0.54
43:BH:121:ILE:CD1	43:BH:144:VAL:HG21	2.36	0.54
48:BP:39:LYS:HD2	48:BP:40:SER:H	1.72	0.54
51:BS:73:LEU:O	51:BS:73:LEU:HD23	2.07	0.54
53:BU:90:VAL:HG21	54:BV:47:VAL:CG2	2.38	0.54
54:BV:21:ARG:HD3	54:BV:21:ARG:H	1.72	0.54
55:BW:4:LYS:HD3	55:BW:6:ILE:CD1	2.38	0.54
1:CA:1443:G:H5'	1:CA:1444:C:OP2	2.07	0.54
1:CA:167:G:O2'	1:CA:168:G:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:226:G:O2'	1:CA:227:G:H5'	2.06	0.54
1:CA:858:G:N1	1:CA:869:G:C8	2.76	0.54
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.08	0.54
4:CD:108:LEU:HB3	4:CD:110:PHE:HE1	1.72	0.54
25:CZ:156:ASP:O	25:CZ:160:GLN:HB3	2.07	0.54
36:DA:1209:G:N2	36:DA:1210:A:H62	2.06	0.54
36:DA:2200:C:H5'	36:DA:2201:C:OP2	2.07	0.54
36:DA:2840:C:H5''	50:DR:53:HIS:HD2	1.72	0.54
37:DB:65:C:N4	37:DB:109:C:H2'	2.22	0.54
40:DE:198:VAL:HG12	40:DE:199:ARG:N	2.22	0.54
42:DG:15:VAL:O	42:DG:19:LEU:HG	2.08	0.54
37:DB:42:C:H1'	42:DG:66:GLN:OE1	2.08	0.54
49:DQ:134:ARG:HA	49:DQ:137:TYR:CD2	2.43	0.54
49:DQ:141:GLN:HB3	58:DZ:99:TYR:CE2	2.42	0.54
54:DV:2:PHE:CZ	54:DV:13:ARG:NH1	2.75	0.54
55:DW:40:ASN:O	55:DW:41:LYS:HG2	2.06	0.54
58:DZ:108:PRO:O	58:DZ:111:VAL:HG23	2.07	0.54
58:DZ:70:LEU:HD23	58:DZ:70:LEU:H	1.73	0.54
1:AA:337:C:H2'	1:AA:338:A:C8	2.42	0.54
1:AA:384:G:H2'	1:AA:385:C:C6	2.42	0.54
19:AS:22:LEU:HD13	19:AS:22:LEU:O	2.07	0.54
22:AW:7:A:N6	22:AW:49:C:H41	2.06	0.54
25:AZ:356:PRO:HB2	25:AZ:359:VAL:HG21	1.90	0.54
25:AZ:359:VAL:HG12	25:AZ:362:VAL:CG2	2.37	0.54
33:B7:34:ARG:CG	33:B7:34:ARG:HH11	2.19	0.54
34:B8:17:THR:HG22	34:B8:21:LYS:O	2.07	0.54
36:BA:1762:A:H8	36:BA:1762:A:O5'	1.90	0.54
36:BA:1786:A:C2	36:BA:2606:C:H1'	2.43	0.54
36:BA:32:C:H5'	36:BA:33:U:OP2	2.08	0.54
36:BA:910:A:H2'	36:BA:911:A:C8	2.42	0.54
36:BA:992:C:O3'	54:BV:72:VAL:HG11	2.07	0.54
39:BD:6:PHE:CD1	39:BD:6:PHE:N	2.75	0.54
43:BH:85:LYS:HE2	43:BH:85:LYS:C	2.28	0.54
46:BN:133:GLN:C	46:BN:135:PRO:HD3	2.27	0.54
46:BN:43:THR:HG22	46:BN:45:ASN:ND2	2.22	0.54
48:BP:112:LEU:HD22	48:BP:113:LYS:N	2.22	0.54
50:BR:103:ARG:O	50:BR:111:LEU:HD11	2.07	0.54
52:BT:28:VAL:O	52:BT:29:ARG:CD	2.46	0.54
58:BZ:24:LEU:C	58:BZ:24:LEU:HD23	2.27	0.54
4:CD:58:LEU:O	4:CD:58:LEU:HD22	2.07	0.54
11:CK:30:VAL:HG11	11:CK:65:ALA:HA	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:39:VAL:CG1	12:CL:57:LYS:HB3	2.37	0.54
1:CA:950:U:OP2	13:CM:102:ARG:HD2	2.08	0.54
25:CZ:226:GLU:O	25:CZ:300:ARG:HG2	2.07	0.54
25:CZ:279:GLU:HG2	25:CZ:279:GLU:O	2.08	0.54
25:CZ:25:THR:CB	60:CZ:501:GDP:O2B	2.54	0.54
28:D2:29:LYS:O	28:D2:33:MET:CG	2.55	0.54
32:D6:15:GLU:OE1	32:D6:18:ARG:CD	2.55	0.54
34:D8:26:LYS:NZ	34:D8:47:LYS:HD3	2.22	0.54
35:D9:1:MET:HB3	35:D9:31:LYS:O	2.08	0.54
36:DA:1240:U:O2'	36:DA:1241:A:H5'	2.08	0.54
36:DA:1681:G:O2'	36:DA:1762:A:C2'	2.54	0.54
36:DA:2009:G:O2'	36:DA:2010:G:H5'	2.07	0.54
36:DA:2631:G:N2	40:DE:61:ARG:NH1	2.55	0.54
36:DA:2647:U:H2'	36:DA:2648:C:C6	2.43	0.54
36:DA:2679:A:H4'	40:DE:165:VAL:HG11	1.88	0.54
39:DD:131:LEU:HB2	39:DD:136:ILE:CD1	2.37	0.54
39:DD:196:VAL:HG12	39:DD:196:VAL:O	2.06	0.54
39:DD:248:SER:HB2	39:DD:249:PRO:HD2	1.88	0.54
39:DD:70:TRP:CZ3	39:DD:150:LYS:HA	2.42	0.54
42:DG:7:LEU:CD2	42:DG:176:LEU:HD21	2.32	0.54
43:DH:121:ILE:CD1	43:DH:144:VAL:HG21	2.37	0.54
48:DP:24:GLY:HA3	48:DP:33:ARG:HH12	1.72	0.54
52:DT:54:ARG:HA	52:DT:59:THR:HB	1.88	0.54
54:DV:35:LEU:HD22	54:DV:35:LEU:N	2.22	0.54
56:DX:64:LYS:HE2	56:DX:73:ARG:HE	1.73	0.54
1:AA:1402:C:O2	1:AA:1500:A:N1	2.41	0.54
1:AA:269:C:H2'	1:AA:270:A:H8	1.72	0.54
1:AA:443:C:H2'	1:AA:444:C:C6	2.43	0.54
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.07	0.54
4:AD:95:GLY:HA3	4:AD:188:LEU:HD21	1.90	0.54
8:AH:119:LEU:HD12	8:AH:124:ALA:CA	2.38	0.54
36:BA:1013:C:H2'	36:BA:1014:U:H6	1.72	0.54
36:BA:1305:C:O2'	36:BA:1306:C:H5'	2.07	0.54
36:BA:1921:G:O2'	36:BA:1922:G:H5'	2.08	0.54
36:BA:2134:A:H62	36:BA:2157:G:H1'	1.73	0.54
36:BA:2223:G:C2'	36:BA:2224:G:H5'	2.38	0.54
36:BA:621:A:H2'	36:BA:622:G:C5'	2.37	0.54
36:BA:654(E):G:H22	36:BA:654(Q):C:C1'	2.16	0.54
36:BA:752:A:O2'	36:BA:753:C:OP2	2.24	0.54
51:BS:53:SER:C	51:BS:55:ALA:H	2.10	0.54
57:BY:13:VAL:HG21	57:BY:72:VAL:HB	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:123:ASP:C	58:BZ:124:ILE:HG12	2.27	0.54
1:CA:1123:A:O2'	10:CJ:38:ILE:HG22	2.08	0.54
1:CA:443:C:H2'	1:CA:444:C:C6	2.43	0.54
1:CA:841:U:H3'	1:CA:848:C:O4'	2.07	0.54
2:CB:238:LEU:HG	2:CB:239:VAL:N	2.22	0.54
2:CB:30:ARG:HG3	2:CB:31:TYR:CD1	2.43	0.54
3:CC:5:ILE:H	3:CC:5:ILE:HD12	1.71	0.54
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.08	0.54
9:CI:19:LEU:HD23	9:CI:20:ARG:N	2.22	0.54
13:CM:40:ASN:HD22	13:CM:43:THR:HG23	1.72	0.54
14:CN:12:ARG:NH1	14:CN:14:PRO:HG2	2.23	0.54
24:CY:72:U:H3'	24:CY:73:G:H5''	1.88	0.54
25:CZ:185:ASN:H	25:CZ:185:ASN:HD22	1.56	0.54
25:CZ:358:GLY:C	25:CZ:360:GLU:N	2.58	0.54
25:CZ:87:ASP:HB2	25:CZ:88:TYR:CD1	2.42	0.54
28:D2:47:ASN:HB3	28:D2:51:ARG:CG	2.37	0.54
36:DA:1722:A:O2'	36:DA:1739:U:H5'	2.07	0.54
36:DA:2312:U:C2'	36:DA:2313:C:H5''	2.37	0.54
34:D8:32:LEU:HD11	36:DA:2391:G:O5'	2.08	0.54
36:DA:2603:G:C3'	36:DA:2604:U:H5''	2.37	0.54
36:DA:271(E):U:H2'	36:DA:271(F):C:C6	2.42	0.54
38:DC:210:ARG:CG	38:DC:210:ARG:HH11	2.20	0.54
39:DD:96:HIS:CE1	39:DD:102:LYS:HE2	2.42	0.54
43:DH:37:VAL:HG11	43:DH:68:THR:HG21	1.89	0.54
48:DP:9:ASN:H	48:DP:10:PRO:CD	2.13	0.54
49:DQ:109:VAL:HG13	49:DQ:113:GLN:OE1	2.07	0.54
49:DQ:21:THR:O	49:DQ:22:LYS:HB3	2.08	0.54
51:DS:35:ILE:HD11	51:DS:99:LYS:NZ	2.23	0.54
58:DZ:28:MET:HG2	58:DZ:37:VAL:CG1	2.38	0.54
1:AA:1158:C:H2'	1:AA:1181:G:H22	1.73	0.54
1:AA:1314:C:O2'	1:AA:1315:U:H5'	2.06	0.54
1:AA:723:U:H3	1:AA:1537:U:H2'	1.70	0.54
1:AA:80:G:C6	1:AA:90:U:H5'	2.42	0.54
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.08	0.54
12:AL:8:ASN:HD22	17:AQ:34:LYS:NZ	2.04	0.54
22:AW:74:C:H5'	22:AW:74:C:C6	2.37	0.54
25:AZ:19:HIS:HA	25:AZ:115:GLN:HB2	1.90	0.54
24:AY:51:G:O2'	25:AZ:338:TYR:HD1	1.89	0.54
25:AZ:397:ALA:HB1	61:AZ:502:KIR:O27	2.08	0.54
25:AZ:7:ARG:CG	25:AZ:7:ARG:NH1	2.65	0.54
34:B8:11:LYS:HE3	34:B8:63:PRO:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B9:1:MET:HG3	36:BA:2478:A:OP2	2.08	0.54
36:BA:1029:A:H2'	36:BA:1030:G:O4'	2.08	0.54
36:BA:1495:A:H2'	36:BA:1496:A:C2	2.43	0.54
36:BA:1880:C:C2'	36:BA:1881:C:H5''	2.38	0.54
36:BA:2183:C:H2'	36:BA:2184:G:C8	2.43	0.54
36:BA:272(J):C:H2'	36:BA:274:G:H5''	1.90	0.54
36:BA:657:U:C2	36:BA:658:C:C5	2.96	0.54
39:BD:270:ILE:HD12	39:BD:270:ILE:H	1.71	0.54
40:BE:33:VAL:CG1	40:BE:69:LYS:HE3	2.36	0.54
41:BF:170:LEU:CB	41:BF:173:VAL:HB	2.37	0.54
55:BW:8:ARG:HG2	55:BW:8:ARG:HH11	1.73	0.54
56:BX:53:LYS:HD2	56:BX:55:ASN:HD21	1.73	0.54
1:CA:274:A:HO2'	1:CA:275:G:H8	1.53	0.54
2:CB:107:THR:O	2:CB:110:GLN:HG2	2.08	0.54
2:CB:221:LEU:HD13	2:CB:221:LEU:O	2.08	0.54
7:CG:115:ARG:O	7:CG:118:VAL:HG22	2.07	0.54
12:CL:83:VAL:HG11	12:CL:100:ILE:HD13	1.88	0.54
18:CR:53:ARG:HG3	18:CR:63:GLN:HE21	1.73	0.54
25:CZ:176:LEU:HB2	60:CZ:501:GDP:C4	2.42	0.54
25:CZ:271:GLU:O	25:CZ:286:VAL:HG23	2.07	0.54
32:D6:15:GLU:OE2	32:D6:41:PRO:HG3	2.08	0.54
36:DA:1019:U:H3	36:DA:1142(A):A:N6	2.02	0.54
36:DA:1141:U:H2'	46:DN:63:THR:HG21	1.87	0.54
36:DA:2174:C:H1'	38:DC:217:THR:O	2.08	0.54
36:DA:2223:G:C2'	36:DA:2224:G:H5'	2.38	0.54
36:DA:2781:A:H5''	36:DA:2782:G:H5'	1.89	0.54
36:DA:315:G:H2'	36:DA:316:C:C6	2.43	0.54
36:DA:779:U:OP1	39:DD:49:ILE:HG13	2.07	0.54
39:DD:4:LYS:HZ1	39:DD:20:ASP:HA	1.73	0.54
39:DD:239:ARG:O	39:DD:239:ARG:HG3	2.08	0.54
41:DF:133:ASN:HB2	41:DF:138:GLU:OE2	2.08	0.54
41:DF:39:TRP:CG	41:DF:101:LEU:HB2	2.43	0.54
42:DG:87:PRO:HG2	42:DG:88:ILE:H	1.73	0.54
43:DH:42:ARG:HG2	43:DH:43:VAL:N	2.22	0.54
46:DN:91:LEU:HD23	46:DN:98:VAL:HG21	1.89	0.54
48:DP:91:PHE:CE2	48:DP:95:VAL:HG12	2.42	0.54
54:DV:12:TYR:N	54:DV:12:TYR:CD1	2.75	0.54
58:DZ:108:PRO:HB3	58:DZ:141:VAL:HG12	1.88	0.54
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.37	0.54
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.73	0.54
1:AA:67:C:H2'	1:AA:68:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:175:LEU:H	3:AC:175:LEU:HD12	1.72	0.54
5:AE:110:LEU:HD13	5:AE:118:ILE:HD13	1.90	0.54
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.22	0.54
9:AI:10:ARG:HG3	9:AI:75:ASP:HB3	1.90	0.54
18:AR:53:ARG:HG3	18:AR:63:GLN:HE21	1.71	0.54
19:AS:31:ILE:HG23	19:AS:49:ILE:HG23	1.90	0.54
24:AY:72:U:H3'	24:AY:73:G:H5''	1.89	0.54
26:B0:73:GLY:O	26:B0:75:LEU:N	2.40	0.54
30:B4:39:CYS:O	30:B4:40:HIS:HB2	2.08	0.54
36:BA:1335:U:H2'	36:BA:1336:A:C8	2.43	0.54
36:BA:1541:G:O3'	36:BA:1541:G:OP2	2.26	0.54
36:BA:1970:A:H5''	36:BA:1971:A:OP1	2.08	0.54
36:BA:2348:U:O2'	36:BA:2349:G:H5'	2.07	0.54
36:BA:2720:U:H5'	36:BA:2721:A:OP2	2.07	0.54
39:BD:129:ASN:O	39:BD:193:VAL:HG12	2.08	0.54
40:BE:198:VAL:HG12	40:BE:199:ARG:N	2.22	0.54
43:BH:83:TYR:HB3	43:BH:135:GLY:O	2.08	0.54
46:BN:73:THR:HG23	46:BN:82:LEU:HD11	1.88	0.54
52:BT:106:SER:O	52:BT:107:ASP:OD1	2.24	0.54
52:BT:80:SER:HB3	52:BT:81:PRO:CD	2.27	0.54
53:BU:95:LEU:HD12	54:BV:11:GLN:HG3	1.90	0.54
57:BY:84:ARG:HG2	57:BY:85:VAL:H	1.71	0.54
1:CA:384:G:H2'	1:CA:385:C:C6	2.42	0.54
2:CB:39:ILE:HG22	2:CB:40:HIS:N	2.22	0.54
4:CD:95:GLY:HA3	4:CD:188:LEU:HD21	1.90	0.54
5:CE:11:ILE:CG2	5:CE:105:VAL:HG22	2.38	0.54
7:CG:141:VAL:O	7:CG:144:MET:HB2	2.07	0.54
3:CC:34:LEU:HG	14:CN:25:VAL:HG11	1.90	0.54
25:CZ:215:ARG:HH11	25:CZ:215:ARG:HG3	1.73	0.54
25:CZ:347:THR:HG22	25:CZ:348:ASP:H	1.72	0.54
28:D2:32:LEU:HD13	28:D2:57:ILE:HG21	1.89	0.54
36:DA:1260:G:H2'	36:DA:1261:C:C6	2.43	0.54
36:DA:2307:G:N3	36:DA:2307:G:H3'	2.23	0.54
36:DA:272(J):C:H2'	36:DA:274:G:H5''	1.89	0.54
36:DA:2790:A:H2'	36:DA:2791:C:C5'	2.37	0.54
36:DA:673:C:O2'	36:DA:674:G:H5'	2.07	0.54
41:DF:183:VAL:O	41:DF:187:VAL:HG23	2.08	0.54
42:DG:47:LYS:HG3	42:DG:81:LYS:CG	2.33	0.54
43:DH:19:VAL:HG12	43:DH:20:ALA:N	2.22	0.54
43:DH:66:GLY:CA	43:DH:69:ARG:HB3	2.35	0.54
48:DP:16:ARG:HD3	48:DP:16:ARG:C	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:58:THR:O	48:DP:58:THR:HG22	2.06	0.54
52:DT:53:ARG:HH11	52:DT:53:ARG:CB	2.12	0.54
52:DT:62:THR:CG2	52:DT:75:ILE:HG13	2.38	0.54
52:DT:78:LEU:C	52:DT:79:HIS:CD2	2.80	0.54
54:DV:38:LEU:HD22	54:DV:52:VAL:HG11	1.89	0.54
56:DX:12:VAL:HG12	56:DX:27:THR:O	2.07	0.54
56:DX:54:VAL:C	56:DX:55:ASN:HD22	2.11	0.54
57:DY:13:VAL:HG22	57:DY:14:LEU:N	2.22	0.54
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.08	0.54
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	1.90	0.54
7:AG:7:ALA:O	7:AG:8:GLU:CB	2.56	0.54
13:AM:56:LEU:HD13	13:AM:56:LEU:C	2.29	0.54
13:AM:3:ARG:HH21	13:AM:7:VAL:HG13	1.71	0.54
15:AO:25:THR:O	15:AO:29:VAL:HG23	2.06	0.54
19:AS:6:LYS:O	19:AS:7:LYS:HD3	2.08	0.54
22:AV:51:U:H2'	22:AV:52:G:H8	1.72	0.54
22:AW:38:A:H2'	22:AW:39:U:O4'	2.07	0.54
25:AZ:198:LYS:HA	25:AZ:201:GLU:HB2	1.88	0.54
25:AZ:226:GLU:O	25:AZ:300:ARG:HG2	2.06	0.54
25:AZ:7:ARG:NH2	25:AZ:281:ILE:CD1	2.67	0.54
31:B5:22:HIS:CE1	36:BA:2624:G:H1'	2.43	0.54
36:BA:141:A:C8	36:BA:1408:C:O2'	2.59	0.54
36:BA:2025:C:H2'	36:BA:2026:C:C6	2.41	0.54
36:BA:2099:U:H2'	36:BA:2100:G:C8	2.43	0.54
26:B0:42:GLY:HA3	36:BA:2331:G:C4'	2.38	0.54
36:BA:320:A:C8	41:BF:136:THR:HG21	2.42	0.54
36:BA:691:C:O2'	36:BA:692:C:H5'	2.07	0.54
38:BC:132:GLY:N	38:BC:133:PRO:CD	2.69	0.54
39:BD:133:LEU:HB3	39:BD:173:VAL:HG11	1.88	0.54
40:BE:61:ARG:CB	40:BE:62:PRO:HD3	2.37	0.54
36:BA:2631:G:N2	40:BE:61:ARG:NH1	2.55	0.54
41:BF:156:LEU:HD12	41:BF:193:VAL:O	2.08	0.54
41:BF:160:ASN:HD22	41:BF:160:ASN:C	2.11	0.54
42:BG:46:ALA:HB2	42:BG:88:ILE:CG1	2.37	0.54
43:BH:37:VAL:HG11	43:BH:68:THR:HG21	1.90	0.54
46:BN:71:ILE:HD12	46:BN:71:ILE:N	2.23	0.54
47:BO:88:ASN:HD21	47:BO:92:GLU:HB2	1.73	0.54
57:BY:62:GLU:OE1	57:BY:62:GLU:N	2.41	0.54
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.90	0.54
49:BQ:141:GLN:HB3	58:BZ:99:TYR:CE1	2.43	0.54
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:111:ARG:NH1	2:CB:111:ARG:HG2	2.21	0.54
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.07	0.54
4:CD:61:LYS:HB2	4:CD:203:VAL:HG13	1.90	0.54
16:CP:5:ARG:HB3	16:CP:67:THR:OG1	2.08	0.54
22:CW:74:C:C6	22:CW:74:C:H5'	2.38	0.54
25:CZ:263:ARG:HE	25:CZ:293:VAL:HG22	1.72	0.54
25:CZ:313:HIS:CD2	25:CZ:403:ILE:HD13	2.43	0.54
27:D1:47:GLN:HG2	36:DA:2091:U:O2'	2.07	0.54
36:DA:1523:U:H2'	36:DA:1524:G:C8	2.42	0.54
36:DA:1272:A:OP2	36:DA:1647:G:OP1	2.26	0.54
36:DA:2262:U:H4'	36:DA:2328:A:H2	1.72	0.54
36:DA:2514:U:H2'	36:DA:2515:C:C6	2.43	0.54
36:DA:321:G:O4'	41:DF:165:ARG:HD3	2.08	0.54
36:DA:623:G:H2'	36:DA:624:C:C6	2.43	0.54
39:DD:226:MET:HE2	39:DD:231:HIS:CB	2.32	0.54
41:DF:4:VAL:HG22	41:DF:19:GLU:OE1	2.07	0.54
46:DN:58:ASP:O	46:DN:60:ILE:HG13	2.06	0.54
47:DO:107:ARG:HD3	52:DT:36:GLU:H	1.73	0.54
48:DP:102:ARG:HH11	48:DP:102:ARG:CB	2.20	0.54
36:DA:2485:G:C5'	49:DQ:46:GLN:HE21	2.19	0.54
50:DR:87:TYR:O	50:DR:89:ASP:N	2.41	0.54
51:DS:53:SER:C	51:DS:55:ALA:H	2.11	0.54
57:DY:81:LYS:O	57:DY:82:PRO:O	2.26	0.54
57:DY:8:LYS:HE2	57:DY:72:VAL:HG23	1.88	0.54
58:DZ:122:ARG:CG	58:DZ:122:ARG:HH11	2.21	0.54
4:AD:170:VAL:HG12	4:AD:171:GLY:H	1.73	0.54
9:AI:6:GLY:N	9:AI:84:ALA:HB2	2.22	0.54
13:AM:82:MET:CB	13:AM:93:ARG:NH1	2.71	0.54
19:AS:16:LEU:C	19:AS:18:LYS:N	2.60	0.54
24:AY:25:C:H6	24:AY:25:C:C5'	2.19	0.54
25:AZ:21:ASP:N	60:AZ:501:GDP:O1B	2.40	0.54
25:AZ:347:THR:HG22	25:AZ:348:ASP:H	1.73	0.54
34:B8:32:LEU:CD1	36:BA:2391:G:H3'	2.36	0.54
34:B8:11:LYS:HZ2	34:B8:60:LEU:HD22	1.72	0.54
36:BA:1411:C:H2'	36:BA:1412:A:C8	2.42	0.54
40:BE:81:ILE:O	40:BE:81:ILE:HG22	2.07	0.54
41:BF:170:LEU:HB3	41:BF:173:VAL:HB	1.90	0.54
42:BG:33:ARG:O	42:BG:34:LEU:HG	2.07	0.54
42:BG:40:ASN:ND2	42:BG:91:ARG:HB2	2.23	0.54
43:BH:41:MET:CG	43:BH:42:ARG:N	2.70	0.54
46:BN:55:VAL:HG22	46:BN:56:ASN:N	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:64:LYS:C	48:BP:66:GLY:N	2.59	0.54
52:BT:29:ARG:HG2	52:BT:86:ILE:HG22	1.88	0.54
54:BV:35:LEU:N	54:BV:35:LEU:HD22	2.22	0.54
55:BW:59:VAL:HG12	55:BW:59:VAL:O	2.08	0.54
1:CA:194:C:C2'	1:CA:195:A:H5''	2.38	0.54
4:CD:108:LEU:HB3	4:CD:110:PHE:CE1	2.43	0.54
10:CJ:4:ILE:N	10:CJ:4:ILE:HD12	2.23	0.54
14:CN:23:ARG:HH11	14:CN:30:ALA:HB2	1.73	0.54
27:D1:67:ILE:HB	27:D1:68:PRO:HD3	1.90	0.54
28:D2:23:LYS:C	28:D2:25:VAL:H	2.11	0.54
28:D2:32:LEU:HB2	28:D2:53:LEU:HD22	1.89	0.54
36:DA:1952:A:C6	47:DO:22:ILE:HD12	2.43	0.54
36:DA:2183:C:H2'	36:DA:2184:G:C8	2.43	0.54
38:DC:139:ASN:OD1	38:DC:140:PRO:HD2	2.08	0.54
39:DD:273:ARG:HG2	39:DD:273:ARG:NH1	2.23	0.54
40:DE:188:VAL:HG23	40:DE:189:PRO:HD2	1.89	0.54
41:DF:175:THR:OG1	41:DF:176:LEU:N	2.40	0.54
41:DF:28:ILE:CD1	41:DF:28:ILE:H	2.13	0.54
52:DT:23:ARG:HA	52:DT:52:ILE:CD1	2.37	0.54
28:D2:26:ARG:HG2	56:DX:5:TYR:CE1	2.43	0.54
1:AA:1125:U:H5''	1:AA:1126:U:C5	2.41	0.54
1:AA:538:G:O2'	1:AA:539:A:H5'	2.08	0.54
1:AA:659:U:O2'	1:AA:660:G:H5'	2.08	0.54
1:AA:992:U:H1'	1:AA:993:G:C2	2.43	0.54
2:AB:25:ASN:HB2	2:AB:191:ASP:O	2.07	0.54
2:AB:30:ARG:HG3	2:AB:31:TYR:CE1	2.43	0.54
4:AD:12:CYS:O	4:AD:33:MET:HE2	2.08	0.54
4:AD:61:LYS:HB2	4:AD:203:VAL:HG13	1.90	0.54
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.89	0.54
9:AI:56:LEU:HG	9:AI:57:GLY:H	1.73	0.54
11:AK:44:SER:O	11:AK:47:VAL:HG23	2.08	0.54
28:B2:35:LEU:HD13	28:B2:35:LEU:C	2.28	0.54
32:B6:8:LYS:O	32:B6:9:LEU:HB3	2.06	0.54
36:BA:1013:C:H2'	36:BA:1014:U:C6	2.43	0.54
36:BA:1103:A:H5'	36:BA:1104:C:OP2	2.08	0.54
36:BA:1790:C:H5''	36:BA:1791:A:OP1	2.08	0.54
36:BA:1839:G:H5'	36:BA:1839:G:H8	1.72	0.54
36:BA:2133:G:N1	36:BA:2157:G:O6	2.41	0.54
36:BA:2856:C:C2	36:BA:2862:G:N2	2.76	0.54
36:BA:480:A:H3'	36:BA:481:G:H5''	1.90	0.54
36:BA:926:A:H5'	36:BA:926:A:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:111:G:O2'	37:BB:112:U:H5'	2.08	0.54
38:BC:166:ASP:O	38:BC:168:THR:N	2.41	0.54
39:BD:10:THR:HG23	39:BD:13:ARG:HB2	1.90	0.54
42:BG:139:LEU:O	42:BG:144:ILE:HG21	2.08	0.54
40:BE:111:ARG:HD2	50:BR:2:ARG:NH2	2.23	0.54
57:BY:51:VAL:O	57:BY:53:PRO:HD3	2.08	0.54
57:BY:43:ASN:CB	57:BY:64:GLU:HA	2.38	0.54
58:BZ:133:ILE:N	58:BZ:134:PRO:CD	2.70	0.54
58:BZ:113:ALA:CB	58:BZ:146:ILE:HD13	2.38	0.54
58:BZ:29:TYR:HB3	58:BZ:34:ASN:CB	2.38	0.54
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.08	0.54
1:CA:59:A:H3'	1:CA:331:G:N2	2.22	0.54
3:CC:25:GLY:C	3:CC:27:LYS:N	2.61	0.54
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.23	0.54
13:CM:77:ASN:O	13:CM:81:LEU:HD23	2.08	0.54
13:CM:82:MET:CB	13:CM:93:ARG:NH1	2.71	0.54
22:CW:57:G:H2'	22:CW:58:A:C5'	2.35	0.54
26:D0:50:ASN:HD22	26:D0:63:VAL:CG2	2.14	0.54
31:D5:22:HIS:CE1	36:DA:2624:G:H1'	2.43	0.54
33:D7:43:THR:HG23	33:D7:44:PRO:HD2	1.89	0.54
36:DA:1019:U:C2'	36:DA:1021:A:H2	2.21	0.54
36:DA:2262:U:H4'	36:DA:2328:A:C2	2.44	0.54
36:DA:271(R):G:O2'	36:DA:271(S):G:H5'	2.08	0.54
36:DA:2823:A:OP1	40:DE:113:PHE:HB2	2.08	0.54
36:DA:304:G:C2	36:DA:314:A:C2	2.96	0.54
39:DD:6:PHE:N	39:DD:6:PHE:CD1	2.76	0.54
40:DE:176:ILE:HG23	40:DE:178:GLU:HB3	1.89	0.54
42:DG:7:LEU:C	42:DG:7:LEU:HD23	2.28	0.54
43:DH:155:SER:O	43:DH:157:TYR:N	2.35	0.54
52:DT:103:ARG:O	52:DT:105:LEU:N	2.41	0.54
57:DY:51:VAL:O	57:DY:53:PRO:HD3	2.08	0.54
58:DZ:37:VAL:HG23	58:DZ:38:TYR:N	2.22	0.54
58:DZ:99:TYR:CZ	58:DZ:125:LEU:HD13	2.43	0.54
2:AB:126:GLU:O	2:AB:129:GLU:HB2	2.08	0.53
3:AC:131:ARG:HH11	3:AC:166:GLU:HG3	1.73	0.53
3:AC:145:GLY:O	3:AC:146:ALA:O	2.25	0.53
3:AC:68:VAL:HG13	3:AC:70:VAL:HG23	1.90	0.53
6:AF:82:ARG:HB2	6:AF:85:VAL:CG2	2.37	0.53
22:AV:48:C:OP2	22:AV:48:C:H6	1.91	0.53
22:AV:5:G:H1	22:AV:68:C:H42	1.54	0.53
25:AZ:185:ASN:ND2	25:AZ:185:ASN:O	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:12:PRO:C	27:B1:13:ILE:HD12	2.28	0.53
30:B4:9:LEU:HD13	30:B4:10:VAL:N	2.19	0.53
36:BA:142:A:H8	36:BA:1595:G:H21	1.56	0.53
36:BA:2464:C:O2'	36:BA:2465:C:H6	1.91	0.53
36:BA:315:G:H2'	36:BA:316:C:C6	2.43	0.53
36:BA:2635:C:H5''	40:BE:78:LEU:O	2.08	0.53
41:BF:175:THR:OG1	41:BF:176:LEU:N	2.41	0.53
42:BG:8:LYS:HE3	42:BG:12:TYR:OH	2.08	0.53
47:BO:43:VAL:HG23	47:BO:56:ASP:O	2.08	0.53
36:BA:661:C:H4'	48:BP:16:ARG:NH1	2.23	0.53
50:BR:24:GLN:HE22	50:BR:36:THR:HG21	1.68	0.53
51:BS:16:ASN:C	51:BS:18:ILE:HD12	2.28	0.53
52:BT:62:THR:CG2	52:BT:75:ILE:HG13	2.38	0.53
55:BW:25:ARG:HB2	55:BW:25:ARG:NH1	2.23	0.53
1:CA:1378:C:H4'	7:CG:94:ARG:NH2	2.20	0.53
1:CA:321:A:O2'	1:CA:322:C:H5'	2.08	0.53
1:CA:429:U:H1'	1:CA:430:A:H5''	1.89	0.53
1:CA:977:A:O2'	1:CA:978:A:C5'	2.55	0.53
6:CF:43:LEU:O	6:CF:44:GLY:O	2.26	0.53
1:CA:1240:U:OP1	7:CG:116:ALA:HB2	2.07	0.53
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.08	0.53
13:CM:118:ALA:HB3	22:CV:29:G:H5'	1.90	0.53
19:CS:29:ARG:HH11	19:CS:30:LEU:HB2	1.73	0.53
22:CW:30:G:H2'	22:CW:31:A:C8	2.42	0.53
27:D1:80:LEU:C	27:D1:82:LEU:H	2.11	0.53
27:D1:89:GLU:OE1	27:D1:92:LYS:HE2	2.08	0.53
28:D2:46:GLN:HA	28:D2:46:GLN:OE1	2.08	0.53
28:D2:46:GLN:O	28:D2:50:ILE:HD13	2.08	0.53
32:D6:16:CYS:SG	32:D6:49:HIS:N	2.81	0.53
36:DA:1257:C:H4'	41:DF:83:PHE:CD1	2.42	0.53
36:DA:2282:G:OP1	36:DA:2283:C:H1'	2.08	0.53
36:DA:2584:U:C2'	36:DA:2585:U:H5'	2.38	0.53
36:DA:2591:C:P	39:DD:239:ARG:HG2	2.48	0.53
36:DA:2619:C:O2'	36:DA:2620:C:H5'	2.08	0.53
36:DA:271(Q):G:H1'	36:DA:271(R):G:C8	2.43	0.53
36:DA:272(H):C:C3'	36:DA:272(I):U:H5''	2.38	0.53
36:DA:2808:U:O2'	36:DA:2809:A:H5'	2.08	0.53
36:DA:2811:G:H1	36:DA:2889:C:H42	1.56	0.53
36:DA:543:C:H42	36:DA:549:G:H1	1.56	0.53
36:DA:703:U:H2'	36:DA:704:G:H5'	1.89	0.53
37:DB:44:G:H1'	37:DB:47:C:N4	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:45:ALA:HB3	38:DC:171:ILE:CG2	2.38	0.53
45:DK:3:UNK:O	45:DK:4:UNK:C	2.56	0.53
49:DQ:141:GLN:OXT	58:DZ:53:ILE:HD12	2.08	0.53
1:AA:56:U:H2'	1:AA:57:G:H8	1.73	0.53
1:AA:309:G:H1'	1:AA:608:A:C2	2.43	0.53
1:AA:613:C:H2'	1:AA:614:A:H8	1.73	0.53
1:AA:977:A:O2'	1:AA:978:A:C5'	2.57	0.53
2:AB:28:PHE:O	2:AB:32:ILE:HG22	2.09	0.53
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.90	0.53
4:AD:129:ASN:HD21	4:AD:144:ASP:HA	1.74	0.53
20:AT:53:LEU:O	20:AT:57:ARG:HB2	2.09	0.53
24:AY:45:U:C3'	24:AY:46:7MG:H5''	2.33	0.53
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB3	1.89	0.53
36:BA:1320:C:C5	36:BA:1329:U:H5''	2.43	0.53
36:BA:1331:A:O2'	36:BA:1332:G:H5''	2.08	0.53
36:BA:156:U:H2'	36:BA:157:U:O4'	2.08	0.53
36:BA:2128:C:HO2'	36:BA:2129:C:P	2.31	0.53
36:BA:2128:C:HO2'	36:BA:2129:C:C5'	2.20	0.53
36:BA:2136:C:H2'	36:BA:2137:C:C6	2.40	0.53
36:BA:2572:A:H62	40:BE:145:LYS:CG	2.22	0.53
36:BA:2807:G:H2'	36:BA:2808:U:H5''	1.89	0.53
36:BA:2840:C:H2'	36:BA:2841:C:H6	1.72	0.53
36:BA:880:G:H1	36:BA:897:C:H42	1.56	0.53
38:BC:40:THR:HA	38:BC:177:LYS:HA	1.89	0.53
47:BO:35:VAL:HG13	47:BO:65:THR:HG23	1.90	0.53
54:BV:38:LEU:HD22	54:BV:52:VAL:HG11	1.90	0.53
57:BY:36:ALA:HB1	57:BY:67:LEU:C	2.28	0.53
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.43	0.53
5:CE:53:LEU:HD12	5:CE:53:LEU:H	1.73	0.53
19:CS:16:LEU:C	19:CS:18:LYS:H	2.11	0.53
22:CW:11:C:O2'	22:CW:12:U:H5'	2.07	0.53
25:CZ:114:PRO:O	25:CZ:117:ARG:HB2	2.09	0.53
36:DA:585:G:H2'	36:DA:1251:C:N4	2.23	0.53
36:DA:1536:C:H2'	36:DA:1537:G:C4'	2.37	0.53
36:DA:1786:A:C2	36:DA:2606:C:H1'	2.43	0.53
39:DD:142:VAL:HG22	39:DD:143:HIS:N	2.23	0.53
39:DD:23:GLU:C	39:DD:25:THR:H	2.11	0.53
41:DF:160:ASN:C	41:DF:160:ASN:HD22	2.11	0.53
46:DN:62:VAL:CG2	46:DN:66:LYS:HB2	2.37	0.53
47:DO:43:VAL:HG23	47:DO:56:ASP:O	2.08	0.53
57:DY:62:GLU:OE1	57:DY:62:GLU:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1039:C:H2'	1:AA:1040:U:C6	2.43	0.53
2:AB:103:THR:HG23	2:AB:176:GLU:HG2	1.90	0.53
4:AD:145:GLU:HA	4:AD:183:GLY:O	2.09	0.53
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.08	0.53
13:AM:120:LYS:HA	13:AM:120:LYS:CE	2.38	0.53
17:AQ:27:PHE:CE1	17:AQ:36:ILE:HD11	2.43	0.53
22:AV:68:C:C2'	22:AV:69:G:H5'	2.38	0.53
25:AZ:90:LYS:HB2	25:AZ:90:LYS:NZ	2.24	0.53
26:B0:43:THR:HG21	36:BA:2336:A:H61	1.73	0.53
31:B5:2:ALA:N	36:BA:747:U:C4	2.77	0.53
36:BA:1272:A:OP2	36:BA:1647:G:OP1	2.24	0.53
36:BA:1827:C:O2'	36:BA:1828:G:H5'	2.09	0.53
36:BA:1952:A:C5	47:BO:22:ILE:HD12	2.43	0.53
36:BA:2127:G:H4'	38:BC:37:PHE:CD1	2.43	0.53
36:BA:2174:C:H1'	38:BC:217:THR:O	2.07	0.53
36:BA:2107:C:H1'	36:BA:2182:G:H22	1.73	0.53
36:BA:543:C:H42	36:BA:549:G:H1	1.57	0.53
36:BA:659:C:H4'	41:BF:100:THR:O	2.09	0.53
42:BG:114:ILE:O	42:BG:114:ILE:HG23	2.08	0.53
48:BP:34:GLY:O	48:BP:35:HIS:CB	2.56	0.53
49:BQ:118:LEU:HD12	49:BQ:131:ILE:HG23	1.90	0.53
53:BU:92:ARG:HH21	54:BV:10:LYS:CB	2.21	0.53
57:BY:81:LYS:O	57:BY:82:PRO:O	2.26	0.53
1:CA:1117:G:H5'	1:CA:1117:G:C8	2.37	0.53
1:CA:1170:A:H2'	1:CA:1171:G:O4'	2.08	0.53
1:CA:490:G:H2'	1:CA:491:G:C8	2.44	0.53
22:CW:39:U:H5'	22:CW:39:U:O2	2.09	0.53
24:CX:68:C:H2'	24:CX:69:C:C6	2.43	0.53
25:CZ:198:LYS:HA	25:CZ:201:GLU:HB2	1.91	0.53
25:CZ:359:VAL:HG12	25:CZ:362:VAL:CG2	2.38	0.53
28:D2:41:ILE:HG13	28:D2:42:GLY:H	1.73	0.53
30:D4:10:VAL:HG23	30:D4:11:PRO:HD2	1.90	0.53
30:D4:45:GLY:O	30:D4:46:GLN:HB2	2.06	0.53
31:D5:48:GLU:C	31:D5:49:CYS:SG	2.86	0.53
33:D7:34:ARG:CG	33:D7:34:ARG:HH11	2.19	0.53
34:D8:52:LYS:O	34:D8:55:ALA:HB3	2.07	0.53
36:DA:1495:A:N3	36:DA:1496:A:C2	2.76	0.53
36:DA:480:A:H3'	36:DA:481:G:H5''	1.89	0.53
36:DA:654(R):C:H2'	36:DA:654(S):G:C8	2.43	0.53
36:DA:814:C:H2'	36:DA:815:C:C6	2.43	0.53
40:DE:98:PRO:HG3	40:DE:174:ASP:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:56:ARG:CG	49:DQ:56:ARG:NH1	2.65	0.53
36:DA:2875:C:H4'	52:DT:5:ALA:HB2	1.91	0.53
1:AA:1038:C:O5'	1:AA:1038:C:H6	1.92	0.53
1:AA:1256:A:H1'	1:AA:1258:G:C6	2.42	0.53
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.08	0.53
1:AA:171:A:H2'	1:AA:172:A:C8	2.44	0.53
3:AC:85:ARG:NH1	3:AC:88:ARG:HH12	2.04	0.53
5:AE:143:ARG:HH12	8:AH:77:GLU:CD	2.10	0.53
10:AJ:48:THR:OG1	10:AJ:62:HIS:HD2	1.92	0.53
15:AO:26:GLU:OE2	15:AO:77:ARG:NH1	2.41	0.53
24:AY:67:G:H2'	24:AY:68:C:C6	2.43	0.53
25:AZ:166:ASP:O	25:AZ:167:GLU:HG2	2.08	0.53
25:AZ:193:ASN:CB	25:AZ:196:VAL:H	2.22	0.53
26:B0:40:GLN:OE1	26:B0:44:ARG:N	2.42	0.53
30:B4:45:GLY:O	30:B4:46:GLN:HB2	2.08	0.53
32:B6:19:ARG:O	32:B6:20:ASN:O	2.26	0.53
36:BA:1782:C:H1'	36:BA:2609:U:H5''	1.90	0.53
36:BA:271(Q):G:H1'	36:BA:271(R):G:C8	2.43	0.53
36:BA:438:G:H2'	36:BA:440:G:H8	1.74	0.53
36:BA:608:A:H2'	36:BA:609:A:C8	2.43	0.53
36:BA:634:C:H2'	36:BA:635:C:C6	2.43	0.53
36:BA:651:G:C2'	36:BA:652:C:H5'	2.38	0.53
36:BA:940:G:H2'	36:BA:941:A:O4'	2.09	0.53
37:BB:105:A:H2'	37:BB:106:G:O4'	2.08	0.53
41:BF:39:TRP:CG	41:BF:101:LEU:HB2	2.43	0.53
48:BP:83:VAL:HG12	48:BP:113:LYS:O	2.08	0.53
51:BS:34:HIS:HB2	51:BS:36:TYR:CE1	2.31	0.53
56:BX:49:VAL:CG1	56:BX:87:GLN:HE21	2.21	0.53
57:BY:28:LYS:HE3	57:BY:37:VAL:HG11	1.88	0.53
1:CA:1127:G:H1	1:CA:1145:C:N4	2.06	0.53
1:CA:1313:U:OP2	19:CS:6:LYS:HB3	2.07	0.53
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.39	0.53
1:CA:1148:U:O3'	9:CI:14:VAL:HG11	2.08	0.53
9:CI:93:ARG:C	9:CI:95:LYS:H	2.12	0.53
18:CR:36:ASN:O	18:CR:36:ASN:CG	2.47	0.53
20:CT:29:LYS:O	20:CT:33:ILE:HG13	2.07	0.53
26:D0:7:LEU:HB3	49:DQ:85:LYS:HD2	1.89	0.53
28:D2:41:ILE:HG13	28:D2:42:GLY:N	2.23	0.53
36:DA:156:U:H2'	36:DA:157:U:O4'	2.07	0.53
36:DA:2720:U:H5'	36:DA:2721:A:OP2	2.07	0.53
36:DA:608:A:H2'	36:DA:609:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:49:C:OP1	51:DS:96:GLY:HA3	2.07	0.53
38:DC:113:VAL:HG12	38:DC:138:PRO:HG3	1.90	0.53
39:DD:43:ARG:HD2	39:DD:44:ASN:CG	2.28	0.53
42:DG:63:ILE:HG22	42:DG:143:GLU:HG3	1.90	0.53
42:DG:105:LYS:HE3	42:DG:143:GLU:OE2	2.08	0.53
43:DH:163:TYR:N	43:DH:163:TYR:CD1	2.76	0.53
46:DN:19:GLU:HG3	46:DN:20:GLY:N	2.22	0.53
48:DP:147:LEU:O	48:DP:148:LEU:CB	2.56	0.53
49:DQ:51:ARG:NH1	49:DQ:51:ARG:HG3	2.22	0.53
52:DT:29:ARG:CB	52:DT:85:LYS:HA	2.38	0.53
56:DX:53:LYS:HB3	56:DX:82:GLN:HB3	1.89	0.53
57:DY:13:VAL:HG21	57:DY:72:VAL:HB	1.90	0.53
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.43	0.53
1:AA:1378:C:H4'	7:AG:94:ARG:NH2	2.19	0.53
1:AA:473:G:H5''	16:AP:81:ARG:HE	1.74	0.53
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.90	0.53
5:AE:53:LEU:HD12	5:AE:53:LEU:N	2.23	0.53
7:AG:143:ARG:CD	22:AW:41:C:O3'	2.57	0.53
7:AG:143:ARG:HD2	22:AW:41:C:O3'	2.09	0.53
9:AI:49:PRO:O	9:AI:53:VAL:HG22	2.08	0.53
17:AQ:58:GLU:HB3	17:AQ:74:LEU:HB3	1.90	0.53
20:AT:50:GLU:N	20:AT:99:LEU:HD12	2.24	0.53
20:AT:72:LEU:O	20:AT:76:ALA:HB3	2.08	0.53
22:AW:43:C:H2'	22:AW:44:G:C1'	2.33	0.53
24:AY:76:A:C5	25:AZ:271:GLU:OE1	2.62	0.53
34:B8:62:LEU:N	34:B8:63:PRO:CD	2.71	0.53
36:BA:1112:G:O2'	36:BA:1113:U:H5'	2.09	0.53
36:BA:1337:G:H2'	36:BA:1338:G:C8	2.42	0.53
36:BA:1516:C:C2'	36:BA:1517:G:C5'	2.85	0.53
36:BA:184:C:H2'	36:BA:185:U:C6	2.44	0.53
36:BA:8:A:H2'	36:BA:9:U:C6	2.43	0.53
38:BC:72:VAL:CG1	38:BC:157:LYS:HA	2.39	0.53
39:BD:23:GLU:C	39:BD:25:THR:H	2.11	0.53
39:BD:276:LYS:HA	39:BD:276:LYS:HE2	1.91	0.53
48:BP:147:LEU:O	48:BP:148:LEU:CB	2.57	0.53
58:BZ:16:SER:O	58:BZ:17:ALA:C	2.46	0.53
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.56	0.53
1:CA:942:G:H21	9:CI:124:GLN:HE22	1.53	0.53
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.89	0.53
3:CC:173:VAL:O	3:CC:175:LEU:HD12	2.08	0.53
7:CG:28:ASN:OD1	7:CG:36:LYS:HE2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:43:ALA:O	9:CI:45:ALA:N	2.42	0.53
13:CM:90:LEU:HD12	19:CS:81:ARG:HH21	1.73	0.53
25:CZ:332:THR:O	25:CZ:363:MET:HE2	2.08	0.53
25:CZ:356:PRO:HB2	25:CZ:359:VAL:CG2	2.39	0.53
25:CZ:389:ARG:HG2	25:CZ:389:ARG:HH11	1.74	0.53
29:D3:26:LEU:O	29:D3:28:LEU:N	2.41	0.53
32:D6:20:ASN:C	32:D6:21:TYR:CG	2.81	0.53
34:D8:32:LEU:HB3	34:D8:36:LYS:HZ2	1.72	0.53
34:D8:61:LEU:N	34:D8:63:PRO:HD2	2.24	0.53
36:DA:1999:C:H4'	36:DA:2723:C:O2	2.09	0.53
36:DA:271(C):C:H2'	36:DA:271(D):G:C8	2.42	0.53
36:DA:2856:C:C2	36:DA:2862:G:N2	2.76	0.53
36:DA:675:A:OP1	41:DF:63:LYS:HE2	2.08	0.53
38:DC:114:VAL:HG23	38:DC:149:ILE:HD11	1.89	0.53
39:DD:10:THR:HG23	39:DD:13:ARG:CB	2.38	0.53
39:DD:133:LEU:HB3	39:DD:173:VAL:HG11	1.90	0.53
36:DA:2579:C:O2'	40:DE:131:ALA:HB3	2.09	0.53
30:D4:34:GLU:CG	42:DG:113:ARG:HH21	2.22	0.53
42:DG:72:ARG:CA	42:DG:87:PRO:HD2	2.39	0.53
42:DG:96:ARG:N	42:DG:99:MET:SD	2.81	0.53
43:DH:85:LYS:HE2	43:DH:85:LYS:C	2.29	0.53
50:DR:99:LYS:N	50:DR:99:LYS:HD2	2.18	0.53
52:DT:78:LEU:O	52:DT:79:HIS:CD2	2.61	0.53
53:DU:90:VAL:HG21	54:DV:47:VAL:CG2	2.38	0.53
57:DY:28:LYS:HE3	57:DY:37:VAL:HG11	1.90	0.53
57:DY:96:ILE:HG13	57:DY:99:CYS:HB2	1.90	0.53
58:DZ:17:ALA:O	58:DZ:20:ARG:HG2	2.07	0.53
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.24	0.53
1:AA:542:G:H2'	1:AA:543:C:C6	2.43	0.53
1:AA:625:G:H2'	1:AA:626:U:H6	1.73	0.53
2:AB:29:ALA:HA	2:AB:32:ILE:CG2	2.38	0.53
5:AE:11:ILE:HG21	5:AE:105:VAL:HG22	1.91	0.53
9:AI:69:GLY:O	9:AI:73:GLN:HG3	2.09	0.53
10:AJ:16:LEU:CD1	10:AJ:70:ARG:HG3	2.38	0.53
13:AM:66:LEU:O	13:AM:70:LEU:HB2	2.09	0.53
25:AZ:233:GLY:O	25:AZ:234:ARG:HD2	2.09	0.53
25:AZ:68:VAL:HG13	25:AZ:69:GLU:N	2.24	0.53
32:B6:45:LYS:O	32:B6:46:HIS:ND1	2.42	0.53
34:B8:50:LEU:N	34:B8:53:PRO:HD3	2.24	0.53
36:BA:1142(A):A:H8	36:BA:1142(A):A:H5'	1.73	0.53
36:BA:1354:A:H2'	36:BA:1355:G:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1538:G:H2'	36:BA:1539:G:C8	2.44	0.53
36:BA:2178:C:O4'	36:BA:2178:C:O2	2.26	0.53
36:BA:2307:G:H3'	36:BA:2307:G:N3	2.23	0.53
36:BA:271(C):C:H2'	36:BA:271(D):G:C8	2.40	0.53
36:BA:304:G:C2	36:BA:314:A:C2	2.97	0.53
38:BC:10:LEU:HA	38:BC:13:LYS:HE3	1.90	0.53
39:BD:96:HIS:CE1	39:BD:102:LYS:HE2	2.44	0.53
43:BH:44:VAL:HG12	43:BH:45:VAL:H	1.74	0.53
43:BH:91:GLY:HA3	43:BH:94:TYR:CD2	2.44	0.53
51:BS:58:LEU:HG	51:BS:59:LYS:H	1.74	0.53
53:BU:8:VAL:O	53:BU:12:ARG:HG3	2.09	0.53
56:BX:12:VAL:HG12	56:BX:27:THR:OG1	2.08	0.53
57:BY:6:HIS:CD2	57:BY:6:HIS:H	2.26	0.53
57:BY:98:VAL:O	57:BY:99:CYS:SG	2.67	0.53
58:BZ:101:PRO:HG2	58:BZ:135:GLU:O	2.09	0.53
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.43	0.53
1:CA:245:C:O2'	1:CA:246:A:P	2.67	0.53
1:CA:586:C:O2'	1:CA:587:G:H5'	2.08	0.53
4:CD:34:GLU:O	4:CD:35:ARG:HB2	2.08	0.53
4:CD:3:ARG:HG2	4:CD:118:ARG:NE	2.22	0.53
10:CJ:6:ILE:CD1	10:CJ:23:ILE:HG21	2.39	0.53
19:CS:16:LEU:N	19:CS:16:LEU:HD12	2.11	0.53
20:CT:53:LEU:O	20:CT:57:ARG:HB2	2.07	0.53
24:CY:25:C:H6	24:CY:25:C:C5'	2.20	0.53
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB3	1.91	0.53
25:CZ:164:PRO:CB	25:CZ:167:GLU:OE2	2.55	0.53
25:CZ:193:ASN:CB	25:CZ:196:VAL:H	2.21	0.53
25:CZ:27:LEU:O	25:CZ:27:LEU:HD12	2.09	0.53
25:CZ:75:ARG:HD2	25:CZ:77:TYR:OH	2.08	0.53
34:D8:14:VAL:HG21	34:D8:22:VAL:HG13	1.90	0.53
34:D8:51:ALA:N	34:D8:53:PRO:HD2	2.24	0.53
36:DA:1109:C:C2'	36:DA:1110:G:H5'	2.38	0.53
36:DA:1311:G:H21	36:DA:1603:A:H62	1.55	0.53
36:DA:1541:G:O3'	36:DA:1541:G:OP2	2.25	0.53
36:DA:1718:G:H2'	36:DA:1719:G:C8	2.41	0.53
36:DA:438:G:H2'	36:DA:440:G:C8	2.44	0.53
36:DA:833:U:H2'	36:DA:834:C:C6	2.43	0.53
42:DG:115:ARG:HH12	42:DG:137:GLU:CD	2.12	0.53
42:DG:53:LEU:HD12	42:DG:153:ARG:NH2	2.24	0.53
36:DA:1952:A:C5	47:DO:22:ILE:HD12	2.44	0.53
48:DP:83:VAL:HG12	48:DP:113:LYS:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:24:GLY:HA2	48:DP:33:ARG:NH1	2.24	0.53
51:DS:15:ARG:HH11	51:DS:15:ARG:HG2	1.74	0.53
52:DT:39:ARG:CD	52:DT:39:ARG:H	2.11	0.53
53:DU:52:ARG:HB3	53:DU:52:ARG:HH11	1.74	0.53
53:DU:52:ARG:HB3	53:DU:52:ARG:NH1	2.24	0.53
54:DV:57:VAL:HG22	54:DV:58:VAL:N	2.24	0.53
55:DW:4:LYS:HD3	55:DW:6:ILE:HD11	1.90	0.53
58:DZ:48:PHE:O	58:DZ:52:SER:N	2.37	0.53
58:DZ:75:ASN:O	58:DZ:84:GLU:HB3	2.09	0.53
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CE1	2.43	0.53
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.09	0.53
1:AA:1442(B):A:OP2	1:AA:1442(B):A:H3'	2.09	0.53
1:AA:490:G:H2'	1:AA:491:G:C8	2.43	0.53
1:AA:555:C:H2'	1:AA:556:C:C6	2.44	0.53
1:AA:711:G:O2'	1:AA:712:A:H5'	2.09	0.53
3:AC:22:TRP:NE1	3:AC:36:ASP:OD2	2.40	0.53
4:AD:100:ARG:HH21	4:AD:118:ARG:NH1	2.01	0.53
7:AG:141:VAL:O	7:AG:144:MET:HB2	2.08	0.53
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.57	0.53
15:AO:2:PRO:O	15:AO:3:ILE:C	2.47	0.53
19:AS:16:LEU:O	19:AS:20:LEU:N	2.42	0.53
24:AY:77:TRP:HA	25:AZ:285:ASN:O	2.09	0.53
25:AZ:166:ASP:C	25:AZ:167:GLU:CG	2.77	0.53
32:B6:27:LYS:HG3	32:B6:30:THR:CB	2.39	0.53
35:B9:19:ARG:O	35:B9:20:HIS:HB2	2.08	0.53
36:BA:271(R):G:O2'	36:BA:271(S):G:H5'	2.08	0.53
36:BA:2875:C:H4'	52:BT:5:ALA:HB2	1.90	0.53
36:BA:633:A:C2'	36:BA:634:C:H5'	2.38	0.53
36:BA:833:U:H2'	36:BA:834:C:C6	2.44	0.53
39:BD:37:LEU:HD23	39:BD:38:LYS:H	1.74	0.53
40:BE:98:PRO:HD3	40:BE:175:VAL:HG12	1.89	0.53
48:BP:115:LEU:HG	48:BP:116:GLY:H	1.73	0.53
50:BR:51:LEU:CD2	50:BR:70:LEU:HD11	2.39	0.53
51:BS:87:PHE:CG	51:BS:88:ASP:N	2.77	0.53
54:BV:57:VAL:HG22	54:BV:58:VAL:N	2.23	0.53
1:CA:1064:G:H21	1:CA:1190:G:H2'	1.73	0.53
1:CA:1158:C:H2'	1:CA:1181:G:H22	1.74	0.53
1:CA:67:C:OP1	1:CA:199:G:H5''	2.08	0.53
1:CA:266:G:H5'	1:CA:268:C:H41	1.74	0.53
1:CA:538:G:O2'	1:CA:539:A:H5'	2.09	0.53
1:CA:625:G:H2'	1:CA:626:U:H6	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:155:LEU:HD22	2:CB:157:ARG:O	2.08	0.53
1:CA:1193:G:OP1	3:CC:167:TRP:HZ3	1.91	0.53
19:CS:37:ARG:O	19:CS:70:LYS:HD2	2.08	0.53
24:CY:44:G:H4'	24:CY:45:U:OP1	2.08	0.53
24:CY:68:C:H2'	24:CY:69:C:H6	1.74	0.53
25:CZ:350:THR:HG22	25:CZ:351:GLY:N	2.24	0.53
28:D2:38:GLN:OE1	28:D2:44:LEU:HD13	2.08	0.53
28:D2:69:ARG:N	28:D2:69:ARG:HD2	2.23	0.53
34:D8:32:LEU:CD1	36:DA:2391:G:H3'	2.35	0.53
36:DA:1538:G:H2'	36:DA:1539:G:C8	2.43	0.53
36:DA:16:G:O2'	36:DA:17:G:H5'	2.09	0.53
36:DA:2029:G:H2'	36:DA:2031:A:OP2	2.09	0.53
36:DA:2469:A:H2	36:DA:2481:G:H21	1.55	0.53
36:DA:2001:A:H4'	36:DA:2689:U:H2'	1.91	0.53
36:DA:782:A:H5'	36:DA:783:A:C2	2.44	0.53
37:DB:21:G:H2'	37:DB:22:U:H5'	1.91	0.53
39:DD:16:MET:HE1	39:DD:208:LYS:HG2	1.90	0.53
41:DF:3:GLU:CB	41:DF:24:LEU:HG	2.38	0.53
43:DH:44:VAL:HG12	43:DH:45:VAL:H	1.74	0.53
43:DH:52:VAL:CB	43:DH:69:ARG:HD3	2.38	0.53
54:DV:52:VAL:O	54:DV:52:VAL:HG22	2.09	0.53
54:DV:79:VAL:O	54:DV:80:GLN:HB2	2.09	0.53
57:DY:90:LEU:HG	57:DY:91:GLU:H	1.72	0.53
58:DZ:145:GLU:HA	58:DZ:145:GLU:OE1	2.09	0.53
1:AA:266:G:H5'	1:AA:268:C:H41	1.74	0.53
2:AB:7:VAL:HG13	2:AB:11:LEU:CD1	2.39	0.53
5:AE:142:LEU:O	5:AE:143:ARG:HD3	2.08	0.53
5:AE:6:PHE:HB3	5:AE:35:GLY:O	2.09	0.53
10:AJ:54:PHE:CD1	10:AJ:55:LYS:HD3	2.44	0.53
12:AL:39:VAL:CG1	12:AL:57:LYS:HB3	2.39	0.53
18:AR:53:ARG:HG3	18:AR:63:GLN:NE2	2.24	0.53
25:AZ:101:GLY:HA3	25:AZ:210:ILE:CD1	2.39	0.53
24:AY:76:A:OP1	25:AZ:274:ARG:CD	2.57	0.53
25:AZ:300:ARG:O	25:AZ:302:GLN:N	2.41	0.53
25:AZ:340:PRO:HG2	25:AZ:342:PHE:CE1	2.43	0.53
25:AZ:317:GLU:HG3	25:AZ:404:LEU:HD21	1.91	0.53
30:B4:10:VAL:HG23	30:B4:11:PRO:HD2	1.90	0.53
32:B6:11:LEU:HD22	32:B6:12:GLU:N	2.21	0.53
36:BA:1417:C:H2'	36:BA:1418:G:O4'	2.09	0.53
36:BA:212:G:O2'	36:BA:213:A:H5'	2.09	0.53
36:BA:644:A:C2	36:BA:2369:A:H1'	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2469:A:H2	36:BA:2481:G:H21	1.55	0.53
42:BG:125:PHE:HD1	42:BG:126:ASP:N	1.94	0.53
43:BH:124:GLU:HB3	43:BH:126:PRO:HD3	1.89	0.53
46:BN:46:VAL:O	46:BN:47:ALA:CB	2.55	0.53
49:BQ:51:ARG:HG3	49:BQ:51:ARG:NH1	2.24	0.53
51:BS:39:ILE:HD11	51:BS:73:LEU:HD21	1.90	0.53
52:BT:104:ASN:O	52:BT:105:LEU:CB	2.57	0.53
47:BO:104:ARG:HE	52:BT:33:LYS:CE	2.22	0.53
52:BT:78:LEU:O	52:BT:79:HIS:CD2	2.61	0.53
57:BY:37:VAL:HG23	57:BY:39:VAL:HG23	1.91	0.53
58:BZ:103:ARG:O	58:BZ:138:GLU:HA	2.09	0.53
5:CE:99:GLY:O	5:CE:117:ASP:HA	2.09	0.53
5:CE:6:PHE:HB3	5:CE:35:GLY:O	2.09	0.53
5:CE:36:ASP:OD1	5:CE:38:GLN:N	2.42	0.53
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD13	1.90	0.53
12:CL:102:ARG:HH12	12:CL:110:VAL:HG22	1.68	0.53
12:CL:110:VAL:N	12:CL:122:THR:HG22	2.20	0.53
19:CS:10:PHE:CZ	19:CS:37:ARG:O	2.62	0.53
25:CZ:310:ILE:HG13	25:CZ:381:GLU:HB2	1.91	0.53
30:D4:37:SER:O	30:D4:38:LYS:HB3	2.09	0.53
36:DA:2572:A:H62	40:DE:145:LYS:CG	2.22	0.53
36:DA:328:U:H4'	57:DY:68:HIS:NE2	2.23	0.53
36:DA:438:G:H2'	36:DA:440:G:H8	1.74	0.53
36:DA:651:G:C2'	36:DA:652:C:H5'	2.38	0.53
37:DB:104:U:O2'	37:DB:105:A:H5'	2.09	0.53
39:DD:77:ALA:HA	39:DD:97:TYR:HA	1.91	0.53
42:DG:94:LEU:HD13	42:DG:98:ARG:CB	2.39	0.53
46:DN:43:THR:HB	46:DN:46:VAL:HG12	1.91	0.53
51:DS:59:LYS:CG	51:DS:60:GLY:H	2.13	0.53
53:DU:88:ILE:HG23	53:DU:90:VAL:CG2	2.38	0.53
54:DV:5:VAL:HG22	54:DV:6:LYS:N	2.24	0.53
55:DW:59:VAL:HG12	55:DW:59:VAL:O	2.08	0.53
55:DW:4:LYS:HD3	55:DW:6:ILE:CD1	2.38	0.53
55:DW:8:ARG:HH11	55:DW:8:ARG:HG2	1.74	0.53
36:DA:1598:C:H5'	56:DX:36:LYS:HD3	1.90	0.53
1:AA:1127:G:H1	1:AA:1145:C:N4	2.07	0.53
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.09	0.53
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.24	0.53
4:AD:150:GLU:N	4:AD:150:GLU:OE1	2.42	0.53
5:AE:11:ILE:HD12	5:AE:31:LEU:CD1	2.38	0.53
11:AK:44:SER:H	11:AK:47:VAL:HG23	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:110:VAL:N	12:AL:122:THR:HG22	2.23	0.53
25:AZ:7:ARG:O	25:AZ:8:THR:CG2	2.57	0.53
25:AZ:87:ASP:HB2	25:AZ:88:TYR:CD1	2.42	0.53
26:B0:36:ILE:HG13	26:B0:36:ILE:O	2.09	0.53
26:B0:50:ASN:HD22	26:B0:63:VAL:CG2	2.14	0.53
36:BA:1109:C:C2'	36:BA:1110:G:H5'	2.39	0.53
36:BA:1479:G:H5'	36:BA:1558:A:H2	1.74	0.53
36:BA:1756:G:H4'	36:BA:1758:G:O4'	2.09	0.53
36:BA:1885:A:H8	36:BA:1885:A:H5'	1.72	0.53
36:BA:2312:U:H2'	36:BA:2313:C:H5'	1.89	0.53
36:BA:272(H):C:C3'	36:BA:272(I):U:H5''	2.38	0.53
36:BA:2808:U:O2'	36:BA:2809:A:H5'	2.08	0.53
42:BG:125:PHE:O	42:BG:126:ASP:O	2.27	0.53
42:BG:39:ILE:O	42:BG:39:ILE:HG13	2.09	0.53
42:BG:77:ILE:HG12	42:BG:77:ILE:O	2.09	0.53
51:BS:35:ILE:HD11	51:BS:99:LYS:NZ	2.23	0.53
54:BV:13:ARG:HG3	54:BV:13:ARG:NH1	2.24	0.53
55:BW:11:ARG:HH12	55:BW:98:LYS:HB3	1.74	0.53
50:BR:101:ALA:HB1	55:BW:38:TYR:HE1	1.73	0.53
57:BY:52:SER:O	57:BY:54:LYS:N	2.39	0.53
58:BZ:151:HIS:HA	58:BZ:171:ILE:HG12	1.91	0.53
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.44	0.53
7:CG:37:ASN:HD21	9:CI:40:LEU:HA	1.72	0.53
1:CA:1152:A:OP1	10:CJ:68:HIS:CD2	2.62	0.53
17:CQ:7:THR:O	17:CQ:23:VAL:HG13	2.09	0.53
26:D0:73:GLY:O	26:D0:75:LEU:N	2.41	0.53
32:D6:19:ARG:O	32:D6:20:ASN:O	2.27	0.53
32:D6:19:ARG:CD	32:D6:20:ASN:H	2.22	0.53
36:DA:145:G:C2'	36:DA:146:G:H5''	2.39	0.53
36:DA:1516:C:C2'	36:DA:1517:G:C5'	2.86	0.53
36:DA:2360:A:O2'	36:DA:2361:A:P	2.67	0.53
36:DA:414:C:O2'	36:DA:415:A:H5'	2.08	0.53
39:DD:152:GLY:O	39:DD:154:LYS:HG3	2.09	0.53
40:DE:61:ARG:CB	40:DE:62:PRO:HD3	2.39	0.53
42:DG:86:MET:HG2	42:DG:86:MET:O	2.09	0.53
1:AA:1190:G:P	3:AC:5:ILE:HD12	2.49	0.53
1:AA:332:G:O2'	1:AA:333:G:H5'	2.08	0.53
4:AD:150:GLU:CG	4:AD:151:LYS:N	2.72	0.53
5:AE:11:ILE:HD11	5:AE:33:VAL:HG21	1.91	0.53
9:AI:11:LYS:O	9:AI:12:GLU:HB2	2.09	0.53
20:AT:64:ASP:OD1	20:AT:81:LYS:HD2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:195:TRP:C	25:AZ:197:ASP:N	2.62	0.53
25:AZ:332:THR:O	25:AZ:363:MET:HE2	2.09	0.53
26:B0:51:VAL:N	26:B0:62:LEU:HD21	2.24	0.53
28:B2:50:ILE:HD12	28:B2:50:ILE:N	2.23	0.53
36:BA:106:C:H2'	36:BA:107:C:C6	2.42	0.53
36:BA:1495:A:N3	36:BA:1496:A:C2	2.77	0.53
36:BA:201:C:C2'	36:BA:202:U:H5'	2.38	0.53
26:B0:36:ILE:HD11	36:BA:2355:C:C4'	2.38	0.53
36:BA:438:G:H2'	36:BA:440:G:C8	2.43	0.53
36:BA:67:U:H2'	36:BA:68:G:H8	1.74	0.53
38:BC:75:LEU:HG	38:BC:112:ALA:O	2.09	0.53
40:BE:186:GLY:O	40:BE:187:ALA:HB3	2.09	0.53
42:BG:52:ILE:HG12	42:BG:53:LEU:N	2.23	0.53
36:BA:2840:C:H5''	50:BR:53:HIS:HD2	1.74	0.53
52:BT:30:VAL:HG22	52:BT:84:GLN:HG3	1.91	0.53
1:CA:1116:C:H2'	1:CA:1117:G:C5'	2.38	0.53
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.91	0.53
1:CA:955:U:O2'	1:CA:956:U:H5'	2.09	0.53
4:CD:150:GLU:CG	4:CD:151:LYS:N	2.72	0.53
5:CE:90:VAL:C	5:CE:91:LEU:HD12	2.29	0.53
9:CI:53:VAL:HG13	9:CI:95:LYS:HZ2	1.70	0.53
11:CK:26:ASN:O	11:CK:27:ASN:HB2	2.09	0.53
14:CN:12:ARG:HB3	14:CN:12:ARG:HH11	1.73	0.53
25:CZ:340:PRO:HG2	25:CZ:342:PHE:CE1	2.43	0.53
34:D8:62:LEU:HB3	36:DA:242:G:H5'	1.91	0.53
35:D9:29:ASN:N	35:D9:29:ASN:HD22	2.06	0.53
36:DA:1417:C:H2'	36:DA:1418:G:O4'	2.09	0.53
36:DA:2175:C:H2'	36:DA:2176:A:C8	2.43	0.53
36:DA:2657:A:H2	36:DA:2664:G:H21	1.57	0.53
36:DA:671:C:H2'	36:DA:672:C:C6	2.44	0.53
36:DA:877:U:C2'	36:DA:878:A:H5''	2.39	0.53
37:DB:42:C:C6	42:DG:69:ALA:HB2	2.44	0.53
38:DC:118:ASP:OD2	38:DC:119:VAL:HG13	2.09	0.53
40:DE:35:GLN:O	40:DE:36:ARG:O	2.28	0.53
41:DF:113:ALA:HB2	41:DF:183:VAL:HG12	1.90	0.53
41:DF:24:LEU:O	41:DF:26:ALA:N	2.37	0.53
42:DG:81:LYS:O	42:DG:83:ARG:HG3	2.09	0.53
47:DO:104:ARG:NE	52:DT:33:LYS:HD2	2.23	0.53
48:DP:100:LEU:O	48:DP:103:ALA:HB3	2.08	0.53
48:DP:112:LEU:HD22	48:DP:113:LYS:N	2.23	0.53
49:DQ:111:GLU:OE1	49:DQ:133:ARG:NH2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:104:GLY:O	51:DS:106:ARG:N	2.40	0.53
54:DV:72:VAL:HG23	54:DV:72:VAL:O	2.09	0.53
55:DW:11:ARG:HH12	55:DW:98:LYS:HB3	1.74	0.53
57:DY:36:ALA:HB1	57:DY:67:LEU:C	2.29	0.53
57:DY:43:ASN:CB	57:DY:64:GLU:HA	2.38	0.53
1:AA:737:A:H2'	1:AA:738:C:H6	1.73	0.52
3:AC:173:VAL:O	3:AC:175:LEU:HD12	2.09	0.52
5:AE:90:VAL:C	5:AE:91:LEU:HD12	2.28	0.52
6:AF:69:GLU:O	6:AF:72:VAL:HG12	2.08	0.52
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.91	0.52
12:AL:69:TYR:O	12:AL:71:PRO:HD3	2.10	0.52
20:AT:24:LEU:HD12	20:AT:24:LEU:O	2.09	0.52
24:AY:75:C:O2	24:AY:75:C:O4'	2.26	0.52
25:AZ:272:MET:HB2	25:AZ:277:LEU:HD23	1.91	0.52
32:B6:14:THR:HG23	32:B6:16:CYS:H	1.74	0.52
32:B6:27:LYS:O	32:B6:29:ASN:N	2.42	0.52
36:BA:1188:U:C2'	36:BA:1189:A:H5'	2.39	0.52
36:BA:1558:A:O2'	36:BA:1559:G:OP2	2.25	0.52
36:BA:1718:G:H2'	36:BA:1719:G:C8	2.43	0.52
36:BA:1880:C:H2'	36:BA:1881:C:H5''	1.89	0.52
36:BA:877:U:C2'	36:BA:878:A:H5''	2.38	0.52
38:BC:100:ILE:O	38:BC:104:LEU:HD23	2.09	0.52
39:BD:142:VAL:HG22	39:BD:143:HIS:N	2.24	0.52
40:BE:38:THR:HG22	40:BE:40:GLU:N	2.10	0.52
41:BF:39:TRP:CB	41:BF:101:LEU:HD22	2.39	0.52
52:BT:28:VAL:HG11	52:BT:46:GLU:CG	2.35	0.52
58:BZ:139:VAL:HG11	58:BZ:150:LEU:HD11	1.92	0.52
58:BZ:17:ALA:O	58:BZ:20:ARG:HG2	2.09	0.52
11:CK:57:THR:HG22	11:CK:60:ALA:CB	2.38	0.52
12:CL:45:PRO:HD3	12:CL:51:ALA:O	2.09	0.52
16:CP:9:PHE:CE2	16:CP:18:ARG:CZ	2.92	0.52
25:CZ:301:GLY:HA3	25:CZ:347:THR:CG2	2.38	0.52
33:D7:22:MET:HA	33:D7:22:MET:HE2	1.90	0.52
34:D8:11:LYS:HZ2	34:D8:63:PRO:HG3	1.74	0.52
36:DA:1019:U:H2'	36:DA:1021:A:C2	2.43	0.52
36:DA:2134:A:H62	36:DA:2157:G:H1'	1.73	0.52
38:DC:40:THR:HA	38:DC:177:LYS:HA	1.90	0.52
42:DG:136:ARG:HH11	42:DG:136:ARG:HB3	1.73	0.52
43:DH:91:GLY:HA3	43:DH:94:TYR:CD2	2.43	0.52
37:DB:7:G:H4'	51:DS:29:PHE:CD2	2.44	0.52
57:DY:6:HIS:CD2	57:DY:6:HIS:H	2.26	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:115:GLY:HA2	58:DZ:177:PRO:CD	2.34	0.52
1:AA:757:U:H2'	1:AA:758:G:O4'	2.09	0.52
3:AC:35:GLU:HG2	3:AC:59:ARG:HH22	1.75	0.52
4:AD:108:LEU:HB3	4:AD:110:PHE:HE1	1.75	0.52
7:AG:132:GLY:O	7:AG:136:LYS:HG2	2.10	0.52
20:AT:45:GLN:CB	20:AT:91:LEU:HD13	2.36	0.52
29:B3:54:VAL:HG12	29:B3:55:ARG:N	2.24	0.52
30:B4:37:SER:O	30:B4:38:LYS:HB3	2.10	0.52
34:B8:11:LYS:HZ2	34:B8:63:PRO:HG3	1.71	0.52
31:B5:4:HIS:HB3	36:BA:2577:A:H1'	1.91	0.52
36:BA:519:U:H2'	36:BA:520:G:C8	2.43	0.52
37:BB:55:U:H2'	37:BB:56:G:C8	2.44	0.52
40:BE:108:SER:O	40:BE:162:ALA:HA	2.09	0.52
46:BN:58:ASP:C	46:BN:60:ILE:N	2.61	0.52
47:BO:98:VAL:HG13	47:BO:118:ALA:HA	1.91	0.52
52:BT:53:ARG:HH11	52:BT:53:ARG:CB	2.12	0.52
36:BA:994:C:OP2	53:BU:54:LYS:NZ	2.43	0.52
54:BV:5:VAL:HG22	54:BV:6:LYS:N	2.24	0.52
55:BW:6:ILE:HG12	55:BW:104:THR:HG22	1.90	0.52
56:BX:54:VAL:C	56:BX:55:ASN:HD22	2.12	0.52
58:BZ:23:LYS:O	58:BZ:24:LEU:CB	2.53	0.52
1:CA:261:U:O2	1:CA:263:A:C8	2.62	0.52
1:CA:542:G:P	4:CD:10:ARG:HH22	2.31	0.52
4:CD:150:GLU:N	4:CD:150:GLU:OE1	2.42	0.52
6:CF:43:LEU:HD22	6:CF:43:LEU:N	2.24	0.52
9:CI:40:LEU:HD11	9:CI:70:LYS:CG	2.37	0.52
1:CA:963:G:N2	10:CJ:55:LYS:NZ	2.57	0.52
13:CM:2:ALA:HB1	13:CM:4:ILE:HD11	1.90	0.52
13:CM:6:GLY:HA3	13:CM:67:GLU:OE2	2.09	0.52
12:CL:8:ASN:HD22	17:CQ:34:LYS:HZ1	1.57	0.52
22:CV:5:G:H1	22:CV:68:C:H42	1.57	0.52
25:CZ:101:GLY:HA3	25:CZ:210:ILE:HD12	1.90	0.52
25:CZ:219:LYS:HB3	25:CZ:244:ARG:CD	2.37	0.52
36:DA:1682:G:H2'	36:DA:1683:C:C6	2.44	0.52
36:DA:521:G:H2'	36:DA:522:G:C8	2.43	0.52
38:DC:166:ASP:O	38:DC:168:THR:N	2.42	0.52
36:DA:1993:U:H4'	40:DE:128:SER:HB3	1.92	0.52
42:DG:34:LEU:HA	42:DG:161:THR:HA	1.91	0.52
46:DN:55:VAL:HG22	46:DN:56:ASN:N	2.24	0.52
47:DO:94:ARG:NH1	47:DO:94:ARG:HG2	2.22	0.52
48:DP:81:GLN:HE22	48:DP:106:LEU:HA	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:30:THR:HG23	48:DP:31:ALA:H	1.74	0.52
49:DQ:35:VAL:HG12	49:DQ:130:LYS:O	2.09	0.52
26:D0:7:LEU:HD21	49:DQ:81:VAL:HG13	1.91	0.52
50:DR:103:ARG:O	50:DR:111:LEU:HD11	2.10	0.52
57:DY:85:VAL:O	57:DY:86:ARG:HB2	2.08	0.52
58:DZ:124:ILE:HD11	58:DZ:137:ILE:HG13	1.91	0.52
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.57	0.52
1:AA:333:G:O2'	1:AA:334:C:H5'	2.10	0.52
17:AQ:59:ILE:HG21	17:AQ:71:PHE:HB3	1.89	0.52
25:AZ:269:GLY:O	25:AZ:288:VAL:HA	2.10	0.52
32:B6:19:ARG:CD	32:B6:20:ASN:H	2.22	0.52
32:B6:22:ALA:C	32:B6:23:THR:HG23	2.28	0.52
36:BA:1642:G:O2'	36:BA:1643:G:H5'	2.09	0.52
36:BA:267:C:H2'	36:BA:268:C:C6	2.43	0.52
36:BA:2711:A:OP1	36:BA:2712(A):A:OP1	2.26	0.52
36:BA:328:U:H4'	57:BY:68:HIS:NE2	2.25	0.52
36:BA:996:A:O3'	53:BU:92:ARG:HG2	2.09	0.52
38:BC:181:PRO:HB2	38:BC:183:GLU:OE2	2.09	0.52
41:BF:185:ASP:O	41:BF:188:ARG:HG2	2.09	0.52
43:BH:42:ARG:HG2	43:BH:43:VAL:N	2.22	0.52
48:BP:58:THR:HB	48:BP:61:ARG:NH2	2.20	0.52
51:BS:13:ARG:CG	51:BS:14:VAL:N	2.68	0.52
1:CA:1036:G:H5''	1:CA:1037:C:H5	1.71	0.52
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.24	0.52
2:CB:164:VAL:HG12	2:CB:165:VAL:N	2.25	0.52
3:CC:131:ARG:HH11	3:CC:166:GLU:HG3	1.74	0.52
9:CI:40:LEU:O	9:CI:42:ARG:N	2.39	0.52
1:CA:1047:G:H5''	14:CN:4:LYS:HG2	1.91	0.52
25:CZ:185:ASN:ND2	25:CZ:185:ASN:O	2.42	0.52
25:CZ:317:GLU:HG3	25:CZ:404:LEU:HD21	1.91	0.52
27:D1:75:GLU:C	27:D1:77:ALA:N	2.62	0.52
28:D2:32:LEU:O	28:D2:35:LEU:HB3	2.09	0.52
36:DA:1311:G:N2	36:DA:1603:A:H62	2.08	0.52
36:DA:1651:G:C2	36:DA:2007:C:C2	2.97	0.52
36:DA:2239:G:H5'	39:DD:251:GLY:HA3	1.92	0.52
36:DA:2746:U:H2'	36:DA:2747:G:O4'	2.10	0.52
36:DA:479:A:HO2'	36:DA:481:G:H8	1.58	0.52
39:DD:73:VAL:HG13	39:DD:120:GLY:CA	2.38	0.52
39:DD:276:LYS:HA	39:DD:276:LYS:HE2	1.91	0.52
40:DE:24:THR:HG21	40:DE:188:VAL:HG12	1.90	0.52
40:DE:79:ARG:HH11	40:DE:79:ARG:CG	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:192:LEU:HD23	41:DF:193:VAL:N	2.24	0.52
42:DG:72:ARG:HA	42:DG:87:PRO:HD2	1.90	0.52
43:DH:83:TYR:HB3	43:DH:135:GLY:O	2.10	0.52
48:DP:65:ARG:O	48:DP:67:MET:N	2.42	0.52
52:DT:106:SER:O	52:DT:107:ASP:HB3	2.09	0.52
52:DT:123:GLN:HA	52:DT:126:ALA:HB3	1.92	0.52
1:AA:1125:U:C3'	1:AA:1125:U:C6	2.91	0.52
1:AA:858:G:C6	1:AA:869:G:C8	2.96	0.52
2:AB:61:LEU:HD23	2:AB:68:ILE:HD11	1.92	0.52
3:AC:90:GLU:O	3:AC:93:LYS:HB3	2.10	0.52
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD13	1.91	0.52
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.92	0.52
25:AZ:124:ARG:HG3	25:AZ:124:ARG:HH11	1.74	0.52
25:AZ:164:PRO:O	25:AZ:168:VAL:HG23	2.10	0.52
25:AZ:224:PRO:HA	25:AZ:303:VAL:HG12	1.91	0.52
27:B1:49:VAL:CG1	27:B1:60:PHE:HB2	2.40	0.52
28:B2:63:VAL:O	28:B2:66:GLU:HG2	2.08	0.52
32:B6:45:LYS:O	32:B6:46:HIS:CB	2.58	0.52
34:B8:15:LYS:CB	34:B8:46:ARG:HH22	2.23	0.52
36:BA:1651:G:C2	36:BA:2007:C:C2	2.98	0.52
36:BA:2308:G:O6	36:BA:2310:A:H2'	2.08	0.52
36:BA:2312:U:O3'	42:BG:71:THR:OG1	2.28	0.52
36:BA:2688:U:H3'	36:BA:2688:U:O2	2.10	0.52
36:BA:2869:G:H2'	36:BA:2870:C:C6	2.44	0.52
39:BD:111:LEU:HD23	39:BD:115:GLN:OE1	2.10	0.52
39:BD:27:THR:HG21	39:BD:81:ALA:CB	2.40	0.52
40:BE:79:ARG:HH11	40:BE:79:ARG:CG	2.22	0.52
42:BG:78:SER:C	42:BG:80:PHE:H	2.13	0.52
45:BK:55:UNK:HA	45:BK:69:UNK:HA	1.92	0.52
46:BN:21:LYS:HD3	46:BN:22:THR:N	2.24	0.52
47:BO:107:ARG:HD3	52:BT:36:GLU:H	1.75	0.52
36:BA:2562:U:H4'	47:BO:25:LEU:HD21	1.91	0.52
36:BA:1246:A:OP1	48:BP:16:ARG:NH2	2.42	0.52
36:BA:832:G:O2'	48:BP:52:GLU:HB3	2.09	0.52
48:BP:46:LYS:CB	48:BP:52:GLU:HG2	2.38	0.52
52:BT:106:SER:O	52:BT:107:ASP:HB3	2.10	0.52
53:BU:3:ARG:HH11	53:BU:3:ARG:CG	2.22	0.52
58:BZ:127:LYS:O	58:BZ:127:LYS:HG3	2.08	0.52
1:CA:542:G:H2'	1:CA:543:C:C6	2.43	0.52
1:CA:714:G:H2'	1:CA:715:A:C8	2.45	0.52
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:114:ARG:HD2	2:CB:141:GLU:OE2	2.09	0.52
2:CB:28:PHE:O	2:CB:32:ILE:HG22	2.09	0.52
7:CG:113:GLU:CG	7:CG:119:ARG:HB3	2.38	0.52
10:CJ:4:ILE:HB	10:CJ:74:ILE:CD1	2.36	0.52
14:CN:26:ARG:HH11	14:CN:47:LEU:HD21	1.73	0.52
28:D2:46:GLN:H	28:D2:50:ILE:HD13	1.75	0.52
28:D2:59:ARG:HG3	28:D2:60:LEU:H	1.73	0.52
28:D2:25:VAL:HB	28:D2:61:LEU:HD21	1.90	0.52
29:D3:54:VAL:HG12	29:D3:55:ARG:N	2.24	0.52
32:D6:22:ALA:C	32:D6:23:THR:HG23	2.28	0.52
36:DA:1688:U:H1'	36:DA:1701:A:C6	2.45	0.52
36:DA:1773:A:H2'	36:DA:1774:C:H5'	1.91	0.52
36:DA:1885:A:H5'	36:DA:1885:A:H8	1.75	0.52
39:DD:81:ALA:HA	39:DD:113:VAL:HG22	1.92	0.52
39:DD:241:PRO:O	39:DD:242:ARG:CB	2.57	0.52
46:DN:89:LYS:O	46:DN:93:THR:HG22	2.09	0.52
54:DV:19:LYS:HZ1	54:DV:20:LEU:H	1.57	0.52
54:DV:21:ARG:H	54:DV:21:ARG:HD3	1.74	0.52
55:DW:22:ASP:HA	55:DW:25:ARG:NH1	2.24	0.52
57:DY:77:PRO:O	57:DY:78:ALA:HB2	2.09	0.52
58:DZ:10:ARG:HB3	58:DZ:36:LYS:HG3	1.91	0.52
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.92	0.52
1:AA:66:G:H4'	1:AA:173:U:C5	2.44	0.52
1:AA:261:U:O2	1:AA:263:A:C8	2.62	0.52
1:AA:946:A:H2'	1:AA:947:G:H8	1.73	0.52
2:AB:80:ILE:CD1	2:AB:80:ILE:H	2.23	0.52
2:AB:87:ARG:HH12	2:AB:223:ILE:HD11	1.75	0.52
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.24	0.52
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.92	0.52
13:AM:12:ASN:N	13:AM:12:ASN:HD22	2.02	0.52
22:AW:5:G:C6	22:AW:6:G:C5	2.97	0.52
25:AZ:270:VAL:HG22	25:AZ:288:VAL:HG22	1.90	0.52
27:B1:70:VAL:O	27:B1:74:VAL:HG23	2.10	0.52
29:B3:31:LEU:C	29:B3:33:GLN:H	2.13	0.52
29:B3:7:LYS:O	29:B3:54:VAL:HA	2.10	0.52
34:B8:61:LEU:N	34:B8:63:PRO:HD2	2.24	0.52
35:B9:3:VAL:HG21	36:BA:2539:C:H4'	1.91	0.52
36:BA:1411:C:H2'	36:BA:1412:A:H8	1.75	0.52
36:BA:2262:U:H4'	36:BA:2328:A:C2	2.44	0.52
36:BA:2358:G:H2'	36:BA:2359:C:H6	1.75	0.52
36:BA:703:U:H2'	36:BA:704:G:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:83:G:O2'	36:BA:84:A:C8	2.58	0.52
37:BB:48:A:H4'	51:BS:95:HIS:HD2	1.73	0.52
38:BC:214:VAL:HG23	38:BC:224:ILE:HD13	1.90	0.52
41:BF:50:SER:HB2	41:BF:94:PRO:HD3	1.91	0.52
46:BN:91:LEU:CD2	46:BN:98:VAL:HG21	2.39	0.52
49:BQ:21:THR:O	49:BQ:22:LYS:HB3	2.07	0.52
49:BQ:56:ARG:CG	49:BQ:56:ARG:NH1	2.67	0.52
52:BT:31:SER:OG	52:BT:32:TYR:CE1	2.62	0.52
47:BO:104:ARG:NH2	52:BT:33:LYS:HE2	2.12	0.52
52:BT:88:ILE:O	52:BT:89:VAL:O	2.28	0.52
52:BT:94:ALA:C	52:BT:96:ARG:H	2.13	0.52
54:BV:19:LYS:HZ1	54:BV:20:LEU:H	1.56	0.52
1:CA:1141:C:O2'	1:CA:1142:G:H5'	2.10	0.52
1:CA:269:C:H2'	1:CA:270:A:H8	1.74	0.52
2:CB:141:GLU:O	2:CB:145:LEU:HD23	2.09	0.52
2:CB:33:TYR:HB2	2:CB:43:ASP:HB2	1.92	0.52
2:CB:7:VAL:HG13	2:CB:11:LEU:CD1	2.39	0.52
9:CI:85:LEU:C	9:CI:87:GLN:H	2.12	0.52
12:CL:51:ALA:C	12:CL:52:LEU:HD22	2.30	0.52
1:CA:521:G:H4'	12:CL:73:GLU:HG3	1.91	0.52
12:CL:75:HIS:HD2	12:CL:77:LEU:H	1.58	0.52
14:CN:21:TYR:N	14:CN:21:TYR:CD1	2.78	0.52
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	2.23	0.52
22:CV:68:C:C2'	22:CV:69:G:H5'	2.39	0.52
25:CZ:277:LEU:CD1	25:CZ:280:GLY:N	2.68	0.52
32:D6:27:LYS:HG3	32:D6:30:THR:HB	1.92	0.52
36:DA:1109:C:H2'	36:DA:1110:G:H5'	1.90	0.52
36:DA:2099:U:H2'	36:DA:2100:G:C8	2.44	0.52
36:DA:2127:G:O2'	36:DA:2128:C:H5'	2.09	0.52
36:DA:2184:G:H2'	36:DA:2185:C:O4'	2.08	0.52
36:DA:709:U:H2'	36:DA:710:G:H8	1.73	0.52
36:DA:940:G:H2'	36:DA:941:A:O4'	2.09	0.52
37:DB:40:U:O2	37:DB:43:C:H5''	2.09	0.52
37:DB:56:G:O2'	37:DB:57:A:OP2	2.25	0.52
38:DC:10:LEU:CD1	38:DC:32:LEU:HA	2.38	0.52
41:DF:138:GLU:O	41:DF:142:TRP:HB2	2.09	0.52
42:DG:165:THR:HB	42:DG:167:GLU:OE1	2.10	0.52
36:DA:2312:U:OP1	42:DG:73:ALA:HA	2.08	0.52
48:DP:41:ARG:CB	48:DP:41:ARG:NH1	2.73	0.52
51:DS:39:ILE:HD11	51:DS:73:LEU:HD21	1.91	0.52
57:DY:37:VAL:HG23	57:DY:39:VAL:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:99:TYR:HB3	58:DZ:123:ASP:OD2	2.10	0.52
1:AA:367:U:C5'	25:AZ:291:ARG:NE	2.62	0.52
1:AA:402:G:O2'	1:AA:403:C:H5'	2.10	0.52
9:AI:43:ALA:O	9:AI:45:ALA:N	2.43	0.52
11:AK:61:ALA:HB2	11:AK:90:GLY:HA3	1.92	0.52
18:AR:29:PHE:HD1	18:AR:29:PHE:N	2.08	0.52
18:AR:31:LEU:H	18:AR:31:LEU:HD23	1.74	0.52
27:B1:30:VAL:HG23	27:B1:31:GLY:N	2.25	0.52
28:B2:24:LEU:HD23	28:B2:24:LEU:C	2.30	0.52
34:B8:51:ALA:N	34:B8:53:PRO:HD2	2.25	0.52
36:BA:2168:G:N2	36:BA:2170:A:H3'	2.25	0.52
36:BA:2386:C:H2'	36:BA:2387:U:C6	2.45	0.52
37:BB:56:G:H4'	37:BB:57:A:O5'	2.10	0.52
39:BD:132:PRO:HD2	39:BD:135:PHE:HD2	1.74	0.52
39:BD:24:ILE:C	39:BD:24:ILE:HD13	2.29	0.52
36:BA:779:U:OP1	39:BD:49:ILE:HG13	2.10	0.52
40:BE:50:GLY:HA2	40:BE:78:LEU:HB3	1.90	0.52
42:BG:133:LEU:CD1	42:BG:157:ILE:HD12	2.35	0.52
43:BH:155:SER:O	43:BH:157:TYR:N	2.35	0.52
48:BP:84:ASN:C	48:BP:86:LYS:N	2.61	0.52
57:BY:10:GLY:C	57:BY:27:VAL:HG22	2.30	0.52
57:BY:61:ILE:O	57:BY:62:GLU:HB2	2.10	0.52
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CZ	2.45	0.52
1:CA:1116:C:C2'	1:CA:1117:G:H5''	2.39	0.52
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.08	0.52
1:CA:255:G:O6	1:CA:266:G:O6	2.28	0.52
4:CD:150:GLU:CD	4:CD:151:LYS:N	2.59	0.52
8:CH:17:THR:HB	8:CH:78:GLN:OE1	2.10	0.52
9:CI:4:TYR:HD2	9:CI:87:GLN:HB3	1.70	0.52
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.92	0.52
11:CK:44:SER:O	11:CK:47:VAL:HG23	2.09	0.52
14:CN:32:SER:O	14:CN:40:CYS:HA	2.09	0.52
18:CR:53:ARG:HG3	18:CR:63:GLN:NE2	2.25	0.52
20:CT:45:GLN:NE2	20:CT:46:GLU:HG3	2.21	0.52
26:D0:10:THR:HG22	26:D0:11:ARG:N	2.24	0.52
28:D2:35:LEU:HD23	28:D2:53:LEU:CD1	2.35	0.52
31:D5:4:HIS:HB3	36:DA:2577:A:H1'	1.90	0.52
32:D6:27:LYS:O	32:D6:29:ASN:N	2.42	0.52
34:D8:50:LEU:C	34:D8:52:LYS:H	2.11	0.52
36:DA:1103:A:H5'	36:DA:1104:C:OP2	2.10	0.52
36:DA:1112:G:O2'	36:DA:1113:U:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1771:C:C1'	36:DA:1786:A:C8	2.93	0.52
36:DA:2153:G:H2'	36:DA:2154:G:H8	1.75	0.52
36:DA:2185:C:C2'	36:DA:2186:G:H5'	2.36	0.52
36:DA:221:A:O2'	36:DA:222:A:OP2	2.27	0.52
36:DA:2464:C:O2'	36:DA:2465:C:H6	1.89	0.52
36:DA:652:C:HO2'	36:DA:653:A:P	2.32	0.52
36:DA:832:G:O2'	48:DP:52:GLU:HB3	2.10	0.52
38:DC:40:THR:HG22	38:DC:177:LYS:CE	2.40	0.52
41:DF:87:GLY:O	41:DF:88:VAL:HG12	2.10	0.52
46:DN:91:LEU:CD2	46:DN:98:VAL:HG21	2.39	0.52
54:DV:19:LYS:HA	54:DV:19:LYS:HE2	1.89	0.52
54:DV:62:LEU:N	54:DV:62:LEU:HD22	2.24	0.52
36:DA:992:C:O3'	54:DV:72:VAL:HG11	2.09	0.52
57:DY:86:ARG:HH21	57:DY:95:LYS:HZ3	1.56	0.52
58:DZ:155:LEU:CD2	58:DZ:155:LEU:H	2.19	0.52
58:DZ:27:VAL:HG22	58:DZ:28:MET:H	1.75	0.52
2:AB:164:VAL:HG12	2:AB:165:VAL:N	2.25	0.52
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.90	0.52
3:AC:157:ILE:CD1	3:AC:166:GLU:HB2	2.40	0.52
4:AD:150:GLU:CD	4:AD:151:LYS:N	2.59	0.52
4:AD:9:CYS:SG	4:AD:26:CYS:SG	3.07	0.52
5:AE:6:PHE:HD2	5:AE:36:ASP:HB3	1.74	0.52
6:AF:22:GLU:O	6:AF:25:ILE:HG22	2.10	0.52
7:AG:69:VAL:HG21	7:AG:104:LEU:CD1	2.39	0.52
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.10	0.52
10:AJ:40:LEU:HG	10:AJ:69:ASN:HB2	1.91	0.52
11:AK:27:ASN:HD21	11:AK:45:GLY:H	1.57	0.52
12:AL:51:ALA:C	12:AL:52:LEU:HD22	2.30	0.52
10:AJ:45:ARG:NE	14:AN:36:PHE:CD2	2.78	0.52
17:AQ:82:MET:O	17:AQ:86:GLU:HG2	2.10	0.52
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.42	0.52
25:AZ:324:LYS:O	25:AZ:325:LYS:C	2.48	0.52
27:B1:82:LEU:HD12	27:B1:83:GLU:H	1.74	0.52
28:B2:16:LEU:O	28:B2:20:GLU:HB3	2.10	0.52
36:BA:1131:G:H21	46:BN:73:THR:CG2	2.22	0.52
36:BA:1315:C:H2'	36:BA:1316:U:H6	1.75	0.52
36:BA:1403:C:H5''	36:BA:1471:A:C1'	2.39	0.52
36:BA:1751:C:O2'	36:BA:1752:C:H5'	2.10	0.52
36:BA:2110:G:H22	36:BA:2178:C:H5	1.55	0.52
38:BC:199:HIS:O	38:BC:201:PRO:HD3	2.10	0.52
41:BF:133:ASN:HB2	41:BF:138:GLU:OE2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:139:PHE:CB	41:BF:166:ALA:HB1	2.40	0.52
36:BA:2315:G:N3	42:BG:128:ARG:HG3	2.25	0.52
48:BP:122:PRO:HB3	48:BP:141:ALA:HB3	1.91	0.52
36:BA:2392:A:H8	48:BP:60:MET:HG2	1.74	0.52
51:BS:14:VAL:O	51:BS:15:ARG:HG3	2.10	0.52
52:BT:53:ARG:O	52:BT:59:THR:HB	2.10	0.52
52:BT:22:PHE:HE2	52:BT:85:LYS:HZ1	1.57	0.52
54:BV:72:VAL:HG23	54:BV:72:VAL:O	2.10	0.52
58:BZ:124:ILE:O	58:BZ:124:ILE:HG13	2.10	0.52
58:BZ:163:LEU:CG	58:BZ:165:VAL:HG13	2.40	0.52
58:BZ:5:LEU:HD11	58:BZ:39:VAL:HB	1.91	0.52
1:CA:1039:C:H2'	1:CA:1040:U:C6	2.44	0.52
1:CA:1327:C:O2'	1:CA:1328:C:H5'	2.10	0.52
1:CA:369:C:H5'	1:CA:369:C:C6	2.45	0.52
8:CH:44:PHE:CE2	8:CH:109:ILE:HG21	2.44	0.52
9:CI:10:ARG:HD3	9:CI:10:ARG:C	2.30	0.52
9:CI:49:PRO:O	9:CI:53:VAL:HG22	2.10	0.52
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.09	0.52
11:CK:44:SER:H	11:CK:47:VAL:HG23	1.74	0.52
13:CM:3:ARG:HH21	13:CM:7:VAL:HG13	1.71	0.52
16:CP:43:LYS:HA	16:CP:48:TRP:CB	2.40	0.52
16:CP:8:ARG:C	16:CP:9:PHE:HD1	2.13	0.52
22:CV:4:C:C3'	22:CV:5:G:H5''	2.40	0.52
25:CZ:317:GLU:HA	25:CZ:370:PHE:O	2.10	0.52
25:CZ:68:VAL:O	25:CZ:69:GLU:HB3	2.09	0.52
26:D0:36:ILE:HD11	36:DA:2355:C:C4'	2.40	0.52
28:D2:48:HIS:HA	36:DA:96:G:P	2.50	0.52
31:D5:3:LYS:H	31:D5:3:LYS:CD	2.18	0.52
36:DA:1163:G:O2'	36:DA:1164:G:H5'	2.10	0.52
36:DA:1827:C:O2'	36:DA:1828:G:H5'	2.10	0.52
36:DA:2195:C:O2'	36:DA:2196:C:H5'	2.10	0.52
36:DA:2464:C:O2'	36:DA:2465:C:O5'	2.28	0.52
36:DA:373:U:H2'	36:DA:374:A:H8	1.74	0.52
36:DA:644:A:C2	36:DA:2369:A:H1'	2.44	0.52
36:DA:852:G:H2'	36:DA:853:G:H8	1.74	0.52
28:D2:51:ARG:CZ	36:DA:94(A):G:H21	2.23	0.52
37:DB:105:A:H2'	37:DB:106:G:O4'	2.09	0.52
41:DF:185:ASP:O	41:DF:188:ARG:HG2	2.10	0.52
36:DA:615:G:OP2	41:DF:40:GLN:HG2	2.10	0.52
42:DG:171:ALA:O	42:DG:175:LEU:HG	2.10	0.52
42:DG:97:ASP:O	42:DG:101:ILE:HG13	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:105:LEU:N	43:DH:105:LEU:HD23	2.24	0.52
46:DN:43:THR:HB	46:DN:46:VAL:CG1	2.40	0.52
48:DP:23:PRO:HB2	48:DP:33:ARG:HD2	1.91	0.52
1:AA:1036:G:H5''	1:AA:1037:C:H5	1.71	0.52
1:AA:521:G:H4'	12:AL:73:GLU:HG3	1.90	0.52
9:AI:10:ARG:C	9:AI:10:ARG:HD3	2.30	0.52
13:AM:97:PRO:N	13:AM:110:ARG:HD3	2.24	0.52
13:AM:92:HIS:CE1	13:AM:98:VAL:HG21	2.44	0.52
15:AO:26:GLU:HB3	15:AO:81:LEU:HD23	1.91	0.52
20:AT:29:LYS:O	20:AT:33:ILE:HG13	2.10	0.52
25:AZ:126:VAL:HG13	61:AZ:502:KIR:H471	1.91	0.52
28:B2:18:PRO:HG3	28:B2:72:ALA:HA	1.92	0.52
30:B4:7:PRO:HD2	42:BG:65:GLY:O	2.09	0.52
32:B6:20:ASN:C	32:B6:21:TYR:CG	2.83	0.52
32:B6:30:THR:HG22	32:B6:31:PRO:CD	2.21	0.52
36:BA:1478:G:HO2'	36:BA:1558:A:H2	1.58	0.52
36:BA:1579:A:H2'	36:BA:1580:A:O4'	2.10	0.52
36:BA:184:C:H2'	36:BA:185:U:H6	1.74	0.52
36:BA:2153:G:H2'	36:BA:2154:G:H8	1.74	0.52
36:BA:469:G:C2'	36:BA:470:A:H5''	2.40	0.52
34:B8:61:LEU:CD2	36:BA:593:G:H4'	2.40	0.52
36:BA:623:G:H2'	36:BA:624:C:C6	2.45	0.52
36:BA:814:C:H2'	36:BA:815:C:C6	2.44	0.52
39:BD:109:ASP:HB2	39:BD:197:GLY:CA	2.40	0.52
40:BE:3:GLY:N	40:BE:81:ILE:HG21	2.25	0.52
41:BF:192:LEU:CD2	41:BF:194:MET:HG3	2.27	0.52
42:BG:37:VAL:HA	42:BG:158:ALA:O	2.10	0.52
42:BG:93:THR:O	42:BG:94:LEU:HD23	2.09	0.52
44:BJ:12:UNK:C	44:BJ:14:UNK:N	2.72	0.52
46:BN:2:LYS:HZ3	54:BV:12:TYR:HA	1.75	0.52
46:BN:67:LEU:O	46:BN:68:GLU:HB2	2.10	0.52
46:BN:91:LEU:HD23	46:BN:98:VAL:HG21	1.91	0.52
47:BO:26:LYS:HE3	47:BO:37:ASP:OD2	2.10	0.52
48:BP:24:GLY:HA3	48:BP:33:ARG:NH1	2.24	0.52
50:BR:7:GLY:O	50:BR:8:ARG:NH2	2.43	0.52
53:BU:57:PHE:CD1	53:BU:60:LEU:HD12	2.45	0.52
1:CA:57:G:H2'	1:CA:58:C:O4'	2.10	0.52
2:CB:42:ILE:HD13	2:CB:203:GLY:HA2	1.91	0.52
12:CL:17:LYS:HD3	12:CL:18:VAL:H	1.75	0.52
13:CM:116:THR:O	13:CM:117:VAL:C	2.49	0.52
25:CZ:356:PRO:HB2	25:CZ:359:VAL:HG21	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:51:VAL:N	26:D0:62:LEU:HD21	2.25	0.52
36:DA:1047:G:C2	36:DA:1110:G:H2'	2.45	0.52
36:DA:1320:C:C5	36:DA:1329:U:H5''	2.45	0.52
36:DA:1331:A:H2'	36:DA:1333:C:C5	2.45	0.52
36:DA:195:A:H5''	36:DA:196:A:OP2	2.10	0.52
36:DA:363(A):A:C2	36:DA:363(B):G:C8	2.98	0.52
38:DC:72:VAL:CG1	38:DC:157:LYS:HA	2.40	0.52
40:DE:179:GLU:O	40:DE:180:ASN:HB2	2.09	0.52
40:DE:55:ASN:O	40:DE:56:PRO:C	2.48	0.52
49:DQ:21:THR:OG1	49:DQ:99:PRO:O	2.27	0.52
51:DS:73:LEU:O	51:DS:73:LEU:HD23	2.09	0.52
53:DU:59:ARG:O	53:DU:60:LEU:C	2.48	0.52
55:DW:8:ARG:NH1	55:DW:8:ARG:HG2	2.25	0.52
58:DZ:27:VAL:HG22	58:DZ:28:MET:N	2.25	0.52
58:DZ:55:HIS:O	58:DZ:57:ILE:HD12	2.10	0.52
1:AA:188:C:O4'	20:AT:89:ARG:NH1	2.43	0.52
1:AA:434:U:H2'	1:AA:435:C:H6	1.73	0.52
5:AE:145:LYS:O	5:AE:149:GLU:HG3	2.10	0.52
5:AE:68:GLU:O	5:AE:68:GLU:HG3	2.10	0.52
7:AG:143:ARG:HD3	22:AW:42:C:OP1	2.10	0.52
8:AH:44:PHE:HE2	8:AH:109:ILE:HG21	1.75	0.52
11:AK:57:THR:OG1	11:AK:58:PRO:HD2	2.09	0.52
20:AT:26:ASN:O	20:AT:30:LYS:HB2	2.09	0.52
24:AY:2:G:O2'	24:AY:3:G:H5''	2.10	0.52
25:AZ:338:TYR:O	25:AZ:353:VAL:HG23	2.10	0.52
31:B5:45:VAL:HG22	31:B5:51:TYR:HB2	1.91	0.52
36:BA:1278:A:OP1	50:BR:36:THR:HA	2.09	0.52
36:BA:1788:C:O2'	36:BA:1789:A:H5'	2.09	0.52
36:BA:250:G:H2'	36:BA:251:A:C8	2.45	0.52
36:BA:88:G:N3	36:BA:88:G:H2'	2.24	0.52
36:BA:1801:G:OP2	39:BD:154:LYS:HE3	2.09	0.52
42:BG:86:MET:N	42:BG:87:PRO:CD	2.72	0.52
43:BH:83:TYR:HB3	43:BH:135:GLY:N	2.24	0.52
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.21	0.52
48:BP:58:THR:O	48:BP:58:THR:HG22	2.09	0.52
53:BU:105:VAL:O	53:BU:108:GLU:HB2	2.10	0.52
54:BV:38:LEU:C	54:BV:38:LEU:HD23	2.31	0.52
1:CA:858:G:C5	1:CA:869:G:N7	2.77	0.52
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.09	0.52
4:CD:62:GLN:NE2	4:CD:62:GLN:HA	2.22	0.52
6:CF:38:GLU:O	6:CF:39:LYS:O	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:41:VAL:HG12	9:CI:41:VAL:O	2.10	0.52
9:CI:10:ARG:HG3	9:CI:75:ASP:HB3	1.91	0.52
10:CJ:38:ILE:CD1	10:CJ:71:LEU:HB3	2.40	0.52
12:CL:69:TYR:O	12:CL:71:PRO:HD3	2.09	0.52
22:CW:5:G:C6	22:CW:6:G:C5	2.98	0.52
25:CZ:277:LEU:CD1	25:CZ:279:GLU:H	2.22	0.52
34:D8:58:ILE:HG22	34:D8:58:ILE:O	2.10	0.52
36:DA:1142(A):A:C8	36:DA:1142(A):A:H5'	2.45	0.52
36:DA:1331:A:O2'	36:DA:1332:G:H5''	2.10	0.52
36:DA:1417:C:O2'	36:DA:1418:G:H5'	2.10	0.52
27:D1:45:ASN:CB	36:DA:2230:G:H1'	2.40	0.52
36:DA:2651:C:O2'	36:DA:2652:C:H5'	2.09	0.52
36:DA:426:C:O2'	36:DA:427:U:H5'	2.10	0.52
36:DA:436:C:H2'	36:DA:437:G:H8	1.75	0.52
36:DA:460:A:H2'	36:DA:461:C:O4'	2.09	0.52
36:DA:740:U:H2'	36:DA:741:G:C8	2.45	0.52
36:DA:996:A:O3'	53:DU:92:ARG:HG2	2.09	0.52
37:DB:81:G:O6	37:DB:96:U:O2	2.28	0.52
38:DC:75:LEU:HG	38:DC:112:ALA:O	2.10	0.52
36:DA:773:U:H4'	39:DD:47:GLY:HA3	1.92	0.52
42:DG:6:ALA:HB3	42:DG:104:GLU:OE2	2.09	0.52
42:DG:16:ARG:N	42:DG:17:PRO:HD2	2.25	0.52
48:DP:146:VAL:CG2	48:DP:147:LEU:H	2.05	0.52
36:DA:661:C:H4'	48:DP:16:ARG:NH1	2.24	0.52
36:DA:1187:G:H5''	54:DV:81:TYR:CE2	2.45	0.52
57:DY:10:GLY:C	57:DY:27:VAL:HG22	2.30	0.52
57:DY:61:ILE:O	57:DY:62:GLU:HB2	2.10	0.52
1:AA:57:G:H2'	1:AA:58:C:O4'	2.10	0.52
4:AD:55:ALA:O	4:AD:59:ARG:HG2	2.09	0.52
8:AH:4:ASP:OD2	8:AH:85:ARG:NE	2.38	0.52
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.92	0.52
22:AV:63:G:H2'	22:AV:64:A:O4'	2.10	0.52
25:AZ:325:LYS:O	25:AZ:328:GLY:N	2.43	0.52
28:B2:7:ARG:HD3	28:B2:7:ARG:H	1.75	0.52
32:B6:44:ARG:C	32:B6:45:LYS:HD2	2.30	0.52
35:B9:10:ILE:O	35:B9:14:CYS:SG	2.49	0.52
36:BA:1109:C:H2'	36:BA:1110:G:H5'	1.92	0.52
36:BA:2155:G:H3'	36:BA:2156:G:H8	1.75	0.52
36:BA:492:A:H2'	36:BA:493:G:O4'	2.09	0.52
36:BA:61:G:H1	36:BA:94:C:H42	1.58	0.52
39:BD:131:LEU:N	39:BD:131:LEU:HD12	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:130:ASN:OD1	42:BG:160:VAL:HG13	2.09	0.52
36:BA:1952:A:C6	47:BO:22:ILE:HD12	2.45	0.52
48:BP:84:ASN:C	48:BP:86:LYS:H	2.11	0.52
51:BS:16:ASN:O	51:BS:18:ILE:HD12	2.10	0.52
52:BT:103:ARG:O	52:BT:105:LEU:N	2.43	0.52
54:BV:67:GLY:O	54:BV:88:ARG:HD2	2.10	0.52
1:CA:171:A:H2'	1:CA:172:A:C8	2.45	0.52
1:CA:635:G:O2'	1:CA:636:U:H5'	2.10	0.52
2:CB:129:GLU:O	2:CB:130:ARG:O	2.28	0.52
5:CE:6:PHE:HD2	5:CE:36:ASP:HB3	1.75	0.52
9:CI:110:GLU:HG2	9:CI:119:ALA:HB1	1.92	0.52
9:CI:95:LYS:HD3	9:CI:95:LYS:C	2.31	0.52
20:CT:72:LEU:O	20:CT:73:HIS:C	2.47	0.52
32:D6:11:LEU:HD13	32:D6:12:GLU:N	2.25	0.52
36:DA:1090:U:H2'	36:DA:1091:G:O4'	2.10	0.52
36:DA:1525:G:O2'	36:DA:1526:G:H5'	2.09	0.52
36:DA:1858:G:O2'	36:DA:1884:A:N6	2.43	0.52
36:DA:67:U:H2'	36:DA:68:G:H8	1.75	0.52
41:DF:156:LEU:HD12	41:DF:193:VAL:O	2.10	0.52
42:DG:66:GLN:NE2	42:DG:67:LYS:CE	2.73	0.52
51:DS:24:LEU:O	51:DS:85:VAL:HB	2.10	0.52
57:DY:88:LYS:HZ2	57:DY:93:GLY:HA3	1.74	0.52
36:DA:1076:C:C4'	58:DZ:112:ARG:HH21	2.15	0.52
12:AL:41:ARG:CZ	12:AL:41:ARG:HB2	2.40	0.51
12:AL:43:VAL:HG21	12:AL:93:LEU:HD22	1.92	0.51
19:AS:10:PHE:CZ	19:AS:37:ARG:O	2.63	0.51
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.10	0.51
22:AW:20:U:O2'	22:AW:21:A:H4'	2.11	0.51
24:AY:68:C:H2'	24:AY:69:C:C6	2.45	0.51
25:AZ:389:ARG:HH11	25:AZ:389:ARG:HG2	1.75	0.51
34:B8:50:LEU:C	34:B8:52:LYS:H	2.13	0.51
36:BA:1331:A:H2'	36:BA:1333:C:C5	2.44	0.51
36:BA:2152:G:O2'	36:BA:2153:G:H5'	2.09	0.51
36:BA:2657:A:H3'	36:BA:2658:C:H6	1.75	0.51
43:BH:85:LYS:CE	43:BH:85:LYS:C	2.79	0.51
46:BN:10:GLU:CD	46:BN:11:PRO:HD2	2.30	0.51
46:BN:61:ARG:HG3	46:BN:61:ARG:NH1	2.25	0.51
50:BR:37:THR:HA	50:BR:111:LEU:HA	1.90	0.51
50:BR:2:ARG:HG2	50:BR:5:LYS:HD3	1.91	0.51
53:BU:88:ILE:HG23	53:BU:90:VAL:CG2	2.40	0.51
36:BA:1598:C:H5'	56:BX:36:LYS:HD3	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:7:ALA:HB3	58:BZ:61:LEU:CD2	2.35	0.51
1:CA:1202:G:O2'	1:CA:1203:C:H5'	2.10	0.51
1:CA:1256:A:H1'	1:CA:1258:G:C6	2.44	0.51
6:CF:42:GLU:HG2	6:CF:42:GLU:O	2.10	0.51
8:CH:20:TYR:CE1	8:CH:78:GLN:NE2	2.78	0.51
20:CT:26:ASN:N	20:CT:26:ASN:HD22	2.08	0.51
25:CZ:130:TYR:CE2	25:CZ:211:PRO:HD2	2.45	0.51
25:CZ:135:MET:O	25:CZ:138:VAL:HG23	2.10	0.51
25:CZ:139:ASP:OD2	25:CZ:177:LEU:HD11	2.10	0.51
25:CZ:272:MET:CG	25:CZ:277:LEU:HD23	2.41	0.51
29:D3:7:LYS:O	29:D3:54:VAL:HG13	2.09	0.51
32:D6:30:THR:HG22	32:D6:31:PRO:CD	2.21	0.51
34:D8:11:LYS:HZ2	34:D8:60:LEU:CD2	2.23	0.51
36:DA:1013:C:H2'	36:DA:1014:U:C6	2.45	0.51
36:DA:1354:A:H2'	36:DA:1355:G:O4'	2.09	0.51
36:DA:1502:C:H5'	36:DA:1503:U:OP2	2.10	0.51
34:D8:8:LYS:HE3	36:DA:245:G:O6	2.10	0.51
28:D2:47:ASN:HB2	36:DA:94(A):G:O2'	2.10	0.51
37:DB:56:G:H4'	37:DB:57:A:O5'	2.11	0.51
43:DH:146:ALA:O	43:DH:149:ARG:N	2.43	0.51
57:DY:17:SER:HB2	57:DY:71:LYS:CE	2.40	0.51
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.45	0.51
1:AA:197:A:H4'	1:AA:198:G:O5'	2.10	0.51
1:AA:544:G:OP1	4:AD:59:ARG:NH2	2.43	0.51
1:AA:979:C:C3'	1:AA:980:C:H5''	2.26	0.51
6:AF:42:GLU:O	6:AF:42:GLU:HG2	2.11	0.51
14:AN:12:ARG:HB3	14:AN:12:ARG:HH11	1.74	0.51
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.44	0.51
25:AZ:17:ILE:HG13	25:AZ:104:LEU:HA	1.92	0.51
28:B2:35:LEU:CD1	28:B2:50:ILE:HG23	2.40	0.51
34:B8:41:ILE:HD12	36:BA:2419:U:OP1	2.10	0.51
36:BA:1773:A:H2'	36:BA:1774:C:H5'	1.92	0.51
36:BA:1827:C:H2'	36:BA:1828:G:H5'	1.91	0.51
36:BA:1948:G:C5'	36:BA:1948:G:C8	2.88	0.51
36:BA:1889:A:O2'	36:BA:2087:G:H5'	2.11	0.51
36:BA:2199:A:N3	36:BA:2199:A:H2'	2.25	0.51
36:BA:2591:C:P	39:BD:239:ARG:HG2	2.51	0.51
36:BA:2887:U:O2'	36:BA:2888:C:H5'	2.10	0.51
36:BA:796:C:H2'	36:BA:797:C:C6	2.45	0.51
39:BD:4:LYS:HZ1	39:BD:20:ASP:HA	1.75	0.51
42:BG:83:ARG:HD2	42:BG:84:LYS:HZ2	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:107:ARG:HA	47:BO:112:MET:HE1	1.92	0.51
48:BP:106:LEU:HD21	48:BP:112:LEU:HB2	1.92	0.51
50:BR:41:ALA:O	50:BR:44:LEU:N	2.42	0.51
52:BT:123:GLN:HA	52:BT:126:ALA:HB3	1.92	0.51
47:BO:104:ARG:NE	52:BT:33:LYS:HD2	2.25	0.51
58:BZ:51:ALA:HB1	58:BZ:57:ILE:CD1	2.33	0.51
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.92	0.51
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.25	0.51
1:CA:197:A:H4'	1:CA:198:G:O5'	2.10	0.51
1:CA:332:G:O2'	1:CA:333:G:H5'	2.10	0.51
1:CA:447:G:H2'	1:CA:485:G:N2	2.24	0.51
1:CA:57:G:H2'	1:CA:58:C:C6	2.45	0.51
1:CA:66:G:H4'	1:CA:173:U:C5	2.46	0.51
17:CQ:45:HIS:HA	17:CQ:69:LYS:HZ1	1.75	0.51
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.11	0.51
25:CZ:338:TYR:O	25:CZ:353:VAL:HG23	2.10	0.51
34:D8:17:THR:HG22	34:D8:21:LYS:O	2.10	0.51
34:D8:62:LEU:N	34:D8:63:PRO:CD	2.72	0.51
36:DA:1013:C:H2'	36:DA:1014:U:H6	1.75	0.51
36:DA:1124:C:H2'	36:DA:1125:G:O4'	2.10	0.51
36:DA:1754:C:OP1	52:DT:96:ARG:NH1	2.32	0.51
36:DA:1880:C:H2'	36:DA:1881:C:H5''	1.92	0.51
36:DA:2136:C:H2'	36:DA:2137:C:C6	2.42	0.51
36:DA:2682:U:H6	36:DA:2682:U:H5'	1.74	0.51
36:DA:2713:A:H3'	36:DA:2714:G:C5'	2.41	0.51
36:DA:271(L):U:C5'	36:DA:271(M):G:H5'	2.31	0.51
36:DA:2869:G:H2'	36:DA:2870:C:C6	2.45	0.51
36:DA:322:A:C5'	36:DA:340:A:H1'	2.40	0.51
36:DA:634:C:H2'	36:DA:635:C:C6	2.44	0.51
37:DB:55:U:H2'	37:DB:56:G:C8	2.45	0.51
37:DB:96:U:H2'	37:DB:97:G:H8	1.74	0.51
40:DE:50:GLY:HA2	40:DE:78:LEU:HB3	1.92	0.51
40:DE:33:VAL:CG1	40:DE:69:LYS:HE3	2.39	0.51
46:DN:10:GLU:CD	46:DN:11:PRO:HD2	2.30	0.51
52:DT:50:ILE:HD11	52:DT:102:ILE:CD1	2.40	0.51
53:DU:57:PHE:CD1	53:DU:60:LEU:HD12	2.45	0.51
57:DY:43:ASN:HB2	57:DY:64:GLU:HA	1.91	0.51
57:DY:75:ILE:HG13	57:DY:76:CYS:N	2.25	0.51
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.10	0.51
1:AA:1498:U:H4'	1:AA:1519:A:C2	2.45	0.51
1:AA:484:G:H4'	1:AA:485:G:O5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:200:ILE:HG22	2:AB:201:ILE:H	1.76	0.51
6:AF:43:LEU:HD22	6:AF:43:LEU:N	2.23	0.51
12:AL:102:ARG:HH12	12:AL:110:VAL:HG22	1.72	0.51
16:AP:53:VAL:HG23	16:AP:54:GLU:HG2	1.92	0.51
27:B1:4:VAL:HG23	27:B1:10:LYS:O	2.10	0.51
31:B5:24:ALA:O	31:B5:25:LEU:CB	2.57	0.51
31:B5:36:CYS:O	31:B5:38:ALA:N	2.42	0.51
34:B8:49:VAL:CG1	34:B8:52:LYS:HB3	2.40	0.51
36:BA:1477:A:C2	36:BA:1515:G:C2	2.98	0.51
36:BA:1514:U:H2'	36:BA:1515:G:C8	2.46	0.51
34:B8:62:LEU:CD1	36:BA:242:G:H5''	2.21	0.51
34:B8:62:LEU:HB3	36:BA:242:G:H5'	1.92	0.51
36:BA:2746:U:H2'	36:BA:2747:G:O4'	2.10	0.51
36:BA:528:A:C2	36:BA:2043:C:O5'	2.61	0.51
39:BD:131:LEU:HB2	39:BD:136:ILE:CD1	2.40	0.51
39:BD:267:SER:C	39:BD:269:PHE:N	2.52	0.51
39:BD:9:TYR:CD1	39:BD:10:THR:HG22	2.45	0.51
40:BE:44:TYR:O	40:BE:45:THR:CB	2.59	0.51
41:BF:3:GLU:CB	41:BF:24:LEU:HG	2.39	0.51
42:BG:5:VAL:HG11	42:BG:100:TRP:HB3	1.91	0.51
55:BW:4:LYS:HD3	55:BW:6:ILE:HD11	1.92	0.51
56:BX:35:THR:O	56:BX:39:ILE:HG13	2.10	0.51
57:BY:17:SER:HB2	57:BY:71:LYS:CE	2.40	0.51
58:BZ:141:VAL:HG13	58:BZ:144:LEU:HB3	1.92	0.51
49:BQ:141:GLN:OXT	58:BZ:53:ILE:HD12	2.10	0.51
1:CA:328:C:H4'	1:CA:329:A:H5'	1.92	0.51
1:CA:544:G:OP1	4:CD:59:ARG:NH2	2.44	0.51
1:CA:858:G:H5''	1:CA:858:G:H8	1.74	0.51
3:CC:71:ALA:HA	3:CC:106:VAL:HG22	1.91	0.51
7:CG:41:ARG:HG2	7:CG:41:ARG:HH11	1.75	0.51
1:CA:973:G:H1'	10:CJ:55:LYS:HE3	1.92	0.51
13:CM:6:GLY:O	13:CM:8:GLU:N	2.38	0.51
19:CS:31:ILE:HG23	19:CS:49:ILE:HG23	1.91	0.51
21:CU:12:LYS:HG2	21:CU:22:ARG:HB3	1.91	0.51
22:CV:59:U:O2'	22:CV:60:U:O4'	2.27	0.51
25:CZ:166:ASP:O	25:CZ:167:GLU:HG2	2.10	0.51
29:D3:7:LYS:O	29:D3:54:VAL:HA	2.11	0.51
34:D8:48:PHE:O	34:D8:49:VAL:HG23	2.11	0.51
36:DA:1827:C:H2'	36:DA:1828:G:H5'	1.92	0.51
36:DA:2050:C:H2'	36:DA:2051:A:O4'	2.11	0.51
36:DA:2074:U:H2'	36:DA:2075:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2087:G:O2'	36:DA:2088:G:H5'	2.09	0.51
36:DA:2107:C:C5	36:DA:2108:C:C5	2.98	0.51
36:DA:2127:G:H4'	38:DC:37:PHE:CD1	2.46	0.51
26:D0:43:THR:HG21	36:DA:2336:A:H61	1.74	0.51
36:DA:8:A:H2'	36:DA:9:U:C6	2.45	0.51
39:DD:109:ASP:HB2	39:DD:197:GLY:CA	2.40	0.51
41:DF:39:TRP:CB	41:DF:101:LEU:HD22	2.40	0.51
36:DA:1278:A:OP1	50:DR:36:THR:HA	2.10	0.51
50:DR:2:ARG:HG2	50:DR:5:LYS:HD3	1.93	0.51
51:DS:15:ARG:NH1	51:DS:15:ARG:HG2	2.24	0.51
13:AM:77:ASN:O	13:AM:81:LEU:HD23	2.09	0.51
20:AT:86:ARG:HG3	20:AT:86:ARG:HH11	1.75	0.51
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.10	0.51
25:AZ:139:ASP:OD2	25:AZ:177:LEU:HD11	2.10	0.51
35:B9:1:MET:HB3	35:B9:31:LYS:O	2.10	0.51
36:BA:1090:U:H2'	36:BA:1091:G:O4'	2.10	0.51
36:BA:15:G:O2'	36:BA:16:G:H5'	2.11	0.51
36:BA:1771:C:C1'	36:BA:1786:A:C8	2.94	0.51
36:BA:363(A):A:C2	36:BA:363(B):G:C8	2.98	0.51
36:BA:657:U:H2'	36:BA:658:C:H6	1.75	0.51
39:BD:16:MET:HE1	39:BD:208:LYS:HG2	1.92	0.51
42:BG:150:ASP:O	42:BG:151:ALA:HB2	2.10	0.51
36:BA:1141:U:H6	46:BN:63:THR:CG2	2.23	0.51
47:BO:43:VAL:HG21	47:BO:52:VAL:CG1	2.39	0.51
48:BP:23:PRO:HB2	48:BP:33:ARG:HD2	1.92	0.51
48:BP:30:THR:HG23	48:BP:31:ALA:H	1.75	0.51
48:BP:45:LEU:CD1	48:BP:46:LYS:H	2.22	0.51
48:BP:65:ARG:O	48:BP:67:MET:N	2.43	0.51
48:BP:77:ARG:HD3	48:BP:78:PRO:HD2	1.92	0.51
50:BR:117:VAL:CG2	50:BR:118:GLU:N	2.74	0.51
51:BS:97:ARG:NH1	51:BS:98:VAL:O	2.44	0.51
54:BV:39:LEU:O	54:BV:40:LEU:HB2	2.10	0.51
58:BZ:53:ILE:HG22	58:BZ:71:VAL:O	2.10	0.51
1:CA:1221:G:O2'	1:CA:1222:G:H5'	2.09	0.51
1:CA:1314:C:O2'	1:CA:1315:U:H5'	2.11	0.51
1:CA:757:U:H2'	1:CA:758:G:O4'	2.10	0.51
6:CF:82:ARG:HB2	6:CF:85:VAL:CG2	2.41	0.51
7:CG:50:ILE:HD12	7:CG:125:MET:HG3	1.92	0.51
13:CM:11:ARG:H	13:CM:45:VAL:HG11	1.76	0.51
18:CR:29:PHE:HD1	18:CR:29:PHE:N	2.08	0.51
22:CW:26:A:H61	22:CW:44:G:H1	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:39:U:H4'	22:CW:39:U:OP1	2.10	0.51
22:CW:3:C:H2'	22:CW:4:C:O4'	2.10	0.51
24:CY:75:C:O4'	24:CY:75:C:O2	2.26	0.51
25:CZ:254:GLU:CD	25:CZ:307:PRO:HA	2.31	0.51
26:D0:10:THR:HG21	36:DA:2277:G:OP2	2.11	0.51
30:D4:22:ILE:HD12	30:D4:22:ILE:N	2.25	0.51
36:DA:1023:U:H2'	36:DA:1024:G:H5'	1.92	0.51
36:DA:1558:A:H4'	36:DA:1559:G:O5'	2.11	0.51
36:DA:1697:G:C3'	36:DA:1698:A:H5''	2.36	0.51
36:DA:1751:C:O2'	36:DA:1752:C:H5'	2.10	0.51
36:DA:2514:U:H2'	36:DA:2515:C:H6	1.75	0.51
36:DA:284:U:H2'	36:DA:285:C:C6	2.46	0.51
36:DA:321:G:H5''	36:DA:322:A:OP2	2.10	0.51
36:DA:45:C:H2'	36:DA:47:C:H6	1.75	0.51
36:DA:500:G:H22	36:DA:502:A:H3'	1.76	0.51
39:DD:80:ALA:HB2	39:DD:96:HIS:CD2	2.46	0.51
41:DF:46:ARG:HG2	41:DF:46:ARG:NH1	2.23	0.51
46:DN:62:VAL:HG22	46:DN:66:LYS:HD2	1.92	0.51
48:DP:46:LYS:CB	48:DP:52:GLU:HG2	2.40	0.51
51:DS:85:VAL:HG23	51:DS:106:ARG:CG	2.38	0.51
51:DS:87:PHE:CG	51:DS:88:ASP:N	2.78	0.51
56:DX:10:ALA:O	56:DX:28:PHE:HB3	2.10	0.51
57:DY:13:VAL:CG2	57:DY:72:VAL:HB	2.40	0.51
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.11	0.51
1:AA:269:C:H2'	1:AA:270:A:C8	2.46	0.51
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.93	0.51
1:AA:924:C:H2'	1:AA:925:G:C8	2.46	0.51
3:AC:32:LEU:HD22	3:AC:59:ARG:HH11	1.73	0.51
7:AG:59:LEU:O	7:AG:59:LEU:HG	2.10	0.51
9:AI:95:LYS:HD3	9:AI:96:LEU:N	2.25	0.51
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.92	0.51
15:AO:17:ARG:HH11	15:AO:77:ARG:NH1	2.08	0.51
22:AV:5:G:H8	22:AV:5:G:H5'	1.74	0.51
25:AZ:98:GLN:HG2	25:AZ:226:GLU:OE2	2.11	0.51
25:AZ:295:ARG:NH1	25:AZ:295:ARG:HG2	2.25	0.51
32:B6:18:ARG:HG3	32:B6:19:ARG:H	1.75	0.51
32:B6:27:LYS:HG3	32:B6:30:THR:HB	1.93	0.51
36:BA:1288:U:C2	36:BA:1327:C:O2	2.63	0.51
36:BA:1858:G:H2'	36:BA:1883:G:N2	2.25	0.51
36:BA:2295:C:O2'	36:BA:2296:U:H5'	2.10	0.51
36:BA:2726:U:H6	47:BO:67:LYS:HZ3	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:359:A:H3'	36:BA:360:G:H8	1.75	0.51
36:BA:523:C:H2'	36:BA:524:U:H5'	1.93	0.51
36:BA:580:C:H2'	36:BA:581:C:H6	1.75	0.51
36:BA:671:C:H2'	36:BA:672:C:H6	1.75	0.51
40:BE:47:VAL:HG21	40:BE:86:PRO:CD	2.40	0.51
40:BE:93:VAL:C	40:BE:95:ILE:H	2.14	0.51
36:BA:1257:C:O2'	41:BF:83:PHE:HA	2.10	0.51
42:BG:106:LEU:HA	42:BG:110:ALA:HB3	1.93	0.51
42:BG:32:PRO:HB3	42:BG:163:ALA:HB2	1.91	0.51
43:BH:33:LEU:HD21	43:BH:136:ILE:HG22	1.93	0.51
46:BN:23:LEU:HD21	46:BN:102:ALA:HB1	1.92	0.51
47:BO:4:PRO:O	47:BO:5:GLN:CB	2.59	0.51
48:BP:62:LEU:HD23	48:BP:62:LEU:N	2.04	0.51
49:BQ:109:VAL:HG13	49:BQ:113:GLN:OE1	2.09	0.51
50:BR:115:GLU:HG2	50:BR:117:VAL:H	1.75	0.51
52:BT:50:ILE:HD11	52:BT:102:ILE:CD1	2.40	0.51
52:BT:83:ILE:CG1	52:BT:84:GLN:N	2.73	0.51
54:BV:82:ARG:NH1	54:BV:82:ARG:HG2	2.25	0.51
56:BX:10:ALA:O	56:BX:28:PHE:HB3	2.10	0.51
57:BY:43:ASN:HB2	57:BY:64:GLU:HA	1.92	0.51
58:BZ:145:GLU:HG3	58:BZ:146:ILE:N	2.26	0.51
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.11	0.51
2:CB:30:ARG:HG3	2:CB:31:TYR:CE1	2.45	0.51
3:CC:65:ALA:O	3:CC:100:ALA:O	2.28	0.51
5:CE:11:ILE:HG21	5:CE:105:VAL:HG22	1.91	0.51
8:CH:119:LEU:HD12	8:CH:124:ALA:CA	2.40	0.51
8:CH:83:ILE:HG13	8:CH:137:VAL:HG22	1.91	0.51
12:CL:126:LYS:O	12:CL:128:ALA:N	2.43	0.51
12:CL:51:ALA:O	12:CL:52:LEU:HD22	2.10	0.51
16:CP:25:ARG:HG3	16:CP:25:ARG:NH1	2.24	0.51
20:CT:62:LEU:O	20:CT:65:LYS:HB2	2.11	0.51
24:CY:26:A:H2'	24:CY:27:C:O4'	2.10	0.51
24:CY:67:G:H2'	24:CY:68:C:C6	2.45	0.51
25:CZ:231:ILE:O	25:CZ:231:ILE:HG22	2.10	0.51
28:D2:49:LYS:HB3	28:D2:49:LYS:NZ	2.25	0.51
28:D2:53:LEU:O	28:D2:57:ILE:HB	2.11	0.51
30:D4:36:CYS:SG	30:D4:37:SER:O	2.69	0.51
30:D4:5:ILE:CG1	30:D4:5:ILE:O	2.58	0.51
32:D6:27:LYS:HE2	32:D6:30:THR:H	1.75	0.51
36:DA:1880:C:C2'	36:DA:1881:C:H5''	2.40	0.51
36:DA:2199:A:H3'	36:DA:2200:C:H6	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:580:C:H2'	36:DA:581:C:H6	1.75	0.51
39:DD:111:LEU:HD23	39:DD:115:GLN:OE1	2.09	0.51
41:DF:139:PHE:CB	41:DF:166:ALA:HB1	2.40	0.51
43:DH:33:LEU:HD21	43:DH:136:ILE:HG22	1.92	0.51
43:DH:149:ARG:HA	43:DH:162:ILE:CD1	2.40	0.51
46:DN:21:LYS:HE3	46:DN:25:ARG:HB3	1.92	0.51
46:DN:42:TRP:CH2	46:DN:44:PRO:HA	2.46	0.51
46:DN:55:VAL:HG22	46:DN:56:ASN:H	1.75	0.51
46:DN:61:ARG:NH1	46:DN:61:ARG:HG3	2.25	0.51
56:DX:40:LYS:O	56:DX:44:GLU:HB2	2.10	0.51
1:AA:635:G:O2'	1:AA:636:U:H5'	2.10	0.51
1:AA:668:G:O2'	15:AO:46:HIS:HD2	1.94	0.51
2:AB:129:GLU:O	2:AB:130:ARG:O	2.28	0.51
3:AC:134:ILE:HD11	3:AC:153:VAL:HB	1.93	0.51
3:AC:22:TRP:CE2	14:AN:54:PRO:HG2	2.45	0.51
4:AD:36:ARG:C	4:AD:38:TYR:H	2.14	0.51
9:AI:19:LEU:C	9:AI:19:LEU:HD23	2.31	0.51
9:AI:93:ARG:C	9:AI:95:LYS:H	2.14	0.51
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.64	0.51
10:AJ:16:LEU:HD11	10:AJ:70:ARG:HG2	1.93	0.51
25:AZ:205:ALA:HA	25:AZ:208:GLU:OE2	2.10	0.51
25:AZ:221:PHE:HE1	25:AZ:242:ILE:HD13	1.75	0.51
24:AY:1:A:H5'	25:AZ:300:ARG:CZ	2.40	0.51
30:B4:27:THR:O	30:B4:28:LYS:HB3	2.10	0.51
32:B6:53:LYS:CG	32:B6:54:ILE:N	2.67	0.51
36:BA:1231:G:H2'	36:BA:1232:G:H8	1.75	0.51
36:BA:1523:U:H2'	36:BA:1524:G:C8	2.45	0.51
36:BA:425:G:O2'	36:BA:426:C:H5'	2.10	0.51
41:BF:183:VAL:O	41:BF:187:VAL:HG23	2.10	0.51
43:BH:105:LEU:HD23	43:BH:105:LEU:N	2.24	0.51
43:BH:146:ALA:O	43:BH:149:ARG:N	2.43	0.51
48:BP:24:GLY:HA3	48:BP:33:ARG:HH12	1.76	0.51
34:B8:12:LYS:O	48:BP:65:ARG:HB2	2.11	0.51
50:BR:101:ALA:O	50:BR:102:GLU:HB2	2.09	0.51
52:BT:100:TYR:O	52:BT:103:ARG:HG3	2.11	0.51
55:BW:11:ARG:HG2	55:BW:11:ARG:NH1	2.24	0.51
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.46	0.51
1:CA:186:C:C2	1:CA:187:C:C5	2.99	0.51
1:CA:792:A:H4'	1:CA:793:U:O5'	2.10	0.51
2:CB:25:ASN:HB2	2:CB:191:ASP:O	2.11	0.51
3:CC:107:GLN:N	3:CC:107:GLN:CD	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:95:THR:CG2	3:CC:95:THR:O	2.56	0.51
4:CD:133:VAL:HG11	4:CD:138:TYR:CD1	2.46	0.51
8:CH:9:MET:O	8:CH:13:ILE:HG12	2.10	0.51
13:CM:91:ARG:HD3	13:CM:97:PRO:O	2.11	0.51
17:CQ:52:LYS:H	17:CQ:52:LYS:CD	2.23	0.51
19:CS:16:LEU:O	19:CS:20:LEU:N	2.42	0.51
22:CW:20:U:O2'	22:CW:21:A:H4'	2.10	0.51
22:CW:7:A:C6	22:CW:49:C:N4	2.77	0.51
25:CZ:124:ARG:HH11	25:CZ:124:ARG:HG3	1.76	0.51
25:CZ:224:PRO:HA	25:CZ:303:VAL:HG12	1.93	0.51
27:D1:72:GLU:O	27:D1:73:LEU:HD23	2.11	0.51
28:D2:29:LYS:NZ	28:D2:32:LEU:HD11	2.25	0.51
30:D4:22:ILE:HG22	30:D4:24:THR:HG23	1.93	0.51
33:D7:30:VAL:HA	33:D7:33:ARG:HH21	1.75	0.51
36:DA:1288:U:C2	36:DA:1327:C:O2	2.64	0.51
36:DA:1315:C:H2'	36:DA:1316:U:H6	1.75	0.51
36:DA:1796:U:H2'	36:DA:1797:C:C6	2.46	0.51
36:DA:2199:A:H2'	36:DA:2199:A:N3	2.25	0.51
34:D8:5:LYS:HG2	36:DA:242:G:C8	2.46	0.51
36:DA:88:G:H2'	36:DA:88:G:N3	2.24	0.51
39:DD:37:LEU:HD23	39:DD:38:LYS:H	1.75	0.51
40:DE:167:VAL:HG12	40:DE:189:PRO:CD	2.38	0.51
41:DF:170:LEU:CB	41:DF:173:VAL:HB	2.41	0.51
42:DG:57:ALA:C	42:DG:59:GLU:H	2.14	0.51
43:DH:97:ARG:NH2	43:DH:99:VAL:HG21	2.26	0.51
48:DP:6:LEU:N	48:DP:6:LEU:HD23	2.26	0.51
50:DR:41:ALA:O	50:DR:44:LEU:N	2.43	0.51
54:DV:39:LEU:O	54:DV:40:LEU:HB2	2.09	0.51
54:DV:62:LEU:H	54:DV:62:LEU:HD22	1.75	0.51
57:DY:85:VAL:HG12	57:DY:86:ARG:H	1.75	0.51
1:AA:1193:G:OP1	3:AC:167:TRP:HZ3	1.94	0.51
1:AA:222:U:H2'	1:AA:223:U:C6	2.45	0.51
1:AA:707:C:H2'	1:AA:708:C:H6	1.76	0.51
1:AA:858:G:N1	1:AA:869:G:C8	2.78	0.51
3:AC:40:ARG:O	3:AC:44:GLU:HG3	2.11	0.51
3:AC:35:GLU:CG	3:AC:59:ARG:HH22	2.24	0.51
10:AJ:40:LEU:HD23	10:AJ:69:ASN:O	2.11	0.51
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.51	0.51
20:AT:65:LYS:O	20:AT:68:LYS:HB2	2.11	0.51
20:AT:72:LEU:O	20:AT:73:HIS:C	2.49	0.51
22:AV:4:C:C3'	22:AV:5:G:H5"	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:279:GLU:O	25:AZ:280:GLY:C	2.49	0.51
25:AZ:324:LYS:HD3	25:AZ:365:GLY:CA	2.41	0.51
25:AZ:69:GLU:CG	25:AZ:70:TYR:N	2.73	0.51
25:AZ:90:LYS:HB2	25:AZ:90:LYS:HZ2	1.76	0.51
28:B2:35:LEU:HD11	28:B2:50:ILE:HG23	1.92	0.51
30:B4:5:ILE:H	30:B4:5:ILE:HD13	1.76	0.51
34:B8:14:VAL:HG21	34:B8:22:VAL:HG13	1.91	0.51
36:BA:1101:U:H2'	36:BA:1102:C:C6	2.46	0.51
36:BA:1264:G:C3'	36:BA:1265:A:H5''	2.38	0.51
36:BA:1517:G:O2'	36:BA:1518:U:H5'	2.11	0.51
36:BA:1525:G:H2'	36:BA:1526:G:C8	2.46	0.51
36:BA:2074:U:H2'	36:BA:2075:U:C6	2.45	0.51
36:BA:2133:G:C6	36:BA:2157:G:O6	2.64	0.51
36:BA:863:A:H61	36:BA:913:U:H3	1.59	0.51
36:BA:773:U:H4'	39:BD:47:GLY:HA3	1.93	0.51
41:BF:138:GLU:O	41:BF:142:TRP:HB2	2.11	0.51
42:BG:149:VAL:O	42:BG:149:VAL:HG23	2.10	0.51
46:BN:21:LYS:HE3	46:BN:25:ARG:HB3	1.93	0.51
52:BT:98:LYS:HB3	52:BT:100:TYR:HE1	1.76	0.51
36:BA:1162:G:H4'	54:BV:24:LYS:HB2	1.93	0.51
55:BW:95:ILE:O	55:BW:95:ILE:HG13	2.11	0.51
56:BX:45:THR:OG1	56:BX:46:ALA:N	2.44	0.51
57:BY:85:VAL:HG12	57:BY:86:ARG:H	1.74	0.51
1:CA:1038:C:H6	1:CA:1038:C:O5'	1.94	0.51
1:CA:124:G:H2'	1:CA:125:U:O4'	2.11	0.51
1:CA:264:U:H4'	17:CQ:63:ARG:HD3	1.92	0.51
1:CA:580:U:H2'	1:CA:581:G:O4'	2.11	0.51
1:CA:828:A:H2'	1:CA:829:G:O4'	2.11	0.51
3:CC:58:GLU:HB2	3:CC:65:ALA:HB2	1.93	0.51
9:CI:11:LYS:O	9:CI:11:LYS:HG2	2.10	0.51
9:CI:56:LEU:HG	9:CI:57:GLY:H	1.75	0.51
1:CA:1152:A:OP1	10:CJ:68:HIS:HD2	1.94	0.51
26:D0:20:ARG:CG	26:D0:20:ARG:HH11	2.23	0.51
28:D2:3:LEU:HD13	36:DA:98:G:H5''	1.92	0.51
32:D6:18:ARG:HG3	32:D6:19:ARG:H	1.76	0.51
34:D8:15:LYS:CB	34:D8:46:ARG:HH22	2.23	0.51
35:D9:19:ARG:O	35:D9:20:HIS:HB2	2.09	0.51
36:DA:1069:A:C1'	36:DA:1070:A:OP2	2.51	0.51
36:DA:118:A:OP2	36:DA:119:A:H5''	2.11	0.51
36:DA:2121:G:N2	36:DA:2176:A:C2	2.78	0.51
36:DA:2855:C:O2'	36:DA:2856:C:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:642:G:H21	36:DA:646:A:H2	1.55	0.51
36:DA:657:U:C2	36:DA:658:C:C5	2.98	0.51
36:DA:686:G:N2	36:DA:788:A:H61	2.08	0.51
36:DA:733:G:C8	36:DA:761:A:N1	2.79	0.51
36:DA:880:G:H1	36:DA:897:C:H42	1.58	0.51
39:DD:206:LEU:HD22	39:DD:211:ARG:HG2	1.93	0.51
39:DD:31:LYS:HZ2	39:DD:33:LEU:HG	1.74	0.51
42:DG:52:ILE:HB	42:DG:54:GLU:OE1	2.11	0.51
46:DN:23:LEU:HD11	46:DN:98:VAL:HG12	1.91	0.51
56:DX:35:THR:HG22	56:DX:36:LYS:N	2.25	0.51
57:DY:46:LYS:HB3	57:DY:62:GLU:HG2	1.92	0.51
58:DZ:115:GLY:CA	58:DZ:177:PRO:HD3	2.34	0.51
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.26	0.51
1:AA:55:A:H2'	1:AA:56:U:H5'	1.93	0.51
2:AB:114:ARG:HD2	2:AB:141:GLU:OE2	2.11	0.51
2:AB:74:LYS:NZ	2:AB:74:LYS:HB3	2.26	0.51
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.14	0.51
12:AL:126:LYS:O	12:AL:128:ALA:N	2.42	0.51
17:AQ:45:HIS:HA	17:AQ:69:LYS:HZ1	1.76	0.51
19:AS:16:LEU:C	19:AS:18:LYS:H	2.13	0.51
22:AV:59:U:O2'	22:AV:60:U:O4'	2.26	0.51
22:AW:39:U:O2	22:AW:39:U:H5'	2.09	0.51
22:AW:3:C:H2'	22:AW:4:C:O4'	2.10	0.51
24:AY:76:A:C6	25:AZ:271:GLU:CG	2.93	0.51
25:AZ:317:GLU:HA	25:AZ:370:PHE:O	2.11	0.51
26:B0:10:THR:HG22	26:B0:11:ARG:N	2.26	0.51
34:B8:32:LEU:HB3	34:B8:36:LYS:HZ1	1.76	0.51
36:BA:1151:G:H2'	36:BA:1152:C:C6	2.46	0.51
36:BA:1508:A:H4'	36:BA:1509(A):A:C2	2.46	0.51
36:BA:1682:G:H2'	36:BA:1683:C:C6	2.46	0.51
36:BA:1688:U:H1'	36:BA:1701:A:C6	2.46	0.51
36:BA:2128:C:O2'	36:BA:2129:C:O5'	2.24	0.51
36:BA:2184:G:H2'	36:BA:2185:C:O4'	2.09	0.51
36:BA:2308:G:N2	42:BG:79:ASN:CG	2.64	0.51
36:BA:1999:C:H4'	36:BA:2723:C:O2	2.10	0.51
36:BA:465:G:H2'	36:BA:466:A:C8	2.46	0.51
49:BQ:3:MET:HB2	49:BQ:4:PRO:HD2	1.93	0.51
56:BX:57:LEU:HD13	56:BX:57:LEU:N	2.25	0.51
1:CA:631:G:H2'	1:CA:632:A:C8	2.45	0.51
2:CB:103:THR:HG23	2:CB:176:GLU:HG2	1.92	0.51
2:CB:200:ILE:HG22	2:CB:201:ILE:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:207:ALA:O	2:CB:211:ILE:HG13	2.11	0.51
3:CC:85:ARG:NH1	3:CC:88:ARG:HH12	2.08	0.51
7:CG:58:PRO:C	7:CG:60:LYS:H	2.13	0.51
17:CQ:82:MET:O	17:CQ:86:GLU:HG2	2.10	0.51
20:CT:26:ASN:N	20:CT:26:ASN:ND2	2.57	0.51
22:CV:59:U:O2'	22:CV:60:U:O5'	2.28	0.51
25:CZ:279:GLU:O	25:CZ:280:GLY:C	2.49	0.51
30:D4:5:ILE:H	30:D4:5:ILE:HD13	1.76	0.51
31:D5:50:GLY:HA3	31:D5:56:LYS:NZ	2.26	0.51
36:DA:1137:G:O2'	36:DA:1138:G:H5'	2.11	0.51
36:DA:1579:A:H2'	36:DA:1580:A:O4'	2.11	0.51
36:DA:1790:C:H5''	36:DA:1791:A:OP1	2.10	0.51
36:DA:2056:G:H2'	36:DA:2056:G:N3	2.26	0.51
36:DA:2170:A:OP1	38:DC:134:ARG:NH2	2.44	0.51
36:DA:673:C:C2'	36:DA:674:G:H5'	2.40	0.51
37:DB:5:C:O2'	37:DB:6:C:H5'	2.10	0.51
39:DD:72:LYS:HE3	39:DD:101:GLU:HB3	1.92	0.51
40:DE:132:HIS:CD2	40:DE:135:HIS:HE2	2.29	0.51
41:DF:50:SER:HB2	41:DF:94:PRO:HD3	1.92	0.51
43:DH:85:LYS:HD3	43:DH:133:VAL:HB	1.93	0.51
52:DT:100:TYR:O	52:DT:103:ARG:HG3	2.10	0.51
52:DT:98:LYS:HB3	52:DT:100:TYR:HE1	1.73	0.51
53:DU:62:ILE:HG23	53:DU:76:TYR:CE2	2.46	0.51
58:DZ:119:GLU:O	58:DZ:119:GLU:HG2	2.11	0.51
58:DZ:122:ARG:HH11	58:DZ:122:ARG:CB	2.24	0.51
1:AA:1141:C:O2'	1:AA:1142:G:H5'	2.11	0.51
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.45	0.51
1:AA:137:C:H42	1:AA:226:G:H1	1.59	0.51
1:AA:358:U:H4'	25:AZ:234:ARG:N	2.26	0.51
1:AA:509:A:H5'	4:AD:54:TYR:HD2	1.76	0.51
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.37	0.51
2:AB:31:TYR:CD2	2:AB:202:PRO:HG3	2.46	0.51
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.10	0.51
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	1.91	0.51
5:AE:143:ARG:NH1	8:AH:77:GLU:OE1	2.43	0.51
9:AI:19:LEU:HD23	9:AI:20:ARG:N	2.26	0.51
9:AI:43:ALA:C	9:AI:45:ALA:H	2.15	0.51
16:AP:8:ARG:C	16:AP:9:PHE:HD1	2.13	0.51
1:AA:1305:G:C5'	21:AU:4:GLY:HA3	2.40	0.51
25:AZ:350:THR:HG22	25:AZ:351:GLY:H	1.75	0.51
34:B8:58:ILE:HG22	34:B8:58:ILE:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1041:G:H2'	36:BA:1042:G:H5'	1.93	0.51
36:BA:1665:A:H2'	36:BA:1666:G:C5'	2.26	0.51
36:BA:1681:G:O2'	36:BA:1762:A:C2'	2.56	0.51
36:BA:1796:U:H2'	36:BA:1797:C:C6	2.46	0.51
36:BA:220:G:H2'	36:BA:427:U:O4	2.10	0.51
36:BA:469:G:H2'	36:BA:470:A:H5''	1.93	0.51
36:BA:638:G:N2	36:BA:651:G:H1'	2.26	0.51
37:BB:68:C:H2'	37:BB:69:G:O4'	2.10	0.51
36:BA:1190:G:C5'	48:BP:35:HIS:H	2.15	0.51
50:BR:13:HIS:CE1	50:BR:16:HIS:HB2	2.46	0.51
55:BW:8:ARG:HG2	55:BW:8:ARG:NH1	2.25	0.51
56:BX:56:THR:HG22	56:BX:79:ALA:HB2	1.93	0.51
57:BY:76:CYS:SG	57:BY:77:PRO:HD2	2.51	0.51
57:BY:77:PRO:O	57:BY:78:ALA:HB2	2.10	0.51
3:CC:68:VAL:HG13	3:CC:70:VAL:HG23	1.93	0.51
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.10	0.51
8:CH:103:VAL:HG12	8:CH:108:GLY:HA3	1.91	0.51
24:CY:61:C:C2'	24:CY:62:U:C5'	2.88	0.51
25:CZ:30:ALA:O	25:CZ:34:VAL:HG23	2.11	0.51
32:D6:45:LYS:HZ2	32:D6:45:LYS:HB3	1.74	0.51
36:DA:1411:C:H2'	36:DA:1412:A:H8	1.76	0.51
36:DA:1486:A:N6	36:DA:1504:C:H42	2.09	0.51
36:DA:1539:G:H2'	36:DA:1540:U:C5'	2.38	0.51
31:D5:4:HIS:C	36:DA:2056:G:N2	2.64	0.51
36:DA:2133:G:C6	36:DA:2157:G:O6	2.64	0.51
36:DA:2358:G:H2'	36:DA:2359:C:H6	1.76	0.51
36:DA:2653:U:H5''	36:DA:2654:A:H2'	1.92	0.51
36:DA:300:A:H2'	36:DA:334:C:O2'	2.11	0.51
36:DA:519:U:H2'	36:DA:520:G:C8	2.43	0.51
34:D8:61:LEU:CD2	36:DA:593:G:H4'	2.40	0.51
39:DD:261:LYS:NZ	39:DD:263:ARG:NH2	2.59	0.51
39:DD:31:LYS:HE3	39:DD:33:LEU:CD1	2.41	0.51
41:DF:175:THR:O	41:DF:176:LEU:HB2	2.11	0.51
45:DK:55:UNK:HA	45:DK:69:UNK:HA	1.92	0.51
48:DP:146:VAL:O	48:DP:148:LEU:HG	2.11	0.51
51:DS:98:VAL:O	51:DS:99:LYS:C	2.48	0.51
53:DU:115:ALA:C	53:DU:117:GLN:H	2.14	0.51
56:DX:14:SER:O	56:DX:17:ALA:HB3	2.11	0.51
57:DY:31:LEU:HD22	57:DY:31:LEU:N	2.26	0.51
57:DY:6:HIS:N	57:DY:6:HIS:CD2	2.79	0.51
57:DY:8:LYS:HE2	57:DY:72:VAL:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1030:C:N4	1:AA:1032:G:H21	2.04	0.51
1:AA:723:U:O4	1:AA:1537:U:H2'	2.11	0.51
1:AA:782:A:H2'	1:AA:783:C:H5'	1.93	0.51
2:AB:44:LEU:HD12	2:AB:44:LEU:N	2.25	0.51
4:AD:187:ARG:CB	4:AD:187:ARG:HH11	2.22	0.51
4:AD:32:ALA:C	4:AD:34:GLU:H	2.12	0.51
14:AN:21:TYR:N	14:AN:21:TYR:CD1	2.79	0.51
18:AR:59:SER:H	18:AR:62:GLU:HB2	1.76	0.51
25:AZ:160:GLN:HG3	25:AZ:160:GLN:O	2.10	0.51
32:B6:15:GLU:OE2	32:B6:41:PRO:CG	2.58	0.51
36:BA:2682:U:H6	36:BA:2682:U:H5'	1.76	0.51
36:BA:2828:C:O2'	36:BA:2829:C:H5'	2.11	0.51
36:BA:2832:U:C2	36:BA:2834:G:N2	2.79	0.51
36:BA:673:C:C2'	36:BA:674:G:H5'	2.41	0.51
38:BC:76:ALA:HB2	38:BC:153:ILE:HD11	1.93	0.51
38:BC:10:LEU:CD1	38:BC:32:LEU:HA	2.40	0.51
39:BD:206:LEU:HD22	39:BD:211:ARG:HG2	1.93	0.51
39:BD:241:PRO:O	39:BD:242:ARG:CB	2.59	0.51
39:BD:27:THR:CG2	39:BD:81:ALA:HB1	2.41	0.51
36:BA:2579:C:O2'	40:BE:131:ALA:HB3	2.11	0.51
41:BF:113:ALA:HB2	41:BF:183:VAL:HG12	1.93	0.51
41:BF:88:VAL:CG1	41:BF:88:VAL:O	2.59	0.51
48:BP:125:VAL:O	48:BP:125:VAL:HG13	2.11	0.51
49:BQ:14:ARG:HG2	49:BQ:41:TRP:HH2	1.75	0.51
50:BR:117:VAL:CG2	50:BR:118:GLU:H	2.21	0.51
50:BR:45:ARG:CG	50:BR:46:GLY:H	2.23	0.51
55:BW:82:LEU:HD23	55:BW:84:ARG:HH22	1.76	0.51
56:BX:40:LYS:O	56:BX:44:GLU:HB2	2.11	0.51
58:BZ:166:SER:HB2	58:BZ:168:GLU:H	1.69	0.51
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.46	0.51
1:CA:201:C:H42	1:CA:216:G:H1	1.59	0.51
1:CA:637:G:O2'	1:CA:638:G:H5'	2.10	0.51
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	1.92	0.51
3:CC:32:LEU:HD22	3:CC:59:ARG:HH11	1.76	0.51
4:CD:145:GLU:HA	4:CD:183:GLY:O	2.10	0.51
18:CR:26:LEU:N	18:CR:26:LEU:HD12	2.26	0.51
20:CT:22:ARG:O	20:CT:26:ASN:ND2	2.44	0.51
22:CV:44:G:C2'	22:CV:45:U:H5'	2.41	0.51
25:CZ:270:VAL:HG22	25:CZ:288:VAL:HG22	1.92	0.51
25:CZ:301:GLY:CA	25:CZ:347:THR:HG23	2.41	0.51
25:CZ:68:VAL:HG13	25:CZ:69:GLU:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:2:LYS:O	28:D2:3:LEU:HB2	2.11	0.51
28:D2:35:LEU:HD11	28:D2:50:ILE:HG23	1.92	0.51
28:D2:28:LYS:HB3	28:D2:57:ILE:HD11	1.91	0.51
32:D6:45:LYS:HD2	32:D6:45:LYS:N	2.25	0.51
34:D8:32:LEU:HB3	34:D8:36:LYS:HZ1	1.76	0.51
36:DA:1142(A):A:OP2	36:DA:1142(A):A:H3'	2.11	0.51
36:DA:1151:G:H2'	36:DA:1152:C:C6	2.45	0.51
36:DA:1525:G:H2'	36:DA:1526:G:C8	2.46	0.51
36:DA:1668:A:N3	36:DA:1670:C:C4	2.79	0.51
36:DA:1946:U:H2'	36:DA:1947:C:H6	1.75	0.51
36:DA:2110:G:H22	36:DA:2178:C:H5	1.55	0.51
36:DA:2171:A:O2'	36:DA:2172:U:C5	2.64	0.51
35:D9:3:VAL:HG21	36:DA:2539:C:H4'	1.92	0.51
36:DA:2688:U:O2	36:DA:2688:U:H3'	2.10	0.51
36:DA:270:A:O2'	36:DA:271:A:H5'	2.11	0.51
36:DA:405:U:H3'	36:DA:406:G:C5'	2.41	0.51
36:DA:654(E):G:H22	36:DA:654(Q):C:C1'	2.15	0.51
40:DE:65:GLY:HA2	40:DE:70:ALA:HB1	1.93	0.51
36:DA:2635:C:H5''	40:DE:78:LEU:O	2.10	0.51
41:DF:84:VAL:C	41:DF:86:GLY:N	2.65	0.51
42:DG:7:LEU:HD22	42:DG:100:TRP:HE3	1.76	0.51
42:DG:88:ILE:HG23	42:DG:89:GLY:N	2.24	0.51
43:DH:83:TYR:HB3	43:DH:135:GLY:N	2.25	0.51
50:DR:101:ALA:HB1	55:DW:38:TYR:HE1	1.75	0.51
51:DS:35:ILE:O	51:DS:35:ILE:HG12	2.11	0.51
52:DT:32:TYR:CD1	52:DT:32:TYR:N	2.78	0.51
54:DV:99:ILE:CD1	54:DV:99:ILE:H	2.10	0.51
57:DY:76:CYS:SG	57:DY:77:PRO:HD2	2.50	0.51
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.92	0.50
1:AA:1363(A):A:C4'	1:AA:1364:U:H5''	2.38	0.50
1:AA:555:C:H2'	1:AA:556:C:H6	1.75	0.50
1:AA:723:U:O2'	1:AA:724:G:H5'	2.10	0.50
1:AA:828:A:H2'	1:AA:829:G:O4'	2.11	0.50
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.11	0.50
6:AF:63:TYR:N	6:AF:63:TYR:CD1	2.79	0.50
9:AI:85:LEU:C	9:AI:87:GLN:H	2.14	0.50
1:AA:963:G:N2	10:AJ:55:LYS:NZ	2.59	0.50
15:AO:17:ARG:O	15:AO:18:PHE:HB3	2.11	0.50
19:AS:11:VAL:CG1	19:AS:16:LEU:HD11	2.40	0.50
23:AX:11:U:H3'	23:AX:12:A:C8	2.47	0.50
24:AY:26:A:H2'	24:AY:27:C:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:368:VAL:HG12	25:AZ:369:THR:H	1.75	0.50
25:AZ:67:HIS:CD2	25:AZ:67:HIS:H	2.29	0.50
30:B4:22:ILE:HG22	30:B4:24:THR:HG23	1.92	0.50
36:BA:2185:C:C2'	36:BA:2186:G:C5'	2.89	0.50
36:BA:321:G:H5''	36:BA:322:A:OP2	2.11	0.50
36:BA:612:C:O2'	36:BA:613:G:H5''	2.11	0.50
36:BA:686:G:N2	36:BA:788:A:H61	2.09	0.50
37:BB:5:C:O2'	37:BB:6:C:H5'	2.10	0.50
38:BC:163:PHE:O	38:BC:163:PHE:CD1	2.64	0.50
39:BD:72:LYS:HE3	39:BD:101:GLU:HB3	1.92	0.50
39:BD:81:ALA:HA	39:BD:113:VAL:HG22	1.93	0.50
48:BP:146:VAL:O	48:BP:148:LEU:HG	2.12	0.50
52:BT:28:VAL:HG22	52:BT:46:GLU:HA	1.94	0.50
52:BT:94:ALA:O	52:BT:96:ARG:N	2.45	0.50
57:BY:46:LYS:HB3	57:BY:62:GLU:HG2	1.92	0.50
1:CA:1319:A:OP1	19:CS:10:PHE:CE1	2.64	0.50
1:CA:347:G:H21	1:CA:348:G:H1'	1.76	0.50
4:CD:55:ALA:O	4:CD:59:ARG:HG2	2.11	0.50
5:CE:33:VAL:HG21	5:CE:109:ILE:HG12	1.93	0.50
9:CI:43:ALA:C	9:CI:45:ALA:H	2.12	0.50
13:CM:56:LEU:C	13:CM:56:LEU:HD13	2.31	0.50
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.44	0.50
22:CV:53:G:H2'	22:CV:54:U:H6	1.75	0.50
22:CW:60:U:O2	22:CW:60:U:C2'	2.60	0.50
25:CZ:324:LYS:O	25:CZ:325:LYS:C	2.49	0.50
25:CZ:368:VAL:HG12	25:CZ:369:THR:H	1.75	0.50
25:CZ:69:GLU:CG	25:CZ:70:TYR:N	2.74	0.50
31:D5:3:LYS:O	31:D5:5:PRO:HD2	2.11	0.50
36:DA:1131:G:H21	46:DN:73:THR:CG2	2.23	0.50
36:DA:153:C:H2'	36:DA:154:G:C8	2.46	0.50
36:DA:1756:G:H4'	36:DA:1758:G:O4'	2.11	0.50
36:DA:612:C:O2'	36:DA:613:G:H5''	2.11	0.50
38:DC:147:PHE:C	38:DC:149:ILE:H	2.14	0.50
38:DC:30:LYS:HB3	38:DC:30:LYS:NZ	2.26	0.50
39:DD:223:GLY:C	39:DD:224:ALA:O	2.44	0.50
39:DD:31:LYS:C	39:DD:35:LYS:HE3	2.32	0.50
46:DN:21:LYS:HD3	46:DN:22:THR:N	2.26	0.50
46:DN:71:ILE:HD12	46:DN:71:ILE:N	2.25	0.50
51:DS:22:GLY:O	51:DS:23:ARG:O	2.28	0.50
52:DT:94:ALA:C	52:DT:96:ARG:H	2.14	0.50
54:DV:38:LEU:C	54:DV:39:LEU:HD13	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1598:C:H5'	56:DX:36:LYS:CD	2.40	0.50
2:AB:157:ARG:HH11	2:AB:157:ARG:HB3	1.76	0.50
4:AD:61:LYS:NZ	4:AD:62:GLN:NE2	2.59	0.50
5:AE:6:PHE:HB3	5:AE:35:GLY:C	2.32	0.50
6:AF:43:LEU:CD2	6:AF:43:LEU:H	2.21	0.50
6:AF:43:LEU:O	6:AF:44:GLY:O	2.29	0.50
6:AF:63:TYR:HD1	6:AF:63:TYR:N	2.08	0.50
24:AY:68:C:H2'	24:AY:69:C:H6	1.76	0.50
25:AZ:130:TYR:CE2	25:AZ:211:PRO:HD2	2.46	0.50
25:AZ:263:ARG:HE	25:AZ:293:VAL:HG22	1.75	0.50
25:AZ:359:VAL:HG12	25:AZ:362:VAL:HG22	1.92	0.50
34:B8:49:VAL:O	34:B8:50:LEU:HB3	2.12	0.50
36:BA:1163:G:O2'	36:BA:1164:G:H5'	2.10	0.50
36:BA:153:C:H2'	36:BA:154:G:C8	2.46	0.50
36:BA:1754:C:OP2	52:BT:113:LYS:NZ	2.42	0.50
34:B8:32:LEU:HD11	36:BA:2391:G:O5'	2.11	0.50
36:BA:247:G:H4'	36:BA:386:G:C5	2.46	0.50
36:BA:2651:C:O2'	36:BA:2652:C:H5'	2.11	0.50
36:BA:2653:U:H5''	36:BA:2654:A:H2'	1.92	0.50
36:BA:2853:C:O2'	36:BA:2854:G:H5'	2.11	0.50
36:BA:419:C:H2'	36:BA:420:C:H6	1.76	0.50
36:BA:782:A:H5'	36:BA:783:A:C2	2.46	0.50
48:BP:9:ASN:N	48:BP:10:PRO:HD2	2.15	0.50
48:BP:41:ARG:CB	48:BP:41:ARG:NH1	2.74	0.50
48:BP:6:LEU:N	48:BP:6:LEU:HD23	2.25	0.50
50:BR:9:LYS:HD2	50:BR:43:GLU:OE1	2.12	0.50
56:BX:61:GLY:HA3	56:BX:73:ARG:O	2.11	0.50
57:BY:13:VAL:CG2	57:BY:72:VAL:HB	2.41	0.50
58:BZ:16:SER:O	58:BZ:18:LEU:N	2.43	0.50
1:CA:137:C:H42	1:CA:226:G:H1	1.59	0.50
1:CA:992:U:H1'	1:CA:993:G:C2	2.45	0.50
2:CB:109:SER:C	2:CB:111:ARG:N	2.65	0.50
3:CC:90:GLU:O	3:CC:93:LYS:HB3	2.11	0.50
13:CM:96:LEU:HB3	13:CM:97:PRO:HD2	1.93	0.50
14:CN:15:LYS:HB3	14:CN:16:PHE:CE2	2.47	0.50
17:CQ:58:GLU:HB3	17:CQ:74:LEU:HB3	1.93	0.50
20:CT:26:ASN:HB3	20:CT:71:THR:OG1	2.11	0.50
23:CX:11:U:H3'	23:CX:12:A:C8	2.46	0.50
31:D5:36:CYS:O	31:D5:38:ALA:N	2.44	0.50
36:DA:1231:G:H2'	36:DA:1232:G:H8	1.77	0.50
36:DA:2304:G:H22	36:DA:2312:U:H3	1.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:445:C:O2'	36:DA:446:G:H5'	2.11	0.50
38:DC:130:ILE:O	38:DC:130:ILE:HG22	2.11	0.50
39:DD:28:GLU:H	39:DD:29:PRO:HD3	1.77	0.50
40:DE:44:TYR:O	40:DE:45:THR:CB	2.60	0.50
40:DE:93:VAL:C	40:DE:95:ILE:H	2.14	0.50
42:DG:11:TYR:HA	42:DG:15:VAL:HG21	1.92	0.50
42:DG:42:GLY:O	42:DG:89:GLY:HA2	2.11	0.50
47:DO:43:VAL:HG21	47:DO:52:VAL:CG1	2.41	0.50
1:CA:1442(B):A:C2	52:DT:118:ARG:NH2	2.80	0.50
52:DT:128:GLU:CD	52:DT:129:ARG:N	2.64	0.50
54:DV:17:GLY:C	54:DV:18:LEU:HD13	2.31	0.50
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.11	0.50
1:AA:1411:C:H2'	1:AA:1412:C:C6	2.46	0.50
1:AA:1392:G:N2	1:AA:1502:A:H8	2.09	0.50
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.47	0.50
1:AA:390:C:H4'	16:AP:28:ARG:HH21	1.76	0.50
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.26	0.50
5:AE:147:ASP:N	5:AE:147:ASP:OD1	2.45	0.50
8:AH:18:ARG:HB2	8:AH:18:ARG:NH1	2.27	0.50
13:AM:11:ARG:H	13:AM:45:VAL:HG11	1.75	0.50
20:AT:26:ASN:HD22	20:AT:26:ASN:N	2.08	0.50
28:B2:68:ARG:HB2	28:B2:68:ARG:NH1	2.03	0.50
35:B9:15:LYS:HB3	35:B9:15:LYS:HZ3	1.75	0.50
36:BA:1486:A:N6	36:BA:1504:C:H42	2.09	0.50
36:BA:1722:A:O2'	36:BA:1739:U:C5'	2.59	0.50
36:BA:1993:U:H4'	40:BE:128:SER:HB3	1.92	0.50
36:BA:2326:C:N4	36:BA:2389:G:H1	2.08	0.50
36:BA:495:G:H21	55:BW:61:ASN:HD21	1.58	0.50
38:BC:118:ASP:OD2	38:BC:119:VAL:HG13	2.11	0.50
38:BC:40:THR:HG22	38:BC:177:LYS:CE	2.41	0.50
39:BD:239:ARG:O	39:BD:239:ARG:HG3	2.10	0.50
39:BD:24:ILE:HG13	39:BD:84:TYR:HB2	1.91	0.50
39:BD:31:LYS:C	39:BD:35:LYS:HE3	2.32	0.50
41:BF:148:LEU:HD23	41:BF:191:ARG:HH11	1.76	0.50
42:BG:45:GLU:OE1	42:BG:45:GLU:HA	2.09	0.50
43:BH:85:LYS:HD3	43:BH:133:VAL:HB	1.94	0.50
43:BH:143:GLN:NE2	43:BH:143:GLN:HA	2.26	0.50
44:BJ:57:UNK:O	44:BJ:58:UNK:O	2.29	0.50
49:BQ:32:TYR:O	49:BQ:105:GLU:HB2	2.11	0.50
36:BA:17:G:H4'	53:BU:25:TRP:CH2	2.45	0.50
58:BZ:99:TYR:CE1	58:BZ:125:LEU:HD13	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:613:C:H2'	1:CA:614:A:H8	1.76	0.50
2:CB:236:TYR:C	2:CB:238:LEU:N	2.64	0.50
2:CB:44:LEU:HD12	2:CB:44:LEU:N	2.26	0.50
13:CM:101:GLN:NE2	13:CM:101:GLN:H	2.00	0.50
24:CY:1:A:H2'	24:CY:2:G:H8	1.77	0.50
25:CZ:325:LYS:O	25:CZ:328:GLY:N	2.44	0.50
28:D2:31:GLU:O	28:D2:35:LEU:HB2	2.11	0.50
28:D2:62:THR:HG21	36:DA:76:C:O4'	2.11	0.50
36:DA:267:C:H2'	36:DA:268:C:C6	2.44	0.50
36:DA:2864:G:O2'	36:DA:2865:U:H5'	2.12	0.50
36:DA:57:C:H2'	36:DA:58:G:O4'	2.12	0.50
36:DA:78:A:H2'	36:DA:79:G:H8	1.76	0.50
41:DF:82:ILE:O	41:DF:83:PHE:HB2	2.11	0.50
42:DG:150:ASP:O	42:DG:151:ALA:HB3	2.11	0.50
42:DG:39:ILE:CD1	42:DG:92:VAL:HG13	2.41	0.50
48:DP:75:ILE:HD13	48:DP:77:ARG:HH22	1.74	0.50
50:DR:115:GLU:HG2	50:DR:117:VAL:H	1.75	0.50
50:DR:88:ARG:HD2	50:DR:88:ARG:O	2.11	0.50
52:DT:88:ILE:O	52:DT:89:VAL:O	2.29	0.50
57:DY:2:ARG:HH11	57:DY:2:ARG:HG2	1.76	0.50
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.47	0.50
1:AA:662:G:H2'	1:AA:663:A:C8	2.46	0.50
4:AD:202:LEU:HD13	4:AD:202:LEU:O	2.11	0.50
12:AL:53:ARG:HD2	12:AL:53:ARG:N	2.27	0.50
25:AZ:200:TRP:O	25:AZ:204:ASP:CB	2.60	0.50
25:AZ:267:VAL:CG2	25:AZ:288:VAL:HG13	2.42	0.50
25:AZ:90:LYS:O	25:AZ:93:ILE:HG23	2.12	0.50
27:B1:3:LYS:HG3	36:BA:1364:G:H5''	1.93	0.50
36:BA:1131:G:C4	46:BN:75:TYR:HB2	2.46	0.50
36:BA:2036:C:H5'	36:BA:2036:C:C6	2.38	0.50
36:BA:2166:G:H2'	36:BA:2167:U:C6	2.46	0.50
36:BA:322:A:C5'	36:BA:340:A:H1'	2.39	0.50
36:BA:363(F):A:O2'	36:BA:364:C:H5	1.94	0.50
27:B1:13:ILE:HD13	36:BA:396:G:H5'	1.91	0.50
36:BA:827:U:H5'	36:BA:828:U:O5'	2.12	0.50
38:BC:45:ALA:HB3	38:BC:171:ILE:CG2	2.41	0.50
39:BD:132:PRO:HG3	39:BD:190:TYR:CZ	2.46	0.50
40:BE:132:HIS:CD2	40:BE:135:HIS:HE2	2.30	0.50
40:BE:179:GLU:O	40:BE:180:ASN:HB2	2.11	0.50
40:BE:35:GLN:O	40:BE:36:ARG:O	2.30	0.50
41:BF:65:TRP:CZ3	41:BF:75:HIS:HD2	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:15:ARG:O	51:BS:18:ILE:CD1	2.60	0.50
51:BS:85:VAL:C	51:BS:106:ARG:HG2	2.32	0.50
53:BU:11:ARG:O	53:BU:15:LYS:HG2	2.10	0.50
54:BV:79:VAL:O	54:BV:80:GLN:HB2	2.11	0.50
57:BY:14:LEU:HD12	57:BY:15:VAL:H	1.75	0.50
58:BZ:14:LYS:O	58:BZ:18:LEU:HD13	2.10	0.50
1:CA:399:G:H2'	1:CA:400:C:C6	2.47	0.50
5:CE:20:GLN:NE2	5:CE:22:GLY:H	2.09	0.50
7:CG:132:GLY:O	7:CG:136:LYS:HG2	2.11	0.50
10:CJ:54:PHE:CE1	10:CJ:55:LYS:CE	2.95	0.50
20:CT:24:LEU:O	20:CT:24:LEU:HD12	2.11	0.50
25:CZ:277:LEU:HD11	25:CZ:280:GLY:N	2.27	0.50
25:CZ:323:LEU:HD12	25:CZ:323:LEU:N	2.26	0.50
25:CZ:28:THR:O	25:CZ:32:THR:HG23	2.11	0.50
25:CZ:359:VAL:HG12	25:CZ:362:VAL:HG22	1.94	0.50
27:D1:46:LEU:HB2	27:D1:62:VAL:O	2.12	0.50
28:D2:17:SER:HB3	28:D2:19:VAL:HG23	1.93	0.50
28:D2:34:GLU:O	28:D2:38:GLN:N	2.44	0.50
30:D4:34:GLU:CB	42:DG:113:ARG:HH21	2.24	0.50
36:DA:1041:G:H2'	36:DA:1042:G:H5'	1.93	0.50
36:DA:1639:U:H2'	36:DA:1640:C:H5''	1.92	0.50
36:DA:2264:C:H2'	36:DA:2265:U:C6	2.45	0.50
36:DA:321:G:H21	41:DF:165:ARG:NH2	2.02	0.50
36:DA:61:G:H1	36:DA:94:C:H42	1.59	0.50
39:DD:26:LYS:H	39:DD:26:LYS:HE2	1.76	0.50
47:DO:98:VAL:HG13	47:DO:118:ALA:HA	1.92	0.50
48:DP:62:LEU:N	48:DP:62:LEU:HD23	2.04	0.50
50:DR:45:ARG:CG	50:DR:46:GLY:H	2.24	0.50
52:DT:94:ALA:O	52:DT:96:ARG:N	2.44	0.50
58:DZ:150:LEU:CD2	58:DZ:150:LEU:N	2.74	0.50
37:DB:73:A:N1	58:DZ:34:ASN:ND2	2.60	0.50
1:AA:1437:C:N3	1:AA:1438:G:N7	2.60	0.50
1:AA:1439:C:N4	1:AA:1463:C:N3	2.59	0.50
1:AA:1532:U:C3'	1:AA:1533:C:H5''	2.41	0.50
1:AA:255:G:O6	1:AA:266:G:O6	2.29	0.50
1:AA:454:C:H5''	1:AA:455:C:C5	2.46	0.50
1:AA:57:G:H2'	1:AA:58:C:C6	2.46	0.50
3:AC:124:ILE:HG12	3:AC:130:VAL:HG22	1.93	0.50
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.79	0.50
4:AD:34:GLU:O	4:AD:35:ARG:HB2	2.10	0.50
7:AG:69:VAL:HG12	7:AG:100:ALA:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:24:GLY:C	9:AI:25:LYS:HD2	2.31	0.50
9:AI:41:VAL:O	9:AI:41:VAL:HG12	2.11	0.50
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.92	0.50
1:AA:280:C:O2	17:AQ:38:ARG:HG3	2.11	0.50
19:AS:16:LEU:HB3	19:AS:20:LEU:HG	1.94	0.50
19:AS:21:GLU:HG3	19:AS:22:LEU:N	2.25	0.50
22:AW:60:U:C2'	22:AW:60:U:O2	2.60	0.50
22:AW:73:A:C2'	22:AW:74:C:H5''	2.42	0.50
25:AZ:178:ALA:HB1	25:AZ:199:ILE:HD12	1.94	0.50
25:AZ:267:VAL:HG23	25:AZ:288:VAL:CG1	2.42	0.50
25:AZ:68:VAL:O	25:AZ:69:GLU:HB3	2.11	0.50
28:B2:7:ARG:CD	28:B2:7:ARG:H	2.25	0.50
35:B9:29:ASN:HD22	35:B9:29:ASN:H	1.60	0.50
36:BA:1070:A:H3'	36:BA:1072:C:C5	2.46	0.50
36:BA:1721:G:C6	36:BA:1739:U:H5'	2.47	0.50
36:BA:2392:A:C8	48:BP:60:MET:HG2	2.46	0.50
36:BA:2672:G:H2'	36:BA:2673:G:H5''	1.94	0.50
36:BA:2753:A:O2'	36:BA:2754:U:H5'	2.11	0.50
36:BA:284:U:H2'	36:BA:285:C:C6	2.45	0.50
39:BD:16:MET:HG3	39:BD:206:LEU:O	2.12	0.50
41:BF:84:VAL:C	41:BF:86:GLY:N	2.65	0.50
42:BG:83:ARG:HD2	42:BG:84:LYS:HZ1	1.77	0.50
46:BN:12:ARG:CZ	46:BN:135:PRO:HG2	2.41	0.50
50:BR:96:ARG:O	50:BR:114:VAL:HA	2.11	0.50
52:BT:128:GLU:CD	52:BT:129:ARG:N	2.64	0.50
52:BT:30:VAL:HA	52:BT:43:GLN:O	2.11	0.50
54:BV:62:LEU:N	54:BV:62:LEU:HD22	2.26	0.50
57:BY:64:GLU:O	57:BY:65:ALA:HB2	2.11	0.50
58:BZ:13:GLU:HG2	58:BZ:14:LYS:HD3	1.92	0.50
1:CA:434:U:H2'	1:CA:435:C:H6	1.75	0.50
1:CA:625:G:O2'	1:CA:626:U:H5'	2.11	0.50
1:CA:954:G:H21	1:CA:1227:A:H62	1.60	0.50
4:CD:59:ARG:HA	4:CD:59:ARG:NE	2.12	0.50
6:CF:43:LEU:H	6:CF:43:LEU:CD2	2.24	0.50
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.11	0.50
11:CK:61:ALA:HB2	11:CK:90:GLY:HA3	1.92	0.50
12:CL:24:VAL:CG1	12:CL:27:LEU:HD22	2.37	0.50
15:CO:31:LEU:O	15:CO:35:ARG:HG3	2.10	0.50
17:CQ:36:ILE:HG13	17:CQ:36:ILE:O	2.11	0.50
25:CZ:323:LEU:H	25:CZ:323:LEU:CD1	2.22	0.50
27:D1:26:ARG:HD3	27:D1:27:GLU:CD	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:27:GLU:C	28:D2:29:LYS:N	2.63	0.50
36:DA:1022:G:H22	36:DA:1142(A):A:H2	1.59	0.50
36:DA:1072:C:H5''	36:DA:1073:A:OP1	2.11	0.50
36:DA:1314:C:C6	36:DA:1314:C:H5'	2.43	0.50
36:DA:1508:A:H4'	36:DA:1509(A):A:C2	2.47	0.50
36:DA:1525:G:H2'	36:DA:1526:G:H8	1.76	0.50
36:DA:2107:C:C5	36:DA:2108:C:H5	2.29	0.50
34:D8:62:LEU:CD1	36:DA:242:G:H5''	2.21	0.50
36:DA:2696:U:H2'	36:DA:2697:G:C8	2.46	0.50
36:DA:271(D):G:O2'	36:DA:271(E):U:H5'	2.12	0.50
36:DA:2840:C:H2'	36:DA:2841:C:H6	1.76	0.50
36:DA:290:G:O2'	36:DA:291:C:H5'	2.11	0.50
38:DC:100:ILE:O	38:DC:104:LEU:HD23	2.11	0.50
38:DC:149:ILE:HG23	38:DC:150:GLY:N	2.27	0.50
40:DE:108:SER:O	40:DE:162:ALA:HA	2.11	0.50
40:DE:47:VAL:HG21	40:DE:86:PRO:CD	2.42	0.50
40:DE:87:GLU:O	40:DE:89:ASP:N	2.44	0.50
41:DF:134:GLY:O	41:DF:135:LYS:HE3	2.11	0.50
43:DH:40:GLU:O	43:DH:41:MET:HB2	2.11	0.50
43:DH:85:LYS:CE	43:DH:85:LYS:C	2.80	0.50
54:DV:82:ARG:NH1	54:DV:82:ARG:HG2	2.27	0.50
55:DW:1:MET:HB3	55:DW:64:MET:HE3	1.94	0.50
57:DY:49:VAL:O	57:DY:50:ARG:CB	2.56	0.50
1:AA:102:G:O2'	1:AA:103:C:H5'	2.11	0.50
1:AA:1181:G:H2'	1:AA:1182:G:C4	2.47	0.50
1:AA:520:A:N1	1:AA:536:C:H1'	2.26	0.50
1:AA:603:U:H2'	1:AA:604:G:H8	1.76	0.50
1:AA:620:C:H2'	1:AA:621:A:O4'	2.12	0.50
1:AA:637:G:O2'	1:AA:638:G:H5'	2.12	0.50
1:AA:695:A:H2'	1:AA:696:A:C8	2.47	0.50
1:AA:707:C:H2'	1:AA:708:C:C6	2.46	0.50
1:AA:748:C:H4'	1:AA:749:C:O5'	2.11	0.50
2:AB:87:ARG:HB3	2:AB:87:ARG:NH1	2.26	0.50
7:AG:15:ASP:OD1	7:AG:16:LEU:N	2.45	0.50
8:AH:9:MET:O	8:AH:13:ILE:HG12	2.12	0.50
8:AH:83:ILE:HG13	8:AH:137:VAL:HG22	1.93	0.50
9:AI:58:HIS:O	9:AI:58:HIS:ND1	2.44	0.50
10:AJ:16:LEU:HD11	10:AJ:70:ARG:CG	2.41	0.50
12:AL:102:ARG:CG	12:AL:102:ARG:NH1	2.73	0.50
14:AN:15:LYS:HB3	14:AN:16:PHE:CE2	2.47	0.50
17:AQ:52:LYS:CD	17:AQ:52:LYS:H	2.22	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:301:GLY:HA3	25:AZ:347:THR:CG2	2.39	0.50
36:BA:1214:A:H2'	36:BA:1215:G:O4'	2.12	0.50
36:BA:1240:U:O2'	36:BA:1241:A:H5'	2.11	0.50
36:BA:158:U:H3'	36:BA:158:U:O2	2.12	0.50
36:BA:2107:C:C5	36:BA:2108:C:C5	2.99	0.50
36:BA:2514:U:H2'	36:BA:2515:C:C6	2.46	0.50
36:BA:2526:G:H5'	36:BA:2742:C:O2'	2.12	0.50
36:BA:2553:G:H3'	36:BA:2554:U:H5''	1.93	0.50
38:BC:45:ALA:O	38:BC:171:ILE:HG22	2.11	0.50
41:BF:24:LEU:O	41:BF:115:ALA:HB1	2.12	0.50
36:BA:615:G:OP2	41:BF:40:GLN:HG2	2.12	0.50
43:BH:13:LYS:HA	43:BH:13:LYS:HE2	1.94	0.50
46:BN:23:LEU:HD11	46:BN:98:VAL:HG12	1.94	0.50
46:BN:4:TYR:O	46:BN:5:VAL:HB	2.11	0.50
46:BN:62:VAL:HG22	46:BN:66:LYS:HD2	1.92	0.50
49:BQ:133:ARG:CB	49:BQ:133:ARG:HH11	2.25	0.50
54:BV:17:GLY:C	54:BV:18:LEU:HD13	2.31	0.50
54:BV:22:VAL:O	54:BV:23:GLU:HB2	2.11	0.50
55:BW:10:VAL:O	55:BW:10:VAL:HG12	2.11	0.50
58:BZ:30:ASN:ND2	58:BZ:32:HIS:N	2.56	0.50
3:CC:145:GLY:O	3:CC:146:ALA:O	2.30	0.50
3:CC:52:LEU:HD21	3:CC:55:VAL:HG23	1.94	0.50
9:CI:19:LEU:CD1	9:CI:59:PHE:HD2	2.17	0.50
14:CN:12:ARG:HH11	14:CN:14:PRO:HG2	1.76	0.50
17:CQ:10:VAL:HG23	17:CQ:53:LEU:HA	1.93	0.50
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.75	0.50
19:CS:21:GLU:HG3	19:CS:22:LEU:N	2.26	0.50
28:D2:63:VAL:O	28:D2:66:GLU:HG3	2.11	0.50
31:D5:23:HIS:O	31:D5:24:ALA:C	2.50	0.50
32:D6:15:GLU:CD	32:D6:18:ARG:NE	2.61	0.50
32:D6:45:LYS:O	32:D6:46:HIS:CB	2.58	0.50
36:DA:1188:U:C2'	36:DA:1189:A:H5'	2.41	0.50
36:DA:1472:A:C2'	36:DA:1473:G:H5'	2.41	0.50
36:DA:1799:G:H5'	36:DA:1819:A:N6	2.27	0.50
36:DA:2185:C:C2'	36:DA:2186:G:C5'	2.90	0.50
36:DA:363(F):A:HO2'	36:DA:364:C:H5	1.58	0.50
36:DA:535:C:O2'	36:DA:536:A:H5'	2.11	0.50
36:DA:691:C:O2'	36:DA:692:C:H5'	2.11	0.50
36:DA:742:G:O2'	36:DA:743:G:H5'	2.12	0.50
36:DA:811:U:OP2	48:DP:30:THR:HG23	2.12	0.50
36:DA:863:A:H61	36:DA:913:U:H3	1.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:15:A:H1'	37:DB:110:G:C5	2.47	0.50
40:DE:5:LEU:HD12	40:DE:51:PHE:HB2	1.93	0.50
42:DG:135:LEU:O	42:DG:154:GLY:HA3	2.12	0.50
42:DG:138:GLN:OE1	42:DG:153:ARG:N	2.38	0.50
43:DH:153:LYS:N	43:DH:153:LYS:HD3	2.12	0.50
51:DS:14:VAL:O	51:DS:15:ARG:HG3	2.12	0.50
51:DS:96:GLY:C	51:DS:98:VAL:H	2.15	0.50
54:DV:22:VAL:O	54:DV:23:GLU:HB2	2.12	0.50
54:DV:55:ALA:O	54:DV:56:SER:HB3	2.12	0.50
36:DA:328:U:H4'	57:DY:68:HIS:CD2	2.47	0.50
1:AA:1270:C:H2'	1:AA:1271:G:H8	1.76	0.50
3:AC:107:GLN:N	3:AC:107:GLN:CD	2.64	0.50
5:AE:50:GLU:HB3	5:AE:53:LEU:HD13	1.94	0.50
8:AH:30:ARG:CZ	8:AH:30:ARG:HB3	2.42	0.50
12:AL:17:LYS:HD3	12:AL:18:VAL:H	1.77	0.50
15:AO:27:VAL:O	15:AO:31:LEU:CD1	2.59	0.50
17:AQ:36:ILE:O	17:AQ:36:ILE:HG13	2.11	0.50
18:AR:36:ASN:HD21	18:AR:39:VAL:HB	1.77	0.50
25:AZ:35:ALA:HA	25:AZ:38:GLU:OE2	2.11	0.50
31:B5:23:HIS:O	31:B5:24:ALA:C	2.50	0.50
32:B6:11:LEU:HD13	32:B6:12:GLU:N	2.27	0.50
36:BA:1142(A):A:C8	36:BA:1142(A):A:H5'	2.47	0.50
36:BA:1314:C:C6	36:BA:1314:C:H5'	2.47	0.50
36:BA:1378:A:O2'	36:BA:1379:A:C5'	2.39	0.50
36:BA:1525:G:O2'	36:BA:1526:G:H5'	2.11	0.50
36:BA:1558:A:H4'	36:BA:1559:G:O5'	2.12	0.50
36:BA:1799:G:H5'	36:BA:1819:A:N6	2.26	0.50
36:BA:2050:C:H2'	36:BA:2051:A:O4'	2.12	0.50
36:BA:2304:G:H22	36:BA:2312:U:H3	1.59	0.50
36:BA:2415:G:H2'	36:BA:2416:C:H6	1.76	0.50
36:BA:2422:A:H4'	36:BA:2423:U:OP1	2.11	0.50
36:BA:2512:C:H4'	40:BE:122:PHE:CE2	2.46	0.50
36:BA:253:C:H2'	36:BA:254:G:O4'	2.11	0.50
36:BA:2681:C:H5	36:BA:2725:A:H62	1.57	0.50
36:BA:27:G:N2	36:BA:512:G:C2'	2.69	0.50
36:BA:585:G:H2'	36:BA:1251:C:N4	2.25	0.50
36:BA:709:U:H2'	36:BA:710:G:H8	1.77	0.50
37:BB:65:C:C2'	37:BB:66:A:H5'	2.42	0.50
42:BG:68:PRO:HB3	42:BG:91:ARG:O	2.12	0.50
43:BH:40:GLU:O	43:BH:41:MET:HB2	2.12	0.50
46:BN:121:LYS:HB3	46:BN:123:TYR:CE1	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:75:ILE:HD13	48:BP:77:ARG:HH22	1.74	0.50
50:BR:32:GLY:O	50:BR:115:GLU:HA	2.11	0.50
51:BS:42:ASP:C	51:BS:44:LYS:H	2.15	0.50
53:BU:92:ARG:HB2	54:BV:11:GLN:NE2	2.27	0.50
36:BA:2014:A:H4'	55:BW:92:ARG:HH22	1.76	0.50
57:BY:31:LEU:HD22	57:BY:31:LEU:N	2.26	0.50
1:CA:370:C:O2'	1:CA:371:G:H5'	2.12	0.50
1:CA:501:C:OP1	12:CL:117:ARG:NH2	2.44	0.50
4:CD:36:ARG:C	4:CD:38:TYR:H	2.14	0.50
17:CQ:25:ARG:O	17:CQ:25:ARG:HG3	2.10	0.50
22:CV:14:A:C2'	22:CV:15:G:H5'	2.42	0.50
22:CW:9:A:C2	22:CW:45:U:O4	2.55	0.50
25:CZ:17:ILE:HG13	25:CZ:104:LEU:HA	1.92	0.50
25:CZ:200:TRP:O	25:CZ:204:ASP:CB	2.60	0.50
25:CZ:90:LYS:NZ	25:CZ:90:LYS:HB2	2.27	0.50
25:CZ:98:GLN:HG2	25:CZ:226:GLU:OE2	2.12	0.50
28:D2:55:ARG:O	28:D2:59:ARG:HG2	2.12	0.50
36:DA:252:G:P	48:DP:50:ARG:HH21	2.34	0.50
36:DA:523:C:O2'	36:DA:524:U:H5'	2.10	0.50
36:DA:607:U:OP1	41:DF:102:PRO:HA	2.12	0.50
37:DB:65:C:C2'	37:DB:66:A:H5'	2.42	0.50
38:DC:46:LYS:NZ	38:DC:168:THR:O	2.45	0.50
39:DD:132:PRO:HD2	39:DD:135:PHE:HD2	1.75	0.50
39:DD:70:TRP:HZ3	39:DD:146:GLU:OE2	1.94	0.50
41:DF:170:LEU:HB3	41:DF:173:VAL:HB	1.94	0.50
47:DO:4:PRO:O	47:DO:5:GLN:CB	2.59	0.50
48:DP:125:VAL:O	48:DP:125:VAL:HG13	2.12	0.50
49:DQ:32:TYR:O	49:DQ:105:GLU:HB2	2.11	0.50
49:DQ:26:TYR:HB2	49:DQ:137:TYR:HD1	1.77	0.50
50:DR:32:GLY:O	50:DR:115:GLU:HA	2.12	0.50
50:DR:72:ASP:OD2	50:DR:75:LEU:HB2	2.11	0.50
51:DS:20:ARG:NE	51:DS:20:ARG:HA	2.26	0.50
57:DY:15:VAL:HG22	57:DY:72:VAL:HG12	1.93	0.50
1:AA:158:G:O2'	1:AA:159:G:H5'	2.12	0.50
1:AA:347:G:H21	1:AA:348:G:H1'	1.76	0.50
2:AB:112:VAL:O	2:AB:115:LEU:HB3	2.12	0.50
3:AC:25:GLY:C	3:AC:27:LYS:N	2.61	0.50
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.45	0.50
6:AF:38:GLU:O	6:AF:39:LYS:O	2.30	0.50
10:AJ:42:THR:HG22	10:AJ:43:ARG:N	2.27	0.50
10:AJ:3:LYS:N	10:AJ:77:PRO:HD3	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:57:THR:HG22	11:AK:60:ALA:CB	2.42	0.50
16:AP:23:ASP:OD1	16:AP:25:ARG:NH1	2.44	0.50
20:AT:26:ASN:ND2	20:AT:26:ASN:N	2.57	0.50
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.11	0.50
22:AW:75:C:H5''	27:B1:30:VAL:HG11	1.93	0.50
27:B1:67:ILE:H	27:B1:68:PRO:HD2	1.74	0.50
29:B3:15:TYR:HB3	29:B3:19:GLN:NE2	2.27	0.50
30:B4:22:ILE:N	30:B4:22:ILE:HD12	2.26	0.50
32:B6:53:LYS:O	32:B6:54:ILE:OXT	2.29	0.50
36:BA:1047:G:C2	36:BA:1110:G:H2'	2.46	0.50
36:BA:1047:G:H2'	36:BA:1110:G:N2	2.13	0.50
27:B1:3:LYS:HG2	36:BA:1365:A:OP2	2.12	0.50
36:BA:1639:U:H2'	36:BA:1640:C:H5''	1.93	0.50
36:BA:2713:A:H3'	36:BA:2714:G:C5'	2.42	0.50
36:BA:648:G:O2'	36:BA:649:G:H5'	2.12	0.50
36:BA:852:G:H2'	36:BA:853:G:H8	1.77	0.50
38:BC:42:GLU:HG3	38:BC:215:THR:CG2	2.42	0.50
39:BD:35:LYS:CG	39:BD:104:TYR:HE2	2.15	0.50
39:BD:273:ARG:HG2	39:BD:273:ARG:NH1	2.25	0.50
39:BD:30:GLU:C	39:BD:35:LYS:HZ1	2.15	0.50
39:BD:61:LEU:O	39:BD:63:ARG:NH1	2.44	0.50
40:BE:55:ASN:O	40:BE:56:PRO:C	2.49	0.50
40:BE:52:LEU:O	40:BE:75:VAL:HG23	2.12	0.50
41:BF:192:LEU:HD23	41:BF:193:VAL:N	2.27	0.50
42:BG:125:PHE:CB	42:BG:130:ASN:O	2.60	0.50
49:BQ:59:ARG:O	49:BQ:60:ARG:HB2	2.11	0.50
57:BY:83:THR:HA	57:BY:96:ILE:HG22	1.94	0.50
58:BZ:56:VAL:HG13	58:BZ:69:THR:O	2.11	0.50
1:CA:865:A:H5'	1:CA:1078:U:O4	2.11	0.50
1:CA:1271:G:C3'	1:CA:1272:G:H5''	2.42	0.50
1:CA:748:C:H4'	1:CA:749:C:O5'	2.11	0.50
3:CC:50:ALA:O	3:CC:70:VAL:CG1	2.60	0.50
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.94	0.50
13:CM:22:ILE:CB	13:CM:25:ILE:HD12	2.42	0.50
14:CN:57:ARG:HB2	14:CN:57:ARG:NH1	2.14	0.50
25:CZ:166:ASP:C	25:CZ:167:GLU:CG	2.78	0.50
25:CZ:7:ARG:NH1	25:CZ:7:ARG:CG	2.68	0.50
27:D1:4:VAL:HG23	27:D1:11:ARG:HB3	1.94	0.50
28:D2:70:GLN:O	28:D2:71:ASN:CB	2.59	0.50
36:DA:1162:G:H4'	54:DV:24:LYS:HB2	1.93	0.50
36:DA:2206:G:C2	36:DA:2207:G:H5'	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2422:A:H4'	36:DA:2423:U:OP1	2.12	0.50
36:DA:2713:A:H3'	36:DA:2714:G:H5'	1.94	0.50
36:DA:359:A:H3'	36:DA:360:G:H8	1.77	0.50
39:DD:112:GLN:O	39:DD:115:GLN:HB2	2.11	0.50
36:DA:2579:C:O2'	40:DE:131:ALA:CB	2.60	0.50
40:DE:76:ARG:O	40:DE:77:ILE:O	2.30	0.50
41:DF:148:LEU:HD23	41:DF:191:ARG:HH11	1.77	0.50
42:DG:146:TYR:O	42:DG:148:MET:N	2.37	0.50
42:DG:86:MET:N	42:DG:87:PRO:CD	2.74	0.50
43:DH:13:LYS:HA	43:DH:13:LYS:HE2	1.94	0.50
45:DK:92:UNK:C	45:DK:94:UNK:H	2.25	0.50
47:DO:2:ILE:HB	47:DO:33:ALA:HB3	1.93	0.50
48:DP:56:SER:O	48:DP:57:THR:C	2.50	0.50
49:DQ:17:LEU:HD13	49:DQ:39:PRO:HB2	1.92	0.50
50:DR:9:LYS:HD2	50:DR:43:GLU:OE1	2.12	0.50
51:DS:15:ARG:O	51:DS:18:ILE:CD1	2.59	0.50
51:DS:16:ASN:O	51:DS:18:ILE:HD12	2.12	0.50
56:DX:33:LYS:CA	56:DX:33:LYS:HE2	2.42	0.50
58:DZ:151:HIS:HA	58:DZ:171:ILE:HG12	1.94	0.50
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.47	0.50
1:AA:1392:G:H21	1:AA:1502:A:H8	1.60	0.50
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.93	0.50
4:AD:58:LEU:O	4:AD:58:LEU:HD22	2.12	0.50
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.94	0.50
8:AH:121:ASP:OD1	8:AH:122:ARG:N	2.45	0.50
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD3	2.47	0.50
1:AA:664:G:P	18:AR:64:ARG:HH21	2.35	0.50
20:AT:14:LYS:O	20:AT:18:GLN:HB2	2.11	0.50
24:AY:1:A:H2'	24:AY:2:G:H8	1.76	0.50
24:AY:52:A:C2'	24:AY:53:G:H5'	2.42	0.50
25:AZ:342:PHE:CD1	25:AZ:342:PHE:N	2.79	0.50
32:B6:19:ARG:H	32:B6:19:ARG:HD2	1.77	0.50
32:B6:35:GLU:HB3	32:B6:51:GLU:CB	2.25	0.50
34:B8:23:VAL:HG13	34:B8:46:ARG:HB3	1.92	0.50
36:BA:1049:C:O2'	36:BA:1050:A:H5'	2.12	0.50
36:BA:1502:C:H5'	36:BA:1503:U:OP2	2.11	0.50
36:BA:2110:G:N2	36:BA:2178:C:H5	2.10	0.50
36:BA:2817:G:OP1	50:BR:42:LYS:NZ	2.45	0.50
36:BA:2839:G:C5'	50:BR:46:GLY:HA2	2.42	0.50
36:BA:628:G:C3'	36:BA:629:G:H5''	2.42	0.50
37:BB:56:G:O2'	37:BB:57:A:OP2	2.28	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:149:ILE:HG23	38:BC:150:GLY:N	2.27	0.50
39:BD:26:LYS:H	39:BD:26:LYS:HE2	1.76	0.50
39:BD:73:VAL:HG13	39:BD:120:GLY:HA2	1.93	0.50
40:BE:5:LEU:HD12	40:BE:51:PHE:HB2	1.93	0.50
41:BF:134:GLY:O	41:BF:135:LYS:HE3	2.12	0.50
44:BJ:33:UNK:O	44:BJ:34:UNK:C	2.59	0.50
48:BP:146:VAL:CG2	48:BP:147:LEU:H	2.05	0.50
50:BR:59:ASP:O	50:BR:60:LEU:CB	2.60	0.50
51:BS:22:GLY:O	51:BS:23:ARG:O	2.30	0.50
52:BT:32:TYR:N	52:BT:32:TYR:CD1	2.77	0.50
52:BT:33:LYS:HG3	52:BT:43:GLN:HB2	1.94	0.50
55:BW:12:ILE:HB	55:BW:42:ARG:HH12	1.77	0.50
57:BY:28:LYS:CD	57:BY:39:VAL:HG22	2.39	0.50
57:BY:6:HIS:N	57:BY:6:HIS:CD2	2.79	0.50
58:BZ:128:VAL:HG22	58:BZ:129:SER:N	2.27	0.50
1:CA:44:G:C2	1:CA:45:U:H1'	2.46	0.50
1:CA:476:G:H2'	1:CA:477:A:H8	1.77	0.50
3:CC:106:VAL:HG23	3:CC:106:VAL:O	2.11	0.50
13:CM:4:ILE:CD1	13:CM:4:ILE:N	2.73	0.50
17:CQ:18:THR:HG23	17:CQ:69:LYS:HZ3	1.74	0.50
20:CT:86:ARG:HH11	20:CT:86:ARG:HG3	1.76	0.50
22:CW:73:A:C2'	22:CW:74:C:H5''	2.42	0.50
27:D1:5:CYS:CB	27:D1:8:SER:HG	2.24	0.50
34:D8:41:ILE:HD12	36:DA:2419:U:P	2.52	0.50
36:DA:158:U:H3'	36:DA:158:U:O2	2.12	0.50
36:DA:528:A:C2	36:DA:2043:C:O5'	2.63	0.50
36:DA:2415:G:H2'	36:DA:2416:C:H6	1.77	0.50
36:DA:2653:U:H3'	36:DA:2654:A:C8	2.46	0.50
36:DA:2843:G:N2	36:DA:2875:C:C2	2.80	0.50
36:DA:247:G:H4'	36:DA:386:G:C5	2.46	0.50
38:DC:42:GLU:HG3	38:DC:215:THR:CG2	2.42	0.50
40:DE:2:LYS:HD3	40:DE:95:ILE:CG2	2.41	0.50
40:DE:68:ALA:O	40:DE:70:ALA:N	2.45	0.50
42:DG:34:LEU:HB3	42:DG:161:THR:HG22	1.92	0.50
43:DH:83:TYR:O	43:DH:84:SER:O	2.30	0.50
48:DP:102:ARG:NH1	48:DP:102:ARG:CB	2.75	0.50
56:DX:53:LYS:HD2	56:DX:55:ASN:HD21	1.76	0.50
1:AA:1508:G:O2'	1:AA:1509:C:H5'	2.12	0.49
1:AA:339:C:OP2	47:BO:97:ARG:NH1	2.45	0.49
1:AA:458:C:H2'	1:AA:460:G:H8	1.77	0.49
1:AA:631:G:H2'	1:AA:632:A:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:213:LEU:C	2:AB:213:LEU:HD23	2.32	0.49
6:AF:45:LEU:HA	6:AF:58:GLY:O	2.12	0.49
6:AF:99:ALA:O	6:AF:100:ASN:HB2	2.12	0.49
7:AG:50:ILE:HD12	7:AG:125:MET:HG3	1.93	0.49
16:AP:43:LYS:HA	16:AP:48:TRP:CB	2.41	0.49
17:AQ:7:THR:O	17:AQ:23:VAL:HG13	2.11	0.49
24:AY:76:A:OP1	25:AZ:274:ARG:NE	2.45	0.49
27:B1:93:GLU:O	27:B1:95:LEU:N	2.40	0.49
36:BA:1404:C:O2'	36:BA:1405:U:H5'	2.12	0.49
36:BA:2659:G:H2'	36:BA:2660:A:H5''	1.94	0.49
36:BA:2855:C:O2'	36:BA:2856:C:H5'	2.11	0.49
36:BA:300:A:H2'	36:BA:334:C:O2'	2.12	0.49
36:BA:451:C:C2	36:BA:453:C:C5	2.99	0.49
36:BA:733:G:C8	36:BA:761:A:N1	2.80	0.49
39:BD:10:THR:HG23	39:BD:13:ARG:CB	2.42	0.49
39:BD:43:ARG:NH2	39:BD:44:ASN:HD21	2.07	0.49
42:BG:61:ALA:O	42:BG:65:GLY:N	2.42	0.49
42:BG:7:LEU:O	42:BG:11:TYR:N	2.44	0.49
45:BK:92:UNK:C	45:BK:94:UNK:H	2.25	0.49
37:BB:91:C:OP2	49:BQ:16:ARG:NH2	2.45	0.49
36:BA:2485:G:C5'	49:BQ:46:GLN:HE21	2.21	0.49
50:BR:72:ASP:OD2	50:BR:75:LEU:HB2	2.12	0.49
52:BT:27:THR:CG2	52:BT:28:VAL:H	2.17	0.49
52:BT:33:LYS:HZ3	52:BT:43:GLN:HG2	1.77	0.49
53:BU:59:ARG:O	53:BU:60:LEU:C	2.50	0.49
1:CA:1157:A:H1'	1:CA:1181:G:N2	2.27	0.49
2:CB:29:ALA:HA	2:CB:32:ILE:CG2	2.41	0.49
6:CF:21:LEU:HD13	6:CF:21:LEU:C	2.32	0.49
16:CP:21:VAL:HG21	16:CP:59:TRP:CD2	2.46	0.49
25:CZ:266:VAL:HB	25:CZ:291:ARG:HH12	1.77	0.49
25:CZ:358:GLY:C	25:CZ:360:GLU:H	2.15	0.49
25:CZ:7:ARG:O	25:CZ:8:THR:CG2	2.60	0.49
28:D2:25:VAL:C	28:D2:27:GLU:N	2.60	0.49
31:D5:40:LYS:HZ1	31:D5:46:CYS:N	1.98	0.49
32:D6:19:ARG:H	32:D6:19:ARG:HD2	1.77	0.49
33:D7:21:ARG:HG2	33:D7:21:ARG:HH11	1.77	0.49
36:DA:1514:U:H2'	36:DA:1515:G:C8	2.47	0.49
36:DA:2659:G:H2'	36:DA:2660:A:H5''	1.94	0.49
36:DA:222:A:H5''	36:DA:421:U:OP1	2.12	0.49
36:DA:465:G:H2'	36:DA:466:A:C8	2.46	0.49
36:DA:827:U:H5'	36:DA:828:U:O5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:22:U:H2'	37:DB:23:G:C8	2.47	0.49
38:DC:127:LEU:HD23	38:DC:128:GLY:N	2.27	0.49
39:DD:9:TYR:CD1	39:DD:10:THR:HG22	2.47	0.49
42:DG:125:PHE:O	42:DG:126:ASP:O	2.30	0.49
36:DA:2394:C:OP1	48:DP:63:PRO:HD2	2.12	0.49
48:DP:66:GLY:O	48:DP:67:MET:CB	2.60	0.49
52:DT:104:ASN:O	52:DT:105:LEU:CB	2.60	0.49
58:DZ:15:PRO:HA	58:DZ:18:LEU:HD23	1.93	0.49
58:DZ:35:ARG:HH22	58:DZ:36:LYS:HG2	1.77	0.49
1:AA:124:G:H2'	1:AA:125:U:O4'	2.12	0.49
1:AA:1354:C:H2'	1:AA:1355:G:H8	1.77	0.49
1:AA:807:A:H2'	1:AA:808:C:C6	2.47	0.49
2:AB:95:GLN:O	2:AB:96:ARG:HD2	2.13	0.49
3:AC:159:GLY:O	3:AC:160:ALA:C	2.51	0.49
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.94	0.49
8:AH:53:VAL:HB	8:AH:58:TYR:CD1	2.47	0.49
1:AA:963:G:N2	10:AJ:55:LYS:HZ1	2.09	0.49
18:AR:26:LEU:HD12	18:AR:26:LEU:N	2.26	0.49
19:AS:27:GLU:O	19:AS:28:LYS:O	2.30	0.49
22:AV:53:G:H2'	22:AV:54:U:H6	1.77	0.49
25:AZ:113:MET:CG	25:AZ:114:PRO:HD2	2.34	0.49
24:AY:76:A:H2'	25:AZ:274:ARG:HA	1.94	0.49
25:AZ:323:LEU:H	25:AZ:323:LEU:CD1	2.22	0.49
36:BA:839:U:O2'	36:BA:1191:G:H1'	2.11	0.49
36:BA:1464:C:HO2'	36:BA:1528:A:H8	1.56	0.49
36:BA:1697:G:C3'	36:BA:1698:A:H5''	2.36	0.49
36:BA:2175:C:H2'	36:BA:2176:A:C8	2.46	0.49
36:BA:2257:U:O2'	36:BA:2258:C:H5'	2.11	0.49
36:BA:2326:C:H41	36:BA:2389:G:H1	1.60	0.49
36:BA:2851:A:H2'	36:BA:2852:G:H8	1.76	0.49
36:BA:2893:G:H5'	36:BA:2894:G:H5'	1.94	0.49
36:BA:590:A:H2'	36:BA:591:C:C6	2.47	0.49
40:BE:65:GLY:HA2	40:BE:70:ALA:HB1	1.94	0.49
40:BE:98:PRO:HG3	40:BE:174:ASP:HA	1.95	0.49
42:BG:45:GLU:CA	42:BG:45:GLU:OE1	2.60	0.49
46:BN:1:MET:C	46:BN:1:MET:SD	2.91	0.49
48:BP:122:PRO:HB3	48:BP:141:ALA:CB	2.42	0.49
50:BR:52:ILE:O	50:BR:55:ALA:N	2.45	0.49
51:BS:74:ALA:O	51:BS:76:LYS:N	2.43	0.49
51:BS:98:VAL:O	51:BS:99:LYS:C	2.49	0.49
52:BT:26:ASP:OD1	52:BT:26:ASP:C	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:75:ILE:HG13	57:BY:76:CYS:N	2.26	0.49
58:BZ:177:PRO:O	58:BZ:178:GLU:HB3	2.12	0.49
1:CA:1498:U:H4'	1:CA:1519:A:C2	2.47	0.49
1:CA:272:C:O2'	1:CA:273:A:H5'	2.11	0.49
1:CA:486:U:O2'	1:CA:487:A:H5'	2.11	0.49
1:CA:56:U:H2'	1:CA:57:G:H8	1.77	0.49
1:CA:664:G:P	18:CR:64:ARG:HH21	2.35	0.49
1:CA:919:A:O2'	1:CA:920:U:H5'	2.12	0.49
2:CB:8:LYS:O	2:CB:12:GLU:HG3	2.12	0.49
3:CC:175:LEU:HD12	3:CC:175:LEU:H	1.76	0.49
4:CD:7:PRO:HB2	4:CD:10:ARG:HD2	1.93	0.49
9:CI:16:ARG:NH1	9:CI:64:THR:HG21	2.27	0.49
10:CJ:43:ARG:HB2	10:CJ:67:THR:HG23	1.94	0.49
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.47	0.49
1:CA:981:U:H5'	14:CN:21:TYR:CE1	2.47	0.49
17:CQ:12:SER:HB3	17:CQ:20:THR:OG1	2.12	0.49
18:CR:40:LEU:O	18:CR:42:ARG:N	2.44	0.49
22:CV:62:C:OP1	22:CV:62:C:H4'	2.11	0.49
25:CZ:145:GLU:O	25:CZ:146:LEU:C	2.50	0.49
25:CZ:35:ALA:HA	25:CZ:38:GLU:OE2	2.12	0.49
25:CZ:318:ALA:HB1	25:CZ:399:VAL:O	2.13	0.49
26:D0:42:GLY:HA3	36:DA:2331:G:C4'	2.42	0.49
36:DA:1189:A:H2'	36:DA:1190:G:O4'	2.12	0.49
36:DA:1479:G:H5'	36:DA:1558:A:C2	2.48	0.49
36:DA:1839:G:C8	36:DA:1839:G:H5'	2.46	0.49
36:DA:18:C:O3'	53:DU:23:GLY:HA2	2.12	0.49
36:DA:200:U:H2'	36:DA:201:C:H5'	1.93	0.49
36:DA:2657:A:H3'	36:DA:2658:C:H6	1.77	0.49
36:DA:2817:G:OP1	50:DR:42:LYS:NZ	2.45	0.49
36:DA:2839:G:C5'	50:DR:46:GLY:HA2	2.43	0.49
41:DF:24:LEU:O	41:DF:115:ALA:HB1	2.12	0.49
36:DA:660:G:H5'	41:DF:99:TYR:CD2	2.47	0.49
43:DH:65:HIS:O	43:DH:67:LEU:N	2.41	0.49
46:DN:12:ARG:CZ	46:DN:135:PRO:HG2	2.42	0.49
47:DO:11:ALA:HB1	47:DO:99:PHE:O	2.13	0.49
48:DP:122:PRO:HB3	48:DP:141:ALA:HB3	1.93	0.49
49:DQ:64:ILE:HG22	49:DQ:65:PHE:N	2.26	0.49
54:DV:38:LEU:HD23	54:DV:38:LEU:C	2.33	0.49
55:DW:6:ILE:CG2	55:DW:8:ARG:HD2	2.42	0.49
56:DX:10:ALA:O	56:DX:28:PHE:CB	2.60	0.49
56:DX:45:THR:OG1	56:DX:46:ALA:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:64:GLU:O	57:DY:65:ALA:HB2	2.11	0.49
58:DZ:119:GLU:O	58:DZ:120:ILE:O	2.29	0.49
58:DZ:104:PHE:CD1	58:DZ:139:VAL:HG21	2.44	0.49
58:DZ:155:LEU:HD23	58:DZ:155:LEU:N	2.25	0.49
1:AA:198:G:O2'	1:AA:199:G:H8	1.95	0.49
1:AA:476:G:H2'	1:AA:477:A:H8	1.78	0.49
1:AA:534:U:H5'	1:AA:534:U:H6	1.77	0.49
2:AB:109:SER:C	2:AB:111:ARG:N	2.65	0.49
2:AB:7:VAL:CG1	2:AB:217:ARG:HH22	2.25	0.49
4:AD:159:ARG:HG3	4:AD:159:ARG:NH1	2.27	0.49
5:AE:53:LEU:H	5:AE:53:LEU:CD1	2.25	0.49
6:AF:11:ASN:HB3	6:AF:14:LEU:CD2	2.42	0.49
7:AG:75:VAL:HG13	7:AG:145:ALA:HB2	1.93	0.49
12:AL:102:ARG:CG	12:AL:102:ARG:HH11	2.16	0.49
22:AV:51:U:H2'	22:AV:52:G:C8	2.47	0.49
22:AW:5:G:O6	22:AW:6:G:C6	2.65	0.49
25:AZ:135:MET:O	25:AZ:138:VAL:HG23	2.12	0.49
36:BA:118:A:OP2	36:BA:119:A:H5''	2.12	0.49
36:BA:1801:G:H3'	36:BA:1802:A:H5'	1.95	0.49
36:BA:2115:G:N3	36:BA:2117:A:N7	2.61	0.49
36:BA:893:C:H2'	36:BA:894:C:H6	1.77	0.49
41:BF:175:THR:O	41:BF:176:LEU:HB2	2.11	0.49
41:BF:46:ARG:NH1	41:BF:46:ARG:HG2	2.20	0.49
42:BG:88:ILE:CG2	42:BG:89:GLY:N	2.75	0.49
43:BH:37:VAL:HG11	43:BH:68:THR:CG2	2.42	0.49
46:BN:134:ARG:O	46:BN:136:GLU:N	2.45	0.49
48:BP:112:LEU:O	48:BP:112:LEU:HD13	2.13	0.49
48:BP:132:LYS:N	48:BP:132:LYS:HD2	2.15	0.49
49:BQ:39:PRO:O	49:BQ:40:ALA:HB2	2.12	0.49
36:BA:1654:A:P	50:BR:3:HIS:HB3	2.53	0.49
50:BR:72:ASP:HB3	50:BR:75:LEU:CB	2.38	0.49
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.80	0.49
52:BT:39:ARG:CD	52:BT:39:ARG:H	2.14	0.49
53:BU:62:ILE:HG23	53:BU:76:TYR:CE2	2.47	0.49
55:BW:40:ASN:O	55:BW:41:LYS:HG2	2.11	0.49
57:BY:60:PHE:CG	57:BY:60:PHE:O	2.66	0.49
57:BY:8:LYS:HE2	57:BY:72:VAL:O	2.12	0.49
1:CA:191:G:C4	20:CT:105:SER:HB2	2.47	0.49
1:CA:197:A:N6	1:CA:221:C:C5'	2.76	0.49
1:CA:269:C:H2'	1:CA:270:A:C8	2.47	0.49
1:CA:402:G:O2'	1:CA:403:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:42:ILE:CD1	2:CB:202:PRO:HB2	2.42	0.49
2:CB:7:VAL:CG1	2:CB:217:ARG:HH22	2.25	0.49
2:CB:72:GLY:O	2:CB:94:ASN:HA	2.12	0.49
3:CC:73:PRO:HD3	3:CC:105:GLU:HG3	1.94	0.49
8:CH:86:ILE:HG21	8:CH:133:LEU:HD23	1.94	0.49
9:CI:86:VAL:O	9:CI:86:VAL:HG22	2.11	0.49
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.16	0.49
13:CM:108:ARG:CG	13:CM:108:ARG:HH11	2.20	0.49
1:CA:1202:G:C2	14:CN:42:ILE:HG21	2.46	0.49
15:CO:2:PRO:O	15:CO:3:ILE:C	2.49	0.49
24:CY:61:C:H2'	24:CY:62:U:H5'	1.94	0.49
25:CZ:92:MET:HG3	25:CZ:93:ILE:N	2.27	0.49
26:D0:36:ILE:O	26:D0:36:ILE:HG13	2.11	0.49
32:D6:36:LEU:HD12	32:D6:50:ARG:CZ	2.42	0.49
34:D8:12:LYS:O	48:DP:65:ARG:HB2	2.12	0.49
35:D9:29:ASN:O	35:D9:29:ASN:ND2	2.45	0.49
36:DA:1101:U:H2'	36:DA:1102:C:C6	2.47	0.49
36:DA:1404:C:O2'	36:DA:1405:U:H5'	2.13	0.49
36:DA:1754:C:OP2	52:DT:113:LYS:NZ	2.40	0.49
36:DA:2168:G:N2	36:DA:2170:A:H3'	2.27	0.49
37:DB:40:U:C2	37:DB:43:C:H5''	2.47	0.49
37:DB:68:C:H2'	37:DB:69:G:O4'	2.12	0.49
38:DC:181:PRO:HB2	38:DC:183:GLU:OE2	2.11	0.49
40:DE:9:VAL:HG11	40:DE:25:VAL:HB	1.94	0.49
41:DF:88:VAL:O	41:DF:88:VAL:HG13	2.12	0.49
13:CM:3:ARG:HB2	42:DG:113:ARG:NH2	2.26	0.49
43:DH:89:ILE:HD11	43:DH:129:THR:HA	1.94	0.49
50:DR:7:GLY:O	50:DR:8:ARG:NH2	2.45	0.49
51:DS:85:VAL:C	51:DS:106:ARG:HG2	2.32	0.49
51:DS:93:LYS:O	51:DS:94:TYR:C	2.51	0.49
52:DT:28:VAL:HG11	52:DT:46:GLU:CG	2.37	0.49
52:DT:83:ILE:CG1	52:DT:84:GLN:N	2.73	0.49
54:DV:13:ARG:HG3	54:DV:13:ARG:NH1	2.25	0.49
36:DA:1341:U:C4'	56:DX:57:LEU:HB3	2.42	0.49
57:DY:2:ARG:N	57:DY:4:LYS:HE2	2.27	0.49
1:AA:160:A:H1'	1:AA:344:A:C5	2.48	0.49
1:AA:383:A:H2'	1:AA:384:G:H5'	1.94	0.49
1:AA:980:C:H5'	1:AA:981:U:C5	2.48	0.49
7:AG:80:VAL:O	7:AG:83:ALA:HB3	2.13	0.49
19:AS:11:VAL:HG13	19:AS:16:LEU:HD11	1.93	0.49
27:B1:48:LYS:CE	27:B1:61:ARG:HD3	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B7:22:MET:HE3	33:B7:31:LEU:HD12	1.93	0.49
34:B8:8:LYS:HE3	36:BA:245:G:O6	2.12	0.49
36:BA:1142(A):A:OP2	36:BA:1142(A):A:H3'	2.12	0.49
36:BA:2107:C:C2	36:BA:2182:G:N1	2.80	0.49
36:BA:445:C:H2'	36:BA:446:G:C8	2.48	0.49
36:BA:473:G:H5''	36:BA:508:G:N2	2.28	0.49
36:BA:671:C:H2'	36:BA:672:C:C6	2.47	0.49
36:BA:949:C:H2'	36:BA:950:G:H8	1.78	0.49
39:BD:65:ILE:CD1	39:BD:88:ARG:CZ	2.90	0.49
40:BE:87:GLU:O	40:BE:89:ASP:N	2.45	0.49
41:BF:181:LEU:CD2	41:BF:202:PHE:HD2	2.25	0.49
41:BF:23:ASP:O	41:BF:115:ALA:HA	2.13	0.49
45:BK:117:UNK:O	45:BK:118:UNK:CB	2.60	0.49
48:BP:47:ASP:HB3	48:BP:48:PRO:C	2.33	0.49
26:B0:7:LEU:HD13	49:BQ:85:LYS:CD	2.41	0.49
51:BS:93:LYS:O	51:BS:94:TYR:C	2.50	0.49
53:BU:52:ARG:HH11	53:BU:52:ARG:HB3	1.77	0.49
53:BU:93:LYS:O	53:BU:96:ALA:HB3	2.12	0.49
54:BV:55:ALA:O	54:BV:56:SER:HB3	2.12	0.49
56:BX:14:SER:O	56:BX:17:ALA:HB3	2.13	0.49
36:BA:1598:C:H5'	56:BX:36:LYS:CD	2.43	0.49
58:BZ:85:HIS:HE1	58:BZ:87:ASP:OD1	1.95	0.49
1:CA:1272:G:H5'	1:CA:1272:G:H8	1.76	0.49
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.48	0.49
1:CA:1502:A:C2	1:CA:1504:G:C2	3.00	0.49
1:CA:161:A:H2'	1:CA:162:A:C8	2.47	0.49
1:CA:16:A:N1	1:CA:919:A:H2	2.09	0.49
1:CA:383:A:H2'	1:CA:384:G:H5'	1.94	0.49
4:CD:26:CYS:HG	59:CD:301:ZN:ZN	1.00	0.49
10:CJ:54:PHE:CZ	10:CJ:55:LYS:CE	2.95	0.49
10:CJ:48:THR:OG1	10:CJ:62:HIS:HD2	1.95	0.49
19:CS:11:VAL:CG1	19:CS:16:LEU:HD11	2.42	0.49
19:CS:27:GLU:O	19:CS:28:LYS:O	2.31	0.49
20:CT:63:ILE:HG21	20:CT:81:LYS:HG3	1.95	0.49
25:CZ:195:TRP:C	25:CZ:197:ASP:N	2.62	0.49
26:D0:37:LEU:N	26:D0:59:LEU:O	2.34	0.49
33:D7:19:ARG:HG2	33:D7:19:ARG:NH1	2.28	0.49
36:DA:1412:A:O2'	36:DA:1413:G:H5'	2.12	0.49
36:DA:1517:G:O2'	36:DA:1518:U:H5'	2.12	0.49
36:DA:1638:C:H4'	36:DA:2710:C:O2	2.13	0.49
36:DA:1777:U:O2'	36:DA:1778:U:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1910:G:O2'	36:DA:1911:U:H5'	2.13	0.49
36:DA:2178:C:O2	36:DA:2178:C:O4'	2.27	0.49
36:DA:627:A:N6	48:DP:115:LEU:HD12	2.27	0.49
36:DA:633:A:C2'	36:DA:634:C:H5'	2.40	0.49
38:DC:25:ALA:O	38:DC:29:VAL:HG22	2.11	0.49
40:DE:147:PRO:HB2	40:DE:149:ARG:HG2	1.93	0.49
42:DG:137:GLU:HG3	42:DG:139:LEU:HD23	1.95	0.49
49:DQ:59:ARG:O	49:DQ:60:ARG:HB2	2.12	0.49
51:DS:42:ASP:C	51:DS:44:LYS:H	2.15	0.49
55:DW:4:LYS:CG	55:DW:5:ALA:H	2.26	0.49
56:DX:49:VAL:CG1	56:DX:87:GLN:HE21	2.23	0.49
57:DY:14:LEU:HD12	57:DY:15:VAL:H	1.76	0.49
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.13	0.49
3:AC:173:VAL:HG12	3:AC:175:LEU:CD1	2.43	0.49
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.11	0.49
3:AC:91:LEU:O	3:AC:94:LEU:O	2.30	0.49
4:AD:62:GLN:HA	4:AD:62:GLN:NE2	2.25	0.49
9:AI:16:ARG:NH1	9:AI:64:THR:HG21	2.27	0.49
1:AA:1372:U:OP1	9:AI:71:SER:HB3	2.12	0.49
9:AI:53:VAL:HG13	9:AI:95:LYS:HZ2	1.72	0.49
13:AM:116:THR:O	13:AM:117:VAL:C	2.48	0.49
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.30	0.49
1:AA:1222:G:OP1	19:AS:77:THR:HG21	2.12	0.49
24:AY:38:A:H5'	36:BA:1913:A:C6	2.47	0.49
24:AY:61:C:H2'	24:AY:62:U:H5'	1.94	0.49
1:AA:367:U:H4'	25:AZ:291:ARG:NH2	2.26	0.49
25:AZ:254:GLU:CD	25:AZ:307:PRO:HA	2.33	0.49
27:B1:13:ILE:CD1	27:B1:13:ILE:N	2.76	0.49
31:B5:33:CYS:HG	31:B5:49:CYS:CB	2.24	0.49
32:B6:16:CYS:SG	32:B6:49:HIS:N	2.85	0.49
32:B6:27:LYS:HE2	32:B6:30:THR:H	1.76	0.49
36:BA:1408:C:O2'	36:BA:1409:C:H5'	2.13	0.49
36:BA:1349:A:N6	36:BA:1598:C:N4	2.61	0.49
36:BA:2360:A:O2'	36:BA:2361:A:P	2.70	0.49
34:B8:5:LYS:HG2	36:BA:242:G:C8	2.47	0.49
36:BA:2801(A):A:C3'	36:BA:2802:G:H5'	2.42	0.49
36:BA:673:C:O2'	36:BA:674:G:H5'	2.12	0.49
37:BB:81:G:O6	37:BB:96:U:O2	2.29	0.49
38:BC:127:LEU:HD23	38:BC:128:GLY:N	2.27	0.49
39:BD:68:LYS:HG3	39:BD:68:LYS:O	2.12	0.49
41:BF:160:ASN:ND2	41:BF:162:LEU:HD13	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:154:VAL:HG13	41:BF:191:ARG:O	2.12	0.49
42:BG:131:TYR:CB	42:BG:159:VAL:HG13	2.37	0.49
42:BG:93:THR:HG22	42:BG:94:LEU:H	1.76	0.49
43:BH:23:ARG:O	43:BH:24:VAL:HG23	2.13	0.49
47:BO:105:GLU:O	47:BO:108:GLU:HG2	2.12	0.49
47:BO:2:ILE:HB	47:BO:33:ALA:HB3	1.95	0.49
49:BQ:10:ARG:HH21	49:BQ:11:LYS:HE3	1.77	0.49
51:BS:85:VAL:HG23	51:BS:106:ARG:CG	2.37	0.49
53:BU:115:ALA:C	53:BU:117:GLN:H	2.16	0.49
36:BA:328:U:H4'	57:BY:68:HIS:CD2	2.48	0.49
1:CA:102:G:O2'	1:CA:103:C:H5'	2.12	0.49
1:CA:1382:C:H2'	1:CA:1383:C:H6	1.76	0.49
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.13	0.49
1:CA:156:G:O2'	1:CA:157:G:H5'	2.13	0.49
1:CA:158:G:O2'	1:CA:159:G:H5'	2.12	0.49
1:CA:418:C:H2'	1:CA:419:C:C6	2.48	0.49
1:CA:555:C:H2'	1:CA:556:C:C6	2.48	0.49
2:CB:118:LEU:CB	2:CB:142:LEU:HD12	2.42	0.49
2:CB:77:ALA:CB	2:CB:211:ILE:HD13	2.42	0.49
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.95	0.49
6:CF:22:GLU:O	6:CF:25:ILE:HG22	2.11	0.49
8:CH:121:ASP:OD1	8:CH:122:ARG:N	2.45	0.49
13:CM:4:ILE:HG22	13:CM:5:ALA:N	2.28	0.49
22:CV:14:A:H2'	22:CV:15:G:H5'	1.93	0.49
22:CV:5:G:H8	22:CV:5:G:C5'	2.26	0.49
22:CW:7:A:H5''	22:CW:8:U:OP2	2.11	0.49
27:D1:81:LYS:HG3	27:D1:81:LYS:O	2.12	0.49
28:D2:33:MET:O	28:D2:37:PHE:CD1	2.65	0.49
28:D2:24:LEU:CD2	28:D2:60:LEU:HD22	2.42	0.49
28:D2:6:VAL:C	28:D2:8:LYS:N	2.66	0.49
31:D5:45:VAL:HG22	31:D5:51:TYR:HB2	1.94	0.49
32:D6:53:LYS:CG	32:D6:54:ILE:N	2.67	0.49
36:DA:1070:A:H3'	36:DA:1072:C:C5	2.47	0.49
36:DA:2286:A:H4'	36:DA:2287:A:O4'	2.13	0.49
36:DA:30:G:O2'	36:DA:31:C:H5'	2.12	0.49
36:DA:335:C:H2'	36:DA:336:C:H6	1.78	0.49
36:DA:451:C:C2	36:DA:453:C:C5	3.01	0.49
36:DA:483:A:C2	36:DA:484:C:H1'	2.48	0.49
38:DC:163:PHE:CD1	38:DC:163:PHE:O	2.65	0.49
39:DD:65:ILE:CD1	39:DD:88:ARG:CZ	2.89	0.49
39:DD:95:LEU:HD12	39:DD:103:ARG:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:117:PHE:HE1	42:DG:119:GLY:O	1.95	0.49
42:DG:80:PHE:O	42:DG:81:LYS:O	2.30	0.49
46:DN:7:LYS:O	46:DN:9:VAL:N	2.45	0.49
48:DP:24:GLY:N	48:DP:33:ARG:CZ	2.75	0.49
55:DW:6:ILE:HG12	55:DW:104:THR:HG22	1.93	0.49
57:DY:15:VAL:O	57:DY:21:LYS:HA	2.12	0.49
57:DY:33:LYS:C	57:DY:35:TYR:N	2.66	0.49
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.48	0.49
1:AA:1272:G:H5'	1:AA:1272:G:H8	1.77	0.49
1:AA:161:A:H2'	1:AA:162:A:C8	2.47	0.49
1:AA:775:G:O2'	1:AA:776:G:H5'	2.13	0.49
1:AA:8:A:C2	4:AD:209:ARG:HB3	2.47	0.49
18:AR:36:ASN:O	18:AR:36:ASN:CG	2.51	0.49
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.95	0.49
1:AA:1326:C:P	21:AU:12:LYS:HZ2	2.36	0.49
24:AY:44:G:H4'	24:AY:45:U:OP1	2.12	0.49
25:AZ:316:PHE:CE1	25:AZ:372:VAL:HB	2.48	0.49
26:B0:49:LYS:O	26:B0:50:ASN:HB2	2.12	0.49
26:B0:7:LEU:HD21	49:BQ:81:VAL:HG13	1.94	0.49
28:B2:10:LEU:HD21	28:B2:14:ARG:NE	2.27	0.49
28:B2:69:ARG:HB2	28:B2:70:GLN:HE22	1.77	0.49
32:B6:45:LYS:N	32:B6:45:LYS:HD2	2.27	0.49
34:B8:48:PHE:O	34:B8:49:VAL:HG23	2.12	0.49
36:BA:1124:C:H2'	36:BA:1125:G:O4'	2.12	0.49
36:BA:1137:G:O2'	36:BA:1138:G:H5'	2.12	0.49
36:BA:1022:G:N2	36:BA:1142(A):A:C2	2.81	0.49
36:BA:139:G:H2'	36:BA:139(A):G:H5''	1.94	0.49
36:BA:2160:G:H8	36:BA:2160:G:C5'	2.17	0.49
36:BA:644:A:H2	36:BA:2369:A:H1'	1.77	0.49
36:BA:2373:G:H2'	36:BA:2374:C:C6	2.48	0.49
34:B8:41:ILE:HD12	36:BA:2419:U:P	2.52	0.49
36:BA:382:G:C2'	36:BA:383:U:H5'	2.42	0.49
36:BA:607:U:OP1	41:BF:102:PRO:HA	2.13	0.49
36:BA:660:G:H5'	41:BF:99:TYR:CD2	2.47	0.49
41:BF:87:GLY:O	41:BF:88:VAL:HG12	2.13	0.49
42:BG:115:ARG:HG3	42:BG:137:GLU:OE2	2.11	0.49
44:BJ:89:UNK:C	44:BJ:91:UNK:H	2.25	0.49
46:BN:42:TRP:CH2	46:BN:44:PRO:HA	2.47	0.49
46:BN:6:PRO:O	46:BN:7:LYS:HB2	2.12	0.49
47:BO:8:LEU:N	47:BO:8:LEU:CD2	2.75	0.49
49:BQ:66:ILE:HD12	49:BQ:66:ILE:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:69:CYS:HG	53:BU:79:PHE:HD2	1.59	0.49
54:BV:39:LEU:HD12	54:BV:50:PRO:O	2.12	0.49
56:BX:12:VAL:CG1	56:BX:27:THR:H	2.25	0.49
57:BY:50:ARG:O	57:BY:51:VAL:C	2.51	0.49
58:BZ:24:LEU:HD23	58:BZ:25:PRO:O	2.11	0.49
37:BB:105:A:H4'	58:BZ:89:PHE:CE1	2.47	0.49
1:CA:1181:G:H2'	1:CA:1182:G:C4	2.47	0.49
1:CA:266:G:C5'	1:CA:267:C:H5	2.20	0.49
1:CA:858:G:H5''	1:CA:858:G:C8	2.47	0.49
2:CB:17:PHE:CD2	2:CB:44:LEU:HD11	2.46	0.49
6:CF:99:ALA:O	6:CF:100:ASN:HB2	2.12	0.49
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.95	0.49
16:CP:53:VAL:CG2	16:CP:54:GLU:H	2.16	0.49
22:CV:63:G:H2'	22:CV:64:A:O4'	2.13	0.49
22:CW:5:G:O6	22:CW:6:G:C6	2.65	0.49
26:D0:49:LYS:O	26:D0:50:ASN:HB2	2.12	0.49
36:DA:1526:G:O2'	36:DA:1527:G:H5'	2.13	0.49
36:DA:1722:A:O2'	36:DA:1739:U:C5'	2.60	0.49
36:DA:2014:A:H4'	55:DW:92:ARG:HH22	1.76	0.49
36:DA:271(E):U:H3	36:DA:271(S):G:H1	1.61	0.49
36:DA:2893:G:H5'	36:DA:2894:G:H5'	1.94	0.49
36:DA:405:U:H3'	36:DA:406:G:H5'	1.93	0.49
36:DA:523:C:H2'	36:DA:524:U:H5'	1.93	0.49
36:DA:903:C:O2'	36:DA:904:C:H5'	2.13	0.49
41:DF:107:LYS:HE3	41:DF:205:ARG:CG	2.43	0.49
36:DA:1257:C:O2'	41:DF:83:PHE:HA	2.12	0.49
46:DN:4:TYR:O	46:DN:5:VAL:HB	2.13	0.49
48:DP:132:LYS:HD2	48:DP:132:LYS:N	2.15	0.49
51:DS:97:ARG:NH1	51:DS:98:VAL:O	2.46	0.49
52:DT:53:ARG:O	52:DT:59:THR:HB	2.13	0.49
40:DE:13:ARG:O	52:DT:57:PHE:HE2	1.95	0.49
54:DV:52:VAL:CG1	54:DV:55:ALA:HB3	2.43	0.49
55:DW:25:ARG:HB2	55:DW:25:ARG:NH1	2.28	0.49
56:DX:56:THR:HG22	56:DX:79:ALA:HB2	1.94	0.49
57:DY:60:PHE:O	57:DY:60:PHE:CG	2.66	0.49
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	2.12	0.49
1:AA:1216:G:H2'	1:AA:1217:C:H6	1.77	0.49
1:AA:156:G:O2'	1:AA:157:G:H5'	2.13	0.49
1:AA:272:C:O2'	1:AA:273:A:H5'	2.13	0.49
1:AA:826:C:H2'	1:AA:827:U:H6	1.78	0.49
2:AB:8:LYS:O	2:AB:12:GLU:HG3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:121:ALA:O	3:AC:125:GLU:HG3	2.12	0.49
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HD12	1.95	0.49
17:AQ:25:ARG:HG3	17:AQ:25:ARG:O	2.12	0.49
25:AZ:135:MET:HE3	25:AZ:150:VAL:CG1	2.40	0.49
25:AZ:219:LYS:CB	25:AZ:244:ARG:HD2	2.39	0.49
28:B2:32:LEU:HB2	28:B2:53:LEU:HD22	1.94	0.49
30:B4:5:ILE:CG1	30:B4:5:ILE:O	2.61	0.49
33:B7:47:ARG:O	33:B7:48:LYS:HB3	2.12	0.49
36:BA:1910:G:O2'	36:BA:1911:U:H5'	2.13	0.49
36:BA:2389:G:H5''	36:BA:2390:U:H5'	1.93	0.49
36:BA:2577:A:H5''	36:BA:2578:G:H5'	1.95	0.49
36:BA:1638:C:H4'	36:BA:2710:C:O2	2.13	0.49
36:BA:848:G:H5'	36:BA:848:G:C8	2.46	0.49
36:BA:880:G:H22	36:BA:897:C:H42	1.59	0.49
36:BA:990:A:OP2	36:BA:991:C:OP2	2.31	0.49
39:BD:35:LYS:HE2	39:BD:104:TYR:OH	2.12	0.49
40:BE:2:LYS:HD3	40:BE:95:ILE:CG2	2.43	0.49
40:BE:30:PRO:HD3	40:BE:180:ASN:CG	2.32	0.49
40:BE:69:LYS:C	40:BE:71:GLY:N	2.64	0.49
42:BG:119:GLY:O	42:BG:181:ARG:HB2	2.13	0.49
42:BG:145:THR:CB	42:BG:148:MET:HB3	2.41	0.49
46:BN:55:VAL:HG22	46:BN:56:ASN:H	1.76	0.49
54:BV:38:LEU:C	54:BV:39:LEU:HD13	2.32	0.49
57:BY:15:VAL:O	57:BY:21:LYS:HA	2.13	0.49
57:BY:60:PHE:HA	57:BY:62:GLU:OE2	2.13	0.49
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.47	0.49
1:CA:1256:A:H2	1:CA:1278:U:H5'	1.78	0.49
1:CA:1485:U:O2'	1:CA:1486:G:H5'	2.13	0.49
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.13	0.49
1:CA:454:C:H5''	1:CA:455:C:C5	2.48	0.49
1:CA:458:C:H2'	1:CA:460:G:H8	1.76	0.49
1:CA:592:G:H2'	1:CA:593:G:H8	1.78	0.49
1:CA:662:G:H2'	1:CA:663:A:C8	2.48	0.49
3:CC:157:ILE:CD1	3:CC:166:GLU:HB2	2.43	0.49
7:CG:151:TYR:OH	11:CK:54:ARG:HD3	2.12	0.49
15:CO:16:ALA:C	15:CO:18:PHE:H	2.16	0.49
16:CP:53:VAL:HG23	16:CP:54:GLU:HG2	1.93	0.49
22:CV:51:U:H2'	22:CV:52:G:H8	1.77	0.49
23:CX:27:A:OP2	23:CX:27:A:H8	1.96	0.49
25:CZ:366:ASP:C	25:CZ:367:ASN:HD22	2.16	0.49
36:DA:1286:A:N6	36:DA:1289:C:N3	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1337:G:C4	36:DA:1338:G:C8	3.01	0.49
36:DA:1408:C:O2'	36:DA:1409:C:H5'	2.13	0.49
36:DA:1947:C:H2'	36:DA:1948:G:H5''	1.93	0.49
36:DA:2128:C:HO2'	36:DA:2129:C:P	2.35	0.49
36:DA:2110:G:N2	36:DA:2178:C:C5	2.79	0.49
36:DA:27:G:N2	36:DA:512:G:C2'	2.68	0.49
36:DA:353:G:H2'	36:DA:353:G:N3	2.28	0.49
36:DA:893:C:H2'	36:DA:894:C:H6	1.78	0.49
37:DB:7:G:C2'	37:DB:8:U:H5''	2.42	0.49
37:DB:90:A:O2'	49:DQ:17:LEU:HD12	2.12	0.49
39:DD:132:PRO:HG3	39:DD:190:TYR:CE1	2.47	0.49
39:DD:267:SER:HA	39:DD:270:ILE:CG1	2.41	0.49
40:DE:88:GLY:O	40:DE:89:ASP:HB2	2.11	0.49
43:DH:94:TYR:CB	43:DH:107:VAL:HG12	2.43	0.49
52:DT:134:GLU:O	52:DT:135:ALA:HB3	2.12	0.49
53:DU:90:VAL:CG1	53:DU:91:ASP:N	2.72	0.49
53:DU:92:ARG:HH22	54:DV:10:LYS:HB3	1.76	0.49
54:DV:62:LEU:H	54:DV:62:LEU:CD2	2.26	0.49
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.48	0.49
1:AA:67:C:O2'	1:AA:171:A:H1'	2.12	0.49
1:AA:59:A:H3'	1:AA:331:G:N2	2.25	0.49
1:AA:714:G:H2'	1:AA:715:A:C8	2.47	0.49
2:AB:7:VAL:N	2:AB:10:LEU:HD12	2.28	0.49
3:AC:43:LEU:HD13	3:AC:68:VAL:HG23	1.95	0.49
13:AM:4:ILE:N	13:AM:4:ILE:CD1	2.74	0.49
14:AN:4:LYS:O	14:AN:7:ILE:HG12	2.13	0.49
22:AV:44:G:C2'	22:AV:45:U:H5'	2.43	0.49
25:AZ:92:MET:HG3	25:AZ:93:ILE:N	2.26	0.49
27:B1:35:THR:O	27:B1:35:THR:HG23	2.13	0.49
30:B4:28:LYS:CE	30:B4:29:PRO:HD2	2.42	0.49
34:B8:33:ASN:HA	34:B8:36:LYS:HE3	1.94	0.49
36:BA:1092:C:H42	36:BA:1100:C:H42	1.59	0.49
36:BA:1906:G:O2'	36:BA:1907:G:H5'	2.12	0.49
36:BA:2223:G:O2'	36:BA:2224:G:H5'	2.13	0.49
36:BA:2241:A:H2'	36:BA:2242:G:C8	2.48	0.49
36:BA:237:C:H2'	36:BA:238:C:H6	1.77	0.49
36:BA:2801(A):A:C5'	36:BA:2802:G:H8	2.26	0.49
36:BA:405:U:H3'	36:BA:406:G:C5'	2.42	0.49
36:BA:90:U:C2'	36:BA:90:U:O2	2.61	0.49
40:BE:76:ARG:O	40:BE:77:ILE:O	2.31	0.49
40:BE:88:GLY:O	40:BE:89:ASP:HB2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:40:GLN:HE22	41:BF:182:ASN:HB2	1.77	0.49
42:BG:15:VAL:O	42:BG:18:GLU:HB3	2.12	0.49
47:BO:47:ILE:O	47:BO:48:PRO:C	2.51	0.49
36:BA:252:G:P	48:BP:50:ARG:HH21	2.36	0.49
52:BT:54:ARG:O	52:BT:55:ASN:HB2	2.13	0.49
56:BX:33:LYS:HE2	56:BX:33:LYS:CA	2.43	0.49
57:BY:28:LYS:HB3	57:BY:39:VAL:N	2.14	0.49
57:BY:2:ARG:HG2	57:BY:2:ARG:HH11	1.78	0.49
1:CA:141:A:H1'	1:CA:182:U:O2	2.11	0.49
1:CA:313:A:H2'	1:CA:314:C:C6	2.48	0.49
1:CA:879:C:O2'	1:CA:880:C:H5'	2.13	0.49
2:CB:15:VAL:N	2:CB:16:HIS:CE1	2.79	0.49
12:CL:32:PHE:HB3	12:CL:84:LEU:HD11	1.95	0.49
15:CO:21:ASP:OD1	15:CO:21:ASP:C	2.51	0.49
24:CY:2:G:O2'	24:CY:3:G:H5''	2.12	0.49
25:CZ:178:ALA:HB1	25:CZ:199:ILE:HD12	1.94	0.49
25:CZ:221:PHE:HE1	25:CZ:242:ILE:HD13	1.77	0.49
33:D7:5:TRP:CD1	33:D7:7:PRO:HD3	2.47	0.49
36:DA:181:A:C8	36:DA:181:A:H5'	2.45	0.49
36:DA:1960:A:C8	36:DA:1960:A:C5'	2.94	0.49
36:DA:2188:C:H2'	36:DA:2189:U:C5	2.48	0.49
36:DA:2264:C:H2'	36:DA:2265:U:H6	1.77	0.49
36:DA:858:U:O2	36:DA:2268:A:H2'	2.12	0.49
36:DA:1782:C:H1'	36:DA:2609:U:C5'	2.43	0.49
36:DA:272(J):C:C2'	36:DA:274:G:H5''	2.43	0.49
36:DA:363(F):A:O2'	36:DA:364:C:H5	1.95	0.49
39:DD:27:THR:CG2	39:DD:27:THR:O	2.60	0.49
40:DE:176:ILE:HG22	40:DE:179:GLU:H	1.78	0.49
40:DE:96:PHE:O	40:DE:175:VAL:HG11	2.12	0.49
41:DF:181:LEU:CD2	41:DF:202:PHE:HD2	2.26	0.49
41:DF:152:GLU:OE1	41:DF:191:ARG:HD2	2.12	0.49
42:DG:29:TRP:HA	42:DG:29:TRP:CE3	2.47	0.49
42:DG:71:THR:CG2	42:DG:72:ARG:N	2.75	0.49
42:DG:71:THR:HG22	42:DG:72:ARG:H	1.75	0.49
43:DH:143:GLN:HA	43:DH:143:GLN:NE2	2.28	0.49
48:DP:64:LYS:C	48:DP:66:GLY:N	2.59	0.49
49:DQ:10:ARG:HH21	49:DQ:11:LYS:HE3	1.77	0.49
50:DR:96:ARG:O	50:DR:114:VAL:HA	2.13	0.49
51:DS:95:HIS:CG	51:DS:96:GLY:N	2.80	0.49
57:DY:7:VAL:HG21	57:DY:8:LYS:HZ3	1.75	0.49
58:DZ:126:VAL:HG23	58:DZ:126:VAL:O	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1442(A):G:HO2'	1:AA:1442(B):A:P	2.34	0.49
1:AA:67:C:OP1	1:AA:199:G:H5''	2.13	0.49
1:AA:603:U:H2'	1:AA:604:G:C8	2.48	0.49
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.94	0.49
2:AB:233:SER:O	2:AB:234:PRO:C	2.51	0.49
3:AC:73:PRO:HD3	3:AC:105:GLU:HG3	1.94	0.49
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.12	0.49
7:AG:41:ARG:HH11	7:AG:41:ARG:HG2	1.78	0.49
9:AI:40:LEU:O	9:AI:42:ARG:N	2.39	0.49
10:AJ:16:LEU:CD1	10:AJ:70:ARG:CG	2.91	0.49
1:AA:972:C:O3'	10:AJ:57:LYS:HG2	2.13	0.49
10:AJ:5:ARG:HG3	10:AJ:73:ASP:OD2	2.12	0.49
14:AN:19:ARG:O	14:AN:20:ALA:O	2.31	0.49
16:AP:5:ARG:HE	16:AP:22:THR:CG2	2.26	0.49
20:AT:50:GLU:HB2	20:AT:99:LEU:CD1	2.43	0.49
1:AA:358:U:O4'	25:AZ:233:GLY:C	2.51	0.49
28:B2:38:GLN:HB3	28:B2:44:LEU:CB	2.41	0.49
36:BA:1140:C:OP2	46:BN:66:LYS:HE2	2.13	0.49
36:BA:1337:G:C4	36:BA:1338:G:C8	3.01	0.49
36:BA:145:G:C2'	36:BA:146:G:H5''	2.41	0.49
36:BA:2428:G:H5''	36:BA:2429:G:O5'	2.13	0.49
36:BA:2632:A:O2'	40:BE:61:ARG:NH2	2.45	0.49
36:BA:2824:C:H2'	36:BA:2825:C:O4'	2.13	0.49
36:BA:335:C:H2'	36:BA:336:C:H6	1.77	0.49
36:BA:523:C:O2'	36:BA:524:U:H5'	2.13	0.49
36:BA:690:G:H2'	36:BA:691:C:C6	2.48	0.49
36:BA:874:G:H5''	58:BZ:175:VAL:HG11	1.95	0.49
37:BB:22:U:H2'	37:BB:23:G:C8	2.47	0.49
39:BD:27:THR:O	39:BD:27:THR:CG2	2.61	0.49
41:BF:88:VAL:O	41:BF:88:VAL:HG13	2.12	0.49
42:BG:95:ARG:O	42:BG:96:ARG:HG2	2.12	0.49
43:BH:45:VAL:O	43:BH:47:GLU:N	2.40	0.49
48:BP:80:TYR:CD1	48:BP:111:ARG:CB	2.96	0.49
52:BT:33:LYS:CE	52:BT:43:GLN:HE21	2.26	0.49
1:CA:1030:C:N4	1:CA:1032:G:H21	2.06	0.49
2:CB:74:LYS:HB3	2:CB:74:LYS:NZ	2.28	0.49
3:CC:114:PRO:O	3:CC:118:GLN:HG3	2.13	0.49
6:CF:11:ASN:HB3	6:CF:14:LEU:CD2	2.41	0.49
1:CA:135:C:O2	16:CP:1:MET:HB3	2.13	0.49
16:CP:23:ASP:OD1	16:CP:25:ARG:NH1	2.46	0.49
20:CT:72:LEU:O	20:CT:76:ALA:HB3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:40:PRO:O	25:CZ:41:ASN:CB	2.61	0.49
28:D2:10:LEU:HD21	28:D2:60:LEU:HG	1.95	0.49
30:D4:28:LYS:CE	30:D4:29:PRO:HD2	2.42	0.49
31:D5:33:CYS:HG	31:D5:49:CYS:CB	2.22	0.49
34:D8:23:VAL:HG13	34:D8:46:ARG:HB3	1.93	0.49
36:DA:139:G:H2'	36:DA:139(A):G:H5''	1.94	0.49
36:DA:272(D):G:H1	36:DA:364:C:N4	2.06	0.49
36:DA:321:G:N2	41:DF:165:ARG:NH2	2.54	0.49
36:DA:95:G:H2'	36:DA:96:G:O4'	2.13	0.49
47:DO:107:ARG:HA	47:DO:112:MET:HE1	1.95	0.49
47:DO:69:ILE:HG13	47:DO:77:ILE:O	2.13	0.49
51:DS:106:ARG:HH11	51:DS:108:GLY:H	1.59	0.49
52:DT:28:VAL:HG22	52:DT:46:GLU:HA	1.94	0.49
53:DU:95:LEU:CD1	54:DV:11:GLN:HG3	2.42	0.49
55:DW:10:VAL:O	55:DW:10:VAL:HG12	2.11	0.49
55:DW:6:ILE:HG22	55:DW:8:ARG:HD2	1.94	0.49
49:DQ:25:ASP:OD2	58:DZ:78:LYS:HG2	2.13	0.49
1:AA:954:G:H21	1:AA:1227:A:H62	1.59	0.49
1:AA:580:U:H2'	1:AA:581:G:O4'	2.12	0.49
1:AA:858:G:H5''	1:AA:858:G:H8	1.77	0.49
1:AA:939:G:H2'	1:AA:940:C:C6	2.48	0.49
2:AB:118:LEU:CB	2:AB:142:LEU:HD12	2.41	0.49
2:AB:73:THR:HG22	2:AB:94:ASN:C	2.33	0.49
3:AC:68:VAL:HG12	3:AC:68:VAL:O	2.13	0.49
4:AD:18:LYS:HE3	4:AD:31:CYS:HB3	1.94	0.49
4:AD:86:LYS:HA	4:AD:86:LYS:HE3	1.95	0.49
14:AN:26:ARG:HH11	14:AN:47:LEU:HD21	1.78	0.49
20:AT:45:GLN:NE2	20:AT:46:GLU:CG	2.75	0.49
36:BA:191:A:H2'	36:BA:192:C:H6	1.75	0.49
36:BA:2056:G:H2'	36:BA:2056:G:N3	2.27	0.49
36:BA:2696:U:H2'	36:BA:2697:G:C8	2.47	0.49
36:BA:271(D):G:O2'	36:BA:271(E):U:H5'	2.13	0.49
36:BA:2843:G:N2	36:BA:2875:C:C2	2.81	0.49
36:BA:627:A:N6	48:BP:115:LEU:HD12	2.28	0.49
36:BA:78:A:H2'	36:BA:79:G:H8	1.76	0.49
39:BD:117:VAL:HG22	39:BD:118:VAL:N	2.28	0.49
39:BD:17:THR:O	39:BD:211:ARG:NH2	2.46	0.49
43:BH:94:TYR:CB	43:BH:107:VAL:HG12	2.43	0.49
53:BU:104:GLN:HB3	54:BV:44:LYS:NZ	2.28	0.49
53:BU:52:ARG:HB3	53:BU:52:ARG:NH1	2.26	0.49
58:BZ:24:LEU:O	58:BZ:24:LEU:CD2	2.58	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:106:C:O2	1:CA:379:C:H4'	2.13	0.49
1:CA:55:A:H2'	1:CA:56:U:H5'	1.95	0.49
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.81	0.49
12:CL:20:LYS:H	12:CL:20:LYS:CD	2.12	0.49
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.53	0.49
15:CO:69:TYR:CZ	15:CO:73:GLU:HG3	2.48	0.49
17:CQ:45:HIS:HA	17:CQ:69:LYS:NZ	2.27	0.49
20:CT:61:SER:O	20:CT:65:LYS:HG2	2.12	0.49
22:CW:57:G:O2'	22:CW:58:A:H5'	2.13	0.49
25:CZ:205:ALA:HA	25:CZ:208:GLU:OE2	2.13	0.49
30:D4:27:THR:O	30:D4:28:LYS:HB3	2.11	0.49
31:D5:3:LYS:N	31:D5:3:LYS:CD	2.76	0.49
34:D8:49:VAL:CG1	34:D8:52:LYS:HB3	2.42	0.49
34:D8:61:LEU:C	34:D8:63:PRO:HD2	2.34	0.49
36:DA:1051:G:C4	36:DA:1052:C:N4	2.80	0.49
36:DA:1614:A:N1	55:DW:93:ALA:HB2	2.28	0.49
36:DA:1747(A):G:C3'	36:DA:1748:G:H5''	2.43	0.49
36:DA:2155:G:H3'	36:DA:2156:G:H8	1.78	0.49
36:DA:2200:C:H42	36:DA:2223:G:H1	1.60	0.49
36:DA:237:C:H2'	36:DA:238:C:H6	1.76	0.49
36:DA:2575:C:H2'	36:DA:2578:G:O6	2.12	0.49
36:DA:742:G:H2'	36:DA:743:G:H8	1.78	0.49
36:DA:752:A:H4'	36:DA:753:C:O5'	2.13	0.49
36:DA:949:C:H2'	36:DA:950:G:H8	1.78	0.49
38:DC:76:ALA:O	38:DC:94:VAL:O	2.30	0.49
40:DE:68:ALA:C	40:DE:70:ALA:H	2.16	0.49
40:DE:81:ILE:O	40:DE:82:ARG:O	2.31	0.49
42:DG:134:GLY:O	42:DG:135:LEU:HD12	2.13	0.49
42:DG:66:GLN:HE22	42:DG:67:LYS:CE	2.23	0.49
42:DG:76:SER:HA	42:DG:84:LYS:N	2.27	0.49
36:DA:1140:C:OP2	46:DN:66:LYS:HE2	2.13	0.49
46:DN:67:LEU:O	46:DN:68:GLU:HB2	2.12	0.49
48:DP:96:THR:HG22	48:DP:126:VAL:CB	2.43	0.49
52:DT:26:ASP:C	52:DT:26:ASP:OD1	2.50	0.49
46:DN:2:LYS:HZ3	54:DV:12:TYR:HA	1.76	0.49
54:DV:19:LYS:HE2	54:DV:20:LEU:H	1.78	0.49
55:DW:11:ARG:HG2	55:DW:11:ARG:NH1	2.27	0.49
55:DW:64:MET:O	55:DW:65:LEU:HB3	2.13	0.49
57:DY:83:THR:HA	57:DY:96:ILE:HG22	1.95	0.49
58:DZ:103:ARG:HD3	58:DZ:138:GLU:CG	2.42	0.49
1:AA:417:C:O2'	1:AA:418:C:H5'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:592:G:H2'	1:AA:593:G:H8	1.77	0.48
2:AB:189:ASP:HB2	2:AB:205:ASP:OD1	2.12	0.48
3:AC:103:VAL:HG12	3:AC:103:VAL:O	2.12	0.48
3:AC:43:LEU:HD13	3:AC:68:VAL:CG2	2.43	0.48
4:AD:133:VAL:HG11	4:AD:138:TYR:CD1	2.47	0.48
4:AD:28:SER:CB	4:AD:29:PRO:CD	2.88	0.48
7:AG:54:THR:HG22	7:AG:56:GLN:N	2.07	0.48
1:AA:1523:G:OP1	11:AK:123:LYS:HD2	2.12	0.48
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.28	0.48
22:AV:62:C:OP1	22:AV:62:C:H4'	2.12	0.48
22:AW:26:A:H61	22:AW:44:G:H1	1.61	0.48
24:AY:76:A:C5	25:AZ:271:GLU:CG	2.96	0.48
25:AZ:145:GLU:O	25:AZ:146:LEU:C	2.51	0.48
25:AZ:28:THR:O	25:AZ:32:THR:HG23	2.13	0.48
25:AZ:65:THR:HG23	25:AZ:80:VAL:HG13	1.90	0.48
28:B2:49:LYS:O	28:B2:53:LEU:HB2	2.13	0.48
33:B7:21:ARG:HG2	33:B7:21:ARG:HH11	1.77	0.48
36:BA:1051:G:C4	36:BA:1052:C:N4	2.81	0.48
36:BA:1069:A:C1'	36:BA:1070:A:OP2	2.51	0.48
36:BA:1248:G:N1	53:BU:3:ARG:HD2	2.27	0.48
36:BA:1286:A:H2'	36:BA:1288:U:OP2	2.13	0.48
36:BA:252:G:OP2	48:BP:50:ARG:NH2	2.42	0.48
36:BA:45:C:H2'	36:BA:47:C:H6	1.77	0.48
39:BD:222:ARG:O	39:BD:224:ALA:O	2.30	0.48
40:BE:13:ARG:O	52:BT:57:PHE:HE2	1.96	0.48
40:BE:176:ILE:HG22	40:BE:179:GLU:H	1.77	0.48
41:BF:152:GLU:OE1	41:BF:191:ARG:HD2	2.13	0.48
41:BF:78:ILE:HA	41:BF:83:PHE:CE2	2.48	0.48
48:BP:102:ARG:CB	48:BP:102:ARG:NH1	2.75	0.48
49:BQ:21:THR:OG1	49:BQ:99:PRO:O	2.30	0.48
51:BS:20:ARG:HA	51:BS:20:ARG:NE	2.26	0.48
51:BS:93:LYS:O	51:BS:95:HIS:N	2.46	0.48
52:BT:28:VAL:HG21	52:BT:46:GLU:HG3	1.94	0.48
53:BU:95:LEU:CD1	54:BV:11:GLN:HG3	2.43	0.48
54:BV:19:LYS:HE2	54:BV:20:LEU:H	1.78	0.48
57:BY:2:ARG:N	57:BY:4:LYS:HE2	2.27	0.48
58:BZ:137:ILE:O	58:BZ:138:GLU:HB2	2.13	0.48
1:CA:1044:A:H2'	1:CA:1045:C:O5'	2.12	0.48
1:CA:946:A:H2'	1:CA:947:G:H8	1.77	0.48
4:CD:59:ARG:NH2	4:CD:62:GLN:HG3	2.26	0.48
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:963:G:N2	10:CJ:55:LYS:CE	2.69	0.48
12:CL:86:ARG:HG2	12:CL:87:GLY:N	2.26	0.48
13:CM:89:GLY:O	13:CM:93:ARG:HD2	2.13	0.48
17:CQ:58:GLU:O	17:CQ:59:ILE:HD13	2.13	0.48
28:D2:2:LYS:N	28:D2:5:GLU:HG2	2.27	0.48
30:D4:6:HIS:HB3	42:DG:67:LYS:NZ	2.28	0.48
32:D6:15:GLU:OE2	32:D6:41:PRO:CG	2.61	0.48
32:D6:53:LYS:O	32:D6:54:ILE:OXT	2.31	0.48
35:D9:29:ASN:HD21	35:D9:32:HIS:CE1	2.30	0.48
36:DA:2241:A:H2'	36:DA:2242:G:C8	2.47	0.48
36:DA:2472:G:H5''	36:DA:2473:U:H5''	1.95	0.48
36:DA:253:C:H2'	36:DA:254:G:O4'	2.13	0.48
36:DA:2711:A:OP1	36:DA:2712(A):A:OP1	2.31	0.48
36:DA:2801(A):A:C3'	36:DA:2802:G:H5'	2.43	0.48
36:DA:382:G:C2'	36:DA:383:U:H5'	2.43	0.48
36:DA:621:A:H2'	36:DA:622:G:C5'	2.37	0.48
36:DA:796:C:H2'	36:DA:797:C:C6	2.48	0.48
39:DD:17:THR:O	39:DD:211:ARG:NH2	2.46	0.48
39:DD:24:ILE:HD13	39:DD:24:ILE:C	2.34	0.48
40:DE:69:LYS:C	40:DE:71:GLY:N	2.65	0.48
43:DH:23:ARG:O	43:DH:24:VAL:HG23	2.13	0.48
43:DH:45:VAL:O	43:DH:47:GLU:N	2.40	0.48
45:DK:117:UNK:O	45:DK:118:UNK:CB	2.61	0.48
48:DP:77:ARG:HD3	48:DP:78:PRO:HD2	1.94	0.48
49:DQ:133:ARG:CB	49:DQ:133:ARG:HH11	2.26	0.48
53:DU:69:CYS:O	53:DU:74:LEU:HD12	2.13	0.48
54:DV:67:GLY:O	54:DV:88:ARG:HD2	2.12	0.48
1:AA:1342:C:O2'	9:AI:124:GLN:HG3	2.13	0.48
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.44	0.48
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.76	0.48
4:AD:11:LEU:O	4:AD:12:CYS:C	2.52	0.48
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.71	0.48
11:AK:127:LYS:O	11:AK:129:SER:N	2.46	0.48
7:AG:151:TYR:OH	11:AK:54:ARG:HD3	2.13	0.48
16:AP:9:PHE:CE2	16:AP:18:ARG:CZ	2.94	0.48
25:AZ:301:GLY:CA	25:AZ:347:THR:HG23	2.42	0.48
28:B2:30:ARG:HH11	56:BX:5:TYR:HE2	1.57	0.48
28:B2:32:LEU:HA	28:B2:53:LEU:HD13	1.94	0.48
36:BA:2121:G:N1	36:BA:2176:A:C2	2.79	0.48
36:BA:2199:A:C5'	36:BA:2200:C:OP2	2.61	0.48
36:BA:270:A:O2'	36:BA:271:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:363(F):A:HO2'	36:BA:364:C:H5	1.59	0.48
36:BA:436:C:H2'	36:BA:437:G:H8	1.77	0.48
36:BA:664:C:O2'	36:BA:665:C:H5'	2.13	0.48
36:BA:865:C:H4'	36:BA:866:A:OP1	2.13	0.48
37:BB:43:C:H5'	37:BB:44:G:OP2	2.14	0.48
39:BD:261:LYS:NZ	39:BD:263:ARG:NH2	2.61	0.48
42:BG:16:ARG:HH11	42:BG:16:ARG:HG3	1.78	0.48
43:BH:97:ARG:NH2	43:BH:99:VAL:HG21	2.29	0.48
44:BJ:22:UNK:C	44:BJ:118:UNK:HA	2.44	0.48
48:BP:6:LEU:CD2	48:BP:6:LEU:H	2.26	0.48
49:BQ:133:ARG:HB2	49:BQ:133:ARG:HH11	1.78	0.48
50:BR:104:ARG:O	50:BR:106:GLY:N	2.47	0.48
51:BS:18:ILE:HD12	51:BS:18:ILE:H	1.78	0.48
54:BV:35:LEU:H	54:BV:35:LEU:HD22	1.78	0.48
54:BV:80:GLN:OE1	54:BV:80:GLN:HA	2.13	0.48
55:BW:37:ARG:HG3	55:BW:37:ARG:HH11	1.78	0.48
57:BY:44:ILE:N	57:BY:44:ILE:HD12	2.28	0.48
1:CA:1125:U:H5''	1:CA:1126:U:C5	2.46	0.48
1:CA:1442(B):A:N1	52:DT:118:ARG:NH2	2.60	0.48
1:CA:166:G:O2'	1:CA:167:G:H5'	2.13	0.48
1:CA:534:U:H6	1:CA:534:U:H5'	1.77	0.48
3:CC:22:TRP:CE2	14:CN:54:PRO:HG2	2.48	0.48
3:CC:35:GLU:HG2	3:CC:59:ARG:HH22	1.77	0.48
3:CC:68:VAL:O	3:CC:68:VAL:HG12	2.12	0.48
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.76	0.48
13:CM:101:GLN:NE2	13:CM:101:GLN:N	2.58	0.48
13:CM:118:ALA:HB3	22:CV:29:G:C5'	2.43	0.48
19:CS:11:VAL:HG13	19:CS:16:LEU:HD11	1.95	0.48
20:CT:50:GLU:N	20:CT:99:LEU:HD12	2.27	0.48
24:CY:52:A:C2'	24:CY:53:G:H5'	2.42	0.48
25:CZ:101:GLY:HA3	25:CZ:210:ILE:CD1	2.43	0.48
28:D2:24:LEU:O	28:D2:25:VAL:HG23	2.13	0.48
36:DA:1538:G:H2'	36:DA:1539:G:H8	1.77	0.48
36:DA:1787:A:O4'	36:DA:2589:A:H4'	2.13	0.48
36:DA:1265:A:N1	36:DA:2013:A:H5''	2.28	0.48
36:DA:2087:G:C2'	36:DA:2088:G:H5'	2.43	0.48
36:DA:2115:G:N3	36:DA:2117:A:N7	2.60	0.48
36:DA:271(L):U:H5''	36:DA:271(M):G:C5'	2.32	0.48
31:D5:42:PRO:HB2	36:DA:2815:C:O2'	2.13	0.48
36:DA:839:U:O2'	36:DA:1191:G:H1'	2.13	0.48
38:DC:210:ARG:HG2	38:DC:210:ARG:HH11	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:61:THR:HG22	38:DC:162:GLU:HA	1.95	0.48
36:DA:2572:A:C4	40:DE:144:ARG:NH1	2.81	0.48
41:DF:160:ASN:ND2	41:DF:162:LEU:HD13	2.28	0.48
43:DH:37:VAL:HG11	43:DH:68:THR:CG2	2.42	0.48
51:DS:83:LYS:CG	51:DS:105:ALA:HB3	2.41	0.48
52:DT:33:LYS:HG3	52:DT:43:GLN:HB2	1.95	0.48
52:DT:33:LYS:CE	52:DT:43:GLN:HE21	2.26	0.48
53:DU:64:ARG:HG2	53:DU:64:ARG:HH11	1.77	0.48
53:DU:92:ARG:CZ	54:DV:11:GLN:H	2.26	0.48
55:DW:95:ILE:O	55:DW:95:ILE:HG13	2.13	0.48
56:DX:12:VAL:HA	56:DX:27:THR:O	2.13	0.48
58:DZ:62:PRO:C	58:DZ:64:GLY:N	2.66	0.48
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.48	0.48
1:AA:418:C:H2'	1:AA:419:C:C6	2.48	0.48
1:AA:505:G:H5'	1:AA:534:U:H2'	1.96	0.48
1:AA:539:A:H2'	1:AA:540:G:C8	2.49	0.48
1:AA:918:A:H2'	1:AA:919:A:C8	2.48	0.48
3:AC:12:LEU:O	3:AC:13:GLY:C	2.49	0.48
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.48	0.48
6:AF:87:ARG:CG	6:AF:87:ARG:NH1	2.72	0.48
9:AI:95:LYS:HD3	9:AI:95:LYS:C	2.34	0.48
10:AJ:55:LYS:N	10:AJ:55:LYS:CD	2.76	0.48
13:AM:120:LYS:HE3	13:AM:120:LYS:HA	1.95	0.48
13:AM:91:ARG:HD3	13:AM:97:PRO:O	2.12	0.48
19:AS:65:ASN:C	19:AS:67:VAL:H	2.17	0.48
25:AZ:155:ARG:O	25:AZ:159:ASN:ND2	2.44	0.48
25:AZ:350:THR:HG22	25:AZ:351:GLY:N	2.28	0.48
26:B0:14:ARG:CG	26:B0:14:ARG:HH11	2.23	0.48
27:B1:44:PRO:HG2	27:B1:46:LEU:HD13	1.94	0.48
28:B2:25:VAL:CG1	28:B2:57:ILE:HG23	2.43	0.48
36:BA:1332:G:H5'	36:BA:1333:C:H5	1.78	0.48
36:BA:2087:G:O2'	36:BA:2088:G:H5'	2.12	0.48
36:BA:321:G:H21	41:BF:165:ARG:NH2	2.02	0.48
36:BA:752:A:H4'	36:BA:753:C:O5'	2.13	0.48
36:BA:858:U:O2	36:BA:2268:A:H2'	2.13	0.48
38:BC:125:SER:C	38:BC:127:LEU:H	2.17	0.48
39:BD:108:PRO:HB3	39:BD:143:HIS:CE1	2.48	0.48
40:BE:68:ALA:O	40:BE:70:ALA:N	2.46	0.48
41:BF:125:LEU:H	41:BF:125:LEU:CD2	2.20	0.48
46:BN:120:LEU:C	46:BN:120:LEU:HD13	2.33	0.48
48:BP:126:VAL:HG22	48:BP:145:PRO:HG2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:24:GLY:N	48:BP:33:ARG:CZ	2.77	0.48
48:BP:96:THR:HG22	48:BP:126:VAL:CB	2.42	0.48
36:BA:2496:C:OP2	49:BQ:82:ARG:HG2	2.13	0.48
57:BY:41:GLY:O	57:BY:42:VAL:O	2.31	0.48
58:BZ:30:ASN:ND2	58:BZ:30:ASN:C	2.66	0.48
2:CB:87:ARG:NH1	2:CB:87:ARG:HB3	2.27	0.48
3:CC:124:ILE:HG12	3:CC:130:VAL:HG22	1.95	0.48
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.48	0.48
5:CE:81:GLU:HG2	5:CE:90:VAL:HG22	1.95	0.48
6:CF:63:TYR:N	6:CF:63:TYR:HD1	2.11	0.48
12:CL:93:LEU:HB2	12:CL:96:VAL:HB	1.94	0.48
13:CM:57:ARG:O	13:CM:61:GLU:HB2	2.13	0.48
25:CZ:295:ARG:HG2	25:CZ:295:ARG:NH1	2.26	0.48
29:D3:6:VAL:HB	29:D3:54:VAL:HG11	1.95	0.48
31:D5:24:ALA:O	31:D5:25:LEU:CB	2.58	0.48
36:DA:1214:A:H2'	36:DA:1215:G:O4'	2.13	0.48
36:DA:2248:C:H2'	36:DA:2249:U:C5'	2.32	0.48
36:DA:2735:G:H2'	36:DA:2736:G:H8	1.78	0.48
36:DA:2851:A:H2'	36:DA:2852:G:H8	1.79	0.48
36:DA:2887:U:O2'	36:DA:2888:C:H5'	2.13	0.48
36:DA:192:C:O2'	36:DA:802:A:N3	2.43	0.48
36:DA:880:G:H22	36:DA:897:C:H42	1.60	0.48
36:DA:90:U:O2	36:DA:90:U:C2'	2.61	0.48
36:DA:2050:C:H1'	40:DE:156:MET:HE1	1.94	0.48
40:DE:30:PRO:HD3	40:DE:180:ASN:CG	2.32	0.48
46:DN:6:PRO:O	46:DN:7:LYS:HB2	2.13	0.48
41:DF:31:HIS:ND1	48:DP:13:ASN:HB2	2.29	0.48
50:DR:105:ARG:H	50:DR:105:ARG:CD	2.26	0.48
53:DU:92:ARG:HH21	54:DV:10:LYS:CB	2.23	0.48
1:AA:277:C:O2'	1:AA:278:G:H5'	2.14	0.48
1:AA:323:U:H2'	1:AA:324:G:O4'	2.14	0.48
1:AA:429:U:H4'	1:AA:430:A:O5'	2.12	0.48
1:AA:451:A:N6	1:AA:480:U:H2'	2.28	0.48
2:AB:134:GLU:C	2:AB:136:VAL:N	2.67	0.48
2:AB:209:ARG:HH11	2:AB:239:VAL:HG11	1.79	0.48
16:AP:21:VAL:HG21	16:AP:59:TRP:CD2	2.49	0.48
25:AZ:31:LEU:HD23	25:AZ:199:ILE:HG23	1.95	0.48
25:AZ:249:VAL:HG13	25:AZ:268:THR:HA	1.94	0.48
26:B0:42:GLY:O	26:B0:57:PHE:CG	2.66	0.48
31:B5:27:PRO:HA	55:BW:23:LEU:HD11	1.95	0.48
34:B8:11:LYS:HZ2	34:B8:60:LEU:CD2	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1072:C:H5''	36:BA:1073:A:OP1	2.13	0.48
36:BA:1301:A:HO2'	36:BA:1302:A:P	2.37	0.48
36:BA:1352:U:O2'	36:BA:1353:A:H5'	2.13	0.48
36:BA:1538:G:H2'	36:BA:1539:G:H8	1.78	0.48
36:BA:2107:C:C5	36:BA:2108:C:H5	2.31	0.48
36:BA:2200:C:H42	36:BA:2223:G:H1	1.62	0.48
26:B0:43:THR:HG22	36:BA:2331:G:O2'	2.13	0.48
36:BA:2464:C:O2'	36:BA:2465:C:O5'	2.29	0.48
36:BA:2713:A:H3'	36:BA:2714:G:H5'	1.95	0.48
36:BA:272(D):G:H1	36:BA:364:C:N4	2.06	0.48
36:BA:2864:G:O2'	36:BA:2865:U:H5'	2.13	0.48
36:BA:402:A:C2'	36:BA:403:U:H5'	2.43	0.48
36:BA:706:A:H2'	36:BA:707:G:O4'	2.14	0.48
36:BA:953:A:O2'	36:BA:954:G:H5'	2.13	0.48
36:BA:95:G:H2'	36:BA:96:G:O4'	2.13	0.48
37:BB:8:U:C5'	37:BB:8:U:H6	2.14	0.48
40:BE:167:VAL:HG12	40:BE:189:PRO:CD	2.38	0.48
46:BN:96:GLU:HB2	46:BN:100:GLU:OE2	2.13	0.48
46:BN:112:LEU:O	46:BN:115:ARG:HB3	2.13	0.48
46:BN:6:PRO:HG2	46:BN:7:LYS:H	1.77	0.48
48:BP:23:PRO:HB2	48:BP:33:ARG:HG3	1.96	0.48
48:BP:38:GLN:CG	48:BP:39:LYS:H	2.17	0.48
48:BP:49:ARG:NH1	48:BP:49:ARG:HG3	2.27	0.48
50:BR:105:ARG:CD	50:BR:105:ARG:H	2.26	0.48
50:BR:105:ARG:HD2	50:BR:105:ARG:H	1.78	0.48
36:BA:2293:C:H5''	51:BS:92:TYR:OH	2.13	0.48
53:BU:99:ALA:HB2	53:BU:106:PHE:CE1	2.48	0.48
54:BV:19:LYS:HG2	54:BV:94:LEU:CB	2.40	0.48
55:BW:4:LYS:CG	55:BW:5:ALA:H	2.26	0.48
56:BX:28:PHE:CE2	56:BX:92:LEU:HD11	2.48	0.48
57:BY:81:LYS:NZ	57:BY:99:CYS:SG	2.85	0.48
1:CA:484:G:H4'	1:CA:485:G:O5'	2.13	0.48
1:CA:505:G:H5'	1:CA:534:U:H2'	1.95	0.48
1:CA:707:C:H2'	1:CA:708:C:C6	2.48	0.48
1:CA:736:C:H2'	1:CA:737:A:C8	2.48	0.48
2:CB:87:ARG:HH12	2:CB:223:ILE:HD11	1.78	0.48
3:CC:40:ARG:O	3:CC:44:GLU:HG3	2.13	0.48
9:CI:24:GLY:C	9:CI:25:LYS:HD2	2.32	0.48
13:CM:66:LEU:O	13:CM:70:LEU:HB2	2.13	0.48
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.94	0.48
21:CU:6:ARG:HD3	21:CU:15:ARG:HH12	1.75	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:316:PHE:CE1	25:CZ:372:VAL:HB	2.48	0.48
25:CZ:342:PHE:CD1	25:CZ:342:PHE:N	2.81	0.48
25:CZ:67:HIS:CD2	25:CZ:67:HIS:H	2.31	0.48
28:D2:32:LEU:HB2	28:D2:53:LEU:CD2	2.43	0.48
28:D2:56:GLN:HA	28:D2:59:ARG:CZ	2.43	0.48
28:D2:59:ARG:HG3	28:D2:60:LEU:N	2.28	0.48
30:D4:34:GLU:HB2	42:DG:113:ARG:HH21	1.79	0.48
36:DA:1049:C:O2'	36:DA:1050:A:H5'	2.13	0.48
36:DA:1141:U:H6	46:DN:63:THR:CG2	2.26	0.48
36:DA:1448:G:H21	36:DA:1528(A):A:H2	1.62	0.48
36:DA:2107:C:H1'	36:DA:2182:G:H22	1.73	0.48
36:DA:2485:G:O2'	36:DA:2486:G:H5'	2.12	0.48
36:DA:469:G:H2'	36:DA:470:A:H5''	1.95	0.48
36:DA:469:G:C2'	36:DA:470:A:H5''	2.43	0.48
39:DD:117:VAL:HG22	39:DD:118:VAL:N	2.27	0.48
36:DA:1353:A:H4'	39:DD:38:LYS:HE3	1.94	0.48
36:DA:2631:G:H21	40:DE:61:ARG:HH12	1.59	0.48
47:DO:86:ILE:C	47:DO:87:ILE:HD13	2.34	0.48
48:DP:106:LEU:HD21	48:DP:112:LEU:HB2	1.94	0.48
36:DA:2495:G:OP1	49:DQ:82:ARG:NH1	2.46	0.48
50:DR:117:VAL:CG2	50:DR:118:GLU:N	2.76	0.48
50:DR:52:ILE:O	50:DR:55:ALA:N	2.46	0.48
53:DU:88:ILE:HG23	53:DU:90:VAL:HG23	1.94	0.48
56:DX:36:LYS:HE2	56:DX:54:VAL:O	2.13	0.48
1:AA:1030:C:H41	1:AA:1032:G:N2	2.06	0.48
1:AA:1484:C:O2'	1:AA:1485:U:H5'	2.14	0.48
1:AA:186:C:C2	1:AA:187:C:C5	3.01	0.48
1:AA:201:C:H42	1:AA:216:G:H1	1.61	0.48
1:AA:370:C:O2'	1:AA:371:G:H5'	2.13	0.48
5:AE:18:ARG:HG3	5:AE:18:ARG:NH1	2.27	0.48
5:AE:148:VAL:CG2	8:AH:107:LEU:HD13	2.36	0.48
9:AI:20:ARG:NH1	9:AI:20:ARG:HG3	2.27	0.48
13:AM:67:GLU:O	13:AM:69:GLU:N	2.45	0.48
1:AA:471:G:H21	16:AP:82:GLN:NE2	2.11	0.48
17:AQ:10:VAL:HG23	17:AQ:53:LEU:HA	1.95	0.48
18:AR:28:GLU:HG3	18:AR:28:GLU:O	2.13	0.48
21:AU:12:LYS:HG2	21:AU:22:ARG:HB3	1.94	0.48
24:AY:76:A:H2	25:AZ:270:VAL:CA	2.25	0.48
27:B1:50:ARG:HG3	36:BA:2200:C:OP1	2.13	0.48
31:B5:50:GLY:HA3	31:B5:56:LYS:NZ	2.28	0.48
32:B6:18:ARG:HH11	32:B6:18:ARG:CG	2.04	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B7:12:ARG:O	33:B7:15:THR:O	2.31	0.48
36:BA:1436:G:H1'	36:BA:1477:A:O2'	2.12	0.48
36:BA:1771:C:O2'	36:BA:1786:A:H8	1.96	0.48
36:BA:2320:A:H2'	36:BA:2320:A:N3	2.29	0.48
34:B8:30:ARG:NH2	36:BA:2419:U:O4	2.46	0.48
36:BA:290:G:O2'	36:BA:291:C:H5'	2.12	0.48
36:BA:310:A:P	57:BY:18:GLY:HA2	2.53	0.48
36:BA:405:U:H3'	36:BA:406:G:H5'	1.94	0.48
36:BA:740:U:H2'	36:BA:741:G:C8	2.48	0.48
37:BB:22:U:H2'	37:BB:23:G:H8	1.79	0.48
38:BC:114:VAL:HG12	38:BC:144:THR:HA	1.96	0.48
38:BC:147:PHE:C	38:BC:149:ILE:H	2.15	0.48
42:BG:51:ARG:HH11	42:BG:53:LEU:CD1	2.25	0.48
36:BA:2312:U:OP1	42:BG:73:ALA:HA	2.13	0.48
49:BQ:26:TYR:HB2	49:BQ:137:TYR:HD1	1.77	0.48
51:BS:96:GLY:C	51:BS:98:VAL:H	2.15	0.48
55:BW:25:ARG:HH11	55:BW:25:ARG:CB	2.27	0.48
36:BA:1341:U:C4'	56:BX:57:LEU:HB3	2.41	0.48
57:BY:27:VAL:HG12	57:BY:28:LYS:N	2.28	0.48
58:BZ:47:VAL:HG12	58:BZ:48:PHE:N	2.29	0.48
1:CA:1152:A:H2'	1:CA:1153:C:H6	1.78	0.48
1:CA:1286:A:O2'	1:CA:1287:A:C5'	2.61	0.48
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.47	0.48
1:CA:160:A:H1'	1:CA:344:A:C5	2.48	0.48
1:CA:471:G:H21	16:CP:82:GLN:NE2	2.11	0.48
2:CB:8:LYS:O	2:CB:10:LEU:N	2.47	0.48
3:CC:35:GLU:CG	3:CC:59:ARG:HH22	2.27	0.48
4:CD:159:ARG:NH1	4:CD:159:ARG:HG3	2.27	0.48
10:CJ:42:THR:HG22	10:CJ:43:ARG:N	2.28	0.48
12:CL:41:ARG:CZ	12:CL:41:ARG:HB2	2.43	0.48
13:CM:107:ALA:O	13:CM:111:LYS:HG3	2.13	0.48
17:CQ:10:VAL:HG23	17:CQ:54:GLY:H	1.79	0.48
18:CR:30:ASP:C	18:CR:32:ARG:H	2.16	0.48
19:CS:15:LEU:O	19:CS:19:VAL:HG23	2.13	0.48
20:CT:53:LEU:H	20:CT:53:LEU:HD12	1.79	0.48
22:CV:60:U:H5''	22:CV:61:C:H5	1.77	0.48
31:D5:36:CYS:HB3	31:D5:49:CYS:SG	2.53	0.48
36:DA:1131:G:C4	46:DN:75:TYR:HB2	2.49	0.48
36:DA:141:A:C8	36:DA:1408:C:O2'	2.61	0.48
36:DA:1721:G:C6	36:DA:1739:U:H5'	2.49	0.48
36:DA:2554:U:H2'	36:DA:2555:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2777:G:C4'	36:DA:2778:A:H5'	2.44	0.48
36:DA:2828:C:O2'	36:DA:2829:C:H5'	2.14	0.48
36:DA:39:C:O2'	36:DA:40:C:H5'	2.12	0.48
36:DA:690:G:H2'	36:DA:691:C:C6	2.49	0.48
36:DA:78:A:C2	36:DA:109:G:C6	3.02	0.48
36:DA:860:U:O2	36:DA:860:U:O4'	2.31	0.48
41:DF:133:ASN:O	41:DF:135:LYS:N	2.47	0.48
41:DF:65:TRP:CZ3	41:DF:75:HIS:HD2	2.31	0.48
41:DF:78:ILE:HA	41:DF:83:PHE:CE2	2.48	0.48
42:DG:110:ALA:C	42:DG:112:PRO:HD2	2.33	0.48
42:DG:138:GLN:HB3	42:DG:153:ARG:O	2.13	0.48
22:CV:56:C:H1'	42:DG:76:SER:O	2.14	0.48
42:DG:79:ASN:O	42:DG:80:PHE:HB2	2.12	0.48
42:DG:95:ARG:NH1	42:DG:95:ARG:HG2	2.29	0.48
46:DN:121:LYS:HB3	46:DN:123:TYR:CE1	2.49	0.48
48:DP:101:VAL:HB	48:DP:107:LYS:HA	1.95	0.48
50:DR:13:HIS:CE1	50:DR:16:HIS:HB2	2.48	0.48
36:DA:1248:G:N1	53:DU:3:ARG:HD2	2.29	0.48
54:DV:81:TYR:C	54:DV:82:ARG:HD2	2.34	0.48
57:DY:50:ARG:O	57:DY:51:VAL:C	2.52	0.48
1:AA:1031:G:H2'	1:AA:1032:G:O4'	2.13	0.48
1:AA:44:G:C2	1:AA:45:U:H1'	2.48	0.48
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.86	0.48
3:AC:11:ARG:NH2	3:AC:182:ILE:HD12	2.29	0.48
5:AE:20:GLN:NE2	5:AE:22:GLY:H	2.12	0.48
1:AA:1124:G:C5'	10:AJ:35:SER:HB2	2.43	0.48
10:AJ:6:ILE:HG13	10:AJ:6:ILE:O	2.13	0.48
10:AJ:47:PHE:CE1	14:AN:37:PHE:HE2	2.31	0.48
27:B1:27:GLU:O	27:B1:28:GLY:C	2.52	0.48
36:BA:1472:A:O2'	36:BA:1473:G:H5'	2.13	0.48
36:BA:1750:G:H2'	36:BA:1751:C:C6	2.49	0.48
36:BA:2030:A:H4'	36:BA:2031:A:H8	1.77	0.48
37:BB:15:A:H3'	37:BB:16:G:C5'	2.42	0.48
37:BB:7:G:C2'	37:BB:8:U:H5''	2.44	0.48
41:BF:103:LYS:HA	41:BF:106:ARG:HE	1.78	0.48
41:BF:107:LYS:HE3	41:BF:205:ARG:CG	2.43	0.48
41:BF:160:ASN:ND2	41:BF:160:ASN:C	2.67	0.48
42:BG:62:LEU:HD12	42:BG:63:ILE:HG23	1.94	0.48
51:BS:28:VAL:CG1	51:BS:29:PHE:N	2.76	0.48
55:BW:6:ILE:CG2	55:BW:8:ARG:HD2	2.44	0.48
1:CA:312:C:H2'	1:CA:313:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:977:A:O2'	1:CA:978:A:H5''	2.14	0.48
3:CC:22:TRP:NE1	3:CC:36:ASP:OD2	2.45	0.48
11:CK:27:ASN:HD21	11:CK:45:GLY:H	1.62	0.48
12:CL:17:LYS:HD3	12:CL:18:VAL:HG22	1.94	0.48
15:CO:17:ARG:HH11	15:CO:77:ARG:NH1	2.10	0.48
15:CO:7:GLU:O	15:CO:11:VAL:HG23	2.14	0.48
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.28	0.48
19:CS:49:ILE:O	19:CS:60:VAL:HG12	2.14	0.48
20:CT:13:LEU:O	20:CT:16:HIS:N	2.45	0.48
20:CT:87:LYS:O	20:CT:91:LEU:HG	2.14	0.48
22:CV:68:C:O2'	22:CV:69:G:H5'	2.12	0.48
25:CZ:272:MET:HB2	25:CZ:277:LEU:HD23	1.94	0.48
26:D0:18:ALA:HB2	36:DA:2272:U:OP2	2.14	0.48
34:D8:11:LYS:HG3	34:D8:60:LEU:CD2	2.43	0.48
36:DA:1888:G:N3	36:DA:1888:G:H5'	2.29	0.48
36:DA:2166:G:H2'	36:DA:2167:U:C6	2.48	0.48
36:DA:2257:U:O2'	36:DA:2258:C:H5'	2.13	0.48
36:DA:644:A:H2	36:DA:2369:A:H1'	1.78	0.48
36:DA:2553:G:H3'	36:DA:2554:U:H5''	1.93	0.48
36:DA:425:G:O2'	36:DA:426:C:H5'	2.14	0.48
36:DA:865:C:H4'	36:DA:866:A:OP1	2.14	0.48
38:DC:10:LEU:HA	38:DC:13:LYS:HE3	1.95	0.48
39:DD:176:ARG:NH1	39:DD:176:ARG:CG	2.73	0.48
39:DD:31:LYS:HZ1	39:DD:33:LEU:HG	1.74	0.48
40:DE:46:ALA:HB1	40:DE:80:GLU:HB3	1.95	0.48
40:DE:65:GLY:O	40:DE:67:PHE:N	2.47	0.48
41:DF:63:LYS:HA	41:DF:76:GLY:O	2.14	0.48
42:DG:76:SER:HB2	42:DG:84:LYS:HA	1.95	0.48
46:DN:73:THR:HG23	46:DN:82:LEU:HD11	1.89	0.48
47:DO:8:LEU:CD2	47:DO:8:LEU:N	2.76	0.48
57:DY:2:ARG:C	57:DY:4:LYS:H	2.16	0.48
1:AA:1220:G:O2'	1:AA:1221:G:H5'	2.13	0.48
1:AA:1271:G:C3'	1:AA:1272:G:H5''	2.42	0.48
2:AB:17:PHE:CD2	2:AB:44:LEU:HD11	2.48	0.48
3:AC:114:PRO:O	3:AC:118:GLN:HG3	2.13	0.48
3:AC:82:GLU:N	3:AC:82:GLU:OE1	2.47	0.48
9:AI:19:LEU:CD1	9:AI:59:PHE:HD2	2.19	0.48
12:AL:86:ARG:HG2	12:AL:87:GLY:N	2.27	0.48
12:AL:93:LEU:HB2	12:AL:96:VAL:HB	1.95	0.48
1:AA:981:U:H5'	14:AN:21:TYR:CE1	2.49	0.48
1:AA:1534:A:N6	23:AX:12:A:C2	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:6:C:H42	24:AY:67:G:H1	1.60	0.48
25:AZ:94:THR:HG22	25:AZ:95:GLY:N	2.29	0.48
36:BA:1022:G:H22	36:BA:1142(A):A:H2	1.58	0.48
36:BA:1386:C:H2'	36:BA:1387:C:C6	2.49	0.48
36:BA:1417:C:O2'	36:BA:1418:G:H5'	2.14	0.48
36:BA:1720:U:H2'	36:BA:1721:G:C4'	2.43	0.48
36:BA:118:A:H1'	36:BA:178:G:O4'	2.14	0.48
36:BA:2188:C:H2'	36:BA:2189:U:C6	2.49	0.48
36:BA:848:G:O6	36:BA:928:G:H2'	2.14	0.48
36:BA:875:G:H2'	36:BA:876:C:C6	2.49	0.48
42:BG:149:VAL:C	42:BG:151:ALA:H	2.17	0.48
46:BN:32:THR:HG22	46:BN:37:LYS:HD3	1.96	0.48
48:BP:131:SER:OG	48:BP:134:ALA:HB3	2.13	0.48
49:BQ:134:ARG:HA	49:BQ:137:TYR:CE2	2.48	0.48
54:BV:52:VAL:CG1	54:BV:55:ALA:HB3	2.44	0.48
54:BV:19:LYS:HB2	54:BV:96:ILE:HG12	1.96	0.48
1:CA:1030(D):A:H62	1:CA:1031:G:N2	2.11	0.48
1:CA:1431:C:H2'	1:CA:1432:G:H5'	1.95	0.48
1:CA:1535:C:O2'	1:CA:1536:C:H5'	2.12	0.48
1:CA:198:G:O2'	1:CA:199:G:H8	1.97	0.48
1:CA:1190:G:P	3:CC:5:ILE:HD12	2.53	0.48
3:CC:91:LEU:O	3:CC:94:LEU:O	2.31	0.48
4:CD:135:LEU:HD13	4:CD:135:LEU:N	2.29	0.48
4:CD:152:SER:O	4:CD:154:ASN:N	2.47	0.48
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.95	0.48
6:CF:38:GLU:O	6:CF:39:LYS:C	2.52	0.48
13:CM:83:ASP:C	13:CM:85:GLY:H	2.16	0.48
14:CN:25:VAL:HG23	14:CN:38:GLY:O	2.13	0.48
15:CO:27:VAL:O	15:CO:31:LEU:CD1	2.60	0.48
20:CT:45:GLN:NE2	20:CT:46:GLU:CG	2.76	0.48
20:CT:92:LEU:C	20:CT:94:ALA:N	2.67	0.48
22:CV:48:C:OP2	22:CV:48:C:H6	1.96	0.48
25:CZ:267:VAL:CG2	25:CZ:288:VAL:HG13	2.43	0.48
25:CZ:94:THR:HG22	25:CZ:95:GLY:N	2.28	0.48
28:D2:5:GLU:O	28:D2:8:LYS:HB2	2.13	0.48
32:D6:20:ASN:O	32:D6:21:TYR:CD2	2.67	0.48
22:CW:65:G:O2'	32:D6:28:ARG:NH2	2.47	0.48
33:D7:22:MET:HE3	33:D7:31:LEU:HD12	1.94	0.48
36:DA:2121:G:H22	36:DA:2176:A:H2	1.59	0.48
36:DA:2190:G:C2	36:DA:2191:G:H1'	2.48	0.48
36:DA:2801(A):A:H4'	36:DA:2802:G:H2'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:628:G:C3'	36:DA:629:G:H5''	2.43	0.48
36:DA:823:G:H2'	36:DA:824:A:C8	2.48	0.48
36:DA:875:G:H2'	36:DA:876:C:C6	2.49	0.48
38:DC:199:HIS:O	38:DC:201:PRO:HD3	2.13	0.48
40:DE:40:GLU:O	40:DE:41:LYS:HB3	2.14	0.48
40:DE:52:LEU:O	40:DE:75:VAL:HG23	2.14	0.48
42:DG:82:LEU:HD23	42:DG:83:ARG:O	2.13	0.48
46:DN:70:LYS:O	46:DN:86:PRO:HA	2.14	0.48
49:DQ:133:ARG:HH11	49:DQ:133:ARG:HB2	1.79	0.48
50:DR:86:ARG:HB3	50:DR:118:GLU:OE2	2.13	0.48
36:DA:2882:A:H5''	50:DR:98:LEU:HD21	1.95	0.48
36:DA:2293:C:H5''	51:DS:92:TYR:OH	2.13	0.48
47:DO:104:ARG:NH2	52:DT:33:LYS:HE2	2.13	0.48
52:DT:55:ASN:H	52:DT:59:THR:CG2	2.23	0.48
56:DX:12:VAL:CG1	56:DX:27:THR:H	2.25	0.48
58:DZ:109:ALA:C	58:DZ:111:VAL:H	2.16	0.48
1:AA:166:G:O2'	1:AA:167:G:H5'	2.13	0.48
1:AA:264:U:H4'	17:AQ:63:ARG:HD3	1.94	0.48
1:AA:722:A:HO2'	1:AA:724:G:H8	1.60	0.48
2:AB:236:TYR:C	2:AB:238:LEU:N	2.65	0.48
3:AC:16:ARG:CD	3:AC:17:ASP:H	2.26	0.48
4:AD:182:LYS:HB3	4:AD:183:GLY:H	1.55	0.48
18:AR:29:PHE:HD1	18:AR:29:PHE:H	1.62	0.48
25:AZ:266:VAL:HB	25:AZ:291:ARG:HH12	1.79	0.48
25:AZ:318:ALA:HB1	25:AZ:399:VAL:O	2.14	0.48
27:B1:80:LEU:C	27:B1:80:LEU:HD23	2.34	0.48
31:B5:40:LYS:NZ	31:B5:44:THR:O	2.45	0.48
36:BA:1539:G:C6	36:BA:1540:U:H1'	2.49	0.48
36:BA:1914:C:H2'	36:BA:1915:U:O4'	2.13	0.48
36:BA:910:A:N1	36:BA:2277:G:H1'	2.28	0.48
36:BA:353:G:H2'	36:BA:353:G:N3	2.29	0.48
36:BA:2239:G:H5'	39:BD:251:GLY:HA3	1.95	0.48
40:BE:49:LEU:O	40:BE:78:LEU:HB3	2.13	0.48
43:BH:125:VAL:HG12	43:BH:125:VAL:O	2.13	0.48
43:BH:89:ILE:HD11	43:BH:129:THR:HA	1.94	0.48
43:BH:19:VAL:CG1	43:BH:20:ALA:N	2.77	0.48
48:BP:66:GLY:O	48:BP:67:MET:CB	2.59	0.48
53:BU:92:ARG:CZ	54:BV:11:GLN:H	2.27	0.48
55:BW:64:MET:O	55:BW:65:LEU:HB3	2.13	0.48
58:BZ:69:THR:HG22	58:BZ:90:VAL:CA	2.16	0.48
1:CA:1031:G:H2'	1:CA:1032:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1325:C:OP1	21:CU:15:ARG:NH2	2.37	0.48
1:CA:782:A:H2'	1:CA:783:C:H5'	1.94	0.48
4:CD:121:VAL:HA	4:CD:126:ILE:HD13	1.95	0.48
1:CA:8:A:C2	4:CD:209:ARG:HB3	2.48	0.48
1:CA:1291:G:H4'	9:CI:39:GLY:HA3	1.95	0.48
10:CJ:61:GLU:OE2	14:CN:49:HIS:HE1	1.97	0.48
12:CL:42:THR:HG23	12:CL:42:THR:O	2.13	0.48
12:CL:45:PRO:HG3	12:CL:53:ARG:CD	2.44	0.48
12:CL:53:ARG:HD2	12:CL:53:ARG:N	2.29	0.48
23:CX:23:G:C5	24:CY:36:A:C2	3.02	0.48
25:CZ:226:GLU:HG3	25:CZ:240:GLY:HA2	1.95	0.48
25:CZ:230:THR:CG2	25:CZ:295:ARG:HD2	2.44	0.48
25:CZ:355:LEU:HD23	25:CZ:370:PHE:CD2	2.48	0.48
26:D0:14:ARG:NH1	26:D0:14:ARG:HG3	2.22	0.48
34:D8:11:LYS:HG3	34:D8:60:LEU:HD22	1.96	0.48
36:DA:1436:G:H1'	36:DA:1477:A:O2'	2.14	0.48
36:DA:1539:G:C6	36:DA:1540:U:H1'	2.48	0.48
36:DA:184:C:H2'	36:DA:185:U:C6	2.48	0.48
1:CA:1483:A:H1'	36:DA:1948:G:O4'	2.13	0.48
36:DA:2030:A:H4'	36:DA:2031:A:H8	1.78	0.48
36:DA:402:A:C2'	36:DA:403:U:H5'	2.43	0.48
36:DA:473:G:H5''	36:DA:508:G:N2	2.29	0.48
38:DC:214:VAL:HG23	38:DC:224:ILE:HD13	1.96	0.48
38:DC:76:ALA:HB2	38:DC:153:ILE:HD11	1.94	0.48
38:DC:76:ALA:CB	38:DC:94:VAL:HG13	2.41	0.48
39:DD:30:GLU:HB3	39:DD:35:LYS:NZ	2.05	0.48
40:DE:49:LEU:O	40:DE:78:LEU:HB3	2.14	0.48
41:DF:88:VAL:CG1	41:DF:88:VAL:O	2.60	0.48
47:DO:47:ILE:O	47:DO:48:PRO:C	2.52	0.48
48:DP:126:VAL:HG22	48:DP:145:PRO:HG2	1.95	0.48
36:DA:2496:C:OP2	49:DQ:82:ARG:HG2	2.14	0.48
36:DA:1654:A:P	50:DR:3:HIS:HB3	2.53	0.48
36:DA:994:C:OP2	53:DU:54:LYS:NZ	2.46	0.48
1:AA:1270:C:H2'	1:AA:1271:G:C8	2.48	0.48
1:AA:167:G:H2'	1:AA:168:G:O4'	2.14	0.48
5:AE:33:VAL:HG21	5:AE:109:ILE:HG12	1.96	0.48
5:AE:144:THR:N	5:AE:147:ASP:OD1	2.47	0.48
10:AJ:6:ILE:HG12	10:AJ:72:VAL:HB	1.95	0.48
13:AM:97:PRO:HA	13:AM:110:ARG:CD	2.44	0.48
20:AT:27:LYS:O	20:AT:27:LYS:HD3	2.13	0.48
26:B0:51:VAL:HG22	26:B0:81:VAL:HG23	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B3:6:VAL:HB	29:B3:54:VAL:HG11	1.95	0.48
31:B5:3:LYS:CD	31:B5:3:LYS:H	2.20	0.48
35:B9:17:ILE:CG2	35:B9:18:ARG:H	2.27	0.48
36:BA:1286:A:N6	36:BA:1289:C:N3	2.61	0.48
36:BA:1525:G:H2'	36:BA:1526:G:H8	1.77	0.48
36:BA:2039:C:O2'	36:BA:2040:C:H5'	2.14	0.48
36:BA:2312:U:C2'	36:BA:2313:C:C5'	2.92	0.48
34:B8:30:ARG:CZ	36:BA:2419:U:O4	2.61	0.48
36:BA:460:A:H2'	36:BA:461:C:O4'	2.14	0.48
38:BC:76:ALA:O	38:BC:94:VAL:O	2.32	0.48
40:BE:116:VAL:HG11	40:BE:138:PRO:HB3	1.96	0.48
43:BH:147:ASN:O	43:BH:151:ILE:HG12	2.14	0.48
46:BN:56:ASN:H	46:BN:125:GLY:HA3	1.79	0.48
50:BR:88:ARG:HD2	50:BR:88:ARG:O	2.14	0.48
51:BS:104:GLY:O	51:BS:106:ARG:N	2.40	0.48
51:BS:89:ARG:CG	51:BS:92:TYR:HA	2.42	0.48
1:AA:1442(B):A:C4	52:BT:118:ARG:CZ	2.97	0.48
54:BV:62:LEU:H	54:BV:62:LEU:HD22	1.79	0.48
57:BY:33:LYS:C	57:BY:35:TYR:N	2.66	0.48
57:BY:87:LYS:HG3	57:BY:88:LYS:N	2.25	0.48
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.48	0.48
1:CA:237:C:O2'	1:CA:238:G:H5'	2.14	0.48
2:CB:95:GLN:O	2:CB:96:ARG:HD2	2.14	0.48
5:CE:153:LYS:HB3	5:CE:154:GLY:H	1.41	0.48
9:CI:20:ARG:NH1	9:CI:20:ARG:HG3	2.26	0.48
13:CM:8:GLU:OE1	13:CM:22:ILE:HG13	2.14	0.48
15:CO:80:ALA:O	15:CO:84:LYS:HG3	2.14	0.48
17:CQ:27:PHE:CE1	17:CQ:36:ILE:HD11	2.48	0.48
17:CQ:83:ASP:CG	17:CQ:84:LEU:N	2.67	0.48
20:CT:89:ARG:NH1	20:CT:104:LEU:HD21	2.29	0.48
25:CZ:65:THR:HG22	25:CZ:80:VAL:HG13	1.92	0.48
26:D0:10:THR:CG2	26:D0:11:ARG:N	2.77	0.48
32:D6:53:LYS:HE2	32:D6:54:ILE:CG1	2.44	0.48
36:DA:1677:A:H2'	36:DA:1678:G:H8	1.79	0.48
36:DA:1771:C:O2'	36:DA:1786:A:H8	1.96	0.48
36:DA:1858:G:H2'	36:DA:1883:G:N2	2.26	0.48
36:DA:759:G:O4'	36:DA:1981:A:C2	2.67	0.48
36:DA:2157:G:H8	36:DA:2157:G:H3'	1.78	0.48
36:DA:2389:G:H5''	36:DA:2390:U:H5'	1.95	0.48
36:DA:2006:C:O2'	36:DA:2823:A:N3	2.45	0.48
36:DA:729:G:OP2	39:DD:13:ARG:NH1	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:136:ILE:HB	39:DD:165:ILE:CD1	2.44	0.48
40:DE:3:GLY:N	40:DE:81:ILE:HG21	2.27	0.48
44:DJ:99:UNK:C	44:DJ:101:UNK:N	2.74	0.48
50:DR:105:ARG:HD2	50:DR:105:ARG:H	1.78	0.48
52:DT:54:ARG:O	52:DT:55:ASN:HB2	2.14	0.48
52:DT:30:VAL:CG2	52:DT:84:GLN:HG3	2.44	0.48
53:DU:61:TRP:O	53:DU:65:ILE:CD1	2.62	0.48
56:DX:61:GLY:HA3	56:DX:73:ARG:O	2.14	0.48
57:DY:44:ILE:HD12	57:DY:44:ILE:N	2.28	0.48
58:DZ:149:SER:HB2	58:DZ:172:ALA:O	2.14	0.48
1:AA:142:G:N3	1:AA:196:A:H2	2.12	0.48
1:AA:106:C:O2	1:AA:379:C:H4'	2.14	0.48
1:AA:723:U:N3	1:AA:1537:U:C2'	2.73	0.48
2:AB:18:GLY:O	2:AB:19:HIS:HB2	2.14	0.48
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.14	0.48
4:AD:61:LYS:HZ3	4:AD:62:GLN:NE2	2.12	0.48
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.47	0.48
16:AP:71:ARG:HA	16:AP:74:LEU:CD1	2.44	0.48
25:AZ:104:LEU:CD2	25:AZ:120:ILE:HD11	2.44	0.48
33:B7:5:TRP:CD1	33:B7:7:PRO:HD3	2.49	0.48
35:B9:29:ASN:ND2	35:B9:29:ASN:O	2.47	0.48
36:BA:1504:C:O2'	36:BA:1505:C:C5'	2.62	0.48
36:BA:1534:U:O2'	36:BA:1535:A:H5'	2.13	0.48
36:BA:1614:A:N1	55:BW:93:ALA:HB2	2.29	0.48
36:BA:414:C:H1'	36:BA:1864:U:O2'	2.14	0.48
36:BA:2160:G:H2'	36:BA:2161:C:O4'	2.14	0.48
36:BA:227:A:C2	36:BA:2407:G:H1'	2.49	0.48
36:BA:2554:U:H2'	36:BA:2555:U:C6	2.49	0.48
36:BA:2631:G:H21	40:BE:61:ARG:HH12	1.59	0.48
36:BA:271(E):U:H3	36:BA:271(S):G:H1	1.61	0.48
36:BA:2779:U:H1'	36:BA:2781:A:C5	2.49	0.48
36:BA:37:C:H2'	36:BA:38:A:C8	2.48	0.48
38:BC:210:ARG:HH11	38:BC:210:ARG:HG2	1.79	0.48
39:BD:31:LYS:HE3	39:BD:33:LEU:HD12	1.95	0.48
42:BG:46:ALA:O	42:BG:47:LYS:HG3	2.14	0.48
46:BN:107:LEU:HB3	46:BN:108:PRO:CD	2.43	0.48
47:BO:11:ALA:HB1	47:BO:99:PHE:O	2.14	0.48
48:BP:101:VAL:HB	48:BP:107:LYS:HA	1.96	0.48
50:BR:86:ARG:HB3	50:BR:118:GLU:OE2	2.14	0.48
51:BS:28:VAL:CG1	51:BS:29:PHE:H	2.25	0.48
51:BS:57:LYS:O	51:BS:58:LEU:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:28:MET:HA	58:BZ:88:PHE:O	2.14	0.48
1:CA:1158:C:H2'	1:CA:1158:C:O2	2.14	0.48
1:CA:304:U:O2'	1:CA:305:G:H5'	2.14	0.48
1:CA:603:U:H2'	1:CA:604:G:H8	1.78	0.48
1:CA:735:C:H2'	1:CA:736:C:H6	1.78	0.48
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.95	0.48
4:CD:36:ARG:HH11	4:CD:36:ARG:CG	2.27	0.48
6:CF:63:TYR:N	6:CF:63:TYR:CD1	2.81	0.48
21:CU:12:LYS:HG2	21:CU:22:ARG:CB	2.44	0.48
25:CZ:19:HIS:HA	25:CZ:115:GLN:CB	2.44	0.48
32:D6:11:LEU:HD22	32:D6:12:GLU:N	2.26	0.48
33:D7:43:THR:HG22	33:D7:44:PRO:O	2.14	0.48
36:DA:1038:C:C3'	36:DA:1039:G:H5''	2.43	0.48
36:DA:1054:A:O2'	36:DA:1055:G:H5'	2.14	0.48
36:DA:115:C:O2'	36:DA:116:C:H5'	2.14	0.48
36:DA:142:A:H5''	36:DA:142(A):C:H5	1.79	0.48
36:DA:2526:G:H5'	36:DA:2742:C:O2'	2.13	0.48
36:DA:2853:C:O2'	36:DA:2854:G:H5'	2.14	0.48
36:DA:309:G:H1'	36:DA:329:G:O2'	2.13	0.48
36:DA:657:U:H2'	36:DA:658:C:H6	1.79	0.48
38:DC:114:VAL:HG12	38:DC:144:THR:CA	2.44	0.48
39:DD:146:GLU:OE1	39:DD:190:TYR:HB2	2.14	0.48
40:DE:12:THR:O	40:DE:23:VAL:HG22	2.14	0.48
41:DF:10:PRO:HG2	41:DF:13:SER:OG	2.13	0.48
41:DF:160:ASN:ND2	41:DF:160:ASN:C	2.67	0.48
42:DG:77:ILE:N	42:DG:83:ARG:CB	2.75	0.48
36:DA:389:G:C6	48:DP:70:GLN:HG3	2.49	0.48
36:DA:955:C:OP1	49:DQ:87:LYS:HE2	2.14	0.48
37:DB:7:G:O5'	51:DS:29:PHE:CE2	2.66	0.48
51:DS:93:LYS:O	51:DS:95:HIS:N	2.47	0.48
54:DV:39:LEU:HD12	54:DV:50:PRO:O	2.14	0.48
56:DX:12:VAL:HG12	56:DX:27:THR:OG1	2.14	0.48
56:DX:35:THR:O	56:DX:39:ILE:HG13	2.13	0.48
58:DZ:29:TYR:O	58:DZ:30:ASN:HB3	2.14	0.48
1:AA:191:G:C4	20:AT:105:SER:HB2	2.48	0.47
1:AA:391:G:H5''	16:AP:8:ARG:NE	2.29	0.47
1:AA:407:G:H2'	1:AA:408:A:C8	2.48	0.47
3:AC:70:VAL:HG21	3:AC:76:VAL:HG11	1.96	0.47
3:AC:95:THR:HG23	3:AC:97:LYS:HD2	1.95	0.47
6:AF:69:GLU:HG2	6:AF:70:ASP:N	2.28	0.47
12:AL:75:HIS:HA	12:AL:102:ARG:HH22	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:43:VAL:HG23	12:AL:93:LEU:HD22	1.94	0.47
20:AT:92:LEU:C	20:AT:94:ALA:N	2.67	0.47
22:AV:59:U:H2'	22:AV:60:U:C6	2.49	0.47
22:AW:43:C:C3'	22:AW:44:G:O4'	2.62	0.47
23:AX:11:U:C2'	23:AX:12:A:OP1	2.62	0.47
25:AZ:159:ASN:C	25:AZ:161:TYR:H	2.16	0.47
25:AZ:226:GLU:HG3	25:AZ:240:GLY:HA2	1.95	0.47
25:AZ:230:THR:CG2	25:AZ:295:ARG:HD2	2.44	0.47
25:AZ:355:LEU:HD13	25:AZ:356:PRO:HD2	1.96	0.47
28:B2:16:LEU:O	28:B2:17:SER:O	2.32	0.47
34:B8:61:LEU:C	34:B8:63:PRO:HD2	2.34	0.47
36:BA:1038:C:C3'	36:BA:1039:G:H5''	2.43	0.47
36:BA:1099:G:O2'	36:BA:1100:C:H5'	2.14	0.47
36:BA:1376:C:O2'	36:BA:1377:G:H5'	2.14	0.47
36:BA:1799:G:H5'	36:BA:1819:A:H61	1.78	0.47
36:BA:2064:C:H2'	36:BA:2065:C:C6	2.49	0.47
36:BA:2206:G:C2	36:BA:2207:G:H5'	2.48	0.47
36:BA:2472:G:H3'	36:BA:2475:C:N4	2.29	0.47
36:BA:309:G:H1'	36:BA:329:G:O2'	2.14	0.47
36:BA:84:A:H2	36:BA:98:G:N3	2.12	0.47
37:BB:104:U:O2'	37:BB:105:A:H5'	2.14	0.47
38:BC:53:ARG:HH11	38:BC:53:ARG:CB	2.18	0.47
36:BA:1353:A:H4'	39:BD:38:LYS:HE3	1.96	0.47
41:BF:37:VAL:HG11	48:BP:7:ARG:CZ	2.44	0.47
42:BG:11:TYR:O	42:BG:15:VAL:N	2.47	0.47
46:BN:7:LYS:O	46:BN:9:VAL:N	2.47	0.47
34:B8:25:MET:HG3	48:BP:64:LYS:HB2	1.95	0.47
49:BQ:109:VAL:HG12	49:BQ:113:GLN:HB2	1.96	0.47
36:BA:994:C:OP1	53:BU:53:ARG:NH2	2.47	0.47
37:BB:104:U:O3'	58:BZ:72:ARG:NH1	2.47	0.47
1:CA:1286:A:O2'	1:CA:1287:A:P	2.71	0.47
1:CA:1533:C:H2'	1:CA:1534:A:O4'	2.14	0.47
1:CA:188:C:O4'	20:CT:89:ARG:NH1	2.47	0.47
1:CA:142:G:N3	1:CA:196:A:H2	2.11	0.47
1:CA:652:U:C2	1:CA:752:G:N2	2.82	0.47
1:CA:681:C:O2'	1:CA:682:G:H5'	2.14	0.47
1:CA:972:C:O3'	10:CJ:57:LYS:HG2	2.14	0.47
2:CB:209:ARG:HH11	2:CB:239:VAL:HG11	1.78	0.47
3:CC:16:ARG:CD	3:CC:17:ASP:H	2.27	0.47
4:CD:180:GLY:O	4:CD:181:MET:C	2.52	0.47
5:CE:147:ASP:N	5:CE:147:ASP:OD1	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:27:LYS:O	20:CT:27:LYS:HD3	2.14	0.47
25:CZ:177:LEU:O	25:CZ:181:GLN:HG3	2.14	0.47
28:D2:56:GLN:O	28:D2:57:ILE:HB	2.14	0.47
35:D9:15:LYS:HZ2	35:D9:15:LYS:HB3	1.79	0.47
36:DA:1222:C:H2'	36:DA:1223:G:C5'	2.43	0.47
36:DA:1316:U:H2'	36:DA:1317:A:C8	2.49	0.47
36:DA:1336:A:O2'	36:DA:1337:G:H5'	2.14	0.47
36:DA:1640:C:H5'	36:DA:1640:C:H6	1.79	0.47
36:DA:1914:C:O4'	36:DA:1914:C:O2	2.31	0.47
36:DA:212:G:O2'	36:DA:213:A:H5'	2.13	0.47
36:DA:2506:U:C6	36:DA:2506:U:H5'	2.49	0.47
36:DA:291:C:H2'	36:DA:292:C:C6	2.49	0.47
36:DA:753:C:O2'	36:DA:754:C:H5'	2.13	0.47
38:DC:107:TRP:NE1	38:DC:110:PHE:CE2	2.82	0.47
41:DF:125:LEU:H	41:DF:125:LEU:CD2	2.20	0.47
42:DG:95:ARG:C	42:DG:99:MET:SD	2.93	0.47
46:DN:6:PRO:HG2	46:DN:7:LYS:H	1.77	0.47
49:DQ:118:LEU:HD12	49:DQ:131:ILE:HG23	1.94	0.47
51:DS:57:LYS:O	51:DS:58:LEU:HB2	2.14	0.47
57:DY:46:LYS:CG	57:DY:47:LYS:N	2.76	0.47
58:DZ:145:GLU:HG3	58:DZ:146:ILE:N	2.29	0.47
58:DZ:70:LEU:HD21	58:DZ:91:LEU:HD21	1.95	0.47
1:AA:1319:A:OP1	19:AS:10:PHE:CE1	2.67	0.47
1:AA:1438:G:N7	1:AA:1464:G:C2	2.82	0.47
1:AA:237:C:O2'	1:AA:238:G:H5'	2.13	0.47
1:AA:473:G:H2'	1:AA:474:G:C8	2.48	0.47
1:AA:542:G:P	4:AD:10:ARG:NH2	2.87	0.47
2:AB:48:MET:HA	2:AB:51:LEU:HB2	1.97	0.47
3:AC:147:LYS:HB2	3:AC:203:PHE:CD2	2.49	0.47
4:AD:101:LEU:O	4:AD:104:VAL:N	2.47	0.47
4:AD:12:CYS:O	4:AD:33:MET:CE	2.62	0.47
7:AG:44:TYR:C	7:AG:46:ALA:N	2.67	0.47
9:AI:17:VAL:CG1	9:AI:81:ILE:HD13	2.37	0.47
10:AJ:81:THR:C	10:AJ:83:GLU:N	2.68	0.47
11:AK:124:LYS:HD2	11:AK:125:PHE:CZ	2.50	0.47
13:AM:84:ILE:O	13:AM:84:ILE:HG22	2.14	0.47
15:AO:81:LEU:CD1	15:AO:85:LEU:HD12	2.44	0.47
22:AW:39:U:OP1	22:AW:39:U:H4'	2.13	0.47
22:AW:18:G:N1	22:AW:55:U:H1'	2.10	0.47
22:AW:71:G:O2'	36:BA:1851:U:O2'	2.26	0.47
25:AZ:358:GLY:C	25:AZ:360:GLU:H	2.16	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:44:PRO:HG2	27:B1:46:LEU:HD11	1.96	0.47
32:B6:22:ALA:HB2	32:B6:39:TYR:CZ	2.49	0.47
36:BA:115:C:O2'	36:BA:116:C:H5'	2.14	0.47
36:BA:2012:G:H4'	55:BW:96:ILE:CD1	2.29	0.47
36:BA:2264:C:H2'	36:BA:2265:U:C6	2.49	0.47
36:BA:272(J):C:C2'	36:BA:274:G:H5''	2.44	0.47
36:BA:2777:G:C4'	36:BA:2778:A:H5'	2.44	0.47
36:BA:2801(A):A:H4'	36:BA:2802:G:H2'	1.96	0.47
36:BA:2869:G:H2'	36:BA:2870:C:O4'	2.14	0.47
27:B1:10:LYS:HE2	36:BA:396:G:OP2	2.14	0.47
37:BB:54:G:C2	37:BB:55:U:C6	3.03	0.47
38:BC:46:LYS:NZ	38:BC:168:THR:O	2.47	0.47
39:BD:196:VAL:O	39:BD:196:VAL:HG12	2.15	0.47
39:BD:50:THR:O	39:BD:51:VAL:HG23	2.14	0.47
40:BE:69:LYS:NZ	40:BE:89:ASP:HA	2.29	0.47
40:BE:46:ALA:HB1	40:BE:80:GLU:HB3	1.96	0.47
42:BG:114:ILE:O	42:BG:116:ASP:O	2.33	0.47
50:BR:29:LEU:C	50:BR:30:THR:HG22	2.34	0.47
1:CA:1320:C:H5''	19:CS:70:LYS:HG3	1.95	0.47
2:CB:233:SER:O	2:CB:234:PRO:C	2.51	0.47
2:CB:46:LYS:C	2:CB:48:MET:N	2.67	0.47
4:CD:127:THR:N	4:CD:147:ALA:O	2.47	0.47
4:CD:12:CYS:O	4:CD:33:MET:HE2	2.14	0.47
9:CI:6:GLY:CA	9:CI:84:ALA:HB2	2.44	0.47
10:CJ:16:LEU:HD11	10:CJ:70:ARG:HG2	1.96	0.47
10:CJ:6:ILE:HG12	10:CJ:72:VAL:HB	1.96	0.47
13:CM:120:LYS:HE3	13:CM:120:LYS:HA	1.95	0.47
14:CN:13:THR:H	14:CN:14:PRO:HD2	1.76	0.47
24:CY:6:C:H42	24:CY:67:G:H1	1.61	0.47
25:CZ:233:GLY:O	25:CZ:234:ARG:HD2	2.13	0.47
36:DA:1286:A:H2'	36:DA:1288:U:OP2	2.13	0.47
31:D5:19:ARG:HG3	36:DA:2046:G:H5'	1.96	0.47
36:DA:2373:G:H2'	36:DA:2374:C:C6	2.49	0.47
40:DE:69:LYS:NZ	40:DE:89:ASP:HA	2.29	0.47
41:DF:126:VAL:HG21	41:DF:129:PHE:CZ	2.49	0.47
43:DH:125:VAL:O	43:DH:125:VAL:HG12	2.14	0.47
36:DA:2746:U:H5'	43:DH:139:GLN:HA	1.95	0.47
46:DN:1:MET:C	46:DN:1:MET:SD	2.93	0.47
47:DO:35:VAL:HA	47:DO:62:VAL:O	2.14	0.47
48:DP:62:LEU:N	48:DP:62:LEU:CD2	2.69	0.47
53:DU:115:ALA:C	53:DU:117:GLN:N	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:29:LEU:CG	55:DW:33:ARG:HD2	2.42	0.47
55:DW:12:ILE:HB	55:DW:42:ARG:HH12	1.79	0.47
58:DZ:114:GLY:N	58:DZ:146:ILE:HG21	2.28	0.47
1:AA:1044:A:H2'	1:AA:1045:C:O5'	2.14	0.47
1:AA:1313:U:OP1	19:AS:6:LYS:HB2	2.12	0.47
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.14	0.47
1:AA:266:G:H5'	1:AA:267:C:C5	2.50	0.47
1:AA:313:A:H2'	1:AA:314:C:C6	2.50	0.47
1:AA:346:G:O2'	1:AA:347:G:P	2.72	0.47
2:AB:28:PHE:CE2	2:AB:190:THR:HG22	2.49	0.47
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.44	0.47
9:AI:110:GLU:HG2	9:AI:119:ALA:HB1	1.95	0.47
10:AJ:46:ARG:HH11	10:AJ:46:ARG:CG	2.27	0.47
1:AA:1060:C:H4'	10:AJ:52:GLY:N	2.30	0.47
13:AM:2:ALA:HB1	13:AM:4:ILE:CD1	2.44	0.47
25:AZ:366:ASP:C	25:AZ:367:ASN:HD22	2.17	0.47
26:B0:32:ARG:HA	26:B0:64:ASP:OD1	2.14	0.47
27:B1:15:ALA:HB2	27:B1:42:GLN:CG	2.40	0.47
36:BA:1889:A:H1'	36:BA:2087:G:O4'	2.15	0.47
36:BA:2245:U:H5'	36:BA:2246:G:C5'	2.33	0.47
36:BA:2341:G:H2'	36:BA:2342:C:H6	1.77	0.47
36:BA:1787:A:O4'	36:BA:2589:A:H4'	2.15	0.47
36:BA:2882:A:H5''	50:BR:98:LEU:HD21	1.97	0.47
36:BA:321:G:N2	41:BF:165:ARG:NH2	2.54	0.47
36:BA:886:C:O2'	36:BA:887:A:C4'	2.60	0.47
36:BA:914:C:C2'	36:BA:915:C:H5'	2.44	0.47
37:BB:15:A:H1'	37:BB:110:G:C5	2.49	0.47
39:BD:28:GLU:H	39:BD:29:PRO:HD3	1.78	0.47
39:BD:76:PRO:HG2	39:BD:98:VAL:HG21	1.96	0.47
40:BE:24:THR:HG21	40:BE:188:VAL:HG12	1.96	0.47
41:BF:40:GLN:NE2	41:BF:182:ASN:HB2	2.29	0.47
42:BG:132:ASN:HA	42:BG:157:ILE:O	2.14	0.47
42:BG:20:ILE:HD13	42:BG:28:VAL:HG22	1.96	0.47
48:BP:7:ARG:HB3	48:BP:8:PRO:HD3	1.95	0.47
51:BS:64:GLU:HA	51:BS:67:ARG:HG3	1.96	0.47
52:BT:42:ILE:O	52:BT:42:ILE:HG13	2.14	0.47
57:BY:46:LYS:CG	57:BY:47:LYS:N	2.77	0.47
58:BZ:30:ASN:OD1	58:BZ:90:VAL:HB	2.14	0.47
58:BZ:85:HIS:CE1	58:BZ:87:ASP:OD1	2.67	0.47
1:CA:1286:A:O2'	1:CA:1287:A:OP2	2.28	0.47
1:CA:137:C:H2'	1:CA:137:C:O2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:346:G:O2'	1:CA:347:G:P	2.72	0.47
1:CA:407:G:H2'	1:CA:408:A:C8	2.49	0.47
1:CA:429:U:H4'	1:CA:430:A:O5'	2.14	0.47
1:CA:511:C:C2	1:CA:512:U:C5	3.02	0.47
1:CA:563:A:H5''	1:CA:566:G:N2	2.29	0.47
2:CB:80:ILE:H	2:CB:80:ILE:CD1	2.27	0.47
4:CD:145:GLU:O	4:CD:145:GLU:HG3	2.14	0.47
14:CN:24:CYS:N	14:CN:29:ARG:O	2.40	0.47
19:CS:31:ILE:CG2	19:CS:49:ILE:HA	2.40	0.47
19:CS:6:LYS:N	19:CS:6:LYS:HD3	2.29	0.47
20:CT:49:ALA:O	20:CT:53:LEU:HD13	2.14	0.47
25:CZ:147:LEU:H	25:CZ:147:LEU:HD22	1.78	0.47
25:CZ:68:VAL:O	25:CZ:69:GLU:CB	2.62	0.47
28:D2:3:LEU:O	28:D2:7:ARG:NE	2.38	0.47
28:D2:6:VAL:CG1	28:D2:59:ARG:HE	2.25	0.47
32:D6:22:ALA:HB2	32:D6:39:TYR:CZ	2.49	0.47
34:D8:30:ARG:NH2	36:DA:2419:U:O4	2.48	0.47
36:DA:1022:G:N2	36:DA:1142(A):A:C2	2.81	0.47
36:DA:1495:A:C4	36:DA:1496:A:H2	2.32	0.47
36:DA:1504:C:O2'	36:DA:1505:C:C5'	2.62	0.47
36:DA:2032:G:OP2	36:DA:2454:G:O2'	2.27	0.47
36:DA:2199:A:C5'	36:DA:2200:C:OP2	2.62	0.47
36:DA:706:A:H2'	36:DA:707:G:O4'	2.14	0.47
36:DA:910:A:N1	36:DA:2277:G:H1'	2.29	0.47
36:DA:848:G:C4	36:DA:933:A:C8	3.01	0.47
39:DD:174:ILE:HG23	39:DD:271:ILE:HD12	1.96	0.47
39:DD:33:LEU:O	39:DD:34:VAL:C	2.53	0.47
39:DD:61:LEU:O	39:DD:63:ARG:NH1	2.47	0.47
39:DD:65:ILE:HD11	39:DD:88:ARG:CZ	2.45	0.47
36:DA:2632:A:O2'	40:DE:61:ARG:NH2	2.46	0.47
41:DF:103:LYS:HA	41:DF:106:ARG:HE	1.79	0.47
42:DG:133:LEU:HD12	42:DG:133:LEU:O	2.14	0.47
44:DJ:25:UNK:HA	44:DJ:116:UNK:CB	2.44	0.47
47:DO:105:GLU:O	47:DO:108:GLU:HG2	2.14	0.47
48:DP:77:ARG:HG2	48:DP:77:ARG:HH11	1.79	0.47
50:DR:87:TYR:O	50:DR:90:ARG:N	2.47	0.47
53:DU:104:GLN:HB3	54:DV:44:LYS:NZ	2.30	0.47
55:DW:37:ARG:HG3	55:DW:37:ARG:HH11	1.79	0.47
58:DZ:166:SER:HB2	58:DZ:167:PRO:CA	2.43	0.47
58:DZ:69:THR:HG22	58:DZ:90:VAL:HA	1.96	0.47
1:AA:141:A:H1'	1:AA:182:U:O2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:486:U:O2'	1:AA:487:A:H5'	2.13	0.47
1:AA:927:G:H4'	1:AA:927:G:OP2	2.14	0.47
2:AB:122:PHE:HA	2:AB:127:ILE:HD11	1.97	0.47
7:AG:152:ALA:O	7:AG:155:ARG:HB2	2.15	0.47
8:AH:110:ALA:HB3	8:AH:121:ASP:HB3	1.96	0.47
10:AJ:7:LYS:HG3	10:AJ:71:LEU:HD13	1.95	0.47
13:AM:57:ARG:O	13:AM:61:GLU:HB2	2.14	0.47
25:AZ:137:LYS:HG2	60:AZ:501:GDP:N1	2.28	0.47
27:B1:52:ARG:HH11	27:B1:57:GLU:HB2	1.78	0.47
29:B3:15:TYR:CD2	29:B3:19:GLN:NE2	2.82	0.47
30:B4:9:LEU:CD1	30:B4:10:VAL:H	2.23	0.47
30:B4:8:LYS:O	30:B4:9:LEU:CB	2.62	0.47
32:B6:53:LYS:HE2	32:B6:54:ILE:CG1	2.44	0.47
36:BA:78:A:C2	36:BA:109:G:C6	3.02	0.47
36:BA:1293:C:C3'	36:BA:1294:U:H5''	2.45	0.47
36:BA:1412:A:O2'	36:BA:1413:G:H5'	2.14	0.47
36:BA:1888:G:H5'	36:BA:1888:G:N3	2.29	0.47
36:BA:1914:C:O4'	36:BA:1914:C:O2	2.32	0.47
36:BA:2308:G:H21	42:BG:79:ASN:ND2	2.13	0.47
36:BA:1786:A:H2	36:BA:2606:C:H1'	1.78	0.47
36:BA:2711:A:OP1	36:BA:2712(A):A:P	2.73	0.47
36:BA:2735:G:H2'	36:BA:2736:G:H8	1.80	0.47
36:BA:2746:U:H5'	43:BH:139:GLN:HA	1.95	0.47
36:BA:291:C:H2'	36:BA:292:C:C6	2.48	0.47
36:BA:674:G:H1'	41:BF:74:ARG:HD3	1.94	0.47
36:BA:856:C:H2'	36:BA:857:C:C6	2.49	0.47
36:BA:903:C:O2'	36:BA:904:C:H5'	2.14	0.47
39:BD:152:GLY:O	39:BD:154:LYS:HG3	2.13	0.47
40:BE:65:GLY:O	40:BE:67:PHE:N	2.47	0.47
36:BA:660:G:H5'	41:BF:99:TYR:CE2	2.49	0.47
42:BG:96:ARG:O	42:BG:99:MET:N	2.44	0.47
44:BJ:72:UNK:O	44:BJ:74:UNK:N	2.47	0.47
48:BP:96:THR:CG2	48:BP:126:VAL:HB	2.45	0.47
49:BQ:120:ILE:O	49:BQ:121:ALA:C	2.52	0.47
53:BU:88:ILE:HG23	53:BU:90:VAL:HG23	1.96	0.47
58:BZ:24:LEU:CD1	58:BZ:41:LEU:HD23	2.44	0.47
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.97	0.47
1:CA:1251:A:H4'	9:CI:12:GLU:OE1	2.15	0.47
5:CE:11:ILE:HD12	5:CE:31:LEU:HD11	1.97	0.47
5:CE:6:PHE:HB3	5:CE:35:GLY:C	2.34	0.47
6:CF:47:ARG:O	6:CF:47:ARG:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:16:LEU:CD1	10:CJ:70:ARG:HG3	2.44	0.47
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.15	0.47
16:CP:9:PHE:CE2	16:CP:18:ARG:NE	2.82	0.47
17:CQ:69:LYS:O	17:CQ:70:ARG:HD2	2.14	0.47
19:CS:10:PHE:HD2	19:CS:12:ASP:OD1	1.97	0.47
20:CT:14:LYS:O	20:CT:18:GLN:HB2	2.15	0.47
21:CU:10:ARG:O	21:CU:11:GLY:C	2.52	0.47
24:CY:49:G:O2'	24:CY:50:G:H5'	2.14	0.47
25:CZ:159:ASN:C	25:CZ:161:TYR:H	2.16	0.47
25:CZ:272:MET:CE	25:CZ:284:ASP:HB2	2.43	0.47
25:CZ:397:ALA:HB1	61:CZ:502:KIR:O27	2.14	0.47
26:D0:32:ARG:HA	26:D0:64:ASP:OD1	2.14	0.47
32:D6:30:THR:O	32:D6:32:ASN:N	2.47	0.47
33:D7:47:ARG:O	33:D7:48:LYS:HB3	2.14	0.47
36:DA:1019:U:HO2'	36:DA:1021:A:H2	1.47	0.47
36:DA:118:A:H1'	36:DA:178:G:O4'	2.15	0.47
36:DA:1288:U:O2'	36:DA:1647:G:N2	2.47	0.47
36:DA:1293:C:C3'	36:DA:1294:U:H5''	2.44	0.47
36:DA:1327:C:H2'	36:DA:1328:G:O4'	2.15	0.47
36:DA:1534:U:O2'	36:DA:1535:A:H5'	2.13	0.47
36:DA:1720:U:H2'	36:DA:1721:G:C4'	2.44	0.47
1:CA:1483:A:H2	36:DA:1959:G:N3	2.12	0.47
36:DA:2807:G:C3'	36:DA:2808:U:H5''	2.44	0.47
36:DA:2832:U:C2	36:DA:2834:G:N2	2.83	0.47
36:DA:740:U:H2'	36:DA:741:G:H8	1.79	0.47
36:DA:814:C:H2'	36:DA:815:C:H6	1.80	0.47
41:DF:154:VAL:HG13	41:DF:191:ARG:O	2.13	0.47
41:DF:37:VAL:HG11	48:DP:7:ARG:CZ	2.44	0.47
43:DH:126:PRO:O	43:DH:127:GLU:CG	2.56	0.47
46:DN:134:ARG:O	46:DN:136:GLU:N	2.46	0.47
50:DR:92:GLY:N	50:DR:94:TYR:CE1	2.75	0.47
51:DS:34:HIS:HB2	51:DS:36:TYR:CE1	2.32	0.47
51:DS:89:ARG:CG	51:DS:92:TYR:HA	2.42	0.47
54:DV:19:LYS:HB2	54:DV:96:ILE:HG12	1.96	0.47
58:DZ:120:ILE:O	58:DZ:121:HIS:C	2.51	0.47
58:DZ:41:LEU:O	58:DZ:41:LEU:HD22	2.14	0.47
1:AA:956:U:O2'	1:AA:957:U:H5'	2.13	0.47
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.95	0.47
18:AR:67:ALA:O	18:AR:71:LYS:HG3	2.14	0.47
20:AT:39:LYS:O	20:AT:43:LEU:HG	2.13	0.47
24:AY:49:G:O2'	24:AY:50:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:256:VAL:HG13	25:AZ:262:THR:HG21	1.95	0.47
25:AZ:277:LEU:CD1	25:AZ:279:GLU:H	2.26	0.47
31:B5:47:PRO:C	31:B5:49:CYS:H	2.17	0.47
32:B6:37:ARG:O	32:B6:48:VAL:O	2.32	0.47
36:BA:1688:U:O2	36:BA:1700:A:H5''	2.15	0.47
36:BA:16:G:H2'	36:BA:17:G:H8	1.80	0.47
36:BA:1946:U:H2'	36:BA:1947:C:C6	2.48	0.47
36:BA:793:A:OP2	36:BA:2072:G:H5'	2.14	0.47
36:BA:823:G:H2'	36:BA:824:A:C8	2.50	0.47
39:BD:33:LEU:O	39:BD:34:VAL:C	2.52	0.47
41:BF:17:ARG:HG3	41:BF:17:ARG:HH11	1.79	0.47
42:BG:51:ARG:CZ	42:BG:52:ILE:HD13	2.44	0.47
43:BH:83:TYR:O	43:BH:84:SER:O	2.31	0.47
46:BN:22:THR:HG1	46:BN:25:ARG:HB2	1.80	0.47
46:BN:5:VAL:HG12	46:BN:7:LYS:HG3	1.97	0.47
47:BO:14:THR:HG21	47:BO:86:ILE:CD1	2.34	0.47
50:BR:45:ARG:O	50:BR:46:GLY:C	2.52	0.47
53:BU:14:HIS:CD2	53:BU:36:ARG:NH2	2.83	0.47
36:BA:1151:G:H4'	53:BU:81:HIS:CG	2.49	0.47
54:BV:20:LEU:HB3	54:BV:21:ARG:HD3	1.97	0.47
56:BX:10:ALA:O	56:BX:28:PHE:CB	2.62	0.47
57:BY:85:VAL:O	57:BY:86:ARG:CB	2.62	0.47
58:BZ:153:SER:H	58:BZ:167:PRO:HB2	1.79	0.47
1:CA:1256:A:C2	1:CA:1278:U:H5'	2.49	0.47
6:CF:3:ARG:HH11	6:CF:3:ARG:HG3	1.79	0.47
1:CA:1124:G:C5'	10:CJ:35:SER:HB2	2.44	0.47
10:CJ:55:LYS:N	10:CJ:55:LYS:CD	2.78	0.47
16:CP:71:ARG:HA	16:CP:74:LEU:CD1	2.43	0.47
1:CA:473:G:H5''	16:CP:81:ARG:HE	1.77	0.47
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.45	0.47
19:CS:65:ASN:C	19:CS:67:VAL:H	2.17	0.47
20:CT:39:LYS:O	20:CT:43:LEU:HG	2.14	0.47
25:CZ:196:VAL:O	25:CZ:196:VAL:CG1	2.63	0.47
36:DA:1314:C:OP1	36:DA:1332:G:OP1	2.32	0.47
36:DA:15:G:O2'	36:DA:16:G:H5'	2.15	0.47
36:DA:2223:G:H2'	36:DA:2224:G:H5'	1.95	0.47
36:DA:2753:A:O2'	36:DA:2754:U:H5'	2.14	0.47
36:DA:2869:G:H2'	36:DA:2870:C:O4'	2.15	0.47
36:DA:481:G:H1'	36:DA:506:G:N2	2.29	0.47
36:DA:914:C:C2'	36:DA:915:C:H5'	2.43	0.47
39:DD:68:LYS:O	39:DD:68:LYS:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:84:VAL:C	41:DF:86:GLY:H	2.16	0.47
42:DG:52:ILE:HA	42:DG:54:GLU:OE2	2.13	0.47
43:DH:109:PHE:CZ	43:DH:152:ARG:NH1	2.83	0.47
44:DJ:24:UNK:O	44:DJ:117:UNK:N	2.48	0.47
46:DN:112:LEU:O	46:DN:115:ARG:HB3	2.14	0.47
48:DP:122:PRO:HB3	48:DP:141:ALA:CB	2.45	0.47
49:DQ:1:MET:CE	49:DQ:44:ALA:HB1	2.44	0.47
49:DQ:51:ARG:HH11	49:DQ:51:ARG:HG3	1.79	0.47
50:DR:29:LEU:C	50:DR:30:THR:HG22	2.35	0.47
53:DU:92:ARG:HB2	54:DV:11:GLN:NE2	2.30	0.47
57:DY:85:VAL:O	57:DY:86:ARG:CB	2.62	0.47
58:DZ:80:ARG:O	58:DZ:81:ARG:C	2.53	0.47
1:AA:1251:A:H4'	9:AI:12:GLU:OE1	2.14	0.47
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.49	0.47
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.15	0.47
1:AA:1445:C:C2'	1:AA:1446:U:H5'	2.45	0.47
1:AA:369:C:C6	1:AA:369:C:H5'	2.47	0.47
1:AA:681:C:O2'	1:AA:682:G:H5'	2.14	0.47
2:AB:15:VAL:N	2:AB:16:HIS:CE1	2.79	0.47
2:AB:57:PHE:HE2	2:AB:185:ILE:HD11	1.78	0.47
2:AB:46:LYS:C	2:AB:48:MET:N	2.66	0.47
3:AC:173:VAL:HG12	3:AC:175:LEU:HD11	1.97	0.47
4:AD:3:ARG:HH11	4:AD:3:ARG:HG2	1.79	0.47
9:AI:86:VAL:HG22	9:AI:86:VAL:O	2.14	0.47
10:AJ:54:PHE:CG	10:AJ:55:LYS:N	2.81	0.47
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.95	0.47
15:AO:69:TYR:CZ	15:AO:73:GLU:HG3	2.50	0.47
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.15	0.47
1:AA:277:C:OP1	17:AQ:41:LYS:HE2	2.14	0.47
20:AT:63:ILE:HG21	20:AT:81:LYS:HG3	1.96	0.47
22:AV:5:G:H8	22:AV:5:G:C5'	2.28	0.47
22:AW:7:A:C6	22:AW:49:C:N4	2.79	0.47
25:AZ:143:ASP:OD1	25:AZ:144:PRO:HD2	2.14	0.47
25:AZ:272:MET:CE	25:AZ:284:ASP:HB2	2.42	0.47
27:B1:23:LYS:CE	27:B1:28:GLY:HA3	2.45	0.47
30:B4:25:TYR:O	30:B4:26:SER:HB3	2.13	0.47
36:BA:1019:U:C2'	36:BA:1021:A:C2	2.97	0.47
36:BA:1054:A:O2'	36:BA:1055:G:H5'	2.14	0.47
36:BA:1316:U:H2'	36:BA:1317:A:C8	2.49	0.47
36:BA:137:C:O2	36:BA:137:C:H2'	2.15	0.47
36:BA:2069:G:O2'	36:BA:2070:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2506:U:C6	36:BA:2506:U:H5'	2.49	0.47
36:BA:2603:G:H2'	36:BA:2604:U:C5'	2.25	0.47
36:BA:426:C:O2'	36:BA:427:U:H5'	2.14	0.47
33:B7:5:TRP:CZ3	36:BA:464:U:H4'	2.49	0.47
36:BA:814:C:H2'	36:BA:815:C:H6	1.80	0.47
36:BA:848:G:C4	36:BA:933:A:C8	2.99	0.47
38:BC:210:ARG:NH1	38:BC:210:ARG:CG	2.78	0.47
39:BD:6:PHE:N	39:BD:6:PHE:HD1	2.12	0.47
40:BE:76:ARG:O	40:BE:77:ILE:C	2.53	0.47
42:BG:87:PRO:O	42:BG:88:ILE:CG1	2.61	0.47
46:BN:129:PRO:O	46:BN:130:HIS:CB	2.60	0.47
48:BP:91:PHE:N	48:BP:91:PHE:CD1	2.82	0.47
49:BQ:27:VAL:HG12	49:BQ:28:ALA:N	2.28	0.47
53:BU:102:GLU:HB3	53:BU:105:VAL:CG2	2.45	0.47
54:BV:60:GLU:O	54:BV:62:LEU:HD22	2.15	0.47
56:BX:72:LYS:N	56:BX:72:LYS:HD2	2.29	0.47
57:BY:96:ILE:HG13	57:BY:96:ILE:O	2.14	0.47
58:BZ:97:GLU:HA	58:BZ:126:VAL:O	2.14	0.47
58:BZ:6:LYS:HG3	58:BZ:60:GLU:HB2	1.97	0.47
1:CA:1372:U:OP1	9:CI:71:SER:HB3	2.14	0.47
1:CA:1431:C:O2'	1:CA:1432:G:H5'	2.15	0.47
1:CA:167:G:H2'	1:CA:168:G:O4'	2.14	0.47
1:CA:375:U:C2	1:CA:376:G:C8	3.03	0.47
1:CA:390:C:H2'	1:CA:391:G:C8	2.50	0.47
1:CA:697:U:H2'	1:CA:698:G:H5'	1.96	0.47
1:CA:807:A:H2'	1:CA:808:C:C6	2.50	0.47
2:CB:48:MET:HA	2:CB:51:LEU:HB2	1.96	0.47
4:CD:11:LEU:O	4:CD:12:CYS:C	2.52	0.47
8:CH:119:LEU:HD12	8:CH:124:ALA:N	2.29	0.47
12:CL:43:VAL:HG23	12:CL:93:LEU:HD22	1.95	0.47
1:CA:390:C:H4'	16:CP:28:ARG:HH21	1.79	0.47
18:CR:36:ASN:HD21	18:CR:39:VAL:HB	1.79	0.47
25:CZ:256:VAL:HG13	25:CZ:262:THR:HG21	1.96	0.47
25:CZ:300:ARG:C	25:CZ:302:GLN:H	2.18	0.47
35:D9:27:CYS:HB3	35:D9:32:HIS:HB2	1.97	0.47
36:DA:1199:U:H2'	36:DA:1200:C:C6	2.49	0.47
36:DA:1374:G:H2'	36:DA:1375:C:C6	2.50	0.47
36:DA:191:A:H2'	36:DA:192:C:H6	1.76	0.47
36:DA:2326:C:N4	36:DA:2389:G:H1	2.13	0.47
36:DA:339:U:O2'	36:DA:340:A:H5'	2.14	0.47
37:DB:15:A:H3'	37:DB:16:G:C5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:22:U:H2'	37:DB:23:G:H8	1.78	0.47
38:DC:114:VAL:HG12	38:DC:144:THR:HA	1.96	0.47
38:DC:159:GLY:O	38:DC:160:ARG:O	2.32	0.47
39:DD:231:HIS:ND1	39:DD:232:PRO:HD2	2.29	0.47
39:DD:24:ILE:HG13	39:DD:84:TYR:HB2	1.96	0.47
41:DF:28:ILE:HG12	41:DF:28:ILE:O	2.14	0.47
42:DG:94:LEU:HD22	42:DG:98:ARG:HG3	1.97	0.47
47:DO:10:VAL:HG21	47:DO:16:ALA:O	2.14	0.47
50:DR:104:ARG:O	50:DR:106:GLY:N	2.48	0.47
51:DS:74:ALA:O	51:DS:76:LYS:N	2.43	0.47
52:DT:96:ARG:CZ	52:DT:96:ARG:HB2	2.44	0.47
53:DU:59:ARG:HH11	53:DU:59:ARG:HG2	1.80	0.47
54:DV:17:GLY:O	54:DV:18:LEU:HD13	2.15	0.47
55:DW:17:VAL:O	55:DW:19:LEU:N	2.47	0.47
57:DY:28:LYS:HB3	57:DY:37:VAL:HB	1.96	0.47
1:AA:1282:C:H2'	1:AA:1283:G:H5'	1.97	0.47
1:AA:1294:G:O2'	1:AA:1295:G:H5'	2.15	0.47
1:AA:1466:C:H2'	1:AA:1467:G:O4'	2.14	0.47
1:AA:197:A:N6	1:AA:221:C:C5'	2.77	0.47
1:AA:321:A:O2'	1:AA:322:C:H5'	2.15	0.47
1:AA:511:C:C2	1:AA:512:U:C5	3.03	0.47
1:AA:879:C:O2'	1:AA:880:C:H5'	2.14	0.47
1:AA:977:A:O2'	1:AA:978:A:H5''	2.15	0.47
2:AB:77:ALA:CB	2:AB:211:ILE:HD13	2.44	0.47
3:AC:186:PHE:CE2	3:AC:188:LEU:HD23	2.50	0.47
5:AE:99:GLY:O	5:AE:117:ASP:HA	2.13	0.47
5:AE:40:ARG:HH11	5:AE:40:ARG:HG2	1.79	0.47
6:AF:79:LEU:O	6:AF:79:LEU:HD23	2.15	0.47
12:AL:32:PHE:HB3	12:AL:84:LEU:HD11	1.95	0.47
22:AV:75:C:H2'	22:AV:76:A:O4'	2.14	0.47
34:B8:11:LYS:HG3	34:B8:60:LEU:CD2	2.44	0.47
36:BA:1189:A:H2'	36:BA:1190:G:O4'	2.15	0.47
36:BA:1270:C:H5''	36:BA:1271:G:C5'	2.45	0.47
36:BA:1386:C:H2'	36:BA:1387:C:H6	1.80	0.47
36:BA:1495:A:N3	36:BA:1496:A:H2	2.13	0.47
36:BA:1506:C:O2	36:BA:1506:C:H2'	2.13	0.47
36:BA:171:G:O2'	36:BA:172:C:H5'	2.14	0.47
36:BA:1767:C:O2'	36:BA:1768:U:H5'	2.15	0.47
36:BA:1839:G:H5'	36:BA:1839:G:C8	2.48	0.47
36:BA:2190:G:C2	36:BA:2191:G:H1'	2.49	0.47
36:BA:2580:U:H4'	40:BE:130:GLY:CA	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:29:U:C1'	53:BU:11:ARG:HH22	2.28	0.47
36:BA:30:G:O2'	36:BA:31:C:H5'	2.15	0.47
36:BA:31:C:H2'	36:BA:32:C:O4'	2.15	0.47
37:BB:56:G:H4'	37:BB:57:A:H8	1.80	0.47
37:BB:81:G:H2'	37:BB:82:G:H5'	1.97	0.47
39:BD:30:GLU:HA	39:BD:83:GLU:OE1	2.15	0.47
36:BA:2572:A:C4	40:BE:144:ARG:NH1	2.82	0.47
40:BE:48:GLN:HA	40:BE:80:GLU:HA	1.96	0.47
40:BE:68:ALA:C	40:BE:70:ALA:H	2.17	0.47
41:BF:89:VAL:HG12	41:BF:90:PHE:H	1.79	0.47
47:BO:86:ILE:C	47:BO:87:ILE:HD13	2.34	0.47
53:BU:64:ARG:HG2	53:BU:64:ARG:HH11	1.80	0.47
54:BV:81:TYR:C	54:BV:82:ARG:HD2	2.35	0.47
56:BX:36:LYS:HE2	56:BX:54:VAL:O	2.14	0.47
1:CA:520:A:N1	1:CA:536:C:H1'	2.29	0.47
1:CA:723:U:O2'	1:CA:724:G:H5'	2.14	0.47
1:CA:858:G:H8	1:CA:858:G:O5'	1.97	0.47
1:CA:995:C:HO2'	1:CA:996:A:P	2.38	0.47
2:CB:229:VAL:CG1	2:CB:230:VAL:N	2.77	0.47
4:CD:101:LEU:O	4:CD:104:VAL:N	2.47	0.47
4:CD:202:LEU:O	4:CD:202:LEU:HD13	2.14	0.47
4:CD:32:ALA:C	4:CD:34:GLU:N	2.66	0.47
1:CA:509:A:H5'	4:CD:54:TYR:HD2	1.80	0.47
5:CE:145:LYS:O	5:CE:149:GLU:HG3	2.15	0.47
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.30	0.47
19:CS:16:LEU:O	19:CS:18:LYS:N	2.47	0.47
1:CA:1286:A:H2	21:CU:18:TYR:HH	1.63	0.47
22:CW:64:A:H2'	22:CW:65:G:H8	1.80	0.47
25:CZ:145:GLU:O	25:CZ:149:LEU:N	2.38	0.47
27:D1:20:ARG:HB3	27:D1:34:THR:HG22	1.96	0.47
30:D4:8:LYS:O	30:D4:9:LEU:CB	2.62	0.47
32:D6:41:PRO:HD2	32:D6:46:HIS:N	2.13	0.47
34:D8:14:VAL:CG2	34:D8:22:VAL:HG13	2.44	0.47
36:DA:1120:G:H2'	36:DA:1121:C:C6	2.50	0.47
36:DA:1332:G:H5'	36:DA:1333:C:H5	1.79	0.47
36:DA:2110:G:N2	36:DA:2178:C:H5	2.11	0.47
35:D9:31:LYS:HE2	36:DA:2478:A:H5'	1.96	0.47
36:DA:2672:G:H2'	36:DA:2673:G:H5''	1.95	0.47
36:DA:2801(A):A:C5'	36:DA:2802:G:H8	2.26	0.47
36:DA:31:C:H2'	36:DA:32:C:O4'	2.15	0.47
36:DA:752:A:O2'	36:DA:753:C:OP2	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:856:C:H2'	36:DA:857:C:C6	2.50	0.47
36:DA:84:A:H2	36:DA:98:G:N3	2.13	0.47
39:DD:73:VAL:HG13	39:DD:120:GLY:HA2	1.96	0.47
40:DE:9:VAL:CG1	40:DE:25:VAL:O	2.63	0.47
41:DF:40:GLN:NE2	41:DF:182:ASN:HB2	2.30	0.47
36:DA:660:G:H5'	41:DF:99:TYR:CE2	2.49	0.47
42:DG:174:GLU:C	42:DG:176:LEU:N	2.67	0.47
42:DG:174:GLU:HG3	42:DG:175:LEU:N	2.30	0.47
42:DG:47:LYS:HE3	42:DG:81:LYS:CB	2.45	0.47
42:DG:99:MET:HE2	42:DG:100:TRP:HD1	1.79	0.47
43:DH:70:THR:O	43:DH:74:ASN:ND2	2.47	0.47
46:DN:125:GLY:CA	46:DN:126:PRO:O	2.63	0.47
54:DV:3:ALA:HB3	54:DV:14:VAL:HG23	1.97	0.47
1:AA:913:A:H4'	1:AA:914:A:H4'	1.96	0.47
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.80	0.47
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.28	0.47
18:AR:30:ASP:C	18:AR:32:ARG:H	2.17	0.47
19:AS:29:ARG:NH1	19:AS:30:LEU:HB2	2.30	0.47
20:AT:49:ALA:O	20:AT:53:LEU:HD13	2.15	0.47
24:AY:5:G:H8	24:AY:5:G:H5'	1.80	0.47
25:AZ:104:LEU:HD21	25:AZ:120:ILE:HD11	1.97	0.47
25:AZ:355:LEU:HD23	25:AZ:370:PHE:CD2	2.49	0.47
27:B1:29:GLY:O	27:B1:30:VAL:CG2	2.61	0.47
27:B1:63:ALA:O	27:B1:64:ALA:O	2.33	0.47
36:BA:1385:G:H4'	36:BA:1386:C:OP1	2.14	0.47
36:BA:2101:G:H3'	36:BA:2102:U:H5''	1.97	0.47
36:BA:2110:G:C2	36:BA:2178:C:H5	2.33	0.47
36:BA:2502:G:H5''	36:BA:2503:A:C5'	2.45	0.47
36:BA:2540:C:H2'	36:BA:2541:A:O4'	2.14	0.47
36:BA:411:G:OP2	36:BA:2406:U:O2'	2.32	0.47
36:BA:925:C:H2'	36:BA:926:A:C5'	2.21	0.47
39:BD:227:ASN:HB3	39:BD:228:PRO:HD2	1.97	0.47
36:BA:2053:G:OP1	40:BE:144:ARG:HG2	2.15	0.47
43:BH:153:LYS:H	43:BH:153:LYS:CD	2.08	0.47
47:BO:103:ALA:HB1	47:BO:105:GLU:OE1	2.15	0.47
49:BQ:67:ARG:NH1	49:BQ:102:VAL:HB	2.30	0.47
49:BQ:81:VAL:HG12	49:BQ:82:ARG:O	2.15	0.47
54:BV:91:TYR:N	54:BV:91:TYR:CD1	2.83	0.47
57:BY:28:LYS:HD2	57:BY:37:VAL:HG21	1.96	0.47
1:CA:1328:C:O2'	1:CA:1329:A:H5'	2.14	0.47
1:CA:539:A:H2'	1:CA:540:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:603:U:H2'	1:CA:604:G:C8	2.49	0.47
2:CB:95:GLN:HG3	2:CB:147:LYS:O	2.15	0.47
4:CD:6:GLY:O	4:CD:7:PRO:C	2.52	0.47
6:CF:46:ARG:NH2	18:CR:38:GLU:OE1	2.48	0.47
8:CH:126:LYS:O	8:CH:127:LEU:HD22	2.14	0.47
10:CJ:29:ARG:O	10:CJ:30:SER:CB	2.63	0.47
10:CJ:3:LYS:N	10:CJ:77:PRO:HD3	2.30	0.47
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.30	0.47
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.77	0.47
18:CR:59:SER:H	18:CR:62:GLU:HB2	1.79	0.47
20:CT:18:GLN:HG2	20:CT:22:ARG:HH12	1.80	0.47
25:CZ:2:LYS:C	25:CZ:275:LYS:HE3	2.28	0.47
26:D0:50:ASN:ND2	26:D0:63:VAL:HG11	2.30	0.47
27:D1:36:GLY:O	27:D1:37:ILE:CG1	2.57	0.47
27:D1:52:ARG:NH1	27:D1:52:ARG:HA	2.27	0.47
29:D3:15:TYR:HB3	29:D3:19:GLN:NE2	2.30	0.47
30:D4:25:TYR:O	30:D4:26:SER:HB3	2.15	0.47
31:D5:51:TYR:N	31:D5:56:LYS:NZ	2.62	0.47
34:D8:50:LEU:C	34:D8:53:PRO:CD	2.83	0.47
36:DA:1092:C:H42	36:DA:1100:C:H42	1.61	0.47
36:DA:1432:C:H2'	36:DA:1433:U:O4'	2.15	0.47
36:DA:1469:A:O2'	36:DA:1470:G:H5'	2.15	0.47
36:DA:1472:A:O2'	36:DA:1473:G:H5'	2.15	0.47
36:DA:1495:A:N3	36:DA:1496:A:H2	2.12	0.47
36:DA:250:G:H2'	36:DA:251:A:C8	2.50	0.47
36:DA:2579:C:O2'	36:DA:2580:U:H5'	2.15	0.47
36:DA:271(F):C:O2'	36:DA:271(G):C:H5'	2.14	0.47
42:DG:133:LEU:HD11	42:DG:157:ILE:HD12	1.95	0.47
46:DN:96:GLU:HB2	46:DN:100:GLU:OE2	2.14	0.47
48:DP:49:ARG:HG3	48:DP:49:ARG:NH1	2.30	0.47
52:DT:3:ARG:HH11	52:DT:6:LEU:HD13	1.80	0.47
53:DU:111:GLU:C	53:DU:113:ALA:N	2.67	0.47
54:DV:35:LEU:HD22	54:DV:35:LEU:H	1.79	0.47
36:DA:481:G:P	57:DY:47:LYS:HD3	2.54	0.47
57:DY:60:PHE:HA	57:DY:62:GLU:OE2	2.13	0.47
58:DZ:102:LEU:HD11	58:DZ:124:ILE:HG23	1.96	0.47
1:AA:1347:G:C5	9:AI:107:ARG:NH2	2.83	0.47
1:AA:540:G:H2'	1:AA:541:G:O4'	2.15	0.47
6:AF:61:LEU:HB3	6:AF:63:TYR:HE1	1.80	0.47
10:AJ:35:SER:OG	10:AJ:73:ASP:HB2	2.14	0.47
13:AM:4:ILE:HG22	13:AM:5:ALA:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1316:G:H4'	14:AN:18:VAL:HG13	1.95	0.47
25:AZ:328:GLY:O	25:AZ:329:GLY:O	2.33	0.47
27:B1:90:ILE:O	27:B1:94:LEU:CD1	2.60	0.47
36:BA:1222:C:H2'	36:BA:1223:G:C5'	2.45	0.47
36:BA:142:A:H5''	36:BA:142(A):C:H5	1.80	0.47
36:BA:1557:C:H5''	36:BA:1558:A:OP2	2.15	0.47
36:BA:1782:C:H1'	36:BA:2609:U:C5'	2.44	0.47
36:BA:2286:A:H4'	36:BA:2287:A:O4'	2.15	0.47
36:BA:2672:G:C2'	36:BA:2673:G:H5''	2.45	0.47
36:BA:2762:G:H2'	36:BA:2763:G:O4'	2.15	0.47
36:BA:2807:G:H3'	36:BA:2808:U:H5''	1.97	0.47
36:BA:453:C:H4'	36:BA:472:A:N6	2.29	0.47
36:BA:588:U:H2'	36:BA:589:C:C6	2.50	0.47
36:BA:603:A:N6	36:BA:626:U:H4'	2.29	0.47
36:BA:652:C:HO2'	36:BA:653:A:P	2.37	0.47
36:BA:753:C:O2'	36:BA:754:C:H5'	2.15	0.47
36:BA:807:U:O2'	36:BA:808:G:H5'	2.15	0.47
36:BA:955:C:OP1	49:BQ:87:LYS:HE2	2.15	0.47
39:BD:136:ILE:HB	39:BD:165:ILE:CD1	2.45	0.47
39:BD:95:LEU:H	39:BD:95:LEU:HD12	1.80	0.47
40:BE:147:PRO:HB2	40:BE:149:ARG:HG2	1.96	0.47
40:BE:176:ILE:CG2	40:BE:178:GLU:HB3	2.44	0.47
40:BE:69:LYS:C	40:BE:71:GLY:H	2.16	0.47
41:BF:126:VAL:HG21	41:BF:129:PHE:CZ	2.49	0.47
41:BF:176:LEU:O	41:BF:177:ALA:HB2	2.15	0.47
48:BP:147:LEU:CG	48:BP:148:LEU:H	2.03	0.47
48:BP:56:SER:O	48:BP:57:THR:C	2.52	0.47
50:BR:87:TYR:O	50:BR:90:ARG:N	2.48	0.47
52:BT:134:GLU:O	52:BT:135:ALA:HB3	2.14	0.47
52:BT:96:ARG:HB2	52:BT:96:ARG:CZ	2.44	0.47
55:BW:6:ILE:HG22	55:BW:8:ARG:HD2	1.95	0.47
57:BY:2:ARG:C	57:BY:4:LYS:H	2.17	0.47
58:BZ:153:SER:HB2	58:BZ:167:PRO:HB2	1.93	0.47
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	2.14	0.47
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.33	0.47
1:CA:451:A:N6	1:CA:480:U:H2'	2.30	0.47
1:CA:737:A:H2'	1:CA:738:C:H6	1.77	0.47
1:CA:983:A:H5'	1:CA:984:C:OP2	2.14	0.47
3:CC:103:VAL:O	3:CC:103:VAL:HG12	2.13	0.47
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.97	0.47
4:CD:28:SER:CB	4:CD:29:PRO:CD	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:79:LEU:O	6:CF:79:LEU:HD23	2.14	0.47
12:CL:58:VAL:HG12	12:CL:60:LEU:HD22	1.96	0.47
14:CN:4:LYS:O	14:CN:7:ILE:HG12	2.15	0.47
18:CR:53:ARG:NH1	18:CR:60:ALA:HA	2.30	0.47
25:CZ:65:THR:CG2	25:CZ:80:VAL:CG1	2.89	0.47
28:D2:2:LYS:HA	28:D2:6:VAL:HB	1.97	0.47
30:D4:9:LEU:CD1	30:D4:10:VAL:H	2.22	0.47
31:D5:47:PRO:C	31:D5:49:CYS:H	2.18	0.47
31:D5:52:TYR:O	31:D5:52:TYR:CD1	2.68	0.47
32:D6:37:ARG:O	32:D6:48:VAL:O	2.33	0.47
34:D8:19:SER:HG	36:DA:651:G:P	2.38	0.47
36:DA:1141:U:H6	46:DN:63:THR:HG21	1.79	0.47
36:DA:1192:G:N7	48:DP:29:LYS:NZ	2.44	0.47
36:DA:1272:A:C2	36:DA:1618:A:C2	3.03	0.47
36:DA:1385:G:H4'	36:DA:1386:C:OP1	2.14	0.47
36:DA:1349:A:N6	36:DA:1598:C:N4	2.63	0.47
36:DA:1921:G:O2'	36:DA:1922:G:H5'	2.14	0.47
36:DA:2160:G:H2'	36:DA:2161:C:O4'	2.14	0.47
36:DA:271(U):G:H2'	36:DA:271(V):G:H8	1.80	0.47
39:DD:95:LEU:HD12	39:DD:95:LEU:H	1.78	0.47
40:DE:55:ASN:HA	40:DE:55:ASN:HD22	1.52	0.47
41:DF:167:ALA:HB1	41:DF:173:VAL:CG1	2.44	0.47
36:DA:2308:G:N2	42:DG:79:ASN:CG	2.68	0.47
42:DG:66:GLN:CG	42:DG:94:LEU:HD21	2.37	0.47
46:DN:120:LEU:HD13	46:DN:120:LEU:C	2.35	0.47
52:DT:28:VAL:HG21	52:DT:46:GLU:HG3	1.96	0.47
53:DU:102:GLU:HB3	53:DU:105:VAL:CG2	2.45	0.47
55:DW:20:VAL:CG2	55:DW:47:VAL:HG21	2.45	0.47
1:AA:1015:A:H2'	1:AA:1016:A:H8	1.76	0.47
1:AA:1438:G:N1	1:AA:1439:C:C4	2.83	0.47
1:AA:328:C:H4'	1:AA:329:A:H5'	1.97	0.47
1:AA:858:G:H5''	1:AA:858:G:C8	2.49	0.47
3:AC:106:VAL:HG23	3:AC:106:VAL:O	2.14	0.47
8:AH:103:VAL:HG12	8:AH:108:GLY:HA3	1.96	0.47
8:AH:18:ARG:CB	8:AH:18:ARG:HH11	2.28	0.47
9:AI:97:LYS:N	9:AI:98:PRO:CD	2.78	0.47
15:AO:31:LEU:N	15:AO:31:LEU:HD12	2.30	0.47
17:AQ:53:LEU:HD23	17:AQ:54:GLY:H	1.79	0.47
18:AR:36:ASN:ND2	18:AR:39:VAL:HB	2.29	0.47
24:AY:1:A:H2'	24:AY:2:G:C8	2.50	0.47
31:B5:3:LYS:CD	31:B5:3:LYS:N	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B7:19:ARG:NH1	33:B7:19:ARG:HG2	2.30	0.47
36:BA:1054:A:H2'	36:BA:1054:A:N3	2.29	0.47
36:BA:1141:U:H6	46:BN:63:THR:HG21	1.80	0.47
36:BA:1221:C:H2'	36:BA:1221(A):C:C6	2.49	0.47
36:BA:1777:U:O2'	36:BA:1778:U:H5'	2.15	0.47
36:BA:774:A:H2	36:BA:787:U:O2'	1.97	0.47
41:BF:200:GLU:O	41:BF:204:ASN:ND2	2.48	0.47
41:BF:63:LYS:HA	41:BF:76:GLY:O	2.14	0.47
46:BN:96:GLU:O	46:BN:100:GLU:HG3	2.15	0.47
46:BN:119:ARG:HB3	46:BN:119:ARG:HH11	1.77	0.47
48:BP:77:ARG:HH11	48:BP:77:ARG:HG2	1.80	0.47
49:BQ:1:MET:CE	49:BQ:44:ALA:HB1	2.44	0.47
53:BU:61:TRP:CD2	53:BU:94:ASN:HA	2.50	0.47
58:BZ:144:LEU:HD21	58:BZ:149:SER:HA	1.96	0.47
58:BZ:166:SER:N	58:BZ:167:PRO:HA	2.29	0.47
58:BZ:67:LEU:N	58:BZ:67:LEU:HD12	2.30	0.47
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.97	0.47
1:CA:1399:C:C2	1:CA:1502:A:N6	2.83	0.47
1:CA:1524:C:H6	1:CA:1524:C:C5'	2.28	0.47
1:CA:594:G:C2'	1:CA:595:G:H5'	2.44	0.47
1:CA:59:A:H2'	1:CA:59:A:N3	2.30	0.47
1:CA:861:G:O2'	1:CA:862:C:H5'	2.15	0.47
4:CD:3:ARG:HE	4:CD:5:ILE:CG1	2.25	0.47
8:CH:112:LEU:CD2	8:CH:112:LEU:N	2.78	0.47
8:CH:26:VAL:HG13	8:CH:59:LEU:HB2	1.95	0.47
10:CJ:40:LEU:CD2	10:CJ:40:LEU:N	2.77	0.47
13:CM:67:GLU:O	13:CM:69:GLU:N	2.44	0.47
15:CO:29:VAL:HG11	15:CO:67:LEU:HD21	1.97	0.47
20:CT:53:LEU:N	20:CT:53:LEU:HD12	2.30	0.47
20:CT:50:GLU:HB2	20:CT:99:LEU:CD1	2.45	0.47
22:CW:39:U:C2'	22:CW:40:C:H5'	2.45	0.47
27:D1:20:ARG:HD3	27:D1:34:THR:HG22	1.95	0.47
28:D2:29:LYS:HE3	28:D2:32:LEU:HD22	1.97	0.47
36:DA:1054:A:N3	36:DA:1054:A:H2'	2.30	0.47
36:DA:1061:U:C4'	36:DA:1070:A:H1'	2.42	0.47
36:DA:1099:G:O2'	36:DA:1100:C:H5'	2.15	0.47
36:DA:1357:U:H2'	36:DA:1358:G:O4'	2.15	0.47
36:DA:2766:G:N3	36:DA:2766:G:H2'	2.30	0.47
36:DA:2886:G:H2'	36:DA:2887:U:C6	2.50	0.47
36:DA:363(E):U:H2'	36:DA:363(F):A:O4'	2.15	0.47
36:DA:638:G:N2	36:DA:651:G:H1'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:887:A:N3	36:DA:887:A:H2'	2.30	0.47
36:DA:855:G:H1	36:DA:922:U:H3	1.63	0.47
37:DB:28:C:O2'	37:DB:29:A:H5'	2.14	0.47
38:DC:125:SER:C	38:DC:127:LEU:H	2.17	0.47
39:DD:222:ARG:O	39:DD:224:ALA:O	2.33	0.47
40:DE:167:VAL:HG11	40:DE:188:VAL:HA	1.97	0.47
41:DF:21:ALA:HB3	41:DF:23:ASP:OD2	2.15	0.47
46:DN:119:ARG:HB3	46:DN:119:ARG:HH11	1.78	0.47
47:DO:26:LYS:HE3	47:DO:37:ASP:OD2	2.15	0.47
52:DT:42:ILE:HG13	52:DT:42:ILE:O	2.15	0.47
36:DA:534:U:O2'	53:DU:49:HIS:CD2	2.68	0.47
53:DU:61:TRP:C	53:DU:65:ILE:HD13	2.35	0.47
53:DU:95:LEU:C	53:DU:97:ASP:H	2.18	0.47
54:DV:35:LEU:C	54:DV:37:VAL:H	2.15	0.47
57:DY:46:LYS:CG	57:DY:47:LYS:H	2.27	0.47
57:DY:77:PRO:O	57:DY:78:ALA:CB	2.63	0.47
58:DZ:9:TYR:CE2	58:DZ:35:ARG:NE	2.71	0.47
1:AA:1216:G:O2'	1:AA:1217:C:H5'	2.15	0.47
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.97	0.47
1:AA:1320:C:H5''	19:AS:70:LYS:HG3	1.97	0.47
1:AA:346:G:N3	1:AA:346:G:C2'	2.78	0.47
1:AA:359:U:OP1	25:AZ:235:GLY:HA2	2.15	0.47
2:AB:72:GLY:HA2	2:AB:165:VAL:HG22	1.97	0.47
2:AB:60:ASP:O	2:AB:61:LEU:C	2.54	0.47
2:AB:69:LEU:CD1	2:AB:71:VAL:HG22	2.45	0.47
2:AB:97:TRP:CZ3	2:AB:176:GLU:OE2	2.68	0.47
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.15	0.47
18:AR:32:ARG:CA	18:AR:69:THR:HG21	2.39	0.47
20:AT:93:GLU:O	20:AT:93:GLU:HG2	2.15	0.47
22:AV:57:G:H2'	22:AV:58:A:H5'	1.97	0.47
22:AV:60:U:H5''	22:AV:61:C:H5	1.79	0.47
25:AZ:277:LEU:HD11	25:AZ:280:GLY:N	2.30	0.47
32:B6:41:PRO:HD2	32:B6:46:HIS:N	2.12	0.47
34:B8:59:LYS:HB2	34:B8:59:LYS:HZ3	1.72	0.47
28:B2:69:ARG:HH22	36:BA:111:A:H4'	1.80	0.47
36:BA:139(A):G:H3'	36:BA:140:G:C8	2.50	0.47
36:BA:1526:G:O2'	36:BA:1527:G:H5'	2.15	0.47
36:BA:2121:G:N2	36:BA:2176:A:C2	2.79	0.47
36:BA:2464:C:O2'	36:BA:2465:C:P	2.73	0.47
36:BA:536:A:H2'	36:BA:537:C:C6	2.50	0.47
36:BA:850:C:O2'	36:BA:851:U:H5'	2.16	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:114:VAL:HG12	38:BC:144:THR:CA	2.45	0.47
38:BC:61:THR:HG22	38:BC:162:GLU:HA	1.96	0.47
36:BA:2579:C:O2'	40:BE:131:ALA:CB	2.63	0.47
41:BF:133:ASN:O	41:BF:135:LYS:N	2.48	0.47
41:BF:164:ARG:HG2	41:BF:164:ARG:NH1	2.29	0.47
42:BG:16:ARG:NH1	42:BG:16:ARG:HG3	2.30	0.47
42:BG:47:LYS:HE2	42:BG:80:PHE:HE1	1.79	0.47
48:BP:16:ARG:CZ	48:BP:16:ARG:HB2	2.45	0.47
36:BA:2713:A:OP1	50:BR:14:SER:HB3	2.15	0.47
52:BT:86:ILE:HG12	52:BT:87:ASP:N	2.30	0.47
58:BZ:8:TYR:O	58:BZ:9:TYR:C	2.52	0.47
1:CA:1220:G:O2'	1:CA:1221:G:H5'	2.14	0.47
1:CA:540:G:H2'	1:CA:541:G:O4'	2.15	0.47
1:CA:67:C:O2'	1:CA:171:A:H1'	2.14	0.47
1:CA:740:U:O2'	1:CA:741:G:H5'	2.15	0.47
1:CA:784:C:H4'	36:DA:1837:C:OP1	2.15	0.47
1:CA:987:G:O2'	1:CA:988:G:H5'	2.15	0.47
3:CC:121:ALA:O	3:CC:125:GLU:HG3	2.15	0.47
3:CC:43:LEU:HD13	3:CC:68:VAL:CG2	2.45	0.47
7:CG:80:VAL:O	7:CG:83:ALA:HB3	2.15	0.47
8:CH:110:ALA:HB3	8:CH:121:ASP:HB3	1.97	0.47
25:CZ:143:ASP:OD1	25:CZ:144:PRO:HD2	2.14	0.47
25:CZ:206:ILE:O	25:CZ:210:ILE:HG22	2.15	0.47
30:D4:7:PRO:O	30:D4:8:LYS:CB	2.63	0.47
36:DA:1403:C:H5''	36:DA:1471:A:C1'	2.39	0.47
36:DA:1506:C:H2'	36:DA:1506:C:O2	2.14	0.47
36:DA:1877:A:C2'	36:DA:1878:G:H5'	2.36	0.47
36:DA:2107:C:C2	36:DA:2182:G:N1	2.80	0.47
36:DA:2320:A:N3	36:DA:2320:A:H2'	2.30	0.47
36:DA:2472:G:H3'	36:DA:2475:C:N4	2.30	0.47
36:DA:2492:U:O2'	36:DA:2493:U:H5'	2.15	0.47
36:DA:2604:U:C5'	36:DA:2604:U:C6	2.92	0.47
36:DA:638:G:C6	36:DA:639:U:N3	2.83	0.47
36:DA:848:G:C8	36:DA:848:G:H5'	2.47	0.47
37:DB:42:C:O2'	37:DB:43:C:P	2.72	0.47
42:DG:42:GLY:CA	42:DG:89:GLY:HA2	2.44	0.47
46:DN:23:LEU:HD21	46:DN:102:ALA:HB1	1.95	0.47
47:DO:120:GLU:OE1	52:DT:67:SER:OG	2.27	0.47
51:DS:28:VAL:CG1	51:DS:29:PHE:N	2.75	0.47
52:DT:28:VAL:HG13	52:DT:46:GLU:CA	2.37	0.47
53:DU:99:ALA:HB2	53:DU:106:PHE:CE1	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:57:LEU:HD13	56:DX:57:LEU:N	2.30	0.47
56:DX:72:LYS:HD2	56:DX:72:LYS:N	2.30	0.47
57:DY:27:VAL:HG12	57:DY:28:LYS:N	2.29	0.47
58:DZ:103:ARG:HD3	58:DZ:138:GLU:HG3	1.97	0.47
1:AA:1004:A:C3'	1:AA:1005:A:H5'	2.45	0.46
1:AA:1006:C:N4	1:AA:1024:G:H21	2.13	0.46
1:AA:1269:A:H2	1:AA:1312:G:N3	2.13	0.46
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	1.96	0.46
4:AD:3:ARG:HE	4:AD:5:ILE:CG1	2.26	0.46
6:AF:62:TRP:C	6:AF:63:TYR:CD1	2.83	0.46
8:AH:119:LEU:HD12	8:AH:124:ALA:N	2.30	0.46
1:AA:1152:A:OP1	10:AJ:68:HIS:HD2	1.99	0.46
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.78	0.46
13:AM:83:ASP:C	13:AM:85:GLY:H	2.16	0.46
17:AQ:45:HIS:HA	17:AQ:69:LYS:NZ	2.30	0.46
19:AS:6:LYS:N	19:AS:6:LYS:HD3	2.30	0.46
20:AT:53:LEU:HD12	20:AT:53:LEU:H	1.80	0.46
23:AX:26:A:H3'	23:AX:27:A:C8	2.50	0.46
25:AZ:19:HIS:HA	25:AZ:115:GLN:CB	2.44	0.46
25:AZ:196:VAL:CG1	25:AZ:196:VAL:O	2.64	0.46
27:B1:39:LYS:O	27:B1:40:ARG:HG2	2.15	0.46
28:B2:36:ARG:HA	28:B2:39:ALA:HB3	1.96	0.46
31:B5:3:LYS:O	31:B5:5:PRO:HD2	2.13	0.46
33:B7:43:THR:HG22	33:B7:44:PRO:O	2.15	0.46
36:BA:1432:C:H2'	36:BA:1433:U:O4'	2.15	0.46
36:BA:1453:U:O4'	50:BR:63:ARG:HD3	2.15	0.46
36:BA:1960:A:C5'	36:BA:1960:A:C8	2.95	0.46
36:BA:2170:A:OP1	38:BC:134:ARG:NH1	2.48	0.46
22:AW:76:A:O2'	36:BA:2394:C:N3	2.38	0.46
36:BA:383:U:H2'	36:BA:385:C:H5	1.80	0.46
36:BA:483:A:C2	36:BA:484:C:H1'	2.49	0.46
38:BC:76:ALA:CB	38:BC:94:VAL:HG13	2.41	0.46
39:BD:267:SER:HA	39:BD:270:ILE:CG1	2.42	0.46
40:BE:3:GLY:HA3	40:BE:81:ILE:CG2	2.45	0.46
42:BG:175:LEU:O	42:BG:176:LEU:HG	2.15	0.46
42:BG:52:ILE:HB	42:BG:54:GLU:CG	2.44	0.46
48:BP:84:ASN:HA	48:BP:116:GLY:HA3	1.96	0.46
36:BA:2724:C:P	50:BR:2:ARG:HH21	2.38	0.46
52:BT:33:LYS:HE2	52:BT:43:GLN:HE21	1.79	0.46
53:BU:45:TYR:O	53:BU:49:HIS:CG	2.68	0.46
57:BY:3:VAL:HG12	57:BY:3:VAL:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:15:VAL:HG22	57:BY:72:VAL:HG12	1.97	0.46
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.97	0.46
1:CA:263:A:OP2	20:CT:79:ARG:NH1	2.48	0.46
1:CA:266:G:H5'	1:CA:267:C:C5	2.49	0.46
1:CA:346:G:N3	1:CA:346:G:C2'	2.78	0.46
1:CA:347:G:N2	1:CA:348:G:H1'	2.30	0.46
1:CA:620:C:H2'	1:CA:621:A:O4'	2.14	0.46
3:CC:6:HIS:CD2	3:CC:8:ILE:HB	2.50	0.46
4:CD:111:ALA:HA	4:CD:116:GLN:OE1	2.15	0.46
22:CV:5:G:H5'	22:CV:5:G:C8	2.50	0.46
22:CW:43:C:C3'	22:CW:44:G:O4'	2.63	0.46
24:CY:26:A:H2'	24:CY:27:C:H6	1.81	0.46
25:CZ:19:HIS:CD2	25:CZ:20:VAL:O	2.63	0.46
32:D6:15:GLU:OE1	32:D6:18:ARG:CG	2.63	0.46
34:D8:15:LYS:HB3	34:D8:46:ARG:HH22	1.80	0.46
34:D8:61:LEU:O	34:D8:64:TYR:N	2.47	0.46
36:DA:1264:G:C3'	36:DA:1265:A:H5''	2.40	0.46
36:DA:137:C:O2	36:DA:137:C:H2'	2.15	0.46
36:DA:184:C:H2'	36:DA:185:U:H6	1.80	0.46
36:DA:2157:G:H3'	36:DA:2157:G:C8	2.50	0.46
36:DA:2726:U:H6	47:DO:67:LYS:HZ3	1.62	0.46
36:DA:2807:G:H3'	36:DA:2808:U:H5''	1.97	0.46
36:DA:756:C:C2'	36:DA:757:U:H5'	2.45	0.46
36:DA:696:G:C2	36:DA:767:U:O2	2.67	0.46
36:DA:848:G:H2'	36:DA:849:A:C8	2.50	0.46
39:DD:12:SER:HB2	39:DD:208:LYS:HB3	1.98	0.46
40:DE:76:ARG:O	40:DE:77:ILE:C	2.53	0.46
41:DF:40:GLN:HE22	41:DF:182:ASN:HB2	1.80	0.46
42:DG:120:LEU:O	42:DG:121:ASN:C	2.53	0.46
42:DG:81:LYS:HB3	42:DG:82:LEU:H	1.40	0.46
52:DT:106:SER:O	52:DT:107:ASP:CG	2.53	0.46
57:DY:41:GLY:O	57:DY:42:VAL:O	2.33	0.46
58:DZ:40:ASP:HB3	58:DZ:43:GLU:HB2	1.97	0.46
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.81	0.46
1:AA:304:U:O2'	1:AA:305:G:H5'	2.16	0.46
1:AA:473:G:H5'	16:AP:81:ARG:HG3	1.95	0.46
1:AA:586:C:O2'	1:AA:587:G:H5'	2.15	0.46
1:AA:82:U:H6	1:AA:83:U:H5	1.63	0.46
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.14	0.46
6:AF:47:ARG:O	6:AF:47:ARG:HG3	2.15	0.46
10:AJ:29:ARG:O	10:AJ:29:ARG:HG2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:17:LYS:HD3	12:AL:18:VAL:HG22	1.97	0.46
13:AM:107:ALA:O	13:AM:111:LYS:HG3	2.15	0.46
14:AN:12:ARG:NH1	14:AN:14:PRO:HG2	2.31	0.46
14:AN:25:VAL:HG23	14:AN:38:GLY:O	2.15	0.46
1:AA:135:C:O2	16:AP:1:MET:HB3	2.15	0.46
1:AA:453:A:C4'	16:AP:72:ARG:HG3	2.38	0.46
27:B1:84:GLY:O	27:B1:86:SER:N	2.47	0.46
28:B2:56:GLN:O	28:B2:60:LEU:HG	2.14	0.46
29:B3:44:ARG:O	29:B3:47:VAL:HB	2.15	0.46
34:B8:30:ARG:HA	34:B8:30:ARG:NE	2.27	0.46
34:B8:11:LYS:HG3	34:B8:60:LEU:HD22	1.96	0.46
36:BA:1827:C:OP2	39:BD:222:ARG:NH1	2.46	0.46
36:BA:1652:A:C2	36:BA:2006:C:N3	2.83	0.46
36:BA:1265:A:N1	36:BA:2013:A:H5''	2.31	0.46
36:BA:2223:G:H2'	36:BA:2224:G:H5'	1.97	0.46
36:BA:2602:A:H4'	36:BA:2603:G:C5'	2.45	0.46
36:BA:2653:U:H3'	36:BA:2654:A:C8	2.49	0.46
36:BA:756:C:C2'	36:BA:757:U:H5'	2.45	0.46
36:BA:2579:C:C1'	40:BE:134:ILE:HD13	2.45	0.46
43:BH:50:VAL:HG12	43:BH:51:ARG:N	2.30	0.46
46:BN:9:VAL:HG12	46:BN:10:GLU:H	1.80	0.46
46:BN:120:LEU:C	46:BN:121:LYS:HD2	2.36	0.46
48:BP:7:ARG:HB3	48:BP:8:PRO:CD	2.44	0.46
36:BA:1287:A:OP1	50:BR:104:ARG:HG2	2.15	0.46
50:BR:10:LEU:O	50:BR:11:ASN:HB2	2.15	0.46
51:BS:35:ILE:O	51:BS:35:ILE:HG12	2.15	0.46
52:BT:106:SER:O	52:BT:107:ASP:CG	2.54	0.46
56:BX:35:THR:CG2	56:BX:36:LYS:N	2.78	0.46
37:BB:76:G:OP1	58:BZ:15:PRO:HB3	2.14	0.46
1:CA:659:U:O2'	1:CA:660:G:H5'	2.15	0.46
1:CA:678:U:H2'	1:CA:679:C:C6	2.51	0.46
1:CA:720:C:H2'	1:CA:721:G:C8	2.50	0.46
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.97	0.46
4:CD:85:LYS:HG2	4:CD:86:LYS:N	2.30	0.46
1:CA:453:A:C4'	16:CP:72:ARG:HG3	2.41	0.46
1:CA:1305:G:C5'	21:CU:4:GLY:HA3	2.40	0.46
22:CV:22:G:O2'	22:CV:23:A:H5'	2.15	0.46
22:CV:51:U:H2'	22:CV:52:G:C8	2.50	0.46
24:CY:20:H2U:H4'	24:CY:21:A:O5'	2.15	0.46
25:CZ:155:ARG:HG2	25:CZ:165:GLY:O	2.14	0.46
27:D1:26:ARG:HD3	27:D1:27:GLU:OE2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1750:G:H2'	36:DA:1751:C:C6	2.49	0.46
36:DA:2050:C:H1'	40:DE:156:MET:HE2	1.95	0.46
40:DE:184:VAL:O	40:DE:186:GLY:N	2.49	0.46
40:DE:69:LYS:C	40:DE:71:GLY:H	2.17	0.46
41:DF:6:VAL:CG1	41:DF:7:TYR:H	2.15	0.46
42:DG:177:GLY:O	42:DG:179:PRO:HD3	2.15	0.46
43:DH:46:GLU:O	43:DH:47:GLU:C	2.53	0.46
46:DN:45:ASN:H	46:DN:45:ASN:HD22	1.64	0.46
36:DA:64:A:H5'	56:DX:64:LYS:HE3	1.97	0.46
1:AA:1145:C:O2'	1:AA:1146:A:O5'	2.28	0.46
1:AA:1256:A:C2	1:AA:1278:U:H5'	2.50	0.46
1:AA:189(I):G:O2'	1:AA:189(J):G:H5'	2.15	0.46
1:AA:858:G:H8	1:AA:858:G:O5'	1.97	0.46
2:AB:8:LYS:O	2:AB:10:LEU:N	2.49	0.46
3:AC:5:ILE:H	3:AC:5:ILE:HD12	1.74	0.46
9:AI:6:GLY:CA	9:AI:84:ALA:HB2	2.45	0.46
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.78	0.46
16:AP:25:ARG:NH1	16:AP:25:ARG:HG3	2.24	0.46
1:AA:375:U:OP1	16:AP:69:THR:HG21	2.15	0.46
22:AW:64:A:H2'	22:AW:65:G:H8	1.79	0.46
22:AW:65:G:O3'	32:B6:28:ARG:NH2	2.47	0.46
25:AZ:339:ARG:HE	25:AZ:352:VAL:CG2	2.28	0.46
27:B1:37:ILE:HG12	27:B1:37:ILE:O	2.16	0.46
36:BA:1138:G:C4	36:BA:1139:G:H1'	2.50	0.46
36:BA:990:A:N6	36:BA:1186:G:H1'	2.31	0.46
36:BA:1314:C:OP1	36:BA:1332:G:OP1	2.34	0.46
36:BA:1327:C:H2'	36:BA:1328:G:O4'	2.15	0.46
36:BA:1357:U:H2'	36:BA:1358:G:O4'	2.15	0.46
36:BA:1543:C:C3'	36:BA:1544:A:C5'	2.90	0.46
36:BA:2033:A:O2'	36:BA:2034:U:P	2.74	0.46
36:BA:2157:G:H8	36:BA:2157:G:H3'	1.80	0.46
36:BA:2289:G:H1'	36:BA:2346:A:H2	1.80	0.46
36:BA:363(E):U:H2'	36:BA:363(F):A:O4'	2.14	0.46
36:BA:845:G:O2'	36:BA:846:C:H5	1.97	0.46
36:BA:848:G:H2'	36:BA:849:A:C8	2.51	0.46
38:BC:159:GLY:O	38:BC:160:ARG:O	2.32	0.46
39:BD:183:ARG:HD2	39:BD:184:LYS:H	1.80	0.46
39:BD:80:ALA:HB2	39:BD:96:HIS:CD2	2.50	0.46
41:BF:10:PRO:HG2	41:BF:13:SER:OG	2.14	0.46
41:BF:157:VAL:HG21	41:BF:194:MET:HG2	1.98	0.46
42:BG:125:PHE:CD2	42:BG:131:TYR:HD1	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:152:LEU:HD23	42:BG:152:LEU:H	1.80	0.46
43:BH:107:VAL:O	43:BH:107:VAL:HG23	2.15	0.46
43:BH:149:ARG:HA	43:BH:162:ILE:CD1	2.44	0.46
43:BH:46:GLU:O	43:BH:47:GLU:C	2.54	0.46
50:BR:26:LYS:O	50:BR:30:THR:HG22	2.14	0.46
54:BV:3:ALA:HB3	54:BV:14:VAL:HG23	1.97	0.46
55:BW:70:TYR:OH	55:BW:72:LYS:HG2	2.15	0.46
36:BA:139(A):G:N2	56:BX:44:GLU:OE1	2.40	0.46
57:BY:46:LYS:CG	57:BY:47:LYS:H	2.28	0.46
57:BY:73:ARG:NH2	57:BY:82:PRO:HA	2.30	0.46
1:CA:1054:C:H4'	1:CA:1055:A:O5'	2.16	0.46
1:CA:1354:C:H2'	1:CA:1355:G:H8	1.80	0.46
1:CA:922:G:N3	1:CA:1398:A:H2	2.12	0.46
2:CB:112:VAL:O	2:CB:115:LEU:HB3	2.16	0.46
2:CB:60:ASP:O	2:CB:61:LEU:C	2.53	0.46
2:CB:72:GLY:HA2	2:CB:165:VAL:HG22	1.98	0.46
6:CF:45:LEU:HA	6:CF:58:GLY:O	2.16	0.46
8:CH:18:ARG:NH1	8:CH:18:ARG:HB2	2.30	0.46
13:CM:97:PRO:N	13:CM:110:ARG:HD3	2.29	0.46
25:CZ:345:ARG:C	25:CZ:347:THR:H	2.18	0.46
26:D0:40:GLN:OE1	26:D0:44:ARG:N	2.48	0.46
28:D2:35:LEU:CD2	28:D2:50:ILE:HG13	2.45	0.46
31:D5:3:LYS:HE3	31:D5:3:LYS:CA	2.44	0.46
34:D8:23:VAL:HA	34:D8:47:LYS:O	2.15	0.46
35:D9:15:LYS:HB3	35:D9:15:LYS:HZ3	1.79	0.46
36:DA:1151:G:H4'	53:DU:81:HIS:CG	2.50	0.46
36:DA:2312:U:C2'	36:DA:2313:C:C5'	2.91	0.46
36:DA:2364:C:O2'	36:DA:2365:G:H5'	2.15	0.46
36:DA:310:A:P	57:DY:18:GLY:HA2	2.54	0.46
36:DA:664:C:O2'	36:DA:665:C:H5'	2.16	0.46
36:DA:736:C:O2'	36:DA:737:C:H5'	2.15	0.46
36:DA:949:C:H2'	36:DA:950:G:C8	2.49	0.46
37:DB:52:A:H62	51:DS:33:LYS:HG2	1.81	0.46
37:DB:57:A:H1'	42:DG:30:GLU:HB2	1.98	0.46
38:DC:151:GLU:HA	38:DC:154:ARG:HG2	1.97	0.46
48:DP:91:PHE:N	48:DP:91:PHE:CD1	2.83	0.46
50:DR:26:LYS:O	50:DR:30:THR:HG22	2.15	0.46
50:DR:75:LEU:HD13	50:DR:75:LEU:C	2.36	0.46
52:DT:117:ASP:OD2	52:DT:120:ARG:HG3	2.16	0.46
53:DU:14:HIS:CD2	53:DU:36:ARG:NH2	2.84	0.46
53:DU:45:TYR:O	53:DU:49:HIS:CG	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:27:PRO:HA	55:DW:23:LEU:HD11	1.97	0.46
55:DW:29:LEU:HG	55:DW:33:ARG:CD	2.43	0.46
1:AA:1158:C:H2'	1:AA:1158:C:O2	2.15	0.46
1:AA:148:G:H2'	1:AA:149:A:C8	2.51	0.46
1:AA:347:G:N2	1:AA:348:G:H1'	2.29	0.46
1:AA:594:G:C2'	1:AA:595:G:H5'	2.45	0.46
1:AA:952:U:O2'	1:AA:953:G:H5'	2.14	0.46
2:AB:7:VAL:HG13	2:AB:11:LEU:HD12	1.97	0.46
3:AC:14:ILE:CG1	3:AC:15:THR:N	2.78	0.46
4:AD:180:GLY:O	4:AD:181:MET:C	2.54	0.46
4:AD:85:LYS:HG2	4:AD:86:LYS:N	2.31	0.46
5:AE:11:ILE:HD12	5:AE:31:LEU:HD11	1.97	0.46
6:AF:30:LEU:HD21	6:AF:65:VAL:HG11	1.96	0.46
6:AF:75:LEU:O	6:AF:79:LEU:HB2	2.15	0.46
7:AG:18:TYR:CD2	7:AG:59:LEU:HB2	2.51	0.46
9:AI:85:LEU:C	9:AI:85:LEU:HD12	2.35	0.46
13:AM:74:VAL:HA	13:AM:77:ASN:HD22	1.79	0.46
18:AR:40:LEU:O	18:AR:42:ARG:N	2.49	0.46
25:AZ:40:PRO:O	25:AZ:41:ASN:CB	2.62	0.46
27:B1:77:ALA:C	27:B1:79:GLY:H	2.19	0.46
32:B6:15:GLU:OE1	32:B6:18:ARG:CD	2.64	0.46
36:BA:1668:A:H1'	36:BA:1670:C:C5	2.50	0.46
36:BA:1747(A):G:C3'	36:BA:1748:G:H5''	2.45	0.46
36:BA:2766:G:N3	36:BA:2766:G:H2'	2.30	0.46
36:BA:370:G:C6	36:BA:424:G:N7	2.84	0.46
36:BA:720:C:H2'	36:BA:721:C:H6	1.80	0.46
37:BB:60:C:O2'	37:BB:61:G:H5'	2.15	0.46
40:BE:103:ASP:OD2	40:BE:201:THR:HA	2.16	0.46
41:BF:31:HIS:ND1	48:BP:13:ASN:HB2	2.30	0.46
42:BG:104:GLU:C	42:BG:106:LEU:H	2.18	0.46
42:BG:56:ALA:O	42:BG:59:GLU:HG2	2.15	0.46
49:BQ:64:ILE:CG2	49:BQ:65:PHE:N	2.78	0.46
52:BT:10:VAL:C	52:BT:12:SER:H	2.18	0.46
54:BV:28:GLU:O	54:BV:61:VAL:HG21	2.16	0.46
57:BY:31:LEU:HD23	57:BY:36:ALA:C	2.36	0.46
57:BY:36:ALA:HB2	57:BY:68:HIS:HA	1.96	0.46
36:BA:336:C:H4'	57:BY:7:VAL:CG2	2.45	0.46
57:BY:98:VAL:O	57:BY:98:VAL:HG12	2.14	0.46
1:CA:1004:A:C3'	1:CA:1005:A:H5'	2.45	0.46
1:CA:458:C:H2'	1:CA:460:G:C8	2.50	0.46
2:CB:44:LEU:HA	2:CB:47:THR:OG1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:11:ILE:HD11	5:CE:33:VAL:CG2	2.44	0.46
5:CE:76:ILE:HG13	5:CE:93:PRO:HG3	1.98	0.46
1:CA:1342:C:O2'	9:CI:124:GLN:HG3	2.14	0.46
11:CK:57:THR:HG22	11:CK:60:ALA:HB2	1.98	0.46
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.96	0.46
1:CA:255:G:H1'	17:CQ:16:GLN:HE21	1.79	0.46
25:CZ:187:LYS:H	25:CZ:187:LYS:CD	2.28	0.46
25:CZ:269:GLY:O	25:CZ:288:VAL:HA	2.16	0.46
25:CZ:355:LEU:CD2	25:CZ:370:PHE:CD2	2.98	0.46
28:D2:23:LYS:N	28:D2:26:ARG:HB3	2.29	0.46
32:D6:15:GLU:CG	32:D6:18:ARG:NH1	2.75	0.46
36:DA:1010:A:H1'	36:DA:1153:C:C1'	2.46	0.46
36:DA:1203:G:H3'	36:DA:1204:A:C5'	2.45	0.46
36:DA:1352:U:O2'	36:DA:1353:A:H5'	2.16	0.46
36:DA:1600:C:C2'	36:DA:1601:G:H5'	2.45	0.46
36:DA:1799:G:H5'	36:DA:1819:A:H61	1.80	0.46
36:DA:1884:A:C3'	36:DA:1885:A:H5''	2.46	0.46
36:DA:1887:C:H2'	36:DA:1888:G:C5'	2.34	0.46
36:DA:2341:G:H2'	36:DA:2342:C:H6	1.80	0.46
36:DA:990:A:OP2	36:DA:991:C:OP2	2.32	0.46
38:DC:175:VAL:HG12	38:DC:188:ASN:CB	2.28	0.46
39:DD:27:THR:HG21	39:DD:81:ALA:CB	2.45	0.46
40:DE:73:GLU:OE2	40:DE:74:PRO:HD2	2.15	0.46
41:DF:176:LEU:O	41:DF:177:ALA:HB2	2.14	0.46
41:DF:28:ILE:N	41:DF:28:ILE:HD13	2.17	0.46
42:DG:48:GLU:O	42:DG:49:ASP:HB3	2.15	0.46
48:DP:23:PRO:HB2	48:DP:33:ARG:HG3	1.98	0.46
50:DR:59:ASP:O	50:DR:60:LEU:CB	2.62	0.46
51:DS:64:GLU:HA	51:DS:67:ARG:HG3	1.98	0.46
53:DU:65:ILE:HD12	53:DU:65:ILE:N	2.31	0.46
1:AA:1255:G:H3'	1:AA:1279:A:H61	1.80	0.46
1:AA:625:G:O2'	1:AA:626:U:H5'	2.15	0.46
4:AD:152:SER:O	4:AD:154:ASN:N	2.48	0.46
12:AL:33:ARG:O	12:AL:84:LEU:HD22	2.15	0.46
1:AA:1048:G:P	14:AN:4:LYS:HB2	2.54	0.46
17:AQ:69:LYS:O	17:AQ:70:ARG:HD2	2.15	0.46
18:AR:53:ARG:NH1	18:AR:60:ALA:HA	2.30	0.46
20:AT:84:LEU:C	20:AT:86:ARG:N	2.68	0.46
21:AU:12:LYS:HG2	21:AU:22:ARG:CB	2.45	0.46
25:AZ:189:ARG:HB2	25:AZ:192:GLU:OE2	2.16	0.46
32:B6:5:VAL:HB	32:B6:8:LYS:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1449:A:N3	36:BA:1529:G:H1'	2.30	0.46
36:BA:1495:A:C4	36:BA:1496:A:H2	2.33	0.46
36:BA:1528:A:N1	36:BA:1542:A:H2	2.14	0.46
36:BA:1668:A:N3	36:BA:1670:C:C4	2.84	0.46
36:BA:2533:A:H2'	36:BA:2534:A:O4'	2.15	0.46
36:BA:2544:G:O5'	36:BA:2544:G:H8	1.98	0.46
36:BA:2688:U:H1'	36:BA:2721:A:H62	1.81	0.46
36:BA:2720:U:C2	36:BA:2721:A:C8	3.04	0.46
36:BA:2807:G:C3'	36:BA:2808:U:H5''	2.45	0.46
36:BA:2886:G:H2'	36:BA:2887:U:C6	2.50	0.46
36:BA:478:A:C6	36:BA:480:A:C6	3.04	0.46
36:BA:57:C:H2'	36:BA:58:G:O4'	2.14	0.46
37:BB:80:U:O2'	37:BB:81:G:H5''	2.16	0.46
38:BC:84:LYS:N	38:BC:84:LYS:HD2	2.30	0.46
40:BE:144:ARG:HB3	40:BE:145:LYS:H	1.54	0.46
40:BE:9:VAL:CG1	40:BE:25:VAL:O	2.63	0.46
41:BF:167:ALA:HB1	41:BF:173:VAL:CG1	2.46	0.46
42:BG:39:ILE:CD1	42:BG:60:LEU:HD11	2.44	0.46
46:BN:15:LEU:HD13	46:BN:16:ILE:N	2.31	0.46
46:BN:23:LEU:HD21	46:BN:102:ALA:CB	2.45	0.46
46:BN:71:ILE:HG21	46:BN:84:LYS:HB3	1.98	0.46
51:BS:29:PHE:CD1	51:BS:29:PHE:C	2.88	0.46
52:BT:107:ASP:H	52:BT:110:ILE:CG1	2.28	0.46
52:BT:28:VAL:HG13	52:BT:46:GLU:CA	2.35	0.46
58:BZ:133:ILE:O	58:BZ:133:ILE:HG22	2.16	0.46
58:BZ:110:GLY:HA2	58:BZ:146:ILE:HG22	1.98	0.46
1:CA:1499:A:C1'	1:CA:1520:G:H5'	2.45	0.46
1:CA:707:C:H2'	1:CA:708:C:H6	1.81	0.46
1:CA:82:U:H6	1:CA:83:U:H5	1.63	0.46
4:CD:12:CYS:O	4:CD:33:MET:CE	2.63	0.46
6:CF:30:LEU:HD21	6:CF:65:VAL:HG11	1.97	0.46
6:CF:69:GLU:HG2	6:CF:70:ASP:N	2.30	0.46
6:CF:75:LEU:O	6:CF:79:LEU:HB2	2.15	0.46
11:CK:125:PHE:C	11:CK:127:LYS:H	2.19	0.46
19:CS:16:LEU:H	19:CS:16:LEU:CD1	2.09	0.46
22:CW:4:C:N4	22:CW:5:G:O6	2.49	0.46
31:D5:16:ARG:NH1	31:D5:17:ASP:OD1	2.49	0.46
34:D8:49:VAL:O	34:D8:50:LEU:HB3	2.14	0.46
36:DA:1750:G:O2'	36:DA:1751:C:H5'	2.15	0.46
36:DA:2147:G:H2'	36:DA:2148:G:O5'	2.15	0.46
36:DA:2406:U:C2	48:DP:72:PRO:HB2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2502:G:H5''	36:DA:2503:A:C5'	2.42	0.46
37:DB:60:C:O2'	37:DB:61:G:H5'	2.15	0.46
38:DC:84:LYS:HD2	38:DC:84:LYS:N	2.30	0.46
41:DF:23:ASP:O	41:DF:115:ALA:HA	2.14	0.46
42:DG:143:GLU:O	42:DG:144:ILE:HG22	2.15	0.46
43:DH:157:TYR:O	43:DH:158:HIS:CG	2.69	0.46
48:DP:47:ASP:HB3	48:DP:48:PRO:C	2.35	0.46
50:DR:117:VAL:CG2	50:DR:118:GLU:H	2.22	0.46
52:DT:28:VAL:CG1	52:DT:88:ILE:HD11	2.46	0.46
57:DY:28:LYS:CD	57:DY:39:VAL:HG22	2.40	0.46
58:DZ:165:VAL:CG1	58:DZ:166:SER:N	2.74	0.46
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.51	0.46
1:AA:973:G:H3'	1:AA:974:A:H5''	1.97	0.46
2:AB:114:ARG:HH11	2:AB:118:LEU:CD2	2.21	0.46
8:AH:85:ARG:HG3	8:AH:85:ARG:HH11	1.79	0.46
12:AL:25:PRO:C	12:AL:27:LEU:N	2.68	0.46
13:AM:8:GLU:OE1	13:AM:22:ILE:HG13	2.15	0.46
15:AO:7:GLU:O	15:AO:11:VAL:HG23	2.14	0.46
15:AO:16:ALA:C	15:AO:18:PHE:H	2.16	0.46
20:AT:18:GLN:HG2	20:AT:22:ARG:HH12	1.79	0.46
20:AT:61:SER:O	20:AT:65:LYS:HG2	2.15	0.46
23:AX:27:A:H8	23:AX:27:A:OP2	1.98	0.46
25:AZ:187:LYS:H	25:AZ:187:LYS:CD	2.29	0.46
24:AY:64:U:C4'	25:AZ:392:GLY:H	2.27	0.46
31:B5:52:TYR:CD1	31:B5:52:TYR:O	2.68	0.46
36:BA:1058:G:C3'	36:BA:1059:G:H5''	2.46	0.46
36:BA:1142:U:H6	36:BA:1142:U:O5'	1.99	0.46
36:BA:2406:U:C2	48:BP:72:PRO:HB2	2.51	0.46
39:BD:112:GLN:O	39:BD:115:GLN:HB2	2.16	0.46
39:BD:142:VAL:HG21	39:BD:191:ALA:HB1	1.98	0.46
40:BE:199:ARG:CB	40:BE:199:ARG:HH11	2.29	0.46
40:BE:47:VAL:HG21	40:BE:86:PRO:HD2	1.97	0.46
41:BF:100:THR:O	41:BF:100:THR:HG22	2.16	0.46
42:BG:11:TYR:CG	42:BG:12:TYR:N	2.83	0.46
43:BH:88:LEU:HD13	43:BH:130:ARG:HG2	1.96	0.46
43:BH:20:ALA:CB	43:BH:21:PRO:CD	2.92	0.46
36:BA:2750:A:OP2	43:BH:62:LYS:HE2	2.16	0.46
46:BN:27:ALA:HB3	46:BN:106:MET:HE1	1.97	0.46
48:BP:24:GLY:HA2	48:BP:33:ARG:NH1	2.28	0.46
53:BU:90:VAL:CG1	53:BU:91:ASP:H	2.23	0.46
55:BW:10:VAL:HG23	55:BW:101:SER:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:28:LYS:HB3	57:BY:37:VAL:HB	1.96	0.46
49:BQ:141:GLN:HB3	58:BZ:99:TYR:CD1	2.50	0.46
1:CA:1127:G:H1	1:CA:1145:C:H42	1.62	0.46
1:CA:511:C:HO2'	1:CA:512:U:H6	1.62	0.46
1:CA:877:C:O2'	1:CA:878:G:H5'	2.16	0.46
2:CB:134:GLU:C	2:CB:136:VAL:N	2.67	0.46
2:CB:239:VAL:O	2:CB:240:GLN:HB3	2.16	0.46
3:CC:166:GLU:OE1	3:CC:166:GLU:HA	2.15	0.46
4:CD:86:LYS:HE3	4:CD:86:LYS:HA	1.97	0.46
5:CE:144:THR:N	5:CE:147:ASP:OD1	2.45	0.46
8:CH:85:ARG:HH11	8:CH:85:ARG:HG3	1.79	0.46
9:CI:114:TYR:CE2	10:CJ:59:SER:HA	2.48	0.46
13:CM:120:LYS:HA	13:CM:120:LYS:NZ	2.31	0.46
16:CP:22:THR:HG23	16:CP:23:ASP:N	2.31	0.46
25:CZ:375:ILE:HG13	25:CZ:376:LYS:HG3	1.97	0.46
27:D1:56:GLN:CB	27:D1:87:PRO:HB3	2.45	0.46
32:D6:52:VAL:O	32:D6:53:LYS:O	2.34	0.46
34:D8:30:ARG:CZ	36:DA:2419:U:O4	2.64	0.46
34:D8:62:LEU:HG	34:D8:62:LEU:H	1.52	0.46
35:D9:17:ILE:CG2	35:D9:18:ARG:H	2.29	0.46
36:DA:1336:A:H2'	36:DA:1337:G:C8	2.51	0.46
36:DA:1496:A:H8	36:DA:1498:C:N3	2.14	0.46
36:DA:1668:A:H1'	36:DA:1670:C:C5	2.51	0.46
36:DA:2464:C:O2'	36:DA:2465:C:P	2.73	0.46
36:DA:2648:C:H2'	36:DA:2649:U:C6	2.50	0.46
36:DA:2688:U:H1'	36:DA:2721:A:H62	1.79	0.46
36:DA:2792:G:O2'	36:DA:2793:G:H5'	2.16	0.46
39:DD:16:MET:HG3	39:DD:206:LEU:O	2.16	0.46
40:DE:65:GLY:HA2	40:DE:70:ALA:CB	2.45	0.46
40:DE:79:ARG:NH1	40:DE:79:ARG:CG	2.78	0.46
43:DH:19:VAL:CG1	43:DH:20:ALA:N	2.78	0.46
44:DJ:91:UNK:C	44:DJ:93:UNK:N	2.78	0.46
45:DK:97:UNK:CB	45:DK:134:UNK:HA	2.46	0.46
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HG2	2.30	0.46
36:DA:958:U:H5''	49:DQ:14:ARG:HD2	1.97	0.46
54:DV:47:VAL:O	54:DV:49:THR:O	2.33	0.46
58:DZ:151:HIS:ND1	58:DZ:152:ALA:N	2.64	0.46
58:DZ:165:VAL:HG12	58:DZ:166:SER:H	1.78	0.46
1:AA:137:C:H2'	1:AA:137:C:O2	2.15	0.46
1:AA:375:U:C2	1:AA:376:G:C8	3.04	0.46
1:AA:499:A:H4'	1:AA:500:G:H5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:567:G:H2'	1:AA:568:G:O4'	2.16	0.46
2:AB:187:LEU:CD1	2:AB:205:ASP:HA	2.46	0.46
2:AB:239:VAL:O	2:AB:240:GLN:HB3	2.15	0.46
3:AC:135:LYS:O	3:AC:138:VAL:HG13	2.16	0.46
6:AF:72:VAL:HG22	6:AF:72:VAL:O	2.15	0.46
1:AA:1373:G:H5''	7:AG:36:LYS:HB2	1.98	0.46
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.49	0.46
24:AY:20:H2U:H4'	24:AY:21:A:O5'	2.16	0.46
25:AZ:65:THR:HG22	25:AZ:80:VAL:HG13	1.95	0.46
26:B0:70:GLN:NE2	26:B0:80:HIS:NE2	2.64	0.46
34:B8:20:GLY:O	34:B8:57:ARG:HD3	2.16	0.46
34:B8:14:VAL:CG2	34:B8:22:VAL:HG13	2.45	0.46
35:B9:27:CYS:HB3	35:B9:32:HIS:HB2	1.97	0.46
36:BA:1064:C:C3'	36:BA:1065:U:C5'	2.94	0.46
36:BA:189:G:H2'	36:BA:205:G:N2	2.30	0.46
36:BA:2392:A:H5'	36:BA:2392:A:N3	2.30	0.46
36:BA:271(L):U:H5''	36:BA:271(M):G:C5'	2.32	0.46
36:BA:2801(A):A:H5'	36:BA:2802:G:H8	1.78	0.46
36:BA:39:C:O2'	36:BA:40:C:H5'	2.14	0.46
36:BA:535:C:O2'	36:BA:536:A:H5'	2.15	0.46
36:BA:582:G:H2'	36:BA:583:G:H8	1.81	0.46
36:BA:638:G:C6	36:BA:639:U:N3	2.84	0.46
38:BC:130:ILE:HG22	38:BC:130:ILE:O	2.14	0.46
40:BE:40:GLU:O	40:BE:41:LYS:HB3	2.16	0.46
43:BH:157:TYR:O	43:BH:158:HIS:CG	2.68	0.46
46:BN:34:LEU:HD11	46:BN:116:LEU:HB3	1.97	0.46
34:B8:13:ARG:HA	48:BP:63:PRO:HA	1.98	0.46
52:BT:3:ARG:HH11	52:BT:6:LEU:HD13	1.80	0.46
52:BT:92:GLY:O	52:BT:93:ARG:C	2.54	0.46
54:BV:47:VAL:O	54:BV:49:THR:O	2.34	0.46
57:BY:73:ARG:O	57:BY:74:PRO:O	2.33	0.46
58:BZ:150:LEU:HD21	58:BZ:172:ALA:HB3	1.97	0.46
58:BZ:28:MET:O	58:BZ:34:ASN:HA	2.15	0.46
1:CA:542:G:P	4:CD:10:ARG:NH2	2.88	0.46
2:CB:18:GLY:O	2:CB:19:HIS:HB2	2.16	0.46
2:CB:7:VAL:O	2:CB:11:LEU:CB	2.60	0.46
4:CD:187:ARG:HG2	4:CD:188:LEU:N	2.31	0.46
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.16	0.46
1:CA:973:G:C4	10:CJ:55:LYS:HE2	2.51	0.46
10:CJ:33:GLN:H	10:CJ:75:ILE:HD11	1.81	0.46
11:CK:48:ILE:HD11	11:CK:67:ASP:HB2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:617:G:H4'	16:CP:44:THR:O	2.16	0.46
19:CS:43:GLU:C	19:CS:45:VAL:N	2.69	0.46
22:CV:59:U:H2'	22:CV:60:U:C6	2.50	0.46
23:CX:11:U:C2'	23:CX:12:A:OP1	2.64	0.46
24:CY:5:G:H5'	24:CY:5:G:H8	1.79	0.46
25:CZ:193:ASN:O	25:CZ:195:TRP:N	2.48	0.46
28:D2:47:ASN:CB	28:D2:51:ARG:HG3	2.43	0.46
28:D2:67:LYS:HE2	28:D2:71:ASN:HD22	1.79	0.46
29:D3:47:VAL:HG11	29:D3:56:VAL:HG21	1.98	0.46
36:DA:1598:C:O2	36:DA:1598:C:H2'	2.16	0.46
36:DA:2101:G:H3'	36:DA:2102:U:H5''	1.97	0.46
36:DA:2474:C:O2	36:DA:2474:C:H2'	2.15	0.46
36:DA:2758:A:C2	36:DA:2759:G:H1'	2.50	0.46
36:DA:7:G:H2'	36:DA:8:A:C8	2.51	0.46
37:DB:8:U:C5'	37:DB:8:U:H6	2.15	0.46
38:DC:78:ALA:H	38:DC:115:ALA:CB	2.28	0.46
38:DC:189:ILE:O	38:DC:193:ILE:HG13	2.16	0.46
39:DD:30:GLU:HA	39:DD:83:GLU:OE1	2.16	0.46
36:DA:2787:C:H1'	40:DE:61:ARG:CD	2.46	0.46
41:DF:177:ALA:HB1	41:DF:178:PRO:CD	2.44	0.46
43:DH:88:LEU:HD13	43:DH:130:ARG:HG2	1.97	0.46
46:DN:96:GLU:O	46:DN:100:GLU:HG3	2.15	0.46
49:DQ:67:ARG:NH1	49:DQ:102:VAL:HB	2.30	0.46
53:DU:11:ARG:O	53:DU:15:LYS:HG2	2.15	0.46
53:DU:76:TYR:C	53:DU:76:TYR:CD1	2.89	0.46
58:DZ:103:ARG:CG	58:DZ:138:GLU:HG2	2.45	0.46
1:AA:266:G:O2'	1:AA:267:C:OP2	2.29	0.46
1:AA:312:C:H2'	1:AA:313:A:C8	2.51	0.46
1:AA:516:U:C4	1:AA:517:G:C6	3.04	0.46
3:AC:107:GLN:NE2	3:AC:107:GLN:H	2.13	0.46
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.50	0.46
4:AD:5:ILE:O	4:AD:5:ILE:HG22	2.14	0.46
5:AE:24:ARG:NH1	23:AX:27:A:N3	2.63	0.46
6:AF:38:GLU:O	6:AF:39:LYS:C	2.53	0.46
9:AI:114:TYR:CE2	10:AJ:59:SER:HA	2.44	0.46
11:AK:125:PHE:C	11:AK:127:LYS:H	2.18	0.46
19:AS:51:VAL:O	19:AS:57:HIS:HA	2.16	0.46
20:AT:53:LEU:N	20:AT:53:LEU:HD12	2.31	0.46
20:AT:53:LEU:HD22	20:AT:100:ILE:O	2.16	0.46
22:AW:4:C:N4	22:AW:5:G:O6	2.49	0.46
25:AZ:355:LEU:CD2	25:AZ:370:PHE:CD2	2.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:372:VAL:HG12	25:AZ:373:GLU:N	2.31	0.46
25:AZ:378:VAL:O	25:AZ:380:LEU:HG	2.16	0.46
31:B5:51:TYR:N	31:B5:56:LYS:NZ	2.64	0.46
32:B6:45:LYS:HZ2	32:B6:45:LYS:HB3	1.80	0.46
36:BA:1464:C:C2	36:BA:1465:G:C8	3.04	0.46
36:BA:1803:A:O3'	39:BD:259:THR:HG22	2.16	0.46
36:BA:2171:A:O2'	36:BA:2172:U:C5	2.67	0.46
36:BA:2312:U:H5'	42:BG:73:ALA:HA	1.98	0.46
36:BA:649:G:H2'	36:BA:650:C:C6	2.51	0.46
36:BA:192:C:O2'	36:BA:802:A:N3	2.44	0.46
36:BA:812:C:H5'	48:BP:25:SER:HA	1.97	0.46
39:BD:27:THR:HG21	39:BD:81:ALA:HB3	1.97	0.46
40:BE:167:VAL:HG11	40:BE:188:VAL:HA	1.98	0.46
40:BE:96:PHE:O	40:BE:175:VAL:HG11	2.16	0.46
41:BF:167:ALA:O	41:BF:168:ARG:C	2.54	0.46
41:BF:84:VAL:C	41:BF:86:GLY:H	2.19	0.46
47:BO:87:ILE:HG21	47:BO:91:LEU:HA	1.96	0.46
48:BP:84:ASN:HA	48:BP:116:GLY:CA	2.45	0.46
48:BP:95:VAL:O	48:BP:125:VAL:HA	2.16	0.46
52:BT:23:ARG:HA	52:BT:52:ILE:HD11	1.98	0.46
52:BT:28:VAL:CG1	52:BT:88:ILE:HD11	2.46	0.46
53:BU:66:ASN:ND2	53:BU:76:TYR:N	2.64	0.46
53:BU:76:TYR:C	53:BU:76:TYR:CD1	2.88	0.46
56:BX:27:THR:HG22	56:BX:80:ILE:CB	2.46	0.46
1:CA:1065:U:H6	1:CA:1190:G:N2	2.13	0.46
1:CA:1347:G:O2'	1:CA:1348:U:P	2.74	0.46
1:CA:976:G:H5'	1:CA:1358:U:O2'	2.16	0.46
1:CA:473:G:H2'	1:CA:474:G:C8	2.48	0.46
2:CB:127:ILE:HG22	2:CB:128:GLU:N	2.31	0.46
2:CB:25:ASN:O	2:CB:27:LYS:N	2.49	0.46
4:CD:171:GLY:C	4:CD:173:TRP:H	2.19	0.46
4:CD:200:GLU:C	4:CD:202:LEU:H	2.19	0.46
9:CI:118:LYS:O	9:CI:119:ALA:CB	2.64	0.46
1:CA:1216:G:H5''	14:CN:5:ALA:HB2	1.98	0.46
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.16	0.46
25:CZ:104:LEU:CD2	25:CZ:120:ILE:HD11	2.45	0.46
25:CZ:324:LYS:HD3	25:CZ:365:GLY:CA	2.42	0.46
25:CZ:28:THR:HG23	25:CZ:79:HIS:CE1	2.50	0.46
27:D1:35:THR:HG22	36:DA:2433:A:C2	2.51	0.46
36:DA:2133:G:C2	36:DA:2157:G:O6	2.69	0.46
26:D0:43:THR:HG22	36:DA:2331:G:O3'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1786:A:H2	36:DA:2606:C:H1'	1.79	0.46
36:DA:590:A:H2'	36:DA:591:C:C6	2.51	0.46
36:DA:83:G:O2'	36:DA:84:A:C8	2.59	0.46
37:DB:56:G:H4'	37:DB:57:A:H8	1.80	0.46
38:DC:74:VAL:CG1	38:DC:75:LEU:N	2.78	0.46
40:DE:48:GLN:HA	40:DE:80:GLU:HA	1.97	0.46
46:DN:120:LEU:C	46:DN:121:LYS:HD2	2.35	0.46
46:DN:58:ASP:C	46:DN:60:ILE:N	2.62	0.46
50:DR:10:LEU:O	50:DR:11:ASN:HB2	2.15	0.46
50:DR:29:LEU:HD11	50:DR:52:ILE:CD1	2.45	0.46
52:DT:23:ARG:HA	52:DT:52:ILE:HD11	1.98	0.46
53:DU:61:TRP:CD2	53:DU:94:ASN:HA	2.51	0.46
1:AA:1442(A):G:O2'	1:AA:1442(B):A:OP1	2.31	0.46
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.16	0.46
1:AA:397:A:C8	1:AA:548:G:OP2	2.69	0.46
1:AA:414:A:H2'	1:AA:415:A:O4'	2.15	0.46
1:AA:987:G:O2'	1:AA:988:G:H5'	2.15	0.46
3:AC:60:ALA:H	3:AC:63:ASN:HD21	1.64	0.46
4:AD:187:ARG:HG2	4:AD:188:LEU:N	2.30	0.46
5:AE:6:PHE:CD1	5:AE:6:PHE:N	2.83	0.46
5:AE:152:ARG:HB3	8:AH:43:GLY:HA3	1.98	0.46
20:AT:98:PRO:O	20:AT:99:LEU:O	2.33	0.46
22:AW:1:G:C2	22:AW:73:A:C2	3.04	0.46
24:AY:3:G:H5'	24:AY:3:G:C8	2.48	0.46
26:B0:10:THR:CG2	26:B0:11:ARG:N	2.79	0.46
34:B8:50:LEU:C	34:B8:53:PRO:CD	2.84	0.46
34:B8:62:LEU:H	34:B8:62:LEU:HG	1.55	0.46
36:BA:1009:A:OP2	46:BN:37:LYS:NZ	2.38	0.46
36:BA:1010:A:H1'	36:BA:1153:C:C1'	2.46	0.46
36:BA:1208:C:C2'	36:BA:1208:C:O2	2.64	0.46
36:BA:1469:A:O2'	36:BA:1470:G:H5'	2.16	0.46
36:BA:1983:C:O2'	36:BA:1984:G:H5'	2.16	0.46
36:BA:2219:G:C2'	36:BA:2220:G:H5'	2.46	0.46
31:B5:42:PRO:HB2	36:BA:2815:C:O2'	2.16	0.46
36:BA:339:U:O2'	36:BA:340:A:H5'	2.15	0.46
36:BA:442:G:O4'	41:BF:46:ARG:HD3	2.15	0.46
39:BD:276:LYS:CA	39:BD:276:LYS:HE2	2.46	0.46
39:BD:98:VAL:HG12	39:BD:98:VAL:O	2.16	0.46
40:BE:117:MET:HA	40:BE:122:PHE:N	2.29	0.46
40:BE:114:ALA:HB3	40:BE:160:TYR:HB3	1.98	0.46
40:BE:65:GLY:HA2	40:BE:70:ALA:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:321:G:OP2	41:BF:135:LYS:HD3	2.16	0.46
47:BO:97:ARG:HH21	47:BO:99:PHE:HE1	1.64	0.46
49:BQ:1:MET:HE2	49:BQ:44:ALA:O	2.15	0.46
55:BW:4:LYS:CG	55:BW:5:ALA:N	2.77	0.46
55:BW:75:TYR:N	55:BW:75:TYR:CD1	2.84	0.46
56:BX:14:SER:H	56:BX:17:ALA:HB3	1.80	0.46
1:CA:1281:U:C5'	1:CA:1282:C:H5	2.09	0.46
1:CA:414:A:H2'	1:CA:415:A:O4'	2.16	0.46
1:CA:593:G:O2'	1:CA:594:G:H5'	2.16	0.46
2:CB:7:VAL:HG13	2:CB:11:LEU:HD12	1.97	0.46
3:CC:30:ARG:HH21	3:CC:31:HIS:HE1	1.62	0.46
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.79	0.46
5:CE:6:PHE:N	5:CE:6:PHE:CD1	2.84	0.46
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	1.97	0.46
8:CH:30:ARG:CZ	8:CH:30:ARG:HB3	2.45	0.46
8:CH:4:ASP:OD2	8:CH:7:ALA:HB2	2.16	0.46
10:CJ:35:SER:O	10:CJ:36:GLY:O	2.34	0.46
11:CK:127:LYS:O	11:CK:129:SER:N	2.48	0.46
12:CL:102:ARG:NH1	12:CL:102:ARG:CG	2.75	0.46
12:CL:34:ARG:HG2	12:CL:35:GLY:N	2.30	0.46
12:CL:57:LYS:HA	12:CL:67:THR:HA	1.97	0.46
12:CL:43:VAL:HG21	12:CL:93:LEU:HD22	1.96	0.46
19:CS:16:LEU:HB3	19:CS:20:LEU:HG	1.96	0.46
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.15	0.46
22:CV:18:G:H2'	22:CV:57:G:N2	2.31	0.46
24:CY:21:A:H5'	24:CY:22:G:OP1	2.16	0.46
25:CZ:191:GLY:HA3	25:CZ:197:ASP:OD2	2.15	0.46
36:DA:1064:C:C3'	36:DA:1065:U:C5'	2.94	0.46
36:DA:1064:C:H3'	36:DA:1065:U:C5'	2.46	0.46
36:DA:2298:A:H2'	36:DA:2299:G:O4'	2.15	0.46
36:DA:2360:A:O2'	36:DA:2361:A:C5'	2.64	0.46
36:DA:2762:G:H2'	36:DA:2763:G:C5'	2.45	0.46
36:DA:648:G:O2'	36:DA:649:G:H5'	2.16	0.46
36:DA:774:A:H2	36:DA:787:U:O2'	1.99	0.46
36:DA:994:C:OP1	53:DU:53:ARG:NH2	2.49	0.46
39:DD:186:HIS:HD2	39:DD:188:GLU:HB2	1.79	0.46
42:DG:30:GLU:O	42:DG:31:VAL:HB	2.16	0.46
43:DH:55:PRO:HG2	43:DH:61:HIS:HD2	1.81	0.46
46:DN:5:VAL:HG12	46:DN:7:LYS:HG3	1.97	0.46
48:DP:83:VAL:HG23	48:DP:105:LEU:CD2	2.46	0.46
48:DP:57:THR:OG1	48:DP:58:THR:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:7:ARG:HB3	48:DP:8:PRO:CD	2.46	0.46
48:DP:7:ARG:HB3	48:DP:8:PRO:HD3	1.98	0.46
48:DP:84:ASN:HA	48:DP:116:GLY:CA	2.46	0.46
36:DA:1453:U:O4'	50:DR:63:ARG:HD3	2.16	0.46
51:DS:28:VAL:CG1	51:DS:29:PHE:H	2.25	0.46
52:DT:101:PHE:HE2	52:DT:113:LYS:HG2	1.80	0.46
54:DV:47:VAL:O	54:DV:47:VAL:HG23	2.16	0.46
55:DW:4:LYS:CG	55:DW:5:ALA:N	2.78	0.46
57:DY:36:ALA:HB2	57:DY:68:HIS:HA	1.96	0.46
57:DY:28:LYS:HD2	57:DY:37:VAL:HG21	1.97	0.46
57:DY:81:LYS:NZ	57:DY:99:CYS:SG	2.85	0.46
58:DZ:30:ASN:HD22	58:DZ:31:ARG:N	2.13	0.46
1:AA:1242:C:O2'	1:AA:1243:C:H5'	2.16	0.46
1:AA:519:C:H2'	1:AA:520:A:O4'	2.16	0.46
9:AI:56:LEU:CD2	9:AI:56:LEU:H	2.29	0.46
1:AA:963:G:N2	10:AJ:55:LYS:CE	2.71	0.46
11:AK:126:ARG:C	11:AK:128:ALA:N	2.68	0.46
11:AK:59:TYR:O	11:AK:62:GLN:HB3	2.15	0.46
11:AK:48:ILE:HD11	11:AK:67:ASP:HB2	1.98	0.46
12:AL:51:ALA:O	12:AL:52:LEU:HD22	2.15	0.46
20:AT:50:GLU:HB2	20:AT:99:LEU:HD13	1.98	0.46
24:AY:62:U:H2'	24:AY:63:C:O4'	2.16	0.46
25:AZ:300:ARG:C	25:AZ:302:GLN:H	2.18	0.46
25:AZ:25:THR:HB	60:AZ:501:GDP:O2B	2.15	0.46
31:B5:22:HIS:HE1	36:BA:2624:G:H1'	1.81	0.46
31:B5:4:HIS:C	36:BA:2056:G:N2	2.68	0.46
32:B6:19:ARG:CG	32:B6:20:ASN:N	2.53	0.46
35:B9:17:ILE:HG22	35:B9:18:ARG:H	1.81	0.46
36:BA:135:G:O2'	36:BA:136:G:H5'	2.15	0.46
36:BA:1600:C:C2'	36:BA:1601:G:H5'	2.45	0.46
36:BA:2176:A:H4'	38:BC:213:TYR:CD1	2.51	0.46
36:BA:2416:C:H2'	36:BA:2417:C:C6	2.51	0.46
36:BA:2537:U:H2'	36:BA:2538:C:C6	2.50	0.46
36:BA:2886:G:H2'	36:BA:2887:U:H6	1.80	0.46
36:BA:363(F):A:O2'	36:BA:364:C:C5	2.69	0.46
36:BA:481:G:H1'	36:BA:506:G:N2	2.30	0.46
36:BA:878:A:H2'	36:BA:879:G:O4'	2.16	0.46
37:BB:96:U:H2'	37:BB:97:G:C8	2.50	0.46
49:BQ:60:ARG:HH11	49:BQ:60:ARG:CB	2.10	0.46
36:BA:64:A:H5'	56:BX:64:LYS:HE3	1.98	0.46
56:BX:64:LYS:HD3	56:BX:73:ARG:NH2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.51	0.46
1:CA:1373:G:H5''	7:CG:36:LYS:HB2	1.98	0.46
1:CA:376:G:P	16:CP:67:THR:HG21	2.56	0.46
1:CA:519:C:H2'	1:CA:520:A:O4'	2.15	0.46
1:CA:555:C:H2'	1:CA:556:C:H6	1.80	0.46
1:CA:826:C:H2'	1:CA:827:U:H6	1.81	0.46
2:CB:122:PHE:HA	2:CB:127:ILE:HD11	1.98	0.46
7:CG:69:VAL:HG21	7:CG:104:LEU:CD1	2.45	0.46
8:CH:53:VAL:HB	8:CH:58:TYR:CD1	2.50	0.46
1:CA:972:C:H4'	10:CJ:57:LYS:HB2	1.98	0.46
11:CK:99:GLN:HG2	11:CK:105:VAL:HG21	1.98	0.46
13:CM:84:ILE:HG22	13:CM:84:ILE:O	2.16	0.46
19:CS:29:ARG:NH1	19:CS:30:LEU:HB2	2.31	0.46
22:CW:18:G:N1	22:CW:55:U:H1'	2.10	0.46
22:CW:74:C:O2'	22:CW:75:C:H5'	2.16	0.46
28:D2:25:VAL:HA	28:D2:29:LYS:HG2	1.97	0.46
31:D5:22:HIS:HE1	36:DA:2624:G:H1'	1.80	0.46
36:DA:1221:C:H2'	36:DA:1221(A):C:C6	2.51	0.46
36:DA:1297:C:O2'	36:DA:1298:C:H5'	2.16	0.46
36:DA:1449:A:N3	36:DA:1529:G:H1'	2.31	0.46
36:DA:1657:C:H2'	36:DA:1658:C:C6	2.51	0.46
22:CW:71:G:O2'	36:DA:1851:U:O2'	2.20	0.46
36:DA:2121:G:N1	36:DA:2176:A:C2	2.77	0.46
36:DA:2580:U:H4'	40:DE:130:GLY:CA	2.45	0.46
36:DA:2602:A:H4'	36:DA:2603:G:C5'	2.45	0.46
36:DA:271(K):U:H3'	36:DA:271(L):U:H5'	1.97	0.46
36:DA:380:U:H2'	36:DA:381:G:H8	1.81	0.46
36:DA:370:G:C6	36:DA:424:G:N7	2.84	0.46
36:DA:453:C:H4'	36:DA:472:A:N6	2.31	0.46
40:DE:176:ILE:CG2	40:DE:178:GLU:HB3	2.45	0.46
40:DE:47:VAL:HG23	40:DE:84:PHE:O	2.16	0.46
41:DF:32:LEU:HD23	41:DF:32:LEU:O	2.16	0.46
42:DG:47:LYS:NZ	42:DG:81:LYS:HB3	2.31	0.46
43:DH:50:VAL:HG12	43:DH:51:ARG:N	2.30	0.46
48:DP:84:ASN:HA	48:DP:116:GLY:HA3	1.96	0.46
48:DP:6:LEU:H	48:DP:6:LEU:CD2	2.26	0.46
51:DS:89:ARG:CB	51:DS:92:TYR:HB3	2.41	0.46
52:DT:57:PHE:HE1	52:DT:79:HIS:HD1	1.64	0.46
54:DV:29:PRO:HA	54:DV:61:VAL:O	2.16	0.46
54:DV:91:TYR:CD1	54:DV:91:TYR:N	2.83	0.46
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1392:G:N2	1:AA:1502:A:C8	2.83	0.45
1:AA:1399:C:C2	1:AA:1502:A:N6	2.84	0.45
1:AA:678:U:H2'	1:AA:679:C:C6	2.49	0.45
1:AA:978:A:C5	1:AA:1319:A:C2	3.04	0.45
3:AC:50:ALA:O	3:AC:70:VAL:CG1	2.63	0.45
4:AD:135:LEU:HD13	4:AD:135:LEU:N	2.32	0.45
4:AD:149:ALA:HB3	4:AD:152:SER:OG	2.16	0.45
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.98	0.45
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.31	0.45
19:AS:43:GLU:C	19:AS:45:VAL:N	2.69	0.45
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB2	1.98	0.45
25:AZ:162:GLU:OE2	61:AZ:502:KIR:H151	2.15	0.45
36:BA:1023:U:H2'	36:BA:1024:G:H5'	1.97	0.45
36:BA:1526:G:H2'	36:BA:1527:G:O4'	2.17	0.45
36:BA:1528(A):A:N6	36:BA:1541:G:C2	2.84	0.45
36:BA:2121:G:H22	36:BA:2176:A:H2	1.61	0.45
36:BA:2583:G:H2'	36:BA:2584:U:O2	2.16	0.45
36:BA:2649:U:H2'	36:BA:2650:U:C6	2.51	0.45
36:BA:336:C:H4'	57:BY:7:VAL:HG21	1.96	0.45
36:BA:445:C:O2'	36:BA:446:G:H5'	2.16	0.45
39:BD:95:LEU:HD12	39:BD:103:ARG:O	2.16	0.45
40:BE:16:ARG:NH1	40:BE:171:GLU:OE1	2.49	0.45
41:BF:68:LYS:HB3	41:BF:69:HIS:CD2	2.50	0.45
42:BG:10:LYS:O	42:BG:15:VAL:HG23	2.16	0.45
42:BG:28:VAL:HG12	42:BG:28:VAL:O	2.16	0.45
45:BK:97:UNK:CB	45:BK:134:UNK:HA	2.46	0.45
36:BA:1996:C:H5	47:BO:32:TYR:OH	1.99	0.45
47:BO:69:ILE:HG13	47:BO:77:ILE:O	2.15	0.45
51:BS:83:LYS:CG	51:BS:105:ALA:HB3	2.42	0.45
51:BS:106:ARG:HH11	51:BS:108:GLY:H	1.59	0.45
52:BT:32:TYR:HD2	52:BT:81:PRO:HB2	1.78	0.45
54:BV:29:PRO:HA	54:BV:61:VAL:O	2.16	0.45
1:CA:1030:C:H41	1:CA:1032:G:N2	2.07	0.45
1:CA:320:C:H2'	1:CA:321:A:C8	2.51	0.45
3:CC:159:GLY:O	3:CC:160:ALA:C	2.53	0.45
3:CC:79:ARG:HB2	3:CC:79:ARG:NH1	2.29	0.45
4:CD:3:ARG:HG2	4:CD:3:ARG:HH11	1.81	0.45
10:CJ:81:THR:C	10:CJ:83:GLU:N	2.69	0.45
12:CL:75:HIS:HA	12:CL:102:ARG:HH22	1.79	0.45
12:CL:33:ARG:HD3	12:CL:62:SER:CB	2.45	0.45
22:CW:76:A:N6	36:DA:2422:A:O4'	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:1:A:H2'	24:CY:2:G:C8	2.50	0.45
25:CZ:328:GLY:O	25:CZ:329:GLY:O	2.34	0.45
25:CZ:90:LYS:O	25:CZ:93:ILE:HG23	2.16	0.45
28:D2:33:MET:O	28:D2:36:ARG:N	2.46	0.45
34:D8:22:VAL:CG2	34:D8:53:PRO:HB2	2.47	0.45
36:DA:1058:G:C3'	36:DA:1059:G:H5''	2.46	0.45
36:DA:1270:C:H5''	36:DA:1271:G:C5'	2.45	0.45
36:DA:1286:A:N6	36:DA:1289:C:C2	2.85	0.45
36:DA:1493:C:O2	36:DA:1493:C:H2'	2.15	0.45
36:DA:201:C:H2'	36:DA:202:U:H5'	1.99	0.45
36:DA:2305:A:C3'	36:DA:2306:C:H5''	2.43	0.45
36:DA:2537:U:H2'	36:DA:2538:C:C6	2.51	0.45
36:DA:2750:A:OP2	43:DH:62:LYS:HE2	2.16	0.45
36:DA:541:C:O2'	36:DA:542:C:H5'	2.16	0.45
36:DA:779:U:O2'	36:DA:780:G:H5'	2.16	0.45
36:DA:806:C:C5	48:DP:39:LYS:HE2	2.51	0.45
37:DB:96:U:H2'	37:DB:97:G:C8	2.51	0.45
38:DC:66:HIS:CG	38:DC:184:LYS:HD2	2.51	0.45
39:DD:27:THR:CG2	39:DD:81:ALA:HB1	2.45	0.45
42:DG:172:LEU:O	42:DG:176:LEU:HB2	2.16	0.45
42:DG:71:THR:CB	42:DG:89:GLY:O	2.61	0.45
47:DO:103:ALA:HB1	47:DO:105:GLU:OE1	2.16	0.45
53:DU:47:TYR:O	53:DU:51:LYS:HG2	2.17	0.45
54:DV:60:GLU:O	54:DV:62:LEU:HD22	2.16	0.45
57:DY:31:LEU:HD23	57:DY:36:ALA:C	2.36	0.45
57:DY:87:LYS:HG3	57:DY:88:LYS:N	2.26	0.45
1:AA:59:A:N3	1:AA:59:A:H2'	2.31	0.45
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.49	0.45
4:AD:60:GLU:OE1	4:AD:60:GLU:HA	2.17	0.45
5:AE:76:ILE:HG13	5:AE:93:PRO:HG3	1.99	0.45
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.80	0.45
12:AL:110:VAL:HG21	12:AL:120:TYR:HB3	1.95	0.45
1:AA:1308:U:OP2	13:AM:99:ARG:HG3	2.16	0.45
15:AO:21:ASP:C	15:AO:21:ASP:OD1	2.52	0.45
25:AZ:11:HIS:O	25:AZ:12:VAL:HG13	2.17	0.45
25:AZ:147:LEU:H	25:AZ:147:LEU:HD22	1.81	0.45
25:AZ:325:LYS:HE3	25:AZ:331:HIS:CG	2.52	0.45
25:AZ:375:ILE:HG13	25:AZ:376:LYS:HG3	1.98	0.45
30:B4:7:PRO:O	30:B4:8:LYS:CB	2.64	0.45
31:B5:48:GLU:O	31:B5:49:CYS:CB	2.64	0.45
32:B6:52:VAL:O	32:B6:53:LYS:O	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1259:G:O2'	36:BA:1260:G:H5'	2.16	0.45
36:BA:1493:C:O2	36:BA:1493:C:H2'	2.16	0.45
36:BA:1272:A:C2	36:BA:1618:A:C2	3.05	0.45
36:BA:2032:G:OP2	36:BA:2454:G:O2'	2.30	0.45
36:BA:2584:U:O4'	36:BA:2584:U:O2	2.34	0.45
36:BA:271(F):C:O2'	36:BA:271(G):C:H5'	2.16	0.45
36:BA:481:G:P	57:BY:47:LYS:HD3	2.56	0.45
42:BG:63:ILE:HG22	42:BG:143:GLU:CB	2.40	0.45
46:BN:63:THR:O	46:BN:64:GLY:O	2.34	0.45
47:BO:105:GLU:O	47:BO:109:LYS:HG2	2.16	0.45
48:BP:83:VAL:HG23	48:BP:105:LEU:CD2	2.46	0.45
52:BT:101:PHE:HE2	52:BT:113:LYS:HG2	1.82	0.45
52:BT:126:ALA:O	52:BT:128:GLU:HG3	2.17	0.45
40:BE:52:LEU:CD1	52:BT:1:MET:HG2	2.36	0.45
56:BX:12:VAL:HA	56:BX:27:THR:O	2.15	0.45
57:BY:95:LYS:HG3	57:BY:99:CYS:O	2.17	0.45
3:CC:82:GLU:OE1	3:CC:82:GLU:N	2.49	0.45
4:CD:122:ARG:HA	4:CD:122:ARG:HD2	1.83	0.45
5:CE:20:GLN:HB3	5:CE:20:GLN:HE21	1.53	0.45
7:CG:75:VAL:HG13	7:CG:145:ALA:HB2	1.98	0.45
10:CJ:16:LEU:HD11	10:CJ:70:ARG:CG	2.46	0.45
10:CJ:58:ASP:O	10:CJ:59:SER:HB3	2.16	0.45
13:CM:2:ALA:HB1	13:CM:4:ILE:CD1	2.46	0.45
24:CY:76:A:C8	25:CZ:231:ILE:HG12	2.50	0.45
25:CZ:372:VAL:HG12	25:CZ:373:GLU:N	2.30	0.45
25:CZ:64:ASN:N	25:CZ:83:PRO:HG2	2.31	0.45
28:D2:29:LYS:HZ2	28:D2:32:LEU:HD11	1.80	0.45
32:D6:13:CYS:HA	32:D6:50:ARG:O	2.17	0.45
34:D8:49:VAL:CG1	34:D8:53:PRO:HD3	2.44	0.45
36:DA:1019:U:C2'	36:DA:1021:A:C2	2.99	0.45
36:DA:189:G:H2'	36:DA:205:G:N2	2.32	0.45
36:DA:2762:G:H2'	36:DA:2763:G:O4'	2.16	0.45
36:DA:478:A:C6	36:DA:480:A:C6	3.04	0.45
36:DA:652:C:O2'	36:DA:653:A:O5'	2.33	0.45
36:DA:729:G:C8	39:DD:208:LYS:HD2	2.51	0.45
36:DA:845:G:O2'	36:DA:846:C:H5	2.00	0.45
39:DD:147:LEU:HD12	39:DD:147:LEU:HA	1.80	0.45
40:DE:47:VAL:HG21	40:DE:86:PRO:HD2	1.98	0.45
41:DF:142:TRP:C	41:DF:142:TRP:CE3	2.90	0.45
41:DF:171:PRO:C	41:DF:173:VAL:H	2.20	0.45
42:DG:41:GLN:HE21	42:DG:155:MET:HB3	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:96:ARG:O	42:DG:98:ARG:N	2.49	0.45
46:DN:9:VAL:HG12	46:DN:10:GLU:H	1.80	0.45
46:DN:16:ILE:HG23	46:DN:54:VAL:HG22	1.98	0.45
48:DP:80:TYR:CD1	48:DP:111:ARG:CB	2.98	0.45
49:DQ:39:PRO:O	49:DQ:40:ALA:HB2	2.16	0.45
40:DE:111:ARG:CB	50:DR:2:ARG:NH1	2.72	0.45
52:DT:10:VAL:O	52:DT:12:SER:N	2.47	0.45
1:CA:1442(B):A:C2	52:DT:118:ARG:CZ	2.99	0.45
52:DT:30:VAL:HA	52:DT:43:GLN:O	2.16	0.45
56:DX:28:PHE:CE2	56:DX:92:LEU:HD11	2.50	0.45
4:AD:20:TYR:HD1	4:AD:26:CYS:O	1.99	0.45
4:AD:12:CYS:SG	4:AD:31:CYS:SG	3.14	0.45
5:AE:112:LEU:HA	5:AE:112:LEU:HD23	1.71	0.45
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.17	0.45
9:AI:5:TYR:CG	9:AI:6:GLY:N	2.85	0.45
10:AJ:8:LEU:CD2	10:AJ:96:ILE:HG22	2.46	0.45
17:AQ:83:ASP:CG	17:AQ:84:LEU:N	2.68	0.45
24:AY:21:A:H5'	24:AY:22:G:OP1	2.16	0.45
24:AY:25:C:C2'	24:AY:26:A:C5'	2.78	0.45
24:AY:76:A:C6	25:AZ:271:GLU:CD	2.89	0.45
25:AZ:155:ARG:HG2	25:AZ:165:GLY:O	2.16	0.45
25:AZ:191:GLY:HA3	25:AZ:197:ASP:OD2	2.16	0.45
25:AZ:251:ASP:HB2	25:AZ:267:VAL:CG1	2.47	0.45
27:B1:67:ILE:N	27:B1:68:PRO:CD	2.79	0.45
34:B8:23:VAL:HA	34:B8:47:LYS:O	2.15	0.45
36:BA:1331:A:C2'	36:BA:1332:G:H5''	2.45	0.45
36:BA:1479:G:H5'	36:BA:1558:A:C2	2.51	0.45
36:BA:1771:C:C1'	36:BA:1786:A:H8	2.30	0.45
36:BA:221:A:O2'	36:BA:222:A:OP2	2.28	0.45
36:BA:2298:A:H2'	36:BA:2299:G:O4'	2.17	0.45
36:BA:2657:A:H5'	36:BA:2658:C:OP2	2.16	0.45
36:BA:603:A:H1'	36:BA:604:G:OP2	2.17	0.45
34:B8:18:ALA:HB2	36:BA:628:G:H5''	1.98	0.45
36:BA:7:G:H2'	36:BA:8:A:C8	2.51	0.45
36:BA:860:U:O4'	36:BA:860:U:O2	2.31	0.45
36:BA:887:A:N3	36:BA:887:A:H2'	2.30	0.45
36:BA:958:U:H5''	49:BQ:14:ARG:HD2	1.99	0.45
38:BC:118:ASP:CG	38:BC:119:VAL:H	2.20	0.45
41:BF:142:TRP:CE3	41:BF:142:TRP:C	2.89	0.45
46:BN:70:LYS:O	46:BN:86:PRO:HA	2.16	0.45
46:BN:99:LEU:O	46:BN:102:ALA:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:26:LYS:HB2	47:BO:30:ALA:HB2	1.98	0.45
50:BR:21:TYR:HB3	50:BR:47:PHE:CD2	2.51	0.45
52:BT:117:ASP:OD2	52:BT:120:ARG:HG3	2.17	0.45
54:BV:17:GLY:O	54:BV:18:LEU:HD13	2.15	0.45
55:BW:17:VAL:O	55:BW:19:LEU:N	2.50	0.45
58:BZ:100:VAL:O	58:BZ:124:ILE:HG12	2.16	0.45
37:BB:106:G:C5'	58:BZ:31:ARG:HG2	2.44	0.45
58:BZ:27:VAL:HG22	58:BZ:36:LYS:HA	1.99	0.45
1:CA:1006:C:N4	1:CA:1024:G:H21	2.14	0.45
1:CA:291:C:O2'	1:CA:292:G:H5'	2.17	0.45
1:CA:775:G:O2'	1:CA:776:G:H5'	2.16	0.45
2:CB:97:TRP:CH2	2:CB:176:GLU:CD	2.87	0.45
2:CB:39:ILE:CG2	2:CB:40:HIS:N	2.79	0.45
5:CE:55:VAL:O	5:CE:55:VAL:HG12	2.15	0.45
6:CF:12:PRO:HG3	6:CF:55:ASP:CB	2.47	0.45
10:CJ:54:PHE:CE1	10:CJ:55:LYS:HE3	2.51	0.45
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HD12	1.97	0.45
1:CA:391:G:H5''	16:CP:8:ARG:NE	2.30	0.45
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.94	0.45
20:CT:84:LEU:C	20:CT:86:ARG:N	2.67	0.45
25:CZ:339:ARG:HE	25:CZ:352:VAL:CG2	2.29	0.45
25:CZ:12:VAL:HG23	25:CZ:77:TYR:CD1	2.51	0.45
26:D0:43:THR:HG22	36:DA:2331:G:O2'	2.16	0.45
26:D0:42:GLY:O	26:D0:57:PHE:CG	2.69	0.45
27:D1:78:LYS:HE2	27:D1:78:LYS:HB3	1.76	0.45
28:D2:21:LEU:O	28:D2:64:LEU:HD11	2.15	0.45
32:D6:53:LYS:HE2	32:D6:54:ILE:HG13	1.99	0.45
36:DA:1036:G:O2'	36:DA:1037:G:H5'	2.17	0.45
36:DA:1301:A:HO2'	36:DA:1302:A:P	2.40	0.45
36:DA:171:G:O2'	36:DA:172:C:H5'	2.15	0.45
36:DA:2179:C:H4'	36:DA:2180:U:N3	2.30	0.45
36:DA:2289:G:H1'	36:DA:2346:A:H2	1.82	0.45
36:DA:227:A:C2	36:DA:2407:G:H1'	2.51	0.45
36:DA:2779:U:H1'	36:DA:2781:A:C5	2.52	0.45
36:DA:2788:C:O2'	36:DA:2809:A:N3	2.48	0.45
36:DA:2870:C:H2'	36:DA:2871:C:O4'	2.17	0.45
36:DA:812:C:H5'	48:DP:25:SER:HA	1.97	0.45
36:DA:848:G:O6	36:DA:928:G:H2'	2.16	0.45
37:DB:29:A:H2'	37:DB:30:C:H6	1.81	0.45
37:DB:81:G:H2'	37:DB:82:G:H5'	1.98	0.45
42:DG:107:LEU:HD13	42:DG:178:PHE:CD1	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:99:LEU:O	46:DN:102:ALA:HB3	2.16	0.45
46:DN:29:LYS:C	46:DN:31:ALA:N	2.69	0.45
47:DO:34:THR:OG1	47:DO:35:VAL:N	2.50	0.45
50:DR:2:ARG:HH11	50:DR:2:ARG:CG	2.29	0.45
51:DS:106:ARG:CB	51:DS:106:ARG:HH11	2.21	0.45
52:DT:33:LYS:HE2	52:DT:43:GLN:HE21	1.79	0.45
54:DV:80:GLN:OE1	54:DV:80:GLN:HA	2.15	0.45
1:AA:1004:A:C2'	1:AA:1005:A:H5'	2.47	0.45
1:AA:1309:G:O2'	1:AA:1310:G:H5'	2.17	0.45
1:AA:245:C:O2'	1:AA:246:A:P	2.75	0.45
1:AA:858:G:C5	1:AA:869:G:N7	2.82	0.45
2:AB:239:VAL:O	2:AB:240:GLN:CB	2.65	0.45
2:AB:39:ILE:CG2	2:AB:40:HIS:N	2.79	0.45
4:AD:145:GLU:HG3	4:AD:145:GLU:O	2.15	0.45
7:AG:69:VAL:HG21	7:AG:104:LEU:HD13	1.99	0.45
8:AH:126:LYS:O	8:AH:127:LEU:HD22	2.16	0.45
11:AK:17:GLY:O	11:AK:80:VAL:HA	2.17	0.45
12:AL:41:ARG:NH1	12:AL:41:ARG:HB2	2.31	0.45
12:AL:43:VAL:HG22	12:AL:55:VAL:CG1	2.47	0.45
13:AM:22:ILE:CB	13:AM:25:ILE:HD12	2.47	0.45
13:AM:89:GLY:O	13:AM:93:ARG:HD2	2.16	0.45
26:B0:41:ARG:O	26:B0:57:PHE:CD2	2.69	0.45
28:B2:52:ASP:OD1	28:B2:55:ARG:HD2	2.16	0.45
33:B7:21:ARG:NH1	33:B7:21:ARG:HG2	2.32	0.45
34:B8:6:THR:CB	34:B8:11:LYS:HZ1	2.26	0.45
35:B9:15:LYS:HZ2	35:B9:15:LYS:HB3	1.79	0.45
36:BA:1884:A:C3'	36:BA:1885:A:H5''	2.46	0.45
36:BA:2485:G:O2'	36:BA:2486:G:H5'	2.16	0.45
36:BA:257:A:H2'	36:BA:258:G:H5'	1.99	0.45
36:BA:271(U):G:H2'	36:BA:271(V):G:H8	1.81	0.45
36:BA:2864:G:OP1	52:BT:119:LYS:HD2	2.17	0.45
36:BA:986:C:O2'	36:BA:987:G:H5'	2.17	0.45
36:BA:2787:C:H1'	40:BE:61:ARG:CD	2.47	0.45
41:BF:171:PRO:C	41:BF:173:VAL:H	2.19	0.45
41:BF:81:PRO:C	41:BF:82:ILE:O	2.52	0.45
43:BH:55:PRO:HG2	43:BH:61:HIS:HD2	1.80	0.45
43:BH:84:SER:O	43:BH:85:LYS:HB3	2.16	0.45
46:BN:29:LYS:C	46:BN:31:ALA:N	2.70	0.45
48:BP:57:THR:OG1	48:BP:58:THR:N	2.49	0.45
49:BQ:43:THR:HB	49:BQ:45:GLN:HE21	1.81	0.45
52:BT:30:VAL:CG2	52:BT:84:GLN:HG3	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:47:TYR:O	53:BU:51:LYS:HG2	2.16	0.45
1:CA:628:G:O2'	1:CA:629:G:H5'	2.17	0.45
2:CB:203:GLY:O	2:CB:204:ASN:C	2.55	0.45
2:CB:213:LEU:O	2:CB:213:LEU:HD23	2.17	0.45
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.98	0.45
3:CC:165:THR:CG2	3:CC:165:THR:O	2.65	0.45
7:CG:54:THR:HG22	7:CG:56:GLN:N	2.05	0.45
1:CA:1222:G:OP1	19:CS:77:THR:HG21	2.15	0.45
22:CW:1:G:C2	22:CW:73:A:C2	3.05	0.45
24:CY:75:C:H5	25:CZ:232:THR:HB	1.78	0.45
25:CZ:31:LEU:HD23	25:CZ:199:ILE:HG23	1.98	0.45
36:DA:1464:C:C2	36:DA:1465:G:C8	3.03	0.45
36:DA:1512:U:H2'	36:DA:1513:C:C6	2.51	0.45
36:DA:2540:C:H2'	36:DA:2541:A:O4'	2.17	0.45
36:DA:2848:G:C8	52:DT:97:ALA:HB2	2.51	0.45
36:DA:414:C:H1'	36:DA:1864:U:O2'	2.16	0.45
36:DA:975:C:H4'	36:DA:975:C:OP2	2.17	0.45
38:DC:80:GLY:O	38:DC:83:ILE:HG13	2.16	0.45
39:DD:132:PRO:HG3	39:DD:190:TYR:CZ	2.51	0.45
36:DA:2572:A:N7	40:DE:145:LYS:HG2	2.32	0.45
41:DF:157:VAL:HG21	41:DF:194:MET:HG2	1.97	0.45
41:DF:36:VAL:HA	41:DF:101:LEU:HD21	1.98	0.45
41:DF:37:VAL:HG11	48:DP:7:ARG:HH12	1.81	0.45
41:DF:65:TRP:CZ3	41:DF:72:ARG:HB2	2.51	0.45
42:DG:107:LEU:O	42:DG:108:ASN:CB	2.64	0.45
49:DQ:81:VAL:HG12	49:DQ:82:ARG:O	2.17	0.45
52:DT:85:LYS:HZ2	52:DT:85:LYS:HB3	1.73	0.45
52:DT:90:GLN:C	52:DT:92:GLY:N	2.68	0.45
55:DW:107:LEU:N	55:DW:107:LEU:CD1	2.76	0.45
55:DW:50:VAL:HG22	55:DW:105:VAL:HG23	1.97	0.45
1:AA:390:C:H2'	1:AA:391:G:C8	2.52	0.45
1:AA:458:C:H2'	1:AA:460:G:C8	2.51	0.45
1:AA:818:G:O2'	1:AA:819:A:H5'	2.17	0.45
2:AB:103:THR:CG2	2:AB:176:GLU:HG2	2.46	0.45
4:AD:23:GLY:O	4:AD:27:TYR:HD2	1.99	0.45
4:AD:59:ARG:NH2	4:AD:62:GLN:HG3	2.29	0.45
7:AG:65:ALA:HB1	7:AG:127:ALA:CB	2.41	0.45
10:AJ:32:ALA:CB	10:AJ:76:ASN:H	2.29	0.45
16:AP:22:THR:HG23	16:AP:23:ASP:N	2.32	0.45
22:AV:14:A:H2'	22:AV:15:G:H5'	1.99	0.45
22:AV:57:G:C2'	22:AV:58:A:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:52:A:O2'	24:AY:53:G:H5'	2.17	0.45
25:AZ:145:GLU:O	25:AZ:149:LEU:N	2.39	0.45
25:AZ:5:PHE:CD1	25:AZ:277:LEU:HD22	2.52	0.45
28:B2:7:ARG:CD	28:B2:7:ARG:N	2.80	0.45
36:BA:1045:A:N3	36:BA:1047:G:N2	2.65	0.45
36:BA:1199:U:H2'	36:BA:1200:C:C6	2.52	0.45
36:BA:1286:A:N6	36:BA:1289:C:C2	2.85	0.45
33:B7:1:MET:HA	36:BA:1620:G:O4'	2.15	0.45
36:BA:2030:A:H5''	36:BA:2031:A:OP1	2.16	0.45
36:BA:2580:U:H5'	40:BE:131:ALA:CB	2.38	0.45
36:BA:2648:C:H2'	36:BA:2649:U:C6	2.51	0.45
38:BC:189:ILE:O	38:BC:193:ILE:HG13	2.16	0.45
38:BC:90:GLY:O	38:BC:157:LYS:HE3	2.17	0.45
39:BD:43:ARG:NH2	39:BD:44:ASN:ND2	2.55	0.45
40:BE:89:ASP:CG	40:BE:90:THR:H	2.19	0.45
41:BF:185:ASP:CA	41:BF:188:ARG:HG2	2.45	0.45
36:BA:811:U:OP2	48:BP:30:THR:HG23	2.16	0.45
48:BP:92:GLU:HA	48:BP:123:LEU:HD11	1.97	0.45
54:BV:16:PRO:O	54:BV:96:ILE:HB	2.17	0.45
58:BZ:99:TYR:CD2	58:BZ:123:ASP:HB3	2.46	0.45
1:CA:1315:U:O2	1:CA:1360:A:H2	1.99	0.45
1:CA:627:G:HO2'	1:CA:628:G:H5'	1.81	0.45
1:CA:973:G:H3'	1:CA:974:A:H5''	1.97	0.45
2:CB:204:ASN:HD22	2:CB:206:ASP:H	1.64	0.45
2:CB:73:THR:HG22	2:CB:94:ASN:C	2.36	0.45
4:CD:5:ILE:O	4:CD:5:ILE:HG22	2.15	0.45
4:CD:91:SER:O	4:CD:92:VAL:C	2.53	0.45
7:CG:15:ASP:OD1	7:CG:16:LEU:N	2.48	0.45
7:CG:65:ALA:HB1	7:CG:127:ALA:CB	2.43	0.45
11:CK:126:ARG:C	11:CK:128:ALA:N	2.70	0.45
19:CS:36:ARG:NH1	19:CS:53:ASN:HA	2.31	0.45
19:CS:45:VAL:C	19:CS:47:HIS:H	2.20	0.45
25:CZ:34:VAL:C	25:CZ:36:ALA:H	2.19	0.45
25:CZ:385:ARG:HA	25:CZ:399:VAL:HA	1.98	0.45
32:D6:20:ASN:O	32:D6:21:TYR:CG	2.69	0.45
33:D7:12:ARG:HG3	33:D7:12:ARG:O	2.15	0.45
34:D8:33:ASN:HA	34:D8:36:LYS:HE3	1.97	0.45
36:DA:1103:A:H5''	36:DA:1104:C:H5	1.81	0.45
36:DA:1315:C:O2'	36:DA:1316:U:H5'	2.17	0.45
36:DA:2266:A:H4'	36:DA:2267:A:N3	2.32	0.45
36:DA:676:A:C8	36:DA:2443:C:H1'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2649:U:H2'	36:DA:2650:U:C6	2.52	0.45
36:DA:271(K):U:C3'	36:DA:271(L):U:H5'	2.47	0.45
36:DA:2824:C:H2'	36:DA:2825:C:O4'	2.16	0.45
38:DC:162:GLU:HG2	38:DC:163:PHE:N	2.31	0.45
38:DC:72:VAL:HG13	38:DC:72:VAL:O	2.17	0.45
39:DD:142:VAL:HG23	39:DD:193:VAL:HA	1.98	0.45
39:DD:276:LYS:CA	39:DD:276:LYS:HE2	2.46	0.45
36:DA:2579:C:C1'	40:DE:134:ILE:HD13	2.45	0.45
40:DE:60:ASN:OD1	40:DE:62:PRO:HD2	2.16	0.45
41:DF:114:VAL:HG21	41:DF:202:PHE:CE2	2.51	0.45
42:DG:53:LEU:N	42:DG:53:LEU:HD22	2.32	0.45
42:DG:87:PRO:CG	42:DG:88:ILE:H	2.30	0.45
46:DN:27:ALA:HB3	46:DN:106:MET:HE1	1.98	0.45
47:DO:104:ARG:C	47:DO:106:LEU:N	2.69	0.45
48:DP:112:LEU:O	48:DP:112:LEU:HD13	2.16	0.45
50:DR:45:ARG:O	50:DR:46:GLY:C	2.53	0.45
50:DR:87:TYR:C	50:DR:89:ASP:N	2.70	0.45
51:DS:18:ILE:HD12	51:DS:18:ILE:H	1.80	0.45
58:DZ:79:ARG:O	58:DZ:79:ARG:HG2	2.17	0.45
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.16	0.45
1:AA:1256:A:H2	1:AA:1278:U:H5'	1.80	0.45
1:AA:310:G:H2'	1:AA:311:C:H6	1.82	0.45
4:AD:12:CYS:SG	4:AD:26:CYS:SG	3.15	0.45
9:AI:70:LYS:O	9:AI:73:GLN:HB2	2.17	0.45
10:AJ:94:VAL:HG12	10:AJ:95:GLU:H	1.80	0.45
13:AM:68:GLY:H	13:AM:71:ARG:CG	2.28	0.45
16:AP:22:THR:OG1	16:AP:26:ARG:HG3	2.16	0.45
17:AQ:10:VAL:HG23	17:AQ:54:GLY:H	1.80	0.45
19:AS:49:ILE:O	19:AS:60:VAL:HG12	2.16	0.45
22:AV:5:G:C8	22:AV:5:G:H5'	2.52	0.45
22:AW:57:G:O2'	22:AW:58:A:H5'	2.15	0.45
25:AZ:129:PRO:HB2	25:AZ:130:TYR:CE2	2.52	0.45
24:AY:50:G:O2'	25:AZ:339:ARG:HD2	2.16	0.45
25:AZ:345:ARG:C	25:AZ:347:THR:H	2.19	0.45
28:B2:6:VAL:HG13	28:B2:59:ARG:NH1	2.32	0.45
32:B6:15:GLU:OE2	32:B6:18:ARG:CZ	2.63	0.45
33:B7:22:MET:HE2	33:B7:22:MET:HA	1.98	0.45
34:B8:15:LYS:HB3	34:B8:46:ARG:HH22	1.81	0.45
36:BA:1120:G:H2'	36:BA:1121:C:C6	2.51	0.45
36:BA:1288:U:O2'	36:BA:1647:G:N2	2.49	0.45
36:BA:2179:C:H4'	36:BA:2180:U:N3	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:332:A:O2'	36:BA:333:G:O5'	2.34	0.45
36:BA:360:G:H2'	36:BA:361:G:H8	1.81	0.45
36:BA:696:G:C2	36:BA:767:U:O2	2.70	0.45
36:BA:880:G:H22	36:BA:897:C:N4	2.15	0.45
39:BD:70:TRP:CZ3	39:BD:146:GLU:OE2	2.69	0.45
40:BE:137:HIS:HB3	40:BE:138:PRO:HD2	1.97	0.45
40:BE:61:ARG:HB3	40:BE:62:PRO:CD	2.46	0.45
40:BE:73:GLU:OE2	40:BE:74:PRO:HD2	2.17	0.45
41:BF:36:VAL:HA	41:BF:101:LEU:HD21	1.98	0.45
41:BF:185:ASP:OD1	41:BF:188:ARG:HD3	2.16	0.45
43:BH:94:TYR:O	43:BH:95:ARG:HB3	2.17	0.45
47:BO:10:VAL:HG21	47:BO:16:ALA:O	2.17	0.45
50:BR:10:LEU:HB2	50:BR:11:ASN:H	1.55	0.45
51:BS:16:ASN:O	51:BS:18:ILE:N	2.50	0.45
51:BS:25:ARG:HD3	51:BS:42:ASP:OD1	2.17	0.45
51:BS:59:LYS:CG	51:BS:60:GLY:H	2.14	0.45
54:BV:62:LEU:H	54:BV:62:LEU:CD2	2.29	0.45
56:BX:8:ILE:HD11	56:BX:43:VAL:CG2	2.47	0.45
57:BY:77:PRO:O	57:BY:78:ALA:CB	2.64	0.45
58:BZ:57:ILE:N	58:BZ:69:THR:O	2.50	0.45
1:CA:1270:C:H2'	1:CA:1271:G:H8	1.82	0.45
1:CA:189:G:O2'	1:CA:189(A):C:H5'	2.17	0.45
2:CB:92:TYR:HE1	2:CB:94:ASN:HD21	1.64	0.45
1:CA:1190:G:OP1	3:CC:4:LYS:HA	2.17	0.45
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.17	0.45
4:CD:62:GLN:HE21	4:CD:62:GLN:CA	2.25	0.45
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.51	0.45
9:CI:53:VAL:C	9:CI:55:ALA:H	2.20	0.45
14:CN:19:ARG:O	14:CN:20:ALA:O	2.34	0.45
20:CT:15:ARG:O	20:CT:19:SER:HB2	2.17	0.45
22:CW:9:A:O2'	22:CW:10:G:N7	2.48	0.45
24:CY:52:A:H2'	24:CY:53:G:H5'	1.99	0.45
26:D0:53:MET:CG	26:D0:57:PHE:HA	2.47	0.45
27:D1:79:GLY:O	27:D1:80:LEU:CB	2.64	0.45
28:D2:25:VAL:HG21	28:D2:61:LEU:HD21	1.99	0.45
28:D2:25:VAL:O	28:D2:27:GLU:N	2.48	0.45
29:D3:17:LYS:HA	29:D3:17:LYS:HD3	1.62	0.45
30:D4:7:PRO:CG	42:DG:61:ALA:HB1	2.46	0.45
34:D8:31:HIS:HE1	36:DA:2392:A:OP2	2.00	0.45
36:DA:1131:G:HO2'	36:DA:1132:A:H8	1.63	0.45
36:DA:1516:C:H2'	36:DA:1517:G:H5''	1.94	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1779:U:C2	36:DA:1783:A:N7	2.85	0.45
38:DC:118:ASP:CG	38:DC:119:VAL:H	2.19	0.45
39:DD:142:VAL:HG22	39:DD:143:HIS:H	1.80	0.45
41:DF:178:PRO:HG2	41:DF:179:GLU:H	1.82	0.45
41:DF:17:ARG:HH11	41:DF:17:ARG:HG3	1.81	0.45
41:DF:93:LYS:O	41:DF:94:PRO:C	2.55	0.45
42:DG:11:TYR:O	42:DG:15:VAL:HB	2.17	0.45
43:DH:147:ASN:O	43:DH:151:ILE:HG12	2.17	0.45
48:DP:96:THR:CG2	48:DP:126:VAL:HB	2.44	0.45
53:DU:93:LYS:O	53:DU:96:ALA:HB3	2.16	0.45
36:DA:64:A:H5'	56:DX:64:LYS:CE	2.46	0.45
57:DY:73:ARG:O	57:DY:74:PRO:O	2.35	0.45
57:DY:96:ILE:O	57:DY:96:ILE:HG13	2.16	0.45
1:AA:1054:C:H4'	1:AA:1055:A:O5'	2.16	0.45
1:AA:179:A:H2'	1:AA:180:U:C6	2.52	0.45
1:AA:61:G:H2'	1:AA:62:U:O4'	2.17	0.45
1:AA:735:C:H2'	1:AA:736:C:C6	2.51	0.45
1:AA:972:C:H4'	10:AJ:57:LYS:HB2	1.98	0.45
2:AB:229:VAL:CG1	2:AB:230:VAL:N	2.80	0.45
3:AC:32:LEU:O	3:AC:35:GLU:HB3	2.16	0.45
4:AD:171:GLY:C	4:AD:173:TRP:H	2.19	0.45
9:AI:20:ARG:CG	9:AI:20:ARG:HH11	2.26	0.45
9:AI:53:VAL:C	9:AI:55:ALA:H	2.20	0.45
11:AK:110:ASP:HB2	18:AR:88:LYS:HG3	1.99	0.45
12:AL:42:THR:O	12:AL:42:THR:HG23	2.16	0.45
13:AM:40:ASN:ND2	13:AM:43:THR:HG23	2.31	0.45
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.16	0.45
22:AV:22:G:O2'	22:AV:23:A:H5'	2.16	0.45
1:AA:367:U:H5'	25:AZ:291:ARG:HE	1.77	0.45
25:AZ:327:GLU:HA	61:AZ:502:KIR:H101	1.98	0.45
25:AZ:90:LYS:HA	25:AZ:93:ILE:CG2	2.46	0.45
27:B1:58:ILE:HD11	27:B1:91:LYS:HB2	1.99	0.45
32:B6:44:ARG:O	32:B6:46:HIS:ND1	2.49	0.45
36:BA:1131:G:OP1	46:BN:80:GLY:N	2.45	0.45
36:BA:1313:U:H3'	36:BA:1314:C:H5'	1.98	0.45
36:BA:1827:C:H2'	36:BA:1828:G:C5'	2.47	0.45
36:BA:1997:G:O2'	36:BA:1998:G:H5'	2.17	0.45
36:BA:185:U:C2	36:BA:212:G:N2	2.85	0.45
36:BA:2131:G:C1'	36:BA:2133:G:H21	2.25	0.45
36:BA:2306:C:H5	36:BA:2307:G:HO2'	1.62	0.45
36:BA:2545:G:N3	36:BA:2565:A:H2	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:271(K):U:H3'	36:BA:271(L):U:H5'	1.97	0.45
36:BA:2792:G:O2'	36:BA:2793:G:H5'	2.16	0.45
36:BA:380:U:H2'	36:BA:381:G:H8	1.81	0.45
38:BC:30:LYS:NZ	38:BC:30:LYS:HB3	2.31	0.45
38:BC:57:ASN:HA	38:BC:57:ASN:HD22	1.53	0.45
38:BC:74:VAL:CG1	38:BC:75:LEU:N	2.80	0.45
38:BC:80:GLY:O	38:BC:83:ILE:HG13	2.17	0.45
39:BD:147:LEU:HD12	39:BD:147:LEU:HA	1.79	0.45
40:BE:52:LEU:HD23	40:BE:75:VAL:HB	1.99	0.45
41:BF:37:VAL:HG11	48:BP:7:ARG:HH12	1.81	0.45
42:BG:131:TYR:HB3	42:BG:159:VAL:HG11	1.96	0.45
43:BH:65:HIS:O	43:BH:67:LEU:N	2.40	0.45
46:BN:41:ASP:O	46:BN:42:TRP:C	2.54	0.45
52:BT:57:PHE:HE1	52:BT:79:HIS:HD1	1.64	0.45
53:BU:59:ARG:HH11	53:BU:59:ARG:HG2	1.80	0.45
53:BU:61:TRP:C	53:BU:65:ILE:HD13	2.36	0.45
53:BU:92:ARG:CB	54:BV:11:GLN:NE2	2.80	0.45
54:BV:28:GLU:O	54:BV:61:VAL:CG2	2.64	0.45
55:BW:20:VAL:CG2	55:BW:47:VAL:HG21	2.47	0.45
56:BX:71:GLY:C	56:BX:72:LYS:HD2	2.37	0.45
1:CA:1125:U:C6	1:CA:1125:U:C3'	2.92	0.45
1:CA:1413:A:C2	1:CA:1488:G:C2	3.05	0.45
1:CA:374:A:C4	1:CA:375:U:C5	3.05	0.45
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.16	0.45
1:CA:942:G:H2'	1:CA:943:U:H6	1.82	0.45
3:CC:84:ILE:HG23	3:CC:85:ARG:HH11	1.82	0.45
5:CE:50:GLU:HB3	5:CE:53:LEU:HD13	1.98	0.45
1:CA:1116:C:HO2'	9:CI:108:VAL:HG21	1.82	0.45
9:CI:40:LEU:C	9:CI:42:ARG:N	2.70	0.45
9:CI:56:LEU:H	9:CI:56:LEU:CD2	2.28	0.45
9:CI:58:HIS:CG	9:CI:58:HIS:O	2.70	0.45
9:CI:6:GLY:HA3	9:CI:84:ALA:HB2	1.98	0.45
9:CI:93:ARG:O	9:CI:95:LYS:N	2.49	0.45
10:CJ:5:ARG:HG3	10:CJ:73:ASP:OD2	2.17	0.45
25:CZ:334:PHE:N	25:CZ:334:PHE:CD1	2.85	0.45
25:CZ:90:LYS:HA	25:CZ:93:ILE:CG2	2.47	0.45
34:D8:18:ALA:HB2	36:DA:628:G:H5''	1.99	0.45
36:DA:1076:C:N4	36:DA:1088:A:H61	2.14	0.45
36:DA:1259:G:O2'	36:DA:1260:G:H5'	2.17	0.45
36:DA:1331:A:C2'	36:DA:1332:G:H5''	2.47	0.45
36:DA:1362:C:C2'	36:DA:1363:C:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1409:C:H4'	36:DA:1915:U:O4	2.17	0.45
36:DA:2110:G:C2	36:DA:2178:C:H5	2.34	0.45
36:DA:2157:G:C3'	36:DA:2157:G:C8	2.99	0.45
36:DA:2219:G:C2'	36:DA:2220:G:H5'	2.47	0.45
36:DA:2326:C:H41	36:DA:2389:G:H1	1.65	0.45
36:DA:603:A:N6	36:DA:626:U:H4'	2.31	0.45
38:DC:118:ASP:CG	38:DC:119:VAL:N	2.70	0.45
38:DC:192:PHE:O	38:DC:192:PHE:CG	2.69	0.45
39:DD:108:PRO:HB3	39:DD:143:HIS:CE1	2.52	0.45
40:DE:101:ARG:HD2	40:DE:169:ASN:O	2.16	0.45
41:DF:107:LYS:HE3	41:DF:205:ARG:HG2	1.98	0.45
42:DG:68:PRO:HB3	42:DG:92:VAL:HB	1.99	0.45
42:DG:87:PRO:CG	42:DG:88:ILE:N	2.77	0.45
46:DN:56:ASN:H	46:DN:125:GLY:HA3	1.81	0.45
46:DN:67:LEU:C	46:DN:69:GLN:H	2.19	0.45
48:DP:92:GLU:HA	48:DP:123:LEU:HD11	1.98	0.45
53:DU:69:CYS:HG	53:DU:79:PHE:HD2	1.65	0.45
54:DV:16:PRO:O	54:DV:96:ILE:HB	2.16	0.45
54:DV:49:THR:O	54:DV:50:PRO:C	2.55	0.45
56:DX:64:LYS:HD3	56:DX:73:ARG:NH2	2.31	0.45
57:DY:3:VAL:O	57:DY:3:VAL:HG12	2.16	0.45
58:DZ:7:ALA:O	58:DZ:61:LEU:HA	2.17	0.45
1:AA:192:U:H1'	20:AT:103:GLY:CA	2.44	0.45
1:AA:719:C:C2	18:AR:50:ILE:HG12	2.51	0.45
2:AB:165:VAL:CG2	2:AB:166:ASP:N	2.71	0.45
3:AC:152:ILE:HG12	3:AC:167:TRP:HB2	1.99	0.45
3:AC:35:GLU:CD	3:AC:95:THR:HG23	2.38	0.45
9:AI:48:GLU:HG3	9:AI:101:PHE:CZ	2.52	0.45
12:AL:57:LYS:HA	12:AL:67:THR:HA	1.97	0.45
19:AS:35:SER:C	19:AS:37:ARG:H	2.21	0.45
22:AV:61:C:O2	22:AV:61:C:H2'	2.17	0.45
31:B5:16:ARG:NH1	31:B5:17:ASP:OD1	2.50	0.45
32:B6:26:ASN:HB3	32:B6:27:LYS:H	1.46	0.45
36:BA:1131:G:O6	36:BA:2040:C:H1'	2.17	0.45
36:BA:1375:C:O2'	36:BA:1376:C:H5'	2.17	0.45
36:BA:562:U:O4	36:BA:2036:C:H1'	2.16	0.45
36:BA:2188:C:H2'	36:BA:2189:U:C5	2.52	0.45
36:BA:2464:C:HO2'	36:BA:2465:C:P	2.39	0.45
36:BA:271(K):U:C3'	36:BA:271(L):U:H5'	2.47	0.45
36:BA:2762:G:H2'	36:BA:2763:G:C5'	2.46	0.45
36:BA:391:G:O2'	36:BA:392:C:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:742:G:H2'	36:BA:743:G:H8	1.81	0.45
36:BA:769:G:O2'	36:BA:770:G:H5'	2.17	0.45
39:BD:142:VAL:HG22	39:BD:143:HIS:H	1.82	0.45
36:BA:320:A:H3'	41:BF:136:THR:CG2	2.47	0.45
41:BF:110:LEU:HA	41:BF:183:VAL:CG1	2.47	0.45
42:BG:139:LEU:HA	42:BG:144:ILE:CG1	2.20	0.45
49:BQ:51:ARG:HG3	49:BQ:51:ARG:HH11	1.81	0.45
56:BX:7:VAL:HB	56:BX:8:ILE:HD12	1.99	0.45
58:BZ:10:ARG:CZ	58:BZ:36:LYS:HB2	2.46	0.45
58:BZ:122:ARG:CG	58:BZ:122:ARG:NH1	2.77	0.45
1:CA:1006:C:H2'	1:CA:1007:C:H6	1.81	0.45
1:CA:1239:A:H62	1:CA:1299:A:N6	2.14	0.45
1:CA:1347:G:C5	9:CI:107:ARG:NH2	2.85	0.45
1:CA:148:G:H2'	1:CA:149:A:C8	2.52	0.45
3:CC:186:PHE:CE2	3:CC:188:LEU:HD23	2.51	0.45
10:CJ:40:LEU:HG	10:CJ:69:ASN:HB2	1.99	0.45
15:CO:39:LEU:O	15:CO:39:LEU:HD23	2.17	0.45
17:CQ:86:GLU:O	17:CQ:87:LYS:C	2.54	0.45
18:CR:28:GLU:HG3	18:CR:28:GLU:O	2.15	0.45
18:CR:29:PHE:HD1	18:CR:29:PHE:H	1.62	0.45
18:CR:87:ARG:CB	18:CR:87:ARG:HH11	2.30	0.45
20:CT:32:ALA:O	20:CT:36:LEU:HB2	2.17	0.45
25:CZ:104:LEU:HD21	25:CZ:120:ILE:HD11	1.99	0.45
25:CZ:206:ILE:C	25:CZ:208:GLU:H	2.19	0.45
25:CZ:284:ASP:N	25:CZ:284:ASP:OD1	2.48	0.45
32:D6:15:GLU:O	32:D6:17:LYS:N	2.49	0.45
32:D6:45:LYS:O	32:D6:45:LYS:HG2	2.17	0.45
34:D8:61:LEU:HD22	36:DA:593:G:H4'	1.98	0.45
36:DA:1247:A:OP1	41:DF:95:ARG:NH2	2.50	0.45
36:DA:512:G:OP1	36:DA:1235:G:H5'	2.17	0.45
36:DA:653:A:N3	36:DA:653:A:H2'	2.32	0.45
37:DB:73:A:H2'	37:DB:74:U:H5'	1.98	0.45
41:DF:133:ASN:N	41:DF:133:ASN:HD22	2.14	0.45
41:DF:84:VAL:O	41:DF:86:GLY:N	2.50	0.45
42:DG:20:ILE:C	42:DG:22:ARG:H	2.20	0.45
42:DG:76:SER:OG	42:DG:83:ARG:HB2	2.17	0.45
43:DH:107:VAL:HG23	43:DH:107:VAL:O	2.16	0.45
43:DH:94:TYR:O	43:DH:95:ARG:HB3	2.17	0.45
47:DO:105:GLU:O	47:DO:109:LYS:HG2	2.17	0.45
50:DR:49:ASP:OD1	50:DR:95:THR:HG22	2.17	0.45
52:DT:32:TYR:HD2	52:DT:81:PRO:HB2	1.77	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:30:VAL:HG21	56:DX:39:ILE:HD11	1.99	0.45
57:DY:52:SER:O	57:DY:54:LYS:N	2.40	0.45
1:AA:349:A:O2'	1:AA:350:G:H5'	2.16	0.45
1:AA:858:G:OP2	1:AA:858:G:C8	2.70	0.45
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.51	0.45
4:AD:36:ARG:HH11	4:AD:36:ARG:CG	2.29	0.45
9:AI:24:GLY:O	9:AI:25:LYS:HD2	2.17	0.45
10:AJ:57:LYS:C	10:AJ:58:ASP:O	2.53	0.45
14:AN:32:SER:HB3	14:AN:41:ARG:HG2	1.98	0.45
18:AR:44:LEU:CD1	18:AR:50:ILE:HD13	2.47	0.45
19:AS:66:MET:O	19:AS:67:VAL:C	2.54	0.45
21:AU:6:ARG:HD3	21:AU:15:ARG:HH12	1.74	0.45
22:AV:5:G:H1	22:AV:68:C:N4	2.14	0.45
22:AW:39:U:C2'	22:AW:40:C:H5'	2.47	0.45
22:AW:44:G:P	22:AW:44:G:O4'	2.75	0.45
26:B0:43:THR:HG22	36:BA:2331:G:O3'	2.17	0.45
28:B2:53:LEU:HD23	28:B2:53:LEU:O	2.17	0.45
36:BA:2690:C:H5	50:BR:14:SER:HG	1.62	0.45
36:BA:338:G:H2'	36:BA:339:U:C6	2.52	0.45
36:BA:586:A:H5'	41:BF:89:VAL:CG2	2.42	0.45
36:BA:589:C:H2'	36:BA:590:A:H8	1.81	0.45
36:BA:863:A:H2'	36:BA:864:G:C8	2.52	0.45
37:BB:29:A:C2	37:BB:56:G:C2	3.05	0.45
40:BE:60:ASN:OD1	40:BE:62:PRO:HD2	2.17	0.45
41:BF:28:ILE:O	41:BF:28:ILE:HG12	2.16	0.45
42:BG:51:ARG:NH1	42:BG:52:ILE:HD13	2.32	0.45
43:BH:109:PHE:CZ	43:BH:152:ARG:NH1	2.85	0.45
47:BO:12:ASP:OD1	47:BO:14:THR:HG22	2.16	0.45
48:BP:95:VAL:HG23	48:BP:125:VAL:CA	2.46	0.45
50:BR:2:ARG:CG	50:BR:2:ARG:HH11	2.30	0.45
50:BR:55:ALA:CB	50:BR:79:LEU:CD1	2.95	0.45
51:BS:61:ASN:O	51:BS:62:LYS:C	2.56	0.45
53:BU:111:GLU:C	53:BU:113:ALA:N	2.69	0.45
53:BU:95:LEU:HD13	54:BV:4:ILE:HG23	1.99	0.45
1:CA:1153:C:O2'	1:CA:1154:G:H5''	2.16	0.45
1:CA:151:A:H2'	1:CA:152:A:O4'	2.17	0.45
1:CA:722:A:HO2'	1:CA:724:G:H8	1.61	0.45
2:CB:157:ARG:HH11	2:CB:157:ARG:HB3	1.81	0.45
6:CF:87:ARG:CG	6:CF:87:ARG:NH1	2.72	0.45
11:CK:38:ASN:HA	11:CK:39:PRO:HD3	1.75	0.45
12:CL:43:VAL:HG22	12:CL:55:VAL:CG1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:12:ASN:ND2	13:CM:12:ASN:N	2.63	0.45
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.16	0.45
18:CR:44:LEU:HD21	18:CR:79:LEU:HD13	1.99	0.45
19:CS:24:ALA:O	19:CS:25:LYS:CB	2.64	0.45
22:CV:22:G:C2'	22:CV:23:A:H5'	2.47	0.45
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB2	1.98	0.45
26:D0:51:VAL:HG22	26:D0:81:VAL:HG23	1.98	0.45
28:D2:20:GLU:HG3	28:D2:23:LYS:HD2	1.99	0.45
29:D3:44:ARG:O	29:D3:47:VAL:HB	2.16	0.45
34:D8:32:LEU:CG	34:D8:36:LYS:HZ1	2.30	0.45
36:DA:2726:U:H6	47:DO:67:LYS:NZ	2.15	0.45
36:DA:2801(A):A:C5'	36:DA:2802:G:C8	3.00	0.45
36:DA:588:U:H2'	36:DA:589:C:C6	2.52	0.45
36:DA:673:C:H6	36:DA:673:C:C5'	2.23	0.45
37:DB:80:U:O2'	37:DB:81:G:H5''	2.17	0.45
39:DD:131:LEU:N	39:DD:131:LEU:HD12	2.32	0.45
40:DE:159:HIS:HE1	40:DE:162:ALA:HB3	1.81	0.45
40:DE:60:ASN:OD1	40:DE:61:ARG:N	2.50	0.45
42:DG:37:VAL:HG12	42:DG:37:VAL:O	2.17	0.45
43:DH:84:SER:O	43:DH:85:LYS:HB3	2.16	0.45
48:DP:33:ARG:O	48:DP:34:GLY:O	2.34	0.45
52:DT:10:VAL:C	52:DT:12:SER:H	2.19	0.45
52:DT:83:ILE:CG1	52:DT:84:GLN:H	2.29	0.45
53:DU:52:ARG:O	53:DU:56:ASP:OD1	2.35	0.45
53:DU:95:LEU:HD11	54:DV:11:GLN:O	2.17	0.45
54:DV:92:THR:O	54:DV:93:GLU:C	2.55	0.45
58:DZ:28:MET:CE	58:DZ:37:VAL:HG11	2.47	0.45
1:AA:647:C:O2'	1:AA:648:A:H5'	2.17	0.45
1:AA:926:G:H5''	1:AA:927:G:O5'	2.16	0.45
4:AD:194:LEU:N	4:AD:194:LEU:HD22	2.32	0.45
4:AD:32:ALA:C	4:AD:34:GLU:N	2.70	0.45
11:AK:29:ILE:HB	11:AK:44:SER:HB3	1.99	0.45
1:AA:1015:A:H4'	14:AN:15:LYS:NZ	2.32	0.45
1:AA:376:G:H4'	16:AP:5:ARG:HH11	1.82	0.45
24:AY:15:A:O5'	24:AY:15:A:H8	2.00	0.45
25:AZ:284:ASP:N	25:AZ:284:ASP:OD1	2.50	0.45
26:B0:50:ASN:ND2	26:B0:63:VAL:HG11	2.32	0.45
28:B2:48:HIS:CG	28:B2:49:LYS:N	2.85	0.45
31:B5:20:ARG:HA	31:B5:23:HIS:ND1	2.32	0.45
36:BA:1064:C:H3'	36:BA:1065:U:C5'	2.47	0.45
36:BA:1855:G:O2'	36:BA:1856:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2376:A:H2'	36:BA:2377:A:O4'	2.16	0.45
36:BA:269:U:O2	36:BA:269:U:H2'	2.16	0.45
36:BA:470:A:H2'	36:BA:471:A:C8	2.51	0.45
36:BA:949:C:H2'	36:BA:950:G:C8	2.50	0.45
37:BB:52:A:O2'	37:BB:53:A:C8	2.70	0.45
37:BB:69:G:N2	37:BB:70:C:H1'	2.32	0.45
38:BC:78:ALA:H	38:BC:115:ALA:CB	2.30	0.45
38:BC:151:GLU:HA	38:BC:154:ARG:HG2	1.99	0.45
39:BD:227:ASN:HB3	39:BD:228:PRO:CD	2.47	0.45
39:BD:70:TRP:CD1	39:BD:70:TRP:C	2.89	0.45
40:BE:79:ARG:NH1	40:BE:79:ARG:CG	2.78	0.45
42:BG:152:LEU:HD23	42:BG:152:LEU:N	2.32	0.45
46:BN:125:GLY:CA	46:BN:126:PRO:O	2.65	0.45
47:BO:26:LYS:HE3	47:BO:37:ASP:CG	2.38	0.45
49:BQ:133:ARG:HB2	49:BQ:133:ARG:NH1	2.32	0.45
36:BA:958:U:C5'	49:BQ:14:ARG:HD3	2.46	0.45
36:BA:2495:G:OP1	49:BQ:82:ARG:NH1	2.50	0.45
36:BA:2724:C:OP1	50:BR:2:ARG:NH2	2.50	0.45
50:BR:87:TYR:C	50:BR:89:ASP:N	2.70	0.45
52:BT:45:PHE:CE2	52:BT:74:ARG:HG3	2.52	0.45
53:BU:61:TRP:CH2	53:BU:94:ASN:HB2	2.52	0.45
1:CA:1320:C:H6	1:CA:1320:C:C5'	2.28	0.45
1:CA:189(H):G:O2'	1:CA:189(I):G:O5'	2.35	0.45
1:CA:349:A:O2'	1:CA:350:G:H5'	2.16	0.45
1:CA:863:U:H6	1:CA:866:C:H41	1.65	0.45
2:CB:7:VAL:N	2:CB:10:LEU:HD12	2.32	0.45
3:CC:95:THR:HG23	3:CC:97:LYS:HD2	1.97	0.45
4:CD:151:LYS:O	4:CD:151:LYS:HG2	2.17	0.45
6:CF:61:LEU:HB3	6:CF:63:TYR:HE1	1.81	0.45
10:CJ:29:ARG:HH11	10:CJ:29:ARG:HG2	1.82	0.45
25:CZ:65:THR:HG23	25:CZ:80:VAL:CG1	2.45	0.45
26:D0:20:ARG:CG	26:D0:20:ARG:NH1	2.80	0.45
27:D1:24:ALA:HB3	27:D1:27:GLU:HB2	1.99	0.45
27:D1:83:GLU:OE1	27:D1:83:GLU:C	2.55	0.45
28:D2:26:ARG:O	56:DX:5:TYR:CE1	2.69	0.45
28:D2:47:ASN:N	28:D2:50:ILE:HB	2.31	0.45
35:D9:29:ASN:H	35:D9:29:ASN:HD22	1.64	0.45
36:DA:1496:A:C8	36:DA:1498:C:N3	2.85	0.45
36:DA:1526:G:H2'	36:DA:1527:G:O4'	2.16	0.45
33:D7:1:MET:HA	36:DA:1620:G:O4'	2.17	0.45
36:DA:176:G:C2'	36:DA:177:G:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2305:A:O2'	42:DG:136:ARG:HG2	2.16	0.45
36:DA:2811:G:O2'	36:DA:2812:G:H5'	2.17	0.45
39:DD:218:ARG:HG3	39:DD:218:ARG:HH11	1.82	0.45
40:DE:144:ARG:HB3	40:DE:145:LYS:H	1.50	0.45
42:DG:19:LEU:HD13	42:DG:32:PRO:HG2	1.99	0.45
42:DG:77:ILE:O	42:DG:77:ILE:HG12	2.17	0.45
43:DH:121:ILE:HG23	43:DH:133:VAL:HG13	1.98	0.45
43:DH:136:ILE:O	43:DH:136:ILE:HG22	2.17	0.45
46:DN:32:THR:HG22	46:DN:37:LYS:HD3	1.98	0.45
48:DP:131:SER:OG	48:DP:134:ALA:HB3	2.17	0.45
48:DP:41:ARG:HH11	48:DP:41:ARG:CB	2.30	0.45
49:DQ:120:ILE:O	49:DQ:121:ALA:C	2.54	0.45
51:DS:89:ARG:HH11	51:DS:89:ARG:HG2	1.80	0.45
58:DZ:108:PRO:HA	58:DZ:142:SER:HA	1.99	0.45
1:AA:1291:G:H4'	9:AI:39:GLY:HA3	1.99	0.44
1:AA:255:G:H1'	17:AQ:16:GLN:HE21	1.81	0.44
1:AA:412:A:H4'	1:AA:413:G:H8	1.82	0.44
1:AA:659:U:H2'	1:AA:660:G:H8	1.82	0.44
1:AA:736:C:H2'	1:AA:737:A:H8	1.82	0.44
3:AC:82:GLU:N	3:AC:82:GLU:CD	2.70	0.44
4:AD:111:ALA:HA	4:AD:116:GLN:OE1	2.16	0.44
4:AD:30:LYS:C	4:AD:32:ALA:N	2.71	0.44
14:AN:24:CYS:N	14:AN:29:ARG:O	2.38	0.44
25:AZ:193:ASN:O	25:AZ:195:TRP:N	2.50	0.44
25:AZ:206:ILE:O	25:AZ:210:ILE:HG22	2.17	0.44
1:AA:358:U:H5'	25:AZ:234:ARG:O	2.16	0.44
28:B2:16:LEU:HD22	28:B2:20:GLU:CG	2.46	0.44
28:B2:60:LEU:O	28:B2:63:VAL:HB	2.17	0.44
13:AM:57:ARG:HH12	30:B4:34:GLU:HG3	1.80	0.44
31:B5:3:LYS:HE3	31:B5:3:LYS:CA	2.43	0.44
36:BA:1064:C:C3'	36:BA:1065:U:H5''	2.47	0.44
36:BA:1304:C:O2'	36:BA:1305:C:H5'	2.17	0.44
36:BA:1534:U:H2'	36:BA:1535:A:O4'	2.16	0.44
36:BA:1948:G:C5'	36:BA:1948:G:H8	2.13	0.44
36:BA:2157:G:C8	36:BA:2157:G:H3'	2.52	0.44
36:BA:2110:G:N2	36:BA:2178:C:C5	2.78	0.44
36:BA:2358:G:H2'	36:BA:2359:C:C6	2.51	0.44
36:BA:2492:U:O2'	36:BA:2493:U:H5'	2.17	0.44
36:BA:299:A:N1	36:BA:322:A:O2'	2.43	0.44
36:BA:332:A:O2'	36:BA:333:G:P	2.75	0.44
36:BA:622:G:O2'	36:BA:623:G:H5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:77:ILE:CG2	38:BC:119:VAL:HG21	2.47	0.44
39:BD:146:GLU:OE1	39:BD:190:TYR:HB2	2.17	0.44
39:BD:273:ARG:HB3	39:BD:274:ARG:H	1.64	0.44
41:BF:32:LEU:O	41:BF:32:LEU:HD23	2.17	0.44
42:BG:127:GLY:O	42:BG:129:GLY:N	2.50	0.44
42:BG:141:PHE:O	42:BG:144:ILE:HG22	2.16	0.44
42:BG:16:ARG:C	42:BG:18:GLU:H	2.18	0.44
42:BG:9:ARG:O	42:BG:11:TYR:N	2.50	0.44
44:BJ:35:UNK:C	44:BJ:37:UNK:N	2.80	0.44
46:BN:45:ASN:HD22	46:BN:45:ASN:H	1.65	0.44
46:BN:67:LEU:C	46:BN:69:GLN:H	2.19	0.44
1:AA:1432:G:P	52:BT:107:ASP:HB2	2.57	0.44
53:BU:66:ASN:HD21	53:BU:76:TYR:H	1.63	0.44
56:BX:12:VAL:CG1	56:BX:27:THR:O	2.65	0.44
36:BA:64:A:H5'	56:BX:64:LYS:CE	2.47	0.44
58:BZ:60:GLU:O	58:BZ:65:GLN:O	2.35	0.44
1:CA:1153:C:O2'	1:CA:1154:G:C5'	2.66	0.44
1:CA:1230:C:O2'	1:CA:1231:G:H5'	2.17	0.44
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.17	0.44
2:CB:142:LEU:HD21	2:CB:146:GLN:OE1	2.17	0.44
2:CB:187:LEU:CD1	2:CB:205:ASP:HA	2.46	0.44
5:CE:40:ARG:HG2	5:CE:40:ARG:NH1	2.31	0.44
7:CG:44:TYR:C	7:CG:46:ALA:N	2.68	0.44
11:CK:59:TYR:O	11:CK:62:GLN:HB3	2.17	0.44
10:CJ:47:PHE:CE2	14:CN:37:PHE:HE2	2.35	0.44
25:CZ:370:PHE:HB2	25:CZ:371:THR:H	1.63	0.44
28:D2:11:GLU:HG2	28:D2:14:ARG:NH2	2.32	0.44
28:D2:27:GLU:O	28:D2:30:ARG:HB3	2.17	0.44
29:D3:35:ARG:HD3	29:D3:37:LEU:HD11	1.98	0.44
31:D5:3:LYS:O	31:D5:5:PRO:N	2.50	0.44
33:D7:30:VAL:HG22	33:D7:33:ARG:NH2	2.32	0.44
36:DA:1314:C:C2	36:DA:1339:G:N2	2.85	0.44
36:DA:1386:C:H2'	36:DA:1387:C:C6	2.52	0.44
36:DA:1820:U:O2	39:DD:201:HIS:HB3	2.17	0.44
36:DA:2156:G:C6	36:DA:2157:G:N2	2.85	0.44
36:DA:271(N):U:H5'	36:DA:271(O):C:C5	2.52	0.44
36:DA:363(F):A:O2'	36:DA:364:C:C5	2.70	0.44
36:DA:886:C:O2'	36:DA:887:A:C4'	2.60	0.44
36:DA:953:A:O2'	36:DA:954:G:H5'	2.17	0.44
37:DB:52:A:O2'	37:DB:53:A:C8	2.70	0.44
40:DE:117:MET:HA	40:DE:122:PHE:N	2.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:60:LEU:HD11	42:DG:92:VAL:HG11	1.98	0.44
48:DP:124:LYS:HA	48:DP:142:GLY:O	2.17	0.44
53:DU:3:ARG:HH11	53:DU:3:ARG:CG	2.23	0.44
54:DV:15:GLU:O	54:DV:96:ILE:HG21	2.17	0.44
57:DY:98:VAL:HG12	57:DY:98:VAL:O	2.17	0.44
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.52	0.44
1:AA:1285:A:H8	1:AA:1285:A:OP1	2.00	0.44
1:AA:942:G:H2'	1:AA:943:U:H6	1.82	0.44
3:AC:136:GLN:O	3:AC:139:GLN:HB3	2.17	0.44
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.17	0.44
10:AJ:33:GLN:H	10:AJ:75:ILE:HD11	1.81	0.44
6:AF:46:ARG:NH2	18:AR:38:GLU:OE1	2.50	0.44
22:AV:75:C:H2'	22:AV:76:A:C1'	2.47	0.44
22:AW:11:C:H2'	22:AW:12:U:H6	1.82	0.44
25:AZ:126:VAL:CG1	25:AZ:126:VAL:O	2.64	0.44
26:B0:41:ARG:HD3	26:B0:41:ARG:HA	1.56	0.44
26:B0:53:MET:CG	26:B0:57:PHE:HA	2.47	0.44
28:B2:3:LEU:HD23	36:BA:98:G:H5''	1.99	0.44
28:B2:66:GLU:HG3	28:B2:67:LYS:N	2.32	0.44
36:BA:1366:A:O2'	36:BA:1367:A:H5'	2.17	0.44
36:BA:1602:U:C3'	36:BA:1603:A:C5'	2.90	0.44
36:BA:1640:C:H6	36:BA:1640:C:H5'	1.81	0.44
36:BA:2326:C:O4'	36:BA:2326:C:O2	2.33	0.44
36:BA:2472:G:H5''	36:BA:2473:U:H5''	1.95	0.44
36:BA:2474:C:H2'	36:BA:2474:C:O2	2.17	0.44
36:BA:764:A:H5''	39:BD:210:GLY:HA2	1.99	0.44
38:BC:78:ALA:CB	38:BC:116:THR:HG23	2.46	0.44
39:BD:147:LEU:HD13	39:BD:155:LEU:CD1	2.47	0.44
40:BE:79:ARG:NH1	40:BE:79:ARG:HG2	2.29	0.44
41:BF:110:LEU:HA	41:BF:183:VAL:HG12	1.99	0.44
42:BG:93:THR:HG22	42:BG:94:LEU:N	2.33	0.44
48:BP:31:ALA:C	48:BP:33:ARG:H	2.19	0.44
54:BV:74:LYS:HB2	54:BV:83:ARG:HB2	1.99	0.44
55:BW:6:ILE:HA	55:BW:104:THR:HG22	1.99	0.44
57:BY:67:LEU:HD23	57:BY:67:LEU:C	2.38	0.44
58:BZ:152:ALA:C	58:BZ:154:ASP:H	2.20	0.44
37:BB:104:U:O2'	58:BZ:72:ARG:HD2	2.17	0.44
1:CA:668:G:O2'	15:CO:46:HIS:HD2	2.00	0.44
2:CB:189:ASP:HB2	2:CB:205:ASP:OD1	2.17	0.44
2:CB:28:PHE:CE2	2:CB:190:THR:HG22	2.52	0.44
4:CD:101:LEU:O	4:CD:102:ASP:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:43:ALA:C	9:CI:45:ALA:N	2.70	0.44
13:CM:11:ARG:O	13:CM:13:LYS:N	2.50	0.44
18:CR:25:THR:O	18:CR:25:THR:HG22	2.18	0.44
20:CT:10:LEU:C	20:CT:12:ALA:H	2.20	0.44
24:CY:15:A:H8	24:CY:15:A:O5'	2.00	0.44
24:CY:3:G:H5'	24:CY:3:G:C8	2.49	0.44
25:CZ:96:ALA:O	25:CZ:99:MET:HG2	2.16	0.44
26:D0:53:MET:HA	26:D0:58:THR:O	2.17	0.44
28:D2:8:LYS:O	28:D2:10:LEU:N	2.51	0.44
28:D2:22:GLU:O	28:D2:26:ARG:N	2.45	0.44
28:D2:3:LEU:HD23	28:D2:3:LEU:C	2.38	0.44
34:D8:20:GLY:O	34:D8:57:ARG:HD3	2.17	0.44
36:DA:1069:A:HO2'	36:DA:1070:A:P	2.40	0.44
36:DA:1313:U:H3'	36:DA:1314:C:H5'	1.99	0.44
36:DA:1494:A:H3'	36:DA:1494:A:N3	2.32	0.44
36:DA:1801:G:H3'	36:DA:1802:A:H5'	1.98	0.44
36:DA:1916:A:H2'	36:DA:1917:U:O4'	2.17	0.44
36:DA:2263:C:O2'	36:DA:2264:C:H5'	2.17	0.44
36:DA:21:A:O2'	36:DA:22:C:H5'	2.18	0.44
36:DA:2392:A:N3	36:DA:2392:A:H5'	2.32	0.44
36:DA:248:G:H5'	36:DA:250:G:N7	2.32	0.44
36:DA:321:G:OP2	41:DF:135:LYS:HD3	2.16	0.44
36:DA:383:U:H2'	36:DA:385:C:H5	1.83	0.44
36:DA:510:C:H2'	36:DA:511:U:O4'	2.16	0.44
38:DC:57:ASN:HA	38:DC:57:ASN:HD22	1.53	0.44
40:DE:116:VAL:HG11	40:DE:138:PRO:HB3	2.00	0.44
42:DG:22:ARG:HH22	42:DG:175:LEU:HD21	1.83	0.44
47:DO:71:ARG:NE	47:DO:105:GLU:OE2	2.50	0.44
49:DQ:134:ARG:HA	49:DQ:137:TYR:CE2	2.52	0.44
51:DS:58:LEU:CG	51:DS:59:LYS:H	2.30	0.44
51:DS:75:GLU:O	51:DS:76:LYS:HG2	2.17	0.44
52:DT:48:ILE:HD12	52:DT:48:ILE:C	2.36	0.44
52:DT:29:ARG:HD3	52:DT:86:ILE:HG23	1.98	0.44
52:DT:92:GLY:O	52:DT:93:ARG:C	2.56	0.44
55:DW:71:VAL:HG23	55:DW:71:VAL:O	2.17	0.44
57:DY:13:VAL:CG1	57:DY:28:LYS:HD3	2.32	0.44
1:AA:1131:G:N3	1:AA:1132:C:N4	2.65	0.44
1:AA:1375:A:H2'	1:AA:1376:U:O4'	2.17	0.44
1:AA:322:C:O2'	20:AT:23:ARG:HB2	2.17	0.44
1:AA:358:U:O3'	25:AZ:235:GLY:CA	2.56	0.44
1:AA:38:G:C2	1:AA:397:A:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:111:ARG:NH1	2:AB:111:ARG:HG2	2.31	0.44
5:AE:119:LEU:HD23	5:AE:119:LEU:HA	1.83	0.44
13:AM:120:LYS:HA	13:AM:120:LYS:NZ	2.32	0.44
13:AM:12:ASN:ND2	13:AM:12:ASN:N	2.65	0.44
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	1.98	0.44
15:AO:29:VAL:HG11	15:AO:67:LEU:HD21	1.99	0.44
19:AS:45:VAL:C	19:AS:47:HIS:H	2.21	0.44
19:AS:58:VAL:HG11	19:AS:75:ALA:HA	2.00	0.44
20:AT:13:LEU:C	20:AT:15:ARG:N	2.71	0.44
25:AZ:334:PHE:CD1	25:AZ:334:PHE:N	2.85	0.44
25:AZ:34:VAL:C	25:AZ:36:ALA:H	2.21	0.44
25:AZ:28:THR:HG23	25:AZ:79:HIS:CE1	2.51	0.44
25:AZ:87:ASP:HB2	25:AZ:88:TYR:HD1	1.82	0.44
26:B0:26:TYR:N	26:B0:26:TYR:CD1	2.86	0.44
32:B6:15:GLU:O	32:B6:17:LYS:N	2.51	0.44
35:B9:29:ASN:HD21	35:B9:32:HIS:CE1	2.33	0.44
36:BA:1069:A:HO2'	36:BA:1070:A:P	2.41	0.44
36:BA:1096:A:N3	36:BA:1096:A:H2'	2.32	0.44
36:BA:1192:G:O6	48:BP:29:LYS:NZ	2.50	0.44
36:BA:1512:U:H2'	36:BA:1513:C:C6	2.52	0.44
36:BA:1677:A:H2'	36:BA:1678:G:H8	1.78	0.44
36:BA:1877:A:C2'	36:BA:1878:G:H5'	2.37	0.44
36:BA:2147:G:H2'	36:BA:2148:G:O5'	2.17	0.44
36:BA:2364:C:O2'	36:BA:2365:G:H5'	2.17	0.44
36:BA:2869:G:H2'	36:BA:2870:C:H6	1.81	0.44
36:BA:654(A):G:H2'	36:BA:654(B):C:H5'	2.00	0.44
36:BA:654(M):C:H2'	36:BA:654(N):G:C8	2.53	0.44
36:BA:748:G:C8	55:BW:89:ALA:HB1	2.52	0.44
38:BC:107:TRP:NE1	38:BC:110:PHE:CE2	2.82	0.44
42:BG:106:LEU:HD13	42:BG:141:PHE:HE1	1.81	0.44
43:BH:136:ILE:HG22	43:BH:136:ILE:O	2.17	0.44
36:BA:661:C:O2'	48:BP:16:ARG:O	2.32	0.44
50:BR:44:LEU:C	50:BR:44:LEU:HD13	2.37	0.44
50:BR:49:ASP:OD1	50:BR:95:THR:HG22	2.17	0.44
51:BS:89:ARG:HH11	51:BS:89:ARG:HG2	1.81	0.44
53:BU:109:LEU:O	53:BU:113:ALA:HB2	2.17	0.44
53:BU:95:LEU:C	53:BU:97:ASP:H	2.19	0.44
55:BW:79:GLY:CA	55:BW:100:THR:HG23	2.47	0.44
28:B2:30:ARG:HG3	56:BX:5:TYR:CE2	2.53	0.44
1:CA:189(I):G:O2'	1:CA:189(J):G:H5'	2.16	0.44
1:CA:219:C:H2'	1:CA:220:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:707:C:OP1	11:CK:85:ARG:NH1	2.49	0.44
1:CA:782:A:C2'	1:CA:783:C:H5'	2.47	0.44
3:CC:52:LEU:HD21	3:CC:55:VAL:CG2	2.47	0.44
11:CK:124:LYS:HD2	11:CK:125:PHE:CZ	2.52	0.44
13:CM:97:PRO:HA	13:CM:110:ARG:CD	2.45	0.44
14:CN:57:ARG:CG	14:CN:58:LYS:N	2.80	0.44
15:CO:69:TYR:CE1	15:CO:73:GLU:HG3	2.51	0.44
1:CA:473:G:H5'	16:CP:81:ARG:HG3	1.99	0.44
17:CQ:53:LEU:HD23	17:CQ:54:GLY:H	1.81	0.44
20:CT:98:PRO:O	20:CT:99:LEU:O	2.36	0.44
22:CV:62:C:C2'	22:CV:62:C:O2	2.66	0.44
22:CV:75:C:H2'	22:CV:76:A:O4'	2.18	0.44
22:CW:9:A:H2	22:CW:45:U:C4	2.35	0.44
27:D1:30:VAL:HG23	27:D1:30:VAL:O	2.17	0.44
28:D2:40:SER:O	28:D2:41:ILE:HG12	2.17	0.44
34:D8:10:ALA:O	34:D8:14:VAL:HG12	2.16	0.44
34:D8:7:HIS:HD2	48:DP:50:ARG:HD3	1.80	0.44
36:DA:1064:C:C3'	36:DA:1065:U:H5''	2.47	0.44
36:DA:1541:G:O2'	36:DA:1542:A:C5'	2.66	0.44
36:DA:1666:G:H5'	36:DA:1666:G:H8	1.83	0.44
36:DA:1744:C:C2'	36:DA:1745:C:H5'	2.48	0.44
36:DA:2115:G:C2	36:DA:2117:A:N7	2.86	0.44
36:DA:2392:A:C8	48:DP:60:MET:HG2	2.51	0.44
36:DA:2512:C:H4'	40:DE:122:PHE:CE2	2.52	0.44
36:DA:2762:G:C2'	36:DA:2763:G:H5'	2.47	0.44
36:DA:925:C:C3'	36:DA:926:A:H5''	2.47	0.44
36:DA:954:G:H4'	49:DQ:13:GLN:NE2	2.32	0.44
36:DA:984:A:H5''	36:DA:985:C:C5	2.45	0.44
37:DB:54:G:C2	37:DB:55:U:C6	3.04	0.44
37:DB:7:G:C3'	37:DB:8:U:C5'	2.95	0.44
38:DC:78:ALA:CB	38:DC:116:THR:HG23	2.47	0.44
40:DE:52:LEU:HD23	40:DE:75:VAL:HB	1.99	0.44
46:DN:48:MET:HE3	46:DN:48:MET:N	2.32	0.44
46:DN:4:TYR:CD1	46:DN:4:TYR:N	2.85	0.44
51:DS:58:LEU:HG	51:DS:59:LYS:N	2.32	0.44
51:DS:95:HIS:CG	51:DS:96:GLY:H	2.35	0.44
51:DS:97:ARG:C	51:DS:97:ARG:NE	2.71	0.44
52:DT:28:VAL:HG23	52:DT:47:GLY:O	2.17	0.44
36:DA:29:U:C1'	53:DU:11:ARG:HH22	2.29	0.44
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.18	0.44
1:AA:441:A:H3'	1:AA:442:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:783:C:O2'	1:AA:784:C:H5'	2.18	0.44
1:AA:824:C:H1'	8:AH:1:MET:HE2	1.99	0.44
1:AA:909:A:H2'	1:AA:910:C:O4'	2.17	0.44
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.59	0.44
4:AD:119:GLN:HG3	4:AD:123:HIS:NE2	2.33	0.44
9:AI:4:TYR:HA	9:AI:87:GLN:HG2	2.00	0.44
11:AK:63:LEU:HD12	11:AK:63:LEU:H	1.83	0.44
1:AA:376:G:H4'	16:AP:5:ARG:NH1	2.32	0.44
18:AR:87:ARG:CB	18:AR:87:ARG:HH11	2.31	0.44
19:AS:10:PHE:HD2	19:AS:12:ASP:OD1	2.00	0.44
19:AS:11:VAL:O	19:AS:11:VAL:HG22	2.17	0.44
24:AY:26:A:H2'	24:AY:27:C:H6	1.83	0.44
25:AZ:96:ALA:O	25:AZ:99:MET:HG2	2.17	0.44
32:B6:26:ASN:HD22	32:B6:32:ASN:HD21	1.63	0.44
36:BA:1036:G:O2'	36:BA:1037:G:H5'	2.17	0.44
36:BA:2156:G:C6	36:BA:2157:G:N2	2.85	0.44
36:BA:2712(A):A:C5'	36:BA:2713:A:OP2	2.65	0.44
36:BA:382:G:H2'	36:BA:383:U:H5'	1.99	0.44
37:BB:73:A:H2'	37:BB:74:U:H5'	2.00	0.44
38:BC:34:THR:CG2	38:BC:34:THR:O	2.65	0.44
40:BE:60:ASN:OD1	40:BE:61:ARG:N	2.50	0.44
40:BE:69:LYS:HD3	40:BE:90:THR:N	2.32	0.44
41:BF:107:LYS:HE3	41:BF:205:ARG:HG2	1.98	0.44
43:BH:126:PRO:O	43:BH:127:GLU:CG	2.58	0.44
43:BH:142:GLY:O	43:BH:145:ALA:HB3	2.16	0.44
43:BH:70:THR:O	43:BH:74:ASN:ND2	2.50	0.44
47:BO:34:THR:OG1	47:BO:35:VAL:N	2.51	0.44
49:BQ:111:GLU:OE1	49:BQ:133:ARG:NH2	2.49	0.44
51:BS:106:ARG:HH11	51:BS:106:ARG:CB	2.22	0.44
51:BS:97:ARG:C	51:BS:97:ARG:NE	2.70	0.44
52:BT:107:ASP:OD2	52:BT:109:GLU:HG3	2.17	0.44
55:BW:50:VAL:HG22	55:BW:105:VAL:HG23	1.99	0.44
58:BZ:100:VAL:HB	58:BZ:124:ILE:HD11	1.99	0.44
1:CA:153:C:H42	1:CA:168:G:H1	1.64	0.44
1:CA:173:U:H5''	1:CA:197:A:O4'	2.18	0.44
3:CC:70:VAL:HG21	3:CC:76:VAL:HG11	1.99	0.44
4:CD:155:LEU:O	4:CD:159:ARG:HG2	2.17	0.44
4:CD:20:TYR:HD1	4:CD:26:CYS:O	2.00	0.44
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	1.99	0.44
10:CJ:32:ALA:CB	10:CJ:76:ASN:H	2.31	0.44
13:CM:74:VAL:HA	13:CM:77:ASN:HD22	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.17	0.44
18:CR:44:LEU:CD1	18:CR:50:ILE:HD13	2.48	0.44
22:CV:57:G:H2'	22:CV:58:A:H5'	2.00	0.44
23:CX:11:U:H2'	23:CX:11:U:O2	2.17	0.44
23:CX:26:A:H3'	23:CX:27:A:C8	2.52	0.44
24:CY:25:C:C2'	24:CY:26:A:C5'	2.78	0.44
25:CZ:330:ARG:HG2	25:CZ:330:ARG:HH11	1.82	0.44
34:D8:8:LYS:HG3	36:DA:246:C:N4	2.32	0.44
36:DA:9:U:HO2'	36:DA:10:G:P	2.41	0.44
36:DA:1709:U:H2'	36:DA:1710:C:H6	1.80	0.44
36:DA:2350:C:H2'	36:DA:2351:G:O4'	2.17	0.44
36:DA:2376:A:H2'	36:DA:2377:A:O4'	2.17	0.44
36:DA:2392:A:H8	48:DP:60:MET:HG2	1.82	0.44
36:DA:2584:U:O2	36:DA:2584:U:O4'	2.35	0.44
36:DA:850:C:O2'	36:DA:851:U:H5'	2.17	0.44
40:DE:48:GLN:NE2	40:DE:78:LEU:HD22	2.32	0.44
40:DE:69:LYS:HD3	40:DE:90:THR:N	2.33	0.44
41:DF:167:ALA:O	41:DF:168:ARG:C	2.55	0.44
42:DG:73:ALA:O	42:DG:85:GLY:HA2	2.17	0.44
43:DH:85:LYS:NZ	43:DH:133:VAL:N	2.45	0.44
46:DN:23:LEU:HD21	46:DN:102:ALA:CB	2.47	0.44
46:DN:29:LYS:C	46:DN:31:ALA:H	2.21	0.44
49:DQ:109:VAL:HG12	49:DQ:113:GLN:HB2	1.98	0.44
49:DQ:21:THR:CG2	49:DQ:23:GLY:O	2.66	0.44
50:DR:45:ARG:O	50:DR:48:VAL:HG12	2.17	0.44
54:DV:19:LYS:HG2	54:DV:94:LEU:CB	2.41	0.44
55:DW:75:TYR:N	55:DW:75:TYR:CD1	2.84	0.44
57:DY:13:VAL:CG2	57:DY:73:ARG:O	2.62	0.44
57:DY:95:LYS:HG3	57:DY:99:CYS:O	2.18	0.44
1:AA:1152:A:H5'	10:AJ:70:ARG:NH2	2.31	0.44
1:AA:1230:C:O2'	1:AA:1231:G:H5'	2.17	0.44
1:AA:1411:C:H2'	1:AA:1412:C:H6	1.81	0.44
1:AA:1458:G:H2'	1:AA:1459:C:C6	2.52	0.44
1:AA:197:A:C6	1:AA:221:C:H4'	2.53	0.44
1:AA:658:G:H2'	1:AA:659:U:C6	2.53	0.44
1:AA:979:C:O2	14:AN:19:ARG:HG2	2.17	0.44
3:AC:166:GLU:HA	3:AC:166:GLU:OE1	2.16	0.44
3:AC:179:ARG:HD2	3:AC:206:GLU:OE2	2.17	0.44
4:AD:30:LYS:HB3	4:AD:35:ARG:NH1	2.33	0.44
1:AA:973:G:C4	10:AJ:55:LYS:HE2	2.53	0.44
13:AM:118:ALA:HB3	22:AV:29:G:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:40:ASN:HB3	13:AM:43:THR:HG23	1.99	0.44
13:AM:68:GLY:N	13:AM:71:ARG:HG3	2.33	0.44
16:AP:9:PHE:CE2	16:AP:18:ARG:NE	2.85	0.44
16:AP:60:LEU:HD21	16:AP:66:PRO:HG3	1.98	0.44
17:AQ:12:SER:HB3	17:AQ:20:THR:OG1	2.17	0.44
19:AS:16:LEU:O	19:AS:18:LYS:N	2.50	0.44
19:AS:36:ARG:NH1	19:AS:53:ASN:HA	2.32	0.44
24:AY:76:A:H2	25:AZ:270:VAL:HA	1.82	0.44
25:AZ:166:ASP:N	25:AZ:166:ASP:OD1	2.50	0.44
25:AZ:197:ASP:O	25:AZ:201:GLU:N	2.51	0.44
25:AZ:64:ASN:N	25:AZ:83:PRO:HG2	2.32	0.44
27:B1:11:ARG:HH11	27:B1:11:ARG:HG2	1.81	0.44
36:BA:1472:A:H2'	36:BA:1473:G:H5'	1.98	0.44
36:BA:1721:G:C2	36:BA:1739:U:OP2	2.70	0.44
36:BA:2678:C:H2'	36:BA:2679:A:O4'	2.18	0.44
36:BA:2687:U:C4	36:BA:2688:U:C5	3.05	0.44
36:BA:271(N):U:H5'	36:BA:271(O):C:C5	2.53	0.44
36:BA:302:C:O2'	36:BA:303:U:H5'	2.17	0.44
36:BA:593:G:O2'	36:BA:594:U:H5'	2.18	0.44
37:BB:28:C:O2'	37:BB:29:A:H5'	2.17	0.44
39:BD:31:LYS:HE3	39:BD:33:LEU:CD1	2.47	0.44
41:BF:133:ASN:N	41:BF:133:ASN:HD22	2.15	0.44
42:BG:94:LEU:HB3	42:BG:99:MET:HB2	2.00	0.44
46:BN:55:VAL:CG2	46:BN:126:PRO:HA	2.47	0.44
50:BR:45:ARG:O	50:BR:48:VAL:HG12	2.17	0.44
50:BR:78:LYS:O	50:BR:83:ILE:HG12	2.17	0.44
51:BS:95:HIS:CG	51:BS:96:GLY:H	2.35	0.44
47:BO:122:LEU:HD13	52:BT:72:VAL:HG11	1.99	0.44
54:BV:99:ILE:H	54:BV:99:ILE:CD1	2.14	0.44
1:CA:1193:G:OP1	3:CC:167:TRP:CZ3	2.70	0.44
1:CA:1216:G:H2'	1:CA:1217:C:H6	1.83	0.44
1:CA:323:U:H2'	1:CA:324:G:O4'	2.16	0.44
1:CA:61:G:H2'	1:CA:62:U:O4'	2.17	0.44
2:CB:31:TYR:CD2	2:CB:202:PRO:HG3	2.52	0.44
2:CB:77:ALA:HB2	2:CB:211:ILE:CD1	2.47	0.44
4:CD:194:LEU:N	4:CD:194:LEU:HD22	2.33	0.44
4:CD:60:GLU:OE1	4:CD:60:GLU:HA	2.16	0.44
5:CE:12:LEU:HD21	5:CE:14:ARG:HB3	1.98	0.44
9:CI:20:ARG:HH11	9:CI:20:ARG:CG	2.24	0.44
11:CK:22:HIS:HB3	11:CK:29:ILE:HG12	1.99	0.44
12:CL:110:VAL:HG21	12:CL:120:TYR:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:41:ARG:HB2	12:CL:41:ARG:NH1	2.32	0.44
17:CQ:10:VAL:HG23	17:CQ:54:GLY:N	2.32	0.44
19:CS:66:MET:O	19:CS:67:VAL:C	2.55	0.44
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.99	0.44
24:CY:26:A:C5	24:CY:27:C:C5	3.05	0.44
25:CZ:249:VAL:HG13	25:CZ:268:THR:HA	1.99	0.44
26:D0:70:GLN:NE2	26:D0:80:HIS:NE2	2.65	0.44
27:D1:75:GLU:O	27:D1:78:LYS:HG2	2.17	0.44
28:D2:27:GLU:HG3	28:D2:30:ARG:HD3	1.99	0.44
31:D5:20:ARG:HA	31:D5:23:HIS:ND1	2.32	0.44
36:DA:1023:U:C2'	36:DA:1024:G:H5'	2.48	0.44
36:DA:1389:G:H2'	36:DA:1390:U:O4'	2.18	0.44
36:DA:1534:U:H2'	36:DA:1535:A:O4'	2.17	0.44
36:DA:1767:C:O2'	36:DA:1768:U:H5'	2.18	0.44
36:DA:1906:G:O2'	36:DA:1907:G:H5'	2.18	0.44
36:DA:2277:G:C6	36:DA:2278:A:N7	2.85	0.44
36:DA:2369:A:O2'	36:DA:2370:G:H5'	2.18	0.44
36:DA:2657:A:H5'	36:DA:2658:C:OP2	2.17	0.44
36:DA:776:G:H4'	36:DA:777:A:O5'	2.17	0.44
37:DB:111:G:H2'	37:DB:112:U:H5'	2.00	0.44
40:DE:98:PRO:HD3	40:DE:175:VAL:CG1	2.46	0.44
41:DF:164:ARG:HG2	41:DF:164:ARG:NH1	2.30	0.44
41:DF:37:VAL:HG11	48:DP:7:ARG:NH1	2.33	0.44
42:DG:120:LEU:O	42:DG:180:PHE:CD1	2.69	0.44
42:DG:176:LEU:O	42:DG:176:LEU:HD23	2.17	0.44
42:DG:61:ALA:O	42:DG:63:ILE:N	2.50	0.44
46:DN:15:LEU:HD13	46:DN:16:ILE:N	2.33	0.44
48:DP:95:VAL:O	48:DP:125:VAL:HA	2.17	0.44
49:DQ:60:ARG:CB	49:DQ:60:ARG:HH11	2.10	0.44
52:DT:11:GLU:N	52:DT:11:GLU:OE1	2.51	0.44
40:DE:52:LEU:CD1	52:DT:1:MET:HG2	2.34	0.44
53:DU:92:ARG:CB	54:DV:11:GLN:NE2	2.81	0.44
54:DV:28:GLU:O	54:DV:30:GLY:N	2.51	0.44
1:AA:59:A:H1'	1:AA:354:G:N2	2.32	0.44
1:AA:35:G:H2'	1:AA:36:C:C6	2.53	0.44
1:AA:470:C:C2'	1:AA:471:G:OP1	2.65	0.44
1:AA:59:A:C5'	1:AA:60:A:H5'	2.47	0.44
1:AA:863:U:H6	1:AA:866:C:H41	1.65	0.44
1:AA:995:C:HO2'	1:AA:996:A:H8	1.66	0.44
2:AB:92:TYR:HE2	2:AB:94:ASN:HD21	1.65	0.44
3:AC:30:ARG:HH21	3:AC:31:HIS:HE1	1.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:84:ILE:HG23	3:AC:85:ARG:HH11	1.83	0.44
3:AC:6:HIS:CD2	3:AC:8:ILE:HB	2.53	0.44
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.18	0.44
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.80	0.44
13:AM:37:THR:O	13:AM:39:ILE:HG13	2.17	0.44
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	2.00	0.44
16:AP:53:VAL:CG2	16:AP:54:GLU:N	2.77	0.44
20:AT:89:ARG:NH1	20:AT:104:LEU:HD21	2.32	0.44
23:AX:11:U:O2	23:AX:11:U:H2'	2.17	0.44
25:AZ:125:GLN:HE22	25:AZ:394:THR:HB	1.83	0.44
25:AZ:200:TRP:O	25:AZ:204:ASP:HB2	2.17	0.44
25:AZ:206:ILE:C	25:AZ:208:GLU:H	2.19	0.44
24:AY:77:TRP:N	25:AZ:272:MET:HA	2.33	0.44
25:AZ:27:LEU:HD11	25:AZ:31:LEU:HD11	2.00	0.44
25:AZ:27:LEU:O	25:AZ:30:ALA:HB3	2.18	0.44
25:AZ:397:ALA:CB	61:AZ:502:KIR:H252	2.40	0.44
25:AZ:12:VAL:HG23	25:AZ:77:TYR:CD1	2.52	0.44
34:B8:61:LEU:HD22	36:BA:593:G:H4'	1.98	0.44
36:BA:99:U:C4'	36:BA:102:G:H1'	2.47	0.44
36:BA:1499:C:C2'	36:BA:1500:G:H5'	2.48	0.44
36:BA:1596:A:O2'	36:BA:1597:A:H5'	2.17	0.44
36:BA:1773:A:H2'	36:BA:1774:C:O4'	2.17	0.44
36:BA:2355:C:C4	36:BA:2356:C:C4	3.06	0.44
36:BA:2481:G:HO2'	36:BA:2482:G:P	2.40	0.44
36:BA:2659:G:C2'	36:BA:2660:A:H5''	2.47	0.44
36:BA:2850:A:N3	50:BR:61:HIS:CE1	2.86	0.44
36:BA:57:C:O2'	36:BA:58:G:H5'	2.18	0.44
36:BA:652:C:O2'	36:BA:653:A:O5'	2.35	0.44
37:BB:78:A:H2'	37:BB:79:C:O4'	2.17	0.44
37:BB:94:C:O2'	37:BB:95:C:H5'	2.18	0.44
36:BA:1568:G:H4'	39:BD:59:LYS:HB3	1.98	0.44
39:BD:62:TYR:HA	39:BD:87:ASN:HD21	1.83	0.44
40:BE:31:CYS:HA	40:BE:32:PRO:HD3	1.82	0.44
42:BG:43:LEU:N	42:BG:43:LEU:HD22	2.33	0.44
42:BG:47:LYS:HE2	42:BG:80:PHE:CE1	2.53	0.44
47:BO:35:VAL:HA	47:BO:62:VAL:O	2.16	0.44
48:BP:23:PRO:HB2	48:BP:33:ARG:CG	2.47	0.44
34:B8:25:MET:CG	48:BP:64:LYS:HB2	2.48	0.44
49:BQ:24:GLY:O	49:BQ:102:VAL:HG23	2.17	0.44
50:BR:26:LYS:O	50:BR:30:THR:CG2	2.66	0.44
50:BR:52:ILE:O	50:BR:55:ALA:HB3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:36:PRO:O	54:BV:37:VAL:HG13	2.17	0.44
57:BY:28:LYS:C	57:BY:38:ILE:HG22	2.38	0.44
58:BZ:19:ARG:HH11	58:BZ:19:ARG:HG2	1.83	0.44
58:BZ:98:MET:SD	58:BZ:133:ILE:HG23	2.58	0.44
1:CA:1036:G:H3'	1:CA:1037:C:C6	2.53	0.44
1:CA:222:U:H2'	1:CA:223:U:H6	1.81	0.44
1:CA:277:C:O2'	1:CA:278:G:H5'	2.18	0.44
2:CB:200:ILE:HG22	2:CB:201:ILE:N	2.33	0.44
2:CB:239:VAL:O	2:CB:240:GLN:CB	2.65	0.44
6:CF:53:ALA:O	6:CF:54:LYS:CB	2.65	0.44
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.18	0.44
7:CG:69:VAL:HG12	7:CG:100:ALA:HA	1.98	0.44
23:CX:13:A:OP2	23:CX:13:A:H8	2.00	0.44
24:CY:62:U:H2'	24:CY:63:C:O4'	2.17	0.44
34:D8:21:LYS:HD3	34:D8:48:PHE:CZ	2.52	0.44
36:DA:135:G:O2'	36:DA:136:G:H5'	2.17	0.44
36:DA:1484:G:C3'	36:DA:1485:G:H5''	2.46	0.44
36:DA:1478:G:N2	36:DA:1514:U:C2	2.86	0.44
36:DA:1889:A:O2'	36:DA:2087:G:H5'	2.16	0.44
36:DA:2326:C:O4'	36:DA:2326:C:O2	2.32	0.44
36:DA:231:C:O2'	36:DA:232:G:H5'	2.17	0.44
36:DA:2672:G:C2'	36:DA:2673:G:H5''	2.48	0.44
36:DA:2711:A:OP1	36:DA:2712(A):A:P	2.76	0.44
36:DA:2712(A):A:C5'	36:DA:2713:A:OP2	2.65	0.44
36:DA:57:C:O2'	36:DA:58:G:H5'	2.18	0.44
37:DB:77:U:P	58:DZ:19:ARG:HH21	2.41	0.44
53:DU:44:ASN:HD21	54:DV:75:PHE:HB3	1.83	0.44
58:DZ:122:ARG:NH1	58:DZ:122:ARG:CG	2.81	0.44
58:DZ:76:LEU:HD23	58:DZ:83:PRO:HA	1.99	0.44
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.53	0.44
1:AA:178:C:O2'	1:AA:179:A:H5'	2.18	0.44
1:AA:782:A:C2'	1:AA:783:C:H5'	2.47	0.44
1:AA:858:G:O2'	1:AA:859:A:H5'	2.17	0.44
2:AB:28:PHE:CE2	2:AB:190:THR:HA	2.53	0.44
3:AC:70:VAL:CG1	3:AC:71:ALA:N	2.81	0.44
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.99	0.44
6:AF:1:MET:HA	6:AF:67:MET:O	2.18	0.44
6:AF:53:ALA:O	6:AF:54:LYS:CB	2.66	0.44
8:AH:44:PHE:CE2	8:AH:109:ILE:CG2	3.00	0.44
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	2.00	0.44
11:AK:33:THR:HB	11:AK:38:ASN:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:61:THR:C	12:AL:63:GLY:H	2.21	0.44
14:AN:41:ARG:NH2	14:AN:42:ILE:HD11	2.32	0.44
15:AO:39:LEU:HD23	15:AO:39:LEU:O	2.18	0.44
15:AO:48:LYS:HA	15:AO:48:LYS:HD3	1.78	0.44
18:AR:59:SER:OG	18:AR:62:GLU:HG3	2.18	0.44
26:B0:10:THR:CG2	26:B0:12:ASN:HB2	2.48	0.44
28:B2:38:GLN:O	28:B2:41:ILE:HG12	2.18	0.44
34:B8:36:LYS:HB3	34:B8:40:GLU:HB3	1.99	0.44
36:BA:1053:C:O2'	36:BA:1054:A:H5'	2.18	0.44
36:BA:1598:C:O2	36:BA:1598:C:H2'	2.17	0.44
36:BA:1635:G:H2'	36:BA:1636:C:C6	2.52	0.44
36:BA:181:A:H5'	36:BA:181:A:C8	2.51	0.44
36:BA:2369:A:O2'	36:BA:2370:G:H5'	2.18	0.44
36:BA:2758:A:C2	36:BA:2759:G:H1'	2.52	0.44
36:BA:2870:C:H2'	36:BA:2871:C:O4'	2.18	0.44
36:BA:341:G:O2'	36:BA:342:G:H5'	2.18	0.44
41:BF:142:TRP:C	41:BF:142:TRP:HE3	2.21	0.44
42:BG:172:LEU:HD13	42:BG:172:LEU:O	2.18	0.44
43:BH:37:VAL:HG21	43:BH:68:THR:HG23	1.99	0.44
46:BN:4:TYR:O	46:BN:5:VAL:CB	2.65	0.44
48:BP:124:LYS:HA	48:BP:142:GLY:O	2.18	0.44
48:BP:83:VAL:CG1	48:BP:112:LEU:HD21	2.46	0.44
52:BT:29:ARG:HD3	52:BT:86:ILE:HG23	1.99	0.44
58:BZ:135:GLU:N	58:BZ:135:GLU:OE1	2.51	0.44
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.53	0.44
1:CA:1505:G:H2'	23:CX:18:G:OP2	2.18	0.44
1:CA:179:A:H2'	1:CA:180:U:C6	2.52	0.44
1:CA:403:C:O2'	1:CA:404:U:H5'	2.17	0.44
1:CA:441:A:H3'	1:CA:442:C:C6	2.53	0.44
1:CA:926:G:H5''	1:CA:927:G:O5'	2.18	0.44
3:CC:107:GLN:NE2	3:CC:107:GLN:H	2.16	0.44
3:CC:14:ILE:CG1	3:CC:15:THR:N	2.81	0.44
3:CC:3:ASN:HB2	3:CC:4:LYS:H	1.60	0.44
9:CI:85:LEU:HD12	9:CI:85:LEU:C	2.38	0.44
10:CJ:7:LYS:HG3	10:CJ:71:LEU:HD13	1.99	0.44
12:CL:92:ASP:O	12:CL:94:PRO:HD3	2.18	0.44
13:CM:25:ILE:HD11	13:CM:66:LEU:HD21	1.98	0.44
16:CP:60:LEU:HD21	16:CP:66:PRO:HG2	2.00	0.44
25:CZ:40:PRO:O	25:CZ:41:ASN:HB3	2.18	0.44
26:D0:14:ARG:NH1	26:D0:14:ARG:CG	2.81	0.44
30:D4:37:SER:O	30:D4:38:LYS:CB	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:36:LYS:HB3	34:D8:40:GLU:HB3	1.99	0.44
36:DA:1019:U:O2'	36:DA:1021:A:C2	2.61	0.44
36:DA:1045:A:N3	36:DA:1047:G:N2	2.65	0.44
36:DA:1106:G:H2'	36:DA:1107:G:O4'	2.18	0.44
36:DA:1114:G:H2'	36:DA:1115:G:H8	1.82	0.44
36:DA:1389:G:H2'	36:DA:1390:U:H6	1.80	0.44
36:DA:1558:A:O2'	36:DA:1559:G:P	2.76	0.44
36:DA:1596:A:O2'	36:DA:1597:A:H5'	2.17	0.44
36:DA:2360:A:O2'	36:DA:2361:A:O5'	2.36	0.44
36:DA:2400:G:N2	36:DA:2417:C:C2	2.85	0.44
33:D7:5:TRP:CZ3	36:DA:464:U:H4'	2.52	0.44
39:DD:98:VAL:O	39:DD:98:VAL:HG12	2.18	0.44
40:DE:132:HIS:C	40:DE:135:HIS:CE1	2.90	0.44
42:DG:34:LEU:O	42:DG:34:LEU:HD12	2.18	0.44
46:DN:41:ASP:O	46:DN:42:TRP:C	2.55	0.44
47:DO:88:ASN:ND2	47:DO:92:GLU:HB2	2.32	0.44
48:DP:31:ALA:C	48:DP:33:ARG:H	2.21	0.44
34:D8:25:MET:HG3	48:DP:64:LYS:HB2	1.98	0.44
49:DQ:24:GLY:O	49:DQ:102:VAL:HG23	2.17	0.44
51:DS:20:ARG:HE	51:DS:20:ARG:HA	1.83	0.44
1:CA:1432:G:P	52:DT:107:ASP:HB2	2.57	0.44
52:DT:126:ALA:O	52:DT:128:GLU:HG3	2.16	0.44
54:DV:20:LEU:HB3	54:DV:21:ARG:HD3	1.99	0.44
54:DV:19:LYS:HB3	54:DV:94:LEU:O	2.18	0.44
56:DX:18:TYR:O	56:DX:20:GLY:N	2.51	0.44
58:DZ:128:VAL:CG2	58:DZ:129:SER:H	2.28	0.44
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.52	0.44
1:AA:189:G:O2'	1:AA:189(A):C:H5'	2.17	0.44
1:AA:294:U:H2'	1:AA:295:C:H6	1.83	0.44
1:AA:659:U:H2'	1:AA:660:G:C8	2.52	0.44
1:AA:723:U:C2'	1:AA:723:U:O2	2.65	0.44
1:AA:836:G:C6	1:AA:851:G:C6	3.06	0.44
1:AA:861:G:O2'	1:AA:862:C:H5'	2.18	0.44
2:AB:31:TYR:HD2	2:AB:202:PRO:HG3	1.83	0.44
3:AC:131:ARG:HH11	3:AC:166:GLU:CG	2.31	0.44
14:AN:60:SER:O	14:AN:61:TRP:HB3	2.18	0.44
24:AY:54:5MU:H73	24:AY:55:PSU:C2	2.52	0.44
25:AZ:117:ARG:NE	25:AZ:157:LEU:HD11	2.32	0.44
25:AZ:159:ASN:C	25:AZ:161:TYR:N	2.71	0.44
25:AZ:330:ARG:HH11	25:AZ:330:ARG:HG2	1.83	0.44
26:B0:53:MET:HA	26:B0:58:THR:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B3:47:VAL:HG11	29:B3:56:VAL:HG21	1.98	0.44
34:B8:10:ALA:O	34:B8:14:VAL:HG12	2.18	0.44
36:BA:1061:U:C4'	36:BA:1070:A:H1'	2.43	0.44
36:BA:1203:G:H3'	36:BA:1204:A:C5'	2.47	0.44
36:BA:1360:A:H5'	36:BA:1361:G:OP2	2.18	0.44
36:BA:1479:G:O2'	36:BA:1480:G:H5'	2.18	0.44
36:BA:1466:G:H2'	36:BA:1547:C:N4	2.33	0.44
36:BA:1916:A:H2'	36:BA:1917:U:O4'	2.18	0.44
36:BA:2491:U:C5'	36:BA:2570:G:H5''	2.36	0.44
36:BA:257:A:C2'	36:BA:258:G:H5'	2.47	0.44
36:BA:2852:G:O2'	36:BA:2853:C:H5'	2.17	0.44
36:BA:67:U:H2'	36:BA:68:G:C8	2.52	0.44
36:BA:925:C:C3'	36:BA:926:A:H5''	2.46	0.44
28:B2:2:LYS:CB	36:BA:97:C:H5''	2.44	0.44
37:BB:42:C:O2'	37:BB:43:C:P	2.76	0.44
37:BB:7:G:C3'	37:BB:8:U:C5'	2.96	0.44
38:BC:118:ASP:CG	38:BC:119:VAL:N	2.70	0.44
38:BC:76:ALA:O	38:BC:77:ILE:HG12	2.18	0.44
39:BD:240:ALA:HB1	39:BD:241:PRO:HD2	2.00	0.44
41:BF:53:THR:O	41:BF:57:VAL:HG23	2.18	0.44
41:BF:82:ILE:O	41:BF:83:PHE:HB2	2.17	0.44
42:BG:11:TYR:O	42:BG:15:VAL:HG23	2.17	0.44
46:BN:16:ILE:HG23	46:BN:54:VAL:HG22	2.00	0.44
47:BO:71:ARG:NE	47:BO:105:GLU:OE2	2.50	0.44
36:BA:806:C:C5	48:BP:39:LYS:HE2	2.52	0.44
36:BA:534:U:O2'	53:BU:49:HIS:CD2	2.71	0.44
53:BU:92:ARG:HH22	54:BV:10:LYS:HB3	1.75	0.44
54:BV:47:VAL:O	54:BV:47:VAL:HG23	2.17	0.44
56:BX:53:LYS:HB3	56:BX:82:GLN:CB	2.48	0.44
58:BZ:100:VAL:HG23	58:BZ:126:VAL:HG22	2.00	0.44
1:CA:1452:C:O2'	1:CA:1456:G:N2	2.48	0.44
1:CA:197:A:C6	1:CA:221:C:H4'	2.52	0.44
1:CA:665:A:H2'	1:CA:732:C:O2	2.18	0.44
2:CB:114:ARG:HH11	2:CB:118:LEU:CD2	2.23	0.44
2:CB:118:LEU:HD13	2:CB:142:LEU:HB2	1.99	0.44
4:CD:182:LYS:HB3	4:CD:183:GLY:H	1.54	0.44
13:CM:111:LYS:O	13:CM:112:GLY:O	2.36	0.44
20:CT:53:LEU:HD22	20:CT:100:ILE:O	2.17	0.44
20:CT:36:LEU:HD13	20:CT:36:LEU:O	2.16	0.44
25:CZ:155:ARG:O	25:CZ:159:ASN:ND2	2.46	0.44
25:CZ:159:ASN:C	25:CZ:161:TYR:N	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:87:ASP:HB2	25:CZ:88:TYR:HD1	1.82	0.44
27:D1:37:ILE:CG1	27:D1:37:ILE:O	2.65	0.44
28:D2:32:LEU:HD21	28:D2:36:ARG:NH2	2.33	0.44
31:D5:3:LYS:O	31:D5:5:PRO:CD	2.66	0.44
34:D8:59:LYS:CB	34:D8:59:LYS:NZ	2.71	0.44
35:D9:1:MET:CG	36:DA:2478:A:OP2	2.66	0.44
36:DA:1042:G:H1	36:DA:1112:G:H22	1.66	0.44
36:DA:117:G:C6	36:DA:119:A:C6	3.06	0.44
36:DA:133:C:H6	36:DA:133:C:O5'	2.01	0.44
27:D1:3:LYS:HG3	36:DA:1365:A:OP2	2.17	0.44
36:DA:1502:C:H2'	36:DA:1502:C:O2	2.18	0.44
36:DA:156:U:C2'	36:DA:157:U:H5'	2.48	0.44
36:DA:2695:C:O2'	36:DA:2696:U:H5'	2.17	0.44
36:DA:589:C:H2'	36:DA:590:A:H8	1.80	0.44
36:DA:1568:G:P	39:DD:63:ARG:HH22	2.40	0.44
40:DE:112:GLY:O	40:DE:159:HIS:HA	2.18	0.44
40:DE:107:THR:HA	40:DE:163:GLU:O	2.17	0.44
36:DA:2631:G:N2	40:DE:61:ARG:HH12	2.15	0.44
40:DE:89:ASP:CG	40:DE:90:THR:H	2.22	0.44
41:DF:157:VAL:HG22	41:DF:194:MET:HG2	1.99	0.44
42:DG:170:ARG:HG3	42:DG:174:GLU:OE2	2.17	0.44
43:DH:49:VAL:O	43:DH:50:VAL:CG2	2.66	0.44
46:DN:34:LEU:HD11	46:DN:116:LEU:HB3	1.99	0.44
50:DR:84:ALA:HB3	50:DR:85:PRO:HD3	2.00	0.44
52:DT:45:PHE:CE2	52:DT:74:ARG:HG3	2.52	0.44
57:DY:67:LEU:HD23	57:DY:67:LEU:C	2.38	0.44
58:DZ:103:ARG:HD2	58:DZ:136:PHE:CD1	2.53	0.44
1:AA:1012:U:O2'	1:AA:1013:G:H5'	2.18	0.44
1:AA:1459:C:O2'	1:AA:1460:A:H5'	2.17	0.44
1:AA:153:C:H42	1:AA:168:G:H1	1.65	0.44
1:AA:130:A:H1'	1:AA:263:A:O2'	2.17	0.44
1:AA:628:G:O2'	1:AA:629:G:H5'	2.17	0.44
4:AD:3:ARG:HG2	4:AD:118:ARG:HE	1.83	0.44
4:AD:6:GLY:O	4:AD:7:PRO:C	2.56	0.44
4:AD:91:SER:O	4:AD:92:VAL:C	2.54	0.44
7:AG:44:TYR:O	7:AG:45:ASP:C	2.57	0.44
12:AL:117:ARG:HB3	12:AL:122:THR:OG1	2.17	0.44
13:AM:4:ILE:CD1	13:AM:4:ILE:H	2.31	0.44
12:AL:7:ILE:HG21	17:AQ:34:LYS:HB2	2.00	0.44
21:AU:10:ARG:O	21:AU:11:GLY:C	2.54	0.44
24:AY:52:A:H2'	24:AY:53:G:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:64:U:O2'	25:AZ:341:GLN:NE2	2.51	0.44
25:AZ:2:LYS:C	25:AZ:275:LYS:HE3	2.29	0.44
27:B1:80:LEU:HD23	27:B1:81:LYS:O	2.18	0.44
28:B2:16:LEU:HD22	28:B2:20:GLU:HG2	1.98	0.44
30:B4:37:SER:O	30:B4:38:LYS:CB	2.65	0.44
36:BA:1087:G:O2'	36:BA:1089:G:H5'	2.18	0.44
36:BA:1101:U:O2'	36:BA:1102:C:H5'	2.17	0.44
36:BA:1389:G:H2'	36:BA:1390:U:O4'	2.18	0.44
36:BA:1440:G:H2'	36:BA:1441:G:H8	1.83	0.44
36:BA:1494:A:N3	36:BA:1494:A:H3'	2.32	0.44
13:AM:125:ARG:NH1	36:BA:1913:A:N7	2.65	0.44
36:BA:2457:U:C2'	36:BA:2458:G:H5'	2.48	0.44
36:BA:2461:C:H2'	36:BA:2462:U:C6	2.53	0.44
36:BA:2575:C:H2'	36:BA:2578:G:O6	2.18	0.44
36:BA:776:G:H4'	36:BA:777:A:O5'	2.18	0.44
36:BA:855:G:H1	36:BA:922:U:H3	1.66	0.44
39:BD:186:HIS:HD2	39:BD:188:GLU:HB2	1.78	0.44
39:BD:229:VAL:HG13	39:BD:230:ASP:N	2.32	0.44
40:BE:59:VAL:O	40:BE:60:ASN:CG	2.57	0.44
41:BF:114:VAL:HG21	41:BF:202:PHE:CE2	2.52	0.44
36:BA:321:G:C1'	41:BF:165:ARG:HD3	2.48	0.44
41:BF:93:LYS:O	41:BF:94:PRO:C	2.55	0.44
42:BG:135:LEU:HD22	42:BG:140:ILE:CD1	2.48	0.44
42:BG:54:GLU:HA	42:BG:57:ALA:CB	2.47	0.44
46:BN:29:LYS:C	46:BN:31:ALA:H	2.20	0.44
40:BE:152:LYS:HG2	46:BN:78:TYR:CZ	2.52	0.44
36:BA:598:G:C5'	48:BP:15:ARG:HB3	2.47	0.44
49:BQ:138:ASP:C	49:BQ:139:GLU:OE1	2.56	0.44
50:BR:81:ASP:O	50:BR:85:PRO:HG2	2.18	0.44
51:BS:20:ARG:HA	51:BS:20:ARG:HE	1.82	0.44
53:BU:65:ILE:HD12	53:BU:65:ILE:N	2.33	0.44
53:BU:74:LEU:HD13	53:BU:79:PHE:HB2	2.00	0.44
58:BZ:132:ASN:C	58:BZ:134:PRO:HD3	2.38	0.44
58:BZ:161:VAL:CG1	58:BZ:162:GLU:N	2.81	0.44
1:CA:1004:A:C2'	1:CA:1005:A:H5'	2.47	0.44
1:CA:1042:G:O2'	1:CA:1043:C:H5'	2.17	0.44
1:CA:1363(A):A:C4'	1:CA:1364:U:H5"	2.41	0.44
1:CA:376:G:H4'	16:CP:5:ARG:NH1	2.32	0.44
1:CA:605:U:O2'	1:CA:606:G:H5'	2.17	0.44
1:CA:639:G:O2'	1:CA:640:A:H5'	2.18	0.44
1:CA:976:G:OP1	14:CN:32:SER:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:97:TRP:CZ3	2:CB:176:GLU:OE2	2.70	0.44
3:CC:3:ASN:O	3:CC:4:LYS:CB	2.66	0.44
4:CD:18:LYS:HE3	4:CD:31:CYS:HB3	1.99	0.44
5:CE:53:LEU:HD12	5:CE:53:LEU:N	2.32	0.44
9:CI:20:ARG:NH1	9:CI:20:ARG:CG	2.81	0.44
1:CA:675:A:H1'	11:CK:116:HIS:ND1	2.33	0.44
13:CM:40:ASN:ND2	13:CM:43:THR:HG23	2.31	0.44
13:CM:4:ILE:CD1	13:CM:4:ILE:H	2.31	0.44
14:CN:57:ARG:HG2	14:CN:58:LYS:N	2.33	0.44
16:CP:22:THR:OG1	16:CP:26:ARG:HG3	2.18	0.44
27:D1:21:ARG:HH11	27:D1:21:ARG:HB2	1.81	0.44
27:D1:70:VAL:O	27:D1:73:LEU:HB2	2.17	0.44
28:D2:11:GLU:HA	28:D2:14:ARG:HE	1.81	0.44
28:D2:63:VAL:O	28:D2:64:LEU:C	2.56	0.44
30:D4:47:GLN:HE21	30:D4:47:GLN:HB3	1.63	0.44
34:D8:30:ARG:NE	34:D8:30:ARG:HA	2.29	0.44
36:DA:139(A):G:H3'	36:DA:140:G:C8	2.51	0.44
36:DA:2153:G:H2'	36:DA:2154:G:C8	2.53	0.44
36:DA:269:U:O2	36:DA:269:U:H2'	2.18	0.44
36:DA:271(U):G:H2'	36:DA:271(V):G:C8	2.53	0.44
36:DA:2841:C:H2'	36:DA:2842:G:C8	2.53	0.44
36:DA:341:G:O2'	36:DA:342:G:H5'	2.18	0.44
36:DA:382:G:H2'	36:DA:383:U:H5'	2.00	0.44
36:DA:445:C:H2'	36:DA:446:G:C8	2.53	0.44
36:DA:534:U:O2'	53:DU:49:HIS:HD2	2.00	0.44
36:DA:654(A):G:H2'	36:DA:654(B):C:H5'	1.99	0.44
36:DA:703:U:O2'	36:DA:704:G:H5'	2.18	0.44
37:DB:17:C:O2'	37:DB:18:G:H5'	2.18	0.44
37:DB:69:G:N2	37:DB:70:C:H1'	2.33	0.44
38:DC:77:ILE:HB	38:DC:115:ALA:CB	2.43	0.44
39:DD:50:THR:O	39:DD:51:VAL:HG23	2.17	0.44
42:DG:26:GLN:HG3	42:DG:27:ASN:H	1.83	0.44
48:DP:47:ASP:OD2	48:DP:50:ARG:HG2	2.18	0.44
49:DQ:43:THR:HB	49:DQ:45:GLN:HE21	1.83	0.44
49:DQ:96:VAL:HG23	49:DQ:96:VAL:O	2.17	0.44
52:DT:31:SER:OG	52:DT:32:TYR:CE1	2.62	0.44
52:DT:56:GLY:O	52:DT:59:THR:CG2	2.64	0.44
53:DU:69:CYS:HB2	53:DU:74:LEU:HD11	1.99	0.44
54:DV:74:LYS:HB2	54:DV:83:ARG:HB2	1.99	0.44
56:DX:35:THR:CG2	56:DX:36:LYS:N	2.80	0.44
56:DX:64:LYS:HZ2	56:DX:73:ARG:HH21	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:7:VAL:CB	57:DY:8:LYS:HD2	2.48	0.44
58:DZ:10:ARG:NH1	58:DZ:10:ARG:HG2	2.28	0.44
58:DZ:149:SER:OG	58:DZ:173:ALA:HA	2.18	0.44
58:DZ:35:ARG:NH2	58:DZ:36:LYS:HG2	2.32	0.44
58:DZ:96:VAL:CG1	58:DZ:97:GLU:N	2.71	0.44
1:AA:1315:U:O2	1:AA:1360:A:H2	2.01	0.43
2:AB:28:PHE:HE2	2:AB:190:THR:HG22	1.83	0.43
5:AE:48:ALA:HB2	5:AE:57:LYS:NZ	2.33	0.43
7:AG:20:ASP:HB3	7:AG:23:VAL:CG2	2.47	0.43
9:AI:50:LEU:O	9:AI:56:LEU:HB3	2.18	0.43
10:AJ:47:PHE:CE1	14:AN:37:PHE:CE2	3.06	0.43
13:AM:83:ASP:OD1	13:AM:85:GLY:N	2.51	0.43
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.17	0.43
17:AQ:10:VAL:HG23	17:AQ:54:GLY:N	2.33	0.43
17:AQ:58:GLU:O	17:AQ:59:ILE:HD13	2.18	0.43
17:AQ:5:VAL:HG22	17:AQ:60:ILE:CD1	2.45	0.43
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.17	0.43
25:AZ:136:ASN:HA	25:AZ:173:GLY:O	2.17	0.43
25:AZ:385:ARG:HA	25:AZ:399:VAL:HA	2.00	0.43
25:AZ:65:THR:HG23	25:AZ:80:VAL:CG1	2.47	0.43
25:AZ:82:CYS:HA	25:AZ:83:PRO:HD3	1.88	0.43
31:B5:36:CYS:HB3	31:B5:49:CYS:SG	2.58	0.43
36:BA:1336:A:O2'	36:BA:1337:G:H5'	2.18	0.43
36:BA:1713:U:O2'	36:BA:1714:G:H5'	2.18	0.43
36:BA:2360:A:O2'	36:BA:2361:A:C5'	2.66	0.43
36:BA:2481:G:C2'	36:BA:2482:G:OP2	2.66	0.43
36:BA:2821:A:O2'	36:BA:2822:G:H5'	2.17	0.43
36:BA:2884:U:H2'	36:BA:2885:C:H5'	2.00	0.43
36:BA:541:C:O2'	36:BA:542:C:H5'	2.18	0.43
36:BA:606:U:H4'	36:BA:658:C:H4'	2.00	0.43
36:BA:973:A:O4'	36:BA:1188:U:C6	2.70	0.43
41:BF:178:PRO:HG2	41:BF:179:GLU:H	1.82	0.43
41:BF:36:VAL:HA	41:BF:101:LEU:CD2	2.48	0.43
43:BH:83:TYR:HB2	43:BH:135:GLY:H	1.82	0.43
46:BN:3:THR:C	46:BN:4:TYR:CG	2.92	0.43
50:BR:75:LEU:HD13	50:BR:75:LEU:C	2.37	0.43
51:BS:61:ASN:O	51:BS:63:THR:N	2.51	0.43
53:BU:69:CYS:O	53:BU:74:LEU:HD12	2.18	0.43
53:BU:66:ASN:ND2	53:BU:76:TYR:HB2	2.33	0.43
36:BA:25:U:H5'	55:BW:78:GLU:O	2.18	0.43
56:BX:25:LYS:HA	56:BX:81:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:56:PRO:O	57:BY:57:GLN:C	2.56	0.43
57:BY:57:GLN:HA	57:BY:57:GLN:OE1	2.18	0.43
1:CA:1073:U:O2'	1:CA:1074:G:H5'	2.18	0.43
1:CA:1282:C:H2'	1:CA:1283:G:H5'	1.99	0.43
1:CA:476:G:H2'	1:CA:477:A:C8	2.53	0.43
1:CA:547:A:H4'	1:CA:548:G:O5'	2.18	0.43
1:CA:59:A:C5'	1:CA:60:A:H5''	2.48	0.43
9:CI:93:ARG:C	9:CI:95:LYS:N	2.71	0.43
12:CL:53:ARG:HB2	12:CL:93:LEU:HD21	1.99	0.43
15:CO:70:LEU:C	15:CO:72:ARG:H	2.21	0.43
18:CR:36:ASN:ND2	18:CR:39:VAL:HB	2.33	0.43
22:CV:49:C:H2'	22:CV:50:U:H6	1.83	0.43
22:CW:9:A:C2	22:CW:45:U:C4	3.06	0.43
27:D1:67:ILE:O	27:D1:68:PRO:C	2.55	0.43
29:D3:48:GLU:H	29:D3:48:GLU:HG2	1.65	0.43
34:D8:36:LYS:O	34:D8:37:SER:C	2.56	0.43
36:DA:1138:G:C4	36:DA:1139:G:H1'	2.53	0.43
36:DA:990:A:N6	36:DA:1186:G:H1'	2.33	0.43
36:DA:1721:G:H8	36:DA:1741:A:H62	1.67	0.43
36:DA:2469:A:O2'	49:DQ:56:ARG:CD	2.65	0.43
36:DA:2562:U:C2'	36:DA:2563:U:H5'	2.47	0.43
36:DA:2650:U:O2'	36:DA:2651:C:H5'	2.19	0.43
36:DA:419:C:H2'	36:DA:420:C:C6	2.53	0.43
36:DA:850:C:H2'	36:DA:851:U:H6	1.82	0.43
37:DB:17:C:H2'	37:DB:18:G:C8	2.52	0.43
38:DC:78:ALA:H	38:DC:115:ALA:CA	2.30	0.43
40:DE:24:THR:HB	40:DE:186:GLY:HA2	1.99	0.43
42:DG:114:ILE:HD12	42:DG:115:ARG:H	1.83	0.43
42:DG:135:LEU:CD2	42:DG:140:ILE:HD11	2.47	0.43
43:DH:142:GLY:O	43:DH:145:ALA:HB3	2.18	0.43
43:DH:76:VAL:C	43:DH:78:GLY:H	2.21	0.43
44:DJ:56:UNK:HA	44:DJ:82:UNK:O	2.18	0.43
46:DN:3:THR:C	46:DN:4:TYR:CG	2.92	0.43
48:DP:100:LEU:C	48:DP:100:LEU:HD13	2.38	0.43
48:DP:133:SER:O	48:DP:136:GLU:HG2	2.17	0.43
52:DT:86:ILE:HG12	52:DT:87:ASP:N	2.33	0.43
55:DW:6:ILE:HA	55:DW:104:THR:HG22	2.00	0.43
56:DX:71:GLY:C	56:DX:72:LYS:HD2	2.39	0.43
58:DZ:153:SER:HB2	58:DZ:167:PRO:HG3	2.00	0.43
1:AA:1065:U:C6	1:AA:1190:G:N3	2.87	0.43
1:AA:1065:U:H6	1:AA:1190:G:N2	2.12	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1171:G:H2'	1:AA:1172:C:H6	1.83	0.43
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.53	0.43
1:AA:332:G:H2'	1:AA:333:G:H8	1.83	0.43
1:AA:656:C:O2'	1:AA:657:G:H5'	2.18	0.43
1:AA:746:A:O2'	1:AA:747:C:H5'	2.18	0.43
3:AC:73:PRO:O	3:AC:76:VAL:HG22	2.18	0.43
4:AD:101:LEU:O	4:AD:102:ASP:C	2.56	0.43
5:AE:20:GLN:HE21	5:AE:20:GLN:HB3	1.52	0.43
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	2.00	0.43
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.18	0.43
15:AO:80:ALA:O	15:AO:84:LYS:HG3	2.18	0.43
18:AR:25:THR:O	18:AR:25:THR:HG22	2.17	0.43
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.48	0.43
18:AR:53:ARG:HH11	18:AR:60:ALA:CA	2.31	0.43
22:AV:59:U:HO2'	22:AV:60:U:H6	1.65	0.43
24:AY:76:A:C2	25:AZ:270:VAL:CA	3.01	0.43
25:AZ:318:ALA:O	25:AZ:369:THR:HA	2.18	0.43
25:AZ:323:LEU:N	25:AZ:323:LEU:HD12	2.26	0.43
27:B1:53:VAL:HG22	27:B1:74:VAL:HG13	2.00	0.43
32:B6:53:LYS:HE2	32:B6:54:ILE:HG13	1.99	0.43
33:B7:14:LYS:HB2	33:B7:14:LYS:HE2	1.83	0.43
34:B8:36:LYS:O	34:B8:37:SER:C	2.56	0.43
36:BA:1042:G:H1	36:BA:1112:G:H22	1.66	0.43
36:BA:1114:G:H2'	36:BA:1115:G:H8	1.83	0.43
36:BA:1915:U:H3'	36:BA:1916:A:H8	1.83	0.43
36:BA:2262:U:H2'	36:BA:2263:C:C6	2.49	0.43
36:BA:2494:G:O2'	49:BQ:80:GLU:HA	2.18	0.43
36:BA:251:A:H5''	48:BP:51:PHE:CZ	2.53	0.43
36:BA:2624:G:O2'	36:BA:2625:G:H5'	2.17	0.43
36:BA:548:A:H2'	36:BA:549:G:H5'	1.99	0.43
37:BB:91:C:P	49:BQ:16:ARG:HH21	2.40	0.43
38:BC:118:ASP:O	38:BC:120:MET:N	2.50	0.43
38:BC:72:VAL:HG13	38:BC:72:VAL:O	2.17	0.43
41:BF:21:ALA:HB3	41:BF:23:ASP:OD2	2.18	0.43
42:BG:73:ALA:N	42:BG:87:PRO:CG	2.76	0.43
43:BH:85:LYS:HE3	43:BH:86:GLU:N	2.33	0.43
50:BR:118:GLU:HA	50:BR:118:GLU:OE1	2.18	0.43
51:BS:89:ARG:CB	51:BS:92:TYR:HB3	2.39	0.43
54:BV:15:GLU:O	54:BV:96:ILE:HG21	2.17	0.43
54:BV:28:GLU:O	54:BV:30:GLY:N	2.51	0.43
54:BV:49:THR:CB	54:BV:50:PRO:CD	2.96	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:41:ASN:C	56:BX:43:VAL:H	2.21	0.43
57:BY:13:VAL:CG2	57:BY:73:ARG:O	2.58	0.43
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.53	0.43
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.53	0.43
1:CA:312:C:H2'	1:CA:313:A:H8	1.83	0.43
1:CA:475:G:H2'	1:CA:476:G:H8	1.83	0.43
1:CA:477:A:O2'	1:CA:479:C:H5'	2.18	0.43
1:CA:719:C:C2	18:CR:50:ILE:HG12	2.54	0.43
1:CA:979:C:O2	14:CN:19:ARG:HG2	2.17	0.43
2:CB:57:PHE:HE2	2:CB:185:ILE:HD11	1.84	0.43
3:CC:107:GLN:CD	3:CC:107:GLN:H	2.20	0.43
7:CG:89:MET:HE2	7:CG:89:MET:HB2	1.80	0.43
10:CJ:32:ALA:H	10:CJ:78:ASN:ND2	2.12	0.43
10:CJ:35:SER:OG	10:CJ:73:ASP:HB2	2.18	0.43
13:CM:97:PRO:HB2	13:CM:101:GLN:NE2	2.33	0.43
19:CS:70:LYS:O	19:CS:71:LEU:C	2.56	0.43
20:CT:13:LEU:O	20:CT:15:ARG:N	2.51	0.43
22:CW:11:C:H2'	22:CW:12:U:H6	1.82	0.43
22:CW:44:G:O4'	22:CW:44:G:P	2.76	0.43
25:CZ:195:TRP:HA	25:CZ:195:TRP:HE3	1.84	0.43
25:CZ:197:ASP:O	25:CZ:201:GLU:N	2.51	0.43
25:CZ:27:LEU:HD11	25:CZ:31:LEU:HD11	2.00	0.43
32:D6:41:PRO:HD2	32:D6:45:LYS:HA	2.00	0.43
33:D7:4:THR:HG22	36:DA:687:C:H1'	1.99	0.43
36:DA:1914:C:H2'	36:DA:1915:U:O4'	2.17	0.43
36:DA:2162:G:O2'	36:DA:2163:C:H5'	2.18	0.43
36:DA:2300:G:O2'	36:DA:2301:C:H5'	2.18	0.43
36:DA:2358:G:H2'	36:DA:2359:C:C6	2.52	0.43
36:DA:2785:C:O2'	40:DE:64:LYS:NZ	2.49	0.43
36:DA:360:G:H2'	36:DA:361:G:H8	1.82	0.43
36:DA:743:G:O2'	36:DA:744:G:H5'	2.18	0.43
36:DA:916:G:C2'	36:DA:917:A:H5''	2.49	0.43
36:DA:986:C:O2'	36:DA:987:G:H5'	2.18	0.43
38:DC:118:ASP:C	38:DC:120:MET:N	2.71	0.43
38:DC:118:ASP:O	38:DC:120:MET:N	2.51	0.43
38:DC:21:THR:OG1	38:DC:24:GLU:HG3	2.18	0.43
40:DE:107:THR:O	40:DE:190:GLY:CA	2.63	0.43
36:DA:320:A:H3'	41:DF:136:THR:CG2	2.48	0.43
41:DF:142:TRP:C	41:DF:142:TRP:HE3	2.21	0.43
42:DG:135:LEU:HD23	42:DG:140:ILE:HD11	2.01	0.43
42:DG:42:GLY:O	42:DG:44:GLY:N	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:37:VAL:HG21	43:DH:68:THR:HG23	2.00	0.43
48:DP:131:SER:O	48:DP:132:LYS:C	2.56	0.43
36:DA:2724:C:P	50:DR:2:ARG:HH21	2.41	0.43
51:DS:66:ALA:C	51:DS:69:VAL:HG12	2.38	0.43
52:DT:115:ARG:CG	52:DT:115:ARG:NH1	2.80	0.43
53:DU:61:TRP:CH2	53:DU:94:ASN:HB2	2.53	0.43
53:DU:92:ARG:NE	54:DV:11:GLN:HG2	2.33	0.43
54:DV:89:GLN:OE1	54:DV:89:GLN:HA	2.18	0.43
55:DW:70:TYR:OH	55:DW:72:LYS:HG2	2.17	0.43
56:DX:35:THR:CG2	56:DX:37:THR:H	1.99	0.43
58:DZ:28:MET:HG2	58:DZ:37:VAL:HG11	2.00	0.43
1:AA:1127:G:H1	1:AA:1145:C:H42	1.65	0.43
1:AA:1286:A:H1'	1:AA:1287:A:H4'	1.99	0.43
1:AA:222:U:H2'	1:AA:223:U:H6	1.82	0.43
1:AA:441:A:H3'	1:AA:442:C:H6	1.83	0.43
1:AA:605:U:O2'	1:AA:606:G:H5'	2.18	0.43
1:AA:774:G:O2'	1:AA:775:G:H5'	2.18	0.43
4:AD:155:LEU:O	4:AD:159:ARG:HG2	2.19	0.43
10:AJ:29:ARG:O	10:AJ:30:SER:CB	2.66	0.43
11:AK:43:SER:HA	11:AK:47:VAL:HG21	2.00	0.43
15:AO:71:GLN:HB2	15:AO:78:TYR:CD1	2.54	0.43
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.31	0.43
1:AA:718:G:O6	18:AR:74:ARG:NH1	2.52	0.43
20:AT:15:ARG:O	20:AT:19:SER:HB2	2.17	0.43
25:AZ:19:HIS:CE1	25:AZ:113:MET:CG	3.02	0.43
25:AZ:145:GLU:CG	25:AZ:149:LEU:HB2	2.40	0.43
25:AZ:333:GLY:HA2	25:AZ:363:MET:HA	2.00	0.43
26:B0:55:ARG:HB3	26:B0:55:ARG:HE	1.70	0.43
27:B1:21:ARG:HH11	27:B1:21:ARG:CB	2.19	0.43
34:B8:61:LEU:O	34:B8:64:TYR:N	2.51	0.43
36:BA:106:C:H1'	57:BY:2:ARG:HH21	1.81	0.43
36:BA:512:G:OP1	36:BA:1235:G:H5'	2.18	0.43
36:BA:133:C:H6	36:BA:133:C:O5'	2.02	0.43
36:BA:1416:G:HO2'	36:BA:1417:C:H5	1.62	0.43
36:BA:1438:U:O2'	36:BA:1439:A:H5'	2.17	0.43
36:BA:1502:C:O2	36:BA:1502:C:H2'	2.16	0.43
36:BA:2087:G:C2'	36:BA:2088:G:H5'	2.47	0.43
36:BA:491:G:H2'	36:BA:492:A:C8	2.53	0.43
36:BA:510:C:H2'	36:BA:511:U:O4'	2.17	0.43
36:BA:673:C:H6	36:BA:673:C:C5'	2.22	0.43
39:BD:12:SER:HB2	39:BD:208:LYS:HB3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:8:PRO:HB3	39:BD:14:ARG:CB	2.41	0.43
40:BE:107:THR:O	40:BE:190:GLY:CA	2.66	0.43
44:BJ:125:UNK:C	44:BJ:127:UNK:N	2.81	0.43
46:BN:82:LEU:HA	46:BN:82:LEU:HD12	1.80	0.43
47:BO:114:ILE:HD12	47:BO:114:ILE:H	1.83	0.43
47:BO:60:ALA:HA	47:BO:87:ILE:HG12	2.00	0.43
36:BA:637:A:OP2	48:BP:115:LEU:HB2	2.17	0.43
49:BQ:18:LYS:O	49:BQ:19:GLY:O	2.36	0.43
49:BQ:21:THR:CG2	49:BQ:23:GLY:O	2.65	0.43
51:BS:85:VAL:CG2	51:BS:106:ARG:HG3	2.42	0.43
52:BT:35:LYS:O	52:BT:38:ASN:ND2	2.52	0.43
52:BT:83:ILE:CG1	52:BT:84:GLN:H	2.30	0.43
1:CA:1171:G:H2'	1:CA:1172:C:H6	1.84	0.43
1:CA:178:C:O2'	1:CA:179:A:H5'	2.18	0.43
1:CA:189(D):C:O2	1:CA:189(H):G:C6	2.72	0.43
1:CA:963:G:C2	10:CJ:55:LYS:NZ	2.81	0.43
2:CB:106:LYS:HB2	2:CB:106:LYS:NZ	2.33	0.43
3:CC:132:ARG:O	3:CC:136:GLN:HG3	2.18	0.43
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.88	0.43
9:CI:4:TYR:HA	9:CI:87:GLN:HG2	2.01	0.43
10:CJ:16:LEU:CD1	10:CJ:70:ARG:CG	2.96	0.43
11:CK:17:GLY:O	11:CK:80:VAL:HA	2.18	0.43
11:CK:44:SER:N	11:CK:47:VAL:HG23	2.33	0.43
13:CM:40:ASN:HB3	13:CM:43:THR:HG23	2.00	0.43
13:CM:57:ARG:NH1	30:D4:34:GLU:CG	2.77	0.43
16:CP:45:THR:O	16:CP:47:ASP:N	2.41	0.43
16:CP:60:LEU:HD21	16:CP:66:PRO:HG3	2.00	0.43
17:CQ:21:VAL:O	17:CQ:41:LYS:HA	2.18	0.43
20:CT:13:LEU:C	20:CT:15:ARG:N	2.70	0.43
25:CZ:129:PRO:HB2	25:CZ:130:TYR:CE2	2.53	0.43
25:CZ:135:MET:HE3	25:CZ:150:VAL:CG1	2.39	0.43
25:CZ:136:ASN:HA	25:CZ:173:GLY:O	2.18	0.43
25:CZ:200:TRP:O	25:CZ:204:ASP:HB2	2.18	0.43
25:CZ:214:VAL:HG13	25:CZ:214:VAL:O	2.18	0.43
26:D0:41:ARG:O	26:D0:57:PHE:CD2	2.71	0.43
28:D2:29:LYS:CB	28:D2:32:LEU:HD22	2.47	0.43
28:D2:32:LEU:HA	28:D2:35:LEU:HB2	2.00	0.43
28:D2:67:LYS:O	28:D2:69:ARG:N	2.51	0.43
36:DA:1495:A:H2'	36:DA:1496:A:N3	2.33	0.43
36:DA:1680:U:O2	36:DA:1763:G:H3'	2.18	0.43
36:DA:1773:A:H2'	36:DA:1774:C:C5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2171:A:HO2'	36:DA:2172:U:H5	1.54	0.43
36:DA:2807:G:C2'	36:DA:2808:U:H5''	2.48	0.43
36:DA:2841:C:H2'	36:DA:2842:G:H8	1.83	0.43
36:DA:2884:U:H2'	36:DA:2885:C:H5'	2.00	0.43
36:DA:442:G:O4'	41:DF:46:ARG:HD3	2.18	0.43
36:DA:89:G:N2	36:DA:456:C:N4	2.67	0.43
36:DA:624:C:H5'	36:DA:625:G:OP2	2.19	0.43
40:DE:137:HIS:HB3	40:DE:138:PRO:HD2	1.98	0.43
40:DE:183:LEU:N	40:DE:183:LEU:HD12	2.34	0.43
41:DF:145:GLU:O	41:DF:146:ALA:HB2	2.19	0.43
41:DF:192:LEU:CD2	41:DF:194:MET:HG3	2.27	0.43
43:DH:97:ARG:HH21	43:DH:99:VAL:HG21	1.82	0.43
46:DN:55:VAL:CG2	46:DN:126:PRO:HA	2.46	0.43
46:DN:137:LYS:HG2	46:DN:138:LEU:N	2.33	0.43
46:DN:94:HIS:N	46:DN:95:PRO:CD	2.81	0.43
47:DO:28:SER:O	47:DO:29:ASN:CB	2.66	0.43
37:DB:91:C:OP2	49:DQ:16:ARG:NH2	2.50	0.43
49:DQ:48:GLU:O	49:DQ:49:ALA:C	2.57	0.43
50:DR:21:TYR:HB3	50:DR:47:PHE:CD2	2.53	0.43
50:DR:52:ILE:O	50:DR:55:ALA:HB3	2.19	0.43
47:DO:104:ARG:CZ	52:DT:33:LYS:HD2	2.48	0.43
52:DT:62:THR:HA	52:DT:74:ARG:O	2.18	0.43
53:DU:32:PHE:CB	53:DU:36:ARG:HH12	2.32	0.43
1:AA:337:C:H2'	1:AA:338:A:H8	1.83	0.43
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.45	0.43
4:AD:127:THR:N	4:AD:147:ALA:O	2.50	0.43
4:AD:15:GLU:HG2	4:AD:63:LYS:HG3	2.00	0.43
1:AA:509:A:H5'	4:AD:54:TYR:CD2	2.52	0.43
4:AD:85:LYS:HD3	4:AD:92:VAL:HG11	1.99	0.43
6:AF:22:GLU:HA	6:AF:25:ILE:HG22	2.00	0.43
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.18	0.43
12:AL:53:ARG:HB2	12:AL:93:LEU:HD21	2.00	0.43
15:AO:69:TYR:CE1	15:AO:73:GLU:HG3	2.53	0.43
17:AQ:63:ARG:O	17:AQ:64:PRO:C	2.57	0.43
18:AR:44:LEU:HD21	18:AR:79:LEU:HD13	1.99	0.43
13:AM:118:ALA:HB3	22:AV:29:G:C5'	2.49	0.43
24:AY:76:A:C2	25:AZ:271:GLU:N	2.86	0.43
31:B5:36:CYS:CB	31:B5:49:CYS:HB3	2.49	0.43
32:B6:25:LYS:HE2	34:B8:34:TRP:CZ2	2.52	0.43
32:B6:30:THR:O	32:B6:32:ASN:N	2.50	0.43
34:B8:21:LYS:HD3	34:B8:48:PHE:CZ	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:32:LEU:HD21	36:BA:2391:G:OP1	2.19	0.43
34:B8:22:VAL:CG2	34:B8:53:PRO:HB2	2.48	0.43
34:B8:50:LEU:H	34:B8:53:PRO:HG3	1.83	0.43
36:BA:117:G:C6	36:BA:119:A:C6	3.07	0.43
36:BA:1539:G:H2'	36:BA:1540:U:C5'	2.38	0.43
36:BA:1844:C:O2'	36:BA:1845:G:H5'	2.19	0.43
36:BA:211:A:O2'	36:BA:212:G:H5'	2.19	0.43
36:BA:2626:C:O2'	36:BA:2627:G:H5'	2.18	0.43
36:BA:2808:U:H5'	36:BA:2891:G:O6	2.18	0.43
36:BA:583:G:H2'	36:BA:584:C:H6	1.82	0.43
34:B8:4:MET:HE2	36:BA:666:G:H1'	2.00	0.43
36:BA:897:C:H2'	36:BA:897:C:O2	2.18	0.43
37:BB:17:C:O2'	37:BB:18:G:H5'	2.19	0.43
40:BE:36:ARG:NH1	40:BE:85:ASN:OD1	2.50	0.43
42:BG:46:ALA:C	42:BG:47:LYS:HG3	2.39	0.43
43:BH:137:ASP:O	43:BH:138:LYS:HB2	2.19	0.43
43:BH:169:VAL:CG2	43:BH:170:ARG:H	2.11	0.43
43:BH:27:LYS:HE2	43:BH:27:LYS:HB3	1.88	0.43
46:BN:137:LYS:HG2	46:BN:138:LEU:N	2.33	0.43
36:BA:2428:G:H21	48:BP:60:MET:HE1	1.83	0.43
51:BS:56:LEU:O	51:BS:57:LYS:O	2.36	0.43
53:BU:79:PHE:CE1	53:BU:83:LEU:HD11	2.54	0.43
53:BU:91:ASP:O	53:BU:92:ARG:HB3	2.18	0.43
54:BV:19:LYS:HB3	54:BV:94:LEU:O	2.17	0.43
57:BY:13:VAL:CG2	57:BY:14:LEU:N	2.82	0.43
1:CA:1269:A:H2	1:CA:1312:G:N3	2.16	0.43
1:CA:1359:C:OP2	14:CN:35:ARG:NH1	2.49	0.43
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.81	0.43
3:CC:173:VAL:HG12	3:CC:175:LEU:CD1	2.48	0.43
3:CC:3:ASN:O	3:CC:4:LYS:HB2	2.18	0.43
5:CE:12:LEU:CD2	5:CE:13:ILE:N	2.81	0.43
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	2.01	0.43
10:CJ:46:ARG:CG	10:CJ:46:ARG:HH11	2.27	0.43
11:CK:43:SER:HA	11:CK:47:VAL:HG21	2.01	0.43
16:CP:67:THR:CG2	16:CP:68:ASP:N	2.79	0.43
20:CT:57:ARG:HD3	20:CT:102:GLY:HA2	2.01	0.43
22:CV:71:G:C2'	22:CV:72:C:H5'	2.48	0.43
24:CY:25:C:O2'	24:CY:26:A:H5'	2.18	0.43
25:CZ:176:LEU:O	25:CZ:180:GLU:HG3	2.19	0.43
25:CZ:325:LYS:HE3	25:CZ:331:HIS:CG	2.53	0.43
25:CZ:41:ASN:O	25:CZ:42:VAL:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:56:GLN:NE2	28:D2:60:LEU:HD12	2.34	0.43
29:D3:15:TYR:CD2	29:D3:19:GLN:NE2	2.84	0.43
31:D5:4:HIS:CB	36:DA:2577:A:H1'	2.48	0.43
36:DA:1210:A:O2'	36:DA:1211:U:OP2	2.27	0.43
36:DA:1771:C:C1'	36:DA:1786:A:H8	2.31	0.43
36:DA:1788:C:C2'	36:DA:1789:A:H5'	2.49	0.43
36:DA:2039:C:O2'	36:DA:2040:C:H5'	2.18	0.43
36:DA:2551:C:H2'	36:DA:2552:U:C6	2.54	0.43
36:DA:2659:G:C2'	36:DA:2660:A:H5''	2.48	0.43
36:DA:2678:C:H2'	36:DA:2679:A:O4'	2.19	0.43
36:DA:67:U:H2'	36:DA:68:G:C8	2.54	0.43
36:DA:888:C:H2'	36:DA:889:C:O4'	2.19	0.43
38:DC:116:THR:CG2	38:DC:147:PHE:HA	2.48	0.43
40:DE:3:GLY:HA3	40:DE:81:ILE:CG2	2.48	0.43
40:DE:59:VAL:HG13	40:DE:60:ASN:N	2.33	0.43
42:DG:143:GLU:O	42:DG:144:ILE:CG2	2.66	0.43
42:DG:88:ILE:HG23	42:DG:89:GLY:H	1.82	0.43
43:DH:23:ARG:O	43:DH:24:VAL:CG2	2.66	0.43
47:DO:26:LYS:HB2	47:DO:30:ALA:HB2	2.00	0.43
48:DP:58:THR:O	48:DP:61:ARG:CD	2.65	0.43
36:DA:2415:G:H4'	48:DP:66:GLY:O	2.18	0.43
50:DR:56:LYS:HA	50:DR:84:ALA:HB1	2.00	0.43
51:DS:29:PHE:C	51:DS:29:PHE:CD1	2.91	0.43
51:DS:61:ASN:O	51:DS:63:THR:N	2.52	0.43
53:DU:66:ASN:ND2	53:DU:76:TYR:HB2	2.33	0.43
56:DX:12:VAL:CG1	56:DX:27:THR:O	2.67	0.43
58:DZ:72:ARG:NH2	58:DZ:97:GLU:O	2.51	0.43
1:AA:1153:C:O2'	1:AA:1154:G:H5''	2.19	0.43
1:AA:1286:A:O2'	1:AA:1287:A:C5'	2.66	0.43
1:AA:552:U:O3'	12:AL:87:GLY:HA3	2.19	0.43
1:AA:639:G:O2'	1:AA:640:A:H5'	2.19	0.43
4:AD:200:GLU:C	4:AD:202:LEU:H	2.21	0.43
9:AI:52:ALA:HB3	9:AI:95:LYS:NZ	2.33	0.43
12:AL:24:VAL:O	12:AL:24:VAL:CG1	2.60	0.43
20:AT:10:LEU:C	20:AT:12:ALA:H	2.22	0.43
20:AT:53:LEU:HB3	20:AT:102:GLY:HA3	2.00	0.43
22:AV:18:G:H2'	22:AV:57:G:N2	2.33	0.43
23:AX:13:A:H8	23:AX:13:A:OP2	2.00	0.43
25:AZ:141:VAL:HG23	25:AZ:141:VAL:O	2.19	0.43
25:AZ:195:TRP:HE3	25:AZ:195:TRP:HA	1.82	0.43
25:AZ:40:PRO:O	25:AZ:41:ASN:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B5:46:CYS:SG	31:B5:47:PRO:CD	3.05	0.43
32:B6:20:ASN:O	32:B6:21:TYR:CD2	2.72	0.43
33:B7:30:VAL:HA	33:B7:33:ARG:HH21	1.83	0.43
36:BA:1103:A:H5''	36:BA:1104:C:H5	1.83	0.43
36:BA:1541:G:O2'	36:BA:1542:A:C5'	2.67	0.43
27:B1:14:VAL:HG21	36:BA:188:G:H5'	2.01	0.43
36:BA:1649:G:C6	36:BA:2009:G:C6	3.06	0.43
36:BA:2027:G:H2'	36:BA:2028:U:C6	2.51	0.43
36:BA:2247:A:O2'	36:BA:2248:C:H5'	2.18	0.43
36:BA:2416:C:H2'	36:BA:2417:C:H6	1.84	0.43
36:BA:2788:C:O2'	36:BA:2809:A:N3	2.51	0.43
36:BA:60:G:C6	36:BA:74:A:N6	2.86	0.43
38:BC:78:ALA:H	38:BC:115:ALA:CA	2.30	0.43
38:BC:140:PRO:HA	38:BC:145:VAL:HB	2.00	0.43
38:BC:46:LYS:O	38:BC:210:ARG:HB2	2.18	0.43
39:BD:223:GLY:O	39:BD:226:MET:HG3	2.18	0.43
40:BE:30:PRO:O	40:BE:32:PRO:HD3	2.19	0.43
40:BE:77:ILE:CG2	40:BE:78:LEU:H	2.26	0.43
36:BA:320:A:H3'	41:BF:136:THR:HG22	2.00	0.43
41:BF:66:PRO:HD2	41:BF:70:THR:HG21	2.00	0.43
41:BF:78:ILE:C	41:BF:80:ALA:H	2.21	0.43
41:BF:84:VAL:O	41:BF:86:GLY:N	2.51	0.43
42:BG:16:ARG:C	42:BG:18:GLU:N	2.71	0.43
42:BG:78:SER:O	42:BG:80:PHE:N	2.50	0.43
43:BH:147:ASN:N	43:BH:147:ASN:HD22	2.16	0.43
44:BJ:96:UNK:O	44:BJ:100:UNK:N	2.51	0.43
46:BN:126:PRO:O	46:BN:127:ASP:CB	2.65	0.43
46:BN:34:LEU:HD13	46:BN:34:LEU:C	2.39	0.43
47:BO:26:LYS:HB2	47:BO:30:ALA:CB	2.48	0.43
36:BA:1190:G:H5'	48:BP:35:HIS:CA	2.48	0.43
48:BP:41:ARG:CB	48:BP:41:ARG:HH11	2.32	0.43
50:BR:52:ILE:CG2	50:BR:94:TYR:CD2	3.00	0.43
52:BT:128:GLU:O	52:BT:129:ARG:C	2.56	0.43
36:BA:559:G:N2	53:BU:49:HIS:CD2	2.86	0.43
56:BX:27:THR:CG2	56:BX:80:ILE:HG22	2.48	0.43
58:BZ:19:ARG:NH1	58:BZ:84:GLU:O	2.34	0.43
1:CA:1316:G:H4'	14:CN:18:VAL:HG13	1.99	0.43
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.84	0.43
1:CA:470:C:C2'	1:CA:471:G:OP1	2.66	0.43
1:CA:765:G:C6	1:CA:812:C:C2	3.05	0.43
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:95:GLN:C	2:CB:96:ARG:HD2	2.39	0.43
4:CD:30:LYS:C	4:CD:32:ALA:N	2.71	0.43
6:CF:40:VAL:HG22	6:CF:40:VAL:O	2.18	0.43
9:CI:48:GLU:HG3	9:CI:101:PHE:CZ	2.54	0.43
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD11	1.99	0.43
12:CL:32:PHE:HB3	12:CL:84:LEU:CD1	2.48	0.43
12:CL:53:ARG:NH1	12:CL:92:ASP:OD2	2.45	0.43
14:CN:41:ARG:NH2	14:CN:42:ILE:HD11	2.34	0.43
25:CZ:358:GLY:O	25:CZ:360:GLU:N	2.52	0.43
26:D0:41:ARG:HD3	26:D0:41:ARG:HA	1.54	0.43
30:D4:12:ALA:HB1	30:D4:29:PRO:HA	2.00	0.43
31:D5:48:GLU:O	31:D5:49:CYS:CB	2.65	0.43
36:DA:1070:A:H3'	36:DA:1072:C:H5	1.84	0.43
36:DA:1171:G:H1	36:DA:1178:C:H42	1.65	0.43
36:DA:1304:C:O2'	36:DA:1305:C:H5'	2.19	0.43
36:DA:1573:G:H2'	36:DA:1574:C:H5'	2.01	0.43
36:DA:1855:G:O2'	36:DA:1856:G:H5'	2.19	0.43
36:DA:2033:A:H4'	36:DA:2034:U:OP1	2.18	0.43
36:DA:1131:G:O6	36:DA:2040:C:H1'	2.18	0.43
36:DA:2886:G:H2'	36:DA:2887:U:H6	1.81	0.43
36:DA:654(M):C:H2'	36:DA:654(N):G:C8	2.53	0.43
36:DA:882:G:H2'	36:DA:883:G:C8	2.51	0.43
36:DA:897:C:O2	36:DA:897:C:H2'	2.18	0.43
36:DA:902:C:H2'	36:DA:903:C:H6	1.83	0.43
37:DB:91:C:H5'	49:DQ:17:LEU:O	2.17	0.43
40:DE:29:GLY:O	40:DE:30:PRO:C	2.55	0.43
36:DA:470:A:OP1	41:DF:59:TYR:CE1	2.71	0.43
52:DT:22:PHE:HE2	52:DT:85:LYS:HZ1	1.64	0.43
54:DV:89:GLN:HA	54:DV:90:PRO:HD3	1.90	0.43
57:DY:85:VAL:CG1	57:DY:86:ARG:H	2.30	0.43
1:AA:1508:G:H2'	1:AA:1509:C:H6	1.83	0.43
1:AA:320:C:H2'	1:AA:321:A:C8	2.54	0.43
1:AA:547:A:H4'	1:AA:548:G:O5'	2.17	0.43
1:AA:976:G:OP1	14:AN:32:SER:N	2.49	0.43
1:AA:995:C:O2'	1:AA:996:A:H8	2.02	0.43
5:AE:45:PHE:CD2	5:AE:47:LYS:HD2	2.54	0.43
9:AI:93:ARG:O	9:AI:95:LYS:N	2.51	0.43
13:AM:10:PRO:HB2	13:AM:45:VAL:HG21	2.00	0.43
13:AM:15:VAL:HA	13:AM:18:ALA:HB3	2.00	0.43
13:AM:68:GLY:H	13:AM:71:ARG:HG3	1.84	0.43
25:AZ:138:VAL:HG21	25:AZ:173:GLY:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:54:GLY:O	26:B0:55:ARG:C	2.57	0.43
27:B1:21:ARG:HB3	27:B1:21:ARG:NH1	2.19	0.43
28:B2:14:ARG:HG2	28:B2:14:ARG:O	2.19	0.43
36:BA:2157:G:C8	36:BA:2157:G:C3'	3.01	0.43
36:BA:231:C:O2'	36:BA:232:G:H5'	2.19	0.43
36:BA:743:G:O2'	36:BA:744:G:H5'	2.19	0.43
36:BA:845:G:HO2'	36:BA:846:C:H5	1.61	0.43
36:BA:999:U:O2'	36:BA:1000:A:H5'	2.19	0.43
39:BD:65:ILE:HD11	39:BD:88:ARG:CZ	2.49	0.43
40:BE:107:THR:HA	40:BE:163:GLU:O	2.17	0.43
40:BE:184:VAL:O	40:BE:186:GLY:N	2.52	0.43
41:BF:132:VAL:CG2	41:BF:133:ASN:H	2.11	0.43
41:BF:150:GLY:HA2	41:BF:172:TRP:CD2	2.54	0.43
42:BG:111:LEU:O	42:BG:114:ILE:HG22	2.18	0.43
42:BG:143:GLU:H	42:BG:143:GLU:HG2	1.57	0.43
42:BG:54:GLU:HG3	42:BG:54:GLU:H	1.61	0.43
42:BG:82:LEU:HD13	42:BG:87:PRO:CB	2.48	0.43
46:BN:94:HIS:N	46:BN:95:PRO:CD	2.81	0.43
48:BP:47:ASP:OD2	48:BP:50:ARG:HG2	2.19	0.43
48:BP:65:ARG:O	48:BP:66:GLY:C	2.57	0.43
51:BS:24:LEU:CB	51:BS:85:VAL:HG12	2.41	0.43
36:BA:2848:G:C8	52:BT:97:ALA:HB2	2.54	0.43
46:BN:38:HIS:O	53:BU:67:ALA:HB1	2.19	0.43
54:BV:92:THR:O	54:BV:93:GLU:C	2.57	0.43
57:BY:7:VAL:CG2	57:BY:8:LYS:NZ	2.78	0.43
49:BQ:137:TYR:CE1	58:BZ:81:ARG:NH2	2.86	0.43
1:CA:1218:C:H2'	1:CA:1219:U:C5	2.53	0.43
1:CA:1270:C:H2'	1:CA:1271:G:C8	2.53	0.43
1:CA:858:G:O2'	1:CA:859:A:H5'	2.19	0.43
4:CD:157:LEU:C	4:CD:159:ARG:N	2.72	0.43
7:CG:152:ALA:O	7:CG:155:ARG:HB2	2.18	0.43
7:CG:20:ASP:HB3	7:CG:23:VAL:CG2	2.47	0.43
7:CG:44:TYR:O	7:CG:45:ASP:C	2.55	0.43
9:CI:16:ARG:HH11	9:CI:16:ARG:HG3	1.83	0.43
11:CK:29:ILE:HB	11:CK:44:SER:HB3	2.00	0.43
12:CL:60:LEU:HB2	12:CL:64:TYR:O	2.18	0.43
13:CM:15:VAL:HA	13:CM:18:ALA:HB3	2.00	0.43
22:CW:71:G:HO2'	36:DA:1851:U:HO2'	1.51	0.43
22:CW:7:A:C5	22:CW:49:C:H5	2.37	0.43
25:CZ:166:ASP:OD1	25:CZ:166:ASP:N	2.51	0.43
25:CZ:28:THR:HG23	25:CZ:79:HIS:ND1	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:8:THR:HG1	25:CZ:9:LYS:HG2	1.82	0.43
28:D2:25:VAL:HG21	28:D2:61:LEU:CD2	2.47	0.43
30:D4:7:PRO:HG3	42:DG:61:ALA:HB1	2.01	0.43
36:DA:99:U:C4'	36:DA:102:G:H1'	2.49	0.43
36:DA:1149:G:H2'	36:DA:1150:C:C6	2.54	0.43
36:DA:1472:A:H2'	36:DA:1473:G:H5'	2.01	0.43
36:DA:1528:A:N1	36:DA:1542:A:H2	2.15	0.43
36:DA:1688:U:O2	36:DA:1700:A:H5''	2.19	0.43
36:DA:1876:A:H2'	36:DA:1877:A:C5'	2.40	0.43
36:DA:2043:C:C2	36:DA:2044:C:C5	3.07	0.43
36:DA:2223:G:O2'	36:DA:2224:G:H5'	2.18	0.43
36:DA:257:A:H2'	36:DA:258:G:H5'	2.00	0.43
36:DA:2695:C:H2'	36:DA:2696:U:C6	2.53	0.43
36:DA:2852:G:O2'	36:DA:2853:C:H5'	2.19	0.43
36:DA:299:A:N1	36:DA:322:A:O2'	2.42	0.43
36:DA:720:C:H2'	36:DA:721:C:H6	1.83	0.43
36:DA:79:G:H2'	36:DA:80:G:H8	1.84	0.43
40:DE:114:ALA:HB3	40:DE:160:TYR:HB3	2.01	0.43
40:DE:22:PRO:O	40:DE:185:LYS:O	2.36	0.43
40:DE:30:PRO:O	40:DE:32:PRO:HD3	2.17	0.43
41:DF:200:GLU:O	41:DF:204:ASN:ND2	2.51	0.43
43:DH:85:LYS:HE3	43:DH:86:GLU:N	2.34	0.43
48:DP:41:ARG:HD2	48:DP:41:ARG:N	2.33	0.43
49:DQ:141:GLN:CG	58:DZ:72:ARG:CD	2.93	0.43
50:DR:78:LYS:O	50:DR:83:ILE:HG12	2.19	0.43
53:DU:6:THR:O	53:DU:9:VAL:CG2	2.67	0.43
55:DW:56:ALA:C	55:DW:57:ASN:HD22	2.21	0.43
57:DY:56:PRO:O	57:DY:57:GLN:C	2.57	0.43
58:DZ:108:PRO:CB	58:DZ:141:VAL:HG12	2.49	0.43
58:DZ:14:LYS:O	58:DZ:18:LEU:HD22	2.19	0.43
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.54	0.43
1:AA:189(D):C:O2	1:AA:189(H):G:C6	2.72	0.43
1:AA:371:G:N2	1:AA:374:A:N6	2.67	0.43
1:AA:575:G:H4'	1:AA:576:G:O5'	2.19	0.43
1:AA:600:C:H4'	8:AH:128:GLY:O	2.17	0.43
2:AB:84:GLU:OE1	2:AB:216:SER:HA	2.18	0.43
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	2.00	0.43
2:AB:25:ASN:O	2:AB:27:LYS:N	2.52	0.43
5:AE:131:ILE:HD13	5:AE:131:ILE:HA	1.87	0.43
6:AF:56:PRO:HD2	6:AF:57:GLN:HE21	1.83	0.43
9:AI:40:LEU:C	9:AI:42:ARG:N	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:54:PHE:CE1	10:AJ:55:LYS:CE	3.01	0.43
11:AK:44:SER:N	11:AK:47:VAL:HG23	2.33	0.43
13:AM:11:ARG:O	13:AM:13:LYS:N	2.51	0.43
19:AS:19:VAL:O	19:AS:23:ASN:N	2.52	0.43
19:AS:29:ARG:O	19:AS:30:LEU:C	2.57	0.43
19:AS:6:LYS:HG2	19:AS:7:LYS:HE3	2.01	0.43
22:AW:9:A:O2'	22:AW:10:G:N7	2.50	0.43
24:AY:26:A:C5	24:AY:27:C:C5	3.06	0.43
25:AZ:368:VAL:CG1	25:AZ:369:THR:N	2.82	0.43
27:B1:6:GLU:HG3	27:B1:61:ARG:HB2	1.99	0.43
32:B6:13:CYS:HA	32:B6:50:ARG:O	2.19	0.43
36:BA:1570:A:H2'	36:BA:1571:A:C8	2.54	0.43
36:BA:1332:G:N2	36:BA:1609:A:O2'	2.52	0.43
36:BA:1680:U:O2	36:BA:1763:G:H3'	2.19	0.43
36:BA:2123:G:H1	36:BA:2174:C:H42	1.67	0.43
36:BA:2264:C:H2'	36:BA:2265:U:H6	1.83	0.43
36:BA:655:A:C4'	36:BA:656:G:H5'	2.41	0.43
36:BA:885:C:H2'	36:BA:886:C:H6	1.82	0.43
37:BB:29:A:H2'	37:BB:30:C:H6	1.83	0.43
40:BE:199:ARG:CB	40:BE:199:ARG:NH1	2.81	0.43
41:BF:28:ILE:HD13	41:BF:28:ILE:N	2.17	0.43
41:BF:37:VAL:HG11	48:BP:7:ARG:NH1	2.33	0.43
42:BG:34:LEU:CD1	42:BG:99:MET:HE3	2.47	0.43
50:BR:17:ARG:O	50:BR:20:LEU:HB3	2.19	0.43
50:BR:4:LEU:HD12	50:BR:7:GLY:H	1.83	0.43
50:BR:95:THR:OG1	50:BR:96:ARG:N	2.51	0.43
51:BS:103:GLU:HG2	51:BS:104:GLY:N	2.34	0.43
52:BT:28:VAL:HG23	52:BT:47:GLY:O	2.18	0.43
53:BU:66:ASN:ND2	53:BU:76:TYR:H	2.17	0.43
55:BW:25:ARG:CB	55:BW:25:ARG:NH1	2.81	0.43
55:BW:29:LEU:CG	55:BW:33:ARG:HD2	2.43	0.43
55:BW:56:ALA:C	55:BW:57:ASN:HD22	2.21	0.43
58:BZ:150:LEU:N	58:BZ:150:LEU:HD23	2.32	0.43
58:BZ:81:ARG:O	58:BZ:82:ARG:CB	2.65	0.43
1:CA:1133:G:C4	1:CA:1142:G:N2	2.86	0.43
1:CA:1140:C:HO2'	1:CA:1141:C:P	2.42	0.43
1:CA:1285:A:H8	1:CA:1285:A:OP1	2.01	0.43
1:CA:1477:C:H2'	1:CA:1478:C:H6	1.83	0.43
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.19	0.43
2:CB:105:PHE:O	2:CB:106:LYS:C	2.57	0.43
2:CB:226:ARG:HD2	2:CB:226:ARG:C	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.99	0.43
3:CC:136:GLN:O	3:CC:139:GLN:HB3	2.19	0.43
3:CC:152:ILE:HG12	3:CC:167:TRP:HB2	2.01	0.43
3:CC:82:GLU:N	3:CC:82:GLU:CD	2.72	0.43
5:CE:143:ARG:HA	5:CE:143:ARG:HD3	1.73	0.43
5:CE:18:ARG:NH1	5:CE:18:ARG:HG3	2.33	0.43
6:CF:62:TRP:C	6:CF:63:TYR:CD1	2.86	0.43
12:CL:32:PHE:CB	12:CL:84:LEU:HD11	2.49	0.43
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.32	0.43
22:CV:57:G:C2'	22:CV:58:A:H5'	2.49	0.43
25:CZ:117:ARG:NE	25:CZ:157:LEU:HD11	2.33	0.43
25:CZ:251:ASP:HB2	25:CZ:267:VAL:CG1	2.49	0.43
25:CZ:64:ASN:N	25:CZ:83:PRO:CG	2.81	0.43
32:D6:8:LYS:HD2	32:D6:8:LYS:HA	1.78	0.43
33:D7:43:THR:HG23	33:D7:44:PRO:CD	2.48	0.43
36:DA:1101:U:O2'	36:DA:1102:C:H5'	2.18	0.43
36:DA:1827:C:OP2	39:DD:222:ARG:NH1	2.50	0.43
36:DA:1887:C:H3'	36:DA:1888:G:H5''	1.99	0.43
36:DA:2120:G:C2	36:DA:2178:C:C5	3.06	0.43
36:DA:2416:C:H2'	36:DA:2417:C:C6	2.54	0.43
36:DA:268:C:C2'	36:DA:268:C:O2	2.67	0.43
36:DA:292:C:O2'	36:DA:293:U:H5'	2.19	0.43
36:DA:336:C:H4'	57:DY:7:VAL:CG2	2.49	0.43
27:D1:13:ILE:HD12	36:DA:396:G:O4'	2.19	0.43
36:DA:436:C:H2'	36:DA:437:G:C8	2.54	0.43
36:DA:455:C:N3	36:DA:473:G:H5'	2.34	0.43
36:DA:603:A:H1'	36:DA:604:G:OP2	2.18	0.43
36:DA:878:A:H2'	36:DA:879:G:O4'	2.17	0.43
37:DB:43:C:H5'	37:DB:44:G:OP2	2.18	0.43
37:DB:29:A:C2	37:DB:56:G:C2	3.07	0.43
37:DB:7:G:C3'	37:DB:8:U:H5''	2.48	0.43
38:DC:75:LEU:HD11	38:DC:113:VAL:HG13	2.01	0.43
38:DC:76:ALA:O	38:DC:77:ILE:HG12	2.17	0.43
38:DC:90:GLY:O	38:DC:157:LYS:HE3	2.19	0.43
39:DD:33:LEU:HB3	39:DD:34:VAL:H	1.59	0.43
36:DA:2053:G:OP1	40:DE:144:ARG:HG2	2.18	0.43
42:DG:107:LEU:HD13	42:DG:178:PHE:HD1	1.83	0.43
43:DH:149:ARG:HA	43:DH:162:ILE:HD13	1.99	0.43
46:DN:128:HIS:O	46:DN:128:HIS:CG	2.71	0.43
48:DP:14:LYS:O	48:DP:15:ARG:HB2	2.18	0.43
36:DA:598:G:C5'	48:DP:15:ARG:HB3	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:133:ARG:HB2	49:DQ:133:ARG:NH1	2.34	0.43
50:DR:106:GLY:O	50:DR:107:ASP:HB3	2.18	0.43
51:DS:85:VAL:CG2	51:DS:106:ARG:HG3	2.41	0.43
53:DU:109:LEU:O	53:DU:113:ALA:HB2	2.19	0.43
53:DU:90:VAL:HG11	54:DV:40:LEU:HD23	2.01	0.43
55:DW:55:ALA:O	55:DW:57:ASN:N	2.51	0.43
58:DZ:104:PHE:HE2	58:DZ:119:GLU:HG3	1.83	0.43
58:DZ:28:MET:O	58:DZ:28:MET:HG3	2.18	0.43
1:AA:1243:C:H2'	1:AA:1244:C:C6	2.54	0.43
1:AA:1283:G:O2'	1:AA:1284:C:C6	2.72	0.43
1:AA:201:C:H2'	1:AA:202:U:H3'	2.01	0.43
1:AA:865:A:H2	1:AA:918:A:C4'	2.29	0.43
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.72	0.43
3:AC:22:TRP:CZ2	14:AN:54:PRO:HG2	2.54	0.43
3:AC:80:GLY:C	3:AC:82:GLU:OE2	2.57	0.43
9:AI:43:ALA:C	9:AI:45:ALA:N	2.72	0.43
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	2.00	0.43
12:AL:25:PRO:O	12:AL:26:ALA:HB3	2.19	0.43
25:AZ:327:GLU:HA	61:AZ:502:KIR:C10	2.48	0.43
25:AZ:378:VAL:O	25:AZ:380:LEU:N	2.52	0.43
25:AZ:64:ASN:N	25:AZ:83:PRO:CG	2.81	0.43
28:B2:47:ASN:O	28:B2:50:ILE:HD13	2.18	0.43
34:B8:19:SER:CB	36:BA:651:G:OP1	2.66	0.43
36:BA:1558:A:O2'	36:BA:1559:G:P	2.77	0.43
36:BA:1666:G:H5'	36:BA:1666:G:H8	1.83	0.43
36:BA:1721:G:H8	36:BA:1741:A:H62	1.66	0.43
36:BA:1750:G:O2'	36:BA:1751:C:H5'	2.19	0.43
36:BA:1771:C:HO2'	36:BA:1786:A:C1'	2.32	0.43
36:BA:2131:G:H5''	36:BA:2132:U:O5'	2.18	0.43
36:BA:2292:C:O2'	36:BA:2293:C:H5'	2.19	0.43
34:B8:31:HIS:HE1	36:BA:2392:A:OP2	2.02	0.43
36:BA:676:A:C8	36:BA:2443:C:H1'	2.54	0.43
36:BA:271(V):G:O2'	36:BA:271(W):G:H5'	2.19	0.43
36:BA:2760:C:C3'	36:BA:2761:G:H5''	2.49	0.43
36:BA:527:C:OP2	36:BA:2779:U:C5	2.71	0.43
36:BA:292:C:O2'	36:BA:293:U:H5'	2.19	0.43
36:BA:527:C:OP2	36:BA:2779:U:H5	2.01	0.43
32:B6:42:TRP:CZ2	36:BA:643:A:N7	2.87	0.43
36:BA:653:A:H2'	36:BA:653:A:N3	2.33	0.43
36:BA:850:C:H2'	36:BA:851:U:H6	1.82	0.43
39:BD:13:ARG:NH1	39:BD:16:MET:SD	2.92	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:176:ARG:CG	39:BD:176:ARG:NH1	2.75	0.43
40:BE:61:ARG:CB	40:BE:62:PRO:CD	2.96	0.43
42:BG:97:ASP:O	42:BG:101:ILE:HG13	2.19	0.43
43:BH:30:LYS:HA	43:BH:30:LYS:HE2	2.01	0.43
47:BO:64:ARG:HD3	47:BO:79:PHE:CD2	2.53	0.43
48:BP:14:LYS:O	48:BP:15:ARG:HB2	2.17	0.43
51:BS:18:ILE:H	51:BS:18:ILE:CD1	2.32	0.43
53:BU:57:PHE:O	53:BU:58:ARG:C	2.57	0.43
53:BU:83:LEU:CD1	53:BU:83:LEU:H	2.32	0.43
54:BV:28:GLU:C	54:BV:30:GLY:H	2.22	0.43
1:CA:1125:U:O5'	1:CA:1125:U:O2	2.36	0.43
1:CA:1131:G:N3	1:CA:1132:C:N4	2.67	0.43
1:CA:1242:C:O5'	1:CA:1242:C:H6	2.02	0.43
1:CA:1255:G:H3'	1:CA:1279:A:H61	1.84	0.43
1:CA:1286:A:H1'	1:CA:1287:A:H4'	2.01	0.43
1:CA:275:G:H5'	17:CQ:14:LYS:HD2	2.00	0.43
1:CA:909:A:H2'	1:CA:910:C:O4'	2.18	0.43
1:CA:939:G:H2'	1:CA:940:C:C6	2.54	0.43
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.54	0.43
3:CC:157:ILE:HD11	3:CC:166:GLU:HB2	2.00	0.43
3:CC:43:LEU:HD13	3:CC:68:VAL:HG23	1.99	0.43
9:CI:97:LYS:N	9:CI:98:PRO:CD	2.80	0.43
12:CL:126:LYS:HD2	12:CL:126:LYS:HA	1.84	0.43
1:CA:1048:G:P	14:CN:4:LYS:HB2	2.58	0.43
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	2.01	0.43
17:CQ:4:LYS:HE3	17:CQ:6:LEU:CD2	2.48	0.43
20:CT:38:LYS:O	20:CT:42:GLN:HB2	2.19	0.43
20:CT:93:GLU:O	20:CT:93:GLU:HG2	2.18	0.43
22:CV:67:C:H2'	22:CV:68:C:C6	2.54	0.43
24:CY:40:C:O2'	24:CY:41:C:H5''	2.18	0.43
25:CZ:191:GLY:CA	25:CZ:197:ASP:OD2	2.67	0.43
25:CZ:352:VAL:HG12	25:CZ:353:VAL:N	2.33	0.43
31:D5:36:CYS:CB	31:D5:49:CYS:HB3	2.49	0.43
31:D5:33:CYS:CB	31:D5:49:CYS:HG	2.29	0.43
36:DA:1204:A:N1	36:DA:1241:A:H2	2.17	0.43
36:DA:1996:C:H5	47:DO:32:TYR:OH	2.01	0.43
36:DA:2533:A:H2'	36:DA:2534:A:O4'	2.18	0.43
36:DA:2624:G:O2'	36:DA:2625:G:H5'	2.19	0.43
36:DA:2687:U:C4	36:DA:2688:U:C5	3.07	0.43
34:D8:4:MET:HE2	36:DA:666:G:H1'	1.99	0.43
37:DB:49:C:O5'	37:DB:49:C:H6	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:77:ILE:CG2	38:DC:119:VAL:HG21	2.48	0.43
39:DD:183:ARG:HD2	39:DD:184:LYS:H	1.83	0.43
39:DD:93:ALA:HB3	39:DD:105:ILE:HG22	1.99	0.43
40:DE:61:ARG:HB3	40:DE:62:PRO:CD	2.47	0.43
41:DF:192:LEU:C	41:DF:192:LEU:CD2	2.86	0.43
44:DJ:36:UNK:O	44:DJ:40:UNK:CB	2.67	0.43
46:DN:34:LEU:C	46:DN:34:LEU:HD13	2.39	0.43
47:DO:60:ALA:HA	47:DO:87:ILE:HG12	2.00	0.43
47:DO:97:ARG:HH21	47:DO:99:PHE:HE1	1.66	0.43
50:DR:103:ARG:O	50:DR:104:ARG:HB2	2.19	0.43
50:DR:118:GLU:HA	50:DR:118:GLU:OE1	2.19	0.43
52:DT:107:ASP:OD2	52:DT:109:GLU:HG3	2.18	0.43
52:DT:123:GLN:O	52:DT:127:ALA:HB3	2.19	0.43
53:DU:66:ASN:ND2	53:DU:76:TYR:N	2.67	0.43
57:DY:81:LYS:HZ3	57:DY:98:VAL:HB	1.84	0.43
1:AA:1137:C:H4'	1:AA:1138:G:N2	2.34	0.43
1:AA:189:G:C6	1:AA:189(A):C:C4	3.07	0.43
1:AA:22:G:H4'	1:AA:885:G:C8	2.54	0.43
1:AA:376:G:P	16:AP:67:THR:HG21	2.59	0.43
1:AA:476:G:H2'	1:AA:477:A:C8	2.53	0.43
1:AA:676:A:H2'	1:AA:677:U:C6	2.54	0.43
1:AA:820:U:H4'	1:AA:821:G:OP2	2.18	0.43
2:AB:115:LEU:HB2	2:AB:145:LEU:HD12	2.00	0.43
2:AB:95:GLN:C	2:AB:96:ARG:HD2	2.38	0.43
3:AC:70:VAL:HG12	3:AC:71:ALA:N	2.33	0.43
4:AD:148:VAL:CG1	4:AD:152:SER:HB2	2.48	0.43
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.34	0.43
8:AH:26:VAL:HG13	8:AH:59:LEU:HB2	1.99	0.43
16:AP:67:THR:CG2	16:AP:68:ASP:N	2.81	0.43
22:AV:49:C:H2'	22:AV:50:U:H6	1.84	0.43
22:AV:68:C:O2'	22:AV:69:G:H5'	2.19	0.43
25:AZ:348:ASP:O	25:AZ:348:ASP:CG	2.57	0.43
60:AZ:501:GDP:O2B	60:AZ:501:GDP:O1A	2.36	0.43
26:B0:27:GLU:OE2	26:B0:69:PHE:HB2	2.19	0.43
29:B3:3:ARG:HG2	29:B3:38:GLU:OE2	2.19	0.43
32:B6:41:PRO:HD2	32:B6:45:LYS:HA	2.01	0.43
32:B6:8:LYS:HA	32:B6:8:LYS:HD2	1.82	0.43
34:B8:52:LYS:H	34:B8:53:PRO:CD	2.32	0.43
36:BA:1362:C:C2'	36:BA:1363:C:H5'	2.48	0.43
36:BA:156:U:C2'	36:BA:157:U:H5'	2.49	0.43
36:BA:1860:G:H1	36:BA:1882:C:H42	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2350:C:H2'	36:BA:2351:G:O4'	2.18	0.43
36:BA:2579:C:H1'	40:BE:134:ILE:HD13	2.01	0.43
36:BA:271(U):G:H2'	36:BA:271(V):G:C8	2.54	0.43
36:BA:378:C:O2'	36:BA:379:G:H5'	2.19	0.43
36:BA:674:G:H2'	36:BA:804:A:H61	1.83	0.43
37:BB:16:G:C6	37:BB:69:G:C2	3.07	0.43
42:BG:9:ARG:O	42:BG:13:GLU:HG2	2.19	0.43
44:BJ:35:UNK:O	44:BJ:37:UNK:N	2.52	0.43
49:BQ:45:GLN:H	49:BQ:45:GLN:HE21	1.67	0.43
50:BR:116:LEU:O	50:BR:117:VAL:CG1	2.66	0.43
51:BS:15:ARG:HH11	51:BS:15:ARG:CG	2.31	0.43
52:BT:90:GLN:C	52:BT:92:GLY:N	2.67	0.43
54:BV:91:TYR:HD1	54:BV:91:TYR:N	2.17	0.43
56:BX:57:LEU:N	56:BX:57:LEU:CD1	2.81	0.43
36:BA:64:A:N9	56:BX:66:LEU:HD12	2.34	0.43
57:BY:28:LYS:HE3	57:BY:28:LYS:HB2	1.88	0.43
57:BY:39:VAL:HG12	57:BY:40:GLU:N	2.34	0.43
57:BY:7:VAL:CB	57:BY:8:LYS:HD2	2.49	0.43
57:BY:88:LYS:HZ1	57:BY:93:GLY:HA3	1.84	0.43
1:CA:189:G:C6	1:CA:189(A):C:C4	3.07	0.43
1:CA:500:G:H5''	12:CL:124:LYS:NZ	2.34	0.43
1:CA:924:C:H2'	1:CA:925:G:C8	2.54	0.43
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.48	0.43
3:CC:190:ARG:HH11	3:CC:190:ARG:HG3	1.82	0.43
3:CC:206:GLU:HB3	3:CC:207:VAL:H	1.45	0.43
4:CD:149:ALA:HB3	4:CD:152:SER:OG	2.18	0.43
4:CD:78:LEU:CD2	4:CD:96:LEU:HB3	2.45	0.43
5:CE:79:GLU:OE2	8:CH:104:ARG:HA	2.19	0.43
6:CF:40:VAL:HG13	6:CF:40:VAL:O	2.18	0.43
9:CI:5:TYR:CG	9:CI:6:GLY:N	2.86	0.43
10:CJ:40:LEU:HD23	10:CJ:69:ASN:O	2.18	0.43
1:CA:376:G:H4'	16:CP:5:ARG:HH11	1.82	0.43
17:CQ:10:VAL:O	17:CQ:10:VAL:HG23	2.19	0.43
20:CT:71:THR:O	20:CT:72:LEU:HD23	2.19	0.43
22:CV:61:C:H2'	22:CV:61:C:O2	2.19	0.43
22:CW:2:C:N4	22:CW:3:C:N4	2.67	0.43
24:CY:26:A:C4	24:CY:27:C:C6	3.07	0.43
25:CZ:77:TYR:OH	25:CZ:207:ASP:HB3	2.18	0.43
27:D1:30:VAL:H	36:DA:2396:G:C4'	2.29	0.43
28:D2:57:ILE:O	28:D2:61:LEU:HG	2.19	0.43
32:D6:11:LEU:O	32:D6:23:THR:HB	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1096:A:H2'	36:DA:1096:A:N3	2.33	0.43
36:DA:116:C:O2'	36:DA:117:G:H5'	2.19	0.43
36:DA:1360:A:H5'	36:DA:1361:G:OP2	2.19	0.43
36:DA:2444:G:OP2	41:DF:68:LYS:NZ	2.47	0.43
36:DA:2446:G:H2'	36:DA:2447:G:H5''	2.01	0.43
36:DA:2815:C:H2'	36:DA:2816:C:O4'	2.19	0.43
36:DA:470:A:H2'	36:DA:471:A:C8	2.54	0.43
28:D2:62:THR:HG21	36:DA:76:C:O2'	2.19	0.43
36:DA:880:G:H22	36:DA:897:C:N4	2.16	0.43
36:DA:941:A:H4'	48:DP:35:HIS:CE1	2.54	0.43
37:DB:117:G:H2'	37:DB:118:G:C8	2.54	0.43
38:DC:73:ARG:HB2	38:DC:111:ASP:OD2	2.19	0.43
47:DO:12:ASP:OD1	47:DO:14:THR:HG22	2.18	0.43
48:DP:100:LEU:HD13	48:DP:100:LEU:O	2.18	0.43
48:DP:23:PRO:HB2	48:DP:33:ARG:CG	2.49	0.43
36:DA:389:G:N1	48:DP:70:GLN:HB3	2.33	0.43
50:DR:55:ALA:CB	50:DR:79:LEU:CD1	2.96	0.43
52:DT:128:GLU:O	52:DT:129:ARG:C	2.56	0.43
52:DT:87:ASP:OD1	52:DT:87:ASP:N	2.49	0.43
36:DA:336:C:H4'	57:DY:7:VAL:HG21	2.00	0.43
1:AA:294:U:H2'	1:AA:295:C:C6	2.54	0.43
1:AA:359:U:H2'	1:AA:360:A:C8	2.54	0.43
1:AA:665:A:H2'	1:AA:732:C:O2	2.19	0.43
2:AB:69:LEU:HB2	2:AB:159:PRO:CG	2.49	0.43
3:AC:165:THR:O	3:AC:165:THR:CG2	2.66	0.43
3:AC:190:ARG:HG3	3:AC:190:ARG:HH11	1.83	0.43
3:AC:175:LEU:HD21	3:AC:201:TYR:CE2	2.54	0.43
3:AC:22:TRP:CH2	3:AC:32:LEU:HB2	2.54	0.43
4:AD:70:ILE:CG2	4:AD:71:SER:N	2.81	0.43
7:AG:114:ARG:HG2	7:AG:114:ARG:H	1.74	0.43
7:AG:22:LEU:HD22	7:AG:62:PHE:CZ	2.54	0.43
7:AG:68:ASN:O	7:AG:138:LYS:HD2	2.18	0.43
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.49	0.43
12:AL:33:ARG:HD3	12:AL:62:SER:CB	2.47	0.43
12:AL:45:PRO:HG3	12:AL:53:ARG:CD	2.47	0.43
14:AN:12:ARG:HH11	14:AN:14:PRO:HG2	1.84	0.43
14:AN:57:ARG:CG	14:AN:58:LYS:N	2.82	0.43
17:AQ:17:LYS:HA	17:AQ:49:GLU:HG2	2.01	0.43
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	2.00	0.43
24:AY:40:C:H2'	24:AY:41:C:H5'	1.99	0.43
24:AY:61:C:C2'	24:AY:62:U:C5'	2.88	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:352:VAL:HG12	25:AZ:353:VAL:N	2.34	0.43
26:B0:19:LYS:HD3	36:BA:2262:U:OP1	2.19	0.43
27:B1:39:LYS:O	27:B1:40:ARG:CG	2.66	0.43
28:B2:51:ARG:HD3	28:B2:55:ARG:HH12	1.82	0.43
32:B6:35:GLU:HB2	32:B6:51:GLU:OE1	2.18	0.43
35:B9:1:MET:CG	36:BA:2478:A:OP2	2.66	0.43
36:BA:1374:G:H2'	36:BA:1375:C:C6	2.54	0.43
36:BA:1496:A:H8	36:BA:1498:C:N3	2.17	0.43
36:BA:2024:G:O2'	36:BA:2025:C:H5'	2.19	0.43
36:BA:2153:G:O2'	36:BA:2154:G:H5'	2.19	0.43
36:BA:21:A:O2'	36:BA:22:C:H5'	2.18	0.43
36:BA:2263:C:O2'	36:BA:2264:C:H5'	2.18	0.43
36:BA:2762:G:C2'	36:BA:2763:G:H5'	2.49	0.43
36:BA:640:C:N4	36:BA:641:C:N4	2.66	0.43
38:BC:120:MET:O	38:BC:124:GLY:HA3	2.19	0.43
40:BE:63:LEU:O	40:BE:64:LYS:C	2.57	0.43
42:BG:138:GLN:HG3	42:BG:139:LEU:HD12	2.01	0.43
43:BH:121:ILE:HG23	43:BH:133:VAL:HG13	2.00	0.43
43:BH:54:ARG:CB	43:BH:55:PRO:HD2	2.43	0.43
48:BP:33:ARG:O	48:BP:34:GLY:O	2.37	0.43
52:BT:25:GLY:O	52:BT:26:ASP:CB	2.64	0.43
52:BT:78:LEU:O	52:BT:78:LEU:HD23	2.18	0.43
53:BU:115:ALA:C	53:BU:117:GLN:N	2.68	0.43
1:CA:1120:G:H2'	1:CA:1121:U:C6	2.54	0.43
1:CA:1488:G:H2'	1:CA:1489:G:C8	2.54	0.43
1:CA:190:U:H2'	1:CA:191:G:H8	1.84	0.43
2:CB:11:LEU:O	2:CB:16:HIS:CE1	2.71	0.43
3:CC:80:GLY:C	3:CC:82:GLU:OE2	2.58	0.43
4:CD:120:LEU:HB3	4:CD:126:ILE:CD1	2.45	0.43
5:CE:131:ILE:HA	5:CE:131:ILE:HD13	1.89	0.43
7:CG:41:ARG:HG2	7:CG:41:ARG:NH1	2.33	0.43
5:CE:152:ARG:HB3	8:CH:43:GLY:HA3	2.01	0.43
10:CJ:46:ARG:NH1	10:CJ:46:ARG:CG	2.82	0.43
10:CJ:8:LEU:CD2	10:CJ:96:ILE:HG22	2.48	0.43
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.19	0.43
22:CV:5:G:H1	22:CV:68:C:N4	2.16	0.43
24:CY:54:5MU:H73	24:CY:55:PSU:C2	2.54	0.43
27:D1:45:ASN:HD21	27:D1:47:GLN:NE2	2.16	0.43
33:D7:21:ARG:HG2	33:D7:21:ARG:NH1	2.34	0.43
34:D8:6:THR:CB	34:D8:11:LYS:HZ1	2.30	0.43
36:DA:129:C:H2'	36:DA:129:C:O2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2027:G:H2'	36:DA:2028:U:C6	2.52	0.43
36:DA:2106:G:C5	36:DA:2107:C:N3	2.87	0.43
36:DA:2184:G:H2'	36:DA:2185:C:H1'	2.01	0.43
36:DA:2206:G:N2	36:DA:2207:G:C5'	2.81	0.43
36:DA:2461:C:H2'	36:DA:2462:U:C6	2.54	0.43
36:DA:2577:A:H5''	36:DA:2578:G:H5'	2.01	0.43
36:DA:2583:G:H2'	36:DA:2584:U:O2	2.19	0.43
36:DA:37:C:H2'	36:DA:38:A:C8	2.54	0.43
36:DA:480:A:H2	36:DA:499:U:O2	2.02	0.43
36:DA:593:G:O2'	36:DA:594:U:H5'	2.18	0.43
36:DA:65:C:H2'	36:DA:66:C:C6	2.54	0.43
36:DA:708:C:N4	36:DA:723:G:H1	2.14	0.43
36:DA:730:C:O2'	36:DA:731:C:H5'	2.19	0.43
37:DB:114:C:O2'	51:DS:46:VAL:HG13	2.18	0.43
40:DE:36:ARG:NH1	40:DE:85:ASN:OD1	2.52	0.43
41:DF:36:VAL:HA	41:DF:101:LEU:CD2	2.48	0.43
42:DG:22:ARG:NH2	42:DG:175:LEU:HD21	2.34	0.43
43:DH:169:VAL:CG2	43:DH:170:ARG:H	2.13	0.43
43:DH:54:ARG:HB2	43:DH:55:PRO:CD	2.44	0.43
46:DN:46:VAL:HG13	46:DN:47:ALA:N	2.34	0.43
48:DP:83:VAL:CG1	48:DP:112:LEU:HD21	2.47	0.43
48:DP:126:VAL:HA	48:DP:145:PRO:CB	2.48	0.43
49:DQ:97:VAL:O	49:DQ:97:VAL:HG23	2.19	0.43
50:DR:44:LEU:HD13	50:DR:44:LEU:C	2.38	0.43
56:DX:14:SER:H	56:DX:17:ALA:HB3	1.82	0.43
57:DY:88:LYS:O	57:DY:90:LEU:HD23	2.19	0.43
57:DY:91:GLU:CG	57:DY:92:ASN:H	2.31	0.43
1:AA:1030(D):A:H62	1:AA:1031:G:N2	2.13	0.42
1:AA:1216:G:H5''	14:AN:5:ALA:HB2	2.01	0.42
1:AA:1286:A:O2'	1:AA:1287:A:P	2.77	0.42
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.72	0.42
1:AA:151:A:H2'	1:AA:152:A:O4'	2.19	0.42
1:AA:190:U:H2'	1:AA:191:G:H8	1.83	0.42
1:AA:475:G:H2'	1:AA:476:G:H8	1.83	0.42
1:AA:797:C:O2'	1:AA:798:G:H5'	2.19	0.42
1:AA:802:A:H2'	1:AA:803:G:O4'	2.19	0.42
2:AB:32:ILE:HA	2:AB:42:ILE:HA	2.01	0.42
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.19	0.42
4:AD:151:LYS:HG2	4:AD:151:LYS:O	2.19	0.42
6:AF:12:PRO:HG3	6:AF:55:ASP:CB	2.48	0.42
6:AF:86:ARG:H	6:AF:86:ARG:HG2	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:40:LEU:HD12	9:AI:74:ILE:HD11	2.00	0.42
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.19	0.42
17:AQ:91:ARG:HH11	17:AQ:91:ARG:HB2	1.84	0.42
20:AT:13:LEU:O	20:AT:16:HIS:N	2.50	0.42
22:AW:18:G:O4'	22:AW:58:A:C2	2.72	0.42
24:AY:76:A:H1'	25:AZ:287:GLY:HA3	2.00	0.42
25:AZ:191:GLY:CA	25:AZ:197:ASP:OD2	2.67	0.42
25:AZ:19:HIS:CD2	25:AZ:20:VAL:N	2.87	0.42
25:AZ:85:HIS:NE2	36:BA:2662:A:H5'	2.34	0.42
26:B0:17:GLN:O	26:B0:19:LYS:HD2	2.19	0.42
36:BA:1358:G:O2'	36:BA:1359:A:H5''	2.18	0.42
36:BA:2133:G:C2	36:BA:2157:G:O6	2.72	0.42
36:BA:2330:G:H2'	36:BA:2331:G:O4'	2.18	0.42
31:B5:4:HIS:CB	36:BA:2577:A:H1'	2.49	0.42
35:B9:33:LYS:NZ	36:BA:2743:C:OP1	2.41	0.42
36:BA:496:G:H1'	55:BW:61:ASN:ND2	2.34	0.42
36:BA:65:C:H2'	36:BA:66:C:H6	1.84	0.42
36:BA:736:C:O2'	36:BA:737:C:H5'	2.18	0.42
36:BA:742:G:O2'	36:BA:743:G:H5'	2.18	0.42
36:BA:786:C:O2'	36:BA:787:U:H5'	2.19	0.42
37:BB:21:G:H2'	37:BB:22:U:C5'	2.49	0.42
38:BC:75:LEU:HD11	38:BC:113:VAL:HG13	2.01	0.42
39:BD:218:ARG:HG3	39:BD:218:ARG:HH11	1.83	0.42
40:BE:47:VAL:HG23	40:BE:84:PHE:O	2.18	0.42
41:BF:25:PRO:HB3	41:BF:119:ARG:CB	2.45	0.42
41:BF:65:TRP:CZ3	41:BF:72:ARG:HB2	2.54	0.42
42:BG:125:PHE:CD1	42:BG:126:ASP:N	2.79	0.42
42:BG:67:LYS:N	42:BG:67:LYS:CD	2.72	0.42
43:BH:76:VAL:C	43:BH:78:GLY:H	2.22	0.42
46:BN:34:LEU:CD1	46:BN:116:LEU:HB3	2.49	0.42
46:BN:51:PHE:CE1	46:BN:119:ARG:HD2	2.53	0.42
41:BF:184:TYR:CE1	48:BP:7:ARG:CZ	3.03	0.42
50:BR:63:ARG:O	50:BR:67:LEU:HD23	2.18	0.42
52:BT:28:VAL:HG22	52:BT:46:GLU:C	2.37	0.42
52:BT:87:ASP:OD1	52:BT:87:ASP:N	2.51	0.42
55:BW:29:LEU:HG	55:BW:33:ARG:CD	2.43	0.42
55:BW:55:ALA:C	55:BW:57:ASN:N	2.71	0.42
57:BY:13:VAL:HG23	57:BY:73:ARG:C	2.39	0.42
1:CA:1137:C:H4'	1:CA:1138:G:N2	2.34	0.42
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.54	0.42
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:412:A:H4'	1:CA:413:G:H8	1.84	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.34	0.42
3:CC:188:LEU:HD22	3:CC:188:LEU:HA	1.79	0.42
4:CD:49:ARG:H	4:CD:49:ARG:HG2	1.54	0.42
7:CG:54:THR:HG22	7:CG:55:GLY:N	2.33	0.42
8:CH:44:PHE:HE2	8:CH:109:ILE:HG21	1.84	0.42
9:CI:24:GLY:O	9:CI:25:LYS:HD2	2.19	0.42
13:CM:83:ASP:OD1	13:CM:85:GLY:N	2.52	0.42
25:CZ:27:LEU:O	25:CZ:30:ALA:HB3	2.19	0.42
25:CZ:397:ALA:CB	61:CZ:502:KIR:H252	2.46	0.42
27:D1:45:ASN:C	27:D1:45:ASN:ND2	2.70	0.42
27:D1:67:ILE:H	27:D1:68:PRO:CD	2.31	0.42
34:D8:50:LEU:O	34:D8:52:LYS:N	2.46	0.42
35:D9:29:ASN:O	35:D9:31:LYS:N	2.51	0.42
36:DA:1297:C:H2'	36:DA:1298:C:H6	1.84	0.42
36:DA:1358:G:O2'	36:DA:1359:A:H5''	2.19	0.42
36:DA:1557:C:H5''	36:DA:1558:A:OP2	2.19	0.42
36:DA:1599:C:OP2	56:DX:36:LYS:HD2	2.19	0.42
36:DA:1332:G:N2	36:DA:1609:A:O2'	2.52	0.42
36:DA:1721:G:C2	36:DA:1739:U:OP2	2.72	0.42
36:DA:1902:C:H4'	39:DD:244:ARG:HB2	2.01	0.42
36:DA:2070:G:H2'	36:DA:2071:A:C8	2.54	0.42
36:DA:2428:G:H5''	36:DA:2429:G:O5'	2.18	0.42
36:DA:2544:G:H8	36:DA:2544:G:O5'	2.02	0.42
36:DA:257:A:C2'	36:DA:258:G:H5'	2.49	0.42
39:DD:266:SER:O	39:DD:267:SER:O	2.36	0.42
40:DE:197:ILE:O	40:DE:197:ILE:HG12	2.19	0.42
41:DF:100:THR:O	41:DF:100:THR:HG22	2.19	0.42
42:DG:147:ASP:O	42:DG:148:MET:HB2	2.19	0.42
42:DG:162:THR:HG22	42:DG:162:THR:O	2.19	0.42
43:DH:80:SER:O	43:DH:81:GLU:CB	2.67	0.42
47:DO:26:LYS:HB2	47:DO:30:ALA:CB	2.49	0.42
47:DO:86:ILE:H	47:DO:86:ILE:CD1	2.31	0.42
50:DR:38:VAL:O	50:DR:42:LYS:HB2	2.19	0.42
50:DR:95:THR:OG1	50:DR:96:ARG:N	2.52	0.42
51:DS:16:ASN:O	51:DS:18:ILE:N	2.52	0.42
52:DT:109:GLU:HG2	52:DT:112:ARG:NH2	2.34	0.42
55:DW:79:GLY:CA	55:DW:100:THR:HG23	2.48	0.42
57:DY:88:LYS:HZ1	57:DY:93:GLY:HA3	1.80	0.42
1:AA:1015:A:C6	1:AA:1016:A:C6	3.07	0.42
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.18	0.42
1:AA:1476:G:H2'	1:AA:1477:C:C6	2.55	0.42
1:AA:173:U:H5''	1:AA:197:A:O4'	2.18	0.42
1:AA:353:A:H2'	1:AA:354:G:OP2	2.19	0.42
1:AA:827:U:N3	1:AA:870:U:C4	2.87	0.42
2:AB:127:ILE:HG22	2:AB:128:GLU:N	2.33	0.42
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.92	0.42
3:AC:107:GLN:CD	3:AC:107:GLN:H	2.21	0.42
3:AC:139:GLN:O	3:AC:142:MET:HB2	2.19	0.42
7:AG:134:ALA:O	7:AG:135:VAL:C	2.58	0.42
7:AG:143:ARG:HD3	22:AW:41:C:O3'	2.19	0.42
10:AJ:40:LEU:N	10:AJ:40:LEU:CD2	2.78	0.42
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.46	0.42
22:AV:47:U:HO2'	22:AV:48:C:C5'	2.32	0.42
22:AV:71:G:C2'	22:AV:72:C:H5'	2.49	0.42
24:AY:25:C:O2'	24:AY:26:A:H5'	2.19	0.42
25:AZ:131:ILE:HG12	25:AZ:163:PHE:CE1	2.53	0.42
25:AZ:77:TYR:OH	25:AZ:207:ASP:HB3	2.19	0.42
1:AA:367:U:H4'	25:AZ:291:ARG:HH21	1.83	0.42
27:B1:39:LYS:HD2	27:B1:39:LYS:HA	1.83	0.42
27:B1:49:VAL:HG13	27:B1:49:VAL:O	2.18	0.42
29:B3:47:VAL:CG1	29:B3:56:VAL:HG21	2.49	0.42
31:B5:16:ARG:HH11	31:B5:20:ARG:HH12	1.66	0.42
31:B5:56:LYS:HE2	31:B5:59:GLU:OE2	2.19	0.42
34:B8:28:GLY:O	34:B8:36:LYS:NZ	2.52	0.42
36:BA:1192:G:C2'	36:BA:1193:G:H5'	2.49	0.42
36:BA:150:C:H2'	36:BA:151:C:C6	2.54	0.42
36:BA:1448:G:H21	36:BA:1528(A):A:H2	1.65	0.42
36:BA:2115:G:C2	36:BA:2117:A:N7	2.87	0.42
36:BA:2604:U:C5'	36:BA:2604:U:C6	2.92	0.42
36:BA:271(H):G:O2'	36:BA:271(I):G:C8	2.70	0.42
37:BB:7:G:C3'	37:BB:8:U:H5''	2.48	0.42
40:BE:29:GLY:O	40:BE:30:PRO:C	2.56	0.42
42:BG:107:LEU:HD21	42:BG:178:PHE:CE1	2.53	0.42
42:BG:51:ARG:NH2	42:BG:52:ILE:CD1	2.83	0.42
42:BG:87:PRO:C	42:BG:88:ILE:HG12	2.39	0.42
43:BH:49:VAL:O	43:BH:50:VAL:CG2	2.67	0.42
43:BH:54:ARG:HB2	43:BH:55:PRO:CD	2.45	0.42
44:BJ:118:UNK:O	44:BJ:119:UNK:C	2.67	0.42
48:BP:31:ALA:C	48:BP:33:ARG:N	2.72	0.42
34:B8:59:LYS:CE	48:BP:50:ARG:HB3	2.36	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:133:ARG:O	49:BQ:134:ARG:HB2	2.19	0.42
50:BR:99:LYS:HA	50:BR:112:ALA:HA	2.01	0.42
53:BU:32:PHE:CB	53:BU:36:ARG:HH22	2.31	0.42
53:BU:91:ASP:CG	53:BU:96:ALA:HB2	2.40	0.42
54:BV:18:LEU:CD2	54:BV:19:LYS:N	2.76	0.42
54:BV:46:VAL:HG13	54:BV:46:VAL:O	2.19	0.42
57:BY:49:VAL:O	57:BY:50:ARG:CB	2.57	0.42
58:BZ:27:VAL:CG1	58:BZ:28:MET:N	2.83	0.42
58:BZ:70:LEU:HD12	58:BZ:70:LEU:H	1.84	0.42
1:CA:499:A:H4'	1:CA:500:G:H5'	2.00	0.42
1:CA:647:C:O2'	1:CA:648:A:H5'	2.18	0.42
1:CA:952:U:O2'	1:CA:953:G:H5'	2.19	0.42
2:CB:200:ILE:O	2:CB:201:ILE:HG13	2.19	0.42
3:CC:131:ARG:HH11	3:CC:166:GLU:CG	2.32	0.42
3:CC:135:LYS:O	3:CC:138:VAL:HG13	2.20	0.42
3:CC:147:LYS:HB2	3:CC:203:PHE:CD2	2.54	0.42
6:CF:56:PRO:HD2	6:CF:57:GLN:HE21	1.83	0.42
6:CF:72:VAL:HG22	6:CF:72:VAL:O	2.18	0.42
7:CG:38:LEU:O	7:CG:42:ILE:HG13	2.20	0.42
14:CN:15:LYS:HB3	14:CN:16:PHE:CD2	2.54	0.42
14:CN:60:SER:O	14:CN:61:TRP:HB3	2.18	0.42
15:CO:31:LEU:N	15:CO:31:LEU:HD12	2.34	0.42
19:CS:11:VAL:HG22	19:CS:11:VAL:O	2.19	0.42
1:CA:191:G:H1'	20:CT:105:SER:HA	2.01	0.42
20:CT:50:GLU:HB2	20:CT:99:LEU:HD13	2.00	0.42
20:CT:33:ILE:HG21	20:CT:63:ILE:HG12	2.01	0.42
25:CZ:348:ASP:O	25:CZ:348:ASP:CG	2.57	0.42
25:CZ:85:HIS:C	25:CZ:87:ASP:N	2.71	0.42
33:D7:43:THR:CG2	33:D7:44:PRO:N	2.82	0.42
35:D9:17:ILE:HG22	35:D9:18:ARG:H	1.84	0.42
36:DA:1087:G:O2'	36:DA:1089:G:H5'	2.19	0.42
36:DA:1878:G:H2'	36:DA:1879:C:C6	2.54	0.42
36:DA:1963:U:C2'	36:DA:1963:U:O2	2.67	0.42
36:DA:2081:C:H2'	36:DA:2082:A:H8	1.83	0.42
36:DA:2171:A:O2'	36:DA:2172:U:H5	1.99	0.42
36:DA:2460:U:H4'	49:DQ:79:LEU:HD11	2.01	0.42
36:DA:2579:C:H1'	40:DE:134:ILE:HD13	2.01	0.42
36:DA:2612:C:C5	36:DA:2613:U:H5	2.37	0.42
36:DA:271(K):U:H3'	36:DA:271(L):U:C5'	2.49	0.42
36:DA:2738:A:H2'	36:DA:2739:U:O5'	2.19	0.42
36:DA:2869:G:H2'	36:DA:2870:C:H6	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:637:A:OP2	48:DP:115:LEU:HB2	2.20	0.42
36:DA:649:G:H2'	36:DA:650:C:C6	2.54	0.42
37:DB:78:A:H2'	37:DB:79:C:O4'	2.19	0.42
39:DD:30:GLU:HB2	39:DD:35:LYS:NZ	2.33	0.42
41:DF:25:PRO:HB3	41:DF:119:ARG:CB	2.44	0.42
41:DF:53:THR:O	41:DF:57:VAL:HG23	2.19	0.42
42:DG:99:MET:CG	42:DG:100:TRP:N	2.81	0.42
43:DH:146:ALA:O	43:DH:147:ASN:C	2.57	0.42
46:DN:71:ILE:HG22	46:DN:72:TYR:N	2.34	0.42
48:DP:83:VAL:HG13	48:DP:83:VAL:O	2.20	0.42
49:DQ:110:THR:O	49:DQ:111:GLU:C	2.56	0.42
52:DT:19:LEU:HA	52:DT:20:PRO:HD3	1.85	0.42
52:DT:96:ARG:HB2	52:DT:96:ARG:HH11	1.82	0.42
56:DX:53:LYS:HB3	56:DX:82:GLN:CB	2.49	0.42
58:DZ:166:SER:HB2	58:DZ:167:PRO:HA	2.01	0.42
36:DA:904:C:H4'	58:DZ:169:GLU:OE1	2.19	0.42
58:DZ:99:TYR:CE2	58:DZ:125:LEU:HD13	2.54	0.42
1:AA:1286:A:O2'	1:AA:1287:A:OP2	2.32	0.42
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.54	0.42
1:AA:190:U:O2'	1:AA:191:G:H5'	2.20	0.42
1:AA:202:U:O2'	1:AA:203:U:OP1	2.36	0.42
1:AA:219:C:H2'	1:AA:220:G:O4'	2.19	0.42
1:AA:275:G:H5'	17:AQ:14:LYS:HD2	2.01	0.42
1:AA:298:A:H2'	1:AA:299:G:O4'	2.19	0.42
1:AA:312:C:H2'	1:AA:313:A:H8	1.84	0.42
1:AA:403:C:O2'	1:AA:404:U:H5'	2.18	0.42
2:AB:200:ILE:O	2:AB:201:ILE:HG13	2.19	0.42
2:AB:77:ALA:HB2	2:AB:211:ILE:CD1	2.49	0.42
3:AC:60:ALA:N	3:AC:63:ASN:OD1	2.52	0.42
4:AD:122:ARG:HA	4:AD:122:ARG:HD2	1.85	0.42
4:AD:163:GLU:C	4:AD:165:MET:H	2.23	0.42
4:AD:9:CYS:HA	4:AD:12:CYS:SG	2.59	0.42
5:AE:145:LYS:HA	8:AH:107:LEU:HD22	2.02	0.42
10:AJ:81:THR:HG23	10:AJ:82:ILE:N	2.34	0.42
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.55	0.42
17:AQ:56:VAL:HG23	17:AQ:81:ARG:HG3	2.01	0.42
18:AR:53:ARG:NH1	18:AR:60:ALA:CA	2.82	0.42
22:AV:62:C:O2	22:AV:62:C:C2'	2.66	0.42
23:AX:12:A:H2'	23:AX:13:A:O5'	2.19	0.42
25:AZ:85:HIS:C	25:AZ:87:ASP:N	2.71	0.42
28:B2:21:LEU:HA	28:B2:21:LEU:HD23	1.91	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1315:C:O2'	36:BA:1316:U:H5'	2.19	0.42
36:BA:18:C:O2'	53:BU:23:GLY:HA2	2.18	0.42
36:BA:2345:G:N3	36:BA:2381:C:H2'	2.34	0.42
36:BA:2394:C:OP1	48:BP:63:PRO:HD2	2.18	0.42
36:BA:271(F):C:C2'	36:BA:271(G):C:H5'	2.50	0.42
36:BA:2841:C:H2'	36:BA:2842:G:C8	2.54	0.42
36:BA:330:A:O2'	36:BA:331:A:H2'	2.20	0.42
36:BA:635:C:O2'	36:BA:639:U:OP1	2.37	0.42
36:BA:640:C:N4	36:BA:641:C:H41	2.17	0.42
36:BA:690:G:O2'	39:BD:43:ARG:NH1	2.53	0.42
36:BA:719:C:O2'	36:BA:720:C:H5'	2.20	0.42
37:BB:17:C:H2'	37:BB:18:G:C8	2.54	0.42
37:BB:44:G:C2	37:BB:48:A:C2	3.07	0.42
38:BC:193:ILE:O	38:BC:194:ARG:C	2.58	0.42
38:BC:163:PHE:CE1	38:BC:196:LEU:HD23	2.53	0.42
39:BD:130:ALA:HA	39:BD:192:THR:HA	2.02	0.42
39:BD:80:ALA:HB3	39:BD:94:LEU:HD13	2.02	0.42
41:BF:145:GLU:O	41:BF:146:ALA:HB2	2.19	0.42
36:BA:1247:A:OP1	41:BF:95:ARG:NH2	2.52	0.42
43:BH:23:ARG:O	43:BH:24:VAL:CG2	2.67	0.42
43:BH:80:SER:O	43:BH:81:GLU:CB	2.66	0.42
46:BN:4:TYR:CD1	46:BN:4:TYR:N	2.86	0.42
47:BO:104:ARG:C	47:BO:106:LEU:N	2.73	0.42
47:BO:49:ARG:HB2	47:BO:50:GLY:H	1.62	0.42
49:BQ:110:THR:OG1	49:BQ:113:GLN:HG3	2.19	0.42
49:BQ:82:ARG:HG3	49:BQ:82:ARG:HH11	1.84	0.42
50:BR:56:LYS:HA	50:BR:84:ALA:HB1	2.00	0.42
52:BT:123:GLN:O	52:BT:127:ALA:HB3	2.19	0.42
53:BU:13:LYS:HD3	53:BU:13:LYS:N	2.35	0.42
53:BU:95:LEU:HD11	54:BV:11:GLN:O	2.19	0.42
54:BV:49:THR:O	54:BV:50:PRO:C	2.57	0.42
56:BX:10:ALA:HB1	56:BX:11:PRO:CD	2.50	0.42
57:BY:75:ILE:CG2	57:BY:76:CYS:N	2.75	0.42
57:BY:91:GLU:CG	57:BY:92:ASN:H	2.31	0.42
58:BZ:39:VAL:CG2	58:BZ:44:PHE:HB2	2.49	0.42
2:CB:8:LYS:C	2:CB:10:LEU:N	2.72	0.42
10:CJ:57:LYS:C	10:CJ:58:ASP:O	2.57	0.42
13:CM:34:LEU:HD13	13:CM:41:PRO:HA	2.00	0.42
18:CR:32:ARG:CA	18:CR:69:THR:HG21	2.39	0.42
19:CS:40:ILE:HD13	19:CS:62:ILE:HD13	2.00	0.42
25:CZ:210:ILE:HG23	25:CZ:210:ILE:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:327:GLU:HA	61:CZ:502:KIR:H101	2.01	0.42
28:D2:47:ASN:ND2	28:D2:50:ILE:HG22	2.34	0.42
32:D6:36:LEU:HD23	32:D6:36:LEU:C	2.39	0.42
36:DA:1479:G:O2'	36:DA:1480:G:H5'	2.19	0.42
36:DA:1649:G:C6	36:DA:2009:G:C6	3.08	0.42
36:DA:1713:U:O2'	36:DA:1714:G:H5'	2.18	0.42
36:DA:793:A:OP2	36:DA:2072:G:H5'	2.20	0.42
36:DA:2100:G:C2	36:DA:2101:G:C6	3.08	0.42
36:DA:2125:G:H21	36:DA:2173:A:H61	1.66	0.42
36:DA:2182:G:O2'	36:DA:2183:C:H5'	2.19	0.42
36:DA:2463:C:C2'	36:DA:2464:C:H5'	2.49	0.42
36:DA:536:A:H2'	36:DA:537:C:C6	2.54	0.42
36:DA:640:C:N4	36:DA:641:C:N4	2.68	0.42
36:DA:655:A:C4'	36:DA:656:G:H5'	2.43	0.42
36:DA:703:U:H2'	36:DA:704:G:C5'	2.49	0.42
36:DA:947:G:H2'	36:DA:948:G:C8	2.55	0.42
38:DC:62:VAL:O	38:DC:160:ARG:HA	2.19	0.42
38:DC:2:LYS:O	38:DC:2:LYS:HG2	2.20	0.42
40:DE:199:ARG:HH11	40:DE:199:ARG:CB	2.30	0.42
40:DE:199:ARG:CB	40:DE:199:ARG:NH1	2.83	0.42
40:DE:69:LYS:HD3	40:DE:90:THR:H	1.85	0.42
36:DA:321:G:C1'	41:DF:165:ARG:HD3	2.49	0.42
41:DF:66:PRO:HD2	41:DF:70:THR:HG21	2.01	0.42
42:DG:117:PHE:CE1	42:DG:119:GLY:O	2.72	0.42
42:DG:90:LEU:CD1	42:DG:90:LEU:C	2.86	0.42
47:DO:110:GLY:C	47:DO:112:MET:HE2	2.40	0.42
47:DO:49:ARG:HB2	47:DO:50:GLY:H	1.58	0.42
48:DP:107:LYS:C	48:DP:109:GLY:H	2.23	0.42
50:DR:81:ASP:O	50:DR:85:PRO:HG2	2.18	0.42
51:DS:61:ASN:O	51:DS:62:LYS:C	2.56	0.42
52:DT:107:ASP:N	52:DT:110:ILE:HG12	2.33	0.42
52:DT:133:GLU:O	52:DT:133:GLU:HG2	2.19	0.42
47:DO:104:ARG:NH2	52:DT:33:LYS:CE	2.79	0.42
53:DU:13:LYS:HD3	53:DU:13:LYS:N	2.34	0.42
54:DV:19:LYS:HG3	54:DV:20:LEU:N	2.34	0.42
56:DX:8:ILE:HD11	56:DX:43:VAL:CG2	2.48	0.42
57:DY:73:ARG:NH2	57:DY:82:PRO:HA	2.32	0.42
1:AA:454:C:H5''	1:AA:455:C:H5	1.83	0.42
1:AA:720:C:H2'	1:AA:721:G:C8	2.54	0.42
1:AA:781:A:H2'	1:AA:782:A:H5'	2.00	0.42
1:AA:811:C:H4'	1:AA:900:A:N6	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:158:LEU:HA	2:AB:159:PRO:HD3	1.82	0.42
3:AC:106:VAL:HG21	3:AC:115:LEU:HD11	2.01	0.42
20:AT:32:ALA:O	20:AT:36:LEU:HB2	2.19	0.42
20:AT:36:LEU:HD13	20:AT:36:LEU:O	2.19	0.42
22:AV:59:U:O2'	22:AV:60:U:O5'	2.37	0.42
23:AX:16:A:H5''	23:AX:17:U:OP2	2.20	0.42
1:AA:358:U:C1'	25:AZ:233:GLY:CA	2.91	0.42
25:AZ:41:ASN:O	25:AZ:42:VAL:HG23	2.19	0.42
28:B2:47:ASN:O	28:B2:50:ILE:CD1	2.67	0.42
29:B3:35:ARG:HD3	29:B3:37:LEU:HD11	2.01	0.42
31:B5:2:ALA:O	31:B5:3:LYS:C	2.57	0.42
31:B5:36:CYS:HB3	31:B5:49:CYS:HB3	2.00	0.42
31:B5:3:LYS:O	31:B5:5:PRO:N	2.52	0.42
32:B6:45:LYS:O	32:B6:45:LYS:HG2	2.19	0.42
34:B8:4:MET:HE1	36:BA:592:G:H21	1.84	0.42
36:BA:1363:C:H2'	36:BA:1364:G:H8	1.84	0.42
36:BA:1861:G:O2'	36:BA:1862:G:H5'	2.20	0.42
36:BA:2514:U:H2'	36:BA:2515:C:H6	1.82	0.42
36:BA:2721:A:H2'	36:BA:2722:G:O4'	2.19	0.42
36:BA:491:G:H2'	36:BA:492:A:H8	1.83	0.42
36:BA:624:C:H5'	36:BA:625:G:OP2	2.19	0.42
36:BA:65:C:H2'	36:BA:66:C:C6	2.54	0.42
36:BA:673:C:H2'	36:BA:674:G:H5'	1.99	0.42
37:BB:15:A:H3'	37:BB:16:G:H5'	2.00	0.42
37:BB:73:A:C2'	37:BB:74:U:H5'	2.50	0.42
38:BC:131:LEU:HD22	38:BC:136:LEU:HB2	2.02	0.42
38:BC:82:LYS:HB3	38:BC:149:ILE:HG21	2.02	0.42
38:BC:22:ILE:HB	38:BC:228:SER:OXT	2.20	0.42
39:BD:174:ILE:HG23	39:BD:271:ILE:HD12	2.01	0.42
39:BD:3:VAL:HG21	39:BD:203:ASN:HB2	2.02	0.42
40:BE:59:VAL:CG2	40:BE:63:LEU:HA	2.50	0.42
40:BE:98:PRO:HD3	40:BE:175:VAL:CG1	2.49	0.42
42:BG:139:LEU:CD1	42:BG:149:VAL:HG11	2.48	0.42
42:BG:63:ILE:HD12	42:BG:141:PHE:CD2	2.54	0.42
42:BG:77:ILE:CD1	42:BG:77:ILE:N	2.79	0.42
42:BG:84:LYS:O	42:BG:85:GLY:C	2.58	0.42
43:BH:153:LYS:HB2	43:BH:154:PRO:HD2	2.02	0.42
43:BH:94:TYR:CD1	43:BH:107:VAL:HA	2.55	0.42
48:BP:107:LYS:C	48:BP:109:GLY:H	2.23	0.42
50:BR:21:TYR:HB3	50:BR:47:PHE:CE2	2.54	0.42
50:BR:48:VAL:O	50:BR:51:LEU:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:11:GLU:OE1	52:BT:11:GLU:N	2.52	0.42
53:BU:44:ASN:HD21	54:BV:75:PHE:HB3	1.83	0.42
54:BV:32:THR:CG2	54:BV:58:VAL:HG12	2.50	0.42
57:BY:42:VAL:HG23	57:BY:67:LEU:HD12	2.02	0.42
57:BY:85:VAL:CG1	57:BY:86:ARG:H	2.30	0.42
58:BZ:166:SER:H	58:BZ:167:PRO:CA	2.33	0.42
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.55	0.42
1:CA:1280:A:O2'	1:CA:1281:U:P	2.78	0.42
1:CA:1294:G:O2'	1:CA:1295:G:H5'	2.19	0.42
1:CA:131:C:H2'	1:CA:132:C:H6	1.83	0.42
1:CA:1375:A:H2'	1:CA:1376:U:O4'	2.19	0.42
1:CA:782:A:H4'	1:CA:1514:C:O2'	2.20	0.42
3:CC:141:VAL:O	3:CC:141:VAL:HG12	2.20	0.42
4:CD:65:ARG:HB2	4:CD:75:PHE:CE1	2.54	0.42
9:CI:50:LEU:O	9:CI:56:LEU:HB3	2.19	0.42
9:CI:52:ALA:HB3	9:CI:95:LYS:NZ	2.35	0.42
10:CJ:38:ILE:HD12	10:CJ:38:ILE:C	2.40	0.42
11:CK:91:ARG:C	11:CK:91:ARG:HD2	2.39	0.42
12:CL:39:VAL:HG13	12:CL:39:VAL:O	2.18	0.42
15:CO:81:LEU:CD1	15:CO:85:LEU:HD12	2.49	0.42
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	2.02	0.42
25:CZ:131:ILE:HG12	25:CZ:163:PHE:CE1	2.55	0.42
25:CZ:171:ILE:HG13	25:CZ:202:LEU:HA	2.02	0.42
25:CZ:201:GLU:O	25:CZ:205:ALA:HB3	2.19	0.42
25:CZ:354:GLN:O	25:CZ:371:THR:HB	2.19	0.42
27:D1:29:GLY:O	27:D1:30:VAL:O	2.36	0.42
27:D1:76:ARG:HH12	27:D1:95:LEU:CD1	2.32	0.42
28:D2:20:GLU:O	28:D2:20:GLU:HG2	2.17	0.42
28:D2:30:ARG:O	28:D2:34:GLU:HG3	2.19	0.42
32:D6:15:GLU:CG	32:D6:15:GLU:O	2.67	0.42
36:DA:1445(A):C:O2'	36:DA:1446:C:H5'	2.19	0.42
36:DA:1540:U:C4	36:DA:1541:G:N7	2.88	0.42
36:DA:2064:C:H2'	36:DA:2065:C:C6	2.54	0.42
36:DA:2123:G:O2'	36:DA:2124:G:H5'	2.20	0.42
36:DA:2160:G:H8	36:DA:2160:G:C5'	2.16	0.42
36:DA:221:A:H4'	36:DA:222:A:O5'	2.19	0.42
36:DA:90:U:H4'	36:DA:92:A:H8	1.84	0.42
36:DA:848:G:C2	36:DA:933:A:H1'	2.54	0.42
38:DC:140:PRO:HA	38:DC:145:VAL:HB	2.00	0.42
39:DD:223:GLY:O	39:DD:226:MET:HG3	2.18	0.42
39:DD:6:PHE:N	39:DD:6:PHE:HD1	2.15	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:59:VAL:O	40:DE:60:ASN:CG	2.58	0.42
40:DE:63:LEU:O	40:DE:64:LYS:C	2.57	0.42
41:DF:65:TRP:CE3	41:DF:72:ARG:HB2	2.54	0.42
41:DF:81:PRO:C	41:DF:82:ILE:O	2.54	0.42
41:DF:89:VAL:HG12	41:DF:90:PHE:H	1.80	0.42
42:DG:106:LEU:HD12	42:DG:141:PHE:HE1	1.85	0.42
42:DG:18:GLU:O	42:DG:22:ARG:HG3	2.20	0.42
42:DG:60:LEU:HD13	42:DG:60:LEU:C	2.40	0.42
42:DG:7:LEU:O	42:DG:8:LYS:C	2.57	0.42
43:DH:30:LYS:HA	43:DH:30:LYS:HE2	2.00	0.42
46:DN:137:LYS:CG	46:DN:138:LEU:N	2.83	0.42
47:DO:98:VAL:HG11	47:DO:118:ALA:N	2.35	0.42
48:DP:39:LYS:HD2	48:DP:40:SER:N	2.33	0.42
53:DU:66:ASN:HD21	53:DU:76:TYR:H	1.66	0.42
56:DX:7:VAL:HB	56:DX:8:ILE:HD12	2.02	0.42
57:DY:57:GLN:HA	57:DY:57:GLN:OE1	2.18	0.42
58:DZ:128:VAL:CG2	58:DZ:129:SER:N	2.79	0.42
58:DZ:162:GLU:O	58:DZ:162:GLU:HG3	2.19	0.42
58:DZ:70:LEU:N	58:DZ:70:LEU:CD2	2.83	0.42
1:AA:1145:C:H1'	1:AA:1146:A:C8	2.54	0.42
1:AA:1281:U:C5'	1:AA:1282:C:H5	2.07	0.42
1:AA:131:C:H2'	1:AA:132:C:H6	1.84	0.42
1:AA:538:G:H3'	12:AL:115:LYS:NZ	2.35	0.42
2:AB:226:ARG:C	2:AB:226:ARG:HD2	2.39	0.42
2:AB:80:ILE:CD1	2:AB:80:ILE:N	2.82	0.42
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	2.01	0.42
4:AD:120:LEU:HB3	4:AD:126:ILE:CD1	2.45	0.42
4:AD:121:VAL:CA	4:AD:126:ILE:HD13	2.49	0.42
4:AD:58:LEU:O	4:AD:62:GLN:HG2	2.20	0.42
10:AJ:82:ILE:O	10:AJ:82:ILE:HG22	2.20	0.42
11:AK:22:HIS:HB3	11:AK:29:ILE:HG12	2.00	0.42
12:AL:39:VAL:HG13	12:AL:39:VAL:O	2.19	0.42
12:AL:58:VAL:HG12	12:AL:60:LEU:HD22	2.01	0.42
12:AL:92:ASP:O	12:AL:94:PRO:HD3	2.20	0.42
22:AW:9:A:C2	22:AW:45:U:C4	3.06	0.42
24:AY:25:C:H2'	24:AY:26:A:O5'	2.19	0.42
25:AZ:90:LYS:HA	25:AZ:93:ILE:HG21	2.02	0.42
26:B0:16:SER:HB2	36:BA:2262:U:C5	2.55	0.42
32:B6:7:ILE:CB	32:B6:27:LYS:HZ2	2.26	0.42
33:B7:43:THR:HG23	33:B7:44:PRO:CD	2.48	0.42
36:BA:1170:G:N2	36:BA:1180:C:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1204:A:N1	36:BA:1241:A:C2	2.88	0.42
36:BA:1517:G:H2'	36:BA:1518:U:O4'	2.20	0.42
36:BA:1540:U:C4	36:BA:1541:G:N7	2.88	0.42
36:BA:191:A:O2'	36:BA:192:C:H5'	2.20	0.42
36:BA:2162:G:O2'	36:BA:2163:C:H5'	2.18	0.42
36:BA:2400:G:C5	36:BA:2401:U:O2	2.72	0.42
36:BA:2695:C:O2'	36:BA:2696:U:H5'	2.20	0.42
36:BA:284:U:H2'	36:BA:285:C:H6	1.84	0.42
36:BA:260:G:H1'	36:BA:621:A:H1'	2.02	0.42
36:BA:723:G:C6	36:BA:724:U:C4	3.07	0.42
36:BA:885:C:C2	36:BA:886:C:C5	3.08	0.42
36:BA:894:C:C2'	36:BA:895:U:H5'	2.50	0.42
36:BA:90:U:H4'	36:BA:92:A:H8	1.85	0.42
39:BD:184:LYS:HG3	39:BD:271:ILE:HD11	2.02	0.42
40:BE:101:ARG:HB2	40:BE:201:THR:CG2	2.48	0.42
40:BE:69:LYS:HD3	40:BE:90:THR:H	1.85	0.42
40:BE:89:ASP:CG	40:BE:90:THR:N	2.73	0.42
41:BF:196:LEU:HD23	41:BF:196:LEU:HA	1.89	0.42
42:BG:165:THR:OG1	42:BG:168:GLU:HG3	2.18	0.42
43:BH:157:TYR:O	43:BH:157:TYR:CD1	2.72	0.42
44:BJ:114:UNK:O	44:BJ:115:UNK:CB	2.67	0.42
46:BN:30:ILE:O	46:BN:30:ILE:HG22	2.20	0.42
46:BN:42:TRP:CZ2	46:BN:44:PRO:HA	2.54	0.42
47:BO:104:ARG:CZ	52:BT:33:LYS:HD2	2.49	0.42
48:BP:12:ALA:O	48:BP:13:ASN:O	2.38	0.42
51:BS:97:ARG:O	51:BS:99:LYS:N	2.53	0.42
1:CA:1152:A:H5'	10:CJ:70:ARG:NH2	2.34	0.42
1:CA:474:G:O2'	1:CA:475:G:H5'	2.20	0.42
1:CA:567:G:H2'	1:CA:568:G:O4'	2.18	0.42
1:CA:594:G:H2'	1:CA:595:G:H5'	2.01	0.42
1:CA:781:A:C3'	1:CA:782:A:H5'	2.49	0.42
1:CA:818:G:O2'	1:CA:819:A:H5'	2.18	0.42
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.19	0.42
4:CD:36:ARG:NH1	4:CD:36:ARG:HG2	2.33	0.42
6:CF:91:VAL:CG1	6:CF:92:LYS:N	2.82	0.42
6:CF:91:VAL:HG12	6:CF:92:LYS:N	2.34	0.42
7:CG:18:TYR:CD2	7:CG:59:LEU:HB2	2.53	0.42
10:CJ:6:ILE:O	10:CJ:6:ILE:HG13	2.19	0.42
12:CL:20:LYS:CD	12:CL:20:LYS:N	2.79	0.42
15:CO:24:SER:OG	15:CO:27:VAL:HG23	2.20	0.42
25:CZ:355:LEU:HD13	25:CZ:356:PRO:HD2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:20:GLU:CG	28:D2:23:LYS:HD2	2.49	0.42
29:D3:47:VAL:CG1	29:D3:56:VAL:HG21	2.49	0.42
32:D6:44:ARG:O	32:D6:46:HIS:ND1	2.52	0.42
36:DA:1013:C:O2'	36:DA:1014:U:H5'	2.20	0.42
36:DA:1386:C:H2'	36:DA:1387:C:H6	1.84	0.42
36:DA:1425:G:H2'	36:DA:1426:G:O4'	2.20	0.42
36:DA:1517:G:H2'	36:DA:1518:U:O4'	2.19	0.42
36:DA:1773:A:H2'	36:DA:1774:C:O4'	2.19	0.42
36:DA:1771:C:HO2'	36:DA:1786:A:C1'	2.33	0.42
36:DA:16:G:H2'	36:DA:17:G:H8	1.84	0.42
36:DA:2007:C:H4'	36:DA:2824:C:H4'	2.02	0.42
27:D1:47:GLN:HG2	36:DA:2091:U:H1'	2.01	0.42
36:DA:2150:U:H2'	36:DA:2151:G:C8	2.54	0.42
36:DA:2545:G:N3	36:DA:2565:A:H2	2.18	0.42
36:DA:332:A:O2'	36:DA:333:G:O5'	2.37	0.42
36:DA:575:A:OP2	36:DA:2499:C:O2'	2.37	0.42
36:DA:673:C:H2'	36:DA:674:G:H5'	2.01	0.42
39:DD:41:GLY:O	39:DD:42:GLY:C	2.57	0.42
41:DF:110:LEU:HA	41:DF:183:VAL:CG1	2.49	0.42
41:DF:110:LEU:HD13	41:DF:110:LEU:C	2.40	0.42
42:DG:107:LEU:O	42:DG:108:ASN:ND2	2.53	0.42
42:DG:170:ARG:NE	42:DG:180:PHE:CD2	2.87	0.42
44:DJ:70:UNK:O	44:DJ:71:UNK:C	2.67	0.42
52:DT:19:LEU:HD22	52:DT:85:LYS:HD3	2.02	0.42
52:DT:65:LYS:HB2	52:DT:65:LYS:NZ	2.33	0.42
54:DV:46:VAL:O	54:DV:48:GLY:N	2.52	0.42
54:DV:93:GLU:H	54:DV:93:GLU:HG3	1.65	0.42
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.33	0.42
1:AA:1239:A:H62	1:AA:1299:A:N6	2.17	0.42
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.19	0.42
2:AB:106:LYS:NZ	2:AB:106:LYS:HB2	2.33	0.42
2:AB:221:LEU:C	2:AB:221:LEU:HD13	2.40	0.42
2:AB:30:ARG:HH21	2:AB:194:PRO:CG	2.30	0.42
4:AD:190:ASP:CG	4:AD:191:ARG:N	2.73	0.42
8:AH:7:ALA:CB	8:AH:85:ARG:HD3	2.39	0.42
12:AL:46:LYS:HB2	12:AL:92:ASP:O	2.19	0.42
13:AM:49:THR:C	13:AM:51:ALA:N	2.72	0.42
14:AN:57:ARG:HG2	14:AN:58:LYS:N	2.35	0.42
20:AT:33:ILE:HG13	20:AT:33:ILE:H	1.64	0.42
22:AW:35:A:N1	23:AX:17:U:O4	2.51	0.42
25:AZ:124:ARG:HG3	25:AZ:124:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:295:ARG:HH11	25:AZ:295:ARG:HG2	1.84	0.42
26:B0:62:LEU:CD2	26:B0:62:LEU:N	2.80	0.42
28:B2:41:ILE:HD11	28:B2:44:LEU:CG	2.50	0.42
30:B4:15:ILE:HD13	30:B4:21:VAL:HG13	2.00	0.42
31:B5:3:LYS:O	31:B5:5:PRO:CD	2.68	0.42
36:BA:1070:A:H3'	36:BA:1072:C:H5	1.83	0.42
36:BA:1106:G:H2'	36:BA:1107:G:O4'	2.19	0.42
36:BA:1108:U:H6	36:BA:1109:C:C6	2.37	0.42
36:BA:1138:G:H2'	36:BA:1139:G:O4'	2.18	0.42
31:B5:11:THR:OG1	36:BA:1264:G:H5'	2.20	0.42
36:BA:1336:A:H2'	36:BA:1337:G:C8	2.54	0.42
36:BA:1496:A:C8	36:BA:1498:C:N3	2.87	0.42
36:BA:1878:G:H2'	36:BA:1879:C:C6	2.55	0.42
36:BA:2043:C:C2	36:BA:2044:C:C5	3.07	0.42
36:BA:2184:G:H2'	36:BA:2185:C:H1'	2.02	0.42
32:B6:27:LYS:HD3	36:BA:2285:C:OP2	2.20	0.42
36:BA:2313:C:O2'	36:BA:2314:C:H5'	2.20	0.42
36:BA:233:A:H2'	36:BA:234:C:O4'	2.19	0.42
36:BA:2695:C:H2'	36:BA:2696:U:C6	2.55	0.42
36:BA:2811:G:O2'	36:BA:2812:G:H5'	2.19	0.42
36:BA:2893:G:H5'	36:BA:2894:G:C5'	2.50	0.42
36:BA:888:C:H2'	36:BA:889:C:O4'	2.20	0.42
37:BB:66:A:H61	37:BB:108:U:H2'	1.84	0.42
39:BD:70:TRP:CD1	39:BD:71:ASP:N	2.88	0.42
39:BD:79:VAL:HG21	39:BD:111:LEU:HD22	2.01	0.42
41:BF:125:LEU:CD2	41:BF:125:LEU:N	2.80	0.42
30:B4:25:TYR:CE2	42:BG:2:PRO:HA	2.55	0.42
44:BJ:27:UNK:HA	44:BJ:113:UNK:CB	2.49	0.42
46:BN:68:GLU:HG2	46:BN:88:GLU:OE1	2.19	0.42
48:BP:38:GLN:O	48:BP:39:LYS:HB2	2.19	0.42
36:BA:954:G:H4'	49:BQ:13:GLN:NE2	2.35	0.42
49:BQ:141:GLN:O	58:BZ:53:ILE:HB	2.20	0.42
51:BS:66:ALA:C	51:BS:69:VAL:HG12	2.40	0.42
51:BS:88:ASP:CG	51:BS:89:ARG:H	1.99	0.42
52:BT:133:GLU:HG2	52:BT:133:GLU:O	2.19	0.42
47:BO:76:ALA:CB	52:BT:75:ILE:HD13	2.45	0.42
53:BU:32:PHE:CB	53:BU:36:ARG:HH12	2.32	0.42
36:BA:534:U:O2'	53:BU:49:HIS:HD2	2.03	0.42
56:BX:18:TYR:O	56:BX:20:GLY:N	2.52	0.42
57:BY:59:GLY:O	57:BY:60:PHE:HB2	2.20	0.42
58:BZ:113:ALA:HB3	58:BZ:146:ILE:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:144:LEU:CD1	58:BZ:174:VAL:HG23	2.44	0.42
1:CA:1299:A:N3	1:CA:1299:A:H5''	2.35	0.42
1:CA:1447:A:H2'	1:CA:1447:A:N3	2.34	0.42
1:CA:154:C:H2'	1:CA:155:C:C6	2.54	0.42
1:CA:948:C:O2'	1:CA:949:A:H5'	2.20	0.42
1:CA:995:C:O2'	1:CA:996:A:H8	2.01	0.42
2:CB:178:ARG:NH2	2:CB:198:ASP:OD2	2.53	0.42
3:CC:60:ALA:H	3:CC:63:ASN:HD21	1.67	0.42
3:CC:70:VAL:HG12	3:CC:71:ALA:N	2.33	0.42
4:CD:163:GLU:C	4:CD:165:MET:H	2.23	0.42
4:CD:56:VAL:HG12	4:CD:57:ARG:N	2.35	0.42
9:CI:70:LYS:O	9:CI:73:GLN:HB2	2.20	0.42
12:CL:25:PRO:C	12:CL:27:LEU:N	2.67	0.42
16:CP:71:ARG:HD3	16:CP:75:ARG:NH2	2.35	0.42
18:CR:87:ARG:NH1	18:CR:87:ARG:HB3	2.35	0.42
19:CS:35:SER:C	19:CS:37:ARG:H	2.21	0.42
25:CZ:145:GLU:O	25:CZ:148:ASP:N	2.53	0.42
25:CZ:355:LEU:CD2	25:CZ:370:PHE:HD2	2.33	0.42
25:CZ:9:LYS:NZ	25:CZ:73:ALA:C	2.73	0.42
26:D0:54:GLY:O	26:D0:55:ARG:C	2.56	0.42
28:D2:43:GLN:O	28:D2:44:LEU:CB	2.67	0.42
28:D2:62:THR:O	28:D2:63:VAL:C	2.58	0.42
32:D6:9:LEU:HD22	32:D6:10:LEU:O	2.19	0.42
32:D6:8:LYS:CE	32:D6:25:LYS:HD3	2.49	0.42
32:D6:27:LYS:HG3	32:D6:30:THR:OG1	2.20	0.42
36:DA:1069:A:H1'	36:DA:1070:A:P	2.59	0.42
36:DA:156:U:H2'	36:DA:157:U:H5'	2.01	0.42
36:DA:17:G:H2'	36:DA:18:C:C6	2.55	0.42
36:DA:1837:C:H2'	36:DA:1838:C:H5''	2.01	0.42
36:DA:1889:A:H1'	36:DA:2087:G:O4'	2.18	0.42
36:DA:2129:C:OP1	38:DC:6:ARG:HB3	2.19	0.42
36:DA:2494:G:O2'	49:DQ:80:GLU:HA	2.19	0.42
36:DA:2720:U:C2	36:DA:2721:A:C8	3.08	0.42
36:DA:332:A:O2'	36:DA:333:G:P	2.78	0.42
36:DA:355:G:H2'	36:DA:356:G:O4'	2.19	0.42
36:DA:733:G:C8	36:DA:761:A:C6	3.07	0.42
36:DA:807:U:O2'	36:DA:808:G:H5'	2.19	0.42
36:DA:977:G:HO2'	36:DA:1001:A:H2	1.60	0.42
37:DB:73:A:C4	37:DB:105:A:C2	3.07	0.42
38:DC:200:LYS:HG3	38:DC:208:PHE:CD1	2.55	0.42
39:DD:24:ILE:O	39:DD:25:THR:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:63:ARG:O	39:DD:65:ILE:HG23	2.19	0.42
40:DE:70:ALA:O	40:DE:71:GLY:C	2.58	0.42
36:DA:470:A:OP1	41:DF:59:TYR:HE1	2.03	0.42
42:DG:92:VAL:HG13	42:DG:92:VAL:O	2.20	0.42
43:DH:83:TYR:HB2	43:DH:135:GLY:H	1.82	0.42
44:DJ:44:UNK:O	44:DJ:52:UNK:O	2.38	0.42
44:DJ:85:UNK:CG	44:DJ:86:UNK:H	2.25	0.42
46:DN:51:PHE:CE1	46:DN:119:ARG:HD2	2.55	0.42
48:DP:58:THR:O	48:DP:58:THR:CG2	2.67	0.42
49:DQ:45:GLN:HE21	49:DQ:45:GLN:H	1.65	0.42
50:DR:99:LYS:HA	50:DR:112:ALA:HA	2.02	0.42
50:DR:96:ARG:CZ	50:DR:117:VAL:HG23	2.50	0.42
50:DR:26:LYS:O	50:DR:30:THR:CG2	2.68	0.42
51:DS:56:LEU:O	51:DS:57:LYS:O	2.37	0.42
53:DU:91:ASP:CG	53:DU:96:ALA:HB2	2.39	0.42
53:DU:95:LEU:HD13	54:DV:4:ILE:HG23	2.01	0.42
57:DY:13:VAL:CG2	57:DY:14:LEU:N	2.83	0.42
57:DY:36:ALA:HA	57:DY:69:ALA:HB2	2.02	0.42
58:DZ:85:HIS:CG	58:DZ:86:VAL:N	2.88	0.42
58:DZ:96:VAL:CG2	58:DZ:97:GLU:H	2.20	0.42
1:AA:1157:A:HO2'	1:AA:1158:C:P	2.43	0.42
1:AA:1299:A:N3	1:AA:1299:A:H5"	2.35	0.42
1:AA:1452:C:H4'	1:AA:1456:G:N2	2.35	0.42
1:AA:1536:C:H6	1:AA:1536:C:O5'	2.02	0.42
1:AA:191:G:H1'	20:AT:105:SER:HA	2.01	0.42
1:AA:436:C:H2'	1:AA:437:U:H6	1.84	0.42
1:AA:958:A:C6	1:AA:959:A:N1	2.88	0.42
1:AA:974:A:H8	1:AA:974:A:OP1	2.03	0.42
2:AB:11:LEU:O	2:AB:16:HIS:CE1	2.73	0.42
2:AB:61:LEU:HD11	2:AB:160:ASP:CB	2.50	0.42
2:AB:203:GLY:O	2:AB:204:ASN:C	2.57	0.42
2:AB:223:ILE:H	2:AB:223:ILE:HG13	1.66	0.42
2:AB:69:LEU:HB2	2:AB:159:PRO:HG2	2.01	0.42
9:AI:78:LYS:HZ1	9:AI:101:PHE:HE1	1.68	0.42
16:AP:71:ARG:HD3	16:AP:75:ARG:NH2	2.34	0.42
19:AS:40:ILE:HD13	19:AS:62:ILE:HD13	2.01	0.42
20:AT:33:ILE:HG21	20:AT:63:ILE:HG12	2.01	0.42
25:AZ:190:ARG:NH1	25:AZ:200:TRP:CE3	2.86	0.42
25:AZ:389:ARG:HG2	25:AZ:394:THR:HA	2.01	0.42
30:B4:9:LEU:HA	30:B4:26:SER:O	2.19	0.42
32:B6:8:LYS:CE	32:B6:25:LYS:HD3	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1425:G:H2'	36:BA:1426:G:O4'	2.19	0.42
36:BA:2113:U:H2'	36:BA:2114:A:H8	1.84	0.42
36:BA:2153:G:H2'	36:BA:2154:G:C8	2.53	0.42
36:BA:2277:G:C6	36:BA:2278:A:N7	2.88	0.42
26:B0:33:ALA:O	36:BA:2353:G:H1'	2.20	0.42
36:BA:2562:U:C2'	36:BA:2563:U:H5'	2.50	0.42
36:BA:2639:A:H2'	36:BA:2640:G:O4'	2.20	0.42
36:BA:271(B):C:O2'	36:BA:271(C):C:H5'	2.20	0.42
36:BA:2726:U:H6	47:BO:67:LYS:NZ	2.17	0.42
36:BA:444:C:H4'	41:BF:49:ALA:HB2	2.01	0.42
40:BE:21:VAL:HG23	40:BE:21:VAL:O	2.20	0.42
42:BG:16:ARG:NH1	42:BG:31:VAL:HG11	2.34	0.42
42:BG:49:ASP:O	42:BG:50:ALA:HB3	2.19	0.42
42:BG:81:LYS:O	42:BG:82:LEU:O	2.37	0.42
43:BH:167:GLU:HB3	43:BH:168:PRO:HD2	2.02	0.42
36:BA:2415:G:H4'	48:BP:66:GLY:O	2.18	0.42
49:BQ:48:GLU:O	49:BQ:49:ALA:C	2.58	0.42
52:BT:48:ILE:C	52:BT:48:ILE:HD12	2.40	0.42
53:BU:83:LEU:HD12	53:BU:83:LEU:N	2.35	0.42
54:BV:82:ARG:HD2	54:BV:82:ARG:N	2.35	0.42
1:CA:1065:U:C6	1:CA:1190:G:N3	2.87	0.42
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.55	0.42
1:CA:189(H):G:O2'	1:CA:189(I):G:P	2.78	0.42
1:CA:913:A:H4'	1:CA:914:A:H4'	2.01	0.42
3:CC:70:VAL:CG1	3:CC:71:ALA:N	2.82	0.42
4:CD:30:LYS:HB3	4:CD:35:ARG:NH1	2.35	0.42
4:CD:78:LEU:HD23	4:CD:78:LEU:HA	1.92	0.42
5:CE:110:LEU:HD13	5:CE:118:ILE:HD13	2.02	0.42
6:CF:22:GLU:HA	6:CF:25:ILE:HG22	2.02	0.42
7:CG:26:PHE:O	7:CG:30:ILE:HG12	2.19	0.42
10:CJ:54:PHE:O	10:CJ:56:HIS:N	2.51	0.42
12:CL:117:ARG:HB3	12:CL:122:THR:OG1	2.18	0.42
13:CM:68:GLY:N	13:CM:71:ARG:HG3	2.35	0.42
14:CN:21:TYR:HE2	14:CN:23:ARG:CZ	2.33	0.42
1:CA:277:C:OP1	17:CQ:41:LYS:HE2	2.20	0.42
19:CS:66:MET:H	19:CS:66:MET:HG2	1.66	0.42
20:CT:13:LEU:C	20:CT:15:ARG:H	2.23	0.42
20:CT:62:LEU:HA	20:CT:65:LYS:HG3	2.02	0.42
25:CZ:26:THR:HG23	60:CZ:501:GDP:O2A	2.20	0.42
28:D2:33:MET:C	28:D2:37:PHE:CD1	2.93	0.42
28:D2:18:PRO:HD2	28:D2:72:ALA:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:16:CYS:HA	30:D4:33:VAL:O	2.20	0.42
33:D7:22:MET:HA	33:D7:22:MET:HE3	1.99	0.42
36:DA:1210:A:C8	36:DA:1210:A:H5'	2.50	0.42
36:DA:1204:A:N1	36:DA:1241:A:C2	2.87	0.42
36:DA:1287:A:OP1	50:DR:104:ARG:HG2	2.20	0.42
36:DA:1466:G:H2'	36:DA:1547:C:N4	2.35	0.42
36:DA:1827:C:H2'	36:DA:1828:G:C5'	2.49	0.42
36:DA:2176:A:H4'	38:DC:213:TYR:CD1	2.55	0.42
36:DA:2762:G:H2'	36:DA:2763:G:H5'	2.01	0.42
36:DA:2772:C:H2'	36:DA:2773:C:H6	1.85	0.42
36:DA:2852:G:H1	36:DA:2865:U:H3	1.68	0.42
36:DA:318:C:H2'	36:DA:319:C:H6	1.85	0.42
36:DA:335:C:H2'	36:DA:336:C:C6	2.54	0.42
36:DA:606:U:H4'	36:DA:658:C:H4'	2.00	0.42
36:DA:908:C:O2'	36:DA:909:A:H5'	2.19	0.42
37:DB:21:G:H2'	37:DB:22:U:C5'	2.49	0.42
38:DC:96:GLY:O	38:DC:98:GLU:N	2.50	0.42
39:DD:273:ARG:HB3	39:DD:274:ARG:H	1.64	0.42
40:DE:61:ARG:CB	40:DE:62:PRO:CD	2.97	0.42
43:DH:41:MET:CG	43:DH:42:ARG:N	2.70	0.42
43:DH:72:ILE:O	43:DH:75:ALA:N	2.53	0.42
46:DN:115:ARG:HG3	46:DN:115:ARG:HH11	1.84	0.42
46:DN:126:PRO:O	46:DN:127:ASP:CB	2.66	0.42
46:DN:4:TYR:O	46:DN:5:VAL:CB	2.67	0.42
48:DP:12:ALA:CB	48:DP:16:ARG:HG2	2.50	0.42
48:DP:28:GLY:O	48:DP:29:LYS:HB2	2.19	0.42
37:DB:92:C:OP1	49:DQ:19:GLY:HA3	2.20	0.42
50:DR:12:ARG:HH11	50:DR:12:ARG:CG	2.32	0.42
53:DU:9:VAL:O	53:DU:13:LYS:HE2	2.20	0.42
54:DV:18:LEU:CD2	54:DV:19:LYS:N	2.76	0.42
54:DV:34:GLU:HA	54:DV:58:VAL:HA	2.02	0.42
58:DZ:70:LEU:N	58:DZ:70:LEU:HD23	2.35	0.42
49:DQ:141:GLN:OXT	58:DZ:99:TYR:CD2	2.72	0.42
1:AA:1137:C:O2'	1:AA:1138:G:N2	2.52	0.42
1:AA:1133:G:C4	1:AA:1142:G:N2	2.87	0.42
1:AA:154:C:H2'	1:AA:155:C:C6	2.54	0.42
1:AA:303:A:H2'	1:AA:304:U:O4'	2.20	0.42
1:AA:324:G:OP1	20:AT:70:SER:HB2	2.20	0.42
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.34	0.42
4:AD:34:GLU:O	4:AD:35:ARG:CB	2.68	0.42
7:AG:81:GLY:C	7:AG:83:ALA:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:56:LEU:HG	9:AI:57:GLY:N	2.34	0.42
18:AR:87:ARG:NH1	18:AR:87:ARG:HB3	2.35	0.42
24:AY:40:C:C2'	24:AY:41:C:C5'	2.94	0.42
25:AZ:201:GLU:O	25:AZ:205:ALA:HB3	2.19	0.42
25:AZ:355:LEU:HB3	25:AZ:370:PHE:CB	2.50	0.42
25:AZ:89:ILE:O	25:AZ:92:MET:HB3	2.19	0.42
26:B0:15:ASP:OD1	26:B0:16:SER:N	2.48	0.42
27:B1:34:THR:HG21	27:B1:37:ILE:HG23	2.02	0.42
28:B2:63:VAL:C	28:B2:65:ASN:N	2.73	0.42
36:BA:1297:C:H2'	36:BA:1298:C:H6	1.85	0.42
36:BA:1779:U:C2	36:BA:1783:A:N7	2.88	0.42
36:BA:2150:U:H2'	36:BA:2151:G:C8	2.55	0.42
36:BA:2300:G:O2'	36:BA:2301:C:H5'	2.20	0.42
36:BA:2636:U:H1'	36:BA:2783:G:N2	2.35	0.42
36:BA:404:C:H4'	36:BA:405:U:H5'	2.02	0.42
36:BA:408:G:C5	36:BA:409:C:C5	3.07	0.42
36:BA:419:C:H2'	36:BA:420:C:C6	2.54	0.42
36:BA:514:A:O2'	36:BA:515:A:H5'	2.17	0.42
36:BA:710:G:H2'	36:BA:711:G:C8	2.55	0.42
37:BB:117:G:H2'	37:BB:118:G:C8	2.55	0.42
36:BA:2572:A:N7	40:BE:144:ARG:HD2	2.35	0.42
40:BE:10:GLY:HA2	40:BE:192:ASN:OD1	2.19	0.42
40:BE:9:VAL:HG11	40:BE:25:VAL:HB	1.97	0.42
40:BE:34:VAL:O	40:BE:34:VAL:HG13	2.19	0.42
40:BE:81:ILE:O	40:BE:82:ARG:O	2.37	0.42
41:BF:108:LYS:H	41:BF:108:LYS:HD3	1.85	0.42
30:B4:25:TYR:HB2	42:BG:101:ILE:HD13	2.02	0.42
43:BH:143:GLN:HE21	43:BH:143:GLN:HA	1.85	0.42
46:BN:23:LEU:CD2	46:BN:24:GLY:N	2.68	0.42
36:BA:941:A:H4'	48:BP:35:HIS:CE1	2.54	0.42
48:BP:39:LYS:HD2	48:BP:40:SER:N	2.34	0.42
51:BS:39:ILE:CD1	51:BS:73:LEU:HD21	2.50	0.42
52:BT:88:ILE:HD13	52:BT:88:ILE:N	2.35	0.42
56:BX:27:THR:HB	56:BX:80:ILE:HG22	2.02	0.42
57:BY:8:LYS:HB2	57:BY:28:LYS:HZ1	1.85	0.42
58:BZ:76:LEU:HD12	58:BZ:76:LEU:N	2.35	0.42
1:CA:1202:G:H2'	1:CA:1203:C:C5'	2.50	0.42
1:CA:1399:C:H4'	1:CA:1400:C:O5'	2.20	0.42
1:CA:1499:A:C2'	1:CA:1500:A:H5'	2.50	0.42
1:CA:197:A:C5	1:CA:221:C:H4'	2.55	0.42
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:822:C:O2'	1:CA:823:G:H5'	2.20	0.42
2:CB:165:VAL:CG2	2:CB:166:ASP:N	2.70	0.42
2:CB:32:ILE:HA	2:CB:42:ILE:HA	2.02	0.42
3:CC:73:PRO:O	3:CC:74:GLY:C	2.58	0.42
4:CD:9:CYS:HA	4:CD:12:CYS:SG	2.59	0.42
7:CG:75:VAL:O	7:CG:75:VAL:HG23	2.20	0.42
8:CH:41:ARG:NH1	8:CH:123:GLU:OE2	2.53	0.42
13:CM:10:PRO:HB2	13:CM:45:VAL:HG21	2.01	0.42
15:CO:36:ILE:HG23	15:CO:56:LEU:HD11	2.01	0.42
17:CQ:81:ARG:HH21	17:CQ:84:LEU:HD11	1.84	0.42
20:CT:99:LEU:O	20:CT:100:ILE:C	2.57	0.42
20:CT:27:LYS:C	20:CT:27:LYS:HD3	2.40	0.42
24:CY:40:C:H2'	24:CY:41:C:H5'	2.00	0.42
25:CZ:141:VAL:HG23	25:CZ:141:VAL:O	2.19	0.42
25:CZ:138:VAL:HG21	25:CZ:173:GLY:N	2.35	0.42
25:CZ:300:ARG:C	25:CZ:302:GLN:N	2.73	0.42
25:CZ:34:VAL:O	25:CZ:36:ALA:N	2.49	0.42
34:D8:19:SER:CB	36:DA:651:G:OP1	2.67	0.42
36:DA:999:U:O2'	36:DA:1000:A:H5'	2.20	0.42
36:DA:1142:U:O5'	36:DA:1142:U:H6	2.02	0.42
36:DA:1208:C:O2	36:DA:1208:C:C2'	2.65	0.42
36:DA:2580:U:H5'	40:DE:131:ALA:CB	2.40	0.42
36:DA:2801(A):A:H5'	36:DA:2802:G:H8	1.79	0.42
36:DA:2630:G:H1'	36:DA:2894:G:C8	2.55	0.42
32:D6:42:TRP:CZ2	36:DA:643:A:N7	2.88	0.42
36:DA:744:G:O2'	36:DA:745:G:H5'	2.20	0.42
39:DD:227:ASN:HB3	39:DD:228:PRO:HD2	2.02	0.42
41:DF:167:ALA:HB1	41:DF:173:VAL:HG11	2.02	0.42
41:DF:9:ILE:HG23	41:DF:13:SER:O	2.19	0.42
42:DG:172:LEU:CD2	42:DG:176:LEU:HD12	2.50	0.42
42:DG:40:ASN:HA	42:DG:91:ARG:HA	2.02	0.42
42:DG:72:ARG:CD	42:DG:86:MET:HA	2.49	0.42
43:DH:20:ALA:CB	43:DH:21:PRO:CD	2.93	0.42
43:DH:94:TYR:CD1	43:DH:107:VAL:HA	2.55	0.42
45:DK:30:UNK:O	45:DK:31:UNK:O	2.38	0.42
46:DN:42:TRP:CZ2	46:DN:44:PRO:HA	2.54	0.42
48:DP:65:ARG:O	48:DP:66:GLY:C	2.58	0.42
49:DQ:140:ALA:O	49:DQ:141:GLN:CB	2.67	0.42
36:DA:2713:A:OP1	50:DR:14:SER:HB3	2.19	0.42
47:DO:76:ALA:CB	52:DT:75:ILE:HD13	2.46	0.42
56:DX:10:ALA:HB1	56:DX:11:PRO:CD	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:2:ARG:HG2	57:DY:2:ARG:NH1	2.35	0.42
58:DZ:19:ARG:HA	58:DZ:23:LYS:O	2.19	0.42
1:AA:1125:U:H1'	10:AJ:5:ARG:NH2	2.35	0.42
1:AA:1153:C:O2'	1:AA:1154:G:C5'	2.68	0.42
1:AA:124:G:C6	1:AA:125:U:C4	3.07	0.42
1:AA:131:C:H2'	1:AA:132:C:C6	2.54	0.42
1:AA:976:G:H5'	1:AA:1358:U:O2'	2.20	0.42
1:AA:552:U:O2	12:AL:31:PRO:HB3	2.20	0.42
1:AA:697:U:H2'	1:AA:698:G:H5'	2.02	0.42
3:AC:132:ARG:O	3:AC:136:GLN:HG3	2.20	0.42
7:AG:75:VAL:HG23	7:AG:75:VAL:O	2.19	0.42
9:AI:95:LYS:NZ	9:AI:96:LEU:CD1	2.83	0.42
10:AJ:54:PHE:CZ	10:AJ:55:LYS:CE	3.02	0.42
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	2.26	0.42
16:AP:52:ASP:CG	16:AP:55:ARG:HB2	2.41	0.42
17:AQ:91:ARG:NH1	17:AQ:91:ARG:HB2	2.34	0.42
19:AS:6:LYS:C	19:AS:7:LYS:HE3	2.40	0.42
22:AV:14:A:C2'	22:AV:15:G:H5'	2.50	0.42
24:AY:70:C:O2'	24:AY:71:C:H5'	2.20	0.42
25:AZ:194:GLU:HG3	25:AZ:194:GLU:H	1.44	0.42
25:AZ:34:VAL:O	25:AZ:36:ALA:N	2.51	0.42
28:B2:13:ALA:C	28:B2:15:LYS:H	2.23	0.42
35:B9:14:CYS:SG	35:B9:27:CYS:CB	3.06	0.42
36:BA:1204:A:N1	36:BA:1241:A:H2	2.17	0.42
36:BA:1484:G:C3'	36:BA:1485:G:H5''	2.48	0.42
36:BA:1843:C:H5'	39:BD:253:GLN:NE2	2.34	0.42
36:BA:2121:G:C1'	38:BC:167:LYS:HE2	2.50	0.42
36:BA:2155:G:H3'	36:BA:2156:G:C8	2.53	0.42
26:B0:18:ALA:HB2	36:BA:2272:U:OP2	2.19	0.42
36:BA:2802:G:C3'	36:BA:2803:C:H5''	2.49	0.42
36:BA:64:A:H2'	36:BA:65:C:O4'	2.19	0.42
36:BA:754:C:H2'	36:BA:755:C:C6	2.55	0.42
38:BC:63:SER:HA	38:BC:160:ARG:HA	2.01	0.42
38:BC:196:LEU:O	38:BC:199:HIS:N	2.51	0.42
36:BA:2174:C:O4'	38:BC:218:MET:HE2	2.20	0.42
38:BC:66:HIS:CG	38:BC:184:LYS:HD2	2.54	0.42
39:BD:147:LEU:HD13	39:BD:155:LEU:HD11	2.01	0.42
39:BD:231:HIS:ND1	39:BD:232:PRO:HD2	2.35	0.42
39:BD:63:ARG:O	39:BD:65:ILE:HG23	2.20	0.42
40:BE:183:LEU:HD12	40:BE:183:LEU:N	2.35	0.42
36:BA:470:A:OP1	41:BF:59:TYR:CE1	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:78:ILE:O	41:BF:80:ALA:N	2.52	0.42
42:BG:52:ILE:HD13	42:BG:52:ILE:N	2.34	0.42
46:BN:137:LYS:CG	46:BN:138:LEU:N	2.82	0.42
46:BN:47:ALA:O	46:BN:119:ARG:NH2	2.52	0.42
48:BP:41:ARG:N	48:BP:41:ARG:HD2	2.34	0.42
48:BP:97:PRO:O	48:BP:98:GLU:CB	2.67	0.42
49:BQ:35:VAL:HG23	49:BQ:101:ARG:O	2.19	0.42
50:BR:87:TYR:C	50:BR:89:ASP:H	2.22	0.42
51:BS:34:HIS:CB	51:BS:36:TYR:HE1	2.20	0.42
54:BV:34:GLU:O	54:BV:36:PRO:HD3	2.18	0.42
54:BV:76:LYS:HB3	54:BV:79:VAL:HG21	2.01	0.42
57:BY:13:VAL:CG1	57:BY:28:LYS:HD3	2.32	0.42
57:BY:81:LYS:HZ3	57:BY:98:VAL:HB	1.85	0.42
1:CA:1095:U:P	1:CA:1108:G:H1	2.42	0.42
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.19	0.42
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.72	0.42
1:CA:1431:C:H2'	1:CA:1432:G:C5'	2.50	0.42
1:CA:1458:G:O2'	1:CA:1459:C:H5'	2.20	0.42
1:CA:375:U:P	16:CP:69:THR:HG21	2.60	0.42
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.39	0.42
3:CC:79:ARG:O	3:CC:82:GLU:OE2	2.37	0.42
4:CD:148:VAL:CG1	4:CD:152:SER:HB2	2.48	0.42
7:CG:104:LEU:HD12	7:CG:104:LEU:HA	1.86	0.42
10:CJ:94:VAL:CG1	10:CJ:95:GLU:N	2.82	0.42
20:CT:53:LEU:HB3	20:CT:102:GLY:HA3	2.00	0.42
20:CT:92:LEU:O	20:CT:94:ALA:N	2.53	0.42
25:CZ:145:GLU:CG	25:CZ:149:LEU:HB2	2.40	0.42
25:CZ:194:GLU:H	25:CZ:194:GLU:HG3	1.43	0.42
28:D2:50:ILE:HG22	28:D2:51:ARG:N	2.33	0.42
28:D2:2:LYS:HA	28:D2:6:VAL:CG2	2.50	0.42
34:D8:48:PHE:O	34:D8:49:VAL:CG2	2.67	0.42
36:DA:1301:A:HO2'	36:DA:1302:A:C2'	2.24	0.42
36:DA:140:G:C1'	36:DA:141:A:H2	2.29	0.42
36:DA:1429:G:H2'	36:DA:1430:C:C6	2.55	0.42
36:DA:1528(A):A:N6	36:DA:1541:G:C2	2.87	0.42
36:DA:271(V):G:O2'	36:DA:271(W):G:H5'	2.20	0.42
36:DA:754:C:H2'	36:DA:755:C:C6	2.55	0.42
36:DA:847:U:H2'	36:DA:848:G:H5''	2.02	0.42
37:DB:16:G:C6	37:DB:69:G:C2	3.07	0.42
40:DE:132:HIS:CA	40:DE:135:HIS:CE1	2.84	0.42
43:DH:167:GLU:HB3	43:DH:168:PRO:HD2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DJ:30:UNK:O	44:DJ:31:UNK:CB	2.67	0.42
45:DK:86:UNK:O	45:DK:87:UNK:CB	2.68	0.42
46:DN:34:LEU:CD1	46:DN:116:LEU:HB3	2.50	0.42
52:DT:40:THR:O	52:DT:41:ARG:O	2.38	0.42
53:DU:46:ALA:O	53:DU:47:TYR:C	2.57	0.42
53:DU:65:ILE:HD12	53:DU:65:ILE:H	1.84	0.42
53:DU:91:ASP:O	53:DU:92:ARG:HB3	2.19	0.42
55:DW:25:ARG:HH11	55:DW:25:ARG:CB	2.32	0.42
57:DY:13:VAL:HG23	57:DY:73:ARG:C	2.40	0.42
57:DY:59:GLY:O	57:DY:60:PHE:HB2	2.20	0.42
58:DZ:105:VAL:O	58:DZ:105:VAL:HG13	2.19	0.42
49:DQ:141:GLN:NE2	58:DZ:71:VAL:O	2.52	0.42
1:AA:1318:A:HO2'	19:AS:10:PHE:HE2	1.67	0.42
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.54	0.42
1:AA:266:G:C5'	1:AA:267:C:H5	2.21	0.42
1:AA:367:U:H5'	25:AZ:291:ARG:HD2	2.02	0.42
1:AA:375:U:P	16:AP:69:THR:HG21	2.60	0.42
1:AA:515:G:H2'	1:AA:516:U:O4'	2.20	0.42
1:AA:538:G:H3'	12:AL:115:LYS:HZ2	1.84	0.42
1:AA:675:A:H1'	11:AK:116:HIS:ND1	2.34	0.42
1:AA:652:U:C2	1:AA:752:G:N2	2.88	0.42
1:AA:865:A:O2'	1:AA:866:C:H5'	2.20	0.42
1:AA:948:C:O2'	1:AA:949:A:H5'	2.19	0.42
1:AA:953:G:H5''	1:AA:965:A:H61	1.83	0.42
4:AD:6:GLY:O	4:AD:8:VAL:HG13	2.20	0.42
10:AJ:3:LYS:HG2	10:AJ:75:ILE:O	2.20	0.42
13:AM:111:LYS:O	13:AM:112:GLY:O	2.38	0.42
13:AM:120:LYS:HA	13:AM:120:LYS:HZ1	1.85	0.42
17:AQ:81:ARG:HH21	17:AQ:84:LEU:HD11	1.84	0.42
25:AZ:13:ASN:ND2	25:AZ:241:ARG:HD2	2.35	0.42
1:AA:367:U:C4'	25:AZ:291:ARG:NE	2.70	0.42
25:AZ:26:THR:N	60:AZ:501:GDP:O2A	2.53	0.42
28:B2:59:ARG:O	28:B2:62:THR:HB	2.20	0.42
31:B5:51:TYR:N	31:B5:56:LYS:HZ1	2.18	0.42
34:B8:13:ARG:HD3	48:BP:61:ARG:O	2.20	0.42
36:BA:1297:C:O2'	36:BA:1298:C:H5'	2.20	0.42
36:BA:1367:A:C5	36:BA:1368:G:H1'	2.54	0.42
36:BA:1429:G:H2'	36:BA:1430:C:C6	2.54	0.42
36:BA:1657:C:H2'	36:BA:1658:C:C6	2.54	0.42
36:BA:2052:G:O4'	40:BE:142:GLY:HA3	2.19	0.42
36:BA:2171:A:O2'	36:BA:2172:U:H5	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2359:C:O2'	36:BA:2360:A:H5'	2.19	0.42
36:BA:2455:G:H2'	36:BA:2456:C:H6	1.84	0.42
36:BA:2517:C:C2	36:BA:2542:A:C6	3.08	0.42
36:BA:2524:G:H2'	36:BA:2525:G:O4'	2.20	0.42
36:BA:2572:A:N7	40:BE:145:LYS:HG2	2.35	0.42
36:BA:389:G:C6	48:BP:70:GLN:HG3	2.54	0.42
36:BA:529:A:H4'	36:BA:530:G:O5'	2.20	0.42
36:BA:975:C:OP2	36:BA:975:C:H4'	2.20	0.42
38:BC:118:ASP:C	38:BC:120:MET:N	2.71	0.42
39:BD:223:GLY:O	39:BD:224:ALA:O	2.38	0.42
39:BD:65:ILE:HD11	39:BD:88:ARG:NH2	2.35	0.42
39:BD:76:PRO:HG2	39:BD:98:VAL:CG2	2.50	0.42
40:BE:126:PRO:C	40:BE:128:SER:N	2.73	0.42
41:BF:135:LYS:HB3	41:BF:138:GLU:OE1	2.19	0.42
41:BF:129:PHE:CD2	41:BF:163:VAL:HG21	2.55	0.42
42:BG:18:GLU:OE1	42:BG:18:GLU:HA	2.20	0.42
43:BH:105:LEU:CD2	43:BH:105:LEU:N	2.83	0.42
43:BH:146:ALA:O	43:BH:147:ASN:C	2.57	0.42
43:BH:80:SER:O	43:BH:81:GLU:HB2	2.20	0.42
44:BJ:71:UNK:O	44:BJ:72:UNK:CB	2.67	0.42
46:BN:128:HIS:O	46:BN:128:HIS:CG	2.72	0.42
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.35	0.42
48:BP:62:LEU:N	48:BP:62:LEU:CD2	2.70	0.42
50:BR:106:GLY:O	50:BR:107:ASP:HB3	2.20	0.42
50:BR:103:ARG:NH1	50:BR:110:PRO:HB3	2.35	0.42
51:BS:53:SER:C	51:BS:55:ALA:N	2.74	0.42
53:BU:35:ALA:O	53:BU:36:ARG:C	2.56	0.42
55:BW:79:GLY:HA3	55:BW:100:THR:HG23	2.01	0.42
58:BZ:81:ARG:CZ	58:BZ:81:ARG:HB3	2.50	0.42
1:CA:1039:C:H2'	1:CA:1040:U:H5	1.84	0.42
1:CA:1153:C:O2'	1:CA:1154:G:P	2.78	0.42
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.19	0.42
1:CA:1305:G:OP1	21:CU:2:GLY:N	2.53	0.42
1:CA:201:C:H2'	1:CA:202:U:H3'	2.02	0.42
1:CA:338:A:H2'	1:CA:339:C:C6	2.55	0.42
1:CA:346:G:O2'	1:CA:347:G:O5'	2.38	0.42
1:CA:802:A:H2'	1:CA:803:G:O4'	2.20	0.42
1:CA:991:U:O4	1:CA:1212:U:H1'	2.19	0.42
3:CC:12:LEU:O	3:CC:14:ILE:N	2.53	0.42
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.34	0.42
4:CD:70:ILE:CG2	4:CD:71:SER:N	2.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:33:PHE:CE2	9:CI:47:LEU:HD21	2.55	0.42
9:CI:56:LEU:HG	9:CI:57:GLY:N	2.35	0.42
10:CJ:81:THR:HG23	10:CJ:82:ILE:N	2.34	0.42
12:CL:46:LYS:CG	12:CL:47:LYS:H	2.33	0.42
1:CA:376:G:O3'	16:CP:5:ARG:NH1	2.52	0.42
25:CZ:19:HIS:HB2	25:CZ:116:THR:OG1	2.19	0.42
27:D1:52:ARG:NH1	27:D1:57:GLU:HG2	2.35	0.42
27:D1:76:ARG:HH12	27:D1:95:LEU:HD12	1.85	0.42
28:D2:42:GLY:O	28:D2:43:GLN:HB2	2.18	0.42
28:D2:3:LEU:HD23	28:D2:7:ARG:NE	2.33	0.42
30:D4:26:SER:OG	30:D4:27:THR:N	2.51	0.42
31:D5:56:LYS:O	31:D5:57:VAL:O	2.38	0.42
32:D6:41:PRO:O	32:D6:41:PRO:HG2	2.20	0.42
32:D6:35:GLU:HB2	32:D6:51:GLU:OE1	2.19	0.42
33:D7:12:ARG:NH2	36:DA:464:U:O3'	2.52	0.42
36:DA:1078:U:H4'	36:DA:1079:C:O2	2.20	0.42
36:DA:1446:C:O2'	36:DA:1447:G:H5'	2.19	0.42
36:DA:1762:A:C8	36:DA:1762:A:O5'	2.72	0.42
36:DA:195:A:C8	36:DA:197:A:OP1	2.73	0.42
36:DA:2125:G:H21	36:DA:2173:A:N6	2.17	0.42
36:DA:2174:C:O4'	38:DC:218:MET:HE2	2.20	0.42
36:DA:2306:C:H5	36:DA:2307:G:O2'	2.03	0.42
36:DA:2639:A:H2'	36:DA:2640:G:O4'	2.20	0.42
36:DA:2771:C:H2'	36:DA:2772:C:C6	2.55	0.42
36:DA:2864:G:OP1	52:DT:119:LYS:HD2	2.19	0.42
36:DA:30:G:C5	36:DA:31:C:C4	3.08	0.42
36:DA:404:C:H4'	36:DA:405:U:H5'	2.02	0.42
36:DA:548:A:H2'	36:DA:549:G:H5'	2.01	0.42
36:DA:60:G:C6	36:DA:74:A:N6	2.87	0.42
36:DA:690:G:O2'	39:DD:43:ARG:NH2	2.51	0.42
36:DA:885:C:H2'	36:DA:886:C:H6	1.83	0.42
36:DA:894:C:C2'	36:DA:895:U:H5'	2.50	0.42
36:DA:2174:C:H1'	38:DC:218:MET:HA	2.02	0.42
38:DC:73:ARG:HG3	38:DC:73:ARG:HH11	1.84	0.42
39:DD:35:LYS:CD	39:DD:36:PRO:N	2.77	0.42
40:DE:142:GLY:O	40:DE:143:ASN:ND2	2.53	0.42
40:DE:21:VAL:HG23	40:DE:21:VAL:O	2.19	0.42
41:DF:125:LEU:N	41:DF:125:LEU:CD2	2.80	0.42
36:DA:320:A:H3'	41:DF:136:THR:HG22	2.01	0.42
42:DG:95:ARG:O	42:DG:96:ARG:C	2.57	0.42
43:DH:105:LEU:CD2	43:DH:105:LEU:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:117:PHE:O	46:DN:120:LEU:HB3	2.20	0.42
46:DN:15:LEU:HD12	46:DN:136:GLU:HG2	2.02	0.42
52:DT:78:LEU:O	52:DT:78:LEU:HD23	2.19	0.42
53:DU:86:ALA:HB2	53:DU:116:ALA:CB	2.50	0.42
55:DW:34:ASN:HA	55:DW:34:ASN:HD22	1.54	0.42
56:DX:41:ASN:C	56:DX:43:VAL:H	2.23	0.42
58:DZ:80:ARG:O	58:DZ:82:ARG:HB2	2.20	0.42
1:AA:1095:U:P	1:AA:1108:G:H1	2.43	0.41
1:AA:1322:C:H6	1:AA:1322:C:OP1	2.03	0.41
1:AA:1347:G:O2'	1:AA:1348:U:P	2.78	0.41
1:AA:1526:G:C6	1:AA:1527:C:N4	2.88	0.41
1:AA:522:C:H41	12:AL:53:ARG:NH2	2.09	0.41
2:AB:87:ARG:HH12	2:AB:223:ILE:CD1	2.33	0.41
3:AC:3:ASN:HB2	3:AC:4:LYS:H	1.63	0.41
6:AF:35:ALA:HB1	6:AF:65:VAL:HB	2.02	0.41
13:AM:25:ILE:HD11	13:AM:66:LEU:HD21	2.02	0.41
18:AR:68:LYS:HE2	18:AR:68:LYS:HB2	1.89	0.41
19:AS:77:THR:HG23	19:AS:78:ARG:HG3	2.02	0.41
24:AY:53:G:OP1	25:AZ:332:THR:OG1	2.27	0.41
25:AZ:354:GLN:O	25:AZ:371:THR:HB	2.19	0.41
29:B3:17:LYS:HA	29:B3:17:LYS:HD3	1.61	0.41
30:B4:26:SER:OG	30:B4:27:THR:N	2.53	0.41
36:BA:2129:C:OP1	38:BC:6:ARG:HB3	2.20	0.41
36:BA:2031:A:O2'	36:BA:2455:G:H4'	2.20	0.41
36:BA:286:C:H2'	36:BA:287:C:H6	1.81	0.41
36:BA:296:C:C2'	36:BA:297:C:H5'	2.49	0.41
36:BA:651:G:H2'	36:BA:652:C:C5'	2.49	0.41
36:BA:79:G:H2'	36:BA:80:G:H8	1.85	0.41
29:B3:49:LYS:HD3	36:BA:851:U:H5'	2.01	0.41
36:BA:902:C:H2'	36:BA:903:C:H6	1.81	0.41
39:BD:35:LYS:CD	39:BD:36:PRO:HD3	2.49	0.41
40:BE:59:VAL:HG13	40:BE:60:ASN:N	2.34	0.41
40:BE:48:GLN:NE2	40:BE:78:LEU:HD22	2.34	0.41
40:BE:93:VAL:HG12	40:BE:93:VAL:O	2.20	0.41
42:BG:59:GLU:OE2	42:BG:138:GLN:NE2	2.53	0.41
42:BG:96:ARG:O	42:BG:97:ASP:C	2.58	0.41
46:BN:46:VAL:HG13	46:BN:47:ALA:N	2.35	0.41
46:BN:71:ILE:HG22	46:BN:72:TYR:N	2.34	0.41
48:BP:131:SER:O	48:BP:132:LYS:C	2.57	0.41
34:B8:7:HIS:HD2	48:BP:50:ARG:HD3	1.85	0.41
49:BQ:97:VAL:HG21	49:BQ:103:MET:CE	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:58:LEU:CG	51:BS:59:LYS:H	2.31	0.41
53:BU:92:ARG:NE	54:BV:11:GLN:HG2	2.35	0.41
54:BV:5:VAL:HG23	54:BV:37:VAL:O	2.20	0.41
54:BV:61:VAL:C	54:BV:63:GLY:H	2.23	0.41
56:BX:30:VAL:HG21	56:BX:39:ILE:HD11	2.01	0.41
1:CA:1125:U:H1'	10:CJ:5:ARG:NH2	2.35	0.41
1:CA:1305:G:O2'	1:CA:1331:G:N2	2.53	0.41
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.19	0.41
1:CA:294:U:H2'	1:CA:295:C:H6	1.85	0.41
1:CA:298:A:H2'	1:CA:299:G:O4'	2.20	0.41
1:CA:373:A:O2'	1:CA:374:A:H5'	2.20	0.41
1:CA:417:C:O2'	1:CA:418:C:H5'	2.20	0.41
1:CA:530:G:O6	23:CX:24:G:H1'	2.20	0.41
1:CA:858:G:C8	1:CA:869:G:O6	2.73	0.41
3:CC:175:LEU:HD21	3:CC:201:TYR:CE2	2.55	0.41
4:CD:163:GLU:C	4:CD:165:MET:N	2.73	0.41
5:CE:7:GLU:HB3	5:CE:112:LEU:HD22	2.01	0.41
8:CH:18:ARG:CB	8:CH:18:ARG:HH11	2.33	0.41
9:CI:47:LEU:N	9:CI:47:LEU:HD12	2.34	0.41
27:D1:13:ILE:HD11	27:D1:42:GLN:HE21	1.85	0.41
27:D1:76:ARG:NH2	27:D1:95:LEU:H	2.18	0.41
29:D3:50:VAL:O	29:D3:52:HIS:N	2.52	0.41
33:D7:22:MET:HE1	33:D7:31:LEU:HD12	2.01	0.41
34:D8:37:SER:O	34:D8:38:GLY:C	2.58	0.41
36:DA:1190:G:H5'	48:DP:35:HIS:CA	2.50	0.41
36:DA:1902:C:H1'	39:DD:244:ARG:HD2	2.02	0.41
36:DA:211:A:O2'	36:DA:212:G:H5'	2.20	0.41
36:DA:260:G:H1'	36:DA:621:A:H1'	2.02	0.41
36:DA:654(N):G:N7	36:DA:654(O):G:C4	2.88	0.41
36:DA:943:U:OP2	48:DP:38:GLN:NE2	2.53	0.41
39:DD:80:ALA:HB3	39:DD:94:LEU:HD13	2.01	0.41
40:DE:145:LYS:HZ2	40:DE:145:LYS:HB3	1.84	0.41
40:DE:34:VAL:HG13	40:DE:34:VAL:O	2.19	0.41
46:DN:62:VAL:HG11	46:DN:67:LEU:HG	2.02	0.41
48:DP:16:ARG:CZ	48:DP:16:ARG:HB2	2.46	0.41
48:DP:39:LYS:CD	48:DP:40:SER:H	2.33	0.41
50:DR:4:LEU:HD12	50:DR:7:GLY:H	1.84	0.41
50:DR:87:TYR:C	50:DR:89:ASP:H	2.22	0.41
51:DS:11:LYS:N	51:DS:11:LYS:CD	2.82	0.41
52:DT:31:SER:HG	52:DT:32:TYR:HE1	1.53	0.41
54:DV:36:PRO:O	54:DV:37:VAL:HG13	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:59:VAL:O	55:DW:60:ASN:HB2	2.20	0.41
57:DY:8:LYS:HB2	57:DY:28:LYS:HZ1	1.84	0.41
57:DY:86:ARG:NH2	57:DY:95:LYS:HZ2	2.17	0.41
1:AA:1160:G:C6	1:AA:1181:G:O6	2.73	0.41
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.55	0.41
1:AA:1442:G:H2'	1:AA:1442(A):G:H5'	2.02	0.41
1:AA:376:G:O3'	16:AP:5:ARG:NH1	2.51	0.41
1:AA:377:G:H2'	1:AA:378:G:C8	2.55	0.41
1:AA:514:C:O2'	1:AA:515:G:H5'	2.21	0.41
1:AA:740:U:O2'	1:AA:741:G:H5'	2.20	0.41
2:AB:57:PHE:CE2	2:AB:185:ILE:HD11	2.55	0.41
2:AB:59:GLU:HB2	2:AB:221:LEU:HD11	2.02	0.41
9:AI:48:GLU:H	9:AI:49:PRO:HD2	1.84	0.41
1:AA:500:G:H5''	12:AL:124:LYS:NZ	2.35	0.41
12:AL:46:LYS:CG	12:AL:47:LYS:H	2.33	0.41
19:AS:70:LYS:O	19:AS:71:LEU:C	2.57	0.41
25:AZ:163:PHE:C	25:AZ:165:GLY:H	2.23	0.41
25:AZ:272:MET:CB	25:AZ:277:LEU:HD23	2.50	0.41
25:AZ:24:LYS:HG3	60:AZ:501:GDP:O3B	2.20	0.41
26:B0:14:ARG:CG	26:B0:14:ARG:NH1	2.79	0.41
34:B8:49:VAL:HG11	34:B8:52:LYS:HB3	2.01	0.41
35:B9:29:ASN:O	35:B9:31:LYS:N	2.52	0.41
36:BA:1149:G:H2'	36:BA:1150:C:C6	2.55	0.41
36:BA:993:G:C6	36:BA:1162:G:C6	3.08	0.41
36:BA:140:G:C1'	36:BA:141:A:H2	2.32	0.41
36:BA:1837:C:H2'	36:BA:1838:C:H5''	2.02	0.41
36:BA:1847:A:H2'	36:BA:1847:A:N3	2.35	0.41
36:BA:2599:G:O2'	36:BA:2600:A:H5'	2.20	0.41
36:BA:2612:C:C5	36:BA:2613:U:H5	2.37	0.41
36:BA:2801(A):A:C5'	36:BA:2802:G:C8	3.00	0.41
36:BA:36:G:H2'	36:BA:37:C:H6	1.85	0.41
36:BA:464:U:H2'	36:BA:465:G:O4'	2.20	0.41
36:BA:455:C:N3	36:BA:473:G:H5'	2.35	0.41
36:BA:605:C:H1'	36:BA:657:U:O2'	2.19	0.41
36:BA:740:U:H2'	36:BA:741:G:H8	1.85	0.41
31:B5:3:LYS:CD	36:BA:747:U:OP1	2.57	0.41
37:BB:35:U:H2'	37:BB:36:C:H6	1.86	0.41
40:BE:12:THR:O	40:BE:23:VAL:HG22	2.20	0.41
40:BE:37:ARG:HA	40:BE:42:ASP:OD2	2.20	0.41
40:BE:70:ALA:O	40:BE:71:GLY:C	2.58	0.41
46:BN:48:MET:N	46:BN:48:MET:HE3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:57:ALA:O	46:BN:58:ASP:O	2.38	0.41
47:BO:1:MET:H1	47:BO:67:LYS:HB3	1.85	0.41
47:BO:86:ILE:HG22	47:BO:94:ARG:HD3	2.03	0.41
48:BP:126:VAL:HA	48:BP:145:PRO:CB	2.49	0.41
48:BP:71:VAL:HG12	48:BP:72:PRO:HD3	2.02	0.41
36:BA:1278:A:C5'	50:BR:36:THR:HG22	2.49	0.41
52:BT:26:ASP:OD1	52:BT:26:ASP:O	2.38	0.41
53:BU:90:VAL:HG11	54:BV:40:LEU:HD23	2.01	0.41
1:CA:514:C:O2'	1:CA:515:G:H5'	2.20	0.41
2:CB:211:ILE:O	2:CB:212:GLN:C	2.56	0.41
2:CB:61:LEU:CD2	2:CB:68:ILE:HG13	2.50	0.41
10:CJ:94:VAL:HG12	10:CJ:95:GLU:H	1.84	0.41
13:CM:120:LYS:HZ1	13:CM:120:LYS:HA	1.85	0.41
13:CM:8:GLU:OE1	13:CM:22:ILE:HA	2.21	0.41
18:CR:53:ARG:NH1	18:CR:60:ALA:CA	2.83	0.41
23:CX:26:A:H3'	23:CX:27:A:O4'	2.19	0.41
25:CZ:113:MET:HG3	25:CZ:114:PRO:CD	2.36	0.41
25:CZ:368:VAL:CG1	25:CZ:369:THR:N	2.81	0.41
25:CZ:15:GLY:HA2	25:CZ:79:HIS:CD2	2.55	0.41
27:D1:73:LEU:O	27:D1:77:ALA:HB2	2.19	0.41
28:D2:15:LYS:O	28:D2:16:LEU:O	2.38	0.41
29:D3:3:ARG:HG2	29:D3:38:GLU:OE2	2.20	0.41
30:D4:31:ILE:HG21	42:DG:142:PRO:CB	2.46	0.41
31:D5:2:ALA:O	31:D5:3:LYS:C	2.59	0.41
34:D8:14:VAL:CG2	34:D8:22:VAL:CG1	2.98	0.41
35:D9:35:ARG:O	35:D9:36:GLN:O	2.39	0.41
36:DA:1184:G:O2'	36:DA:1185:C:H5'	2.20	0.41
36:DA:1750:G:H2'	36:DA:1751:C:H6	1.86	0.41
36:DA:1847:A:H3'	36:DA:1848:A:C5'	2.50	0.41
36:DA:2149:G:O2'	36:DA:2150:U:H5'	2.20	0.41
36:DA:2264:C:O2'	36:DA:2265:U:H5'	2.20	0.41
36:DA:2400:G:C5	36:DA:2401:U:O2	2.73	0.41
36:DA:2721:A:H2'	36:DA:2722:G:O4'	2.20	0.41
36:DA:2802:G:C3'	36:DA:2803:C:H5''	2.50	0.41
36:DA:338:G:H2'	36:DA:339:U:C6	2.54	0.41
36:DA:43:A:O2'	36:DA:44:G:H5'	2.19	0.41
36:DA:635:C:O2'	36:DA:639:U:OP1	2.38	0.41
36:DA:64:A:H2'	36:DA:65:C:O4'	2.20	0.41
36:DA:80:G:H2'	36:DA:81:G:H8	1.85	0.41
36:DA:861:A:C2'	36:DA:862:G:H5'	2.50	0.41
36:DA:922:U:H2'	36:DA:923:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:66:A:H61	37:DB:108:U:H2'	1.86	0.41
41:DF:184:TYR:CE1	48:DP:7:ARG:CZ	3.03	0.41
22:CV:56:C:C1'	42:DG:76:SER:O	2.69	0.41
48:DP:9:ASN:N	48:DP:10:PRO:CD	2.81	0.41
31:D5:44:THR:HG23	50:DR:100:LEU:C	2.40	0.41
51:DS:50:SER:O	51:DS:51:ALA:CB	2.67	0.41
55:DW:12:ILE:HD13	55:DW:17:VAL:HG22	2.02	0.41
58:DZ:57:ILE:O	58:DZ:69:THR:O	2.38	0.41
2:AB:142:LEU:HD21	2:AB:146:GLN:OE1	2.19	0.41
2:AB:175:ARG:NH1	2:AB:175:ARG:HB3	2.36	0.41
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.87	0.41
10:AJ:61:GLU:OE2	14:AN:49:HIS:CE1	2.72	0.41
10:AJ:35:SER:OG	10:AJ:73:ASP:CB	2.68	0.41
10:AJ:81:THR:O	10:AJ:83:GLU:N	2.53	0.41
10:AJ:86:MET:O	10:AJ:86:MET:HG2	2.20	0.41
14:AN:59:ALA:HB1	14:AN:61:TRP:CZ3	2.56	0.41
20:AT:62:LEU:HA	20:AT:65:LYS:HG3	2.02	0.41
22:AW:2:C:N4	22:AW:3:C:N4	2.69	0.41
24:AY:40:C:O2'	24:AY:41:C:H5''	2.19	0.41
25:AZ:176:LEU:O	25:AZ:180:GLU:HG3	2.19	0.41
25:AZ:174:SER:OG	60:AZ:501:GDP:O6	2.37	0.41
26:B0:24:LYS:HA	26:B0:24:LYS:HD3	1.81	0.41
33:B7:12:ARG:O	33:B7:12:ARG:HG3	2.20	0.41
36:BA:1076:C:C2'	36:BA:1077:A:H5'	2.50	0.41
36:BA:1171:G:H1	36:BA:1178:C:H42	1.68	0.41
36:BA:1314:C:C2	36:BA:1339:G:N2	2.89	0.41
36:BA:1352:U:O2	36:BA:1570:A:H2	2.04	0.41
36:BA:1773:A:H2'	36:BA:1774:C:C5'	2.49	0.41
36:BA:195:A:C8	36:BA:197:A:OP1	2.73	0.41
36:BA:201:C:H2'	36:BA:202:U:H5'	2.01	0.41
36:BA:2126:A:H1'	36:BA:2127:G:O4'	2.20	0.41
36:BA:431:U:O5'	36:BA:431:U:H6	2.03	0.41
36:BA:436:C:H2'	36:BA:437:G:C8	2.55	0.41
36:BA:687:C:H2'	36:BA:688:U:O4'	2.20	0.41
36:BA:908:C:O2'	36:BA:909:A:H5'	2.20	0.41
38:BC:73:ARG:HH11	38:BC:73:ARG:HG3	1.84	0.41
36:BA:729:G:OP2	39:BD:13:ARG:NH1	2.53	0.41
39:BD:41:GLY:O	39:BD:42:GLY:C	2.57	0.41
40:BE:24:THR:HG23	40:BE:24:THR:O	2.20	0.41
41:BF:184:TYR:CE1	48:BP:7:ARG:NH2	2.89	0.41
42:BG:128:ARG:HD3	42:BG:128:ARG:HA	1.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B4:31:ILE:CG2	42:BG:142:PRO:HB2	2.43	0.41
42:BG:32:PRO:HB2	42:BG:172:LEU:CG	2.34	0.41
44:BJ:72:UNK:C	44:BJ:74:UNK:N	2.82	0.41
48:BP:121:LYS:HA	48:BP:122:PRO:HD3	1.93	0.41
40:BE:111:ARG:CB	50:BR:2:ARG:NH1	2.73	0.41
52:BT:10:VAL:O	52:BT:12:SER:N	2.46	0.41
54:BV:46:VAL:O	54:BV:48:GLY:N	2.53	0.41
56:BX:12:VAL:HG21	56:BX:21:PHE:HZ	1.84	0.41
56:BX:21:PHE:O	56:BX:22:ALA:C	2.58	0.41
57:BY:46:LYS:HB3	57:BY:62:GLU:CG	2.50	0.41
58:BZ:166:SER:HB2	58:BZ:167:PRO:CA	2.51	0.41
1:CA:1116:C:H2'	1:CA:1117:G:H5'	2.02	0.41
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.55	0.41
1:CA:189(C):C:C2	1:CA:189(I):G:N2	2.89	0.41
1:CA:645:C:H2'	1:CA:646:U:H6	1.85	0.41
4:CD:190:ASP:CG	4:CD:191:ARG:N	2.73	0.41
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.78	0.41
4:CD:34:GLU:O	4:CD:35:ARG:CB	2.67	0.41
8:CH:1:MET:HE2	8:CH:2:LEU:N	2.36	0.41
11:CK:110:ASP:HB2	18:CR:88:LYS:HG3	2.01	0.41
11:CK:63:LEU:N	11:CK:63:LEU:HD12	2.36	0.41
17:CQ:26:GLN:HB3	17:CQ:37:LYS:CA	2.46	0.41
25:CZ:222:LEU:HA	25:CZ:304:LEU:O	2.21	0.41
26:D0:26:TYR:N	26:D0:26:TYR:CD1	2.87	0.41
28:D2:25:VAL:CA	28:D2:29:LYS:HG2	2.50	0.41
28:D2:27:GLU:C	28:D2:29:LYS:H	2.24	0.41
29:D3:31:LEU:C	29:D3:33:GLN:N	2.73	0.41
36:DA:106:C:H1'	57:DY:2:ARG:HH21	1.82	0.41
36:DA:1316:U:H2'	36:DA:1317:A:H8	1.85	0.41
36:DA:562:U:O4	36:DA:2036:C:H1'	2.20	0.41
36:DA:251:A:H5''	48:DP:51:PHE:CZ	2.56	0.41
36:DA:2626:C:O2'	36:DA:2627:G:H5'	2.21	0.41
36:DA:272(J):C:H2'	36:DA:274:G:C5'	2.50	0.41
36:DA:523:C:H2'	36:DA:524:U:C5'	2.50	0.41
29:D3:49:LYS:HD3	36:DA:851:U:H5'	2.02	0.41
37:DB:44:G:C2	37:DB:48:A:C2	3.08	0.41
38:DC:82:LYS:HB3	38:DC:149:ILE:HG21	2.02	0.41
39:DD:25:THR:HG22	39:DD:26:LYS:HE3	2.02	0.41
40:DE:116:VAL:HG21	40:DE:122:PHE:CE2	2.55	0.41
44:DJ:106:UNK:O	44:DJ:107:UNK:C	2.69	0.41
46:DN:42:TRP:CD1	53:DU:63:VAL:HG11	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:71:ILE:HG21	46:DN:84:LYS:HB3	2.01	0.41
48:DP:71:VAL:N	48:DP:72:PRO:CD	2.83	0.41
49:DQ:110:THR:OG1	49:DQ:113:GLN:HG3	2.21	0.41
49:DQ:113:GLN:O	49:DQ:114:ALA:C	2.59	0.41
50:DR:21:TYR:HB3	50:DR:47:PHE:CE2	2.54	0.41
36:DA:2724:C:OP1	50:DR:2:ARG:NH2	2.54	0.41
54:DV:47:VAL:O	54:DV:49:THR:N	2.53	0.41
58:DZ:177:PRO:O	58:DZ:178:GLU:HB3	2.19	0.41
1:AA:1010:G:H2'	1:AA:1011:G:H8	1.85	0.41
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.86	0.41
1:AA:346:G:O2'	1:AA:347:G:O5'	2.39	0.41
1:AA:743:U:H2'	1:AA:744:C:C6	2.55	0.41
1:AA:877:C:O2'	1:AA:878:G:H5'	2.20	0.41
1:AA:903:G:H2'	1:AA:904:C:C6	2.55	0.41
1:AA:993:G:H4'	1:AA:994:A:OP2	2.20	0.41
3:AC:73:PRO:O	3:AC:74:GLY:C	2.56	0.41
5:AE:12:LEU:CD2	5:AE:13:ILE:N	2.80	0.41
5:AE:93:PRO:HD2	8:AH:105:ARG:HH21	1.85	0.41
11:AK:124:LYS:HD2	11:AK:125:PHE:CE2	2.55	0.41
13:AM:86:CYS:O	13:AM:87:TYR:C	2.59	0.41
14:AN:15:LYS:HB3	14:AN:16:PHE:CD2	2.55	0.41
19:AS:11:VAL:HG11	19:AS:16:LEU:HD21	2.03	0.41
25:AZ:185:ASN:HD22	25:AZ:185:ASN:N	2.14	0.41
25:AZ:355:LEU:CD2	25:AZ:370:PHE:HD2	2.34	0.41
25:AZ:385:ARG:HD3	61:AZ:502:KIR:H301	2.02	0.41
31:B5:44:THR:HG23	50:BR:100:LEU:C	2.40	0.41
31:B5:57:VAL:HG12	31:B5:58:LEU:HD12	2.03	0.41
34:B8:48:PHE:HB3	34:B8:49:VAL:H	1.63	0.41
36:BA:118:A:H5'	36:BA:119:A:H8	1.86	0.41
36:BA:1528:A:O2'	36:BA:1528(A):A:H5'	2.20	0.41
36:BA:1529:G:C2	36:BA:1541:G:N2	2.89	0.41
36:BA:1847:A:H3'	36:BA:1848:A:C5'	2.49	0.41
36:BA:2186:G:H2'	36:BA:2187:G:C4	2.54	0.41
36:BA:2716:U:O2'	36:BA:2717:G:H5'	2.20	0.41
36:BA:271(K):U:H3'	36:BA:271(L):U:C5'	2.50	0.41
35:B9:19:ARG:NH1	36:BA:2755:C:C2	2.89	0.41
36:BA:26:G:C6	36:BA:27:G:N1	2.88	0.41
36:BA:355:G:H2'	36:BA:356:G:O4'	2.20	0.41
33:B7:39:ARG:HD2	36:BA:458:G:O2'	2.20	0.41
36:BA:997:G:O2'	36:BA:998:C:H5'	2.21	0.41
37:BB:106:G:O2'	37:BB:107:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:128:GLY:HA2	38:BC:137:LEU:CD2	2.50	0.41
39:BD:3:VAL:HG23	39:BD:200:ASP:OD2	2.19	0.41
36:BA:691:C:O4'	39:BD:43:ARG:NH1	2.53	0.41
40:BE:53:PRO:O	40:BE:54:GLN:C	2.59	0.41
46:BN:15:LEU:HD12	46:BN:136:GLU:HG2	2.02	0.41
36:BA:806:C:OP2	48:BP:39:LYS:HD2	2.20	0.41
26:B0:7:LEU:CB	49:BQ:85:LYS:HD2	2.50	0.41
36:BA:1011:G:OP1	53:BU:75:ASN:HB2	2.20	0.41
1:CA:1239:A:O2'	1:CA:1240:U:OP2	2.33	0.41
1:CA:131:C:H2'	1:CA:132:C:C6	2.55	0.41
1:CA:1435:G:H2'	1:CA:1436:U:H6	1.82	0.41
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.55	0.41
1:CA:676:A:H2'	1:CA:677:U:C6	2.56	0.41
4:CD:98:GLU:CG	4:CD:189:PRO:HG3	2.48	0.41
8:CH:83:ILE:O	8:CH:83:ILE:HG23	2.20	0.41
9:CI:50:LEU:HG	9:CI:81:ILE:HG21	2.02	0.41
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	2.01	0.41
11:CK:33:THR:HG22	11:CK:39:PRO:CA	2.49	0.41
13:CM:89:GLY:C	13:CM:91:ARG:N	2.72	0.41
3:CC:22:TRP:CZ2	14:CN:54:PRO:HG2	2.55	0.41
17:CQ:56:VAL:HG23	17:CQ:81:ARG:HG3	2.02	0.41
19:CS:29:ARG:O	19:CS:30:LEU:C	2.58	0.41
24:CY:25:C:H2'	24:CY:26:A:O5'	2.17	0.41
24:CY:52:A:O2'	24:CY:53:G:H5'	2.20	0.41
26:D0:55:ARG:HE	26:D0:55:ARG:HB3	1.67	0.41
28:D2:23:LYS:HE3	28:D2:26:ARG:HH11	1.84	0.41
33:D7:14:LYS:HE2	33:D7:14:LYS:HB2	1.87	0.41
34:D8:15:LYS:HD3	48:DP:65:ARG:NH2	2.15	0.41
36:DA:1097:U:O2'	36:DA:1098:A:H5'	2.20	0.41
36:DA:1131:G:O2'	36:DA:1132:A:H8	2.03	0.41
31:D5:11:THR:OG1	36:DA:1264:G:H5'	2.21	0.41
36:DA:1437:C:H2'	36:DA:1437:C:O2	2.20	0.41
36:DA:1482:G:C6	36:DA:1507:A:C6	3.09	0.41
36:DA:1541:G:O2'	36:DA:1542:A:H5''	2.20	0.41
36:DA:1803:A:O3'	39:DD:259:THR:HG22	2.20	0.41
36:DA:2069:G:O2'	36:DA:2070:G:H5'	2.20	0.41
36:DA:2116:G:C5	36:DA:2117:A:C2	3.09	0.41
36:DA:2187:G:C3'	36:DA:2188:C:H5'	2.50	0.41
36:DA:2712:U:O2	36:DA:2712:U:H5'	2.21	0.41
36:DA:296:C:C2'	36:DA:297:C:H5'	2.50	0.41
36:DA:514:A:O2'	36:DA:515:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:529:A:H4'	36:DA:530:G:O5'	2.20	0.41
36:DA:64:A:N9	56:DX:66:LEU:HD12	2.35	0.41
36:DA:761:A:C3'	36:DA:761:A:C8	3.04	0.41
36:DA:948:G:O2'	36:DA:949:C:H5'	2.21	0.41
37:DB:94:C:O2'	37:DB:95:C:H5'	2.21	0.41
38:DC:79:LYS:HD3	38:DC:119:VAL:CG1	2.51	0.41
36:DA:729:G:C6	39:DD:208:LYS:HB2	2.54	0.41
39:DD:62:TYR:HA	39:DD:87:ASN:HD21	1.84	0.41
41:DF:185:ASP:CA	41:DF:188:ARG:HG2	2.46	0.41
42:DG:172:LEU:C	42:DG:172:LEU:HD23	2.40	0.41
42:DG:43:LEU:N	42:DG:43:LEU:HD22	2.35	0.41
42:DG:73:ALA:H	42:DG:87:PRO:CD	2.33	0.41
45:DK:99:UNK:O	45:DK:100:UNK:O	2.37	0.41
53:DU:35:ALA:O	53:DU:36:ARG:C	2.57	0.41
54:DV:28:GLU:C	54:DV:30:GLY:H	2.23	0.41
54:DV:64:HIS:CE1	54:DV:92:THR:HG22	2.54	0.41
55:DW:79:GLY:HA3	55:DW:100:THR:HG23	2.01	0.41
56:DX:63:LYS:CD	56:DX:70:LEU:HD21	2.34	0.41
58:DZ:104:PHE:CZ	58:DZ:119:GLU:HB2	2.55	0.41
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.55	0.41
1:AA:123:C:OP1	1:AA:312:C:H5'	2.21	0.41
1:AA:781:A:C3'	1:AA:782:A:H5'	2.50	0.41
1:AA:983:A:H5'	1:AA:984:C:OP2	2.20	0.41
2:AB:238:LEU:CG	2:AB:239:VAL:N	2.83	0.41
3:AC:79:ARG:O	3:AC:79:ARG:HG3	2.21	0.41
4:AD:163:GLU:C	4:AD:165:MET:N	2.74	0.41
6:AF:6:VAL:O	6:AF:62:TRP:HA	2.21	0.41
6:AF:91:VAL:CG1	6:AF:92:LYS:N	2.83	0.41
7:AG:22:LEU:HD22	7:AG:62:PHE:CE2	2.56	0.41
8:AH:137:VAL:HG12	8:AH:138:TRP:N	2.36	0.41
8:AH:18:ARG:CB	8:AH:18:ARG:NH1	2.84	0.41
11:AK:27:ASN:ND2	11:AK:28:THR:H	2.04	0.41
11:AK:57:THR:HG22	11:AK:60:ALA:HB2	2.02	0.41
12:AL:20:LYS:CD	12:AL:20:LYS:H	2.14	0.41
16:AP:45:THR:O	16:AP:47:ASP:N	2.43	0.41
16:AP:60:LEU:HD21	16:AP:66:PRO:HG2	2.00	0.41
22:AV:41:C:C3'	22:AV:42:C:H5''	2.51	0.41
23:AX:26:A:H3'	23:AX:27:A:O4'	2.21	0.41
25:AZ:221:PHE:CD1	25:AZ:247:VAL:HG13	2.56	0.41
25:AZ:315:LYS:HB3	25:AZ:315:LYS:HE2	1.83	0.41
25:AZ:315:LYS:HG2	25:AZ:372:VAL:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:94:THR:O	25:AZ:98:GLN:NE2	2.54	0.41
29:B3:4:LEU:HA	29:B3:4:LEU:HD23	1.90	0.41
30:B4:27:THR:HG21	42:BG:62:LEU:HB2	2.03	0.41
30:B4:12:ALA:HB1	30:B4:29:PRO:HA	2.00	0.41
31:B5:56:LYS:O	31:B5:57:VAL:O	2.38	0.41
32:B6:10:LEU:HG	34:B8:34:TRP:CD1	2.56	0.41
33:B7:43:THR:CG2	33:B7:44:PRO:N	2.83	0.41
34:B8:48:PHE:O	34:B8:49:VAL:CG2	2.68	0.41
34:B8:56:GLU:O	34:B8:57:ARG:C	2.58	0.41
36:BA:1188:U:H2'	36:BA:1189:A:H5'	2.02	0.41
36:BA:1446:C:O2'	36:BA:1447:G:H5'	2.20	0.41
36:BA:1744:C:C2'	36:BA:1745:C:H5'	2.49	0.41
36:BA:1902:C:H1'	39:BD:244:ARG:HD2	2.03	0.41
36:BA:1948:G:O2'	36:BA:1949:G:H5'	2.21	0.41
36:BA:759:G:O4'	36:BA:1981:A:C2	2.73	0.41
31:B5:19:ARG:HG3	36:BA:2046:G:H5'	2.02	0.41
36:BA:203:C:C3'	36:BA:204:A:H5''	2.49	0.41
36:BA:2815:C:H2'	36:BA:2816:C:O4'	2.20	0.41
36:BA:593:G:H2'	36:BA:594:U:C6	2.55	0.41
38:BC:62:VAL:O	38:BC:160:ARG:HA	2.20	0.41
39:BD:127:VAL:HA	39:BD:193:VAL:HG13	2.03	0.41
40:BE:167:VAL:CG1	40:BE:189:PRO:HD3	2.42	0.41
41:BF:6:VAL:CG1	41:BF:7:TYR:H	2.15	0.41
48:BP:121:LYS:O	48:BP:123:LEU:N	2.52	0.41
48:BP:133:SER:O	48:BP:136:GLU:HG2	2.19	0.41
54:BV:71:LEU:HD23	54:BV:71:LEU:HA	1.89	0.41
54:BV:89:GLN:OE1	54:BV:89:GLN:HA	2.20	0.41
55:BW:5:ALA:O	55:BW:6:ILE:HB	2.21	0.41
1:CA:337:C:H2'	1:CA:338:A:H8	1.81	0.41
1:CA:371:G:N2	1:CA:374:A:N6	2.68	0.41
1:CA:38:G:C2	1:CA:397:A:C2	3.08	0.41
1:CA:454:C:H5''	1:CA:455:C:H5	1.85	0.41
1:CA:644:G:N2	1:CA:645:C:H1'	2.35	0.41
1:CA:903:G:H2'	1:CA:904:C:C6	2.56	0.41
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.74	0.41
14:CN:32:SER:HB3	14:CN:41:ARG:HG2	2.01	0.41
22:CV:75:C:H2'	22:CV:76:A:C1'	2.50	0.41
25:CZ:129:PRO:O	25:CZ:130:TYR:O	2.39	0.41
25:CZ:13:ASN:ND2	25:CZ:241:ARG:HD2	2.36	0.41
27:D1:81:LYS:HZ1	36:DA:156:U:C4'	2.33	0.41
29:D3:31:LEU:O	29:D3:33:GLN:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:25:LYS:HE2	34:D8:34:TRP:CZ2	2.51	0.41
32:D6:33:LYS:O	32:D6:34:LEU:HB2	2.20	0.41
32:D6:25:LYS:CE	34:D8:34:TRP:HZ2	2.34	0.41
34:D8:42:ARG:NH2	36:DA:2382:G:H21	2.19	0.41
36:DA:1053:C:O2'	36:DA:1054:A:H5'	2.20	0.41
36:DA:1375:C:H2'	36:DA:1376:C:C6	2.52	0.41
36:DA:1528:A:O2'	36:DA:1528(A):A:H5'	2.21	0.41
36:DA:1602:U:C3'	36:DA:1603:A:C5'	2.90	0.41
36:DA:1652:A:C2	36:DA:2006:C:N3	2.89	0.41
36:DA:2121:G:N2	36:DA:2176:A:H2	2.17	0.41
36:DA:2186:G:H2'	36:DA:2187:G:C4	2.54	0.41
36:DA:2245:U:H5'	36:DA:2246:G:C5'	2.33	0.41
36:DA:2292:C:O2'	36:DA:2293:C:H5'	2.20	0.41
36:DA:21:A:H2'	36:DA:22:C:O4'	2.20	0.41
36:DA:2636:U:H1'	36:DA:2783:G:N2	2.34	0.41
36:DA:374:A:H2'	36:DA:375:C:O4'	2.21	0.41
36:DA:885:C:C2	36:DA:886:C:C5	3.09	0.41
38:DC:128:GLY:HA2	38:DC:137:LEU:CD2	2.50	0.41
39:DD:257:LEU:C	39:DD:257:LEU:CD2	2.88	0.41
40:DE:67:PHE:O	40:DE:70:ALA:HB2	2.20	0.41
42:DG:77:ILE:CD1	42:DG:77:ILE:N	2.73	0.41
42:DG:96:ARG:C	42:DG:99:MET:SD	2.99	0.41
43:DH:127:GLU:HG3	43:DH:130:ARG:HE	1.86	0.41
46:DN:63:THR:O	46:DN:64:GLY:O	2.38	0.41
40:DE:152:LYS:HG2	46:DN:78:TYR:CZ	2.55	0.41
50:DR:114:VAL:O	50:DR:114:VAL:HG23	2.21	0.41
53:DU:9:VAL:O	53:DU:13:LYS:HG2	2.20	0.41
1:AA:1006:C:H2'	1:AA:1007:C:H6	1.81	0.41
1:AA:1003:G:H21	1:AA:1039:C:H42	1.63	0.41
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.56	0.41
1:AA:1312:G:O2'	1:AA:1313:U:H5'	2.21	0.41
1:AA:347:G:O2'	1:AA:348:G:C5'	2.69	0.41
1:AA:46:G:O2'	1:AA:365:U:H1'	2.20	0.41
1:AA:407:G:H2'	1:AA:408:A:H8	1.84	0.41
1:AA:50:A:H4'	1:AA:51:A:H5'	2.03	0.41
2:AB:40:HIS:C	2:AB:41:ILE:HD12	2.41	0.41
5:AE:11:ILE:HD11	5:AE:33:VAL:CG2	2.48	0.41
7:AG:119:ARG:O	7:AG:120:ILE:C	2.58	0.41
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.38	0.41
15:AO:70:LEU:C	15:AO:72:ARG:H	2.22	0.41
20:AT:38:LYS:O	20:AT:42:GLN:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:323:LEU:CD1	25:AZ:396:GLY:HA2	2.50	0.41
25:AZ:325:LYS:O	25:AZ:326:GLU:C	2.59	0.41
25:AZ:28:THR:HG23	25:AZ:79:HIS:ND1	2.35	0.41
27:B1:37:ILE:CD1	27:B1:37:ILE:H	2.28	0.41
31:B5:36:CYS:C	31:B5:38:ALA:N	2.72	0.41
36:BA:1899:G:H22	36:BA:1902:C:N4	2.15	0.41
36:BA:2852:G:H1	36:BA:2865:U:H3	1.69	0.41
36:BA:43:A:O2'	36:BA:44:G:H5'	2.21	0.41
36:BA:832:G:N3	48:BP:53:GLY:HA2	2.35	0.41
37:BB:49:C:H6	37:BB:49:C:O5'	2.04	0.41
38:BC:162:GLU:HG2	38:BC:163:PHE:N	2.33	0.41
38:BC:82:LYS:HE2	38:BC:82:LYS:CA	2.45	0.41
39:BD:107:ALA:HA	39:BD:108:PRO:HD2	1.96	0.41
41:BF:32:LEU:CD2	41:BF:105:VAL:HG13	2.48	0.41
41:BF:157:VAL:HG22	41:BF:194:MET:HG2	2.00	0.41
41:BF:126:VAL:O	41:BF:196:LEU:HG	2.21	0.41
41:BF:7:TYR:CE1	41:BF:196:LEU:HD11	2.56	0.41
42:BG:54:GLU:HA	42:BG:57:ALA:HB3	2.02	0.41
43:BH:163:TYR:HD1	43:BH:163:TYR:N	2.18	0.41
43:BH:87:LEU:HD13	43:BH:162:ILE:HD11	2.02	0.41
44:BJ:72:UNK:O	44:BJ:73:UNK:C	2.69	0.41
45:BK:99:UNK:O	45:BK:100:UNK:O	2.39	0.41
46:BN:22:THR:CB	46:BN:61:ARG:HB2	2.51	0.41
46:BN:21:LYS:HD2	46:BN:26:LEU:HB2	2.03	0.41
48:BP:96:THR:O	48:BP:100:LEU:HB2	2.21	0.41
48:BP:107:LYS:HG3	48:BP:107:LYS:O	2.20	0.41
48:BP:71:VAL:N	48:BP:72:PRO:CD	2.83	0.41
51:BS:58:LEU:HG	51:BS:59:LYS:N	2.35	0.41
52:BT:7:ILE:O	52:BT:10:VAL:HB	2.21	0.41
55:BW:59:VAL:O	55:BW:60:ASN:HB2	2.21	0.41
55:BW:71:VAL:HG23	55:BW:71:VAL:O	2.20	0.41
56:BX:37:THR:C	56:BX:39:ILE:H	2.23	0.41
57:BY:86:ARG:NH2	57:BY:95:LYS:HZ3	2.13	0.41
58:BZ:127:LYS:HE2	58:BZ:162:GLU:OE2	2.20	0.41
58:BZ:24:LEU:HD22	58:BZ:39:VAL:HG22	2.03	0.41
1:CA:1326:C:P	21:CU:12:LYS:HZ2	2.43	0.41
1:CA:1406:U:H2'	1:CA:1407:C:H5'	2.02	0.41
1:CA:303:A:H2'	1:CA:304:U:O4'	2.21	0.41
1:CA:339:C:OP2	47:DO:97:ARG:NH1	2.54	0.41
1:CA:658:G:H2'	1:CA:659:U:C6	2.55	0.41
1:CA:743:U:H2'	1:CA:744:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:22:G:H4'	1:CA:885:G:C8	2.56	0.41
1:CA:78:G:N2	1:CA:91:C:N4	2.69	0.41
2:CB:189:ASP:OD1	2:CB:190:THR:N	2.43	0.41
2:CB:238:LEU:CG	2:CB:239:VAL:N	2.83	0.41
4:CD:88:VAL:HG12	4:CD:90:GLY:H	1.85	0.41
6:CF:6:VAL:O	6:CF:62:TRP:HA	2.21	0.41
11:CK:38:ASN:N	11:CK:38:ASN:ND2	2.66	0.41
13:CM:68:GLY:H	13:CM:71:ARG:CG	2.32	0.41
10:CJ:62:HIS:HB2	14:CN:59:ALA:HB3	2.02	0.41
15:CO:48:LYS:HD3	15:CO:48:LYS:HA	1.76	0.41
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD2	1.85	0.41
17:CQ:5:VAL:HG22	17:CQ:60:ILE:CD1	2.47	0.41
19:CS:11:VAL:O	19:CS:12:ASP:O	2.39	0.41
25:CZ:219:LYS:CB	25:CZ:244:ARG:HD2	2.43	0.41
25:CZ:318:ALA:O	25:CZ:369:THR:HA	2.20	0.41
26:D0:47:PRO:HG3	26:D0:59:LEU:CD2	2.51	0.41
36:DA:1103:A:H3'	36:DA:1104:C:C6	2.56	0.41
36:DA:1363:C:H2'	36:DA:1364:G:H8	1.85	0.41
36:DA:1473:G:C2	36:DA:1474:C:H1'	2.56	0.41
36:DA:1499:C:C2'	36:DA:1500:G:H5'	2.50	0.41
36:DA:2121:G:C1'	38:DC:167:LYS:HE2	2.50	0.41
36:DA:2306:C:H5	36:DA:2307:G:HO2'	1.63	0.41
36:DA:2524:G:H2'	36:DA:2525:G:O4'	2.21	0.41
36:DA:2696:U:H2'	36:DA:2697:G:H8	1.85	0.41
36:DA:411:G:OP2	36:DA:2406:U:O2'	2.34	0.41
36:DA:654(U):A:O2'	36:DA:654(V):A:H5'	2.21	0.41
37:DB:112:U:H2'	37:DB:113:G:H8	1.85	0.41
37:DB:73:A:C2'	37:DB:74:U:H5'	2.49	0.41
39:DD:35:LYS:CD	39:DD:36:PRO:HD3	2.50	0.41
40:DE:101:ARG:HB2	40:DE:201:THR:CG2	2.49	0.41
40:DE:3:GLY:O	40:DE:4:ILE:HB	2.20	0.41
41:DF:132:VAL:CG2	41:DF:133:ASN:H	2.11	0.41
41:DF:68:LYS:HB3	41:DF:69:HIS:CD2	2.56	0.41
43:DH:16:SER:HB2	43:DH:27:LYS:CB	2.46	0.41
47:DO:107:ARG:O	47:DO:112:MET:HE3	2.21	0.41
48:DP:125:VAL:O	48:DP:145:PRO:CD	2.67	0.41
48:DP:97:PRO:O	48:DP:98:GLU:CB	2.68	0.41
51:DS:103:GLU:HG2	51:DS:104:GLY:N	2.36	0.41
51:DS:12:PHE:O	51:DS:13:ARG:HG2	2.20	0.41
51:DS:39:ILE:CD1	51:DS:73:LEU:HD21	2.51	0.41
52:DT:93:ARG:HA	52:DT:93:ARG:HD2	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:27:THR:HB	56:DX:80:ILE:HG22	2.02	0.41
56:DX:25:LYS:HA	56:DX:81:VAL:O	2.20	0.41
57:DY:75:ILE:CG1	57:DY:76:CYS:H	2.27	0.41
58:DZ:5:LEU:O	58:DZ:60:GLU:HG3	2.20	0.41
1:AA:1242:C:O5'	1:AA:1242:C:H6	2.04	0.41
1:AA:1303:C:N4	1:AA:1304:G:C6	2.89	0.41
1:AA:1442(B):A:N7	52:BT:118:ARG:NE	2.69	0.41
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.56	0.41
1:AA:477:A:O2'	1:AA:479:C:H5'	2.20	0.41
2:AB:100:GLY:O	2:AB:104:ASN:N	2.50	0.41
2:AB:106:LYS:H	2:AB:106:LYS:HG3	1.64	0.41
2:AB:215:LEU:O	2:AB:218:ALA:HB3	2.21	0.41
2:AB:55:PHE:N	2:AB:55:PHE:CD1	2.89	0.41
2:AB:7:VAL:O	2:AB:11:LEU:CB	2.62	0.41
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.20	0.41
6:AF:11:ASN:CB	6:AF:14:LEU:HD23	2.48	0.41
10:AJ:55:LYS:H	10:AJ:55:LYS:HD3	1.86	0.41
12:AL:54:LYS:HD2	12:AL:54:LYS:N	2.35	0.41
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD2	2.56	0.41
19:AS:43:GLU:O	19:AS:45:VAL:N	2.48	0.41
20:AT:57:ARG:HD3	20:AT:102:GLY:HA2	2.02	0.41
20:AT:71:THR:O	20:AT:72:LEU:HD23	2.21	0.41
22:AW:7:A:C5	22:AW:49:C:H5	2.38	0.41
24:AY:26:A:C4	24:AY:27:C:C6	3.09	0.41
25:AZ:15:GLY:HA2	25:AZ:79:HIS:CD2	2.55	0.41
27:B1:30:VAL:HG23	27:B1:31:GLY:H	1.84	0.41
27:B1:20:ARG:HG2	27:B1:34:THR:HA	2.02	0.41
27:B1:82:LEU:HD11	27:B1:90:ILE:HD12	2.02	0.41
28:B2:47:ASN:C	28:B2:50:ILE:HD13	2.41	0.41
28:B2:67:LYS:O	28:B2:69:ARG:N	2.53	0.41
36:BA:1052:C:O2'	36:BA:1053:C:P	2.79	0.41
36:BA:1541:G:O2'	36:BA:1542:A:H5''	2.21	0.41
36:BA:1790:C:H2'	36:BA:1791:A:C4	2.55	0.41
36:BA:2199:A:C2	36:BA:2200:C:H1'	2.55	0.41
36:BA:2266:A:H4'	36:BA:2267:A:N3	2.35	0.41
36:BA:2779:U:H1'	36:BA:2781:A:C6	2.56	0.41
36:BA:338:G:H2'	36:BA:339:U:H6	1.85	0.41
36:BA:523:C:H2'	36:BA:524:U:C5'	2.50	0.41
36:BA:674:G:H21	41:BF:74:ARG:HH12	1.68	0.41
36:BA:751:A:C6	36:BA:789:A:C5	3.09	0.41
36:BA:848:G:C2	36:BA:933:A:H1'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:29:VAL:HG11	38:BC:214:VAL:HG12	2.02	0.41
36:BA:1820:U:O2	39:BD:201:HIS:HB3	2.20	0.41
40:BE:67:PHE:O	40:BE:70:ALA:HB2	2.21	0.41
42:BG:45:GLU:O	42:BG:51:ARG:HG3	2.20	0.41
42:BG:76:SER:HB3	42:BG:83:ARG:HB3	2.03	0.41
43:BH:125:VAL:N	43:BH:126:PRO:CD	2.84	0.41
44:BJ:8:UNK:C	44:BJ:10:UNK:N	2.81	0.41
45:BK:86:UNK:O	45:BK:87:UNK:CB	2.68	0.41
46:BN:115:ARG:HG3	46:BN:115:ARG:HH11	1.84	0.41
48:BP:102:ARG:NH1	48:BP:102:ARG:HB3	2.36	0.41
52:BT:65:LYS:HB2	52:BT:65:LYS:NZ	2.36	0.41
52:BT:93:ARG:HA	52:BT:93:ARG:HD2	1.82	0.41
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.35	0.41
36:BA:1599:C:OP2	56:BX:36:LYS:HD2	2.21	0.41
57:BY:43:ASN:HA	57:BY:64:GLU:C	2.41	0.41
1:CA:1012:U:O2'	1:CA:1013:G:H5'	2.19	0.41
1:CA:1202:G:C2'	1:CA:1203:C:H5'	2.51	0.41
1:CA:1378:C:OP1	7:CG:7:ALA:CB	2.69	0.41
1:CA:192:U:H1'	20:CT:103:GLY:CA	2.44	0.41
1:CA:322:C:O2'	20:CT:23:ARG:HB2	2.19	0.41
1:CA:418:C:H2'	1:CA:419:C:H6	1.86	0.41
1:CA:441:A:H3'	1:CA:442:C:H6	1.83	0.41
1:CA:746:A:O2'	1:CA:747:C:H5'	2.21	0.41
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.93	0.41
2:CB:213:LEU:C	2:CB:213:LEU:CD2	2.89	0.41
3:CC:134:ILE:HD11	3:CC:153:VAL:HB	2.03	0.41
3:CC:173:VAL:HG12	3:CC:175:LEU:HD11	2.01	0.41
5:CE:61:TYR:O	5:CE:62:ALA:C	2.57	0.41
10:CJ:86:MET:HG2	10:CJ:86:MET:O	2.21	0.41
14:CN:33:VAL:HG23	14:CN:33:VAL:O	2.21	0.41
14:CN:26:ARG:NH1	14:CN:47:LEU:HD21	2.36	0.41
16:CP:6:LEU:CD1	16:CP:19:ILE:HD13	2.51	0.41
16:CP:71:ARG:HG3	16:CP:80:PHE:CZ	2.56	0.41
17:CQ:72:ARG:HB2	17:CQ:72:ARG:HE	1.65	0.41
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.20	0.41
20:CT:86:ARG:NH1	20:CT:86:ARG:HG3	2.36	0.41
22:CV:44:G:H2'	22:CV:44:G:N3	2.35	0.41
25:CZ:135:MET:HG2	25:CZ:138:VAL:HG22	2.02	0.41
25:CZ:221:PHE:CD1	25:CZ:247:VAL:HG13	2.56	0.41
26:D0:16:SER:HB2	36:DA:2262:U:C5	2.55	0.41
32:D6:12:GLU:HA	32:D6:23:THR:CB	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1469:A:H2'	36:DA:1470:G:C8	2.56	0.41
36:DA:1543:C:C3'	36:DA:1544:A:C5'	2.90	0.41
36:DA:2102:U:C5	36:DA:2103:C:N3	2.89	0.41
36:DA:2131:G:C1'	36:DA:2133:G:H21	2.25	0.41
36:DA:2155:G:H3'	36:DA:2156:G:C8	2.55	0.41
36:DA:2207:G:O2'	36:DA:2208:A:H5''	2.21	0.41
36:DA:2278:A:H2'	36:DA:2279:G:O5'	2.20	0.41
36:DA:2405:G:HO2'	36:DA:2406:U:P	2.44	0.41
36:DA:25:U:H5'	55:DW:78:GLU:O	2.21	0.41
36:DA:271(B):C:O2'	36:DA:271(C):C:H5'	2.21	0.41
36:DA:278:A:H61	36:DA:362:U:H3	1.69	0.41
36:DA:580:C:H2'	36:DA:581:C:C6	2.56	0.41
36:DA:586:A:H5'	41:DF:89:VAL:CG2	2.42	0.41
34:D8:4:MET:HE1	36:DA:592:G:H21	1.86	0.41
36:DA:92:A:H2'	36:DA:92:A:N3	2.36	0.41
36:DA:953:A:OP2	49:DQ:16:ARG:CD	2.68	0.41
38:DC:100:ILE:HD13	38:DC:127:LEU:HB2	2.03	0.41
39:DD:30:GLU:C	39:DD:35:LYS:HZ1	2.24	0.41
43:DH:125:VAL:N	43:DH:126:PRO:CD	2.83	0.41
43:DH:147:ASN:N	43:DH:147:ASN:HD22	2.17	0.41
43:DH:109:PHE:CE1	43:DH:152:ARG:NH1	2.89	0.41
46:DN:3:THR:C	46:DN:4:TYR:CD1	2.94	0.41
34:D8:25:MET:CG	48:DP:64:LYS:HB2	2.51	0.41
53:DU:90:VAL:O	53:DU:91:ASP:C	2.58	0.41
54:DV:32:THR:CG2	54:DV:58:VAL:HG12	2.50	0.41
54:DV:28:GLU:O	54:DV:61:VAL:HG21	2.20	0.41
55:DW:88:ARG:HB2	55:DW:92:ARG:HB2	2.02	0.41
57:DY:40:GLU:HA	57:DY:40:GLU:OE1	2.21	0.41
57:DY:76:CYS:SG	57:DY:77:PRO:CD	3.08	0.41
58:DZ:108:PRO:CA	58:DZ:141:VAL:HG12	2.51	0.41
58:DZ:130:PRO:C	58:DZ:133:ILE:HD11	2.41	0.41
58:DZ:45:ASP:O	58:DZ:46:LYS:C	2.58	0.41
49:DQ:135:ASP:CB	58:DZ:49:ARG:HH11	2.34	0.41
49:DQ:141:GLN:OXT	58:DZ:99:TYR:HD2	2.04	0.41
1:AA:1036:G:H3'	1:AA:1037:C:H6	1.86	0.41
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.56	0.41
1:AA:1354:C:O2'	1:AA:1355:G:H5'	2.20	0.41
1:AA:189(F):U:O2	17:AQ:63:ARG:NH2	2.54	0.41
1:AA:198:G:O2'	1:AA:199:G:P	2.78	0.41
1:AA:685:G:O2'	1:AA:686:U:H5'	2.21	0.41
1:AA:923:A:C6	1:AA:924:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:29:PRO:O	4:AD:30:LYS:CB	2.69	0.41
4:AD:36:ARG:HG2	4:AD:36:ARG:NH1	2.35	0.41
9:AI:93:ARG:C	9:AI:95:LYS:N	2.73	0.41
16:AP:22:THR:HA	16:AP:33:ILE:H	1.86	0.41
17:AQ:21:VAL:O	17:AQ:41:LYS:HA	2.20	0.41
19:AS:61:TYR:O	19:AS:66:MET:HE2	2.20	0.41
24:AY:52:A:O2'	25:AZ:330:ARG:NH1	2.27	0.41
24:AY:4:G:C3'	24:AY:5:G:H5''	2.50	0.41
25:AZ:19:HIS:HB2	25:AZ:116:THR:OG1	2.21	0.41
25:AZ:145:GLU:O	25:AZ:148:ASP:N	2.53	0.41
25:AZ:187:LYS:CD	25:AZ:187:LYS:N	2.82	0.41
25:AZ:197:ASP:HA	25:AZ:200:TRP:HB2	2.03	0.41
25:AZ:300:ARG:C	25:AZ:302:GLN:N	2.73	0.41
25:AZ:65:THR:CG2	25:AZ:80:VAL:CG1	2.92	0.41
27:B1:27:GLU:HB3	27:B1:28:GLY:H	1.64	0.41
27:B1:46:LEU:N	27:B1:46:LEU:HD12	2.34	0.41
27:B1:3:LYS:HB3	27:B1:4:VAL:H	1.41	0.41
28:B2:18:PRO:HA	28:B2:64:LEU:CD2	2.50	0.41
28:B2:21:LEU:HB2	28:B2:64:LEU:HD21	2.03	0.41
32:B6:15:GLU:O	32:B6:15:GLU:CG	2.68	0.41
32:B6:45:LYS:C	32:B6:46:HIS:HD1	2.24	0.41
33:B7:22:MET:CE	33:B7:28:ARG:HG2	2.43	0.41
33:B7:4:THR:HG22	36:BA:687:C:H1'	2.03	0.41
36:BA:1076:C:N4	36:BA:1088:A:H61	2.16	0.41
36:BA:1103:A:H5''	36:BA:1104:C:C5	2.56	0.41
36:BA:1450:G:O2'	36:BA:1450(A):C:H5'	2.20	0.41
36:BA:1683:C:C2	36:BA:1684:C:C5	3.09	0.41
36:BA:1887:C:H2'	36:BA:1888:G:C5'	2.33	0.41
36:BA:21:A:H2'	36:BA:22:C:O4'	2.20	0.41
36:BA:2395:C:C2	36:BA:2396:G:C8	3.09	0.41
36:BA:318:C:H2'	36:BA:319:C:H6	1.85	0.41
36:BA:366:C:H5	36:BA:403:U:HO2'	1.69	0.41
36:BA:480:A:H2	36:BA:499:U:O2	2.04	0.41
34:B8:19:SER:HB2	36:BA:651:G:OP1	2.20	0.41
36:BA:708:C:N4	36:BA:723:G:H1	2.12	0.41
36:BA:947:G:H2'	36:BA:948:G:C8	2.56	0.41
38:BC:161:ILE:HD12	38:BC:161:ILE:O	2.20	0.41
38:BC:45:ALA:HA	38:BC:211:SER:O	2.21	0.41
38:BC:20:TYR:O	38:BC:224:ILE:HA	2.21	0.41
38:BC:77:ILE:HB	38:BC:115:ALA:CB	2.43	0.41
36:BA:729:G:C8	39:BD:208:LYS:HD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:27:THR:HG21	39:BD:81:ALA:HB1	2.03	0.41
43:BH:51:ARG:O	43:BH:52:VAL:HB	2.21	0.41
46:BN:60:ILE:CD1	46:BN:99:LEU:HD23	2.51	0.41
47:BO:98:VAL:HG11	47:BO:118:ALA:N	2.35	0.41
48:BP:125:VAL:O	48:BP:145:PRO:CD	2.68	0.41
48:BP:47:ASP:CB	48:BP:48:PRO:HA	2.44	0.41
48:BP:88:LEU:C	48:BP:90:ARG:H	2.24	0.41
49:BQ:118:LEU:HD12	49:BQ:131:ILE:CG2	2.50	0.41
52:BT:40:THR:O	52:BT:41:ARG:O	2.38	0.41
52:BT:28:VAL:CG2	52:BT:47:GLY:N	2.68	0.41
52:BT:85:LYS:CB	52:BT:85:LYS:HZ2	2.27	0.41
53:BU:65:ILE:HG13	53:BU:96:ALA:HB1	2.03	0.41
55:BW:34:ASN:HA	55:BW:34:ASN:HD22	1.54	0.41
58:BZ:152:ALA:C	58:BZ:154:ASP:N	2.74	0.41
58:BZ:156:LYS:O	58:BZ:158:PRO:HD3	2.20	0.41
1:CA:1049:U:H1'	1:CA:1201:A:N7	2.35	0.41
1:CA:346:G:O2'	1:CA:347:G:O4'	2.38	0.41
1:CA:723:U:O2	1:CA:723:U:C2'	2.66	0.41
2:CB:115:LEU:HB2	2:CB:145:LEU:HD12	2.02	0.41
2:CB:178:ARG:HG2	8:CH:72:PRO:HA	2.03	0.41
2:CB:47:THR:HG22	2:CB:47:THR:O	2.20	0.41
2:CB:77:ALA:O	2:CB:81:VAL:HG23	2.21	0.41
2:CB:98:LEU:O	2:CB:101:MET:HG3	2.20	0.41
3:CC:141:VAL:HG11	3:CC:202:ILE:HG12	2.03	0.41
7:CG:68:ASN:O	7:CG:138:LYS:HD2	2.20	0.41
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	2.03	0.41
11:CK:54:ARG:O	11:CK:57:THR:HG22	2.20	0.41
12:CL:18:VAL:O	12:CL:19:ARG:CB	2.68	0.41
13:CM:116:THR:O	13:CM:116:THR:CG2	2.67	0.41
19:CS:11:VAL:HG11	19:CS:16:LEU:HD21	2.02	0.41
24:CY:16:H2U:H4'	24:CY:17:H2U:OP2	2.21	0.41
25:CZ:125:GLN:HE22	25:CZ:394:THR:HB	1.86	0.41
25:CZ:163:PHE:C	25:CZ:165:GLY:H	2.23	0.41
25:CZ:166:ASP:O	25:CZ:167:GLU:CB	2.68	0.41
25:CZ:325:LYS:O	25:CZ:326:GLU:C	2.59	0.41
30:D4:33:VAL:CG1	30:D4:34:GLU:N	2.84	0.41
34:D8:56:GLU:O	34:D8:57:ARG:C	2.59	0.41
36:DA:565:C:H4'	36:DA:1253:A:C6	2.55	0.41
36:DA:1683:C:C2	36:DA:1684:C:C5	3.08	0.41
36:DA:1910:G:C2'	36:DA:1911:U:H5'	2.51	0.41
36:DA:2457:U:C2'	36:DA:2458:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2849:U:OP2	52:DT:95:ARG:NH1	2.54	0.41
36:DA:301:G:H3'	36:DA:335:C:OP2	2.21	0.41
36:DA:330:A:O2'	36:DA:331:A:H2'	2.21	0.41
36:DA:333:G:N3	36:DA:333:G:H2'	2.36	0.41
36:DA:605:C:C4	36:DA:606:U:C5	3.09	0.41
36:DA:569:U:H5''	36:DA:821:A:C2	2.56	0.41
37:DB:16:G:N2	37:DB:69:G:H1'	2.36	0.41
39:DD:173:VAL:HG12	39:DD:185:VAL:O	2.20	0.41
39:DD:70:TRP:CD1	39:DD:70:TRP:C	2.93	0.41
40:DE:104:VAL:HG11	40:DE:188:VAL:HG21	2.03	0.41
40:DE:93:VAL:C	40:DE:95:ILE:N	2.74	0.41
41:DF:150:GLY:HA2	41:DF:172:TRP:CD2	2.55	0.41
41:DF:185:ASP:OD1	41:DF:188:ARG:HD3	2.20	0.41
41:DF:78:ILE:C	41:DF:80:ALA:H	2.24	0.41
42:DG:152:LEU:H	42:DG:152:LEU:CD2	2.29	0.41
43:DH:49:VAL:C	43:DH:50:VAL:HG23	2.41	0.41
44:DJ:56:UNK:HA	44:DJ:83:UNK:CA	2.51	0.41
46:DN:22:THR:O	46:DN:23:LEU:O	2.39	0.41
47:DO:64:ARG:HD3	47:DO:79:PHE:CD2	2.56	0.41
48:DP:47:ASP:CB	48:DP:48:PRO:HA	2.44	0.41
36:DA:2358:G:H22	48:DP:55:ARG:NH2	2.19	0.41
34:D8:13:ARG:HD3	48:DP:61:ARG:O	2.20	0.41
49:DQ:18:LYS:O	49:DQ:19:GLY:O	2.39	0.41
50:DR:76:VAL:CG1	50:DR:77:ARG:N	2.84	0.41
52:DT:25:GLY:O	52:DT:26:ASP:CB	2.67	0.41
53:DU:109:LEU:HA	53:DU:109:LEU:HD23	1.92	0.41
58:DZ:103:ARG:NH1	58:DZ:136:PHE:CD2	2.89	0.41
1:AA:1032:G:H2'	1:AA:1033:G:C8	2.56	0.41
1:AA:1431:C:H2'	1:AA:1432:G:H5'	2.02	0.41
1:AA:48:C:H5''	1:AA:365:U:O4	2.21	0.41
1:AA:426:G:H4'	4:AD:41:GLY:O	2.21	0.41
1:AA:563:A:H5''	1:AA:566:G:N2	2.36	0.41
1:AA:668:G:O2'	15:AO:46:HIS:CD2	2.73	0.41
1:AA:78:G:N2	1:AA:91:C:N4	2.69	0.41
4:AD:103:ASN:OD1	4:AD:114:ARG:NE	2.39	0.41
4:AD:121:VAL:N	4:AD:126:ILE:HD13	2.36	0.41
7:AG:78:ARG:CG	7:AG:79:ARG:N	2.82	0.41
11:AK:63:LEU:HD12	11:AK:63:LEU:N	2.35	0.41
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.20	0.41
20:AT:13:LEU:O	20:AT:15:ARG:N	2.54	0.41
22:AW:61:C:O2'	22:AW:62:C:C6	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:210:ILE:O	25:AZ:210:ILE:HG23	2.21	0.41
25:AZ:7:ARG:C	25:AZ:8:THR:CG2	2.89	0.41
27:B1:89:GLU:O	27:B1:90:ILE:C	2.58	0.41
32:B6:11:LEU:O	32:B6:23:THR:HB	2.21	0.41
32:B6:33:LYS:O	32:B6:34:LEU:HB2	2.21	0.41
32:B6:15:GLU:OE2	32:B6:41:PRO:CB	2.69	0.41
34:B8:32:LEU:CG	34:B8:36:LYS:HZ1	2.33	0.41
34:B8:49:VAL:CG1	34:B8:53:PRO:HD3	2.42	0.41
36:BA:1762:A:C8	36:BA:1762:A:O5'	2.73	0.41
36:BA:2125:G:H21	36:BA:2173:A:H61	1.68	0.41
36:BA:2370:G:H2'	36:BA:2371:G:C8	2.56	0.41
36:BA:2551:C:H2'	36:BA:2552:U:C6	2.55	0.41
36:BA:2579:C:O2'	36:BA:2580:U:H5'	2.21	0.41
36:BA:272(J):C:H2'	36:BA:274:G:C5'	2.51	0.41
36:BA:327:G:C2	36:BA:328:U:C2	3.09	0.41
36:BA:333:G:N3	36:BA:333:G:H2'	2.36	0.41
36:BA:516:C:O2'	36:BA:517:C:H5'	2.21	0.41
36:BA:654(U):A:O2'	36:BA:654(V):A:H5'	2.21	0.41
36:BA:74:A:H5''	36:BA:75:G:O4'	2.21	0.41
36:BA:861:A:C2	36:BA:917:A:C4	3.09	0.41
36:BA:444:C:C4'	41:BF:49:ALA:HB2	2.50	0.41
41:BF:65:TRP:CE3	41:BF:72:ARG:HB2	2.55	0.41
42:BG:83:ARG:O	42:BG:84:LYS:C	2.59	0.41
43:BH:97:ARG:HH21	43:BH:99:VAL:HG21	1.85	0.41
36:BA:195:A:H5''	48:BP:46:LYS:NZ	2.36	0.41
51:BS:75:GLU:O	51:BS:76:LYS:HG2	2.20	0.41
56:BX:10:ALA:HB1	56:BX:11:PRO:HD2	2.01	0.41
56:BX:80:ILE:O	56:BX:80:ILE:CG1	2.69	0.41
56:BX:87:GLN:O	56:BX:88:LYS:HG3	2.20	0.41
57:BY:88:LYS:O	57:BY:90:LEU:HD23	2.20	0.41
58:BZ:112:ARG:HB2	58:BZ:112:ARG:NH1	2.35	0.41
58:BZ:10:ARG:NH2	58:BZ:26:GLY:O	2.54	0.41
1:CA:1524:C:C3'	1:CA:1524:C:C6	3.04	0.41
1:CA:189(C):C:C2'	1:CA:189(D):C:H5'	2.51	0.41
1:CA:189(L):G:H2'	1:CA:190:U:C6	2.55	0.41
2:CB:109:SER:O	2:CB:112:VAL:N	2.54	0.41
2:CB:69:LEU:HB2	2:CB:159:PRO:CG	2.51	0.41
3:CC:73:PRO:O	3:CC:76:VAL:HG22	2.21	0.41
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.89	0.41
10:CJ:45:ARG:NE	14:CN:36:PHE:CD2	2.88	0.41
10:CJ:47:PHE:CE2	14:CN:37:PHE:CE2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:27:CYS:SG	14:CN:40:CYS:SG	3.19	0.41
16:CP:22:THR:OG1	16:CP:23:ASP:N	2.52	0.41
16:CP:67:THR:HG22	16:CP:68:ASP:H	1.85	0.41
19:CS:19:VAL:O	19:CS:23:ASN:N	2.54	0.41
19:CS:78:ARG:HG3	19:CS:78:ARG:HH11	1.86	0.41
25:CZ:147:LEU:CD2	25:CZ:147:LEU:H	2.34	0.41
25:CZ:241:ARG:CB	25:CZ:241:ARG:HH11	2.10	0.41
25:CZ:7:ARG:C	25:CZ:8:THR:CG2	2.88	0.41
28:D2:10:LEU:HD13	28:D2:63:VAL:CG2	2.46	0.41
28:D2:25:VAL:CG2	28:D2:61:LEU:HD21	2.51	0.41
28:D2:2:LYS:HB2	36:DA:97:C:H5'	2.00	0.41
33:D7:24:THR:HG23	33:D7:27:GLY:H	1.86	0.41
36:DA:1103:A:H5''	36:DA:1104:C:C5	2.55	0.41
36:DA:1108:U:H6	36:DA:1109:C:C6	2.38	0.41
36:DA:1188:U:H2'	36:DA:1189:A:H5'	2.02	0.41
36:DA:1438:U:O2'	36:DA:1439:A:H5'	2.21	0.41
36:DA:1630:G:C2	36:DA:1637:A:C2	3.08	0.41
36:DA:1844:C:O2'	36:DA:1845:G:H5'	2.21	0.41
36:DA:2033:A:HO2'	36:DA:2034:U:P	2.44	0.41
36:DA:2187:G:H2'	36:DA:2188:C:C5'	2.26	0.41
36:DA:2554:U:H2'	36:DA:2555:U:H6	1.86	0.41
36:DA:2578:G:C5	40:DE:140:SER:HB2	2.56	0.41
36:DA:2760:C:C3'	36:DA:2761:G:H5''	2.50	0.41
36:DA:586:A:N1	36:DA:809:G:O2'	2.44	0.41
36:DA:65:C:H2'	36:DA:66:C:H6	1.84	0.41
36:DA:773:U:O2'	39:DD:48:ARG:HD3	2.21	0.41
37:DB:92:C:OP1	49:DQ:19:GLY:CA	2.69	0.41
38:DC:63:SER:HA	38:DC:160:ARG:HA	2.03	0.41
40:DE:176:ILE:HG22	40:DE:176:ILE:O	2.20	0.41
41:DF:21:ALA:HB3	41:DF:23:ASP:CG	2.41	0.41
42:DG:111:LEU:N	42:DG:112:PRO:CD	2.83	0.41
47:DO:114:ILE:HD12	47:DO:114:ILE:H	1.86	0.41
47:DO:1:MET:H1	47:DO:67:LYS:HB3	1.86	0.41
48:DP:110:TYR:O	48:DP:111:ARG:C	2.60	0.41
48:DP:85:LEU:CD2	48:DP:85:LEU:N	2.84	0.41
48:DP:95:VAL:HG23	48:DP:125:VAL:CA	2.46	0.41
49:DQ:118:LEU:HD12	49:DQ:131:ILE:CG2	2.50	0.41
50:DR:38:VAL:CB	50:DR:39:PRO:HD3	2.39	0.41
36:DA:2848:G:H8	52:DT:97:ALA:HB2	1.86	0.41
57:DY:47:LYS:HD2	57:DY:47:LYS:N	2.35	0.41
1:AA:423:G:H2'	1:AA:424:G:H5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:622:A:C8	1:AA:623:C:C5	3.09	0.41
1:AA:940:C:O2'	1:AA:941:G:H5'	2.21	0.41
1:AA:985:C:O2'	1:AA:986:A:H5'	2.21	0.41
4:AD:11:LEU:HD22	4:AD:66:ARG:HD3	2.02	0.41
4:AD:98:GLU:CG	4:AD:189:PRO:HG3	2.49	0.41
12:AL:18:VAL:O	12:AL:19:ARG:CB	2.69	0.41
16:AP:71:ARG:HG3	16:AP:80:PHE:CZ	2.56	0.41
19:AS:51:VAL:HB	19:AS:75:ALA:HB2	2.01	0.41
1:AA:966:G:C4	22:AV:34:G:H4'	2.56	0.41
22:AW:26:A:O2'	22:AW:27:G:H5'	2.21	0.41
24:AY:44:G:H1'	24:AY:45:U:C6	2.56	0.41
25:AZ:222:LEU:HA	25:AZ:304:LEU:O	2.21	0.41
28:B2:12:GLU:HA	28:B2:15:LYS:HE2	2.03	0.41
29:B3:38:GLU:HB3	29:B3:40:THR:HG23	2.03	0.41
32:B6:32:ASN:O	32:B6:33:LYS:CG	2.68	0.41
33:B7:22:MET:HE1	33:B7:31:LEU:HD12	2.02	0.41
34:B8:14:VAL:CG2	34:B8:22:VAL:CG1	2.99	0.41
35:B9:25:VAL:O	35:B9:33:LYS:HA	2.21	0.41
36:BA:1068:G:N3	36:BA:1068:G:C2'	2.83	0.41
36:BA:1210:A:C8	36:BA:1210:A:H5'	2.52	0.41
36:BA:1210:A:O2'	36:BA:1211:U:OP2	2.29	0.41
36:BA:1234:U:H2'	36:BA:1235:G:O4'	2.21	0.41
36:BA:1260:G:H2'	36:BA:1261:C:H6	1.84	0.41
36:BA:1291:C:H2'	36:BA:1292:U:C6	2.56	0.41
36:BA:156:U:H2'	36:BA:157:U:H5'	2.02	0.41
36:BA:1711:C:O2'	36:BA:1712:C:H5'	2.21	0.41
36:BA:2125:G:H21	36:BA:2173:A:N6	2.19	0.41
36:BA:2174:C:H1'	38:BC:218:MET:HA	2.03	0.41
36:BA:2120:G:C2	36:BA:2178:C:C5	3.08	0.41
36:BA:2206:G:N2	36:BA:2207:G:C5'	2.84	0.41
36:BA:221:A:H4'	36:BA:222:A:O5'	2.21	0.41
36:BA:2297:C:O2'	36:BA:2298:A:H5'	2.21	0.41
36:BA:2460:U:H4'	49:BQ:79:LEU:HD11	2.01	0.41
36:BA:2463:C:C2'	36:BA:2464:C:H5'	2.50	0.41
36:BA:2645:G:H4'	36:BA:2646:C:OP2	2.21	0.41
36:BA:2707:G:H2'	36:BA:2708:G:H8	1.86	0.41
36:BA:2822:G:OP1	40:BE:112:GLY:N	2.53	0.41
36:BA:335:C:H2'	36:BA:336:C:C6	2.54	0.41
37:BB:73:A:C4	37:BB:105:A:C2	3.09	0.41
38:BC:175:VAL:HG12	38:BC:188:ASN:CB	2.29	0.41
39:BD:60:ARG:HD3	39:BD:86:PRO:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:17:ASP:HB3	40:BE:18:ASP:H	1.59	0.41
36:BA:2631:G:N2	40:BE:61:ARG:HH12	2.15	0.41
42:BG:144:ILE:O	42:BG:144:ILE:HG23	2.19	0.41
44:BJ:99:UNK:C	44:BJ:101:UNK:N	2.83	0.41
57:BY:2:ARG:HG2	57:BY:2:ARG:NH1	2.36	0.41
57:BY:47:LYS:N	57:BY:47:LYS:HD2	2.36	0.41
58:BZ:59:LEU:O	58:BZ:66:SER:HA	2.21	0.41
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.55	0.41
1:CA:1216:G:O2'	1:CA:1217:C:H5'	2.21	0.41
1:CA:1283:G:O2'	1:CA:1284:C:C6	2.72	0.41
1:CA:1527:C:H6	1:CA:1527:C:O5'	2.04	0.41
1:CA:383:A:C2'	1:CA:384:G:H5'	2.50	0.41
5:CE:50:GLU:HA	5:CE:50:GLU:OE1	2.21	0.41
9:CI:56:LEU:N	9:CI:56:LEU:HD23	2.36	0.41
9:CI:52:ALA:HB3	9:CI:95:LYS:HZ3	1.86	0.41
12:CL:54:LYS:N	12:CL:54:LYS:HD2	2.36	0.41
15:CO:71:GLN:HB2	15:CO:78:TYR:CD1	2.55	0.41
18:CR:73:ALA:CB	18:CR:79:LEU:HD12	2.50	0.41
19:CS:51:VAL:HB	19:CS:75:ALA:HB2	2.03	0.41
20:CT:36:LEU:HD12	20:CT:59:ALA:CB	2.51	0.41
25:CZ:315:LYS:HE2	25:CZ:315:LYS:HB3	1.83	0.41
25:CZ:389:ARG:HG2	25:CZ:394:THR:HA	2.02	0.41
25:CZ:136:ASN:OD1	60:CZ:501:GDP:O6	2.39	0.41
25:CZ:89:ILE:O	25:CZ:92:MET:HB3	2.21	0.41
26:D0:25:ARG:HD2	26:D0:29:GLN:HE21	1.86	0.41
31:D5:36:CYS:HB3	31:D5:49:CYS:HB3	2.03	0.41
36:DA:1068:G:N3	36:DA:1068:G:C2'	2.82	0.41
36:DA:1076:C:C2'	36:DA:1077:A:H5'	2.51	0.41
36:DA:1170:G:N2	36:DA:1180:C:C2	2.89	0.41
36:DA:1313:U:H4'	36:DA:1333:C:OP2	2.20	0.41
36:DA:1376:C:O2'	36:DA:1377:G:H5'	2.20	0.41
36:DA:1427:A:H4'	36:DA:1428:C:O4'	2.20	0.41
36:DA:1568:G:OP2	39:DD:63:ARG:NH2	2.53	0.41
36:DA:1712:C:O2'	36:DA:1713:U:H5'	2.21	0.41
36:DA:2815:C:C2	36:DA:2816:C:C6	3.08	0.41
36:DA:338:G:H2'	36:DA:339:U:H6	1.86	0.41
36:DA:491:G:H2'	36:DA:492:A:C8	2.55	0.41
37:DB:106:G:O2'	37:DB:107:G:H5'	2.20	0.41
38:DC:120:MET:O	38:DC:124:GLY:HA3	2.21	0.41
38:DC:216:THR:CG2	38:DC:219:GLY:HA3	2.51	0.41
41:DF:135:LYS:HB3	41:DF:138:GLU:OE1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:78:ILE:O	41:DF:80:ALA:N	2.54	0.41
42:DG:114:ILE:CD1	42:DG:115:ARG:N	2.83	0.41
36:DA:2303:G:C5'	42:DG:126:ASP:HB2	2.50	0.41
42:DG:68:PRO:CB	42:DG:90:LEU:HD13	2.48	0.41
46:DN:21:LYS:HD2	46:DN:26:LEU:HB2	2.03	0.41
46:DN:90:MET:O	46:DN:93:THR:O	2.39	0.41
46:DN:60:ILE:CD1	46:DN:99:LEU:HD23	2.51	0.41
48:DP:146:VAL:HG13	48:DP:147:LEU:N	2.36	0.41
49:DQ:133:ARG:O	49:DQ:134:ARG:HB2	2.21	0.41
49:DQ:141:GLN:HG3	58:DZ:72:ARG:CZ	2.50	0.41
26:D0:7:LEU:CB	49:DQ:85:LYS:HD2	2.51	0.41
50:DR:100:LEU:CD1	50:DR:100:LEU:N	2.83	0.41
51:DS:25:ARG:HD3	51:DS:42:ASP:OD1	2.21	0.41
51:DS:58:LEU:O	51:DS:59:LYS:O	2.38	0.41
54:DV:34:GLU:O	54:DV:36:PRO:HD3	2.20	0.41
54:DV:6:LYS:O	54:DV:37:VAL:HG21	2.21	0.41
55:DW:92:ARG:O	55:DW:93:ALA:CB	2.69	0.41
1:AA:1211:U:O2	1:AA:1211:U:O4'	2.39	0.41
1:AA:1218:C:H2'	1:AA:1219:U:C5	2.53	0.41
1:AA:418:C:H2'	1:AA:419:C:H6	1.86	0.41
1:AA:474:G:O2'	1:AA:475:G:H5'	2.20	0.41
2:AB:157:ARG:CB	2:AB:157:ARG:HH11	2.33	0.41
3:AC:95:THR:O	3:AC:95:THR:CG2	2.60	0.41
1:AA:408:A:H4'	4:AD:112:VAL:HG11	2.03	0.41
4:AD:78:LEU:HA	4:AD:78:LEU:HD23	1.91	0.41
5:AE:7:GLU:HB3	5:AE:112:LEU:HD22	2.02	0.41
7:AG:41:ARG:HG2	7:AG:41:ARG:NH1	2.36	0.41
8:AH:4:ASP:OD2	8:AH:7:ALA:HB2	2.21	0.41
9:AI:16:ARG:HG3	9:AI:16:ARG:HH11	1.86	0.41
9:AI:65:VAL:O	9:AI:65:VAL:HG13	2.21	0.41
13:AM:25:ILE:HD11	13:AM:60:VAL:HG11	2.03	0.41
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD2	1.86	0.41
20:AT:27:LYS:C	20:AT:27:LYS:HD3	2.42	0.41
25:AZ:358:GLY:O	25:AZ:360:GLU:N	2.53	0.41
25:AZ:385:ARG:HD3	61:AZ:502:KIR:H452	2.03	0.41
26:B0:46:LYS:HE3	26:B0:46:LYS:HB2	1.84	0.41
28:B2:26:ARG:C	28:B2:28:LYS:H	2.24	0.41
31:B5:41:PRO:HA	31:B5:42:PRO:HD3	1.97	0.41
32:B6:27:LYS:HG3	32:B6:30:THR:OG1	2.21	0.41
32:B6:41:PRO:HG2	32:B6:41:PRO:O	2.21	0.41
35:B9:1:MET:SD	35:B9:1:MET:N	2.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1298:C:N4	36:BA:1299:G:C6	2.89	0.41
36:BA:1440:G:O6	36:BA:1552:G:C2	2.74	0.41
36:BA:1666:G:H1'	47:BO:3:GLN:NE2	2.36	0.41
36:BA:1876:A:H2'	36:BA:1877:A:C5'	2.39	0.41
36:BA:2078:C:H2'	36:BA:2079:U:C6	2.55	0.41
36:BA:2327:A:H2'	36:BA:2328:A:C8	2.56	0.41
36:BA:640:C:C4	36:BA:641:C:N4	2.89	0.41
37:BB:111:G:H2'	37:BB:112:U:H5'	2.02	0.41
38:BC:100:ILE:HD13	38:BC:127:LEU:HB2	2.02	0.41
36:BA:1902:C:H4'	39:BD:244:ARG:CA	2.51	0.41
39:BD:27:THR:HG23	39:BD:83:GLU:HG3	2.02	0.41
36:BA:470:A:OP1	41:BF:59:TYR:HE1	2.04	0.41
36:BA:674:G:N3	41:BF:74:ARG:NH1	2.69	0.41
41:BF:9:ILE:HG23	41:BF:13:SER:O	2.20	0.41
36:BA:2316:C:O2'	42:BG:128:ARG:NH2	2.53	0.41
43:BH:85:LYS:HZ3	43:BH:132:ARG:C	2.19	0.41
44:BJ:106:UNK:O	44:BJ:107:UNK:CB	2.68	0.41
46:BN:87:LEU:O	46:BN:88:GLU:C	2.59	0.41
48:BP:58:THR:CG2	48:BP:58:THR:O	2.69	0.41
49:BQ:139:GLU:OE1	49:BQ:139:GLU:CA	2.69	0.41
51:BS:61:ASN:H	51:BS:65:VAL:CG2	2.34	0.41
52:BT:128:GLU:CD	52:BT:129:ARG:H	2.24	0.41
57:BY:26:LYS:HB3	57:BY:27:VAL:H	1.78	0.41
57:BY:11:ASP:HA	57:BY:27:VAL:HG22	2.03	0.41
57:BY:76:CYS:SG	57:BY:77:PRO:CD	3.08	0.41
58:BZ:81:ARG:CB	58:BZ:81:ARG:HH11	2.33	0.41
1:CA:1145:C:H1'	1:CA:1146:A:C8	2.56	0.41
1:CA:1442(B):A:P	1:CA:1442(B):A:H3'	2.60	0.41
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.56	0.41
1:CA:160:A:H2'	1:CA:161:A:O4'	2.21	0.41
1:CA:324:G:OP1	20:CT:70:SER:HB2	2.20	0.41
1:CA:397:A:C8	1:CA:548:G:OP2	2.74	0.41
1:CA:66:G:H4'	1:CA:173:U:C4	2.56	0.41
1:CA:940:C:O2'	1:CA:941:G:H5'	2.21	0.41
4:CD:111:ALA:HB3	4:CD:117:ALA:HB2	2.03	0.41
7:CG:88:PRO:HB2	7:CG:145:ALA:HB1	2.02	0.41
7:CG:81:GLY:C	7:CG:83:ALA:H	2.25	0.41
8:CH:127:LEU:HD13	8:CH:127:LEU:HA	1.87	0.41
11:CK:63:LEU:H	11:CK:63:LEU:HD12	1.86	0.41
12:CL:61:THR:C	12:CL:63:GLY:H	2.24	0.41
13:CM:49:THR:O	13:CM:53:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:85:VAL:HG12	17:CQ:89:LEU:CD1	2.51	0.41
22:CW:29:G:H1	22:CW:41:C:H42	1.69	0.41
23:CX:12:A:H2'	23:CX:13:A:O5'	2.20	0.41
25:CZ:103:ILE:HG22	25:CZ:103:ILE:O	2.21	0.41
24:CY:75:C:C5	25:CZ:232:THR:CB	3.01	0.41
25:CZ:389:ARG:NH1	25:CZ:389:ARG:HG2	2.35	0.41
26:D0:33:ALA:O	36:DA:2353:G:H1'	2.21	0.41
26:D0:7:LEU:HD13	49:DQ:85:LYS:CD	2.49	0.41
28:D2:6:VAL:HG21	28:D2:59:ARG:HH21	1.86	0.41
31:D5:56:LYS:HE2	31:D5:59:GLU:OE2	2.20	0.41
34:D8:50:LEU:H	34:D8:53:PRO:HG3	1.85	0.41
36:DA:1059:G:N7	36:DA:1060:U:C4	2.89	0.41
36:DA:1367:A:C5	36:DA:1368:G:H1'	2.56	0.41
36:DA:1541:G:O2'	36:DA:1542:A:P	2.79	0.41
36:DA:1658:C:C2	36:DA:1659:U:C5	3.09	0.41
36:DA:2012:G:H4'	55:DW:96:ILE:CD1	2.29	0.41
36:DA:2239:G:H5'	39:DD:251:GLY:CA	2.51	0.41
36:DA:252:G:OP2	48:DP:50:ARG:NH2	2.45	0.41
36:DA:2779:U:H5'	36:DA:2780:G:O5'	2.21	0.41
36:DA:366:C:H5	36:DA:403:U:HO2'	1.67	0.41
36:DA:696:G:N3	36:DA:696:G:H2'	2.35	0.41
36:DA:764:A:H3'	36:DA:765:G:H5'	2.03	0.41
37:DB:40:U:H3'	37:DB:41:U:C5'	2.45	0.41
38:DC:75:LEU:CG	38:DC:113:VAL:HG22	2.51	0.41
38:DC:163:PHE:CE1	38:DC:196:LEU:HD23	2.55	0.41
39:DD:3:VAL:HG23	39:DD:200:ASP:OD2	2.20	0.41
40:DE:126:PRO:C	40:DE:128:SER:N	2.74	0.41
36:DA:2572:A:N7	40:DE:145:LYS:CG	2.84	0.41
40:DE:37:ARG:HA	40:DE:42:ASP:OD2	2.20	0.41
41:DF:129:PHE:CD2	41:DF:163:VAL:HG21	2.55	0.41
42:DG:14:GLU:HA	42:DG:17:PRO:CG	2.51	0.41
43:DH:163:TYR:N	43:DH:163:TYR:HD1	2.19	0.41
43:DH:76:VAL:C	43:DH:78:GLY:N	2.75	0.41
43:DH:80:SER:O	43:DH:81:GLU:HB2	2.21	0.41
46:DN:129:PRO:O	46:DN:130:HIS:CB	2.62	0.41
46:DN:60:ILE:HG22	46:DN:61:ARG:O	2.21	0.41
48:DP:12:ALA:O	48:DP:13:ASN:O	2.39	0.41
54:DV:46:VAL:O	54:DV:46:VAL:HG13	2.21	0.41
56:DX:12:VAL:HG21	56:DX:21:PHE:HZ	1.86	0.41
49:DQ:22:LYS:H	58:DZ:78:LYS:HZ1	1.69	0.41
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:160:A:H2'	1:AA:161:A:O4'	2.21	0.40
1:AA:338:A:H2'	1:AA:339:C:C6	2.56	0.40
1:AA:398:C:H2'	1:AA:399:G:H8	1.87	0.40
1:AA:731:G:H5'	1:AA:766:A:H4'	2.02	0.40
3:AC:106:VAL:O	3:AC:106:VAL:CG2	2.70	0.40
3:AC:139:GLN:HE22	3:AC:170:GLN:HE22	1.67	0.40
3:AC:53:ALA:O	3:AC:54:ARG:HB2	2.21	0.40
4:AD:174:LEU:CD2	4:AD:185:PHE:HA	2.50	0.40
8:AH:41:ARG:NH1	8:AH:123:GLU:OE2	2.53	0.40
8:AH:6:ILE:N	8:AH:6:ILE:CD1	2.84	0.40
10:AJ:48:THR:OG1	10:AJ:62:HIS:CD2	2.72	0.40
11:AK:21:ILE:HD13	11:AK:94:ALA:HB3	2.03	0.40
1:AA:1331:G:OP2	13:AM:23:TYR:CD2	2.74	0.40
15:AO:39:LEU:O	15:AO:42:HIS:HB3	2.21	0.40
15:AO:64:ARG:HG3	15:AO:64:ARG:HH11	1.85	0.40
20:AT:99:LEU:O	20:AT:100:ILE:C	2.58	0.40
1:AA:926:G:O2'	23:AX:16:A:N3	2.46	0.40
24:AY:47:U:O2'	24:AY:50:G:OP1	2.36	0.40
28:B2:43:GLN:HB3	28:B2:44:LEU:H	1.48	0.40
29:B3:54:VAL:CG1	29:B3:55:ARG:N	2.84	0.40
34:B8:23:VAL:CG1	34:B8:46:ARG:HB3	2.50	0.40
36:BA:1097:U:O2'	36:BA:1098:A:H5'	2.20	0.40
36:BA:1653:G:C5	50:BR:10:LEU:CD1	3.04	0.40
36:BA:2173:A:C2'	36:BA:2173:A:N3	2.79	0.40
36:BA:2712:U:O2	36:BA:2712:U:H5'	2.20	0.40
36:BA:2807:G:C2'	36:BA:2808:U:H5''	2.50	0.40
36:BA:2842:G:C2	36:BA:2876:G:C2	3.09	0.40
36:BA:637:A:C6	36:BA:652:C:H4'	2.56	0.40
36:BA:654(N):G:N7	36:BA:654(O):G:C4	2.89	0.40
36:BA:889:C:O2'	36:BA:890:A:P	2.80	0.40
37:BB:31:C:H4'	42:BG:29:TRP:HZ2	1.86	0.40
37:BB:87:G:N2	37:BB:89:G:H3'	2.36	0.40
38:BC:192:PHE:CG	38:BC:192:PHE:O	2.73	0.40
36:BA:1568:G:P	39:BD:63:ARG:HH22	2.44	0.40
40:BE:159:HIS:HE1	40:BE:162:ALA:HB3	1.85	0.40
40:BE:184:VAL:HG12	40:BE:185:LYS:N	2.36	0.40
41:BF:39:TRP:CZ2	41:BF:106:ARG:HD3	2.56	0.40
42:BG:125:PHE:HB3	42:BG:131:TYR:HD1	1.86	0.40
42:BG:135:LEU:HD22	42:BG:140:ILE:HD13	2.03	0.40
42:BG:52:ILE:HD13	42:BG:52:ILE:H	1.87	0.40
43:BH:167:GLU:CB	43:BH:168:PRO:HD2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BK:30:UNK:O	45:BK:31:UNK:O	2.38	0.40
48:BP:28:GLY:O	48:BP:29:LYS:HB2	2.21	0.40
36:BA:2428:G:H21	48:BP:60:MET:CE	2.34	0.40
48:BP:96:THR:HG22	48:BP:126:VAL:CG2	2.51	0.40
49:BQ:35:VAL:HA	49:BQ:101:ARG:O	2.20	0.40
49:BQ:52:VAL:HA	49:BQ:55:VAL:CG1	2.52	0.40
50:BR:29:LEU:HD11	50:BR:52:ILE:CD1	2.45	0.40
51:BS:93:LYS:O	51:BS:95:HIS:HB3	2.20	0.40
52:BT:19:LEU:HD22	52:BT:85:LYS:HD3	2.02	0.40
54:BV:21:ARG:CG	54:BV:91:TYR:CD2	3.02	0.40
56:BX:64:LYS:HE2	56:BX:73:ARG:NE	2.36	0.40
58:BZ:99:TYR:HA	58:BZ:124:ILE:O	2.22	0.40
1:CA:1283:G:O2'	1:CA:1284:C:OP2	2.40	0.40
1:CA:1313:U:OP1	19:CS:6:LYS:HB2	2.21	0.40
1:CA:265:G:C2'	1:CA:266:G:H5''	2.47	0.40
1:CA:818:G:HO2'	1:CA:820:U:H6	1.68	0.40
2:CB:61:LEU:CD2	2:CB:68:ILE:CG1	2.99	0.40
4:CD:23:GLY:O	4:CD:27:TYR:HD2	2.03	0.40
1:CA:509:A:H5'	4:CD:54:TYR:CD2	2.55	0.40
7:CG:88:PRO:CB	7:CG:145:ALA:HB1	2.51	0.40
12:CL:7:ILE:HG21	17:CQ:34:LYS:HB2	2.04	0.40
13:CM:94:ARG:HE	19:CS:81:ARG:C	2.24	0.40
16:CP:21:VAL:CG2	16:CP:21:VAL:O	2.66	0.40
16:CP:58:TYR:CD1	16:CP:58:TYR:C	2.94	0.40
21:CU:2:GLY:O	21:CU:4:GLY:N	2.53	0.40
22:CW:71:G:O2'	22:CW:72:C:H5'	2.21	0.40
25:CZ:229:PHE:O	25:CZ:236:THR:HA	2.21	0.40
28:D2:34:GLU:HA	28:D2:37:PHE:CG	2.54	0.40
30:D4:9:LEU:HA	30:D4:26:SER:O	2.22	0.40
32:D6:12:GLU:HA	32:D6:23:THR:HB	2.04	0.40
32:D6:44:ARG:HA	32:D6:44:ARG:HD2	1.87	0.40
36:DA:1041:G:C2'	36:DA:1042:G:H5'	2.51	0.40
36:DA:1402:C:O2'	36:DA:1403:C:H5'	2.21	0.40
36:DA:1860:G:H1	36:DA:1882:C:H42	1.69	0.40
36:DA:2713:A:C3'	36:DA:2714:G:C5'	2.99	0.40
36:DA:271(F):C:H2'	36:DA:271(G):C:O4'	2.21	0.40
36:DA:2893:G:H5'	36:DA:2894:G:C5'	2.50	0.40
36:DA:302:C:O2'	36:DA:303:U:H5'	2.20	0.40
36:DA:494:G:H2'	36:DA:494:G:N3	2.36	0.40
36:DA:79:G:H2'	36:DA:80:G:C8	2.55	0.40
39:DD:21:PHE:HB3	39:DD:24:ILE:CG2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:165:VAL:HG12	40:DE:166:THR:N	2.35	0.40
40:DE:201:THR:OG1	40:DE:202:LYS:N	2.54	0.40
42:DG:43:LEU:HB3	42:DG:45:GLU:HB2	2.03	0.40
46:DN:68:GLU:HG2	46:DN:88:GLU:OE1	2.20	0.40
47:DO:87:ILE:HG21	47:DO:91:LEU:HA	1.98	0.40
48:DP:24:GLY:CA	48:DP:33:ARG:HH12	2.30	0.40
48:DP:31:ALA:C	48:DP:33:ARG:N	2.74	0.40
48:DP:58:THR:C	48:DP:61:ARG:CZ	2.90	0.40
50:DR:96:ARG:NH2	50:DR:117:VAL:HG23	2.37	0.40
52:DT:102:ILE:HD12	52:DT:102:ILE:C	2.42	0.40
36:DA:1011:G:OP1	53:DU:75:ASN:HB2	2.21	0.40
54:DV:61:VAL:O	54:DV:63:GLY:N	2.53	0.40
56:DX:64:LYS:HE2	56:DX:73:ARG:NE	2.36	0.40
57:DY:43:ASN:HA	57:DY:64:GLU:C	2.42	0.40
49:DQ:22:LYS:H	58:DZ:78:LYS:NZ	2.18	0.40
1:AA:1123:A:H4'	10:AJ:36:GLY:HA3	2.03	0.40
1:AA:1304:G:C6	1:AA:1305:G:C6	3.09	0.40
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.57	0.40
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.52	0.40
1:AA:1417:G:C6	1:AA:1482:G:C6	3.10	0.40
1:AA:58:C:O2	1:AA:58:C:H2'	2.21	0.40
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.41	0.40
3:AC:94:LEU:HD12	3:AC:94:LEU:C	2.41	0.40
6:AF:11:ASN:O	6:AF:14:LEU:HD23	2.21	0.40
6:AF:8:ILE:HG23	6:AF:85:VAL:HG13	2.02	0.40
12:AL:32:PHE:CB	12:AL:84:LEU:HD11	2.51	0.40
12:AL:8:ASN:O	12:AL:12:ARG:HG3	2.22	0.40
15:AO:5:LYS:HA	15:AO:5:LYS:HD2	1.88	0.40
19:AS:25:LYS:O	19:AS:26:GLY:C	2.60	0.40
20:AT:36:LEU:HD12	20:AT:59:ALA:CB	2.51	0.40
22:AV:68:C:H2'	22:AV:69:G:H5'	2.03	0.40
25:AZ:166:ASP:O	25:AZ:167:GLU:CB	2.69	0.40
25:AZ:171:ILE:HG13	25:AZ:202:LEU:HA	2.02	0.40
25:AZ:229:PHE:O	25:AZ:236:THR:HA	2.21	0.40
25:AZ:14:VAL:HG23	25:AZ:79:HIS:CD2	2.56	0.40
29:B3:26:LEU:HB2	29:B3:28:LEU:HD12	2.04	0.40
34:B8:37:SER:O	34:B8:38:GLY:C	2.58	0.40
36:BA:1023:U:C2'	36:BA:1024:G:H5'	2.51	0.40
36:BA:1751:C:H2'	36:BA:1752:C:C6	2.57	0.40
36:BA:176:G:C2'	36:BA:177:G:H5'	2.50	0.40
36:BA:1947:C:C3'	36:BA:1948:G:C5'	3.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2207:G:O2'	36:BA:2208:A:H5''	2.22	0.40
36:BA:2308:G:C2	36:BA:2309:A:N6	2.89	0.40
36:BA:2320:A:C2	36:BA:2333:A:C8	3.10	0.40
36:BA:2585:U:O2	36:BA:2585:U:O4'	2.39	0.40
36:BA:271(F):C:H2'	36:BA:271(G):C:O4'	2.21	0.40
36:BA:719:C:H2'	36:BA:720:C:C6	2.57	0.40
37:BB:48:A:H4'	51:BS:95:HIS:CD2	2.54	0.40
38:BC:79:LYS:HB2	38:BC:118:ASP:OD2	2.21	0.40
39:BD:186:HIS:HD2	39:BD:188:GLU:N	2.10	0.40
39:BD:224:ALA:O	39:BD:225:ALA:CB	2.65	0.40
39:BD:97:TYR:HE1	39:BD:103:ARG:HB2	1.85	0.40
40:BE:93:VAL:C	40:BE:95:ILE:N	2.75	0.40
42:BG:52:ILE:CG1	42:BG:53:LEU:N	2.84	0.40
42:BG:73:ALA:N	42:BG:87:PRO:HG2	2.18	0.40
47:BO:90:GLN:O	47:BO:91:LEU:HB2	2.22	0.40
48:BP:83:VAL:O	48:BP:83:VAL:HG13	2.21	0.40
49:BQ:110:THR:O	49:BQ:111:GLU:C	2.58	0.40
50:BR:12:ARG:CG	50:BR:12:ARG:HH11	2.33	0.40
50:BR:38:VAL:O	50:BR:42:LYS:HB2	2.21	0.40
54:BV:47:VAL:O	54:BV:49:THR:N	2.54	0.40
36:BA:1341:U:O4'	56:BX:57:LEU:HG	2.21	0.40
57:BY:12:THR:CG2	57:BY:13:VAL:N	2.84	0.40
58:BZ:165:VAL:HB	58:BZ:166:SER:H	1.42	0.40
1:CA:781:A:H2'	1:CA:782:A:H5'	2.03	0.40
3:CC:106:VAL:CG2	3:CC:106:VAL:O	2.68	0.40
4:CD:157:LEU:O	4:CD:159:ARG:N	2.54	0.40
4:CD:174:LEU:CD2	4:CD:185:PHE:HA	2.51	0.40
5:CE:112:LEU:HD23	5:CE:112:LEU:HA	1.73	0.40
6:CF:11:ASN:CB	6:CF:14:LEU:HD23	2.48	0.40
17:CQ:10:VAL:CG2	17:CQ:53:LEU:HA	2.51	0.40
22:CW:18:G:O4'	22:CW:58:A:C2	2.74	0.40
22:CW:60:U:H2'	22:CW:60:U:O2	2.21	0.40
22:CW:58:A:C5	22:CW:61:C:C4	3.09	0.40
24:CY:41:C:H6	24:CY:41:C:C5'	2.25	0.40
24:CY:44:G:H1'	24:CY:45:U:C6	2.56	0.40
25:CZ:124:ARG:NH1	25:CZ:124:ARG:HG3	2.36	0.40
25:CZ:378:VAL:O	25:CZ:380:LEU:HG	2.20	0.40
26:D0:42:GLY:HA3	36:DA:2331:G:C1'	2.52	0.40
26:D0:50:ASN:C	26:D0:62:LEU:CD2	2.90	0.40
27:D1:45:ASN:HD21	27:D1:47:GLN:HE22	1.69	0.40
28:D2:62:THR:HG23	36:DA:72:U:C2	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:23:VAL:CG1	34:D8:46:ARG:HB3	2.51	0.40
34:D8:49:VAL:HG11	34:D8:52:LYS:HB3	2.03	0.40
36:DA:1291:C:H2'	36:DA:1292:U:C6	2.56	0.40
36:DA:1682:G:H2'	36:DA:1683:C:H6	1.85	0.40
36:DA:1710:C:H2'	36:DA:1711:C:C6	2.57	0.40
36:DA:1740:G:H4'	36:DA:1741:A:OP1	2.21	0.40
36:DA:1821:A:H2'	36:DA:1822:G:H8	1.85	0.40
36:DA:1947:C:C3'	36:DA:1948:G:C5'	2.99	0.40
36:DA:2262:U:H2'	36:DA:2263:C:C6	2.51	0.40
36:DA:2481:G:C2'	36:DA:2482:G:OP2	2.69	0.40
36:DA:271(F):C:C2'	36:DA:271(G):C:H5'	2.50	0.40
36:DA:271(N):U:H5'	36:DA:271(O):C:H5	1.86	0.40
35:D9:19:ARG:NH1	36:DA:2755:C:C2	2.88	0.40
36:DA:2863:C:C5	36:DA:2864:G:N7	2.89	0.40
36:DA:2881:C:C2	36:DA:2882:A:C8	3.09	0.40
36:DA:391:G:O2'	36:DA:392:C:H5'	2.21	0.40
36:DA:408:G:C5	36:DA:409:C:C5	3.10	0.40
36:DA:444:C:H4'	41:DF:49:ALA:HB2	2.03	0.40
36:DA:651:G:H2'	36:DA:652:C:C5'	2.49	0.40
36:DA:674:G:H1'	41:DF:74:ARG:HD3	1.98	0.40
39:DD:147:LEU:HD13	39:DD:155:LEU:CD1	2.50	0.40
40:DE:167:VAL:CG1	40:DE:189:PRO:HD3	2.44	0.40
41:DF:132:VAL:O	41:DF:133:ASN:HB2	2.22	0.40
42:DG:107:LEU:H	42:DG:107:LEU:HD23	1.86	0.40
46:DN:107:LEU:HB3	46:DN:108:PRO:CD	2.45	0.40
46:DN:38:HIS:ND1	46:DN:39:ARG:N	2.70	0.40
48:DP:18:ARG:O	48:DP:19:VAL:C	2.60	0.40
48:DP:88:LEU:C	48:DP:90:ARG:H	2.25	0.40
49:DQ:97:VAL:HG21	49:DQ:103:MET:CE	2.52	0.40
49:DQ:1:MET:O	49:DQ:2:LEU:HB2	2.20	0.40
49:DQ:64:ILE:CG2	49:DQ:65:PHE:N	2.83	0.40
52:DT:126:ALA:O	52:DT:128:GLU:N	2.49	0.40
52:DT:33:LYS:HZ2	52:DT:74:ARG:HH21	1.69	0.40
54:DV:28:GLU:O	54:DV:61:VAL:CG2	2.70	0.40
54:DV:5:VAL:HG23	54:DV:37:VAL:O	2.21	0.40
55:DW:64:MET:HE2	55:DW:109:GLU:HG3	2.03	0.40
58:DZ:148:ASP:O	58:DZ:149:SER:OG	2.33	0.40
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.55	0.40
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.47	0.40
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.56	0.40
1:AA:227:G:H2'	1:AA:228:A:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:267:C:P	17:AQ:67:LYS:HB2	2.61	0.40
1:AA:383:A:C2'	1:AA:384:G:H5'	2.51	0.40
1:AA:511:C:HO2'	1:AA:512:U:H6	1.65	0.40
1:AA:51:A:H4'	1:AA:52:G:C5'	2.52	0.40
1:AA:858:G:C4'	1:AA:858:G:C8	3.05	0.40
2:AB:104:ASN:O	2:AB:108:ILE:HG12	2.22	0.40
2:AB:118:LEU:HD13	2:AB:142:LEU:HB2	2.02	0.40
2:AB:200:ILE:HG22	2:AB:201:ILE:N	2.35	0.40
3:AC:3:ASN:O	3:AC:4:LYS:HB2	2.21	0.40
3:AC:99:VAL:HG23	3:AC:99:VAL:O	2.21	0.40
4:AD:149:ALA:O	4:AD:153:ARG:HG3	2.22	0.40
7:AG:54:THR:HG22	7:AG:55:GLY:N	2.35	0.40
8:AH:111:ILE:C	8:AH:112:LEU:HD23	2.41	0.40
10:AJ:16:LEU:HD23	10:AJ:94:VAL:HG13	2.04	0.40
11:AK:91:ARG:HD2	11:AK:91:ARG:C	2.41	0.40
13:AM:89:GLY:C	13:AM:91:ARG:N	2.74	0.40
19:AS:42:PRO:O	19:AS:44:MET:N	2.51	0.40
22:AW:74:C:O2'	22:AW:75:C:H5'	2.21	0.40
23:AX:12:A:C2'	23:AX:13:A:O5'	2.69	0.40
25:AZ:69:GLU:OE1	25:AZ:273:HIS:CD2	2.75	0.40
27:B1:59:THR:O	27:B1:91:LYS:NZ	2.54	0.40
29:B3:31:LEU:C	29:B3:33:GLN:N	2.74	0.40
29:B3:50:VAL:O	29:B3:52:HIS:N	2.54	0.40
31:B5:44:THR:HG22	31:B5:45:VAL:N	2.35	0.40
32:B6:20:ASN:O	32:B6:21:TYR:CG	2.74	0.40
33:B7:30:VAL:HG22	33:B7:33:ARG:NH2	2.37	0.40
36:BA:1131:G:O2'	36:BA:1132:A:H8	2.03	0.40
36:BA:1361:G:O2'	36:BA:1362:C:H5'	2.21	0.40
36:BA:17:G:H2'	36:BA:18:C:C6	2.56	0.40
36:BA:1952:A:C2	47:BO:22:ILE:HG23	2.55	0.40
36:BA:2149:G:O2'	36:BA:2150:U:H5'	2.21	0.40
36:BA:2182:G:O2'	36:BA:2183:C:H5'	2.21	0.40
36:BA:2523:G:O2'	36:BA:2524:G:H5''	2.20	0.40
36:BA:2693:A:H2'	36:BA:2694:G:H8	1.86	0.40
36:BA:598:G:H5'	48:BP:15:ARG:CB	2.50	0.40
36:BA:605:C:C4	36:BA:606:U:C5	3.10	0.40
36:BA:80:G:H2'	36:BA:81:G:H8	1.86	0.40
36:BA:825:C:H2'	36:BA:826:U:O4'	2.21	0.40
36:BA:871:U:O2	36:BA:871:U:H2'	2.20	0.40
36:BA:916:G:C2'	36:BA:917:A:H5''	2.52	0.40
36:BA:984:A:H5''	36:BA:985:C:C5	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:21:G:C2'	37:BB:22:U:H5'	2.51	0.40
38:BC:21:THR:OG1	38:BC:24:GLU:HG3	2.21	0.40
39:BD:158:ALA:O	39:BD:161:THR:HG23	2.21	0.40
40:BE:142:GLY:O	40:BE:143:ASN:ND2	2.54	0.40
40:BE:51:PHE:CG	40:BE:52:LEU:N	2.90	0.40
40:BE:69:LYS:CE	40:BE:89:ASP:HA	2.52	0.40
41:BF:9:ILE:HG13	41:BF:9:ILE:H	1.72	0.40
42:BG:114:ILE:HG12	42:BG:114:ILE:O	2.20	0.40
42:BG:67:LYS:HA	42:BG:68:PRO:HD3	1.79	0.40
43:BH:103:LEU:CB	43:BH:123:PHE:HD2	2.24	0.40
44:BJ:102:UNK:C	44:BJ:104:UNK:H	2.34	0.40
48:BP:100:LEU:HD13	48:BP:100:LEU:C	2.41	0.40
48:BP:110:TYR:O	48:BP:111:ARG:C	2.59	0.40
54:BV:24:LYS:HG3	54:BV:90:PRO:HB2	2.03	0.40
56:BX:45:THR:O	56:BX:47:PHE:N	2.54	0.40
57:BY:8:LYS:HG2	57:BY:72:VAL:HG23	2.04	0.40
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.56	0.40
1:CA:135:C:H2'	1:CA:136:C:H5'	2.02	0.40
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.22	0.40
1:CA:515:G:H2'	1:CA:516:U:O4'	2.21	0.40
3:CC:60:ALA:N	3:CC:63:ASN:OD1	2.54	0.40
4:CD:15:GLU:HG2	4:CD:63:LYS:HG3	2.03	0.40
10:CJ:3:LYS:HG2	10:CJ:75:ILE:O	2.21	0.40
1:CA:552:U:O2	12:CL:31:PRO:HB3	2.20	0.40
12:CL:8:ASN:O	12:CL:12:ARG:HG3	2.21	0.40
14:CN:33:VAL:HA	14:CN:40:CYS:HA	2.03	0.40
15:CO:16:ALA:C	15:CO:18:PHE:N	2.74	0.40
1:CA:189(F):U:O2	17:CQ:63:ARG:NH2	2.54	0.40
19:CS:16:LEU:C	19:CS:19:VAL:H	2.24	0.40
24:CY:40:C:C2'	24:CY:41:C:C5'	2.94	0.40
28:D2:66:GLU:CD	28:D2:67:LYS:N	2.74	0.40
32:D6:32:ASN:O	32:D6:33:LYS:CG	2.69	0.40
32:D6:5:VAL:HB	32:D6:8:LYS:CB	2.52	0.40
35:D9:10:ILE:O	35:D9:11:CYS:CB	2.68	0.40
36:DA:1081:U:H2'	36:DA:1082:U:H6	1.87	0.40
36:DA:993:G:C6	36:DA:1162:G:C6	3.10	0.40
36:DA:1292:U:H2'	36:DA:1293:C:C6	2.56	0.40
36:DA:1462:C:H4'	36:DA:2703:C:O4'	2.20	0.40
36:DA:2547:U:H2'	36:DA:2548:G:C8	2.56	0.40
36:DA:455:C:N3	36:DA:472:A:H2'	2.36	0.40
36:DA:581:C:P	53:DU:33:ARG:HG3	2.62	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:724:U:O2'	36:DA:725:G:H5'	2.22	0.40
37:DB:87:G:N2	37:DB:89:G:H3'	2.36	0.40
38:DC:161:ILE:O	38:DC:161:ILE:HD12	2.21	0.40
38:DC:34:THR:CG2	38:DC:34:THR:O	2.68	0.40
39:DD:27:THR:HG21	39:DD:81:ALA:HB3	2.03	0.40
39:DD:76:PRO:HG2	39:DD:98:VAL:HG21	2.02	0.40
41:DF:101:LEU:CD1	41:DF:102:PRO:HD2	2.44	0.40
41:DF:107:LYS:HD3	41:DF:107:LYS:HA	1.96	0.40
43:DH:157:TYR:O	43:DH:158:HIS:CB	2.70	0.40
36:DA:1142(A):A:H4'	46:DN:25:ARG:HH22	1.85	0.40
46:DN:57:ALA:O	46:DN:58:ASP:O	2.38	0.40
36:DA:1666:G:H1'	47:DO:3:GLN:NE2	2.36	0.40
36:DA:826:U:H4'	48:DP:55:ARG:HB3	2.03	0.40
36:DA:559:G:N2	53:DU:49:HIS:CD2	2.89	0.40
53:DU:90:VAL:CG1	53:DU:91:ASP:H	2.24	0.40
54:DV:5:VAL:HG21	54:DV:35:LEU:HG	2.02	0.40
54:DV:34:GLU:CG	54:DV:58:VAL:HG22	2.49	0.40
54:DV:5:VAL:CG2	54:DV:6:LYS:N	2.84	0.40
57:DY:39:VAL:HG12	57:DY:40:GLU:N	2.36	0.40
36:DA:875:G:H4'	58:DZ:170:THR:OG1	2.21	0.40
1:AA:125:U:H2'	1:AA:126:G:C8	2.56	0.40
1:AA:1431:C:C2'	1:AA:1432:G:H5'	2.52	0.40
1:AA:373:A:O2'	1:AA:374:A:H5'	2.21	0.40
1:AA:617:G:H1	1:AA:623:C:H42	1.69	0.40
2:AB:230:VAL:HG23	2:AB:231:GLU:N	2.36	0.40
2:AB:8:LYS:C	2:AB:10:LEU:N	2.74	0.40
3:AC:36:ASP:OD1	3:AC:57:ILE:HG21	2.21	0.40
4:AD:127:THR:HB	4:AD:147:ALA:O	2.21	0.40
4:AD:196:LEU:C	4:AD:198:VAL:H	2.25	0.40
6:AF:22:GLU:C	6:AF:24:GLU:N	2.75	0.40
9:AI:52:ALA:HB3	9:AI:95:LYS:HZ3	1.86	0.40
15:AO:16:ALA:C	15:AO:18:PHE:N	2.74	0.40
25:AZ:176:LEU:HB2	60:AZ:501:GDP:C5	2.57	0.40
28:B2:60:LEU:HD23	28:B2:60:LEU:HA	1.94	0.40
32:B6:48:VAL:O	32:B6:49:HIS:HB2	2.21	0.40
33:B7:48:LYS:HE2	33:B7:48:LYS:HB3	1.90	0.40
32:B6:25:LYS:CE	34:B8:34:TRP:HZ2	2.34	0.40
34:B8:4:MET:CE	36:BA:592:G:H21	2.34	0.40
36:BA:1424:G:H2'	36:BA:1425:G:O4'	2.21	0.40
36:BA:2106:G:C5	36:BA:2107:C:N3	2.89	0.40
36:BA:248:G:H5'	36:BA:250:G:N7	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2735:G:H2'	36:BA:2736:G:C8	2.56	0.40
36:BA:2738:A:H2'	36:BA:2739:U:O5'	2.21	0.40
36:BA:780:G:H2'	36:BA:782:A:N7	2.36	0.40
36:BA:847:U:H2'	36:BA:848:G:H5''	2.04	0.40
38:BC:6:ARG:HH11	38:BC:34:THR:HB	1.87	0.40
39:BD:33:LEU:HB3	39:BD:34:VAL:H	1.58	0.40
40:BE:101:ARG:HD2	40:BE:169:ASN:O	2.22	0.40
43:BH:154:PRO:HB2	43:BH:155:SER:H	1.58	0.40
43:BH:44:VAL:CG1	43:BH:45:VAL:H	2.33	0.40
43:BH:72:ILE:O	43:BH:75:ALA:N	2.54	0.40
36:BA:2467:C:C4'	49:BQ:123:HIS:ND1	2.84	0.40
49:BQ:1:MET:O	49:BQ:2:LEU:HB2	2.21	0.40
52:BT:62:THR:HA	52:BT:74:ARG:O	2.21	0.40
53:BU:10:ARG:O	53:BU:12:ARG:N	2.54	0.40
57:BY:91:GLU:HG2	57:BY:92:ASN:N	2.36	0.40
58:BZ:97:GLU:HA	58:BZ:127:LYS:HA	2.02	0.40
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.56	0.40
1:CA:130:A:H1'	1:CA:263:A:O2'	2.20	0.40
1:CA:1312:G:O2'	1:CA:1313:U:H5'	2.21	0.40
1:CA:1331:G:OP2	13:CM:23:TYR:CD2	2.74	0.40
1:CA:190:U:O2'	1:CA:191:G:H5'	2.21	0.40
1:CA:865:A:O2'	1:CA:866:C:H5'	2.21	0.40
1:CA:858:G:N1	1:CA:869:G:N7	2.69	0.40
2:CB:69:LEU:HB2	2:CB:159:PRO:HG2	2.03	0.40
3:CC:195:VAL:HG12	3:CC:196:LEU:N	2.36	0.40
3:CC:22:TRP:CH2	3:CC:32:LEU:HB2	2.57	0.40
16:CP:75:ARG:HH11	16:CP:75:ARG:HG3	1.85	0.40
17:CQ:17:LYS:HA	17:CQ:49:GLU:HG2	2.03	0.40
22:CW:44:G:C2'	22:CW:45:U:OP1	2.70	0.40
25:CZ:277:LEU:CD1	25:CZ:279:GLU:N	2.84	0.40
25:CZ:323:LEU:CD1	25:CZ:396:GLY:HA2	2.51	0.40
25:CZ:378:VAL:O	25:CZ:380:LEU:N	2.55	0.40
25:CZ:5:PHE:O	25:CZ:5:PHE:HD1	2.04	0.40
25:CZ:87:ASP:C	25:CZ:88:TYR:HD1	2.25	0.40
26:D0:10:THR:CG2	26:D0:12:ASN:HB2	2.51	0.40
26:D0:27:GLU:OE2	26:D0:69:PHE:HB2	2.22	0.40
26:D0:41:ARG:O	26:D0:42:GLY:O	2.40	0.40
28:D2:29:LYS:HE3	28:D2:32:LEU:CD2	2.51	0.40
29:D3:54:VAL:CG1	29:D3:55:ARG:N	2.84	0.40
32:D6:15:GLU:CG	32:D6:18:ARG:CZ	3.00	0.40
35:D9:29:ASN:C	35:D9:31:LYS:H	2.25	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1106:G:O2'	36:DA:1107:G:H5'	2.22	0.40
36:DA:1635:G:H2'	36:DA:1636:C:C6	2.56	0.40
36:DA:2223:G:H2'	36:DA:2224:G:C5'	2.52	0.40
36:DA:2781:A:H5'	36:DA:2782:G:C5'	2.50	0.40
36:DA:2825:C:H2'	36:DA:2826:A:H5'	2.04	0.40
36:DA:406:G:O5'	36:DA:406:G:H8	2.05	0.40
36:DA:593:G:H2'	36:DA:594:U:C6	2.56	0.40
36:DA:688:U:H5'	36:DA:1780:A:C2	2.56	0.40
36:DA:710:G:H2'	36:DA:711:G:C8	2.57	0.40
39:DD:97:TYR:HE1	39:DD:103:ARG:HB2	1.86	0.40
40:DE:24:THR:HG21	40:DE:188:VAL:CG1	2.51	0.40
41:DF:32:LEU:CD2	41:DF:105:VAL:HG13	2.48	0.40
41:DF:108:LYS:H	41:DF:108:LYS:HD3	1.85	0.40
41:DF:123:LEU:HD12	41:DF:124:LEU:N	2.35	0.40
41:DF:34:TRP:HB2	48:DP:10:PRO:HB2	2.04	0.40
13:CM:3:ARG:CB	42:DG:113:ARG:HH22	2.34	0.40
42:DG:51:ARG:NH2	42:DG:52:ILE:HD11	2.36	0.40
47:DO:19:ILE:HG22	47:DO:43:VAL:HA	2.03	0.40
49:DQ:138:ASP:C	49:DQ:139:GLU:OE1	2.60	0.40
50:DR:41:ALA:O	50:DR:42:LYS:C	2.60	0.40
51:DS:66:ALA:O	51:DS:69:VAL:HG12	2.22	0.40
36:DA:581:C:OP1	53:DU:33:ARG:HG3	2.21	0.40
58:DZ:115:GLY:HA2	58:DZ:176:PRO:HA	2.03	0.40
58:DZ:119:GLU:C	58:DZ:120:ILE:O	2.58	0.40
58:DZ:76:LEU:HA	58:DZ:76:LEU:HD23	1.85	0.40
1:AA:1148:U:O4'	9:AI:16:ARG:HD3	2.20	0.40
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.56	0.40
1:AA:1442(B):A:N7	52:BT:118:ARG:CD	2.84	0.40
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.22	0.40
1:AA:256:U:H2'	1:AA:257:G:C8	2.57	0.40
1:AA:827:U:C2	1:AA:870:U:C4	3.10	0.40
2:AB:193:ASP:OD1	2:AB:193:ASP:O	2.39	0.40
2:AB:204:ASN:C	2:AB:204:ASN:HD22	2.23	0.40
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.22	0.40
7:AG:88:PRO:HB2	7:AG:145:ALA:HB1	2.03	0.40
9:AI:33:PHE:CE2	9:AI:47:LEU:HD21	2.57	0.40
11:AK:38:ASN:ND2	11:AK:38:ASN:N	2.66	0.40
13:AM:94:ARG:HE	19:AS:81:ARG:C	2.25	0.40
18:AR:36:ASN:OD1	18:AR:39:VAL:HG23	2.22	0.40
22:AW:9:A:H2	22:AW:45:U:C4	2.35	0.40
25:AZ:19:HIS:CD2	25:AZ:20:VAL:O	2.62	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:214:VAL:O	25:AZ:214:VAL:HG13	2.22	0.40
24:AY:66:C:H4'	25:AZ:375:ILE:HD11	2.04	0.40
32:B6:36:LEU:HD23	32:B6:36:LEU:C	2.42	0.40
36:BA:1053:C:N4	36:BA:1107:G:N2	2.69	0.40
36:BA:1427:A:H4'	36:BA:1428:C:O4'	2.22	0.40
36:BA:1544:A:O2'	36:BA:1545:A:H5'	2.22	0.40
36:BA:2008:C:H2'	36:BA:2009:G:H8	1.87	0.40
36:BA:2160:G:C5'	36:BA:2160:G:C8	2.99	0.40
36:BA:2464:C:HO2'	36:BA:2465:C:C5'	2.33	0.40
36:BA:2662:A:H2'	36:BA:2663:G:O4'	2.21	0.40
36:BA:271(N):U:H5'	36:BA:271(O):C:H5	1.86	0.40
36:BA:2771:C:H2'	36:BA:2772:C:C6	2.57	0.40
36:BA:332:A:H4'	36:BA:333:G:OP1	2.21	0.40
36:BA:447:A:H4'	36:BA:449:A:N7	2.37	0.40
36:BA:583:G:C5	36:BA:584:C:C5	3.10	0.40
37:BB:78:A:C2	37:BB:100:A:C4	3.10	0.40
38:BC:116:THR:CG2	38:BC:147:PHE:HA	2.49	0.40
38:BC:77:ILE:HG22	38:BC:119:VAL:HG21	2.04	0.40
38:BC:79:LYS:HD3	38:BC:119:VAL:CG1	2.51	0.40
39:BD:131:LEU:HD22	39:BD:136:ILE:HD13	2.04	0.40
36:BA:729:G:C6	39:BD:208:LYS:HB2	2.57	0.40
40:BE:176:ILE:HG22	40:BE:176:ILE:O	2.20	0.40
40:BE:24:THR:HB	40:BE:186:GLY:HA2	2.03	0.40
40:BE:3:GLY:O	40:BE:4:ILE:HB	2.21	0.40
42:BG:152:LEU:HG	42:BG:152:LEU:O	2.22	0.40
42:BG:16:ARG:N	42:BG:17:PRO:CD	2.83	0.40
46:BN:62:VAL:HG11	46:BN:67:LEU:HG	2.03	0.40
47:BO:28:SER:O	47:BO:29:ASN:CB	2.67	0.40
52:BT:30:VAL:HA	52:BT:44:ASP:HA	2.03	0.40
46:BN:42:TRP:CD1	53:BU:63:VAL:HG11	2.57	0.40
53:BU:69:CYS:HB2	53:BU:74:LEU:HD11	2.02	0.40
54:BV:35:LEU:C	54:BV:37:VAL:N	2.73	0.40
55:BW:35:ILE:C	55:BW:37:ARG:N	2.75	0.40
55:BW:55:ALA:O	55:BW:57:ASN:N	2.55	0.40
28:B2:30:ARG:NH1	56:BX:5:TYR:HE2	2.20	0.40
58:BZ:107:THR:HA	58:BZ:108:PRO:HD2	1.85	0.40
58:BZ:145:GLU:CG	58:BZ:146:ILE:N	2.85	0.40
1:CA:1125:U:C1'	10:CJ:5:ARG:NH2	2.84	0.40
1:CA:1477:C:H2'	1:CA:1478:C:C6	2.55	0.40
1:CA:374:A:H2'	1:CA:375:U:H6	1.85	0.40
1:CA:695:A:H2'	1:CA:696:A:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:945:G:H2'	1:CA:945:G:N3	2.37	0.40
1:CA:995:C:O2'	1:CA:996:A:P	2.80	0.40
2:CB:127:ILE:O	2:CB:129:GLU:N	2.54	0.40
2:CB:236:TYR:O	2:CB:238:LEU:N	2.55	0.40
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.22	0.40
4:CD:100:ARG:NH2	4:CD:118:ARG:NH1	2.56	0.40
4:CD:159:ARG:O	4:CD:163:GLU:N	2.55	0.40
5:CE:45:PHE:CD2	5:CE:47:LYS:HD2	2.56	0.40
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.83	0.40
10:CJ:82:ILE:HG22	10:CJ:82:ILE:O	2.22	0.40
1:CA:538:G:H3'	12:CL:115:LYS:NZ	2.37	0.40
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.53	0.40
15:CO:85:LEU:HB2	15:CO:87:ILE:HG13	2.03	0.40
16:CP:23:ASP:OD1	16:CP:24:ALA:N	2.54	0.40
18:CR:40:LEU:C	18:CR:42:ARG:N	2.75	0.40
18:CR:59:SER:OG	18:CR:62:GLU:HG3	2.20	0.40
18:CR:76:LEU:HD12	18:CR:76:LEU:HA	1.77	0.40
1:CA:191:G:N3	20:CT:105:SER:HB2	2.36	0.40
1:CA:1305:G:P	21:CU:2:GLY:N	2.95	0.40
28:D2:29:LYS:HD3	28:D2:57:ILE:HG21	2.03	0.40
29:D3:26:LEU:HB2	29:D3:28:LEU:HD12	2.03	0.40
36:DA:1052:C:O2'	36:DA:1053:C:P	2.79	0.40
36:DA:1374:G:H2'	36:DA:1375:C:H6	1.86	0.40
36:DA:1485:G:H2'	36:DA:1486:A:H8	1.87	0.40
36:DA:1495:A:H2'	36:DA:1496:A:H2	1.85	0.40
36:DA:18:C:O2'	53:DU:23:GLY:HA2	2.21	0.40
36:DA:185:U:C2	36:DA:212:G:N2	2.90	0.40
36:DA:2144:U:H4'	36:DA:2145:C:H5	1.87	0.40
36:DA:547:A:H2'	36:DA:548:A:H8	1.86	0.40
36:DA:605:C:H1'	36:DA:657:U:O2'	2.22	0.40
36:DA:640:C:C4	36:DA:641:C:N4	2.90	0.40
28:D2:62:THR:CG2	36:DA:76:C:O2'	2.70	0.40
36:DA:861:A:H2'	36:DA:862:G:H5'	2.04	0.40
37:DB:53:A:C5	37:DB:54:G:C8	3.10	0.40
43:DH:51:ARG:O	43:DH:52:VAL:HB	2.21	0.40
43:DH:54:ARG:CB	43:DH:55:PRO:HD2	2.42	0.40
47:DO:24:VAL:HA	47:DO:39:ILE:HG22	2.03	0.40
51:DS:103:GLU:OE1	51:DS:103:GLU:N	2.47	0.40
51:DS:70:GLY:C	51:DS:72:ALA:N	2.75	0.40
52:DT:7:ILE:O	52:DT:10:VAL:HB	2.20	0.40
54:DV:16:PRO:O	54:DV:96:ILE:O	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:35:ILE:C	55:DW:37:ARG:N	2.75	0.40
55:DW:20:VAL:HG23	55:DW:47:VAL:HG21	2.04	0.40

All (4) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:65:GLY:O	38:DC:27:ARG:NH2[2_445]	1.97	0.23
2:AB:65:GLY:O	38:BC:27:ARG:NH2[2_646]	2.02	0.18
2:CB:66:GLY:CA	38:DC:27:ARG:NH2[2_445]	2.09	0.11
2:AB:66:GLY:CA	38:BC:27:ARG:NH2[2_646]	2.18	0.02

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	232/256 (91%)	161 (69%)	48 (21%)	23 (10%)	0	3
2	CB	232/256 (91%)	164 (71%)	45 (19%)	23 (10%)	0	3
3	AC	204/239 (85%)	169 (83%)	22 (11%)	13 (6%)	1	8
3	CC	204/239 (85%)	171 (84%)	21 (10%)	12 (6%)	1	10
4	AD	206/209 (99%)	149 (72%)	39 (19%)	18 (9%)	1	4
4	CD	206/209 (99%)	149 (72%)	38 (18%)	19 (9%)	1	4
5	AE	148/162 (91%)	136 (92%)	10 (7%)	2 (1%)	11	40
5	CE	148/162 (91%)	136 (92%)	9 (6%)	3 (2%)	7	31
6	AF	99/101 (98%)	72 (73%)	18 (18%)	9 (9%)	1	4
6	CF	99/101 (98%)	73 (74%)	17 (17%)	9 (9%)	1	4
7	AG	153/156 (98%)	127 (83%)	22 (14%)	4 (3%)	5	26
7	CG	153/156 (98%)	129 (84%)	21 (14%)	3 (2%)	7	31

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	AH	136/138 (99%)	123 (90%)	11 (8%)	2 (2%)	10	39
8	CH	136/138 (99%)	123 (90%)	11 (8%)	2 (2%)	10	39
9	AI	125/128 (98%)	83 (66%)	34 (27%)	8 (6%)	1	8
9	CI	125/128 (98%)	83 (66%)	35 (28%)	7 (6%)	2	11
10	AJ	96/105 (91%)	69 (72%)	21 (22%)	6 (6%)	1	8
10	CJ	96/105 (91%)	71 (74%)	19 (20%)	6 (6%)	1	8
11	AK	117/129 (91%)	98 (84%)	18 (15%)	1 (1%)	17	52
11	CK	117/129 (91%)	99 (85%)	17 (14%)	1 (1%)	17	52
12	AL	122/131 (93%)	104 (85%)	10 (8%)	8 (7%)	1	7
12	CL	122/131 (93%)	104 (85%)	10 (8%)	8 (7%)	1	7
13	AM	122/126 (97%)	85 (70%)	27 (22%)	10 (8%)	1	5
13	CM	122/126 (97%)	85 (70%)	28 (23%)	9 (7%)	1	6
14	AN	58/61 (95%)	42 (72%)	9 (16%)	7 (12%)	0	1
14	CN	58/61 (95%)	43 (74%)	7 (12%)	8 (14%)	0	1
15	AO	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	6	28
15	CO	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	6	28
16	AP	81/88 (92%)	58 (72%)	17 (21%)	6 (7%)	1	6
16	CP	81/88 (92%)	59 (73%)	16 (20%)	6 (7%)	1	6
17	AQ	97/105 (92%)	85 (88%)	7 (7%)	5 (5%)	2	12
17	CQ	97/105 (92%)	85 (88%)	7 (7%)	5 (5%)	2	12
18	AR	68/88 (77%)	55 (81%)	11 (16%)	2 (3%)	4	24
18	CR	68/88 (77%)	56 (82%)	10 (15%)	2 (3%)	4	24
19	AS	76/93 (82%)	48 (63%)	15 (20%)	13 (17%)	0	0
19	CS	76/93 (82%)	47 (62%)	16 (21%)	13 (17%)	0	0
20	AT	97/106 (92%)	67 (69%)	22 (23%)	8 (8%)	1	5
20	CT	97/106 (92%)	67 (69%)	21 (22%)	9 (9%)	0	3
21	AU	22/27 (82%)	17 (77%)	4 (18%)	1 (4%)	2	15
21	CU	22/27 (82%)	17 (77%)	4 (18%)	1 (4%)	2	15
25	AZ	381/405 (94%)	263 (69%)	80 (21%)	38 (10%)	0	3
25	CZ	381/405 (94%)	266 (70%)	77 (20%)	38 (10%)	0	3
26	B0	82/85 (96%)	68 (83%)	10 (12%)	4 (5%)	2	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	D0	82/85 (96%)	68 (83%)	10 (12%)	4 (5%)	2	14
27	B1	91/98 (93%)	68 (75%)	13 (14%)	10 (11%)	0	2
27	D1	91/98 (93%)	63 (69%)	10 (11%)	18 (20%)	0	0
28	B2	69/72 (96%)	46 (67%)	17 (25%)	6 (9%)	1	4
28	D2	69/72 (96%)	37 (54%)	16 (23%)	16 (23%)	0	0
29	B3	57/60 (95%)	46 (81%)	6 (10%)	5 (9%)	1	4
29	D3	57/60 (95%)	46 (81%)	6 (10%)	5 (9%)	1	4
30	B4	42/71 (59%)	24 (57%)	11 (26%)	7 (17%)	0	0
30	D4	42/71 (59%)	24 (57%)	11 (26%)	7 (17%)	0	0
31	B5	57/60 (95%)	41 (72%)	7 (12%)	9 (16%)	0	0
31	D5	57/60 (95%)	40 (70%)	8 (14%)	9 (16%)	0	0
32	B6	48/54 (89%)	23 (48%)	8 (17%)	17 (35%)	0	0
32	D6	48/54 (89%)	23 (48%)	8 (17%)	17 (35%)	0	0
33	B7	46/49 (94%)	39 (85%)	7 (15%)	0	100	100
33	D7	46/49 (94%)	39 (85%)	7 (15%)	0	100	100
34	B8	61/65 (94%)	43 (70%)	12 (20%)	6 (10%)	0	3
34	D8	61/65 (94%)	45 (74%)	10 (16%)	6 (10%)	0	3
35	B9	35/37 (95%)	25 (71%)	7 (20%)	3 (9%)	1	4
35	D9	35/37 (95%)	25 (71%)	7 (20%)	3 (9%)	1	4
38	BC	226/229 (99%)	170 (75%)	40 (18%)	16 (7%)	1	6
38	DC	226/229 (99%)	170 (75%)	40 (18%)	16 (7%)	1	6
39	BD	273/276 (99%)	214 (78%)	33 (12%)	26 (10%)	0	3
39	DD	273/276 (99%)	214 (78%)	34 (12%)	25 (9%)	1	4
40	BE	202/206 (98%)	125 (62%)	46 (23%)	31 (15%)	0	0
40	DE	202/206 (98%)	125 (62%)	47 (23%)	30 (15%)	0	0
41	BF	205/210 (98%)	153 (75%)	23 (11%)	29 (14%)	0	1
41	DF	205/210 (98%)	153 (75%)	23 (11%)	29 (14%)	0	1
42	BG	179/182 (98%)	103 (58%)	45 (25%)	31 (17%)	0	0
42	DG	179/182 (98%)	111 (62%)	40 (22%)	28 (16%)	0	0
43	BH	157/180 (87%)	105 (67%)	28 (18%)	24 (15%)	0	0
43	DH	157/180 (87%)	105 (67%)	29 (18%)	23 (15%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
46	BN	136/140 (97%)	85 (62%)	32 (24%)	19 (14%)	0	1
46	DN	136/140 (97%)	86 (63%)	32 (24%)	18 (13%)	0	1
47	BO	120/122 (98%)	100 (83%)	15 (12%)	5 (4%)	3	16
47	DO	120/122 (98%)	100 (83%)	15 (12%)	5 (4%)	3	16
48	BP	144/150 (96%)	72 (50%)	31 (22%)	41 (28%)	0	0
48	DP	144/150 (96%)	71 (49%)	33 (23%)	40 (28%)	0	0
49	BQ	139/141 (99%)	108 (78%)	25 (18%)	6 (4%)	2	16
49	DQ	139/141 (99%)	108 (78%)	25 (18%)	6 (4%)	2	16
50	BR	115/118 (98%)	81 (70%)	15 (13%)	19 (16%)	0	0
50	DR	115/118 (98%)	82 (71%)	14 (12%)	19 (16%)	0	0
51	BS	96/112 (86%)	44 (46%)	31 (32%)	21 (22%)	0	0
51	DS	96/112 (86%)	44 (46%)	32 (33%)	20 (21%)	0	0
52	BT	135/146 (92%)	85 (63%)	24 (18%)	26 (19%)	0	0
52	DT	135/146 (92%)	85 (63%)	24 (18%)	26 (19%)	0	0
53	BU	115/118 (98%)	82 (71%)	28 (24%)	5 (4%)	2	16
53	DU	115/118 (98%)	82 (71%)	28 (24%)	5 (4%)	2	16
54	BV	99/101 (98%)	67 (68%)	19 (19%)	13 (13%)	0	1
54	DV	99/101 (98%)	67 (68%)	19 (19%)	13 (13%)	0	1
55	BW	111/113 (98%)	82 (74%)	23 (21%)	6 (5%)	2	12
55	DW	111/113 (98%)	84 (76%)	21 (19%)	6 (5%)	2	12
56	BX	90/96 (94%)	63 (70%)	16 (18%)	11 (12%)	0	1
56	DX	90/96 (94%)	64 (71%)	15 (17%)	11 (12%)	0	1
57	BY	98/110 (89%)	32 (33%)	36 (37%)	30 (31%)	0	0
57	DY	98/110 (89%)	32 (33%)	37 (38%)	29 (30%)	0	0
58	BZ	174/206 (84%)	111 (64%)	36 (21%)	27 (16%)	0	0
58	DZ	174/206 (84%)	119 (68%)	31 (18%)	24 (14%)	0	1
All	All	12256/13098 (94%)	8805 (72%)	2168 (18%)	1283 (10%)	0	3

All (1283) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	18	GLY

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Mol	Chain	Res	Type
2	AB	130	ARG
2	AB	234	PRO
3	AC	12	LEU
3	AC	45	LYS
3	AC	47	LEU
3	AC	146	ALA
4	AD	26	CYS
4	AD	27	TYR
4	AD	30	LYS
4	AD	35	ARG
4	AD	44	GLY
4	AD	125	HIS
5	AE	64	ARG
6	AF	39	LYS
6	AF	44	GLY
6	AF	64	GLN
7	AG	7	ALA
7	AG	8	GLU
8	AH	2	LEU
9	AI	23	ASN
9	AI	41	VAL
9	AI	89	ASN
9	AI	108	VAL
9	AI	118	LYS
10	AJ	30	SER
10	AJ	55	LYS
12	AL	46	LYS
12	AL	127	GLU
13	AM	12	ASN
13	AM	83	ASP
13	AM	117	VAL
14	AN	14	PRO
14	AN	15	LYS
14	AN	59	ALA
15	AO	3	ILE
19	AS	5	LEU
19	AS	6	LYS
19	AS	12	ASP
19	AS	14	HIS
19	AS	26	GLY
19	AS	28	LYS
19	AS	67	VAL

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Mol	Chain	Res	Type
20	AT	48	LYS
20	AT	73	HIS
20	AT	75	ASN
20	AT	99	LEU
25	AZ	41	ASN
25	AZ	69	GLU
25	AZ	130	TYR
25	AZ	141	VAL
25	AZ	167	GLU
25	AZ	196	VAL
25	AZ	211	PRO
25	AZ	280	GLY
25	AZ	329	GLY
27	B1	39	LYS
27	B1	64	ALA
27	B1	66	HIS
27	B1	83	GLU
28	B2	48	HIS
28	B2	68	ARG
29	B3	27	GLY
30	B4	26	SER
31	B5	4	HIS
31	B5	24	ALA
31	B5	25	LEU
31	B5	49	CYS
31	B5	57	VAL
32	B6	16	CYS
32	B6	18	ARG
32	B6	20	ASN
32	B6	27	LYS
32	B6	28	ARG
32	B6	31	PRO
32	B6	33	LYS
32	B6	45	LYS
32	B6	53	LYS
34	B8	31	HIS
34	B8	34	TRP
34	B8	43	GLN
34	B8	49	VAL
38	BC	128	GLY
38	BC	160	ARG
38	BC	167	LYS

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Mol	Chain	Res	Type
39	BD	31	LYS
39	BD	33	LEU
39	BD	42	GLY
39	BD	58	HIS
39	BD	246	PRO
39	BD	267	SER
39	BD	268	ARG
39	BD	273	ARG
40	BE	2	LYS
40	BE	4	ILE
40	BE	36	ARG
40	BE	41	LYS
40	BE	45	THR
40	BE	53	PRO
40	BE	66	HIS
40	BE	69	LYS
40	BE	76	ARG
40	BE	77	ILE
40	BE	82	ARG
40	BE	88	GLY
40	BE	197	ILE
41	BF	10	PRO
41	BF	14	PRO
41	BF	21	ALA
41	BF	89	VAL
41	BF	132	VAL
41	BF	146	ALA
41	BF	168	ARG
41	BF	175	THR
41	BF	176	LEU
42	BG	3	LEU
42	BG	11	TYR
42	BG	25	TYR
42	BG	71	THR
42	BG	80	PHE
42	BG	81	LYS
42	BG	82	LEU
42	BG	87	PRO
42	BG	96	ARG
42	BG	120	LEU
42	BG	126	ASP
42	BG	129	GLY

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Mol	Chain	Res	Type
43	BH	46	GLU
43	BH	55	PRO
43	BH	84	SER
43	BH	138	LYS
43	BH	158	HIS
43	BH	159	GLU
43	BH	169	VAL
46	BN	8	GLN
46	BN	42	TRP
46	BN	58	ASP
46	BN	64	GLY
46	BN	130	HIS
47	BO	29	ASN
47	BO	48	PRO
48	BP	10	PRO
48	BP	13	ASN
48	BP	17	LYS
48	BP	19	VAL
48	BP	21	ARG
48	BP	40	SER
48	BP	47	ASP
48	BP	52	GLU
48	BP	58	THR
48	BP	65	ARG
48	BP	67	MET
48	BP	107	LYS
48	BP	111	ARG
48	BP	132	LYS
48	BP	146	VAL
48	BP	147	LEU
48	BP	149	GLU
49	BQ	2	LEU
49	BQ	19	GLY
49	BQ	27	VAL
49	BQ	137	TYR
50	BR	4	LEU
50	BR	6	SER
50	BR	11	ASN
50	BR	29	LEU
50	BR	30	THR
50	BR	117	VAL
51	BS	23	ARG

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Mol	Chain	Res	Type
51	BS	51	ALA
51	BS	57	LYS
51	BS	59	LYS
51	BS	62	LYS
51	BS	94	TYR
51	BS	97	ARG
51	BS	98	VAL
52	BT	2	ASN
52	BT	24	PRO
52	BT	26	ASP
52	BT	27	THR
52	BT	28	VAL
52	BT	32	TYR
52	BT	55	ASN
52	BT	80	SER
52	BT	89	VAL
52	BT	91	ARG
52	BT	92	GLY
52	BT	93	ARG
52	BT	95	ARG
52	BT	105	LEU
52	BT	107	ASP
52	BT	112	ARG
53	BU	90	VAL
53	BU	91	ASP
53	BU	93	LYS
54	BV	16	PRO
54	BV	18	LEU
55	BW	63	ASP
56	BX	12	VAL
57	BY	3	VAL
57	BY	50	ARG
57	BY	51	VAL
57	BY	56	PRO
57	BY	60	PHE
57	BY	74	PRO
57	BY	75	ILE
57	BY	78	ALA
57	BY	82	PRO
57	BY	86	ARG
58	BZ	17	ALA
58	BZ	82	ARG

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Mol	Chain	Res	Type
58	BZ	113	ALA
58	BZ	124	ILE
58	BZ	145	GLU
58	BZ	153	SER
58	BZ	159	PRO
58	BZ	163	LEU
58	BZ	165	VAL
2	CB	8	LYS
2	CB	15	VAL
2	CB	18	GLY
2	CB	77	ALA
2	CB	130	ARG
2	CB	234	PRO
3	CC	12	LEU
3	CC	45	LYS
3	CC	47	LEU
3	CC	146	ALA
4	CD	26	CYS
4	CD	27	TYR
4	CD	30	LYS
4	CD	35	ARG
4	CD	44	GLY
4	CD	125	HIS
5	CE	64	ARG
6	CF	39	LYS
6	CF	44	GLY
6	CF	64	GLN
7	CG	7	ALA
7	CG	8	GLU
8	CH	2	LEU
9	CI	23	ASN
9	CI	41	VAL
9	CI	89	ASN
9	CI	108	VAL
9	CI	118	LYS
10	CJ	30	SER
10	CJ	36	GLY
10	CJ	55	LYS
12	CL	46	LYS
12	CL	127	GLU
13	CM	12	ASN
13	CM	83	ASP

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Mol	Chain	Res	Type
13	CM	117	VAL
14	CN	14	PRO
14	CN	15	LYS
14	CN	59	ALA
15	CO	3	ILE
19	CS	5	LEU
19	CS	6	LYS
19	CS	12	ASP
19	CS	14	HIS
19	CS	26	GLY
19	CS	28	LYS
19	CS	67	VAL
20	CT	48	LYS
20	CT	73	HIS
20	CT	75	ASN
20	CT	99	LEU
25	CZ	41	ASN
25	CZ	69	GLU
25	CZ	130	TYR
25	CZ	141	VAL
25	CZ	167	GLU
25	CZ	196	VAL
25	CZ	211	PRO
25	CZ	280	GLY
25	CZ	300	ARG
25	CZ	329	GLY
27	D1	30	VAL
27	D1	45	ASN
27	D1	67	ILE
27	D1	76	ARG
27	D1	83	GLU
28	D2	3	LEU
28	D2	9	GLN
28	D2	16	LEU
28	D2	25	VAL
28	D2	27	GLU
28	D2	41	ILE
28	D2	57	ILE
28	D2	66	GLU
28	D2	68	ARG
28	D2	71	ASN
29	D3	27	GLY

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Mol	Chain	Res	Type
30	D4	26	SER
31	D5	4	HIS
31	D5	24	ALA
31	D5	25	LEU
31	D5	49	CYS
31	D5	57	VAL
32	D6	16	CYS
32	D6	18	ARG
32	D6	20	ASN
32	D6	27	LYS
32	D6	28	ARG
32	D6	31	PRO
32	D6	33	LYS
32	D6	45	LYS
32	D6	47	THR
32	D6	53	LYS
34	D8	31	HIS
34	D8	34	TRP
34	D8	43	GLN
34	D8	49	VAL
38	DC	128	GLY
38	DC	160	ARG
39	DD	31	LYS
39	DD	33	LEU
39	DD	42	GLY
39	DD	58	HIS
39	DD	246	PRO
39	DD	267	SER
39	DD	268	ARG
39	DD	273	ARG
40	DE	2	LYS
40	DE	4	ILE
40	DE	36	ARG
40	DE	41	LYS
40	DE	45	THR
40	DE	53	PRO
40	DE	66	HIS
40	DE	69	LYS
40	DE	76	ARG
40	DE	77	ILE
40	DE	82	ARG
40	DE	88	GLY

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Mol	Chain	Res	Type
40	DE	189	PRO
40	DE	197	ILE
41	DF	10	PRO
41	DF	14	PRO
41	DF	21	ALA
41	DF	89	VAL
41	DF	132	VAL
41	DF	146	ALA
41	DF	168	ARG
41	DF	175	THR
41	DF	176	LEU
42	DG	81	LYS
42	DG	87	PRO
42	DG	103	LEU
42	DG	108	ASN
42	DG	115	ARG
42	DG	126	ASP
42	DG	137	GLU
42	DG	138	GLN
42	DG	147	ASP
42	DG	148	MET
43	DH	46	GLU
43	DH	55	PRO
43	DH	84	SER
43	DH	138	LYS
43	DH	158	HIS
43	DH	159	GLU
43	DH	169	VAL
46	DN	8	GLN
46	DN	42	TRP
46	DN	58	ASP
46	DN	64	GLY
46	DN	130	HIS
47	DO	29	ASN
47	DO	48	PRO
48	DP	10	PRO
48	DP	13	ASN
48	DP	17	LYS
48	DP	19	VAL
48	DP	21	ARG
48	DP	40	SER
48	DP	47	ASP

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Mol	Chain	Res	Type
48	DP	52	GLU
48	DP	58	THR
48	DP	65	ARG
48	DP	67	MET
48	DP	107	LYS
48	DP	111	ARG
48	DP	132	LYS
48	DP	146	VAL
48	DP	147	LEU
48	DP	149	GLU
49	DQ	2	LEU
49	DQ	19	GLY
49	DQ	27	VAL
49	DQ	137	TYR
50	DR	4	LEU
50	DR	6	SER
50	DR	11	ASN
50	DR	29	LEU
50	DR	30	THR
50	DR	117	VAL
51	DS	23	ARG
51	DS	51	ALA
51	DS	57	LYS
51	DS	59	LYS
51	DS	62	LYS
51	DS	94	TYR
51	DS	97	ARG
51	DS	98	VAL
52	DT	2	ASN
52	DT	24	PRO
52	DT	26	ASP
52	DT	27	THR
52	DT	28	VAL
52	DT	32	TYR
52	DT	55	ASN
52	DT	80	SER
52	DT	89	VAL
52	DT	91	ARG
52	DT	92	GLY
52	DT	93	ARG
52	DT	95	ARG
52	DT	105	LEU

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Mol	Chain	Res	Type
52	DT	107	ASP
52	DT	112	ARG
53	DU	90	VAL
53	DU	91	ASP
53	DU	93	LYS
54	DV	16	PRO
54	DV	18	LEU
55	DW	63	ASP
56	DX	12	VAL
57	DY	3	VAL
57	DY	50	ARG
57	DY	51	VAL
57	DY	56	PRO
57	DY	60	PHE
57	DY	74	PRO
57	DY	75	ILE
57	DY	78	ALA
57	DY	82	PRO
57	DY	86	ARG
58	DZ	81	ARG
58	DZ	113	ALA
58	DZ	120	ILE
58	DZ	158	PRO
58	DZ	161	VAL
58	DZ	163	LEU
2	AB	8	LYS
2	AB	77	ALA
2	AB	110	GLN
2	AB	127	ILE
2	AB	129	GLU
2	AB	230	VAL
2	AB	238	LEU
3	AC	26	LYS
4	AD	3	ARG
4	AD	153	ARG
4	AD	181	MET
6	AF	45	LEU
6	AF	62	TRP
9	AI	44	VAL
9	AI	94	ALA
10	AJ	27	ALA
10	AJ	36	GLY

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Mol	Chain	Res	Type
11	AK	128	ALA
12	AL	39	VAL
13	AM	7	VAL
13	AM	67	GLU
14	AN	16	PHE
14	AN	20	ALA
14	AN	22	THR
17	AQ	13	ASP
17	AQ	68	ARG
20	AT	95	ALA
25	AZ	8	THR
25	AZ	35	ALA
25	AZ	146	LEU
25	AZ	169	PRO
25	AZ	300	ARG
25	AZ	301	GLY
25	AZ	310	ILE
25	AZ	374	LEU
25	AZ	379	ALA
26	B0	42	GLY
27	B1	28	GLY
27	B1	85	LEU
29	B3	30	ARG
29	B3	51	ALA
31	B5	37	LYS
31	B5	52	TYR
32	B6	46	HIS
32	B6	47	THR
34	B8	3	LYS
34	B8	33	ASN
38	BC	36	LYS
38	BC	37	PHE
38	BC	77	ILE
38	BC	79	LYS
38	BC	94	VAL
38	BC	117	PRO
38	BC	119	VAL
39	BD	24	ILE
39	BD	34	VAL
39	BD	127	VAL
40	BE	35	GLN
40	BE	57	LYS

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Mol	Chain	Res	Type
40	BE	71	GLY
40	BE	72	VAL
40	BE	117	MET
40	BE	130	GLY
40	BE	185	LYS
40	BE	189	PRO
41	BF	7	TYR
41	BF	26	ALA
41	BF	82	ILE
41	BF	83	PHE
41	BF	86	GLY
41	BF	88	VAL
41	BF	134	GLY
41	BF	169	ASN
42	BG	35	GLU
42	BG	75	LYS
42	BG	79	ASN
42	BG	84	LYS
42	BG	97	ASP
42	BG	115	ARG
42	BG	127	GLY
42	BG	128	ARG
42	BG	151	ALA
43	BH	24	VAL
43	BH	44	VAL
43	BH	81	GLU
43	BH	154	PRO
46	BN	23	LEU
46	BN	47	ALA
46	BN	63	THR
46	BN	76	SER
46	BN	129	PRO
47	BO	5	GLN
47	BO	49	ARG
48	BP	15	ARG
48	BP	31	ALA
48	BP	33	ARG
48	BP	34	GLY
48	BP	35	HIS
48	BP	56	SER
48	BP	59	LEU
48	BP	116	GLY

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Mol	Chain	Res	Type
48	BP	148	LEU
50	BR	3	HIS
50	BR	45	ARG
50	BR	57	ARG
50	BR	60	LEU
50	BR	88	ARG
50	BR	104	ARG
50	BR	107	ASP
51	BS	13	ARG
51	BS	17	ARG
51	BS	63	THR
51	BS	80	LEU
51	BS	96	GLY
51	BS	103	GLU
51	BS	105	ALA
52	BT	17	THR
52	BT	41	ARG
52	BT	104	ASN
52	BT	129	ARG
53	BU	77	SER
54	BV	46	VAL
54	BV	62	LEU
55	BW	18	ARG
55	BW	60	ASN
55	BW	67	ASP
56	BX	7	VAL
56	BX	62	LYS
57	BY	8	LYS
57	BY	17	SER
57	BY	26	LYS
57	BY	39	VAL
57	BY	42	VAL
57	BY	63	LYS
57	BY	65	ALA
57	BY	66	PRO
57	BY	68	HIS
57	BY	85	VAL
58	BZ	9	TYR
58	BZ	108	PRO
58	BZ	110	GLY
58	BZ	111	VAL
58	BZ	177	PRO

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Mol	Chain	Res	Type
2	CB	110	GLN
2	CB	127	ILE
2	CB	129	GLU
2	CB	230	VAL
2	CB	238	LEU
3	CC	26	LYS
4	CD	3	ARG
4	CD	153	ARG
4	CD	181	MET
6	CF	62	TRP
9	CI	44	VAL
10	CJ	27	ALA
11	CK	128	ALA
12	CL	39	VAL
13	CM	7	VAL
13	CM	67	GLU
14	CN	20	ALA
14	CN	22	THR
17	CQ	13	ASP
17	CQ	68	ARG
20	CT	95	ALA
25	CZ	35	ALA
25	CZ	146	LEU
25	CZ	169	PRO
25	CZ	301	GLY
25	CZ	310	ILE
25	CZ	326	GLU
25	CZ	374	LEU
25	CZ	379	ALA
26	D0	42	GLY
27	D1	18	ILE
27	D1	52	ARG
27	D1	55	GLY
27	D1	78	LYS
28	D2	19	VAL
28	D2	44	LEU
29	D3	30	ARG
29	D3	51	ALA
31	D5	37	LYS
31	D5	52	TYR
32	D6	46	HIS
34	D8	3	LYS

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Mol	Chain	Res	Type
38	DC	77	ILE
38	DC	79	LYS
38	DC	94	VAL
38	DC	117	PRO
38	DC	119	VAL
38	DC	167	LYS
39	DD	24	ILE
39	DD	34	VAL
39	DD	127	VAL
40	DE	35	GLN
40	DE	57	LYS
40	DE	71	GLY
40	DE	72	VAL
40	DE	117	MET
40	DE	130	GLY
40	DE	185	LYS
41	DF	7	TYR
41	DF	26	ALA
41	DF	82	ILE
41	DF	86	GLY
41	DF	134	GLY
41	DF	169	ASN
42	DG	3	LEU
42	DG	10	LYS
42	DG	14	GLU
42	DG	84	LYS
42	DG	96	ARG
43	DH	24	VAL
43	DH	44	VAL
43	DH	81	GLU
43	DH	154	PRO
46	DN	23	LEU
46	DN	47	ALA
46	DN	63	THR
46	DN	76	SER
46	DN	129	PRO
47	DO	49	ARG
48	DP	15	ARG
48	DP	20	GLY
48	DP	31	ALA
48	DP	33	ARG
48	DP	34	GLY

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Mol	Chain	Res	Type
48	DP	35	HIS
48	DP	56	SER
48	DP	59	LEU
48	DP	116	GLY
48	DP	148	LEU
50	DR	3	HIS
50	DR	42	LYS
50	DR	45	ARG
50	DR	57	ARG
50	DR	60	LEU
50	DR	88	ARG
50	DR	104	ARG
50	DR	107	ASP
51	DS	13	ARG
51	DS	17	ARG
51	DS	63	THR
51	DS	80	LEU
51	DS	96	GLY
51	DS	103	GLU
51	DS	105	ALA
52	DT	17	THR
52	DT	41	ARG
52	DT	104	ASN
52	DT	129	ARG
53	DU	77	SER
54	DV	46	VAL
54	DV	62	LEU
55	DW	18	ARG
55	DW	60	ASN
55	DW	67	ASP
56	DX	7	VAL
57	DY	8	LYS
57	DY	17	SER
57	DY	26	LYS
57	DY	39	VAL
57	DY	42	VAL
57	DY	63	LYS
57	DY	66	PRO
57	DY	68	HIS
57	DY	85	VAL
58	DZ	30	ASN
58	DZ	61	LEU

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Mol	Chain	Res	Type
58	DZ	79	ARG
58	DZ	142	SER
58	DZ	146	ILE
58	DZ	152	ALA
2	AB	9	GLU
2	AB	20	GLU
2	AB	126	GLU
2	AB	128	GLU
2	AB	153	ARG
2	AB	204	ASN
2	AB	232	PRO
3	AC	65	ALA
4	AD	4	TYR
6	AF	54	LYS
6	AF	79	LEU
7	AG	53	LYS
12	AL	62	SER
13	AM	112	GLY
13	AM	120	LYS
16	AP	26	ARG
16	AP	47	ASP
16	AP	68	ASP
16	AP	81	ARG
17	AQ	34	LYS
17	AQ	49	GLU
18	AR	41	LYS
19	AS	29	ARG
19	AS	46	GLY
21	AU	3	LYS
25	AZ	23	GLY
25	AZ	65	THR
25	AZ	85	HIS
25	AZ	191	GLY
25	AZ	285	ASN
25	AZ	326	GLU
26	B0	20	ARG
26	B0	75	LEU
27	B1	52	ARG
27	B1	53	VAL
27	B1	91	LYS
28	B2	22	GLU
28	B2	35	LEU

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Mol	Chain	Res	Type
28	B2	69	ARG
30	B4	8	LYS
30	B4	34	GLU
31	B5	53	ALA
32	B6	17	LYS
32	B6	23	THR
35	B9	30	PRO
35	B9	35	ARG
35	B9	36	GLN
38	BC	109	ASP
38	BC	118	ASP
39	BD	27	THR
39	BD	30	GLU
39	BD	35	LYS
39	BD	242	ARG
40	BE	54	GLN
40	BE	56	PRO
40	BE	61	ARG
40	BE	68	ALA
40	BE	75	VAL
41	BF	79	GLY
41	BF	127	GLU
41	BF	133	ASN
41	BF	178	PRO
41	BF	206	ILE
42	BG	150	ASP
43	BH	47	GLU
43	BH	52	VAL
46	BN	57	ALA
48	BP	9	ASN
48	BP	20	GLY
48	BP	25	SER
48	BP	39	LYS
48	BP	57	THR
48	BP	70	GLN
48	BP	122	PRO
48	BP	131	SER
49	BQ	54	MET
50	BR	14	SER
50	BR	42	LYS
50	BR	58	GLY
50	BR	105	ARG

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Mol	Chain	Res	Type
51	BS	14	VAL
51	BS	88	ASP
52	BT	36	GLU
54	BV	29	PRO
54	BV	48	GLY
54	BV	56	SER
55	BW	56	ALA
56	BX	4	ALA
56	BX	11	PRO
56	BX	19	ALA
57	BY	53	PRO
57	BY	77	PRO
57	BY	81	LYS
58	BZ	24	LEU
58	BZ	156	LYS
58	BZ	166	SER
2	CB	9	GLU
2	CB	20	GLU
2	CB	126	GLU
2	CB	128	GLU
2	CB	153	ARG
2	CB	204	ASN
2	CB	232	PRO
3	CC	65	ALA
3	CC	96	GLY
4	CD	4	TYR
4	CD	201	GLN
6	CF	45	LEU
6	CF	54	LYS
6	CF	79	LEU
8	CH	83	ILE
9	CI	94	ALA
12	CL	62	SER
13	CM	112	GLY
13	CM	120	LYS
14	CN	16	PHE
16	CP	47	ASP
16	CP	81	ARG
17	CQ	49	GLU
18	CR	41	LYS
19	CS	29	ARG
19	CS	46	GLY

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Mol	Chain	Res	Type
20	CT	14	LYS
21	CU	3	LYS
25	CZ	8	THR
25	CZ	23	GLY
25	CZ	85	HIS
25	CZ	190	ARG
25	CZ	191	GLY
25	CZ	285	ASN
26	D0	74	ARG
26	D0	75	LEU
27	D1	80	LEU
27	D1	81	LYS
28	D2	37	PHE
28	D2	70	GLN
30	D4	8	LYS
30	D4	34	GLU
31	D5	36	CYS
31	D5	53	ALA
32	D6	17	LYS
32	D6	23	THR
34	D8	33	ASN
35	D9	30	PRO
35	D9	35	ARG
35	D9	36	GLN
38	DC	36	LYS
38	DC	37	PHE
38	DC	109	ASP
38	DC	118	ASP
39	DD	27	THR
39	DD	30	GLU
39	DD	35	LYS
39	DD	242	ARG
40	DE	54	GLN
40	DE	56	PRO
40	DE	61	ARG
40	DE	68	ALA
40	DE	75	VAL
41	DF	83	PHE
41	DF	88	VAL
41	DF	127	GLU
41	DF	133	ASN
41	DF	178	PRO

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Mol	Chain	Res	Type
41	DF	206	ILE
42	DG	6	ALA
42	DG	62	LEU
42	DG	99	MET
43	DH	47	GLU
43	DH	52	VAL
46	DN	57	ALA
47	DO	5	GLN
48	DP	9	ASN
48	DP	25	SER
48	DP	66	GLY
48	DP	122	PRO
48	DP	131	SER
50	DR	14	SER
50	DR	58	GLY
50	DR	105	ARG
51	DS	14	VAL
51	DS	88	ASP
52	DT	36	GLU
54	DV	29	PRO
54	DV	48	GLY
54	DV	56	SER
55	DW	56	ALA
56	DX	4	ALA
56	DX	11	PRO
56	DX	19	ALA
56	DX	62	LYS
57	DY	53	PRO
57	DY	65	ALA
57	DY	77	PRO
57	DY	81	LYS
58	DZ	139	VAL
58	DZ	148	ASP
58	DZ	166	SER
2	AB	165	VAL
3	AC	93	LYS
3	AC	96	GLY
4	AD	102	ASP
8	AH	83	ILE
12	AL	25	PRO
16	AP	49	LEU
18	AR	31	LEU

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Mol	Chain	Res	Type
19	AS	9	VAL
19	AS	35	SER
20	AT	93	GLU
25	AZ	72	THR
25	AZ	128	VAL
25	AZ	186	PRO
25	AZ	190	ARG
25	AZ	330	ARG
26	B0	74	ARG
27	B1	94	LEU
29	B3	2	PRO
29	B3	32	GLN
30	B4	28	LYS
30	B4	41	PRO
30	B4	44	THR
31	B5	36	CYS
32	B6	15	GLU
32	B6	41	PRO
32	B6	49	HIS
38	BC	84	LYS
39	BD	32	SER
39	BD	156	ALA
39	BD	224	ALA
39	BD	245	PRO
40	BE	62	PRO
41	BF	94	PRO
41	BF	171	PRO
41	BF	177	ALA
42	BG	10	LYS
42	BG	32	PRO
43	BH	25	LYS
43	BH	41	MET
43	BH	85	LYS
43	BH	109	PHE
46	BN	5	VAL
46	BN	33	LEU
48	BP	43	GLY
48	BP	66	GLY
50	BR	102	GLU
52	BT	86	ILE
54	BV	50	PRO
56	BX	46	ALA

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Mol	Chain	Res	Type
56	BX	87	GLN
58	BZ	18	LEU
58	BZ	116	VAL
2	CB	165	VAL
3	CC	93	LYS
3	CC	156	ARG
4	CD	13	ARG
4	CD	102	ASP
7	CG	53	LYS
12	CL	25	PRO
16	CP	26	ARG
16	CP	68	ASP
17	CQ	34	LYS
17	CQ	64	PRO
18	CR	31	LEU
19	CS	9	VAL
19	CS	35	SER
19	CS	80	TYR
20	CT	93	GLU
25	CZ	65	THR
25	CZ	68	VAL
25	CZ	72	THR
25	CZ	128	VAL
25	CZ	330	ARG
26	D0	20	ARG
27	D1	31	GLY
27	D1	65	SER
27	D1	85	LEU
28	D2	23	LYS
29	D3	2	PRO
29	D3	32	GLN
30	D4	28	LYS
30	D4	41	PRO
30	D4	44	THR
32	D6	15	GLU
32	D6	41	PRO
32	D6	49	HIS
38	DC	84	LYS
39	DD	3	VAL
39	DD	32	SER
39	DD	241	PRO
39	DD	245	PRO

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Mol	Chain	Res	Type
40	DE	62	PRO
40	DE	135	HIS
41	DF	94	PRO
41	DF	171	PRO
41	DF	177	ALA
42	DG	21	ARG
42	DG	97	ASP
42	DG	117	PHE
42	DG	121	ASN
42	DG	144	ILE
43	DH	25	LYS
43	DH	85	LYS
43	DH	109	PHE
46	DN	5	VAL
46	DN	33	LEU
47	DO	68	GLU
48	DP	39	LYS
48	DP	57	THR
48	DP	70	GLN
49	DQ	54	MET
51	DS	24	LEU
54	DV	50	PRO
56	DX	46	ALA
58	DZ	97	GLU
58	DZ	151	HIS
58	DZ	177	PRO
3	AC	15	THR
3	AC	61	ALA
3	AC	144	SER
3	AC	156	ARG
4	AD	13	ARG
4	AD	28	SER
4	AD	155	LEU
4	AD	159	ARG
5	AE	8	GLU
6	AF	28	ARG
6	AF	40	VAL
13	AM	124	PRO
14	AN	60	SER
17	AQ	64	PRO
19	AS	80	TYR
20	AT	70	SER

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Mol	Chain	Res	Type
25	AZ	68	VAL
25	AZ	79	HIS
28	B2	17	SER
38	BC	55	ASP
39	BD	3	VAL
39	BD	26	LYS
39	BD	28	GLU
39	BD	241	PRO
40	BE	34	VAL
40	BE	135	HIS
41	BF	25	PRO
41	BF	172	TRP
42	BG	50	ALA
43	BH	21	PRO
43	BH	49	VAL
43	BH	95	ARG
43	BH	156	ALA
46	BN	40	PRO
47	BO	68	GLU
48	BP	6	LEU
48	BP	141	ALA
51	BS	24	LEU
51	BS	36	TYR
52	BT	30	VAL
52	BT	33	LYS
52	BT	85	LYS
54	BV	19	LYS
54	BV	36	PRO
54	BV	40	LEU
54	BV	47	VAL
55	BW	6	ILE
56	BX	42	ALA
57	BY	57	GLN
58	BZ	61	LEU
58	BZ	78	LYS
58	BZ	80	ARG
58	BZ	134	PRO
58	BZ	162	GLU
3	CC	61	ALA
3	CC	144	SER
4	CD	155	LEU
5	CE	8	GLU

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Mol	Chain	Res	Type
5	CE	153	LYS
6	CF	28	ARG
6	CF	40	VAL
12	CL	26	ALA
13	CM	124	PRO
14	CN	23	ARG
14	CN	60	SER
16	CP	49	LEU
20	CT	70	SER
20	CT	85	MET
25	CZ	79	HIS
25	CZ	186	PRO
25	CZ	360	GLU
27	D1	37	ILE
38	DC	55	ASP
39	DD	26	LYS
39	DD	28	GLU
40	DE	34	VAL
41	DF	25	PRO
41	DF	79	GLY
41	DF	172	TRP
42	DG	31	VAL
42	DG	109	VAL
42	DG	181	ARG
43	DH	21	PRO
43	DH	41	MET
43	DH	49	VAL
43	DH	95	ARG
43	DH	156	ALA
46	DN	40	PRO
48	DP	6	LEU
48	DP	43	GLY
48	DP	141	ALA
50	DR	102	GLU
52	DT	30	VAL
52	DT	33	LYS
52	DT	86	ILE
54	DV	19	LYS
54	DV	36	PRO
54	DV	40	LEU
54	DV	47	VAL
55	DW	6	ILE

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Mol	Chain	Res	Type
56	DX	42	ALA
56	DX	87	GLN
57	DY	57	GLN
58	DZ	46	LYS
58	DZ	165	VAL
2	AB	131	PRO
4	AD	5	ILE
7	AG	59	LEU
9	AI	11	LYS
10	AJ	91	PRO
12	AL	26	ALA
16	AP	46	PRO
20	AT	14	LYS
25	AZ	126	VAL
25	AZ	276	THR
32	B6	34	LEU
39	BD	236	GLY
40	BE	30	PRO
40	BE	187	ALA
42	BG	26	GLN
42	BG	34	LEU
42	BG	44	GLY
43	BH	127	GLU
46	BN	7	LYS
46	BN	135	PRO
48	BP	23	PRO
53	BU	59	ARG
54	BV	51	VAL
56	BX	84	ALA
57	BY	7	VAL
57	BY	97	ARG
58	BZ	142	SER
2	CB	131	PRO
4	CD	5	ILE
4	CD	28	SER
4	CD	159	ARG
10	CJ	91	PRO
16	CP	46	PRO
25	CZ	93	ILE
27	D1	54	ALA
32	D6	34	LEU
39	DD	45	ASN

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Mol	Chain	Res	Type
40	DE	30	PRO
42	DG	80	PHE
43	DH	127	GLU
46	DN	135	PRO
48	DP	23	PRO
48	DP	109	GLY
50	DR	46	GLY
51	DS	36	TYR
52	DT	25	GLY
52	DT	127	ALA
53	DU	59	ARG
54	DV	51	VAL
56	DX	84	ALA
57	DY	7	VAL
58	DZ	96	VAL
3	AC	66	VAL
13	AM	10	PRO
19	AS	45	VAL
25	AZ	93	ILE
25	AZ	359	VAL
41	BF	87	GLY
48	BP	109	GLY
49	BQ	62	GLY
51	BS	49	VAL
52	BT	25	GLY
57	BY	27	VAL
58	BZ	25	PRO
2	CB	26	PRO
3	CC	66	VAL
19	CS	45	VAL
25	CZ	126	VAL
25	CZ	359	VAL
27	D1	86	SER
38	DC	130	ILE
41	DF	87	GLY
51	DS	49	VAL
58	DZ	114	GLY
2	AB	26	PRO
4	AD	172	PRO
25	AZ	355	LEU
25	AZ	356	PRO
38	BC	90	GLY

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Mol	Chain	Res	Type
38	BC	130	ILE
46	BN	9	VAL
50	BR	46	GLY
57	BY	76	CYS
4	CD	172	PRO
28	D2	63	VAL
38	DC	90	GLY
39	DD	244	ARG
42	DG	52	ILE
46	DN	9	VAL
49	DQ	62	GLY
57	DY	27	VAL
57	DY	76	CYS
4	AD	37	PRO
10	AJ	39	PRO
12	AL	18	VAL
13	AM	38	GLY
39	BD	244	ARG
41	BF	126	VAL
42	BG	52	ILE
42	BG	70	VAL
51	BS	22	GLY
58	BZ	130	PRO
2	CB	229	VAL
4	CD	37	PRO
10	CJ	39	PRO
12	CL	18	VAL
13	CM	10	PRO
15	CO	87	ILE
25	CZ	34	VAL
25	CZ	355	LEU
25	CZ	356	PRO
39	DD	51	VAL
58	DZ	64	GLY
2	AB	229	VAL
12	AL	74	GLY
15	AO	87	ILE
25	AZ	34	VAL
30	B4	40	HIS
39	BD	51	VAL
43	BH	79	VAL
46	BN	6	PRO

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Mol	Chain	Res	Type
46	BN	77	GLY
56	BX	32	PRO
57	BY	31	LEU
57	BY	55	TYR
12	CL	47	LYS
30	D4	40	HIS
41	DF	126	VAL
46	DN	6	PRO
46	DN	77	GLY
56	DX	32	PRO
57	DY	55	TYR
2	AB	228	GLY
42	BG	149	VAL
43	BH	20	ALA
48	BP	97	PRO
2	CB	228	GLY
27	D1	84	GLY
39	DD	236	GLY
43	DH	43	VAL
57	DY	31	LEU
58	DZ	167	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%)	181 (90%)	21 (10%)	7	27
2	CB	202/220 (92%)	180 (89%)	22 (11%)	6	25
3	AC	160/188 (85%)	141 (88%)	19 (12%)	5	20
3	CC	160/188 (85%)	142 (89%)	18 (11%)	6	23
4	AD	180/181 (99%)	162 (90%)	18 (10%)	7	28
4	CD	180/181 (99%)	162 (90%)	18 (10%)	7	28
5	AE	115/123 (94%)	102 (89%)	13 (11%)	6	23
5	CE	115/123 (94%)	102 (89%)	13 (11%)	6	23

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	AF	90/90 (100%)	80 (89%)	10 (11%)	6	24
6	CF	90/90 (100%)	80 (89%)	10 (11%)	6	24
7	AG	126/127 (99%)	118 (94%)	8 (6%)	18	48
7	CG	126/127 (99%)	118 (94%)	8 (6%)	18	48
8	AH	119/119 (100%)	107 (90%)	12 (10%)	7	28
8	CH	119/119 (100%)	107 (90%)	12 (10%)	7	28
9	AI	98/99 (99%)	90 (92%)	8 (8%)	11	38
9	CI	98/99 (99%)	89 (91%)	9 (9%)	9	33
10	AJ	88/92 (96%)	77 (88%)	11 (12%)	4	18
10	CJ	88/92 (96%)	77 (88%)	11 (12%)	4	18
11	AK	90/99 (91%)	80 (89%)	10 (11%)	6	24
11	CK	90/99 (91%)	80 (89%)	10 (11%)	6	24
12	AL	104/108 (96%)	92 (88%)	12 (12%)	5	22
12	CL	104/108 (96%)	92 (88%)	12 (12%)	5	22
13	AM	99/101 (98%)	88 (89%)	11 (11%)	6	24
13	CM	99/101 (98%)	88 (89%)	11 (11%)	6	24
14	AN	49/50 (98%)	42 (86%)	7 (14%)	3	14
14	CN	49/50 (98%)	42 (86%)	7 (14%)	3	14
15	AO	79/80 (99%)	70 (89%)	9 (11%)	5	23
15	CO	79/80 (99%)	70 (89%)	9 (11%)	5	23
16	AP	72/74 (97%)	64 (89%)	8 (11%)	6	24
16	CP	72/74 (97%)	65 (90%)	7 (10%)	8	30
17	AQ	94/97 (97%)	88 (94%)	6 (6%)	17	48
17	CQ	94/97 (97%)	88 (94%)	6 (6%)	17	48
18	AR	61/77 (79%)	51 (84%)	10 (16%)	2	10
18	CR	61/77 (79%)	51 (84%)	10 (16%)	2	10
19	AS	69/80 (86%)	56 (81%)	13 (19%)	1	6
19	CS	69/80 (86%)	56 (81%)	13 (19%)	1	6
20	AT	76/82 (93%)	68 (90%)	8 (10%)	7	26
20	CT	76/82 (93%)	68 (90%)	8 (10%)	7	26
21	AU	19/22 (86%)	18 (95%)	1 (5%)	22	54

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	CU	19/22 (86%)	18 (95%)	1 (5%)	22	54
25	AZ	322/338 (95%)	279 (87%)	43 (13%)	4	16
25	CZ	322/338 (95%)	281 (87%)	41 (13%)	4	18
26	B0	66/67 (98%)	59 (89%)	7 (11%)	6	26
26	D0	66/67 (98%)	59 (89%)	7 (11%)	6	26
27	B1	78/83 (94%)	67 (86%)	11 (14%)	3	15
27	D1	78/83 (94%)	68 (87%)	10 (13%)	4	18
28	B2	66/67 (98%)	64 (97%)	2 (3%)	41	71
28	D2	66/67 (98%)	57 (86%)	9 (14%)	3	16
29	B3	51/52 (98%)	45 (88%)	6 (12%)	5	21
29	D3	51/52 (98%)	45 (88%)	6 (12%)	5	21
30	B4	39/63 (62%)	32 (82%)	7 (18%)	2	8
30	D4	39/63 (62%)	33 (85%)	6 (15%)	2	11
31	B5	51/52 (98%)	45 (88%)	6 (12%)	5	21
31	D5	51/52 (98%)	45 (88%)	6 (12%)	5	21
32	B6	49/52 (94%)	32 (65%)	17 (35%)	0	0
32	D6	49/52 (94%)	31 (63%)	18 (37%)	0	0
33	B7	41/42 (98%)	38 (93%)	3 (7%)	14	43
33	D7	41/42 (98%)	38 (93%)	3 (7%)	14	43
34	B8	53/55 (96%)	44 (83%)	9 (17%)	2	9
34	D8	53/55 (96%)	44 (83%)	9 (17%)	2	9
35	B9	34/34 (100%)	31 (91%)	3 (9%)	10	36
35	D9	34/34 (100%)	31 (91%)	3 (9%)	10	36
38	BC	180/181 (99%)	172 (96%)	8 (4%)	28	61
38	DC	180/181 (99%)	172 (96%)	8 (4%)	28	61
39	BD	217/218 (100%)	186 (86%)	31 (14%)	3	14
39	DD	217/218 (100%)	187 (86%)	30 (14%)	3	16
40	BE	165/166 (99%)	145 (88%)	20 (12%)	5	20
40	DE	165/166 (99%)	143 (87%)	22 (13%)	4	16
41	BF	165/166 (99%)	152 (92%)	13 (8%)	12	40
41	DF	165/166 (99%)	152 (92%)	13 (8%)	12	40

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	BG	155/156 (99%)	135 (87%)	20 (13%)	4	18
42	DG	155/156 (99%)	124 (80%)	31 (20%)	1	5
43	BH	132/148 (89%)	118 (89%)	14 (11%)	6	26
43	DH	132/148 (89%)	118 (89%)	14 (11%)	6	26
46	BN	117/119 (98%)	101 (86%)	16 (14%)	3	16
46	DN	117/119 (98%)	101 (86%)	16 (14%)	3	16
47	BO	100/100 (100%)	93 (93%)	7 (7%)	15	45
47	DO	100/100 (100%)	93 (93%)	7 (7%)	15	45
48	BP	112/116 (97%)	93 (83%)	19 (17%)	2	9
48	DP	112/116 (97%)	93 (83%)	19 (17%)	2	9
49	BQ	111/111 (100%)	101 (91%)	10 (9%)	9	34
49	DQ	111/111 (100%)	101 (91%)	10 (9%)	9	34
50	BR	100/101 (99%)	87 (87%)	13 (13%)	4	18
50	DR	100/101 (99%)	85 (85%)	15 (15%)	3	12
51	BS	77/88 (88%)	65 (84%)	12 (16%)	2	11
51	DS	77/88 (88%)	65 (84%)	12 (16%)	2	11
52	BT	120/127 (94%)	97 (81%)	23 (19%)	1	6
52	DT	120/127 (94%)	97 (81%)	23 (19%)	1	6
53	BU	92/94 (98%)	86 (94%)	6 (6%)	17	47
53	DU	92/94 (98%)	86 (94%)	6 (6%)	17	47
54	BV	82/82 (100%)	67 (82%)	15 (18%)	1	7
54	DV	82/82 (100%)	67 (82%)	15 (18%)	1	7
55	BW	91/92 (99%)	87 (96%)	4 (4%)	28	61
55	DW	91/92 (99%)	86 (94%)	5 (6%)	21	53
56	BX	74/78 (95%)	67 (90%)	7 (10%)	8	31
56	DX	74/78 (95%)	68 (92%)	6 (8%)	11	39
57	BY	84/91 (92%)	71 (84%)	13 (16%)	2	11
57	DY	84/91 (92%)	72 (86%)	12 (14%)	3	14
58	BZ	155/179 (87%)	130 (84%)	25 (16%)	2	10
58	DZ	155/179 (87%)	131 (84%)	24 (16%)	2	11
All	All	10338/10854 (95%)	9112 (88%)	1226 (12%)	5	20

All (1226) 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	24	TRP
2	AB	32	ILE
2	AB	36	ARG
2	AB	42	ILE
2	AB	51	LEU
2	AB	67	THR
2	AB	74	LYS
2	AB	93	VAL
2	AB	140	HIS
2	AB	144	ARG
2	AB	156	LYS
2	AB	170	GLU
2	AB	178	ARG
2	AB	187	LEU
2	AB	200	ILE
2	AB	204	ASN
2	AB	208	ILE
2	AB	234	PRO
3	AC	3	ASN
3	AC	5	ILE
3	AC	14	ILE
3	AC	16	ARG
3	AC	20	SER
3	AC	21	ARG
3	AC	26	LYS
3	AC	46	GLU
3	AC	52	LEU
3	AC	79	ARG
3	AC	105	GLU
3	AC	107	GLN
3	AC	119	ARG
3	AC	120	VAL
3	AC	135	LYS
3	AC	138	VAL
3	AC	167	TRP
3	AC	178	LEU
3	AC	188	LEU
4	AD	3	ARG
4	AD	10	ARG

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Mol	Chain	Res	Type
4	AD	15	GLU
4	AD	24	GLU
4	AD	27	TYR
4	AD	33	MET
4	AD	36	ARG
4	AD	49	ARG
4	AD	59	ARG
4	AD	62	GLN
4	AD	86	LYS
4	AD	100	ARG
4	AD	127	THR
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	162	LEU
4	AD	209	ARG
5	AE	6	PHE
5	AE	10	MET
5	AE	12	LEU
5	AE	16	THR
5	AE	18	ARG
5	AE	20	GLN
5	AE	38	GLN
5	AE	41	VAL
5	AE	68	GLU
5	AE	73	ASN
5	AE	79	GLU
5	AE	125	SER
5	AE	147	ASP
6	AF	14	LEU
6	AF	25	ILE
6	AF	27	GLN
6	AF	31	GLU
6	AF	32	ASN
6	AF	47	ARG
6	AF	57	GLN
6	AF	83	ASP
6	AF	86	ARG
6	AF	98	LEU
7	AG	24	THR
7	AG	51	GLN
7	AG	91	VAL

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Mol	Chain	Res	Type
7	AG	104	LEU
7	AG	113	GLU
7	AG	114	ARG
7	AG	137	LYS
7	AG	151	TYR
8	AH	1	MET
8	AH	18	ARG
8	AH	52	ASP
8	AH	54	ASP
8	AH	56	LYS
8	AH	91	ARG
8	AH	102	ARG
8	AH	109	ILE
8	AH	112	LEU
8	AH	115	SER
8	AH	119	LEU
8	AH	127	LEU
9	AI	4	TYR
9	AI	10	ARG
9	AI	44	VAL
9	AI	47	LEU
9	AI	75	ASP
9	AI	95	LYS
9	AI	112	LYS
9	AI	128	ARG
10	AJ	9	ARG
10	AJ	22	LYS
10	AJ	40	LEU
10	AJ	49	VAL
10	AJ	55	LYS
10	AJ	67	THR
10	AJ	73	ASP
10	AJ	78	ASN
10	AJ	81	THR
10	AJ	96	ILE
10	AJ	97	GLU
11	AK	27	ASN
11	AK	29	ILE
11	AK	30	VAL
11	AK	38	ASN
11	AK	47	VAL
11	AK	57	THR

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Mol	Chain	Res	Type
11	AK	84	VAL
11	AK	104	GLN
11	AK	106	LYS
11	AK	116	HIS
12	AL	20	LYS
12	AL	33	ARG
12	AL	41	ARG
12	AL	53	ARG
12	AL	55	VAL
12	AL	60	LEU
12	AL	83	VAL
12	AL	85	ILE
12	AL	89	ARG
12	AL	102	ARG
12	AL	106	ASP
12	AL	118	SER
13	AM	64	TRP
13	AM	65	LYS
13	AM	69	GLU
13	AM	70	LEU
13	AM	71	ARG
13	AM	82	MET
13	AM	93	ARG
13	AM	101	GLN
13	AM	108	ARG
13	AM	115	LYS
13	AM	120	LYS
14	AN	13	THR
14	AN	14	PRO
14	AN	18	VAL
14	AN	21	TYR
14	AN	22	THR
14	AN	29	ARG
14	AN	41	ARG
15	AO	10	LYS
15	AO	13	GLN
15	AO	25	THR
15	AO	38	ARG
15	AO	39	LEU
15	AO	41	GLU
15	AO	66	LEU
15	AO	82	ILE

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Mol	Chain	Res	Type
15	AO	88	ARG
16	AP	1	MET
16	AP	21	VAL
16	AP	23	ASP
16	AP	25	ARG
16	AP	43	LYS
16	AP	45	THR
16	AP	62	VAL
16	AP	69	THR
17	AQ	26	GLN
17	AQ	38	ARG
17	AQ	49	GLU
17	AQ	52	LYS
17	AQ	70	ARG
17	AQ	74	LEU
18	AR	29	PHE
18	AR	36	ASN
18	AR	37	VAL
18	AR	38	GLU
18	AR	44	LEU
18	AR	46	GLU
18	AR	47	THR
18	AR	54	ARG
18	AR	59	SER
18	AR	76	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	10	PHE
19	AS	13	ASP
19	AS	15	LEU
19	AS	16	LEU
19	AS	29	ARG
19	AS	37	ARG
19	AS	41	VAL
19	AS	49	ILE
19	AS	63	THR
19	AS	65	ASN
19	AS	66	MET
20	AT	23	ARG
20	AT	26	ASN
20	AT	36	LEU
20	AT	45	GLN

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Mol	Chain	Res	Type
20	AT	64	ASP
20	AT	74	LYS
20	AT	75	ASN
20	AT	100	ILE
21	AU	22	ARG
25	AZ	5	PHE
25	AZ	7	ARG
25	AZ	8	THR
25	AZ	9	LYS
25	AZ	27	LEU
25	AZ	38	GLU
25	AZ	63	ILE
25	AZ	64	ASN
25	AZ	82	CYS
25	AZ	85	HIS
25	AZ	88	TYR
25	AZ	93	ILE
25	AZ	114	PRO
25	AZ	121	LEU
25	AZ	130	TYR
25	AZ	135	MET
25	AZ	160	GLN
25	AZ	163	PHE
25	AZ	166	ASP
25	AZ	167	GLU
25	AZ	185	ASN
25	AZ	189	ARG
25	AZ	194	GLU
25	AZ	196	VAL
25	AZ	206	ILE
25	AZ	218	ASP
25	AZ	230	THR
25	AZ	272	MET
25	AZ	274	ARG
25	AZ	275	LYS
25	AZ	277	LEU
25	AZ	284	ASP
25	AZ	285	ASN
25	AZ	291	ARG
25	AZ	295	ARG
25	AZ	324	LYS
25	AZ	325	LYS

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Mol	Chain	Res	Type
25	AZ	326	GLU
25	AZ	334	PHE
25	AZ	335	PHE
25	AZ	336	SER
25	AZ	345	ARG
25	AZ	347	THR
26	B0	14	ARG
26	B0	16	SER
26	B0	19	LYS
26	B0	20	ARG
26	B0	62	LEU
26	B0	75	LEU
26	B0	84	LEU
27	B1	3	LYS
27	B1	21	ARG
27	B1	26	ARG
27	B1	33	LYS
27	B1	37	ILE
27	B1	45	ASN
27	B1	67	ILE
27	B1	69	LYS
27	B1	73	LEU
27	B1	75	GLU
27	B1	83	GLU
28	B2	7	ARG
28	B2	68	ARG
29	B3	18	ASP
29	B3	35	ARG
29	B3	36	VAL
29	B3	38	GLU
29	B3	46	ASN
29	B3	48	GLU
30	B4	5	ILE
30	B4	9	LEU
30	B4	20	ASN
30	B4	28	LYS
30	B4	32	TYR
30	B4	43	TYR
30	B4	47	GLN
31	B5	3	LYS
31	B5	11	THR
31	B5	25	LEU

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Mol	Chain	Res	Type
31	B5	35	GLU
31	B5	49	CYS
31	B5	51	TYR
32	B6	7	ILE
32	B6	9	LEU
32	B6	12	GLU
32	B6	18	ARG
32	B6	19	ARG
32	B6	21	TYR
32	B6	23	THR
32	B6	26	ASN
32	B6	27	LYS
32	B6	29	ASN
32	B6	30	THR
32	B6	31	PRO
32	B6	41	PRO
32	B6	42	TRP
32	B6	44	ARG
32	B6	45	LYS
32	B6	53	LYS
33	B7	1	MET
33	B7	24	THR
33	B7	34	ARG
34	B8	30	ARG
34	B8	34	TRP
34	B8	35	GLN
34	B8	40	GLU
34	B8	41	ILE
34	B8	44	LYS
34	B8	47	LYS
34	B8	61	LEU
34	B8	64	TYR
35	B9	11	CYS
35	B9	29	ASN
35	B9	34	GLN
38	BC	11	LEU
38	BC	55	ASP
38	BC	57	ASN
38	BC	81	GLU
38	BC	93	TYR
38	BC	134	ARG
38	BC	210	ARG

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Mol	Chain	Res	Type
38	BC	218	MET
39	BD	6	PHE
39	BD	10	THR
39	BD	24	ILE
39	BD	26	LYS
39	BD	27	THR
39	BD	28	GLU
39	BD	43	ARG
39	BD	44	ASN
39	BD	46	GLN
39	BD	95	LEU
39	BD	104	TYR
39	BD	106	ILE
39	BD	111	LEU
39	BD	112	GLN
39	BD	155	LEU
39	BD	157	ARG
39	BD	166	GLN
39	BD	176	ARG
39	BD	192	THR
39	BD	198	ASN
39	BD	200	ASP
39	BD	211	ARG
39	BD	217	ARG
39	BD	218	ARG
39	BD	221	VAL
39	BD	226	MET
39	BD	241	PRO
39	BD	246	PRO
39	BD	270	ILE
39	BD	275	LYS
39	BD	276	LYS
40	BE	17	ASP
40	BE	18	ASP
40	BE	25	VAL
40	BE	33	VAL
40	BE	55	ASN
40	BE	56	PRO
40	BE	57	LYS
40	BE	62	PRO
40	BE	67	PHE
40	BE	76	ARG

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Mol	Chain	Res	Type
40	BE	78	LEU
40	BE	79	ARG
40	BE	121	ASN
40	BE	144	ARG
40	BE	146	THR
40	BE	167	VAL
40	BE	181	LEU
40	BE	188	VAL
40	BE	202	LYS
40	BE	203	LYS
41	BF	19	GLU
41	BF	23	ASP
41	BF	28	ILE
41	BF	72	ARG
41	BF	88	VAL
41	BF	98	SER
41	BF	122	LYS
41	BF	125	LEU
41	BF	135	LYS
41	BF	142	TRP
41	BF	157	VAL
41	BF	160	ASN
41	BF	169	ASN
42	BG	10	LYS
42	BG	12	TYR
42	BG	21	ARG
42	BG	22	ARG
42	BG	26	GLN
42	BG	34	LEU
42	BG	52	ILE
42	BG	54	GLU
42	BG	60	LEU
42	BG	67	LYS
42	BG	77	ILE
42	BG	84	LYS
42	BG	98	ARG
42	BG	113	ARG
42	BG	123	ASN
42	BG	125	PHE
42	BG	143	GLU
42	BG	153	ARG
42	BG	159	VAL

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Mol	Chain	Res	Type
42	BG	164	GLU
43	BH	43	VAL
43	BH	54	ARG
43	BH	57	ASP
43	BH	83	TYR
43	BH	85	LYS
43	BH	104	GLU
43	BH	105	LEU
43	BH	111	HIS
43	BH	139	GLN
43	BH	152	ARG
43	BH	153	LYS
43	BH	157	TYR
43	BH	162	ILE
43	BH	163	TYR
46	BN	1	MET
46	BN	4	TYR
46	BN	19	GLU
46	BN	25	ARG
46	BN	32	THR
46	BN	38	HIS
46	BN	45	ASN
46	BN	48	MET
46	BN	56	ASN
46	BN	87	LEU
46	BN	96	GLU
46	BN	99	LEU
46	BN	119	ARG
46	BN	120	LEU
46	BN	127	ASP
46	BN	136	GLU
47	BO	1	MET
47	BO	8	LEU
47	BO	23	ARG
47	BO	24	VAL
47	BO	48	PRO
47	BO	69	ILE
47	BO	94	ARG
48	BP	6	LEU
48	BP	16	ARG
48	BP	32	THR
48	BP	39	LYS

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Mol	Chain	Res	Type
48	BP	41	ARG
48	BP	42	SER
48	BP	45	LEU
48	BP	57	THR
48	BP	61	ARG
48	BP	68	GLN
48	BP	70	GLN
48	BP	75	ILE
48	BP	85	LEU
48	BP	91	PHE
48	BP	112	LEU
48	BP	114	ILE
48	BP	115	LEU
48	BP	136	GLU
48	BP	149	GLU
49	BQ	1	MET
49	BQ	45	GLN
49	BQ	54	MET
49	BQ	55	VAL
49	BQ	56	ARG
49	BQ	58	PHE
49	BQ	59	ARG
49	BQ	79	LEU
49	BQ	104	PHE
49	BQ	139	GLU
50	BR	2	ARG
50	BR	4	LEU
50	BR	5	LYS
50	BR	10	LEU
50	BR	30	THR
50	BR	49	ASP
50	BR	76	VAL
50	BR	79	LEU
50	BR	89	ASP
50	BR	94	TYR
50	BR	99	LYS
50	BR	100	LEU
50	BR	111	LEU
51	BS	11	LYS
51	BS	12	PHE
51	BS	15	ARG
51	BS	18	ILE

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Mol	Chain	Res	Type
51	BS	25	ARG
51	BS	29	PHE
51	BS	36	TYR
51	BS	40	ILE
51	BS	76	LYS
51	BS	92	TYR
51	BS	97	ARG
51	BS	106	ARG
52	BT	11	GLU
52	BT	24	PRO
52	BT	29	ARG
52	BT	32	TYR
52	BT	38	ASN
52	BT	39	ARG
52	BT	41	ARG
52	BT	43	GLN
52	BT	44	ASP
52	BT	48	ILE
52	BT	49	VAL
52	BT	50	ILE
52	BT	53	ARG
52	BT	58	ASN
52	BT	65	LYS
52	BT	78	LEU
52	BT	82	LEU
52	BT	88	ILE
52	BT	99	LEU
52	BT	108	ARG
52	BT	115	ARG
52	BT	124	ASP
52	BT	128	GLU
53	BU	9	VAL
53	BU	66	ASN
53	BU	74	LEU
53	BU	78	THR
53	BU	92	ARG
53	BU	108	GLU
54	BV	2	PHE
54	BV	12	TYR
54	BV	16	PRO
54	BV	18	LEU
54	BV	19	LYS

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Mol	Chain	Res	Type
54	BV	21	ARG
54	BV	26	ASP
54	BV	35	LEU
54	BV	39	LEU
54	BV	68	LYS
54	BV	79	VAL
54	BV	82	ARG
54	BV	91	TYR
54	BV	95	LEU
54	BV	99	ILE
55	BW	8	ARG
55	BW	11	ARG
55	BW	34	ASN
55	BW	107	LEU
56	BX	11	PRO
56	BX	28	PHE
56	BX	37	THR
56	BX	57	LEU
56	BX	60	ARG
56	BX	68	ARG
56	BX	75	ASP
57	BY	2	ARG
57	BY	5	MET
57	BY	6	HIS
57	BY	7	VAL
57	BY	29	GLU
57	BY	32	PRO
57	BY	50	ARG
57	BY	62	GLU
57	BY	73	ARG
57	BY	76	CYS
57	BY	77	PRO
57	BY	90	LEU
57	BY	97	ARG
58	BZ	6	LYS
58	BZ	9	TYR
58	BZ	11	GLU
58	BZ	30	ASN
58	BZ	38	TYR
58	BZ	41	LEU
58	BZ	55	HIS
58	BZ	70	LEU

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Mol	Chain	Res	Type
58	BZ	76	LEU
58	BZ	79	ARG
58	BZ	87	ASP
58	BZ	121	HIS
58	BZ	122	ARG
58	BZ	127	LYS
58	BZ	130	PRO
58	BZ	131	ARG
58	BZ	132	ASN
58	BZ	136	PHE
58	BZ	140	ASP
58	BZ	144	LEU
58	BZ	148	ASP
58	BZ	150	LEU
58	BZ	155	LEU
58	BZ	165	VAL
58	BZ	178	GLU
2	CB	15	VAL
2	CB	16	HIS
2	CB	17	PHE
2	CB	24	TRP
2	CB	32	ILE
2	CB	36	ARG
2	CB	42	ILE
2	CB	51	LEU
2	CB	67	THR
2	CB	74	LYS
2	CB	93	VAL
2	CB	97	TRP
2	CB	140	HIS
2	CB	144	ARG
2	CB	156	LYS
2	CB	170	GLU
2	CB	178	ARG
2	CB	187	LEU
2	CB	200	ILE
2	CB	204	ASN
2	CB	208	ILE
2	CB	234	PRO
3	CC	3	ASN
3	CC	5	ILE
3	CC	14	ILE

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Mol	Chain	Res	Type
3	CC	16	ARG
3	CC	20	SER
3	CC	21	ARG
3	CC	26	LYS
3	CC	46	GLU
3	CC	52	LEU
3	CC	79	ARG
3	CC	105	GLU
3	CC	107	GLN
3	CC	119	ARG
3	CC	120	VAL
3	CC	138	VAL
3	CC	167	TRP
3	CC	178	LEU
3	CC	188	LEU
4	CD	3	ARG
4	CD	10	ARG
4	CD	15	GLU
4	CD	24	GLU
4	CD	27	TYR
4	CD	33	MET
4	CD	36	ARG
4	CD	49	ARG
4	CD	59	ARG
4	CD	62	GLN
4	CD	86	LYS
4	CD	100	ARG
4	CD	127	THR
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	162	LEU
4	CD	209	ARG
5	CE	6	PHE
5	CE	10	MET
5	CE	12	LEU
5	CE	16	THR
5	CE	18	ARG
5	CE	20	GLN
5	CE	38	GLN
5	CE	41	VAL
5	CE	68	GLU

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Mol	Chain	Res	Type
5	CE	73	ASN
5	CE	79	GLU
5	CE	125	SER
5	CE	147	ASP
6	CF	14	LEU
6	CF	25	ILE
6	CF	27	GLN
6	CF	31	GLU
6	CF	32	ASN
6	CF	47	ARG
6	CF	57	GLN
6	CF	83	ASP
6	CF	86	ARG
6	CF	98	LEU
7	CG	24	THR
7	CG	51	GLN
7	CG	91	VAL
7	CG	104	LEU
7	CG	113	GLU
7	CG	114	ARG
7	CG	137	LYS
7	CG	151	TYR
8	CH	1	MET
8	CH	18	ARG
8	CH	52	ASP
8	CH	54	ASP
8	CH	56	LYS
8	CH	91	ARG
8	CH	102	ARG
8	CH	109	ILE
8	CH	112	LEU
8	CH	115	SER
8	CH	119	LEU
8	CH	127	LEU
9	CI	4	TYR
9	CI	10	ARG
9	CI	44	VAL
9	CI	47	LEU
9	CI	75	ASP
9	CI	95	LYS
9	CI	112	LYS
9	CI	121	ARG

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Mol	Chain	Res	Type
9	CI	128	ARG
10	CJ	9	ARG
10	CJ	22	LYS
10	CJ	40	LEU
10	CJ	49	VAL
10	CJ	55	LYS
10	CJ	67	THR
10	CJ	73	ASP
10	CJ	78	ASN
10	CJ	81	THR
10	CJ	96	ILE
10	CJ	97	GLU
11	CK	27	ASN
11	CK	29	ILE
11	CK	30	VAL
11	CK	38	ASN
11	CK	47	VAL
11	CK	57	THR
11	CK	84	VAL
11	CK	104	GLN
11	CK	106	LYS
11	CK	116	HIS
12	CL	20	LYS
12	CL	33	ARG
12	CL	41	ARG
12	CL	53	ARG
12	CL	55	VAL
12	CL	60	LEU
12	CL	83	VAL
12	CL	85	ILE
12	CL	89	ARG
12	CL	102	ARG
12	CL	106	ASP
12	CL	118	SER
13	CM	64	TRP
13	CM	65	LYS
13	CM	69	GLU
13	CM	70	LEU
13	CM	71	ARG
13	CM	82	MET
13	CM	93	ARG
13	CM	101	GLN

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Mol	Chain	Res	Type
13	CM	108	ARG
13	CM	115	LYS
13	CM	120	LYS
14	CN	13	THR
14	CN	14	PRO
14	CN	18	VAL
14	CN	21	TYR
14	CN	22	THR
14	CN	29	ARG
14	CN	41	ARG
15	CO	10	LYS
15	CO	13	GLN
15	CO	25	THR
15	CO	38	ARG
15	CO	39	LEU
15	CO	41	GLU
15	CO	66	LEU
15	CO	82	ILE
15	CO	88	ARG
16	CP	1	MET
16	CP	21	VAL
16	CP	23	ASP
16	CP	25	ARG
16	CP	43	LYS
16	CP	62	VAL
16	CP	69	THR
17	CQ	26	GLN
17	CQ	38	ARG
17	CQ	49	GLU
17	CQ	52	LYS
17	CQ	70	ARG
17	CQ	74	LEU
18	CR	29	PHE
18	CR	36	ASN
18	CR	37	VAL
18	CR	38	GLU
18	CR	44	LEU
18	CR	46	GLU
18	CR	47	THR
18	CR	54	ARG
18	CR	59	SER
18	CR	76	LEU

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Mol	Chain	Res	Type
19	CS	6	LYS
19	CS	7	LYS
19	CS	10	PHE
19	CS	13	ASP
19	CS	15	LEU
19	CS	16	LEU
19	CS	29	ARG
19	CS	37	ARG
19	CS	41	VAL
19	CS	49	ILE
19	CS	63	THR
19	CS	65	ASN
19	CS	66	MET
20	CT	23	ARG
20	CT	26	ASN
20	CT	36	LEU
20	CT	45	GLN
20	CT	64	ASP
20	CT	74	LYS
20	CT	75	ASN
20	CT	100	ILE
21	CU	22	ARG
25	CZ	5	PHE
25	CZ	7	ARG
25	CZ	9	LYS
25	CZ	27	LEU
25	CZ	38	GLU
25	CZ	63	ILE
25	CZ	64	ASN
25	CZ	82	CYS
25	CZ	85	HIS
25	CZ	88	TYR
25	CZ	93	ILE
25	CZ	114	PRO
25	CZ	121	LEU
25	CZ	130	TYR
25	CZ	135	MET
25	CZ	160	GLN
25	CZ	163	PHE
25	CZ	166	ASP
25	CZ	167	GLU
25	CZ	185	ASN

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Mol	Chain	Res	Type
25	CZ	189	ARG
25	CZ	194	GLU
25	CZ	196	VAL
25	CZ	206	ILE
25	CZ	218	ASP
25	CZ	230	THR
25	CZ	272	MET
25	CZ	274	ARG
25	CZ	275	LYS
25	CZ	277	LEU
25	CZ	284	ASP
25	CZ	285	ASN
25	CZ	291	ARG
25	CZ	295	ARG
25	CZ	325	LYS
25	CZ	326	GLU
25	CZ	334	PHE
25	CZ	335	PHE
25	CZ	336	SER
25	CZ	345	ARG
25	CZ	347	THR
26	D0	14	ARG
26	D0	16	SER
26	D0	19	LYS
26	D0	20	ARG
26	D0	62	LEU
26	D0	75	LEU
26	D0	84	LEU
27	D1	13	ILE
27	D1	20	ARG
27	D1	21	ARG
27	D1	26	ARG
27	D1	27	GLU
27	D1	38	SER
27	D1	61	ARG
27	D1	75	GLU
27	D1	83	GLU
27	D1	94	LEU
28	D2	12	GLU
28	D2	24	LEU
28	D2	25	VAL
28	D2	49	LYS

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Mol	Chain	Res	Type
28	D2	51	ARG
28	D2	53	LEU
28	D2	57	ILE
28	D2	60	LEU
28	D2	69	ARG
29	D3	18	ASP
29	D3	35	ARG
29	D3	36	VAL
29	D3	38	GLU
29	D3	46	ASN
29	D3	48	GLU
30	D4	5	ILE
30	D4	9	LEU
30	D4	20	ASN
30	D4	32	TYR
30	D4	43	TYR
30	D4	47	GLN
31	D5	3	LYS
31	D5	11	THR
31	D5	25	LEU
31	D5	35	GLU
31	D5	49	CYS
31	D5	51	TYR
32	D6	7	ILE
32	D6	9	LEU
32	D6	12	GLU
32	D6	18	ARG
32	D6	19	ARG
32	D6	21	TYR
32	D6	23	THR
32	D6	26	ASN
32	D6	27	LYS
32	D6	29	ASN
32	D6	30	THR
32	D6	31	PRO
32	D6	41	PRO
32	D6	42	TRP
32	D6	44	ARG
32	D6	45	LYS
32	D6	48	VAL
32	D6	53	LYS
33	D7	1	MET

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Mol	Chain	Res	Type
33	D7	24	THR
33	D7	34	ARG
34	D8	30	ARG
34	D8	34	TRP
34	D8	35	GLN
34	D8	40	GLU
34	D8	41	ILE
34	D8	44	LYS
34	D8	47	LYS
34	D8	61	LEU
34	D8	64	TYR
35	D9	11	CYS
35	D9	29	ASN
35	D9	34	GLN
38	DC	11	LEU
38	DC	28	LEU
38	DC	55	ASP
38	DC	57	ASN
38	DC	81	GLU
38	DC	93	TYR
38	DC	210	ARG
38	DC	218	MET
39	DD	6	PHE
39	DD	10	THR
39	DD	24	ILE
39	DD	26	LYS
39	DD	27	THR
39	DD	28	GLU
39	DD	43	ARG
39	DD	44	ASN
39	DD	46	GLN
39	DD	95	LEU
39	DD	104	TYR
39	DD	106	ILE
39	DD	111	LEU
39	DD	112	GLN
39	DD	155	LEU
39	DD	157	ARG
39	DD	166	GLN
39	DD	176	ARG
39	DD	192	THR
39	DD	200	ASP

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Mol	Chain	Res	Type
39	DD	211	ARG
39	DD	217	ARG
39	DD	218	ARG
39	DD	221	VAL
39	DD	226	MET
39	DD	241	PRO
39	DD	246	PRO
39	DD	270	ILE
39	DD	275	LYS
39	DD	276	LYS
40	DE	17	ASP
40	DE	18	ASP
40	DE	25	VAL
40	DE	33	VAL
40	DE	54	GLN
40	DE	55	ASN
40	DE	56	PRO
40	DE	57	LYS
40	DE	62	PRO
40	DE	67	PHE
40	DE	76	ARG
40	DE	78	LEU
40	DE	79	ARG
40	DE	121	ASN
40	DE	144	ARG
40	DE	146	THR
40	DE	167	VAL
40	DE	175	VAL
40	DE	181	LEU
40	DE	188	VAL
40	DE	202	LYS
40	DE	203	LYS
41	DF	19	GLU
41	DF	23	ASP
41	DF	28	ILE
41	DF	72	ARG
41	DF	88	VAL
41	DF	98	SER
41	DF	122	LYS
41	DF	125	LEU
41	DF	135	LYS
41	DF	142	TRP

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Mol	Chain	Res	Type
41	DF	157	VAL
41	DF	160	ASN
41	DF	169	ASN
42	DG	11	TYR
42	DG	14	GLU
42	DG	16	ARG
42	DG	30	GLU
42	DG	39	ILE
42	DG	40	ASN
42	DG	45	GLU
42	DG	47	LYS
42	DG	52	ILE
42	DG	66	GLN
42	DG	67	LYS
42	DG	77	ILE
42	DG	82	LEU
42	DG	83	ARG
42	DG	87	PRO
42	DG	91	ARG
42	DG	93	THR
42	DG	95	ARG
42	DG	103	LEU
42	DG	107	LEU
42	DG	113	ARG
42	DG	114	ILE
42	DG	116	ASP
42	DG	133	LEU
42	DG	136	ARG
42	DG	139	LEU
42	DG	143	GLU
42	DG	150	ASP
42	DG	152	LEU
42	DG	153	ARG
42	DG	164	GLU
43	DH	43	VAL
43	DH	54	ARG
43	DH	57	ASP
43	DH	83	TYR
43	DH	85	LYS
43	DH	104	GLU
43	DH	105	LEU
43	DH	111	HIS

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Mol	Chain	Res	Type
43	DH	139	GLN
43	DH	152	ARG
43	DH	153	LYS
43	DH	157	TYR
43	DH	162	ILE
43	DH	163	TYR
46	DN	1	MET
46	DN	4	TYR
46	DN	19	GLU
46	DN	25	ARG
46	DN	32	THR
46	DN	38	HIS
46	DN	45	ASN
46	DN	48	MET
46	DN	56	ASN
46	DN	87	LEU
46	DN	96	GLU
46	DN	99	LEU
46	DN	119	ARG
46	DN	120	LEU
46	DN	127	ASP
46	DN	136	GLU
47	DO	1	MET
47	DO	8	LEU
47	DO	23	ARG
47	DO	24	VAL
47	DO	48	PRO
47	DO	69	ILE
47	DO	94	ARG
48	DP	6	LEU
48	DP	16	ARG
48	DP	32	THR
48	DP	39	LYS
48	DP	41	ARG
48	DP	42	SER
48	DP	45	LEU
48	DP	57	THR
48	DP	61	ARG
48	DP	68	GLN
48	DP	70	GLN
48	DP	75	ILE
48	DP	85	LEU

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Mol	Chain	Res	Type
48	DP	91	PHE
48	DP	112	LEU
48	DP	114	ILE
48	DP	115	LEU
48	DP	136	GLU
48	DP	149	GLU
49	DQ	1	MET
49	DQ	45	GLN
49	DQ	54	MET
49	DQ	55	VAL
49	DQ	56	ARG
49	DQ	58	PHE
49	DQ	59	ARG
49	DQ	79	LEU
49	DQ	104	PHE
49	DQ	139	GLU
50	DR	2	ARG
50	DR	4	LEU
50	DR	5	LYS
50	DR	10	LEU
50	DR	30	THR
50	DR	49	ASP
50	DR	70	LEU
50	DR	76	VAL
50	DR	79	LEU
50	DR	89	ASP
50	DR	94	TYR
50	DR	97	VAL
50	DR	99	LYS
50	DR	100	LEU
50	DR	111	LEU
51	DS	11	LYS
51	DS	12	PHE
51	DS	15	ARG
51	DS	18	ILE
51	DS	25	ARG
51	DS	29	PHE
51	DS	36	TYR
51	DS	40	ILE
51	DS	76	LYS
51	DS	92	TYR
51	DS	97	ARG

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Mol	Chain	Res	Type
51	DS	106	ARG
52	DT	11	GLU
52	DT	24	PRO
52	DT	29	ARG
52	DT	32	TYR
52	DT	38	ASN
52	DT	39	ARG
52	DT	41	ARG
52	DT	43	GLN
52	DT	44	ASP
52	DT	48	ILE
52	DT	49	VAL
52	DT	50	ILE
52	DT	53	ARG
52	DT	58	ASN
52	DT	65	LYS
52	DT	78	LEU
52	DT	82	LEU
52	DT	88	ILE
52	DT	99	LEU
52	DT	108	ARG
52	DT	115	ARG
52	DT	124	ASP
52	DT	128	GLU
53	DU	9	VAL
53	DU	66	ASN
53	DU	74	LEU
53	DU	78	THR
53	DU	92	ARG
53	DU	108	GLU
54	DV	2	PHE
54	DV	12	TYR
54	DV	16	PRO
54	DV	18	LEU
54	DV	19	LYS
54	DV	21	ARG
54	DV	26	ASP
54	DV	35	LEU
54	DV	39	LEU
54	DV	68	LYS
54	DV	79	VAL
54	DV	82	ARG

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Mol	Chain	Res	Type
54	DV	91	TYR
54	DV	95	LEU
54	DV	99	ILE
55	DW	8	ARG
55	DW	11	ARG
55	DW	14	PRO
55	DW	34	ASN
55	DW	107	LEU
56	DX	11	PRO
56	DX	28	PHE
56	DX	37	THR
56	DX	57	LEU
56	DX	68	ARG
56	DX	75	ASP
57	DY	2	ARG
57	DY	5	MET
57	DY	6	HIS
57	DY	7	VAL
57	DY	29	GLU
57	DY	32	PRO
57	DY	50	ARG
57	DY	62	GLU
57	DY	73	ARG
57	DY	76	CYS
57	DY	90	LEU
57	DY	97	ARG
58	DZ	5	LEU
58	DZ	9	TYR
58	DZ	10	ARG
58	DZ	24	LEU
58	DZ	31	ARG
58	DZ	37	VAL
58	DZ	42	VAL
58	DZ	50	GLN
58	DZ	61	LEU
58	DZ	65	GLN
58	DZ	67	LEU
58	DZ	70	LEU
58	DZ	72	ARG
58	DZ	81	ARG
58	DZ	107	THR
58	DZ	121	HIS

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Mol	Chain	Res	Type
58	DZ	122	ARG
58	DZ	123	ASP
58	DZ	127	LYS
58	DZ	135	GLU
58	DZ	136	PHE
58	DZ	140	ASP
58	DZ	150	LEU
58	DZ	168	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (325) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	40	HIS
2	AB	45	GLN
2	AB	76	GLN
2	AB	78	GLN
2	AB	94	ASN
2	AB	95	GLN
2	AB	204	ASN
3	AC	6	HIS
3	AC	28	GLN
3	AC	31	HIS
3	AC	118	GLN
3	AC	123	GLN
3	AC	139	GLN
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	73	ASN
6	AF	27	GLN
6	AF	32	ASN
6	AF	64	GLN
6	AF	73	ASN
6	AF	84	ASN
6	AF	94	GLN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	86	GLN

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Mol	Chain	Res	Type
8	AH	82	HIS
9	AI	31	GLN
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	56	HIS
10	AJ	62	HIS
10	AJ	68	HIS
10	AJ	78	ASN
11	AK	27	ASN
11	AK	38	ASN
11	AK	93	GLN
11	AK	117	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	75	HIS
13	AM	12	ASN
13	AM	40	ASN
13	AM	77	ASN
13	AM	101	GLN
14	AN	49	HIS
15	AO	37	ASN
15	AO	46	HIS
15	AO	62	GLN
16	AP	76	GLN
17	AQ	16	GLN
18	AR	63	GLN
19	AS	14	HIS
19	AS	47	HIS
20	AT	9	ASN
20	AT	18	GLN
20	AT	26	ASN
20	AT	42	GLN
20	AT	45	GLN
20	AT	75	ASN
25	AZ	19	HIS
25	AZ	64	ASN
25	AZ	67	HIS
25	AZ	98	GLN
25	AZ	115	GLN
25	AZ	125	GLN
25	AZ	185	ASN

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Mol	Chain	Res	Type
25	AZ	193	ASN
25	AZ	273	HIS
25	AZ	285	ASN
25	AZ	341	GLN
25	AZ	367	ASN
26	B0	12	ASN
26	B0	29	GLN
26	B0	50	ASN
26	B0	70	GLN
27	B1	16	ASN
27	B1	45	ASN
28	B2	43	GLN
28	B2	46	GLN
28	B2	47	ASN
28	B2	56	GLN
28	B2	70	GLN
29	B3	19	GLN
29	B3	46	ASN
29	B3	52	HIS
30	B4	20	ASN
30	B4	40	HIS
30	B4	47	GLN
32	B6	26	ASN
35	B9	29	ASN
38	BC	57	ASN
39	BD	44	ASN
39	BD	58	HIS
39	BD	116	GLN
39	BD	126	GLN
39	BD	166	GLN
39	BD	186	HIS
39	BD	198	ASN
39	BD	233	HIS
39	BD	253	GLN
40	BE	48	GLN
40	BE	54	GLN
40	BE	55	ASN
40	BE	121	ASN
40	BE	129	HIS
40	BE	169	ASN
40	BE	180	ASN
41	BF	29	ASN

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Mol	Chain	Res	Type
41	BF	40	GLN
41	BF	69	HIS
41	BF	75	HIS
41	BF	133	ASN
41	BF	160	ASN
41	BF	204	ASN
42	BG	40	ASN
42	BG	79	ASN
43	BH	61	HIS
43	BH	74	ASN
43	BH	139	GLN
43	BH	147	ASN
46	BN	45	ASN
46	BN	56	ASN
46	BN	94	HIS
46	BN	131	GLN
47	BO	3	GLN
48	BP	13	ASN
48	BP	68	GLN
48	BP	81	GLN
48	BP	84	ASN
48	BP	128	HIS
49	BQ	45	GLN
49	BQ	141	GLN
50	BR	11	ASN
50	BR	23	ASN
50	BR	24	GLN
52	BT	38	ASN
52	BT	43	GLN
52	BT	58	ASN
52	BT	79	HIS
52	BT	90	GLN
52	BT	104	ASN
53	BU	49	HIS
53	BU	66	ASN
53	BU	117	GLN
54	BV	11	GLN
55	BW	57	ASN
55	BW	61	ASN
55	BW	102	HIS
56	BX	41	ASN
56	BX	55	ASN

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Mol	Chain	Res	Type
56	BX	82	GLN
56	BX	87	GLN
57	BY	6	HIS
58	BZ	30	ASN
58	BZ	75	ASN
58	BZ	118	GLN
58	BZ	132	ASN
2	CB	37	ASN
2	CB	40	HIS
2	CB	45	GLN
2	CB	76	GLN
2	CB	78	GLN
2	CB	95	GLN
2	CB	204	ASN
3	CC	6	HIS
3	CC	28	GLN
3	CC	31	HIS
3	CC	118	GLN
3	CC	123	GLN
3	CC	139	GLN
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	73	ASN
6	CF	27	GLN
6	CF	32	ASN
6	CF	64	GLN
6	CF	73	ASN
6	CF	84	ASN
6	CF	94	GLN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
8	CH	82	HIS
9	CI	31	GLN
9	CI	124	GLN
10	CJ	13	HIS
10	CJ	56	HIS
10	CJ	62	HIS

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Mol	Chain	Res	Type
10	CJ	68	HIS
10	CJ	78	ASN
11	CK	27	ASN
11	CK	38	ASN
11	CK	93	GLN
11	CK	117	ASN
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
12	CL	75	HIS
13	CM	12	ASN
13	CM	40	ASN
13	CM	77	ASN
13	CM	92	HIS
13	CM	101	GLN
14	CN	49	HIS
15	CO	37	ASN
15	CO	46	HIS
15	CO	62	GLN
16	CP	76	GLN
17	CQ	16	GLN
18	CR	63	GLN
19	CS	14	HIS
20	CT	9	ASN
20	CT	18	GLN
20	CT	26	ASN
20	CT	42	GLN
20	CT	45	GLN
20	CT	75	ASN
25	CZ	19	HIS
25	CZ	64	ASN
25	CZ	67	HIS
25	CZ	91	ASN
25	CZ	98	GLN
25	CZ	115	GLN
25	CZ	125	GLN
25	CZ	185	ASN
25	CZ	193	ASN
25	CZ	285	ASN
25	CZ	341	GLN
25	CZ	367	ASN
26	D0	12	ASN

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Mol	Chain	Res	Type
26	D0	29	GLN
26	D0	50	ASN
26	D0	70	GLN
27	D1	42	GLN
27	D1	45	ASN
28	D2	47	ASN
28	D2	56	GLN
28	D2	71	ASN
29	D3	19	GLN
29	D3	46	ASN
29	D3	52	HIS
30	D4	20	ASN
30	D4	40	HIS
30	D4	47	GLN
32	D6	26	ASN
34	D8	31	HIS
35	D9	29	ASN
38	DC	57	ASN
39	DD	44	ASN
39	DD	58	HIS
39	DD	116	GLN
39	DD	126	GLN
39	DD	166	GLN
39	DD	186	HIS
39	DD	198	ASN
39	DD	233	HIS
39	DD	253	GLN
40	DE	48	GLN
40	DE	54	GLN
40	DE	55	ASN
40	DE	121	ASN
40	DE	129	HIS
40	DE	135	HIS
40	DE	143	ASN
40	DE	169	ASN
41	DF	29	ASN
41	DF	40	GLN
41	DF	69	HIS
41	DF	75	HIS
41	DF	133	ASN
41	DF	160	ASN
41	DF	204	ASN

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Mol	Chain	Res	Type
42	DG	40	ASN
42	DG	41	GLN
42	DG	66	GLN
43	DH	61	HIS
43	DH	74	ASN
43	DH	139	GLN
43	DH	147	ASN
46	DN	45	ASN
46	DN	56	ASN
46	DN	94	HIS
46	DN	131	GLN
47	DO	3	GLN
48	DP	13	ASN
48	DP	68	GLN
48	DP	81	GLN
48	DP	84	ASN
48	DP	128	HIS
49	DQ	45	GLN
49	DQ	141	GLN
50	DR	11	ASN
50	DR	23	ASN
50	DR	24	GLN
52	DT	38	ASN
52	DT	43	GLN
52	DT	58	ASN
52	DT	79	HIS
52	DT	90	GLN
52	DT	104	ASN
53	DU	49	HIS
53	DU	66	ASN
53	DU	117	GLN
54	DV	11	GLN
55	DW	57	ASN
55	DW	61	ASN
55	DW	102	HIS
56	DX	41	ASN
56	DX	55	ASN
56	DX	82	GLN
56	DX	87	GLN
57	DY	6	HIS
58	DZ	30	ASN
58	DZ	75	ASN

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Mol	Chain	Res	Type
58	DZ	118	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1509/1522 (99%)	227 (15%)	43 (2%)
1	CA	1509/1522 (99%)	222 (14%)	46 (3%)
22	AV	75/76 (98%)	22 (29%)	1 (1%)
22	AW	75/76 (98%)	21 (28%)	2 (2%)
22	CV	75/76 (98%)	23 (30%)	1 (1%)
22	CW	75/76 (98%)	21 (28%)	3 (4%)
23	AX	16/27 (59%)	6 (37%)	1 (6%)
23	CX	16/27 (59%)	5 (31%)	1 (6%)
24	AY	74/77 (96%)	25 (33%)	3 (4%)
24	CY	74/77 (96%)	25 (33%)	3 (4%)
36	BA	2900/2915 (99%)	494 (17%)	45 (1%)
36	DA	2900/2915 (99%)	492 (16%)	45 (1%)
37	BB	118/122 (96%)	22 (18%)	3 (2%)
37	DB	118/122 (96%)	22 (18%)	3 (2%)
All	All	9534/9630 (99%)	1627 (17%)	200 (2%)

All (1627) 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	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	55	A
1	AA	58	C
1	AA	60	A
1	AA	61	G
1	AA	63	C
1	AA	65	U
1	AA	79	G
1	AA	80	G
1	AA	81	U

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Mol	Chain	Res	Type
1	AA	84	U
1	AA	89	C
1	AA	90	U
1	AA	101	A
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	144	G
1	AA	146	G
1	AA	147	G
1	AA	151	A
1	AA	172	A
1	AA	173	U
1	AA	182	U
1	AA	189(I)	G
1	AA	195	A
1	AA	197	A
1	AA	198	G
1	AA	199	G
1	AA	202	U
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	244	U
1	AA	246	A
1	AA	247	G
1	AA	251	G
1	AA	267	C
1	AA	275	G
1	AA	289	G
1	AA	328	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	348	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	369	C

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Mol	Chain	Res	Type
1	AA	372	C
1	AA	373	A
1	AA	397	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	452	A
1	AA	454	C
1	AA	471	G
1	AA	484	G
1	AA	485	G
1	AA	496	A
1	AA	499	A
1	AA	508	C
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	534	U
1	AA	548	G
1	AA	559	A
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	632	A
1	AA	653	A
1	AA	665	A
1	AA	688	G
1	AA	701	C
1	AA	702	A
1	AA	721	G
1	AA	722	A

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Mol	Chain	Res	Type
1	AA	723	U
1	AA	731	G
1	AA	734	G
1	AA	748	C
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	787	A
1	AA	793	U
1	AA	794	A
1	AA	816	A
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	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	962	C
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	981	U
1	AA	982	U
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	996	A
1	AA	1004	A

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Mol	Chain	Res	Type
1	AA	1026	G
1	AA	1030	C
1	AA	1050	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	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1171	G
1	AA	1182	G
1	AA	1184	G
1	AA	1187	G
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1201	A
1	AA	1212	U
1	AA	1238	A
1	AA	1240	U
1	AA	1256	A
1	AA	1257	U
1	AA	1272	G
1	AA	1280	A
1	AA	1281	U
1	AA	1284	C
1	AA	1285	A

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Mol	Chain	Res	Type
1	AA	1286	A
1	AA	1287	A
1	AA	1299	A
1	AA	1300	G
1	AA	1302	U
1	AA	1320	C
1	AA	1321	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1336	C
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1363	C
1	AA	1363(A)	A
1	AA	1364	U
1	AA	1370	G
1	AA	1397	C
1	AA	1398	A
1	AA	1400	C
1	AA	1419	G
1	AA	1439	C
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1470	G
1	AA	1492	A
1	AA	1494	G
1	AA	1499	A
1	AA	1503	A
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1537	U

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Mol	Chain	Res	Type
22	AV	2	C
22	AV	5	G
22	AV	7	A
22	AV	8	U
22	AV	16	U
22	AV	17	C
22	AV	18	G
22	AV	20	U
22	AV	21	A
22	AV	42	C
22	AV	44	G
22	AV	45	U
22	AV	46	G
22	AV	47	U
22	AV	48	C
22	AV	60	U
22	AV	61	C
22	AV	62	C
22	AV	63	G
22	AV	68	C
22	AV	74	C
22	AV	76	A
22	AW	4	C
22	AW	8	U
22	AW	9	A
22	AW	16	U
22	AW	17	C
22	AW	18	G
22	AW	19	G
22	AW	21	A
22	AW	39	U
22	AW	44	G
22	AW	45	U
22	AW	47	U
22	AW	48	C
22	AW	50	U
22	AW	56	C
22	AW	57	G
22	AW	59	U
22	AW	61	C
22	AW	62	C
22	AW	73	A

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Mol	Chain	Res	Type
22	AW	74	C
23	AX	12	A
23	AX	13	A
23	AX	16	A
23	AX	17	U
23	AX	22	U
23	AX	27	A
24	AY	3	G
24	AY	5	G
24	AY	8	4SU
24	AY	9	A
24	AY	12	U
24	AY	13	C
24	AY	16	H2U
24	AY	17	H2U
24	AY	18	G
24	AY	19	G
24	AY	20	H2U
24	AY	21	A
24	AY	25	C
24	AY	26	A
24	AY	41	C
24	AY	44	G
24	AY	45	U
24	AY	46	7MG
24	AY	47	U
24	AY	48	U
24	AY	56	C
24	AY	59	G
24	AY	62	U
24	AY	71	C
24	AY	73	G
36	BA	10	G
36	BA	45	C
36	BA	69	C
36	BA	71	A
36	BA	72	U
36	BA	74	A
36	BA	75	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	100	G
36	BA	102	G
36	BA	118	A
36	BA	119	A
36	BA	120	U
36	BA	129	C
36	BA	139(A)	G
36	BA	141	A
36	BA	146	G
36	BA	149	A
36	BA	156	U
36	BA	174	C
36	BA	181	A
36	BA	196	A
36	BA	197	A
36	BA	199	A
36	BA	200	U
36	BA	204	A
36	BA	205	G
36	BA	215	G
36	BA	216	A
36	BA	221	A
36	BA	222	A
36	BA	229	A
36	BA	233	A
36	BA	245	G
36	BA	248	G
36	BA	261	G
36	BA	268	C
36	BA	271(I)	G
36	BA	271(K)	U
36	BA	271(M)	G
36	BA	271(O)	C
36	BA	272(A)	U
36	BA	272(B)	G
36	BA	272(I)	U
36	BA	276	A
36	BA	278	A
36	BA	288	C

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Mol	Chain	Res	Type
36	BA	322	A
36	BA	324	A
36	BA	329	G
36	BA	330	A
36	BA	333	G
36	BA	338	G
36	BA	352	G
36	BA	353	G
36	BA	358	U
36	BA	362	U
36	BA	363	G
36	BA	363(F)	A
36	BA	386	G
36	BA	388	G
36	BA	396	G
36	BA	405	U
36	BA	406	G
36	BA	411	G
36	BA	428	A
36	BA	448	U
36	BA	451	C
36	BA	457	A
36	BA	458	G
36	BA	470	A
36	BA	480	A
36	BA	481	G
36	BA	494	G
36	BA	505	A
36	BA	508	G
36	BA	509	C
36	BA	512	G
36	BA	513	A
36	BA	529	A
36	BA	530	G
36	BA	531	C
36	BA	532	A
36	BA	533	G
36	BA	537	C
36	BA	556	G
36	BA	563	G
36	BA	573	G
36	BA	575	A

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Mol	Chain	Res	Type
36	BA	586	A
36	BA	587	C
36	BA	588	U
36	BA	603	A
36	BA	604	G
36	BA	607	U
36	BA	613	G
36	BA	614(B)	G
36	BA	615	G
36	BA	622	G
36	BA	624	C
36	BA	627	A
36	BA	629	G
36	BA	637	A
36	BA	645	C
36	BA	646	A
36	BA	651	G
36	BA	653	A
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	656	G
36	BA	669	G
36	BA	673	C
36	BA	686	G
36	BA	708	C
36	BA	722	A
36	BA	730	C
36	BA	753	C
36	BA	765	G
36	BA	776	G
36	BA	782	A
36	BA	784	A
36	BA	785	G
36	BA	790	C
36	BA	791	C
36	BA	792	G
36	BA	805	G
36	BA	812	C
36	BA	819	A

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Mol	Chain	Res	Type
36	BA	827	U
36	BA	828	U
36	BA	830	G
36	BA	848	G
36	BA	857	C
36	BA	859	G
36	BA	866	A
36	BA	878	A
36	BA	889	C
36	BA	890	A
36	BA	896	A
36	BA	897	C
36	BA	901	A
36	BA	910	A
36	BA	917	A
36	BA	926	A
36	BA	932	G
36	BA	941	A
36	BA	945	A
36	BA	946	G
36	BA	953	A
36	BA	958	U
36	BA	959	A
36	BA	961	C
36	BA	974	G
36	BA	975	C
36	BA	983	A
36	BA	991	C
36	BA	996	A
36	BA	1011	G
36	BA	1012	U
36	BA	1013	C
36	BA	1022	G
36	BA	1025	G
36	BA	1026	U
36	BA	1034	G
36	BA	1038	C
36	BA	1039	G
36	BA	1045	A
36	BA	1046	A
36	BA	1047	G
36	BA	1053	C

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Mol	Chain	Res	Type
36	BA	1059	G
36	BA	1061	U
36	BA	1062	G
36	BA	1065	U
36	BA	1067	A
36	BA	1068	G
36	BA	1069	A
36	BA	1070	A
36	BA	1071	G
36	BA	1072	C
36	BA	1073	A
36	BA	1087	G
36	BA	1088	A
36	BA	1090	U
36	BA	1094	U
36	BA	1111	A
36	BA	1112	G
36	BA	1116	C
36	BA	1135	C
36	BA	1136	G
36	BA	1143	A
36	BA	1155	A
36	BA	1174	A
36	BA	1175	U
36	BA	1176	G
36	BA	1178	C
36	BA	1205	U
36	BA	1210	A
36	BA	1211	U
36	BA	1212	G
36	BA	1223	G
36	BA	1236	G
36	BA	1244	G
36	BA	1247	A
36	BA	1248	G
36	BA	1253	A
36	BA	1256	G
36	BA	1265	A
36	BA	1271	G
36	BA	1272	A
36	BA	1273	U
36	BA	1294	U

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Mol	Chain	Res	Type
36	BA	1300	U
36	BA	1301	A
36	BA	1302	A
36	BA	1314	C
36	BA	1319	G
36	BA	1332	G
36	BA	1349	A
36	BA	1359	A
36	BA	1365	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	1407	C
36	BA	1416	G
36	BA	1417	C
36	BA	1427	A
36	BA	1428	C
36	BA	1437	C
36	BA	1445	A
36	BA	1449	A
36	BA	1450	G
36	BA	1455	G
36	BA	1458	C
36	BA	1460	A
36	BA	1461	G
36	BA	1467	C
36	BA	1471	A
36	BA	1475	G
36	BA	1478	G
36	BA	1482	G
36	BA	1485	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

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Mol	Chain	Res	Type
36	BA	1502	C
36	BA	1505	C
36	BA	1509	C
36	BA	1509(A)	A
36	BA	1517	G
36	BA	1541	G
36	BA	1542	A
36	BA	1544	A
36	BA	1549	C
36	BA	1554	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	1591	G
36	BA	1593	G
36	BA	1603	A
36	BA	1608	A
36	BA	1616	A
36	BA	1617	C
36	BA	1618	A
36	BA	1634	A
36	BA	1635	G
36	BA	1640	C
36	BA	1648	C
36	BA	1651	G
36	BA	1654	A
36	BA	1666	G
36	BA	1674	G
36	BA	1698	A
36	BA	1699	G
36	BA	1721	G
36	BA	1722	A
36	BA	1739	U
36	BA	1742	G
36	BA	1748	G
36	BA	1756	G
36	BA	1763	G
36	BA	1764	G

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Mol	Chain	Res	Type
36	BA	1773	A
36	BA	1780	A
36	BA	1791	A
36	BA	1799	G
36	BA	1800	C
36	BA	1801	G
36	BA	1816	G
36	BA	1820	U
36	BA	1821	A
36	BA	1835	G
36	BA	1847	A
36	BA	1858	G
36	BA	1865	G
36	BA	1877	A
36	BA	1878	G
36	BA	1881	C
36	BA	1885	A
36	BA	1888	G
36	BA	1889	A
36	BA	1900	A
36	BA	1906	G
36	BA	1929	G
36	BA	1930	G
36	BA	1936	A
36	BA	1938	A
36	BA	1948	G
36	BA	1955	U
36	BA	1960	A
36	BA	1963	U
36	BA	1967	C
36	BA	1969	A
36	BA	1970	A
36	BA	1971	A
36	BA	1972	A
36	BA	1982	C
36	BA	1987	G
36	BA	1992	G
36	BA	1993	U
36	BA	1997	G
36	BA	2023	G
36	BA	2031	A
36	BA	2033	A

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Mol	Chain	Res	Type
36	BA	2034	U
36	BA	2036	C
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	2069	G
36	BA	2093	G
36	BA	2100	G
36	BA	2102	U
36	BA	2103	C
36	BA	2104	G
36	BA	2116	G
36	BA	2117	A
36	BA	2118	U
36	BA	2127	G
36	BA	2129	C
36	BA	2131	G
36	BA	2132	U
36	BA	2133	G
36	BA	2146	C
36	BA	2148	G
36	BA	2157	G
36	BA	2159	G
36	BA	2160	G
36	BA	2172	U
36	BA	2173	A
36	BA	2174	C
36	BA	2180	U
36	BA	2185	C
36	BA	2186	G
36	BA	2187	G
36	BA	2189	U
36	BA	2190	G
36	BA	2192	G
36	BA	2193	G
36	BA	2198	A
36	BA	2199	A
36	BA	2200	C
36	BA	2207	G

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Mol	Chain	Res	Type
36	BA	2208	A
36	BA	2218	U
36	BA	2219	G
36	BA	2225	A
36	BA	2238	G
36	BA	2239	G
36	BA	2275	C
36	BA	2283	C
36	BA	2287	A
36	BA	2288	A
36	BA	2305	A
36	BA	2306	C
36	BA	2307	G
36	BA	2308	G
36	BA	2313	C
36	BA	2319	G
36	BA	2320	A
36	BA	2334	G
36	BA	2336	A
36	BA	2343	C
36	BA	2347	C
36	BA	2350	C
36	BA	2361	A
36	BA	2383	G
36	BA	2385	C
36	BA	2392	A
36	BA	2400	G
36	BA	2402	C
36	BA	2403	C
36	BA	2406	U
36	BA	2423	U
36	BA	2425	A
36	BA	2429	G
36	BA	2430	A
36	BA	2431	U
36	BA	2434	A
36	BA	2439	A
36	BA	2441	C
36	BA	2448	A
36	BA	2465	C
36	BA	2469	A
36	BA	2476	A

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Mol	Chain	Res	Type
36	BA	2484	G
36	BA	2502	G
36	BA	2505	G
36	BA	2518	A
36	BA	2524	G
36	BA	2529	G
36	BA	2543	G
36	BA	2554	U
36	BA	2566	A
36	BA	2567	G
36	BA	2581	G
36	BA	2582	G
36	BA	2586	C
36	BA	2602	A
36	BA	2604	U
36	BA	2609	U
36	BA	2611	U
36	BA	2612	C
36	BA	2615	U
36	BA	2630	G
36	BA	2636	U
36	BA	2646	C
36	BA	2660	A
36	BA	2673	G
36	BA	2690	C
36	BA	2702	U
36	BA	2712	U
36	BA	2712(A)	A
36	BA	2713	A
36	BA	2720	U
36	BA	2726	U
36	BA	2733	A
36	BA	2750	A
36	BA	2751	G
36	BA	2752	C
36	BA	2757	A
36	BA	2759	G
36	BA	2761	G
36	BA	2762	G
36	BA	2764	A
36	BA	2765	A
36	BA	2766	G

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Mol	Chain	Res	Type
36	BA	2778	A
36	BA	2779	U
36	BA	2780	G
36	BA	2781	A
36	BA	2790	A
36	BA	2791	C
36	BA	2792	G
36	BA	2794	C
36	BA	2799	C
36	BA	2802	G
36	BA	2803	C
36	BA	2808	U
36	BA	2820	A
36	BA	2821	A
36	BA	2823	A
36	BA	2833	G
36	BA	2834	G
36	BA	2849	U
36	BA	2863	C
36	BA	2872	G
36	BA	2880	C
36	BA	2894	G
37	BB	8	U
37	BB	13	A
37	BB	15	A
37	BB	16	G
37	BB	17	C
37	BB	21	G
37	BB	25	A
37	BB	27	C
37	BB	35	U
37	BB	41	U
37	BB	42	C
37	BB	43	C
37	BB	45	A
37	BB	53	A
37	BB	57	A
37	BB	66	A
37	BB	67	G
37	BB	73	A
37	BB	81	G
37	BB	82	G

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Mol	Chain	Res	Type
37	BB	88	C
37	BB	110	G
1	CA	7	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	55	A
1	CA	58	C
1	CA	60	A
1	CA	61	G
1	CA	63	C
1	CA	65	U
1	CA	79	G
1	CA	80	G
1	CA	81	U
1	CA	84	U
1	CA	89	C
1	CA	90	U
1	CA	101	A
1	CA	116	A
1	CA	120	A
1	CA	121	C
1	CA	131	C
1	CA	144	G
1	CA	146	G
1	CA	147	G
1	CA	151	A
1	CA	172	A
1	CA	173	U
1	CA	182	U
1	CA	189(I)	G
1	CA	195	A
1	CA	197	A
1	CA	198	G
1	CA	199	G
1	CA	202	U
1	CA	203	U
1	CA	204	U

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Mol	Chain	Res	Type
1	CA	216	G
1	CA	244	U
1	CA	246	A
1	CA	247	G
1	CA	251	G
1	CA	267	C
1	CA	275	G
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	332	G
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	348	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	369	C
1	CA	372	C
1	CA	373	A
1	CA	397	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	429	U
1	CA	430	A
1	CA	439	A
1	CA	452	A
1	CA	454	C
1	CA	471	G
1	CA	484	G
1	CA	485	G
1	CA	496	A
1	CA	499	A
1	CA	508	C
1	CA	509	A
1	CA	518	C
1	CA	527	G
1	CA	531	U

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Mol	Chain	Res	Type
1	CA	532	A
1	CA	534	U
1	CA	548	G
1	CA	559	A
1	CA	561	U
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	577	G
1	CA	632	A
1	CA	653	A
1	CA	665	A
1	CA	688	G
1	CA	701	C
1	CA	702	A
1	CA	721	G
1	CA	722	A
1	CA	723	U
1	CA	731	G
1	CA	734	G
1	CA	748	C
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	787	A
1	CA	793	U
1	CA	794	A
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	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U

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Mol	Chain	Res	Type
1	CA	962	C
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	974	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	981	U
1	CA	982	U
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	996	A
1	CA	1004	A
1	CA	1026	G
1	CA	1030	C
1	CA	1050	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	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1146	A
1	CA	1152	A
1	CA	1154	G
1	CA	1158	C
1	CA	1159	U
1	CA	1182	G

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Mol	Chain	Res	Type
1	CA	1184	G
1	CA	1187	G
1	CA	1196	U
1	CA	1197	G
1	CA	1200	C
1	CA	1201	A
1	CA	1212	U
1	CA	1238	A
1	CA	1240	U
1	CA	1256	A
1	CA	1257	U
1	CA	1272	G
1	CA	1280	A
1	CA	1281	U
1	CA	1284	C
1	CA	1285	A
1	CA	1286	A
1	CA	1287	A
1	CA	1299	A
1	CA	1300	G
1	CA	1302	U
1	CA	1320	C
1	CA	1321	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1335	C
1	CA	1336	C
1	CA	1346	A
1	CA	1347	G
1	CA	1353	G
1	CA	1363	C
1	CA	1363(A)	A
1	CA	1364	U
1	CA	1370	G
1	CA	1398	A
1	CA	1400	C
1	CA	1419	G
1	CA	1442(A)	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G

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Mol	Chain	Res	Type
1	CA	1487	G
1	CA	1492	A
1	CA	1494	G
1	CA	1497	G
1	CA	1499	A
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1524	C
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
22	CV	2	C
22	CV	5	G
22	CV	7	A
22	CV	8	U
22	CV	16	U
22	CV	17	C
22	CV	18	G
22	CV	20	U
22	CV	21	A
22	CV	23	A
22	CV	42	C
22	CV	44	G
22	CV	45	U
22	CV	46	G
22	CV	47	U
22	CV	48	C
22	CV	60	U
22	CV	61	C
22	CV	62	C
22	CV	63	G
22	CV	68	C
22	CV	74	C
22	CV	76	A
22	CW	4	C
22	CW	8	U
22	CW	9	A
22	CW	16	U
22	CW	17	C

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Mol	Chain	Res	Type
22	CW	18	G
22	CW	19	G
22	CW	21	A
22	CW	39	U
22	CW	44	G
22	CW	45	U
22	CW	47	U
22	CW	48	C
22	CW	50	U
22	CW	56	C
22	CW	57	G
22	CW	59	U
22	CW	61	C
22	CW	62	C
22	CW	73	A
22	CW	74	C
23	CX	12	A
23	CX	13	A
23	CX	17	U
23	CX	22	U
23	CX	27	A
24	CY	3	G
24	CY	5	G
24	CY	8	4SU
24	CY	9	A
24	CY	12	U
24	CY	13	C
24	CY	16	H2U
24	CY	17	H2U
24	CY	18	G
24	CY	19	G
24	CY	20	H2U
24	CY	21	A
24	CY	25	C
24	CY	26	A
24	CY	41	C
24	CY	44	G
24	CY	45	U
24	CY	46	7MG
24	CY	47	U
24	CY	48	U
24	CY	56	C

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Mol	Chain	Res	Type
24	CY	59	G
24	CY	62	U
24	CY	71	C
24	CY	73	G
36	DA	10	G
36	DA	27	G
36	DA	45	C
36	DA	69	C
36	DA	71	A
36	DA	72	U
36	DA	74	A
36	DA	75	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	100	G
36	DA	102	G
36	DA	118	A
36	DA	119	A
36	DA	120	U
36	DA	129	C
36	DA	139(A)	G
36	DA	141	A
36	DA	146	G
36	DA	149	A
36	DA	156	U
36	DA	174	C
36	DA	181	A
36	DA	182	A
36	DA	196	A
36	DA	197	A
36	DA	199	A
36	DA	200	U
36	DA	204	A
36	DA	205	G
36	DA	215	G
36	DA	216	A
36	DA	221	A
36	DA	222	A

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Mol	Chain	Res	Type
36	DA	229	A
36	DA	233	A
36	DA	245	G
36	DA	248	G
36	DA	261	G
36	DA	268	C
36	DA	271(I)	G
36	DA	271(K)	U
36	DA	271(M)	G
36	DA	271(O)	C
36	DA	272(A)	U
36	DA	272(B)	G
36	DA	272(I)	U
36	DA	276	A
36	DA	278	A
36	DA	288	C
36	DA	322	A
36	DA	324	A
36	DA	329	G
36	DA	330	A
36	DA	333	G
36	DA	338	G
36	DA	352	G
36	DA	353	G
36	DA	358	U
36	DA	362	U
36	DA	363	G
36	DA	363(F)	A
36	DA	386	G
36	DA	388	G
36	DA	396	G
36	DA	405	U
36	DA	406	G
36	DA	411	G
36	DA	428	A
36	DA	448	U
36	DA	451	C
36	DA	457	A
36	DA	458	G
36	DA	470	A
36	DA	480	A
36	DA	481	G

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Mol	Chain	Res	Type
36	DA	494	G
36	DA	505	A
36	DA	508	G
36	DA	509	C
36	DA	512	G
36	DA	513	A
36	DA	529	A
36	DA	530	G
36	DA	531	C
36	DA	532	A
36	DA	533	G
36	DA	537	C
36	DA	556	G
36	DA	563	G
36	DA	573	G
36	DA	575	A
36	DA	587	C
36	DA	588	U
36	DA	603	A
36	DA	604	G
36	DA	607	U
36	DA	613	G
36	DA	614(B)	G
36	DA	615	G
36	DA	622	G
36	DA	624	C
36	DA	627	A
36	DA	629	G
36	DA	637	A
36	DA	645	C
36	DA	646	A
36	DA	651	G
36	DA	653	A
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	656	G
36	DA	669	G
36	DA	673	C
36	DA	686	G

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Mol	Chain	Res	Type
36	DA	708	C
36	DA	722	A
36	DA	730	C
36	DA	753	C
36	DA	765	G
36	DA	776	G
36	DA	782	A
36	DA	784	A
36	DA	785	G
36	DA	790	C
36	DA	791	C
36	DA	792	G
36	DA	805	G
36	DA	812	C
36	DA	819	A
36	DA	827	U
36	DA	828	U
36	DA	830	G
36	DA	848	G
36	DA	857	C
36	DA	859	G
36	DA	866	A
36	DA	878	A
36	DA	889	C
36	DA	890	A
36	DA	896	A
36	DA	897	C
36	DA	901	A
36	DA	910	A
36	DA	917	A
36	DA	926	A
36	DA	932	G
36	DA	941	A
36	DA	945	A
36	DA	946	G
36	DA	953	A
36	DA	958	U
36	DA	959	A
36	DA	961	C
36	DA	974	G
36	DA	975	C
36	DA	983	A

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Mol	Chain	Res	Type
36	DA	991	C
36	DA	996	A
36	DA	1011	G
36	DA	1012	U
36	DA	1013	C
36	DA	1022	G
36	DA	1025	G
36	DA	1026	U
36	DA	1034	G
36	DA	1038	C
36	DA	1039	G
36	DA	1045	A
36	DA	1046	A
36	DA	1047	G
36	DA	1053	C
36	DA	1059	G
36	DA	1061	U
36	DA	1062	G
36	DA	1065	U
36	DA	1067	A
36	DA	1068	G
36	DA	1069	A
36	DA	1070	A
36	DA	1071	G
36	DA	1072	C
36	DA	1073	A
36	DA	1087	G
36	DA	1088	A
36	DA	1090	U
36	DA	1094	U
36	DA	1111	A
36	DA	1112	G
36	DA	1116	C
36	DA	1135	C
36	DA	1136	G
36	DA	1143	A
36	DA	1155	A
36	DA	1174	A
36	DA	1175	U
36	DA	1176	G
36	DA	1178	C
36	DA	1205	U

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Mol	Chain	Res	Type
36	DA	1210	A
36	DA	1211	U
36	DA	1212	G
36	DA	1223	G
36	DA	1236	G
36	DA	1244	G
36	DA	1247	A
36	DA	1248	G
36	DA	1253	A
36	DA	1256	G
36	DA	1265	A
36	DA	1271	G
36	DA	1272	A
36	DA	1273	U
36	DA	1294	U
36	DA	1300	U
36	DA	1301	A
36	DA	1302	A
36	DA	1314	C
36	DA	1319	G
36	DA	1332	G
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	1407	C
36	DA	1416	G
36	DA	1417	C
36	DA	1427	A
36	DA	1428	C
36	DA	1437	C
36	DA	1445	A
36	DA	1449	A
36	DA	1450	G
36	DA	1455	G
36	DA	1458	C

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Mol	Chain	Res	Type
36	DA	1460	A
36	DA	1461	G
36	DA	1467	C
36	DA	1471	A
36	DA	1475	G
36	DA	1478	G
36	DA	1482	G
36	DA	1485	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	1502	C
36	DA	1505	C
36	DA	1509	C
36	DA	1509(A)	A
36	DA	1517	G
36	DA	1541	G
36	DA	1542	A
36	DA	1544	A
36	DA	1554	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	1591	G
36	DA	1593	G
36	DA	1603	A
36	DA	1608	A
36	DA	1616	A
36	DA	1617	C
36	DA	1618	A
36	DA	1634	A
36	DA	1640	C
36	DA	1648	C
36	DA	1651	G

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Mol	Chain	Res	Type
36	DA	1653	G
36	DA	1654	A
36	DA	1666	G
36	DA	1674	G
36	DA	1698	A
36	DA	1699	G
36	DA	1721	G
36	DA	1722	A
36	DA	1739	U
36	DA	1742	G
36	DA	1748	G
36	DA	1756	G
36	DA	1763	G
36	DA	1764	G
36	DA	1773	A
36	DA	1780	A
36	DA	1791	A
36	DA	1799	G
36	DA	1800	C
36	DA	1801	G
36	DA	1816	G
36	DA	1820	U
36	DA	1821	A
36	DA	1835	G
36	DA	1847	A
36	DA	1858	G
36	DA	1865	G
36	DA	1877	A
36	DA	1878	G
36	DA	1881	C
36	DA	1885	A
36	DA	1888	G
36	DA	1889	A
36	DA	1900	A
36	DA	1906	G
36	DA	1929	G
36	DA	1930	G
36	DA	1936	A
36	DA	1938	A
36	DA	1948	G
36	DA	1955	U
36	DA	1960	A

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Mol	Chain	Res	Type
36	DA	1963	U
36	DA	1967	C
36	DA	1969	A
36	DA	1970	A
36	DA	1971	A
36	DA	1972	A
36	DA	1982	C
36	DA	1987	G
36	DA	1992	G
36	DA	1993	U
36	DA	1997	G
36	DA	2023	G
36	DA	2031	A
36	DA	2033	A
36	DA	2034	U
36	DA	2036	C
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	2069	G
36	DA	2093	G
36	DA	2100	G
36	DA	2102	U
36	DA	2103	C
36	DA	2104	G
36	DA	2116	G
36	DA	2117	A
36	DA	2118	U
36	DA	2127	G
36	DA	2129	C
36	DA	2132	U
36	DA	2133	G
36	DA	2146	C
36	DA	2148	G
36	DA	2157	G
36	DA	2159	G
36	DA	2160	G
36	DA	2172	U
36	DA	2173	A

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Mol	Chain	Res	Type
36	DA	2174	C
36	DA	2180	U
36	DA	2185	C
36	DA	2186	G
36	DA	2187	G
36	DA	2189	U
36	DA	2190	G
36	DA	2192	G
36	DA	2193	G
36	DA	2198	A
36	DA	2199	A
36	DA	2200	C
36	DA	2207	G
36	DA	2208	A
36	DA	2218	U
36	DA	2219	G
36	DA	2225	A
36	DA	2238	G
36	DA	2239	G
36	DA	2275	C
36	DA	2283	C
36	DA	2287	A
36	DA	2288	A
36	DA	2305	A
36	DA	2306	C
36	DA	2307	G
36	DA	2308	G
36	DA	2313	C
36	DA	2319	G
36	DA	2320	A
36	DA	2336	A
36	DA	2343	C
36	DA	2347	C
36	DA	2350	C
36	DA	2361	A
36	DA	2383	G
36	DA	2385	C
36	DA	2392	A
36	DA	2400	G
36	DA	2402	C
36	DA	2403	C
36	DA	2406	U

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Mol	Chain	Res	Type
36	DA	2423	U
36	DA	2425	A
36	DA	2429	G
36	DA	2430	A
36	DA	2431	U
36	DA	2434	A
36	DA	2439	A
36	DA	2441	C
36	DA	2448	A
36	DA	2465	C
36	DA	2469	A
36	DA	2476	A
36	DA	2484	G
36	DA	2502	G
36	DA	2505	G
36	DA	2518	A
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	2581	G
36	DA	2582	G
36	DA	2586	C
36	DA	2602	A
36	DA	2604	U
36	DA	2609	U
36	DA	2611	U
36	DA	2612	C
36	DA	2615	U
36	DA	2630	G
36	DA	2636	U
36	DA	2646	C
36	DA	2660	A
36	DA	2673	G
36	DA	2690	C
36	DA	2702	U
36	DA	2712	U
36	DA	2712(A)	A
36	DA	2713	A
36	DA	2720	U

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Mol	Chain	Res	Type
36	DA	2726	U
36	DA	2733	A
36	DA	2750	A
36	DA	2751	G
36	DA	2752	C
36	DA	2757	A
36	DA	2759	G
36	DA	2761	G
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	2780	G
36	DA	2781	A
36	DA	2790	A
36	DA	2791	C
36	DA	2792	G
36	DA	2794	C
36	DA	2799	C
36	DA	2802	G
36	DA	2803	C
36	DA	2808	U
36	DA	2820	A
36	DA	2821	A
36	DA	2823	A
36	DA	2833	G
36	DA	2834	G
36	DA	2849	U
36	DA	2863	C
36	DA	2872	G
36	DA	2880	C
36	DA	2894	G
37	DB	8	U
37	DB	13	A
37	DB	15	A
37	DB	16	G
37	DB	17	C
37	DB	21	G
37	DB	25	A
37	DB	27	C

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Mol	Chain	Res	Type
37	DB	35	U
37	DB	41	U
37	DB	42	C
37	DB	43	C
37	DB	45	A
37	DB	53	A
37	DB	57	A
37	DB	66	A
37	DB	67	G
37	DB	73	A
37	DB	81	G
37	DB	82	G
37	DB	88	C
37	DB	110	G

All (200) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	79	G
1	AA	115	G
1	AA	119	A
1	AA	197	A
1	AA	202	U
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	274	A
1	AA	344	A
1	AA	351	G
1	AA	353	A
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	495	A
1	AA	508	C
1	AA	534	U
1	AA	547	A
1	AA	560	U
1	AA	575	G
1	AA	576	G

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Mol	Chain	Res	Type
1	AA	687	A
1	AA	748	C
1	AA	792	A
1	AA	982	U
1	AA	992	U
1	AA	1049	U
1	AA	1101	A
1	AA	1117	G
1	AA	1145	C
1	AA	1157	A
1	AA	1200	C
1	AA	1239	A
1	AA	1280	A
1	AA	1285	A
1	AA	1286	A
1	AA	1363(A)	A
1	AA	1399	C
1	AA	1442(A)	G
1	AA	1498	U
22	AV	59	U
22	AW	7	A
22	AW	44	G
23	AX	21	C
24	AY	16	H2U
24	AY	17	H2U
24	AY	20	H2U
36	BA	71	A
36	BA	83	G
36	BA	199	A
36	BA	221	A
36	BA	332	A
36	BA	387	U
36	BA	512	G
36	BA	587	C
36	BA	603	A
36	BA	614(C)	A
36	BA	752	A
36	BA	790	C
36	BA	811	U
36	BA	856	C
36	BA	1052	C
36	BA	1060	U

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Mol	Chain	Res	Type
36	BA	1068	G
36	BA	1069	A
36	BA	1210	A
36	BA	1300	U
36	BA	1301	A
36	BA	1378	A
36	BA	1427	A
36	BA	1541	G
36	BA	1558	A
36	BA	1653	G
36	BA	1799	G
36	BA	1819	A
36	BA	1820	U
36	BA	1948	G
36	BA	1960	A
36	BA	1970	A
36	BA	2033	A
36	BA	2126	A
36	BA	2131	G
36	BA	2145	C
36	BA	2160	G
36	BA	2422	A
36	BA	2581	G
36	BA	2610	C
36	BA	2689	U
36	BA	2750	A
36	BA	2756	U
36	BA	2762	G
36	BA	2779	U
37	BB	34	U
37	BB	56	G
37	BB	66	A
1	CA	30	U
1	CA	60	A
1	CA	79	G
1	CA	115	G
1	CA	119	A
1	CA	197	A
1	CA	202	U
1	CA	243	A
1	CA	250	A
1	CA	266	G

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Mol	Chain	Res	Type
1	CA	274	A
1	CA	344	A
1	CA	351	G
1	CA	353	A
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	495	A
1	CA	508	C
1	CA	534	U
1	CA	547	A
1	CA	560	U
1	CA	563	A
1	CA	575	G
1	CA	576	G
1	CA	687	A
1	CA	748	C
1	CA	792	A
1	CA	961	U
1	CA	982	U
1	CA	992	U
1	CA	995	C
1	CA	1049	U
1	CA	1101	A
1	CA	1117	G
1	CA	1145	C
1	CA	1157	A
1	CA	1200	C
1	CA	1239	A
1	CA	1280	A
1	CA	1285	A
1	CA	1286	A
1	CA	1363(A)	A
1	CA	1399	C
1	CA	1498	U
1	CA	1529	G
22	CV	59	U
22	CW	7	A
22	CW	39	U
22	CW	44	G
23	CX	21	C
24	CY	16	H2U

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Mol	Chain	Res	Type
24	CY	17	H2U
24	CY	20	H2U
36	DA	71	A
36	DA	83	G
36	DA	199	A
36	DA	221	A
36	DA	332	A
36	DA	387	U
36	DA	512	G
36	DA	587	C
36	DA	603	A
36	DA	614(C)	A
36	DA	752	A
36	DA	790	C
36	DA	811	U
36	DA	856	C
36	DA	1052	C
36	DA	1060	U
36	DA	1068	G
36	DA	1069	A
36	DA	1210	A
36	DA	1300	U
36	DA	1301	A
36	DA	1378	A
36	DA	1427	A
36	DA	1541	G
36	DA	1558	A
36	DA	1653	G
36	DA	1799	G
36	DA	1819	A
36	DA	1820	U
36	DA	1948	G
36	DA	1960	A
36	DA	1970	A
36	DA	2033	A
36	DA	2126	A
36	DA	2131	G
36	DA	2145	C
36	DA	2160	G
36	DA	2422	A
36	DA	2581	G
36	DA	2610	C

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Mol	Chain	Res	Type
36	DA	2689	U
36	DA	2750	A
36	DA	2756	U
36	DA	2762	G
36	DA	2779	U
37	DB	34	U
37	DB	56	G
37	DB	66	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	MIA	CY	37	24	24,31,32	1.08	3 (12%)	26,44,47	1.70	4 (15%)
24	5MU	AY	54	24	15,22,23	1.21	2 (13%)	16,32,35	3.74	1 (6%)
24	H2U	CY	20	24	18,21,22	0.73	0	21,30,33	1.92	5 (23%)
24	7MG	AY	46	24	22,26,27	1.25	2 (9%)	28,39,42	2.32	5 (17%)
24	4SU	CY	8	24	14,21,22	1.44	3 (21%)	15,30,33	2.60	2 (13%)
24	PSU	AY	55	24	17,21,22	1.16	2 (11%)	20,30,33	3.37	8 (40%)
24	7MG	CY	46	24	22,26,27	1.27	2 (9%)	28,39,42	2.30	5 (17%)
24	OMC	AY	32	24	15,22,23	0.76	0	17,31,34	1.19	2 (11%)
24	H2U	AY	20	24	18,21,22	0.73	0	21,30,33	1.91	5 (23%)
24	5MU	CY	54	24	15,22,23	1.24	2 (13%)	16,32,35	3.73	1 (6%)
24	PSU	CY	55	24	17,21,22	1.14	2 (11%)	20,30,33	3.30	8 (40%)
24	MIA	AY	37	24	24,31,32	0.97	2 (8%)	26,44,47	1.69	4 (15%)
24	OMC	CY	32	24	15,22,23	0.75	0	17,31,34	1.21	2 (11%)
24	H2U	AY	16	24	18,21,22	0.99	1 (5%)	21,30,33	1.82	4 (19%)
24	H2U	CY	17	24	18,21,22	0.97	0	21,30,33	1.90	5 (23%)
24	H2U	AY	17	24	18,21,22	0.98	0	21,30,33	1.90	5 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	H2U	CY	16	24	18,21,22	0.98	1 (5%)	21,30,33	1.79	4 (19%)
24	4SU	AY	8	24	14,21,22	1.50	4 (28%)	15,30,33	2.62	2 (13%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	MIA	CY	37	24	-	2/11/33/34	0/3/3/3
24	5MU	AY	54	24	-	0/5/25/26	0/2/2/2
24	H2U	CY	20	24	-	1/7/38/39	0/2/2/2
24	7MG	AY	46	24	-	2/7/37/38	0/3/3/3
24	4SU	CY	8	24	-	1/5/25/26	0/2/2/2
24	PSU	AY	55	24	-	0/7/25/26	0/2/2/2
24	7MG	CY	46	24	-	2/7/37/38	0/3/3/3
24	OMC	AY	32	24	-	0/7/27/28	0/2/2/2
24	H2U	AY	20	24	-	1/7/38/39	0/2/2/2
24	5MU	CY	54	24	-	0/5/25/26	0/2/2/2
24	PSU	CY	55	24	-	0/7/25/26	0/2/2/2
24	MIA	AY	37	24	-	2/11/33/34	0/3/3/3
24	OMC	CY	32	24	-	0/7/27/28	0/2/2/2
24	H2U	AY	16	24	-	0/7/38/39	0/2/2/2
24	H2U	CY	17	24	-	3/7/38/39	0/2/2/2
24	H2U	AY	17	24	-	3/7/38/39	0/2/2/2
24	H2U	CY	16	24	-	0/7/38/39	0/2/2/2
24	4SU	AY	8	24	-	1/5/25/26	0/2/2/2

All (26) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	46	7MG	C6-N1	4.12	1.40	1.33
24	AY	8	4SU	C5-C4	4.00	1.42	1.38
24	CY	46	7MG	C6-N1	3.74	1.39	1.33
24	CY	8	4SU	C5-C4	3.71	1.42	1.38
24	CY	54	5MU	C4-N3	3.44	1.39	1.33
24	AY	54	5MU	C4-N3	3.37	1.38	1.33
24	CY	46	7MG	C8-N9	-3.22	1.38	1.45
24	AY	46	7MG	C8-N9	-3.19	1.38	1.45
24	AY	55	PSU	C4-N3	2.87	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CY	55	PSU	C4-N3	2.83	1.38	1.33
24	CY	37	MIA	C2-S10	2.71	1.78	1.75
24	AY	55	PSU	C6-N1	2.58	1.39	1.34
24	CY	8	4SU	C6-N1	2.52	1.39	1.35
24	AY	8	4SU	C6-N1	2.47	1.38	1.35
24	CY	55	PSU	C6-N1	2.42	1.39	1.34
24	CY	37	MIA	C8-N7	-2.28	1.30	1.34
24	AY	8	4SU	C4-S4	2.21	1.71	1.67
24	CY	37	MIA	C13-C14	2.19	1.38	1.32
24	AY	37	MIA	C13-C14	2.15	1.38	1.32
24	CY	54	5MU	C6-C5	-2.13	1.34	1.40
24	CY	16	H2U	C1'-N1	2.13	1.50	1.46
24	CY	8	4SU	C6-C5	-2.10	1.33	1.38
24	AY	54	5MU	C6-C5	-2.07	1.34	1.40
24	AY	8	4SU	C6-C5	-2.06	1.33	1.38
24	AY	37	MIA	C8-N7	-2.05	1.31	1.34
24	AY	16	H2U	C1'-N1	2.05	1.50	1.46

All (72) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AY	54	5MU	C4-N3-C2	14.56	127.43	115.14
24	CY	54	5MU	C4-N3-C2	14.51	127.39	115.14
24	AY	55	PSU	N1-C2-N3	-10.45	120.12	128.43
24	CY	55	PSU	N1-C2-N3	-10.19	120.33	128.43
24	AY	8	4SU	C2-N3-C4	7.92	126.63	115.15
24	CY	8	4SU	C2-N3-C4	7.86	126.54	115.15
24	AY	55	PSU	C4-N3-C2	6.99	121.05	115.14
24	AY	46	7MG	N7-C8-N9	6.83	113.14	103.38
24	CY	46	7MG	N7-C8-N9	6.79	113.09	103.38
24	CY	55	PSU	C4-N3-C2	6.75	120.84	115.14
24	AY	8	4SU	C5-C4-N3	-6.11	115.66	123.83
24	CY	8	4SU	C5-C4-N3	-6.02	115.78	123.83
24	CY	46	7MG	C6-N1-C2	5.90	125.31	115.93
24	AY	46	7MG	C6-N1-C2	5.86	125.24	115.93
24	AY	46	7MG	C5-C6-N1	-5.67	111.50	123.14
24	CY	46	7MG	C5-C6-N1	-5.64	111.56	123.14
24	CY	37	MIA	C11-S10-C2	5.43	106.32	102.27
24	AY	20	H2U	C4-N3-C2	-5.23	121.45	125.79
24	CY	20	H2U	C4-N3-C2	-5.22	121.46	125.79
24	AY	37	MIA	C11-S10-C2	5.17	106.13	102.27
24	AY	17	H2U	C4-N3-C2	-4.74	121.86	125.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	CY	17	H2U	C4-N3-C2	-4.72	121.88	125.79
24	AY	16	H2U	C4-N3-C2	-4.57	122.00	125.79
24	AY	55	PSU	C5-C4-N3	-4.51	119.55	125.36
24	CY	16	H2U	C4-N3-C2	-4.46	122.09	125.79
24	CY	55	PSU	C5-C4-N3	-4.43	119.65	125.36
24	AY	16	H2U	N3-C2-N1	4.27	121.17	116.65
24	CY	16	H2U	N3-C2-N1	4.21	121.11	116.65
24	AY	17	H2U	N3-C2-N1	4.20	121.10	116.65
24	CY	17	H2U	N3-C2-N1	4.15	121.05	116.65
24	AY	37	MIA	C5-C6-N1	-3.99	117.49	120.81
24	CY	37	MIA	C5-C6-N1	-3.80	117.66	120.81
24	CY	20	H2U	N3-C2-N1	3.77	120.64	116.65
24	AY	16	H2U	C5-C4-N3	3.76	120.87	116.65
24	CY	16	H2U	C5-C4-N3	3.73	120.84	116.65
24	CY	32	OMC	C2-N3-C4	3.68	120.07	116.34
24	AY	20	H2U	N3-C2-N1	3.67	120.53	116.65
24	AY	32	OMC	C2-N3-C4	3.66	120.05	116.34
24	AY	20	H2U	C5-C4-N3	3.58	120.67	116.65
24	CY	20	H2U	C5-C4-N3	3.57	120.66	116.65
24	CY	17	H2U	C5-C4-N3	3.54	120.62	116.65
24	AY	17	H2U	C5-C4-N3	3.51	120.59	116.65
24	CY	55	PSU	C6-N1-C2	3.49	121.11	115.36
24	AY	55	PSU	C6-N1-C2	3.47	121.09	115.36
24	CY	55	PSU	C5-C6-N1	-3.38	120.28	124.44
24	AY	37	MIA	C2-N3-C4	-3.34	110.72	115.32
24	AY	55	PSU	C5-C6-N1	-3.29	120.39	124.44
24	AY	46	7MG	C6-C5-C4	3.27	118.71	115.20
24	CY	37	MIA	C2-N3-C4	-3.24	110.86	115.32
24	CY	46	7MG	C6-C5-C4	3.21	118.65	115.20
24	AY	37	MIA	C12-N6-C6	2.94	126.90	122.55
24	CY	37	MIA	C12-N6-C6	2.88	126.81	122.55
24	CY	55	PSU	O3'-C3'-C2'	2.87	121.10	111.82
24	AY	55	PSU	O3'-C3'-C2'	2.81	120.91	111.82
24	AY	17	H2U	O3'-C3'-C2'	2.62	120.29	111.82
24	AY	55	PSU	O3'-C3'-C4'	2.61	118.61	111.05
24	CY	17	H2U	O3'-C3'-C2'	2.59	120.19	111.82
24	CY	55	PSU	O3'-C3'-C4'	2.57	118.49	111.05
24	AY	46	7MG	C4-C5-N7	2.46	110.73	106.98
24	CY	32	OMC	CM2-O2'-C2'	-2.46	108.08	114.52
24	AY	32	OMC	CM2-O2'-C2'	-2.44	108.12	114.52
24	CY	46	7MG	C4-C5-N7	2.44	110.71	106.98
24	CY	16	H2U	O2-C2-N1	-2.29	120.24	123.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	CY	20	H2U	O2-C2-N1	-2.25	120.28	123.11
24	AY	17	H2U	O2-C2-N1	-2.24	120.30	123.11
24	CY	17	H2U	O2-C2-N1	-2.23	120.30	123.11
24	AY	16	H2U	O2-C2-N1	-2.18	120.36	123.11
24	AY	55	PSU	C5-C1'-C2'	-2.18	111.43	115.32
24	CY	55	PSU	C5-C1'-C2'	-2.17	111.45	115.32
24	AY	20	H2U	O2-C2-N1	-2.08	120.49	123.11
24	CY	20	H2U	O3'-C3'-C2'	2.03	118.38	111.82
24	AY	20	H2U	O3'-C3'-C2'	2.01	118.31	111.82

There are no chirality outliers.

All (18) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	CY	37	MIA	C5-C6-N6-C12
24	AY	37	MIA	C5-C6-N6-C12
24	CY	17	H2U	C4'-C5'-O5'-P
24	AY	17	H2U	C4'-C5'-O5'-P
24	CY	17	H2U	O4'-C4'-C5'-O5'
24	CY	17	H2U	C3'-C4'-C5'-O5'
24	AY	17	H2U	O4'-C4'-C5'-O5'
24	AY	17	H2U	C3'-C4'-C5'-O5'
24	AY	37	MIA	N1-C6-N6-C12
24	CY	37	MIA	N1-C6-N6-C12
24	AY	46	7MG	C2'-C1'-N9-C8
24	CY	20	H2U	O4'-C4'-C5'-O5'
24	AY	46	7MG	O4'-C4'-C5'-O5'
24	CY	8	4SU	O4'-C4'-C5'-O5'
24	CY	46	7MG	O4'-C4'-C5'-O5'
24	AY	20	H2U	O4'-C4'-C5'-O5'
24	CY	46	7MG	C2'-C1'-N9-C8
24	AY	8	4SU	O4'-C4'-C5'-O5'

There are no ring outliers.

14 monomers are involved in 19 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	AY	54	5MU	1	0
24	CY	20	H2U	1	0
24	AY	46	7MG	3	0
24	CY	8	4SU	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	AY	55	PSU	1	0
24	CY	46	7MG	3	0
24	AY	20	H2U	1	0
24	CY	54	5MU	1	0
24	CY	55	PSU	1	0
24	AY	16	H2U	3	0
24	CY	17	H2U	4	0
24	AY	17	H2U	3	0
24	CY	16	H2U	4	0
24	AY	8	4SU	1	0

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 12 ligands modelled in this entry, 8 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	$\# Z > 2$
61	KIR	CZ	502	-	56,59,59	3.39	22 (39%)	62,84,84	1.66	13 (20%)
60	GDP	CZ	501	-	24,30,30	1.54	4 (16%)	31,47,47	2.16	7 (22%)
60	GDP	AZ	501	-	24,30,30	1.63	5 (20%)	31,47,47	1.59	6 (19%)
61	KIR	AZ	502	-	56,59,59	3.42	22 (39%)	62,84,84	1.63	13 (20%)

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
61	KIR	CZ	502	-	-	8/54/98/98	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
60	GDP	CZ	501	-	-	0/12/32/32	0/3/3/3
60	GDP	AZ	501	-	-	2/12/32/32	0/3/3/3
61	KIR	AZ	502	-	-	8/54/98/98	0/3/3/3

All (53) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	CZ	502	KIR	O18-C17	-14.49	1.22	1.44
61	AZ	502	KIR	O18-C17	-14.21	1.23	1.44
61	AZ	502	KIR	O30-C30	-12.64	1.17	1.42
61	CZ	502	KIR	O30-C30	-12.30	1.18	1.42
60	AZ	501	GDP	C6-N1	5.52	1.42	1.33
61	AZ	502	KIR	C32-C31	5.18	1.61	1.54
61	CZ	502	KIR	C22-C21	5.01	1.38	1.33
61	CZ	502	KIR	C45-C28	4.76	1.62	1.53
60	CZ	501	GDP	C6-N1	4.71	1.41	1.33
61	AZ	502	KIR	C22-C21	4.55	1.38	1.33
61	CZ	502	KIR	C32-C31	4.54	1.60	1.54
61	CZ	502	KIR	C27-N26	4.51	1.43	1.33
61	AZ	502	KIR	C27-N26	4.30	1.43	1.33
61	AZ	502	KIR	C19-C17	4.23	1.64	1.54
61	AZ	502	KIR	C45-C28	4.14	1.61	1.53
61	AZ	502	KIR	C2-N1	4.12	1.40	1.33
61	CZ	502	KIR	C2-N1	4.11	1.40	1.33
61	AZ	502	KIR	C29-C28	4.11	1.62	1.54
61	CZ	502	KIR	C19-C17	4.08	1.64	1.54
61	AZ	502	KIR	O29-C29	4.04	1.48	1.40
61	AZ	502	KIR	C42-C19	4.01	1.61	1.53
61	CZ	502	KIR	O29-C29	3.99	1.48	1.40
61	CZ	502	KIR	C29-C28	3.82	1.62	1.54
61	AZ	502	KIR	C5-C4	3.80	1.46	1.39
61	CZ	502	KIR	C8-C7	3.67	1.57	1.48
61	CZ	502	KIR	C5-C4	3.61	1.45	1.39
61	AZ	502	KIR	C8-C7	3.49	1.56	1.48
61	CZ	502	KIR	C42-C19	3.48	1.60	1.53
61	AZ	502	KIR	O34-C29	3.31	1.49	1.43
60	CZ	501	GDP	C6-C5	-3.21	1.35	1.41
61	AZ	502	KIR	C32-C33	3.08	1.59	1.55
61	CZ	502	KIR	O34-C29	2.87	1.48	1.43
61	AZ	502	KIR	C37-C38	2.82	1.39	1.32
60	CZ	501	GDP	C2-N1	2.77	1.40	1.35
61	AZ	502	KIR	C29-C30	2.75	1.58	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AZ	502	KIR	C20-C21	2.73	1.55	1.51
61	CZ	502	KIR	C32-C33	2.71	1.59	1.55
61	CZ	502	KIR	C29-C30	2.68	1.58	1.53
61	CZ	502	KIR	C20-C21	2.68	1.55	1.51
61	CZ	502	KIR	C37-C38	2.61	1.39	1.32
61	AZ	502	KIR	C16-C17	2.47	1.58	1.52
61	AZ	502	KIR	C44-C21	2.44	1.55	1.50
61	CZ	502	KIR	C9-C8	2.42	1.41	1.34
61	AZ	502	KIR	C6-N1	2.39	1.39	1.34
60	AZ	501	GDP	C6-C5	-2.32	1.37	1.41
60	AZ	501	GDP	C8-N7	-2.28	1.30	1.34
61	CZ	502	KIR	C6-N1	2.26	1.39	1.34
60	AZ	501	GDP	O4'-C1'	2.23	1.44	1.41
61	CZ	502	KIR	C16-C17	2.21	1.57	1.52
61	AZ	502	KIR	C9-C8	2.21	1.41	1.34
60	CZ	501	GDP	O4'-C1'	2.15	1.44	1.41
60	AZ	501	GDP	C2-N1	2.06	1.39	1.35
61	CZ	502	KIR	C44-C21	2.04	1.54	1.50

All (39) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	CZ	501	GDP	C2-N3-C4	5.78	121.96	115.36
60	CZ	501	GDP	N3-C2-N1	-5.33	120.11	127.22
61	AZ	502	KIR	O29-C29-O34	-5.09	101.68	110.21
61	CZ	502	KIR	O29-C29-O34	-5.02	101.79	110.21
61	CZ	502	KIR	C48-C32-C47	-4.41	101.43	107.72
60	CZ	501	GDP	C5-C6-N1	-4.37	117.46	123.43
60	CZ	501	GDP	PA-O3A-PB	-4.30	118.08	132.83
61	AZ	502	KIR	C48-C32-C47	-4.04	101.95	107.72
60	AZ	501	GDP	N3-C2-N1	-3.82	122.13	127.22
60	AZ	501	GDP	PA-O3A-PB	-3.79	119.82	132.83
61	CZ	502	KIR	C11-C10-C9	-3.61	116.07	123.47
60	AZ	501	GDP	C2-N3-C4	3.58	119.45	115.36
61	AZ	502	KIR	C11-C10-C9	-3.51	116.28	123.47
60	CZ	501	GDP	C4-C5-N7	-3.32	105.94	109.40
61	CZ	502	KIR	O34-C29-C28	3.30	113.10	104.46
61	AZ	502	KIR	O34-C29-C28	3.27	113.03	104.46
60	AZ	501	GDP	C5-C6-N1	-3.15	119.12	123.43
61	CZ	502	KIR	C6-N1-C2	3.08	123.79	116.43
61	AZ	502	KIR	C6-N1-C2	2.99	123.59	116.43
61	CZ	502	KIR	C45-C28-C27	2.92	112.99	108.86

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AZ	502	KIR	C45-C28-C27	2.66	112.62	108.86
61	AZ	502	KIR	O18-C17-C16	2.66	109.26	104.27
61	CZ	502	KIR	O18-C17-C16	2.65	109.24	104.27
61	AZ	502	KIR	C44-C21-C20	2.59	120.15	115.68
61	CZ	502	KIR	C44-C21-C20	2.52	120.03	115.68
61	CZ	502	KIR	C5-C6-N1	-2.44	120.92	123.96
60	AZ	501	GDP	O4'-C1'-C2'	-2.43	103.38	106.93
61	CZ	502	KIR	C48-C32-C31	2.40	113.31	109.29
61	AZ	502	KIR	C29-C30-C31	-2.32	107.59	110.66
60	CZ	501	GDP	C6-N1-C2	2.29	119.57	115.93
61	AZ	502	KIR	C5-C6-N1	-2.27	121.14	123.96
61	CZ	502	KIR	C29-C30-C31	-2.27	107.66	110.66
61	AZ	502	KIR	C48-C32-C31	2.24	113.05	109.29
61	CZ	502	KIR	C48-C32-C33	2.17	113.75	109.48
60	AZ	501	GDP	C4-C5-N7	-2.12	107.19	109.40
61	CZ	502	KIR	O7-C7-C3	-2.08	115.05	119.91
61	AZ	502	KIR	C48-C32-C33	2.07	113.56	109.48
61	AZ	502	KIR	O7-C7-C3	-2.06	115.10	119.91
60	CZ	501	GDP	N2-C2-N1	2.03	120.41	117.25

There are no chirality outliers.

All (18) torsion outliers are listed below:

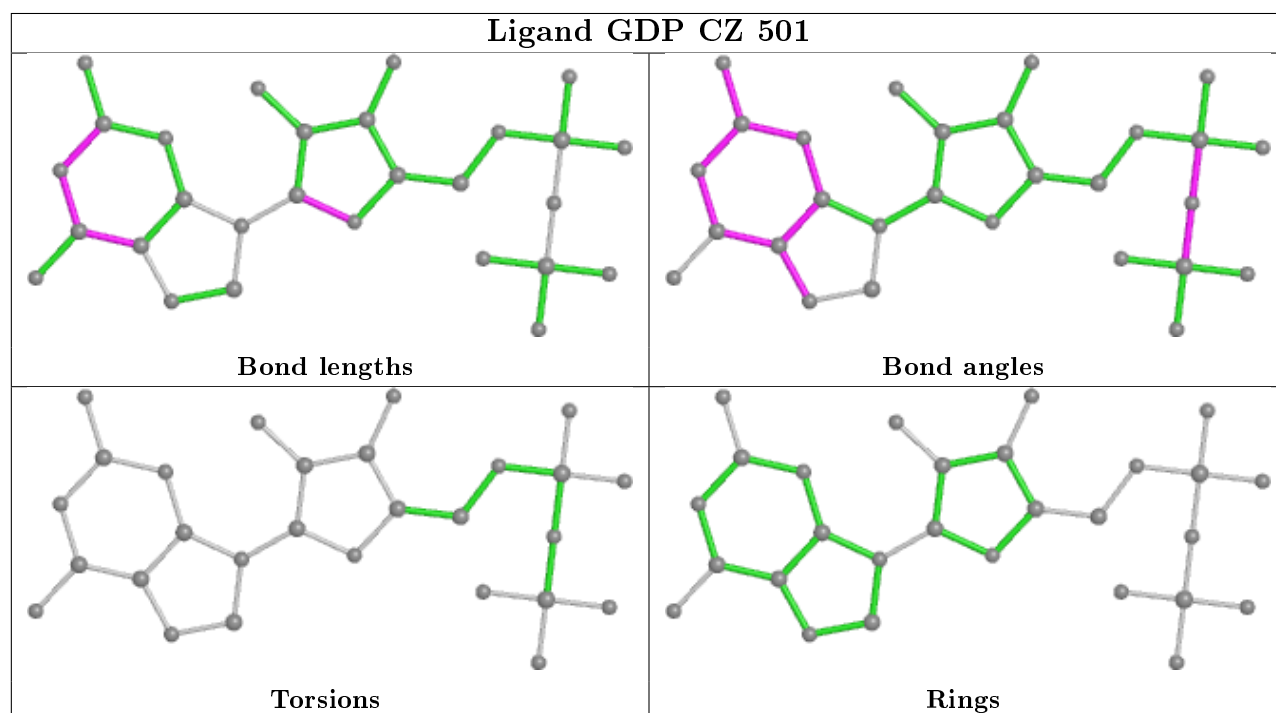
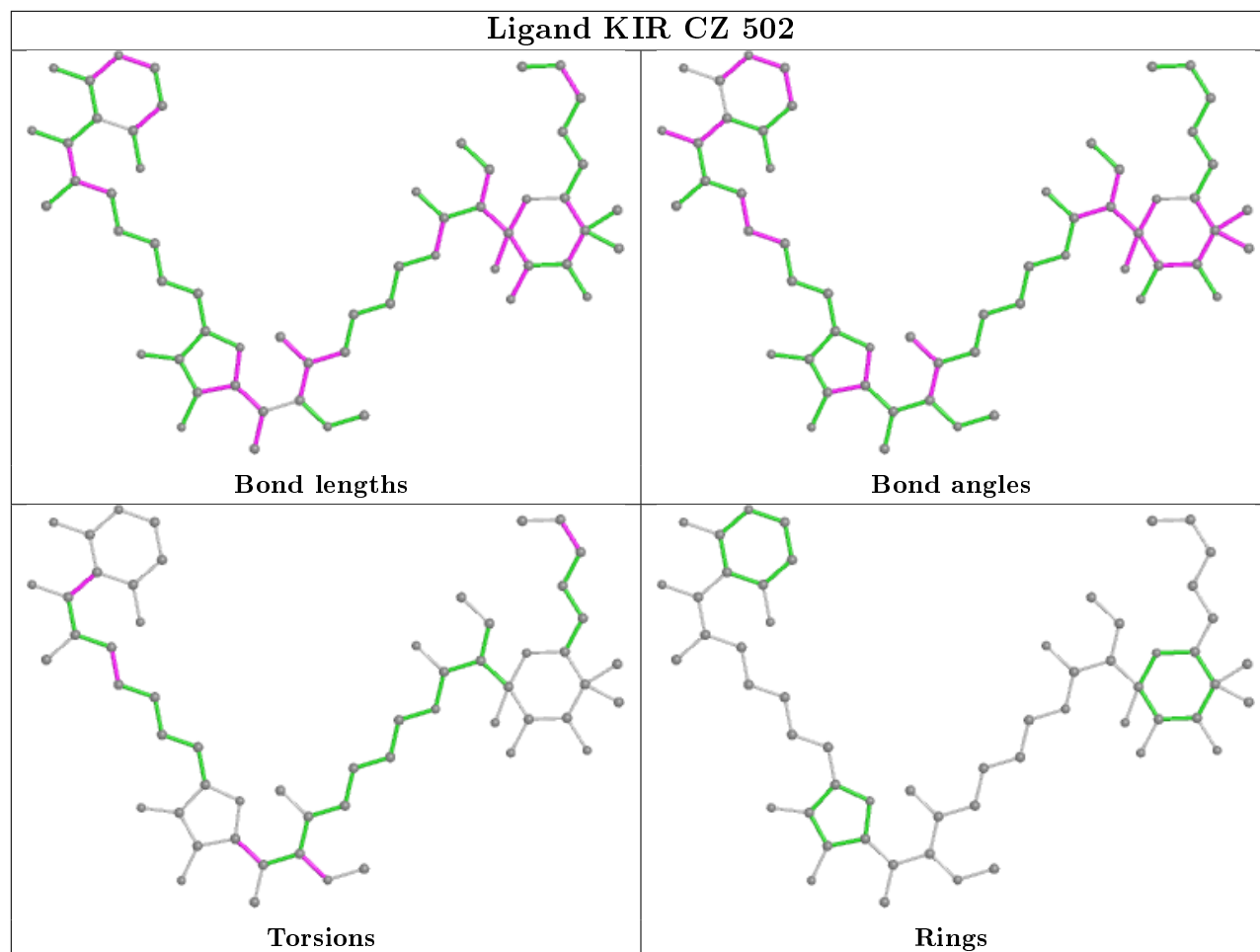
Mol	Chain	Res	Type	Atoms
61	CZ	502	KIR	O18-C17-C19-C42
61	AZ	502	KIR	O18-C17-C19-C42
60	AZ	501	GDP	PA-O3A-PB-O2B
61	CZ	502	KIR	C11-C10-C9-C8
61	AZ	502	KIR	C11-C10-C9-C8
61	CZ	502	KIR	C36-C37-C38-C39
61	AZ	502	KIR	C36-C37-C38-C39
61	CZ	502	KIR	C19-C20-O20-C43
61	AZ	502	KIR	C19-C20-O20-C43
61	CZ	502	KIR	C16-C17-C19-C20
61	AZ	502	KIR	C16-C17-C19-C20
61	CZ	502	KIR	C16-C17-C19-C42
61	AZ	502	KIR	C16-C17-C19-C42
61	CZ	502	KIR	C2-C3-C7-O7
61	AZ	502	KIR	C2-C3-C7-O7
60	AZ	501	GDP	PA-O3A-PB-O3B
61	CZ	502	KIR	C21-C20-O20-C43
61	AZ	502	KIR	C21-C20-O20-C43

There are no ring outliers.

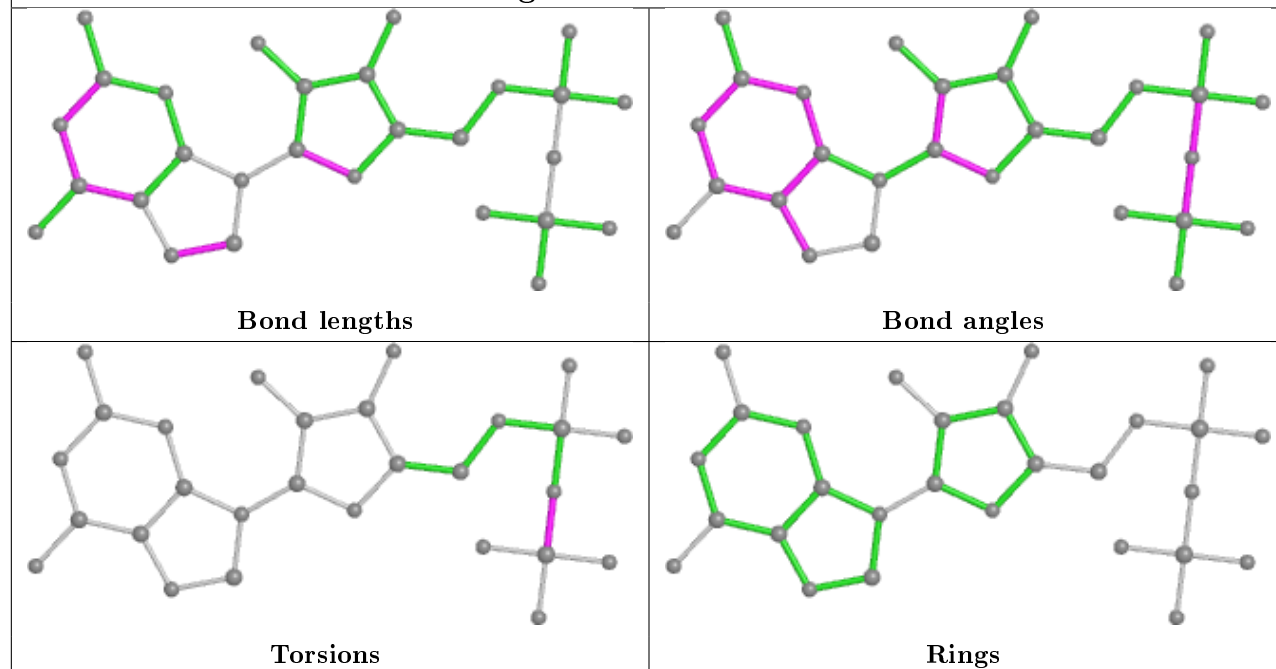
4 monomers are involved in 45 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	CZ	502	KIR	9	0
60	CZ	501	GDP	8	0
60	AZ	501	GDP	15	0
61	AZ	502	KIR	13	0

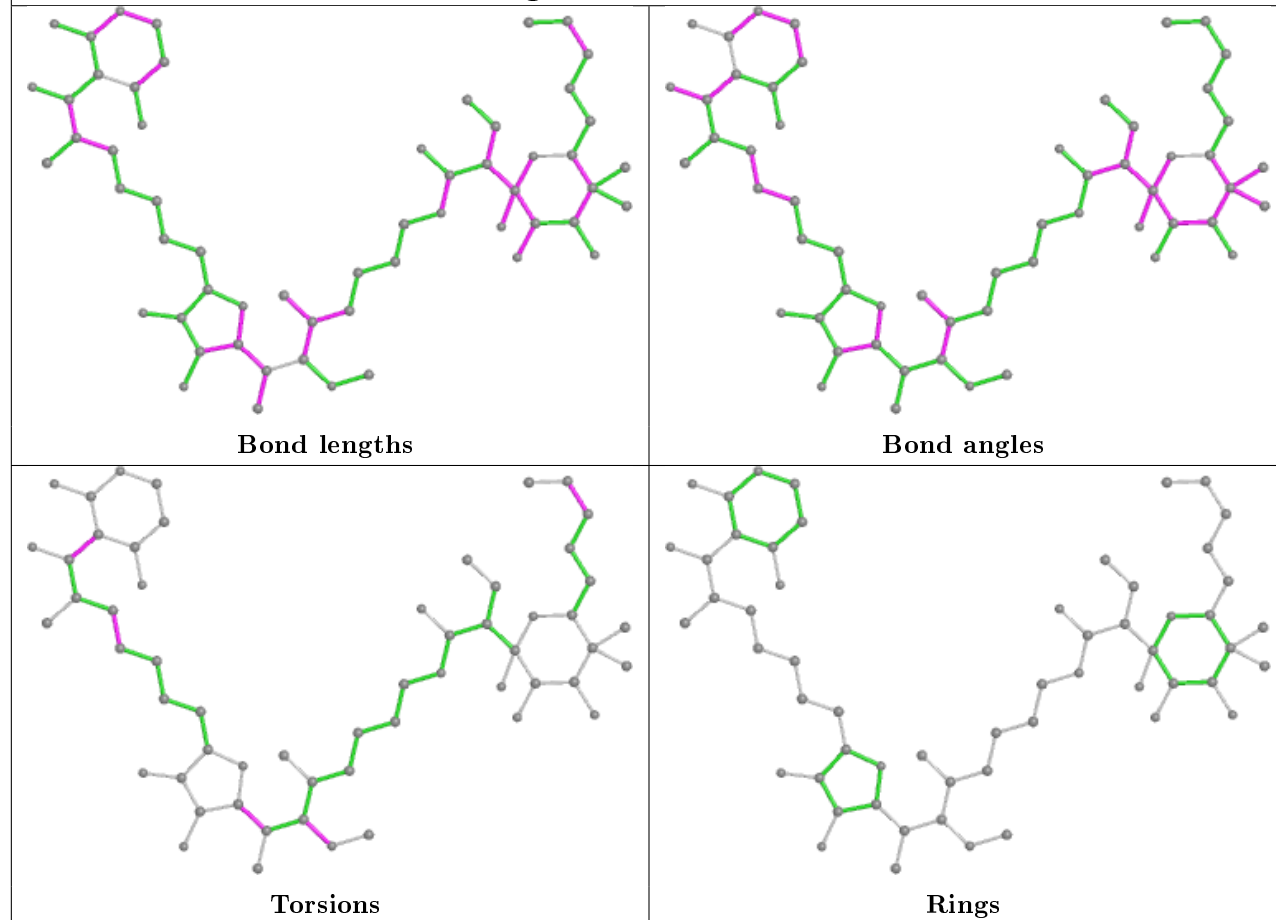
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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 AZ 501



Ligand KIR AZ 502



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

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	1510/1522 (99%)	-0.29	19 (1%) 77 59	44, 78, 160, 200	0
1	CA	1510/1522 (99%)	-0.07	31 (2%) 63 43	37, 73, 161, 200	0
2	AB	234/256 (91%)	-0.10	6 (2%) 56 33	58, 88, 152, 164	0
2	CB	234/256 (91%)	-0.19	3 (1%) 77 59	54, 86, 151, 164	0
3	AC	206/239 (86%)	-0.30	1 (0%) 91 81	52, 75, 101, 110	0
3	CC	206/239 (86%)	-0.30	0 100 100	46, 70, 100, 109	0
4	AD	208/209 (99%)	0.11	10 (4%) 30 14	71, 97, 124, 132	0
4	CD	208/209 (99%)	0.05	4 (1%) 66 46	67, 96, 123, 131	0
5	AE	150/162 (92%)	-0.35	0 100 100	53, 65, 89, 110	0
5	CE	150/162 (92%)	-0.35	0 100 100	49, 63, 88, 109	0
6	AF	101/101 (100%)	0.04	1 (0%) 82 67	71, 99, 115, 122	0
6	CF	101/101 (100%)	-0.15	1 (0%) 82 67	68, 97, 114, 121	0
7	AG	155/156 (99%)	0.18	7 (4%) 33 16	66, 89, 113, 130	0
7	CG	155/156 (99%)	-0.11	2 (1%) 77 59	59, 86, 112, 129	0
8	AH	138/138 (100%)	-0.28	1 (0%) 87 75	54, 70, 87, 95	0
8	CH	138/138 (100%)	-0.30	0 100 100	52, 67, 87, 94	0
9	AI	127/128 (99%)	0.64	15 (11%) 4 2	62, 96, 128, 139	0
9	CI	127/128 (99%)	0.23	2 (1%) 72 51	54, 93, 127, 139	0
10	AJ	98/105 (93%)	0.81	20 (20%) 1 0	59, 99, 141, 145	0
10	CJ	98/105 (93%)	0.35	5 (5%) 28 13	54, 95, 140, 144	0
11	AK	119/129 (92%)	0.04	6 (5%) 28 13	55, 73, 107, 134	0
11	CK	119/129 (92%)	-0.04	4 (3%) 45 24	51, 68, 108, 133	0
12	AL	124/131 (94%)	0.02	5 (4%) 38 19	55, 70, 94, 132	0
12	CL	124/131 (94%)	-0.12	1 (0%) 86 72	51, 68, 93, 132	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	124/126 (98%)	0.34	13 (10%) 6 2	71, 97, 124, 152	0
13	CM	124/126 (98%)	0.13	7 (5%) 24 11	67, 95, 123, 152	0
14	AN	60/61 (98%)	-0.17	1 (1%) 70 49	57, 72, 93, 96	0
14	CN	60/61 (98%)	-0.02	1 (1%) 70 49	49, 66, 91, 96	0
15	AO	88/89 (98%)	-0.08	0 100 100	57, 75, 99, 105	0
15	CO	88/89 (98%)	-0.05	0 100 100	56, 74, 98, 104	0
16	AP	83/88 (94%)	0.40	3 (3%) 42 22	74, 91, 109, 135	0
16	CP	83/88 (94%)	0.38	2 (2%) 59 37	72, 89, 108, 136	0
17	AQ	99/105 (94%)	-0.00	3 (3%) 50 27	60, 79, 95, 108	0
17	CQ	99/105 (94%)	-0.06	0 100 100	57, 78, 93, 107	0
18	AR	70/88 (79%)	-0.05	2 (2%) 51 28	58, 82, 106, 119	0
18	CR	70/88 (79%)	-0.30	1 (1%) 75 56	56, 79, 105, 118	0
19	AS	78/93 (83%)	0.43	5 (6%) 19 8	75, 99, 137, 139	0
19	CS	78/93 (83%)	0.45	4 (5%) 28 13	71, 99, 136, 139	0
20	AT	99/106 (93%)	0.44	6 (6%) 21 9	75, 97, 131, 135	0
20	CT	99/106 (93%)	0.43	5 (5%) 28 13	71, 96, 132, 135	0
21	AU	24/27 (88%)	0.77	3 (12%) 3 1	66, 84, 103, 115	0
21	CU	24/27 (88%)	0.37	1 (4%) 36 18	64, 78, 99, 115	0
22	AV	76/76 (100%)	-0.29	1 (1%) 77 59	56, 91, 128, 148	0
22	AW	76/76 (100%)	0.78	10 (13%) 3 1	103, 172, 200, 200	0
22	CV	76/76 (100%)	-0.22	1 (1%) 77 59	50, 89, 128, 147	0
22	CW	76/76 (100%)	0.70	11 (14%) 2 1	100, 172, 200, 200	0
23	AX	17/27 (62%)	0.58	2 (11%) 4 2	50, 97, 156, 157	0
23	CX	17/27 (62%)	0.53	1 (5%) 22 10	45, 95, 156, 157	0
24	AY	68/77 (88%)	0.04	1 (1%) 73 54	61, 140, 171, 190	0
24	CY	68/77 (88%)	-0.01	4 (5%) 22 10	57, 140, 170, 190	0
25	AZ	385/405 (95%)	1.76	136 (35%) 0 0	116, 142, 165, 183	0
25	CZ	385/405 (95%)	0.44	24 (6%) 20 9	113, 141, 165, 183	0
26	B0	84/85 (98%)	0.62	8 (9%) 8 2	77, 91, 118, 131	0
26	D0	84/85 (98%)	0.55	7 (8%) 11 4	76, 90, 119, 131	0
27	B1	93/98 (94%)	0.43	5 (5%) 25 12	74, 95, 134, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
27	D1	93/98 (94%)	0.24	2 (2%) 62 41	56, 76, 130, 142	0
28	B2	71/72 (98%)	0.45	5 (7%) 16 7	110, 133, 148, 157	0
28	D2	71/72 (98%)	1.39	21 (29%) 0 0	134, 154, 174, 175	0
29	B3	59/60 (98%)	0.66	3 (5%) 28 13	81, 99, 120, 142	0
29	D3	59/60 (98%)	0.54	3 (5%) 28 13	80, 97, 120, 142	0
30	B4	44/71 (61%)	0.21	5 (11%) 5 2	124, 149, 160, 163	0
30	D4	44/71 (61%)	0.38	3 (6%) 17 7	123, 147, 158, 163	0
31	B5	59/60 (98%)	0.31	5 (8%) 10 4	73, 105, 158, 176	0
31	D5	59/60 (98%)	0.14	4 (6%) 17 7	72, 104, 158, 176	0
32	B6	50/54 (92%)	0.81	7 (14%) 2 1	74, 106, 116, 125	0
32	D6	50/54 (92%)	0.85	8 (16%) 1 1	73, 104, 115, 123	0
33	B7	48/49 (97%)	0.43	0 100 100	70, 79, 119, 139	0
33	D7	48/49 (97%)	0.58	2 (4%) 36 18	68, 78, 119, 140	0
34	B8	63/65 (96%)	0.49	3 (4%) 30 14	80, 90, 104, 131	0
34	D8	63/65 (96%)	0.41	3 (4%) 30 14	78, 88, 104, 131	0
35	B9	37/37 (100%)	0.63	2 (5%) 25 12	76, 90, 104, 108	0
35	D9	37/37 (100%)	0.29	3 (8%) 12 5	76, 90, 104, 107	0
36	BA	2901/2915 (99%)	-0.10	73 (2%) 57 34	49, 95, 190, 200	0
36	DA	2901/2915 (99%)	-0.02	70 (2%) 59 37	46, 93, 190, 200	0
37	BB	119/122 (97%)	-0.46	0 100 100	78, 108, 134, 157	0
37	DB	119/122 (97%)	-0.37	0 100 100	75, 107, 133, 157	0
38	BC	228/229 (99%)	0.71	32 (14%) 2 1	69, 99, 177, 187	0
38	DC	228/229 (99%)	0.33	20 (8%) 10 4	67, 97, 177, 187	0
39	BD	275/276 (99%)	-0.15	3 (1%) 80 64	50, 68, 98, 123	0
39	DD	275/276 (99%)	-0.16	2 (0%) 87 75	47, 66, 97, 123	0
40	BE	204/206 (99%)	0.28	12 (5%) 22 10	64, 93, 141, 152	0
40	DE	204/206 (99%)	0.25	8 (3%) 39 20	64, 93, 141, 152	0
41	BF	207/210 (98%)	0.76	27 (13%) 3 1	73, 128, 176, 184	0
41	DF	207/210 (98%)	0.68	27 (13%) 3 1	71, 127, 176, 184	0
42	BG	181/182 (99%)	0.25	11 (6%) 21 9	97, 125, 147, 157	0
42	DG	181/182 (99%)	0.08	9 (4%) 28 13	75, 96, 125, 146	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
43	BH	159/180 (88%)	0.79	24 (15%) 2 1	106, 142, 163, 165	0
43	DH	159/180 (88%)	1.16	36 (22%) 0 0	106, 142, 163, 165	0
44	BJ	0/173	-	-	-	-
44	DJ	0/173	-	-	-	-
45	BK	0/147	-	-	-	-
45	DK	0/147	-	-	-	-
46	BN	138/140 (98%)	0.20	2 (1%) 75 56	78, 104, 145, 148	0
46	DN	138/140 (98%)	0.17	3 (2%) 62 41	77, 104, 144, 147	0
47	BO	122/122 (100%)	-0.16	1 (0%) 86 72	58, 76, 90, 97	0
47	DO	122/122 (100%)	-0.06	0 100 100	57, 76, 89, 97	0
48	BP	146/150 (97%)	0.95	20 (13%) 3 1	73, 121, 146, 162	0
48	DP	146/150 (97%)	0.96	27 (18%) 1 0	72, 120, 145, 162	0
49	BQ	141/141 (100%)	0.02	2 (1%) 75 56	61, 78, 107, 138	0
49	DQ	141/141 (100%)	0.05	4 (2%) 53 30	60, 77, 107, 139	0
50	BR	117/118 (99%)	0.32	4 (3%) 45 24	76, 98, 114, 129	0
50	DR	117/118 (99%)	0.31	3 (2%) 56 33	75, 98, 115, 129	0
51	BS	98/112 (87%)	0.87	18 (18%) 1 0	89, 112, 137, 141	0
51	DS	98/112 (87%)	0.46	5 (5%) 28 13	88, 111, 136, 140	0
52	BT	137/146 (93%)	0.13	9 (6%) 18 7	74, 97, 155, 179	0
52	DT	137/146 (93%)	0.23	12 (8%) 10 4	73, 97, 154, 179	0
53	BU	117/118 (99%)	0.14	3 (2%) 56 33	81, 98, 125, 142	0
53	DU	117/118 (99%)	0.13	2 (1%) 70 49	78, 97, 125, 142	0
54	BV	101/101 (100%)	0.56	7 (6%) 16 7	79, 130, 146, 150	0
54	DV	101/101 (100%)	0.50	7 (6%) 16 7	79, 129, 146, 150	0
55	BW	113/113 (100%)	0.47	8 (7%) 16 6	85, 100, 133, 165	0
55	DW	113/113 (100%)	0.39	9 (7%) 12 5	82, 100, 133, 165	0
56	BX	92/96 (95%)	0.49	3 (3%) 46 24	83, 109, 125, 134	0
56	DX	92/96 (95%)	0.40	7 (7%) 13 5	83, 108, 124, 134	0
57	BY	100/110 (90%)	1.80	38 (38%) 0 0	127, 146, 179, 187	0
57	DY	100/110 (90%)	1.76	40 (40%) 0 0	126, 146, 179, 187	0
58	BZ	176/206 (85%)	0.09	5 (2%) 53 30	75, 103, 135, 144	0
58	DZ	176/206 (85%)	0.05	8 (4%) 33 16	64, 94, 140, 150	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
All	All	21994/23368 (94%)	0.13	1092 (4%) 28 13	37, 93, 162, 200	0

All (1092) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
49	DQ	141	GLN	14.3
49	BQ	141	GLN	12.8
38	BC	1	PRO	11.6
43	DH	170	ARG	11.5
53	DU	118	GLY	11.2
42	DG	2	PRO	10.9
57	BY	2	ARG	10.6
1	AA	89	C	9.8
58	BZ	113	ALA	9.7
25	CZ	42	VAL	9.6
42	BG	2	PRO	9.5
36	DA	654(K)	C	9.3
13	AM	123	ALA	9.0
25	AZ	183	HIS	8.8
57	DY	2	ARG	8.7
41	DF	24	LEU	8.6
41	DF	20	LEU	8.5
25	AZ	203	LEU	8.5
25	AZ	213	PRO	8.1
11	CK	129	SER	8.0
42	DG	48	GLU	8.0
57	DY	52	SER	8.0
36	DA	654(C)	G	8.0
25	AZ	36	ALA	7.9
25	AZ	141	VAL	7.9
58	BZ	114	GLY	7.9
38	BC	77	ILE	7.7
38	DC	94	VAL	7.7
36	DA	654(H)	G	7.4
57	BY	51	VAL	7.4
26	D0	3	HIS	7.4
43	DH	169	VAL	7.2
36	DA	654(J)	A	7.2
36	BA	352	G	7.2
57	DY	55	TYR	7.2
36	BA	2802	G	7.2
25	AZ	212	THR	7.1

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Mol	Chain	Res	Type	RSRZ
1	CA	89	C	7.1
28	D2	9	GLN	7.1
22	AW	34	G	7.1
38	DC	1	PRO	7.0
25	AZ	250	GLY	7.0
38	DC	109	ASP	7.0
36	DA	2802	G	7.0
20	CT	106	ALA	6.9
38	BC	105	ASP	6.9
36	BA	654(K)	C	6.8
1	AA	88	A	6.7
1	CA	1026	G	6.7
58	BZ	112	ARG	6.7
36	DA	1066	U	6.7
41	DF	8	GLN	6.7
25	AZ	202	LEU	6.7
25	AZ	199	ILE	6.7
38	BC	76	ALA	6.6
32	B6	26	ASN	6.6
29	B3	1	MET	6.6
36	DA	1077	A	6.6
38	BC	106	GLY	6.6
36	DA	654(I)	C	6.6
19	CS	81	ARG	6.5
36	DA	654(G)	C	6.4
36	BA	654(E)	G	6.3
28	D2	42	GLY	6.3
36	DA	654(L)	G	6.3
36	BA	1066	U	6.2
57	BY	79	CYS	6.2
52	BT	1	MET	6.2
11	AK	129	SER	6.2
51	BS	83	LYS	6.2
32	D6	42	TRP	6.2
38	DC	105	ASP	6.2
25	AZ	1	ALA	6.2
57	BY	52	SER	6.1
25	AZ	29	ALA	6.1
31	B5	59	GLU	6.1
32	B6	42	TRP	6.1
54	BV	36	PRO	6.1
57	BY	75	ILE	6.1

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Mol	Chain	Res	Type	RSRZ
40	BE	204	ALA	6.0
19	AS	81	ARG	6.0
1	AA	82	U	6.0
25	AZ	280	GLY	6.0
36	BA	654(J)	A	6.0
2	AB	7	VAL	5.9
39	BD	276	LYS	5.9
28	D2	16	LEU	5.9
25	AZ	196	VAL	5.9
41	BF	194	MET	5.9
13	CM	124	PRO	5.8
36	DA	654(F)	C	5.8
36	DA	2799	C	5.8
1	AA	80	G	5.8
38	BC	97	GLU	5.7
28	D2	71	ASN	5.7
57	BY	55	TYR	5.7
36	DA	654(S)	G	5.7
57	DY	51	VAL	5.7
41	BF	207	GLY	5.7
25	AZ	247	VAL	5.7
39	DD	276	LYS	5.6
26	D0	4	LYS	5.6
14	AN	2	ALA	5.6
57	DY	56	PRO	5.6
25	AZ	146	LEU	5.6
48	DP	17	LYS	5.6
36	DA	2796	U	5.6
35	B9	37	GLY	5.5
1	CA	88	A	5.5
58	DZ	113	ALA	5.5
25	AZ	249	VAL	5.5
53	BU	118	GLY	5.4
38	BC	115	ALA	5.4
25	AZ	216	ASP	5.3
25	AZ	110	ASP	5.2
25	AZ	132	VAL	5.3
36	BA	1077	A	5.2
55	DW	113	LYS	5.2
40	DE	204	ALA	5.2
54	BV	101	GLY	5.2
36	BA	654(L)	G	5.2

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Mol	Chain	Res	Type	RSRZ
25	AZ	71	GLU	5.2
28	B2	72	ALA	5.1
52	DT	136	GLN	5.1
38	DC	95	GLY	5.1
28	D2	43	GLN	5.1
1	CA	1447	A	5.1
25	AZ	266	VAL	5.1
26	B0	6	GLY	5.1
1	CA	1036	G	5.1
14	CN	2	ALA	5.1
26	D0	2	ALA	5.1
25	AZ	195	TRP	5.0
29	D3	1	MET	5.0
25	AZ	126	VAL	5.0
42	BG	48	GLU	5.0
25	CZ	63	ILE	5.0
46	BN	10	GLU	5.0
38	BC	109	ASP	5.0
31	B5	60	VAL	5.0
25	AZ	186	PRO	5.0
25	AZ	147	LEU	5.0
25	CZ	41	ASN	4.9
36	BA	654(G)	C	4.9
36	BA	654(C)	G	4.9
13	AM	122	LYS	4.9
41	DF	12	LEU	4.9
25	AZ	233	GLY	4.9
25	AZ	101	GLY	4.9
33	D7	47	ARG	4.9
12	AL	128	ALA	4.9
36	BA	2804	C	4.9
10	AJ	23	ILE	4.9
41	DF	124	LEU	4.9
25	AZ	33	TYR	4.9
54	DV	101	GLY	4.9
9	AI	19	LEU	4.8
42	BG	49	ASP	4.8
48	DP	149	GLU	4.8
41	BF	11	VAL	4.8
46	BN	8	GLN	4.8
51	BS	59	LYS	4.8
25	AZ	83	PRO	4.8

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Mol	Chain	Res	Type	RSRZ
10	AJ	85	LEU	4.8
36	BA	275	G	4.8
36	DA	654(T)	C	4.7
25	AZ	217	VAL	4.7
43	DH	52	VAL	4.7
13	CM	125	ARG	4.7
25	AZ	105	VAL	4.7
43	BH	169	VAL	4.7
57	DY	61	ILE	4.6
12	CL	128	ALA	4.6
43	BH	170	ARG	4.6
7	AG	81	GLY	4.6
36	DA	277	C	4.6
57	DY	85	VAL	4.6
33	D7	48	LYS	4.5
41	BF	24	LEU	4.5
52	DT	39	ARG	4.5
51	BS	60	GLY	4.5
34	D8	64	TYR	4.5
36	DA	2207	G	4.5
10	AJ	91	PRO	4.5
38	BC	94	VAL	4.5
36	BA	2896	C	4.5
36	DA	654(E)	G	4.5
43	DH	161	GLY	4.5
57	BY	3	VAL	4.5
1	CA	81	U	4.5
57	BY	54	LYS	4.5
41	DF	1	MET	4.5
36	BA	1509	C	4.5
20	CT	9	ASN	4.4
36	BA	2796	U	4.4
36	BA	156	U	4.4
57	DY	6	HIS	4.4
25	CZ	86	ALA	4.4
1	AA	1036	G	4.4
48	BP	5	ASP	4.4
57	BY	28	LYS	4.4
57	BY	35	TYR	4.4
1	AA	81	U	4.3
13	CM	122	LYS	4.4
36	DA	2795	G	4.3

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Mol	Chain	Res	Type	RSRZ
36	DA	654(V)	A	4.3
38	DC	107	TRP	4.3
4	CD	209	ARG	4.3
25	AZ	143	ASP	4.3
25	AZ	130	TYR	4.3
13	AM	125	ARG	4.3
20	AT	104	LEU	4.3
20	CT	104	LEU	4.3
6	CF	101	ALA	4.3
25	AZ	2	LYS	4.3
36	BA	1174	A	4.2
25	AZ	335	PHE	4.2
57	DY	91	GLU	4.2
38	DC	86	ALA	4.2
25	AZ	200	TRP	4.2
27	B1	81	LYS	4.2
35	B9	1	MET	4.2
38	BC	107	TRP	4.2
36	BA	654	A	4.2
40	DE	10	GLY	4.2
43	DH	13	LYS	4.2
25	AZ	206	ILE	4.2
28	D2	41	ILE	4.2
42	DG	50	ALA	4.1
49	BQ	140	ALA	4.1
36	BA	654(S)	G	4.1
58	DZ	153	SER	4.1
25	CZ	112	PRO	4.1
36	DA	2801	A	4.1
25	AZ	290	LEU	4.1
48	DP	82	GLY	4.1
52	BT	135	ALA	4.1
1	CA	76	C	4.1
36	DA	352	G	4.1
23	CX	27	A	4.1
52	DT	132	LYS	4.1
25	AZ	72	THR	4.1
55	DW	5	ALA	4.1
36	DA	614(B)	G	4.0
57	DY	79	CYS	4.0
36	DA	2894	G	4.0
48	DP	150	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
57	DY	92	ASN	4.0
57	DY	53	PRO	4.0
41	BF	124	LEU	4.0
58	DZ	144	LEU	4.0
57	DY	38	ILE	4.0
41	DF	11	VAL	4.0
25	AZ	294	SER	4.0
36	DA	275	G	4.0
4	AD	209	ARG	4.0
57	BY	86	ARG	4.0
55	DW	74	ALA	4.0
25	AZ	276	THR	3.9
40	DE	76	ARG	3.9
22	AW	44	G	3.9
41	BF	129	PHE	3.9
29	B3	2	PRO	3.9
19	CS	43	GLU	3.9
51	DS	54	LEU	3.9
22	AW	3	C	3.9
21	CU	25	LYS	3.9
25	AZ	37	ALA	3.9
36	BA	277	C	3.9
23	AX	27	A	3.9
36	DA	1087	G	3.9
38	DC	79	LYS	3.9
25	AZ	16	THR	3.9
1	CA	1030(A)	G	3.9
1	AA	1030(B)	C	3.9
36	BA	654(H)	G	3.8
25	AZ	41	ASN	3.8
32	D6	54	ILE	3.8
50	BR	105	ARG	3.8
51	BS	80	LEU	3.8
25	AZ	142	ASP	3.8
25	AZ	252	GLU	3.8
41	DF	25	PRO	3.8
28	D2	38	GLN	3.8
19	CS	12	ASP	3.8
36	BA	654(I)	C	3.8
58	DZ	148	ASP	3.8
25	AZ	140	MET	3.8
25	AZ	260	PRO	3.8

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Mol	Chain	Res	Type	RSRZ
57	BY	53	PRO	3.8
36	DA	271(K)	U	3.8
36	DA	2896	C	3.8
22	CW	34	G	3.8
36	DA	1093	G	3.8
36	BA	229	A	3.8
38	DC	108	MET	3.8
43	BH	88	LEU	3.8
25	AZ	134	PHE	3.8
36	DA	1174	A	3.8
38	BC	101	GLN	3.7
10	AJ	4	ILE	3.7
36	BA	654(V)	A	3.7
43	BH	53	GLU	3.7
25	AZ	185	ASN	3.7
25	CZ	108	ALA	3.7
51	BS	68	GLN	3.7
57	BY	91	GLU	3.7
22	AW	6	G	3.7
57	BY	36	ALA	3.7
13	AM	121	LYS	3.7
25	AZ	68	VAL	3.7
25	AZ	232	THR	3.7
57	BY	17	SER	3.7
36	DA	1509(A)	A	3.7
38	BC	70	LYS	3.7
28	D2	68	ARG	3.7
42	DG	86	MET	3.7
58	DZ	115	GLY	3.7
36	BA	2801	A	3.7
41	BF	1	MET	3.7
4	AD	112	VAL	3.7
25	AZ	32	THR	3.6
40	BE	53	PRO	3.6
42	DG	49	ASP	3.6
22	CW	21	A	3.6
48	BP	110	TYR	3.6
41	BF	134	GLY	3.6
27	B1	82	LEU	3.6
41	DF	10	PRO	3.6
42	BG	28	VAL	3.6
9	AI	4	TYR	3.6

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Mol	Chain	Res	Type	RSRZ
25	AZ	304	LEU	3.6
31	B5	58	LEU	3.6
25	AZ	75	ARG	3.6
43	DH	17	VAL	3.6
57	DY	84	ARG	3.6
36	BA	155	U	3.6
38	BC	95	GLY	3.6
51	BS	54	LEU	3.6
52	DT	135	ALA	3.6
1	AA	1447	A	3.6
38	DC	97	GLU	3.6
1	CA	1030(B)	C	3.5
43	BH	131	VAL	3.5
42	BG	82	LEU	3.5
31	B5	52	TYR	3.5
43	DH	53	GLU	3.5
48	DP	126	VAL	3.5
58	DZ	114	GLY	3.5
32	D6	26	ASN	3.5
25	AZ	268	THR	3.5
25	AZ	296	GLU	3.5
36	BA	1063	G	3.5
1	CA	1038	C	3.5
25	AZ	131	ILE	3.5
48	BP	149	GLU	3.5
22	AW	5	G	3.5
36	BA	2799	C	3.5
40	BE	54	GLN	3.5
19	AS	9	VAL	3.5
9	AI	8	GLY	3.5
25	AZ	28	THR	3.5
26	D0	6	GLY	3.5
40	BE	68	ALA	3.5
36	DA	654	A	3.5
40	BE	76	ARG	3.5
41	BF	18	ARG	3.5
54	BV	1	MET	3.5
36	BA	271(L)	U	3.5
25	AZ	171	ILE	3.5
25	CZ	141	VAL	3.4
48	BP	82	GLY	3.4
10	AJ	73	ASP	3.4

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Mol	Chain	Res	Type	RSRZ
34	B8	64	TYR	3.4
10	AJ	77	PRO	3.4
13	AM	7	VAL	3.4
1	CA	78	G	3.4
24	AY	44	G	3.4
36	BA	2805	G	3.4
43	BH	21	PRO	3.4
36	DA	654(M)	C	3.4
57	DY	54	LYS	3.4
25	AZ	179	LEU	3.4
13	AM	124	PRO	3.4
10	AJ	89	ASP	3.4
36	DA	2801(A)	A	3.4
36	BA	614(B)	G	3.4
43	BH	148	ILE	3.4
36	BA	1534	U	3.4
36	BA	888	C	3.4
25	AZ	307	PRO	3.4
57	DY	3	VAL	3.4
4	AD	23	GLY	3.4
55	BW	112	GLY	3.4
36	DA	1079	C	3.4
54	BV	46	VAL	3.4
25	AZ	336	SER	3.4
28	D2	57	ILE	3.4
52	BT	136	GLN	3.4
52	BT	132	LYS	3.4
57	BY	19	LYS	3.4
36	BA	508	G	3.4
25	AZ	103	ILE	3.4
36	BA	654(F)	C	3.4
26	B0	7	LEU	3.3
22	CW	47	U	3.3
20	CT	85	MET	3.3
25	CZ	85	HIS	3.3
1	AA	723	U	3.3
13	CM	84	ILE	3.3
25	AZ	184	ARG	3.3
43	DH	81	GLU	3.3
48	DP	127	ALA	3.3
25	AZ	215	ARG	3.3
57	DY	5	MET	3.3

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Mol	Chain	Res	Type	RSRZ
25	AZ	398	GLY	3.3
28	B2	13	ALA	3.3
52	BT	27	THR	3.3
56	DX	85	PRO	3.3
27	D1	85	LEU	3.3
36	BA	1104	C	3.3
4	AD	154	ASN	3.3
58	DZ	162	GLU	3.3
36	DA	229	A	3.3
32	D6	46	HIS	3.3
22	CW	7	A	3.3
54	DV	54	GLY	3.3
51	BS	34	HIS	3.3
52	DT	27	THR	3.3
2	AB	132	LYS	3.3
57	DY	86	ARG	3.3
43	DH	33	LEU	3.3
22	CW	5	G	3.3
25	CZ	370	PHE	3.3
42	BG	84	LYS	3.3
25	AZ	102	ALA	3.2
57	BY	65	ALA	3.2
25	CZ	110	ASP	3.2
25	AZ	194	GLU	3.2
41	DF	9	ILE	3.2
7	CG	156	TRP	3.2
13	AM	117	VAL	3.2
31	D5	59	GLU	3.2
36	DA	1080	C	3.2
20	CT	100	ILE	3.2
36	BA	157	U	3.2
32	B6	36	LEU	3.2
26	B0	5	LYS	3.2
10	AJ	34	VAL	3.2
32	D6	23	THR	3.2
36	BA	1087	G	3.2
25	AZ	320	VAL	3.2
19	AS	43	GLU	3.2
1	CA	1129	C	3.2
36	DA	1509	C	3.2
43	BH	136	ILE	3.2
10	CJ	34	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
25	AZ	154	VAL	3.2
26	B0	4	LYS	3.2
51	DS	23	ARG	3.2
25	AZ	39	ASN	3.2
36	BA	271(J)	C	3.2
57	DY	83	THR	3.2
57	BY	45	VAL	3.2
1	AA	78	G	3.2
54	DV	36	PRO	3.2
55	DW	82	LEU	3.2
10	AJ	33	GLN	3.2
48	BP	88	LEU	3.1
36	DA	2897	U	3.1
26	D0	85	ALA	3.1
51	DS	68	GLN	3.1
57	BY	44	ILE	3.1
55	BW	1	MET	3.1
55	BW	113	LYS	3.1
36	BA	1740	G	3.1
25	AZ	165	GLY	3.1
28	D2	6	VAL	3.1
25	AZ	107	SER	3.1
41	BF	2	LYS	3.1
41	DF	23	ASP	3.1
54	DV	20	LEU	3.1
48	BP	112	LEU	3.1
54	BV	35	LEU	3.1
9	AI	6	GLY	3.1
22	CW	6	G	3.1
34	D8	48	PHE	3.1
54	BV	48	GLY	3.1
48	BP	27	HIS	3.1
25	CZ	326	GLU	3.1
1	CA	1001(A)	G	3.1
19	AS	12	ASP	3.1
25	AZ	87	ASP	3.1
7	AG	82	GLY	3.1
46	DN	62	VAL	3.1
51	DS	107	GLU	3.1
51	BS	90	GLY	3.1
16	CP	83	GLU	3.1
55	DW	112	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
35	D9	28	GLU	3.0
48	DP	98	GLU	3.0
26	B0	3	HIS	3.0
38	DC	78	ALA	3.0
41	DF	14	PRO	3.0
41	BF	133	ASN	3.0
38	BC	86	ALA	3.0
9	AI	63	ILE	3.0
36	BA	1847	A	3.0
56	BX	5	TYR	3.0
57	DY	45	VAL	3.0
28	D2	48	HIS	3.0
32	D6	37	ARG	3.0
25	AZ	129	PRO	3.0
57	BY	89	PHE	3.0
48	BP	150	ALA	3.0
57	DY	88	LYS	3.0
38	BC	69	GLY	3.0
36	DA	2792	G	3.0
9	CI	88	TYR	3.0
41	BF	8	GLN	3.0
43	BH	168	PRO	3.0
28	D2	64	LEU	3.0
28	D2	5	GLU	3.0
36	DA	888	C	3.0
49	DQ	140	ALA	3.0
1	CA	1030(D)	A	3.0
36	BA	2792	G	2.9
31	D5	60	VAL	2.9
11	CK	127	LYS	2.9
25	AZ	7	ARG	2.9
38	DC	121	GLY	2.9
48	DP	35	HIS	2.9
36	BA	1420	U	2.9
32	B6	37	ARG	2.9
40	DE	88	GLY	2.9
28	D2	53	LEU	2.9
34	B8	2	PRO	2.9
40	BE	66	HIS	2.9
48	DP	103	ALA	2.9
26	D0	5	LYS	2.9
25	AZ	322	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
58	DZ	112	ARG	2.9
36	DA	271(J)	C	2.9
25	AZ	3	GLY	2.9
1	CA	82	U	2.9
10	AJ	20	ALA	2.9
40	BE	69	LYS	2.9
7	AG	156	TRP	2.9
38	BC	81	GLU	2.9
1	CA	1031	G	2.9
41	BF	23	ASP	2.9
51	BS	23	ARG	2.9
54	DV	46	VAL	2.9
1	CA	92	C	2.9
9	AI	88	TYR	2.9
43	DH	32	GLU	2.9
38	BC	129	ARG	2.9
18	AR	23	LYS	2.9
40	BE	59	VAL	2.9
40	BE	151	TYR	2.9
57	BY	64	GLU	2.9
41	BF	12	LEU	2.9
46	DN	33	LEU	2.9
13	AM	43	THR	2.8
57	BY	46	LYS	2.8
36	DA	1091	G	2.8
52	DT	1	MET	2.8
25	AZ	73	ALA	2.8
28	D2	49	LYS	2.8
36	BA	405	U	2.8
36	DA	271(L)	U	2.8
25	AZ	63	ILE	2.8
42	BG	81	LYS	2.8
50	BR	2	ARG	2.8
10	AJ	35	SER	2.8
43	DH	155	SER	2.8
48	DP	25	SER	2.8
57	BY	58	GLY	2.8
23	AX	18	G	2.8
36	DA	1078	U	2.8
1	CA	91	C	2.8
36	DA	654(Q)	C	2.8
25	AZ	193	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
24	CY	19	G	2.8
36	DA	654(D)	G	2.8
25	CZ	65	THR	2.8
53	BU	19	LYS	2.8
28	D2	60	LEU	2.8
43	BH	89	ILE	2.8
36	DA	654(A)	G	2.8
43	BH	101	ARG	2.8
52	BT	134	GLU	2.8
52	DT	115	ARG	2.8
38	BC	68	LEU	2.8
41	DF	49	ALA	2.8
57	DY	15	VAL	2.8
25	AZ	180	GLU	2.8
25	AZ	192	GLU	2.8
57	DY	34	LYS	2.8
25	AZ	264	ARG	2.8
25	CZ	372	VAL	2.8
35	D9	37	GLY	2.8
10	CJ	80	LYS	2.8
38	BC	73	ARG	2.8
38	BC	113	VAL	2.8
43	DH	113	VAL	2.8
1	CA	1030(C)	G	2.7
35	D9	1	MET	2.7
43	DH	44	VAL	2.7
48	BP	83	VAL	2.7
25	CZ	199	ILE	2.7
22	CV	17	C	2.7
21	AU	24	ARG	2.7
22	AW	47	U	2.7
36	BA	2795	G	2.7
41	BF	25	PRO	2.7
43	DH	168	PRO	2.7
43	DH	137	ASP	2.7
43	DH	35	VAL	2.7
56	DX	84	ALA	2.7
28	D2	4	SER	2.7
30	D4	42	PHE	2.7
36	BA	2897	U	2.7
43	DH	148	ILE	2.7
51	BS	35	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
36	BA	1535	A	2.7
38	BC	145	VAL	2.7
7	CG	78	ARG	2.7
38	BC	79	LYS	2.7
25	CZ	111	GLY	2.7
41	DF	193	VAL	2.7
36	BA	654(D)	G	2.7
1	AA	204	U	2.7
36	BA	1076	C	2.7
40	DE	69	LYS	2.7
48	DP	91	PHE	2.7
38	BC	103	ILE	2.7
4	AD	110	PHE	2.7
25	AZ	5	PHE	2.7
43	DH	101	ARG	2.7
48	BP	77	ARG	2.7
40	BE	128	SER	2.7
57	BY	39	VAL	2.7
41	DF	21	ALA	2.7
48	BP	114	ILE	2.7
21	AU	9	ARG	2.7
25	AZ	164	PRO	2.7
25	AZ	337	GLY	2.7
43	DH	26	VAL	2.7
54	DV	37	VAL	2.7
43	BH	155	SER	2.7
18	CR	88	LYS	2.7
36	DA	1420	U	2.7
52	DT	91	ARG	2.7
53	BU	6	THR	2.7
25	AZ	400	VAL	2.7
57	DY	22	GLY	2.7
41	DF	166	ALA	2.7
48	BP	7	ARG	2.6
2	CB	128	GLU	2.6
11	AK	11	LYS	2.6
57	BY	88	LYS	2.6
24	CY	44	G	2.6
2	CB	122	PHE	2.6
1	CA	1029	C	2.6
42	BG	50	ALA	2.6
57	BY	60	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
57	DY	28	LYS	2.6
22	CW	44	G	2.6
25	AZ	109	ALA	2.6
25	AZ	150	VAL	2.6
25	AZ	168	VAL	2.6
25	AZ	269	GLY	2.6
41	BF	181	LEU	2.6
36	DA	157	U	2.6
43	BH	123	PHE	2.6
43	DH	51	ARG	2.6
56	DX	60	ARG	2.6
57	DY	82	PRO	2.6
19	AS	13	ASP	2.6
48	DP	107	LYS	2.6
13	AM	19	LEU	2.6
25	AZ	255	ILE	2.6
52	BT	137	LYS	2.6
9	AI	128	ARG	2.6
38	DC	76	ALA	2.6
7	AG	80	VAL	2.6
25	AZ	153	GLU	2.6
27	B1	74	VAL	2.6
25	AZ	310	ILE	2.6
25	AZ	235	GLY	2.6
38	BC	102	LYS	2.6
38	BC	121	GLY	2.6
43	DH	43	VAL	2.6
7	AG	5	ARG	2.6
36	DA	2804	C	2.6
30	D4	4	GLY	2.6
48	DP	94	GLU	2.6
25	AZ	344	PHE	2.6
50	BR	80	PHE	2.6
57	DY	89	PHE	2.6
43	DH	159	GLU	2.6
43	BH	158	HIS	2.6
9	AI	82	ALA	2.5
11	AK	76	GLY	2.5
36	DA	1176	G	2.5
25	AZ	176	LEU	2.5
17	AQ	2	PRO	2.5
4	AD	47	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
7	AG	2	ALA	2.5
52	BT	93	ARG	2.5
55	BW	73	ALA	2.5
25	AZ	287	GLY	2.5
36	BA	2790	A	2.5
36	DA	654(N)	G	2.5
36	DA	1541	G	2.5
41	DF	7	TYR	2.5
41	DF	131	GLY	2.5
41	DF	207	GLY	2.5
34	D8	15	LYS	2.5
1	CA	1037	C	2.5
36	DA	1048	A	2.5
52	DT	134	GLU	2.5
25	AZ	275	LYS	2.5
48	BP	51	PHE	2.5
4	AD	152	SER	2.5
22	AW	21	A	2.5
38	DC	149	ILE	2.5
48	BP	90	ARG	2.5
48	DP	102	ARG	2.5
57	BY	61	ILE	2.5
51	BS	53	SER	2.5
1	CA	204	U	2.5
3	AC	207	VAL	2.5
41	DF	134	GLY	2.5
51	BS	33	LYS	2.5
25	AZ	11	HIS	2.5
38	DC	104	LEU	2.5
36	BA	1073	A	2.5
51	BS	107	GLU	2.5
57	DY	39	VAL	2.5
48	DP	138	LEU	2.5
48	BP	76	LYS	2.5
49	DQ	63	LYS	2.5
20	AT	36	LEU	2.5
41	BF	20	LEU	2.5
55	BW	111	HIS	2.5
36	DA	2793	G	2.5
30	B4	34	GLU	2.5
18	AR	88	LYS	2.5
42	BG	75	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
57	BY	63	LYS	2.5
9	AI	7	THR	2.5
25	AZ	136	ASN	2.5
32	B6	20	ASN	2.5
36	BA	158	U	2.5
1	CA	80	G	2.5
10	AJ	26	ALA	2.5
25	AZ	30	ALA	2.5
57	DY	67	LEU	2.5
38	BC	111	ASP	2.5
57	BY	56	PRO	2.5
48	BP	84	ASN	2.5
11	CK	128	ALA	2.5
48	DP	88	LEU	2.5
52	DT	137	LYS	2.5
36	BA	1173	G	2.5
25	AZ	26	THR	2.4
36	BA	1065	U	2.4
36	DA	271(N)	U	2.4
9	AI	16	ARG	2.4
40	DE	77	ILE	2.4
50	DR	118	GLU	2.4
43	BH	52	VAL	2.4
41	DF	172	TRP	2.4
48	DP	148	LEU	2.4
41	BF	130	ALA	2.4
57	BY	69	ALA	2.4
36	BA	1079	C	2.4
38	DC	82	LYS	2.4
31	D5	58	LEU	2.4
57	DY	58	GLY	2.4
48	DP	51	PHE	2.4
41	DF	133	ASN	2.4
51	BS	75	GLU	2.4
13	CM	117	VAL	2.4
27	D1	81	LYS	2.4
25	AZ	285	ASN	2.4
48	DP	37	GLY	2.4
28	D2	8	LYS	2.4
31	D5	24	ALA	2.4
12	AL	127	GLU	2.4
25	AZ	309	SER	2.4

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Mol	Chain	Res	Type	RSRZ
25	CZ	236	THR	2.4
28	B2	19	VAL	2.4
54	BV	40	LEU	2.4
1	AA	77	G	2.4
25	AZ	135	MET	2.4
43	DH	49	VAL	2.4
58	BZ	165	VAL	2.4
40	DE	68	ALA	2.4
52	BT	36	GLU	2.4
1	AA	1257	U	2.4
36	BA	271(K)	U	2.4
25	AZ	9	LYS	2.4
27	B1	32	LYS	2.4
25	AZ	316	PHE	2.4
36	DA	2173	A	2.4
52	DT	3	ARG	2.4
41	BF	28	ILE	2.4
39	BD	32	SER	2.4
43	DH	24	VAL	2.4
55	BW	6	ILE	2.4
4	CD	23	GLY	2.4
24	CY	18	G	2.4
28	D2	69	ARG	2.4
57	BY	57	GLN	2.4
20	AT	93	GLU	2.4
1	AA	1129	C	2.4
38	BC	78	ALA	2.4
47	BO	122	LEU	2.4
1	CA	1001	A	2.3
20	AT	88	VAL	2.3
26	B0	71	ASP	2.3
41	BF	193	VAL	2.3
43	DH	34	GLU	2.3
43	DH	29	PRO	2.3
25	AZ	34	VAL	2.3
43	DH	122	THR	2.3
10	AJ	6	ILE	2.3
22	CW	45	U	2.3
48	DP	110	TYR	2.3
43	DH	87	LEU	2.3
1	AA	1026	G	2.3
43	DH	85	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
10	CJ	21	GLN	2.3
36	BA	654(R)	C	2.3
10	AJ	55	LYS	2.3
25	AZ	352	VAL	2.3
54	DV	53	GLU	2.3
42	DG	25	TYR	2.3
43	DH	88	LEU	2.3
13	CM	7	VAL	2.3
56	BX	85	PRO	2.3
8	AH	1	MET	2.3
41	BF	158	THR	2.3
11	AK	98	LEU	2.3
25	AZ	198	LYS	2.3
40	DE	151	TYR	2.3
43	DH	90	LYS	2.3
57	BY	71	LYS	2.3
1	CA	980	C	2.3
25	AZ	334	PHE	2.3
57	BY	80	GLY	2.3
57	DY	66	PRO	2.3
32	D6	12	GLU	2.3
4	AD	161	ASN	2.3
9	CI	64	THR	2.3
25	AZ	13	ASN	2.3
25	AZ	239	THR	2.3
57	BY	47	LYS	2.3
51	BS	39	ILE	2.3
9	AI	90	PRO	2.3
1	AA	980	C	2.3
16	AP	83	GLU	2.3
57	DY	62	GLU	2.3
25	CZ	183	HIS	2.3
29	B3	10	LYS	2.3
30	B4	6	HIS	2.3
36	DA	1173	G	2.3
41	BF	172	TRP	2.3
57	BY	12	THR	2.3
48	BP	53	GLY	2.3
25	AZ	278	GLN	2.3
12	AL	64	TYR	2.3
42	BG	25	TYR	2.3
57	DY	75	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
24	CY	15	A	2.3
25	AZ	325	LYS	2.3
43	BH	81	GLU	2.3
43	BH	124	GLU	2.3
25	CZ	272	MET	2.3
2	CB	137	ARG	2.3
25	AZ	77	TYR	2.3
1	CA	1027	C	2.3
36	BA	34	C	2.3
42	BG	47	LYS	2.3
25	AZ	405	GLU	2.3
28	B2	68	ARG	2.3
41	DF	18	ARG	2.3
50	DR	2	ARG	2.3
9	AI	18	PHE	2.3
48	BP	95	VAL	2.3
26	B0	22	GLY	2.3
52	DT	36	GLU	2.3
26	B0	84	LEU	2.3
38	DC	77	ILE	2.3
32	B6	21	TYR	2.3
50	DR	3	HIS	2.3
10	CJ	25	GLU	2.2
16	AP	41	PRO	2.2
25	AZ	98	GLN	2.2
25	AZ	228	VAL	2.2
34	B8	48	PHE	2.2
38	BC	110	PHE	2.2
57	DY	30	VAL	2.2
1	CA	77	G	2.2
10	AJ	99	LYS	2.2
36	BA	2893	G	2.2
48	DP	84	ASN	2.2
55	DW	1	MET	2.2
41	BF	152	GLU	2.2
57	DY	20	TYR	2.2
25	AZ	230	THR	2.2
25	AZ	265	THR	2.2
41	DF	126	VAL	2.2
30	B4	42	PHE	2.2
43	DH	31	GLY	2.2
21	AU	23	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
57	DY	59	GLY	2.2
36	DA	1069	A	2.2
4	CD	152	SER	2.2
55	DW	6	ILE	2.2
56	DX	80	ILE	2.2
56	BX	90	GLU	2.2
36	BA	2894	G	2.2
2	AB	135	GLN	2.2
11	AK	77	MET	2.2
25	AZ	137	LYS	2.2
36	DA	1535	A	2.2
53	DU	19	LYS	2.2
13	AM	2	ALA	2.2
25	AZ	88	TYR	2.2
4	AD	21	LEU	2.2
1	AA	1002	G	2.2
30	B4	13	ARG	2.2
43	BH	151	ILE	2.2
57	DY	65	ALA	2.2
25	AZ	21	ASP	2.2
29	D3	10	LYS	2.2
41	BF	14	PRO	2.2
36	BA	1072	C	2.2
43	BH	86	GLU	2.2
55	DW	103	ILE	2.2
17	AQ	72	ARG	2.2
38	DC	129	ARG	2.2
56	DX	88	LYS	2.2
36	DA	1177	A	2.2
38	DC	101	GLN	2.2
25	CZ	344	PHE	2.2
40	BE	74	PRO	2.2
43	DH	54	ARG	2.2
41	BF	162	LEU	2.2
41	DF	33	LEU	2.2
43	DH	138	LYS	2.2
22	AV	44	G	2.2
42	DG	26	GLN	2.2
43	DH	58	GLU	2.2
57	DY	96	ILE	2.2
11	AK	12	ARG	2.2
22	CW	48	C	2.1

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Mol	Chain	Res	Type	RSRZ
28	D2	40	SER	2.1
36	DA	156	U	2.1
13	CM	121	LYS	2.1
25	CZ	252	GLU	2.1
43	DH	42	ARG	2.1
48	DP	87	ASP	2.1
57	BY	43	ASN	2.1
25	CZ	33	TYR	2.1
51	DS	77	ALA	2.1
1	AA	92	C	2.1
2	AB	133	LYS	2.1
43	BH	26	VAL	2.1
1	AA	90	U	2.1
55	BW	64	MET	2.1
28	B2	71	ASN	2.1
38	BC	93	TYR	2.1
10	AJ	3	LYS	2.1
13	AM	60	VAL	2.1
25	AZ	115	GLN	2.1
25	CZ	69	GLU	2.1
36	DA	654(U)	A	2.1
36	DA	1847	A	2.1
46	DN	118	LYS	2.1
48	DP	7	ARG	2.1
48	DP	125	VAL	2.1
38	BC	117	PRO	2.1
48	BP	10	PRO	2.1
51	BS	27	SER	2.1
22	AW	4	C	2.1
36	BA	2172	U	2.1
10	AJ	98	ILE	2.1
16	AP	19	ILE	2.1
25	AZ	242	ILE	2.1
30	D4	47	GLN	2.1
42	DG	28	VAL	2.1
28	D2	10	LEU	2.1
4	CD	35	ARG	2.1
13	AM	102	ARG	2.1
22	AW	45	U	2.1
36	BA	1505	C	2.1
36	DA	1175	U	2.1
10	AJ	19	SER	2.1

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Mol	Chain	Res	Type	RSRZ
32	B6	31	PRO	2.1
12	AL	19	ARG	2.1
19	CS	10	PHE	2.1
48	BP	127	ALA	2.1
17	AQ	45	HIS	2.1
22	AW	17	C	2.1
16	CP	1	MET	2.1
39	DD	275	LYS	2.1
40	BE	116	VAL	2.1
36	DA	2189	U	2.1
25	CZ	347	THR	2.1
32	D6	20	ASN	2.1
38	DC	136	LEU	2.1
48	DP	81	GLN	2.1
51	BS	30	ARG	2.1
29	D3	2	PRO	2.1
31	B5	34	PRO	2.1
6	AF	101	ALA	2.1
41	BF	15	SER	2.1
58	BZ	168	GLU	2.1
43	BH	57	ASP	2.1
55	DW	22	ASP	2.1
56	DX	83	VAL	2.1
36	BA	1084	A	2.1
55	BW	100	THR	2.1
2	AB	128	GLU	2.1
36	BA	1089	G	2.1
41	BF	21	ALA	2.1
38	BC	149	ILE	2.1
27	B1	31	GLY	2.1
36	BA	271(N)	U	2.1
25	AZ	106	VAL	2.1
25	AZ	177	LEU	2.1
50	BR	3	HIS	2.1
42	DG	81	LYS	2.1
13	AM	84	ILE	2.1
36	BA	2801(A)	A	2.1
2	AB	96	ARG	2.0
12	AL	21	LYS	2.0
26	D0	74	ARG	2.0
1	CA	79	G	2.0
1	CA	1002	G	2.0

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Mol	Chain	Res	Type	RSRZ
43	BH	167	GLU	2.0
9	AI	27	THR	2.0
57	BY	66	PRO	2.0
11	CK	11	LYS	2.0
39	BD	35	LYS	2.0
9	AI	20	ARG	2.0
30	B4	47	GLN	2.0
43	BH	97	ARG	2.0
4	AD	133	VAL	2.0
25	AZ	84	GLY	2.0
36	BA	1062	G	2.0
36	DA	1740	G	2.0
25	AZ	370	PHE	2.0
48	DP	15	ARG	2.0
48	DP	71	VAL	2.0
10	AJ	90	LEU	2.0
41	DF	162	LEU	2.0
51	BS	26	LEU	2.0
57	DY	63	LYS	2.0
43	BH	149	ARG	2.0
1	CA	1446	U	2.0
22	CW	71	G	2.0
25	AZ	226	GLU	2.0
25	AZ	85	HIS	2.0
25	CZ	87	ASP	2.0
57	BY	31	LEU	2.0
36	BA	1088	A	2.0
10	AJ	100	THR	2.0
36	BA	1043	C	2.0
56	DX	3	THR	2.0
10	CJ	83	GLU	2.0
49	DQ	80	GLU	2.0
1	CA	1257	U	2.0
20	AT	87	LYS	2.0
36	DA	2172	U	2.0
38	BC	126	LYS	2.0
41	DF	2	LYS	2.0
20	AT	106	ALA	2.0
22	CW	46	G	2.0
36	BA	353	G	2.0
36	BA	1176	G	2.0
25	AZ	236	THR	2.0

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Mol	Chain	Res	Type	RSRZ
9	AI	87	GLN	2.0
36	BA	2794	C	2.0
36	DA	1075	C	2.0
57	DY	12	THR	2.0
7	AG	79	ARG	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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
24	H2U	CY	16	20/21	0.56	0.69	181,191,191,193	0
24	H2U	AY	16	20/21	0.58	0.66	181,191,192,193	0
24	7MG	AY	46	24/25	0.65	0.39	166,169,171,171	0
24	H2U	AY	20	20/21	0.74	0.35	186,186,188,188	0
24	4SU	AY	8	20/21	0.76	0.30	140,143,144,144	0
24	PSU	CY	55	20/21	0.79	0.18	158,166,168,168	0
24	H2U	CY	20	20/21	0.79	0.38	185,186,187,187	0
24	H2U	AY	17	20/21	0.80	0.54	194,195,195,195	0
24	H2U	CY	17	20/21	0.80	0.58	194,195,195,195	0
24	PSU	AY	55	20/21	0.80	0.19	157,166,168,168	0
24	7MG	CY	46	24/25	0.84	0.23	166,168,170,170	0
24	4SU	CY	8	20/21	0.85	0.24	140,141,142,142	0
24	5MU	CY	54	21/22	0.89	0.15	142,153,154,156	0
24	OMC	CY	32	21/22	0.90	0.17	96,103,108,109	0
24	OMC	AY	32	21/22	0.92	0.29	98,106,112,113	0
24	5MU	AY	54	21/22	0.92	0.20	143,153,153,156	0
24	MIA	CY	37	29/30	0.93	0.28	60,80,107,108	0
24	MIA	AY	37	29/30	0.94	0.26	63,84,108,108	0

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

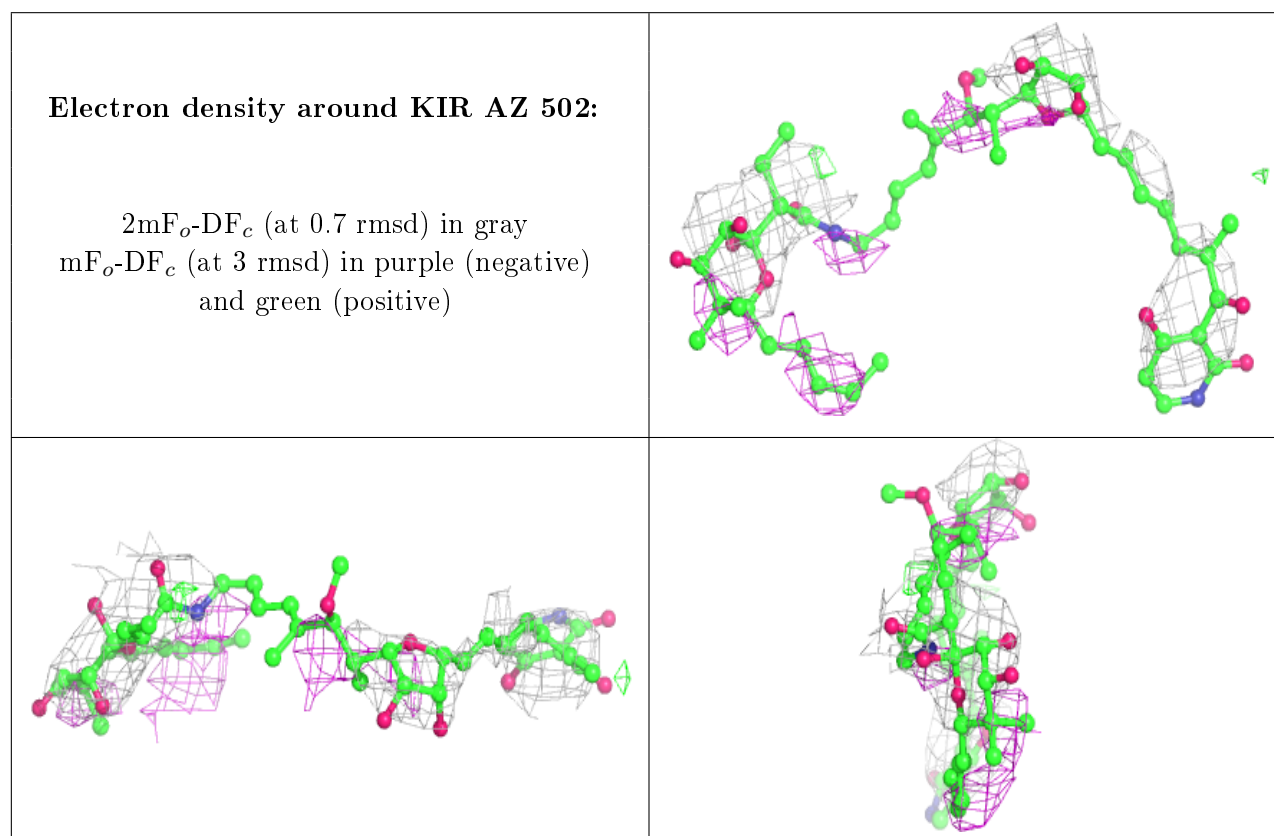
6.4 Ligands [i](#)

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.

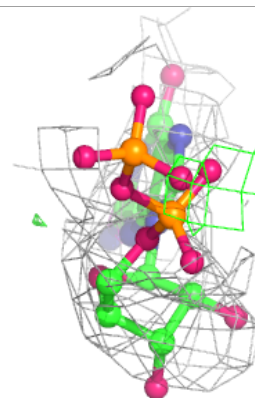
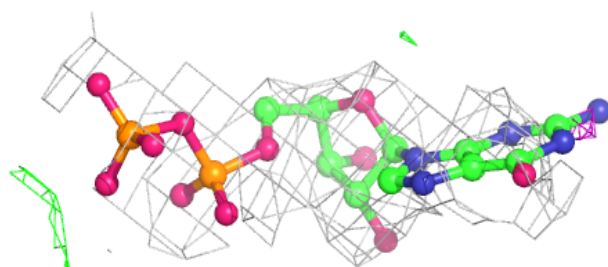
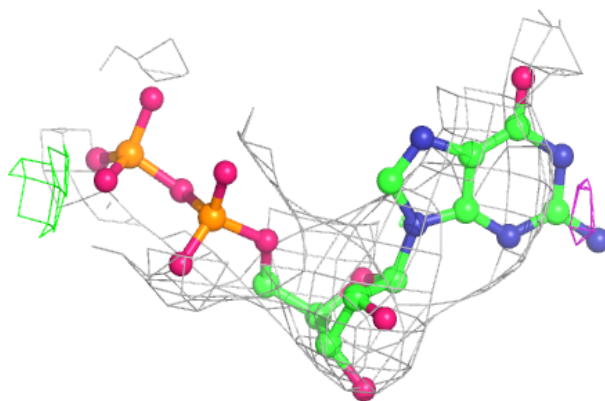
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
61	KIR	AZ	502	57/57	0.74	0.57	139,147,150,150	0
60	GDP	CZ	501	28/28	0.81	0.25	141,145,153,153	0
61	KIR	CZ	502	57/57	0.84	0.34	139,145,150,151	0
60	GDP	AZ	501	28/28	0.84	0.23	151,157,158,158	0
59	ZN	B4	101	1/1	0.88	0.08	200,200,200,200	0
59	ZN	B9	101	1/1	0.94	0.14	200,200,200,200	0
59	ZN	D9	101	1/1	0.97	0.11	133,133,133,133	0
59	ZN	AD	301	1/1	0.99	0.29	99,99,99,99	0
59	ZN	AN	101	1/1	0.99	0.16	84,84,84,84	0
59	ZN	D4	101	1/1	0.99	0.14	129,129,129,129	0
59	ZN	CD	301	1/1	0.99	0.31	85,85,85,85	0
59	ZN	CN	101	1/1	1.00	0.17	63,63,63,63	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.

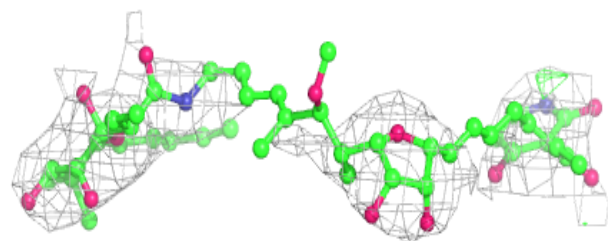
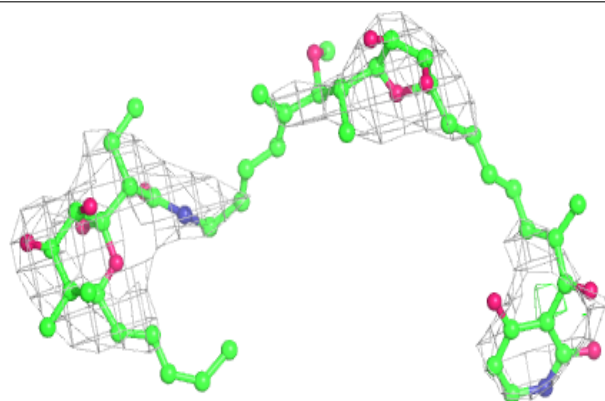


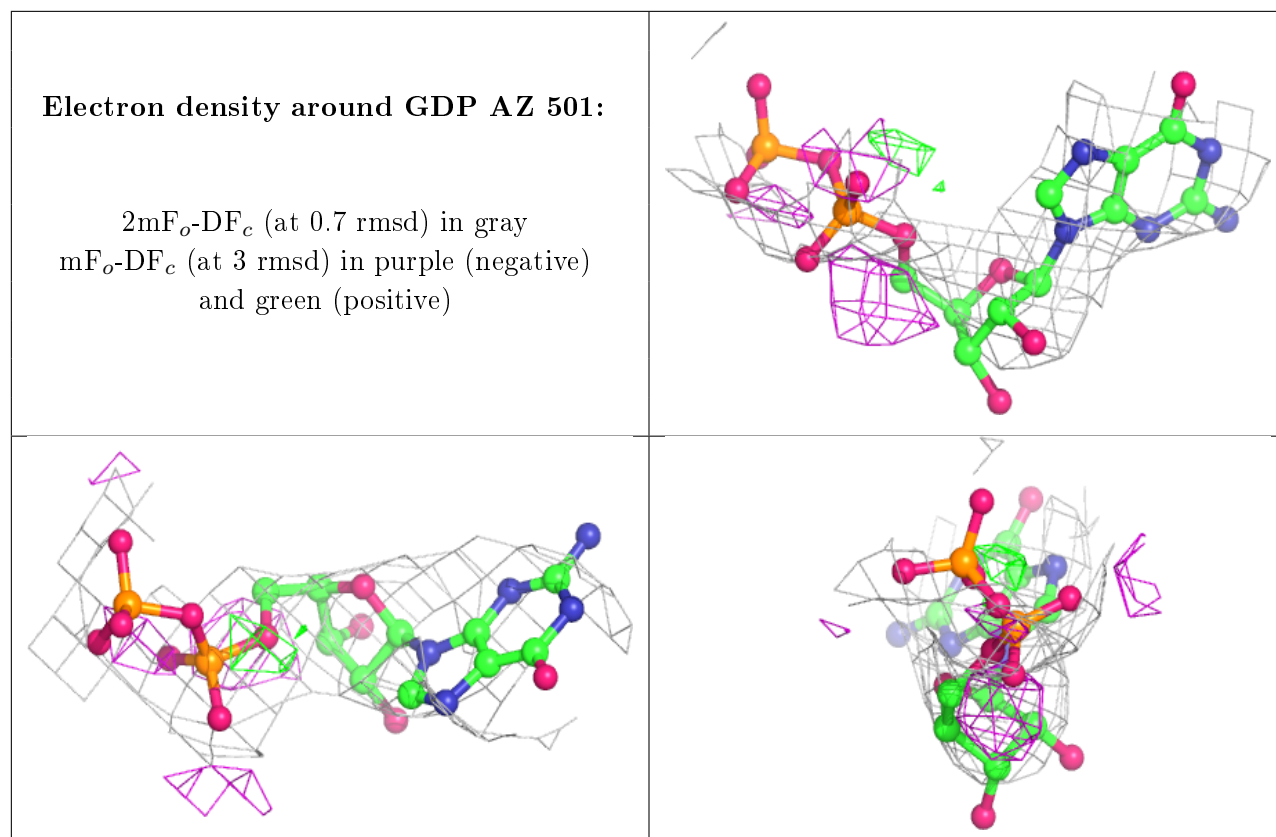
Electron density around GDP CZ 501:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around KIR CZ 502:**

$2mF_o-DF_c$ (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.