



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:46 PM GMT

PDB ID : 4V5Q  
Title : The crystal structure of EF-Tu and G24A-tRNA-Trp bound to a near- 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](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467  
Mogul : 1.7 (RC4), CSD as536be (2015)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk26865

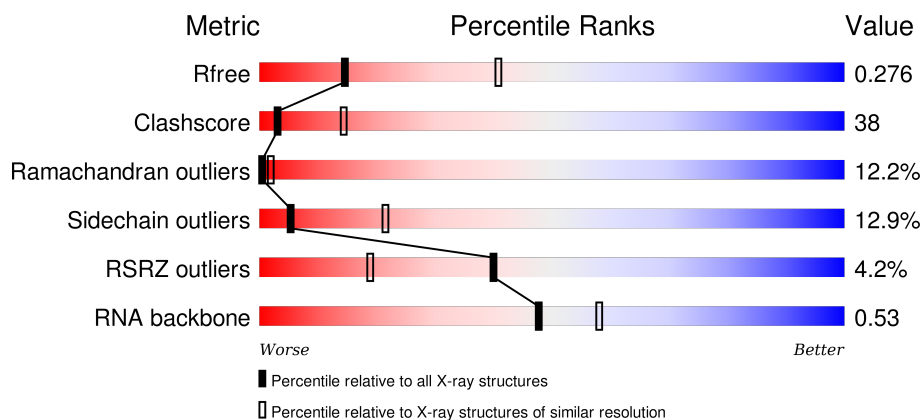
# 1 Overall quality at a glance

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))
$R_{free}$	91344	1114 (3.14-3.06)
Clashscore	102246	1222 (3.14-3.06)
Ramachandran outliers	100387	1174 (3.14-3.06)
Sidechain outliers	100360	1174 (3.14-3.06)
RSRZ outliers	91569	1119 (3.14-3.06)
RNA backbone	2183	1010 (3.52-2.68)

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  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. 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>2%</div> <div>36%</div> <div>47%</div> <div>13%</div> <div>..</div> </div>
1	CA	1522	<div> <div>2%</div> <div>28%</div> <div>57%</div> <div>12%</div> <div>..</div> </div>
2	AB	256	<div> <div>%</div> <div>28%</div> <div>45%</div> <div>17%</div> <div>9%</div> </div>
2	CB	256	<div> <div>%</div> <div>19%</div> <div>56%</div> <div>16%</div> <div>9%</div> </div>



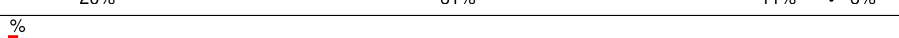
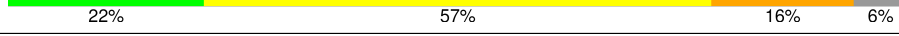
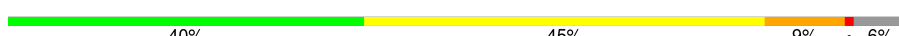
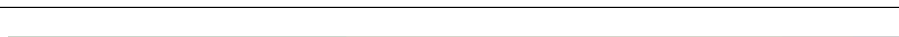
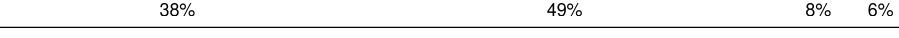
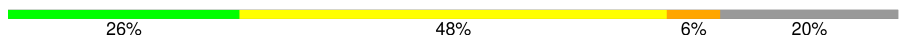

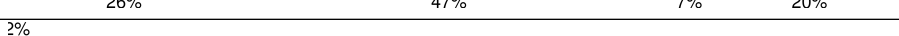
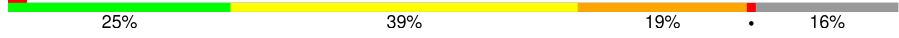
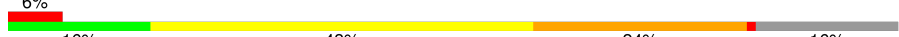
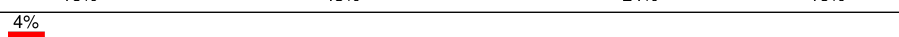
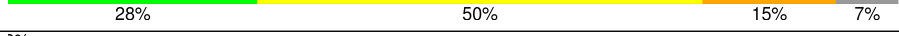

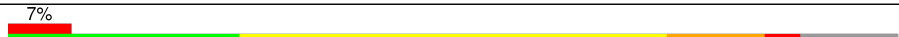
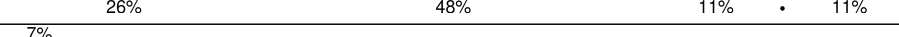
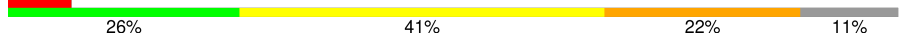

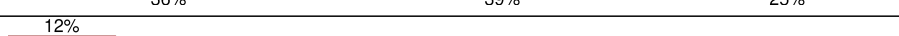
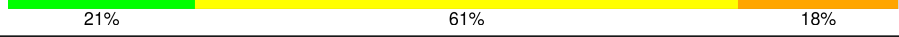
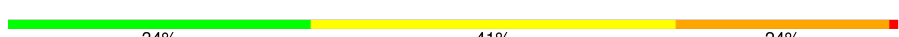
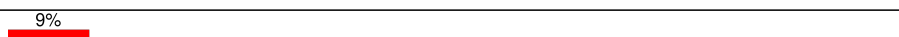
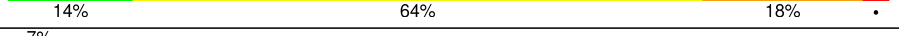

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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	132	
12	CL	132	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	

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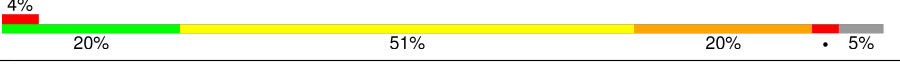
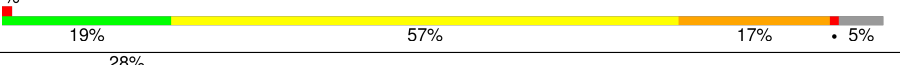
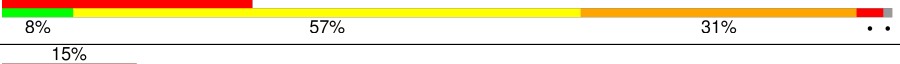
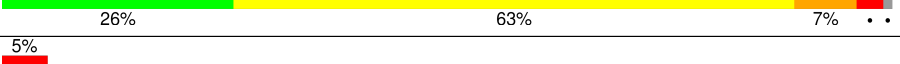
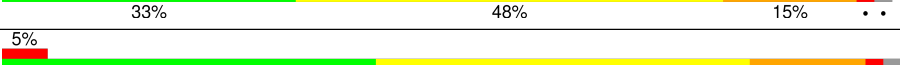
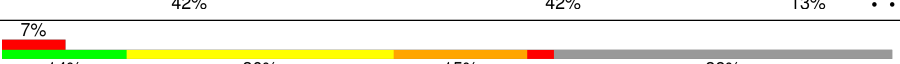
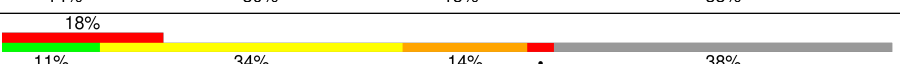
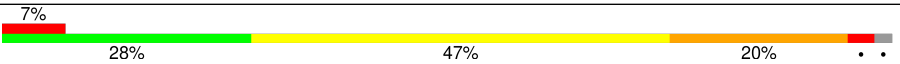
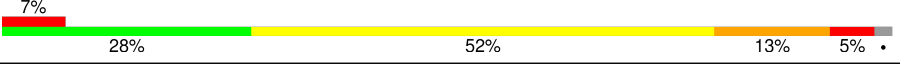


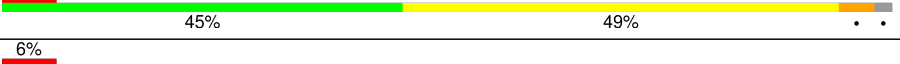

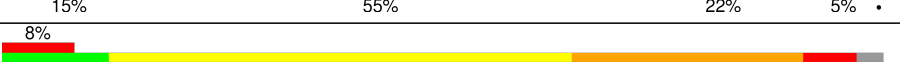
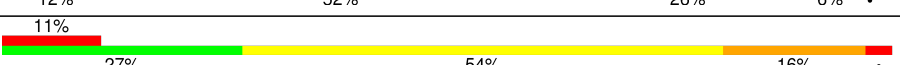
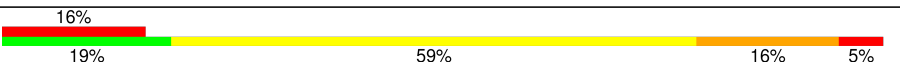

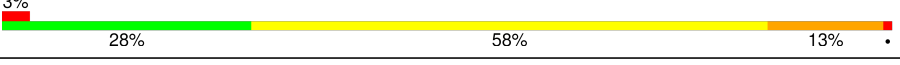
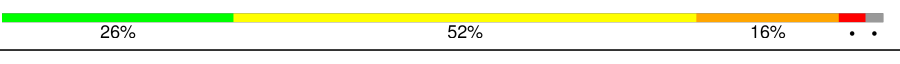
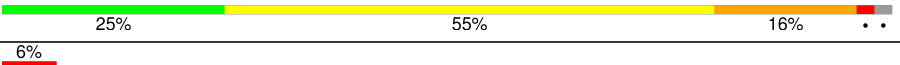

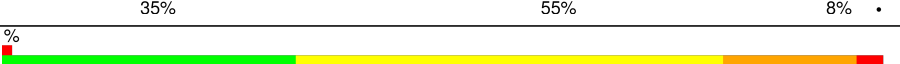



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Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	AV	76	
22	AW	76	
22	CV	76	
22	CW	76	
23	AX	27	
23	CX	27	
24	AY	77	
24	CY	77	
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
59	ZN	AN	101	-	-	X	-
60	GDP	AZ	501	-	-	X	-
60	GDP	CZ	501	-	-	X	-
61	KIR	CZ	502	-	-	-	X

## 2 Entry composition

There are 61 unique types of molecules in this entry. The entry contains 307194 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	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
			361	164	68	113	16			
23	CX	17	Total	C	N	O	P	0	0	0
			361	164	68	113	16			

- Molecule 24 is a RNA chain called A-SITE TRNA G24A TRP-TRNA TRP.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	AY	77	Total	C	N	O	P	S	0	0	0
			1644	742	289	535	76	2			
24	CY	77	Total	C	N	O	P	S	0	0	0
			1644	742	289	535	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			

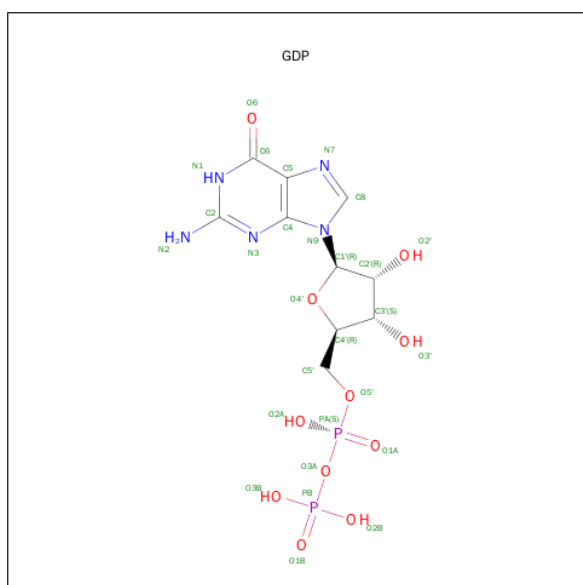
- Molecule 58 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	BZ	183	Total	C	N	O	S	0	0	0
			1459	932	260	265	2			
58	DZ	183	Total	C	N	O	S	0	0	0
			1459	932	260	265	2			

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

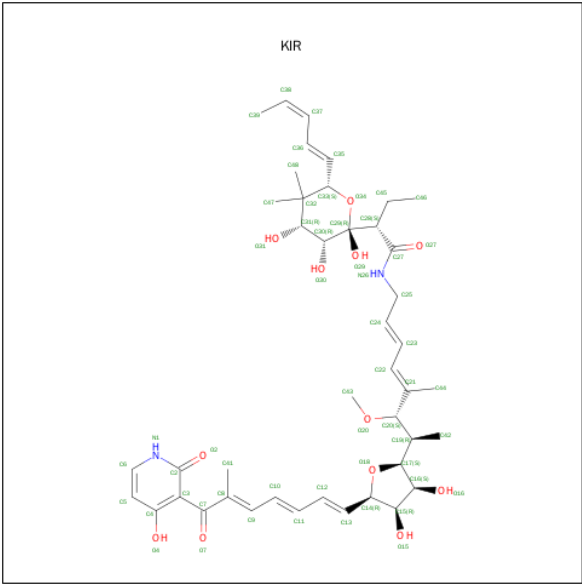
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	B4	1	Total	Zn	0	0
			1	1		
59	CN	1	Total	Zn	0	0
			1	1		
59	AN	1	Total	Zn	0	0
			1	1		
59	B9	1	Total	Zn	0	0
			1	1		
59	D9	1	Total	Zn	0	0
			1	1		
59	D4	1	Total	Zn	0	0
			1	1		
59	CD	1	Total	Zn	0	0
			1	1		
59	AD	1	Total	Zn	0	0
			1	1		

- Molecule 60 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: C<sub>10</sub>H<sub>15</sub>N<sub>5</sub>O<sub>11</sub>P<sub>2</sub>).



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: C<sub>43</sub>H<sub>60</sub>N<sub>2</sub>O<sub>12</sub>).



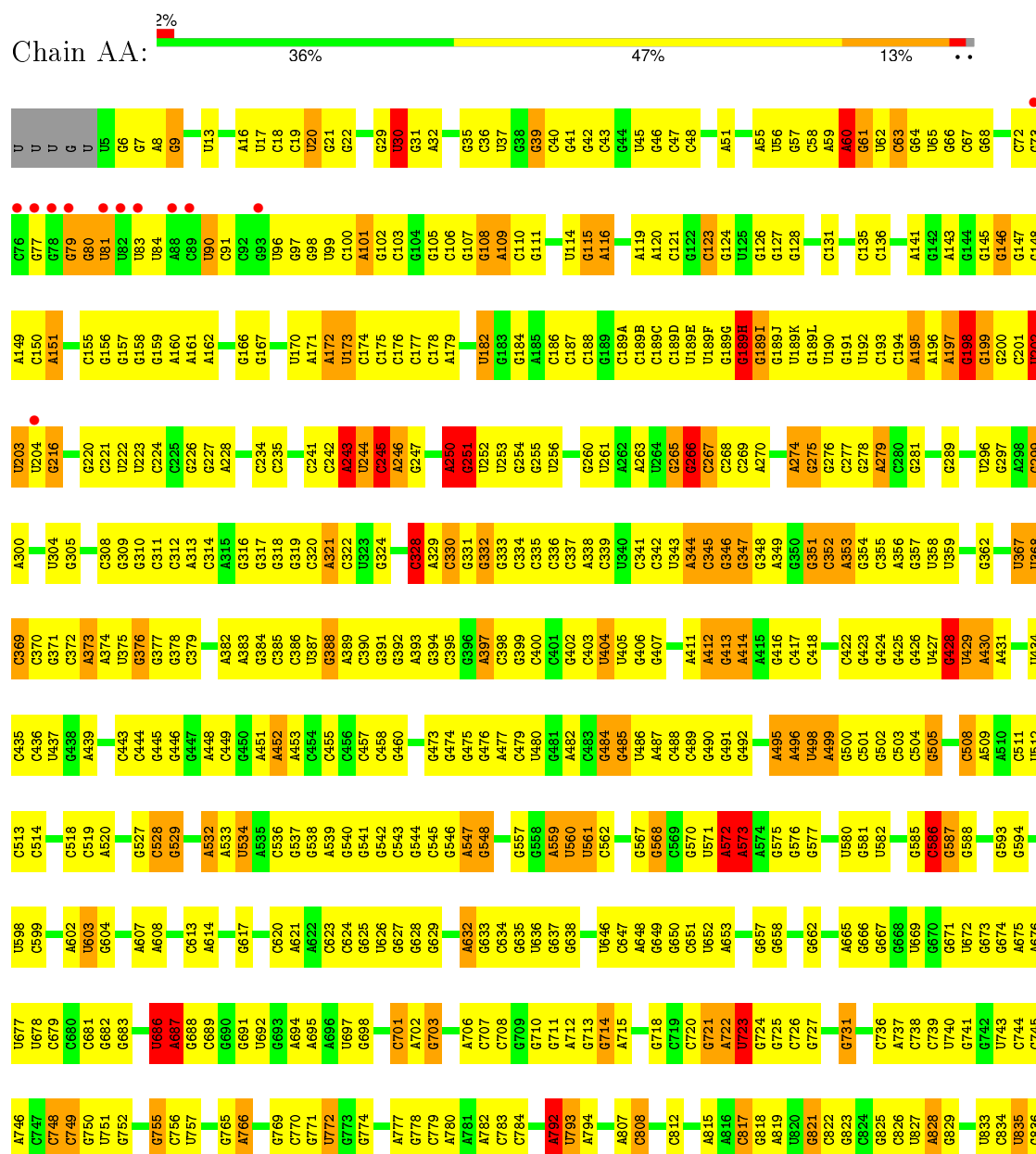
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
61	AZ	1	Total	C	N	O		0	0
			57	43	2	12			
61	CZ	1	Total	C	N	O		0	0
			57	43	2	12			

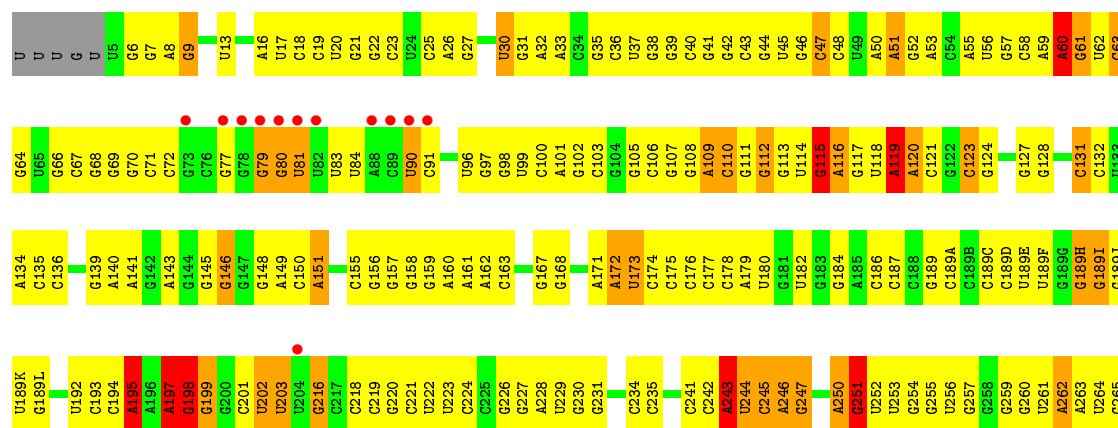


### 3 Residue-property plots

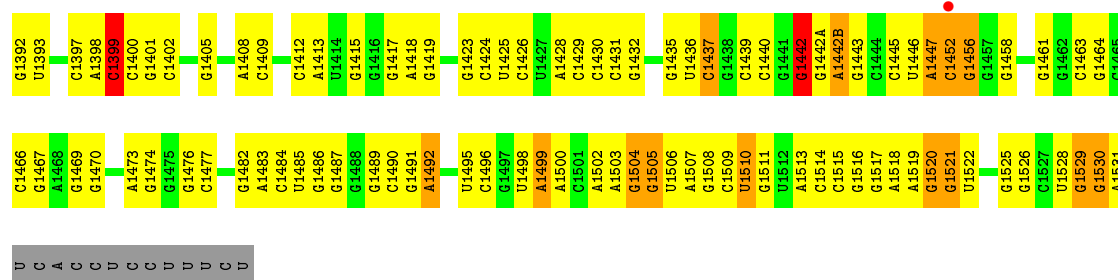
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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 ( $\text{RSRZ} > 2$ ). 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

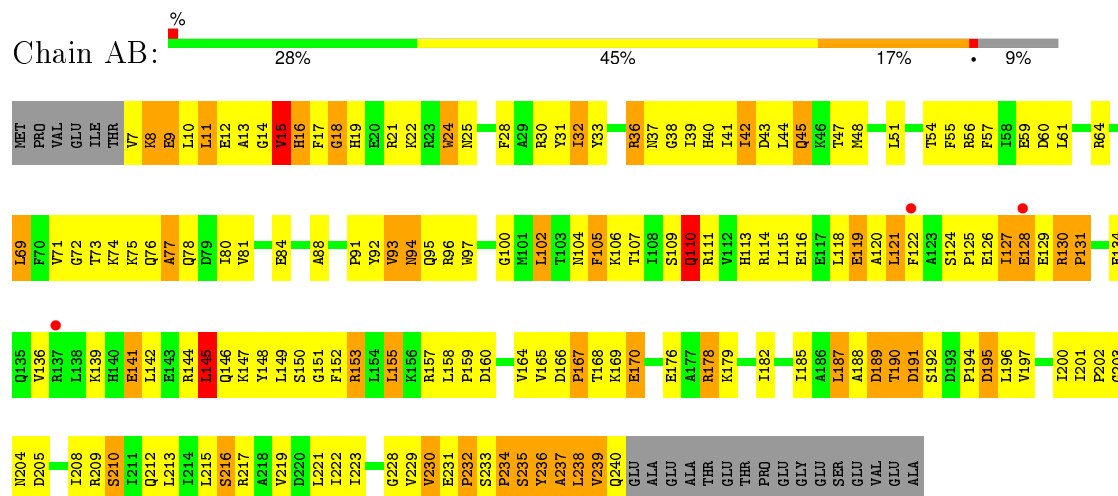




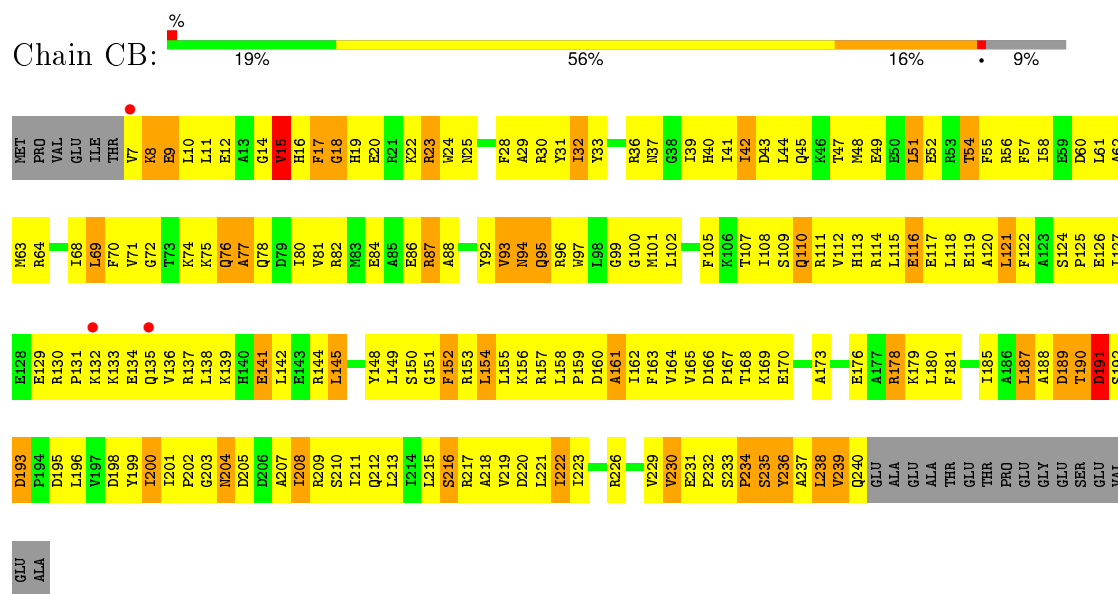




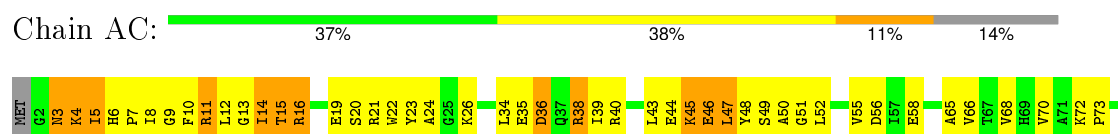
### • Molecule 2: 30S RIBOSOMAL PROTEIN S2

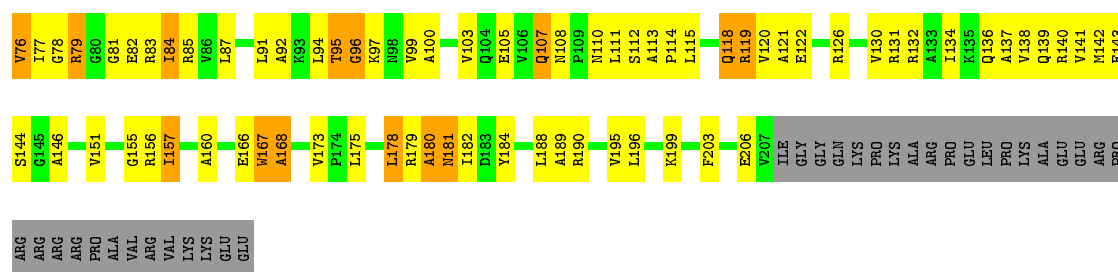


### • Molecule 2: 30S RIBOSOMAL PROTEIN S2



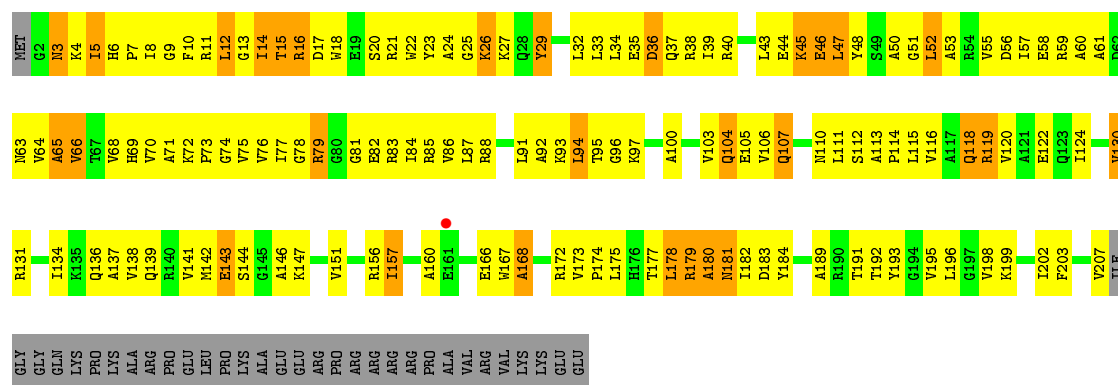
### • Molecule 3: 30S RIBOSOMAL PROTEIN S3





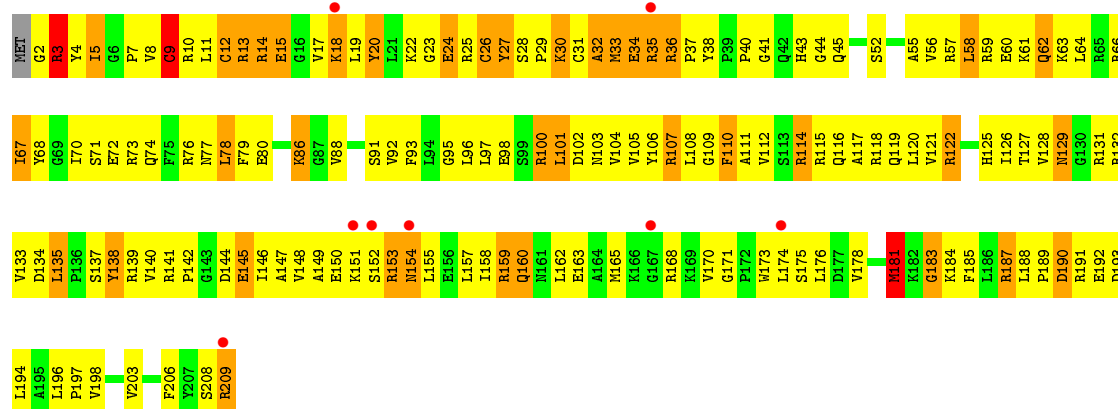
### • Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain CC: 26% 48% 12% 14%



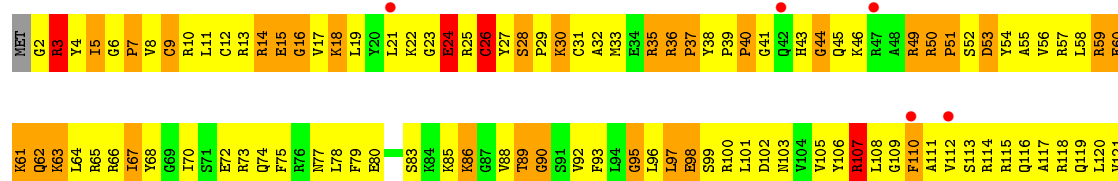
### • Molecule 4: 30S RIBOSOMAL PROTEIN S4

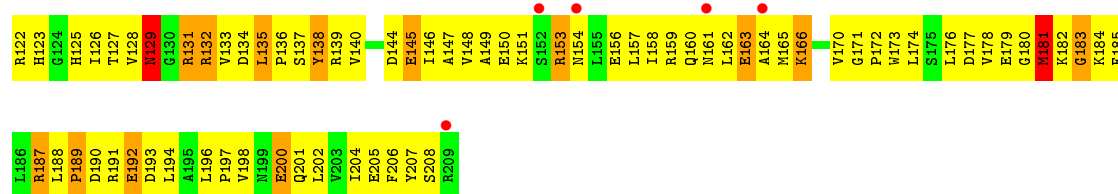
Chain AD: 4% 25% 55% 19%



### • Molecule 4: 30S RIBOSOMAL PROTEIN S4

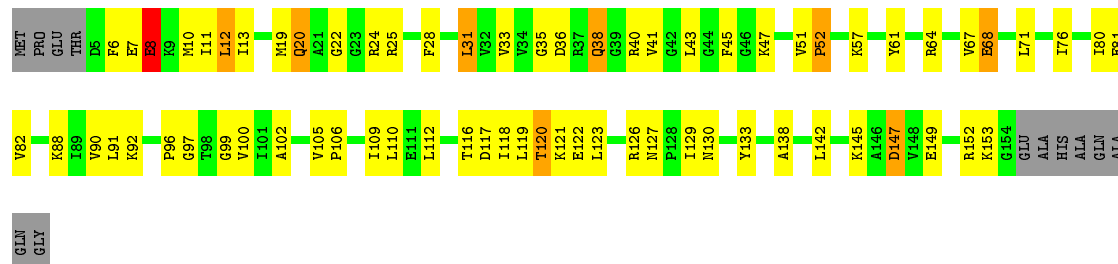
Chain CD: 5% 15% 61% 21%





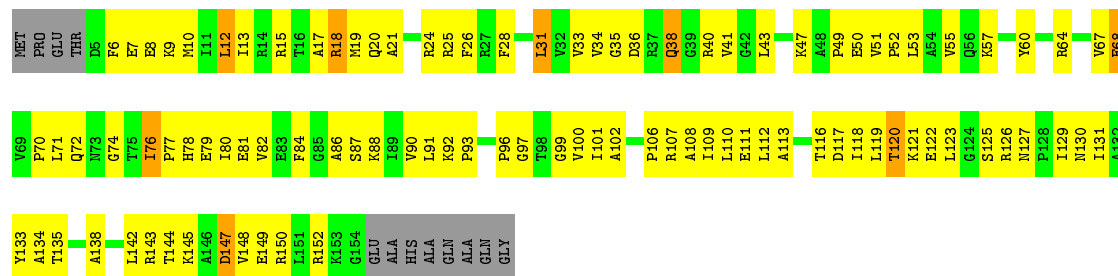
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain AE: 50% 37% 5% 7%



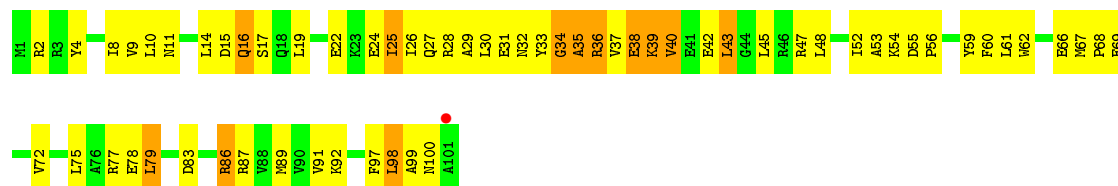
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain CE: 32% 56% 5% 7%



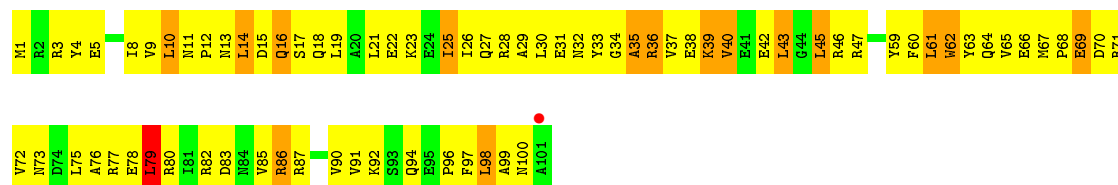
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain AF: 39% 50% 12%

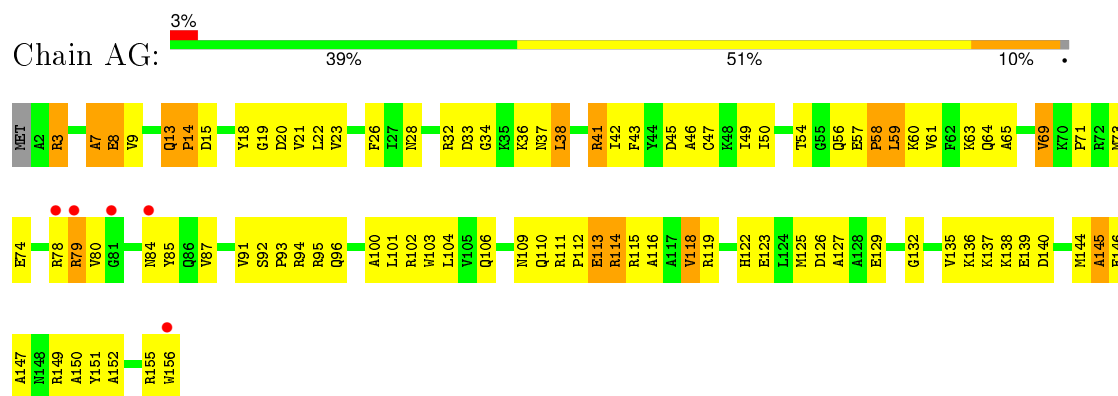


• Molecule 6: 30S RIBOSOMAL PROTEIN S6

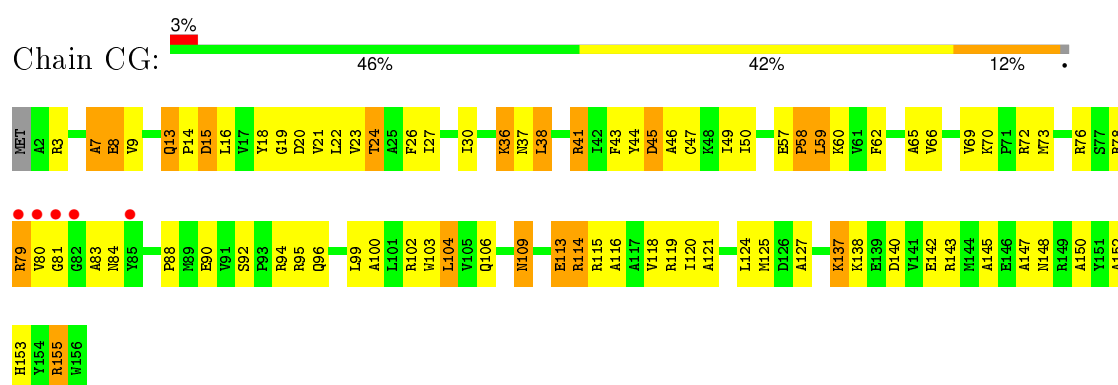
Chain CF: 26% 58% 15%



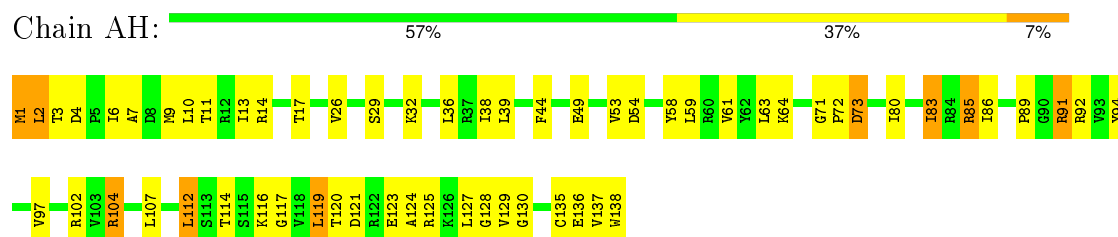
- Molecule 7: 30S RIBOSOMAL PROTEIN S7



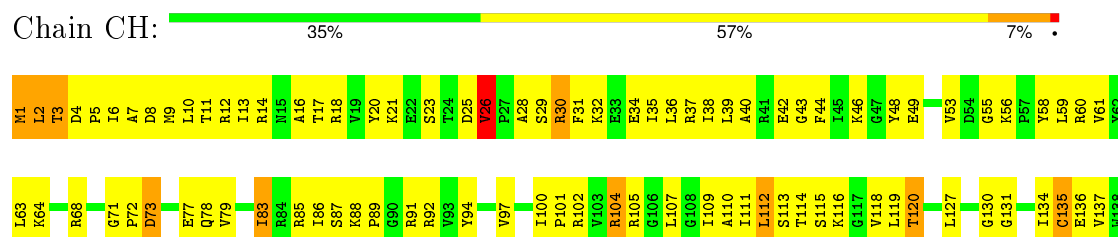
- Molecule 7: 30S RIBOSOMAL PROTEIN S7



- Molecule 8: 30S RIBOSOMAL PROTEIN S8

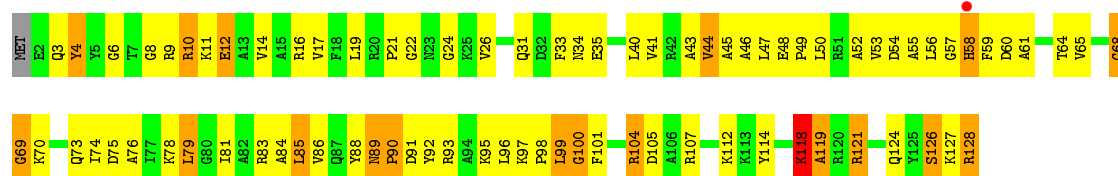


- Molecule 8: 30S RIBOSOMAL PROTEIN S8

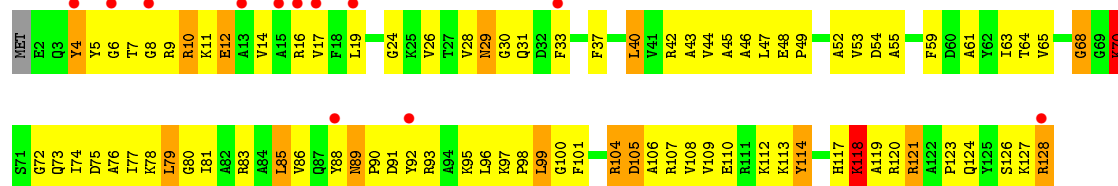


- Molecule 9: 30S RIBOSOMAL PROTEIN S9

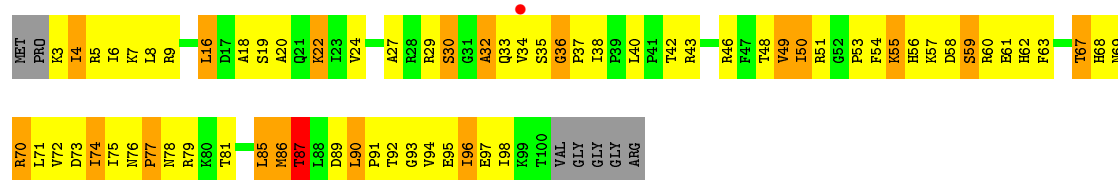




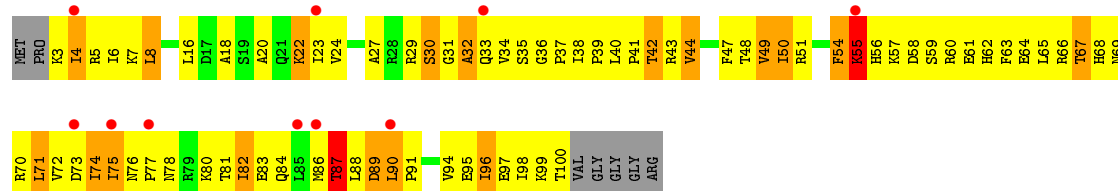
• Molecule 9: 30S RIBOSOMAL PROTEIN S9



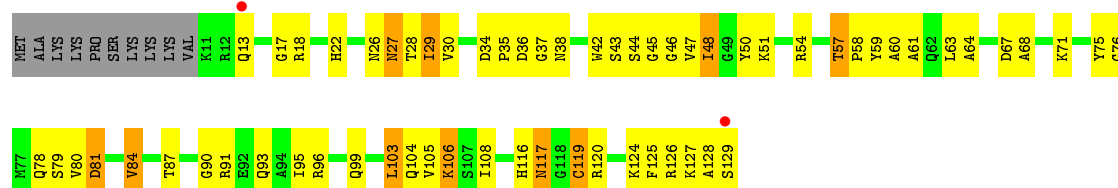
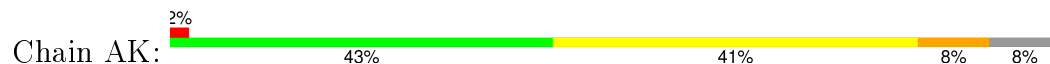
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



• Molecule 10: 30S RIBOSOMAL PROTEIN S10



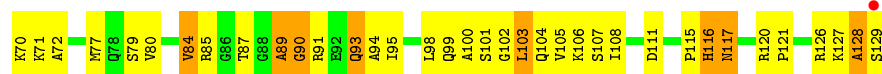
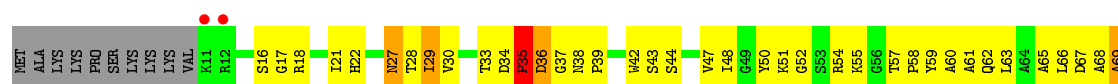
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



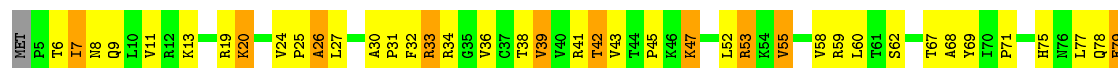
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



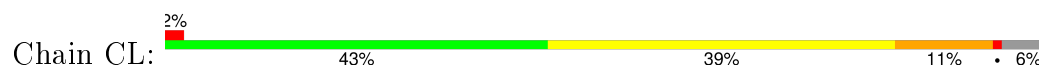




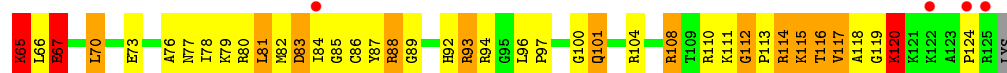
• Molecule 12: 30S RIBOSOMAL PROTEIN S12



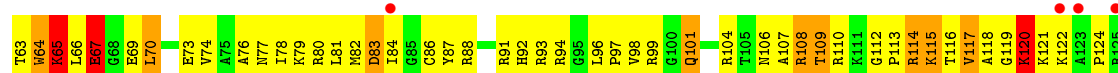
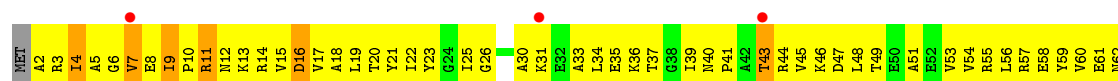
• Molecule 12: 30S RIBOSOMAL PROTEIN S12



• Molecule 13: 30S RIBOSOMAL PROTEIN S13

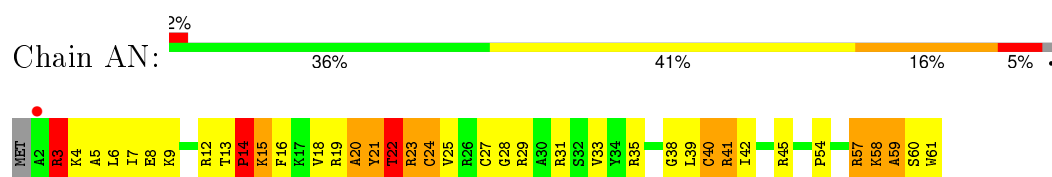


• Molecule 13: 30S RIBOSOMAL PROTEIN S13

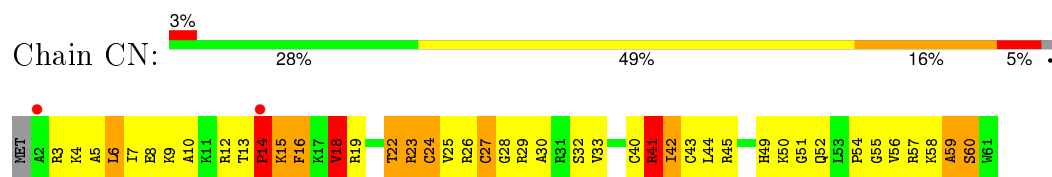


LYS

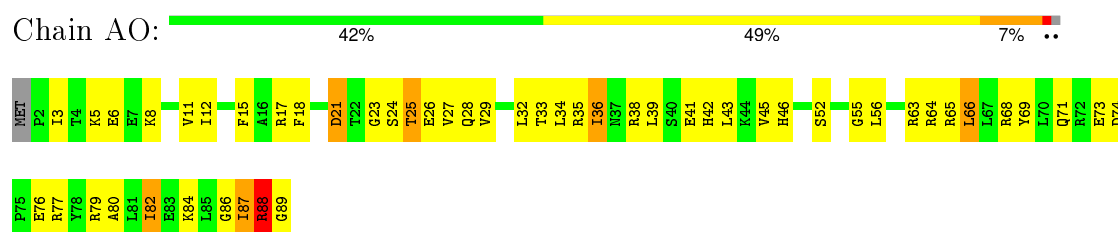
• Molecule 14: 30S RIBOSOMAL PROTEIN S14



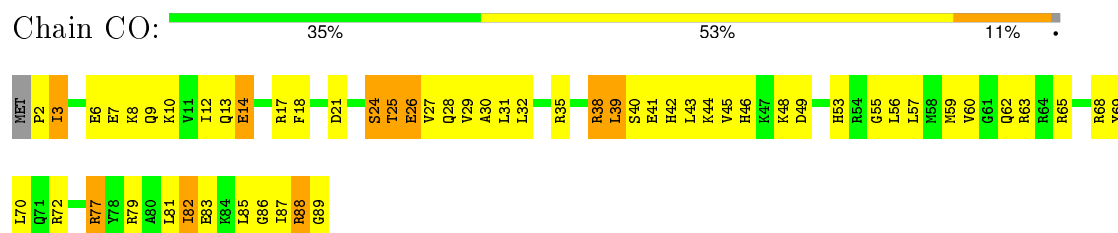
- Molecule 14: 30S RIBOSOMAL PROTEIN S14



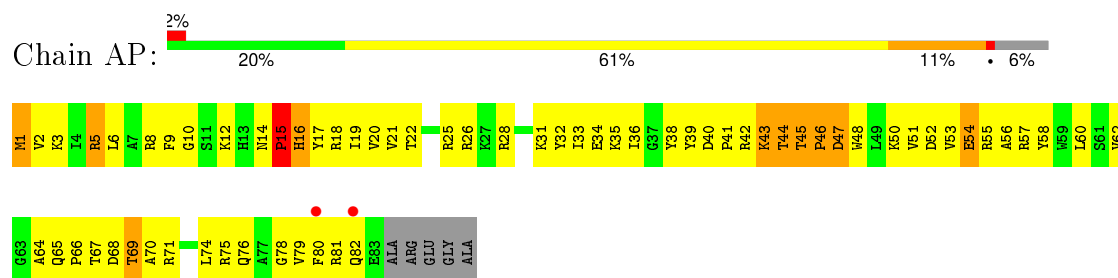
• Molecule 15: 30S RIBOSOMAL PROTEIN S15



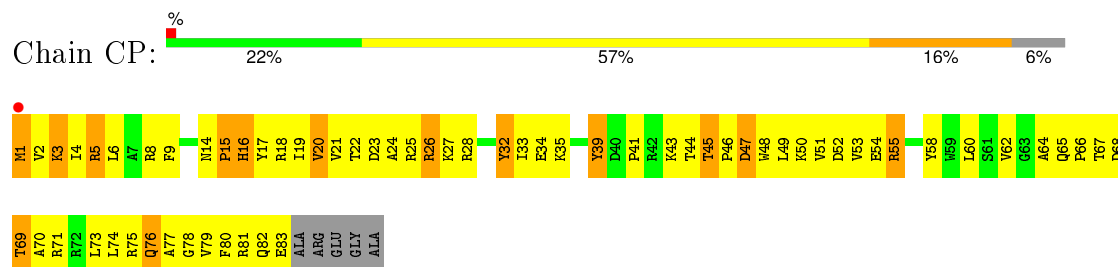
● Molecule 15: 30S RIBOSOMAL PROTEIN S15



● Molecule 16: 30S RIBOSOMAL PROTEIN S16

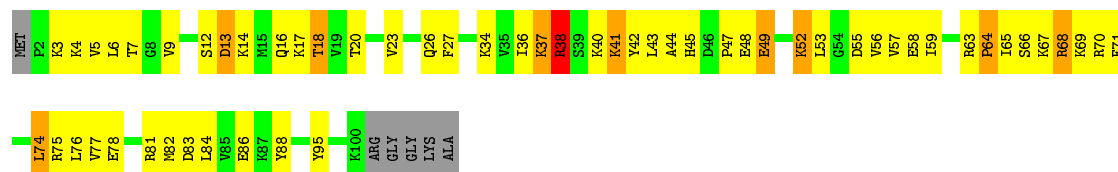


- Molecule 16: 30S RIBOSOMAL PROTEIN S16

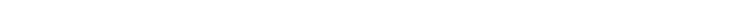


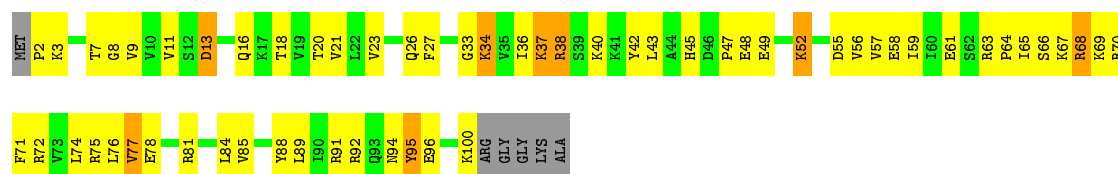
● Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain AQ:  40% 45% 9% • 6%



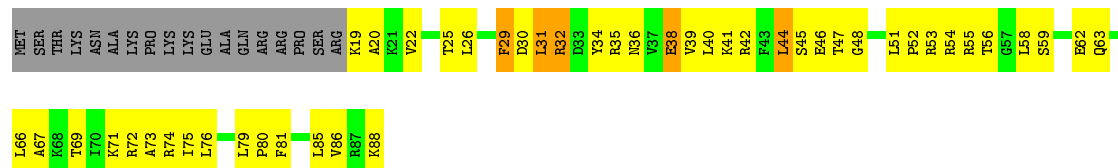
● Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain CQ: 



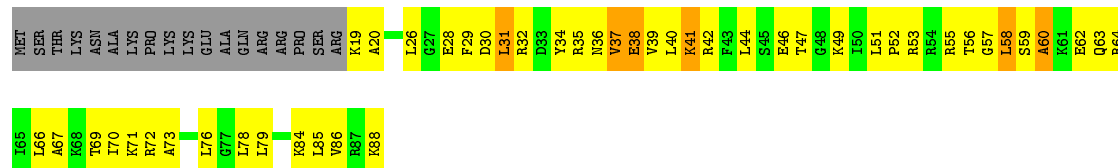
● Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain AR: 



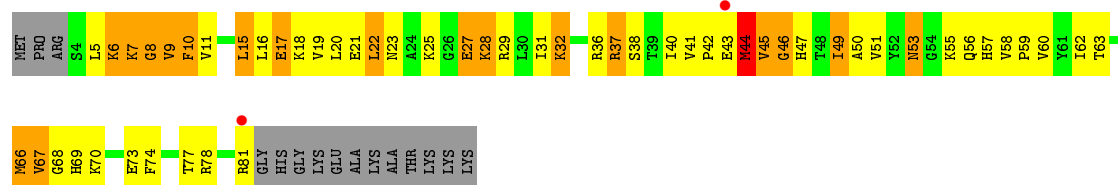
- Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain CR: 

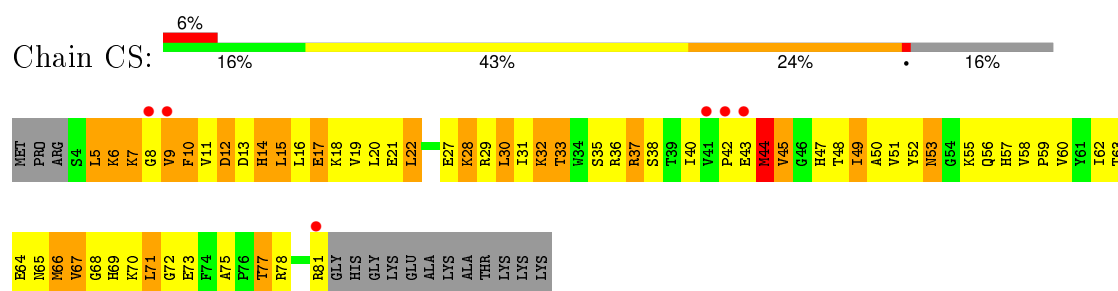


● Molecule 19: 30S RIBOSOMAL PROTEIN S19

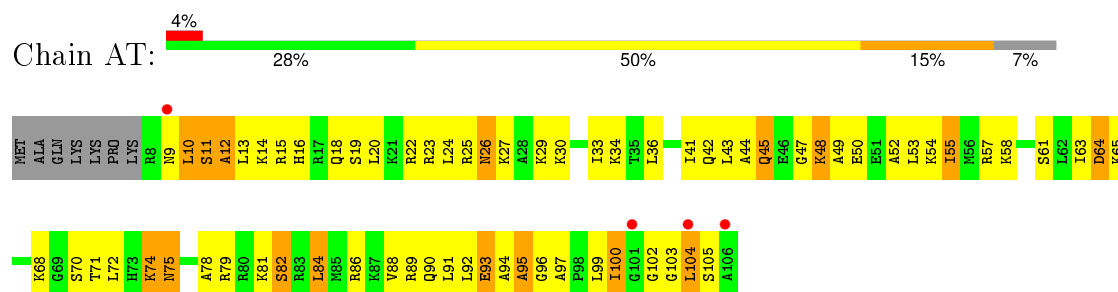
Chain AS: 



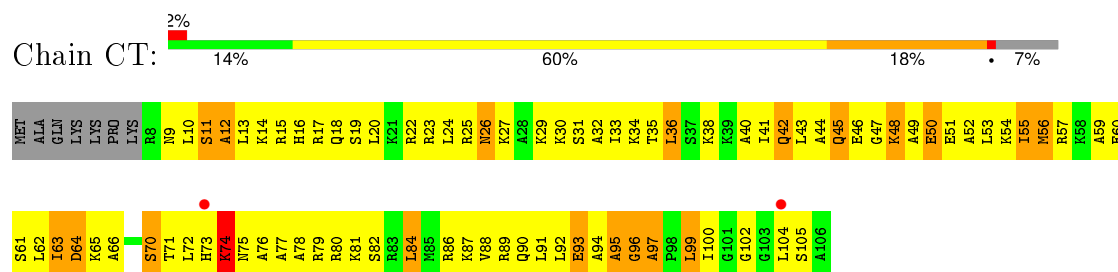
• Molecule 19: 30S RIBOSOMAL PROTEIN S19



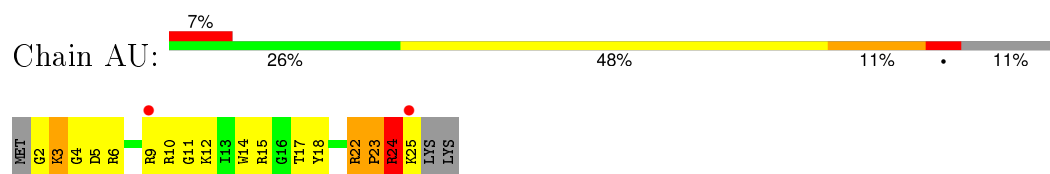
• Molecule 20: 30S RIBOSOMAL PROTEIN S20



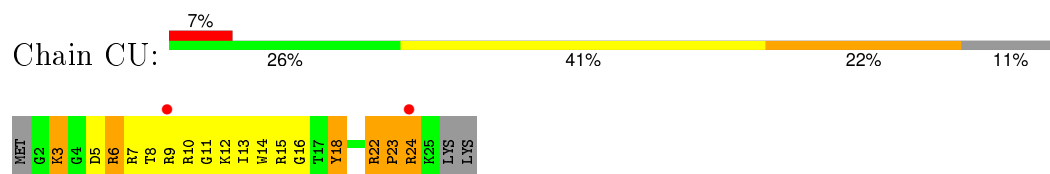
• Molecule 20: 30S RIBOSOMAL PROTEIN S20



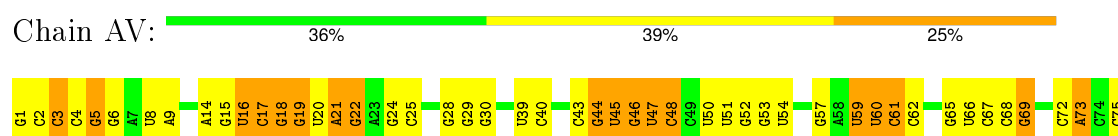
• Molecule 21: 30S RIBOSOMAL PROTEIN THX



• Molecule 21: 30S RIBOSOMAL PROTEIN THX

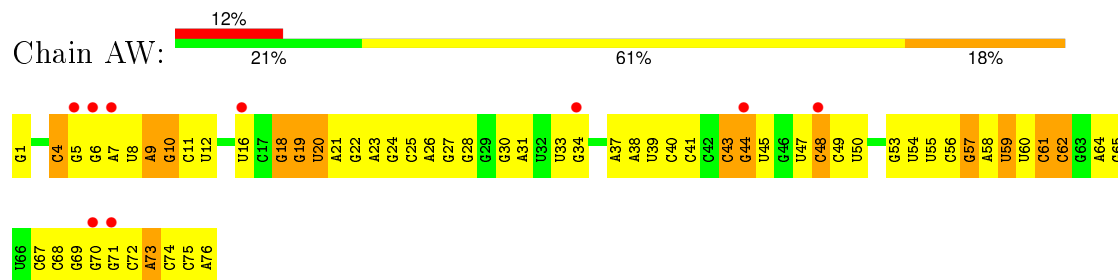


• Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

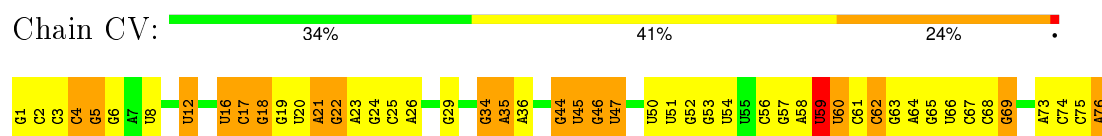


A76

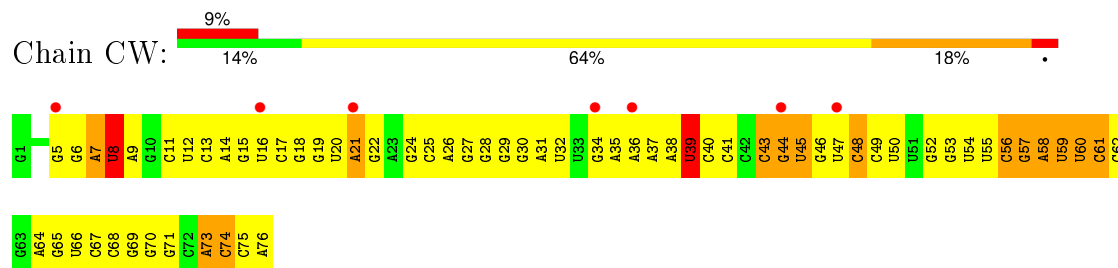
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



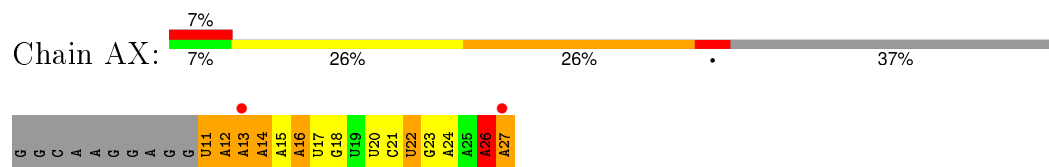
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



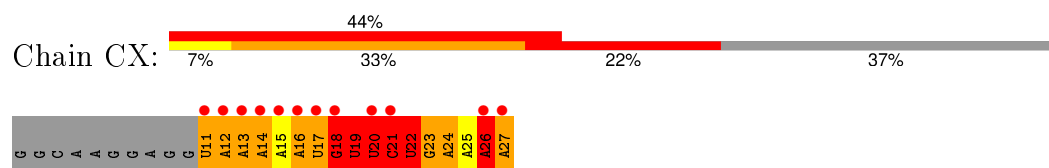
- Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE



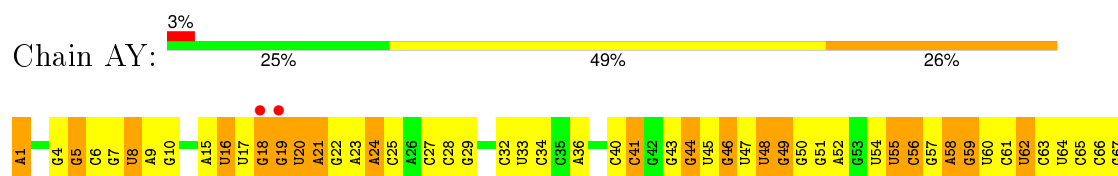
- Molecule 23: MRNA



- Molecule 23: MRNA

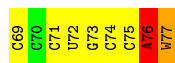
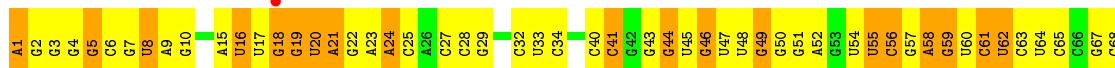


- Molecule 24: A-SITE TRNA G24A TRP-TRNA TRP

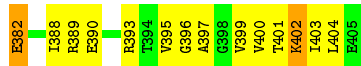
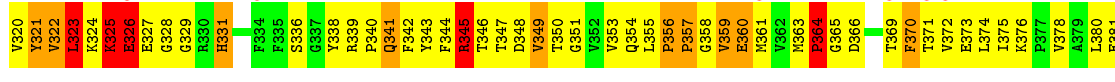
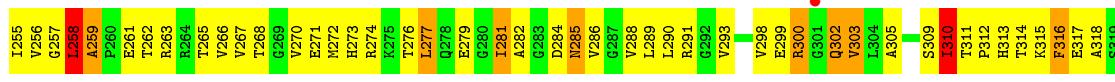
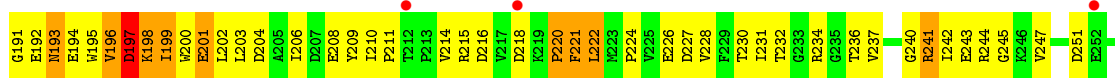
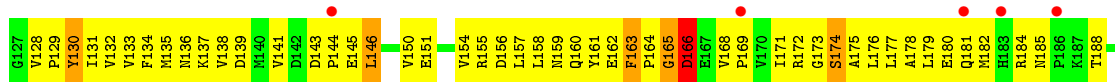
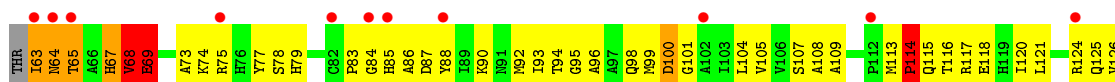




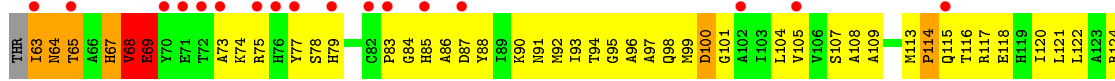
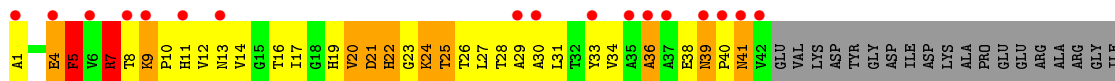
• Molecule 24: A-SITE TRNA G24A TRP-TRNA TRP

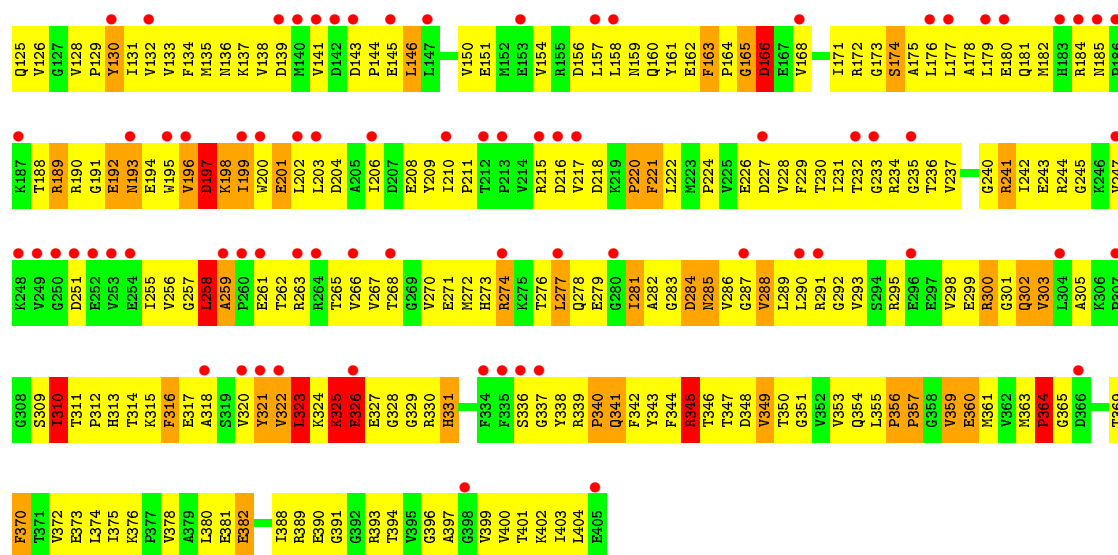


• Molecule 25: ELONGATION FACTOR TU

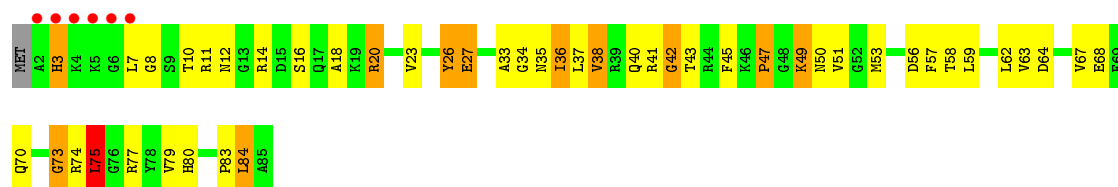
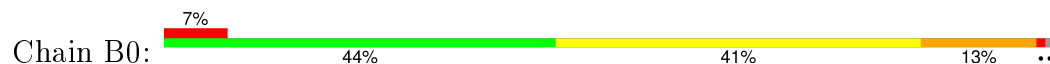


• Molecule 25: ELONGATION FACTOR TU

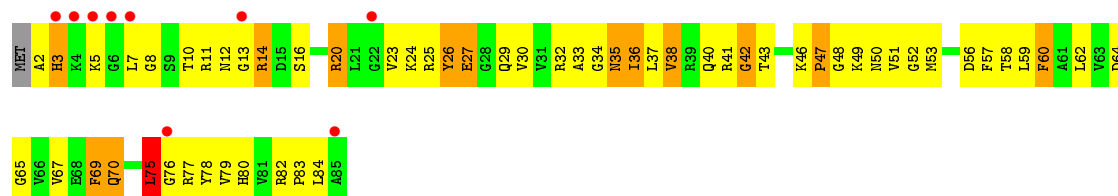




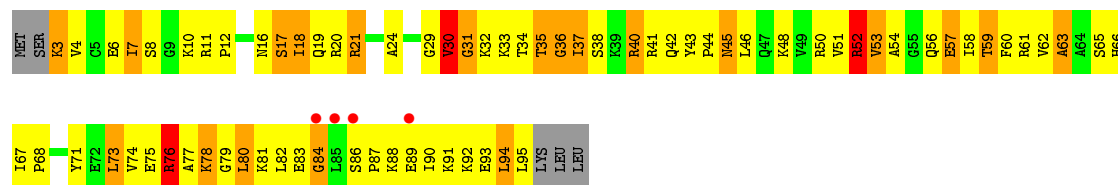
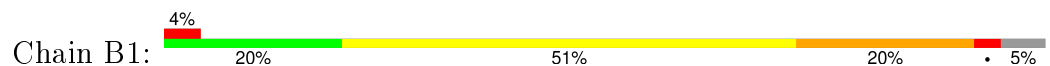
• Molecule 26: 50S RIBOSOMAL PROTEIN L27



• Molecule 26: 50S RIBOSOMAL PROTEIN L27

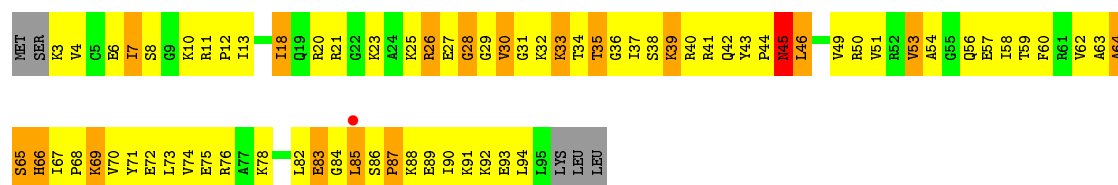


• Molecule 27: 50S RIBOSOMAL PROTEIN L28

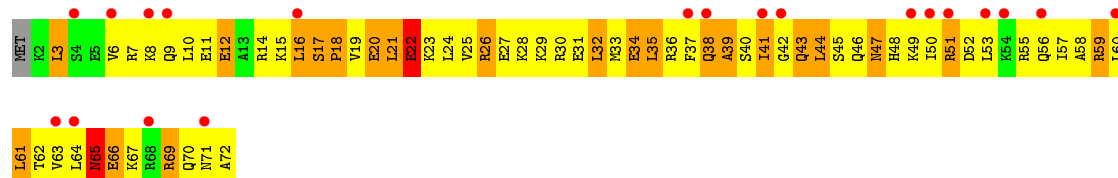
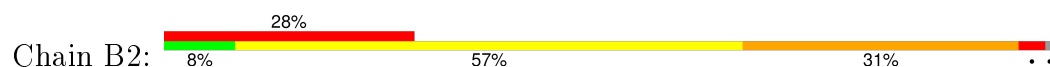


• Molecule 27: 50S RIBOSOMAL PROTEIN L28





• Molecule 28: 50S RIBOSOMAL PROTEIN L29



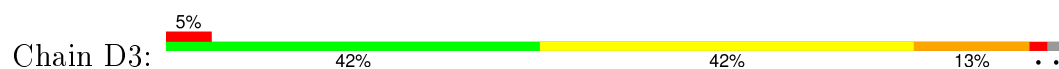
• Molecule 28: 50S RIBOSOMAL PROTEIN L29



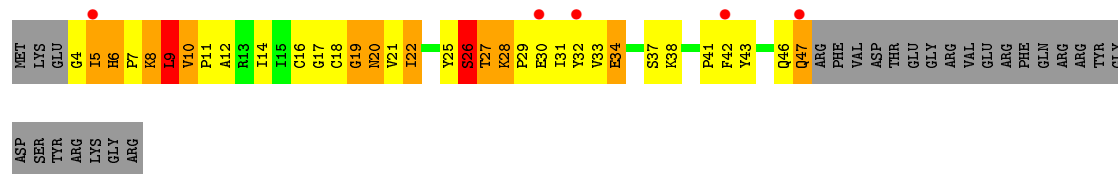
• Molecule 29: 50S RIBOSOMAL PROTEIN L30



• Molecule 29: 50S RIBOSOMAL PROTEIN L30

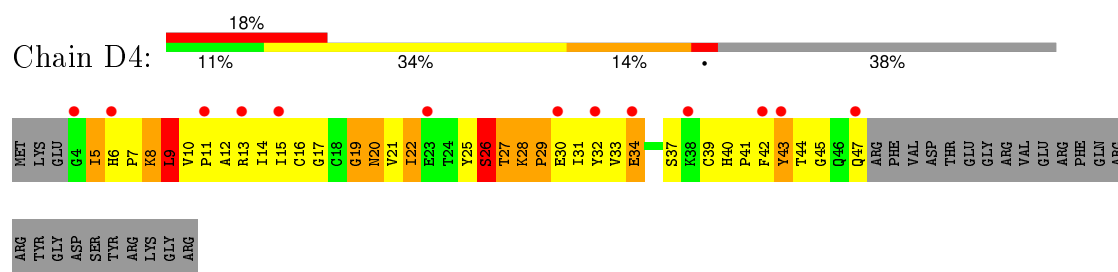


• Molecule 30: 50S RIBOSOMAL PROTEIN L31

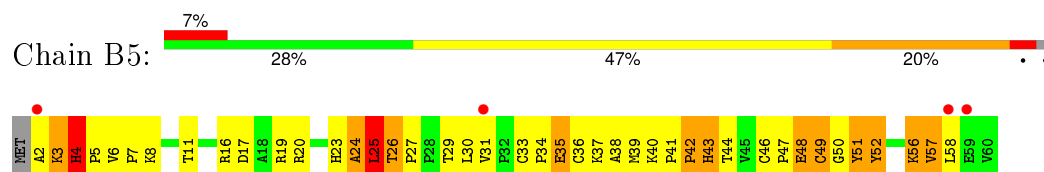


• Molecule 30: 50S RIBOSOMAL PROTEIN L31

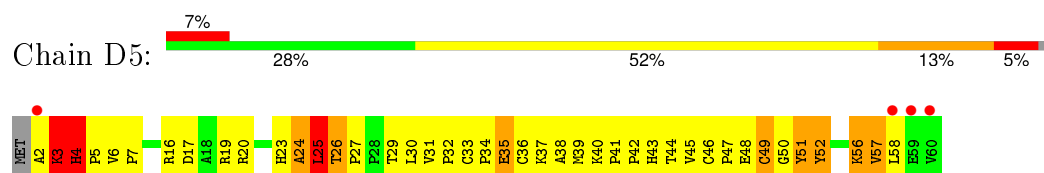




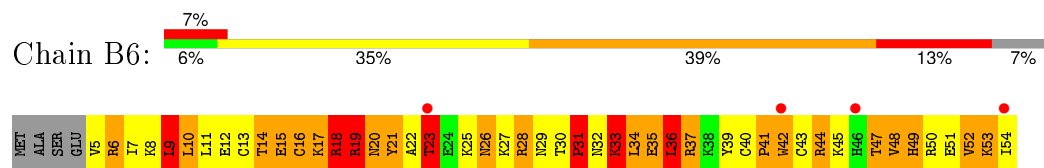
- Molecule 31: 50S RIBOSOMAL PROTEIN L32



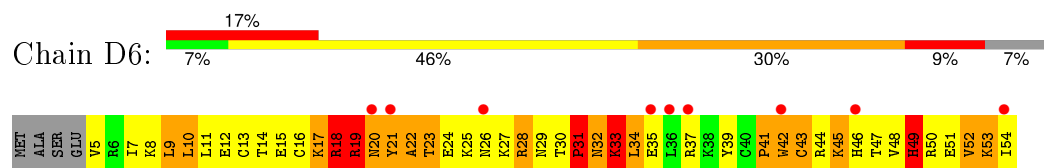
- Molecule 31: 50S RIBOSOMAL PROTEIN L32



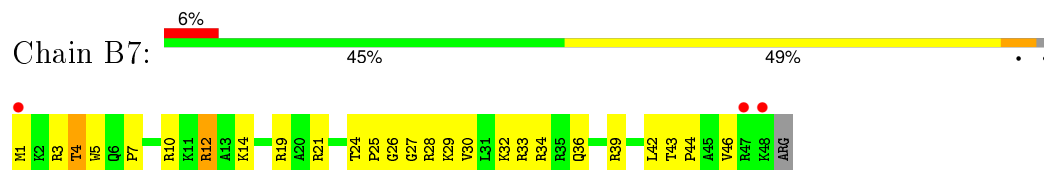
- Molecule 32: 50S RIBOSOMAL PROTEIN L33



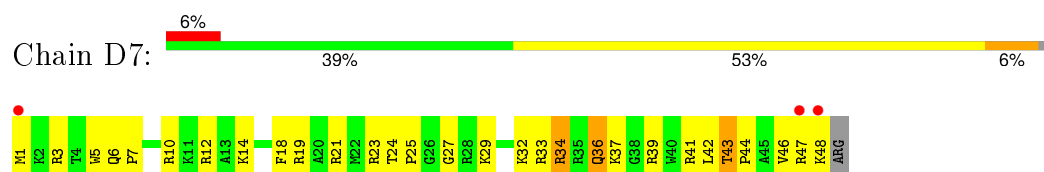
- Molecule 32: 50S RIBOSOMAL PROTEIN L33



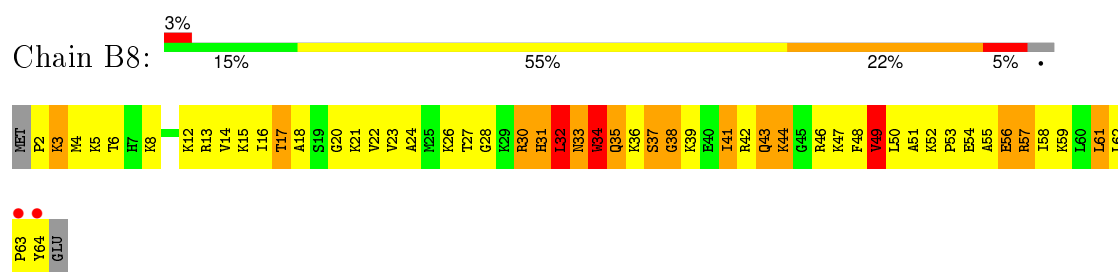
- Molecule 33: 50S RIBOSOMAL PROTEIN L34



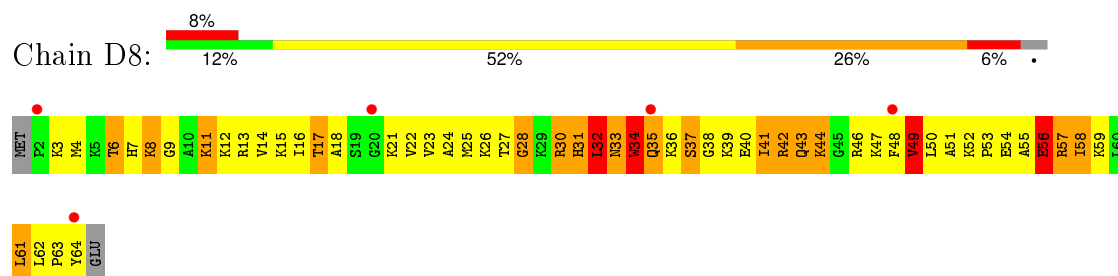
- Molecule 33: 50S RIBOSOMAL PROTEIN L34



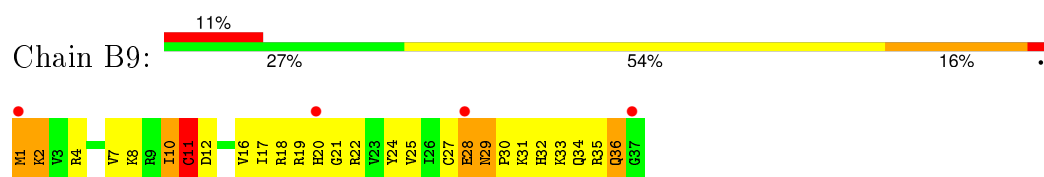
- Molecule 34: 50S RIBOSOMAL PROTEIN L35



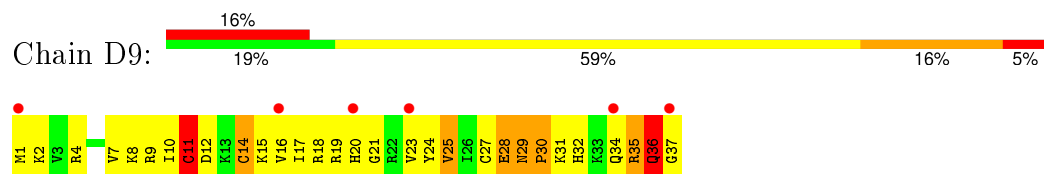
• Molecule 34: 50S RIBOSOMAL PROTEIN L35



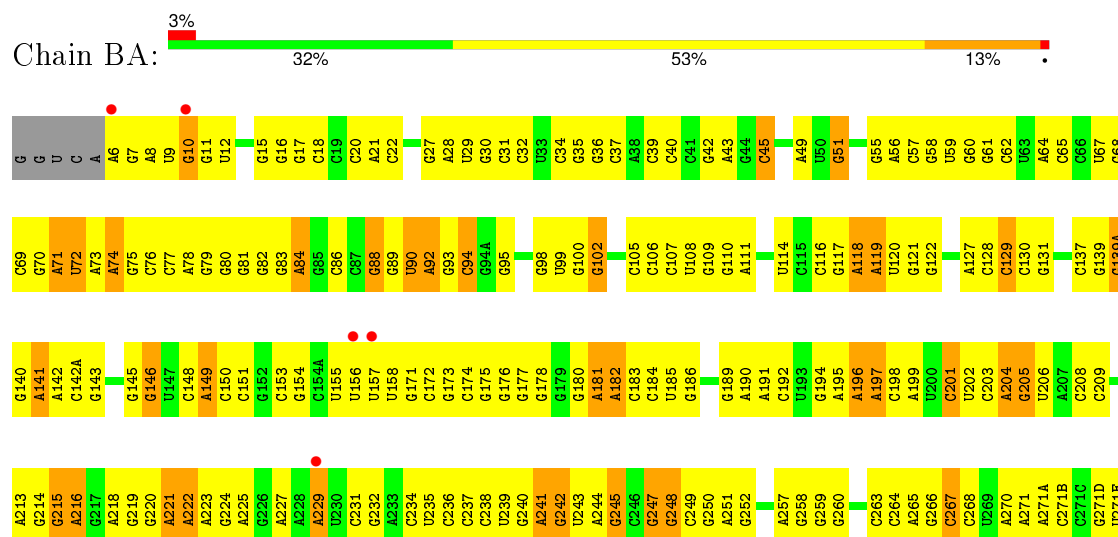
• Molecule 35: 50S RIBOSOMAL PROTEIN L36



• Molecule 35: 50S RIBOSOMAL PROTEIN L36

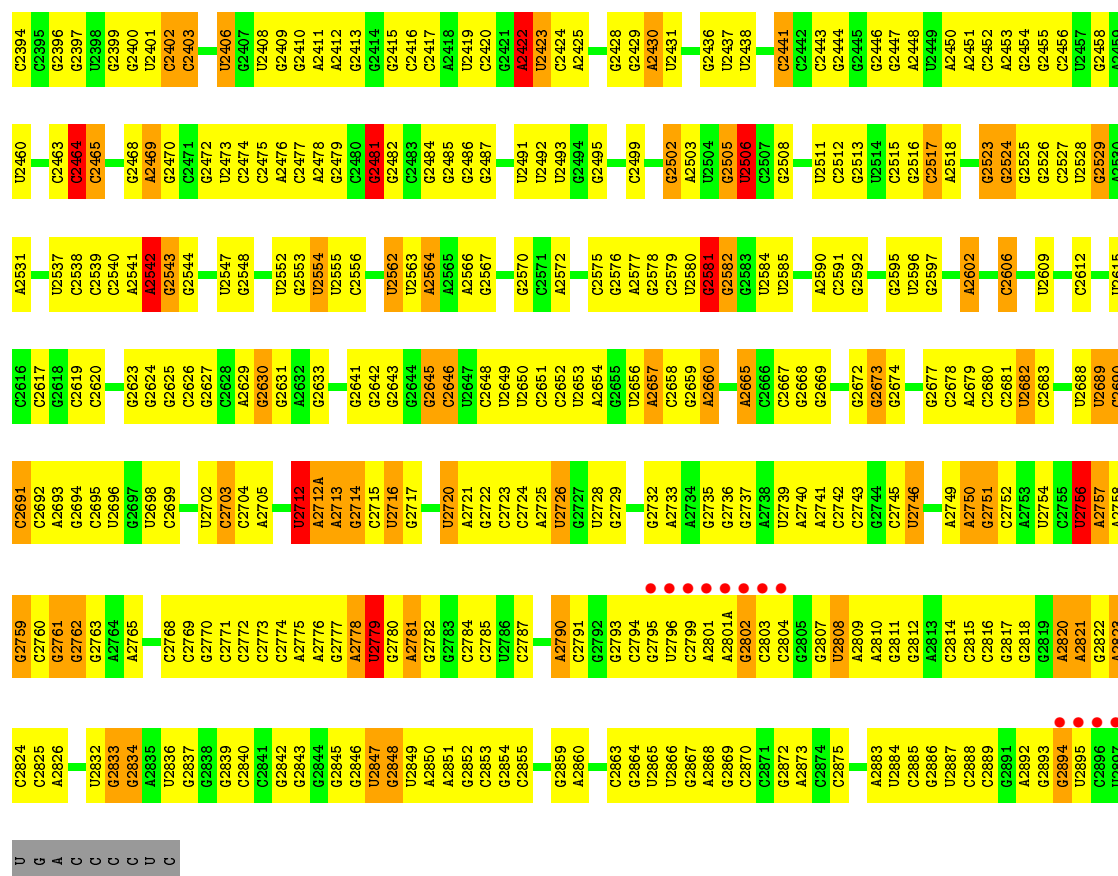


• Molecule 36: 23S RIBOSOMAL RNA

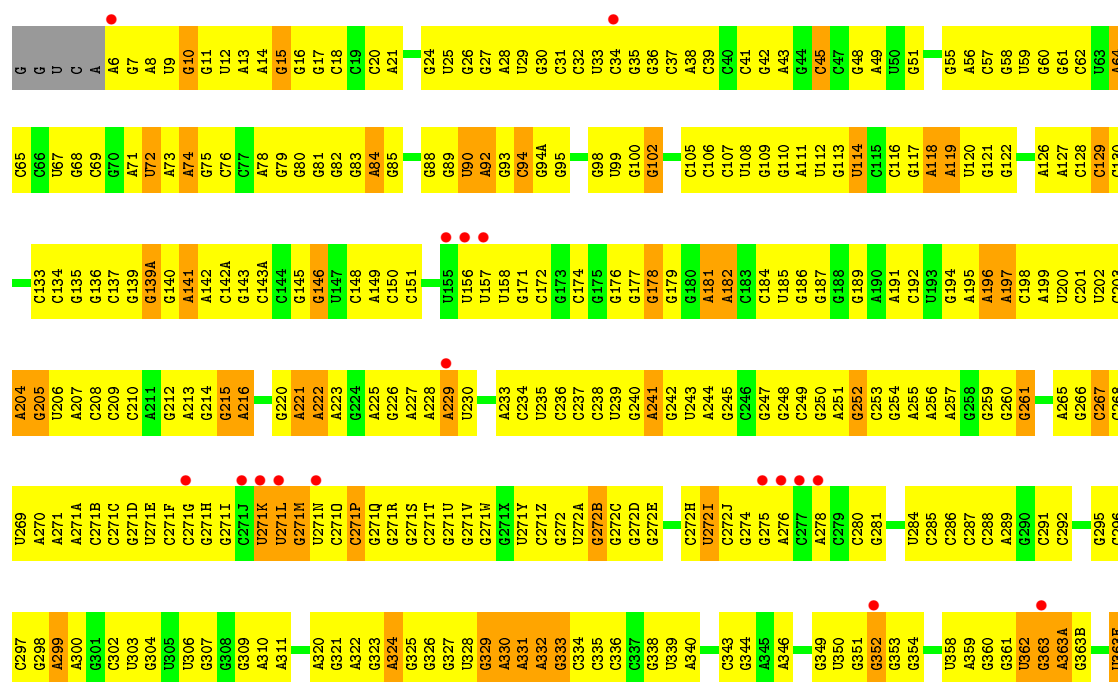


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C1121	C1124	G1125	G1131	A1132	U1133	C1135	G1136	G1137	G1138	G1139	C1140	U1141	U1142	A1142A	A1143	G1144	C1145	G1149	C1150	G1151	G1152	C1153	G1154	A1155	A1156	U1159	G1162	G1163	G1164	U1165	C1166	U1167	G1168	G1169	U1170	G1171	G1173	A1174	U1175	G1176	U1240	A1241	A1242	G1243	A1244	U1249	C1251	G1252	A1253	A1254								
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G1059	U1060	U1061	G1062	G1063	U1065	U1066	A1067	G1068	A1069	A1070	G1071	C1072	A1073	G1074	C1075	A1076	U1077	U1078	C1079	U1080	U1081	U1082	A1085	U1086	G1087	A1088	U1089	U1090	G1091	C1092	G1093	U1094	A1095	A1096	U1097	A1098	G1099	C1100	U1101	C1102	A1103	U1105	G1106	G1107	U1108	C1109	G1110	A1111	U1112	U1113	G1114	G1115	C1116	G1117	G1120			
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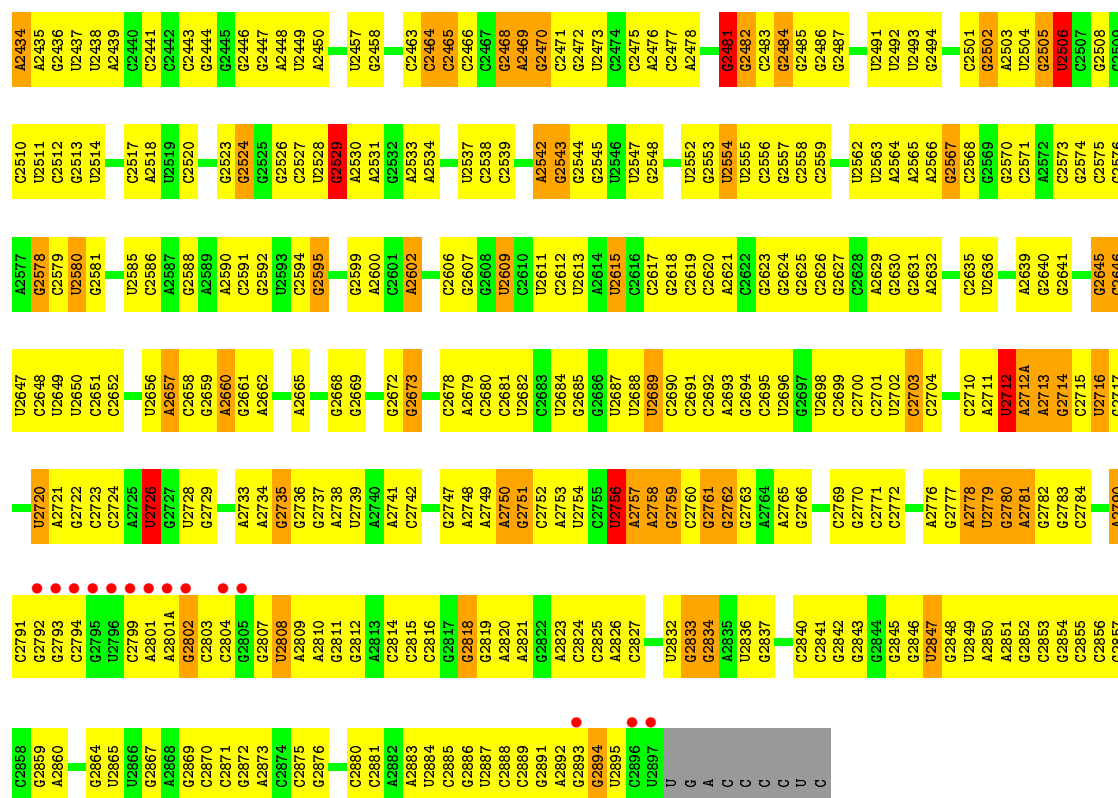


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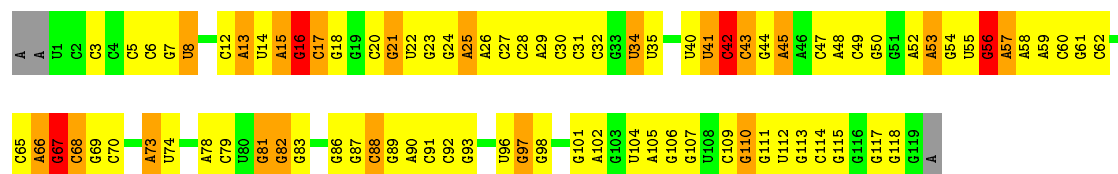
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A1331	A1262	U1198	G1131	C1064	G997	A917	G848	A774	C697	A653	C591	U524	U384
G1332	U1263	U1199	G1131	U1065	C998	A918	A849	G775		A654	G592		C385
	C1264	C1200	A1132	U1066	U999		C850	G776	U703	G654A	G593	C527	G386
A1336	A1265	C1201	U1133	A1067	A1000	C924	U851	A782	G704	C654B	U594	A528	U387
G1337	C1266	G1197	C1135	G1068	A1001	C925	G852	U783	A705	C654C	C595	A529	G388
A1338	A1268	G1203	G1136	A1069	A926	A926	U853	A784	G706	C654D	G596	G530	G389
	C1270	U1204	G1137	A1070	G927	G927	G854	G785	G707	C654E	U597	C531	A390
U1341	C1271	U1205	G1138	G1071	G928	G928	C856		C708	C654F	G598	A532	G391
	G1272	G1206	G1139	C1072	C1006		C857		U709	C654G	G599	A533	G392
G1344	A1272	C1207	C1140	A1073	A1010	G932	U858	G786	G710	C654H	G600	U534	G396
C1345	U1273	C1208	U1141	G1074	A1011	A933	U859	U787	G711	C654I	C601	C535	G397
C1346	A1274	G1209	U1142	C1075	G1012	U940	U860	A789	G712	A654J	A596	A536	G398
G1347	A1275	A1210	A1142A	C1076	U1012	G941	A861	C790	G713	C654K	A603	C537	G399
A1348	C1276	U1211	A1143	U1077	C1013	A941	G862			C654L	G604		G400
G1349	G1277	C1212	G1144	U1078	U1014	G942	A863	G792	C720	C654M	C605	C540	A401
C1350	A1278	A1213	C1145	C1079	U1014	U944	G864	A793	A722	C654N	U606	C543	A402
G1351	G1279	C1214		C1080	C1018	A945	A866	C796	G723	C654O	U607		U403
U1352		G1215	G1149	U1081	U1019	G946		C797	U724	C654P	A608	A547	C404
A1353	A1286	G1216	C1150	U1082	A1020		G874			C654Q	A609	A548	U405
A1354	A1287	C1217	G1151	U1083	A1021	A953	G875	A802	G729	C654R	C610	G549	G406
G1355	U1288	C1218	C1152	A1084	G1022	G954	C876	U803	C730	C654S	C611	G551	G407
C1356	C1289		C1153	A1085	U1023		U877	A804		C654T	G612	G552	G408
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G1358	C1291	C1221A	A1155	G1087	G1025	U958	G879	C806	A734	A655	U614A	U554	G410
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		C1224	C1158	U1090	G1030	C961			C737	C658	G615		C413
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C1362	C1297	C1226	G1162	C1092	A1032	U963	C885	C812	G744	C660	C618	C560	A415
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A1365	G1299	G1228	G1164	U1094	G1034	C965	A837	C814	A746	C664	G622	U562	C420
A1366	U1300		U1165	A1095	U1035		C888	C815	G748	C665	G623	C564	U421
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G1369	G1303		U1167	A1098	G1038	C971	G892	A820	A751	A670	G628	U568	A428
	C1304	A1237	G1168	G1099	U1039	G972	C893	A821	G752	C671	G629	U569	U499
C1305	G1238	G1239	G1169	C1100	A1040	A973	C894	U822	A753	C672	G630	G570	G500
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A1307	A1307	U1240	G1171	C1102	G1042	C975	A896	A824	C755	G674	A632	A572	C433
A1308	A1308	A1241	A1173	U1103			C897						
G1380	G1380	G1242	A1174	C1104	A1045	G978	C898						
G1381	G1310	G1243	U1175	U1105									

G2372	G2307	U2243	A2170	C2039	A1969	C1893	G1817	G1750	G1656	G1589	G1515	G1448	G1382
G2373	G2308	U2244	A2171	C2040	A1970	C1894	U1818	C1751	C1657	U1590	C1516	A1449	C1383
G2374	G2309	U2245	U2172	U2041	A1971	C1895	A1819	C1752	C1658	U1591	C1517	G1433	G1384
G2375	A2310	G2246	A2173	A2042	A1972	G1896	U1820	G1753	U1659	C1592	U1518	U1433	G1385
A2376	A2311	A2247	C2174	C2043	G1973	A1821	A1821	C1754	G1666	G1595	G1520	G1435	G1386
A2377	U2312	C2248	C2175		G1899	G1822	G1822	A1755		G1596	G1523	G1436	C1387
A2378	C2313	U2249	A2176	G2048	A1900	C1823	G1823	G1756		A1596	U1523	A1480	G1388
G2379	G2314	G2250	C2177	G2049	A1901	G1824	G1824	U1757	C1670	A1597	G1524	G1461	G1389
G2380	C2315	G2251	C2178	C2050	U1982	A1825	A1825	G1758	U1671	C1598	G1525	G1462	U1390
G2381	C2316	G2252	A2179	A2051	G1983	G1826	G1826	A1759	C1672	C1599	G1526	C1463	
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G2386		U2257	C2184	G2056	C1988	C1908	G1832		G1678	C1604	G1530	U1397	
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	G2351	A2286	G2219	C2086	U2016		G1861	G1792	C1710	G1635			
G2413	A2352	C2287	U2220	G2087	U2017	G1945	G1862	C1793	C1711	A1562			
G2414	G2353	A2288	G2221	G2088	G2018	U1946	G1863	C1796	U1712	A1637			
G2415	G2354	C2289	G2222	U2089	A2019	C1947	U1864	U1796	U1713	G1638			
G2416	C2355	G2290	G2223	U2090	A2020	G1948	G1865	C1797	G1714	U1639			
C2417	C2356	U2291	G2224		C2021	G1949	C1866	U1798	G1717	C1640			
A2418	U2357	C2292	A2225	U2092				G1799		A1571			
U2419	G2358	C2293		G2093	U2022	A1952	C1879	G1800	G1719	G1642			
C2420	C2359	C2294	U2228	C2095	G2023		C1880	G1801	U1720	G1643			
G2421	A2360	C2295	G2229	U2096		U1955	C1881	A1802	G1721	G1644			
A2422	A2361	C2296	G2230	C2097	G2027	U1958	G1882	A1803	A1722	G1645			
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	G2365	G2300	C2162	G2101	A1960	C1961	A1886	G1742	G1581	C1649			
G2428	A2366	C2301	U2102	U2103	G1962	C1887	C1887		G1582	G1650			
G2429	G2367	G2302	C2103	U2034	U1963	G1888	A1811	A1810	A1509A	A1509B			
A2430	C2368	G2303	G2104	G2035	G1964	A1889	A1812	G1746	C1584	G1651			
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U2432	A2370	G2305	G2106	G2037	C1967	A1891	A1814	G1748	A1587	C1511			
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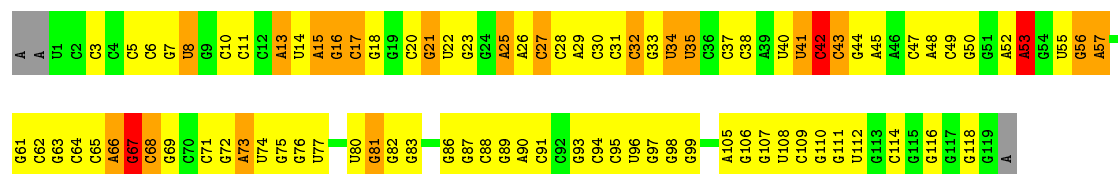
### • Molecule 37: 5S RIBOSOMAL RNA

Chain BB: 26% 52% 16%



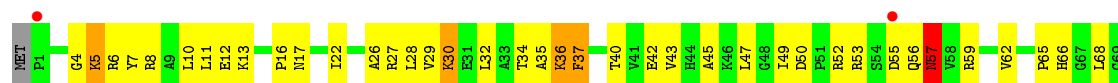
### • Molecule 37: 5S RIBOSOMAL RNA

Chain DB: 25% 55% 16%

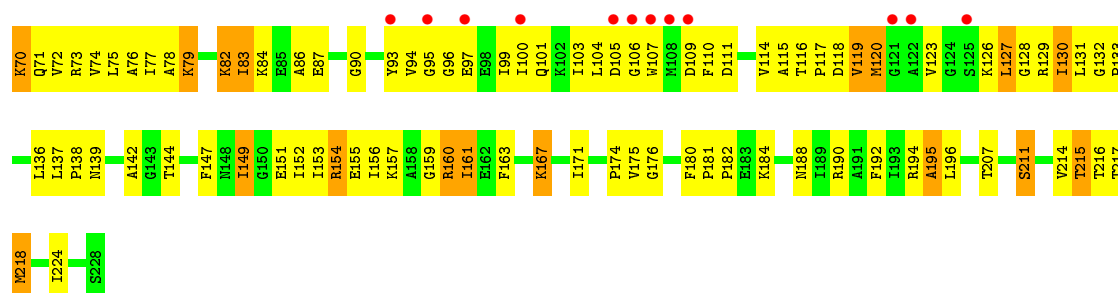


### • Molecule 38: 50S RIBOSOMAL PROTEIN L1

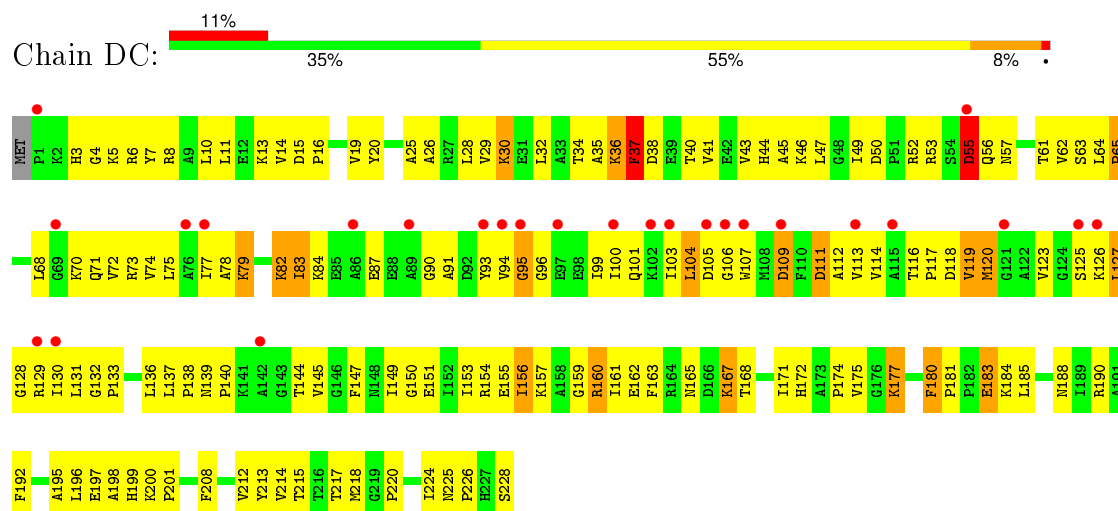
Chain BC: 6% 43% 47% 9%



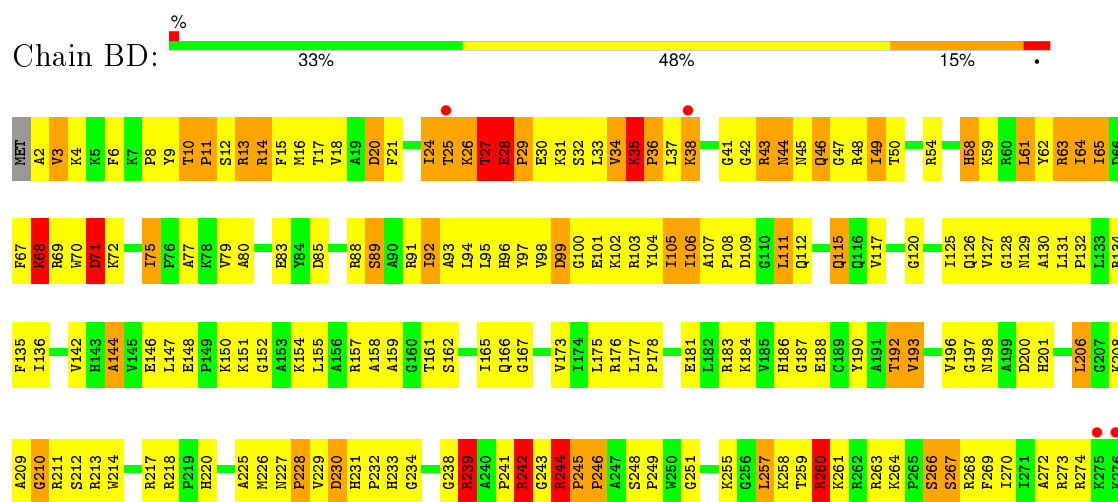




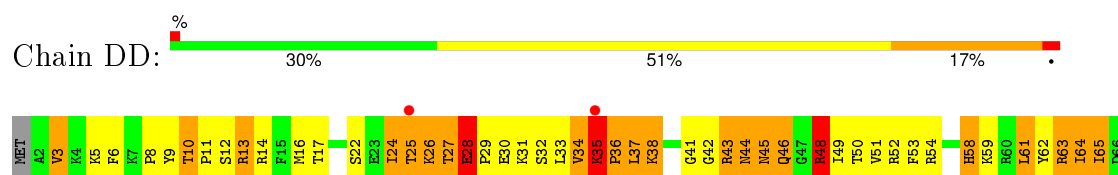
• Molecule 38: 50S RIBOSOMAL PROTEIN L1

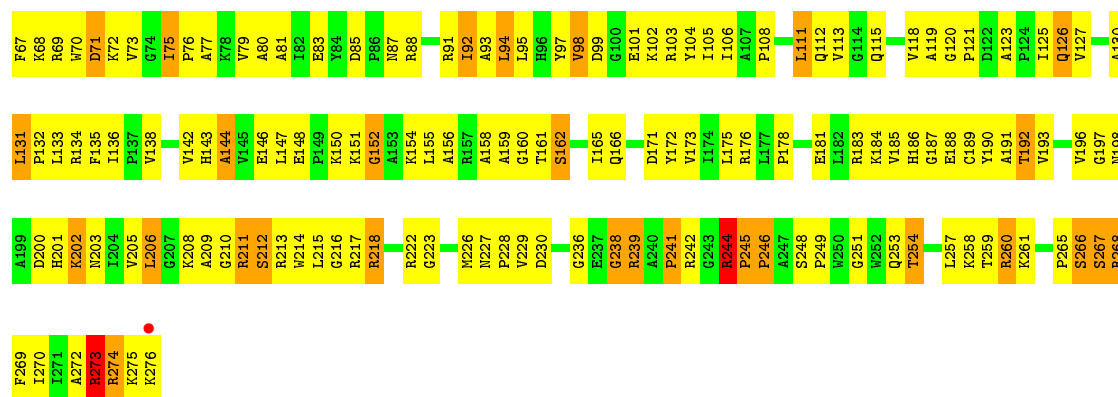


• Molecule 39: 50S RIBOSOMAL PROTEIN L2

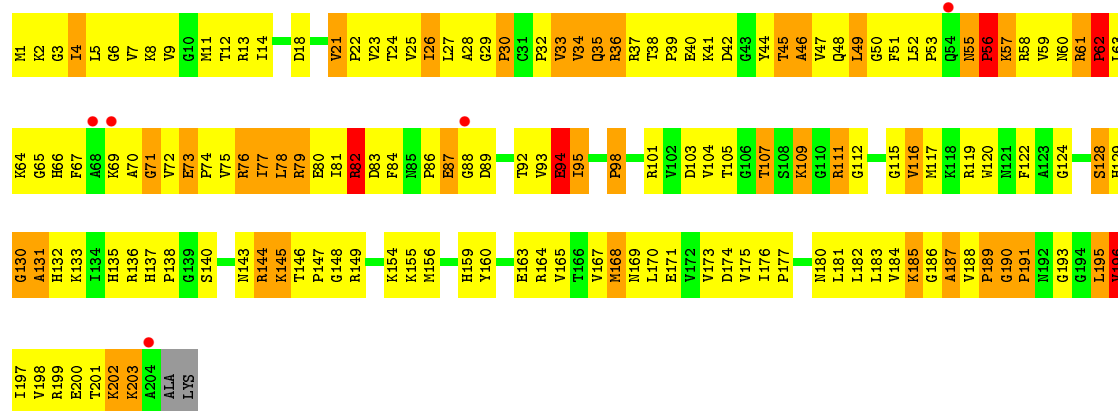


• Molecule 39: 50S RIBOSOMAL PROTEIN L2

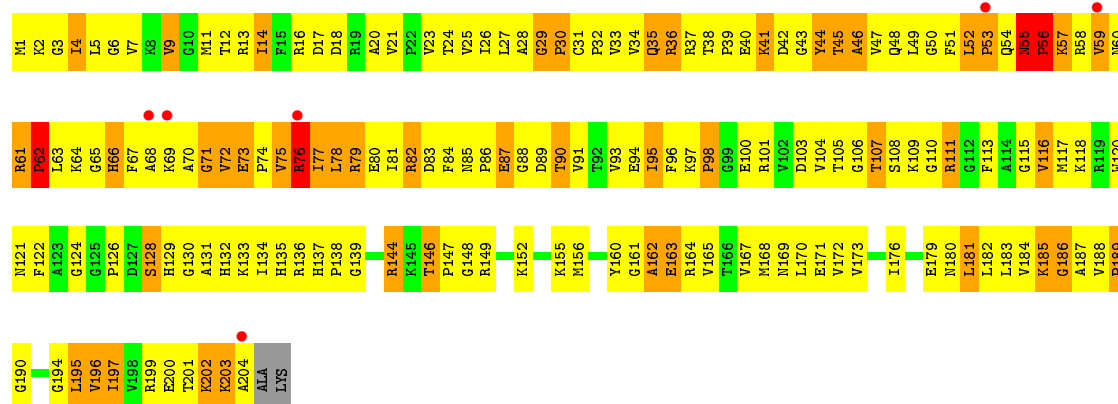




• Molecule 40: 50S RIBOSOMAL PROTEIN L3

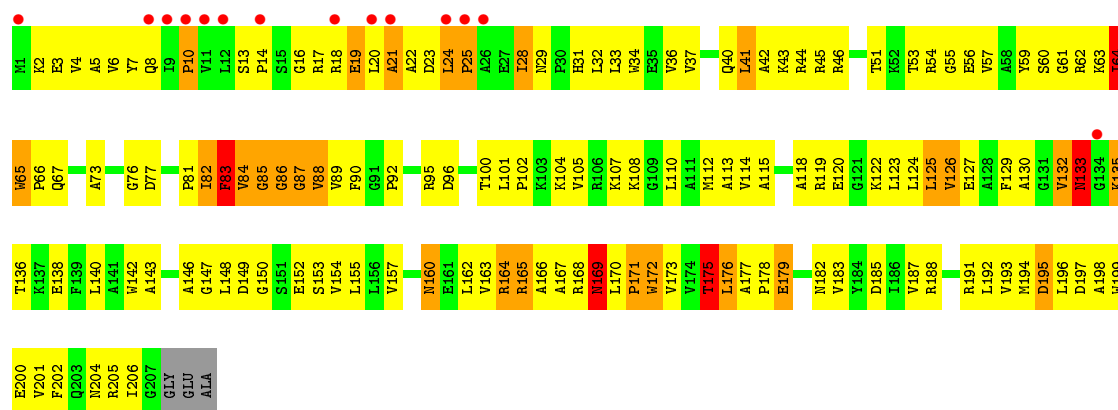


• Molecule 40: 50S RIBOSOMAL PROTEIN L3

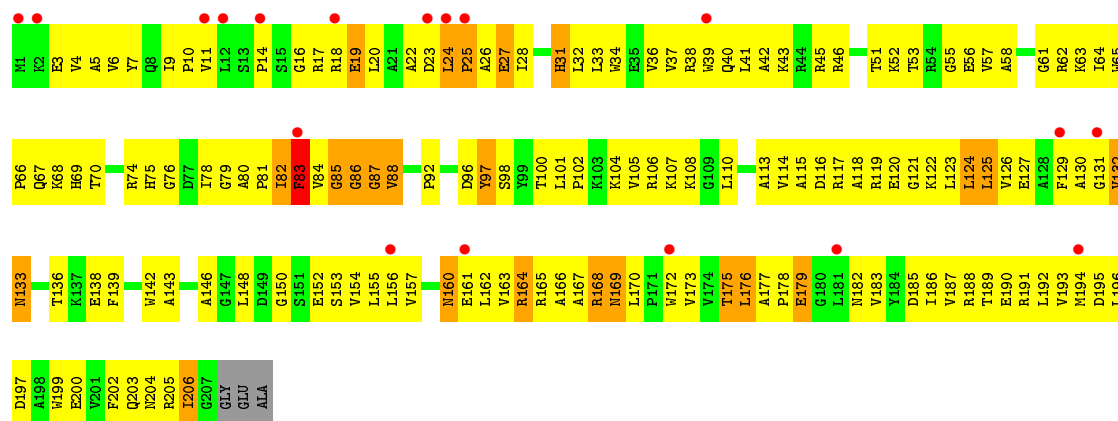


• Molecule 41: 50S RIBOSOMAL PROTEIN L4

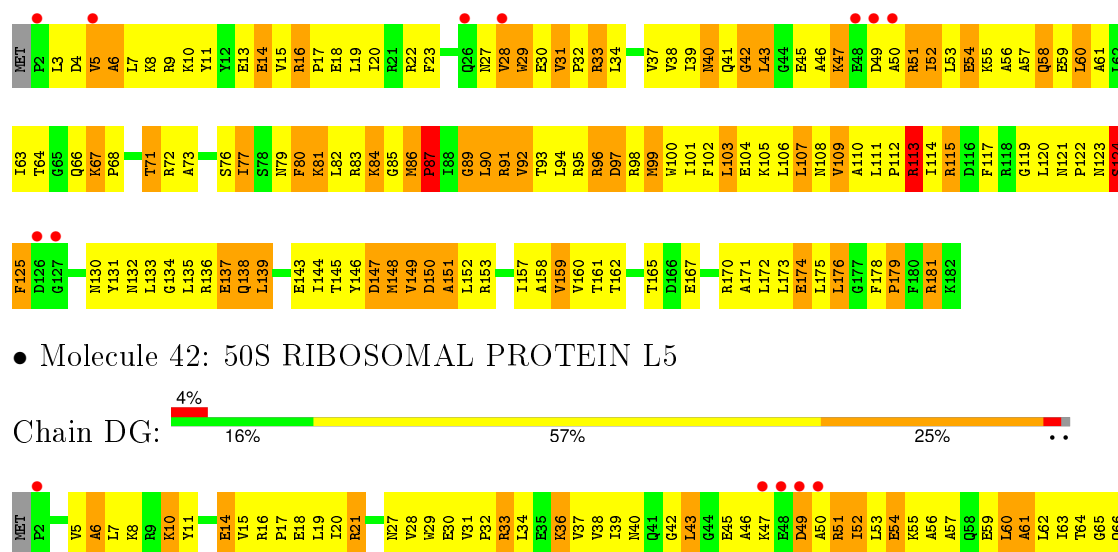
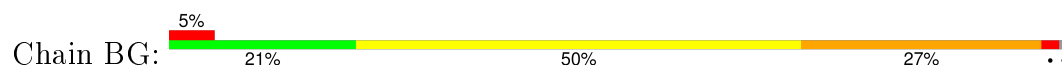




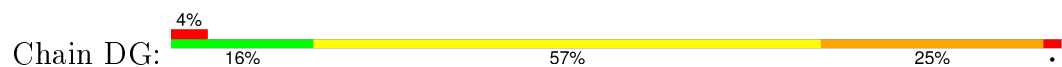
• Molecule 41: 50S RIBOSOMAL PROTEIN L4

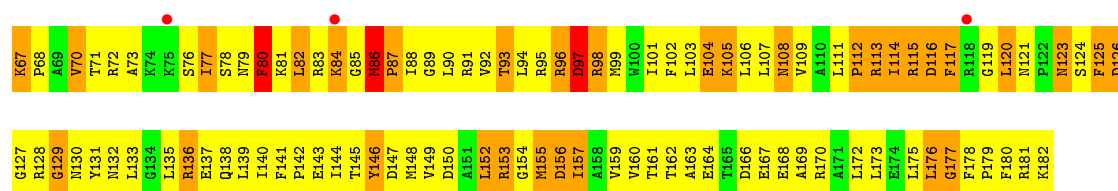


• Molecule 42: 50S RIBOSOMAL PROTEIN L5

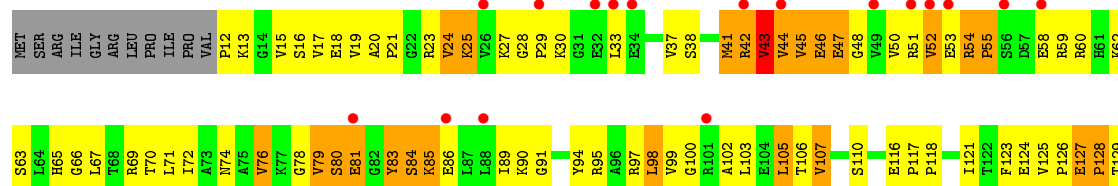


• Molecule 42: 50S RIBOSOMAL PROTEIN L5

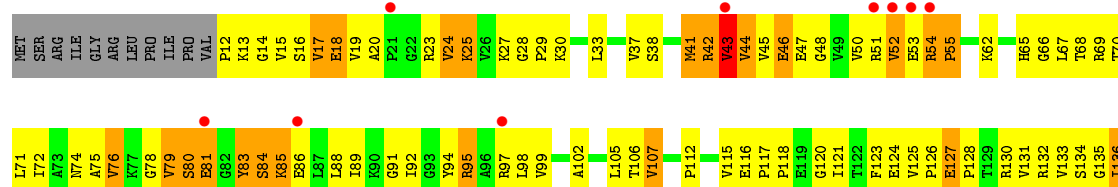




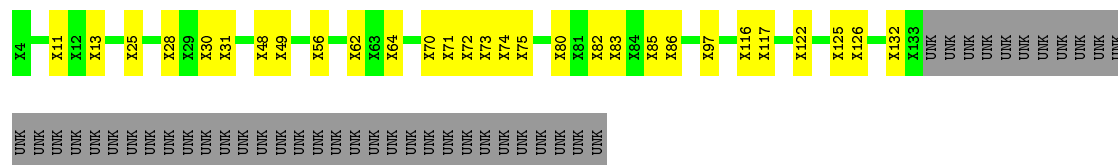
• Molecule 43: 50S RIBOSOMAL PROTEIN L6



• Molecule 43: 50S RIBOSOMAL PROTEIN L6



• Molecule 44: 50S RIBOSOMAL PROTEIN L10



• Molecule 44: 50S RIBOSOMAL PROTEIN L10





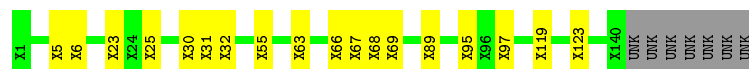
• Molecule 45: 50S RIBOSOMAL PROTEIN L11

Chain BK: 80% 16% 5%



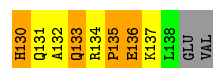
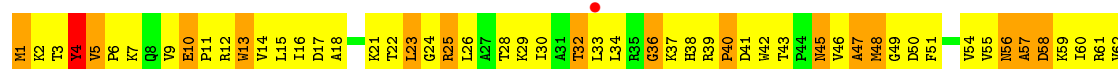
• Molecule 45: 50S RIBOSOMAL PROTEIN L11

Chain DK: 83% 12% 5%



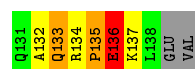
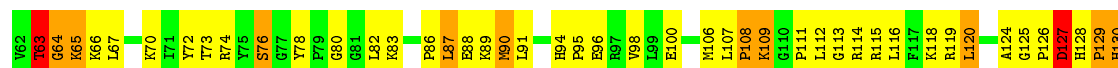
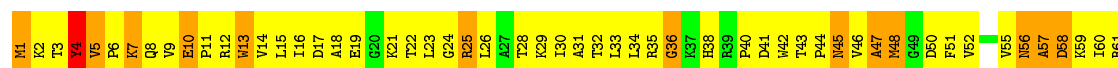
• Molecule 46: 50S RIBOSOMAL PROTEIN L13

Chain BN: 23% 56% 19% ..



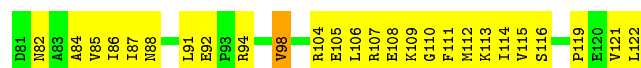
• Molecule 46: 50S RIBOSOMAL PROTEIN L13

Chain DN: 24% 54% 18% ..



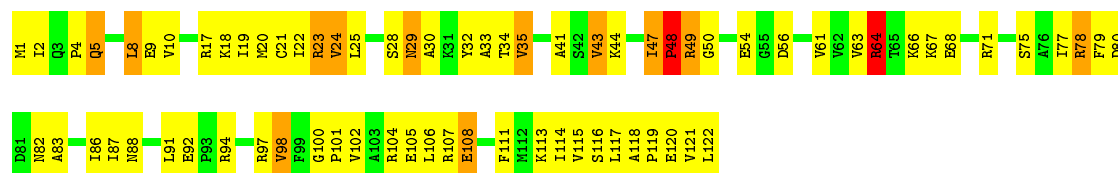
• Molecule 47: 50S RIBOSOMAL PROTEIN L14

Chain BO: 42% 47% 10% ..




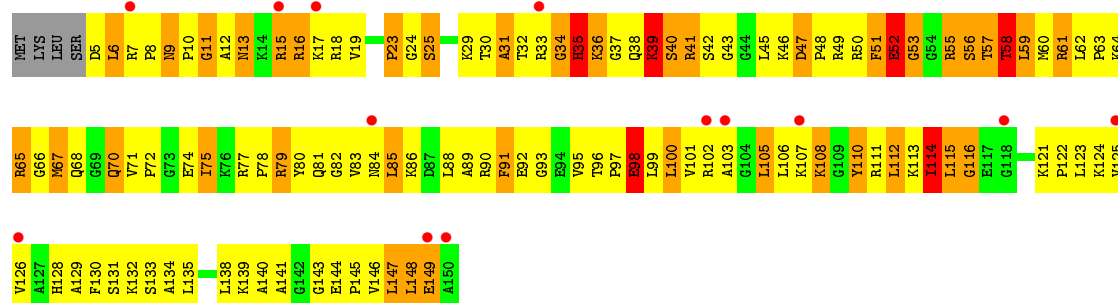
• Molecule 47: 50S RIBOSOMAL PROTEIN L14

Chain DO: 

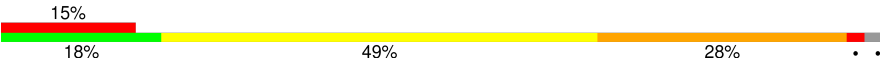


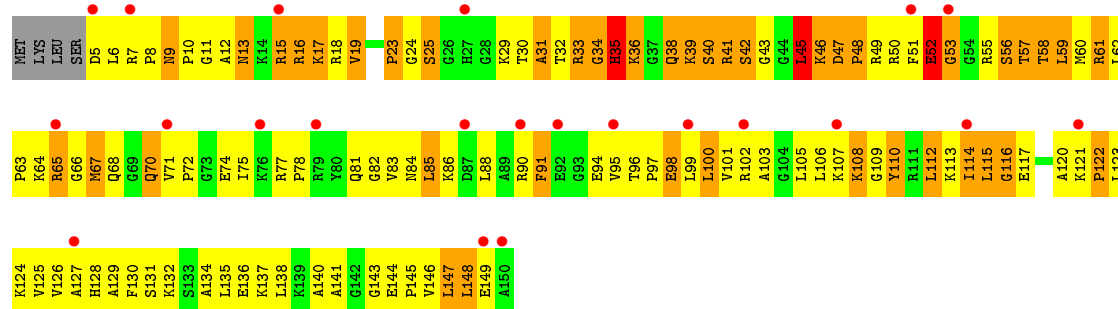
• Molecule 48: 50S RIBOSOMAL PROTEIN L15

Chain BP: 



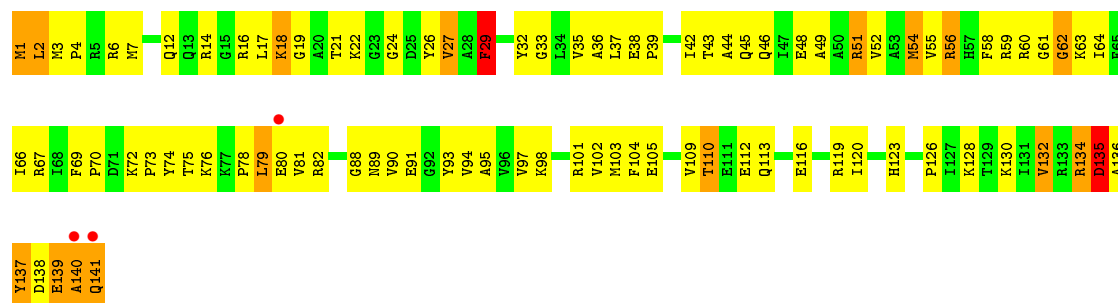
• Molecule 48: 50S RIBOSOMAL PROTEIN L15

Chain DP: 

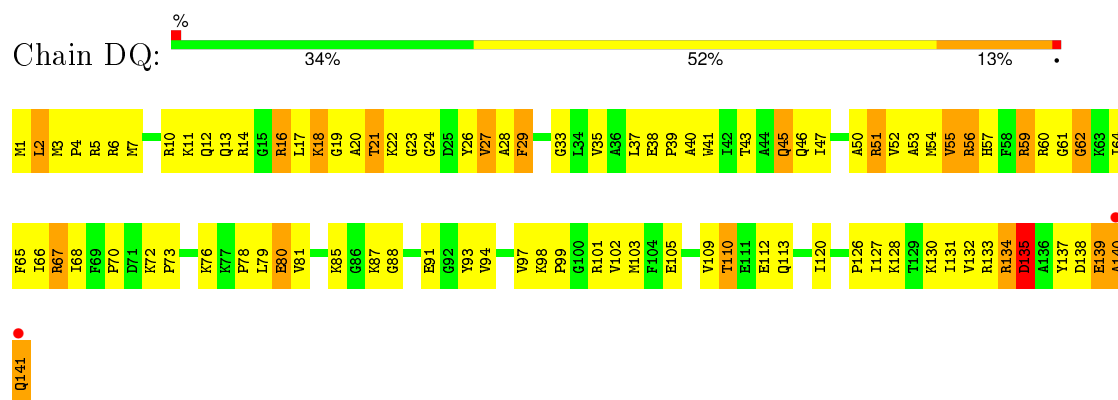


• Molecule 49: 50S RIBOSOMAL PROTEIN L16

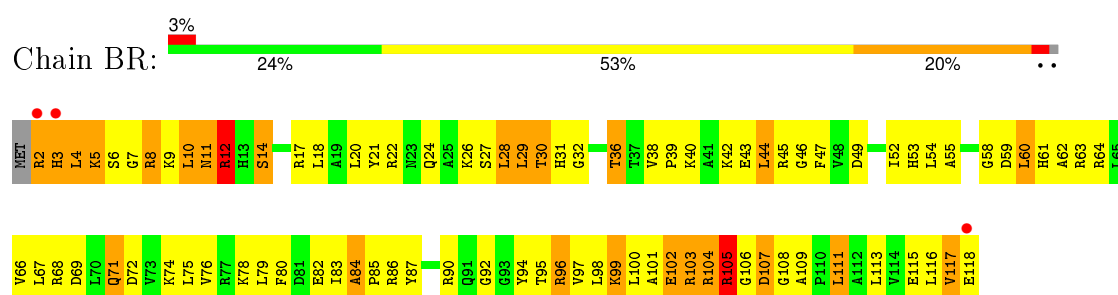
Chain BQ: 



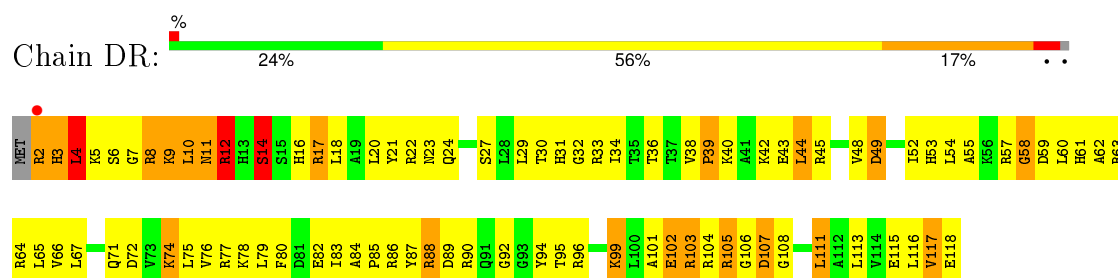
- Molecule 49: 50S RIBOSOMAL PROTEIN L16



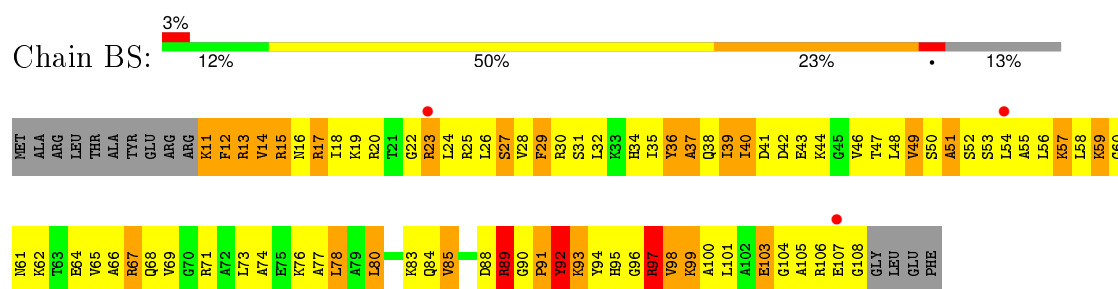
- Molecule 50: 50S RIBOSOMAL PROTEIN L17



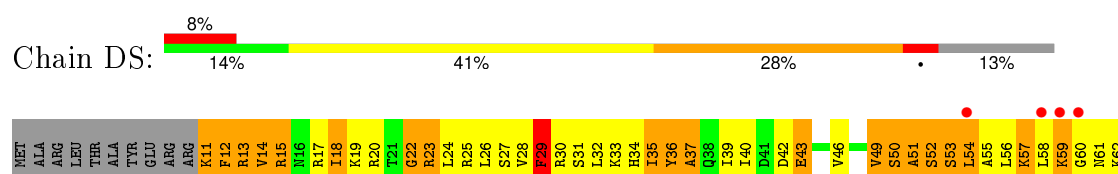
- Molecule 50: 50S RIBOSOMAL PROTEIN L17

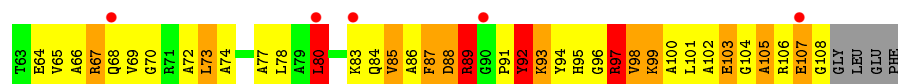


- Molecule 51: 50S RIBOSOMAL PROTEIN L18

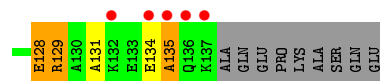
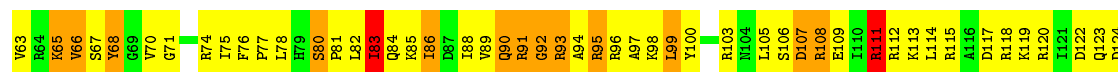
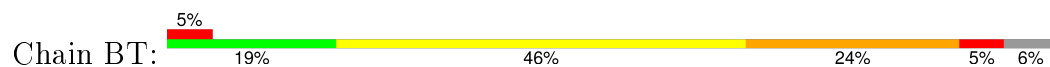


- Molecule 51: 50S RIBOSOMAL PROTEIN L18

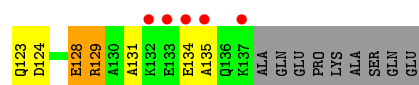
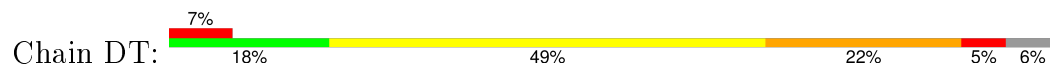




• Molecule 52: 50S RIBOSOMAL PROTEIN L19



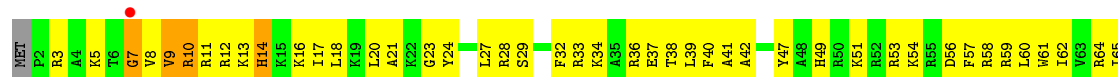
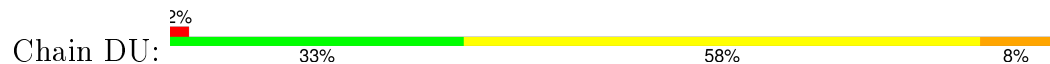
• Molecule 52: 50S RIBOSOMAL PROTEIN L19



• Molecule 53: 50S RIBOSOMAL PROTEIN L20

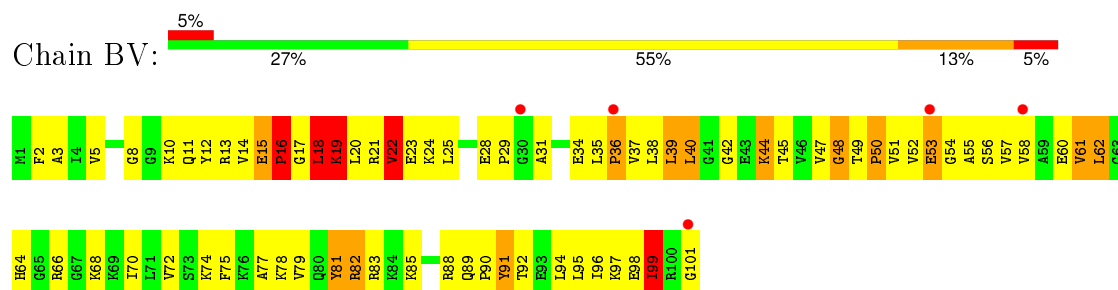


• Molecule 53: 50S RIBOSOMAL PROTEIN L20

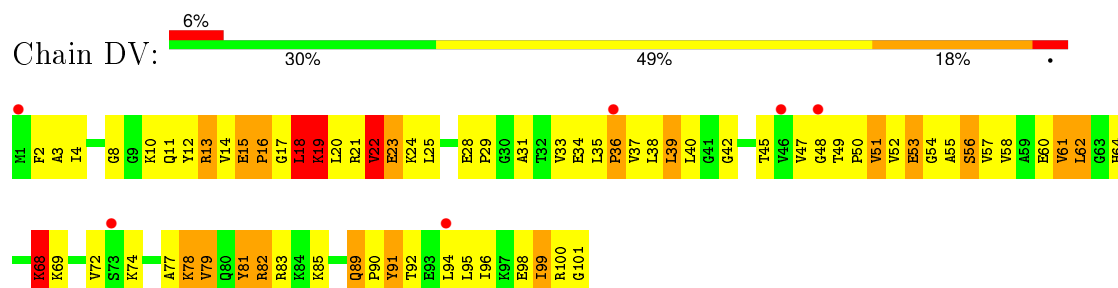




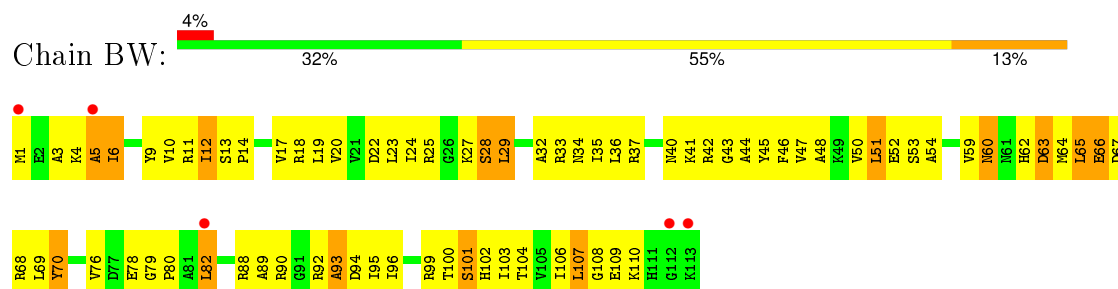
- Molecule 54: 50S RIBOSOMAL PROTEIN L21



- Molecule 54: 50S RIBOSOMAL PROTEIN L21



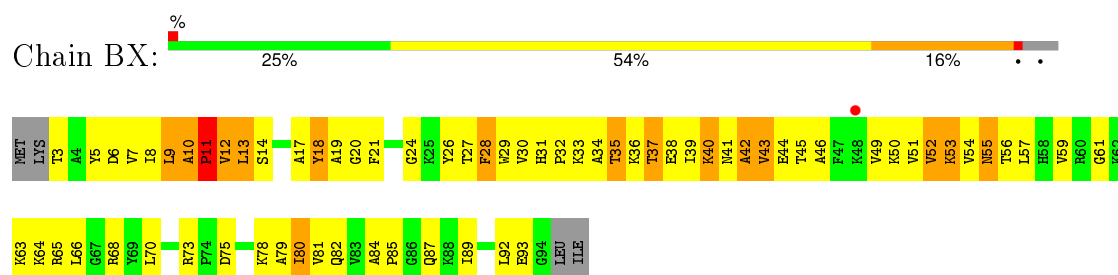
- Molecule 55: 50S RIBOSOMAL PROTEIN L22



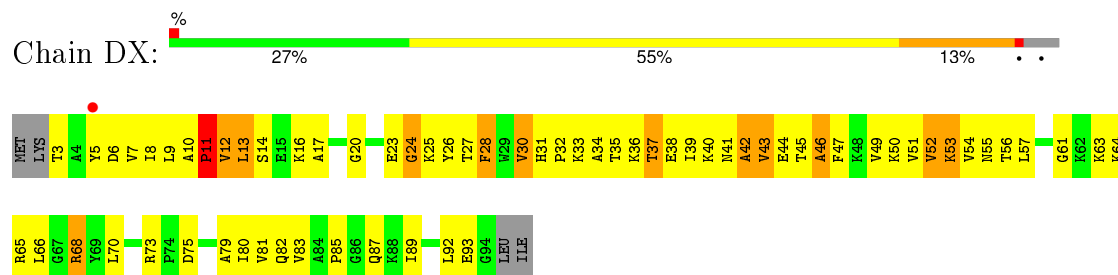
- Molecule 55: 50S RIBOSOMAL PROTEIN L22



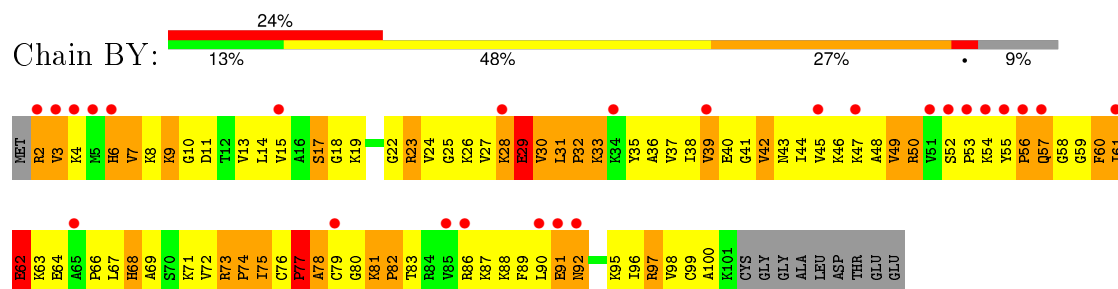
- Molecule 56: 50S RIBOSOMAL PROTEIN L23



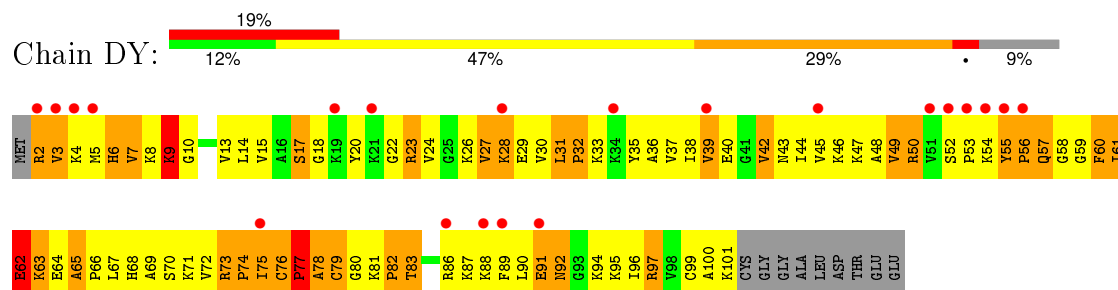
- Molecule 56: 50S RIBOSOMAL PROTEIN L23



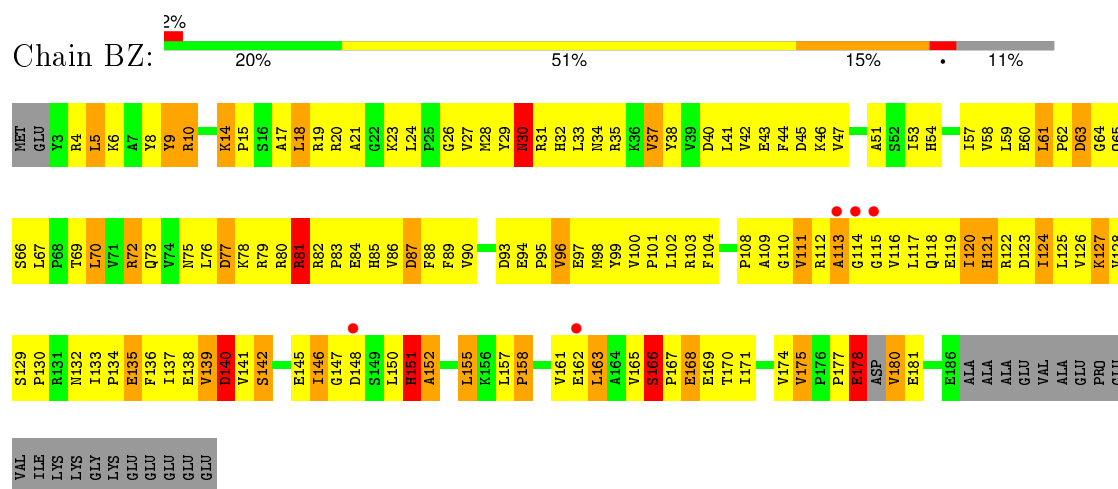
• Molecule 57: 50S RIBOSOMAL PROTEIN L24



• Molecule 57: 50S RIBOSOMAL PROTEIN L24



- Molecule 58: 50S RIBOSOMAL PROTEIN L25



● Molecule 58: 50S RIBOSOMAL PROTEIN L25



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## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	289.90Å 269.40Å 404.50Å 90.00° 91.51° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10 49.22 – 2.80	Depositor EDS
% Data completeness (in resolution range)	98.7 (50.00-3.10) 91.8 (49.22-2.80)	Depositor EDS
$R_{merge}$	0.02	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.18 (at 2.81Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, $R_{free}$	0.238 , 0.275 0.238 , 0.276	Depositor DCC
$R_{free}$ test set	55079 reflections (5.24%)	DCC
Wilson B-factor (Å <sup>2</sup> )	65.1	Xtriage
Anisotropy	0.052	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 74.4	EDS
Estimated twinning fraction	0.024 for h,-k,-l	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.45$ , $\langle L^2 \rangle = 0.27$	Xtriage
Outliers	2 of 1394902 reflections (0.000%)	Xtriage
$F_o, F_c$ correlation	0.91	EDS
Total number of atoms	307194	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	90.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.01% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 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	0.67	10/36190 (0.0%)	0.79	44/56486 (0.1%)
1	CA	0.54	3/36190 (0.0%)	0.74	25/56486 (0.0%)
2	AB	0.55	0/1935	0.76	0/2609
2	CB	0.43	0/1935	0.70	0/2609
3	AC	0.65	1/1636 (0.1%)	0.83	0/2205
3	CC	0.43	0/1636	0.70	0/2205
4	AD	0.48	1/1733 (0.1%)	0.75	1/2318 (0.0%)
4	CD	0.44	1/1733 (0.1%)	0.71	0/2318
5	AE	0.65	1/1162 (0.1%)	0.81	0/1564
5	CE	0.52	0/1162	0.77	0/1564
6	AF	0.50	0/856	0.70	1/1154 (0.1%)
6	CF	0.38	0/856	0.67	0/1154
7	AG	0.52	0/1276	0.73	1/1709 (0.1%)
7	CG	0.39	0/1276	0.63	0/1709
8	AH	0.57	0/1136	0.80	0/1527
8	CH	0.49	0/1136	0.79	0/1527
9	AI	0.55	0/1029	0.82	0/1379
9	CI	0.41	0/1029	0.68	0/1379
10	AJ	0.55	0/807	0.85	0/1085
10	CJ	0.40	0/807	0.75	1/1085 (0.1%)
11	AK	0.60	1/900 (0.1%)	0.80	0/1213
11	CK	0.46	0/900	0.76	1/1213 (0.1%)
12	AL	0.52	0/986	0.82	1/1320 (0.1%)
12	CL	0.44	0/986	0.77	0/1320
13	AM	0.51	0/998	0.80	0/1336
13	CM	0.39	0/998	0.74	0/1336
14	AN	0.70	1/501 (0.2%)	0.98	1/664 (0.2%)
14	CN	0.53	1/501 (0.2%)	0.86	1/664 (0.2%)
15	AO	0.52	0/745	0.77	0/992
15	CO	0.44	0/745	0.66	0/992
16	AP	0.46	0/716	0.74	0/963
16	CP	0.40	0/716	0.70	0/963

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.54	0/836	0.76	0/1117
17	CQ	0.45	0/836	0.76	0/1117
18	AR	0.56	0/579	0.73	0/768
18	CR	0.46	0/579	0.72	0/768
19	AS	0.55	0/642	0.76	0/865
19	CS	0.40	0/642	0.76	0/865
20	AT	0.42	0/765	0.69	0/1007
20	CT	0.36	0/765	0.71	0/1007
21	AU	0.55	0/212	0.87	0/277
21	CU	0.48	0/212	0.80	0/277
22	AV	0.68	0/1809	0.79	0/2819
22	AW	0.47	0/1809	0.74	0/2819
22	CV	0.92	5/1809 (0.3%)	0.90	7/2819 (0.2%)
22	CW	0.41	0/1809	0.73	0/2819
23	AX	0.79	0/405	0.91	2/629 (0.3%)
23	CX	1.78	13/405 (3.2%)	1.64	16/629 (2.5%)
24	AY	0.49	1/1618 (0.1%)	0.71	0/2514
24	CY	0.64	2/1618 (0.1%)	0.76	0/2514
25	AZ	0.84	12/3042 (0.4%)	0.99	15/4129 (0.4%)
25	CZ	0.90	14/3042 (0.5%)	1.02	17/4129 (0.4%)
26	B0	0.47	0/671	0.78	0/892
26	D0	0.42	0/671	0.74	0/892
27	B1	0.51	0/738	0.81	1/981 (0.1%)
27	D1	0.42	0/738	0.76	0/981
28	B2	0.38	0/600	0.73	0/793
28	D2	0.35	0/600	0.60	0/793
29	B3	0.40	0/472	0.67	0/634
29	D3	0.38	0/472	0.68	0/634
30	B4	0.46	0/349	0.66	0/474
30	D4	0.51	0/349	0.62	0/474
31	B5	0.44	0/473	0.73	0/639
31	D5	0.43	0/473	0.74	0/639
32	B6	0.70	0/440	0.94	0/586
32	D6	0.58	0/440	0.85	0/586
33	B7	0.49	0/426	0.73	0/561
33	D7	0.44	0/426	0.74	1/561 (0.2%)
34	B8	0.58	0/515	0.89	1/679 (0.1%)
34	D8	0.52	0/515	0.87	1/679 (0.1%)
35	B9	0.56	0/310	0.73	0/407
35	D9	0.69	1/310 (0.3%)	0.81	0/407
36	BA	0.56	7/69976 (0.0%)	0.74	36/109244 (0.0%)
36	DA	0.51	3/69976 (0.0%)	0.73	25/109244 (0.0%)
37	BB	0.51	0/2853	0.77	3/4451 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
37	DB	0.48	0/2853	0.76	0/4451
38	BC	0.46	2/1774 (0.1%)	0.65	0/2391
38	DC	0.41	2/1774 (0.1%)	0.61	0/2391
39	BD	0.62	0/2195	0.93	3/2955 (0.1%)
39	DD	0.51	0/2195	0.86	1/2955 (0.0%)
40	BE	0.46	0/1596	0.77	1/2153 (0.0%)
40	DE	0.45	0/1596	0.75	1/2153 (0.0%)
41	BF	0.40	0/1658	0.65	0/2244
41	DF	0.40	0/1658	0.64	0/2244
42	BG	0.48	0/1499	0.78	0/2016
42	DG	0.40	0/1499	0.70	0/2016
43	BH	0.37	0/1245	0.66	0/1682
43	DH	0.35	0/1245	0.66	0/1682
46	BN	0.39	0/1131	0.72	0/1525
46	DN	0.39	0/1131	0.70	0/1525
47	BO	0.53	0/943	0.74	1/1269 (0.1%)
47	DO	0.51	1/943 (0.1%)	0.74	0/1269
48	BP	0.46	0/1131	0.96	4/1504 (0.3%)
48	DP	0.42	0/1131	0.93	4/1504 (0.3%)
49	BQ	0.52	0/1143	0.73	0/1527
49	DQ	0.51	0/1143	0.69	0/1527
50	BR	0.41	0/974	0.81	2/1302 (0.2%)
50	DR	0.38	0/974	0.77	2/1302 (0.2%)
51	BS	0.45	0/778	0.79	0/1036
51	DS	0.41	0/778	0.76	1/1036 (0.1%)
52	BT	0.48	0/1155	0.78	1/1542 (0.1%)
52	DT	0.44	0/1155	0.77	1/1542 (0.1%)
53	BU	0.42	0/975	0.69	0/1297
53	DU	0.44	0/975	0.69	0/1297
54	BV	0.38	0/790	0.68	0/1057
54	DV	0.37	0/790	0.67	0/1057
55	BW	0.39	0/907	0.76	0/1216
55	DW	0.39	0/907	0.68	0/1216
56	BX	0.45	0/739	0.70	0/993
56	DX	0.41	0/739	0.67	0/993
57	BY	0.36	0/788	0.69	0/1051
57	DY	0.38	0/788	0.70	0/1051
58	BZ	0.50	0/1491	0.75	0/2024
58	DZ	0.46	0/1491	0.72	0/2024
All	All	0.55	83/330116 (0.0%)	0.75	224/493186 (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	1	90
1	CA	2	54
5	AE	0	1
22	AV	0	1
22	CV	0	2
22	CW	0	2
23	AX	0	2
23	CX	0	6
24	CY	0	1
25	AZ	0	2
25	CZ	0	2
36	BA	2	87
36	DA	0	79
37	BB	0	4
37	DB	0	3
39	BD	0	1
46	BN	0	1
All	All	5	338

All (83) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	CV	34	G	C5-C6	-23.91	1.18	1.42
25	CZ	69	GLU	CB-CG	17.54	1.85	1.52
25	AZ	69	GLU	CB-CG	16.36	1.83	1.52
25	AZ	68	VAL	CA-C	12.52	1.85	1.52
25	CZ	68	VAL	CA-C	11.51	1.82	1.52
22	CV	35	A	C5-C6	-10.92	1.31	1.41
36	BA	761	A	C5-C6	-9.78	1.32	1.41
1	AA	858	G	C5-C6	-9.64	1.32	1.42
23	CX	19	U	N3-C4	9.25	1.46	1.38
23	CX	20	U	P-OP2	9.06	1.64	1.49
25	CZ	1	ALA	CA-CB	8.40	1.70	1.52
25	CZ	68	VAL	CB-CG1	8.40	1.70	1.52
36	DA	761	A	C5-C6	-8.38	1.33	1.41
36	BA	945	A	C5-C6	8.28	1.48	1.41
25	AZ	5	PHE	CE2-CZ	8.25	1.53	1.37
23	CX	20	U	C2-O2	8.13	1.29	1.22
35	D9	14	CYS	CB-SG	-8.08	1.68	1.82
22	CV	34	G	C6-O6	-8.06	1.16	1.24
25	AZ	1	ALA	CA-CB	7.97	1.69	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	CZ	5	PHE	CE2-CZ	7.68	1.51	1.37
25	AZ	68	VAL	C-O	7.47	1.37	1.23
23	CX	21	C	C2-N3	7.12	1.41	1.35
24	CY	1	A	OP3-P	-7.03	1.52	1.61
24	AY	1	A	OP3-P	-7.02	1.52	1.61
36	DA	2506	U	N1-C2	7.02	1.44	1.38
1	CA	858	G	C5-C6	-7.02	1.35	1.42
24	CY	77	TRP	CB-CG	-6.92	1.37	1.50
23	CX	20	U	N3-C4	6.89	1.44	1.38
4	AD	9	CYS	CB-SG	-6.84	1.70	1.82
22	CV	34	G	N9-C4	-6.75	1.32	1.38
22	CV	34	G	C8-N7	-6.66	1.26	1.30
25	CZ	68	VAL	C-O	6.62	1.35	1.23
25	AZ	68	VAL	CB-CG2	-6.61	1.39	1.52
1	CA	1054	C	C5-C6	-6.58	1.29	1.34
25	AZ	68	VAL	CB-CG1	6.57	1.66	1.52
36	BA	2506	U	N1-C2	6.57	1.44	1.38
14	AN	40	CYS	CB-SG	6.51	1.93	1.82
25	CZ	322	VAL	CB-CG1	6.47	1.66	1.52
25	CZ	69	GLU	CG-CD	6.43	1.61	1.51
23	CX	20	U	P-OP1	6.26	1.59	1.49
25	AZ	69	GLU	CA-CB	-6.23	1.40	1.53
1	AA	1108	G	C6-O6	6.18	1.29	1.24
1	AA	858	G	N1-C2	6.15	1.42	1.37
25	CZ	288	VAL	CB-CG2	6.12	1.65	1.52
4	CD	26	CYS	CB-SG	-6.07	1.72	1.82
23	CX	21	C	N1-C2	-6.03	1.34	1.40
23	CX	19	U	C2-N3	5.97	1.42	1.37
25	CZ	69	GLU	CA-CB	-5.97	1.40	1.53
25	AZ	69	GLU	CG-CD	5.91	1.60	1.51
23	CX	22	U	P-OP2	5.89	1.58	1.49
1	AA	766	A	P-OP2	5.86	1.58	1.49
1	AA	1281	U	N1-C2	5.84	1.43	1.38
38	DC	120	MET	CG-SD	5.78	1.96	1.81
38	DC	218	MET	CG-SD	5.77	1.96	1.81
1	AA	1054	C	C5-C6	-5.67	1.29	1.34
23	CX	19	U	C2-O2	5.49	1.27	1.22
36	DA	945	A	C5-C6	5.49	1.46	1.41
1	AA	299	G	C6-O6	5.45	1.29	1.24
36	BA	2180	U	N1-C2	5.43	1.43	1.38
1	AA	723	U	N1-C2	5.43	1.43	1.38
36	BA	761	A	C6-N6	-5.41	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	CZ	67	HIS	CA-C	5.41	1.67	1.52
23	CX	20	U	O3'-P	5.36	1.67	1.61
25	AZ	322	VAL	CB-CG1	5.32	1.64	1.52
25	CZ	184	ARG	CZ-NH2	5.30	1.40	1.33
23	CX	19	U	C4-O4	5.29	1.27	1.23
25	AZ	67	HIS	CA-C	5.29	1.66	1.52
25	AZ	5	PHE	CE1-CZ	5.26	1.47	1.37
36	BA	1795	C	N1-C2	5.24	1.45	1.40
5	AE	68	GLU	CB-CG	5.18	1.62	1.52
36	BA	1968	G	C5-C6	-5.18	1.37	1.42
1	CA	1054	C	C2-N3	-5.16	1.31	1.35
25	CZ	5	PHE	CE1-CZ	5.15	1.47	1.37
47	DO	21	CYS	CB-SG	-5.11	1.73	1.81
23	CX	19	U	O3'-P	5.10	1.67	1.61
14	CN	27	CYS	CB-SG	-5.10	1.73	1.81
1	AA	858	G	C5-C4	5.09	1.42	1.38
38	BC	218	MET	CG-SD	5.09	1.94	1.81
1	AA	1502	A	C5-C6	-5.05	1.36	1.41
38	BC	120	MET	CG-SD	5.04	1.94	1.81
3	AC	167	TRP	CB-CG	-5.03	1.41	1.50
25	CZ	322	VAL	CB-CG2	5.03	1.63	1.52
11	AK	119	CYS	CB-SG	-5.02	1.73	1.81

All (224) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	AZ	356	PRO	C-N-CD	-26.29	62.77	120.60
25	CZ	356	PRO	C-N-CD	-25.87	63.68	120.60
25	AZ	197	ASP	CB-CG-OD2	-14.50	105.25	118.30
25	AZ	69	GLU	N-CA-CB	-13.90	85.58	110.60
25	CZ	69	GLU	N-CA-CB	-13.63	86.07	110.60
25	CZ	197	ASP	CB-CG-OD2	-13.28	106.35	118.30
23	CX	20	U	O5'-P-OP1	-11.34	95.49	105.70
22	CV	34	G	C5-C6-O6	-11.03	121.98	128.60
23	CX	21	C	N1-C2-O2	-11.01	112.30	118.90
25	AZ	197	ASP	CB-CG-OD1	10.73	127.96	118.30
25	CZ	69	GLU	CA-CB-CG	10.27	135.99	113.40
25	AZ	69	GLU	CA-CB-CG	10.09	135.61	113.40
14	AN	24	CYS	CA-CB-SG	-10.03	95.94	114.00
25	CZ	197	ASP	CB-CG-OD1	9.88	127.19	118.30
22	CV	34	G	C6-C5-N7	-9.84	124.50	130.40
1	AA	508	C	C2'-C3'-O3'	9.71	130.87	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	CN	24	CYS	CA-CB-SG	-9.55	96.80	114.00
25	CZ	7	ARG	NE-CZ-NH1	-9.43	115.58	120.30
1	CA	508	C	C2'-C3'-O3'	9.32	130.00	109.50
36	DA	1786	A	N9-C1'-C2'	9.22	125.99	114.00
36	BA	1992	G	C2'-C3'-O3'	9.07	129.45	109.50
1	AA	1101	A	C2'-C3'-O3'	9.00	129.30	109.50
1	AA	687	A	C2'-C3'-O3'	8.99	129.27	109.50
1	CA	243	A	C2'-C3'-O3'	8.95	129.18	109.50
23	CX	23	G	O5'-P-OP1	-8.86	97.72	105.70
1	AA	245	C	N1-C1'-C2'	-8.77	102.36	112.00
36	BA	1820	U	C2'-C3'-O3'	8.51	128.23	109.50
1	AA	961	U	N1-C1'-C2'	-8.49	102.66	112.00
36	DA	1912	A	C5'-C4'-O4'	-8.47	98.93	109.10
1	CA	1399	C	C2'-C3'-O3'	8.47	128.13	109.50
25	CZ	68	VAL	CB-CA-C	8.43	127.41	111.40
36	BA	1786	A	N9-C1'-C2'	8.39	124.91	114.00
23	CX	19	U	O5'-P-OP1	-8.37	98.17	105.70
48	DP	53	GLY	N-CA-C	-8.36	92.20	113.10
1	AA	968	A	C2'-C3'-O3'	8.27	127.68	109.50
1	AA	243	A	C2'-C3'-O3'	8.25	127.65	109.50
1	CA	961	U	N1-C1'-C2'	-8.18	103.00	112.00
25	CZ	68	VAL	CA-C-O	-8.18	102.92	120.10
36	BA	1300	U	C2'-C3'-O3'	8.10	127.32	109.50
36	BA	1970	A	C5'-C4'-O4'	8.09	118.81	109.10
25	AZ	68	VAL	CB-CA-C	8.02	126.63	111.40
1	CA	792	A	C2'-C3'-O3'	7.98	127.06	109.50
25	CZ	201	GLU	OE1-CD-OE2	-7.92	113.80	123.30
1	AA	792	A	C2'-C3'-O3'	7.92	126.92	109.50
36	DA	1992	G	C2'-C3'-O3'	7.90	126.89	109.50
25	AZ	7	ARG	NE-CZ-NH1	-7.88	116.36	120.30
23	CX	21	C	N3-C2-O2	7.88	127.42	121.90
1	AA	189(H)	G	N9-C1'-C2'	-7.82	103.40	112.00
48	DP	52	GLU	N-CA-C	7.64	131.62	111.00
25	AZ	68	VAL	CA-C-O	-7.61	104.13	120.10
25	CZ	356	PRO	C-N-CA	7.58	153.86	122.00
36	BA	1970	A	C1'-O4'-C4'	-7.58	103.83	109.90
25	AZ	201	GLU	OE1-CD-OE2	-7.58	114.20	123.30
23	CX	24	A	O5'-P-OP1	-7.56	98.89	105.70
39	BD	244	ARG	C-N-CD	-7.52	104.05	120.60
25	AZ	356	PRO	C-N-CA	7.49	153.46	122.00
48	BP	53	GLY	N-CA-C	-7.48	94.41	113.10
36	DA	1300	U	C2'-C3'-O3'	7.43	125.85	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	982	U	C2'-C3'-O3'	7.35	125.67	109.50
1	AA	60	A	C2'-C3'-O3'	7.33	125.61	109.50
50	BR	12	ARG	N-CA-C	-7.24	91.45	111.00
36	BA	1819	A	C2'-C3'-O3'	7.20	125.35	109.50
48	BP	52	GLU	N-CA-C	7.19	130.41	111.00
1	AA	1050	G	N9-C1'-C2'	-7.16	104.13	112.00
36	BA	2360	A	N9-C1'-C2'	-7.14	104.14	112.00
50	DR	12	ARG	N-CA-C	-7.13	91.74	111.00
36	DA	1912	A	N9-C1'-C2'	7.10	123.23	114.00
36	BA	1835	G	C5'-C4'-C3'	-7.09	104.66	116.00
22	CV	34	G	N1-C6-O6	7.08	124.15	119.90
36	DA	1820	U	C2'-C3'-O3'	7.02	124.94	109.50
36	DA	2756	U	C2'-C3'-O3'	7.01	124.93	109.50
50	BR	4	LEU	CA-CB-CG	6.99	131.38	115.30
23	AX	26	A	N9-C1'-C2'	6.98	123.08	114.00
36	BA	2464	C	N1-C1'-C2'	-6.95	104.36	112.00
25	CZ	69	GLU	CA-C-N	-6.95	101.92	117.20
36	DA	2360	A	N9-C1'-C2'	-6.77	104.55	112.00
23	CX	26	A	N9-C1'-C2'	6.72	122.74	114.00
34	B8	32	LEU	CA-CB-CG	6.72	130.75	115.30
36	DA	1799	G	C2'-C3'-O3'	6.67	124.38	113.70
25	AZ	69	GLU	CA-C-N	-6.66	102.56	117.20
1	AA	328	C	N1-C1'-C2'	6.57	122.54	114.00
22	CV	34	G	C4-C5-C6	6.57	122.74	118.80
36	DA	1495	A	N9-C1'-C2'	6.53	122.49	114.00
22	CV	59	U	N1-C1'-C2'	-6.52	104.83	112.00
1	AA	1181	G	N9-C1'-C2'	6.51	122.47	114.00
36	BA	1799	G	C2'-C3'-O3'	6.49	124.08	113.70
36	BA	242	G	N9-C1'-C2'	6.45	122.39	114.00
1	CA	1101	A	C2'-C3'-O3'	6.45	124.02	113.70
1	AA	1387	G	C5'-C4'-C3'	-6.43	105.71	116.00
36	BA	1698	A	N9-C1'-C2'	6.39	122.30	114.00
36	BA	527	C	O4'-C1'-N1	6.34	113.27	108.20
36	BA	2157	G	N9-C1'-C2'	-6.34	105.02	112.00
1	AA	1239	A	C2'-C3'-O3'	6.33	123.83	113.70
23	AX	26	A	O4'-C1'-N9	6.33	113.27	108.20
23	CX	21	C	O5'-P-OP1	-6.33	100.00	105.70
36	DA	1948	G	C5'-C4'-O4'	-6.33	101.51	109.10
1	AA	428	G	N9-C1'-C2'	6.30	122.19	114.00
7	AG	145	ALA	N-CA-C	-6.30	94.00	111.00
1	AA	995	C	N1-C1'-C2'	-6.23	105.15	112.00
23	CX	26	A	O4'-C1'-N9	6.21	113.17	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	772	U	C5'-C4'-C3'	-6.21	106.06	116.00
36	DA	1427	A	C2'-C3'-O3'	6.21	123.63	113.70
1	AA	960	U	N1-C1'-C2'	6.20	122.06	114.00
25	CZ	184	ARG	NE-CZ-NH1	-6.18	117.21	120.30
50	DR	4	LEU	CA-CB-CG	6.18	129.51	115.30
36	BA	1970	A	C5'-C4'-C3'	6.18	125.88	116.00
36	BA	2132	U	N1-C1'-C2'	6.16	122.01	114.00
25	CZ	69	GLU	N-CA-C	6.13	127.55	111.00
1	AA	1506	U	O5'-P-OP2	-6.13	100.19	105.70
37	BB	16	G	N9-C1'-C2'	-6.11	105.28	112.00
1	AA	1502	A	N9-C1'-C2'	6.08	121.91	114.00
1	AA	1279	A	N9-C1'-C2'	6.07	121.89	114.00
1	AA	686	U	N1-C1'-C2'	6.07	121.88	114.00
23	CX	20	U	C5'-C4'-O4'	6.03	116.34	109.10
1	AA	1348	U	O5'-P-OP2	-5.99	100.31	105.70
39	BD	68	LYS	N-CA-C	-5.97	94.88	111.00
37	BB	67	G	N9-C1'-C2'	-5.94	105.47	112.00
36	BA	1820	U	C4'-C3'-O3'	5.93	124.85	113.00
36	DA	2111	C	N1-C1'-C2'	5.91	121.69	114.00
1	AA	858	G	C6-C5-N7	-5.91	126.85	130.40
25	AZ	69	GLU	N-CA-C	5.91	126.96	111.00
36	BA	2286	A	N9-C1'-C2'	5.88	121.65	114.00
1	CA	1239	A	N9-C1'-C2'	5.81	121.56	114.00
23	CX	20	U	OP1-P-O3'	5.81	117.98	105.20
36	BA	1300	U	C4'-C3'-O3'	5.77	124.54	113.00
12	AL	88	GLY	N-CA-C	-5.77	98.68	113.10
23	CX	20	U	N3-C2-O2	5.74	126.22	122.20
1	AA	1255	G	C5'-C4'-C3'	-5.72	106.84	116.00
36	DA	906	G	C5'-C4'-C3'	-5.72	106.84	116.00
36	BA	1653	G	C2'-C3'-O3'	5.70	122.83	113.70
1	CA	1050	G	N9-C1'-C2'	-5.70	105.73	112.00
34	D8	32	LEU	CA-CB-CG	5.68	128.37	115.30
39	DD	244	ARG	C-N-CD	-5.68	108.10	120.60
1	AA	376	G	N9-C1'-C2'	-5.66	105.78	112.00
52	BT	29	ARG	N-CA-C	5.66	126.27	111.00
1	CA	30	U	C2'-C3'-O3'	5.62	122.70	113.70
36	BA	2756	U	C2'-C3'-O3'	5.60	122.66	113.70
48	DP	59	LEU	CA-CB-CG	5.60	128.17	115.30
1	AA	961	U	C5'-C4'-C3'	-5.59	107.05	116.00
25	CZ	68	VAL	N-CA-C	-5.59	95.91	111.00
37	BB	56	G	N9-C1'-C2'	5.59	121.26	114.00
1	CA	687	A	C2'-C3'-O3'	5.58	122.63	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	AZ	258	LEU	CA-CB-CG	-5.58	102.46	115.30
1	CA	1399	C	C4'-C3'-O3'	5.58	124.15	113.00
1	CA	115	G	N9-C1'-C2'	5.57	121.24	114.00
1	CA	428	G	N9-C1'-C2'	5.57	121.23	114.00
1	AA	1077	G	N9-C1'-C2'	-5.56	105.88	112.00
1	AA	572	A	OP2-P-O3'	5.56	117.43	105.20
1	AA	1044	A	N9-C1'-C2'	-5.54	105.90	112.00
36	BA	387	U	C2'-C3'-O3'	5.54	122.57	113.70
1	AA	977	A	C5'-C4'-C3'	-5.53	107.15	116.00
36	DA	1300	U	C4'-C3'-O3'	5.53	124.06	113.00
10	CJ	55	LYS	N-CA-C	5.52	125.91	111.00
36	BA	527	C	N1-C1'-C2'	5.52	121.17	114.00
1	CA	971	G	N9-C1'-C2'	5.52	121.17	114.00
40	BE	168	MET	N-CA-C	5.51	125.87	111.00
1	CA	1181	G	N9-C1'-C2'	5.51	121.16	114.00
23	CX	21	C	N1-C1'-C2'	-5.51	105.94	112.00
47	BO	8	LEU	CA-CB-CG	5.50	127.96	115.30
36	DA	1819	A	C2'-C3'-O3'	5.49	122.49	113.70
4	AD	12	CYS	N-CA-C	-5.49	96.18	111.00
36	BA	1912	A	N9-C1'-C2'	5.48	121.13	114.00
36	BA	669	G	N9-C1'-C2'	5.47	121.11	114.00
1	AA	1054	C	N1-C1'-C2'	5.46	121.10	114.00
1	CA	748	C	N1-C1'-C2'	5.43	121.06	114.00
23	CX	21	C	C2-N3-C4	-5.43	117.19	119.90
36	DA	1970	A	C1'-O4'-C4'	-5.42	105.56	109.90
1	AA	202	U	C2'-C3'-O3'	5.41	122.36	113.70
36	DA	669	G	N9-C1'-C2'	5.40	121.02	114.00
22	CV	34	G	C2-N3-C4	-5.39	109.21	111.90
25	CZ	189	ARG	NE-CZ-NH2	-5.39	117.61	120.30
36	BA	1781	C	N1-C1'-C2'	5.38	121.00	114.00
52	DT	29	ARG	N-CA-C	5.38	125.52	111.00
36	BA	1698	A	O4'-C1'-N9	5.34	112.47	108.20
1	AA	1053	G	OP2-P-O3'	5.34	116.94	105.20
1	CA	119	A	N9-C1'-C2'	5.34	120.94	114.00
1	CA	198	G	N9-C1'-C2'	-5.33	106.13	112.00
1	CA	197	A	N9-C1'-C2'	5.31	120.90	114.00
11	CK	102	GLY	N-CA-C	-5.30	99.86	113.10
36	BA	2200	C	C5'-C4'-C3'	-5.29	107.53	116.00
36	BA	386	G	N9-C1'-C2'	5.29	120.87	114.00
36	BA	1947	C	C5'-C4'-C3'	-5.28	107.55	116.00
25	CZ	258	LEU	CA-CB-CG	-5.28	103.15	115.30
1	CA	839	U	N1-C1'-C2'	5.28	120.86	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	AZ	197	ASP	N-CA-C	-5.27	96.78	111.00
36	BA	2346	A	O4'-C1'-N9	5.25	112.40	108.20
36	DA	2559	C	C5'-C4'-C3'	-5.24	107.62	116.00
1	AA	30	U	N1-C1'-C2'	5.23	120.80	114.00
1	CA	328	C	N1-C1'-C2'	5.22	120.79	114.00
33	D7	6	GLN	N-CA-C	-5.22	96.90	111.00
1	CA	231	G	N9-C1'-C2'	-5.22	106.26	112.00
48	DP	45	LEU	N-CA-C	-5.22	96.91	111.00
27	B1	36	GLY	N-CA-C	5.20	126.11	113.10
22	CV	34	G	N1-C2-N3	-5.20	120.78	123.90
36	DA	1558	A	C2'-C3'-O3'	5.20	122.01	113.70
36	BA	906	G	C5'-C4'-C3'	-5.18	107.71	116.00
48	BP	51	PHE	N-CA-C	5.17	124.97	111.00
1	CA	508	C	C4'-C3'-O3'	5.17	123.34	113.00
25	AZ	7	ARG	NE-CZ-NH2	5.14	122.87	120.30
23	CX	19	U	C5'-C4'-O4'	5.14	115.27	109.10
1	AA	1157	A	N9-C1'-C2'	5.13	120.67	114.00
39	BD	210	GLY	N-CA-C	-5.12	100.30	113.10
36	DA	1301	A	N9-C1'-C2'	5.12	120.65	114.00
6	AF	38	GLU	N-CA-C	-5.11	97.22	111.00
1	AA	586	C	N1-C1'-C2'	-5.10	106.39	112.00
1	CA	560	U	C2'-C3'-O3'	5.10	121.86	113.70
36	DA	2126	A	N9-C1'-C2'	5.10	120.63	114.00
1	AA	1065	U	O4'-C1'-N1	5.08	112.26	108.20
1	AA	508	C	OP2-P-O3'	5.07	116.36	105.20
25	CZ	197	ASP	N-CA-C	-5.07	97.32	111.00
1	AA	1239	A	C4'-C3'-C2'	5.06	107.66	102.60
36	BA	1835	G	C5'-C4'-O4'	5.06	115.17	109.10
36	BA	2564	A	N9-C1'-C2'	5.06	120.58	114.00
1	AA	858	G	N1-C6-O6	5.05	122.93	119.90
51	DS	26	LEU	CA-CB-CG	5.05	126.91	115.30
1	CA	60	A	C2'-C3'-O3'	5.05	121.77	113.70
23	CX	20	U	C2-N1-C1'	-5.05	111.64	117.70
36	DA	2278	A	C5'-C4'-C3'	5.05	124.08	116.00
36	BA	2009	G	N9-C1'-C2'	-5.04	106.46	112.00
36	DA	1698	A	N9-C1'-C2'	5.04	120.55	114.00
48	BP	59	LEU	CA-CB-CG	5.03	126.87	115.30
40	DE	168	MET	N-CA-C	5.03	124.57	111.00
1	AA	1066	C	C5'-C4'-C3'	-5.00	108.00	116.00
36	DA	1159	U	C5'-C4'-C3'	-5.00	108.00	116.00

All (5) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	508	C	C3'
36	BA	1300	U	C3'
36	BA	1820	U	C3'
1	CA	508	C	C3'
1	CA	1399	C	C3'

All (338) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1050	G	Sidechain
1	AA	1054	C	Sidechain
1	AA	1055	A	Sidechain
1	AA	1073	U	Sidechain
1	AA	1077	G	Sidechain
1	AA	108	G	Sidechain
1	AA	1085	U	Sidechain
1	AA	1094	G	Sidechain
1	AA	1117	G	Sidechain
1	AA	1153	C	Sidechain
1	AA	1181	G	Sidechain
1	AA	1190	G	Sidechain
1	AA	1206	G	Sidechain
1	AA	1214	C	Sidechain
1	AA	1224	G	Sidechain
1	AA	1227	A	Sidechain
1	AA	123	C	Sidechain
1	AA	1266	G	Sidechain
1	AA	1279	A	Sidechain
1	AA	1281	U	Sidechain
1	AA	1283	G	Sidechain
1	AA	1292	U	Sidechain
1	AA	1294	G	Sidechain
1	AA	13	U	Sidechain
1	AA	1330	U	Sidechain
1	AA	1331	G	Sidechain
1	AA	1348	U	Sidechain
1	AA	1378	C	Sidechain
1	AA	1406	U	Sidechain
1	AA	1414	U	Sidechain
1	AA	1421	G	Sidechain
1	AA	1442(A)	G	Sidechain
1	AA	1480	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1505	G	Sidechain
1	AA	1512	U	Sidechain
1	AA	1516	G	Sidechain
1	AA	1519	A	Sidechain
1	AA	1531	A	Sidechain
1	AA	189(G)	G	Sidechain
1	AA	189(H)	G	Sidechain
1	AA	198	G	Sidechain
1	AA	20	U	Sidechain
1	AA	244	U	Sidechain
1	AA	245	C	Sidechain
1	AA	250	A	Sidechain
1	AA	251	G	Sidechain
1	AA	265	G	Sidechain
1	AA	266	G	Sidechain
1	AA	279	A	Sidechain
1	AA	362	G	Sidechain
1	AA	404	U	Sidechain
1	AA	428	G	Sidechain
1	AA	498	U	Sidechain
1	AA	505	G	Sidechain
1	AA	528	C	Sidechain
1	AA	529	G	Sidechain
1	AA	557	G	Sidechain
1	AA	568	G	Sidechain
1	AA	570	G	Sidechain
1	AA	573	A	Sidechain
1	AA	586	C	Sidechain
1	AA	603	U	Sidechain
1	AA	667	G	Sidechain
1	AA	669	U	Sidechain
1	AA	686	U	Sidechain
1	AA	714	G	Sidechain
1	AA	727	G	Sidechain
1	AA	740	U	Sidechain
1	AA	741	G	Sidechain
1	AA	772	U	Sidechain
1	AA	774	G	Sidechain
1	AA	808	C	Sidechain
1	AA	835	U	Sidechain
1	AA	858	G	Sidechain
1	AA	864	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	868	C	Sidechain
1	AA	878	G	Sidechain
1	AA	898	G	Sidechain
1	AA	907	A	Sidechain
1	AA	942	G	Sidechain
1	AA	946	A	Sidechain
1	AA	951	G	Sidechain
1	AA	960	U	Sidechain
1	AA	961	U	Sidechain
1	AA	963	G	Sidechain
1	AA	974	A	Sidechain
1	AA	977	A	Sidechain
1	AA	992	U	Sidechain
1	AA	995	C	Sidechain
5	AE	133	TYR	Sidechain
22	AV	59	U	Sidechain
23	AX	22	U	Sidechain
23	AX	26	A	Sidechain
25	AZ	68	VAL	Mainchain
25	AZ	69	GLU	Mainchain
36	BA	1133	U	Sidechain
36	BA	114	U	Sidechain
36	BA	1156	A	Sidechain
36	BA	1162	G	Sidechain
36	BA	1227	G	Sidechain
36	BA	1374	G	Sidechain
36	BA	1380	G	Sidechain
36	BA	1397	U	Sidechain
36	BA	1425	G	Sidechain
36	BA	1427	A	Sidechain
36	BA	1455	G	Sidechain
36	BA	1573	G	Sidechain
36	BA	1647	G	Sidechain
36	BA	1690	A	Sidechain
36	BA	1772	G	Sidechain
36	BA	1778	U	Sidechain
36	BA	1798	U	Sidechain
36	BA	1809	A	Sidechain
36	BA	1822	G	Sidechain
36	BA	1831	G	Sidechain
36	BA	1900	A	Sidechain
36	BA	1938	A	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	1943	U	Sidechain
36	BA	1952	A	Sidechain
36	BA	1964	G	Sidechain
36	BA	1978	A	Sidechain
36	BA	1985	G	Sidechain
36	BA	1988	C	Sidechain
36	BA	1993	U	Sidechain
36	BA	201	C	Sidechain
36	BA	2047	U	Sidechain
36	BA	2049	G	Sidechain
36	BA	2050	C	Sidechain
36	BA	2053	G	Sidechain
36	BA	2061	G	Sidechain
36	BA	2074	U	Sidechain
36	BA	2122	U	Sidechain
36	BA	2128	C	Sidechain
36	BA	2157	G	Sidechain
36	BA	2173	A	Sidechain
36	BA	2266	A	Sidechain
36	BA	2282	G	Sidechain
36	BA	2320	A	Sidechain
36	BA	2344	U	Sidechain
36	BA	2360	A	Sidechain
36	BA	2381	C	Sidechain
36	BA	2390	U	Sidechain
36	BA	2391	G	Sidechain
36	BA	2422	A	Sidechain
36	BA	2437	U	Sidechain
36	BA	2438	U	Sidechain
36	BA	2464	C	Sidechain
36	BA	247	G	Sidechain
36	BA	2481	G	Sidechain
36	BA	2506	U	Sidechain
36	BA	2508	G	Sidechain
36	BA	2517	C	Sidechain
36	BA	2523	G	Sidechain
36	BA	2525	G	Sidechain
36	BA	2542	A	Sidechain
36	BA	2562	U	Sidechain
36	BA	2564	A	Sidechain
36	BA	2581	G	Sidechain
36	BA	2582	G	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	2595	G	Sidechain
36	BA	2606	C	Sidechain
36	BA	2665	A	Sidechain
36	BA	2712	U	Sidechain
36	BA	2716	U	Sidechain
36	BA	2746	U	Sidechain
36	BA	2779	U	Sidechain
36	BA	2817	G	Sidechain
36	BA	2848	G	Sidechain
36	BA	383	U	Sidechain
36	BA	463	G	Sidechain
36	BA	528	A	Sidechain
36	BA	604	G	Sidechain
36	BA	670	A	Sidechain
36	BA	700	G	Sidechain
36	BA	740	U	Sidechain
36	BA	757	U	Sidechain
36	BA	760	G	Sidechain
36	BA	763	G	Sidechain
36	BA	859	G	Sidechain
36	BA	946	G	Sidechain
36	BA	951	C	Sidechain
36	BA	968	G	Sidechain
37	BB	16	G	Sidechain
37	BB	24	G	Sidechain
37	BB	42	C	Sidechain
37	BB	67	G	Sidechain
39	BD	9	TYR	Sidechain
46	BN	4	TYR	Sidechain
1	CA	1050	G	Sidechain
1	CA	1054	C	Sidechain
1	CA	1086	U	Sidechain
1	CA	112	G	Sidechain
1	CA	1181	G	Sidechain
1	CA	1212	U	Sidechain
1	CA	1220	G	Sidechain
1	CA	123	C	Sidechain
1	CA	1281	U	Sidechain
1	CA	1283	G	Sidechain
1	CA	13	U	Sidechain
1	CA	1442	G	Sidechain
1	CA	1498	U	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	1504	G	Sidechain
1	CA	1505	G	Sidechain
1	CA	1510	U	Sidechain
1	CA	1516	G	Sidechain
1	CA	1521	G	Sidechain
1	CA	1528	U	Sidechain
1	CA	189(H)	G	Sidechain
1	CA	195	A	Sidechain
1	CA	197	A	Sidechain
1	CA	198	G	Sidechain
1	CA	244	U	Sidechain
1	CA	245	C	Sidechain
1	CA	251	G	Sidechain
1	CA	253	U	Sidechain
1	CA	262	A	Sidechain
1	CA	277	C	Sidechain
1	CA	279	A	Sidechain
1	CA	319	G	Sidechain
1	CA	368	U	Sidechain
1	CA	404	U	Sidechain
1	CA	47	C	Sidechain
1	CA	498	U	Sidechain
1	CA	573	A	Sidechain
1	CA	592	G	Sidechain
1	CA	641	U	Sidechain
1	CA	652	U	Sidechain
1	CA	686	U	Sidechain
1	CA	692	U	Sidechain
1	CA	727	G	Sidechain
1	CA	741	G	Sidechain
1	CA	748	C	Sidechain
1	CA	760	G	Sidechain
1	CA	788	U	Sidechain
1	CA	808	C	Sidechain
1	CA	858	G	Sidechain
1	CA	864	A	Sidechain
1	CA	884	U	Sidechain
1	CA	898	G	Sidechain
1	CA	943	U	Sidechain
1	CA	961	U	Sidechain
1	CA	995	C	Sidechain
22	CV	12	U	Sidechain

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Mol	Chain	Res	Type	Group
22	CV	59	U	Sidechain
22	CW	39	U	Sidechain
22	CW	8	U	Sidechain
23	CX	18	G	Sidechain
23	CX	19	U	Sidechain
23	CX	20	U	Sidechain
23	CX	21	C	Sidechain
23	CX	22	U	Sidechain
23	CX	26	A	Sidechain
24	CY	76	A	Sidechain
25	CZ	68	VAL	Mainchain
25	CZ	69	GLU	Mainchain
36	DA	1001	A	Sidechain
36	DA	1060	U	Sidechain
36	DA	1133	U	Sidechain
36	DA	114	U	Sidechain
36	DA	1156	A	Sidechain
36	DA	1162	G	Sidechain
36	DA	1238	G	Sidechain
36	DA	1301	A	Sidechain
36	DA	1379	A	Sidechain
36	DA	1427	A	Sidechain
36	DA	15	G	Sidechain
36	DA	1614	A	Sidechain
36	DA	1647	G	Sidechain
36	DA	1659	U	Sidechain
36	DA	1666	G	Sidechain
36	DA	1673	U	Sidechain
36	DA	1674	G	Sidechain
36	DA	1772	G	Sidechain
36	DA	1773	A	Sidechain
36	DA	178	G	Sidechain
36	DA	1814	G	Sidechain
36	DA	1841	U	Sidechain
36	DA	1890	A	Sidechain
36	DA	1907	G	Sidechain
36	DA	1937	A	Sidechain
36	DA	1939	U	Sidechain
36	DA	1945	G	Sidechain
36	DA	1946	U	Sidechain
36	DA	1964	G	Sidechain
36	DA	2000	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	2010	G	Sidechain
36	DA	2011	U	Sidechain
36	DA	2053	G	Sidechain
36	DA	2061	G	Sidechain
36	DA	2089	U	Sidechain
36	DA	2128	C	Sidechain
36	DA	2157	G	Sidechain
36	DA	2250	G	Sidechain
36	DA	2252	G	Sidechain
36	DA	2262	U	Sidechain
36	DA	2320	A	Sidechain
36	DA	2344	U	Sidechain
36	DA	2360	A	Sidechain
36	DA	2390	U	Sidechain
36	DA	2413	G	Sidechain
36	DA	2419	U	Sidechain
36	DA	2433	A	Sidechain
36	DA	2437	U	Sidechain
36	DA	2438	U	Sidechain
36	DA	2464	C	Sidechain
36	DA	2481	G	Sidechain
36	DA	2504	U	Sidechain
36	DA	2506	U	Sidechain
36	DA	2508	G	Sidechain
36	DA	2514	U	Sidechain
36	DA	2529	G	Sidechain
36	DA	2542	A	Sidechain
36	DA	2564	A	Sidechain
36	DA	2580	U	Sidechain
36	DA	2581	G	Sidechain
36	DA	2595	G	Sidechain
36	DA	2611	U	Sidechain
36	DA	2712	U	Sidechain
36	DA	2716	U	Sidechain
36	DA	2726	U	Sidechain
36	DA	2735	G	Sidechain
36	DA	2758	A	Sidechain
36	DA	463	G	Sidechain
36	DA	532	A	Sidechain
36	DA	555	U	Sidechain
36	DA	576	U	Sidechain
36	DA	686	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	688	U	Sidechain
36	DA	783	A	Sidechain
36	DA	827	U	Sidechain
36	DA	913	U	Sidechain
36	DA	916	G	Sidechain
36	DA	990	A	Sidechain
36	DA	991	C	Sidechain
37	DB	42	C	Sidechain
37	DB	53	A	Sidechain
37	DB	67	G	Sidechain

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32329	0	16318	1034	0
1	CA	32329	0	16318	1281	0
2	AB	1900	0	1951	204	0
2	CB	1900	0	1951	237	0
3	AC	1612	0	1677	145	0
3	CC	1612	0	1677	183	0
4	AD	1703	0	1763	229	0
4	CD	1703	0	1763	265	0
5	AE	1146	0	1207	75	0
5	CE	1146	0	1207	108	0
6	AF	843	0	857	71	0
6	CF	843	0	857	94	0
7	AG	1257	0	1296	88	0
7	CG	1257	0	1296	87	0
8	AH	1116	0	1177	64	0
8	CH	1116	0	1177	92	0
9	AI	1010	0	1037	111	0
9	CI	1010	0	1037	117	0
10	AJ	794	0	840	126	0
10	CJ	794	0	840	169	0
11	AK	885	0	904	67	0
11	CK	885	0	904	77	0
12	AL	970	0	1057	112	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	CL	970	0	1057	87	0
13	AM	987	0	1059	122	0
13	CM	987	0	1059	139	0
14	AN	492	0	531	62	0
14	CN	492	0	530	77	0
15	AO	734	0	771	47	0
15	CO	734	0	771	56	0
16	AP	700	0	720	92	0
16	CP	700	0	720	102	0
17	AQ	823	0	891	70	0
17	CQ	823	0	891	76	0
18	AR	574	0	644	51	0
18	CR	574	0	644	54	0
19	AS	629	0	652	81	0
19	CS	629	0	652	104	0
20	AT	763	0	861	105	0
20	CT	763	0	861	110	0
21	AU	208	0	221	32	0
21	CU	208	0	221	29	0
22	AV	1619	0	822	74	0
22	AW	1619	0	822	75	0
22	CV	1619	0	822	78	0
22	CW	1619	0	822	90	0
23	AX	361	0	184	27	0
23	CX	361	0	184	30	0
24	AY	1644	0	853	71	0
24	CY	1644	0	853	130	0
25	AZ	2984	0	2997	433	0
25	CZ	2984	0	2997	513	0
26	B0	662	0	688	75	0
26	D0	662	0	688	96	0
27	B1	731	0	808	88	0
27	D1	731	0	808	116	0
28	B2	598	0	653	179	0
28	D2	598	0	653	81	0
29	B3	467	0	523	57	0
29	D3	467	0	523	40	0
30	B4	340	0	336	51	0
30	D4	340	0	335	55	0
31	B5	459	0	480	82	0
31	D5	459	0	480	86	0
32	B6	433	0	461	143	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	D6	433	0	461	147	0
33	B7	418	0	467	35	0
33	D7	418	0	467	40	0
34	B8	507	0	576	118	0
34	D8	507	0	576	134	0
35	B9	307	0	335	35	0
35	D9	307	0	336	49	0
36	BA	62477	0	31497	2272	0
36	DA	62477	0	31497	2491	0
37	BB	2551	0	1295	108	0
37	DB	2551	0	1295	108	0
38	BC	1742	0	1800	152	0
38	DC	1742	0	1800	181	0
39	BD	2145	0	2234	297	0
39	DD	2145	0	2234	321	0
40	BE	1563	0	1629	227	0
40	DE	1563	0	1629	256	0
41	BF	1623	0	1677	197	0
41	DF	1623	0	1677	209	0
42	BG	1474	0	1535	241	0
42	DG	1474	0	1535	275	0
43	BH	1222	0	1282	171	0
43	DH	1222	0	1282	159	0
44	BJ	651	0	170	19	0
44	DJ	651	0	162	25	0
45	BK	700	0	175	15	0
45	DK	700	0	171	13	0
46	BN	1104	0	1180	160	0
46	DN	1104	0	1180	159	0
47	BO	933	0	996	92	0
47	DO	933	0	996	100	0
48	BP	1114	0	1187	291	0
48	DP	1114	0	1187	301	0
49	BQ	1122	0	1179	141	0
49	DQ	1122	0	1179	138	0
50	BR	960	0	1021	131	0
50	DR	960	0	1021	136	0
51	BS	770	0	832	166	0
51	DS	770	0	832	159	0
52	BT	1141	0	1202	234	0
52	DT	1141	0	1202	211	0
53	BU	958	0	1015	141	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	DU	958	0	1015	152	0
54	BV	779	0	852	135	0
54	DV	779	0	852	124	0
55	BW	896	0	953	100	0
55	DW	896	0	953	97	0
56	BX	725	0	778	98	0
56	DX	725	0	778	107	0
57	BY	775	0	870	176	0
57	DY	775	0	870	164	0
58	BZ	1459	0	1488	216	0
58	DZ	1459	0	1488	206	0
59	AD	1	0	0	0	0
59	AN	1	0	0	2	0
59	B4	1	0	0	0	0
59	B9	1	0	0	0	0
59	CD	1	0	0	0	0
59	CN	1	0	0	0	0
59	D4	1	0	0	0	0
59	D9	1	0	0	1	0
60	AZ	28	0	12	12	0
60	CZ	28	0	12	13	0
61	AZ	57	0	59	11	0
61	CZ	57	0	59	14	0
All	All	307194	0	208701	19683	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 38.

All (19683) 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:CZ:69:GLU:CG	25:CZ:69:GLU:CB	1.85	1.54
25:AZ:69:GLU:CB	25:AZ:69:GLU:CG	1.83	1.52
25:CZ:68:VAL:C	25:CZ:68:VAL:CA	1.82	1.46
25:AZ:68:VAL:C	25:AZ:68:VAL:CA	1.85	1.45
25:CZ:198:LYS:HE3	25:CZ:201:GLU:OE1	1.33	1.29
4:AD:20:TYR:HA	4:AD:26:CYS:SG	1.73	1.26
25:CZ:198:LYS:NZ	25:CZ:198:LYS:HA	1.49	1.26
25:AZ:198:LYS:HA	25:AZ:198:LYS:NZ	1.49	1.24
25:AZ:198:LYS:HE3	25:AZ:201:GLU:OE1	1.35	1.22
21:AU:6:ARG:HD3	21:AU:15:ARG:NH1	1.55	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:198:LYS:HA	25:AZ:198:LYS:CE	1.68	1.20
22:AV:46:G:H3'	22:AV:47:U:C5'	1.71	1.19
25:CZ:198:LYS:CE	25:CZ:198:LYS:HA	1.70	1.19
31:B5:4:HIS:HB3	31:B5:5:PRO:HD3	1.26	1.17
1:AA:973:G:H1'	10:AJ:55:LYS:NZ	1.60	1.17
38:BC:119:VAL:HG13	38:BC:120:MET:HE3	1.27	1.17
36:BA:2101:G:H2'	36:BA:2102:U:H5''	1.24	1.16
47:DO:111:PHE:HB3	47:DO:114:ILE:HD13	1.27	1.16
3:AC:79:ARG:HB2	3:AC:79:ARG:HH11	1.11	1.16
27:D1:82:LEU:HD21	27:D1:90:ILE:HD12	1.26	1.15
36:BA:11:G:H22	36:BA:2627:G:H5''	1.11	1.15
39:DD:35:LYS:HZ3	39:DD:36:PRO:HD3	1.05	1.15
24:CY:65:C:H4'	25:CZ:341:GLN:HG2	1.18	1.15
26:D0:36:ILE:HD11	36:DA:2355:C:H5'	1.25	1.14
36:DA:996:A:H4'	53:DU:92:ARG:HG3	1.27	1.14
43:BH:149:ARG:HA	43:BH:162:ILE:HD11	1.25	1.14
51:DS:28:VAL:HG12	51:DS:29:PHE:H	1.12	1.14
3:CC:34:LEU:HD22	3:CC:38:ARG:HE	1.12	1.14
36:BA:2833:G:H3'	36:BA:2834:G:H5''	1.26	1.14
1:CA:1271:G:H2'	1:CA:1272:G:H5''	1.16	1.14
26:D0:38:VAL:HG23	26:D0:59:LEU:HB2	1.22	1.14
22:AW:72:C:H2'	22:AW:73:A:H5''	1.21	1.13
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.16	1.13
31:D5:4:HIS:HB3	31:D5:5:PRO:HD3	1.17	1.13
36:BA:1899:G:N2	36:BA:1902:C:H41	1.45	1.13
1:CA:979:C:H3'	1:CA:980:C:H5''	1.26	1.13
36:BA:2761:G:H2'	36:BA:2762:G:H5''	1.17	1.13
57:BY:10:GLY:HA2	57:BY:27:VAL:HG13	1.28	1.13
4:AD:187:ARG:HH11	4:AD:187:ARG:HB3	1.11	1.13
4:CD:107:ARG:HH21	4:CD:194:LEU:HD12	1.10	1.12
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.00	1.12
36:BA:612:C:H2'	36:BA:613:G:H5''	1.13	1.12
36:BA:2012:G:H4'	55:BW:96:ILE:HD11	1.19	1.12
36:DA:2092:U:H4'	36:DA:2093:G:H5''	1.15	1.12
36:BA:266:G:H2'	36:BA:267:C:H5''	1.32	1.11
43:BH:85:LYS:HE2	43:BH:133:VAL:H	1.04	1.11
52:DT:53:ARG:HH11	52:DT:53:ARG:HB3	1.03	1.11
1:CA:1221:G:H4'	19:CS:77:THR:HG21	1.31	1.11
49:DQ:51:ARG:HH11	49:DQ:51:ARG:HB2	1.07	1.11
1:CA:80:G:H22	1:CA:90:U:H5'	1.12	1.11
1:AA:1271:G:H2'	1:AA:1272:G:H5''	1.31	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:52:ILE:HG13	42:BG:53:LEU:H	1.00	1.11
34:D8:62:LEU:HD13	36:DA:242:G:H5''	1.23	1.11
36:BA:2131:G:H1'	36:BA:2133:G:H21	1.09	1.11
56:DX:35:THR:HG22	56:DX:37:THR:H	1.10	1.10
52:DT:28:VAL:HG13	52:DT:46:GLU:HA	1.32	1.10
36:DA:2307:G:H21	36:DA:2308:G:H5''	1.16	1.10
36:DA:612:C:H2'	36:DA:613:G:H5''	1.12	1.10
58:BZ:180:VAL:HG22	58:BZ:181:GLU:H	1.12	1.10
25:CZ:272:MET:HB2	25:CZ:277:LEU:HD23	1.31	1.10
51:BS:49:VAL:HG12	51:BS:50:SER:H	1.12	1.10
4:AD:107:ARG:HH21	4:AD:194:LEU:HD12	1.15	1.10
25:CZ:189:ARG:HG2	25:CZ:190:ARG:H	1.13	1.10
58:BZ:130:PRO:HA	58:BZ:133:ILE:HD11	1.23	1.10
28:B2:29:LYS:HA	28:B2:32:LEU:HB3	1.13	1.09
39:DD:31:LYS:HZ2	39:DD:33:LEU:HB2	1.16	1.09
36:DA:2833:G:H3'	36:DA:2834:G:H5''	1.34	1.09
36:DA:2502:G:H5''	36:DA:2503:A:H5''	1.30	1.09
40:DE:57:LYS:HA	40:DE:57:LYS:HE3	1.29	1.09
36:DA:2101:G:H2'	36:DA:2102:U:H5''	1.16	1.09
25:CZ:310:ILE:HD12	25:CZ:311:THR:H	1.13	1.09
2:AB:7:VAL:HG13	2:AB:11:LEU:HD12	1.24	1.08
36:DA:1270:C:H5''	36:DA:1271:G:H5''	1.18	1.08
42:BG:67:LYS:H	42:BG:67:LYS:HD3	0.99	1.08
1:CA:1271:G:C2'	1:CA:1272:G:H5''	1.84	1.08
36:BA:330:A:H2	36:BA:1210:A:H2'	1.18	1.08
42:DG:51:ARG:HH11	42:DG:53:LEU:HD13	1.15	1.08
34:B8:62:LEU:HD13	36:BA:242:G:H5''	1.29	1.07
36:BA:2307:G:H21	36:BA:2308:G:H5''	1.01	1.07
36:DA:1826:G:H4'	39:DD:242:ARG:HH21	0.93	1.07
36:BA:27:G:H22	36:BA:512:G:H2'	1.16	1.07
4:CD:28:SER:HB3	4:CD:29:PRO:HD2	1.30	1.07
36:DA:330:A:H2	36:DA:1210:A:H2'	1.19	1.07
26:D0:40:GLN:HE22	26:D0:43:THR:HA	1.16	1.07
42:BG:7:LEU:HD21	42:BG:176:LEU:HD21	1.34	1.07
36:DA:271(L):U:H5''	36:DA:271(M):G:H5'	1.36	1.07
25:AZ:181:GLN:HG2	25:AZ:184:ARG:NH2	1.69	1.07
28:B2:15:LYS:HG3	28:B2:16:LEU:H	1.20	1.07
53:BU:92:ARG:HD3	53:BU:94:ASN:HB3	1.35	1.07
57:DY:96:ILE:HG13	57:DY:99:CYS:HB3	1.31	1.07
43:DH:153:LYS:H	43:DH:153:LYS:HD3	1.13	1.07
36:BA:272(H):C:H2'	36:BA:272(I):U:H5''	1.37	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:59:LYS:HG2	51:BS:60:GLY:H	1.16	1.06
41:DF:24:LEU:HB3	41:DF:25:PRO:HD2	1.34	1.06
51:DS:49:VAL:HG12	51:DS:50:SER:H	1.19	1.06
24:CY:65:C:H4'	25:CZ:341:GLN:CG	1.83	1.06
36:DA:2131:G:H1'	36:DA:2133:G:H21	0.98	1.06
57:DY:38:ILE:HB	57:DY:66:PRO:HG3	1.36	1.06
48:DP:41:ARG:HB3	48:DP:41:ARG:HH11	1.19	1.06
58:BZ:151:HIS:HB3	58:BZ:170:THR:HA	1.36	1.06
1:AA:80:G:H22	1:AA:90:U:H5'	1.09	1.06
36:DA:1747(A):G:H2'	36:DA:1748:G:H5''	1.38	1.06
22:AV:46:G:H3'	22:AV:47:U:H5''	1.07	1.06
43:BH:117:PRO:HB3	43:BH:123:PHE:HE1	1.18	1.06
1:AA:1125:U:H1'	10:AJ:5:ARG:NH2	1.72	1.05
41:BF:24:LEU:HB3	41:BF:25:PRO:HD2	1.38	1.05
52:DT:55:ASN:H	52:DT:59:THR:HG22	0.89	1.05
1:CA:1352:C:H2'	1:CA:1353:G:C8	1.92	1.05
52:BT:53:ARG:HH11	52:BT:53:ARG:HB3	1.15	1.05
50:DR:99:LYS:H	50:DR:99:LYS:HD2	1.16	1.05
57:DY:28:LYS:HG2	57:DY:39:VAL:HG22	1.32	1.05
36:BA:2312:U:H4'	42:BG:71:THR:HG21	1.37	1.05
57:BY:47:LYS:HD2	57:BY:60:PHE:HE1	1.22	1.05
10:CJ:55:LYS:N	10:CJ:55:LYS:HE3	1.72	1.05
43:BH:85:LYS:HZ3	43:BH:132:ARG:HA	1.14	1.04
48:DP:35:HIS:O	48:DP:36:LYS:HG2	1.54	1.04
43:DH:85:LYS:HE2	43:DH:133:VAL:N	1.71	1.04
40:BE:57:LYS:HA	40:BE:57:LYS:HE3	1.37	1.04
25:AZ:272:MET:HB2	25:AZ:277:LEU:HD23	1.34	1.04
36:BA:2185:C:H2'	36:BA:2186:G:H5'	1.39	1.04
39:BD:35:LYS:HD2	39:BD:36:PRO:N	1.72	1.04
58:DZ:180:VAL:HG22	58:DZ:181:GLU:H	1.19	1.04
25:CZ:198:LYS:HA	25:CZ:198:LYS:HZ3	1.06	1.04
31:B5:2:ALA:HA	36:BA:2015:A:H1'	1.39	1.04
36:DA:621:A:H2'	36:DA:622:G:H5'	1.38	1.04
34:B8:27:THR:HG21	48:BP:61:ARG:HA	1.39	1.04
12:AL:8:ASN:HD22	17:AQ:34:LYS:NZ	1.54	1.04
36:DA:1301:A:O2'	36:DA:1302:A:H2'	1.57	1.04
25:CZ:64:ASN:N	25:CZ:83:PRO:HG2	1.72	1.04
27:B1:48:LYS:HG2	27:B1:50:ARG:HH21	1.19	1.04
52:DT:29:ARG:HH21	52:DT:88:ILE:HD11	1.15	1.04
41:BF:25:PRO:HB3	41:BF:119:ARG:HB2	1.35	1.04
36:DA:2159:G:H2'	36:DA:2160:G:H5''	1.38	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:35:THR:HG22	56:BX:37:THR:H	1.20	1.04
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.19	1.03
39:BD:43:ARG:HH11	39:BD:44:ASN:ND2	1.54	1.03
43:BH:153:LYS:HD3	43:BH:153:LYS:H	1.18	1.03
40:DE:77:ILE:HG22	40:DE:78:LEU:H	1.22	1.03
52:DT:55:ASN:N	52:DT:59:THR:HG22	1.73	1.03
10:CJ:54:PHE:C	10:CJ:55:LYS:HE3	1.78	1.03
54:BV:8:GLY:HA3	54:BV:23:GLU:HG3	1.40	1.03
36:DA:1887:C:H2'	36:DA:1888:G:H5''	1.37	1.03
51:DS:13:ARG:HG3	51:DS:14:VAL:H	1.21	1.03
57:BY:38:ILE:HB	57:BY:66:PRO:HG3	1.40	1.03
37:DB:8:U:H5'	37:DB:8:U:H6	1.17	1.03
4:AD:108:LEU:HD11	4:AD:176:LEU:HD13	1.39	1.03
52:BT:28:VAL:HG13	52:BT:46:GLU:HA	1.41	1.03
50:BR:99:LYS:H	50:BR:99:LYS:HD2	1.17	1.03
28:B2:52:ASP:O	28:B2:56:GLN:HG2	1.58	1.02
52:DT:28:VAL:HG22	52:DT:47:GLY:N	1.73	1.02
43:BH:44:VAL:HG12	43:BH:45:VAL:H	1.21	1.02
54:DV:62:LEU:HD21	54:DV:95:LEU:HB2	1.39	1.02
25:AZ:325:LYS:O	25:AZ:327:GLU:N	1.92	1.02
30:D4:22:ILE:H	30:D4:22:ILE:HD12	1.23	1.02
1:AA:436:C:H4'	4:AD:157:LEU:HD11	1.39	1.02
36:DA:2312:U:H2'	36:DA:2313:C:H5''	1.33	1.02
58:BZ:114:GLY:H	58:BZ:146:ILE:HG21	1.20	1.02
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.41	1.02
21:CU:6:ARG:HD3	21:CU:15:ARG:NH1	1.73	1.02
53:DU:92:ARG:HD3	53:DU:94:ASN:HB3	1.39	1.02
36:BA:335:C:H4'	57:BY:73:ARG:HH12	1.23	1.02
36:DA:612:C:C2'	36:DA:613:G:H5''	1.90	1.02
16:CP:67:THR:H	16:CP:70:ALA:HB3	1.21	1.02
54:BV:62:LEU:HD21	54:BV:95:LEU:HB2	1.40	1.02
36:BA:271(L):U:H5''	36:BA:271(M):G:H5'	1.41	1.02
39:BD:35:LYS:HZ3	39:BD:36:PRO:HD3	1.19	1.01
25:AZ:93:ILE:HD13	61:AZ:502:KIR:H381	1.42	1.01
36:BA:628:G:H2'	36:BA:629:G:H5''	1.42	1.01
47:DO:88:ASN:HD21	47:DO:92:GLU:HB2	1.23	1.01
27:B1:87:PRO:HA	27:B1:90:ILE:HB	1.41	1.01
3:AC:5:ILE:H	3:AC:5:ILE:HD12	1.22	1.01
32:B6:10:LEU:HD22	32:B6:10:LEU:H	1.24	1.01
51:DS:99:LYS:NZ	51:DS:99:LYS:HB3	1.74	1.01
48:DP:47:ASP:HB2	48:DP:51:PHE:HB2	1.41	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:9:LYS:HG2	25:AZ:75:ARG:HA	1.41	1.01
36:DA:925:C:H2'	36:DA:926:A:H5''	1.38	1.01
25:CZ:198:LYS:CE	25:CZ:201:GLU:OE1	2.08	1.01
25:AZ:191:GLY:N	25:AZ:197:ASP:OD2	1.93	1.01
25:AZ:310:ILE:HD12	25:AZ:311:THR:H	1.21	1.01
58:DZ:166:SER:HB2	58:DZ:168:GLU:N	1.75	1.01
41:BF:29:ASN:HD22	41:BF:32:LEU:HB2	1.21	1.01
20:AT:45:GLN:N	20:AT:45:GLN:HE21	1.57	1.01
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.41	1.01
52:DT:53:ARG:HB3	52:DT:53:ARG:NH1	1.76	1.01
48:BP:45:LEU:HD13	48:BP:46:LYS:H	1.21	1.01
47:DO:24:VAL:HG12	47:DO:33:ALA:HB2	1.42	1.01
26:D0:49:LYS:H	26:D0:80:HIS:HD1	1.02	1.01
25:CZ:9:LYS:HG2	25:CZ:75:ARG:HA	1.40	1.01
1:AA:973:G:H1'	10:AJ:55:LYS:HZ3	1.23	1.00
22:CW:73:A:H2'	22:CW:74:C:H5''	1.37	1.00
19:AS:40:ILE:HG21	19:AS:62:ILE:HD11	1.37	1.00
43:DH:117:PRO:HB3	43:DH:123:PHE:HE1	1.24	1.00
25:AZ:198:LYS:CE	25:AZ:201:GLU:OE1	2.09	1.00
57:DY:10:GLY:HA2	57:DY:27:VAL:HG13	1.42	1.00
48:BP:59:LEU:HA	48:BP:61:ARG:NE	1.77	1.00
3:AC:180:ALA:O	3:AC:181:ASN:HB2	1.57	1.00
48:BP:41:ARG:HD3	48:BP:45:LEU:HD23	1.44	1.00
13:CM:3:ARG:HH21	13:CM:7:VAL:HG22	1.22	1.00
52:DT:50:ILE:HA	52:DT:99:LEU:HD11	1.43	1.00
3:CC:5:ILE:H	3:CC:5:ILE:HD13	1.26	1.00
52:DT:89:VAL:HG11	52:DT:91:ARG:HE	1.26	1.00
31:B5:3:LYS:HA	31:B5:3:LYS:HE3	1.40	1.00
36:DA:1543:C:H3'	36:DA:1544:A:H5''	1.44	1.00
8:CH:9:MET:SD	8:CH:32:LYS:HG2	2.00	1.00
54:DV:15:GLU:HB3	54:DV:16:PRO:CD	1.91	1.00
39:DD:35:LYS:HD2	39:DD:36:PRO:N	1.76	1.00
39:DD:31:LYS:NZ	39:DD:33:LEU:HB2	1.76	1.00
49:DQ:51:ARG:NH1	49:DQ:51:ARG:HB2	1.76	1.00
36:BA:1539:G:H2'	36:BA:1540:U:H5'	1.42	1.00
25:CZ:325:LYS:O	25:CZ:327:GLU:N	1.92	1.00
36:BA:2068:U:H3	36:BA:2430:A:H2	1.05	1.00
1:AA:980:C:H5'	1:AA:980:C:H6	1.25	1.00
35:D9:4:ARG:HG2	35:D9:34:GLN:NE2	1.76	1.00
36:DA:1826:G:H4'	39:DD:242:ARG:NH2	1.77	1.00
1:CA:63:C:H2'	1:CA:64:G:H5'	1.40	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.43	0.99
36:BA:1299:G:H22	36:BA:1640:C:H5''	1.26	0.99
36:DA:1884:A:H2'	36:DA:1885:A:H5''	1.39	0.99
39:DD:218:ARG:HG3	39:DD:218:ARG:HH11	1.27	0.99
25:CZ:191:GLY:N	25:CZ:197:ASP:OD2	1.95	0.99
39:BD:30:GLU:HG3	39:BD:63:ARG:HH21	1.26	0.99
36:DA:2187:G:H2'	36:DA:2188:C:H5'	1.42	0.99
39:DD:8:PRO:HB3	39:DD:14:ARG:HB3	1.43	0.99
28:B2:29:LYS:HG2	28:B2:32:LEU:HD13	1.40	0.99
43:BH:117:PRO:HB3	43:BH:123:PHE:CE1	1.97	0.99
46:DN:3:THR:HG22	46:DN:4:TYR:H	1.23	0.99
13:AM:120:LYS:HE3	13:AM:120:LYS:HA	1.41	0.99
36:BA:1516:C:H2'	36:BA:1517:G:H5''	1.41	0.99
25:CZ:313:HIS:HB3	25:CZ:403:ILE:HG21	1.42	0.99
36:BA:2307:G:N2	36:BA:2308:G:H5''	1.77	0.99
22:AV:5:G:H8	22:AV:5:G:H5'	1.27	0.99
36:BA:1884:A:H2'	36:BA:1885:A:H5''	1.43	0.99
48:BP:34:GLY:O	48:BP:35:HIS:HB2	1.61	0.99
36:DA:1568:G:H5''	39:DD:61:LEU:HD13	1.45	0.99
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.44	0.99
36:DA:84:A:H5''	57:DY:9:LYS:HD2	1.45	0.99
36:BA:2312:U:H4'	42:BG:71:THR:CG2	1.92	0.99
25:CZ:198:LYS:HE2	25:CZ:198:LYS:HA	1.45	0.99
43:DH:85:LYS:HE2	43:DH:133:VAL:H	0.86	0.99
32:B6:52:VAL:HG12	32:B6:53:LYS:HD3	1.45	0.99
13:CM:65:LYS:HD3	13:CM:65:LYS:H	1.28	0.99
54:BV:99:ILE:H	54:BV:99:ILE:HD13	1.27	0.99
26:D0:7:LEU:HD13	49:DQ:85:LYS:HG3	1.44	0.99
1:CA:1347:G:N2	1:CA:1373:G:H2'	1.78	0.98
36:BA:1050:A:H2'	36:BA:1051:G:H5'	1.45	0.98
39:BD:44:ASN:HB3	39:BD:49:ILE:HA	1.43	0.98
17:AQ:26:GLN:HE21	17:AQ:37:LYS:HE2	1.26	0.98
42:DG:67:LYS:H	42:DG:67:LYS:HD3	1.28	0.98
42:BG:67:LYS:HD3	42:BG:67:LYS:N	1.79	0.98
36:DA:1747(A):G:C2'	36:DA:1748:G:H5''	1.92	0.98
36:DA:1948:G:H5'	36:DA:1948:G:H8	1.28	0.98
22:AV:46:G:C3'	22:AV:47:U:H5''	1.91	0.98
56:DX:55:ASN:HB2	56:DX:80:ILE:HG23	1.45	0.98
25:AZ:313:HIS:HB3	25:AZ:403:ILE:HG21	1.45	0.98
56:BX:24:GLY:O	56:BX:82:GLN:HA	1.62	0.98
52:BT:28:VAL:HG22	52:BT:47:GLY:N	1.79	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2801(A):A:H4'	36:BA:2802:G:H5'	1.42	0.98
25:CZ:7:ARG:HH12	25:CZ:281:ILE:HG12	1.27	0.98
22:AW:72:C:C2'	22:AW:73:A:H5''	1.93	0.98
36:DA:266:G:H2'	36:DA:267:C:H5''	1.45	0.98
36:DA:655:A:H4'	36:DA:656:G:H5'	1.45	0.98
28:B2:55:ARG:HA	28:B2:58:ALA:HB2	1.45	0.98
56:BX:12:VAL:HG23	56:BX:13:LEU:H	1.27	0.98
2:CB:94:ASN:N	2:CB:94:ASN:HD22	1.62	0.98
34:D8:61:LEU:HD12	34:D8:61:LEU:H	1.24	0.97
25:AZ:270:VAL:HG13	25:AZ:286:VAL:HG21	1.42	0.97
25:CZ:93:ILE:HD13	61:CZ:502:KIR:H381	1.41	0.97
1:CA:1305:G:N2	1:CA:1331:G:H2'	1.78	0.97
34:B8:14:VAL:HG23	34:B8:24:ALA:HB2	1.46	0.97
36:BA:2756:U:H1'	36:BA:2757:A:H5''	1.46	0.97
26:B0:49:LYS:H	26:B0:80:HIS:HD1	1.05	0.97
34:D8:14:VAL:HG23	34:D8:24:ALA:HB2	1.46	0.97
36:BA:2761:G:C2'	36:BA:2762:G:H5''	1.94	0.97
58:BZ:104:PHE:HA	58:BZ:139:VAL:HG22	1.46	0.97
31:D5:4:HIS:HB3	31:D5:5:PRO:CD	1.90	0.97
12:AL:45:PRO:HB3	12:AL:92:ASP:HB3	1.45	0.97
1:CA:1431:C:H5	1:CA:1469:G:N1	1.62	0.97
36:DA:2317:C:H2'	36:DA:2318:G:H5'	1.44	0.97
28:D2:68:ARG:HB2	28:D2:68:ARG:HH11	1.26	0.97
10:CJ:42:THR:HG23	10:CJ:68:HIS:HA	1.46	0.97
36:BA:1301:A:O2'	36:BA:1302:A:H2'	1.63	0.97
58:DZ:151:HIS:HB3	58:DZ:170:THR:HA	1.46	0.97
36:BA:1747(A):G:H2'	36:BA:1748:G:H5''	1.46	0.97
29:D3:35:ARG:HB2	29:D3:35:ARG:HH11	1.27	0.97
25:AZ:198:LYS:HA	25:AZ:198:LYS:HE2	1.43	0.97
43:BH:85:LYS:HE2	43:BH:133:VAL:N	1.79	0.97
32:B6:25:LYS:HE2	34:B8:34:TRP:HE1	1.26	0.97
36:BA:259:G:H21	36:BA:621:A:H8	1.11	0.97
58:DZ:125:LEU:HD23	58:DZ:164:ALA:HB3	1.47	0.97
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.45	0.97
2:AB:95:GLN:HE21	2:AB:147:LYS:HE2	1.27	0.97
37:DB:20:C:H2'	37:DB:21:G:H5''	1.47	0.97
36:DA:2245:U:H5'	36:DA:2246:G:H5'	1.46	0.97
4:AD:95:GLY:HA3	4:AD:188:LEU:HD21	1.46	0.97
1:AA:1271:G:C2'	1:AA:1272:G:H5''	1.94	0.97
36:DA:2098:U:H3	36:DA:2191:G:H1	1.01	0.97
36:DA:1799:G:H5''	36:DA:1819:A:H61	1.28	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:925:C:H2'	36:BA:926:A:H5''	1.44	0.97
36:DA:2110:G:H1	36:DA:2178:C:H5	1.06	0.97
57:DY:7:VAL:HB	57:DY:8:LYS:HD2	1.47	0.96
48:DP:16:ARG:CZ	48:DP:18:ARG:HG2	1.95	0.96
25:AZ:198:LYS:NZ	25:AZ:198:LYS:CA	2.28	0.96
36:BA:2187:G:H2'	36:BA:2188:C:H5'	1.47	0.96
51:BS:28:VAL:HG12	51:BS:29:PHE:H	1.29	0.96
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.46	0.96
38:DC:175:VAL:HG12	38:DC:188:ASN:HB3	1.44	0.96
36:BA:106:C:H2'	36:BA:107:C:H6	1.25	0.96
36:BA:1879:C:H2'	36:BA:1880:C:H5''	1.44	0.96
38:BC:123:VAL:HG22	38:BC:127:LEU:CD2	1.96	0.96
52:DT:50:ILE:HD11	52:DT:64:ARG:HB2	1.46	0.96
36:BA:1681:G:O2'	36:BA:1762:A:H2'	1.66	0.96
53:BU:85:LYS:HD3	53:BU:117:GLN:HE22	1.28	0.96
36:BA:612:C:C2'	36:BA:613:G:H5''	1.96	0.96
52:DT:28:VAL:HB	52:DT:88:ILE:HG12	1.47	0.96
22:AW:71:G:H2'	22:AW:72:C:H5'	1.48	0.96
54:DV:99:ILE:H	54:DV:99:ILE:HD13	1.30	0.96
25:AZ:7:ARG:HH12	25:AZ:281:ILE:CG1	1.76	0.96
48:BP:58:THR:O	48:BP:61:ARG:NE	1.99	0.96
36:DA:1803:A:O3'	39:DD:259:THR:HG21	1.66	0.96
1:AA:1240:U:OP1	7:AG:116:ALA:HB2	1.64	0.96
39:BD:71:ASP:HB3	39:BD:103:ARG:HH22	1.28	0.96
1:CA:942:G:H21	9:CI:124:GLN:NE2	1.62	0.96
33:B7:1:MET:HG3	33:B7:3:ARG:HH12	1.30	0.96
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.65	0.96
36:BA:1024:G:H3'	36:BA:1025:G:H5''	1.45	0.96
34:D8:27:THR:HG21	48:DP:61:ARG:HA	1.48	0.96
36:DA:1826:G:C4'	39:DD:242:ARG:HH21	1.78	0.96
25:AZ:64:ASN:N	25:AZ:83:PRO:HG2	1.79	0.96
54:DV:8:GLY:HA3	54:DV:23:GLU:HG3	1.48	0.96
1:AA:858:G:C6	1:AA:869:G:N7	2.34	0.96
26:B0:16:SER:HB2	36:BA:2262:U:H5	1.26	0.96
25:CZ:198:LYS:CA	25:CZ:198:LYS:NZ	2.27	0.95
1:AA:1305:G:N2	1:AA:1331:G:H2'	1.81	0.95
36:BA:2875:C:H4'	52:BT:5:ALA:HB2	1.44	0.95
31:D5:40:LYS:HE2	31:D5:46:CYS:HB3	1.46	0.95
43:DH:85:LYS:CE	43:DH:133:VAL:H	1.78	0.95
48:BP:124:LYS:HD3	48:BP:143:GLY:HA3	1.48	0.95
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.31	0.95
56:DX:65:ARG:HD3	56:DX:70:LEU:HD23	1.47	0.95
25:AZ:198:LYS:CE	25:AZ:198:LYS:CA	2.39	0.95
25:AZ:198:LYS:HA	25:AZ:198:LYS:HZ3	1.12	0.95
51:BS:34:HIS:HB3	51:BS:53:SER:HB3	1.47	0.95
36:BA:1516:C:C2'	36:BA:1517:G:H5''	1.94	0.95
36:BA:140:G:H1'	36:BA:141:A:H2	1.30	0.95
25:AZ:198:LYS:HZ1	25:AZ:201:GLU:CG	1.78	0.95
30:B4:8:LYS:O	30:B4:9:LEU:HB2	1.65	0.95
31:D5:3:LYS:HA	31:D5:3:LYS:HE3	1.45	0.95
2:CB:7:VAL:HG13	2:CB:11:LEU:HD12	1.48	0.95
25:CZ:7:ARG:HH12	25:CZ:281:ILE:CG1	1.78	0.95
1:AA:1250:A:H4'	9:AI:68:GLY:N	1.81	0.95
42:BG:52:ILE:HG13	42:BG:53:LEU:N	1.81	0.95
54:DV:15:GLU:HB3	54:DV:16:PRO:HD3	1.48	0.95
58:BZ:4:ARG:HG2	58:BZ:58:VAL:HB	1.47	0.95
48:DP:66:GLY:O	48:DP:67:MET:HB2	1.67	0.95
36:BA:2092:U:H4'	36:BA:2093:G:H5''	1.45	0.95
29:B3:35:ARG:HB2	29:B3:35:ARG:HH11	1.32	0.95
10:CJ:50:ILE:HD13	10:CJ:50:ILE:H	1.30	0.95
43:DH:85:LYS:HZ3	43:DH:132:ARG:HA	1.32	0.95
36:BA:1543:C:H3'	36:BA:1544:A:H5''	1.48	0.95
36:BA:2491:U:H5'	36:BA:2570:G:H5''	1.48	0.95
5:CE:76:ILE:HG13	5:CE:142:LEU:HD13	1.49	0.95
1:AA:1314:C:H5	1:AA:1323:G:H1	1.13	0.95
25:CZ:25:THR:HB	60:CZ:501:GDP:O2B	1.67	0.94
36:DA:2101:G:C2'	36:DA:2102:U:H5''	1.96	0.94
42:BG:67:LYS:H	42:BG:67:LYS:CD	1.80	0.94
8:AH:112:LEU:HD23	8:AH:112:LEU:H	1.32	0.94
36:DA:2068:U:H3	36:DA:2430:A:H2	0.99	0.94
36:BA:2317:C:H2'	36:BA:2318:G:H5'	1.49	0.94
51:BS:39:ILE:HD11	51:BS:73:LEU:HD21	1.48	0.94
1:CA:1430:C:H5	1:CA:1470:G:H1	0.97	0.94
25:AZ:7:ARG:HH12	25:AZ:281:ILE:HG12	1.31	0.94
50:DR:55:ALA:HA	50:DR:80:PHE:HE1	1.29	0.94
28:B2:69:ARG:H	28:B2:69:ARG:HD2	1.31	0.94
6:CF:43:LEU:H	6:CF:43:LEU:HD22	1.32	0.94
58:BZ:9:TYR:OH	58:BZ:35:ARG:HG3	1.66	0.94
47:BO:107:ARG:HD3	52:BT:36:GLU:HG3	1.47	0.94
36:DA:1484:G:H2'	36:DA:1485:G:H5''	1.45	0.94
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.29	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:63:VAL:O	47:BO:64:ARG:HB3	1.64	0.94
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	1.98	0.94
36:BA:1464:C:HO2'	36:BA:1528:A:H8	1.12	0.94
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.46	0.94
58:DZ:18:LEU:HG	58:DZ:23:LYS:HD2	1.50	0.94
36:BA:1480:G:H2'	36:BA:1481:U:H5''	1.48	0.94
47:BO:19:ILE:HG22	47:BO:43:VAL:HA	1.47	0.94
36:BA:1351:C:H5	36:BA:1380:G:H1	1.10	0.94
36:DA:1899:G:H21	36:DA:1902:C:H41	1.05	0.94
28:B2:23:LYS:HG2	28:B2:26:ARG:HD2	1.48	0.94
36:BA:631:A:H5''	48:BP:65:ARG:HH11	1.32	0.94
36:BA:2415:G:O3'	48:BP:66:GLY:HA3	1.68	0.94
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.10	0.94
39:DD:91:ARG:HG2	39:DD:91:ARG:HH11	1.32	0.94
48:BP:105:LEU:H	48:BP:105:LEU:HD12	1.33	0.94
35:D9:11:CYS:SG	35:D9:12:ASP:N	2.40	0.94
43:DH:52:VAL:HG21	43:DH:69:ARG:HG3	1.48	0.94
1:CA:961:U:HO2'	1:CA:962:C:H6	1.14	0.94
36:BA:1747(A):G:C2'	36:BA:1748:G:H5''	1.97	0.94
25:AZ:25:THR:HB	60:AZ:501:GDP:O2B	1.68	0.94
38:BC:123:VAL:CG2	38:BC:127:LEU:CD2	2.46	0.94
36:DA:2833:G:H3'	36:DA:2834:G:C5'	1.98	0.94
26:B0:36:ILE:HD11	36:BA:2355:C:H5'	1.48	0.94
4:AD:3:ARG:NH1	4:AD:118:ARG:HD3	1.83	0.93
36:DA:1860:G:H1	36:DA:1882:C:H42	1.03	0.93
12:AL:33:ARG:HD3	12:AL:62:SER:OG	1.68	0.93
38:BC:6:ARG:O	38:BC:10:LEU:HD23	1.68	0.93
4:CD:28:SER:HB3	4:CD:29:PRO:CD	1.98	0.93
34:B8:23:VAL:HG12	34:B8:46:ARG:HD3	1.46	0.93
34:D8:49:VAL:HB	34:D8:53:PRO:HD3	1.47	0.93
54:BV:51:VAL:HG12	54:BV:52:VAL:H	1.32	0.93
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD11	1.47	0.93
36:BA:2098:U:H3	36:BA:2191:G:H1	1.15	0.93
36:BA:2833:G:H3'	36:BA:2834:G:C5'	1.97	0.93
35:B9:10:ILE:HD12	35:B9:10:ILE:H	1.33	0.93
24:CY:40:C:H2'	24:CY:41:C:H5''	1.47	0.93
57:DY:95:LYS:HG3	57:DY:100:ALA:HA	1.50	0.93
32:D6:27:LYS:HB3	32:D6:30:THR:HB	1.50	0.93
36:BA:1012:U:O4	46:BN:28:THR:HG21	1.67	0.93
25:CZ:198:LYS:HZ1	25:CZ:201:GLU:CG	1.80	0.93
31:B5:41:PRO:HG2	31:B5:44:THR:OG1	1.69	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:59:ARG:HH11	53:DU:59:ARG:HG2	1.33	0.93
41:DF:132:VAL:HG13	41:DF:133:ASN:H	1.33	0.93
24:AY:40:C:H2'	24:AY:41:C:H5''	1.47	0.93
36:DA:2131:G:H1'	36:DA:2133:G:N2	1.83	0.93
52:DT:55:ASN:H	52:DT:59:THR:CG2	1.82	0.93
30:D4:9:LEU:HD13	30:D4:10:VAL:H	1.31	0.93
50:BR:84:ALA:HB3	50:BR:85:PRO:HD3	1.49	0.93
25:CZ:133:VAL:HG23	25:CZ:168:VAL:HG11	1.49	0.93
41:DF:25:PRO:HB3	41:DF:119:ARG:HB2	1.47	0.93
14:AN:13:THR:N	14:AN:14:PRO:HD2	1.83	0.93
42:DG:77:ILE:H	42:DG:77:ILE:HD13	1.34	0.93
26:B0:49:LYS:N	26:B0:80:HIS:HD1	1.66	0.93
39:DD:75:ILE:HG21	39:DD:99:ASP:HB2	1.51	0.93
57:DY:47:LYS:HD2	57:DY:60:PHE:HE1	1.33	0.93
4:CD:59:ARG:HA	4:CD:59:ARG:HE	1.33	0.93
38:BC:123:VAL:CG2	38:BC:127:LEU:HD22	1.99	0.92
5:CE:6:PHE:HB3	5:CE:35:GLY:O	1.69	0.92
24:CY:75:C:H5	25:CZ:232:THR:H	1.05	0.92
36:BA:654(E):G:N2	36:BA:654(Q):C:H1'	1.84	0.92
10:AJ:4:ILE:HD13	10:AJ:74:ILE:HG13	1.49	0.92
21:AU:9:ARG:HH12	21:AU:23:PRO:HD2	1.34	0.92
13:CM:101:GLN:HE21	13:CM:101:GLN:N	1.67	0.92
24:CY:76:A:P	25:CZ:274:ARG:HD2	2.09	0.92
43:BH:52:VAL:HG21	43:BH:69:ARG:HG3	1.49	0.92
22:CV:35:A:H61	23:CX:20:U:H3	1.01	0.92
1:CA:8:A:H62	4:CD:208:SER:HB2	1.31	0.92
1:CA:351:G:H4'	1:CA:352:C:OP2	1.67	0.92
4:AD:187:ARG:NH1	4:AD:187:ARG:HB3	1.84	0.92
52:BT:91:ARG:HA	52:BT:117:ASP:H	1.31	0.92
22:CV:35:A:N6	23:CX:20:U:H3	1.68	0.92
1:AA:573:A:H8	1:AA:573:A:H5'	1.34	0.92
4:AD:114:ARG:HG3	4:AD:114:ARG:HH11	1.32	0.92
36:BA:2160:G:H8	36:BA:2160:G:H5'	1.33	0.92
4:AD:133:VAL:HG11	4:AD:138:TYR:HD2	1.34	0.92
46:BN:126:PRO:O	46:BN:127:ASP:HB2	1.70	0.92
25:AZ:181:GLN:HG2	25:AZ:184:ARG:HH21	1.34	0.92
32:B6:15:GLU:CD	32:B6:18:ARG:CZ	2.38	0.92
50:BR:55:ALA:HA	50:BR:80:PHE:HE1	1.35	0.92
25:CZ:270:VAL:HG13	25:CZ:286:VAL:HG21	1.47	0.92
10:AJ:38:ILE:HD11	10:AJ:71:LEU:CB	1.99	0.92
48:DP:34:GLY:O	48:DP:35:HIS:HB2	1.65	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:6:THR:HG22	34:B8:63:PRO:HD3	1.52	0.92
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD2	2.05	0.92
32:B6:35:GLU:HB2	32:B6:51:GLU:HB2	1.52	0.92
36:DA:1311:G:H21	36:DA:1603:A:H62	1.17	0.92
52:DT:2:ASN:HB2	52:DT:7:ILE:HD11	1.50	0.92
43:BH:85:LYS:CE	43:BH:133:VAL:H	1.83	0.92
52:DT:85:LYS:HZ3	52:DT:85:LYS:HB3	1.34	0.92
36:BA:2312:U:H2'	36:BA:2313:C:H5''	1.52	0.92
32:D6:12:GLU:HA	32:D6:23:THR:HG22	1.50	0.92
29:D3:26:LEU:HB2	29:D3:28:LEU:HD12	1.52	0.92
28:B2:3:LEU:HG	28:B2:7:ARG:CZ	2.00	0.91
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.51	0.91
58:BZ:151:HIS:CB	58:BZ:170:THR:HA	2.00	0.91
13:AM:11:ARG:HA	13:AM:45:VAL:HB	1.51	0.91
36:DA:2780:G:OP2	46:DN:118:LYS:HE3	1.70	0.91
22:AW:18:G:H1	22:AW:55:U:H1'	1.36	0.91
26:D0:49:LYS:N	26:D0:80:HIS:HD1	1.67	0.91
53:BU:92:ARG:NH2	54:BV:11:GLN:H	1.67	0.91
48:BP:47:ASP:HB3	48:BP:48:PRO:HA	1.47	0.91
32:D6:17:LYS:HB2	32:D6:18:ARG:HH12	1.32	0.91
42:BG:39:ILE:HG12	42:BG:92:VAL:HG12	1.52	0.91
25:CZ:198:LYS:CA	25:CZ:198:LYS:HZ3	1.81	0.91
27:D1:41:ARG:NH2	36:DA:1365:A:H5''	1.84	0.91
56:DX:31:HIS:HB3	56:DX:34:ALA:HB2	1.48	0.91
1:AA:265:G:H2'	1:AA:266:G:H5''	1.52	0.91
36:DA:1407:C:H42	36:DA:1595:G:H1	0.98	0.91
38:BC:123:VAL:HG22	38:BC:127:LEU:HD23	1.52	0.91
36:DA:1270:C:H5''	36:DA:1271:G:C5'	2.01	0.91
32:D6:11:LEU:O	32:D6:12:GLU:HG2	1.71	0.91
48:BP:147:LEU:HG	48:BP:148:LEU:H	1.33	0.91
40:BE:77:ILE:HG22	40:BE:78:LEU:H	1.35	0.91
36:DA:1209:G:H21	36:DA:1210:A:H62	1.16	0.91
32:B6:26:ASN:HA	36:BA:2286:A:H2	1.34	0.91
48:DP:125:VAL:O	48:DP:145:PRO:HD2	1.71	0.91
42:DG:73:ALA:HB3	42:DG:87:PRO:HG3	1.50	0.91
36:BA:676:A:H8	36:BA:2069:G:H21	1.13	0.91
13:AM:88:ARG:HG2	13:AM:88:ARG:HH11	1.36	0.91
36:BA:1826:G:H4'	39:BD:242:ARG:HH21	1.35	0.91
35:D9:7:VAL:HG22	35:D9:34:GLN:HG2	1.53	0.91
36:DA:28:A:N6	36:DA:512:G:H1'	1.86	0.91
24:CY:56:C:C6	36:DA:1067:A:H2	1.88	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:59:A:H3'	1:CA:331:G:H22	1.36	0.91
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.05	0.91
36:DA:1854:A:H62	36:DA:1888:G:H8	0.95	0.91
25:CZ:215:ARG:HB3	25:CZ:282:ALA:HB3	1.52	0.91
36:BA:1484:G:H2'	36:BA:1485:G:H5''	1.50	0.91
33:D7:1:MET:HG3	33:D7:3:ARG:HH12	1.34	0.91
36:BA:1064:C:H2'	36:BA:1065:U:H5''	1.50	0.91
1:AA:1452:C:H4'	1:AA:1456:G:N2	1.85	0.91
51:DS:52:SER:HB2	51:DS:55:ALA:HB3	1.53	0.91
36:BA:1902:C:H1'	39:BD:244:ARG:HG3	1.53	0.90
52:DT:80:SER:HB3	52:DT:81:PRO:HD3	1.51	0.90
2:AB:7:VAL:O	2:AB:11:LEU:HB2	1.71	0.90
42:DG:73:ALA:H	42:DG:87:PRO:HG2	1.36	0.90
58:BZ:114:GLY:N	58:BZ:146:ILE:HG21	1.85	0.90
52:BT:129:ARG:CZ	52:BT:131:ALA:HB3	2.00	0.90
36:BA:84:A:H5'	57:BY:9:LYS:HB3	1.51	0.90
36:BA:106:C:H2'	36:BA:107:C:C6	2.05	0.90
36:DA:581:C:H2'	36:DA:582:G:C8	2.06	0.90
41:DF:101:LEU:HD12	41:DF:102:PRO:HD2	1.51	0.90
24:CY:4:G:H2'	24:CY:5:G:H5''	1.53	0.90
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.50	0.90
3:CC:157:ILE:HD13	3:CC:166:GLU:HG2	1.53	0.90
1:AA:1442(B):A:OP2	1:AA:1442(B):A:H3'	1.70	0.90
24:CY:65:C:C4'	25:CZ:341:GLN:HG2	2.01	0.90
36:BA:1209:G:H21	36:BA:1210:A:H62	1.13	0.90
41:BF:29:ASN:ND2	41:BF:32:LEU:HB2	1.86	0.90
36:BA:852:G:H2'	36:BA:853:G:H8	1.35	0.90
27:D1:18:ILE:HD11	27:D1:20:ARG:CZ	2.01	0.90
42:DG:123:ASN:H	42:DG:123:ASN:ND2	1.68	0.90
57:BY:7:VAL:HB	57:BY:8:LYS:HD2	1.54	0.90
56:BX:35:THR:CG2	56:BX:37:THR:H	1.84	0.90
22:AV:4:C:H2'	22:AV:5:G:H5''	1.53	0.90
35:D9:14:CYS:SG	35:D9:27:CYS:HB2	2.12	0.90
38:DC:120:MET:HA	38:DC:123:VAL:HG12	1.52	0.90
36:DA:2756:U:H1'	36:DA:2757:A:H5''	1.53	0.90
10:AJ:55:LYS:HE3	10:AJ:55:LYS:N	1.87	0.90
36:DA:2185:C:H2'	36:DA:2186:G:H5'	1.52	0.90
53:BU:59:ARG:HH11	53:BU:59:ARG:HG2	1.34	0.90
20:CT:31:SER:HA	20:CT:34:LYS:HD2	1.54	0.90
9:CI:16:ARG:HB2	9:CI:64:THR:HB	1.53	0.90
58:DZ:69:THR:HG22	58:DZ:90:VAL:HA	1.52	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:351:G:H4'	1:AA:352:C:OP2	1.69	0.90
3:AC:79:ARG:NH1	3:AC:79:ARG:HB2	1.87	0.90
36:BA:1826:G:H4'	39:BD:242:ARG:NH2	1.86	0.90
12:AL:8:ASN:HD22	17:AQ:34:LYS:HZ3	0.90	0.90
50:DR:55:ALA:HA	50:DR:80:PHE:CE1	2.07	0.90
42:DG:10:LYS:O	42:DG:14:GLU:HB3	1.71	0.90
36:BA:1270:C:H5''	36:BA:1271:G:H5''	1.51	0.90
36:BA:2485:G:H5''	49:BQ:46:GLN:HE21	1.33	0.90
57:BY:81:LYS:NZ	57:BY:99:CYS:HB2	1.85	0.90
31:B5:29:THR:HG21	36:BA:2814:C:O2'	1.72	0.90
36:DA:1602:U:H3'	36:DA:1603:A:C5'	2.02	0.90
36:BA:860:U:H5	36:BA:917:A:N7	1.70	0.90
36:BA:614(A):U:H4'	36:BA:614(B):G:H5''	1.53	0.90
52:DT:83:ILE:HG13	52:DT:84:GLN:N	1.86	0.90
2:CB:94:ASN:H	2:CB:94:ASN:HD22	1.18	0.90
27:D1:41:ARG:HH22	36:DA:1365:A:H5''	1.35	0.90
40:BE:50:GLY:HA2	40:BE:78:LEU:HB3	1.52	0.90
2:AB:106:LYS:HG3	2:AB:107:THR:H	1.36	0.90
39:DD:69:ARG:HH11	39:DD:130:ALA:HB2	1.35	0.90
36:BA:2126:A:H4'	36:BA:2127:G:O5'	1.71	0.90
54:DV:19:LYS:HZ3	54:DV:20:LEU:H	1.12	0.90
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.54	0.90
54:DV:19:LYS:NZ	54:DV:20:LEU:H	1.71	0.89
36:DA:2801(A):A:H4'	36:DA:2802:G:H5'	1.54	0.89
52:BT:96:ARG:HB2	52:BT:96:ARG:NH1	1.87	0.89
25:CZ:26:THR:HB	60:CZ:501:GDP:O2A	1.73	0.89
10:CJ:61:GLU:HG3	14:CN:58:LYS:HE2	1.53	0.89
36:DA:1464:C:HO2'	36:DA:1528:A:H8	1.20	0.89
5:CE:76:ILE:HD11	5:CE:142:LEU:HD22	1.54	0.89
36:DA:2712:U:H1'	36:DA:2712(A):A:C8	2.07	0.89
36:DA:1064:C:H2'	36:DA:1065:U:H5''	1.53	0.89
39:DD:132:PRO:HG3	39:DD:190:TYR:CE1	2.05	0.89
37:DB:30:C:H1'	37:DB:57:A:H61	1.36	0.89
3:CC:79:ARG:HB2	3:CC:79:ARG:HH11	1.36	0.89
1:CA:194:C:H2'	1:CA:195:A:H5''	1.54	0.89
36:DA:2491:U:H5'	36:DA:2570:G:H5''	1.54	0.89
1:CA:979:C:C3'	1:CA:980:C:H5''	2.01	0.89
19:CS:53:ASN:HD21	19:CS:56:GLN:N	1.71	0.89
52:BT:53:ARG:NH1	52:BT:53:ARG:HB3	1.86	0.89
13:CM:120:LYS:HE3	13:CM:120:LYS:HA	1.53	0.89
36:DA:2781:A:H5'	36:DA:2782:G:H5'	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.53	0.89
27:D1:53:VAL:HG22	27:D1:74:VAL:HG13	1.53	0.89
10:AJ:38:ILE:CD1	10:AJ:71:LEU:HB3	2.00	0.89
57:DY:13:VAL:HG23	57:DY:73:ARG:O	1.73	0.89
36:DA:1480:G:H2'	36:DA:1481:U:H5''	1.52	0.89
24:CY:75:C:C6	25:CZ:231:ILE:HA	2.08	0.89
42:DG:32:PRO:HB2	42:DG:172:LEU:HD12	1.55	0.89
55:DW:22:ASP:HA	55:DW:25:ARG:HH12	1.37	0.89
52:BT:89:VAL:HG12	52:BT:91:ARG:HG3	1.53	0.89
31:B5:50:GLY:HA3	31:B5:56:LYS:HE2	1.54	0.89
48:BP:66:GLY:O	48:BP:67:MET:HB2	1.72	0.89
52:BT:23:ARG:HG2	52:BT:120:ARG:HH12	1.37	0.89
1:AA:201:C:C3'	1:AA:202:U:H5''	2.02	0.89
40:DE:116:VAL:HG22	40:DE:117:MET:N	1.86	0.89
52:DT:100:TYR:HB3	52:DT:103:ARG:HE	1.36	0.89
36:BA:1899:G:H21	36:BA:1902:C:H41	0.93	0.89
36:DA:2305:A:H3'	36:DA:2306:C:H5''	1.54	0.89
36:DA:1038:C:H2'	36:DA:1039:G:H5''	1.55	0.89
36:BA:2183:C:H2'	36:BA:2184:G:H8	1.38	0.89
25:CZ:23:GLY:HA3	25:CZ:105:VAL:HG11	1.55	0.89
25:CZ:309:SER:O	25:CZ:310:ILE:HG22	1.73	0.89
36:BA:1884:A:C2'	36:BA:1885:A:H5''	2.02	0.89
48:DP:59:LEU:HA	48:DP:61:ARG:NE	1.86	0.89
1:CA:358:U:H4'	25:CZ:234:ARG:C	1.93	0.89
36:BA:1803:A:H4'	39:BD:259:THR:HG21	1.55	0.89
12:CL:80:HIS:NE2	24:CY:69:C:H5'	1.87	0.89
36:BA:1602:U:H3'	36:BA:1603:A:C5'	2.03	0.89
3:CC:8:ILE:HG23	3:CC:16:ARG:HG2	1.53	0.89
32:D6:41:PRO:HG2	32:D6:44:ARG:O	1.73	0.89
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.55	0.89
4:AD:18:LYS:HE3	4:AD:31:CYS:CB	2.03	0.89
26:D0:23:VAL:HG13	26:D0:38:VAL:HG13	1.52	0.89
1:AA:80:G:N2	1:AA:90:U:H5'	1.88	0.89
42:DG:141:PHE:HB3	42:DG:142:PRO:HD2	1.55	0.89
36:DA:1598:C:H5'	56:DX:36:LYS:HG2	1.54	0.89
31:D5:49:CYS:O	31:D5:56:LYS:HG3	1.73	0.89
22:CW:26:A:H61	22:CW:44:G:H1	1.18	0.89
47:DO:107:ARG:HD3	52:DT:36:GLU:HG3	1.53	0.89
36:BA:2100:G:H2'	36:BA:2101:G:C8	2.08	0.88
4:AD:100:ARG:HH21	4:AD:118:ARG:HH12	1.10	0.88
36:DA:2092:U:C4'	36:DA:2093:G:H5''	2.03	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:189:ARG:HG2	25:CZ:190:ARG:N	1.86	0.88
36:BA:650:C:H3'	36:BA:651:G:H5''	1.55	0.88
32:D6:35:GLU:HB2	32:D6:51:GLU:HB2	1.52	0.88
52:BT:28:VAL:HB	52:BT:88:ILE:HG12	1.53	0.88
51:BS:97:ARG:NH2	51:BS:98:VAL:HA	1.87	0.88
36:DA:1902:C:H1'	39:DD:244:ARG:HG3	1.55	0.88
9:AI:19:LEU:HD21	9:AI:59:PHE:HB3	1.54	0.88
7:CG:46:ALA:O	7:CG:50:ILE:HG12	1.72	0.88
27:D1:87:PRO:HG2	27:D1:88:LYS:H	1.36	0.88
31:B5:40:LYS:HE2	31:B5:46:CYS:HB3	1.55	0.88
36:DA:1539:G:H2'	36:DA:1540:U:H5'	1.55	0.88
56:DX:53:LYS:HG3	56:DX:55:ASN:HD21	1.38	0.88
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.02	0.88
42:DG:123:ASN:HD22	42:DG:123:ASN:N	1.67	0.88
36:DA:1139:G:H5''	46:DN:70:LYS:HZ3	1.38	0.88
38:BC:27:ARG:CZ	38:BC:182:PRO:HG2	2.04	0.88
1:CA:975:A:H4'	1:CA:976:G:H5''	1.56	0.88
20:AT:45:GLN:H	20:AT:45:GLN:HE21	0.92	0.88
36:BA:631:A:H5''	48:BP:65:ARG:NH1	1.88	0.88
36:DA:61:G:H1	36:DA:94:C:H42	1.18	0.88
1:AA:1221:G:H4'	19:AS:77:THR:HG21	1.54	0.88
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.36	0.88
48:BP:16:ARG:HB2	48:BP:16:ARG:NH1	1.88	0.88
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.38	0.88
36:DA:1221(A):C:H2'	36:DA:1222:C:H6	1.37	0.88
1:CA:80:G:N2	1:CA:90:U:H5'	1.89	0.88
56:DX:35:THR:HG22	56:DX:37:THR:N	1.88	0.88
42:DG:67:LYS:N	42:DG:67:LYS:HD3	1.87	0.88
39:DD:270:ILE:O	39:DD:270:ILE:HD12	1.71	0.88
52:DT:83:ILE:HG13	52:DT:84:GLN:H	1.38	0.88
42:DG:123:ASN:H	42:DG:123:ASN:HD22	0.91	0.88
46:BN:47:ALA:HB2	46:BN:112:LEU:HD11	1.56	0.88
36:DA:984:A:H5''	36:DA:985:C:H5	1.39	0.88
58:BZ:177:PRO:O	58:BZ:178:GLU:HB3	1.71	0.88
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.54	0.88
56:BX:11:PRO:HA	56:BX:28:PHE:HB3	1.55	0.88
45:DK:55:UNK:HA	45:DK:69:UNK:HA	1.55	0.88
56:DX:35:THR:CG2	56:DX:37:THR:H	1.86	0.88
9:CI:114:TYR:HE2	10:CJ:60:ARG:H	1.21	0.88
47:BO:71:ARG:HH12	47:BO:104:ARG:HG2	1.34	0.88
41:BF:40:GLN:HE22	41:BF:182:ASN:HB2	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1042:G:H1	36:DA:1113:U:H3	1.21	0.88
4:CD:88:VAL:HG13	5:CE:97:GLY:HA2	1.54	0.88
36:BA:886:C:O2'	36:BA:887:A:H4'	1.72	0.88
36:DA:259:G:H21	36:DA:621:A:H8	1.14	0.88
1:AA:1039:C:H6	1:AA:1040:U:H5	1.17	0.88
36:DA:1899:G:N2	36:DA:1902:C:H41	1.70	0.88
36:DA:1050:A:H2'	36:DA:1051:G:H5'	1.54	0.88
39:BD:162:SER:O	39:BD:178:PRO:HG3	1.74	0.88
17:CQ:52:LYS:H	17:CQ:52:LYS:HE3	1.39	0.88
38:BC:68:LEU:HD11	38:BC:161:ILE:HG23	1.56	0.88
5:CE:76:ILE:HD11	5:CE:142:LEU:CD2	2.04	0.88
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	1.56	0.88
31:D5:24:ALA:O	31:D5:25:LEU:HB2	1.73	0.88
39:BD:239:ARG:HH11	39:BD:239:ARG:HG2	1.36	0.88
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.56	0.88
43:DH:136:ILE:H	43:DH:136:ILE:HD12	1.39	0.88
48:DP:147:LEU:HG	48:DP:148:LEU:H	1.35	0.88
36:BA:2101:G:C2'	36:BA:2102:U:H5''	2.04	0.87
28:B2:41:ILE:HG13	28:B2:42:GLY:H	1.39	0.87
43:DH:117:PRO:HB3	43:DH:123:PHE:CE1	2.09	0.87
57:BY:96:ILE:HG13	57:BY:99:CYS:HB3	1.55	0.87
3:AC:134:ILE:HG21	3:AC:167:TRP:O	1.74	0.87
17:CQ:76:LEU:HD12	17:CQ:77:VAL:H	1.38	0.87
38:BC:96:GLY:H	38:BC:99:ILE:HD11	1.37	0.87
36:DA:650:C:H3'	36:DA:651:G:H5''	1.55	0.87
47:BO:104:ARG:HE	52:BT:33:LYS:HZ2	1.18	0.87
25:AZ:309:SER:O	25:AZ:310:ILE:HG22	1.74	0.87
32:D6:35:GLU:CB	32:D6:51:GLU:HB2	2.05	0.87
48:DP:146:VAL:HG22	48:DP:147:LEU:H	1.39	0.87
36:DA:774:A:H2	36:DA:787:U:HO2'	0.95	0.87
54:DV:29:PRO:HA	54:DV:61:VAL:HG22	1.56	0.87
49:DQ:79:LEU:HD23	49:DQ:80:GLU:N	1.89	0.87
13:CM:15:VAL:HG11	13:CM:48:LEU:HD11	1.54	0.87
36:BA:1899:G:N2	36:BA:1902:C:N4	2.22	0.87
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.56	0.87
52:DT:23:ARG:O	52:DT:25:GLY:N	2.08	0.87
36:BA:2672:G:H2'	36:BA:2673:G:H5''	1.56	0.87
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	1.57	0.87
1:AA:1127:G:H1	1:AA:1145:C:H42	1.23	0.87
41:BF:143:ALA:HB1	41:BF:148:LEU:HB2	1.57	0.87
48:DP:29:LYS:H	48:DP:29:LYS:HD2	1.38	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:73:A:C2'	22:CW:74:C:H5''	2.04	0.87
1:AA:1314:C:OP2	19:AS:6:LYS:HG3	1.74	0.87
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	1.55	0.87
46:BN:48:MET:H	46:BN:48:MET:HE3	1.39	0.87
13:AM:22:ILE:HD13	13:AM:25:ILE:HD12	1.55	0.87
41:BF:114:VAL:HG21	41:BF:202:PHE:HE2	1.39	0.87
36:BA:658:C:H2'	36:BA:659:C:C6	2.10	0.87
51:BS:101:LEU:O	51:BS:101:LEU:HD12	1.73	0.87
48:DP:124:LYS:HD3	48:DP:143:GLY:HA3	1.54	0.87
39:DD:267:SER:O	39:DD:269:PHE:N	2.06	0.87
47:DO:19:ILE:HG22	47:DO:43:VAL:HA	1.54	0.87
36:DA:2189:U:H2'	36:DA:2190:G:H4'	1.56	0.87
1:CA:1250:A:H4'	9:CI:68:GLY:N	1.88	0.87
22:CW:69:G:H2'	22:CW:70:G:C8	2.09	0.87
1:CA:1190:G:H3'	3:CC:3:ASN:ND2	1.89	0.87
36:DA:628:G:H2'	36:DA:629:G:H5''	1.57	0.87
6:AF:30:LEU:O	6:AF:35:ALA:HB3	1.74	0.87
4:AD:138:TYR:HD1	4:AD:139:ARG:N	1.71	0.87
52:DT:85:LYS:NZ	52:DT:85:LYS:HB3	1.88	0.87
57:BY:47:LYS:HD2	57:BY:60:PHE:CE1	2.10	0.87
42:DG:139:LEU:HA	42:DG:144:ILE:HG12	1.55	0.87
10:AJ:53:PRO:HA	14:AN:42:ILE:HD11	1.55	0.87
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.73	0.87
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.37	0.87
52:BT:28:VAL:CG1	52:BT:46:GLU:HA	2.05	0.87
24:CY:40:C:C2'	24:CY:41:C:H5''	2.04	0.87
38:DC:123:VAL:CG2	38:DC:127:LEU:HD22	2.04	0.87
41:DF:113:ALA:HB1	41:DF:186:ILE:HG21	1.56	0.87
5:CE:110:LEU:HD13	5:CE:118:ILE:HD13	1.57	0.87
51:DS:42:ASP:O	51:DS:43:GLU:HB3	1.75	0.87
39:DD:35:LYS:NZ	39:DD:36:PRO:HD3	1.89	0.87
42:DG:45:GLU:HB2	42:DG:53:LEU:HG	1.55	0.87
36:DA:2656:U:H3	36:DA:2665:A:H2	1.19	0.87
22:AV:68:C:C2'	22:AV:69:G:H5''	2.04	0.87
52:DT:29:ARG:NH2	52:DT:88:ILE:HD11	1.90	0.87
36:BA:1879:C:C2'	36:BA:1880:C:H5''	2.05	0.87
32:D6:25:LYS:HE2	34:D8:34:TRP:HE1	1.38	0.87
30:D4:8:LYS:O	30:D4:9:LEU:HB2	1.73	0.87
52:DT:92:GLY:HA3	52:DT:120:ARG:NH2	1.89	0.87
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.75	0.87
58:BZ:110:GLY:HA2	58:BZ:113:ALA:HB3	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:34:GLU:HA	28:B2:37:PHE:HB2	1.55	0.86
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.56	0.86
58:BZ:33:LEU:HD23	58:BZ:90:VAL:HG21	1.55	0.86
6:CF:11:ASN:HB3	6:CF:14:LEU:HD23	1.54	0.86
36:DA:2761:G:H2'	36:DA:2762:G:H5''	1.57	0.86
55:BW:107:LEU:H	55:BW:107:LEU:HD12	1.39	0.86
2:CB:87:ARG:HH11	2:CB:223:ILE:HD11	1.40	0.86
25:CZ:198:LYS:HZ1	25:CZ:201:GLU:HG3	1.39	0.86
39:BD:30:GLU:HG3	39:BD:63:ARG:NH2	1.89	0.86
25:AZ:12:VAL:O	25:AZ:77:TYR:HA	1.75	0.86
36:DA:1899:G:H21	36:DA:1902:C:N4	1.73	0.86
49:BQ:51:ARG:HB2	49:BQ:51:ARG:HH11	1.39	0.86
36:DA:1257:C:H2'	36:DA:1258:C:H6	1.40	0.86
36:BA:888:C:H2'	36:BA:889:C:H4'	1.57	0.86
57:BY:67:LEU:HD23	57:BY:68:HIS:H	1.38	0.86
25:CZ:7:ARG:NH1	25:CZ:281:ILE:HG12	1.90	0.86
10:CJ:96:ILE:H	10:CJ:96:ILE:HD13	1.40	0.86
1:CA:1285:A:H4'	1:CA:1286:A:O5'	1.72	0.86
58:BZ:18:LEU:HD22	58:BZ:18:LEU:H	1.37	0.86
2:AB:69:LEU:HD23	2:AB:91:PRO:HB2	1.56	0.86
52:DT:89:VAL:HG12	52:DT:91:ARG:HG3	1.54	0.86
48:DP:62:LEU:H	48:DP:62:LEU:HD23	1.41	0.86
25:CZ:288:VAL:HG12	25:CZ:290:LEU:HD23	1.55	0.86
49:BQ:56:ARG:HG3	49:BQ:56:ARG:HH11	1.39	0.86
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.40	0.86
1:AA:1286:A:H2	21:AU:18:TYR:HH	1.22	0.86
34:D8:8:LYS:O	34:D8:12:LYS:HG3	1.74	0.86
40:DE:61:ARG:HB3	40:DE:62:PRO:HD3	1.55	0.86
1:CA:1318:A:H1'	19:CS:37:ARG:HH21	1.38	0.86
36:BA:240:G:H3'	36:BA:241:A:H5''	1.55	0.86
24:AY:4:G:H2'	24:AY:5:G:H5''	1.57	0.86
2:AB:18:GLY:H	2:AB:42:ILE:HG22	1.40	0.86
13:CM:25:ILE:HD11	13:CM:60:VAL:HG11	1.56	0.86
42:BG:51:ARG:HA	42:BG:51:ARG:HE	1.39	0.86
47:DO:104:ARG:HE	52:DT:33:LYS:HZ2	1.21	0.86
1:CA:368:U:OP2	25:CZ:291:ARG:HD3	1.74	0.86
36:DA:145:G:H2'	36:DA:146:G:H5''	1.58	0.86
36:DA:886:C:O2'	36:DA:887:A:H4'	1.75	0.86
41:DF:110:LEU:HD12	41:DF:206:ILE:HD11	1.57	0.86
13:CM:84:ILE:HG21	19:CS:60:VAL:HG23	1.57	0.86
20:AT:55:ILE:H	20:AT:55:ILE:HD13	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2645:G:H3'	36:BA:2646:C:H5'	1.57	0.86
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.35	0.86
49:DQ:141:GLN:HE22	58:DZ:72:ARG:HA	1.36	0.86
1:AA:1502:A:H2	1:AA:1505:G:H1	1.21	0.86
39:BD:267:SER:C	39:BD:269:PHE:H	1.77	0.86
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.57	0.86
36:DA:590:A:H2'	36:DA:591:C:C6	2.09	0.86
48:DP:23:PRO:HB2	48:DP:33:ARG:HG3	1.57	0.86
40:DE:50:GLY:HA2	40:DE:78:LEU:HB3	1.58	0.86
36:DA:330:A:C2	36:DA:1210:A:H2'	2.10	0.86
1:AA:979:C:C3'	1:AA:980:C:H5''	2.06	0.86
36:DA:1139:G:H5''	46:DN:70:LYS:NZ	1.91	0.86
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.57	0.86
32:B6:12:GLU:HA	32:B6:23:THR:HG22	1.58	0.86
47:DO:2:ILE:HB	47:DO:33:ALA:HB3	1.55	0.86
1:AA:1003:G:N2	1:AA:1039:C:H42	1.73	0.86
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.76	0.86
54:BV:25:LEU:H	54:BV:92:THR:HG21	1.41	0.86
41:DF:37:VAL:HG11	48:DP:7:ARG:HH22	1.37	0.86
9:CI:19:LEU:HD21	9:CI:59:PHE:HB3	1.56	0.86
4:CD:121:VAL:O	4:CD:134:ASP:HA	1.76	0.86
4:CD:96:LEU:HG	4:CD:139:ARG:NH2	1.90	0.86
4:CD:107:ARG:NH2	4:CD:194:LEU:HD12	1.90	0.86
36:BA:2131:G:H1'	36:BA:2133:G:N2	1.89	0.86
36:DA:2126:A:H4'	36:DA:2127:G:O5'	1.76	0.86
56:DX:11:PRO:HA	56:DX:28:PHE:HB3	1.58	0.86
57:DY:47:LYS:HD2	57:DY:60:PHE:CE1	2.09	0.86
55:DW:5:ALA:HB2	55:DW:54:ALA:HB2	1.56	0.86
18:CR:36:ASN:OD1	18:CR:39:VAL:HB	1.75	0.86
42:BG:77:ILE:H	42:BG:77:ILE:HD13	1.40	0.86
58:BZ:180:VAL:HG22	58:BZ:181:GLU:N	1.91	0.85
42:BG:15:VAL:O	42:BG:19:LEU:HD23	1.74	0.85
36:DA:1803:A:H4'	39:DD:259:THR:HG21	1.57	0.85
24:AY:40:C:C2'	24:AY:41:C:H5''	2.05	0.85
27:D1:8:SER:HB3	27:D1:66:HIS:NE2	1.90	0.85
36:BA:2524:G:H8	36:BA:2524:G:H5'	1.41	0.85
5:CE:31:LEU:CD2	5:CE:43:LEU:HD11	2.04	0.85
43:BH:18:GLU:HB2	43:BH:25:LYS:HB2	1.55	0.85
28:B2:57:ILE:HG22	28:B2:61:LEU:HG	1.56	0.85
32:D6:15:GLU:HB2	32:D6:20:ASN:HB3	1.58	0.85
7:AG:20:ASP:HB3	7:AG:23:VAL:HG23	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HD12	1.57	0.85
38:BC:100:ILE:HD11	38:BC:123:VAL:HG23	1.58	0.85
36:BA:272(H):C:C2'	36:BA:272(I):U:H5''	2.06	0.85
36:DA:1221(A):C:H2'	36:DA:1222:C:C6	2.11	0.85
36:DA:1517:G:H8	36:DA:1517:G:H5'	1.41	0.85
12:CL:24:VAL:HG12	12:CL:27:LEU:HD13	1.57	0.85
36:BA:1039:G:H1	36:BA:1116:C:H42	1.20	0.85
25:CZ:271:GLU:HG2	25:CZ:276:THR:HA	1.59	0.85
19:CS:53:ASN:HD21	19:CS:56:GLN:H	0.89	0.85
57:DY:81:LYS:NZ	57:DY:99:CYS:HB2	1.91	0.85
52:BT:85:LYS:NZ	52:BT:85:LYS:HB3	1.90	0.85
1:AA:1190:G:H3'	3:AC:3:ASN:HD22	1.40	0.85
25:CZ:12:VAL:O	25:CZ:77:TYR:HA	1.75	0.85
58:DZ:23:LYS:O	58:DZ:24:LEU:HB2	1.73	0.85
38:BC:34:THR:HG22	38:BC:35:ALA:H	1.40	0.85
36:BA:2446:G:H2'	36:BA:2447:G:H5''	1.57	0.85
36:DA:529:A:H62	36:DA:2041:U:H3	1.23	0.85
36:DA:2036:C:H6	36:DA:2036:C:H5'	1.42	0.85
51:DS:28:VAL:HG12	51:DS:29:PHE:N	1.90	0.85
25:CZ:310:ILE:HD12	25:CZ:311:THR:N	1.92	0.85
34:B8:27:THR:CG2	48:BP:61:ARG:HA	2.06	0.85
41:DF:40:GLN:HE22	41:DF:182:ASN:HB2	1.41	0.85
41:DF:187:VAL:HB	48:DP:7:ARG:HH11	1.41	0.85
36:BA:2245:U:H5'	36:BA:2246:G:H5'	1.59	0.85
36:BA:2305:A:H3'	36:BA:2306:C:H5''	1.59	0.85
20:AT:45:GLN:H	20:AT:45:GLN:NE2	1.72	0.85
36:DA:2317:C:C2'	36:DA:2318:G:H5'	2.06	0.85
40:BE:52:LEU:HB3	40:BE:75:VAL:HB	1.58	0.85
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HA	1.91	0.85
37:BB:20:C:H2'	37:BB:21:G:H5''	1.59	0.85
54:BV:15:GLU:HB3	54:BV:16:PRO:CD	2.06	0.85
36:DA:2771:C:H2'	36:DA:2772:C:C6	2.12	0.85
48:BP:75:ILE:H	48:BP:75:ILE:HD12	1.40	0.85
39:DD:63:ARG:HH11	39:DD:63:ARG:HG2	1.41	0.85
36:BA:266:G:C2'	36:BA:267:C:H5''	2.06	0.85
1:CA:1321:C:H5''	1:CA:1322:C:H5''	1.58	0.85
36:DA:2307:G:N2	36:DA:2308:G:H5''	1.91	0.85
36:DA:2312:U:C2'	36:DA:2313:C:H5''	2.07	0.85
21:AU:23:PRO:O	21:AU:24:ARG:HB2	1.75	0.85
49:DQ:141:GLN:O	58:DZ:53:ILE:HB	1.77	0.85
48:DP:121:LYS:O	48:DP:123:LEU:HD23	1.75	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:43:ARG:HE	39:DD:49:ILE:HG22	1.39	0.85
25:AZ:198:LYS:HZ1	25:AZ:201:GLU:HG3	1.41	0.85
19:CS:53:ASN:ND2	19:CS:56:GLN:H	1.73	0.85
36:DA:1336:A:OP1	56:DX:64:LYS:HE2	1.77	0.85
12:CL:79:GLU:O	12:CL:80:HIS:HB2	1.73	0.85
38:DC:96:GLY:H	38:DC:99:ILE:HD11	1.41	0.85
41:BF:126:VAL:HG11	41:BF:142:TRP:HH2	1.39	0.85
36:BA:2781:A:H5'	36:BA:2782:G:H5'	1.59	0.85
58:DZ:114:GLY:H	58:DZ:146:ILE:HG21	1.41	0.85
40:BE:116:VAL:HG23	40:BE:120:TRP:HB2	1.57	0.85
28:B2:15:LYS:HG3	28:B2:16:LEU:N	1.91	0.85
48:BP:115:LEU:HG	48:BP:116:GLY:H	1.40	0.85
48:DP:16:ARG:NH1	48:DP:16:ARG:HB2	1.90	0.85
58:DZ:82:ARG:HH12	58:DZ:84:GLU:HA	1.41	0.85
1:CA:358:U:O3'	25:CZ:235:GLY:HA2	1.77	0.85
41:DF:107:LYS:HE3	41:DF:205:ARG:HG2	1.57	0.85
36:DA:2579:C:O2'	40:DE:131:ALA:HB2	1.75	0.85
43:DH:54:ARG:HH11	43:DH:54:ARG:HG2	1.42	0.85
25:AZ:200:TRP:CE3	25:AZ:203:LEU:HD12	2.12	0.85
36:BA:11:G:N2	36:BA:2627:G:H5''	1.92	0.85
37:DB:8:U:H5'	37:DB:8:U:C6	2.10	0.85
39:BD:131:LEU:HB2	39:BD:136:ILE:HD11	1.59	0.85
1:AA:9:G:H5''	5:AE:122:GLU:OE1	1.76	0.85
24:CY:77:TRP:O	25:CZ:273:HIS:N	2.10	0.84
21:AU:6:ARG:HD3	21:AU:15:ARG:HH12	1.41	0.84
36:BA:330:A:C2	36:BA:1210:A:H2'	2.10	0.84
1:CA:1354:C:H2'	1:CA:1355:G:H8	1.42	0.84
36:BA:2415:G:H4'	48:BP:66:GLY:C	1.97	0.84
37:DB:106:G:H5''	58:DZ:31:ARG:HG2	1.59	0.84
31:D5:2:ALA:HA	36:DA:2015:A:H1'	1.57	0.84
28:B2:29:LYS:HA	28:B2:32:LEU:CB	2.03	0.84
38:DC:123:VAL:CG2	38:DC:127:LEU:CD2	2.55	0.84
16:AP:64:ALA:O	16:AP:66:PRO:HD3	1.75	0.84
25:AZ:198:LYS:HZ3	25:AZ:198:LYS:CA	1.90	0.84
28:B2:67:LYS:HA	28:B2:70:GLN:HE21	1.41	0.84
42:BG:97:ASP:O	42:BG:101:ILE:HG13	1.77	0.84
36:BA:1301:A:H4'	36:BA:1302:A:OP1	1.76	0.84
36:DA:2392:A:H2	36:DA:2424:C:H42	1.21	0.84
19:CS:11:VAL:HG23	19:CS:38:SER:HB2	1.57	0.84
36:DA:2672:G:H2'	36:DA:2673:G:H5''	1.59	0.84
43:BH:16:SER:HB2	43:BH:27:LYS:HB2	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:2:ARG:HD2	50:BR:2:ARG:O	1.78	0.84
36:DA:1012:U:O4	46:DN:28:THR:HG21	1.76	0.84
28:B2:29:LYS:O	28:B2:33:MET:HG3	1.77	0.84
25:CZ:189:ARG:CG	25:CZ:190:ARG:H	1.87	0.84
29:D3:38:GLU:HB3	29:D3:40:THR:HG23	1.59	0.84
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.76	0.84
36:BA:2657:A:H2'	36:BA:2658:C:H5'	1.58	0.84
40:DE:101:ARG:HD2	40:DE:169:ASN:O	1.77	0.84
36:BA:2036:C:H6	36:BA:2036:C:H5'	1.41	0.84
36:DA:2012:G:H4'	55:DW:96:ILE:HD11	1.59	0.84
38:BC:87:GLU:HG2	38:BC:94:VAL:HG11	1.59	0.84
5:CE:147:ASP:HB3	5:CE:150:ARG:HH12	1.43	0.84
13:AM:17:VAL:O	13:AM:20:THR:HB	1.75	0.84
11:CK:33:THR:HG22	11:CK:39:PRO:HA	1.59	0.84
1:CA:947:G:H2'	1:CA:948:C:C6	2.11	0.84
1:CA:573:A:H8	1:CA:573:A:H5'	1.43	0.84
25:AZ:265:THR:HG22	25:AZ:266:VAL:N	1.93	0.84
1:AA:1086:U:H2'	1:AA:1087:G:H5'	1.59	0.84
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.12	0.84
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.17	0.84
38:BC:120:MET:HA	38:BC:123:VAL:HG12	1.56	0.84
57:BY:9:LYS:HZ2	57:BY:9:LYS:HB2	1.41	0.84
26:D0:43:THR:H	36:DA:2331:G:H4'	1.41	0.84
36:BA:628:G:C2'	36:BA:629:G:H5''	2.07	0.84
36:DA:1884:A:C2'	36:DA:1885:A:H5''	2.06	0.84
36:BA:259:G:N2	36:BA:621:A:H8	1.74	0.84
54:DV:24:LYS:HA	54:DV:92:THR:HG23	1.56	0.84
1:AA:150:C:H2'	1:AA:151:A:H5''	1.58	0.84
54:DV:35:LEU:HD23	54:DV:57:VAL:HG13	1.56	0.84
52:DT:28:VAL:CG1	52:DT:46:GLU:HA	2.05	0.84
25:AZ:133:VAL:HG23	25:AZ:168:VAL:HG11	1.60	0.84
56:DX:50:LYS:H	56:DX:87:GLN:HE22	1.24	0.84
25:AZ:7:ARG:NH1	25:AZ:281:ILE:HG12	1.91	0.84
49:DQ:135:ASP:H	49:DQ:137:TYR:HD2	1.24	0.84
52:DT:25:GLY:HA2	52:DT:92:GLY:HA2	1.57	0.84
28:B2:61:LEU:HD13	36:BA:72:U:H4'	1.60	0.84
36:DA:2502:G:H5''	36:DA:2503:A:C5'	2.07	0.84
37:BB:40:U:H3'	37:BB:41:U:H5''	1.58	0.84
32:B6:26:ASN:HA	36:BA:2286:A:C2	2.13	0.84
34:D8:27:THR:CG2	48:DP:61:ARG:HA	2.07	0.84
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	1.81	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:62:LEU:HD23	48:BP:62:LEU:H	1.41	0.84
36:BA:1539:G:C2'	36:BA:1540:U:H5'	2.08	0.84
42:DG:60:LEU:O	42:DG:64:THR:HG22	1.77	0.84
10:CJ:4:ILE:HD13	10:CJ:74:ILE:HG13	1.57	0.84
51:DS:17:ARG:HA	51:DS:20:ARG:HH12	1.40	0.84
43:BH:136:ILE:HD12	43:BH:136:ILE:H	1.42	0.84
1:CA:977:A:N3	1:CA:977:A:H2'	1.91	0.84
42:DG:135:LEU:HD13	42:DG:140:ILE:HD11	1.60	0.84
43:BH:66:GLY:HA2	43:BH:69:ARG:HB3	1.58	0.84
36:BA:2443:C:O2'	36:BA:2444:G:H5'	1.78	0.84
36:BA:2179:C:H4'	36:BA:2180:U:N3	1.93	0.84
36:DA:1024:G:H3'	36:DA:1025:G:H5''	1.59	0.84
36:DA:733:G:N7	36:DA:761:A:C6	2.46	0.84
36:DA:2068:U:N3	36:DA:2430:A:H2	1.75	0.83
19:AS:49:ILE:HD12	19:AS:49:ILE:H	1.41	0.83
36:BA:1480:G:H1	36:BA:1511:C:H42	1.26	0.83
36:BA:1803:A:H4'	39:BD:259:THR:CG2	2.08	0.83
48:BP:16:ARG:NE	48:BP:18:ARG:HG2	1.93	0.83
39:DD:35:LYS:HG2	39:DD:63:ARG:HA	1.59	0.83
52:DT:89:VAL:HG21	52:DT:91:ARG:HH21	1.41	0.83
51:BS:49:VAL:HG12	51:BS:50:SER:N	1.93	0.83
2:CB:72:GLY:O	2:CB:94:ASN:HA	1.78	0.83
51:BS:42:ASP:O	51:BS:43:GLU:HB3	1.78	0.83
58:BZ:86:VAL:HG12	58:BZ:87:ASP:H	1.43	0.83
17:AQ:67:LYS:O	17:AQ:68:ARG:HB2	1.76	0.83
36:DA:997:G:OP1	53:DU:93:LYS:HD3	1.78	0.83
25:AZ:310:ILE:HD11	25:AZ:380:LEU:O	1.77	0.83
42:DG:60:LEU:HD22	42:DG:63:ILE:HD11	1.60	0.83
58:DZ:7:ALA:HB3	58:DZ:61:LEU:HD23	1.60	0.83
13:AM:54:VAL:HA	13:AM:57:ARG:NH1	1.93	0.83
40:BE:101:ARG:NH1	40:BE:171:GLU:HB2	1.93	0.83
2:AB:130:ARG:HB3	2:AB:131:PRO:HD2	1.58	0.83
27:B1:73:LEU:HD22	27:B1:94:LEU:HB3	1.59	0.83
47:DO:114:ILE:HD12	47:DO:114:ILE:H	1.43	0.83
4:CD:21:LEU:HD11	4:CD:66:ARG:O	1.78	0.83
25:AZ:215:ARG:HB3	25:AZ:282:ALA:HB3	1.59	0.83
36:DA:1516:C:C2'	36:DA:1517:G:H5''	2.07	0.83
40:BE:128:SER:OG	40:BE:129:HIS:N	2.11	0.83
38:DC:163:PHE:HB2	38:DC:171:ILE:HD11	1.60	0.83
30:B4:20:ASN:HD22	30:B4:21:VAL:N	1.76	0.83
12:CL:69:TYR:O	12:CL:71:PRO:HD3	1.79	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:79:LYS:HD3	38:BC:119:VAL:HB	1.59	0.83
36:DA:996:A:H4'	53:DU:92:ARG:CG	2.07	0.83
51:DS:67:ARG:HA	51:DS:67:ARG:HE	1.42	0.83
52:DT:55:ASN:HD22	52:DT:58:ASN:HB2	1.43	0.83
1:AA:1190:G:H3'	3:AC:3:ASN:ND2	1.94	0.83
32:B6:53:LYS:HG2	32:B6:54:ILE:H	1.42	0.83
42:DG:91:ARG:HD2	42:DG:92:VAL:N	1.93	0.83
1:CA:201:C:C3'	1:CA:202:U:H5''	2.08	0.83
47:DO:87:ILE:CG2	47:DO:91:LEU:HA	2.08	0.83
58:DZ:10:ARG:H	58:DZ:37:VAL:HA	1.44	0.83
58:DZ:72:ARG:HG3	58:DZ:89:PHE:HB2	1.60	0.83
9:AI:19:LEU:HD21	9:AI:59:PHE:CD2	2.14	0.83
36:DA:2179:C:H4'	36:DA:2180:U:C2	2.13	0.83
50:BR:96:ARG:NH1	50:BR:117:VAL:HG21	1.93	0.83
41:DF:176:LEU:HG	41:DF:177:ALA:H	1.42	0.83
36:DA:2781:A:C5'	36:DA:2782:G:H5'	2.08	0.83
40:DE:116:VAL:HG22	40:DE:117:MET:H	1.43	0.83
46:DN:67:LEU:O	46:DN:88:GLU:HG3	1.79	0.83
1:AA:975:A:H4'	1:AA:976:G:H5''	1.57	0.83
57:BY:17:SER:HA	57:BY:71:LYS:HD2	1.59	0.83
53:DU:92:ARG:HH21	54:DV:10:LYS:HB3	1.44	0.83
53:DU:92:ARG:O	53:DU:94:ASN:N	2.11	0.83
10:CJ:49:VAL:HG22	14:CN:41:ARG:HG3	1.57	0.83
36:DA:1948:G:H5'	36:DA:1948:G:C8	2.13	0.83
34:B8:48:PHE:O	34:B8:49:VAL:HG22	1.77	0.83
37:BB:48:A:H4'	51:BS:95:HIS:CD2	2.12	0.83
36:DA:2415:G:O3'	48:DP:66:GLY:HA3	1.79	0.83
48:DP:126:VAL:HA	48:DP:145:PRO:HB2	1.61	0.83
57:BY:95:LYS:HG3	57:BY:100:ALA:HA	1.60	0.83
25:AZ:267:VAL:HG23	25:AZ:288:VAL:HG13	1.60	0.83
3:CC:52:LEU:HD11	3:CC:55:VAL:HG22	1.61	0.83
24:AY:20:H2U:H4'	24:AY:21:A:C5'	2.08	0.83
36:DA:200:U:H2'	36:DA:201:C:H5'	1.61	0.83
58:BZ:166:SER:HB2	58:BZ:167:PRO:C	1.98	0.83
25:AZ:26:THR:HB	60:AZ:501:GDP:O2A	1.77	0.83
47:BO:1:MET:HG3	47:BO:67:LYS:HG2	1.61	0.83
10:AJ:89:ASP:O	10:AJ:90:LEU:HB2	1.77	0.83
36:BA:419:C:H2'	36:BA:420:C:H6	1.43	0.83
55:DW:28:SER:O	55:DW:70:TYR:HA	1.77	0.83
25:CZ:325:LYS:HD3	25:CZ:331:HIS:HB3	1.61	0.83
36:DA:84:A:H5'	57:DY:9:LYS:HB3	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:5:VAL:N	32:B6:8:LYS:HB3	1.94	0.83
48:BP:41:ARG:HH11	48:BP:41:ARG:HB3	1.41	0.83
51:DS:83:LYS:HG2	51:DS:105:ALA:HB3	1.60	0.83
36:DA:1790:C:H5''	36:DA:1791:A:OP1	1.78	0.83
36:BA:325:G:H2'	36:BA:326:G:H8	1.42	0.83
39:BD:65:ILE:HD13	39:BD:65:ILE:H	1.42	0.83
2:AB:94:ASN:HD22	2:AB:94:ASN:N	1.76	0.83
36:BA:1599:C:H2'	36:BA:1600:C:H6	1.44	0.83
41:BF:178:PRO:HG2	41:BF:179:GLU:OE1	1.78	0.82
25:CZ:163:PHE:HD1	25:CZ:164:PRO:HD2	1.44	0.82
48:BP:148:LEU:O	48:BP:149:GLU:HB2	1.78	0.82
3:CC:76:VAL:HG21	3:CC:103:VAL:HG11	1.61	0.82
40:DE:171:GLU:HB3	40:DE:185:LYS:HG2	1.61	0.82
36:DA:2533:A:H2'	36:DA:2534:A:O4'	1.79	0.82
36:DA:910:A:H62	49:DQ:12:GLN:HA	1.42	0.82
48:BP:80:TYR:HE1	48:BP:111:ARG:HD2	1.42	0.82
48:BP:77:ARG:HD3	48:BP:78:PRO:HD2	1.59	0.82
58:BZ:102:LEU:HD21	58:BZ:124:ILE:HD11	1.61	0.82
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.61	0.82
49:BQ:21:THR:O	49:BQ:22:LYS:HB3	1.79	0.82
24:AY:56:C:C6	36:BA:1067:A:H2	1.97	0.82
2:AB:7:VAL:HG13	2:AB:11:LEU:CD1	2.09	0.82
43:DH:153:LYS:N	43:DH:153:LYS:HD3	1.94	0.82
51:BS:34:HIS:HB2	51:BS:36:TYR:HE1	1.45	0.82
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.44	0.82
36:DA:2179:C:H4'	36:DA:2180:U:N3	1.95	0.82
12:AL:32:PHE:HB3	12:AL:84:LEU:HD21	1.60	0.82
6:AF:11:ASN:HB3	6:AF:14:LEU:HD23	1.60	0.82
12:CL:38:THR:O	12:CL:39:VAL:HG23	1.78	0.82
36:BA:1336:A:OP1	56:BX:64:LYS:HE2	1.78	0.82
27:B1:88:LYS:O	27:B1:91:LYS:HG2	1.80	0.82
1:CA:1313:U:H2'	1:CA:1314:C:O2	1.79	0.82
52:BT:95:ARG:HH11	52:BT:95:ARG:HB3	1.44	0.82
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.08	0.82
13:AM:23:TYR:HB3	13:AM:67:GLU:HB2	1.60	0.82
28:D2:65:ASN:ND2	36:DA:112:U:H5'	1.94	0.82
49:DQ:29:PHE:HB2	49:DQ:105:GLU:OE2	1.79	0.82
49:BQ:19:GLY:H	49:BQ:98:LYS:HD3	1.43	0.82
43:BH:149:ARG:HA	43:BH:162:ILE:CD1	2.09	0.82
51:DS:28:VAL:CG1	51:DS:29:PHE:H	1.92	0.82
42:DG:51:ARG:NH1	42:DG:53:LEU:HD13	1.93	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:203:C:H3'	36:BA:204:A:H5''	1.60	0.82
36:BA:621:A:H2'	36:BA:622:G:H5'	1.60	0.82
48:BP:125:VAL:O	48:BP:145:PRO:HD2	1.79	0.82
2:AB:91:PRO:HG2	2:AB:155:LEU:HD23	1.61	0.82
2:AB:17:PHE:HB2	2:AB:44:LEU:HD11	1.61	0.82
9:AI:53:VAL:H	9:AI:95:LYS:HZ2	1.26	0.82
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.59	0.82
46:DN:13:TRP:O	46:DN:135:PRO:HD2	1.79	0.82
36:BA:1058:G:H2'	36:BA:1059:G:H5''	1.62	0.82
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.60	0.82
32:B6:33:LYS:HA	32:B6:33:LYS:HE2	1.62	0.82
36:DA:925:C:C2'	36:DA:926:A:H5''	2.08	0.82
42:DG:39:ILE:HD12	42:DG:60:LEU:HD11	1.61	0.82
50:BR:2:ARG:HD2	50:BR:2:ARG:C	2.00	0.82
25:CZ:27:LEU:HG	25:CZ:31:LEU:HD11	1.59	0.82
7:CG:45:ASP:O	7:CG:49:ILE:HG12	1.80	0.82
4:CD:30:LYS:C	4:CD:32:ALA:H	1.81	0.82
57:DY:27:VAL:HG12	57:DY:29:GLU:H	1.44	0.82
51:DS:13:ARG:CG	51:DS:14:VAL:H	1.93	0.82
36:DA:910:A:C5	49:DQ:13:GLN:HG3	2.14	0.82
36:DA:2408:U:H2'	36:DA:2409:G:H8	1.43	0.82
24:CY:20:H2U:H4'	24:CY:21:A:C5'	2.09	0.82
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.15	0.82
36:DA:2131:G:C1'	36:DA:2133:G:H21	1.88	0.82
57:BY:46:LYS:HG2	57:BY:47:LYS:H	1.43	0.82
35:D9:10:ILE:HG13	36:DA:2477:C:N4	1.93	0.82
32:D6:11:LEU:HD23	32:D6:25:LYS:HA	1.61	0.82
36:DA:639:U:H2'	36:DA:640:C:C6	2.15	0.82
36:DA:302:C:H2'	36:DA:303:U:C6	2.15	0.82
28:B2:39:ALA:HA	28:B2:44:LEU:HB2	1.60	0.82
36:DA:1799:G:H5''	36:DA:1819:A:N6	1.92	0.82
50:BR:55:ALA:HA	50:BR:80:PHE:CE1	2.14	0.82
1:CA:1125:U:H1'	10:CJ:5:ARG:NH2	1.94	0.82
1:CA:201:C:H3'	1:CA:202:U:H5''	1.59	0.82
36:DA:814:C:H2'	36:DA:815:C:H6	1.43	0.82
20:CT:47:GLY:O	20:CT:49:ALA:N	2.11	0.82
23:CX:13:A:H5''	23:CX:14:A:OP1	1.79	0.82
47:BO:87:ILE:CG2	47:BO:91:LEU:HA	2.10	0.82
1:CA:37:U:OP1	12:CL:124:LYS:HB3	1.80	0.82
39:BD:24:ILE:O	39:BD:26:LYS:N	2.13	0.82
51:BS:83:LYS:HG2	51:BS:105:ALA:HB3	1.59	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1578:U:H2'	36:BA:1579:A:H5''	1.62	0.82
31:B5:4:HIS:HB3	31:B5:5:PRO:CD	2.05	0.82
58:BZ:104:PHE:HA	58:BZ:139:VAL:CG2	2.09	0.82
54:BV:24:LYS:HA	54:BV:92:THR:HG23	1.61	0.82
36:DA:2524:G:H8	36:DA:2524:G:H5'	1.42	0.82
4:AD:78:LEU:HD21	4:AD:96:LEU:HB3	1.62	0.82
56:BX:31:HIS:HB3	56:BX:34:ALA:HB2	1.60	0.82
4:CD:162:LEU:O	4:CD:162:LEU:HD13	1.80	0.82
22:AV:72:C:C3'	22:AV:73:A:H5''	2.10	0.82
1:CA:1314:C:H5	1:CA:1323:G:H1	1.28	0.82
57:DY:13:VAL:O	57:DY:24:VAL:HG13	1.80	0.82
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.60	0.82
58:DZ:126:VAL:HA	58:DZ:163:LEU:HA	1.60	0.82
54:BV:15:GLU:HB3	54:BV:16:PRO:HD2	1.61	0.82
36:DA:325:G:H2'	36:DA:326:G:H8	1.43	0.82
1:AA:377:G:OP1	16:AP:3:LYS:HD2	1.80	0.82
40:BE:61:ARG:HB3	40:BE:62:PRO:HD3	1.62	0.82
9:CI:10:ARG:HD3	9:CI:75:ASP:HB3	1.60	0.82
36:BA:1887:C:H2'	36:BA:1888:G:H5''	1.62	0.82
57:BY:13:VAL:HG23	57:BY:73:ARG:O	1.80	0.81
39:BD:43:ARG:HH11	39:BD:44:ASN:HD22	1.25	0.81
5:AE:76:ILE:HD11	5:AE:142:LEU:CD2	2.09	0.81
32:D6:32:ASN:O	32:D6:33:LYS:HB2	1.80	0.81
39:DD:43:ARG:HH21	39:DD:49:ILE:HG23	1.45	0.81
3:CC:52:LEU:HD11	3:CC:55:VAL:CG2	2.10	0.81
18:AR:59:SER:OG	18:AR:62:GLU:HG3	1.79	0.81
36:BA:389:G:H1	48:BP:72:PRO:HD3	1.44	0.81
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.62	0.81
42:BG:7:LEU:HA	42:BG:10:LYS:HD2	1.62	0.81
57:DY:81:LYS:HZ3	57:DY:99:CYS:HB2	1.43	0.81
30:D4:10:VAL:HG23	30:D4:11:PRO:HD2	1.61	0.81
1:AA:194:C:H2'	1:AA:195:A:H5''	1.62	0.81
36:DA:323:G:H2'	41:DF:169:ASN:ND2	1.94	0.81
51:BS:106:ARG:HH12	51:BS:108:GLY:N	1.78	0.81
36:DA:1887:C:C2'	36:DA:1888:G:H5''	2.10	0.81
25:AZ:325:LYS:C	25:AZ:327:GLU:H	1.83	0.81
49:BQ:141:GLN:NE2	58:BZ:72:ARG:HA	1.93	0.81
36:BA:2317:C:C2'	36:BA:2318:G:H5'	2.09	0.81
36:DA:581:C:H2'	36:DA:582:G:H8	1.42	0.81
38:DC:100:ILE:HD11	38:DC:123:VAL:HG23	1.62	0.81
36:BA:1270:C:H5''	36:BA:1271:G:C5'	2.08	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:53:ARG:HG3	18:AR:63:GLN:HE21	1.45	0.81
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.44	0.81
52:BT:111:ARG:HB3	52:BT:111:ARG:HH11	1.41	0.81
42:DG:131:TYR:HB3	42:DG:159:VAL:CG1	2.11	0.81
20:AT:71:THR:O	20:AT:72:LEU:HD23	1.79	0.81
39:BD:43:ARG:NH1	39:BD:44:ASN:ND2	2.28	0.81
32:D6:15:GLU:CD	32:D6:18:ARG:CZ	2.49	0.81
39:BD:4:LYS:HD2	39:BD:18:VAL:HG12	1.62	0.81
1:CA:150:C:H2'	1:CA:151:A:H5''	1.60	0.81
1:AA:59:A:H3'	1:AA:331:G:H22	1.43	0.81
25:CZ:317:GLU:HG3	25:CZ:404:LEU:HD21	1.63	0.81
25:AZ:193:ASN:OD1	25:AZ:195:TRP:HB2	1.80	0.81
52:DT:29:ARG:HB3	52:DT:85:LYS:HA	1.62	0.81
51:BS:36:TYR:HD1	51:BS:36:TYR:N	1.77	0.81
22:AV:5:G:C8	22:AV:5:G:H5'	2.14	0.81
36:BA:655:A:H4'	36:BA:656:G:H5'	1.63	0.81
1:AA:1392:G:N2	1:AA:1502:A:H8	1.78	0.81
19:AS:44:MET:SD	19:AS:44:MET:N	2.53	0.81
38:DC:82:LYS:HG3	38:DC:116:THR:HG21	1.62	0.81
43:DH:83:TYR:HB3	43:DH:135:GLY:H	1.45	0.81
33:D7:34:ARG:HG3	33:D7:34:ARG:HH11	1.44	0.81
36:BA:322:A:OP2	41:BF:169:ASN:HB2	1.80	0.81
27:B1:51:VAL:HG23	27:B1:58:ILE:HG23	1.63	0.81
22:CV:44:G:H2'	22:CV:45:U:H5'	1.63	0.81
1:AA:505:G:H5'	1:AA:534:U:H2'	1.63	0.81
52:BT:29:ARG:HB3	52:BT:85:LYS:HA	1.62	0.81
52:BT:29:ARG:HH21	52:BT:88:ILE:HD11	1.45	0.81
50:DR:63:ARG:HG3	50:DR:80:PHE:HE2	1.44	0.81
50:BR:63:ARG:HG3	50:BR:80:PHE:HE2	1.45	0.81
8:AH:85:ARG:HG3	8:AH:85:ARG:HH11	1.46	0.81
41:DF:164:ARG:HG2	41:DF:164:ARG:HH11	1.45	0.81
53:BU:52:ARG:HH11	53:BU:52:ARG:HB3	1.46	0.81
41:BF:132:VAL:HG13	41:BF:133:ASN:H	1.46	0.81
36:DA:654(E):G:N2	36:DA:654(Q):C:H1'	1.95	0.81
38:DC:10:LEU:HD12	38:DC:32:LEU:HA	1.60	0.81
3:AC:5:ILE:CD1	3:AC:5:ILE:H	1.93	0.81
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.81	0.81
36:BA:733:G:N7	36:BA:761:A:C6	2.48	0.81
42:BG:79:ASN:O	42:BG:80:PHE:HB2	1.77	0.81
50:BR:67:LEU:HD13	50:BR:76:VAL:HG21	1.63	0.81
36:BA:413:C:H42	36:BA:2410:G:H1	1.29	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2408:U:H2'	36:BA:2409:G:H8	1.46	0.81
41:DF:167:ALA:HB1	41:DF:173:VAL:HG11	1.63	0.81
2:CB:130:ARG:HB3	2:CB:131:PRO:HD2	1.61	0.81
2:CB:7:VAL:HG13	2:CB:11:LEU:CD1	2.11	0.81
27:B1:76:ARG:NH1	27:B1:95:LEU:HD22	1.96	0.81
27:B1:4:VAL:HG23	27:B1:10:LYS:O	1.81	0.81
1:AA:973:G:OP1	10:AJ:57:LYS:HE2	1.81	0.81
42:DG:135:LEU:HB2	42:DG:155:MET:HG3	1.63	0.81
26:B0:49:LYS:HG3	26:B0:80:HIS:ND1	1.96	0.81
19:CS:29:ARG:HG2	19:CS:47:HIS:HA	1.63	0.81
17:CQ:67:LYS:O	17:CQ:68:ARG:HB2	1.81	0.81
27:B1:40:ARG:NH1	27:B1:41:ARG:O	2.14	0.81
25:CZ:198:LYS:CA	25:CZ:198:LYS:CE	2.40	0.81
21:CU:6:ARG:O	21:CU:12:LYS:HD3	1.81	0.81
51:BS:36:TYR:N	51:BS:36:TYR:CD1	2.47	0.81
48:BP:59:LEU:HA	48:BP:61:ARG:HE	1.45	0.81
41:BF:40:GLN:NE2	41:BF:182:ASN:HB2	1.95	0.81
32:B6:18:ARG:HG2	32:B6:18:ARG:HH11	1.45	0.81
56:BX:27:THR:HG22	56:BX:80:ILE:HB	1.60	0.81
36:BA:325:G:H2'	36:BA:326:G:C8	2.16	0.81
48:DP:77:ARG:HD3	48:DP:78:PRO:HD2	1.61	0.81
9:CI:126:SER:O	9:CI:128:ARG:HD2	1.81	0.81
36:DA:1368:G:O2'	36:DA:1369:G:H5'	1.81	0.81
10:CJ:89:ASP:O	10:CJ:90:LEU:HB2	1.80	0.81
25:CZ:181:GLN:OE1	25:CZ:193:ASN:ND2	2.14	0.80
51:DS:99:LYS:HB3	51:DS:99:LYS:HZ2	1.44	0.80
39:BD:63:ARG:HH11	39:BD:63:ARG:HG3	1.46	0.80
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.10	0.80
52:DT:92:GLY:HA3	52:DT:120:ARG:HH21	1.46	0.80
13:CM:51:ALA:O	13:CM:55:ARG:HB2	1.81	0.80
54:BV:18:LEU:HG	54:BV:19:LYS:H	1.46	0.80
36:BA:1314:C:H5'	36:BA:1314:C:H6	1.45	0.80
33:D7:10:ARG:HH11	33:D7:10:ARG:HG2	1.45	0.80
49:BQ:29:PHE:HB2	49:BQ:105:GLU:OE2	1.81	0.80
32:D6:52:VAL:HG12	32:D6:53:LYS:HD3	1.61	0.80
27:D1:39:LYS:NZ	27:D1:39:LYS:HB3	1.96	0.80
26:B0:84:LEU:H	26:B0:84:LEU:HD12	1.46	0.80
49:DQ:18:LYS:HA	49:DQ:18:LYS:NZ	1.96	0.80
4:CD:187:ARG:NH1	4:CD:187:ARG:HB3	1.96	0.80
42:BG:51:ARG:HB3	42:BG:53:LEU:HD23	1.61	0.80
36:DA:1270:C:C5'	36:DA:1271:G:H5''	2.07	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:91:ARG:HA	52:BT:117:ASP:N	1.96	0.80
36:DA:2185:C:H2'	36:DA:2186:G:C5'	2.11	0.80
36:BA:140:G:H1'	36:BA:141:A:C2	2.14	0.80
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	1.96	0.80
38:DC:79:LYS:HD3	38:DC:119:VAL:HB	1.62	0.80
49:BQ:18:LYS:NZ	49:BQ:18:LYS:HA	1.96	0.80
36:BA:2472:G:H5'	36:BA:2473:U:H5''	1.63	0.80
36:DA:11:G:H22	36:DA:2627:G:H5''	1.46	0.80
25:CZ:200:TRP:CE3	25:CZ:203:LEU:HD12	2.16	0.80
36:DA:189:G:H2'	36:DA:205:G:H22	1.45	0.80
43:BH:149:ARG:CA	43:BH:162:ILE:HD11	2.07	0.80
53:BU:91:ASP:O	53:BU:95:LEU:HB2	1.82	0.80
32:B6:32:ASN:O	32:B6:33:LYS:HB2	1.80	0.80
57:BY:81:LYS:HZ3	57:BY:99:CYS:HB2	1.47	0.80
40:DE:117:MET:HE2	40:DE:124:GLY:HA3	1.62	0.80
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	1.96	0.80
39:DD:44:ASN:HB3	39:DD:49:ILE:HA	1.64	0.80
17:AQ:82:MET:O	17:AQ:86:GLU:HG2	1.82	0.80
5:CE:18:ARG:HH11	5:CE:18:ARG:HG3	1.45	0.80
55:DW:17:VAL:O	55:DW:20:VAL:HG22	1.80	0.80
26:D0:34:GLY:O	26:D0:60:PHE:HB2	1.82	0.80
28:B2:8:LYS:O	28:B2:12:GLU:HB3	1.82	0.80
25:AZ:163:PHE:HD1	25:AZ:164:PRO:HD2	1.44	0.80
36:BA:2298:A:H62	36:BA:2318:G:H8	1.29	0.80
36:DA:1049:C:O2	36:DA:1113:U:H4'	1.80	0.80
1:CA:617:G:H1	1:CA:623:C:H42	1.29	0.80
26:D0:50:ASN:O	26:D0:62:LEU:HB2	1.82	0.80
8:CH:13:ILE:O	8:CH:17:THR:HG23	1.82	0.80
25:CZ:277:LEU:HD12	25:CZ:279:GLU:H	1.46	0.80
34:B8:6:THR:CG2	34:B8:63:PRO:HD3	2.12	0.80
48:DP:47:ASP:HB3	48:DP:48:PRO:CA	2.11	0.80
36:DA:2159:G:C2'	36:DA:2160:G:H5''	2.11	0.80
36:DA:1854:A:N6	36:DA:1888:G:H8	1.76	0.80
31:B5:57:VAL:HG12	31:B5:58:LEU:H	1.45	0.80
36:DA:2110:G:N1	36:DA:2178:C:H5	1.80	0.80
38:DC:175:VAL:CG1	38:DC:188:ASN:HB3	2.11	0.80
36:DA:479:A:O2'	36:DA:481:G:H5'	1.81	0.80
2:AB:22:LYS:HE2	2:AB:22:LYS:HA	1.63	0.80
13:CM:88:ARG:HH11	13:CM:88:ARG:HG2	1.46	0.80
36:BA:2185:C:H2'	36:BA:2186:G:C5'	2.10	0.80
39:DD:68:LYS:HB2	39:DD:70:TRP:CH2	2.17	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:313:HIS:CB	25:CZ:403:ILE:HG21	2.10	0.80
25:AZ:325:LYS:HD3	25:AZ:331:HIS:HB3	1.64	0.80
42:DG:64:THR:HG23	42:DG:66:GLN:H	1.47	0.80
40:BE:26:ILE:HG13	40:BE:182:LEU:HB3	1.62	0.80
36:BA:1480:G:C2'	36:BA:1481:U:H5''	2.11	0.80
22:AV:72:C:H3'	22:AV:73:A:H5''	1.63	0.80
1:CA:265:G:H2'	1:CA:266:G:H5''	1.64	0.80
31:D5:41:PRO:HG2	31:D5:44:THR:OG1	1.82	0.80
58:DZ:144:LEU:HD12	58:DZ:149:SER:HA	1.63	0.80
38:DC:123:VAL:HG22	38:DC:127:LEU:CD2	2.10	0.80
36:BA:1536:C:H2'	36:BA:1537:G:H4'	1.62	0.80
36:BA:1389:G:H2'	36:BA:1390:U:C6	2.17	0.80
16:CP:67:THR:N	16:CP:70:ALA:HB3	1.96	0.80
1:CA:547:A:H4'	1:CA:548:G:O5'	1.81	0.80
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.64	0.80
11:AK:27:ASN:HD22	11:AK:28:THR:H	1.30	0.80
14:AN:25:VAL:HG23	14:AN:38:GLY:O	1.81	0.80
36:DA:1907:G:O2'	36:DA:1908:C:H5'	1.82	0.80
48:DP:70:GLN:HB3	48:DP:72:PRO:HD2	1.63	0.80
9:CI:99:LEU:O	9:CI:101:PHE:N	2.14	0.80
43:DH:149:ARG:HA	43:DH:162:ILE:HD11	1.64	0.80
39:BD:43:ARG:HB2	39:BD:54:ARG:HB2	1.63	0.80
56:BX:12:VAL:HB	56:BX:17:ALA:HB1	1.64	0.80
32:D6:13:CYS:O	32:D6:21:TYR:HA	1.82	0.80
46:BN:119:ARG:HH11	46:BN:119:ARG:HG3	1.47	0.80
38:DC:30:LYS:HE2	38:DC:180:PHE:O	1.82	0.80
36:BA:2866:U:H6	36:BA:2868:A:H1'	1.47	0.80
49:DQ:101:ARG:HH11	49:DQ:101:ARG:HG3	1.47	0.80
50:DR:105:ARG:HD2	50:DR:105:ARG:H	1.45	0.80
19:AS:16:LEU:H	19:AS:16:LEU:HD12	1.45	0.80
36:BA:1061:U:H4'	36:BA:1070:A:H1'	1.64	0.80
24:AY:7:G:H3'	24:AY:8:4SU:H5'	1.61	0.80
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.47	0.80
36:BA:27:G:N2	36:BA:512:G:H2'	1.94	0.80
56:BX:35:THR:HG22	56:BX:37:THR:N	1.96	0.80
52:BT:85:LYS:HZ3	52:BT:85:LYS:HB3	1.46	0.80
52:BT:95:ARG:NH1	52:BT:95:ARG:HB3	1.97	0.80
54:BV:29:PRO:HA	54:BV:61:VAL:HG22	1.63	0.80
40:BE:60:ASN:OD1	40:BE:62:PRO:HD2	1.81	0.80
19:CS:63:THR:HG22	19:CS:66:MET:SD	2.21	0.80
31:D5:32:PRO:HG3	31:D5:39:MET:SD	2.22	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1348:G:H2'	36:BA:1349:A:H5''	1.62	0.80
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.81	0.80
23:AX:13:A:H5''	23:AX:14:A:OP1	1.81	0.80
39:DD:275:LYS:HD2	39:DD:276:LYS:H	1.46	0.80
55:BW:6:ILE:HG12	55:BW:104:THR:CG2	2.12	0.80
36:DA:1689:A:H62	36:DA:1698:A:H2	1.29	0.80
24:CY:77:TRP:N	25:CZ:285:ASN:O	2.14	0.79
37:DB:48:A:H4'	51:DS:95:HIS:CD2	2.17	0.79
1:CA:1221:G:H4'	19:CS:77:THR:CG2	2.12	0.79
25:CZ:64:ASN:H	25:CZ:83:PRO:HG2	1.47	0.79
36:DA:2187:G:C2'	36:DA:2188:C:H5'	2.12	0.79
1:CA:1430:C:H5	1:CA:1470:G:N1	1.77	0.79
50:BR:2:ARG:HD3	50:BR:5:LYS:HE2	1.63	0.79
1:CA:737:A:H2'	1:CA:738:C:C6	2.15	0.79
26:B0:26:TYR:HE2	36:BA:857:C:H1'	1.47	0.79
1:AA:979:C:H2'	1:AA:980:C:H5''	1.62	0.79
48:BP:23:PRO:HD2	48:BP:33:ARG:HE	1.45	0.79
26:B0:16:SER:HB2	36:BA:2262:U:C5	2.16	0.79
25:AZ:135:MET:SD	25:AZ:150:VAL:HG11	2.22	0.79
7:CG:120:ILE:O	7:CG:124:LEU:HG	1.81	0.79
38:BC:107:TRP:CH2	38:BC:109:ASP:HA	2.17	0.79
2:CB:200:ILE:HD12	2:CB:200:ILE:H	1.45	0.79
1:CA:186:C:H2'	1:CA:187:C:H6	1.46	0.79
1:CA:973:G:O4'	10:CJ:55:LYS:HE2	1.83	0.79
31:B5:50:GLY:HA3	31:B5:56:LYS:CE	2.11	0.79
25:AZ:20:VAL:HG13	25:AZ:115:GLN:NE2	1.96	0.79
36:BA:925:C:C2'	36:BA:926:A:H5''	2.12	0.79
51:BS:89:ARG:HH11	51:BS:89:ARG:HG2	1.47	0.79
31:D5:40:LYS:CE	31:D5:46:CYS:HB3	2.13	0.79
40:BE:98:PRO:HD3	40:BE:175:VAL:HG12	1.63	0.79
36:BA:1970:A:H5''	36:BA:1971:A:OP1	1.82	0.79
43:BH:42:ARG:O	43:BH:43:VAL:HG13	1.81	0.79
36:BA:2668:G:O2'	36:BA:2669:G:H5'	1.81	0.79
36:BA:2579:C:O2'	40:BE:131:ALA:HB2	1.82	0.79
42:BG:111:LEU:O	42:BG:114:ILE:HG22	1.82	0.79
25:AZ:313:HIS:CB	25:AZ:403:ILE:HG21	2.13	0.79
48:BP:24:GLY:HA3	48:BP:33:ARG:NH1	1.98	0.79
37:BB:7:G:H4'	51:BS:29:PHE:CD2	2.18	0.79
1:AA:201:C:H3'	1:AA:202:U:H5''	1.64	0.79
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.65	0.79
48:DP:122:PRO:HB3	48:DP:141:ALA:HB1	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:2:ALA:HB2	36:DA:2014:A:O2'	1.81	0.79
22:CV:68:C:H2'	22:CV:69:G:H5'	1.63	0.79
48:BP:122:PRO:HB3	48:BP:141:ALA:HB1	1.64	0.79
39:BD:142:VAL:HG23	39:BD:193:VAL:HA	1.64	0.79
4:AD:61:LYS:HA	4:AD:203:VAL:HG13	1.63	0.79
1:AA:973:G:H1'	10:AJ:55:LYS:CE	2.11	0.79
25:CZ:136:ASN:CG	60:CZ:501:GDP:O6	2.21	0.79
43:BH:102:ALA:HB2	43:BH:116:GLU:OE1	1.81	0.79
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	1.82	0.79
32:B6:35:GLU:CB	32:B6:51:GLU:HB2	2.12	0.79
52:DT:50:ILE:HA	52:DT:99:LEU:CD1	2.12	0.79
48:BP:81:GLN:NE2	48:BP:106:LEU:HA	1.98	0.79
34:D8:33:ASN:HA	34:D8:36:LYS:HD2	1.65	0.79
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.17	0.79
3:AC:166:GLU:HA	3:AC:166:GLU:OE1	1.83	0.79
24:CY:7:G:H3'	24:CY:8:4SU:H5'	1.63	0.79
52:BT:38:ASN:C	52:BT:38:ASN:HD22	1.84	0.79
26:B0:40:GLN:HE22	26:B0:43:THR:HA	1.46	0.79
1:AA:675:A:H1'	11:AK:116:HIS:ND1	1.98	0.79
36:BA:708:C:H42	36:BA:723:G:H1	1.28	0.79
51:DS:66:ALA:HB1	51:DS:99:LYS:HG2	1.64	0.79
52:DT:53:ARG:HH11	52:DT:53:ARG:CB	1.93	0.79
5:AE:76:ILE:HG13	5:AE:142:LEU:HD13	1.62	0.79
19:AS:43:GLU:O	19:AS:45:VAL:N	2.15	0.79
51:BS:89:ARG:NH1	51:BS:92:TYR:HA	1.96	0.79
1:CA:624:C:H2'	1:CA:625:G:C8	2.17	0.79
36:DA:751:A:H5'	55:DW:90:ARG:HA	1.65	0.79
20:CT:23:ARG:O	20:CT:27:LYS:HB2	1.82	0.79
52:DT:62:THR:HG22	52:DT:75:ILE:HG13	1.64	0.79
52:BT:89:VAL:HG11	52:BT:91:ARG:HE	1.46	0.79
31:B5:34:PRO:O	31:B5:35:GLU:HG2	1.82	0.79
36:DA:140:G:H1'	36:DA:141:A:H2	1.46	0.79
24:CY:41:C:H6	24:CY:41:C:H5'	1.47	0.79
46:BN:62:VAL:HG21	46:BN:66:LYS:HD2	1.64	0.79
49:DQ:79:LEU:CD2	49:DQ:80:GLU:HG3	2.12	0.79
39:BD:267:SER:O	39:BD:269:PHE:N	2.16	0.79
17:AQ:4:LYS:HE3	17:AQ:6:LEU:HD21	1.65	0.79
36:DA:888:C:H2'	36:DA:889:C:H4'	1.65	0.79
26:D0:20:ARG:HG2	26:D0:20:ARG:HH11	1.48	0.79
6:AF:19:LEU:HD11	6:AF:59:TYR:CZ	2.17	0.79
22:CV:51:U:H2'	22:CV:52:G:H8	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.65	0.79
41:BF:25:PRO:CB	41:BF:119:ARG:HB2	2.11	0.79
13:AM:11:ARG:HG2	13:AM:12:ASN:ND2	1.97	0.79
24:CY:68:C:H2'	24:CY:69:C:H6	1.48	0.79
17:CQ:52:LYS:H	17:CQ:52:LYS:CE	1.96	0.79
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CZ	2.18	0.79
46:DN:7:LYS:H	46:DN:7:LYS:HE3	1.47	0.79
35:B9:1:MET:SD	36:BA:2477:C:H2'	2.23	0.79
50:BR:111:LEU:N	50:BR:111:LEU:HD12	1.97	0.79
25:AZ:317:GLU:HG3	25:AZ:404:LEU:HD21	1.64	0.79
25:AZ:277:LEU:HD12	25:AZ:279:GLU:H	1.47	0.79
25:AZ:68:VAL:O	25:AZ:69:GLU:HB3	1.78	0.79
25:CZ:313:HIS:CD2	25:CZ:403:ILE:HG13	2.17	0.79
42:DG:73:ALA:O	42:DG:85:GLY:HA2	1.83	0.79
43:BH:33:LEU:HD21	43:BH:136:ILE:HG22	1.65	0.79
36:DA:2485:G:H5''	49:DQ:46:GLN:HE21	1.47	0.79
6:AF:22:GLU:O	6:AF:25:ILE:HG22	1.83	0.79
2:AB:126:GLU:HA	2:AB:129:GLU:CD	2.03	0.79
11:CK:54:ARG:O	11:CK:57:THR:HG22	1.83	0.79
12:AL:8:ASN:ND2	17:AQ:34:LYS:HZ3	1.75	0.79
53:DU:17:ILE:HG23	53:DU:39:LEU:HD12	1.65	0.79
1:CA:736:C:H2'	1:CA:737:A:H8	1.47	0.79
1:CA:186:C:H2'	1:CA:187:C:C6	2.18	0.79
41:BF:65:TRP:HZ3	41:BF:73:ALA:O	1.65	0.79
3:CC:58:GLU:HB2	3:CC:65:ALA:HB2	1.64	0.79
28:B2:47:ASN:HA	28:B2:50:ILE:HB	1.62	0.78
41:DF:24:LEU:HB3	41:DF:25:PRO:CD	2.12	0.78
13:CM:101:GLN:HE21	13:CM:101:GLN:H	1.30	0.78
20:CT:75:ASN:HA	20:CT:78:ALA:HB3	1.64	0.78
49:BQ:3:MET:HB2	49:BQ:4:PRO:HD2	1.65	0.78
43:DH:42:ARG:O	43:DH:43:VAL:HG13	1.82	0.78
1:AA:961:U:O2'	1:AA:962:C:H6	1.66	0.78
37:BB:91:C:H5'	49:BQ:17:LEU:O	1.83	0.78
25:AZ:139:ASP:CG	25:AZ:177:LEU:HD11	2.02	0.78
42:BG:45:GLU:HG3	42:BG:53:LEU:HG	1.63	0.78
56:DX:35:THR:O	56:DX:39:ILE:HG12	1.81	0.78
42:BG:11:TYR:OH	42:BG:33:ARG:HB3	1.83	0.78
22:AV:4:C:C2'	22:AV:5:G:H5''	2.13	0.78
36:BA:2801(A):A:C4'	36:BA:2802:G:H5'	2.12	0.78
10:AJ:33:GLN:HB2	10:AJ:75:ILE:CD1	2.13	0.78
58:BZ:115:GLY:HA2	58:BZ:175:VAL:O	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HB3	1.65	0.78
36:BA:2408:U:H2'	36:BA:2409:G:C8	2.18	0.78
25:AZ:27:LEU:HG	25:AZ:31:LEU:HD11	1.65	0.78
50:DR:4:LEU:HD13	50:DR:7:GLY:N	1.98	0.78
29:B3:19:GLN:NE2	29:B3:52:HIS:HE1	1.81	0.78
1:AA:1321:C:H5''	1:AA:1322:C:H5''	1.65	0.78
3:AC:81:GLY:O	3:AC:85:ARG:HD3	1.83	0.78
24:CY:76:A:OP1	25:CZ:274:ARG:HD2	1.82	0.78
1:CA:1271:G:H2'	1:CA:1272:G:C5'	2.07	0.78
28:B2:62:THR:HG21	36:BA:76:C:O2'	1.84	0.78
49:BQ:141:GLN:H	58:BZ:53:ILE:HD12	1.48	0.78
36:DA:2840:C:H2'	36:DA:2841:C:C6	2.18	0.78
58:DZ:10:ARG:HE	58:DZ:36:LYS:HB2	1.49	0.78
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.47	0.78
49:BQ:43:THR:HG22	49:BQ:94:VAL:HG12	1.64	0.78
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.66	0.78
1:AA:547:A:H4'	1:AA:548:G:O5'	1.84	0.78
22:CW:38:A:H2'	22:CW:39:U:H5''	1.65	0.78
28:B2:46:GLN:HB3	28:B2:48:HIS:ND1	1.98	0.78
36:BA:1210:A:H5''	36:BA:1212:G:O4'	1.84	0.78
25:CZ:310:ILE:HD11	25:CZ:380:LEU:O	1.83	0.78
52:BT:88:ILE:HG22	52:BT:89:VAL:HG23	1.64	0.78
24:AY:68:C:H2'	24:AY:69:C:H6	1.47	0.78
47:DO:88:ASN:ND2	47:DO:92:GLU:HB2	1.98	0.78
36:BA:626:U:O2	48:BP:105:LEU:HG	1.83	0.78
1:CA:1251:A:H4'	9:CI:12:GLU:OE2	1.84	0.78
36:BA:658:C:H2'	36:BA:659:C:H6	1.48	0.78
4:CD:109:GLY:O	4:CD:111:ALA:N	2.16	0.78
22:AV:76:A:H3'	36:BA:2585:U:N3	1.98	0.78
17:CQ:18:THR:HG23	17:CQ:69:LYS:HD2	1.66	0.78
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.64	0.78
1:AA:559:A:P	5:AE:126:ARG:HH22	2.06	0.78
4:AD:20:TYR:HD2	4:AD:26:CYS:O	1.66	0.78
21:CU:18:TYR:HB3	21:CU:22:ARG:O	1.83	0.78
40:DE:77:ILE:HG22	40:DE:78:LEU:N	1.97	0.78
34:B8:62:LEU:CD1	36:BA:242:G:H5''	2.11	0.78
3:AC:5:ILE:N	3:AC:5:ILE:CD1	2.46	0.78
46:BN:46:VAL:CG1	46:BN:48:MET:HG3	2.13	0.78
22:CV:36:A:H61	23:CX:19:U:H3	1.29	0.78
36:BA:191:A:O2'	36:BA:192:C:H5'	1.84	0.78
1:AA:63:C:H2'	1:AA:64:G:H5'	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:194:GLU:O	25:AZ:194:GLU:HG2	1.83	0.78
28:B2:31:GLU:O	28:B2:34:GLU:HB2	1.84	0.78
14:CN:7:ILE:HG13	14:CN:8:GLU:N	1.97	0.78
32:B6:11:LEU:HD12	32:B6:51:GLU:HG3	1.63	0.78
4:AD:28:SER:HB3	4:AD:29:PRO:CD	2.13	0.78
39:BD:4:LYS:NZ	39:BD:20:ASP:HA	1.99	0.78
6:CF:61:LEU:O	6:CF:62:TRP:HB2	1.84	0.78
43:DH:19:VAL:HG12	43:DH:20:ALA:H	1.47	0.78
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	2.13	0.78
2:CB:14:GLY:O	2:CB:15:VAL:HG13	1.84	0.78
2:AB:75:LYS:HA	2:AB:78:GLN:HE21	1.46	0.78
36:DA:1721:G:C6	36:DA:1739:U:H5'	2.18	0.78
36:BA:2185:C:C2'	36:BA:2186:G:H5'	2.12	0.78
25:CZ:20:VAL:HG13	25:CZ:115:GLN:NE2	1.98	0.78
25:CZ:19:HIS:HB2	25:CZ:116:THR:OG1	1.83	0.78
36:BA:1569:A:O2'	39:BD:38:LYS:HE2	1.82	0.78
36:DA:1543:C:H3'	36:DA:1544:A:C5'	2.14	0.78
36:DA:2416:C:H2'	36:DA:2417:C:H6	1.48	0.78
57:BY:95:LYS:HE3	57:BY:99:CYS:O	1.83	0.78
36:BA:1227:G:OP1	53:BU:13:LYS:HD2	1.84	0.78
53:BU:13:LYS:HD3	53:BU:13:LYS:N	1.99	0.78
8:AH:119:LEU:HD12	8:AH:123:GLU:HB2	1.65	0.78
1:AA:108:G:H5'	1:AA:109:A:H5''	1.66	0.78
26:B0:23:VAL:HG22	26:B0:38:VAL:HG13	1.64	0.78
52:BT:2:ASN:HB2	52:BT:7:ILE:HD11	1.65	0.78
14:CN:13:THR:N	14:CN:14:PRO:HD2	1.96	0.78
4:AD:59:ARG:HA	4:AD:59:ARG:HE	1.49	0.78
39:DD:71:ASP:HB3	39:DD:103:ARG:HH22	1.48	0.78
48:BP:64:LYS:O	48:BP:66:GLY:N	2.17	0.78
32:B6:17:LYS:HB2	32:B6:18:ARG:HH12	1.49	0.78
8:AH:112:LEU:N	8:AH:112:LEU:HD23	1.96	0.78
32:D6:41:PRO:HD2	32:D6:45:LYS:HA	1.64	0.78
36:DA:761:A:H8	36:DA:761:A:O5'	1.66	0.78
36:BA:419:C:H2'	36:BA:420:C:C6	2.19	0.78
36:DA:2408:U:H2'	36:DA:2409:G:C8	2.18	0.78
1:AA:1186:G:H2'	1:AA:1187:G:H5''	1.65	0.78
40:BE:147:PRO:HB2	40:BE:149:ARG:HG2	1.65	0.78
31:B5:25:LEU:O	31:B5:26:THR:HB	1.82	0.78
36:DA:483:A:O3'	57:DY:49:VAL:HG22	1.84	0.78
42:BG:16:ARG:O	42:BG:20:ILE:HG12	1.84	0.78
1:CA:926:G:O2'	23:CX:16:A:C2	2.37	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:35:ALA:HA	6:CF:67:MET:HB3	1.65	0.78
36:BA:2313:C:H5'	36:BA:2313:C:H6	1.49	0.78
36:BA:1299:G:N2	36:BA:1640:C:H5''	1.98	0.78
46:DN:3:THR:HG22	46:DN:4:TYR:N	1.98	0.78
58:BZ:109:ALA:H	58:BZ:142:SER:HA	1.48	0.78
39:BD:27:THR:HG21	39:BD:83:GLU:HG2	1.65	0.78
36:BA:1854:A:H62	36:BA:1888:G:H8	1.30	0.78
51:DS:59:LYS:HG2	51:DS:60:GLY:H	1.47	0.78
36:DA:1061:U:H4'	36:DA:1070:A:H1'	1.66	0.78
36:BA:2110:G:H1	36:BA:2178:C:H5	1.32	0.78
36:BA:597:U:O2'	48:BP:15:ARG:HG2	1.84	0.78
51:DS:106:ARG:HG2	51:DS:106:ARG:HH11	1.48	0.78
36:DA:622:G:O2'	36:DA:623:G:H5'	1.84	0.78
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.48	0.78
13:AM:119:GLY:O	13:AM:120:LYS:HB2	1.84	0.78
50:DR:67:LEU:HD13	50:DR:76:VAL:HG21	1.66	0.78
36:BA:614(A):U:H4'	36:BA:614(B):G:C5'	2.14	0.78
57:BY:42:VAL:HG21	57:BY:67:LEU:HD12	1.66	0.78
24:AY:20:H2U:H4'	24:AY:21:A:H5'	1.66	0.78
1:CA:624:C:H2'	1:CA:625:G:H8	1.48	0.78
1:CA:984:C:H2'	1:CA:985:C:H6	1.49	0.78
1:CA:1499:A:H5'	1:CA:1499:A:H8	1.49	0.78
36:DA:644:A:H2	36:DA:2369:A:H1'	1.49	0.78
16:CP:1:MET:HG3	16:CP:65:GLN:HG2	1.64	0.78
40:DE:137:HIS:HB3	40:DE:138:PRO:HD2	1.66	0.78
36:BA:2183:C:H2'	36:BA:2184:G:C8	2.18	0.77
25:CZ:19:HIS:HE1	36:DA:2661:G:OP1	1.68	0.77
36:BA:2761:G:H2'	36:BA:2762:G:C5'	2.10	0.77
1:AA:980:C:H5'	1:AA:980:C:C6	2.16	0.77
25:AZ:23:GLY:HA3	25:AZ:105:VAL:HG11	1.65	0.77
36:BA:2726:U:O2	36:BA:2726:U:H5'	1.84	0.77
17:AQ:58:GLU:HB2	17:AQ:74:LEU:HB3	1.65	0.77
36:BA:284:U:H2'	36:BA:285:C:H6	1.49	0.77
52:BT:66:VAL:HA	52:BT:71:GLY:HA2	1.65	0.77
36:BA:2188:C:H2'	36:BA:2189:U:C6	2.19	0.77
4:CD:187:ARG:HH11	4:CD:187:ARG:HB3	1.48	0.77
52:DT:90:GLN:O	52:DT:92:GLY:N	2.17	0.77
38:DC:87:GLU:HG2	38:DC:94:VAL:HG21	1.66	0.77
22:CW:59:U:H2'	22:CW:60:U:H5'	1.63	0.77
1:CA:620:C:H2'	1:CA:621:A:O4'	1.84	0.77
57:DY:2:ARG:HD3	57:DY:3:VAL:HG23	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2659:G:H2'	36:DA:2660:A:H5''	1.65	0.77
38:BC:47:LEU:HD11	38:BC:171:ILE:HG22	1.65	0.77
55:BW:22:ASP:HA	55:BW:25:ARG:HH12	1.48	0.77
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	1.85	0.77
36:DA:1865:G:H5'	36:DA:1866:C:OP2	1.84	0.77
52:DT:89:VAL:CG1	52:DT:91:ARG:HE	1.97	0.77
12:AL:80:HIS:NE2	24:AY:69:C:H5'	1.97	0.77
32:B6:10:LEU:CD2	32:B6:10:LEU:H	1.97	0.77
32:B6:16:CYS:SG	32:B6:48:VAL:HG22	2.25	0.77
58:BZ:69:THR:CG2	58:BZ:90:VAL:HA	2.15	0.77
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	1.99	0.77
46:BN:40:PRO:HB3	53:BU:68:ALA:HB2	1.67	0.77
36:DA:2555:U:H2'	36:DA:2556:C:H5'	1.64	0.77
43:BH:118:PRO:HG2	43:BH:121:ILE:HD12	1.65	0.77
56:DX:24:GLY:O	56:DX:82:GLN:HA	1.85	0.77
1:AA:882:C:O2'	1:AA:883:C:H5'	1.85	0.77
25:CZ:325:LYS:C	25:CZ:327:GLU:H	1.85	0.77
36:BA:607:U:OP1	41:BF:102:PRO:HA	1.83	0.77
51:BS:17:ARG:O	51:BS:20:ARG:HG2	1.82	0.77
25:AZ:136:ASN:CG	60:AZ:501:GDP:O6	2.23	0.77
32:D6:10:LEU:H	32:D6:10:LEU:HD22	1.47	0.77
36:DA:1602:U:H3'	36:DA:1603:A:H5'	1.64	0.77
36:DA:1257:C:H2'	36:DA:1258:C:C6	2.18	0.77
41:DF:34:TRP:HB2	48:DP:10:PRO:O	1.85	0.77
41:DF:37:VAL:CG1	48:DP:7:ARG:HH22	1.97	0.77
26:B0:43:THR:H	36:BA:2331:G:H4'	1.48	0.77
29:B3:19:GLN:HE22	29:B3:52:HIS:HE1	1.27	0.77
22:CW:38:A:H3'	22:CW:39:U:H5''	1.67	0.77
57:BY:2:ARG:HD3	57:BY:3:VAL:HG23	1.66	0.77
55:DW:10:VAL:HG23	55:DW:101:SER:O	1.84	0.77
39:BD:108:PRO:HG2	39:BD:111:LEU:HB2	1.64	0.77
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.18	0.77
36:BA:2189:U:H2'	36:BA:2190:G:H4'	1.65	0.77
58:BZ:96:VAL:HG13	58:BZ:97:GLU:N	1.97	0.77
50:DR:99:LYS:H	50:DR:99:LYS:CD	1.94	0.77
25:CZ:64:ASN:N	25:CZ:64:ASN:HD22	1.83	0.77
1:AA:979:C:C2'	1:AA:980:C:H5''	2.14	0.77
34:B8:50:LEU:C	34:B8:52:LYS:H	1.88	0.77
36:BA:2159:G:C2'	36:BA:2160:G:H5''	2.15	0.77
22:CW:6:G:O2'	22:CW:7:A:H5'	1.85	0.77
48:BP:16:ARG:CZ	48:BP:18:ARG:HG2	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:46:GLU:O	3:CC:47:LEU:HB3	1.85	0.77
2:AB:17:PHE:CB	2:AB:44:LEU:HD11	2.15	0.77
20:CT:20:LEU:O	20:CT:23:ARG:HB3	1.85	0.77
4:AD:145:GLU:HA	4:AD:184:LYS:HA	1.65	0.77
46:DN:73:THR:HG22	46:DN:82:LEU:HD11	1.64	0.77
46:BN:2:LYS:HZ1	54:BV:13:ARG:H	1.29	0.77
13:CM:54:VAL:O	13:CM:58:GLU:HG2	1.84	0.77
25:CZ:194:GLU:HG2	25:CZ:194:GLU:O	1.85	0.77
53:DU:91:ASP:OD1	53:DU:96:ALA:HB2	1.85	0.77
4:CD:100:ARG:HG2	4:CD:102:ASP:OD1	1.84	0.77
39:BD:63:ARG:CG	39:BD:63:ARG:HH11	1.98	0.77
50:BR:99:LYS:CD	50:BR:99:LYS:H	1.92	0.77
13:CM:3:ARG:NH2	13:CM:7:VAL:HG22	1.99	0.77
32:D6:14:THR:HB	32:D6:52:VAL:CG2	2.15	0.77
1:AA:1459:C:H2'	1:AA:1460:A:C8	2.19	0.77
30:B4:22:ILE:H	30:B4:22:ILE:HD12	1.48	0.77
25:CZ:363:MET:HB3	25:CZ:364:PRO:HD2	1.67	0.77
33:D7:37:LYS:HG2	36:DA:458:G:C8	2.19	0.77
28:D2:33:MET:O	28:D2:37:PHE:HB2	1.85	0.77
31:B5:4:HIS:CB	31:B5:5:PRO:HD3	2.13	0.77
9:CI:114:TYR:HD2	10:CJ:60:ARG:HG2	1.50	0.77
10:CJ:61:GLU:HG3	14:CN:58:LYS:CE	2.15	0.77
25:AZ:20:VAL:HG13	25:AZ:115:GLN:HE22	1.48	0.77
51:BS:28:VAL:HG12	51:BS:29:PHE:N	1.97	0.77
31:D5:48:GLU:O	31:D5:49:CYS:SG	2.43	0.77
36:DA:1485:G:H1'	36:DA:1505:C:N4	2.00	0.77
30:D4:7:PRO:HG2	42:DG:65:GLY:HA2	1.67	0.77
27:D1:67:ILE:O	27:D1:70:VAL:HG12	1.85	0.77
2:AB:110:GLN:OE1	2:AB:111:ARG:HG2	1.85	0.77
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.20	0.77
36:DA:1242:A:H5'	36:DA:1243:G:OP2	1.83	0.77
58:BZ:103:ARG:CZ	58:BZ:136:PHE:HB2	2.14	0.77
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.20	0.77
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.00	0.77
50:DR:21:TYR:OH	50:DR:43:GLU:HG2	1.84	0.77
50:BR:18:LEU:HD11	50:BR:22:ARG:CZ	2.15	0.77
40:DE:128:SER:OG	40:DE:129:HIS:N	2.17	0.77
1:AA:1316:G:H4'	14:AN:18:VAL:HG11	1.65	0.77
52:DT:38:ASN:C	52:DT:38:ASN:HD22	1.88	0.77
36:DA:2784:C:H1'	40:DE:37:ARG:HH12	1.49	0.77
36:DA:271(L):U:H5''	36:DA:271(M):G:C5'	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2287:A:H62	36:BA:2344:U:H3	1.32	0.77
36:BA:2068:U:N3	36:BA:2430:A:H2	1.82	0.77
36:DA:1348:G:H2'	36:DA:1349:A:H5''	1.65	0.77
24:AY:41:C:H6	24:AY:41:C:H5'	1.50	0.77
25:CZ:234:ARG:O	25:CZ:289:LEU:HD11	1.84	0.77
1:CA:265:G:H5'	17:CQ:64:PRO:O	1.85	0.77
17:AQ:58:GLU:HG3	17:AQ:75:ARG:HG2	1.67	0.77
38:BC:163:PHE:HB2	38:BC:171:ILE:HD11	1.64	0.77
40:DE:132:HIS:HA	40:DE:135:HIS:NE2	1.99	0.77
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.67	0.77
12:AL:36:VAL:HG12	12:AL:82:VAL:HG22	1.65	0.77
12:AL:55:VAL:HG23	12:AL:68:ALA:O	1.85	0.77
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.19	0.77
42:DG:73:ALA:H	42:DG:87:PRO:CG	1.97	0.77
36:DA:655:A:C4'	36:DA:656:G:H5'	2.15	0.77
36:BA:852:G:H2'	36:BA:853:G:C8	2.20	0.77
38:BC:161:ILE:HG21	38:BC:174:PRO:HG2	1.66	0.77
36:BA:297:C:H2'	36:BA:298:G:O4'	1.83	0.77
36:DA:99:U:H4'	36:DA:102:G:H1'	1.65	0.77
1:CA:1139:G:H5'	1:CA:1140:C:OP1	1.85	0.77
42:BG:53:LEU:C	42:BG:55:LYS:H	1.87	0.77
51:BS:49:VAL:CG1	51:BS:50:SER:H	1.96	0.77
36:DA:250:G:H2'	36:DA:251:A:C8	2.20	0.77
21:AU:17:THR:O	21:AU:22:ARG:NH1	2.18	0.77
36:DA:633:A:H2'	36:DA:634:C:H5'	1.64	0.77
36:BA:2781:A:C5'	36:BA:2782:G:H5'	2.14	0.77
36:BA:2176:A:H3'	36:BA:2177:C:H5''	1.65	0.77
50:BR:32:GLY:O	50:BR:115:GLU:HA	1.84	0.77
1:CA:537:G:H5''	12:CL:113:ARG:HH12	1.50	0.77
53:BU:70:ARG:HA	53:BU:74:LEU:O	1.84	0.77
52:DT:27:THR:O	52:DT:28:VAL:HB	1.84	0.76
42:BG:102:PHE:CZ	42:BG:106:LEU:HD12	2.20	0.76
34:B8:16:ILE:HD12	34:B8:57:ARG:HG2	1.67	0.76
34:B8:15:LYS:HG2	48:BP:65:ARG:NH2	2.00	0.76
51:DS:56:LEU:O	51:DS:56:LEU:HD23	1.85	0.76
27:B1:76:ARG:HH12	27:B1:95:LEU:HD22	1.48	0.76
13:CM:58:GLU:O	13:CM:62:ASN:HB2	1.85	0.76
16:CP:51:VAL:HG12	16:CP:52:ASP:O	1.84	0.76
13:AM:116:THR:HG22	13:AM:116:THR:O	1.83	0.76
50:BR:38:VAL:HB	50:BR:39:PRO:HD3	1.67	0.76
13:AM:113:PRO:O	13:AM:114:ARG:HB3	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:80:ILE:HG22	5:AE:91:LEU:HB2	1.68	0.76
25:CZ:19:HIS:CE1	36:DA:2661:G:OP1	2.38	0.76
36:BA:61:G:H1	36:BA:94:C:H42	1.32	0.76
34:B8:23:VAL:CG1	34:B8:46:ARG:HD3	2.15	0.76
5:CE:152:ARG:HB3	8:CH:43:GLY:HA3	1.67	0.76
36:BA:2159:G:H2'	36:BA:2160:G:H5''	1.68	0.76
22:CW:7:A:H5''	22:CW:8:U:OP2	1.85	0.76
36:BA:2645:G:H3'	36:BA:2646:C:C5'	2.14	0.76
13:AM:5:ALA:HB2	13:AM:66:LEU:HD23	1.67	0.76
51:DS:67:ARG:NH2	51:DS:100:ALA:H	1.83	0.76
27:D1:50:ARG:HG2	27:D1:59:THR:HG22	1.65	0.76
19:CS:53:ASN:ND2	19:CS:55:LYS:H	1.82	0.76
52:DT:28:VAL:O	52:DT:29:ARG:HB2	1.85	0.76
36:BA:2312:U:C4'	42:BG:71:THR:HG21	2.13	0.76
36:BA:806:C:OP2	48:BP:39:LYS:HD2	1.84	0.76
48:DP:16:ARG:NE	48:DP:18:ARG:HG2	2.00	0.76
33:D7:10:ARG:O	33:D7:14:LYS:HG2	1.84	0.76
1:CA:1227:A:H2	1:CA:1228:C:H1'	1.50	0.76
40:DE:195:LEU:O	40:DE:196:VAL:HG22	1.85	0.76
15:AO:25:THR:O	15:AO:29:VAL:HG23	1.84	0.76
13:AM:65:LYS:HD3	13:AM:65:LYS:H	1.50	0.76
1:AA:624:C:H2'	1:AA:625:G:C8	2.21	0.76
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5''	1.66	0.76
25:CZ:135:MET:SD	25:CZ:150:VAL:HG11	2.26	0.76
53:DU:90:VAL:HG21	54:DV:47:VAL:CG2	2.15	0.76
28:B2:29:LYS:CA	28:B2:32:LEU:HB3	2.07	0.76
1:AA:407:G:O2'	4:AD:116:GLN:HG3	1.86	0.76
1:CA:973:G:H1'	10:CJ:55:LYS:CE	2.15	0.76
52:BT:27:THR:O	52:BT:28:VAL:HB	1.85	0.76
12:AL:79:GLU:O	12:AL:80:HIS:HB2	1.82	0.76
36:DA:2183:C:H2'	36:DA:2184:G:H8	1.51	0.76
36:BA:1049:C:H2'	36:BA:1050:A:H8	1.50	0.76
39:BD:24:ILE:HD13	39:BD:25:THR:N	2.00	0.76
39:BD:4:LYS:HZ3	39:BD:20:ASP:HA	1.48	0.76
36:DA:83:G:N2	36:DA:102:G:H2'	1.99	0.76
1:CA:1086:U:H2'	1:CA:1087:G:H5'	1.68	0.76
58:DZ:94:GLU:HB3	58:DZ:95:PRO:HD2	1.66	0.76
51:DS:89:ARG:NH1	51:DS:92:TYR:HA	2.01	0.76
34:B8:61:LEU:HD23	36:BA:593:G:H4'	1.68	0.76
34:B8:50:LEU:HD12	34:B8:51:ALA:H	1.50	0.76
43:DH:66:GLY:HA2	43:DH:69:ARG:HB3	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:23:GLY:O	25:AZ:26:THR:HG22	1.86	0.76
36:DA:28:A:H61	36:DA:512:G:H1'	1.49	0.76
1:CA:1037:C:H2'	1:CA:1038:C:O4'	1.85	0.76
43:DH:16:SER:HB2	43:DH:27:LYS:HB2	1.65	0.76
1:CA:736:C:H2'	1:CA:737:A:C8	2.21	0.76
20:CT:73:HIS:O	20:CT:76:ALA:HB3	1.85	0.76
19:AS:53:ASN:HD21	19:AS:56:GLN:H	1.33	0.76
8:CH:35:ILE:HG23	8:CH:111:ILE:HD13	1.65	0.76
41:DF:148:LEU:HD23	41:DF:191:ARG:HH11	1.50	0.76
36:DA:272(H):C:H2'	36:DA:272(I):U:H5''	1.66	0.76
51:DS:101:LEU:O	51:DS:101:LEU:HD12	1.86	0.76
36:BA:1523:U:H2'	36:BA:1524:G:H8	1.49	0.76
51:DS:88:ASP:OD1	51:DS:89:ARG:N	2.19	0.76
1:CA:1268:A:H2'	1:CA:1269:A:C8	2.20	0.76
42:DG:82:LEU:HD13	42:DG:87:PRO:CB	2.15	0.76
29:D3:45:GLY:C	29:D3:47:VAL:H	1.88	0.76
35:D9:4:ARG:O	35:D9:36:GLN:HA	1.85	0.76
32:D6:20:ASN:ND2	32:D6:21:TYR:H	1.83	0.76
42:DG:6:ALA:C	42:DG:10:LYS:HD3	2.05	0.76
35:B9:1:MET:HA	35:B9:4:ARG:NH2	2.00	0.76
53:BU:6:THR:O	53:BU:9:VAL:HG22	1.85	0.76
38:DC:181:PRO:HB2	38:DC:183:GLU:OE2	1.85	0.76
36:BA:1771:C:H1'	36:BA:1786:A:C8	2.21	0.76
1:AA:353:A:H5'	1:AA:353:A:H8	1.51	0.76
7:CG:20:ASP:HB3	7:CG:23:VAL:HG23	1.68	0.76
14:CN:24:CYS:SG	14:CN:25:VAL:N	2.58	0.76
54:BV:62:LEU:HD21	54:BV:95:LEU:CB	2.16	0.76
32:B6:25:LYS:CE	34:B8:34:TRP:HE1	1.98	0.76
56:BX:12:VAL:HG23	56:BX:13:LEU:N	2.00	0.76
36:DA:1480:G:C2'	36:DA:1481:U:H5''	2.15	0.76
10:CJ:71:LEU:HD12	10:CJ:72:VAL:N	2.01	0.76
6:AF:87:ARG:HG2	6:AF:87:ARG:HH11	1.50	0.76
43:DH:42:ARG:HG2	43:DH:43:VAL:H	1.50	0.76
36:DA:500:G:N2	36:DA:502:A:H3'	2.00	0.76
46:DN:72:TYR:HD2	46:DN:90:MET:HG3	1.49	0.76
56:BX:18:TYR:O	56:BX:20:GLY:N	2.19	0.76
29:B3:43:ILE:O	29:B3:47:VAL:HG23	1.86	0.76
16:CP:22:THR:HG22	16:CP:32:TYR:CB	2.15	0.76
1:AA:1127:G:H1	1:AA:1145:C:N4	1.83	0.76
34:B8:61:LEU:HD12	34:B8:61:LEU:H	1.49	0.76
42:DG:39:ILE:HG22	42:DG:157:ILE:HG23	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CE2	2.21	0.76
36:DA:2416:C:H2'	36:DA:2417:C:C6	2.20	0.76
27:D1:18:ILE:HD11	27:D1:20:ARG:NH2	2.00	0.76
36:DA:297:C:H2'	36:DA:298:G:O4'	1.86	0.76
25:AZ:363:MET:HB3	25:AZ:364:PRO:HD2	1.68	0.76
24:CY:51:G:O2'	25:CZ:338:TYR:CD1	2.39	0.76
36:BA:449:A:H4'	53:BU:3:ARG:HH21	1.51	0.76
38:DC:114:VAL:HG12	38:DC:144:THR:HA	1.68	0.76
22:AW:68:C:H2'	22:AW:69:G:H8	1.48	0.76
29:B3:17:LYS:HA	29:B3:17:LYS:HE2	1.68	0.76
33:B7:29:LYS:HZ2	33:B7:29:LYS:HB3	1.51	0.76
25:AZ:181:GLN:OE1	25:AZ:193:ASN:ND2	2.19	0.76
36:BA:2187:G:C2'	36:BA:2188:C:H5'	2.14	0.76
3:CC:34:LEU:HD22	3:CC:38:ARG:NE	1.96	0.76
12:AL:8:ASN:ND2	17:AQ:34:LYS:NZ	2.32	0.76
36:DA:1301:A:HO2'	36:DA:1302:A:H2'	1.49	0.76
52:BT:91:ARG:O	52:BT:93:ARG:N	2.19	0.76
36:DA:2313:C:H5'	36:DA:2313:C:H6	1.51	0.76
3:AC:5:ILE:N	3:AC:5:ILE:HD12	1.98	0.76
42:DG:139:LEU:CA	42:DG:144:ILE:HG12	2.14	0.76
34:D8:52:LYS:O	34:D8:55:ALA:HB3	1.86	0.76
27:D1:65:SER:O	27:D1:66:HIS:HB2	1.84	0.76
36:DA:2777:G:H5''	36:DA:2778:A:H5'	1.65	0.76
50:DR:32:GLY:O	50:DR:115:GLU:HA	1.86	0.76
22:CV:2:C:H2'	22:CV:3:C:C6	2.20	0.76
39:BD:210:GLY:O	39:BD:211:ARG:HB3	1.85	0.76
20:AT:11:SER:O	20:AT:13:LEU:N	2.19	0.76
25:AZ:277:LEU:CD1	25:AZ:279:GLU:H	1.99	0.76
2:AB:7:VAL:CG1	2:AB:11:LEU:HD12	2.11	0.76
36:BA:2306:C:H5	36:BA:2307:G:HO2'	1.33	0.76
57:DY:96:ILE:CG1	57:DY:99:CYS:HB3	2.13	0.76
19:AS:43:GLU:O	19:AS:45:VAL:HG13	1.86	0.76
42:DG:66:GLN:O	42:DG:92:VAL:HG21	1.86	0.76
39:BD:68:LYS:HB2	39:BD:70:TRP:CH2	2.19	0.76
50:DR:62:ALA:O	50:DR:66:VAL:HG23	1.86	0.76
40:BE:30:PRO:HD3	40:BE:180:ASN:CG	2.07	0.76
36:DA:27:G:H22	36:DA:512:G:H2'	1.49	0.76
24:CY:56:C:C6	36:DA:1067:A:C2	2.73	0.76
58:DZ:6:LYS:HG3	58:DZ:60:GLU:HB2	1.68	0.76
39:BD:155:LEU:HD23	39:BD:177:LEU:HD22	1.68	0.76
39:BD:83:GLU:HB2	39:BD:92:ILE:HD11	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:627:G:O2'	1:CA:628:G:H5'	1.86	0.76
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.66	0.76
12:AL:24:VAL:HG11	12:AL:27:LEU:HD22	1.67	0.76
36:DA:585:G:H2'	36:DA:1251:C:H42	1.50	0.76
36:BA:181:A:H5'	36:BA:181:A:H8	1.49	0.76
2:CB:121:LEU:HG	2:CB:126:GLU:CB	2.16	0.76
24:CY:76:A:H2	25:CZ:270:VAL:HA	1.51	0.75
25:CZ:193:ASN:OD1	25:CZ:195:TRP:HB2	1.86	0.75
36:DA:1210:A:H5''	36:DA:1212:G:O4'	1.86	0.75
10:CJ:50:ILE:N	10:CJ:50:ILE:HD13	2.00	0.75
36:BA:2887:U:H2'	36:BA:2888:C:C6	2.21	0.75
20:AT:100:ILE:HG22	20:AT:102:GLY:H	1.50	0.75
32:B6:18:ARG:HG2	32:B6:18:ARG:NH1	1.99	0.75
36:DA:2176:A:H3'	36:DA:2177:C:H5''	1.66	0.75
1:AA:1116:C:H2'	1:AA:1117:G:H5''	1.68	0.75
36:BA:2469:A:H2'	36:BA:2470:G:H5'	1.67	0.75
36:DA:597:U:O2'	48:DP:15:ARG:HG2	1.86	0.75
36:BA:483:A:O3'	57:BY:49:VAL:HG22	1.86	0.75
50:BR:14:SER:HA	50:BR:17:ARG:HH12	1.51	0.75
36:DA:1701:A:H5'	36:DA:1702:G:OP2	1.85	0.75
21:CU:9:ARG:NH1	21:CU:22:ARG:HA	2.00	0.75
28:B2:6:VAL:O	28:B2:10:LEU:HG	1.87	0.75
39:DD:70:TRP:CZ3	39:DD:150:LYS:HA	2.22	0.75
52:BT:5:ALA:HA	52:BT:8:LYS:HE2	1.68	0.75
36:DA:2761:G:C2'	36:DA:2762:G:H5''	2.17	0.75
36:BA:1598:C:H5'	56:BX:36:LYS:CG	2.16	0.75
46:BN:3:THR:HG22	46:BN:4:TYR:H	1.51	0.75
1:AA:368:U:O4	25:AZ:234:ARG:HD3	1.85	0.75
41:DF:7:TYR:HB3	41:DF:16:GLY:O	1.85	0.75
36:BA:2502:G:H5''	36:BA:2503:A:H5''	1.66	0.75
46:DN:58:ASP:C	46:DN:60:ILE:H	1.87	0.75
36:DA:548:A:H2'	36:DA:549:G:H5'	1.68	0.75
4:AD:149:ALA:O	4:AD:153:ARG:HG3	1.86	0.75
25:CZ:68:VAL:N	25:CZ:68:VAL:C	2.40	0.75
25:CZ:74:LYS:O	25:CZ:75:ARG:HG3	1.85	0.75
48:BP:23:PRO:O	48:BP:33:ARG:HD2	1.86	0.75
30:D4:14:ILE:HG13	30:D4:31:ILE:HB	1.68	0.75
36:DA:1038:C:C2'	36:DA:1039:G:H5''	2.17	0.75
1:AA:371:G:H1'	1:AA:482:A:H1'	1.67	0.75
27:B1:16:ASN:O	27:B1:17:SER:HB3	1.86	0.75
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:59:U:H3	36:DA:68:G:H1	1.30	0.75
24:CZ:65:C:C5'	25:CZ:341:GLN:HG2	2.15	0.75
58:BZ:96:VAL:HG22	58:BZ:97:GLU:H	1.51	0.75
48:BP:47:ASP:HB2	48:BP:51:PHE:HB2	1.68	0.75
48:DP:56:SER:O	48:DP:58:THR:N	2.20	0.75
30:B4:10:VAL:HG23	30:B4:11:PRO:HD2	1.69	0.75
32:D6:8:LYS:O	32:D6:9:LEU:HB3	1.86	0.75
36:DA:2287:A:H62	36:DA:2344:U:H3	1.31	0.75
32:D6:18:ARG:HG2	32:D6:18:ARG:HH11	1.51	0.75
37:DB:91:C:H5'	49:DQ:17:LEU:O	1.86	0.75
1:CA:1116:C:C2'	1:CA:1117:G:H5''	2.16	0.75
43:DH:30:LYS:HG3	43:DH:79:VAL:C	2.05	0.75
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.21	0.75
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.01	0.75
52:DT:88:ILE:HG22	52:DT:89:VAL:HG23	1.67	0.75
36:BA:2884:U:H2'	36:BA:2885:C:H5'	1.66	0.75
32:B6:30:THR:CG2	32:B6:31:PRO:HD2	2.16	0.75
36:DA:1484:G:C2'	36:DA:1485:G:H5''	2.15	0.75
36:DA:1899:G:N2	36:DA:1902:C:N4	2.32	0.75
52:BT:50:ILE:HA	52:BT:99:LEU:HD11	1.68	0.75
36:DA:189:G:H2'	36:DA:205:G:N2	2.00	0.75
46:DN:73:THR:CG2	46:DN:82:LEU:HD11	2.16	0.75
1:AA:627:G:O2'	1:AA:628:G:H5'	1.86	0.75
4:AD:148:VAL:HG12	4:AD:149:ALA:H	1.50	0.75
36:BA:1047:G:H2'	36:BA:1110:G:H21	1.50	0.75
25:CZ:117:ARG:HG2	25:CZ:157:LEU:HD11	1.68	0.75
57:DY:42:VAL:HG21	57:DY:67:LEU:CD1	2.17	0.75
13:AM:94:ARG:HH21	19:AS:81:ARG:HB2	1.49	0.75
6:CF:25:ILE:HD13	6:CF:25:ILE:O	1.85	0.75
1:CA:405:U:H3'	1:CA:406:G:H5'	1.69	0.75
36:DA:1494:A:C2'	36:DA:1495:A:H5''	2.15	0.75
21:CU:9:ARG:HH12	21:CU:23:PRO:HD2	1.52	0.75
48:BP:56:SER:O	48:BP:58:THR:N	2.19	0.75
25:AZ:19:HIS:HB2	25:AZ:116:THR:OG1	1.87	0.75
42:DG:115:ARG:O	42:DG:116:ASP:HB2	1.85	0.75
37:BB:7:G:O5'	51:BS:29:PHE:HE2	1.68	0.75
36:BA:2092:U:C4'	36:BA:2093:G:H5''	2.16	0.75
1:AA:1117:G:C8	1:AA:1117:G:H5'	2.18	0.75
32:D6:7:ILE:HB	32:D6:27:LYS:NZ	2.02	0.75
32:D6:17:LYS:HE2	32:D6:17:LYS:HA	1.68	0.75
48:DP:131:SER:OG	48:DP:134:ALA:HB3	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1336:A:H2'	36:BA:1337:G:C8	2.22	0.75
28:D2:43:GLN:O	28:D2:44:LEU:HB2	1.84	0.75
24:CY:20:H2U:H4'	24:CY:21:A:H5'	1.67	0.75
32:D6:53:LYS:HG2	32:D6:54:ILE:H	1.51	0.75
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.87	0.75
38:DC:34:THR:HG22	38:DC:35:ALA:H	1.51	0.75
51:BS:99:LYS:HB3	51:BS:99:LYS:NZ	2.00	0.75
21:AU:3:LYS:HD3	21:AU:14:TRP:CD1	2.22	0.75
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.86	0.75
27:B1:44:PRO:HG2	27:B1:46:LEU:HG	1.68	0.75
36:BA:1779:U:H5	36:BA:1784:A:N7	1.85	0.75
28:D2:48:HIS:CD2	28:D2:49:LYS:H	2.05	0.75
25:CZ:68:VAL:O	25:CZ:69:GLU:HB3	1.76	0.75
25:CZ:397:ALA:HB1	61:CZ:502:KIR:O27	1.87	0.75
36:BA:267:C:H2'	36:BA:268:C:H6	1.52	0.75
31:B5:31:VAL:HG21	36:BA:2886:G:H1'	1.68	0.75
36:DA:1860:G:H1	36:DA:1882:C:N4	1.83	0.75
13:AM:120:LYS:HA	13:AM:120:LYS:CE	2.13	0.75
36:DA:27:G:N2	36:DA:512:G:H2'	2.01	0.75
1:CA:393:A:O2'	1:CA:394:G:H5'	1.86	0.75
22:CV:44:G:C3'	22:CV:45:U:H5'	2.16	0.75
36:DA:371:A:H61	36:DA:401:A:H5''	1.51	0.75
40:DE:3:GLY:HA3	40:DE:81:ILE:HD12	1.67	0.75
36:BA:45:C:OP2	36:BA:215:G:H5''	1.87	0.75
18:CR:67:ALA:O	18:CR:71:LYS:HG3	1.87	0.75
50:DR:84:ALA:HB3	50:DR:85:PRO:HD3	1.67	0.75
25:CZ:20:VAL:HG13	25:CZ:115:GLN:HE22	1.50	0.75
34:B8:8:LYS:O	34:B8:12:LYS:HG3	1.85	0.75
36:BA:666:G:H4'	48:BP:49:ARG:NH2	2.01	0.75
35:D9:7:VAL:HG22	35:D9:34:GLN:CG	2.16	0.75
1:CA:63:C:C2'	1:CA:64:G:H5'	2.16	0.75
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.68	0.75
36:DA:1058:G:H2'	36:DA:1059:G:H5''	1.67	0.75
50:BR:21:TYR:HB3	50:BR:47:PHE:CD2	2.21	0.75
36:DA:1087:G:O2'	36:DA:1089:G:H5'	1.86	0.75
44:DJ:25:UNK:O	44:DJ:84:UNK:HA	1.87	0.75
36:DA:380:U:H2'	36:DA:381:G:H8	1.51	0.75
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.00	0.75
1:AA:1306:A:P	21:AU:6:ARG:HH22	2.09	0.75
39:DD:28:GLU:H	39:DD:29:PRO:HD2	1.50	0.75
28:B2:24:LEU:HB2	28:B2:64:LEU:HD12	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:27:LEU:HD12	40:BE:180:ASN:O	1.87	0.75
40:DE:116:VAL:CG2	40:DE:117:MET:H	1.99	0.75
51:DS:74:ALA:HB2	51:DS:101:LEU:HD22	1.67	0.75
55:BW:78:GLU:OE2	55:BW:99:ARG:HD2	1.87	0.75
25:AZ:117:ARG:HG2	25:AZ:157:LEU:HD11	1.69	0.75
36:DA:2512:C:H2'	36:DA:2513:G:O4'	1.87	0.75
16:AP:58:TYR:O	16:AP:62:VAL:HG23	1.86	0.75
13:CM:23:TYR:HB3	13:CM:67:GLU:HB3	1.68	0.74
36:BA:27:G:H22	36:BA:512:G:C2'	1.99	0.74
35:D9:34:GLN:HG3	35:D9:35:ARG:H	1.52	0.74
32:D6:15:GLU:HG2	32:D6:47:THR:HG21	1.69	0.74
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.87	0.74
36:DA:1517:G:C8	36:DA:1517:G:H5'	2.22	0.74
47:BO:88:ASN:ND2	47:BO:92:GLU:HB2	2.02	0.74
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.51	0.74
43:DH:167:GLU:HB3	43:DH:168:PRO:HD2	1.69	0.74
46:DN:96:GLU:O	46:DN:100:GLU:HG3	1.87	0.74
36:DA:442:G:H4'	41:DF:46:ARG:HB2	1.68	0.74
40:BE:9:VAL:HG12	40:BE:25:VAL:O	1.87	0.74
2:AB:212:GLN:HE22	2:AB:216:SER:HB2	1.48	0.74
46:BN:30:ILE:O	46:BN:34:LEU:HB2	1.86	0.74
22:CV:4:C:C3'	22:CV:5:G:H5''	2.16	0.74
26:D0:25:ARG:HD2	26:D0:29:GLN:NE2	2.02	0.74
21:AU:6:ARG:CD	21:AU:15:ARG:NH1	2.46	0.74
41:DF:19:GLU:O	41:DF:20:LEU:HG	1.87	0.74
58:DZ:180:VAL:HG22	58:DZ:181:GLU:N	1.99	0.74
31:B5:31:VAL:HG23	36:BA:2886:G:O2'	1.86	0.74
12:AL:80:HIS:CD2	24:AY:69:C:H5'	2.21	0.74
25:AZ:397:ALA:HB1	61:AZ:502:KIR:O27	1.87	0.74
58:DZ:37:VAL:HG23	58:DZ:38:TYR:N	2.02	0.74
51:DS:54:LEU:HD13	51:DS:57:LYS:HA	1.68	0.74
40:DE:24:THR:HG22	40:DE:184:VAL:HG23	1.68	0.74
20:AT:29:LYS:O	20:AT:33:ILE:HG13	1.88	0.74
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	1.69	0.74
2:AB:115:LEU:HB2	2:AB:145:LEU:HD12	1.69	0.74
8:CH:119:LEU:HD23	8:CH:119:LEU:H	1.52	0.74
13:AM:89:GLY:O	13:AM:93:ARG:HD2	1.87	0.74
20:AT:14:LYS:O	20:AT:18:GLN:HG3	1.87	0.74
1:CA:979:C:H3'	1:CA:980:C:C5'	2.13	0.74
36:DA:1210:A:H5'	36:DA:1210:A:H8	1.52	0.74
32:B6:7:ILE:HB	32:B6:27:LYS:NZ	2.03	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:50:ARG:HH11	48:BP:50:ARG:HG2	1.50	0.74
52:BT:23:ARG:HG2	52:BT:120:ARG:NH1	2.01	0.74
54:BV:25:LEU:H	54:BV:92:THR:CG2	1.99	0.74
5:CE:31:LEU:HD21	5:CE:43:LEU:HD11	1.67	0.74
55:DW:20:VAL:HG23	55:DW:47:VAL:HG21	1.69	0.74
46:DN:58:ASP:O	46:DN:60:ILE:N	2.20	0.74
53:DU:24:TYR:HB3	53:DU:28:ARG:HB2	1.66	0.74
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.87	0.74
27:B1:53:VAL:O	27:B1:57:GLU:HA	1.87	0.74
22:CV:21:A:O2'	22:CV:22:G:H5''	1.88	0.74
36:BA:1902:C:H4'	39:BD:244:ARG:HA	1.68	0.74
38:DC:32:LEU:HD13	38:DC:220:PRO:HG2	1.69	0.74
36:DA:2190:G:C2	36:DA:2191:G:H1'	2.22	0.74
48:BP:23:PRO:HA	48:BP:29:LYS:O	1.86	0.74
56:DX:12:VAL:HG23	56:DX:13:LEU:H	1.53	0.74
56:DX:14:SER:HB3	56:DX:17:ALA:HB2	1.69	0.74
34:D8:17:THR:HG23	34:D8:21:LYS:HB2	1.67	0.74
50:BR:55:ALA:HB2	50:BR:79:LEU:HD11	1.68	0.74
38:DC:119:VAL:HG13	38:DC:120:MET:HE3	1.70	0.74
1:CA:358:U:H2'	1:CA:359:U:C6	2.22	0.74
36:DA:590:A:H2'	36:DA:591:C:H6	1.49	0.74
19:CS:12:ASP:H	19:CS:38:SER:HB3	1.51	0.74
28:D2:65:ASN:HD21	36:DA:112:U:H5'	1.49	0.74
36:BA:1348:G:C2'	36:BA:1349:A:H5''	2.17	0.74
40:DE:7:VAL:HG12	40:DE:27:LEU:HB3	1.69	0.74
22:CV:21:A:C2'	22:CV:22:G:H5''	2.18	0.74
22:CW:56:C:HO2'	22:CW:57:G:H8	1.35	0.74
33:D7:29:LYS:HB3	33:D7:29:LYS:NZ	2.02	0.74
1:CA:559:A:P	5:CE:126:ARG:HH22	2.09	0.74
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.69	0.74
4:CD:43:HIS:O	4:CD:45:GLN:N	2.19	0.74
55:BW:33:ARG:HD2	55:BW:52:GLU:OE1	1.87	0.74
25:CZ:85:HIS:HE1	36:DA:2661:G:O2'	1.69	0.74
51:DS:49:VAL:HG12	51:DS:50:SER:N	2.01	0.74
32:B6:17:LYS:HA	32:B6:17:LYS:HE2	1.67	0.74
55:DW:37:ARG:HG3	55:DW:37:ARG:HH11	1.52	0.74
36:DA:691:C:H1'	39:DD:43:ARG:NH1	2.01	0.74
36:BA:2779:U:H1'	36:BA:2781:A:C5	2.21	0.74
22:CW:66:U:H5'	32:D6:28:ARG:HH22	1.53	0.74
25:AZ:113:MET:HB3	25:AZ:114:PRO:HD2	1.70	0.74
22:AV:17:C:H2'	22:AV:18:G:H5'	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:21:VAL:HG21	17:CQ:59:ILE:HD11	1.67	0.74
36:BA:1252:G:N3	53:BU:33:ARG:HD2	2.02	0.74
36:DA:271(A):A:H5'	36:DA:271(B):C:OP2	1.87	0.74
36:BA:945:A:H5'	36:BA:945:A:N3	2.03	0.74
30:B4:12:ALA:HB2	30:B4:29:PRO:HA	1.70	0.74
12:AL:20:LYS:HD2	12:AL:20:LYS:H	1.52	0.74
13:CM:64:TRP:O	13:CM:66:LEU:HD13	1.88	0.74
28:B2:25:VAL:HG22	28:B2:57:ILE:HG21	1.69	0.74
4:AD:138:TYR:CD1	4:AD:139:ARG:N	2.55	0.74
52:DT:28:VAL:HG22	52:DT:47:GLY:H	1.50	0.74
36:BA:2306:C:H4'	42:BG:136:ARG:NH2	2.02	0.74
10:CJ:54:PHE:CD2	10:CJ:55:LYS:HD2	2.22	0.74
35:D9:4:ARG:HB2	36:DA:2466:C:OP1	1.87	0.74
1:AA:1036:G:H5''	1:AA:1037:C:C5	2.22	0.74
57:BY:67:LEU:HD23	57:BY:68:HIS:N	2.01	0.74
55:DW:4:LYS:HG2	55:DW:5:ALA:H	1.52	0.74
40:DE:14:ILE:HD11	40:DE:173:VAL:HG11	1.68	0.74
36:DA:201:C:O2'	36:DA:202:U:H5'	1.86	0.74
58:DZ:123:ASP:O	58:DZ:124:ILE:HG23	1.87	0.74
2:AB:124:SER:OG	2:AB:125:PRO:HD2	1.87	0.74
36:DA:1047:G:H2'	36:DA:1110:G:H21	1.52	0.74
1:CA:719:C:H1'	18:CR:49:LYS:HB3	1.69	0.74
39:DD:27:THR:HG23	39:DD:83:GLU:HG2	1.69	0.74
52:DT:13:ARG:NE	52:DT:13:ARG:HA	2.02	0.74
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.53	0.74
4:AD:19:LEU:O	4:AD:26:CYS:SG	2.46	0.74
10:AJ:54:PHE:CG	10:AJ:55:LYS:HE3	2.22	0.74
53:DU:79:PHE:O	53:DU:83:LEU:HD13	1.86	0.74
25:AZ:313:HIS:CD2	25:AZ:403:ILE:HG13	2.23	0.74
32:B6:43:CYS:O	32:B6:44:ARG:HB2	1.86	0.74
46:DN:43:THR:HB	46:DN:46:VAL:HG11	1.70	0.74
39:BD:155:LEU:HD23	39:BD:177:LEU:CD2	2.18	0.74
36:DA:628:G:C2'	36:DA:629:G:H5''	2.18	0.74
9:CI:4:TYR:HB2	9:CI:19:LEU:HB3	1.69	0.74
42:BG:16:ARG:H	42:BG:17:PRO:HD2	1.50	0.74
36:DA:1494:A:H2'	36:DA:1495:A:H5''	1.69	0.74
46:BN:45:ASN:HD22	46:BN:45:ASN:H	1.35	0.74
3:AC:94:LEU:O	3:AC:95:THR:HB	1.88	0.74
51:DS:92:TYR:O	51:DS:93:LYS:HB2	1.86	0.74
13:CM:2:ALA:N	13:CM:9:ILE:HG23	2.01	0.74
42:BG:96:ARG:O	42:BG:97:ASP:HB2	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:7:VAL:HB	57:DY:8:LYS:CD	2.17	0.74
32:B6:5:VAL:N	32:B6:9:LEU:H	1.86	0.74
34:B8:15:LYS:CG	48:BP:65:ARG:HH21	2.01	0.74
28:D2:68:ARG:HH11	28:D2:68:ARG:CB	2.00	0.74
2:CB:8:LYS:NZ	2:CB:217:ARG:HH12	1.86	0.74
36:BA:1484:G:C2'	36:BA:1485:G:H5''	2.15	0.74
25:CZ:265:THR:HG22	25:CZ:266:VAL:N	2.02	0.74
39:DD:43:ARG:HB2	39:DD:54:ARG:HB2	1.69	0.74
50:BR:116:LEU:O	50:BR:117:VAL:HG12	1.87	0.74
36:DA:953:A:OP2	49:DQ:16:ARG:NE	2.20	0.74
36:DA:1817:G:H2'	36:DA:1818:U:H5'	1.70	0.74
36:DA:1536:C:H2'	36:DA:1537:G:H4'	1.70	0.74
36:BA:83:G:N2	36:BA:102:G:H2'	2.03	0.74
26:D0:10:THR:HG22	26:D0:12:ASN:H	1.52	0.74
36:DA:654(G):C:H1'	36:DA:654(N):G:H22	1.53	0.74
1:CA:1006:C:H2'	1:CA:1007:C:C6	2.23	0.74
55:BW:82:LEU:HD12	55:BW:82:LEU:N	2.02	0.74
5:CE:79:GLU:OE1	5:CE:79:GLU:N	2.19	0.74
36:DA:1379:A:H5''	36:DA:1379:A:N3	2.03	0.74
27:D1:82:LEU:CD2	27:D1:90:ILE:HD12	2.13	0.74
48:DP:29:LYS:N	48:DP:29:LYS:HD2	2.03	0.74
57:DY:28:LYS:HB3	57:DY:37:VAL:HB	1.68	0.74
36:BA:252:G:OP2	48:BP:50:ARG:NH2	2.19	0.74
51:BS:92:TYR:O	51:BS:93:LYS:HB2	1.88	0.74
39:DD:121:PRO:HB3	39:DD:135:PHE:CE2	2.22	0.74
36:BA:1803:A:O3'	39:BD:259:THR:HG21	1.87	0.74
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.87	0.74
22:AV:68:C:H2'	22:AV:69:G:C5'	2.17	0.74
2:CB:215:LEU:O	2:CB:219:VAL:HG23	1.87	0.74
36:DA:1023:U:H2'	36:DA:1024:G:H5'	1.69	0.74
41:DF:125:LEU:HD23	41:DF:125:LEU:H	1.51	0.74
1:AA:192:U:H2'	1:AA:193:C:H6	1.53	0.74
36:DA:1879:C:C3'	36:DA:1880:C:H5''	2.17	0.74
40:DE:9:VAL:HG12	40:DE:25:VAL:O	1.86	0.74
1:CA:858:G:C6	1:CA:869:G:N7	2.56	0.74
39:BD:186:HIS:CD2	39:BD:188:GLU:HB2	2.23	0.74
28:D2:11:GLU:HA	28:D2:14:ARG:HB3	1.68	0.74
1:AA:723:U:H2'	1:AA:723:U:O2	1.87	0.74
25:CZ:277:LEU:CD1	25:CZ:279:GLU:H	2.01	0.74
4:AD:19:LEU:O	4:AD:31:CYS:SG	2.45	0.74
1:AA:1325:C:H5''	21:AU:15:ARG:HH21	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:56:GLY:O	52:BT:59:THR:HG23	1.87	0.74
48:BP:29:LYS:H	48:BP:29:LYS:HD2	1.52	0.74
51:BS:88:ASP:OD1	51:BS:89:ARG:N	2.21	0.74
3:AC:46:GLU:O	3:AC:47:LEU:HB2	1.88	0.74
28:D2:39:ALA:HA	28:D2:45:SER:HB3	1.69	0.74
12:CL:8:ASN:HD22	17:CQ:34:LYS:NZ	1.86	0.74
36:DA:2113:U:H2'	36:DA:2114:A:H8	1.53	0.74
57:BY:10:GLY:HA2	57:BY:27:VAL:CG1	2.14	0.73
36:DA:1971:A:C4	39:DD:241:PRO:HD3	2.23	0.73
42:BG:102:PHE:O	42:BG:103:LEU:HB2	1.86	0.73
48:BP:58:THR:O	48:BP:58:THR:HG22	1.88	0.73
36:DA:2334:G:H5'	51:DS:13:ARG:HD3	1.68	0.73
42:DG:133:LEU:H	42:DG:133:LEU:HD23	1.53	0.73
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.70	0.73
41:DF:84:VAL:HG13	41:DF:85:GLY:N	2.03	0.73
36:DA:2672:G:C2'	36:DA:2673:G:H5''	2.17	0.73
2:AB:92:TYR:HE1	2:AB:94:ASN:HD21	1.33	0.73
19:AS:53:ASN:ND2	19:AS:56:GLN:H	1.86	0.73
4:CD:180:GLY:O	4:CD:182:LYS:HG3	1.88	0.73
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.68	0.73
36:BA:2303:G:H4'	42:BG:124:SER:O	1.87	0.73
1:AA:691:G:H2'	1:AA:692:U:C6	2.23	0.73
22:CW:14:A:H2'	22:CW:15:G:H5'	1.70	0.73
24:CY:76:A:C4	25:CZ:271:GLU:HB2	2.23	0.73
1:AA:1325:C:P	21:AU:15:ARG:HH21	2.12	0.73
51:DS:67:ARG:HH22	51:DS:100:ALA:HB3	1.50	0.73
31:B5:40:LYS:CE	31:B5:46:CYS:HB3	2.18	0.73
25:AZ:310:ILE:HD12	25:AZ:311:THR:N	2.01	0.73
58:BZ:30:ASN:HD22	58:BZ:30:ASN:C	1.92	0.73
40:BE:98:PRO:HG3	40:BE:174:ASP:HA	1.68	0.73
36:DA:1516:C:H2'	36:DA:1517:G:C5'	2.18	0.73
17:AQ:18:THR:HG23	17:AQ:69:LYS:HD2	1.70	0.73
36:BA:1578:U:C2'	36:BA:1579:A:H5''	2.18	0.73
36:BA:2652:C:H2'	36:BA:2653:U:C6	2.23	0.73
16:AP:67:THR:HG22	16:AP:68:ASP:H	1.51	0.73
36:DA:203:C:H3'	36:DA:204:A:H5''	1.71	0.73
14:CN:27:CYS:SG	14:CN:29:ARG:HB2	2.28	0.73
26:D0:38:VAL:HG23	26:D0:59:LEU:CB	2.12	0.73
28:B2:7:ARG:HA	28:B2:10:LEU:HD12	1.70	0.73
3:AC:180:ALA:O	3:AC:181:ASN:CB	2.35	0.73
34:B8:41:ILE:HD12	36:BA:2419:U:OP1	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:15:GLU:OE2	32:B6:41:PRO:HG3	1.88	0.73
42:DG:139:LEU:CB	42:DG:144:ILE:HG12	2.18	0.73
56:BX:40:LYS:HG2	56:BX:41:ASN:ND2	2.04	0.73
36:BA:2298:A:H2'	36:BA:2299:G:O4'	1.88	0.73
25:AZ:136:ASN:ND2	60:AZ:501:GDP:O6	2.21	0.73
36:DA:1311:G:N2	36:DA:1603:A:H62	1.85	0.73
37:DB:56:G:H5'	42:DG:27:ASN:ND2	2.03	0.73
51:BS:106:ARG:HH11	51:BS:106:ARG:HG2	1.51	0.73
22:CV:44:G:C2'	22:CV:45:U:H5'	2.18	0.73
36:BA:760:G:C2'	36:BA:761:A:H5'	2.19	0.73
43:BH:41:MET:HG3	43:BH:42:ARG:O	1.88	0.73
57:DY:44:ILE:HG22	57:DY:45:VAL:N	2.03	0.73
54:DV:72:VAL:HG23	54:DV:85:LYS:HB3	1.69	0.73
36:BA:1865:G:H5'	36:BA:1866:C:OP2	1.87	0.73
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.70	0.73
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.24	0.73
25:CZ:198:LYS:CA	25:CZ:198:LYS:HE2	2.06	0.73
40:DE:55:ASN:CG	40:DE:75:VAL:HG22	2.09	0.73
42:BG:98:ARG:HH11	42:BG:98:ARG:HG2	1.53	0.73
36:DA:621:A:H2'	36:DA:622:G:C5'	2.17	0.73
27:B1:48:LYS:CG	27:B1:50:ARG:HH21	2.01	0.73
51:DS:15:ARG:O	51:DS:18:ILE:HG13	1.88	0.73
35:D9:24:TYR:O	35:D9:25:VAL:HG23	1.88	0.73
28:B2:69:ARG:HD2	28:B2:69:ARG:N	2.03	0.73
36:DA:1311:G:H21	36:DA:1603:A:N6	1.86	0.73
36:DA:1516:C:O2'	36:DA:1517:G:H5''	1.89	0.73
48:BP:75:ILE:N	48:BP:75:ILE:HD12	2.03	0.73
25:AZ:318:ALA:HB1	25:AZ:399:VAL:O	1.88	0.73
50:DR:2:ARG:HD3	50:DR:5:LYS:HE2	1.69	0.73
4:CD:129:ASN:H	4:CD:129:ASN:HD22	1.34	0.73
36:BA:709:U:H2'	36:BA:710:G:H8	1.54	0.73
1:AA:405:U:H3'	1:AA:406:G:H5'	1.69	0.73
2:CB:22:LYS:HE2	2:CB:22:LYS:HA	1.70	0.73
25:AZ:375:ILE:HD12	25:AZ:376:LYS:HG3	1.69	0.73
25:AZ:198:LYS:HE2	25:AZ:198:LYS:CA	2.06	0.73
41:BF:7:TYR:OH	41:BF:10:PRO:HB3	1.88	0.73
42:DG:54:GLU:O	42:DG:57:ALA:HB3	1.88	0.73
42:BG:63:ILE:HA	42:BG:143:GLU:HG3	1.70	0.73
50:DR:99:LYS:N	50:DR:99:LYS:HD2	2.00	0.73
51:DS:34:HIS:HB3	51:DS:53:SER:HB3	1.69	0.73
39:DD:69:ARG:HH11	39:DD:130:ALA:CB	1.99	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:187:C:O2	20:AT:105:SER:HB3	1.88	0.73
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.68	0.73
6:CF:91:VAL:HG12	6:CF:92:LYS:N	2.03	0.73
35:B9:1:MET:HG2	35:B9:31:LYS:O	1.88	0.73
19:AS:53:ASN:C	19:AS:53:ASN:HD22	1.89	0.73
6:CF:19:LEU:O	6:CF:23:LYS:HB2	1.88	0.73
7:CG:15:ASP:HB3	7:CG:20:ASP:H	1.53	0.73
1:AA:356:A:H2	1:AA:368:U:O2	1.70	0.73
46:DN:57:ALA:HB3	46:DN:124:ALA:HA	1.70	0.73
3:CC:84:ILE:O	3:CC:88:ARG:HG3	1.89	0.73
12:CL:45:PRO:HG3	12:CL:53:ARG:HD3	1.70	0.73
46:DN:126:PRO:O	46:DN:127:ASP:HB2	1.88	0.73
36:BA:185:U:H2'	36:BA:186:G:C8	2.23	0.73
36:BA:59:U:H3	36:BA:68:G:H1	1.36	0.73
36:BA:303:U:H2'	36:BA:304:G:C8	2.23	0.73
4:AD:120:LEU:HB3	4:AD:126:ILE:CD1	2.18	0.73
28:B2:62:THR:HG22	28:B2:66:GLU:HB3	1.71	0.73
1:CA:80:G:O2'	1:CA:81:U:H5'	1.89	0.73
26:D0:42:GLY:HA3	36:DA:2331:G:O4'	1.87	0.73
57:DY:8:LYS:HB3	57:DY:28:LYS:NZ	2.04	0.73
19:AS:45:VAL:HG23	19:AS:46:GLY:N	2.03	0.73
36:DA:1539:G:C2'	36:DA:1540:U:H5'	2.18	0.73
48:BP:29:LYS:HD2	48:BP:29:LYS:N	2.02	0.73
32:B6:15:GLU:OE1	32:B6:18:ARG:NE	2.22	0.73
36:DA:657:U:H2'	36:DA:658:C:C6	2.23	0.73
46:BN:21:LYS:HD3	46:BN:22:THR:H	1.53	0.73
1:AA:1452:C:H4'	1:AA:1456:G:H22	1.51	0.73
36:DA:583:G:OP2	53:DU:10:ARG:HD2	1.88	0.73
49:DQ:141:GLN:C	58:DZ:53:ILE:HD12	2.08	0.73
43:DH:12:PRO:HD3	43:DH:48:GLY:HA2	1.68	0.73
16:AP:67:THR:H	16:AP:70:ALA:HB3	1.53	0.73
24:CY:32:OMC:HM22	24:CY:33:U:H5'	1.69	0.73
38:DC:151:GLU:HA	38:DC:154:ARG:HD2	1.71	0.73
1:CA:41:G:H2'	1:CA:42:G:C8	2.23	0.73
7:AG:46:ALA:O	7:AG:50:ILE:HG12	1.88	0.73
53:DU:91:ASP:O	53:DU:95:LEU:HB2	1.88	0.73
1:AA:1125:U:O4	10:AJ:38:ILE:HG12	1.88	0.73
28:B2:35:LEU:HA	28:B2:39:ALA:CB	2.19	0.73
42:DG:52:ILE:HD13	42:DG:52:ILE:H	1.52	0.73
42:BG:6:ALA:C	42:BG:10:LYS:HE2	2.09	0.73
57:DY:31:LEU:HB2	57:DY:32:PRO:HA	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:166:SER:H	58:DZ:167:PRO:HA	1.52	0.73
48:BP:45:LEU:CD1	48:BP:46:LYS:H	2.00	0.73
32:D6:18:ARG:HG2	32:D6:18:ARG:NH1	2.04	0.73
40:DE:59:VAL:HG13	40:DE:60:ASN:H	1.53	0.73
22:CW:38:A:C3'	22:CW:39:U:H5''	2.18	0.73
1:CA:1228:C:OP1	13:CM:115:LYS:HE3	1.87	0.73
25:CZ:375:ILE:HD12	25:CZ:376:LYS:HG3	1.70	0.73
1:CA:45:U:H2'	1:CA:46:G:C8	2.23	0.73
22:AV:44:G:C3'	22:AV:45:U:H5'	2.18	0.73
1:CA:658:G:H2'	1:CA:659:U:H6	1.52	0.73
36:DA:2853:C:H2'	36:DA:2854:G:H8	1.54	0.73
39:DD:35:LYS:HZ3	39:DD:36:PRO:CD	1.94	0.73
28:B2:32:LEU:HA	28:B2:53:LEU:HD22	1.70	0.73
36:BA:336:C:H4'	57:BY:7:VAL:HG21	1.70	0.73
36:DA:1209:G:N2	36:DA:1210:A:H62	1.86	0.73
36:BA:2312:U:C2'	36:BA:2313:C:H5''	2.18	0.73
2:CB:8:LYS:HZ1	2:CB:217:ARG:HH12	1.33	0.73
32:D6:33:LYS:HA	32:D6:33:LYS:HE2	1.69	0.73
1:AA:265:G:H5'	17:AQ:64:PRO:O	1.88	0.73
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.71	0.73
36:BA:1599:C:H2'	36:BA:1600:C:C6	2.23	0.73
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.70	0.73
27:B1:58:ILE:HD11	27:B1:60:PHE:CE2	2.23	0.73
4:AD:129:ASN:HD21	4:AD:144:ASP:HA	1.52	0.73
20:CT:38:LYS:O	20:CT:41:ILE:HG12	1.88	0.73
1:AA:706:A:O2'	11:AK:29:ILE:HD11	1.88	0.73
50:BR:87:TYR:HD1	50:BR:90:ARG:HD2	1.52	0.73
4:AD:59:ARG:HH21	4:AD:62:GLN:HG3	1.53	0.73
31:B5:4:HIS:O	36:BA:2056:G:N2	2.16	0.73
37:DB:48:A:H4'	51:DS:95:HIS:HD2	1.52	0.73
41:BF:6:VAL:HG12	41:BF:7:TYR:H	1.54	0.73
36:BA:2160:G:C8	36:BA:2160:G:H5'	2.23	0.73
36:DA:1654:A:OP1	50:DR:3:HIS:N	2.21	0.73
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.71	0.73
36:BA:20:C:O2'	36:BA:21:A:H5'	1.89	0.73
58:DZ:29:TYR:CB	58:DZ:34:ASN:HB3	2.18	0.73
36:DA:184:C:H2'	36:DA:185:U:C6	2.23	0.73
1:CA:656:C:H4'	15:CO:62:GLN:HE22	1.53	0.73
43:BH:158:HIS:ND1	43:BH:168:PRO:HB2	2.03	0.73
37:DB:25:A:H2'	37:DB:25:A:N3	2.04	0.73
40:DE:87:GLU:HG3	40:DE:89:ASP:H	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:136:ASN:ND2	60:CZ:501:GDP:O6	2.22	0.73
36:BA:1899:G:H21	36:BA:1902:C:N4	1.78	0.73
54:BV:49:THR:HB	54:BV:50:PRO:HD2	1.71	0.73
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.02	0.73
32:B6:30:THR:O	32:B6:32:ASN:HB2	1.87	0.73
25:AZ:242:ILE:CG2	25:AZ:282:ALA:HA	2.19	0.73
41:BF:36:VAL:O	41:BF:40:GLN:HG3	1.89	0.73
36:DA:1803:A:C4'	39:DD:259:THR:HG21	2.18	0.73
36:DA:634:C:H2'	36:DA:635:C:C6	2.24	0.73
41:DF:84:VAL:O	41:DF:86:GLY:N	2.22	0.73
2:AB:94:ASN:N	2:AB:94:ASN:ND2	2.37	0.73
20:CT:78:ALA:HA	20:CT:81:LYS:HD3	1.69	0.73
2:CB:126:GLU:HA	2:CB:129:GLU:CD	2.09	0.73
22:CW:65:G:O3'	32:D6:28:ARG:NH2	2.22	0.73
36:DA:969:U:H2'	36:DA:970:C:C6	2.23	0.73
4:AD:13:ARG:O	4:AD:15:GLU:N	2.22	0.72
53:DU:90:VAL:HG21	54:DV:47:VAL:HG21	1.70	0.72
4:AD:95:GLY:CA	4:AD:188:LEU:HD21	2.18	0.72
57:BY:61:ILE:O	57:BY:62:GLU:HB2	1.87	0.72
31:B5:2:ALA:HA	36:BA:2015:A:C1'	2.15	0.72
47:BO:107:ARG:CD	52:BT:36:GLU:HG3	2.19	0.72
50:BR:7:GLY:O	50:BR:8:ARG:NE	2.22	0.72
17:AQ:4:LYS:HE3	17:AQ:6:LEU:CD2	2.18	0.72
13:AM:118:ALA:HB3	22:AV:29:G:H5'	1.69	0.72
18:AR:45:SER:HB3	18:AR:51:LEU:CD2	2.19	0.72
40:DE:9:VAL:CG1	40:DE:25:VAL:HB	2.19	0.72
24:CY:54:5MU:H3'	24:CY:55:PSU:O4'	1.89	0.72
4:CD:150:GLU:CD	4:CD:151:LYS:H	1.91	0.72
1:CA:1030(A):G:H1'	1:CA:1031:G:H1	1.53	0.72
41:DF:68:LYS:HB3	41:DF:69:HIS:CD2	2.24	0.72
1:AA:686:U:H1'	11:AK:42:TRP:HE1	1.54	0.72
3:CC:173:VAL:O	3:CC:173:VAL:HG12	1.89	0.72
20:CT:45:GLN:HE21	20:CT:45:GLN:H	1.36	0.72
1:AA:977:A:H2'	1:AA:977:A:N3	2.04	0.72
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD12	1.54	0.72
40:DE:104:VAL:HG11	40:DE:188:VAL:HG21	1.71	0.72
25:CZ:25:THR:CB	60:CZ:501:GDP:O2B	2.37	0.72
53:DU:92:ARG:NH2	54:DV:10:LYS:HB3	2.04	0.72
13:CM:11:ARG:HG2	13:CM:12:ASN:ND2	2.04	0.72
4:CD:10:ARG:HH11	4:CD:10:ARG:HG2	1.52	0.72
14:CN:24:CYS:SG	14:CN:26:ARG:N	2.62	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:35:LYS:CG	39:BD:63:ARG:HG2	2.19	0.72
16:CP:67:THR:HG22	16:CP:68:ASP:H	1.53	0.72
32:B6:15:GLU:HB2	32:B6:20:ASN:HB3	1.69	0.72
37:BB:48:A:H4'	51:BS:95:HIS:HD2	1.54	0.72
36:DA:2840:C:H2'	36:DA:2841:C:H6	1.53	0.72
39:DD:91:ARG:HG2	39:DD:91:ARG:NH1	1.98	0.72
40:BE:77:ILE:HG22	40:BE:78:LEU:HD12	1.69	0.72
10:AJ:18:ALA:O	10:AJ:22:LYS:HB2	1.89	0.72
52:DT:25:GLY:CA	52:DT:92:GLY:HA2	2.18	0.72
36:DA:325:G:H2'	36:DA:326:G:C8	2.24	0.72
36:DA:240:G:H3'	36:DA:241:A:H5''	1.72	0.72
18:CR:59:SER:H	18:CR:62:GLU:HB2	1.54	0.72
1:CA:1502:A:H2	1:CA:1505:G:H1	1.36	0.72
36:DA:118:A:N3	36:DA:178:G:H1'	2.04	0.72
43:DH:153:LYS:H	43:DH:153:LYS:CD	1.98	0.72
31:B5:57:VAL:HG12	31:B5:58:LEU:N	2.04	0.72
32:B6:11:LEU:HD23	32:B6:26:ASN:H	1.53	0.72
34:B8:34:TRP:HA	36:BA:2420:C:OP1	1.90	0.72
2:AB:148:TYR:O	2:AB:149:LEU:HD23	1.89	0.72
2:CB:8:LYS:HE2	2:CB:217:ARG:HH22	1.54	0.72
24:CY:4:G:C2'	24:CY:5:G:H5''	2.19	0.72
1:AA:143:A:H2	1:AA:220:G:H1	1.36	0.72
52:DT:38:ASN:ND2	52:DT:38:ASN:O	2.18	0.72
1:CA:505:G:H5'	1:CA:534:U:H2'	1.71	0.72
36:BA:2291:U:H2'	36:BA:2292:C:C6	2.24	0.72
43:DH:91:GLY:HA3	43:DH:94:TYR:CD2	2.24	0.72
25:CZ:20:VAL:HG21	36:DA:2661:G:H5''	1.71	0.72
42:DG:51:ARG:NE	42:DG:51:ARG:HA	2.03	0.72
1:CA:426:G:H4'	4:CD:41:GLY:O	1.87	0.72
25:AZ:74:LYS:O	25:AZ:75:ARG:HG3	1.88	0.72
39:BD:71:ASP:HB3	39:BD:103:ARG:NH2	2.02	0.72
36:DA:2415:G:H4'	48:DP:66:GLY:C	2.09	0.72
36:DA:1407:C:N4	36:DA:1595:G:H1	1.81	0.72
18:CR:69:THR:O	18:CR:72:ARG:HB2	1.88	0.72
17:AQ:52:LYS:HD2	17:AQ:55:ASP:OD2	1.89	0.72
41:DF:53:THR:HG23	41:DF:55:GLY:H	1.54	0.72
10:AJ:9:ARG:HH22	10:AJ:97:GLU:HG3	1.55	0.72
36:DA:2590:A:OP2	39:DD:238:GLY:HA2	1.89	0.72
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	1.88	0.72
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.05	0.72
36:DA:1299:G:H22	36:DA:1640:C:H5''	1.52	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:126:VAL:HA	48:BP:145:PRO:HB2	1.71	0.72
32:D6:26:ASN:HA	36:DA:2286:A:H2	1.53	0.72
46:DN:43:THR:HB	46:DN:46:VAL:CG1	2.19	0.72
36:DA:607:U:OP1	41:DF:102:PRO:HA	1.89	0.72
1:CA:194:C:C2'	1:CA:195:A:H5''	2.20	0.72
1:CA:358:U:H4'	25:CZ:235:GLY:N	2.05	0.72
19:CS:37:ARG:O	19:CS:70:LYS:HD2	1.88	0.72
41:DF:114:VAL:HG21	41:DF:202:PHE:HE2	1.55	0.72
1:AA:1320:C:H5'	1:AA:1320:C:H6	1.55	0.72
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.69	0.72
39:BD:45:ASN:OD1	39:BD:46:GLN:N	2.23	0.72
8:AH:9:MET:SD	8:AH:32:LYS:HG2	2.28	0.72
25:CZ:313:HIS:HB3	25:CZ:403:ILE:CG2	2.16	0.72
52:BT:28:VAL:HG22	52:BT:47:GLY:H	1.52	0.72
20:AT:50:GLU:HA	20:AT:100:ILE:HD13	1.70	0.72
2:AB:96:ARG:HD3	2:AB:148:TYR:CE1	2.25	0.72
58:DZ:72:ARG:CG	58:DZ:89:PHE:HB2	2.18	0.72
13:CM:119:GLY:O	13:CM:120:LYS:HB2	1.90	0.72
10:CJ:38:ILE:HD11	10:CJ:71:LEU:CB	2.18	0.72
36:BA:240:G:H3'	36:BA:241:A:C5'	2.20	0.72
9:CI:88:TYR:O	9:CI:89:ASN:HB2	1.88	0.72
46:DN:23:LEU:HD23	46:DN:24:GLY:N	2.05	0.72
43:BH:167:GLU:HB3	43:BH:168:PRO:HD2	1.71	0.72
36:BA:1842:G:H2'	36:BA:1843:C:C6	2.25	0.72
1:CA:1104:G:O5'	2:CB:111:ARG:HD2	1.90	0.72
57:DY:28:LYS:CB	57:DY:37:VAL:HB	2.20	0.72
58:BZ:152:ALA:HB1	58:BZ:167:PRO:HB2	1.71	0.72
48:BP:39:LYS:HD3	48:BP:40:SER:H	1.54	0.72
1:AA:573:A:H5'	1:AA:573:A:C8	2.23	0.72
32:D6:17:LYS:CB	32:D6:18:ARG:HH12	2.02	0.72
38:DC:100:ILE:HD13	38:DC:127:LEU:HB2	1.72	0.72
20:CT:61:SER:O	20:CT:65:LYS:HG3	1.88	0.72
3:CC:77:ILE:HG22	3:CC:78:GLY:O	1.89	0.72
9:AI:52:ALA:HB3	9:AI:95:LYS:NZ	2.05	0.72
41:BF:136:THR:HG23	41:BF:170:LEU:HD21	1.72	0.72
50:DR:2:ARG:HD2	50:DR:2:ARG:C	2.09	0.72
8:AH:123:GLU:O	8:AH:127:LEU:HD23	1.88	0.72
1:CA:713:G:H2'	1:CA:714:G:C8	2.24	0.72
9:CI:52:ALA:HB3	9:CI:95:LYS:NZ	2.04	0.72
46:BN:108:PRO:O	46:BN:109:LYS:HG3	1.89	0.72
17:AQ:7:THR:O	17:AQ:23:VAL:HG13	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:104:ARG:HE	52:BT:33:LYS:NZ	1.85	0.72
39:BD:70:TRP:CH2	39:BD:150:LYS:HA	2.25	0.72
48:DP:59:LEU:HA	48:DP:61:ARG:CZ	2.19	0.72
36:DA:2887:U:H2'	36:DA:2888:C:C6	2.25	0.72
36:DA:2777:G:H5''	36:DA:2778:A:C5'	2.20	0.72
40:DE:116:VAL:O	40:DE:117:MET:HB2	1.89	0.72
43:DH:19:VAL:HG12	43:DH:20:ALA:N	2.05	0.72
52:BT:13:ARG:NE	52:BT:13:ARG:HA	2.04	0.72
31:B5:20:ARG:HA	31:B5:23:HIS:ND1	2.05	0.72
1:CA:1227:A:C2	1:CA:1228:C:H1'	2.24	0.72
15:AO:87:ILE:HG22	15:AO:88:ARG:N	2.04	0.72
36:BA:1810:A:H2'	36:BA:1811:G:O4'	1.89	0.72
3:AC:188:LEU:HD13	3:AC:195:VAL:HG11	1.71	0.72
2:AB:114:ARG:CZ	2:AB:118:LEU:HD21	2.20	0.72
36:BA:850:C:H2'	36:BA:851:U:H6	1.54	0.72
2:CB:168:THR:CG2	2:CB:192:SER:HA	2.19	0.72
13:CM:94:ARG:HH21	19:CS:81:ARG:HB2	1.55	0.72
3:CC:34:LEU:CD2	3:CC:38:ARG:HE	1.99	0.72
4:CD:107:ARG:HH21	4:CD:194:LEU:CD1	1.98	0.72
54:BV:49:THR:HB	54:BV:50:PRO:CD	2.19	0.72
31:B5:49:CYS:SG	31:B5:50:GLY:N	2.63	0.72
36:DA:2183:C:H2'	36:DA:2184:G:C8	2.25	0.72
36:DA:1599:C:H2'	36:DA:1600:C:H6	1.54	0.72
37:BB:73:A:H2'	37:BB:74:U:H5'	1.72	0.72
14:AN:13:THR:N	14:AN:14:PRO:CD	2.53	0.72
46:DN:46:VAL:CG1	46:DN:48:MET:HG3	2.19	0.72
9:AI:19:LEU:HD21	9:AI:59:PHE:HD2	1.51	0.72
7:CG:115:ARG:O	7:CG:118:VAL:HG22	1.89	0.72
36:BA:886:C:C2'	36:BA:887:A:H4'	2.20	0.72
31:D5:2:ALA:HB3	36:DA:747:U:N1	2.04	0.72
1:AA:975:A:H5'	1:AA:975:A:H8	1.54	0.72
36:BA:1389:G:H2'	36:BA:1390:U:H6	1.53	0.72
36:BA:709:U:H2'	36:BA:710:G:C8	2.25	0.72
36:DA:2591:C:H2'	36:DA:2592:G:C8	2.25	0.72
7:AG:79:ARG:HB2	7:AG:84:ASN:HD22	1.55	0.72
41:BF:84:VAL:C	41:BF:86:GLY:H	1.93	0.72
10:AJ:92:THR:HG23	10:AJ:93:GLY:H	1.55	0.72
43:DH:118:PRO:HG2	43:DH:121:ILE:HD12	1.71	0.72
53:DU:95:LEU:CD1	54:DV:11:GLN:HG3	2.19	0.72
51:DS:24:LEU:HB3	51:DS:85:VAL:HG12	1.71	0.72
21:CU:9:ARG:HH12	21:CU:23:PRO:CD	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:71:G:C2'	22:AW:72:C:H5'	2.18	0.72
43:BH:85:LYS:HG2	43:BH:86:GLU:N	2.04	0.72
1:CA:542:G:P	4:CD:10:ARG:HH21	2.12	0.72
42:BG:29:TRP:CE3	42:BG:29:TRP:HA	2.23	0.72
36:DA:197:A:H8	36:DA:197:A:H5'	1.55	0.72
39:BD:35:LYS:NZ	39:BD:36:PRO:HD3	2.02	0.72
13:AM:4:ILE:HG22	13:AM:5:ALA:N	2.05	0.72
36:BA:2524:G:C8	36:BA:2524:G:H5'	2.23	0.72
58:DZ:113:ALA:CB	58:DZ:146:ILE:HD13	2.20	0.72
3:AC:34:LEU:O	3:AC:38:ARG:HG2	1.90	0.72
9:CI:98:PRO:HB2	9:CI:99:LEU:HD22	1.71	0.72
3:AC:157:ILE:HD12	3:AC:166:GLU:HG2	1.71	0.72
1:AA:624:C:H2'	1:AA:625:G:H8	1.53	0.72
22:AV:17:C:H2'	22:AV:18:G:C5'	2.20	0.72
1:CA:858:G:C5'	1:CA:858:G:H8	2.03	0.72
39:BD:134:ARG:NH1	39:BD:135:PHE:CZ	2.58	0.72
40:BE:34:VAL:HG13	40:BE:48:GLN:HE21	1.54	0.72
10:AJ:50:ILE:H	10:AJ:50:ILE:HD13	1.55	0.72
42:BG:103:LEU:O	42:BG:107:LEU:HD22	1.89	0.71
48:BP:59:LEU:CA	48:BP:61:ARG:HE	2.02	0.71
52:BT:89:VAL:CG1	52:BT:91:ARG:HG3	2.20	0.71
25:AZ:64:ASN:N	25:AZ:64:ASN:HD22	1.83	0.71
36:BA:139:G:H2'	36:BA:139(A):G:H5''	1.70	0.71
34:D8:33:ASN:ND2	36:DA:2419:U:H5''	2.05	0.71
36:DA:1516:C:H2'	36:DA:1517:G:H5''	1.71	0.71
36:BA:298:G:H5'	36:BA:299:A:OP1	1.88	0.71
1:CA:390:C:H4'	16:CP:28:ARG:HH21	1.54	0.71
30:B4:12:ALA:CB	30:B4:29:PRO:HA	2.20	0.71
47:BO:110:GLY:HA2	47:BO:112:MET:HE1	1.70	0.71
57:BY:74:PRO:O	57:BY:75:ILE:HB	1.87	0.71
36:DA:1578:U:H2'	36:DA:1579:A:H5''	1.72	0.71
37:DB:16:G:HO2'	37:DB:17:C:H6	1.36	0.71
54:BV:34:GLU:HA	54:BV:57:VAL:O	1.90	0.71
58:BZ:70:LEU:H	58:BZ:70:LEU:HD23	1.55	0.71
1:AA:1125:U:H1'	10:AJ:5:ARG:HH21	1.49	0.71
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	1.72	0.71
42:BG:72:ARG:HA	42:BG:87:PRO:HD2	1.70	0.71
47:BO:35:VAL:HG22	47:BO:64:ARG:H	1.55	0.71
46:BN:58:ASP:C	46:BN:60:ILE:H	1.92	0.71
40:BE:6:GLY:HA2	40:BE:27:LEU:O	1.90	0.71
36:BA:2469:A:O2'	49:BQ:56:ARG:HD2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2672:G:C3'	36:DA:2673:G:H5''	2.20	0.71
46:DN:133:GLN:HG2	46:DN:135:PRO:HD3	1.70	0.71
4:CD:158:ILE:O	4:CD:162:LEU:HB2	1.90	0.71
31:B5:24:ALA:O	31:B5:25:LEU:HB2	1.90	0.71
33:D7:29:LYS:HZ2	33:D7:29:LYS:HB3	1.54	0.71
39:BD:270:ILE:HD12	39:BD:270:ILE:O	1.90	0.71
36:DA:671:C:O2'	36:DA:672:C:H5'	1.90	0.71
16:AP:51:VAL:HG12	16:AP:52:ASP:O	1.89	0.71
1:CA:882:C:O2'	1:CA:883:C:H5'	1.89	0.71
58:BZ:180:VAL:CG2	58:BZ:181:GLU:H	1.97	0.71
32:B6:11:LEU:O	32:B6:12:GLU:HG2	1.91	0.71
37:DB:105:A:H2'	37:DB:106:G:O4'	1.90	0.71
40:DE:116:VAL:HG21	40:DE:122:PHE:CG	2.24	0.71
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.24	0.71
50:BR:96:ARG:NH1	50:BR:117:VAL:HG11	2.04	0.71
36:DA:2524:G:C8	36:DA:2524:G:H5'	2.24	0.71
36:BA:2866:U:C6	36:BA:2868:A:H1'	2.24	0.71
10:CJ:78:ASN:HD22	10:CJ:81:THR:HG21	1.56	0.71
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.25	0.71
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.55	0.71
1:CA:176:C:H2'	1:CA:177:C:H6	1.54	0.71
1:CA:192:U:O2'	20:CT:57:ARG:HG3	1.89	0.71
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.72	0.71
44:BJ:85:UNK:HG3	44:BJ:86:UNK:H	1.53	0.71
10:CJ:43:ARG:HG3	10:CJ:43:ARG:HH11	1.55	0.71
43:BH:19:VAL:HG12	43:BH:20:ALA:H	1.55	0.71
36:DA:127:A:H5''	36:DA:128:C:O4'	1.90	0.71
25:CZ:13:ASN:HB3	25:CZ:78:SER:HB2	1.71	0.71
38:BC:123:VAL:CG2	38:BC:127:LEU:HD23	2.14	0.71
4:AD:25:ARG:C	4:AD:27:TYR:H	1.90	0.71
48:DP:23:PRO:HB2	48:DP:33:ARG:CG	2.19	0.71
51:BS:59:LYS:HG2	51:BS:60:GLY:N	1.98	0.71
41:BF:24:LEU:HB3	41:BF:25:PRO:CD	2.17	0.71
48:BP:58:THR:C	48:BP:61:ARG:HE	1.93	0.71
52:BT:80:SER:HB3	52:BT:81:PRO:CD	2.20	0.71
42:DG:85:GLY:C	42:DG:87:PRO:HD3	2.10	0.71
32:B6:27:LYS:HB3	32:B6:30:THR:HB	1.73	0.71
19:AS:29:ARG:O	19:AS:31:ILE:HG22	1.89	0.71
36:BA:2334:G:H5'	51:BS:13:ARG:HD3	1.72	0.71
46:BN:21:LYS:HD3	46:BN:22:THR:N	2.06	0.71
25:CZ:267:VAL:HG23	25:CZ:288:VAL:HG13	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:79:LEU:HD23	49:DQ:80:GLU:H	1.53	0.71
3:CC:40:ARG:HH11	3:CC:40:ARG:HG3	1.55	0.71
27:B1:40:ARG:HG2	27:B1:41:ARG:N	2.04	0.71
4:CD:129:ASN:HD21	4:CD:145:GLU:H	1.39	0.71
46:DN:72:TYR:CD2	46:DN:90:MET:HG3	2.26	0.71
22:CW:66:U:H5'	32:D6:28:ARG:NH2	2.04	0.71
50:BR:83:ILE:HG22	50:BR:87:TYR:HE2	1.55	0.71
1:AA:636:U:H2'	1:AA:637:G:H8	1.55	0.71
34:B8:42:ARG:O	34:B8:44:LYS:N	2.23	0.71
36:BA:1473:G:H2'	36:BA:1474:C:O4'	1.90	0.71
36:DA:668:G:H2'	36:DA:670:A:H62	1.54	0.71
36:DA:782:A:H5'	36:DA:783:A:C2	2.25	0.71
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.71	0.71
2:AB:59:GLU:HB2	2:AB:221:LEU:HD11	1.70	0.71
12:CL:41:ARG:HG3	12:CL:42:THR:H	1.55	0.71
10:AJ:16:LEU:HD12	10:AJ:70:ARG:HE	1.54	0.71
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.72	0.71
42:BG:34:LEU:HD23	42:BG:161:THR:HG22	1.72	0.71
14:CN:6:LEU:HD13	14:CN:23:ARG:HH22	1.56	0.71
48:BP:35:HIS:O	48:BP:36:LYS:HG2	1.91	0.71
48:BP:81:GLN:HE22	48:BP:106:LEU:HA	1.54	0.71
38:DC:123:VAL:HG22	38:DC:127:LEU:HD23	1.72	0.71
36:BA:1602:U:H3'	36:BA:1603:A:H5'	1.72	0.71
7:CG:113:GLU:O	7:CG:119:ARG:HD3	1.91	0.71
1:CA:1125:U:O4	10:CJ:38:ILE:HG12	1.90	0.71
41:DF:164:ARG:O	41:DF:168:ARG:HB2	1.91	0.71
9:AI:52:ALA:HB3	9:AI:95:LYS:CE	2.21	0.71
20:AT:26:ASN:ND2	20:AT:26:ASN:H	1.88	0.71
50:DR:2:ARG:HD2	50:DR:2:ARG:O	1.90	0.71
50:DR:7:GLY:O	50:DR:8:ARG:NE	2.23	0.71
22:AV:20:U:H2'	22:AV:21:A:C5'	2.21	0.71
1:AA:337:C:H2'	1:AA:338:A:C8	2.26	0.71
36:DA:1105:U:H2'	36:DA:1106:G:C8	2.25	0.71
7:AG:91:VAL:HG23	7:AG:95:ARG:HD3	1.70	0.71
36:DA:2645:G:H3'	36:DA:2646:C:H5'	1.72	0.71
36:DA:536:A:H2'	36:DA:537:C:C6	2.26	0.71
36:BA:1224:C:O2	36:BA:1224:C:H2'	1.91	0.71
22:CW:35:A:H2'	22:CW:36:A:H8	1.54	0.71
24:CY:76:A:H2	25:CZ:270:VAL:CA	2.04	0.71
36:BA:996:A:H4'	53:BU:92:ARG:HG3	1.72	0.71
48:DP:41:ARG:HB3	48:DP:41:ARG:NH1	1.99	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:222:LEU:HB3	25:CZ:243:GLU:HB2	1.72	0.71
27:D1:64:ALA:O	27:D1:65:SER:C	2.29	0.71
1:CA:1436:U:H2'	1:CA:1437:C:O4'	1.89	0.71
13:AM:2:ALA:N	13:AM:9:ILE:HG23	2.06	0.71
25:AZ:288:VAL:HG12	25:AZ:290:LEU:HD23	1.73	0.71
57:DY:44:ILE:HG22	57:DY:45:VAL:H	1.56	0.71
31:D5:29:THR:HG21	36:DA:2814:C:O2'	1.89	0.71
56:DX:61:GLY:HA3	56:DX:73:ARG:O	1.91	0.71
1:AA:1217:C:OP1	14:AN:9:LYS:HE3	1.90	0.71
55:DW:95:ILE:O	55:DW:95:ILE:HG13	1.90	0.71
36:BA:2693:A:H2'	36:BA:2694:G:H8	1.56	0.71
24:CY:2:G:OP1	25:CZ:90:LYS:HB2	1.89	0.71
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.04	0.71
40:DE:52:LEU:HB3	40:DE:75:VAL:HB	1.72	0.71
42:DG:42:GLY:O	42:DG:89:GLY:HA2	1.90	0.71
25:AZ:313:HIS:HB3	25:AZ:403:ILE:CG2	2.20	0.71
34:D8:52:LYS:H	34:D8:53:PRO:HD2	1.56	0.71
33:B7:1:MET:HG3	33:B7:3:ARG:NH1	2.05	0.71
22:AV:68:C:H2'	22:AV:69:G:H5''	1.71	0.71
22:CV:51:U:H2'	22:CV:52:G:C8	2.25	0.71
22:AV:20:U:H2'	22:AV:21:A:H5'	1.72	0.71
1:AA:1217:C:O2'	1:AA:1218:C:H5'	1.91	0.71
21:AU:5:ASP:O	21:AU:11:GLY:HA3	1.89	0.71
36:BA:740:U:H2'	36:BA:741:G:H8	1.55	0.71
54:DV:39:LEU:HD12	54:DV:47:VAL:HG11	1.73	0.71
36:BA:28:A:N6	36:BA:512:G:H1'	2.06	0.71
58:BZ:166:SER:HB2	58:BZ:167:PRO:CA	2.21	0.71
34:B8:50:LEU:HD12	34:B8:51:ALA:N	2.05	0.71
58:DZ:81:ARG:NH1	58:DZ:81:ARG:HB3	2.04	0.71
25:AZ:25:THR:CB	60:AZ:501:GDP:O2B	2.38	0.71
38:BC:34:THR:HG22	38:BC:35:ALA:N	2.04	0.71
36:DA:1057:A:H2'	36:DA:1058:G:H8	1.55	0.71
20:CT:42:GLN:C	20:CT:45:GLN:HE22	1.94	0.71
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.21	0.71
36:BA:1722:A:O2'	36:BA:1739:U:H5''	1.90	0.71
25:AZ:13:ASN:HB3	25:AZ:78:SER:HB2	1.72	0.71
36:DA:1188:U:O2'	36:DA:1189:A:H5'	1.91	0.71
39:DD:125:ILE:HG22	39:DD:125:ILE:O	1.90	0.71
24:AY:54:5MU:H3'	24:AY:55:PSU:O4'	1.91	0.71
25:CZ:26:THR:HG21	60:CZ:501:GDP:C8	2.26	0.71
51:DS:93:LYS:O	51:DS:95:HIS:N	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:51:ARG:HG3	28:B2:52:ASP:OD1	1.90	0.71
28:B2:67:LYS:HG2	28:B2:70:GLN:HG2	1.73	0.71
1:CA:1220:G:H2'	1:CA:1221:G:H8	1.56	0.71
36:DA:84:A:C5'	57:DY:9:LYS:HD2	2.18	0.71
3:CC:5:ILE:N	3:CC:5:ILE:HD13	2.02	0.71
32:D6:10:LEU:HD22	32:D6:10:LEU:N	2.05	0.71
27:D1:62:VAL:HG11	27:D1:67:ILE:HG23	1.72	0.71
9:CI:19:LEU:HD21	9:CI:59:PHE:CD2	2.26	0.71
19:CS:16:LEU:HD12	19:CS:16:LEU:H	1.56	0.71
22:CW:38:A:C2'	22:CW:39:U:H5''	2.21	0.71
25:CZ:113:MET:HB3	25:CZ:114:PRO:HD2	1.73	0.71
2:AB:215:LEU:O	2:AB:219:VAL:HG23	1.91	0.71
47:DO:35:VAL:CG2	47:DO:64:ARG:H	2.03	0.71
22:AW:65:G:H4'	32:B6:28:ARG:NH2	2.05	0.71
41:DF:160:ASN:HD21	41:DF:162:LEU:HD13	1.56	0.71
43:BH:37:VAL:HG12	43:BH:38:SER:N	2.06	0.71
54:DV:38:LEU:O	54:DV:52:VAL:HG12	1.90	0.71
4:AD:100:ARG:HH21	4:AD:118:ARG:NH1	1.87	0.71
48:DP:23:PRO:HB2	48:DP:33:ARG:CD	2.21	0.71
48:DP:39:LYS:HD3	48:DP:40:SER:H	1.55	0.71
25:CZ:65:THR:HA	25:CZ:83:PRO:HD3	1.73	0.71
58:BZ:114:GLY:H	58:BZ:146:ILE:CG2	2.00	0.71
1:AA:1003:G:H21	1:AA:1039:C:H42	1.39	0.71
1:AA:572:A:H5'	1:AA:573:A:OP2	1.91	0.71
27:B1:94:LEU:H	27:B1:94:LEU:HD12	1.54	0.71
58:DZ:109:ALA:HB3	58:DZ:144:LEU:O	1.90	0.71
43:BH:42:ARG:HG2	43:BH:43:VAL:H	1.55	0.71
1:CA:858:G:H5''	1:CA:858:G:H8	1.56	0.71
1:AA:45:U:H2'	1:AA:46:G:C8	2.26	0.71
41:DF:66:PRO:HD2	41:DF:70:THR:HG21	1.72	0.71
36:DA:363:G:H2'	36:DA:363(A):A:H8	1.56	0.71
30:B4:16:CYS:SG	30:B4:17:GLY:N	2.64	0.71
1:AA:102:G:O2'	1:AA:103:C:H5'	1.91	0.71
42:DG:125:PHE:HB3	42:DG:130:ASN:O	1.90	0.71
25:AZ:68:VAL:O	25:AZ:69:GLU:HG2	1.90	0.70
10:AJ:35:SER:HB3	10:AJ:73:ASP:HB2	1.72	0.70
1:CA:1060:C:H2'	1:CA:1061:G:H8	1.56	0.70
39:BD:30:GLU:CG	39:BD:63:ARG:HH21	2.02	0.70
39:BD:35:LYS:HG2	39:BD:63:ARG:HA	1.72	0.70
32:B6:30:THR:HG22	32:B6:31:PRO:HD2	1.73	0.70
36:DA:130:C:O3'	36:DA:1349:A:H1'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1053:G:H4'	1:AA:1054:C:C5'	2.18	0.70
36:DA:2248:C:H2'	36:DA:2249:U:H5'	1.73	0.70
5:CE:144:THR:O	5:CE:148:VAL:HG23	1.91	0.70
4:CD:59:ARG:CA	4:CD:59:ARG:HE	2.04	0.70
46:BN:23:LEU:HD23	46:BN:24:GLY:N	2.06	0.70
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.73	0.70
49:BQ:56:ARG:CG	49:BQ:56:ARG:HH11	2.04	0.70
37:DB:40:U:C2	37:DB:43:C:H5''	2.26	0.70
9:AI:11:LYS:O	9:AI:12:GLU:HB2	1.90	0.70
56:BX:65:ARG:HB2	56:BX:70:LEU:HD23	1.73	0.70
36:BA:1782:C:H1'	36:BA:2609:U:H5''	1.73	0.70
14:AN:57:ARG:HH11	14:AN:57:ARG:CB	2.03	0.70
57:BY:37:VAL:HG22	57:BY:69:ALA:HB2	1.73	0.70
40:DE:75:VAL:O	40:DE:77:ILE:N	2.24	0.70
30:D4:5:ILE:HG12	30:D4:5:ILE:O	1.91	0.70
36:BA:650:C:C3'	36:BA:651:G:H5''	2.22	0.70
38:DC:119:VAL:HG13	38:DC:120:MET:CE	2.21	0.70
48:DP:85:LEU:HA	48:DP:88:LEU:HB3	1.73	0.70
58:DZ:113:ALA:HB3	58:DZ:146:ILE:HG21	1.73	0.70
41:DF:18:ARG:NH1	41:DF:196:LEU:HD22	2.06	0.70
49:DQ:17:LEU:HD13	49:DQ:39:PRO:HB2	1.73	0.70
41:DF:167:ALA:HB1	41:DF:173:VAL:CG1	2.20	0.70
1:CA:260:G:H2'	1:CA:261:U:C6	2.27	0.70
20:CT:57:ARG:NH1	20:CT:102:GLY:HA3	2.06	0.70
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.26	0.70
36:DA:614(A):U:H4'	36:DA:614(B):G:H5''	1.71	0.70
36:DA:1434:A:H61	36:DA:1558:A:N6	1.89	0.70
26:B0:50:ASN:HD22	26:B0:63:VAL:CG2	2.04	0.70
1:AA:1499:A:H5'	1:AA:1499:A:H8	1.55	0.70
22:CW:13:C:O2	22:CW:13:C:H2'	1.91	0.70
43:DH:137:ASP:O	43:DH:138:LYS:HB2	1.90	0.70
10:AJ:55:LYS:N	10:AJ:55:LYS:CE	2.54	0.70
41:BF:125:LEU:HD23	41:BF:125:LEU:N	2.06	0.70
41:BF:175:THR:O	41:BF:176:LEU:HB2	1.89	0.70
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.72	0.70
36:DA:271(L):U:C5'	36:DA:271(M):G:H5'	2.18	0.70
1:CA:1047:G:H5''	14:CN:4:LYS:HE2	1.73	0.70
14:CN:4:LYS:O	14:CN:7:ILE:HG12	1.91	0.70
47:BO:71:ARG:NH1	47:BO:104:ARG:HG2	2.06	0.70
32:B6:18:ARG:HH11	32:B6:18:ARG:CG	2.04	0.70
56:DX:49:VAL:HG12	56:DX:87:GLN:HB3	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:259:THR:HG22	39:DD:260:ARG:N	2.06	0.70
32:D6:10:LEU:H	32:D6:10:LEU:CD2	2.04	0.70
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	1.91	0.70
29:D3:29:ARG:HH11	29:D3:29:ARG:HB2	1.57	0.70
58:BZ:86:VAL:HG12	58:BZ:87:ASP:N	2.05	0.70
30:B4:30:GLU:C	30:B4:31:ILE:HD12	2.11	0.70
43:DH:83:TYR:CB	43:DH:135:GLY:H	2.04	0.70
6:CF:33:TYR:O	6:CF:35:ALA:N	2.22	0.70
36:BA:1657:C:H2'	36:BA:1658:C:H6	1.56	0.70
9:AI:10:ARG:HD3	9:AI:75:ASP:HB3	1.72	0.70
42:BG:130:ASN:OD1	42:BG:160:VAL:HA	1.91	0.70
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.57	0.70
36:BA:108:U:H2'	36:BA:109:G:C8	2.27	0.70
52:BT:39:ARG:HD2	52:BT:39:ARG:H	1.56	0.70
27:D1:86:SER:HB2	27:D1:89:GLU:HB2	1.73	0.70
42:DG:114:ILE:O	42:DG:116:ASP:N	2.24	0.70
34:D8:50:LEU:C	34:D8:52:LYS:H	1.93	0.70
1:CA:975:A:H4'	1:CA:976:G:C5'	2.21	0.70
46:BN:46:VAL:HG11	46:BN:48:MET:HG3	1.72	0.70
41:BF:110:LEU:HD12	41:BF:206:ILE:HD11	1.73	0.70
36:DA:2762:G:H8	36:DA:2762:G:H5'	1.56	0.70
26:B0:40:GLN:NE2	26:B0:43:THR:HA	2.06	0.70
4:CD:149:ALA:O	4:CD:153:ARG:HG3	1.92	0.70
13:CM:118:ALA:HB3	22:CV:29:G:H5'	1.74	0.70
47:BO:114:ILE:HD12	47:BO:114:ILE:H	1.56	0.70
38:BC:16:PRO:HG2	38:BC:17:ASN:OD1	1.91	0.70
9:AI:86:VAL:CG2	9:AI:93:ARG:HG2	2.21	0.70
36:BA:2087:G:O2'	36:BA:2088:G:H5'	1.90	0.70
48:DP:75:ILE:HD12	48:DP:75:ILE:N	2.07	0.70
38:BC:127:LEU:O	38:BC:129:ARG:N	2.24	0.70
25:CZ:397:ALA:HB2	61:CZ:502:KIR:H252	1.72	0.70
22:AW:72:C:H2'	22:AW:73:A:C5'	2.11	0.70
48:DP:38:GLN:O	48:DP:39:LYS:HB2	1.89	0.70
43:BH:44:VAL:HG12	43:BH:45:VAL:N	2.02	0.70
56:DX:27:THR:HG22	56:DX:80:ILE:HB	1.73	0.70
56:DX:55:ASN:HB2	56:DX:80:ILE:CG2	2.21	0.70
36:BA:1351:C:H5	36:BA:1380:G:N1	1.87	0.70
22:AW:18:G:H22	22:AW:55:U:H6	1.36	0.70
48:DP:83:VAL:CG1	48:DP:112:LEU:HD21	2.22	0.70
37:DB:56:G:H4'	37:DB:57:A:O5'	1.91	0.70
36:DA:814:C:H2'	36:DA:815:C:C6	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:148:LEU:HD23	41:DF:191:ARG:NH1	2.06	0.70
3:CC:142:MET:C	3:CC:144:SER:H	1.94	0.70
3:AC:175:LEU:HD23	3:AC:182:ILE:HD12	1.74	0.70
13:CM:97:PRO:HA	13:CM:110:ARG:HD3	1.74	0.70
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.72	0.70
50:DR:45:ARG:O	50:DR:49:ASP:HB2	1.91	0.70
45:BK:55:UNK:HA	45:BK:69:UNK:HA	1.73	0.70
6:CF:15:ASP:OD2	6:CF:17:SER:HB3	1.90	0.70
15:AO:74:ASP:OD1	15:AO:76:GLU:HB3	1.91	0.70
1:CA:1053:G:H4'	1:CA:1054:C:C5'	2.21	0.70
1:AA:979:C:H3'	1:AA:980:C:C5'	2.22	0.70
1:AA:1039:C:H6	1:AA:1040:U:C5	2.05	0.70
36:DA:2415:G:H2'	36:DA:2416:C:C6	2.25	0.70
5:CE:152:ARG:O	8:CH:64:LYS:NZ	2.23	0.70
51:DS:52:SER:CB	51:DS:55:ALA:HB3	2.20	0.70
52:BT:50:ILE:HA	52:BT:99:LEU:CD1	2.22	0.70
36:DA:637:A:OP2	48:DP:115:LEU:HB2	1.91	0.70
39:DD:43:ARG:HH21	39:DD:49:ILE:CG2	2.04	0.70
8:CH:85:ARG:HH12	8:CH:134:ILE:HG23	1.55	0.70
29:D3:17:LYS:HA	29:D3:17:LYS:HE2	1.73	0.70
36:BA:2074:U:H2'	36:BA:2075:U:C6	2.26	0.70
5:CE:81:GLU:OE1	5:CE:90:VAL:HG22	1.91	0.70
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.73	0.70
36:DA:30:G:O2'	36:DA:31:C:H5'	1.90	0.70
1:CA:673:G:H2'	1:CA:674:G:C8	2.25	0.70
36:BA:1151:G:H2'	36:BA:1152:C:H6	1.55	0.70
42:DG:40:ASN:HB3	42:DG:156:ASP:OD2	1.91	0.70
1:AA:495:A:H61	4:AD:119:GLN:HE22	1.39	0.70
36:BA:1517:G:H8	36:BA:1517:G:H5'	1.57	0.70
36:DA:266:G:C2'	36:DA:267:C:H5''	2.19	0.70
40:BE:52:LEU:CB	40:BE:75:VAL:HB	2.22	0.70
52:BT:90:GLN:C	52:BT:92:GLY:H	1.93	0.70
41:BF:201:VAL:HA	41:BF:204:ASN:HD22	1.56	0.70
1:AA:1186:G:C2'	1:AA:1187:G:H5''	2.22	0.70
36:BA:2712:U:H1'	36:BA:2712(A):A:C8	2.27	0.70
13:AM:87:TYR:HE1	19:AS:81:ARG:HH22	1.37	0.70
39:DD:24:ILE:O	39:DD:26:LYS:N	2.25	0.70
1:CA:1502:A:H2	1:CA:1505:G:N1	1.87	0.70
49:BQ:1:MET:HE2	49:BQ:44:ALA:HB1	1.72	0.70
1:CA:9:G:OP1	5:CE:122:GLU:HG3	1.92	0.70
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:2:PHE:HB2	54:DV:42:GLY:HA2	1.73	0.70
36:BA:1403:C:H5''	36:BA:1471:A:H1'	1.73	0.70
36:DA:383:U:H2'	36:DA:385:C:H5	1.56	0.70
56:BX:49:VAL:HG12	56:BX:87:GLN:HE21	1.55	0.70
38:BC:132:GLY:N	38:BC:133:PRO:HD2	2.06	0.70
36:DA:45:C:OP2	36:DA:215:G:H5''	1.92	0.70
54:DV:34:GLU:O	54:DV:36:PRO:HD3	1.92	0.70
28:B2:15:LYS:CG	28:B2:16:LEU:H	2.01	0.70
36:BA:1209:G:H21	36:BA:1210:A:N6	1.88	0.70
25:AZ:320:VAL:HG13	25:AZ:397:ALA:O	1.92	0.70
2:CB:94:ASN:H	2:CB:94:ASN:ND2	1.88	0.70
29:B3:35:ARG:HD3	29:B3:37:LEU:HD11	1.72	0.70
40:BE:77:ILE:HG22	40:BE:78:LEU:N	2.06	0.70
3:CC:112:SER:HB3	3:CC:115:LEU:HB2	1.72	0.70
52:DT:23:ARG:HA	52:DT:52:ILE:CD1	2.21	0.70
40:BE:59:VAL:HG13	40:BE:60:ASN:H	1.55	0.70
37:DB:40:U:O2	37:DB:43:C:H5''	1.91	0.70
54:BV:2:PHE:HB2	54:BV:42:GLY:HA2	1.72	0.70
36:DA:2373:G:H2'	36:DA:2374:C:C6	2.27	0.70
36:BA:671:C:O2'	36:BA:672:C:H5'	1.91	0.70
6:AF:98:LEU:H	6:AF:98:LEU:HD12	1.55	0.70
8:CH:49:GLU:HG3	8:CH:49:GLU:O	1.92	0.70
2:CB:7:VAL:CG1	2:CB:11:LEU:HD12	2.22	0.70
42:DG:19:LEU:HD13	42:DG:32:PRO:HG2	1.72	0.70
13:AM:23:TYR:HD1	13:AM:23:TYR:O	1.75	0.70
36:BA:1336:A:H2'	36:BA:1337:G:H8	1.56	0.70
1:CA:1117:G:H5'	1:CA:1117:G:H8	1.56	0.70
33:B7:29:LYS:NZ	33:B7:29:LYS:HB3	2.07	0.70
22:AV:21:A:C2'	22:AV:22:G:H5''	2.22	0.70
43:BH:94:TYR:HD1	43:BH:107:VAL:HA	1.57	0.70
36:BA:2342:C:O2'	36:BA:2374:C:H5''	1.91	0.70
41:DF:52:LYS:HA	41:DF:56:GLU:OE1	1.92	0.70
36:DA:1434:A:H61	36:DA:1558:A:H62	1.39	0.70
9:AI:10:ARG:HD3	9:AI:75:ASP:CB	2.22	0.70
40:BE:38:THR:HG22	40:BE:40:GLU:H	1.56	0.70
36:DA:880:G:H22	36:DA:897:C:H42	1.37	0.70
2:CB:33:TYR:HB2	2:CB:43:ASP:HB2	1.73	0.70
32:B6:42:TRP:CE3	32:B6:42:TRP:HA	2.27	0.70
33:B7:26:GLY:O	33:B7:30:VAL:HG23	1.91	0.70
3:AC:79:ARG:CB	3:AC:79:ARG:HH11	2.00	0.70
25:CZ:23:GLY:O	25:CZ:26:THR:HG22	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:244:ARG:HG2	39:BD:245:PRO:HG3	1.74	0.70
43:BH:85:LYS:NZ	43:BH:132:ARG:HA	2.01	0.70
36:DA:330:A:O2'	36:DA:331:A:H8	1.74	0.70
25:AZ:397:ALA:HB2	61:AZ:502:KIR:H252	1.73	0.70
36:BA:587:C:C5	48:BP:33:ARG:HG2	2.27	0.70
53:DU:82:GLY:O	53:DU:84:LYS:N	2.24	0.70
32:D6:16:CYS:SG	32:D6:48:VAL:HG22	2.31	0.70
53:DU:16:LYS:O	53:DU:20:LEU:HD23	1.92	0.70
55:DW:6:ILE:HG12	55:DW:104:THR:CG2	2.22	0.70
39:BD:85:ASP:HB2	39:BD:92:ILE:HG23	1.72	0.70
25:CZ:101:GLY:HA3	25:CZ:210:ILE:HD12	1.74	0.70
7:AG:37:ASN:HD21	9:AI:40:LEU:HA	1.57	0.70
42:BG:125:PHE:HA	42:BG:130:ASN:O	1.92	0.70
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	1.74	0.70
10:AJ:85:LEU:O	10:AJ:87:THR:N	2.25	0.70
36:BA:1590:U:H2'	36:BA:1591:G:C8	2.26	0.70
42:DG:138:GLN:HB3	42:DG:153:ARG:O	1.91	0.70
28:B2:29:LYS:HG2	28:B2:32:LEU:CD1	2.21	0.69
57:BY:28:LYS:HG2	57:BY:39:VAL:HG22	1.74	0.69
41:BF:125:LEU:HD23	41:BF:125:LEU:H	1.54	0.69
52:DT:74:ARG:C	52:DT:75:ILE:HD12	2.12	0.69
58:BZ:130:PRO:CA	58:BZ:133:ILE:HD11	2.13	0.69
38:DC:127:LEU:O	38:DC:129:ARG:N	2.25	0.69
48:DP:148:LEU:O	48:DP:149:GLU:HB2	1.91	0.69
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.73	0.69
1:AA:1392:G:H21	1:AA:1502:A:H8	1.37	0.69
40:BE:117:MET:CE	40:BE:136:ARG:HA	2.22	0.69
36:BA:389:G:C6	48:BP:70:GLN:HG3	2.27	0.69
24:CY:64:U:H1'	25:CZ:391:GLY:H	1.55	0.69
36:DA:1494:A:H3'	36:DA:1494:A:N3	2.06	0.69
16:AP:53:VAL:HG23	16:AP:54:GLU:H	1.56	0.69
49:DQ:19:GLY:H	49:DQ:98:LYS:HD3	1.56	0.69
22:CW:11:C:H2'	22:CW:12:U:H6	1.56	0.69
37:DB:3:C:H42	37:DB:118:G:H1	1.36	0.69
4:AD:11:LEU:HD13	4:AD:66:ARG:HD3	1.73	0.69
36:BA:612:C:H2'	36:BA:613:G:C5'	2.08	0.69
36:DA:2309:A:H2'	36:DA:2310:A:H5''	1.73	0.69
36:DA:1209:G:H21	36:DA:1210:A:N6	1.90	0.69
1:CA:1054:C:N4	24:CY:34:C:C2	2.60	0.69
52:BT:29:ARG:HD3	52:BT:30:VAL:H	1.57	0.69
31:B5:48:GLU:O	31:B5:49:CYS:SG	2.50	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D3:44:ARG:O	29:D3:47:VAL:HB	1.92	0.69
32:B6:45:LYS:HB2	36:BA:2371:G:H4'	1.74	0.69
50:DR:60:LEU:O	50:DR:64:ARG:HG3	1.91	0.69
52:DT:23:ARG:HA	52:DT:52:ILE:HD11	1.72	0.69
36:DA:2657:A:H2'	36:DA:2658:C:H5'	1.74	0.69
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.26	0.69
36:BA:1038:C:H2'	36:BA:1039:G:H5''	1.74	0.69
36:BA:760:G:H2'	36:BA:761:A:H5'	1.72	0.69
19:CS:31:ILE:HG23	19:CS:49:ILE:HG23	1.71	0.69
49:DQ:46:GLN:NE2	49:DQ:126:PRO:HD3	2.07	0.69
8:CH:86:ILE:HD11	8:CH:136:GLU:HG2	1.74	0.69
36:BA:1657:C:H2'	36:BA:1658:C:C6	2.27	0.69
24:AY:32:OMC:HM22	24:AY:33:U:H5'	1.72	0.69
36:BA:156:U:H2'	36:BA:157:U:O4'	1.91	0.69
4:AD:62:GLN:HE21	4:AD:62:GLN:HA	1.57	0.69
1:AA:1325:C:C5'	21:AU:15:ARG:HH21	2.05	0.69
4:AD:173:TRP:HB3	4:AD:187:ARG:HH22	1.55	0.69
56:DX:35:THR:HB	56:DX:38:GLU:HG3	1.75	0.69
42:BG:138:GLN:O	42:BG:144:ILE:HG21	1.93	0.69
51:DS:12:PHE:O	51:DS:14:VAL:HG23	1.92	0.69
48:BP:45:LEU:HD13	48:BP:46:LYS:N	2.02	0.69
32:B6:13:CYS:O	32:B6:21:TYR:HA	1.91	0.69
53:BU:115:ALA:C	53:BU:117:GLN:H	1.95	0.69
31:D5:31:VAL:HG21	36:DA:2886:G:H1'	1.74	0.69
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.22	0.69
41:DF:37:VAL:HG11	48:DP:7:ARG:NH2	2.06	0.69
39:BD:26:LYS:O	39:BD:27:THR:HB	1.91	0.69
50:BR:18:LEU:O	50:BR:18:LEU:HD13	1.91	0.69
22:CW:64:A:H2'	22:CW:65:G:H8	1.56	0.69
47:BO:111:PHE:O	47:BO:115:VAL:HG23	1.92	0.69
58:BZ:40:ASP:HB3	58:BZ:43:GLU:CG	2.21	0.69
47:DO:20:MET:HE3	47:DO:44:LYS:HE3	1.72	0.69
8:AH:83:ILE:HG13	8:AH:137:VAL:HG22	1.75	0.69
16:CP:4:ILE:HG13	16:CP:64:ALA:HB1	1.73	0.69
36:DA:2870:C:H5''	50:DR:65:LEU:HD21	1.73	0.69
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.40	0.69
36:DA:2875:C:H4'	52:DT:5:ALA:HB2	1.72	0.69
36:BA:984:A:H5''	36:BA:985:C:H5	1.56	0.69
27:D1:34:THR:HG21	27:D1:37:ILE:HG23	1.74	0.69
57:BY:27:VAL:HG12	57:BY:29:GLU:H	1.56	0.69
38:DC:6:ARG:O	38:DC:10:LEU:HD23	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:50:LEU:N	34:B8:53:PRO:HD3	2.07	0.69
32:D6:25:LYS:HG3	32:D6:25:LYS:O	1.92	0.69
57:DY:61:ILE:O	57:DY:62:GLU:HB2	1.91	0.69
58:DZ:57:ILE:N	58:DZ:69:THR:O	2.25	0.69
9:CI:4:TYR:CD2	9:CI:88:TYR:HB2	2.27	0.69
40:DE:101:ARG:NH1	40:DE:171:GLU:HB2	2.07	0.69
14:AN:24:CYS:SG	14:AN:25:VAL:N	2.64	0.69
4:CD:129:ASN:N	4:CD:129:ASN:HD22	1.88	0.69
36:BA:284:U:H2'	36:BA:285:C:C6	2.26	0.69
1:CA:534:U:H6	1:CA:534:U:H5'	1.56	0.69
43:DH:89:ILE:HD11	43:DH:128:PRO:O	1.93	0.69
4:AD:73:ARG:O	4:AD:77:ASN:HB2	1.92	0.69
50:DR:29:LEU:O	50:DR:75:LEU:HD21	1.91	0.69
36:BA:1297:C:O2'	36:BA:1298:C:H5'	1.92	0.69
49:DQ:43:THR:HG22	49:DQ:94:VAL:HG12	1.73	0.69
36:BA:1315:C:O2'	36:BA:1316:U:H5'	1.91	0.69
1:AA:1423:G:H5'	47:BO:49:ARG:NH2	2.08	0.69
36:DA:122:G:H1	36:DA:129:C:H42	1.41	0.69
39:DD:65:ILE:H	39:DD:65:ILE:HD13	1.57	0.69
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.22	0.69
43:BH:28:GLY:HA3	43:BH:79:VAL:HB	1.74	0.69
42:BG:11:TYR:HA	42:BG:15:VAL:HB	1.72	0.69
41:BF:19:GLU:O	41:BF:20:LEU:HG	1.92	0.69
25:AZ:8:THR:CG2	25:AZ:9:LYS:N	2.54	0.69
12:AL:92:ASP:O	12:AL:94:PRO:HD3	1.92	0.69
48:BP:105:LEU:HD12	48:BP:105:LEU:N	2.05	0.69
1:CA:961:U:O2'	1:CA:962:C:H6	1.75	0.69
40:DE:116:VAL:HG23	40:DE:120:TRP:HB2	1.75	0.69
48:DP:84:ASN:ND2	48:DP:116:GLY:HA2	2.07	0.69
51:DS:83:LYS:CG	51:DS:105:ALA:HB3	2.22	0.69
42:DG:131:TYR:HB3	42:DG:159:VAL:HG13	1.73	0.69
39:DD:275:LYS:HD2	39:DD:276:LYS:N	2.06	0.69
36:DA:1720:U:H3'	36:DA:1721:G:H5''	1.75	0.69
1:CA:377:G:OP1	16:CP:3:LYS:HD2	1.92	0.69
46:DN:17:ASP:OD1	46:DN:56:ASN:HB3	1.92	0.69
36:DA:363:G:H2'	36:DA:363(A):A:C8	2.27	0.69
36:DA:2351:G:HO2'	36:DA:2352:A:H8	1.40	0.69
54:DV:77:ALA:O	54:DV:79:VAL:HG22	1.92	0.69
46:DN:111:PRO:HA	46:DN:114:ARG:NH1	2.08	0.69
1:CA:722:A:N3	1:CA:722:A:H2'	2.07	0.69
45:DK:32:UNK:HA	45:DK:63:UNK:CB	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:102:ARG:O	7:AG:106:GLN:HG3	1.92	0.69
24:CY:24:A:H2'	24:CY:25:C:C6	2.27	0.69
36:BA:2189:U:C2'	36:BA:2190:G:H4'	2.22	0.69
26:D0:51:VAL:HG21	26:D0:79:VAL:O	1.92	0.69
13:CM:15:VAL:O	13:CM:19:LEU:HD23	1.92	0.69
36:BA:330:A:HO2'	36:BA:331:A:H8	1.40	0.69
4:CD:26:CYS:HA	4:CD:31:CYS:HA	1.75	0.69
4:CD:18:LYS:HB2	4:CD:33:MET:HG2	1.73	0.69
57:DY:96:ILE:HD11	57:DY:99:CYS:SG	2.32	0.69
36:BA:2304:G:H22	36:BA:2312:U:H3	1.39	0.69
3:AC:11:ARG:O	3:AC:14:ILE:O	2.10	0.69
3:CC:5:ILE:CD1	3:CC:5:ILE:H	2.04	0.69
34:D8:52:LYS:N	34:D8:53:PRO:HD2	2.08	0.69
25:AZ:64:ASN:H	25:AZ:83:PRO:HG2	1.54	0.69
40:BE:197:ILE:HD11	40:BE:199:ARG:HH21	1.58	0.69
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.74	0.69
10:AJ:78:ASN:HD22	10:AJ:81:THR:CG2	2.06	0.69
24:CY:75:C:H6	25:CZ:231:ILE:HA	1.55	0.69
36:BA:860:U:C5	36:BA:917:A:N7	2.59	0.69
3:AC:130:VAL:O	3:AC:134:ILE:HG13	1.92	0.69
36:BA:2672:G:C2'	36:BA:2673:G:H5''	2.22	0.69
40:BE:101:ARG:HD2	40:BE:169:ASN:O	1.93	0.69
41:DF:157:VAL:HG22	41:DF:193:VAL:O	1.93	0.69
1:CA:35:G:H2'	1:CA:36:C:C6	2.27	0.69
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.73	0.69
40:BE:38:THR:HB	40:BE:41:LYS:HG2	1.75	0.69
8:AH:83:ILE:HG23	8:AH:83:ILE:O	1.91	0.69
24:AY:62:U:H5'	24:AY:62:U:H6	1.57	0.69
36:BA:999:U:H5''	36:BA:1154:G:O6	1.92	0.69
12:CL:89:ARG:NH1	12:CL:91:LYS:HG2	2.08	0.69
2:AB:178:ARG:NH1	8:AH:71:GLY:O	2.25	0.69
41:DF:155:LEU:HB2	41:DF:189:THR:HG21	1.74	0.69
58:BZ:155:LEU:HD23	58:BZ:155:LEU:H	1.57	0.69
36:BA:880:G:H22	36:BA:897:C:H42	1.38	0.69
36:BA:884:C:H2'	36:BA:885:C:H5'	1.75	0.69
40:DE:38:THR:HG22	40:DE:40:GLU:H	1.58	0.69
52:DT:30:VAL:HA	52:DT:44:ASP:HA	1.75	0.69
32:B6:30:THR:O	32:B6:32:ASN:N	2.26	0.69
25:CZ:8:THR:CG2	25:CZ:9:LYS:N	2.55	0.69
36:DA:266:G:H2'	36:DA:267:C:C5'	2.22	0.69
51:BS:12:PHE:HD1	51:BS:13:ARG:N	1.89	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:138:VAL:HG21	25:AZ:172:ARG:HB3	1.74	0.69
1:AA:266:G:C5'	1:AA:267:C:H5	2.05	0.69
38:BC:96:GLY:N	38:BC:99:ILE:HD11	2.08	0.69
36:DA:691:C:C1'	39:DD:43:ARG:NH1	2.56	0.69
25:AZ:200:TRP:CD2	25:AZ:203:LEU:HD12	2.27	0.69
1:CA:946:A:H2'	1:CA:947:G:C8	2.28	0.69
40:BE:171:GLU:HB3	40:BE:185:LYS:HG2	1.75	0.69
22:CV:4:C:H3'	22:CV:5:G:H5''	1.74	0.69
7:AG:78:ARG:O	7:AG:78:ARG:HG3	1.93	0.69
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	1.75	0.69
7:CG:79:ARG:HB2	7:CG:84:ASN:HD22	1.57	0.69
41:BF:160:ASN:HD21	41:BF:162:LEU:HB2	1.57	0.69
22:AV:59:U:O2'	22:AV:60:U:C6	2.45	0.69
12:AL:91:LYS:NZ	12:AL:91:LYS:HB3	2.07	0.69
58:DZ:20:ARG:HH11	58:DZ:20:ARG:HB3	1.58	0.69
42:BG:119:GLY:HA3	42:BG:181:ARG:HB3	1.75	0.69
36:BA:1678:G:H22	36:BA:1989:G:H22	1.40	0.69
25:CZ:198:LYS:HZ1	25:CZ:201:GLU:CD	1.96	0.69
25:AZ:198:LYS:HZ1	25:AZ:201:GLU:CD	1.95	0.69
39:DD:63:ARG:HG2	39:DD:63:ARG:NH1	2.05	0.69
25:CZ:19:HIS:HE1	36:DA:2661:G:P	2.16	0.69
13:CM:17:VAL:O	13:CM:20:THR:HB	1.92	0.69
13:CM:15:VAL:HG22	13:CM:43:THR:O	1.93	0.69
1:CA:977:A:N3	1:CA:977:A:C2'	2.56	0.69
52:DT:29:ARG:CB	52:DT:85:LYS:HA	2.22	0.69
36:DA:2309:A:H2'	36:DA:2310:A:C5'	2.22	0.69
39:DD:68:LYS:HB2	39:DD:70:TRP:CZ2	2.27	0.69
42:BG:31:VAL:HG22	42:BG:33:ARG:HG3	1.74	0.69
9:CI:114:TYR:CD2	10:CJ:60:ARG:HG2	2.27	0.69
36:DA:2304:G:H22	36:DA:2312:U:H3	1.41	0.69
42:DG:68:PRO:HB3	42:DG:91:ARG:O	1.93	0.69
1:AA:1039:C:C6	1:AA:1040:U:H5	2.07	0.69
36:BA:1681:G:HO2'	36:BA:1762:A:H2'	1.56	0.69
56:BX:40:LYS:HG2	56:BX:41:ASN:HD22	1.58	0.69
1:AA:1502:A:H2	1:AA:1505:G:N1	1.89	0.69
27:B1:73:LEU:CD2	27:B1:94:LEU:HB3	2.22	0.69
19:CS:40:ILE:HB	19:CS:68:GLY:HA2	1.74	0.69
5:CE:18:ARG:NH1	5:CE:18:ARG:HG3	2.07	0.69
35:B9:7:VAL:HG22	35:B9:34:GLN:HG3	1.74	0.69
22:CW:39:U:H2'	22:CW:40:C:H5'	1.74	0.69
2:CB:44:LEU:HA	2:CB:47:THR:HB	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:18:ARG:O	16:CP:20:VAL:HG12	1.91	0.69
28:D2:47:ASN:HB2	36:DA:95:G:H1'	1.75	0.69
36:BA:184:C:H2'	36:BA:185:U:C6	2.28	0.69
40:DE:33:VAL:HG13	40:DE:69:LYS:HD2	1.73	0.69
43:BH:94:TYR:HE2	43:BH:160:LYS:HB3	1.58	0.69
39:BD:45:ASN:CG	39:BD:46:GLN:H	1.95	0.69
20:CT:50:GLU:HA	20:CT:100:ILE:HD13	1.74	0.69
36:BA:1925:C:O2'	36:BA:1926:U:H5'	1.91	0.69
36:DA:291:C:H2'	36:DA:292:C:C6	2.27	0.69
36:DA:1779:U:C5	36:DA:1784:A:N7	2.61	0.69
36:BA:1344:G:H4'	36:BA:1384:A:C5	2.28	0.69
36:DA:361:G:H2'	36:DA:362:U:H4'	1.74	0.69
51:DS:24:LEU:O	51:DS:85:VAL:HB	1.93	0.69
51:DS:89:ARG:HH11	51:DS:89:ARG:HG2	1.57	0.69
57:BY:14:LEU:HB3	57:BY:73:ARG:HB2	1.74	0.69
4:AD:133:VAL:HG11	4:AD:138:TYR:CD2	2.23	0.69
41:DF:25:PRO:CB	41:DF:119:ARG:HB2	2.22	0.69
14:CN:22:THR:HB	14:CN:33:VAL:HG21	1.74	0.69
58:DZ:163:LEU:HD11	58:DZ:167:PRO:HB3	1.75	0.69
13:CM:65:LYS:H	13:CM:65:LYS:CD	2.05	0.69
56:DX:12:VAL:HG23	56:DX:13:LEU:N	2.08	0.69
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.28	0.69
25:AZ:64:ASN:H	25:AZ:64:ASN:HD22	1.39	0.69
48:BP:126:VAL:HG22	48:BP:145:PRO:HG2	1.73	0.69
27:D1:67:ILE:N	27:D1:68:PRO:HD2	2.08	0.69
1:AA:1286:A:C2	21:AU:18:TYR:OH	2.46	0.69
36:DA:1722:A:O2'	36:DA:1739:U:H5''	1.93	0.69
1:AA:353:A:H5'	1:AA:353:A:C8	2.27	0.69
1:CA:724:G:O2'	1:CA:725:G:H5'	1.93	0.69
42:BG:119:GLY:HA3	42:BG:181:ARG:CB	2.22	0.69
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	1.92	0.69
46:BN:13:TRP:O	46:BN:135:PRO:HD2	1.93	0.69
53:DU:32:PHE:CB	53:DU:36:ARG:HH22	2.05	0.69
36:DA:1436:G:C3'	36:DA:1437:C:H5''	2.23	0.69
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.74	0.69
22:AW:27:G:O2'	22:AW:28:G:H5'	1.91	0.69
2:AB:16:HIS:HB3	2:AB:210:SER:HB2	1.75	0.69
1:CA:105:G:H2'	1:CA:106:C:C6	2.27	0.69
48:BP:99:LEU:O	48:BP:99:LEU:HD23	1.93	0.69
57:BY:13:VAL:HG21	57:BY:72:VAL:HB	1.73	0.69
4:CD:194:LEU:HB3	4:CD:196:LEU:HD13	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:67:ILE:O	4:CD:67:ILE:HG23	1.93	0.69
25:AZ:121:LEU:HD22	61:AZ:502:KIR:O4	1.93	0.69
34:D8:13:ARG:NH2	36:DA:250:G:OP2	2.26	0.69
43:DH:51:ARG:HG3	43:DH:52:VAL:H	1.58	0.69
58:BZ:108:PRO:HB3	58:BZ:141:VAL:HG11	1.76	0.69
24:AY:4:G:C2'	24:AY:5:G:H5''	2.23	0.69
2:AB:18:GLY:H	2:AB:42:ILE:CG2	2.05	0.69
36:BA:2631:G:H21	40:BE:61:ARG:NH1	1.91	0.69
36:BA:2807:G:H2'	36:BA:2808:U:H5''	1.74	0.69
36:BA:1061:U:H4'	36:BA:1070:A:C1'	2.23	0.69
22:AV:18:G:O2'	22:AV:57:G:N2	2.26	0.69
57:BY:75:ILE:HG23	57:BY:76:CYS:N	2.07	0.69
47:DO:78:ARG:HG3	47:DO:79:PHE:N	2.07	0.69
42:DG:95:ARG:O	42:DG:96:ARG:HG2	1.92	0.69
36:BA:2138:C:H2'	36:BA:2139:C:H6	1.57	0.69
51:BS:80:LEU:O	51:BS:80:LEU:HD23	1.93	0.69
37:DB:8:U:C5'	37:DB:8:U:H6	2.01	0.68
19:CS:53:ASN:O	19:CS:77:THR:HG22	1.94	0.68
52:DT:77:PRO:O	52:DT:78:LEU:HB2	1.93	0.68
48:DP:45:LEU:HD13	48:DP:46:LYS:H	1.57	0.68
58:DZ:152:ALA:O	58:DZ:154:ASP:N	2.24	0.68
36:BA:197:A:C8	36:BA:197:A:H5'	2.28	0.68
42:DG:105:LYS:O	42:DG:109:VAL:HB	1.92	0.68
36:DA:2189:U:C2'	36:DA:2190:G:H4'	2.23	0.68
36:BA:2756:U:H1'	36:BA:2757:A:C5'	2.21	0.68
36:DA:2298:A:H62	36:DA:2318:G:H8	1.40	0.68
36:BA:1019:U:HO2'	36:BA:1021:A:H2	1.41	0.68
50:DR:63:ARG:HA	50:DR:80:PHE:CZ	2.28	0.68
48:BP:96:THR:HG22	48:BP:126:VAL:CG2	2.23	0.68
48:BP:147:LEU:CG	48:BP:148:LEU:H	2.00	0.68
3:CC:40:ARG:O	3:CC:44:GLU:HB2	1.92	0.68
41:DF:187:VAL:HG12	48:DP:7:ARG:HA	1.75	0.68
41:DF:168:ARG:HG3	41:DF:175:THR:HG21	1.74	0.68
43:DH:76:VAL:O	43:DH:79:VAL:HG22	1.93	0.68
17:CQ:45:HIS:CD2	17:CQ:47:PRO:HD3	2.28	0.68
1:CA:1499:A:H5'	1:CA:1499:A:C8	2.28	0.68
1:AA:1459:C:H2'	1:AA:1460:A:H8	1.57	0.68
57:DY:67:LEU:HD23	57:DY:68:HIS:N	2.08	0.68
36:DA:2645:G:H3'	36:DA:2646:C:C5'	2.23	0.68
36:DA:1779:U:H5	36:DA:1784:A:N7	1.91	0.68
46:DN:107:LEU:HB3	46:DN:108:PRO:HD2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:62:U:H6	24:CY:62:U:H5'	1.56	0.68
5:CE:64:ARG:HH11	5:CE:64:ARG:HG3	1.59	0.68
29:B3:2:PRO:HB2	29:B3:58:VAL:CG1	2.22	0.68
46:BN:115:ARG:HA	46:BN:118:LYS:NZ	2.08	0.68
13:CM:74:VAL:HA	13:CM:77:ASN:HD22	1.59	0.68
57:BY:13:VAL:HG11	57:BY:28:LYS:HD3	1.75	0.68
48:DP:41:ARG:HH11	48:DP:41:ARG:CB	2.01	0.68
3:AC:3:ASN:O	3:AC:4:LYS:HB2	1.93	0.68
25:AZ:242:ILE:HB	25:AZ:282:ALA:HA	1.75	0.68
32:B6:52:VAL:HG12	32:B6:53:LYS:H	1.58	0.68
51:BS:40:ILE:HA	51:BS:47:THR:HA	1.75	0.68
36:DA:482:A:H4'	57:DY:47:LYS:HG3	1.74	0.68
32:D6:42:TRP:HA	32:D6:42:TRP:CE3	2.28	0.68
1:CA:187:C:O2	20:CT:105:SER:HB3	1.94	0.68
50:DR:4:LEU:HD13	50:DR:7:GLY:H	1.55	0.68
57:DY:67:LEU:HD23	57:DY:68:HIS:H	1.58	0.68
55:BW:24:ILE:HG21	55:BW:36:LEU:HD21	1.73	0.68
3:CC:82:GLU:CD	3:CC:82:GLU:H	1.96	0.68
36:DA:709:U:H2'	36:DA:710:G:C8	2.26	0.68
49:BQ:78:PRO:HD2	49:BQ:81:VAL:HG11	1.74	0.68
2:CB:57:PHE:HE2	2:CB:185:ILE:HD11	1.59	0.68
36:BA:1494:A:C2'	36:BA:1495:A:H5''	2.23	0.68
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.08	0.68
36:BA:2162:G:O2'	36:BA:2173:A:N6	2.26	0.68
1:AA:111:G:H1	1:AA:330:C:H41	1.38	0.68
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.75	0.68
36:BA:335:C:H4'	57:BY:73:ARG:NH1	2.03	0.68
25:CZ:313:HIS:CG	25:CZ:403:ILE:HG21	2.28	0.68
25:AZ:324:LYS:O	25:AZ:327:GLU:HG3	1.93	0.68
36:BA:1064:C:H2'	36:BA:1065:U:C5'	2.23	0.68
36:BA:1039:G:H1	36:BA:1116:C:N4	1.92	0.68
1:CA:148:G:H1	1:CA:174:C:H42	1.40	0.68
17:CQ:18:THR:CG2	17:CQ:69:LYS:HD2	2.23	0.68
36:DA:2327:A:H2'	36:DA:2328:A:C8	2.28	0.68
36:DA:1921:G:O2'	36:DA:1922:G:H5'	1.94	0.68
2:AB:134:GLU:C	2:AB:136:VAL:H	1.96	0.68
27:D1:30:VAL:HG23	27:D1:31:GLY:H	1.56	0.68
21:AU:6:ARG:HD3	21:AU:15:ARG:HH11	1.50	0.68
25:CZ:324:LYS:O	25:CZ:327:GLU:HG3	1.93	0.68
25:CZ:85:HIS:CE1	36:DA:2661:G:O2'	2.46	0.68
13:CM:5:ALA:HB2	13:CM:66:LEU:HD23	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:29:TRP:HA	42:BG:29:TRP:HE3	1.55	0.68
36:DA:621:A:C2'	36:DA:622:G:H5'	2.18	0.68
46:DN:3:THR:CG2	46:DN:4:TYR:H	2.05	0.68
39:BD:99:ASP:OD1	39:BD:99:ASP:C	2.32	0.68
24:AY:28:C:H2'	24:AY:29:G:H8	1.58	0.68
48:DP:81:GLN:NE2	48:DP:106:LEU:HA	2.09	0.68
13:AM:25:ILE:HD11	13:AM:60:VAL:HG11	1.76	0.68
39:DD:147:LEU:HD13	39:DD:155:LEU:HD11	1.75	0.68
47:DO:19:ILE:HD12	47:DO:41:ALA:CB	2.24	0.68
32:D6:53:LYS:HD3	32:D6:53:LYS:H	1.58	0.68
26:B0:43:THR:HG22	36:BA:2331:G:O3'	1.93	0.68
16:CP:39:TYR:CD2	16:CP:73:LEU:HD11	2.28	0.68
16:CP:58:TYR:CE1	16:CP:62:VAL:HG21	2.29	0.68
43:DH:155:SER:O	43:DH:157:TYR:N	2.24	0.68
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.23	0.68
41:DF:65:TRP:CZ3	41:DF:75:HIS:HD2	2.11	0.68
15:AO:26:GLU:OE2	15:AO:77:ARG:HD2	1.93	0.68
50:DR:96:ARG:NH1	50:DR:117:VAL:HG21	2.09	0.68
1:CA:1258:G:O2'	1:CA:1259:C:H5'	1.92	0.68
40:BE:167:VAL:HG22	40:BE:170:LEU:HD11	1.74	0.68
36:DA:2845:G:H2'	36:DA:2846:G:H8	1.57	0.68
47:BO:47:ILE:HG23	47:BO:48:PRO:HD2	1.73	0.68
25:AZ:198:LYS:HD3	25:AZ:198:LYS:O	1.93	0.68
53:DU:95:LEU:HD12	54:DV:11:GLN:HG3	1.74	0.68
36:BA:2308:G:O6	36:BA:2310:A:H2'	1.93	0.68
32:B6:8:LYS:O	32:B6:9:LEU:HB3	1.92	0.68
36:BA:2287:A:H2	36:BA:2346:A:N1	1.90	0.68
36:BA:1050:A:C2'	36:BA:1051:G:H5'	2.23	0.68
36:BA:2262:U:H2'	36:BA:2263:C:H6	1.57	0.68
40:BE:104:VAL:HG11	40:BE:188:VAL:HG21	1.76	0.68
48:BP:112:LEU:H	48:BP:128:HIS:HD2	1.41	0.68
41:DF:32:LEU:O	41:DF:36:VAL:HG23	1.93	0.68
38:DC:87:GLU:HG2	38:DC:94:VAL:HG11	1.76	0.68
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.93	0.68
16:CP:2:VAL:O	16:CP:2:VAL:HG22	1.92	0.68
36:DA:2850:A:H2	50:DR:61:HIS:HD1	1.34	0.68
36:BA:1678:G:N2	36:BA:1989:G:H22	1.90	0.68
1:CA:1308:U:H5''	13:CM:98:VAL:CG2	2.23	0.68
1:CA:411:A:H62	1:CA:413:G:H21	1.41	0.68
24:CY:77:TRP:CE2	25:CZ:67:HIS:HB2	2.29	0.68
25:AZ:193:ASN:OD1	25:AZ:195:TRP:CB	2.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:92:ARG:HH21	54:BV:10:LYS:HB3	1.58	0.68
58:BZ:151:HIS:HA	58:BZ:171:ILE:HG12	1.74	0.68
41:BF:37:VAL:HG11	48:BP:7:ARG:HH22	1.59	0.68
36:DA:1348:G:C2'	36:DA:1349:A:H5''	2.23	0.68
36:BA:925:C:H2'	36:BA:926:A:C5'	2.23	0.68
41:DF:132:VAL:HG13	41:DF:133:ASN:N	2.09	0.68
2:AB:106:LYS:HG3	2:AB:107:THR:N	2.08	0.68
36:BA:2673:G:O2'	36:BA:2674:G:H5'	1.93	0.68
19:AS:16:LEU:N	19:AS:16:LEU:HD12	2.08	0.68
1:CA:737:A:H2'	1:CA:738:C:H6	1.57	0.68
20:CT:43:LEU:HD22	20:CT:48:LYS:HG3	1.75	0.68
47:DO:78:ARG:CB	47:DO:78:ARG:HH11	2.06	0.68
54:DV:2:PHE:H	54:DV:42:GLY:HA3	1.58	0.68
2:AB:200:ILE:HD12	2:AB:200:ILE:H	1.57	0.68
13:CM:16:ASP:HA	13:CM:34:LEU:HD11	1.74	0.68
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.75	0.68
38:DC:20:TYR:CE2	38:DC:28:LEU:HD12	2.28	0.68
28:B2:35:LEU:HG	28:B2:50:ILE:HG23	1.76	0.68
40:DE:57:LYS:CA	40:DE:57:LYS:HE3	2.18	0.68
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.07	0.68
50:DR:63:ARG:HG3	50:DR:80:PHE:CE2	2.27	0.68
32:D6:11:LEU:CD1	32:D6:51:GLU:HG3	2.24	0.68
46:BN:48:MET:N	46:BN:48:MET:HE3	2.07	0.68
36:DA:2761:G:H2'	36:DA:2762:G:C5'	2.22	0.68
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.26	0.68
35:B9:22:ARG:NH2	36:BA:2741:A:OP1	2.25	0.68
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.74	0.68
52:BT:65:LYS:HG3	52:BT:66:VAL:H	1.58	0.68
38:BC:171:ILE:HD13	38:BC:196:LEU:HD21	1.76	0.68
54:DV:72:VAL:CG2	54:DV:85:LYS:HB3	2.24	0.68
4:AD:120:LEU:HB3	4:AD:126:ILE:HD13	1.73	0.68
36:BA:1821:A:H2'	36:BA:1822:G:C8	2.29	0.68
4:AD:162:LEU:HD13	4:AD:162:LEU:O	1.93	0.68
53:DU:34:LYS:HE2	53:DU:34:LYS:HA	1.75	0.68
1:CA:560:U:H5'	1:CA:566:G:N2	2.07	0.68
40:BE:37:ARG:HA	40:BE:42:ASP:OD2	1.94	0.68
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.94	0.68
36:DA:1305:C:O2'	36:DA:1306:C:H5'	1.94	0.68
4:AD:59:ARG:HA	4:AD:59:ARG:NE	2.08	0.68
25:CZ:93:ILE:HD11	25:CZ:389:ARG:NH1	2.09	0.68
3:CC:95:THR:O	3:CC:95:THR:HG22	1.91	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:59:LYS:CG	51:BS:60:GLY:H	1.99	0.68
58:BZ:151:HIS:HB2	58:BZ:169:GLU:O	1.93	0.68
38:DC:10:LEU:HD13	38:DC:13:LYS:NZ	2.09	0.68
58:DZ:162:GLU:C	58:DZ:163:LEU:HD23	2.14	0.68
36:BA:1051:G:H2'	36:BA:1052:C:C4	2.28	0.68
36:BA:1879:C:C3'	36:BA:1880:C:H5''	2.24	0.68
36:DA:2886:G:H2'	36:DA:2887:U:H6	1.59	0.68
49:DQ:68:ILE:HD13	49:DQ:103:MET:HG2	1.75	0.68
36:BA:761:A:H8	36:BA:761:A:O5'	1.77	0.68
24:CY:7:G:H3'	24:CY:8:4SU:C5'	2.24	0.68
35:B9:35:ARG:HD3	36:BA:2742:C:OP1	1.93	0.68
36:DA:186:G:H2'	36:DA:187:G:H8	1.58	0.68
9:CI:95:LYS:HG3	9:CI:96:LEU:HD13	1.74	0.68
1:CA:723:U:O2	1:CA:723:U:H2'	1.92	0.68
1:CA:1277:C:H1'	1:CA:1282:C:O2	1.93	0.68
36:DA:2264:C:H2'	36:DA:2265:U:H6	1.59	0.68
17:CQ:7:THR:O	17:CQ:23:VAL:HG13	1.94	0.68
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.29	0.68
18:AR:44:LEU:HD23	18:AR:80:PRO:HD2	1.74	0.68
36:DA:914:C:H2'	36:DA:915:C:H5'	1.75	0.68
1:CA:992:U:H3	1:CA:1044:A:H62	1.41	0.68
57:BY:7:VAL:HB	57:BY:8:LYS:CD	2.24	0.68
42:BG:5:VAL:HG12	42:BG:6:ALA:N	2.09	0.68
57:BY:46:LYS:HG2	57:BY:47:LYS:N	2.08	0.68
1:CA:973:G:C1'	10:CJ:55:LYS:HE2	2.23	0.68
58:DZ:157:LEU:HD11	58:DZ:163:LEU:CD2	2.24	0.68
37:BB:7:G:H4'	51:BS:29:PHE:HD2	1.59	0.68
46:DN:46:VAL:HG13	46:DN:48:MET:HG3	1.76	0.68
36:DA:512:G:O2'	36:DA:513:A:H8	1.77	0.68
52:DT:100:TYR:HD2	52:DT:103:ARG:HH21	1.40	0.68
22:AV:68:C:O2'	22:AV:69:G:H5''	1.93	0.68
13:AM:70:LEU:O	13:AM:73:GLU:HB3	1.94	0.68
36:DA:296:C:O2'	36:DA:297:C:H5'	1.94	0.68
50:DR:96:ARG:NH1	50:DR:117:VAL:HG11	2.09	0.68
39:BD:69:ARG:HH11	39:BD:130:ALA:CB	2.06	0.68
6:CF:3:ARG:HD3	6:CF:64:GLN:HE21	1.59	0.68
36:DA:521:G:H2'	36:DA:522:G:H8	1.59	0.68
1:AA:1139:G:H5'	1:AA:1140:C:OP1	1.92	0.68
36:BA:2422:A:H4'	36:BA:2423:U:OP1	1.94	0.68
36:DA:945:A:N3	36:DA:945:A:H5'	2.08	0.68
25:AZ:26:THR:HG21	60:AZ:501:GDP:C8	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:512:G:HO2'	36:DA:513:A:H8	1.39	0.68
38:DC:100:ILE:CD1	38:DC:127:LEU:HB2	2.24	0.68
38:DC:47:LEU:N	38:DC:47:LEU:HD12	2.09	0.68
36:BA:2377:A:H4'	51:BS:107:GLU:O	1.92	0.68
11:AK:27:ASN:ND2	11:AK:28:THR:H	1.92	0.68
18:AR:74:ARG:HD3	18:AR:81:PHE:CD1	2.29	0.68
16:CP:50:LYS:HD3	16:CP:51:VAL:N	2.09	0.68
38:DC:181:PRO:HG2	38:DC:184:LYS:HG2	1.75	0.68
36:BA:445:C:O2'	36:BA:446:G:H5'	1.93	0.68
1:CA:1127:G:H1	1:CA:1145:C:H42	1.42	0.68
36:DA:1717:G:H2'	36:DA:1718:G:H5''	1.76	0.68
53:BU:34:LYS:HA	53:BU:34:LYS:HE2	1.74	0.68
33:D7:43:THR:HG23	33:D7:44:PRO:HD2	1.75	0.68
24:AY:23:A:C2'	24:AY:24:A:H5'	2.24	0.68
39:DD:176:ARG:HH11	39:DD:176:ARG:HG2	1.58	0.68
43:BH:13:LYS:HE2	43:BH:13:LYS:HA	1.76	0.68
38:BC:53:ARG:HB3	38:BC:53:ARG:NH1	2.09	0.68
27:D1:87:PRO:CG	27:D1:88:LYS:H	2.07	0.67
1:CA:1305:G:H3'	21:CU:6:ARG:NH2	2.09	0.67
28:B2:42:GLY:O	28:B2:43:GLN:HG3	1.93	0.67
4:CD:138:TYR:HD1	4:CD:139:ARG:N	1.92	0.67
52:DT:28:VAL:HG23	52:DT:47:GLY:O	1.94	0.67
36:BA:1538:G:H2'	36:BA:1539:G:C8	2.28	0.67
32:B6:15:GLU:O	32:B6:15:GLU:HG2	1.93	0.67
30:D4:28:LYS:HA	30:D4:28:LYS:HE3	1.76	0.67
53:DU:59:ARG:HG2	53:DU:59:ARG:NH1	2.05	0.67
48:DP:126:VAL:HG22	48:DP:145:PRO:HG2	1.76	0.67
1:CA:367:U:H4'	25:CZ:291:ARG:NH1	2.09	0.67
17:AQ:43:LEU:O	17:AQ:69:LYS:HG3	1.93	0.67
22:AV:44:G:H3'	22:AV:45:U:H5'	1.75	0.67
40:DE:188:VAL:CG2	40:DE:189:PRO:HD2	2.23	0.67
5:CE:7:GLU:O	5:CE:8:GLU:HB3	1.94	0.67
52:DT:129:ARG:CZ	52:DT:131:ALA:HB3	2.25	0.67
1:AA:731:G:OP1	1:AA:766:A:H1'	1.94	0.67
46:DN:21:LYS:HE3	46:DN:25:ARG:HB3	1.76	0.67
58:DZ:145:GLU:HA	58:DZ:145:GLU:OE1	1.94	0.67
23:CX:22:U:O2'	23:CX:23:G:H5'	1.94	0.67
13:CM:35:GLU:C	13:CM:37:THR:H	1.94	0.67
1:AA:1125:U:O4	10:AJ:38:ILE:HG21	1.95	0.67
41:BF:157:VAL:HG23	41:BF:194:MET:HG3	1.76	0.67
39:DD:70:TRP:O	39:DD:73:VAL:HG23	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:52:GLU:HA	48:DP:52:GLU:OE1	1.92	0.67
27:D1:27:GLU:O	27:D1:29:GLY:N	2.27	0.67
25:CZ:163:PHE:CD1	25:CZ:164:PRO:HD2	2.29	0.67
40:BE:5:LEU:HD12	40:BE:51:PHE:HB2	1.77	0.67
10:CJ:24:VAL:HG21	10:CJ:37:PRO:CG	2.24	0.67
36:DA:1064:C:H2'	36:DA:1065:U:C5'	2.22	0.67
43:DH:136:ILE:HD12	43:DH:136:ILE:N	2.08	0.67
51:DS:19:LYS:HB3	51:DS:20:ARG:NH2	2.09	0.67
24:AY:8:4SU:H5''	24:AY:8:4SU:H6	1.75	0.67
36:DA:1069:A:H1'	36:DA:1070:A:OP1	1.95	0.67
27:B1:46:LEU:HD23	27:B1:63:ALA:HA	1.75	0.67
1:CA:192:U:H2'	1:CA:193:C:H6	1.58	0.67
46:DN:21:LYS:HD3	46:DN:22:THR:N	2.09	0.67
36:DA:1400:G:H2'	36:DA:1401:G:C8	2.29	0.67
36:DA:1932:A:H2'	36:DA:1933:G:O4'	1.94	0.67
36:DA:2720:U:O2	36:DA:2720:U:H2'	1.93	0.67
27:B1:12:PRO:HB3	27:B1:43:TYR:CD1	2.29	0.67
40:DE:203:LYS:HD2	40:DE:203:LYS:O	1.93	0.67
36:DA:1352:U:O2'	36:DA:1353:A:H5'	1.94	0.67
38:BC:175:VAL:HG12	38:BC:188:ASN:HB3	1.76	0.67
36:DA:320:A:H2'	41:DF:136:THR:OG1	1.94	0.67
7:CG:140:ASP:HA	7:CG:143:ARG:NH1	2.09	0.67
3:CC:107:GLN:CD	3:CC:107:GLN:H	1.96	0.67
1:AA:1531:A:H8	1:AA:1531:A:H5''	1.59	0.67
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.77	0.67
28:B2:47:ASN:CA	28:B2:50:ILE:HB	2.24	0.67
36:BA:84:A:H5''	57:BY:9:LYS:HD2	1.75	0.67
39:DD:218:ARG:HH11	39:DD:218:ARG:CG	2.04	0.67
32:B6:18:ARG:HG3	32:B6:19:ARG:N	2.09	0.67
58:BZ:69:THR:HB	58:BZ:89:PHE:O	1.95	0.67
48:DP:64:LYS:O	48:DP:66:GLY:N	2.27	0.67
49:DQ:79:LEU:HD22	49:DQ:80:GLU:HG3	1.75	0.67
41:BF:114:VAL:HG21	41:BF:202:PHE:CE2	2.27	0.67
52:BT:105:LEU:O	52:BT:107:ASP:OD1	2.12	0.67
13:AM:54:VAL:HA	13:AM:57:ARG:HH12	1.60	0.67
20:AT:20:LEU:O	20:AT:24:LEU:HD23	1.94	0.67
47:BO:87:ILE:HG22	47:BO:88:ASN:O	1.93	0.67
40:BE:63:LEU:HD23	40:BE:63:LEU:O	1.94	0.67
20:CT:87:LYS:O	20:CT:91:LEU:HG	1.95	0.67
12:CL:41:ARG:CG	12:CL:42:THR:H	2.07	0.67
50:DR:117:VAL:HG22	50:DR:118:GLU:H	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:99:GLY:O	5:AE:117:ASP:HA	1.94	0.67
17:CQ:40:LYS:HD3	17:CQ:42:TYR:OH	1.93	0.67
6:AF:15:ASP:OD2	6:AF:17:SER:HB3	1.94	0.67
1:CA:686:U:H1'	11:CK:42:TRP:HE1	1.59	0.67
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.75	0.67
36:BA:1331:A:O2'	36:BA:1332:G:H8	1.78	0.67
29:B3:22:ALA:CB	29:B3:46:ASN:HD21	2.07	0.67
25:CZ:320:VAL:HG13	25:CZ:397:ALA:O	1.94	0.67
52:DT:32:TYR:CD1	52:DT:32:TYR:N	2.59	0.67
42:BG:60:LEU:O	42:BG:64:THR:HG22	1.95	0.67
36:DA:1747(A):G:H2'	36:DA:1748:G:C5'	2.22	0.67
31:B5:33:CYS:HB3	31:B5:36:CYS:O	1.94	0.67
25:AZ:222:LEU:HB3	25:AZ:243:GLU:HB2	1.76	0.67
32:B6:17:LYS:CB	32:B6:18:ARG:HH12	2.08	0.67
52:BT:11:GLU:H	52:BT:11:GLU:CD	1.96	0.67
32:D6:7:ILE:HG22	32:D6:27:LYS:HZ3	1.60	0.67
3:CC:79:ARG:HB2	3:CC:79:ARG:NH1	2.09	0.67
58:BZ:100:VAL:HG11	58:BZ:137:ILE:HG12	1.76	0.67
1:CA:1116:C:H2'	1:CA:1117:G:C5'	2.23	0.67
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.77	0.67
1:CA:538:G:P	12:CL:115:LYS:HB2	2.34	0.67
10:AJ:50:ILE:N	10:AJ:50:ILE:HD13	2.10	0.67
43:BH:37:VAL:HG12	43:BH:38:SER:H	1.59	0.67
36:DA:121:G:H4'	36:DA:149:A:H5'	1.76	0.67
36:DA:2074:U:H2'	36:DA:2075:U:C6	2.29	0.67
1:AA:189(H):G:O2'	1:AA:189(I):G:H8	1.77	0.67
36:DA:419:C:H2'	36:DA:420:C:H6	1.59	0.67
9:AI:99:LEU:HD22	9:AI:99:LEU:N	2.08	0.67
16:CP:26:ARG:HH11	16:CP:26:ARG:HG2	1.59	0.67
25:AZ:68:VAL:C	25:AZ:68:VAL:N	2.48	0.67
25:CZ:198:LYS:HD3	25:CZ:198:LYS:O	1.94	0.67
1:AA:973:G:C1'	10:AJ:55:LYS:CE	2.71	0.67
4:AD:173:TRP:O	4:AD:174:LEU:HD23	1.95	0.67
48:DP:23:PRO:O	48:DP:33:ARG:HD2	1.95	0.67
39:DD:102:LYS:O	39:DD:103:ARG:HG2	1.95	0.67
4:CD:18:LYS:H	4:CD:33:MET:HE3	1.60	0.67
25:AZ:124:ARG:O	61:AZ:502:KIR:H443	1.95	0.67
32:B6:30:THR:O	32:B6:31:PRO:C	2.33	0.67
56:DX:12:VAL:HB	56:DX:17:ALA:HB1	1.76	0.67
51:BS:90:GLY:C	51:BS:92:TYR:H	1.98	0.67
36:BA:1021:A:H2'	36:BA:1023:U:H5"	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:32:LEU:HB2	34:D8:36:LYS:HZ2	1.59	0.67
36:DA:527:C:C4	36:DA:2779:U:H5''	2.29	0.67
46:BN:119:ARG:NH1	46:BN:119:ARG:HG3	2.06	0.67
36:DA:636:G:H2'	48:DP:115:LEU:HD12	1.76	0.67
55:BW:65:LEU:HD23	55:BW:68:ARG:HD2	1.76	0.67
57:BY:42:VAL:HG21	57:BY:67:LEU:CD1	2.25	0.67
1:AA:255:G:H1'	17:AQ:16:GLN:HE21	1.56	0.67
17:CQ:11:VAL:HG22	17:CQ:20:THR:O	1.95	0.67
36:DA:1495:A:N3	36:DA:1496:A:C2	2.63	0.67
22:CW:55:U:C3'	22:CW:56:C:H5''	2.24	0.67
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.08	0.67
43:DH:94:TYR:HD1	43:DH:107:VAL:HA	1.58	0.67
36:BA:1821:A:H2'	36:BA:1822:G:H8	1.59	0.67
24:AY:24:A:H2'	24:AY:25:C:C6	2.30	0.67
40:BE:36:ARG:NH2	40:BE:88:GLY:HA2	2.09	0.67
50:DR:38:VAL:HB	50:DR:39:PRO:HD3	1.75	0.67
1:CA:691:G:H2'	1:CA:692:U:C6	2.29	0.67
37:DB:61:G:O2'	37:DB:62:C:H5'	1.94	0.67
25:CZ:198:LYS:C	25:CZ:198:LYS:NZ	2.48	0.67
1:CA:1330:U:H3'	1:CA:1331:G:O4'	1.94	0.67
41:BF:168:ARG:HG3	41:BF:175:THR:HG21	1.77	0.67
43:BH:30:LYS:HG3	43:BH:79:VAL:C	2.14	0.67
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.10	0.67
51:BS:92:TYR:CD1	51:BS:93:LYS:N	2.62	0.67
36:BA:1453:U:H5'	50:BR:63:ARG:CZ	2.25	0.67
36:DA:2657:A:N3	36:DA:2657:A:H5'	2.10	0.67
32:D6:53:LYS:HG2	32:D6:54:ILE:N	2.09	0.67
52:BT:6:LEU:O	52:BT:10:VAL:HG23	1.95	0.67
53:BU:69:CYS:O	53:BU:74:LEU:HD12	1.94	0.67
3:CC:130:VAL:O	3:CC:134:ILE:HG13	1.94	0.67
24:CY:23:A:C2'	24:CY:24:A:H5'	2.24	0.67
36:DA:176:G:O2'	36:DA:177:G:H5'	1.95	0.67
36:BA:2115:G:N3	36:BA:2117:A:N7	2.42	0.67
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.29	0.67
1:CA:108:G:H5'	1:CA:109:A:H5''	1.75	0.67
36:BA:332:A:H4'	36:BA:333:G:OP1	1.94	0.67
43:BH:83:TYR:HB3	43:BH:135:GLY:O	1.95	0.67
43:BH:85:LYS:NZ	43:BH:86:GLU:HA	2.10	0.67
40:BE:57:LYS:HA	40:BE:57:LYS:CE	2.20	0.67
25:AZ:65:THR:HA	25:AZ:83:PRO:HD3	1.75	0.67
6:CF:43:LEU:HD22	6:CF:43:LEU:N	2.06	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1902:C:C1'	39:DD:244:ARG:HG3	2.24	0.67
53:DU:82:GLY:C	53:DU:84:LYS:H	1.98	0.67
54:DV:19:LYS:HZ3	54:DV:20:LEU:N	1.91	0.67
46:BN:46:VAL:O	46:BN:47:ALA:HB3	1.93	0.67
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.77	0.67
49:BQ:51:ARG:HH11	49:BQ:51:ARG:CB	2.07	0.67
41:DF:84:VAL:CG1	41:DF:85:GLY:N	2.58	0.67
13:AM:23:TYR:CE1	13:AM:70:LEU:HD13	2.30	0.67
40:BE:117:MET:HE2	40:BE:124:GLY:HA3	1.76	0.67
25:AZ:265:THR:CG2	25:AZ:266:VAL:N	2.58	0.67
2:AB:73:THR:HG22	2:AB:94:ASN:C	2.14	0.67
36:BA:761:A:O5'	36:BA:761:A:C8	2.48	0.67
6:CF:19:LEU:HD23	6:CF:19:LEU:O	1.94	0.67
36:DA:1879:C:H3'	36:DA:1880:C:H5''	1.75	0.67
36:BA:185:U:H2'	36:BA:186:G:H8	1.59	0.67
36:DA:2314:C:O2'	36:DA:2315:G:H5'	1.94	0.67
7:AG:111:ARG:NH2	7:AG:126:ASP:OD2	2.28	0.67
1:CA:1256:A:H1'	1:CA:1258:G:C6	2.29	0.67
3:CC:29:TYR:HE2	10:CJ:65:LEU:HD21	1.60	0.67
36:DA:1411:C:H2'	36:DA:1412:A:H8	1.60	0.67
36:BA:2572:A:C8	40:BE:144:ARG:HD2	2.30	0.67
1:AA:299:G:H2'	1:AA:300:A:C8	2.30	0.67
38:DC:132:GLY:N	38:DC:133:PRO:HD2	2.09	0.67
36:BA:2039:C:O2'	36:BA:2040:C:H5'	1.95	0.67
44:BJ:28:UNK:HA	44:BJ:82:UNK:HA	1.76	0.67
38:BC:78:ALA:HA	38:BC:116:THR:H	1.60	0.67
43:BH:85:LYS:HZ3	43:BH:132:ARG:CA	2.00	0.67
56:BX:55:ASN:HB2	56:BX:80:ILE:HG23	1.76	0.67
1:AA:266:G:H5'	1:AA:267:C:C5	2.30	0.67
40:BE:95:ILE:N	40:BE:95:ILE:HD13	2.10	0.67
10:CJ:4:ILE:N	10:CJ:4:ILE:HD12	2.10	0.67
25:CZ:318:ALA:HB1	25:CZ:399:VAL:O	1.95	0.67
24:AY:7:G:H3'	24:AY:8:4SU:C5'	2.25	0.67
26:B0:26:TYR:CE2	36:BA:857:C:H1'	2.29	0.67
24:CY:8:4SU:H6	24:CY:8:4SU:H5''	1.76	0.67
26:B0:43:THR:O	26:B0:43:THR:HG23	1.94	0.67
40:DE:37:ARG:HA	40:DE:42:ASP:OD2	1.95	0.67
18:CR:47:THR:HG21	18:CR:49:LYS:NZ	2.09	0.67
36:BA:740:U:H2'	36:BA:741:G:C8	2.30	0.67
50:DR:49:ASP:OD1	50:DR:95:THR:HG22	1.94	0.67
3:CC:22:TRP:CE2	14:CN:54:PRO:HG2	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:796:C:H2'	36:DA:797:C:C6	2.30	0.67
38:DC:140:PRO:HA	38:DC:145:VAL:HB	1.77	0.67
51:BS:56:LEU:O	51:BS:56:LEU:HD23	1.94	0.67
1:CA:924:C:H2'	1:CA:925:G:C8	2.29	0.67
36:DA:1963:U:O2	36:DA:1963:U:H2'	1.95	0.67
36:BA:121:G:H4'	36:BA:149:A:H5'	1.76	0.67
25:CZ:68:VAL:CA	25:CZ:69:GLU:N	2.57	0.67
53:DU:92:ARG:NH1	54:DV:11:GLN:O	2.28	0.67
57:BY:6:HIS:HB3	57:BY:35:TYR:HE1	1.60	0.67
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	1.95	0.67
26:D0:43:THR:O	26:D0:43:THR:HG23	1.95	0.67
25:CZ:64:ASN:HD22	25:CZ:64:ASN:H	1.41	0.67
51:DS:13:ARG:HG3	51:DS:14:VAL:N	2.03	0.67
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.77	0.67
32:B6:11:LEU:HD23	32:B6:26:ASN:N	2.10	0.67
19:AS:47:HIS:O	19:AS:62:ILE:HG22	1.94	0.67
2:AB:95:GLN:NE2	2:AB:147:LYS:HE2	2.06	0.67
51:BS:30:ARG:NH2	51:BS:62:LYS:HD3	2.09	0.67
27:D1:7:ILE:HG22	27:D1:8:SER:N	2.10	0.67
1:CA:59:A:H3'	1:CA:331:G:N2	2.08	0.67
4:CD:85:LYS:NZ	4:CD:92:VAL:HG13	2.10	0.67
58:BZ:110:GLY:HA2	58:BZ:113:ALA:CB	2.24	0.67
41:DF:125:LEU:HD23	41:DF:125:LEU:N	2.09	0.67
2:AB:22:LYS:HE2	2:AB:22:LYS:CA	2.24	0.67
55:BW:6:ILE:HG12	55:BW:104:THR:HG22	1.75	0.67
1:AA:961:U:HO2'	1:AA:962:C:H6	1.42	0.67
50:DR:2:ARG:HE	50:DR:5:LYS:HE2	1.59	0.67
58:DZ:29:TYR:HB3	58:DZ:34:ASN:HB3	1.76	0.67
43:DH:74:ASN:HB3	43:DH:138:LYS:HD3	1.77	0.67
46:BN:133:GLN:HG2	46:BN:135:PRO:HD3	1.76	0.67
40:DE:199:ARG:HG2	40:DE:200:GLU:OE1	1.95	0.67
25:CZ:255:ILE:HG22	25:CZ:302:GLN:NE2	2.10	0.67
36:BA:654(G):C:H1'	36:BA:654(N):G:H22	1.59	0.67
2:AB:56:ARG:HG2	2:AB:56:ARG:HH11	1.59	0.67
25:CZ:138:VAL:HG21	25:CZ:172:ARG:HB3	1.76	0.67
4:CD:187:ARG:HG2	4:CD:188:LEU:N	2.10	0.67
36:DA:593:G:H1	36:DA:664:C:H42	1.40	0.67
34:B8:61:LEU:CD2	36:BA:593:G:H4'	2.25	0.67
28:B2:55:ARG:HH11	28:B2:55:ARG:HG3	1.59	0.67
50:BR:63:ARG:HG3	50:BR:80:PHE:CE2	2.30	0.67
58:DZ:68:PRO:O	58:DZ:91:LEU:HB2	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1053:C:H2'	36:DA:1054:A:C8	2.29	0.67
31:D5:25:LEU:O	31:D5:26:THR:HB	1.95	0.67
58:DZ:114:GLY:H	58:DZ:146:ILE:CG2	2.08	0.67
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.76	0.67
33:B7:34:ARG:HB2	33:B7:42:LEU:CD2	2.25	0.67
1:CA:1128:C:O2'	1:CA:1130:A:N7	2.26	0.67
36:DA:271(H):G:H1'	36:DA:271(I):G:C8	2.30	0.67
11:CK:80:VAL:HG22	11:CK:103:LEU:HD12	1.76	0.67
20:AT:92:LEU:C	20:AT:94:ALA:H	1.96	0.67
25:AZ:68:VAL:O	25:AZ:69:GLU:CB	2.42	0.66
4:AD:35:ARG:O	4:AD:36:ARG:HG3	1.94	0.66
1:AA:973:G:O4'	10:AJ:55:LYS:HE2	1.95	0.66
27:D1:86:SER:HA	27:D1:89:GLU:OE2	1.95	0.66
13:CM:23:TYR:HB3	13:CM:67:GLU:CB	2.25	0.66
36:DA:2309:A:C2'	36:DA:2310:A:H5''	2.25	0.66
36:DA:85:G:O5'	57:DY:30:VAL:HB	1.95	0.66
27:B1:48:LYS:HG2	27:B1:50:ARG:NH2	2.02	0.66
36:DA:2160:G:H8	36:DA:2160:G:H5'	1.59	0.66
32:B6:12:GLU:HA	32:B6:23:THR:CG2	2.25	0.66
36:BA:2287:A:C2	36:BA:2346:A:N1	2.63	0.66
29:D3:43:ILE:O	29:D3:47:VAL:HG23	1.96	0.66
36:BA:1053:C:H2'	36:BA:1054:A:C8	2.29	0.66
36:BA:1747(A):G:H2'	36:BA:1748:G:C5'	2.24	0.66
39:BD:102:LYS:O	39:BD:103:ARG:HG2	1.94	0.66
51:DS:36:TYR:N	51:DS:36:TYR:CD1	2.61	0.66
53:DU:13:LYS:HD3	53:DU:13:LYS:H	1.60	0.66
39:DD:267:SER:C	39:DD:269:PHE:H	1.97	0.66
1:AA:1392:G:N2	1:AA:1502:A:C8	2.63	0.66
54:BV:19:LYS:HZ3	54:BV:20:LEU:H	1.42	0.66
46:DN:12:ARG:HB3	46:DN:50:ASP:OD1	1.95	0.66
52:BT:6:LEU:HG	52:BT:9:LEU:HD12	1.77	0.66
2:AB:212:GLN:NE2	2:AB:216:SER:HB2	2.09	0.66
41:DF:160:ASN:HD21	41:DF:162:LEU:HB2	1.59	0.66
40:DE:203:LYS:HE3	40:DE:204:ALA:HB2	1.76	0.66
36:BA:1717:G:C3'	36:BA:1718:G:H5''	2.25	0.66
1:CA:179:A:H2'	1:CA:180:U:C6	2.30	0.66
1:CA:1365:G:O2'	1:CA:1366:C:H5'	1.95	0.66
1:CA:918:A:H2'	1:CA:919:A:C8	2.31	0.66
40:BE:107:THR:O	40:BE:190:GLY:HA2	1.95	0.66
16:AP:25:ARG:HH11	16:AP:25:ARG:HG3	1.60	0.66
40:DE:11:MET:HB2	40:DE:23:VAL:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:70:GLN:NE2	26:D0:80:HIS:NE2	2.43	0.66
36:DA:2310:A:O2'	36:DA:2311:A:H5'	1.93	0.66
42:BG:10:LYS:HA	42:BG:14:GLU:OE2	1.95	0.66
42:BG:43:LEU:HD11	42:BG:153:ARG:HD2	1.75	0.66
36:BA:481:G:OP2	57:BY:47:LYS:HG2	1.94	0.66
19:AS:29:ARG:HG2	19:AS:47:HIS:HA	1.77	0.66
36:DA:1799:G:C5'	36:DA:1819:A:H61	2.05	0.66
36:DA:481:G:OP2	57:DY:47:LYS:HG2	1.94	0.66
32:D6:15:GLU:CG	32:D6:47:THR:HG21	2.25	0.66
40:BE:30:PRO:O	40:BE:32:PRO:HD3	1.94	0.66
36:DA:1050:A:C2'	36:DA:1051:G:H5'	2.24	0.66
36:DA:145:G:C2'	36:DA:146:G:H5''	2.24	0.66
55:DW:6:ILE:HG12	55:DW:104:THR:HG22	1.76	0.66
36:DA:910:A:H2'	36:DA:911:A:C8	2.30	0.66
49:DQ:97:VAL:HG21	49:DQ:103:MET:CE	2.26	0.66
43:DH:12:PRO:CD	43:DH:48:GLY:HA2	2.26	0.66
1:CA:628:G:O2'	1:CA:629:G:H5'	1.95	0.66
40:DE:9:VAL:HG12	40:DE:25:VAL:HB	1.74	0.66
52:DT:3:ARG:O	52:DT:5:ALA:N	2.28	0.66
9:AI:118:LYS:O	9:AI:119:ALA:HB3	1.95	0.66
36:DA:1279:G:H4'	50:DR:31:HIS:CD2	2.30	0.66
36:DA:271(Z):C:H2'	36:DA:272:G:C8	2.31	0.66
7:AG:38:LEU:O	7:AG:38:LEU:HD12	1.95	0.66
2:CB:75:LYS:HA	2:CB:78:GLN:HE21	1.59	0.66
2:AB:165:VAL:HG23	2:AB:165:VAL:O	1.96	0.66
38:BC:100:ILE:HD13	38:BC:127:LEU:HB2	1.77	0.66
43:BH:124:GLU:HB3	43:BH:126:PRO:HD3	1.77	0.66
52:DT:29:ARG:HD3	52:DT:30:VAL:H	1.59	0.66
57:DY:28:LYS:CG	57:DY:39:VAL:HG22	2.17	0.66
48:BP:58:THR:CG2	48:BP:58:THR:O	2.44	0.66
47:BO:104:ARG:HH21	52:BT:33:LYS:HE3	1.58	0.66
42:DG:46:ALA:HB2	42:DG:88:ILE:CG1	2.26	0.66
25:AZ:256:VAL:HG13	25:AZ:312:PRO:HG3	1.77	0.66
39:BD:77:ALA:HB2	39:BD:97:TYR:CD1	2.30	0.66
52:BT:3:ARG:O	52:BT:5:ALA:N	2.27	0.66
48:BP:113:LYS:HG2	48:BP:114:ILE:H	1.61	0.66
40:DE:181:LEU:HD21	52:DT:7:ILE:CG2	2.26	0.66
1:CA:1437:C:H42	1:CA:1464:G:H1	1.43	0.66
42:DG:11:TYR:HA	42:DG:15:VAL:CG2	2.25	0.66
54:DV:19:LYS:HE2	54:DV:19:LYS:HA	1.77	0.66
36:BA:1058:G:C2'	36:BA:1059:G:H5''	2.24	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:296:C:H42	36:DA:343:C:H42	1.43	0.66
1:AA:1503:A:H2'	23:AX:16:A:N6	2.10	0.66
24:CY:51:G:O2'	25:CZ:338:TYR:HD1	1.78	0.66
1:AA:636:U:H2'	1:AA:637:G:C8	2.30	0.66
36:DA:1304:C:H2'	36:DA:1305:C:H6	1.61	0.66
12:AL:25:PRO:O	12:AL:26:ALA:HB2	1.94	0.66
36:DA:2295:C:H2'	36:DA:2296:U:H6	1.60	0.66
4:CD:171:GLY:HA3	4:CD:173:TRP:CZ3	2.30	0.66
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.10	0.66
1:AA:434:U:H2'	1:AA:435:C:C6	2.29	0.66
54:DV:39:LEU:HD12	54:DV:51:VAL:HA	1.78	0.66
39:BD:32:SER:O	39:BD:36:PRO:HG3	1.95	0.66
25:AZ:93:ILE:HD11	25:AZ:389:ARG:NH1	2.10	0.66
47:DO:87:ILE:HG21	47:DO:91:LEU:HA	1.75	0.66
29:D3:35:ARG:HD3	29:D3:37:LEU:HD21	1.76	0.66
39:BD:72:LYS:HD3	39:BD:75:ILE:HG13	1.77	0.66
12:AL:33:ARG:CG	12:AL:60:LEU:HD12	2.24	0.66
34:D8:42:ARG:O	34:D8:44:LYS:N	2.29	0.66
36:DA:26:G:OP1	55:DW:80:PRO:HB3	1.96	0.66
36:DA:761:A:C8	36:DA:761:A:O5'	2.46	0.66
33:D7:10:ARG:NH1	33:D7:10:ARG:HG2	2.06	0.66
16:CP:1:MET:O	16:CP:24:ALA:HB2	1.95	0.66
1:CA:1016:A:H2'	1:CA:1017:G:O4'	1.95	0.66
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.29	0.66
36:DA:2850:A:C2	50:DR:61:HIS:ND1	2.59	0.66
5:AE:92:LYS:HB3	5:AE:119:LEU:HB2	1.76	0.66
36:BA:2206:G:N2	36:BA:2207:G:H5'	2.11	0.66
36:BA:1242:A:H5'	36:BA:1243:G:OP2	1.95	0.66
1:CA:1234:C:H2'	1:CA:1235:U:H6	1.60	0.66
4:AD:20:TYR:CA	4:AD:26:CYS:SG	2.68	0.66
4:AD:31:CYS:O	4:AD:32:ALA:HB3	1.96	0.66
10:AJ:54:PHE:CD1	10:AJ:55:LYS:NZ	2.63	0.66
28:B2:67:LYS:HA	28:B2:70:GLN:NE2	2.11	0.66
36:BA:330:A:O2'	36:BA:331:A:H8	1.78	0.66
57:DY:10:GLY:HA2	57:DY:27:VAL:CG1	2.23	0.66
42:DG:46:ALA:HB3	42:DG:82:LEU:HD11	1.76	0.66
35:D9:10:ILE:HG13	36:DA:2477:C:C4	2.30	0.66
46:DN:48:MET:HE3	46:DN:48:MET:N	2.11	0.66
36:DA:1227:G:OP1	53:DU:13:LYS:HD2	1.96	0.66
7:AG:20:ASP:HB3	7:AG:23:VAL:CG2	2.25	0.66
38:BC:87:GLU:HG2	38:BC:94:VAL:HG21	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:134:GLU:C	2:CB:136:VAL:H	1.97	0.66
50:DR:2:ARG:CD	50:DR:5:LYS:HE2	2.25	0.66
43:BH:118:PRO:CG	43:BH:121:ILE:HD12	2.25	0.66
20:AT:12:ALA:O	20:AT:15:ARG:HB2	1.96	0.66
22:AV:21:A:H2'	22:AV:22:G:H5''	1.76	0.66
55:BW:82:LEU:H	55:BW:82:LEU:HD12	1.59	0.66
1:CA:1126:U:OP2	1:CA:1281:U:O2	2.14	0.66
11:CK:80:VAL:O	11:CK:105:VAL:HA	1.95	0.66
41:DF:185:ASP:HA	41:DF:188:ARG:HG2	1.75	0.66
9:AI:50:LEU:O	9:AI:56:LEU:HA	1.95	0.66
36:BA:1279:G:H4'	50:BR:31:HIS:CD2	2.30	0.66
36:BA:730:C:O2'	36:BA:731:C:H5'	1.95	0.66
36:DA:902:C:H2'	36:DA:903:C:H6	1.59	0.66
1:CA:6:G:O2'	1:CA:7:G:H5''	1.96	0.66
43:DH:105:LEU:H	43:DH:105:LEU:HD23	1.61	0.66
4:CD:49:ARG:O	4:CD:51:PRO:HD3	1.96	0.66
36:DA:1771:C:H1'	36:DA:1786:A:C8	2.30	0.66
25:CZ:20:VAL:HG23	25:CZ:21:ASP:H	1.60	0.66
13:CM:11:ARG:HA	13:CM:45:VAL:HB	1.76	0.66
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.76	0.66
41:BF:107:LYS:HE3	41:BF:205:ARG:HG2	1.76	0.66
19:CS:53:ASN:HD22	19:CS:55:LYS:H	1.43	0.66
34:B8:61:LEU:HD12	34:B8:61:LEU:N	2.09	0.66
53:BU:88:ILE:HG22	54:BV:47:VAL:HG23	1.77	0.66
51:BS:58:LEU:HD23	51:BS:65:VAL:HG13	1.77	0.66
31:B5:43:HIS:HD2	36:BA:2815:C:O2'	1.78	0.66
32:B6:11:LEU:CD2	32:B6:26:ASN:H	2.09	0.66
40:BE:197:ILE:O	40:BE:197:ILE:HG13	1.95	0.66
37:DB:106:G:C5'	58:DZ:31:ARG:HG2	2.25	0.66
46:BN:55:VAL:CG2	46:BN:126:PRO:HA	2.26	0.66
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.30	0.66
43:DH:83:TYR:HB3	43:DH:135:GLY:O	1.96	0.66
26:B0:38:VAL:HG23	26:B0:59:LEU:HB2	1.78	0.66
2:AB:229:VAL:HG12	2:AB:230:VAL:H	1.61	0.66
28:D2:3:LEU:HB3	36:DA:98:G:OP1	1.95	0.66
9:CI:53:VAL:H	9:CI:95:LYS:HZ2	1.43	0.66
13:CM:118:ALA:HB3	22:CV:29:G:C5'	2.25	0.66
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.78	0.66
46:BN:12:ARG:HB3	46:BN:50:ASP:OD1	1.96	0.66
36:DA:902:C:H2'	36:DA:903:C:C6	2.31	0.66
40:BE:137:HIS:HB3	40:BE:138:PRO:HD2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:93:G:H2'	37:DB:94:C:H6	1.60	0.66
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.78	0.66
5:AE:6:PHE:HB3	5:AE:35:GLY:O	1.95	0.66
38:BC:73:ARG:O	38:BC:111:ASP:HB2	1.96	0.66
25:AZ:5:PHE:C	25:AZ:5:PHE:CD1	2.69	0.66
53:DU:90:VAL:O	53:DU:92:ARG:N	2.29	0.66
3:CC:32:LEU:HD22	3:CC:59:ARG:NE	2.11	0.66
1:AA:1129:C:OP1	1:AA:1130:A:H5'	1.95	0.66
4:CD:134:ASP:O	4:CD:136:PRO:HD3	1.95	0.66
34:B8:50:LEU:O	34:B8:51:ALA:HB3	1.96	0.66
51:BS:28:VAL:CG1	51:BS:29:PHE:H	2.07	0.66
40:BE:105:THR:O	40:BE:196:VAL:HA	1.95	0.66
58:DZ:58:VAL:HG12	58:DZ:68:PRO:HA	1.78	0.66
52:BT:90:GLN:O	52:BT:92:GLY:N	2.28	0.66
31:D5:25:LEU:HD12	55:DW:19:LEU:HG	1.77	0.66
39:DD:43:ARG:O	39:DD:43:ARG:HG2	1.94	0.66
41:DF:177:ALA:HB1	41:DF:178:PRO:HD2	1.78	0.66
55:BW:12:ILE:HD12	55:BW:42:ARG:NH1	2.10	0.66
17:CQ:59:ILE:HG22	17:CQ:71:PHE:CD2	2.31	0.66
36:DA:1409:C:H2'	36:DA:1410:G:H8	1.61	0.66
15:CO:45:VAL:HG12	15:CO:46:HIS:CD2	2.29	0.66
17:CQ:37:LYS:O	17:CQ:38:ARG:HB2	1.94	0.66
56:BX:26:TYR:CD2	56:BX:92:LEU:HD12	2.31	0.66
1:CA:189(H):G:O2'	1:CA:189(I):G:H8	1.79	0.66
39:DD:95:LEU:HD11	39:DD:105:ILE:HG22	1.76	0.66
9:CI:86:VAL:HG23	9:CI:93:ARG:HG2	1.77	0.66
25:CZ:272:MET:CB	25:CZ:277:LEU:HD23	2.19	0.66
51:DS:85:VAL:HG23	51:DS:106:ARG:HD3	1.77	0.66
41:BF:155:LEU:HD11	41:BF:176:LEU:HD22	1.78	0.66
27:B1:86:SER:O	27:B1:90:ILE:HG12	1.95	0.66
35:D9:4:ARG:HG2	35:D9:34:GLN:HE22	1.60	0.66
36:BA:1301:A:O2'	36:BA:1302:A:C2'	2.40	0.66
48:BP:135:LEU:HD13	48:BP:135:LEU:O	1.95	0.66
52:BT:24:PRO:HD3	52:BT:52:ILE:HG13	1.77	0.66
40:DE:61:ARG:CB	40:DE:62:PRO:HD3	2.26	0.66
36:BA:2179:C:H4'	36:BA:2180:U:C2	2.30	0.66
30:B4:20:ASN:HD22	30:B4:21:VAL:H	1.42	0.66
24:AY:20:H2U:H4'	24:AY:21:A:H5''	1.76	0.66
27:B1:40:ARG:NH1	27:B1:42:GLN:HG2	2.11	0.66
46:BN:2:LYS:NZ	54:BV:13:ARG:H	1.94	0.66
51:BS:66:ALA:HA	51:BS:69:VAL:HG12	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1784:A:H4'	36:BA:1785:A:O5'	1.95	0.66
40:DE:69:LYS:HD3	40:DE:89:ASP:HA	1.78	0.66
36:DA:521:G:H2'	36:DA:522:G:C8	2.30	0.66
11:CK:103:LEU:HD13	11:CK:104:GLN:H	1.61	0.66
58:BZ:75:ASN:O	58:BZ:84:GLU:HB3	1.96	0.66
7:CG:78:ARG:CZ	7:CG:80:VAL:HG21	2.25	0.66
36:DA:907:U:OP1	49:DQ:24:GLY:N	2.24	0.66
36:DA:181:A:H2'	36:DA:182:A:C8	2.31	0.66
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	1.95	0.66
39:DD:248:SER:HB2	39:DD:249:PRO:HD2	1.76	0.66
36:BA:2153:G:H2'	36:BA:2154:G:H8	1.59	0.66
36:DA:191:A:O2'	36:DA:192:C:H5'	1.96	0.66
15:CO:26:GLU:OE2	15:CO:77:ARG:HD2	1.95	0.66
36:DA:116:C:H2'	36:DA:117:G:C8	2.31	0.66
7:AG:9:VAL:HG22	7:AG:94:ARG:HD3	1.78	0.66
25:CZ:124:ARG:O	61:CZ:502:KIR:H443	1.95	0.66
28:B2:25:VAL:HG22	28:B2:57:ILE:HD13	1.77	0.66
57:BY:30:VAL:HA	57:BY:37:VAL:HG12	1.75	0.66
36:DA:2199:A:H3'	36:DA:2200:C:H6	1.61	0.66
42:BG:7:LEU:HD22	42:BG:100:TRP:CE3	2.31	0.66
54:BV:39:LEU:HD12	54:BV:47:VAL:HG11	1.77	0.66
31:B5:6:VAL:HG22	36:BA:2015:A:C2	2.31	0.66
54:DV:15:GLU:CB	54:DV:16:PRO:CD	2.72	0.66
17:AQ:27:PHE:CE2	17:AQ:36:ILE:HD11	2.31	0.66
17:AQ:37:LYS:O	17:AQ:38:ARG:HB2	1.96	0.66
34:D8:23:VAL:CG1	34:D8:46:ARG:HB3	2.25	0.66
32:D6:12:GLU:OE2	32:D6:23:THR:HG21	1.95	0.66
32:D6:15:GLU:HA	32:D6:49:HIS:CE1	2.30	0.66
52:BT:92:GLY:HA3	52:BT:120:ARG:NH2	2.11	0.66
12:CL:80:HIS:HD2	24:CY:68:C:H4'	1.58	0.66
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	1.76	0.66
36:DA:323:G:H2'	41:DF:169:ASN:HD21	1.59	0.66
20:CT:71:THR:HG22	20:CT:72:LEU:CD2	2.25	0.66
22:CW:59:U:H5'	22:CW:60:U:C5	2.31	0.66
47:DO:63:VAL:O	47:DO:63:VAL:HG23	1.96	0.66
36:DA:234:C:H2'	36:DA:235:U:C6	2.31	0.66
1:CA:250:A:H4'	1:CA:251:G:O5'	1.95	0.66
36:BA:271(H):G:H1'	36:BA:271(I):G:C8	2.31	0.66
1:AA:367:U:H5''	1:AA:394:G:H21	1.59	0.66
39:BD:8:PRO:HB3	39:BD:14:ARG:HB3	1.78	0.66
16:CP:76:GLN:O	16:CP:76:GLN:HG2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:135:ASP:H	49:BQ:137:TYR:HD1	1.42	0.66
3:CC:32:LEU:O	3:CC:35:GLU:HB3	1.96	0.66
57:BY:14:LEU:HD12	57:BY:15:VAL:H	1.60	0.66
36:DA:2635:C:OP1	40:DE:77:ILE:HG21	1.96	0.66
4:CD:19:LEU:O	4:CD:31:CYS:SG	2.54	0.66
10:CJ:54:PHE:CD1	10:CJ:55:LYS:NZ	2.63	0.66
47:DO:61:VAL:HG12	47:DO:87:ILE:HD11	1.78	0.66
34:B8:15:LYS:HG2	48:BP:65:ARG:HH21	1.60	0.66
36:BA:1538:G:H2'	36:BA:1539:G:H8	1.60	0.66
36:BA:1024:G:H3'	36:BA:1025:G:C5'	2.21	0.66
46:BN:23:LEU:CD1	46:BN:98:VAL:HG12	2.26	0.66
58:DZ:6:LYS:HG3	58:DZ:60:GLU:CB	2.26	0.66
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.59	0.66
13:AM:39:ILE:HD12	13:AM:56:LEU:HD23	1.78	0.66
8:AH:114:THR:HG22	8:AH:130:GLY:O	1.95	0.66
12:AL:24:VAL:HG12	12:AL:27:LEU:HD13	1.78	0.66
11:CK:30:VAL:HG21	11:CK:65:ALA:HA	1.78	0.66
1:AA:487:A:H2'	1:AA:488:C:O4'	1.95	0.66
19:AS:67:VAL:HG12	19:AS:68:GLY:N	2.10	0.66
57:BY:90:LEU:O	57:BY:91:GLU:HG2	1.96	0.66
36:DA:2469:A:H2	36:DA:2481:G:H21	1.44	0.66
37:BB:17:C:H2'	37:BB:18:G:O4'	1.96	0.66
12:CL:55:VAL:HG23	12:CL:68:ALA:O	1.96	0.66
25:AZ:241:ARG:HH11	25:AZ:241:ARG:HB3	1.61	0.66
36:BA:993:G:H4'	54:BV:70:ILE:HD12	1.78	0.66
25:CZ:136:ASN:OD1	60:CZ:501:GDP:O6	2.14	0.65
47:DO:104:ARG:CZ	52:DT:33:LYS:HD2	2.26	0.65
47:DO:104:ARG:HE	52:DT:33:LYS:NZ	1.94	0.65
1:AA:80:G:O2'	1:AA:81:U:H5'	1.95	0.65
52:BT:55:ASN:H	52:BT:59:THR:HG22	1.61	0.65
10:CJ:54:PHE:CA	10:CJ:55:LYS:HE3	2.25	0.65
36:DA:259:G:H1'	36:DA:621:A:O2'	1.96	0.65
36:BA:943:U:OP2	48:BP:38:GLN:CD	2.34	0.65
42:DG:107:LEU:HD21	42:DG:178:PHE:CD1	2.31	0.65
36:DA:1543:C:C3'	36:DA:1544:A:H5''	2.24	0.65
51:BS:27:SER:HA	51:BS:88:ASP:HB3	1.79	0.65
12:AL:6:THR:HG23	12:AL:9:GLN:NE2	2.11	0.65
30:B4:7:PRO:O	30:B4:8:LYS:HB3	1.95	0.65
41:DF:84:VAL:C	41:DF:86:GLY:H	1.99	0.65
40:BE:13:ARG:HB3	40:BE:22:PRO:HA	1.78	0.65
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:687:A:H4'	11:AK:47:VAL:HG12	1.78	0.65
11:AK:44:SER:H	11:AK:47:VAL:CG2	2.08	0.65
36:BA:2033:A:H4'	36:BA:2034:U:OP1	1.97	0.65
4:CD:24:GLU:O	4:CD:27:TYR:HB3	1.95	0.65
36:BA:1777:U:O2'	36:BA:1778:U:H5'	1.95	0.65
5:AE:64:ARG:HG3	5:AE:64:ARG:HH11	1.61	0.65
43:DH:143:GLN:HE21	43:DH:143:GLN:CA	2.09	0.65
30:D4:42:PHE:CG	30:D4:42:PHE:O	2.48	0.65
28:B2:21:LEU:HB3	28:B2:64:LEU:HG	1.77	0.65
4:CD:100:ARG:HH21	4:CD:118:ARG:HH12	1.43	0.65
36:DA:1192:G:O2'	36:DA:1193:G:H5'	1.96	0.65
52:DT:89:VAL:CG1	52:DT:91:ARG:HG3	2.23	0.65
36:DA:2308:G:O6	36:DA:2310:A:H2'	1.96	0.65
48:DP:47:ASP:HB3	48:DP:48:PRO:HA	1.76	0.65
52:BT:27:THR:O	52:BT:28:VAL:CB	2.44	0.65
36:BA:2886:G:H2'	36:BA:2887:U:H6	1.61	0.65
3:AC:11:ARG:HG2	3:AC:11:ARG:HH11	1.59	0.65
36:BA:2286:A:H4'	36:BA:2287:A:O4'	1.95	0.65
32:B6:16:CYS:SG	32:B6:49:HIS:N	2.69	0.65
48:DP:58:THR:O	48:DP:58:THR:HG22	1.95	0.65
36:DA:631:A:H5''	48:DP:65:ARG:NH1	2.11	0.65
13:AM:11:ARG:HG2	13:AM:12:ASN:N	2.10	0.65
48:DP:114:ILE:HG21	48:DP:130:PHE:CD2	2.32	0.65
58:DZ:89:PHE:HE2	58:DZ:96:VAL:HG23	1.61	0.65
54:BV:28:GLU:HB3	54:BV:29:PRO:HD2	1.78	0.65
36:BA:1600:C:O2'	36:BA:1601:G:H5'	1.95	0.65
49:DQ:67:ARG:HD2	49:DQ:105:GLU:HG2	1.79	0.65
9:AI:95:LYS:HG3	9:AI:96:LEU:HD13	1.78	0.65
25:CZ:27:LEU:HD11	25:CZ:31:LEU:HD21	1.77	0.65
1:AA:376:G:O2'	1:AA:377:G:H5'	1.95	0.65
50:DR:2:ARG:NE	50:DR:5:LYS:HE2	2.11	0.65
17:CQ:66:SER:OG	17:CQ:69:LYS:HB2	1.96	0.65
36:BA:585:G:H2'	36:BA:1251:C:H42	1.61	0.65
41:DF:120:GLU:HB3	41:DF:122:LYS:HD3	1.78	0.65
24:CY:51:G:H4'	25:CZ:339:ARG:H	1.59	0.65
1:CA:658:G:H2'	1:CA:659:U:C6	2.31	0.65
1:AA:1499:A:H5'	1:AA:1499:A:C8	2.30	0.65
22:AV:16:U:H3	22:AV:59:U:H3	1.44	0.65
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	1.95	0.65
16:AP:43:LYS:O	16:AP:45:THR:N	2.30	0.65
5:AE:127:ASN:HD22	5:AE:130:ASN:H	1.41	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:72:VAL:HG23	54:BV:72:VAL:O	1.96	0.65
37:DB:7:G:H2'	37:DB:8:U:H5''	1.79	0.65
28:B2:39:ALA:HA	28:B2:44:LEU:CB	2.25	0.65
28:B2:49:LYS:O	28:B2:53:LEU:HG	1.96	0.65
28:B2:59:ARG:HD3	28:B2:59:ARG:H	1.60	0.65
39:DD:72:LYS:NZ	39:DD:101:GLU:HB3	2.12	0.65
52:BT:33:LYS:HE3	52:BT:43:GLN:NE2	2.12	0.65
41:BF:32:LEU:O	41:BF:36:VAL:HG23	1.97	0.65
36:BA:1539:G:C2	36:BA:1540:U:H4'	2.31	0.65
36:BA:1884:A:H2'	36:BA:1885:A:C5'	2.25	0.65
56:DX:14:SER:HB3	56:DX:17:ALA:CB	2.26	0.65
56:BX:12:VAL:HB	56:BX:17:ALA:CB	2.26	0.65
34:B8:52:LYS:N	34:B8:53:PRO:HD2	2.11	0.65
10:AJ:78:ASN:HD22	10:AJ:81:THR:HG21	1.61	0.65
51:DS:34:HIS:HB2	51:DS:36:TYR:HE1	1.61	0.65
24:CY:6:C:H42	24:CY:67:G:H1	1.44	0.65
39:BD:131:LEU:HB2	39:BD:136:ILE:CD1	2.25	0.65
36:BA:2720:U:H2'	36:BA:2720:U:O2	1.96	0.65
1:AA:534:U:H5'	1:AA:534:U:H6	1.62	0.65
27:D1:3:LYS:HE3	36:DA:1364:G:OP2	1.96	0.65
26:B0:27:GLU:OE1	36:BA:856:C:H1'	1.96	0.65
2:CB:121:LEU:HG	2:CB:126:GLU:HB3	1.76	0.65
43:DH:158:HIS:ND1	43:DH:168:PRO:HB2	2.12	0.65
2:CB:43:ASP:OD2	2:CB:45:GLN:HB3	1.97	0.65
24:CY:23:A:O2'	24:CY:24:A:H5'	1.96	0.65
24:AY:23:A:O2'	24:AY:24:A:H5'	1.95	0.65
55:DW:24:ILE:HG21	55:DW:36:LEU:HD21	1.77	0.65
36:DA:1151:G:H5''	53:DU:81:HIS:CE1	2.31	0.65
1:CA:731:G:OP1	1:CA:766:A:H1'	1.96	0.65
36:BA:2464:C:O2'	36:BA:2465:C:H6	1.79	0.65
28:B2:21:LEU:HA	28:B2:24:LEU:CD1	2.25	0.65
41:BF:6:VAL:HG12	41:BF:7:TYR:N	2.10	0.65
30:B4:26:SER:HB2	42:BG:143:GLU:OE2	1.95	0.65
14:CN:7:ILE:HG13	14:CN:8:GLU:H	1.61	0.65
36:BA:1517:G:H5'	36:BA:1517:G:C8	2.31	0.65
48:BP:101:VAL:HG23	48:BP:102:ARG:N	2.12	0.65
24:CY:28:C:H2'	24:CY:29:G:H8	1.59	0.65
57:BY:81:LYS:HZ2	57:BY:99:CYS:HB2	1.60	0.65
40:DE:117:MET:CE	40:DE:136:ARG:HA	2.27	0.65
1:CA:358:U:H2'	1:CA:359:U:H6	1.62	0.65
36:DA:2716:U:O2'	36:DA:2717:G:H5'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.32	0.65
40:BE:116:VAL:HG22	40:BE:117:MET:H	1.61	0.65
36:BA:1665:A:O2'	47:BO:1:MET:HB2	1.96	0.65
22:AV:2:C:O2	22:AV:2:C:H2'	1.96	0.65
12:CL:117:ARG:HB3	12:CL:122:THR:HG23	1.79	0.65
36:BA:1598:C:H5'	56:BX:36:LYS:HG2	1.77	0.65
22:CV:2:C:H2'	22:CV:3:C:H6	1.62	0.65
3:AC:95:THR:HG22	3:AC:95:THR:O	1.95	0.65
40:DE:32:PRO:HA	40:DE:90:THR:HG23	1.79	0.65
26:B0:50:ASN:O	26:B0:62:LEU:HB2	1.96	0.65
15:AO:17:ARG:HD3	15:AO:26:GLU:OE2	1.97	0.65
36:DA:1436:G:H2'	36:DA:1437:C:H5''	1.78	0.65
57:DY:17:SER:HA	57:DY:71:LYS:HD2	1.79	0.65
36:BA:2840:C:H5''	50:BR:53:HIS:CD2	2.32	0.65
41:DF:51:THR:OG1	41:DF:92:PRO:HD2	1.97	0.65
45:BK:32:UNK:HA	45:BK:63:UNK:CB	2.25	0.65
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.76	0.65
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HD3	2.31	0.65
22:CV:59:U:H2'	22:CV:60:U:C6	2.32	0.65
25:AZ:198:LYS:NZ	25:AZ:201:GLU:OE1	2.30	0.65
1:AA:972:C:OP2	10:AJ:57:LYS:HE3	1.97	0.65
57:BY:28:LYS:HB3	57:BY:39:VAL:HG22	1.76	0.65
39:DD:70:TRP:CH2	39:DD:150:LYS:HA	2.31	0.65
54:BV:8:GLY:CA	54:BV:23:GLU:HG3	2.23	0.65
42:BG:83:ARG:HB2	42:BG:84:LYS:HD2	1.79	0.65
52:BT:32:TYR:N	52:BT:32:TYR:CD1	2.62	0.65
42:DG:84:LYS:HD2	42:DG:84:LYS:H	1.61	0.65
25:AZ:345:ARG:HH11	25:AZ:345:ARG:HG2	1.60	0.65
25:AZ:312:PRO:O	25:AZ:313:HIS:ND1	2.29	0.65
34:B8:24:ALA:HA	34:B8:46:ARG:NH1	2.11	0.65
36:DA:2396:G:O2'	36:DA:2397:G:H5'	1.95	0.65
39:DD:43:ARG:NE	39:DD:44:ASN:ND2	2.44	0.65
24:CY:20:H2U:H4'	24:CY:21:A:H5''	1.78	0.65
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.62	0.65
3:CC:134:ILE:HG22	3:CC:168:ALA:CB	2.27	0.65
36:DA:549:G:O2'	36:DA:551:G:H5'	1.97	0.65
46:BN:16:ILE:HG23	46:BN:54:VAL:HG22	1.78	0.65
49:BQ:78:PRO:O	49:BQ:81:VAL:HG12	1.97	0.65
11:CK:22:HIS:HB3	11:CK:29:ILE:HG13	1.78	0.65
36:DA:1332:G:N2	36:DA:1609:A:O2'	2.29	0.65
4:AD:76:ARG:O	4:AD:80:GLU:HG2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:8:A:H62	4:AD:208:SER:HB2	1.61	0.65
36:BA:1827:C:O2'	36:BA:1828:G:H5'	1.97	0.65
47:DO:66:LYS:H	47:DO:82:ASN:ND2	1.94	0.65
36:DA:1441:G:O2'	36:DA:1442:G:H5'	1.97	0.65
36:BA:667:U:H2'	36:BA:668:G:O4'	1.96	0.65
36:DA:708:C:H42	36:DA:723:G:H1	1.45	0.65
11:AK:80:VAL:HG13	11:AK:103:LEU:HD11	1.79	0.65
15:AO:3:ILE:O	15:AO:3:ILE:HG13	1.96	0.65
6:CF:98:LEU:H	6:CF:98:LEU:HD12	1.62	0.65
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.55	0.65
28:B2:57:ILE:HG22	28:B2:61:LEU:CG	2.26	0.65
39:DD:31:LYS:HZ2	39:DD:33:LEU:CB	2.04	0.65
54:BV:39:LEU:CD1	54:BV:51:VAL:HA	2.27	0.65
51:DS:15:ARG:HH12	51:DS:18:ILE:HD11	1.61	0.65
25:AZ:163:PHE:CD1	25:AZ:164:PRO:HD2	2.29	0.65
34:B8:32:LEU:HD22	36:BA:2392:A:OP1	1.97	0.65
20:AT:57:ARG:NH1	20:AT:102:GLY:HA3	2.12	0.65
25:AZ:138:VAL:HG21	25:AZ:173:GLY:H	1.62	0.65
36:DA:1018:C:H2'	36:DA:1019:U:H6	1.60	0.65
37:BB:20:C:C2'	37:BB:21:G:H5''	2.27	0.65
55:DW:107:LEU:N	55:DW:107:LEU:HD12	2.12	0.65
4:AD:78:LEU:CD2	4:AD:96:LEU:HB3	2.26	0.65
1:AA:1315:U:O2	1:AA:1360:A:H2	1.79	0.65
24:CY:64:U:C1'	25:CZ:391:GLY:H	2.08	0.65
41:DF:185:ASP:HA	41:DF:188:ARG:CG	2.27	0.65
25:AZ:255:ILE:HG22	25:AZ:302:GLN:NE2	2.12	0.65
42:BG:109:VAL:O	42:BG:112:PRO:HG2	1.95	0.65
1:CA:269:C:H2'	1:CA:270:A:H8	1.62	0.65
12:AL:41:ARG:CG	12:AL:42:THR:H	2.10	0.65
12:AL:122:THR:O	12:AL:122:THR:HG23	1.95	0.65
55:DW:82:LEU:HD12	55:DW:82:LEU:H	1.60	0.65
28:B2:20:GLU:O	28:B2:22:GLU:HG3	1.97	0.65
1:CA:1221:G:C4'	19:CS:77:THR:HG21	2.17	0.65
52:DT:31:SER:HB2	52:DT:32:TYR:CD1	2.32	0.65
47:BO:63:VAL:HG23	47:BO:63:VAL:O	1.96	0.65
52:BT:32:TYR:O	52:BT:33:LYS:HB2	1.97	0.65
31:B5:31:VAL:CG2	36:BA:2886:G:H1'	2.26	0.65
25:CZ:8:THR:HG23	25:CZ:9:LYS:N	2.11	0.65
51:BS:14:VAL:HG12	51:BS:15:ARG:N	2.12	0.65
31:D5:47:PRO:HG2	31:D5:48:GLU:OE1	1.95	0.65
34:D8:25:MET:CG	48:DP:64:LYS:HB2	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:101:VAL:HG12	48:BP:106:LEU:HB2	1.79	0.65
9:AI:85:LEU:HD13	9:AI:92:TYR:HD2	1.62	0.65
36:DA:650:C:C3'	36:DA:651:G:H5''	2.26	0.65
58:BZ:102:LEU:HD23	58:BZ:137:ILE:HB	1.78	0.65
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.78	0.65
36:DA:1058:G:H1'	36:DA:1082:U:O4	1.96	0.65
36:DA:212:G:O2'	36:DA:213:A:H5'	1.97	0.65
40:DE:95:ILE:N	40:DE:95:ILE:HD13	2.12	0.65
11:AK:43:SER:HB3	11:AK:68:ALA:HB2	1.78	0.65
40:DE:188:VAL:HG23	40:DE:189:PRO:HD2	1.78	0.65
8:AH:29:SER:OG	8:AH:32:LYS:HB2	1.97	0.65
7:AG:78:ARG:CZ	7:AG:80:VAL:HG21	2.27	0.65
19:AS:11:VAL:HG23	19:AS:38:SER:HB2	1.79	0.65
37:BB:114:C:O2'	51:BS:46:VAL:HG13	1.97	0.65
1:AA:853:G:O2'	1:AA:854:G:H5'	1.96	0.65
28:B2:27:GLU:HA	28:B2:30:ARG:HB2	1.79	0.65
35:D9:30:PRO:HB2	36:DA:2527:C:H4'	1.78	0.65
43:BH:163:TYR:CD1	43:BH:163:TYR:N	2.64	0.65
36:BA:643:A:C2'	36:BA:644:A:H5'	2.26	0.65
52:BT:62:THR:HG22	52:BT:75:ILE:HG13	1.78	0.65
38:BC:120:MET:HA	38:BC:120:MET:HE2	1.77	0.65
22:AW:71:G:H2'	22:AW:72:C:C5'	2.24	0.65
28:B2:59:ARG:HH21	28:B2:60:LEU:HD12	1.62	0.65
28:B2:6:VAL:HG21	28:B2:59:ARG:NE	2.11	0.65
36:DA:2100:G:H2'	36:DA:2101:G:C8	2.32	0.65
57:DY:13:VAL:HG23	57:DY:73:ARG:H	1.61	0.65
52:BT:32:TYR:CD2	52:BT:81:PRO:HG2	2.32	0.65
32:B6:11:LEU:HD23	32:B6:25:LYS:HA	1.79	0.65
35:D9:4:ARG:HG2	35:D9:34:GLN:CD	2.15	0.65
30:D4:31:ILE:HG22	30:D4:33:VAL:HG23	1.79	0.65
51:BS:89:ARG:CG	51:BS:89:ARG:HH11	2.09	0.65
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.23	0.65
40:BE:24:THR:HG22	40:BE:186:GLY:HA2	1.78	0.65
2:CB:9:GLU:OE1	2:CB:9:GLU:N	2.30	0.65
5:CE:145:LYS:O	5:CE:149:GLU:HG3	1.96	0.65
49:DQ:133:ARG:CB	49:DQ:133:ARG:HH11	2.10	0.65
43:BH:66:GLY:CA	43:BH:69:ARG:HB3	2.26	0.65
46:DN:46:VAL:O	46:DN:47:ALA:HB3	1.96	0.65
12:CL:80:HIS:CD2	24:CY:68:C:O2'	2.49	0.65
49:BQ:52:VAL:O	49:BQ:56:ARG:HB2	1.97	0.65
3:CC:77:ILE:O	3:CC:83:ARG:HB3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:691:C:C1'	39:DD:43:ARG:HH11	2.09	0.65
1:CA:625:G:H2'	1:CA:626:U:C6	2.32	0.65
38:BC:47:LEU:HD11	38:BC:171:ILE:CG2	2.26	0.65
39:BD:3:VAL:CG1	39:BD:17:THR:HB	2.27	0.65
12:AL:24:VAL:CG1	12:AL:27:LEU:HD22	2.26	0.65
46:DN:23:LEU:HB2	46:DN:60:ILE:CG2	2.27	0.65
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.12	0.65
9:AI:83:ARG:O	9:AI:86:VAL:HG12	1.97	0.65
36:DA:2019:A:C4'	53:DU:34:LYS:HD2	2.27	0.65
46:BN:67:LEU:O	46:BN:88:GLU:HG3	1.96	0.65
3:CC:92:ALA:O	3:CC:96:GLY:HA2	1.96	0.65
54:DV:68:LYS:HD3	54:DV:69:LYS:H	1.62	0.65
36:DA:1403:C:H5''	36:DA:1471:A:H1'	1.77	0.65
1:CA:1492:A:OP1	12:CL:47:LYS:HB2	1.97	0.65
2:AB:30:ARG:HB2	2:AB:30:ARG:HH11	1.61	0.65
27:B1:37:ILE:HG22	27:B1:37:ILE:O	1.95	0.65
53:DU:83:LEU:HG	53:DU:88:ILE:HD11	1.77	0.65
4:CD:100:ARG:HH12	4:CD:137:SER:HA	1.62	0.65
53:BU:92:ARG:HH21	54:BV:11:GLN:H	1.42	0.65
49:BQ:141:GLN:O	58:BZ:53:ILE:HB	1.97	0.65
58:DZ:81:ARG:HH11	58:DZ:81:ARG:HB3	1.60	0.65
22:AW:59:U:H2'	22:AW:60:U:H5'	1.77	0.65
58:DZ:7:ALA:HB3	58:DZ:61:LEU:CD2	2.27	0.65
36:DA:528:A:H2	36:DA:2043:C:O5'	1.79	0.65
48:DP:147:LEU:CG	48:DP:148:LEU:H	2.05	0.65
36:BA:659:C:H4'	41:BF:100:THR:O	1.96	0.65
43:DH:30:LYS:HB2	43:DH:79:VAL:HA	1.78	0.65
6:CF:9:VAL:HG12	6:CF:86:ARG:HG3	1.79	0.65
36:BA:2176:A:C3'	36:BA:2177:C:H5''	2.27	0.65
1:CA:984:C:H2'	1:CA:985:C:C6	2.31	0.65
36:BA:1316:U:H2'	36:BA:1317:A:C8	2.32	0.65
31:B5:11:THR:OG1	36:BA:1263:U:O3'	2.15	0.65
1:CA:1368:G:H5'	9:CI:112:LYS:O	1.97	0.65
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.61	0.65
10:CJ:44:VAL:HG13	10:CJ:66:ARG:HB3	1.79	0.65
37:BB:3:C:H42	37:BB:118:G:H1	1.45	0.65
49:BQ:60:ARG:HB3	49:BQ:60:ARG:NH1	2.11	0.65
25:CZ:198:LYS:NZ	25:CZ:201:GLU:HG3	2.12	0.65
25:CZ:121:LEU:HD22	61:CZ:502:KIR:O4	1.96	0.65
36:BA:221:A:H4'	36:BA:222:A:O5'	1.96	0.65
43:BH:84:SER:O	43:BH:85:LYS:HB3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:92:ARG:NH2	54:BV:10:LYS:HB3	2.12	0.65
52:BT:28:VAL:HG23	52:BT:47:GLY:O	1.96	0.65
20:AT:45:GLN:HB3	20:AT:91:LEU:HD13	1.79	0.65
36:BA:1516:C:H2'	36:BA:1517:G:C5'	2.23	0.65
32:B6:41:PRO:HD2	32:B6:45:LYS:HA	1.79	0.65
37:DB:20:C:C2'	37:DB:21:G:H5''	2.25	0.65
43:BH:51:ARG:HG3	43:BH:52:VAL:H	1.61	0.65
54:DV:25:LEU:H	54:DV:92:THR:HG21	1.61	0.65
52:BT:25:GLY:HA2	52:BT:92:GLY:HA2	1.79	0.65
1:CA:367:U:O5'	25:CZ:291:ARG:HD2	1.96	0.65
14:AN:27:CYS:SG	59:AN:101:ZN:ZN	1.86	0.65
10:CJ:27:ALA:HB3	10:CJ:34:VAL:HG21	1.79	0.65
1:CA:1317:C:H2'	1:CA:1318:A:O4'	1.97	0.65
54:BV:61:VAL:HA	54:BV:94:LEU:HD23	1.79	0.65
19:CS:16:LEU:N	19:CS:16:LEU:HD12	2.11	0.65
43:BH:136:ILE:HD12	43:BH:136:ILE:N	2.11	0.65
13:AM:113:PRO:O	13:AM:114:ARG:CB	2.45	0.65
43:DH:158:HIS:O	43:DH:159:GLU:HB2	1.97	0.65
43:DH:89:ILE:O	43:DH:89:ILE:HG13	1.97	0.65
39:DD:238:GLY:O	39:DD:239:ARG:O	2.15	0.65
9:AI:86:VAL:HG23	9:AI:93:ARG:HG2	1.77	0.65
3:CC:180:ALA:O	3:CC:181:ASN:HB2	1.96	0.65
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.42	0.65
36:DA:2720:U:H5'	36:DA:2721:A:OP2	1.97	0.65
38:BC:175:VAL:HG12	38:BC:175:VAL:O	1.95	0.65
1:AA:452:A:O2'	1:AA:453:A:H8	1.79	0.65
50:BR:75:LEU:O	50:BR:75:LEU:HD13	1.97	0.65
36:BA:1907:G:O2'	36:BA:1908:C:H5'	1.97	0.65
5:CE:127:ASN:HD22	5:CE:130:ASN:H	1.45	0.65
36:BA:1642:G:O2'	36:BA:1643:G:H5'	1.97	0.65
36:BA:1198:U:H2'	36:BA:1199:U:C6	2.32	0.65
20:CT:60:GLU:O	20:CT:63:ILE:HB	1.96	0.65
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.94	0.65
36:DA:2483:C:H3'	36:DA:2484:G:H5''	1.79	0.65
1:CA:1486:G:H2'	1:CA:1487:G:O4'	1.97	0.65
53:BU:108:GLU:HG3	54:BV:44:LYS:HD3	1.79	0.65
3:CC:192:THR:O	3:CC:192:THR:HG22	1.97	0.65
11:CK:121:PRO:HG2	11:CK:126:ARG:HB2	1.79	0.65
36:BA:2190:G:C2	36:BA:2191:G:H1'	2.32	0.64
36:DA:806:C:OP2	48:DP:39:LYS:HD2	1.97	0.64
48:DP:38:GLN:HG3	48:DP:39:LYS:H	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:35:LYS:HG3	39:BD:63:ARG:HG2	1.79	0.64
36:BA:195:A:OP1	48:BP:46:LYS:HE2	1.97	0.64
36:DA:1528:A:N1	36:DA:1542:A:H2	1.93	0.64
37:DB:74:U:H2'	37:DB:75:G:O4'	1.97	0.64
48:BP:101:VAL:HG12	48:BP:106:LEU:CB	2.27	0.64
51:DS:61:ASN:O	51:DS:65:VAL:HG23	1.97	0.64
36:DA:2491:U:H4'	36:DA:2570:G:OP1	1.96	0.64
36:DA:2022:U:O2'	36:DA:2617:C:H5'	1.97	0.64
48:DP:77:ARG:CD	48:DP:78:PRO:HD2	2.27	0.64
32:D6:52:VAL:HG12	32:D6:53:LYS:H	1.62	0.64
11:AK:27:ASN:ND2	11:AK:28:THR:N	2.45	0.64
1:AA:64:G:H4'	1:AA:66:G:OP1	1.96	0.64
24:CY:50:G:O2'	25:CZ:339:ARG:HD3	1.96	0.64
36:BA:2502:G:H5''	36:BA:2503:A:C5'	2.27	0.64
3:AC:119:ARG:O	3:AC:122:GLU:HB2	1.97	0.64
9:AI:11:LYS:O	9:AI:12:GLU:CB	2.46	0.64
43:DH:137:ASP:OD2	43:DH:140:LYS:HE3	1.96	0.64
47:BO:66:LYS:H	47:BO:82:ASN:ND2	1.95	0.64
18:CR:42:ARG:HH11	18:CR:42:ARG:HG3	1.62	0.64
50:BR:106:GLY:O	50:BR:107:ASP:HB3	1.96	0.64
1:CA:990:C:H2'	1:CA:991:U:C6	2.32	0.64
27:B1:75:GLU:C	27:B1:77:ALA:H	2.01	0.64
2:AB:144:ARG:HG3	2:AB:144:ARG:O	1.96	0.64
3:AC:107:GLN:CD	3:AC:107:GLN:H	2.00	0.64
25:CZ:328:GLY:O	25:CZ:393:ARG:HD3	1.96	0.64
10:AJ:38:ILE:HG13	10:AJ:71:LEU:O	1.97	0.64
13:CM:65:LYS:HD3	13:CM:65:LYS:N	2.08	0.64
52:DT:105:LEU:O	52:DT:107:ASP:OD1	2.13	0.64
36:DA:1803:A:O3'	39:DD:259:THR:CG2	2.43	0.64
56:DX:65:ARG:HD3	56:DX:70:LEU:CD2	2.23	0.64
32:D6:7:ILE:HG23	32:D6:29:ASN:HD22	1.62	0.64
40:BE:52:LEU:CG	40:BE:75:VAL:HB	2.27	0.64
42:DG:27:ASN:OD1	42:DG:28:VAL:N	2.29	0.64
1:CA:1036:G:H5''	1:CA:1037:C:C5	2.33	0.64
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.32	0.64
2:CB:102:LEU:HB2	2:CB:176:GLU:OE1	1.97	0.64
36:BA:761:A:H8	36:BA:761:A:H3'	1.62	0.64
25:CZ:34:VAL:HG21	25:CZ:199:ILE:CG2	2.26	0.64
20:CT:71:THR:O	20:CT:72:LEU:HD23	1.97	0.64
15:AO:82:ILE:HD11	15:AO:88:ARG:N	2.12	0.64
42:DG:130:ASN:OD1	42:DG:160:VAL:HA	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:54:VAL:HG22	56:BX:81:VAL:HG12	1.77	0.64
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.79	0.64
36:BA:2704:C:H2'	36:BA:2705:A:H8	1.61	0.64
15:AO:28:GLN:OE1	15:AO:66:LEU:HD21	1.96	0.64
43:DH:126:PRO:O	43:DH:127:GLU:HB2	1.98	0.64
39:DD:45:ASN:CG	39:DD:46:GLN:H	1.99	0.64
4:AD:36:ARG:C	4:AD:38:TYR:H	2.00	0.64
37:DB:7:G:H4'	51:DS:29:PHE:CD2	2.32	0.64
1:CA:1305:G:H3'	21:CU:6:ARG:HH22	1.61	0.64
14:CN:22:THR:O	14:CN:23:ARG:HB3	1.97	0.64
25:AZ:7:ARG:NH1	25:AZ:281:ILE:CG1	2.53	0.64
36:DA:631:A:H5''	48:DP:65:ARG:HH11	1.61	0.64
39:DD:76:PRO:HG2	39:DD:98:VAL:CG2	2.28	0.64
27:D1:62:VAL:HG21	27:D1:67:ILE:HA	1.79	0.64
40:BE:105:THR:HG21	40:BE:164:ARG:NH1	2.13	0.64
9:CI:79:LEU:HD12	9:CI:83:ARG:HD2	1.77	0.64
36:BA:1803:A:C4'	39:BD:259:THR:HG21	2.25	0.64
36:DA:1019:U:H3	36:DA:1142(A):A:H62	1.44	0.64
36:DA:1053:C:H2'	36:DA:1054:A:H8	1.62	0.64
36:BA:2464:C:HO2'	36:BA:2465:C:H6	1.42	0.64
39:BD:152:GLY:O	39:BD:154:LYS:HG3	1.98	0.64
36:BA:460:A:H2'	36:BA:461:C:O4'	1.98	0.64
36:DA:1652:A:H2'	36:DA:1653:G:H5'	1.77	0.64
36:BA:1105:U:H2'	36:BA:1106:G:C8	2.32	0.64
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.97	0.64
36:BA:1946:U:H2'	36:BA:1947:C:C6	2.32	0.64
36:DA:863:A:O2'	36:DA:864:G:H5'	1.97	0.64
36:BA:234:C:H2'	36:BA:235:U:C6	2.32	0.64
36:BA:882:G:H2'	36:BA:883:G:H8	1.60	0.64
25:AZ:29:ALA:O	25:AZ:33:TYR:CE2	2.50	0.64
25:CZ:198:LYS:NZ	25:CZ:201:GLU:OE1	2.30	0.64
52:DT:82:LEU:O	52:DT:83:ILE:C	2.34	0.64
42:BG:7:LEU:O	42:BG:7:LEU:HD23	1.97	0.64
36:DA:1638:C:H5''	36:DA:2710:C:O2'	1.98	0.64
25:AZ:8:THR:HG23	25:AZ:9:LYS:N	2.11	0.64
25:AZ:313:HIS:CG	25:AZ:403:ILE:HG21	2.32	0.64
19:AS:22:LEU:HD13	19:AS:22:LEU:O	1.97	0.64
25:AZ:270:VAL:CG1	25:AZ:286:VAL:HG21	2.22	0.64
36:BA:622:G:O2'	36:BA:623:G:H5'	1.96	0.64
58:DZ:59:LEU:O	58:DZ:66:SER:HA	1.98	0.64
24:CY:75:C:H5	25:CZ:232:THR:N	1.87	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:7:VAL:HG12	40:BE:27:LEU:HB3	1.78	0.64
9:AI:4:TYR:CD2	9:AI:88:TYR:HB2	2.32	0.64
6:AF:35:ALA:O	6:AF:36:ARG:HB2	1.96	0.64
58:BZ:126:VAL:HA	58:BZ:163:LEU:HA	1.80	0.64
1:AA:376:G:H4'	16:AP:5:ARG:NH1	2.12	0.64
48:BP:70:GLN:HB3	48:BP:72:PRO:HD2	1.78	0.64
1:AA:59:A:H5''	1:AA:60:A:H5''	1.79	0.64
46:BN:4:TYR:CD1	46:BN:4:TYR:N	2.66	0.64
41:DF:65:TRP:CZ3	41:DF:75:HIS:CD2	2.86	0.64
36:DA:49:A:H5''	36:DA:51:G:O4'	1.97	0.64
7:CG:44:TYR:HA	7:CG:47:CYS:SG	2.38	0.64
36:DA:1010:A:H1'	36:DA:1153:C:H1'	1.80	0.64
41:DF:195:ASP:OD2	41:DF:197:ASP:HB2	1.98	0.64
2:AB:9:GLU:N	2:AB:9:GLU:OE1	2.31	0.64
36:BA:2228:G:OP2	39:BD:261:LYS:HE3	1.97	0.64
42:BG:32:PRO:HA	42:BG:162:THR:OG1	1.96	0.64
1:CA:226:G:O2'	1:CA:227:G:H5'	1.96	0.64
13:CM:77:ASN:O	13:CM:81:LEU:HD22	1.97	0.64
41:BF:157:VAL:HG12	41:BF:176:LEU:HD23	1.78	0.64
49:DQ:51:ARG:O	49:DQ:55:VAL:HG13	1.97	0.64
49:DQ:56:ARG:HG3	49:DQ:56:ARG:HH11	1.62	0.64
48:DP:31:ALA:C	48:DP:33:ARG:H	1.98	0.64
47:DO:71:ARG:NH2	47:DO:77:ILE:HG21	2.12	0.64
54:BV:47:VAL:O	54:BV:47:VAL:HG23	1.98	0.64
57:DY:74:PRO:O	57:DY:75:ILE:HB	1.97	0.64
32:B6:11:LEU:CD1	32:B6:51:GLU:HG3	2.28	0.64
36:BA:2392:A:H2	36:BA:2424:C:H42	1.45	0.64
1:CA:1186:G:C3'	1:CA:1187:G:H5''	2.27	0.64
48:BP:23:PRO:HB2	48:BP:33:ARG:HG3	1.78	0.64
51:BS:89:ARG:O	51:BS:92:TYR:HB3	1.96	0.64
27:D1:4:VAL:HB	27:D1:11:ARG:HG2	1.80	0.64
53:BU:59:ARG:NH1	53:BU:59:ARG:HG2	2.06	0.64
36:DA:2777:G:C5'	36:DA:2778:A:H5'	2.26	0.64
36:DA:633:A:C2'	36:DA:634:C:H5'	2.27	0.64
52:DT:24:PRO:HD3	52:DT:52:ILE:CD1	2.27	0.64
20:AT:61:SER:O	20:AT:65:LYS:HG3	1.96	0.64
25:AZ:265:THR:HG22	25:AZ:266:VAL:H	1.59	0.64
1:AA:187:C:H2'	1:AA:188:C:H6	1.61	0.64
47:BO:88:ASN:HD21	47:BO:92:GLU:HB2	1.60	0.64
55:DW:20:VAL:CG2	55:DW:47:VAL:HG21	2.28	0.64
36:DA:1654:A:OP1	50:DR:2:ARG:HA	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:15:ASP:OD1	7:CG:16:LEU:N	2.29	0.64
47:BO:110:GLY:HA2	47:BO:112:MET:CE	2.27	0.64
36:BA:1658:C:H2'	36:BA:1659:U:C6	2.32	0.64
1:CA:437:U:H3	1:CA:495:A:H62	1.46	0.64
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.62	0.64
36:DA:2528:U:O2'	36:DA:2529:G:H3'	1.97	0.64
36:DA:608:A:H2'	36:DA:609:A:C8	2.31	0.64
40:BE:112:GLY:O	40:BE:159:HIS:HA	1.98	0.64
36:DA:566:U:O4	54:DV:78:LYS:HE3	1.97	0.64
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.79	0.64
39:DD:35:LYS:CG	39:DD:63:ARG:HA	2.26	0.64
26:D0:36:ILE:CD1	36:DA:2355:C:H5'	2.16	0.64
43:BH:98:LEU:HB3	43:BH:125:VAL:HG21	1.80	0.64
25:CZ:256:VAL:HG13	25:CZ:312:PRO:HG3	1.80	0.64
52:BT:53:ARG:HH11	52:BT:53:ARG:CB	2.01	0.64
52:BT:89:VAL:HG21	52:BT:91:ARG:HH21	1.62	0.64
31:B5:49:CYS:O	31:B5:56:LYS:HG3	1.98	0.64
1:CA:67:C:O2'	1:CA:171:A:H1'	1.97	0.64
40:BE:184:VAL:O	40:BE:186:GLY:N	2.30	0.64
36:DA:2286:A:H4'	36:DA:2287:A:O4'	1.98	0.64
46:BN:126:PRO:O	46:BN:127:ASP:CB	2.45	0.64
36:DA:1252:G:OP2	53:DU:14:HIS:HE1	1.80	0.64
36:DA:2523:G:C2'	36:DA:2524:G:H5''	2.27	0.64
36:BA:1887:C:C2'	36:BA:1888:G:H5''	2.27	0.64
43:DH:15:VAL:HG12	43:DH:28:GLY:HA2	1.78	0.64
16:CP:22:THR:HG22	16:CP:32:TYR:HB3	1.80	0.64
40:BE:9:VAL:CG1	40:BE:25:VAL:HB	2.28	0.64
39:BD:132:PRO:HG3	39:BD:190:TYR:CZ	2.32	0.64
36:BA:2020:A:O2'	36:BA:2021:C:H5'	1.98	0.64
40:BE:69:LYS:HD3	40:BE:89:ASP:HA	1.79	0.64
36:BA:1493:C:H2'	36:BA:1493:C:O2	1.97	0.64
17:CQ:26:GLN:HE21	17:CQ:37:LYS:HE2	1.62	0.64
36:BA:1827:C:C2'	36:BA:1828:G:H5'	2.28	0.64
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.32	0.64
19:CS:20:LEU:O	19:CS:22:LEU:N	2.29	0.64
30:D4:37:SER:C	30:D4:39:CYS:H	1.99	0.64
37:BB:81:G:O6	37:BB:96:U:O2	2.15	0.64
36:DA:2668:G:O2'	36:DA:2669:G:H5'	1.97	0.64
42:BG:131:TYR:HE2	42:BG:133:LEU:HD23	1.63	0.64
1:AA:145:G:H5'	1:AA:146:G:OP2	1.96	0.64
36:BA:2555:U:H2'	36:BA:2556:C:H5'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:46:G:C3'	22:AV:47:U:C5'	2.62	0.64
47:DO:114:ILE:HD12	47:DO:114:ILE:N	2.13	0.64
28:B2:17:SER:C	28:B2:19:VAL:H	2.00	0.64
36:BA:267:C:H2'	36:BA:268:C:C6	2.31	0.64
40:DE:52:LEU:HD23	40:DE:75:VAL:HB	1.79	0.64
52:BT:28:VAL:O	52:BT:29:ARG:HB2	1.97	0.64
52:BT:22:PHE:HE2	52:BT:85:LYS:HZ1	1.44	0.64
58:DZ:166:SER:HB2	58:DZ:168:GLU:H	1.58	0.64
13:AM:84:ILE:HG21	19:AS:60:VAL:HG23	1.78	0.64
36:BA:1543:C:H3'	36:BA:1544:A:C5'	2.24	0.64
48:BP:24:GLY:HA3	48:BP:33:ARG:HH12	1.63	0.64
32:B6:15:GLU:HG3	32:B6:47:THR:OG1	1.97	0.64
39:DD:77:ALA:HB2	39:DD:97:TYR:CD2	2.33	0.64
41:DF:36:VAL:O	41:DF:40:GLN:HG3	1.98	0.64
58:DZ:69:THR:CG2	58:DZ:90:VAL:HA	2.25	0.64
57:BY:96:ILE:CG1	57:BY:99:CYS:HB3	2.27	0.64
17:CQ:52:LYS:HD2	17:CQ:55:ASP:OD2	1.97	0.64
58:BZ:18:LEU:HB3	58:BZ:23:LYS:HB2	1.78	0.64
13:AM:58:GLU:O	13:AM:62:ASN:HB2	1.97	0.64
53:BU:52:ARG:HB3	53:BU:52:ARG:NH1	2.12	0.64
32:D6:14:THR:HB	32:D6:52:VAL:HG21	1.79	0.64
16:CP:20:VAL:HG23	16:CP:34:GLU:O	1.96	0.64
36:DA:371:A:N6	36:DA:401:A:H5"	2.13	0.64
36:DA:2870:C:H5"	50:DR:65:LEU:CD2	2.27	0.64
9:AI:98:PRO:HB2	9:AI:99:LEU:HD22	1.79	0.64
36:BA:64:A:C4	56:BX:66:LEU:HD12	2.32	0.64
16:CP:43:LYS:O	16:CP:45:THR:N	2.31	0.64
7:AG:92:SER:O	7:AG:96:GLN:HG3	1.98	0.64
3:CC:25:GLY:O	3:CC:27:LYS:N	2.30	0.64
38:DC:63:SER:HA	38:DC:160:ARG:HA	1.80	0.64
25:CZ:126:VAL:HB	25:CZ:128:VAL:HG23	1.80	0.64
36:DA:1214:A:H2'	36:DA:1215:G:O4'	1.97	0.64
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.80	0.64
1:AA:1125:U:C1'	10:AJ:5:ARG:NH2	2.55	0.64
28:B2:57:ILE:HA	28:B2:60:LEU:HB3	1.79	0.64
41:BF:18:ARG:NH1	41:BF:196:LEU:HD22	2.12	0.64
48:DP:23:PRO:HD2	48:DP:33:ARG:HE	1.63	0.64
48:DP:29:LYS:H	48:DP:29:LYS:CD	2.09	0.64
52:DT:30:VAL:O	52:DT:31:SER:HB3	1.96	0.64
42:BG:15:VAL:HG12	42:BG:15:VAL:O	1.96	0.64
24:AY:6:C:H42	24:AY:67:G:H1	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:72:ARG:HB2	42:DG:87:PRO:HD2	1.80	0.64
36:BA:271(K):U:H3'	36:BA:271(L):U:H5'	1.80	0.64
25:AZ:222:LEU:HG	25:AZ:303:VAL:HG11	1.80	0.64
32:B6:15:GLU:HG2	32:B6:18:ARG:NH1	2.12	0.64
56:DX:12:VAL:HB	56:DX:17:ALA:CB	2.28	0.64
56:DX:44:GLU:HG3	56:DX:50:LYS:HA	1.79	0.64
36:DA:64:A:C4	56:DX:66:LEU:HD12	2.33	0.64
34:D8:54:GLU:O	34:D8:58:ILE:HG12	1.97	0.64
25:AZ:34:VAL:HG21	25:AZ:199:ILE:CG2	2.27	0.64
50:BR:117:VAL:HG22	50:BR:118:GLU:H	1.62	0.64
37:DB:91:C:OP1	49:DQ:16:ARG:HG3	1.98	0.64
25:CZ:200:TRP:CD2	25:CZ:203:LEU:HD12	2.32	0.64
1:AA:67:C:OP1	1:AA:199:G:H5''	1.98	0.64
6:CF:1:MET:HA	6:CF:68:PRO:HA	1.80	0.64
36:BA:1771:C:C1'	36:BA:1786:A:H8	2.09	0.64
41:DF:160:ASN:ND2	41:DF:162:LEU:HD13	2.12	0.64
3:CC:14:ILE:CG1	3:CC:15:THR:N	2.61	0.64
58:BZ:119:GLU:HG3	58:BZ:122:ARG:NH1	2.13	0.64
13:CM:108:ARG:HG3	13:CM:108:ARG:HH11	1.61	0.64
36:DA:25:U:C5'	55:DW:79:GLY:HA2	2.28	0.64
36:BA:286:C:H2'	36:BA:287:C:C6	2.33	0.64
15:CO:82:ILE:HG23	15:CO:83:GLU:N	2.11	0.64
38:BC:30:LYS:HE2	38:BC:180:PHE:O	1.96	0.64
54:DV:58:VAL:HB	54:DV:98:GLU:HG2	1.80	0.64
36:BA:1952:A:C6	47:BO:22:ILE:HD12	2.33	0.64
25:CZ:321:TYR:C	25:CZ:321:TYR:CD1	2.71	0.64
1:AA:722:A:H2'	1:AA:722:A:N3	2.12	0.64
39:DD:62:TYR:HA	39:DD:87:ASN:HD21	1.62	0.64
36:BA:335:C:H2'	36:BA:336:C:H6	1.63	0.64
36:BA:2133:G:C2	36:BA:2157:G:O6	2.51	0.64
52:DT:50:ILE:HG23	52:DT:99:LEU:HD12	1.80	0.64
1:CA:197:A:H4'	1:CA:198:G:O5'	1.98	0.64
32:B6:18:ARG:HG3	32:B6:19:ARG:H	1.62	0.64
56:DX:27:THR:HG22	56:DX:80:ILE:CB	2.28	0.64
38:BC:10:LEU:CD1	38:BC:32:LEU:HA	2.26	0.64
24:CY:29:G:H1	24:CY:41:C:H42	1.45	0.64
42:DG:7:LEU:HA	42:DG:10:LYS:HB2	1.79	0.64
57:BY:81:LYS:HD3	57:BY:97:ARG:O	1.98	0.64
9:CI:11:LYS:O	9:CI:12:GLU:HB2	1.98	0.64
56:BX:11:PRO:HA	56:BX:28:PHE:CB	2.28	0.64
31:D5:20:ARG:HA	31:D5:23:HIS:ND1	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:34:VAL:HG13	10:CJ:73:ASP:O	1.97	0.64
13:AM:23:TYR:HB3	13:AM:67:GLU:CB	2.26	0.64
54:BV:21:ARG:O	54:BV:22:VAL:HG13	1.98	0.64
46:DN:34:LEU:O	46:DN:34:LEU:HD13	1.97	0.64
1:AA:975:A:H5'	1:AA:975:A:C8	2.32	0.64
36:BA:2631:G:N2	40:BE:61:ARG:NH1	2.46	0.64
36:DA:654(E):G:H22	36:DA:654(Q):C:H1'	1.61	0.64
41:DF:170:LEU:HB2	41:DF:173:VAL:HB	1.80	0.64
56:BX:36:LYS:HB3	56:BX:56:THR:HG21	1.80	0.64
52:BT:65:LYS:HG3	52:BT:66:VAL:N	2.13	0.64
22:CW:59:U:H5'	22:CW:60:U:H5	1.61	0.64
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.27	0.64
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.13	0.64
50:DR:96:ARG:HH12	50:DR:117:VAL:HG11	1.62	0.64
52:DT:5:ALA:HA	52:DT:8:LYS:HE2	1.80	0.64
36:DA:1717:G:C3'	36:DA:1718:G:H5''	2.28	0.64
9:CI:86:VAL:CG2	9:CI:93:ARG:HG2	2.28	0.64
19:AS:67:VAL:HG12	19:AS:68:GLY:H	1.62	0.64
4:CD:25:ARG:C	4:CD:27:TYR:H	1.99	0.64
1:CA:1217:C:P	14:CN:9:LYS:HZ2	2.21	0.64
1:CA:1075:C:OP1	2:CB:179:LYS:HE2	1.98	0.64
36:BA:270:A:O2'	36:BA:271:A:H5'	1.98	0.64
1:AA:848:C:O2'	1:AA:849:C:H5'	1.98	0.64
36:BA:2314:C:O2'	36:BA:2315:G:H5'	1.98	0.64
1:CA:827:U:H2'	1:CA:870:U:O4	1.98	0.64
36:DA:8:A:H2'	36:DA:9:U:C6	2.33	0.64
25:AZ:68:VAL:O	25:AZ:69:GLU:CG	2.46	0.64
4:AD:3:ARG:HH12	4:AD:118:ARG:HD3	1.63	0.64
1:CA:973:G:C1'	10:CJ:55:LYS:CE	2.76	0.64
34:B8:13:ARG:NH2	36:BA:250:G:OP2	2.31	0.64
51:DS:15:ARG:NH1	51:DS:18:ILE:HD11	2.12	0.64
32:D6:11:LEU:HD21	32:D6:26:ASN:HD22	1.62	0.64
46:BN:21:LYS:HE3	46:BN:25:ARG:HB3	1.79	0.64
1:AA:201:C:H42	1:AA:216:G:H1	1.46	0.64
24:CY:68:C:H2'	24:CY:69:C:C6	2.30	0.64
1:CA:1288:A:H2'	1:CA:1289:A:H8	1.63	0.64
6:CF:9:VAL:HA	6:CF:59:TYR:O	1.98	0.64
29:B3:17:LYS:HE3	36:BA:969:U:OP1	1.98	0.64
36:DA:1103:A:H5'	36:DA:1104:C:OP2	1.98	0.64
42:DG:36:LYS:HG2	42:DG:160:VAL:HB	1.80	0.64
40:DE:45:THR:O	40:DE:46:ALA:HB2	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:155:GLY:HA3	3:AC:196:LEU:HD13	1.78	0.64
36:DA:234:C:H2'	36:DA:235:U:H6	1.63	0.64
37:BB:65:C:O2'	37:BB:66:A:H5'	1.97	0.64
4:CD:23:GLY:O	4:CD:27:TYR:HB2	1.98	0.64
36:BA:225:A:O2'	36:BA:257:A:H4'	1.97	0.64
36:DA:753:C:H2'	36:DA:754:C:C6	2.33	0.64
42:BG:37:VAL:HG22	42:BG:159:VAL:HA	1.78	0.64
38:DC:3:HIS:HB3	38:DC:7:TYR:HD2	1.63	0.64
42:BG:40:ASN:HA	42:BG:91:ARG:HA	1.80	0.64
25:AZ:272:MET:CB	25:AZ:277:LEU:HD23	2.21	0.63
25:CZ:193:ASN:OD1	25:CZ:195:TRP:CB	2.46	0.63
1:AA:542:G:H2'	1:AA:543:C:H6	1.63	0.63
25:AZ:198:LYS:C	25:AZ:198:LYS:NZ	2.51	0.63
36:BA:2189:U:C3'	36:BA:2190:G:H4'	2.27	0.63
25:CZ:324:LYS:HG2	25:CZ:365:GLY:HA2	1.79	0.63
13:CM:4:ILE:HD13	13:CM:56:LEU:HD12	1.81	0.63
28:B2:32:LEU:O	28:B2:53:LEU:HD13	1.98	0.63
42:BG:55:LYS:HG3	42:BG:58:GLN:NE2	2.12	0.63
4:CD:12:CYS:HA	4:CD:19:LEU:HD13	1.78	0.63
57:DY:96:ILE:HG13	57:DY:99:CYS:CB	2.17	0.63
36:BA:623:G:H2'	36:BA:624:C:C6	2.33	0.63
58:DZ:28:MET:HE1	58:DZ:59:LEU:HD13	1.79	0.63
36:BA:2128:C:O2'	36:BA:2129:C:P	2.56	0.63
32:D6:5:VAL:N	32:D6:9:LEU:H	1.95	0.63
36:DA:2753:A:O2'	36:DA:2754:U:H5'	1.98	0.63
48:BP:16:ARG:HH11	48:BP:16:ARG:HB2	1.58	0.63
58:BZ:118:GLN:HG2	58:BZ:120:ILE:HD13	1.81	0.63
13:CM:49:THR:O	13:CM:53:VAL:HG23	1.97	0.63
1:AA:194:C:C2'	1:AA:195:A:H5''	2.27	0.63
27:D1:39:LYS:HZ3	27:D1:39:LYS:HB3	1.61	0.63
49:DQ:35:VAL:CG1	49:DQ:130:LYS:HB3	2.28	0.63
46:DN:91:LEU:CD2	46:DN:98:VAL:HG21	2.28	0.63
57:DY:43:ASN:HB2	57:DY:64:GLU:HA	1.80	0.63
42:DG:96:ARG:N	42:DG:99:MET:HB3	2.13	0.63
6:CF:87:ARG:HG2	6:CF:87:ARG:HH11	1.63	0.63
27:B1:78:LYS:HE2	27:B1:78:LYS:HA	1.79	0.63
38:DC:63:SER:OG	38:DC:160:ARG:HB2	1.97	0.63
4:CD:57:ARG:HB3	4:CD:206:PHE:HB2	1.81	0.63
12:AL:38:THR:O	12:AL:39:VAL:HG23	1.98	0.63
7:AG:41:ARG:HH11	7:AG:41:ARG:HG2	1.63	0.63
7:AG:41:ARG:HG2	7:AG:41:ARG:NH1	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:61:ALA:N	3:CC:63:ASN:OD1	2.30	0.63
29:B3:11:SER:HB2	36:BA:988:A:O5'	1.98	0.63
38:DC:53:ARG:NH1	38:DC:53:ARG:HB3	2.13	0.63
24:CY:76:A:C2	25:CZ:270:VAL:C	2.71	0.63
1:CA:402:G:O2'	1:CA:403:C:H5'	1.96	0.63
52:DT:80:SER:CB	52:DT:81:PRO:HD3	2.27	0.63
39:DD:102:LYS:C	39:DD:103:ARG:HG2	2.19	0.63
36:DA:2099:U:H2'	36:DA:2100:G:C8	2.33	0.63
36:BA:2886:G:H2'	36:BA:2887:U:C6	2.32	0.63
20:AT:45:GLN:CA	20:AT:45:GLN:HE21	2.11	0.63
25:CZ:242:ILE:CG2	25:CZ:282:ALA:HA	2.27	0.63
58:BZ:51:ALA:CB	58:BZ:57:ILE:HD11	2.28	0.63
48:BP:82:GLY:HA2	48:BP:113:LYS:HB3	1.80	0.63
39:DD:75:ILE:CG2	39:DD:99:ASP:HB2	2.26	0.63
1:CA:8:A:N6	4:CD:208:SER:HB2	2.10	0.63
46:BN:58:ASP:O	46:BN:60:ILE:N	2.31	0.63
40:DE:116:VAL:CG2	40:DE:117:MET:N	2.52	0.63
13:AM:15:VAL:HG23	13:AM:34:LEU:HD11	1.79	0.63
51:BS:74:ALA:HB1	51:BS:103:GLU:HG2	1.79	0.63
41:DF:33:LEU:O	41:DF:37:VAL:HG23	1.97	0.63
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.15	0.63
38:BC:106:GLY:O	38:BC:107:TRP:HB3	1.99	0.63
48:BP:122:PRO:HB3	48:BP:141:ALA:CB	2.28	0.63
29:B3:19:GLN:NE2	29:B3:52:HIS:CE1	2.65	0.63
51:DS:103:GLU:OE1	51:DS:103:GLU:N	2.28	0.63
1:CA:677:U:H3	1:CA:713:G:H22	1.44	0.63
48:DP:75:ILE:HD12	48:DP:75:ILE:H	1.63	0.63
36:DA:880:G:H22	36:DA:897:C:N4	1.97	0.63
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.32	0.63
36:DA:484:C:H2'	36:DA:485:C:C6	2.33	0.63
1:AA:1030(A):G:H2'	1:AA:1030(A):G:N3	2.13	0.63
36:BA:2248:C:H2'	36:BA:2249:U:H5'	1.79	0.63
12:CL:20:LYS:H	12:CL:20:LYS:HD2	1.62	0.63
2:AB:168:THR:HG23	2:AB:192:SER:HA	1.79	0.63
41:BF:104:LYS:O	41:BF:108:LYS:HG2	1.98	0.63
1:AA:1325:C:H5''	21:AU:15:ARG:NH2	2.13	0.63
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	1.81	0.63
57:BY:28:LYS:HG2	57:BY:39:VAL:HG13	1.80	0.63
1:CA:1321:C:H5''	1:CA:1322:C:C5'	2.26	0.63
51:BS:50:SER:O	51:BS:51:ALA:HB2	1.99	0.63
42:DG:51:ARG:HD3	42:DG:53:LEU:CD2	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:61:LEU:N	34:B8:63:PRO:HD2	2.13	0.63
1:CA:973:G:H1'	10:CJ:55:LYS:NZ	2.12	0.63
25:CZ:64:ASN:N	25:CZ:64:ASN:ND2	2.44	0.63
36:DA:1542:A:H5'	36:DA:1543:C:OP2	1.98	0.63
39:DD:133:LEU:HD13	39:DD:173:VAL:HG11	1.80	0.63
39:DD:134:ARG:HG3	39:DD:187:GLY:C	2.19	0.63
36:DA:2656:U:N3	36:DA:2665:A:H2	1.95	0.63
42:BG:77:ILE:CD1	42:BG:77:ILE:H	2.11	0.63
40:BE:116:VAL:HG21	40:BE:122:PHE:CD2	2.33	0.63
20:AT:75:ASN:HA	20:AT:78:ALA:HB3	1.79	0.63
1:AA:373:A:O2'	1:AA:374:A:H5'	1.98	0.63
42:BG:16:ARG:N	42:BG:17:PRO:HD2	2.12	0.63
2:CB:168:THR:HG23	2:CB:192:SER:HA	1.80	0.63
47:DO:35:VAL:HG22	47:DO:64:ARG:H	1.63	0.63
47:DO:78:ARG:HB2	47:DO:78:ARG:HH11	1.63	0.63
50:DR:116:LEU:O	50:DR:117:VAL:HG12	1.98	0.63
2:CB:45:GLN:O	2:CB:49:GLU:HG3	1.97	0.63
1:CA:1216:G:O2'	1:CA:1217:C:H5'	1.99	0.63
36:DA:89:G:H3'	36:DA:90:U:C5'	2.28	0.63
25:AZ:231:ILE:HD13	25:AZ:237:VAL:HB	1.80	0.63
36:DA:986:C:O2'	36:DA:987:G:H5'	1.99	0.63
36:BA:467:G:O2'	36:BA:468:G:H5'	1.97	0.63
36:BA:2853:C:H2'	36:BA:2854:G:C8	2.33	0.63
36:DA:720:C:H2'	36:DA:721:C:H6	1.63	0.63
2:CB:193:ASP:OD1	2:CB:193:ASP:O	2.14	0.63
6:CF:27:GLN:O	6:CF:31:GLU:HB2	1.98	0.63
38:DC:49:ILE:HB	38:DC:56:GLN:HB3	1.81	0.63
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.80	0.63
27:D1:84:GLY:C	27:D1:86:SER:H	2.02	0.63
54:DV:39:LEU:CD1	54:DV:51:VAL:HA	2.28	0.63
36:BA:266:G:H2'	36:BA:267:C:C5'	2.19	0.63
43:BH:76:VAL:O	43:BH:79:VAL:HG22	1.97	0.63
36:BA:2312:U:H2'	36:BA:2313:C:C5'	2.27	0.63
52:BT:32:TYR:HB3	52:BT:81:PRO:HB2	1.81	0.63
36:DA:1858:G:O2'	36:DA:1884:A:N6	2.31	0.63
51:BS:15:ARG:HH11	51:BS:15:ARG:CB	2.12	0.63
1:AA:858:G:C8	1:AA:869:G:O6	2.52	0.63
1:CA:1065:U:C5	1:CA:1190:G:H1'	2.34	0.63
2:AB:94:ASN:H	2:AB:94:ASN:ND2	1.96	0.63
36:DA:414:C:O2'	36:DA:415:A:H5'	1.98	0.63
20:CT:71:THR:HG22	20:CT:72:LEU:HD23	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:105:VAL:HG21	4:CD:126:ILE:HG12	1.80	0.63
4:CD:129:ASN:HD21	4:CD:145:GLU:N	1.96	0.63
1:CA:959:A:H2'	1:CA:960:U:H4'	1.80	0.63
38:DC:34:THR:HG22	38:DC:35:ALA:N	2.12	0.63
1:CA:1439:C:OP1	20:CT:38:LYS:HD2	1.98	0.63
43:BH:91:GLY:HA3	43:BH:94:TYR:CD2	2.34	0.63
36:BA:813:U:H2'	36:BA:814:C:C6	2.33	0.63
1:CA:167:G:O2'	1:CA:168:G:H5'	1.99	0.63
36:DA:270:A:O2'	36:DA:271:A:H5'	1.98	0.63
46:BN:99:LEU:O	46:BN:103:VAL:HG23	1.99	0.63
36:BA:1573:G:H2'	36:BA:1574:C:H5'	1.80	0.63
1:CA:1179:A:H2'	1:CA:1180:A:C8	2.34	0.63
36:BA:237:C:O2'	36:BA:238:C:H5'	1.99	0.63
5:AE:147:ASP:N	5:AE:147:ASP:OD1	2.30	0.63
43:DH:163:TYR:N	43:DH:163:TYR:CD1	2.67	0.63
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.98	0.63
36:BA:428:A:H3'	36:BA:429:A:H8	1.62	0.63
20:CT:52:ALA:O	20:CT:55:ILE:HD13	1.99	0.63
7:AG:61:VAL:O	7:AG:64:GLN:HB3	1.98	0.63
1:AA:1330:U:H3'	1:AA:1331:G:O4'	1.98	0.63
48:BP:57:THR:OG1	48:BP:59:LEU:HB2	1.97	0.63
36:BA:2887:U:H2'	36:BA:2888:C:H6	1.64	0.63
36:BA:1858:G:H2'	36:BA:1883:G:H22	1.63	0.63
42:DG:60:LEU:HA	42:DG:63:ILE:HD11	1.81	0.63
34:B8:21:LYS:HD3	34:B8:48:PHE:CE2	2.34	0.63
10:CJ:6:ILE:HG12	10:CJ:72:VAL:O	1.99	0.63
49:DQ:35:VAL:HG12	49:DQ:130:LYS:O	1.99	0.63
1:CA:738:C:H5''	6:CF:69:GLU:HB2	1.80	0.63
8:AH:114:THR:HG21	8:AH:129:VAL:HG23	1.81	0.63
26:B0:38:VAL:CG2	26:B0:59:LEU:HD12	2.29	0.63
14:CN:13:THR:N	14:CN:14:PRO:CD	2.62	0.63
36:DA:1061:U:H4'	36:DA:1070:A:C1'	2.27	0.63
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD12	2.34	0.63
25:AZ:13:ASN:CB	25:AZ:78:SER:HB2	2.28	0.63
32:B6:42:TRP:HA	32:B6:42:TRP:HE3	1.63	0.63
25:AZ:29:ALA:O	25:AZ:33:TYR:HE2	1.81	0.63
36:BA:2853:C:H2'	36:BA:2854:G:H8	1.63	0.63
1:CA:636:U:H2'	1:CA:637:G:C8	2.34	0.63
1:CA:328:C:H2'	1:CA:328:C:O2	1.96	0.63
36:DA:1419:A:O2'	36:DA:1420:U:H5''	1.99	0.63
13:AM:79:LYS:O	13:AM:82:MET:HG2	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:277:LEU:HD12	25:CZ:279:GLU:N	2.13	0.63
41:BF:148:LEU:HD23	41:BF:191:ARG:NH1	2.13	0.63
48:DP:23:PRO:HA	48:DP:29:LYS:O	1.97	0.63
52:BT:30:VAL:O	52:BT:31:SER:HB3	1.97	0.63
32:B6:8:LYS:O	32:B6:26:ASN:O	2.17	0.63
41:BF:183:VAL:O	41:BF:187:VAL:HG23	1.97	0.63
41:BF:33:LEU:O	41:BF:37:VAL:HG23	1.99	0.63
1:AA:980:C:H2'	1:AA:981:U:H5'	1.80	0.63
19:AS:6:LYS:N	19:AS:6:LYS:HD3	2.12	0.63
34:D8:28:GLY:O	34:D8:32:LEU:HG	1.98	0.63
34:D8:32:LEU:CB	34:D8:36:LYS:NZ	2.61	0.63
24:CY:75:C:C5	25:CZ:231:ILE:HA	2.32	0.63
22:AW:59:U:H5'	22:AW:60:U:C5	2.34	0.63
1:CA:1190:G:H5''	3:CC:3:ASN:HD22	1.63	0.63
36:DA:884:C:H2'	36:DA:885:C:H5'	1.81	0.63
20:AT:20:LEU:O	20:AT:23:ARG:HB3	1.99	0.63
41:DF:169:ASN:O	41:DF:169:ASN:ND2	2.32	0.63
42:BG:16:ARG:HH11	42:BG:16:ARG:HG3	1.63	0.63
22:AV:19:G:C5	22:AV:57:G:N2	2.67	0.63
39:DD:26:LYS:O	39:DD:27:THR:HG22	1.98	0.63
1:CA:1007:C:O2'	1:CA:1008:C:H5'	1.99	0.63
1:CA:341:C:O2'	1:CA:342:C:H5'	1.99	0.63
46:DN:2:LYS:HZ1	54:DV:12:TYR:HB3	1.63	0.63
36:DA:2361:A:H2'	36:DA:2362:G:H8	1.64	0.63
53:DU:115:ALA:C	53:DU:117:GLN:H	2.01	0.63
36:BA:2591:C:H2'	36:BA:2592:G:C8	2.34	0.63
36:DA:1187:G:H5''	54:DV:81:TYR:CE2	2.34	0.63
36:BA:752:A:H4'	36:BA:753:C:O5'	1.99	0.63
51:BS:67:ARG:NH2	51:BS:100:ALA:HB3	2.13	0.63
36:DA:1224:C:H2'	36:DA:1224:C:O2	1.98	0.63
21:CU:6:ARG:HE	21:CU:6:ARG:H	1.46	0.63
28:B2:59:ARG:NH2	28:B2:60:LEU:HD12	2.13	0.63
1:AA:1271:G:H2'	1:AA:1272:G:C5'	2.20	0.63
47:DO:71:ARG:HH12	47:DO:104:ARG:HG2	1.64	0.63
30:B4:5:ILE:O	42:BG:67:LYS:HD2	1.98	0.63
48:DP:39:LYS:CD	48:DP:40:SER:H	2.12	0.63
10:CJ:48:THR:HG23	10:CJ:62:HIS:CD2	2.33	0.63
34:B8:47:LYS:C	34:B8:48:PHE:HD1	2.02	0.63
34:D8:32:LEU:HD13	36:DA:2392:A:OP1	1.98	0.63
54:DV:17:GLY:HA2	54:DV:96:ILE:O	1.99	0.63
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1239:A:H4'	1:CA:1240:U:O5'	1.99	0.63
36:DA:62:C:H42	36:DA:93:G:H1	1.47	0.63
36:BA:761:A:C8	36:BA:761:A:H3'	2.33	0.63
58:DZ:123:ASP:O	58:DZ:124:ILE:HG12	1.98	0.63
36:BA:2110:G:N1	36:BA:2178:C:H5	1.95	0.63
11:AK:54:ARG:O	11:AK:57:THR:CG2	2.47	0.63
22:AW:65:G:O3'	32:B6:28:ARG:NH2	2.31	0.63
36:DA:1472:A:C2'	36:DA:1473:G:H5'	2.29	0.63
36:BA:842:G:O2'	36:BA:843:G:H5'	1.98	0.63
39:BD:125:ILE:O	39:BD:125:ILE:HG22	1.98	0.63
24:CY:76:A:C2	25:CZ:270:VAL:CA	2.81	0.63
36:BA:1902:C:C1'	39:BD:244:ARG:HG3	2.27	0.63
36:BA:594:U:H2'	36:BA:595:C:C6	2.33	0.63
52:BT:59:THR:OG1	52:BT:78:LEU:HD12	1.99	0.63
36:DA:1803:A:C3'	39:DD:259:THR:HG21	2.28	0.63
36:BA:1019:U:O2'	36:BA:1021:A:H2	1.81	0.63
2:CB:8:LYS:NZ	2:CB:217:ARG:NH1	2.47	0.63
37:BB:73:A:C2	58:BZ:34:ASN:ND2	2.67	0.63
25:AZ:150:VAL:HG13	25:AZ:151:GLU:N	2.14	0.63
48:DP:101:VAL:HG23	48:DP:102:ARG:N	2.13	0.63
48:DP:83:VAL:HG13	48:DP:114:ILE:HD12	1.81	0.63
52:BT:100:TYR:HB3	52:BT:103:ARG:HE	1.63	0.63
12:CL:24:VAL:HG11	12:CL:27:LEU:HD22	1.81	0.63
27:D1:44:PRO:HG2	27:D1:46:LEU:HD22	1.81	0.63
11:AK:27:ASN:HD22	11:AK:28:THR:N	1.95	0.63
3:CC:64:VAL:HG12	3:CC:66:VAL:HG23	1.81	0.63
6:CF:26:ILE:O	6:CF:29:ALA:HB3	1.98	0.63
36:DA:380:U:H2'	36:DA:381:G:C8	2.33	0.63
58:DZ:29:TYR:HA	58:DZ:34:ASN:HB3	1.81	0.63
36:BA:1782:C:H1'	36:BA:2609:U:C5'	2.28	0.63
5:CE:81:GLU:OE2	5:CE:90:VAL:HG22	1.99	0.63
58:BZ:40:ASP:OD1	58:BZ:42:VAL:HG12	1.99	0.63
2:AB:14:GLY:O	2:AB:15:VAL:HG13	1.98	0.63
36:DA:1411:C:H2'	36:DA:1412:A:C8	2.33	0.63
12:AL:42:THR:HG23	12:AL:52:LEU:HD12	1.80	0.63
55:DW:82:LEU:N	55:DW:82:LEU:HD12	2.13	0.63
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	1.81	0.63
55:DW:56:ALA:C	55:DW:57:ASN:HD22	2.01	0.63
36:BA:30:G:O2'	36:BA:31:C:H5'	1.98	0.63
39:DD:118:VAL:HG13	39:DD:123:ALA:CB	2.29	0.63
47:DO:28:SER:O	47:DO:29:ASN:HB3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2294:C:O2	36:DA:2294:C:H2'	1.99	0.63
7:CG:92:SER:O	7:CG:96:GLN:HG3	1.99	0.63
4:AD:86:LYS:HA	4:AD:86:LYS:HE3	1.81	0.63
4:AD:14:ARG:HD2	4:AD:59:ARG:NH1	2.14	0.63
4:AD:107:ARG:NH2	4:AD:194:LEU:HD12	2.00	0.63
39:DD:148:GLU:O	39:DD:151:LYS:HB2	1.99	0.63
36:DA:143:G:H1'	56:DX:37:THR:HG21	1.80	0.63
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.13	0.63
1:AA:979:C:H3'	1:AA:980:C:H5''	1.75	0.63
36:DA:222:A:H5''	36:DA:421:U:OP1	1.99	0.63
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.63	0.63
46:BN:46:VAL:HG13	46:BN:48:MET:HG3	1.80	0.63
36:DA:984:A:H5''	36:DA:985:C:C5	2.29	0.63
48:DP:85:LEU:HD23	48:DP:86:LYS:N	2.14	0.63
41:DF:84:VAL:CG1	41:DF:85:GLY:H	2.11	0.63
28:D2:38:GLN:OE1	28:D2:44:LEU:HD13	1.98	0.63
52:BT:37:GLY:O	52:BT:38:ASN:HB3	1.98	0.63
16:CP:58:TYR:O	16:CP:62:VAL:HG23	1.99	0.63
47:DO:63:VAL:O	47:DO:64:ARG:CB	2.46	0.63
36:DA:753:C:H2'	36:DA:754:C:H6	1.64	0.63
1:AA:683:G:H21	11:AK:38:ASN:ND2	1.96	0.63
25:AZ:126:VAL:HB	25:AZ:128:VAL:HG23	1.79	0.63
37:BB:111:G:O2'	37:BB:112:U:H5'	1.99	0.63
54:BV:31:ALA:O	54:BV:60:GLU:HG3	1.99	0.63
7:AG:58:PRO:HG2	7:AG:59:LEU:H	1.63	0.63
36:BA:774:A:H2	36:BA:787:U:HO2'	1.44	0.63
25:CZ:68:VAL:O	25:CZ:69:GLU:CB	2.46	0.62
1:AA:545:C:H5''	4:AD:72:GLU:HG2	1.79	0.62
25:AZ:198:LYS:HZ2	25:AZ:198:LYS:C	2.01	0.62
28:B2:34:GLU:HA	28:B2:37:PHE:CB	2.28	0.62
4:AD:173:TRP:HB3	4:AD:187:ARG:NH2	2.13	0.62
49:DQ:51:ARG:O	49:DQ:54:MET:HB3	1.99	0.62
40:DE:77:ILE:HG22	40:DE:78:LEU:HD12	1.80	0.62
1:AA:979:C:C3'	1:AA:980:C:C5'	2.77	0.62
32:B6:15:GLU:OE2	32:B6:18:ARG:NH2	2.33	0.62
56:DX:36:LYS:NZ	56:DX:55:ASN:HA	2.14	0.62
48:BP:115:LEU:HD23	48:BP:115:LEU:N	2.13	0.62
34:D8:21:LYS:HZ3	34:D8:48:PHE:HE2	1.47	0.62
39:BD:68:LYS:HB2	39:BD:70:TRP:CZ2	2.34	0.62
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.63	0.62
1:AA:858:G:C5'	1:AA:858:G:H8	2.12	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:10:ARG:HD3	58:BZ:37:VAL:C	2.19	0.62
35:D9:14:CYS:SG	59:D9:101:ZN:ZN	1.88	0.62
32:D6:27:LYS:HD2	32:D6:30:THR:OG1	1.99	0.62
36:BA:1485:G:H1'	36:BA:1505:C:N4	2.14	0.62
36:BA:916:G:C2'	36:BA:917:A:H5''	2.29	0.62
36:DA:1144:G:H2'	36:DA:1145:C:C6	2.34	0.62
52:BT:109:GLU:HA	52:BT:112:ARG:NE	2.14	0.62
54:BV:19:LYS:NZ	54:BV:20:LEU:H	1.96	0.62
25:AZ:101:GLY:HA3	25:AZ:210:ILE:HD12	1.81	0.62
58:BZ:103:ARG:HG3	58:BZ:138:GLU:HG2	1.79	0.62
1:CA:626:U:H2'	1:CA:627:G:C8	2.33	0.62
6:CF:75:LEU:O	6:CF:79:LEU:HG	1.99	0.62
57:BY:50:ARG:HG3	57:BY:56:PRO:HA	1.80	0.62
22:CW:55:U:H3'	22:CW:56:C:H5''	1.80	0.62
17:CQ:58:GLU:HG3	17:CQ:75:ARG:HG2	1.81	0.62
3:AC:118:GLN:O	3:AC:122:GLU:HG2	1.99	0.62
36:DA:1578:U:C2'	36:DA:1579:A:H5''	2.28	0.62
36:BA:2019:A:H4'	53:BU:34:LYS:HD2	1.80	0.62
15:CO:17:ARG:HD3	15:CO:26:GLU:OE2	1.99	0.62
57:BY:87:LYS:O	57:BY:88:LYS:HB2	1.99	0.62
36:BA:363:G:H2'	36:BA:363(A):A:H8	1.64	0.62
46:BN:96:GLU:H	46:BN:96:GLU:CD	2.02	0.62
1:CA:1170:A:H2'	1:CA:1171:G:O4'	1.99	0.62
39:DD:206:LEU:HD12	39:DD:211:ARG:HG2	1.81	0.62
36:DA:1076:C:O2	45:DK:89:UNK:HA	1.99	0.62
3:AC:137:ALA:O	3:AC:141:VAL:HG23	1.98	0.62
36:BA:1103:A:H5''	36:BA:1104:C:H5	1.62	0.62
1:CA:853:G:O2'	1:CA:854:G:H5'	1.99	0.62
36:BA:2543:G:H2'	36:BA:2544:G:C8	2.34	0.62
25:AZ:277:LEU:HD12	25:AZ:279:GLU:N	2.13	0.62
28:B2:32:LEU:HA	28:B2:53:LEU:CD2	2.29	0.62
36:DA:335:C:H2'	36:DA:336:C:C6	2.33	0.62
39:BD:35:LYS:HG2	39:BD:63:ARG:HG2	1.81	0.62
31:B5:50:GLY:CA	31:B5:56:LYS:HE2	2.28	0.62
58:DZ:153:SER:HB2	58:DZ:167:PRO:HG2	1.80	0.62
48:DP:58:THR:C	48:DP:61:ARG:HE	2.02	0.62
47:BO:107:ARG:HD3	52:BT:36:GLU:CG	2.26	0.62
40:BE:95:ILE:HD13	40:BE:95:ILE:H	1.65	0.62
52:BT:25:GLY:CA	52:BT:92:GLY:HA2	2.30	0.62
36:DA:2712:U:O2'	36:DA:2712(A):A:H3'	1.99	0.62
36:DA:2712:U:H1'	36:DA:2712(A):A:N7	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:53:ALA:HB2	3:CC:115:LEU:HG	1.81	0.62
10:CJ:4:ILE:HB	10:CJ:74:ILE:CG1	2.29	0.62
49:DQ:67:ARG:HH11	49:DQ:67:ARG:HB3	1.63	0.62
6:AF:10:LEU:HD13	6:AF:59:TYR:HD2	1.64	0.62
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.81	0.62
29:B3:38:GLU:HB3	29:B3:40:THR:HG23	1.82	0.62
36:DA:1058:G:C2'	36:DA:1059:G:H5''	2.29	0.62
1:CA:45:U:H2'	1:CA:46:G:H8	1.63	0.62
22:CW:11:C:H2'	22:CW:12:U:C6	2.34	0.62
5:CE:99:GLY:O	5:CE:117:ASP:HA	1.99	0.62
41:DF:185:ASP:HA	41:DF:188:ARG:HD3	1.80	0.62
15:CO:82:ILE:HD11	15:CO:88:ARG:N	2.14	0.62
29:B3:11:SER:HB2	36:BA:988:A:P	2.39	0.62
4:AD:150:GLU:N	4:AD:150:GLU:OE1	2.29	0.62
36:BA:1087:G:H8	36:BA:1088:A:H4'	1.63	0.62
38:DC:74:VAL:HG23	38:DC:157:LYS:HE2	1.81	0.62
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.34	0.62
37:BB:30:C:H1'	37:BB:57:A:H61	1.64	0.62
36:BA:1689:A:H62	36:BA:1698:A:H2	1.47	0.62
43:DH:13:LYS:HA	43:DH:13:LYS:HE2	1.81	0.62
53:BU:82:GLY:C	53:BU:84:LYS:H	2.02	0.62
4:AD:18:LYS:HE2	4:AD:20:TYR:CE2	2.34	0.62
25:CZ:90:LYS:HD2	25:CZ:90:LYS:H	1.64	0.62
42:BG:51:ARG:NE	42:BG:51:ARG:HA	2.10	0.62
36:DA:613:G:H8	36:DA:613:G:H5'	1.64	0.62
47:BO:64:ARG:CZ	52:BT:70:VAL:HG21	2.28	0.62
1:AA:436:C:H2'	1:AA:437:U:C6	2.34	0.62
34:B8:31:HIS:O	34:B8:32:LEU:C	2.36	0.62
42:DG:116:ASP:O	42:DG:117:PHE:HB3	1.97	0.62
2:AB:95:GLN:HA	2:AB:95:GLN:OE1	1.98	0.62
51:BS:12:PHE:C	51:BS:12:PHE:CD1	2.73	0.62
51:BS:12:PHE:C	51:BS:12:PHE:HD1	2.01	0.62
25:AZ:136:ASN:OD1	60:AZ:501:GDP:O6	2.17	0.62
30:D4:10:VAL:CG2	30:D4:11:PRO:HD2	2.29	0.62
33:D7:7:PRO:HG2	36:DA:1309:G:H4'	1.82	0.62
32:D6:18:ARG:CG	32:D6:18:ARG:HH11	2.12	0.62
1:AA:266:G:C5'	1:AA:267:C:C5	2.83	0.62
54:DV:19:LYS:HZ1	54:DV:22:VAL:HG13	1.64	0.62
52:BT:96:ARG:CZ	52:BT:96:ARG:HB2	2.27	0.62
1:AA:201:C:C2'	1:AA:202:U:H5''	2.28	0.62
36:DA:1038:C:C3'	36:DA:1039:G:H5''	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:65:LEU:HD23	55:BW:68:ARG:CZ	2.29	0.62
13:AM:9:ILE:HD12	13:AM:9:ILE:N	2.14	0.62
2:CB:97:TRP:CH2	2:CB:176:GLU:CD	2.68	0.62
43:BH:33:LEU:HD21	43:BH:136:ILE:CG2	2.28	0.62
46:DN:12:ARG:NH2	46:DN:135:PRO:HG2	2.14	0.62
36:BA:708:C:N4	36:BA:723:G:H1	1.95	0.62
54:BV:5:VAL:HG21	54:BV:35:LEU:HG	1.81	0.62
20:CT:100:ILE:HG22	20:CT:102:GLY:H	1.64	0.62
16:CP:26:ARG:NH1	16:CP:26:ARG:HG2	2.12	0.62
36:BA:1717:G:H3'	36:BA:1718:G:H5''	1.81	0.62
39:BD:248:SER:HB2	39:BD:249:PRO:HD2	1.81	0.62
48:BP:85:LEU:HA	48:BP:88:LEU:CB	2.28	0.62
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.00	0.62
36:BA:2081:C:H2'	36:BA:2082:A:H8	1.64	0.62
4:AD:59:ARG:CA	4:AD:59:ARG:HE	2.12	0.62
25:CZ:16:THR:HG23	25:CZ:79:HIS:CE1	2.35	0.62
58:BZ:96:VAL:HG13	58:BZ:97:GLU:H	1.64	0.62
4:CD:67:ILE:O	4:CD:67:ILE:CG2	2.48	0.62
43:BH:153:LYS:N	43:BH:153:LYS:HD3	2.03	0.62
43:BH:44:VAL:O	43:BH:46:GLU:HG2	2.00	0.62
30:D4:14:ILE:N	30:D4:14:ILE:HD12	2.14	0.62
36:DA:657:U:H2'	36:DA:658:C:H6	1.65	0.62
1:CA:1431:C:H2'	1:CA:1432:G:O4'	1.99	0.62
36:BA:1681:G:O2'	36:BA:1762:A:C2'	2.45	0.62
39:BD:68:LYS:HG2	39:BD:68:LYS:O	1.99	0.62
31:D5:57:VAL:O	31:D5:58:LEU:HD12	1.98	0.62
34:D8:34:TRP:HA	36:DA:2420:C:OP1	1.99	0.62
36:DA:247:G:H4'	36:DA:386:G:C5	2.35	0.62
48:DP:97:PRO:O	48:DP:98:GLU:CB	2.47	0.62
40:DE:117:MET:HE3	40:DE:136:ARG:HA	1.80	0.62
25:CZ:265:THR:HG22	25:CZ:266:VAL:H	1.62	0.62
13:AM:10:PRO:HB2	13:AM:18:ALA:CB	2.29	0.62
8:AH:85:ARG:NH1	8:AH:85:ARG:HG3	2.14	0.62
6:AF:33:TYR:O	6:AF:35:ALA:N	2.32	0.62
10:CJ:38:ILE:HD12	10:CJ:71:LEU:H	1.64	0.62
2:AB:188:ALA:O	2:AB:202:PRO:HA	1.99	0.62
9:CI:19:LEU:HD21	9:CI:59:PHE:HD2	1.65	0.62
9:AI:52:ALA:HB1	9:AI:95:LYS:HD2	1.81	0.62
1:CA:1158:C:H2'	1:CA:1158:C:O2	1.98	0.62
19:CS:28:LYS:C	19:CS:29:ARG:HD2	2.20	0.62
19:CS:62:ILE:HA	19:CS:66:MET:HE1	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:74:ALA:HB1	51:DS:103:GLU:HG2	1.80	0.62
25:CZ:13:ASN:CB	25:CZ:78:SER:HB2	2.29	0.62
14:AN:57:ARG:HH11	14:AN:57:ARG:HB3	1.64	0.62
40:DE:38:THR:HG23	40:DE:39:PRO:HD2	1.81	0.62
36:DA:419:C:H2'	36:DA:420:C:C6	2.34	0.62
16:CP:25:ARG:HG3	16:CP:25:ARG:HH11	1.63	0.62
11:CK:17:GLY:O	11:CK:80:VAL:HA	1.98	0.62
57:DY:88:LYS:O	57:DY:89:PHE:HB2	1.98	0.62
25:AZ:20:VAL:HG23	25:AZ:21:ASP:H	1.64	0.62
47:DO:87:ILE:HG22	47:DO:88:ASN:O	1.99	0.62
36:BA:926:A:H5'	36:BA:926:A:H8	1.64	0.62
51:BS:15:ARG:HH11	51:BS:15:ARG:HB2	1.63	0.62
42:DG:77:ILE:N	42:DG:77:ILE:HD13	2.12	0.62
1:CA:353:A:H5'	1:CA:353:A:H8	1.64	0.62
55:DW:22:ASP:HA	55:DW:25:ARG:NH1	2.13	0.62
17:CQ:9:VAL:HG11	17:CQ:84:LEU:HD12	1.81	0.62
52:DT:92:GLY:CA	52:DT:120:ARG:HH21	2.13	0.62
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.14	0.62
40:DE:24:THR:HG22	40:DE:184:VAL:CG2	2.29	0.62
1:AA:376:G:H5''	16:AP:5:ARG:CB	2.30	0.62
2:CB:28:PHE:CD1	2:CB:190:THR:HA	2.35	0.62
26:B0:38:VAL:HG11	26:B0:45:PHE:CD2	2.35	0.62
53:DU:24:TYR:HB2	53:DU:29:SER:HB3	1.80	0.62
58:DZ:29:TYR:HB3	58:DZ:34:ASN:CB	2.28	0.62
3:CC:82:GLU:O	3:CC:85:ARG:HB2	1.99	0.62
1:AA:1120:G:H2'	1:AA:1121:U:H6	1.62	0.62
1:CA:992:U:H4'	1:CA:993:G:O5'	2.00	0.62
36:BA:271(H):G:H1	36:BA:271(P):C:N4	1.97	0.62
25:CZ:29:ALA:O	25:CZ:33:TYR:CE2	2.51	0.62
36:BA:1817:G:H2'	36:BA:1818:U:H5'	1.80	0.62
20:CT:26:ASN:ND2	20:CT:26:ASN:H	1.98	0.62
1:CA:382:A:H2'	1:CA:383:A:C8	2.34	0.62
1:AA:96:U:H2'	1:AA:97:G:C8	2.34	0.62
38:BC:104:LEU:HD13	38:BC:105:ASP:N	2.14	0.62
39:DD:158:ALA:HB3	39:DD:161:THR:HG21	1.82	0.62
42:DG:152:LEU:N	42:DG:152:LEU:HD23	2.14	0.62
46:DN:45:ASN:HD22	46:DN:45:ASN:H	1.47	0.62
3:AC:173:VAL:HG12	3:AC:173:VAL:O	1.98	0.62
4:CD:2:GLY:O	4:CD:3:ARG:HD3	2.00	0.62
36:BA:2195:C:O2'	36:BA:2196:C:H5'	2.00	0.62
57:BY:9:LYS:NZ	57:BY:10:GLY:H	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:542:G:H2'	1:CA:543:C:H6	1.64	0.62
47:BO:105:GLU:O	47:BO:108:GLU:HG2	1.99	0.62
52:BT:89:VAL:CG1	52:BT:91:ARG:HE	2.13	0.62
32:B6:10:LEU:HD22	32:B6:10:LEU:N	2.07	0.62
1:AA:1007:C:O2'	1:AA:1008:C:H5'	2.00	0.62
36:BA:139(A):G:N2	56:BX:44:GLU:OE1	2.29	0.62
58:DZ:76:LEU:HD23	58:DZ:83:PRO:HA	1.81	0.62
32:D6:16:CYS:O	32:D6:17:LYS:HE3	1.98	0.62
40:BE:195:LEU:O	40:BE:196:VAL:HG22	2.00	0.62
40:BE:75:VAL:O	40:BE:77:ILE:N	2.32	0.62
13:AM:55:ARG:O	13:AM:58:GLU:HB2	1.99	0.62
51:DS:17:ARG:HA	51:DS:20:ARG:NH1	2.13	0.62
2:CB:130:ARG:HH21	2:CB:134:GLU:HG3	1.64	0.62
40:BE:154:LYS:O	40:BE:156:MET:HG3	2.00	0.62
46:DN:7:LYS:N	46:DN:7:LYS:HE3	2.13	0.62
35:B9:1:MET:HB2	35:B9:34:GLN:OE1	1.99	0.62
36:DA:1879:C:H2'	36:DA:1880:C:H5''	1.81	0.62
43:BH:19:VAL:HG12	43:BH:20:ALA:N	2.14	0.62
36:BA:2206:G:H21	36:BA:2207:G:H4'	1.64	0.62
36:BA:1085:A:H4'	36:BA:1105:U:H4'	1.80	0.62
42:BG:30:GLU:OE2	42:BG:32:PRO:CD	2.48	0.62
26:B0:10:THR:HG22	26:B0:12:ASN:H	1.63	0.62
43:BH:54:ARG:HB2	43:BH:55:PRO:HD2	1.80	0.62
47:DO:47:ILE:HG23	47:DO:48:PRO:HD2	1.80	0.62
36:BA:1653:G:O6	50:BR:11:ASN:HB2	1.98	0.62
36:DA:1260:G:H2'	36:DA:1261:C:C6	2.34	0.62
2:AB:77:ALA:O	2:AB:81:VAL:HG23	1.98	0.62
2:CB:120:ALA:C	2:CB:122:PHE:H	2.03	0.62
36:DA:2228:G:OP2	39:DD:261:LYS:HE3	1.98	0.62
1:AA:711:G:O2'	1:AA:712:A:H5'	2.00	0.62
41:BF:60:SER:O	41:BF:77:ASP:HB2	2.00	0.62
42:BG:173:LEU:O	42:BG:176:LEU:HB3	2.00	0.62
36:DA:832:G:OP1	48:DP:40:SER:HB3	1.99	0.62
31:B5:6:VAL:HG22	36:BA:2015:A:N3	2.14	0.62
36:BA:832:G:O2'	48:BP:52:GLU:HB3	1.99	0.62
32:B6:21:TYR:OH	36:BA:2399:G:H2'	1.99	0.62
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.66	0.62
36:BA:1018:C:H2'	36:BA:1019:U:H6	1.63	0.62
25:AZ:64:ASN:N	25:AZ:64:ASN:ND2	2.44	0.62
25:AZ:14:VAL:O	25:AZ:79:HIS:HA	1.99	0.62
10:CJ:24:VAL:CG2	10:CJ:37:PRO:HG3	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:39:PRO:HA	10:CJ:70:ARG:NH1	2.14	0.62
13:AM:54:VAL:O	13:AM:58:GLU:HG2	1.99	0.62
36:DA:296:C:H42	36:DA:343:C:N4	1.98	0.62
2:CB:12:GLU:HG3	2:CB:44:LEU:HD23	1.82	0.62
46:BN:3:THR:HG22	46:BN:4:TYR:N	2.14	0.62
1:CA:537:G:H2'	1:CA:538:G:C8	2.34	0.62
57:DY:42:VAL:HG21	57:DY:67:LEU:HD13	1.80	0.62
36:BA:2138:C:H2'	36:BA:2139:C:C6	2.35	0.62
1:CA:269:C:H2'	1:CA:270:A:C8	2.34	0.62
36:DA:1652:A:C2'	36:DA:1653:G:H5'	2.29	0.62
58:DZ:77:ASP:O	58:DZ:78:LYS:HB2	1.99	0.62
40:BE:47:VAL:HG23	40:BE:84:PHE:HB3	1.82	0.62
1:CA:1255:G:OP1	3:CC:26:LYS:HE2	1.99	0.62
9:AI:105:ASP:OD1	9:AI:107:ARG:HD3	2.00	0.62
36:BA:361:G:H2'	36:BA:362:U:H4'	1.81	0.62
49:BQ:12:GLN:HG2	49:BQ:73:PRO:HD2	1.81	0.62
36:DA:470:A:H2'	36:DA:471:A:C8	2.35	0.62
36:BA:2023:G:H4'	36:BA:2617:C:O3'	2.00	0.62
55:BW:10:VAL:HG21	55:BW:103:ILE:HG13	1.82	0.62
13:CM:86:CYS:HA	19:CS:73:GLU:O	1.98	0.62
42:BG:51:ARG:HD3	42:BG:53:LEU:HD21	1.82	0.62
51:BS:39:ILE:HG22	51:BS:39:ILE:O	1.99	0.62
42:BG:27:ASN:C	42:BG:29:TRP:H	2.03	0.62
36:DA:195:A:H5''	36:DA:196:A:OP2	2.00	0.62
43:DH:85:LYS:HZ3	43:DH:132:ARG:CA	2.10	0.62
3:AC:14:ILE:CG1	3:AC:15:THR:N	2.62	0.62
36:DA:852:G:O2'	36:DA:853:G:H5'	2.00	0.62
48:BP:24:GLY:CA	48:BP:33:ARG:NH1	2.62	0.62
30:D4:14:ILE:HG13	30:D4:31:ILE:CB	2.29	0.62
6:CF:43:LEU:H	6:CF:43:LEU:CD2	2.09	0.62
48:BP:112:LEU:HD13	48:BP:112:LEU:O	2.00	0.62
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB2	1.81	0.62
22:CV:35:A:N1	23:CX:20:U:O2	2.33	0.62
46:BN:23:LEU:HB2	46:BN:60:ILE:HG21	1.80	0.62
51:DS:65:VAL:O	51:DS:69:VAL:HG12	1.99	0.62
53:DU:13:LYS:HD3	53:DU:13:LYS:N	2.14	0.62
42:DG:6:ALA:O	42:DG:10:LYS:HD3	1.99	0.62
36:BA:1800:C:H5''	39:BD:147:LEU:CD2	2.30	0.62
46:DN:70:LYS:HG2	46:DN:87:LEU:HD23	1.80	0.62
1:AA:1286:A:H2	21:AU:18:TYR:OH	1.80	0.62
1:AA:176:C:H2'	1:AA:177:C:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:148:G:H2'	1:CA:149:A:H8	1.64	0.62
58:DZ:144:LEU:HG	58:DZ:150:LEU:HD22	1.81	0.62
1:CA:1241:G:H2'	1:CA:1242:C:H6	1.65	0.62
3:CC:65:ALA:O	3:CC:100:ALA:O	2.17	0.62
2:CB:18:GLY:O	2:CB:19:HIS:HB2	1.99	0.62
1:CA:41:G:H2'	1:CA:42:G:H8	1.63	0.62
1:AA:45:U:H2'	1:AA:46:G:H8	1.65	0.62
1:CA:603:U:H2'	1:CA:604:G:C8	2.34	0.62
36:DA:819:A:OP2	36:DA:1187:G:N2	2.28	0.62
39:DD:213:ARG:HD2	39:DD:217:ARG:O	2.00	0.62
26:B0:10:THR:HG22	26:B0:12:ASN:N	2.15	0.62
47:DO:101:PRO:HD2	52:DT:70:VAL:CG2	2.29	0.62
36:BA:2201:C:O2'	36:BA:2202:C:H5'	2.00	0.62
1:CA:452:A:HO2'	1:CA:453:A:H8	1.47	0.62
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.81	0.62
52:DT:16:ARG:HD2	52:DT:18:ASP:OD1	1.99	0.62
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.82	0.62
12:CL:75:HIS:HB3	12:CL:102:ARG:HH12	1.65	0.62
36:BA:1991:U:H2'	36:BA:1992:G:H5''	1.80	0.62
39:DD:35:LYS:HG2	39:DD:63:ARG:CA	2.29	0.62
34:D8:62:LEU:HD13	36:DA:242:G:C5'	2.16	0.62
40:DE:57:LYS:HA	40:DE:57:LYS:CE	2.15	0.62
48:DP:41:ARG:HD3	48:DP:45:LEU:HD23	1.82	0.62
39:BD:32:SER:O	39:BD:36:PRO:CG	2.48	0.62
34:B8:23:VAL:O	34:B8:46:ARG:NH1	2.33	0.62
1:AA:1323:G:O2'	1:AA:1324:A:H5'	2.00	0.62
36:BA:1570:A:H2'	36:BA:1571:A:C8	2.34	0.62
38:BC:10:LEU:HA	38:BC:13:LYS:CE	2.30	0.62
34:D8:33:ASN:CA	34:D8:36:LYS:HD2	2.30	0.62
38:DC:113:VAL:HG12	38:DC:138:PRO:HG3	1.82	0.62
54:DV:18:LEU:HD23	54:DV:19:LYS:H	1.65	0.62
3:CC:76:VAL:HG21	3:CC:103:VAL:CG1	2.29	0.62
2:AB:12:GLU:HG3	2:AB:44:LEU:HD23	1.82	0.62
55:DW:4:LYS:HA	55:DW:106:ILE:HG22	1.82	0.62
53:BU:9:VAL:O	53:BU:13:LYS:HE2	2.00	0.62
52:BT:65:LYS:NZ	52:BT:66:VAL:H	1.97	0.62
57:DY:42:VAL:HG21	57:DY:67:LEU:HD12	1.79	0.62
47:DO:63:VAL:HB	47:DO:102:VAL:HG12	1.81	0.62
36:DA:710:G:H2'	36:DA:711:G:H8	1.64	0.62
22:CW:75:C:H5''	27:D1:30:VAL:HG11	1.82	0.62
36:DA:236:C:H2'	36:DA:237:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1151:G:H5''	53:DU:81:HIS:NE2	2.14	0.62
52:BT:75:ILE:N	52:BT:75:ILE:HD12	2.14	0.62
36:DA:1653:G:O6	50:DR:11:ASN:HB2	1.99	0.62
46:DN:2:LYS:HZ3	54:DV:12:TYR:HA	1.64	0.62
29:D3:6:VAL:HB	29:D3:54:VAL:HG11	1.81	0.62
36:DA:1983:C:O2'	36:DA:1984:G:H5'	1.99	0.62
46:BN:73:THR:HG21	46:BN:82:LEU:HD11	1.81	0.62
1:AA:756:C:H2'	1:AA:757:U:O4'	2.00	0.62
36:DA:1168:G:H2'	36:DA:1169:G:C8	2.34	0.62
36:BA:2777:G:H5''	36:BA:2778:A:H5'	1.82	0.62
1:CA:664:G:H22	1:CA:741:G:H1	1.48	0.62
36:BA:122:G:H1	36:BA:129:C:H42	1.47	0.62
36:BA:862:G:H2'	36:BA:863:A:O4'	1.98	0.62
50:DR:44:LEU:HD13	50:DR:44:LEU:O	2.00	0.62
55:BW:59:VAL:HG12	55:BW:59:VAL:O	1.99	0.62
4:AD:18:LYS:HG3	4:AD:31:CYS:SG	2.39	0.62
10:AJ:38:ILE:O	10:AJ:38:ILE:HD12	1.99	0.62
4:AD:100:ARG:NH2	4:AD:118:ARG:HH12	1.90	0.62
36:DA:331:A:H1'	36:DA:332:A:OP1	1.99	0.62
37:BB:45:A:H1'	42:BG:95:ARG:NH2	2.15	0.62
53:BU:90:VAL:HG21	54:BV:47:VAL:CG2	2.29	0.62
24:AY:68:C:H2'	24:AY:69:C:C6	2.30	0.62
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.15	0.62
19:AS:40:ILE:CG2	19:AS:62:ILE:HD11	2.22	0.62
36:BA:1049:C:H2'	36:BA:1050:A:C8	2.34	0.62
36:DA:2111:C:H1'	36:DA:2118:U:C4'	2.30	0.62
31:D5:57:VAL:HG12	31:D5:58:LEU:H	1.65	0.62
31:D5:57:VAL:HG12	31:D5:58:LEU:N	2.15	0.62
48:BP:97:PRO:O	48:BP:98:GLU:CB	2.48	0.62
39:DD:132:PRO:HG3	39:DD:190:TYR:CZ	2.34	0.62
13:AM:23:TYR:HE1	13:AM:70:LEU:HD13	1.62	0.62
18:CR:36:ASN:HB2	18:CR:38:GLU:HG2	1.81	0.62
1:CA:947:G:H2'	1:CA:948:C:H6	1.64	0.62
25:AZ:265:THR:CG2	25:AZ:266:VAL:H	2.12	0.62
30:B4:31:ILE:HG22	30:B4:33:VAL:HG23	1.82	0.62
10:CJ:90:LEU:H	10:CJ:91:PRO:CD	2.12	0.62
5:AE:11:ILE:HD11	5:AE:33:VAL:CG2	2.30	0.62
36:BA:2110:G:H22	36:BA:2178:C:H5	1.45	0.62
36:BA:484:C:H2'	36:BA:485:C:C6	2.35	0.62
3:AC:13:GLY:H	14:AN:57:ARG:HD2	1.65	0.62
46:DN:111:PRO:HA	46:DN:114:ARG:HH12	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:108:PRO:O	46:DN:109:LYS:HG3	1.99	0.62
55:DW:48:ALA:O	55:DW:50:VAL:N	2.33	0.62
25:CZ:29:ALA:O	25:CZ:33:TYR:HE2	1.83	0.62
36:DA:729:G:C5	39:DD:208:LYS:HB2	2.35	0.62
23:AX:11:U:O2	23:AX:11:U:H2'	1.99	0.62
1:AA:1411:C:O2'	1:AA:1412:C:H5'	1.99	0.62
36:DA:654(C):G:H2'	36:DA:654(D):G:H5'	1.81	0.62
11:CK:59:TYR:O	11:CK:62:GLN:HB3	2.00	0.62
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.00	0.62
7:CG:109:ASN:HD22	7:CG:109:ASN:N	1.98	0.62
1:AA:346:G:N3	1:AA:346:G:H2'	2.14	0.62
36:DA:2206:G:N3	36:DA:2206:G:H3'	2.15	0.62
4:AD:59:ARG:NH2	4:AD:62:GLN:HG3	2.14	0.61
19:CS:6:LYS:C	19:CS:7:LYS:HD3	2.20	0.61
36:BA:57:C:O2'	36:BA:58:G:H5'	1.99	0.61
47:DO:104:ARG:NE	52:DT:33:LYS:HD2	2.14	0.61
52:DT:85:LYS:NZ	52:DT:85:LYS:CB	2.63	0.61
57:DY:31:LEU:HD23	57:DY:36:ALA:O	2.00	0.61
36:BA:201:C:O2'	36:BA:202:U:H5'	1.99	0.61
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.82	0.61
52:BT:82:LEU:O	52:BT:84:GLN:N	2.33	0.61
52:BT:85:LYS:NZ	52:BT:85:LYS:CB	2.63	0.61
36:BA:2884:U:C2'	36:BA:2885:C:H5'	2.29	0.61
36:DA:848:G:N3	36:DA:933:A:H1'	2.15	0.61
48:BP:35:HIS:C	48:BP:36:LYS:HG2	2.21	0.61
28:D2:68:ARG:HH12	28:D2:72:ALA:HB1	1.64	0.61
39:BD:71:ASP:CB	39:BD:103:ARG:HH22	2.08	0.61
40:BE:188:VAL:HG23	40:BE:189:PRO:HD2	1.82	0.61
40:BE:11:MET:HB2	40:BE:23:VAL:O	2.00	0.61
51:DS:54:LEU:CD1	51:DS:58:LEU:H	2.13	0.61
40:DE:116:VAL:HG21	40:DE:122:PHE:CD2	2.35	0.61
40:DE:14:ILE:HB	52:DT:14:TYR:CE2	2.36	0.61
36:BA:1067:A:H3'	36:BA:1068:G:H5''	1.81	0.61
46:DN:12:ARG:O	46:DN:14:VAL:HG23	1.99	0.61
46:DN:15:LEU:HD13	46:DN:16:ILE:N	2.15	0.61
6:AF:87:ARG:CG	6:AF:87:ARG:HH11	2.11	0.61
22:CW:38:A:H2'	22:CW:39:U:C5'	2.29	0.61
6:CF:30:LEU:O	6:CF:35:ALA:HB3	2.00	0.61
4:CD:150:GLU:CD	4:CD:151:LYS:N	2.54	0.61
2:CB:107:THR:O	2:CB:110:GLN:HG3	2.00	0.61
58:DZ:20:ARG:HB3	58:DZ:20:ARG:NH1	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:709:U:H2'	36:DA:710:G:H8	1.64	0.61
36:DA:1442:G:H1	36:DA:1549:C:H42	1.48	0.61
27:B1:71:TYR:O	27:B1:74:VAL:HB	1.99	0.61
6:AF:4:TYR:HE1	6:AF:92:LYS:HD2	1.63	0.61
36:BA:1087:G:O2'	36:BA:1089:G:H5'	2.00	0.61
25:CZ:139:ASP:CG	25:CZ:177:LEU:HD11	2.21	0.61
2:AB:189:ASP:HB3	2:AB:203:GLY:O	1.99	0.61
57:DY:56:PRO:O	57:DY:57:GLN:C	2.37	0.61
36:DA:1354:A:H2'	36:DA:1355:G:O4'	2.00	0.61
36:DA:1357:U:H2'	36:DA:1358:G:O4'	2.00	0.61
46:BN:39:ARG:C	46:BN:41:ASP:H	2.02	0.61
55:BW:95:ILE:O	55:BW:95:ILE:HG13	2.00	0.61
19:CS:44:MET:N	19:CS:44:MET:SD	2.73	0.61
25:AZ:68:VAL:CA	25:AZ:69:GLU:N	2.60	0.61
25:AZ:198:LYS:NZ	25:AZ:201:GLU:CG	2.61	0.61
39:DD:71:ASP:CB	39:DD:103:ARG:HH22	2.12	0.61
53:BU:90:VAL:O	53:BU:92:ARG:N	2.33	0.61
3:AC:5:ILE:HG12	3:AC:10:PHE:HB2	1.82	0.61
34:D8:21:LYS:HD3	34:D8:48:PHE:CZ	2.34	0.61
38:BC:6:ARG:HH11	38:BC:34:THR:HB	1.65	0.61
22:AW:57:G:C2'	22:AW:58:A:H5'	2.29	0.61
38:DC:123:VAL:HG21	38:DC:127:LEU:HD22	1.83	0.61
20:CT:36:LEU:HD12	20:CT:59:ALA:HB2	1.82	0.61
36:DA:2779:U:H1'	36:DA:2781:A:C5	2.35	0.61
36:DA:786:C:C2'	36:DA:787:U:H5'	2.30	0.61
1:CA:946:A:H2'	1:CA:947:G:H8	1.65	0.61
17:CQ:67:LYS:O	17:CQ:68:ARG:CB	2.48	0.61
41:BF:64:ILE:HG22	41:BF:76:GLY:O	2.00	0.61
43:DH:94:TYR:CD1	43:DH:107:VAL:HA	2.34	0.61
9:AI:9:ARG:CG	9:AI:14:VAL:HG13	2.30	0.61
4:CD:201:GLN:HA	4:CD:204:ILE:HD12	1.80	0.61
38:BC:152:ILE:O	38:BC:155:GLU:HG2	2.00	0.61
36:BA:2219:G:O2'	36:BA:2220:G:H5'	1.99	0.61
7:CG:76:ARG:HH11	7:CG:76:ARG:HG2	1.64	0.61
25:AZ:176:LEU:C	25:AZ:176:LEU:HD13	2.21	0.61
25:AZ:193:ASN:OD1	25:AZ:195:TRP:N	2.33	0.61
25:CZ:14:VAL:O	25:CZ:79:HIS:HA	2.00	0.61
48:DP:35:HIS:O	48:DP:36:LYS:CG	2.39	0.61
42:BG:71:THR:HB	42:BG:89:GLY:HA3	1.82	0.61
36:DA:1301:A:O2'	36:DA:1302:A:C2'	2.43	0.61
16:CP:67:THR:H	16:CP:70:ALA:CB	2.05	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:185:ASP:HA	41:BF:188:ARG:HG2	1.81	0.61
36:BA:832:G:OP1	48:BP:40:SER:HB3	1.99	0.61
36:BA:1543:C:C3'	36:BA:1544:A:H5''	2.26	0.61
1:CA:1432:G:OP1	52:DT:107:ASP:HB2	2.01	0.61
58:DZ:122:ARG:HH11	58:DZ:122:ARG:HG2	1.66	0.61
58:DZ:85:HIS:CE1	58:DZ:87:ASP:OD1	2.53	0.61
35:B9:10:ILE:H	35:B9:10:ILE:CD1	2.10	0.61
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.83	0.61
10:CJ:6:ILE:O	10:CJ:6:ILE:HG13	1.98	0.61
13:AM:4:ILE:HD13	13:AM:56:LEU:HD12	1.82	0.61
54:BV:18:LEU:CG	54:BV:19:LYS:H	2.10	0.61
50:BR:117:VAL:HG22	50:BR:118:GLU:N	2.16	0.61
41:BF:132:VAL:HG22	41:BF:133:ASN:N	2.15	0.61
6:CF:91:VAL:CG1	6:CF:92:LYS:N	2.63	0.61
25:AZ:27:LEU:HD11	25:AZ:31:LEU:HD21	1.82	0.61
36:BA:848:G:N3	36:BA:933:A:H1'	2.16	0.61
40:DE:30:PRO:HD3	40:DE:180:ASN:ND2	2.15	0.61
54:DV:13:ARG:HG3	54:DV:13:ARG:HH11	1.65	0.61
36:BA:2572:A:N7	40:BE:144:ARG:HD2	2.15	0.61
36:DA:1771:C:C1'	36:DA:1786:A:H8	2.13	0.61
47:DO:8:LEU:HB2	47:DO:82:ASN:O	2.00	0.61
36:DA:862:G:H2'	36:DA:863:A:O4'	2.00	0.61
36:BA:271(A):A:H5'	36:BA:271(B):C:OP2	1.99	0.61
57:DY:90:LEU:HD23	57:DY:90:LEU:H	1.66	0.61
36:BA:2130:U:OP1	38:BC:5:LYS:HG3	2.00	0.61
7:CG:73:MET:HG2	7:CG:90:GLU:HA	1.82	0.61
36:DA:1094:U:H2'	36:DA:1096:A:OP2	2.00	0.61
8:CH:20:TYR:CE1	8:CH:78:GLN:NE2	2.68	0.61
38:DC:61:THR:HB	38:DC:161:ILE:O	2.00	0.61
36:BA:773:U:H4'	39:BD:47:GLY:HA3	1.80	0.61
39:DD:37:LEU:O	39:DD:38:LYS:O	2.18	0.61
53:DU:95:LEU:O	53:DU:98:LEU:HG	1.99	0.61
1:AA:1132:C:O2'	1:AA:1133:G:H5'	1.99	0.61
36:DA:1268:A:H2'	36:DA:1269:A:O4'	2.00	0.61
36:BA:27:G:N2	36:BA:512:G:C2'	2.62	0.61
51:BS:58:LEU:HG	51:BS:59:LYS:H	1.65	0.61
57:DY:14:LEU:HD12	57:DY:15:VAL:H	1.65	0.61
39:BD:35:LYS:HD2	39:BD:36:PRO:CA	2.31	0.61
39:BD:30:GLU:HB2	39:BD:35:LYS:NZ	2.15	0.61
31:B5:51:TYR:N	31:B5:56:LYS:HE3	2.15	0.61
15:CO:56:LEU:O	15:CO:60:VAL:HG23	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D3:35:ARG:HH11	29:D3:35:ARG:CB	2.08	0.61
53:BU:115:ALA:C	53:BU:117:GLN:N	2.53	0.61
58:DZ:82:ARG:NH1	58:DZ:84:GLU:HA	2.14	0.61
36:DA:1051:G:H2'	36:DA:1052:C:C4	2.34	0.61
4:CD:88:VAL:HG13	5:CE:97:GLY:CA	2.29	0.61
46:DN:30:ILE:O	46:DN:34:LEU:HB2	2.00	0.61
51:BS:85:VAL:HG23	51:BS:106:ARG:HD3	1.82	0.61
58:DZ:144:LEU:HD11	58:DZ:150:LEU:HB3	1.81	0.61
58:DZ:150:LEU:HD23	58:DZ:150:LEU:H	1.65	0.61
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.83	0.61
43:BH:41:MET:SD	43:BH:53:GLU:O	2.58	0.61
25:AZ:318:ALA:HB2	25:AZ:400:VAL:HA	1.83	0.61
43:DH:43:VAL:HG12	43:DH:46:GLU:OE2	2.00	0.61
1:AA:1186:G:C3'	1:AA:1187:G:H5''	2.29	0.61
51:BS:69:VAL:HG13	51:BS:99:LYS:HD3	1.82	0.61
43:DH:158:HIS:CE1	43:DH:169:VAL:HG12	2.36	0.61
33:D7:24:THR:HG23	33:D7:27:GLY:H	1.64	0.61
7:AG:50:ILE:O	7:AG:54:THR:HG22	2.01	0.61
36:BA:1151:G:H2'	36:BA:1152:C:C6	2.35	0.61
36:BA:2463:C:O2'	36:BA:2464:C:H5'	2.00	0.61
36:BA:1354:A:H2'	36:BA:1355:G:O4'	2.01	0.61
36:BA:49:A:H5''	36:BA:51:G:O4'	2.00	0.61
1:AA:328:C:H4'	1:AA:329:A:H5'	1.82	0.61
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.81	0.61
25:AZ:321:TYR:C	25:AZ:321:TYR:CD1	2.73	0.61
39:BD:176:ARG:HG2	39:BD:176:ARG:HH11	1.65	0.61
36:BA:524:U:H4'	36:BA:555:U:H4'	1.82	0.61
24:CY:77:TRP:HB2	25:CZ:285:ASN:HB3	1.80	0.61
25:CZ:121:LEU:HG	25:CZ:125:GLN:HE21	1.65	0.61
25:CZ:136:ASN:ND2	60:CZ:501:GDP:N7	2.39	0.61
36:BA:611:C:H2'	36:BA:612:C:C6	2.36	0.61
52:DT:62:THR:CG2	52:DT:75:ILE:HG13	2.29	0.61
36:BA:2014:A:H2'	36:BA:2015:A:C8	2.35	0.61
58:DZ:151:HIS:HA	58:DZ:171:ILE:HG12	1.82	0.61
30:D4:27:THR:HG23	42:DG:143:GLU:OE2	2.01	0.61
48:DP:16:ARG:HD3	48:DP:18:ARG:H	1.66	0.61
31:D5:57:VAL:C	31:D5:58:LEU:HD12	2.21	0.61
36:DA:2883:A:H3'	36:DA:2884:U:H5'	1.82	0.61
57:DY:95:LYS:HE3	57:DY:100:ALA:HB2	1.81	0.61
32:D6:30:THR:HG22	32:D6:31:PRO:HD2	1.81	0.61
46:BN:70:LYS:HE2	46:BN:72:TYR:CZ	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:81:GLN:HE22	48:DP:106:LEU:HA	1.65	0.61
48:DP:96:THR:HG22	48:DP:126:VAL:CG2	2.30	0.61
3:CC:113:ALA:HB2	3:CC:183:ASP:HB3	1.80	0.61
12:CL:79:GLU:O	12:CL:80:HIS:CB	2.47	0.61
36:BA:888:C:H2'	36:BA:889:C:C4'	2.31	0.61
50:BR:2:ARG:CD	50:BR:5:LYS:HE2	2.30	0.61
25:CZ:27:LEU:O	25:CZ:31:LEU:HG	2.00	0.61
48:DP:77:ARG:HG2	48:DP:77:ARG:HH11	1.66	0.61
4:CD:145:GLU:OE1	4:CD:145:GLU:O	2.18	0.61
1:AA:197:A:H4'	1:AA:198:G:O5'	2.01	0.61
54:BV:13:ARG:HG3	54:BV:13:ARG:HH11	1.64	0.61
50:DR:18:LEU:HD11	50:DR:22:ARG:CZ	2.30	0.61
41:DF:123:LEU:HD12	41:DF:124:LEU:H	1.65	0.61
9:CI:95:LYS:O	9:CI:96:LEU:HD12	2.00	0.61
1:AA:683:G:H21	11:AK:38:ASN:HD22	1.49	0.61
36:DA:1493:C:O2	36:DA:1493:C:H2'	2.01	0.61
3:CC:120:VAL:HB	3:CC:198:VAL:HG11	1.82	0.61
1:AA:657:G:O2'	1:AA:658:G:H5'	1.99	0.61
56:DX:42:ALA:O	56:DX:43:VAL:HG23	2.00	0.61
12:AL:114:LYS:N	12:AL:114:LYS:HD2	2.16	0.61
22:AW:43:C:H2'	22:AW:44:G:C1'	2.31	0.61
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.01	0.61
36:DA:72:U:O2'	36:DA:73:A:H5'	2.01	0.61
39:DD:35:LYS:HA	39:DD:64:ILE:H	1.64	0.61
25:CZ:138:VAL:HG21	25:CZ:173:GLY:H	1.65	0.61
52:DT:47:GLY:HA3	52:DT:63:VAL:HG12	1.82	0.61
42:BG:102:PHE:CD1	42:BG:102:PHE:O	2.53	0.61
42:BG:57:ALA:C	42:BG:59:GLU:H	2.02	0.61
54:BV:51:VAL:HG12	54:BV:52:VAL:N	2.10	0.61
41:BF:24:LEU:HD12	41:BF:118:ALA:HB1	1.82	0.61
38:DC:10:LEU:CD1	38:DC:32:LEU:HA	2.29	0.61
36:DA:2248:C:C2'	36:DA:2249:U:H5'	2.31	0.61
36:DA:2176:A:H4'	38:DC:213:TYR:CD1	2.36	0.61
49:DQ:132:VAL:HG11	58:DZ:81:ARG:HD2	1.81	0.61
32:D6:30:THR:O	32:D6:31:PRO:C	2.37	0.61
32:D6:8:LYS:HD2	32:D6:27:LYS:HG2	1.83	0.61
24:AY:29:G:H1	24:AY:41:C:H42	1.46	0.61
48:DP:82:GLY:HA2	48:DP:113:LYS:HB3	1.82	0.61
36:BA:852:G:O2'	36:BA:853:G:H5'	2.01	0.61
57:BY:97:ARG:HH21	57:BY:98:VAL:HB	1.66	0.61
36:DA:1142(A):A:H8	36:DA:1142(A):A:H5'	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:26:ASN:HD22	20:AT:26:ASN:H	1.46	0.61
26:B0:77:ARG:NH2	36:BA:857:C:H5'	2.16	0.61
50:BR:111:LEU:H	50:BR:111:LEU:HD12	1.64	0.61
19:AS:53:ASN:C	19:AS:53:ASN:ND2	2.53	0.61
2:CB:44:LEU:HA	2:CB:47:THR:CB	2.31	0.61
27:B1:36:GLY:O	27:B1:38:SER:N	2.34	0.61
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.00	0.61
36:BA:1720:U:H2'	36:BA:1721:G:H5''	1.82	0.61
1:AA:828:A:H2'	1:AA:829:G:O4'	2.00	0.61
2:CB:155:LEU:HD21	2:CB:159:PRO:HG3	1.83	0.61
1:AA:57:G:H2'	1:AA:58:C:C6	2.35	0.61
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.00	0.61
40:DE:163:GLU:O	40:DE:165:VAL:HG23	2.01	0.61
1:AA:538:G:P	12:AL:115:LYS:HB2	2.40	0.61
38:DC:107:TRP:CH2	38:DC:109:ASP:HA	2.35	0.61
51:DS:29:PHE:CE1	51:DS:31:SER:HB2	2.36	0.61
28:B2:35:LEU:O	28:B2:39:ALA:HB3	2.00	0.61
57:BY:28:LYS:HB2	57:BY:37:VAL:HB	1.82	0.61
4:CD:103:ASN:OD1	4:CD:114:ARG:NE	2.34	0.61
52:DT:32:TYR:HD1	52:DT:32:TYR:N	1.97	0.61
39:DD:71:ASP:HB3	39:DD:103:ARG:NH2	2.15	0.61
58:DZ:180:VAL:CG2	58:DZ:181:GLU:H	2.03	0.61
19:AS:28:LYS:C	19:AS:29:ARG:HD2	2.21	0.61
36:DA:2146:C:H4'	36:DA:2147:G:C5	2.36	0.61
25:AZ:16:THR:HG23	25:AZ:79:HIS:CE1	2.35	0.61
48:DP:112:LEU:O	48:DP:112:LEU:HD13	2.01	0.61
22:AV:69:G:H5'	22:AV:69:G:H8	1.64	0.61
1:CA:1318:A:H4'	19:CS:10:PHE:CZ	2.36	0.61
28:D2:32:LEU:HB2	28:D2:53:LEU:HD22	1.83	0.61
17:AQ:12:SER:HB3	17:AQ:20:THR:CB	2.30	0.61
43:DH:28:GLY:HA3	43:DH:79:VAL:HB	1.82	0.61
1:CA:1219:U:OP1	14:CN:19:ARG:NH2	2.33	0.61
39:BD:210:GLY:O	39:BD:211:ARG:CB	2.45	0.61
46:DN:23:LEU:HB2	46:DN:60:ILE:HG21	1.83	0.61
22:CW:55:U:H2'	22:CW:56:C:H5''	1.82	0.61
1:CA:1030(A):G:H2'	1:CA:1030(A):G:N3	2.14	0.61
38:BC:43:VAL:HG23	38:BC:175:VAL:HG21	1.83	0.61
33:B7:34:ARG:HB2	33:B7:42:LEU:HD22	1.83	0.61
1:AA:458:C:H2'	1:AA:460:G:C8	2.36	0.61
36:DA:2166:G:H2'	36:DA:2167:U:C6	2.35	0.61
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B9:19:ARG:O	35:B9:20:HIS:HB2	2.00	0.61
2:CB:165:VAL:HG23	2:CB:165:VAL:O	1.99	0.61
36:DA:2647:U:H2'	36:DA:2648:C:C6	2.36	0.61
36:BA:15:G:O2'	36:BA:16:G:H5'	2.00	0.61
36:BA:2869:G:H2'	36:BA:2870:C:C6	2.35	0.61
36:DA:443:A:H1'	36:DA:1201:C:O4'	2.00	0.61
15:AO:11:VAL:HG21	15:AO:34:LEU:HD22	1.83	0.61
4:AD:43:HIS:O	4:AD:45:GLN:N	2.29	0.61
42:BG:165:THR:HB	42:BG:167:GLU:OE1	2.00	0.61
12:CL:114:LYS:N	12:CL:114:LYS:HD2	2.16	0.61
36:BA:873:G:H2'	36:BA:874:G:H8	1.65	0.61
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	1.83	0.61
6:AF:97:PHE:HD1	18:AR:31:LEU:HD21	1.65	0.61
25:CZ:241:ARG:HB3	25:CZ:241:ARG:HH11	1.64	0.61
10:AJ:55:LYS:H	10:AJ:55:LYS:HE3	1.65	0.61
51:DS:30:ARG:HD2	51:DS:35:ILE:HB	1.83	0.61
4:AD:98:GLU:CB	4:AD:189:PRO:HG3	2.31	0.61
1:CA:1220:G:H2'	1:CA:1221:G:C8	2.36	0.61
30:B4:5:ILE:O	30:B4:5:ILE:HG12	2.01	0.61
53:BU:61:TRP:HB3	53:BU:93:LYS:O	2.01	0.61
54:BV:39:LEU:HD12	54:BV:51:VAL:HA	1.83	0.61
5:AE:76:ILE:HG13	5:AE:142:LEU:CD1	2.31	0.61
32:B6:5:VAL:HG12	32:B6:5:VAL:O	2.01	0.61
36:DA:139:G:H1	36:DA:142(A):C:H42	1.47	0.61
34:B8:23:VAL:CG1	34:B8:46:ARG:HB3	2.31	0.61
39:BD:75:ILE:HG21	39:BD:99:ASP:HB2	1.83	0.61
48:DP:58:THR:O	48:DP:61:ARG:NE	2.26	0.61
58:BZ:27:VAL:HG22	58:BZ:28:MET:H	1.66	0.61
49:DQ:133:ARG:HB2	49:DQ:133:ARG:NH1	2.16	0.61
25:AZ:172:ARG:N	25:AZ:172:ARG:HD2	2.16	0.61
40:BE:3:GLY:HA3	40:BE:81:ILE:HD12	1.83	0.61
17:CQ:78:GLU:OE2	17:CQ:81:ARG:HD3	2.01	0.61
39:DD:134:ARG:HD3	39:DD:188:GLU:OE2	2.00	0.61
1:CA:1065:U:C4	1:CA:1190:G:H1'	2.36	0.61
49:BQ:56:ARG:CG	49:BQ:56:ARG:NH1	2.63	0.61
36:DA:200:U:C2'	36:DA:201:C:H5'	2.30	0.61
13:AM:87:TYR:HE1	19:AS:81:ARG:NH2	1.99	0.61
36:DA:1495:A:N3	36:DA:1496:A:H2	1.98	0.61
55:BW:36:LEU:HD12	55:BW:48:ALA:HA	1.83	0.61
14:CN:3:ARG:HG2	14:CN:3:ARG:O	2.01	0.61
36:BA:1721:G:C6	36:BA:1739:U:H5'	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:686:U:O4	1:CA:703:G:H1'	2.01	0.61
39:DD:201:HIS:C	39:DD:203:ASN:H	2.04	0.61
56:BX:29:TRP:CZ3	56:BX:78:LYS:HB3	2.35	0.61
36:DA:2641:G:P	46:DN:74:ARG:HH21	2.23	0.61
20:AT:16:HIS:O	20:AT:19:SER:HB3	2.01	0.61
24:CY:77:TRP:O	25:CZ:273:HIS:CA	2.49	0.61
25:CZ:198:LYS:NZ	25:CZ:198:LYS:O	2.33	0.61
13:CM:2:ALA:O	13:CM:4:ILE:HG13	2.01	0.61
28:B2:59:ARG:O	28:B2:63:VAL:HG23	1.99	0.61
28:B2:57:ILE:CG2	28:B2:61:LEU:HG	2.28	0.61
41:BF:123:LEU:HD12	41:BF:124:LEU:H	1.66	0.61
52:DT:65:LYS:NZ	52:DT:66:VAL:H	1.99	0.61
58:BZ:130:PRO:HA	58:BZ:133:ILE:CD1	2.15	0.61
42:BG:173:LEU:HB3	42:BG:178:PHE:CD2	2.35	0.61
47:BO:35:VAL:HG23	47:BO:65:THR:HG23	1.81	0.61
32:B6:5:VAL:HG11	36:BA:2283:C:H5'	1.82	0.61
25:CZ:8:THR:CG2	25:CZ:9:LYS:H	2.13	0.61
42:DG:178:PHE:HB3	42:DG:180:PHE:HE1	1.65	0.61
30:D4:14:ILE:H	30:D4:14:ILE:HD12	1.63	0.61
30:D4:30:GLU:C	30:D4:31:ILE:HD12	2.21	0.61
48:BP:84:ASN:HA	48:BP:116:GLY:HA3	1.83	0.61
1:CA:59:A:C5'	1:CA:60:A:H5''	2.30	0.61
36:DA:2712:U:OP1	36:DA:2714:G:H4'	2.01	0.61
36:DA:1141:U:H2'	46:DN:63:THR:HG21	1.83	0.61
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.83	0.61
1:CA:1086:U:C2'	1:CA:1087:G:H5'	2.30	0.61
36:BA:2712:U:O2'	36:BA:2713:A:H5'	2.01	0.61
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	2.15	0.61
40:DE:47:VAL:HG23	40:DE:84:PHE:O	2.01	0.61
2:AB:97:TRP:HH2	2:AB:176:GLU:OE1	1.84	0.61
36:DA:391:G:O2'	36:DA:392:C:H5'	2.01	0.61
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.36	0.61
2:CB:115:LEU:C	2:CB:117:GLU:H	2.04	0.61
57:BY:54:LYS:O	57:BY:55:TYR:HB2	2.00	0.61
22:CV:76:A:H3'	36:DA:2585:U:N3	2.15	0.61
25:CZ:178:ALA:O	25:CZ:196:VAL:CG2	2.49	0.61
22:AW:19:G:H5'	22:AW:20:U:C5	2.36	0.61
3:AC:52:LEU:HD11	3:AC:55:VAL:HG23	1.83	0.61
36:BA:1223:G:H5'	36:BA:1223:G:H8	1.66	0.61
24:CY:76:A:OP2	25:CZ:274:ARG:HD2	2.00	0.61
25:CZ:193:ASN:OD1	25:CZ:195:TRP:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:34:VAL:O	39:DD:36:PRO:HD2	2.00	0.61
25:CZ:150:VAL:HG13	25:CZ:151:GLU:N	2.15	0.61
3:CC:94:LEU:O	3:CC:95:THR:HB	1.99	0.61
10:CJ:61:GLU:OE2	14:CN:49:HIS:HE1	1.83	0.61
58:DZ:157:LEU:HD11	58:DZ:163:LEU:HD22	1.81	0.61
36:DA:2463:C:O2'	36:DA:2464:C:H5'	2.01	0.61
31:D5:31:VAL:HG23	36:DA:2886:G:O2'	2.01	0.61
36:DA:2886:G:H2'	36:DA:2887:U:C6	2.35	0.61
58:BZ:98:MET:O	58:BZ:125:LEU:HD12	2.00	0.61
32:D6:35:GLU:HB3	32:D6:51:GLU:HB2	1.81	0.61
55:BW:107:LEU:N	55:BW:107:LEU:HD12	2.14	0.61
36:DA:1516:C:C2'	36:DA:1517:G:C5'	2.77	0.61
36:DA:201:C:C2'	36:DA:202:U:H5'	2.31	0.61
36:DA:389:G:H1	48:DP:71:VAL:HG12	1.65	0.61
36:BA:2741:A:H2'	36:BA:2742:C:O4'	2.01	0.61
1:AA:67:C:H2'	1:AA:68:G:C8	2.35	0.61
38:BC:47:LEU:N	38:BC:47:LEU:HD12	2.15	0.61
3:CC:134:ILE:HG21	3:CC:167:TRP:O	1.99	0.61
38:BC:53:ARG:HB3	38:BC:53:ARG:HH11	1.64	0.61
36:DA:1400:G:H2'	36:DA:1401:G:H8	1.66	0.61
3:CC:22:TRP:CZ2	14:CN:54:PRO:HG2	2.35	0.61
20:CT:55:ILE:H	20:CT:55:ILE:HD13	1.66	0.61
33:B7:43:THR:HG23	33:B7:44:PRO:HD2	1.83	0.61
7:AG:145:ALA:O	7:AG:147:ALA:N	2.32	0.61
31:D5:6:VAL:HG13	36:DA:2016:U:H1'	1.83	0.61
41:DF:126:VAL:HG21	41:DF:129:PHE:CZ	2.36	0.61
58:DZ:9:TYR:HE1	58:DZ:35:ARG:HG3	1.66	0.61
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.01	0.61
52:BT:42:ILE:O	52:BT:42:ILE:HG13	2.01	0.61
54:DV:49:THR:HB	54:DV:50:PRO:HD2	1.82	0.61
43:BH:15:VAL:HG12	43:BH:28:GLY:HA2	1.83	0.60
4:CD:16:GLY:HA2	4:CD:33:MET:HE1	1.83	0.60
36:BA:1542:A:H5'	36:BA:1543:C:OP2	2.01	0.60
32:B6:53:LYS:H	32:B6:53:LYS:HD3	1.65	0.60
39:DD:259:THR:O	39:DD:260:ARG:O	2.18	0.60
48:DP:16:ARG:HB2	48:DP:16:ARG:HH11	1.62	0.60
36:BA:1023:U:H2'	36:BA:1024:G:H5'	1.82	0.60
31:D5:33:CYS:HB3	31:D5:36:CYS:O	2.01	0.60
5:CE:76:ILE:HG12	5:CE:77:PRO:CD	2.30	0.60
48:BP:105:LEU:H	48:BP:105:LEU:CD1	2.08	0.60
36:DA:2801(A):A:C4'	36:DA:2802:G:H5'	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:202:U:H4'	1:CA:203:U:OP2	2.00	0.60
49:BQ:18:LYS:HB3	49:BQ:98:LYS:NZ	2.16	0.60
26:D0:20:ARG:CG	26:D0:20:ARG:HH11	2.13	0.60
36:BA:582:G:H2'	36:BA:583:G:C8	2.36	0.60
10:CJ:83:GLU:OE1	10:CJ:84:GLN:HG3	2.00	0.60
1:AA:954:G:H21	1:AA:1227:A:N6	1.99	0.60
1:CA:1086:U:H5	1:CA:1099:G:H22	1.48	0.60
36:BA:1771:C:C1'	36:BA:1786:A:C8	2.84	0.60
2:AB:142:LEU:HD23	2:AB:142:LEU:O	2.00	0.60
3:CC:172:ARG:O	3:CC:173:VAL:HG23	2.01	0.60
47:BO:114:ILE:HD12	47:BO:114:ILE:N	2.16	0.60
1:CA:9:G:H5''	5:CE:122:GLU:OE1	2.01	0.60
22:AW:56:C:O4'	38:BC:132:GLY:HA3	2.01	0.60
25:CZ:258:LEU:HD12	25:CZ:299:GLU:CG	2.31	0.60
11:CK:80:VAL:HG23	11:CK:105:VAL:HG12	1.83	0.60
36:BA:2369:A:O2'	36:BA:2370:G:H5'	2.01	0.60
50:BR:72:ASP:HB3	50:BR:75:LEU:HB3	1.83	0.60
22:AW:44:G:H2'	22:AW:44:G:N3	2.16	0.60
26:D0:77:ARG:HH22	36:DA:858:U:P	2.23	0.60
36:DA:2364:C:H2'	36:DA:2365:G:O4'	2.01	0.60
36:BA:549:G:O2'	36:BA:551:G:H5'	2.01	0.60
36:BA:1469:A:H2'	36:BA:1470:G:C8	2.36	0.60
36:DA:519:U:H2'	36:DA:520:G:H8	1.65	0.60
36:BA:528:A:H2	36:BA:2043:C:O5'	1.84	0.60
18:CR:56:THR:C	18:CR:58:LEU:H	2.03	0.60
22:CW:76:A:P	36:DA:2432:A:H4'	2.40	0.60
10:CJ:40:LEU:HB2	10:CJ:69:ASN:CB	2.30	0.60
30:D4:16:CYS:SG	30:D4:17:GLY:N	2.74	0.60
40:DE:183:LEU:N	40:DE:183:LEU:HD12	2.16	0.60
43:BH:12:PRO:HB2	43:BH:15:VAL:HG22	1.84	0.60
34:B8:62:LEU:HD13	36:BA:242:G:C5'	2.18	0.60
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.34	0.60
1:CA:972:C:O2	10:CJ:55:LYS:HG2	2.01	0.60
52:BT:29:ARG:HG2	52:BT:86:ILE:HG22	1.83	0.60
43:BH:46:GLU:O	43:BH:47:GLU:C	2.39	0.60
29:D3:43:ILE:HD11	36:DA:927:G:O2'	2.01	0.60
48:BP:106:LEU:HD21	48:BP:112:LEU:HB2	1.83	0.60
36:DA:1012:U:C4	46:DN:28:THR:HG21	2.36	0.60
51:DS:17:ARG:C	51:DS:19:LYS:H	2.03	0.60
43:DH:149:ARG:HA	43:DH:162:ILE:CD1	2.31	0.60
20:CT:71:THR:C	20:CT:72:LEU:HD23	2.21	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:23:ARG:HG2	20:CT:23:ARG:HH11	1.66	0.60
2:CB:121:LEU:O	2:CB:121:LEU:HD23	2.01	0.60
3:AC:70:VAL:HG12	3:AC:72:LYS:N	2.14	0.60
36:BA:2303:G:O2'	42:BG:132:ASN:HB2	2.00	0.60
36:DA:118:A:H1'	36:DA:178:G:O4'	2.01	0.60
33:D7:43:THR:HG23	33:D7:44:PRO:CD	2.31	0.60
10:CJ:65:LEU:HD22	14:CN:56:VAL:HG22	1.83	0.60
29:D3:6:VAL:HG12	29:D3:56:VAL:HG22	1.83	0.60
18:CR:56:THR:O	18:CR:58:LEU:N	2.33	0.60
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.01	0.60
36:DA:1092:C:H42	36:DA:1100:C:H42	1.47	0.60
36:BA:2619:C:O2'	36:BA:2620:C:H5'	2.01	0.60
26:B0:73:GLY:O	26:B0:75:LEU:N	2.34	0.60
48:DP:99:LEU:HD23	48:DP:99:LEU:O	2.02	0.60
22:CV:46:G:H3'	22:CV:47:U:C5'	2.31	0.60
26:D0:46:LYS:HE3	26:D0:76:GLY:HA3	1.84	0.60
37:DB:68:C:H2'	37:DB:69:G:O4'	2.02	0.60
36:BA:470:A:OP1	41:BF:59:TYR:HE1	1.84	0.60
25:CZ:172:ARG:N	25:CZ:172:ARG:HD2	2.16	0.60
1:AA:1125:U:H5''	1:AA:1126:U:O4	2.02	0.60
4:CD:13:ARG:O	4:CD:15:GLU:N	2.33	0.60
26:D0:40:GLN:NE2	26:D0:43:THR:HA	2.01	0.60
48:DP:46:LYS:HG2	48:DP:52:GLU:OE2	2.01	0.60
36:DA:259:G:N2	36:DA:621:A:H8	1.94	0.60
32:B6:7:ILE:HB	32:B6:27:LYS:HZ3	1.66	0.60
48:BP:50:ARG:HG2	48:BP:50:ARG:NH1	2.16	0.60
36:DA:1803:A:H4'	39:DD:259:THR:CG2	2.28	0.60
37:DB:106:G:O2'	37:DB:107:G:H5'	2.01	0.60
53:DU:76:TYR:O	53:DU:80:ILE:HG12	2.02	0.60
32:D6:15:GLU:OE2	32:D6:41:PRO:HG3	2.01	0.60
32:D6:13:CYS:HA	32:D6:50:ARG:O	2.01	0.60
36:DA:1067:A:H3'	36:DA:1068:G:H5''	1.82	0.60
36:BA:1802:A:H2'	36:BA:1803:A:C8	2.36	0.60
1:CA:1298:C:H2'	7:CG:114:ARG:NH1	2.17	0.60
3:CC:46:GLU:O	3:CC:47:LEU:CB	2.49	0.60
46:DN:30:ILE:HG21	46:DN:120:LEU:HD21	1.82	0.60
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.83	0.60
43:DH:33:LEU:HD11	43:DH:78:GLY:O	2.00	0.60
36:BA:296:C:O2'	36:BA:297:C:H5'	2.01	0.60
36:BA:956:G:OP2	49:BQ:14:ARG:NH2	2.33	0.60
36:DA:1658:C:OP1	40:DE:132:HIS:CE1	2.54	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:959:A:H2'	1:CA:960:U:C4'	2.31	0.60
51:BS:99:LYS:HZ3	51:BS:99:LYS:HB3	1.65	0.60
36:DA:18:C:O3'	53:DU:23:GLY:HA2	2.00	0.60
36:DA:769:G:O2'	36:DA:770:G:H5'	2.00	0.60
1:CA:656:C:H4'	15:CO:62:GLN:NE2	2.16	0.60
43:BH:156:ALA:C	43:BH:158:HIS:H	2.03	0.60
36:DA:2636:U:H4'	40:DE:80:GLU:OE1	2.01	0.60
36:DA:534:U:H5'	53:DU:42:ALA:HB1	1.82	0.60
36:BA:2693:A:H2'	36:BA:2694:G:C8	2.37	0.60
47:DO:63:VAL:O	47:DO:64:ARG:HG2	2.01	0.60
1:CA:1282:C:O2'	1:CA:1283:G:H5'	2.01	0.60
3:CC:107:GLN:NE2	3:CC:107:GLN:H	1.98	0.60
36:DA:2713:A:OP1	50:DR:14:SER:HB2	2.01	0.60
51:BS:67:ARG:HH22	51:BS:100:ALA:HB3	1.66	0.60
39:DD:211:ARG:O	39:DD:215:LEU:HG	2.01	0.60
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.65	0.60
1:AA:451:A:N6	1:AA:480:U:H2'	2.16	0.60
54:BV:66:ARG:NE	54:BV:88:ARG:HD2	2.16	0.60
36:BA:1081:U:H5'	45:BK:122:UNK:O	2.00	0.60
36:DA:1847:A:H3'	36:DA:1848:A:H5'	1.83	0.60
47:DO:4:PRO:O	47:DO:5:GLN:HB2	2.00	0.60
25:CZ:143:ASP:HB3	25:CZ:146:LEU:CB	2.31	0.60
36:BA:89:G:H3'	36:BA:90:U:C5'	2.32	0.60
41:BF:31:HIS:ND1	48:BP:13:ASN:HB2	2.16	0.60
25:CZ:7:ARG:NH1	25:CZ:281:ILE:CG1	2.56	0.60
25:AZ:5:PHE:HB3	25:AZ:276:THR:O	2.01	0.60
36:DA:2377:A:O2'	36:DA:2378:A:H5'	2.00	0.60
36:BA:331:A:H1'	36:BA:332:A:OP1	2.00	0.60
42:BG:7:LEU:HA	42:BG:10:LYS:CD	2.30	0.60
51:DS:15:ARG:HH11	51:DS:15:ARG:HB2	1.66	0.60
32:B6:44:ARG:O	32:B6:45:LYS:HD3	2.01	0.60
51:BS:97:ARG:NH2	51:BS:98:VAL:CA	2.63	0.60
51:DS:54:LEU:HD13	51:DS:58:LEU:H	1.65	0.60
36:DA:1049:C:H2'	36:DA:1050:A:H8	1.65	0.60
12:CL:24:VAL:CG1	12:CL:27:LEU:HD13	2.31	0.60
58:DZ:99:TYR:HD2	58:DZ:123:ASP:HB3	1.66	0.60
36:BA:2025:C:H2'	36:BA:2026:C:H6	1.66	0.60
51:BS:66:ALA:HB1	51:BS:99:LYS:HG2	1.83	0.60
36:DA:1817:G:C2'	36:DA:1818:U:H5'	2.31	0.60
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.14	0.60
8:CH:85:ARG:NH1	8:CH:134:ILE:HG23	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:122:ARG:HA	4:AD:122:ARG:HH11	1.65	0.60
40:DE:30:PRO:HD3	40:DE:180:ASN:CG	2.22	0.60
9:CI:53:VAL:HG22	9:CI:95:LYS:NZ	2.15	0.60
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.37	0.60
42:DG:96:ARG:H	42:DG:99:MET:HE1	1.65	0.60
5:CE:81:GLU:CD	5:CE:90:VAL:HG22	2.22	0.60
36:BA:1494:A:N3	36:BA:1494:A:H3'	2.15	0.60
36:DA:1717:G:C2'	36:DA:1718:G:H5''	2.32	0.60
29:B3:22:ALA:HB2	29:B3:49:LYS:HD3	1.82	0.60
36:BA:2154:G:H2'	36:BA:2155:G:H8	1.67	0.60
38:DC:50:ASP:OD2	38:DC:52:ARG:HB2	2.01	0.60
1:CA:896:C:O2'	1:CA:897:C:H5'	2.00	0.60
42:DG:18:GLU:HA	42:DG:18:GLU:OE1	2.01	0.60
36:DA:2389:G:H5''	36:DA:2390:U:O4'	2.01	0.60
49:BQ:109:VAL:HG12	49:BQ:110:THR:N	2.16	0.60
27:B1:24:ALA:HB2	27:B1:32:LYS:HE3	1.81	0.60
1:CA:599:C:H4'	8:CH:130:GLY:C	2.22	0.60
22:AW:37:A:H3'	22:AW:38:A:H8	1.66	0.60
22:CW:20:U:O2'	22:CW:21:A:H4'	2.00	0.60
36:DA:1952:A:C5	47:DO:22:ILE:HD12	2.36	0.60
25:CZ:5:PHE:CD1	25:CZ:5:PHE:C	2.75	0.60
26:D0:36:ILE:HG13	36:DA:2354:G:O2'	2.01	0.60
28:B2:16:LEU:HD23	28:B2:17:SER:H	1.64	0.60
28:B2:53:LEU:O	28:B2:56:GLN:HB2	2.00	0.60
57:BY:8:LYS:HB3	57:BY:28:LYS:NZ	2.16	0.60
52:DT:75:ILE:HD12	52:DT:75:ILE:N	2.16	0.60
43:DH:84:SER:O	43:DH:85:LYS:HE3	2.01	0.60
58:DZ:165:VAL:HG11	58:DZ:169:GLU:HB2	1.82	0.60
47:DO:23:ARG:HG3	47:DO:24:VAL:N	2.17	0.60
25:CZ:345:ARG:HH11	25:CZ:345:ARG:HG2	1.65	0.60
1:CA:62:U:O2'	1:CA:63:C:H5''	2.02	0.60
42:DG:133:LEU:HD21	42:DG:157:ILE:HB	1.82	0.60
48:BP:101:VAL:HG23	48:BP:102:ARG:H	1.66	0.60
35:B9:29:ASN:N	35:B9:29:ASN:HD22	1.99	0.60
32:D6:11:LEU:HD23	32:D6:26:ASN:H	1.67	0.60
32:D6:30:THR:O	32:D6:32:ASN:HB2	2.01	0.60
55:BW:62:HIS:O	55:BW:64:MET:HG3	2.01	0.60
41:DF:175:THR:O	41:DF:176:LEU:HB2	2.00	0.60
48:BP:107:LYS:HG3	48:BP:107:LYS:O	2.02	0.60
51:BS:106:ARG:HH12	51:BS:107:GLU:C	2.05	0.60
25:CZ:318:ALA:HB2	25:CZ:400:VAL:HA	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:120:TYR:O	12:CL:122:THR:HG22	2.02	0.60
8:AH:120:THR:OG1	8:AH:123:GLU:HG3	2.01	0.60
25:AZ:268:THR:HG22	25:AZ:289:LEU:O	2.01	0.60
16:AP:34:GLU:HG2	16:AP:35:LYS:N	2.17	0.60
5:CE:127:ASN:ND2	5:CE:130:ASN:H	1.99	0.60
22:CV:66:U:H2'	22:CV:67:C:C6	2.36	0.60
1:CA:807:A:H2'	1:CA:808:C:C6	2.36	0.60
36:DA:979:G:H3'	36:DA:980:A:C5'	2.32	0.60
36:BA:729:G:N7	39:BD:208:LYS:HB2	2.16	0.60
36:BA:962:G:C2'	36:BA:963:U:H5'	2.32	0.60
36:DA:2028:U:H2'	36:DA:2029:G:C8	2.36	0.60
1:CA:1296:C:H4'	1:CA:1302:U:C5	2.36	0.60
1:AA:135:C:H2'	1:AA:136:C:H5'	1.83	0.60
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.84	0.60
36:BA:1409:C:H2'	36:BA:1410:G:H8	1.66	0.60
37:BB:25:A:H2'	37:BB:25:A:N3	2.15	0.60
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.36	0.60
36:BA:2648:C:H2'	36:BA:2649:U:C6	2.36	0.60
25:CZ:198:LYS:NZ	25:CZ:201:GLU:CG	2.60	0.60
4:AD:67:ILE:HG22	4:AD:68:TYR:CD1	2.35	0.60
38:BC:78:ALA:O	38:BC:79:LYS:HB2	2.00	0.60
25:CZ:107:SER:OG	25:CZ:137:LYS:HD2	2.01	0.60
54:DV:35:LEU:O	54:DV:37:VAL:N	2.33	0.60
1:CA:1270:C:H2'	1:CA:1271:G:C8	2.37	0.60
1:AA:1126:U:OP2	1:AA:1281:U:O2	2.19	0.60
36:DA:332:A:H4'	36:DA:333:G:OP1	2.00	0.60
53:BU:61:TRP:CD2	53:BU:94:ASN:HA	2.36	0.60
48:DP:50:ARG:HG2	48:DP:50:ARG:HH11	1.65	0.60
25:AZ:324:LYS:HG2	25:AZ:365:GLY:HA2	1.81	0.60
32:B6:25:LYS:O	32:B6:25:LYS:HG3	2.00	0.60
36:BA:195:A:H5''	36:BA:196:A:OP2	2.01	0.60
37:BB:73:A:C2'	37:BB:74:U:H5'	2.31	0.60
46:BN:90:MET:CE	46:BN:90:MET:HA	2.31	0.60
1:AA:266:G:H5'	1:AA:267:C:H5	1.64	0.60
38:DC:100:ILE:CD1	38:DC:123:VAL:HG23	2.32	0.60
13:CM:120:LYS:CE	13:CM:120:LYS:HA	2.29	0.60
43:DH:54:ARG:HB2	43:DH:55:PRO:HD2	1.84	0.60
28:D2:35:LEU:HB3	28:D2:50:ILE:HG13	1.83	0.60
14:AN:22:THR:CB	14:AN:33:VAL:HG21	2.30	0.60
41:BF:167:ALA:HB1	41:BF:173:VAL:HG11	1.84	0.60
4:CD:106:TYR:CE2	4:CD:113:SER:HA	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B3:17:LYS:HG2	36:BA:969:U:OP1	2.02	0.60
39:DD:24:ILE:HD13	39:DD:25:THR:N	2.17	0.60
46:DN:55:VAL:HG22	46:DN:56:ASN:H	1.66	0.60
9:CI:53:VAL:O	9:CI:54:ASP:HB2	2.02	0.60
2:CB:168:THR:HG21	2:CB:192:SER:HA	1.84	0.60
1:AA:1277:C:O2'	1:AA:1279:A:H8	1.84	0.60
36:DA:2264:C:H2'	36:DA:2265:U:C6	2.36	0.60
36:BA:910:A:H62	49:BQ:12:GLN:HA	1.66	0.60
36:DA:1131:G:OP1	46:DN:80:GLY:N	2.28	0.60
36:BA:815:C:H2'	36:BA:816:C:H6	1.67	0.60
1:AA:475:G:O2'	1:AA:476:G:H5'	2.01	0.60
40:DE:108:SER:O	40:DE:162:ALA:HA	2.02	0.60
40:DE:110:GLY:HA2	40:DE:161:GLY:HA3	1.82	0.60
36:DA:1708:C:O2'	36:DA:1709:U:H5'	2.01	0.60
35:D9:29:ASN:H	35:D9:29:ASN:HD22	1.50	0.60
49:DQ:110:THR:HG23	49:DQ:113:GLN:OE1	2.01	0.60
54:DV:82:ARG:HH11	54:DV:82:ARG:HG2	1.67	0.60
19:AS:21:GLU:O	19:AS:21:GLU:HG3	2.01	0.60
38:DC:4:GLY:O	38:DC:8:ARG:HG3	2.01	0.60
10:AJ:54:PHE:CZ	10:AJ:55:LYS:HD2	2.37	0.60
36:BA:300:A:H2'	36:BA:334:C:O2'	2.02	0.60
51:BS:61:ASN:O	51:BS:65:VAL:HG23	2.01	0.60
25:AZ:8:THR:CG2	25:AZ:9:LYS:H	2.13	0.60
19:AS:45:VAL:C	19:AS:47:HIS:H	2.04	0.60
1:CA:66:G:H4'	1:CA:173:U:C5	2.36	0.60
32:B6:14:THR:HB	32:B6:52:VAL:CG2	2.32	0.60
36:BA:1049:C:O2	36:BA:1113:U:H4'	2.01	0.60
36:BA:1114:G:H2'	36:BA:1115:G:C8	2.37	0.60
42:DG:61:ALA:C	42:DG:62:LEU:HD12	2.22	0.60
56:BX:12:VAL:CG2	56:BX:13:LEU:H	1.98	0.60
29:D3:35:ARG:HB2	29:D3:35:ARG:NH1	2.09	0.60
51:BS:40:ILE:HD11	51:BS:42:ASP:OD1	2.01	0.60
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.17	0.60
36:BA:802:A:H2'	36:BA:803:U:C6	2.36	0.60
38:DC:123:VAL:CG2	38:DC:127:LEU:HD23	2.28	0.60
39:BD:239:ARG:NH1	39:BD:239:ARG:HG2	2.13	0.60
36:DA:648:G:H2'	36:DA:649:G:H8	1.67	0.60
1:AA:176:C:H2'	1:AA:177:C:H6	1.66	0.60
19:CS:11:VAL:HA	19:CS:38:SER:HB2	1.83	0.60
1:AA:149:A:H2'	1:AA:150:C:C6	2.37	0.60
9:AI:53:VAL:HG22	9:AI:95:LYS:HD3	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:52:ALA:HB3	9:AI:95:LYS:HZ2	1.67	0.60
1:AA:371:G:C1'	1:AA:482:A:H1'	2.32	0.60
49:DQ:18:LYS:HA	49:DQ:18:LYS:CE	2.32	0.60
25:CZ:206:ILE:HG23	25:CZ:210:ILE:HG21	1.83	0.60
22:AW:5:G:H2'	22:AW:6:G:O4'	2.02	0.60
36:BA:2162:G:O2'	36:BA:2163:C:H5'	2.01	0.60
25:CZ:258:LEU:HD13	25:CZ:299:GLU:OE2	2.00	0.60
16:AP:46:PRO:O	16:AP:47:ASP:HB2	2.02	0.60
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.36	0.60
17:AQ:41:LYS:HE3	17:AQ:88:TYR:OH	2.02	0.60
1:CA:345:C:O5'	52:DT:41:ARG:NH2	2.34	0.60
55:DW:68:ARG:O	55:DW:109:GLU:HA	2.02	0.60
43:DH:37:VAL:HG12	43:DH:38:SER:N	2.17	0.60
8:AH:86:ILE:HD11	8:AH:136:GLU:HG2	1.83	0.60
36:BA:2698:U:H2'	36:BA:2699:C:C6	2.37	0.60
1:AA:1492:A:OP1	12:AL:47:LYS:HB2	2.02	0.60
36:BA:1379:A:H4'	36:BA:1379:A:OP2	2.02	0.60
36:DA:673:C:P	41:DF:81:PRO:HG3	2.41	0.60
36:BA:1215:G:O2'	36:BA:1216:G:H5'	2.02	0.60
36:DA:2320:A:H2'	36:DA:2320:A:N3	2.16	0.60
55:BW:4:LYS:HA	55:BW:106:ILE:HG22	1.83	0.60
1:CA:97:G:H2'	1:CA:98:G:O4'	2.02	0.60
36:BA:2188:C:H2'	36:BA:2189:U:C5	2.37	0.60
25:CZ:23:GLY:HA3	25:CZ:105:VAL:CG1	2.31	0.60
57:BY:13:VAL:O	57:BY:24:VAL:HG13	2.02	0.60
25:CZ:312:PRO:O	25:CZ:313:HIS:ND1	2.34	0.60
3:AC:11:ARG:CG	3:AC:11:ARG:HH11	2.14	0.60
32:B6:17:LYS:O	32:B6:18:ARG:HB3	2.01	0.60
36:DA:139:G:C6	36:DA:140:G:H2'	2.37	0.60
34:D8:17:THR:OG1	34:D8:18:ALA:N	2.34	0.60
32:D6:7:ILE:CG2	32:D6:27:LYS:HZ3	2.14	0.60
36:BA:654(E):G:H22	36:BA:654(Q):C:H1'	1.67	0.60
58:BZ:108:PRO:HA	58:BZ:141:VAL:HG12	1.83	0.60
43:BH:16:SER:HB2	43:BH:27:LYS:CB	2.31	0.60
36:DA:200:U:H2'	36:DA:201:C:C5'	2.30	0.60
36:BA:389:G:N1	48:BP:71:VAL:HG12	2.16	0.60
36:BA:761:A:C8	36:BA:761:A:C3'	2.85	0.60
50:DR:2:ARG:HD3	50:DR:5:LYS:CE	2.31	0.60
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	1.84	0.60
24:CY:51:G:H1	24:CY:63:C:H42	1.49	0.60
2:AB:120:ALA:C	2:AB:122:PHE:H	2.05	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2853:C:H2'	36:DA:2854:G:C8	2.34	0.60
40:DE:36:ARG:NH2	40:DE:88:GLY:N	2.50	0.60
39:BD:69:ARG:HD3	39:BD:130:ALA:HB3	1.84	0.60
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.17	0.60
36:DA:2291:U:H2'	36:DA:2292:C:C6	2.36	0.60
36:BA:863:A:O2'	36:BA:864:G:H5'	2.02	0.60
57:DY:50:ARG:HG3	57:DY:56:PRO:HA	1.83	0.60
42:BG:167:GLU:H	42:BG:167:GLU:CD	2.04	0.60
31:D5:7:PRO:HA	36:DA:2615:U:C2	2.36	0.60
27:D1:49:VAL:CG1	27:D1:60:PHE:HB2	2.31	0.60
7:AG:7:ALA:O	7:AG:8:GLU:HB2	2.01	0.60
13:AM:77:ASN:O	13:AM:81:LEU:HD22	2.02	0.60
1:CA:308:C:H2'	1:CA:309:G:H8	1.66	0.60
36:BA:213:A:O2'	36:BA:214:G:H5'	2.02	0.60
1:AA:1463:C:C5'	52:BT:115:ARG:HH12	2.14	0.60
31:B5:16:ARG:HG2	31:B5:16:ARG:HH11	1.67	0.60
41:DF:100:THR:O	41:DF:100:THR:HG22	2.02	0.60
3:CC:95:THR:HG23	3:CC:97:LYS:HD2	1.84	0.60
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	2.30	0.60
4:AD:108:LEU:O	4:AD:110:PHE:CD1	2.55	0.60
42:BG:52:ILE:C	42:BG:54:GLU:H	2.05	0.60
36:DA:587:C:C4	48:DP:33:ARG:HG2	2.37	0.60
42:DG:136:ARG:O	42:DG:154:GLY:HA2	2.01	0.60
58:BZ:128:VAL:HG22	58:BZ:129:SER:N	2.17	0.60
42:BG:64:THR:HG23	42:BG:66:GLN:H	1.65	0.60
53:BU:91:ASP:O	53:BU:92:ARG:HB3	2.01	0.60
1:AA:80:G:H2'	1:AA:81:U:C6	2.37	0.60
10:CJ:61:GLU:HG3	14:CN:58:LYS:NZ	2.16	0.60
52:BT:82:LEU:N	52:BT:82:LEU:HD12	2.17	0.60
15:CO:43:LEU:HD11	15:CO:53:HIS:HA	1.84	0.60
1:AA:1006:C:H2'	1:AA:1007:C:H6	1.67	0.60
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HD3	2.17	0.60
54:DV:19:LYS:HG2	54:DV:94:LEU:HB2	1.82	0.60
55:DW:25:ARG:HB3	55:DW:25:ARG:HH11	1.65	0.60
36:DA:1019:U:O2'	36:DA:1021:A:H2	1.83	0.60
48:DP:85:LEU:HA	48:DP:88:LEU:CB	2.31	0.60
22:CV:44:G:H3'	22:CV:45:U:H5'	1.83	0.60
19:AS:16:LEU:C	19:AS:18:LYS:N	2.55	0.60
38:BC:103:ILE:HA	38:BC:107:TRP:HB2	1.84	0.60
36:DA:2722:G:H2'	36:DA:2723:C:C6	2.37	0.60
4:CD:132:ARG:C	4:CD:132:ARG:HD2	2.22	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:36:LEU:CD1	55:BW:48:ALA:HA	2.32	0.60
43:BH:155:SER:O	43:BH:157:TYR:N	2.29	0.60
40:DE:90:THR:HG22	40:DE:91:VAL:N	2.16	0.60
41:BF:84:VAL:O	41:BF:86:GLY:N	2.34	0.60
47:DO:64:ARG:NH2	47:DO:100:GLY:HA3	2.16	0.60
42:DG:56:ALA:HB2	42:DG:153:ARG:HH21	1.66	0.60
1:AA:1423:G:H5'	47:BO:49:ARG:HH22	1.66	0.60
36:DA:1409:C:O2'	36:DA:1410:G:H5'	2.02	0.60
4:CD:170:VAL:CG1	4:CD:174:LEU:HB2	2.31	0.60
41:DF:185:ASP:HA	41:DF:188:ARG:CD	2.32	0.60
49:BQ:137:TYR:CE2	58:BZ:81:ARG:NH2	2.70	0.60
36:BA:234:C:H2'	36:BA:235:U:H6	1.67	0.60
56:DX:8:ILE:N	56:DX:8:ILE:HD12	2.17	0.60
1:AA:538:G:OP2	12:AL:115:LYS:HB2	2.02	0.60
52:DT:41:ARG:HH11	52:DT:41:ARG:HG2	1.67	0.60
5:AE:81:GLU:OE1	5:AE:90:VAL:HG22	2.01	0.60
38:DC:73:ARG:O	38:DC:111:ASP:HB2	2.02	0.60
36:DA:2138:C:H2'	36:DA:2139:C:H6	1.65	0.60
36:DA:2728:U:O2'	36:DA:2729:G:H5'	2.02	0.60
55:DW:9:TYR:H	55:DW:102:HIS:CD2	2.19	0.60
5:AE:10:MET:SD	5:AE:13:ILE:HD11	2.42	0.60
25:CZ:204:ASP:O	25:CZ:208:GLU:HG2	2.02	0.60
29:B3:30:ARG:HH21	36:BA:1159:U:P	2.25	0.60
51:DS:99:LYS:HZ1	51:DS:99:LYS:HB3	1.60	0.60
1:CA:1271:G:H5'	1:CA:1314:C:H5''	1.84	0.60
13:CM:9:ILE:H	13:CM:9:ILE:HD12	1.67	0.60
47:DO:104:ARG:NE	52:DT:33:LYS:HZ2	1.96	0.60
42:BG:63:ILE:HG22	42:BG:143:GLU:HB2	1.83	0.60
57:DY:7:VAL:HB	57:DY:8:LYS:CE	2.32	0.60
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.02	0.60
43:BH:44:VAL:CG1	43:BH:45:VAL:H	2.05	0.60
42:DG:107:LEU:HD22	42:DG:177:GLY:O	2.02	0.60
48:BP:31:ALA:C	48:BP:33:ARG:H	2.05	0.60
56:DX:36:LYS:HE2	56:DX:54:VAL:O	2.02	0.60
51:BS:89:ARG:HH11	51:BS:92:TYR:HA	1.66	0.60
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.37	0.60
35:D9:14:CYS:SG	35:D9:27:CYS:CB	2.89	0.60
40:BE:55:ASN:CG	40:BE:75:VAL:HG22	2.21	0.60
10:CJ:16:LEU:HD12	10:CJ:70:ARG:HE	1.66	0.60
55:DW:6:ILE:HA	55:DW:104:THR:HA	1.84	0.60
19:CS:16:LEU:CD1	19:CS:16:LEU:H	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2722:G:O2'	50:BR:5:LYS:HB2	2.00	0.60
49:BQ:18:LYS:HZ3	49:BQ:18:LYS:HA	1.64	0.60
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.35	0.60
22:CV:69:G:H5'	22:CV:69:G:H8	1.67	0.60
38:BC:47:LEU:CD1	38:BC:171:ILE:HG22	2.31	0.60
46:DN:126:PRO:O	46:DN:127:ASP:CB	2.50	0.60
36:DA:240:G:H3'	36:DA:241:A:C5'	2.31	0.60
1:CA:1392:G:N2	1:CA:1502:A:H8	2.00	0.60
36:BA:1316:U:H2'	36:BA:1317:A:H8	1.66	0.60
36:BA:2009:G:H1'	50:BR:107:ASP:O	2.02	0.60
36:DA:987:G:H2'	36:DA:988:A:O4'	2.01	0.60
54:DV:3:ALA:HB3	54:DV:14:VAL:HG23	1.83	0.60
1:CA:22:G:H2'	1:CA:23:C:H6	1.67	0.60
11:AK:67:ASP:OD1	11:AK:71:LYS:HE3	2.02	0.60
43:BH:105:LEU:HD23	43:BH:105:LEU:H	1.66	0.60
58:DZ:70:LEU:HD12	58:DZ:70:LEU:H	1.67	0.60
36:DA:1958:C:O2'	36:DA:1959:G:H5'	2.02	0.60
28:B2:35:LEU:O	28:B2:35:LEU:HD22	2.02	0.59
36:BA:335:C:H2'	36:BA:336:C:C6	2.37	0.59
36:BA:93:G:H2'	36:BA:94:C:C6	2.37	0.59
57:BY:31:LEU:HD23	57:BY:36:ALA:O	2.01	0.59
53:BU:95:LEU:HD12	54:BV:11:GLN:HE21	1.67	0.59
36:DA:336:C:H4'	57:DY:7:VAL:HG21	1.84	0.59
31:B5:3:LYS:HB2	36:BA:747:U:C5	2.37	0.59
36:BA:1882:C:H5'	36:BA:1883:G:OP2	2.02	0.59
1:CA:1429:C:H4'	36:DA:1703:G:O2'	2.02	0.59
36:BA:1748:G:H8	36:BA:1748:G:H5'	1.66	0.59
12:AL:6:THR:H	12:AL:9:GLN:NE2	1.92	0.59
50:BR:63:ARG:HA	50:BR:80:PHE:CZ	2.37	0.59
13:AM:88:ARG:NH1	13:AM:88:ARG:HG2	2.11	0.59
12:CL:80:HIS:CD2	24:CY:68:C:H4'	2.36	0.59
12:CL:80:HIS:CD2	24:CY:68:C:HO2'	2.19	0.59
36:DA:1223:G:H5'	36:DA:1223:G:H8	1.67	0.59
56:BX:28:PHE:N	56:BX:28:PHE:CD1	2.67	0.59
39:DD:134:ARG:HG3	39:DD:187:GLY:O	2.02	0.59
50:BR:2:ARG:NH1	50:BR:2:ARG:O	2.35	0.59
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.35	0.59
36:DA:2659:G:C2'	36:DA:2660:A:H5''	2.32	0.59
36:DA:782:A:N1	39:DD:226:MET:HE1	2.16	0.59
56:BX:49:VAL:HA	56:BX:87:GLN:HE22	1.67	0.59
47:DO:20:MET:CE	47:DO:44:LYS:HE3	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2262:U:H2'	36:DA:2263:C:H6	1.67	0.59
50:DR:11:ASN:O	50:DR:12:ARG:HG3	2.01	0.59
1:CA:603:U:H2'	1:CA:604:G:H8	1.67	0.59
2:CB:239:VAL:O	2:CB:240:GLN:HB3	2.00	0.59
23:CX:11:U:H2'	23:CX:11:U:O2	2.00	0.59
1:AA:860:A:H2'	1:AA:861:G:O4'	2.01	0.59
1:AA:160:A:H1'	1:AA:344:A:N7	2.17	0.59
41:BF:10:PRO:HD2	41:BF:13:SER:O	2.02	0.59
43:BH:30:LYS:HB2	43:BH:79:VAL:HA	1.83	0.59
1:AA:585:G:H2'	1:AA:586:C:H6	1.68	0.59
52:BT:82:LEU:O	52:BT:83:ILE:C	2.41	0.59
42:DG:72:ARG:HD3	42:DG:86:MET:HA	1.85	0.59
25:AZ:242:ILE:CB	25:AZ:282:ALA:HA	2.32	0.59
36:BA:833:U:H2'	36:BA:834:C:C6	2.37	0.59
36:DA:1538:G:H2'	36:DA:1539:G:H8	1.67	0.59
36:BA:1448:G:H21	36:BA:1528(A):A:H2	1.48	0.59
39:DD:218:ARG:HG3	39:DD:218:ARG:NH1	2.06	0.59
36:BA:1042:G:H1	36:BA:1113:U:H3	1.50	0.59
36:BA:2378:A:N1	51:BS:19:LYS:HE3	2.18	0.59
37:BB:7:G:O5'	51:BS:29:PHE:CE2	2.53	0.59
36:BA:1682:G:H2'	36:BA:1683:C:C6	2.36	0.59
1:CA:942:G:H21	9:CI:124:GLN:HE22	1.49	0.59
36:BA:142:A:H1'	36:BA:1408:C:O4'	2.01	0.59
49:DQ:134:ARG:HA	49:DQ:137:TYR:CD2	2.37	0.59
36:BA:2128:C:H42	36:BA:2160:G:H1	1.50	0.59
43:BH:52:VAL:HG11	43:BH:69:ARG:HB2	1.83	0.59
36:BA:1139:G:H5''	46:BN:70:LYS:NZ	2.17	0.59
38:DC:120:MET:HA	38:DC:123:VAL:CG1	2.29	0.59
51:DS:42:ASP:O	51:DS:43:GLU:CB	2.50	0.59
37:BB:21:G:H2'	37:BB:22:U:H5'	1.83	0.59
39:DD:43:ARG:HB2	39:DD:54:ARG:CB	2.32	0.59
25:AZ:290:LEU:HB2	25:AZ:293:VAL:HG21	1.83	0.59
20:AT:26:ASN:O	20:AT:30:LYS:HB2	2.02	0.59
1:AA:1319:A:H5'	1:AA:1320:C:OP1	2.03	0.59
39:DD:27:THR:CG2	39:DD:83:GLU:HG2	2.31	0.59
8:AH:10:LEU:HD22	8:AH:83:ILE:HG12	1.83	0.59
17:CQ:27:PHE:CE1	17:CQ:36:ILE:HD11	2.36	0.59
48:BP:85:LEU:HA	48:BP:88:LEU:HB2	1.84	0.59
43:BH:54:ARG:HG2	43:BH:54:ARG:HH11	1.65	0.59
27:D1:60:PHE:CE1	27:D1:91:LYS:HG3	2.37	0.59
22:CW:52:G:N3	22:CW:52:G:H2'	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:152:ARG:O	8:AH:64:LYS:NZ	2.35	0.59
36:BA:2001:A:H4'	36:BA:2689:U:H2'	1.85	0.59
1:AA:948:C:O2'	1:AA:949:A:H5'	2.02	0.59
11:CK:67:ASP:O	11:CK:71:LYS:HG3	2.02	0.59
4:CD:38:TYR:HB2	4:CD:44:GLY:O	2.02	0.59
48:BP:91:PHE:N	48:BP:91:PHE:CD1	2.71	0.59
6:AF:99:ALA:O	6:AF:100:ASN:HB2	2.02	0.59
29:B3:56:VAL:CG1	29:B3:57:GLU:N	2.65	0.59
25:AZ:198:LYS:NZ	25:AZ:201:GLU:HG3	2.14	0.59
25:CZ:341:GLN:NE2	25:CZ:389:ARG:O	2.36	0.59
26:D0:36:ILE:HD11	36:DA:2355:C:C5'	2.17	0.59
22:AW:72:C:C3'	22:AW:73:A:H5''	2.33	0.59
4:CD:96:LEU:H	4:CD:96:LEU:HD12	1.67	0.59
41:BF:175:THR:OG1	41:BF:176:LEU:N	2.35	0.59
43:BH:98:LEU:HD12	43:BH:102:ALA:O	2.02	0.59
43:BH:12:PRO:HD3	43:BH:48:GLY:HA2	1.84	0.59
43:BH:76:VAL:C	43:BH:78:GLY:H	2.05	0.59
36:DA:2307:G:N3	36:DA:2307:G:H3'	2.17	0.59
36:DA:1970:A:H5''	36:DA:1971:A:OP1	2.02	0.59
42:BG:31:VAL:O	42:BG:31:VAL:HG22	2.00	0.59
42:BG:97:ASP:H	42:BG:100:TRP:HD1	1.49	0.59
42:BG:85:GLY:C	42:BG:87:PRO:HD3	2.22	0.59
47:BO:104:ARG:CZ	52:BT:33:LYS:HD2	2.32	0.59
25:AZ:328:GLY:O	25:AZ:393:ARG:HD3	2.02	0.59
36:BA:197:A:H5'	36:BA:197:A:H8	1.66	0.59
36:DA:2415:G:H2'	36:DA:2416:C:H6	1.67	0.59
39:DD:76:PRO:HG2	39:DD:98:VAL:HG21	1.84	0.59
48:DP:112:LEU:HD22	48:DP:113:LYS:N	2.18	0.59
36:BA:1484:G:C3'	36:BA:1485:G:H5''	2.31	0.59
36:BA:1799:G:OP1	39:BD:260:ARG:HD2	2.02	0.59
24:CY:68:C:HO2'	24:CY:69:C:H5'	1.67	0.59
36:DA:786:C:O2'	36:DA:787:U:H5'	2.01	0.59
8:AH:4:ASP:CG	8:AH:85:ARG:HE	2.06	0.59
22:AV:68:C:C2'	22:AV:69:G:C5'	2.75	0.59
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.17	0.59
28:D2:38:GLN:O	28:D2:41:ILE:HG12	2.03	0.59
20:CT:92:LEU:C	20:CT:94:ALA:H	2.04	0.59
56:BX:36:LYS:HB3	56:BX:56:THR:CG2	2.32	0.59
1:AA:961:U:O2'	1:AA:962:C:O5'	2.21	0.59
27:B1:53:VAL:O	27:B1:54:ALA:HB3	2.03	0.59
36:DA:990:A:C6	36:DA:1186:G:H1'	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB2	1.84	0.59
2:CB:141:GLU:O	2:CB:145:LEU:HB2	2.01	0.59
36:DA:1436:G:H3'	36:DA:1437:C:H5''	1.83	0.59
49:BQ:27:VAL:H	49:BQ:137:TYR:HD2	1.50	0.59
57:DY:90:LEU:O	57:DY:91:GLU:HG2	2.03	0.59
1:CA:1521:G:H2'	1:CA:1522:U:H6	1.66	0.59
1:AA:275:G:OP1	17:AQ:14:LYS:HD2	2.02	0.59
1:CA:339:C:OP2	47:DO:97:ARG:NH1	2.35	0.59
49:DQ:14:ARG:HG2	49:DQ:41:TRP:HH2	1.67	0.59
3:CC:147:LYS:HB2	3:CC:203:PHE:CD2	2.37	0.59
1:AA:1239:A:H62	1:AA:1299:A:N6	1.99	0.59
25:CZ:5:PHE:HB3	25:CZ:276:THR:O	2.02	0.59
25:CZ:84:GLY:O	25:CZ:85:HIS:HB3	2.02	0.59
54:DV:55:ALA:HA	54:DV:101:GLY:OXT	2.01	0.59
28:B2:35:LEU:HA	28:B2:39:ALA:HB3	1.83	0.59
43:BH:83:TYR:HB3	43:BH:135:GLY:H	1.67	0.59
58:BZ:96:VAL:HG22	58:BZ:97:GLU:N	2.17	0.59
36:BA:2307:G:H21	36:BA:2308:G:C5'	1.94	0.59
4:CD:15:GLU:HG2	4:CD:63:LYS:HG3	1.85	0.59
4:CD:58:LEU:HD23	4:CD:62:GLN:HG2	1.85	0.59
57:DY:75:ILE:HG23	57:DY:76:CYS:N	2.18	0.59
42:BG:73:ALA:H	42:BG:87:PRO:CD	2.16	0.59
10:CJ:61:GLU:CG	14:CN:58:LYS:HE2	2.29	0.59
39:BD:35:LYS:HB2	39:BD:104:TYR:HE2	1.68	0.59
36:DA:848:G:O6	36:DA:928:G:H2'	2.02	0.59
48:BP:41:ARG:CD	48:BP:45:LEU:HD23	2.27	0.59
25:CZ:222:LEU:HG	25:CZ:303:VAL:HG11	1.83	0.59
22:AV:4:C:C3'	22:AV:5:G:H5''	2.33	0.59
36:DA:141:A:C8	36:DA:1408:C:O2'	2.54	0.59
55:DW:37:ARG:HG3	55:DW:37:ARG:NH1	2.18	0.59
36:DA:64:A:C5	56:DX:66:LEU:HD12	2.37	0.59
34:D8:36:LYS:O	34:D8:37:SER:O	2.20	0.59
50:BR:60:LEU:O	50:BR:63:ARG:HB3	2.03	0.59
1:AA:1442(B):A:H3'	1:AA:1442(B):A:P	2.42	0.59
37:DB:56:G:H5'	42:DG:27:ASN:HD21	1.66	0.59
36:DA:527:C:N4	36:DA:2779:U:H5''	2.17	0.59
28:D2:25:VAL:HG22	28:D2:60:LEU:HB3	1.84	0.59
39:BD:27:THR:CG2	39:BD:83:GLU:HG2	2.31	0.59
43:DH:76:VAL:C	43:DH:78:GLY:H	2.05	0.59
9:CI:99:LEU:HD22	9:CI:99:LEU:N	2.18	0.59
36:BA:2579:C:O2'	40:BE:131:ALA:CB	2.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:673:G:H2'	1:AA:674:G:C8	2.38	0.59
31:B5:25:LEU:HD12	55:BW:19:LEU:O	2.02	0.59
1:AA:625:G:H2'	1:AA:626:U:C6	2.36	0.59
7:CG:15:ASP:HB3	7:CG:20:ASP:N	2.18	0.59
46:DN:58:ASP:C	46:DN:60:ILE:N	2.55	0.59
11:AK:57:THR:HG23	11:AK:60:ALA:HB2	1.84	0.59
42:DG:96:ARG:H	42:DG:99:MET:CE	2.15	0.59
37:BB:16:G:HO2'	37:BB:17:C:H6	1.49	0.59
25:AZ:299:GLU:N	25:AZ:302:GLN:OE1	2.31	0.59
36:DA:2008:C:H2'	36:DA:2009:G:H8	1.68	0.59
36:DA:2360:A:C2	36:DA:2361:A:H1'	2.35	0.59
42:DG:16:ARG:O	42:DG:20:ILE:HG13	2.02	0.59
8:CH:53:VAL:HG23	8:CH:58:TYR:HB2	1.84	0.59
1:CA:828:A:H2'	1:CA:829:G:O4'	2.02	0.59
49:DQ:3:MET:HB2	49:DQ:4:PRO:HD2	1.82	0.59
24:AY:51:G:H1	24:AY:63:C:H42	1.48	0.59
41:BF:53:THR:HG23	41:BF:55:GLY:H	1.67	0.59
24:CY:76:A:OP2	25:CZ:274:ARG:HB3	2.02	0.59
4:AD:15:GLU:OE2	4:AD:66:ARG:HD2	2.03	0.59
51:DS:92:TYR:CD1	51:DS:93:LYS:N	2.70	0.59
43:BH:12:PRO:HB2	43:BH:15:VAL:CG2	2.32	0.59
48:DP:47:ASP:HB3	48:DP:48:PRO:C	2.23	0.59
1:CA:1367:C:H5'	10:CJ:60:ARG:NH2	2.18	0.59
36:DA:1301:A:H2'	36:DA:1302:A:H3'	1.85	0.59
15:CO:39:LEU:HD13	15:CO:56:LEU:CB	2.26	0.59
36:DA:1453:U:H5'	50:DR:63:ARG:NE	2.18	0.59
10:AJ:32:ALA:HB2	10:AJ:76:ASN:O	2.03	0.59
25:CZ:231:ILE:N	25:CZ:231:ILE:HD12	2.17	0.59
36:BA:2127:G:H4'	38:BC:37:PHE:CD1	2.37	0.59
20:CT:32:ALA:O	20:CT:36:LEU:HB2	2.02	0.59
28:D2:58:ALA:HB1	36:DA:76:C:H4'	1.84	0.59
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.84	0.59
48:DP:91:PHE:N	48:DP:91:PHE:CD1	2.70	0.59
58:BZ:109:ALA:C	58:BZ:111:VAL:H	2.05	0.59
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.84	0.59
1:AA:187:C:H2'	1:AA:188:C:C6	2.37	0.59
36:BA:323:G:H2'	41:BF:169:ASN:ND2	2.17	0.59
1:AA:1321:C:H5''	1:AA:1322:C:C5'	2.31	0.59
1:AA:66:G:N2	1:AA:172:A:H2	1.99	0.59
2:CB:29:ALA:HA	2:CB:32:ILE:CG2	2.32	0.59
36:BA:2121:G:N1	36:BA:2176:A:C2	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:48:C:H2'	22:CW:59:U:H1'	1.83	0.59
16:CP:22:THR:HG22	16:CP:32:TYR:HB2	1.84	0.59
43:DH:156:ALA:C	43:DH:158:HIS:H	2.04	0.59
16:AP:22:THR:HG22	16:AP:32:TYR:CB	2.33	0.59
36:DA:382:G:H1	36:DA:392:C:H42	1.50	0.59
36:DA:1436:G:C2'	36:DA:1437:C:H5''	2.33	0.59
36:DA:578:A:H5'	36:DA:1254:A:OP1	2.01	0.59
16:CP:25:ARG:O	16:CP:26:ARG:O	2.21	0.59
40:BE:69:LYS:HE3	40:BE:88:GLY:O	2.03	0.59
36:DA:1013:C:H2'	36:DA:1014:U:C6	2.37	0.59
36:DA:845:G:HO2'	36:DA:846:C:H5	1.48	0.59
36:DA:1757:U:O4	36:DA:1762:A:C2	2.56	0.59
36:DA:1810:A:H2'	36:DA:1811:G:O4'	2.02	0.59
11:AK:81:ASP:OD1	11:AK:106:LYS:HB2	2.02	0.59
41:DF:192:LEU:C	41:DF:192:LEU:HD23	2.22	0.59
24:CY:2:G:H4'	25:CZ:88:TYR:CE1	2.38	0.59
57:BY:28:LYS:CB	57:BY:37:VAL:HB	2.33	0.59
4:AD:141:ARG:HB3	4:AD:142:PRO:CD	2.32	0.59
4:AD:98:GLU:HG2	4:AD:189:PRO:HG3	1.84	0.59
41:BF:125:LEU:HA	41:BF:194:MET:O	2.02	0.59
36:DA:2203:U:O2'	39:DD:151:LYS:HG3	2.02	0.59
42:BG:52:ILE:CG1	42:BG:53:LEU:H	1.89	0.59
36:BA:512:G:O2'	36:BA:513:A:H8	1.86	0.59
4:CD:8:VAL:C	4:CD:10:ARG:H	2.05	0.59
39:BD:35:LYS:O	39:BD:36:PRO:C	2.41	0.59
20:AT:48:LYS:O	20:AT:52:ALA:HB2	2.03	0.59
51:BS:30:ARG:HH22	51:BS:62:LYS:HD3	1.67	0.59
36:DA:631:A:H5''	48:DP:65:ARG:HD3	1.83	0.59
25:AZ:143:ASP:HB3	25:AZ:146:LEU:CB	2.32	0.59
23:CX:20:U:H2'	23:CX:21:C:C6	2.38	0.59
41:DF:101:LEU:HD12	41:DF:102:PRO:CD	2.27	0.59
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.29	0.59
22:AV:68:C:H2'	22:AV:69:G:H5'	1.83	0.59
36:BA:2036:C:C6	36:BA:2036:C:H5'	2.31	0.59
25:CZ:356:PRO:HD3	25:CZ:370:PHE:HB3	1.84	0.59
19:CS:47:HIS:O	19:CS:62:ILE:HG22	2.02	0.59
36:BA:2579:C:O2'	36:BA:2580:U:H5'	2.02	0.59
3:AC:83:ARG:C	3:AC:85:ARG:H	2.06	0.59
2:CB:30:ARG:HB2	2:CB:30:ARG:HH11	1.67	0.59
39:DD:85:ASP:OD2	39:DD:88:ARG:HD2	2.03	0.59
8:CH:134:ILE:O	8:CH:135:CYS:HB3	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:134:ARG:HG3	39:BD:187:GLY:C	2.22	0.59
47:DO:64:ARG:HG2	47:DO:83:ALA:HB3	1.84	0.59
14:AN:57:ARG:HG3	14:AN:58:LYS:H	1.67	0.59
2:CB:185:ILE:HG12	2:CB:199:TYR:HB2	1.84	0.59
36:DA:1771:C:C1'	36:DA:1786:A:C8	2.86	0.59
36:DA:310:A:OP1	57:DY:17:SER:O	2.21	0.59
1:CA:383:A:H2'	1:CA:384:G:H5'	1.84	0.59
36:BA:1222:C:H2'	36:BA:1223:G:H5'	1.84	0.59
36:DA:1952:A:C6	47:DO:22:ILE:HD12	2.38	0.59
36:BA:272(C):G:H1	36:BA:365:C:H42	1.51	0.59
35:D9:19:ARG:O	35:D9:20:HIS:HB2	2.03	0.59
17:CQ:92:ARG:O	17:CQ:95:TYR:HB2	2.03	0.59
40:BE:203:LYS:O	40:BE:203:LYS:HD2	2.02	0.59
47:BO:98:VAL:O	47:BO:98:VAL:HG13	2.03	0.59
36:BA:877:U:O2'	36:BA:878:A:H5''	2.02	0.59
2:CB:212:GLN:HE22	2:CB:216:SER:HB2	1.67	0.59
25:AZ:198:LYS:O	25:AZ:198:LYS:NZ	2.34	0.59
25:CZ:20:VAL:CG2	36:DA:2661:G:H5''	2.32	0.59
36:BA:2760:C:H2'	36:BA:2761:G:H5''	1.84	0.59
25:CZ:313:HIS:HB2	25:CZ:380:LEU:HD12	1.84	0.59
1:CA:545:C:H5''	4:CD:72:GLU:HG2	1.83	0.59
36:DA:335:C:H2'	36:DA:336:C:H6	1.67	0.59
36:DA:196:A:OP2	48:DP:51:PHE:HE2	1.85	0.59
43:BH:44:VAL:O	43:BH:46:GLU:N	2.35	0.59
1:AA:437:U:H3	1:AA:495:A:H62	1.50	0.59
32:B6:9:LEU:HD22	32:B6:10:LEU:N	2.18	0.59
25:CZ:242:ILE:HB	25:CZ:282:ALA:HA	1.82	0.59
36:DA:2840:C:H5''	50:DR:53:HIS:CD2	2.37	0.59
24:CY:41:C:H6	24:CY:41:C:C5'	2.14	0.59
32:D6:30:THR:CG2	32:D6:31:PRO:HD2	2.33	0.59
38:DC:137:LEU:HD13	38:DC:138:PRO:O	2.03	0.59
52:BT:90:GLN:C	52:BT:92:GLY:N	2.53	0.59
13:AM:5:ALA:CB	13:AM:66:LEU:HD23	2.32	0.59
36:DA:2771:C:H2'	36:DA:2772:C:H6	1.68	0.59
46:DN:15:LEU:HD12	46:DN:136:GLU:HG2	1.82	0.59
1:AA:1503:A:H1'	23:AX:15:A:N6	2.18	0.59
22:CW:39:U:H5'	22:CW:39:U:O2	2.02	0.59
2:CB:42:ILE:CD1	2:CB:202:PRO:HB2	2.32	0.59
36:DA:1720:U:C3'	36:DA:1721:G:H5''	2.32	0.59
1:AA:368:U:C4	25:AZ:234:ARG:HD3	2.36	0.59
54:BV:35:LEU:C	54:BV:37:VAL:H	2.05	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:52:ASP:OD1	16:AP:53:VAL:N	2.34	0.59
11:CK:80:VAL:HG22	11:CK:103:LEU:CD1	2.33	0.59
56:DX:43:VAL:HA	56:DX:46:ALA:HB3	1.85	0.59
54:DV:49:THR:HB	54:DV:50:PRO:CD	2.33	0.59
36:DA:1709:U:H2'	36:DA:1710:C:C6	2.38	0.59
6:CF:99:ALA:O	6:CF:100:ASN:HB2	2.01	0.59
1:CA:33:A:OP2	1:CA:398:C:H5'	2.02	0.59
7:AG:152:ALA:O	7:AG:155:ARG:HB2	2.02	0.59
13:AM:6:GLY:O	13:AM:8:GLU:N	2.31	0.59
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.85	0.59
2:CB:52:GLU:O	2:CB:56:ARG:HG3	2.03	0.59
18:CR:84:LYS:N	18:CR:84:LYS:HD3	2.17	0.59
25:AZ:191:GLY:H	25:AZ:197:ASP:CG	2.06	0.59
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.15	0.59
28:B2:17:SER:O	28:B2:19:VAL:N	2.36	0.59
28:B2:31:GLU:HA	28:B2:34:GLU:OE1	2.03	0.59
36:DA:2222:G:O2'	36:DA:2223:G:H5'	2.03	0.59
42:DG:51:ARG:HH11	42:DG:53:LEU:CD1	2.03	0.59
51:DS:51:ALA:CB	51:DS:73:LEU:HB2	2.33	0.59
57:DY:13:VAL:HG21	57:DY:72:VAL:HB	1.84	0.59
10:CJ:55:LYS:CE	10:CJ:55:LYS:N	2.59	0.59
36:DA:2185:C:C2'	36:DA:2186:G:C5'	2.80	0.59
46:DN:4:TYR:N	46:DN:4:TYR:CD1	2.70	0.59
48:BP:23:PRO:C	48:BP:33:ARG:CZ	2.71	0.59
48:BP:23:PRO:HB2	48:BP:33:ARG:CD	2.33	0.59
34:D8:23:VAL:HG12	34:D8:46:ARG:HB3	1.83	0.59
36:DA:1252:G:N3	53:DU:33:ARG:HD2	2.17	0.59
36:DA:691:C:O2'	36:DA:692:C:H5'	2.02	0.59
36:DA:1024:G:H3'	36:DA:1025:G:C5'	2.31	0.59
51:BS:106:ARG:CG	51:BS:106:ARG:HH11	2.16	0.59
36:BA:2866:U:H2'	36:BA:2866:U:O2	2.03	0.59
25:AZ:234:ARG:O	25:AZ:289:LEU:HD11	2.03	0.59
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.49	0.59
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.50	0.59
3:AC:188:LEU:HD13	3:AC:195:VAL:CG1	2.33	0.59
1:CA:992:U:O2	1:CA:992:U:H2'	2.02	0.59
36:BA:2019:A:C4'	53:BU:34:LYS:HD2	2.32	0.59
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.68	0.59
33:B7:12:ARG:NH2	36:BA:465:G:OP1	2.36	0.59
7:AG:18:TYR:HB3	7:AG:59:LEU:HD13	1.85	0.59
50:BR:59:ASP:H	50:BR:62:ALA:HB3	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1645:G:OP1	36:BA:1646:C:H5'	2.03	0.59
36:BA:1434:A:O2'	36:BA:1435:G:H5'	2.02	0.59
40:DE:111:ARG:HD3	40:DE:160:TYR:CD2	2.38	0.59
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.37	0.59
41:BF:150:GLY:HA2	41:BF:172:TRP:CE3	2.37	0.59
22:AV:61:C:H5'	22:AV:62:C:OP2	2.02	0.59
36:BA:308:G:O2'	57:BY:19:LYS:HE3	2.02	0.59
11:CK:127:LYS:O	11:CK:129:SER:N	2.34	0.59
6:AF:43:LEU:HD22	6:AF:43:LEU:H	1.66	0.59
27:D1:86:SER:HA	27:D1:89:GLU:CD	2.23	0.59
24:CY:2:G:H4'	25:CZ:88:TYR:CD1	2.38	0.59
26:D0:36:ILE:O	26:D0:36:ILE:CD1	2.51	0.59
53:DU:61:TRP:CH2	53:DU:94:ASN:HB2	2.38	0.59
51:DS:97:ARG:NH2	51:DS:98:VAL:HA	2.18	0.59
1:AA:1129:C:HO2'	1:AA:1131:G:H8	1.51	0.59
36:BA:2133:G:H4'	36:BA:2133:G:OP1	2.02	0.59
42:BG:60:LEU:HD23	42:BG:63:ILE:HD11	1.85	0.59
41:BF:29:ASN:ND2	41:BF:32:LEU:H	2.00	0.59
36:DA:2111:C:H1'	36:DA:2118:U:O4'	2.02	0.59
48:DP:57:THR:OG1	48:DP:59:LEU:HB2	2.03	0.59
49:DQ:134:ARG:CZ	58:DZ:122:ARG:HH21	2.16	0.59
48:BP:96:THR:HG22	48:BP:126:VAL:HG21	1.84	0.59
13:AM:3:ARG:NH1	42:BG:113:ARG:HD3	2.17	0.59
55:DW:5:ALA:CB	55:DW:54:ALA:HB2	2.31	0.59
58:BZ:100:VAL:CG1	58:BZ:137:ILE:HG12	2.32	0.59
14:AN:24:CYS:SG	14:AN:39:LEU:HA	2.42	0.59
48:BP:122:PRO:HA	48:BP:141:ALA:O	2.03	0.59
25:AZ:27:LEU:O	25:AZ:31:LEU:HG	2.02	0.59
22:AV:76:A:H3'	36:BA:2585:U:H3	1.68	0.59
1:AA:1316:G:H4'	14:AN:18:VAL:CG1	2.32	0.59
1:CA:955:U:H1'	1:CA:1227:A:N6	2.18	0.59
58:DZ:29:TYR:CA	58:DZ:34:ASN:HB3	2.33	0.59
40:DE:28:ALA:O	40:DE:29:GLY:C	2.42	0.59
46:BN:107:LEU:HB3	46:BN:108:PRO:HD2	1.84	0.59
1:CA:725:G:O2'	1:CA:726:C:H5'	2.03	0.59
2:AB:15:VAL:H	2:AB:16:HIS:HD1	1.51	0.59
36:BA:2115:G:C2	36:BA:2117:A:N7	2.71	0.59
50:DR:111:LEU:HD12	50:DR:111:LEU:N	2.18	0.59
36:BA:2206:G:H21	36:BA:2207:G:C5'	2.16	0.59
25:AZ:226:GLU:O	25:AZ:300:ARG:CD	2.50	0.59
42:BG:30:GLU:CD	42:BG:32:PRO:HD3	2.23	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:54:LYS:HE2	36:DA:73:A:OP2	2.02	0.59
36:DA:2283:C:H2'	36:DA:2284:C:O4'	2.02	0.59
16:AP:1:MET:HG3	16:AP:65:GLN:HG2	1.83	0.59
1:CA:22:G:H2'	1:CA:23:C:C6	2.37	0.59
38:BC:26:ALA:O	38:BC:29:VAL:HG22	2.03	0.59
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.68	0.59
1:CA:471:G:H21	16:CP:82:GLN:NE2	2.00	0.59
36:BA:765:G:H2'	36:BA:766:C:H6	1.68	0.59
58:BZ:94:GLU:HB3	58:BZ:95:PRO:HD2	1.84	0.59
40:DE:79:ARG:HH11	40:DE:79:ARG:HG2	1.68	0.59
1:CA:1137:C:H4'	1:CA:1138:G:N2	2.18	0.59
6:CF:37:VAL:HG12	6:CF:38:GLU:O	2.03	0.59
55:BW:37:ARG:HG3	55:BW:37:ARG:HH11	1.68	0.59
25:CZ:194:GLU:O	25:CZ:198:LYS:HB2	2.03	0.59
4:AD:18:LYS:HE3	4:AD:31:CYS:HB2	1.80	0.59
51:DS:89:ARG:CG	51:DS:92:TYR:HB3	2.33	0.59
13:CM:25:ILE:CD1	13:CM:60:VAL:HG11	2.29	0.59
13:CM:66:LEU:O	13:CM:70:LEU:HB2	2.02	0.59
36:BA:1902:C:O2'	39:BD:244:ARG:HB2	2.02	0.59
28:B2:20:GLU:O	28:B2:21:LEU:C	2.42	0.59
28:B2:50:ILE:O	28:B2:53:LEU:HB2	2.03	0.59
36:BA:86:C:OP1	57:BY:32:PRO:HD2	2.03	0.59
42:BG:53:LEU:C	42:BG:55:LYS:N	2.56	0.59
34:B8:17:THR:OG1	34:B8:18:ALA:N	2.35	0.59
34:B8:49:VAL:HB	34:B8:53:PRO:HD3	1.83	0.59
39:DD:130:ALA:C	39:DD:131:LEU:HD12	2.23	0.59
25:CZ:265:THR:CG2	25:CZ:266:VAL:N	2.66	0.59
39:BD:259:THR:HG22	39:BD:260:ARG:N	2.18	0.59
39:BD:238:GLY:O	39:BD:239:ARG:O	2.21	0.59
17:CQ:56:VAL:HG23	17:CQ:81:ARG:HG3	1.84	0.59
40:DE:61:ARG:HB3	40:DE:62:PRO:CD	2.30	0.59
1:CA:573:A:H5'	1:CA:573:A:C8	2.33	0.59
22:AV:3:C:H5'	22:AV:3:C:H6	1.68	0.59
41:BF:132:VAL:HG13	41:BF:133:ASN:N	2.18	0.59
25:AZ:356:PRO:HD3	25:AZ:370:PHE:HB3	1.85	0.59
36:BA:2025:C:H2'	36:BA:2026:C:C6	2.38	0.59
1:CA:955:U:O2'	1:CA:956:U:H5'	2.03	0.59
25:CZ:340:PRO:HD2	25:CZ:351:GLY:O	2.03	0.59
36:BA:1805:U:O2	39:BD:50:THR:HB	2.03	0.59
1:AA:390:C:H4'	16:AP:28:ARG:HH21	1.68	0.59
25:AZ:258:LEU:HD13	25:AZ:299:GLU:OE2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:96:GLU:O	46:BN:100:GLU:HG3	2.03	0.59
36:BA:2023:G:H5'	36:BA:2617:C:H4'	1.85	0.59
36:BA:118:A:OP2	36:BA:119:A:H5''	2.02	0.59
36:BA:1358:G:O2'	36:BA:1359:A:H5''	2.02	0.59
36:BA:176:G:O2'	36:BA:177:G:H5'	2.03	0.59
5:CE:9:LYS:HB2	5:CE:112:LEU:HD11	1.83	0.59
1:CA:755:G:OP2	15:CO:65:ARG:HD2	2.03	0.59
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.03	0.59
36:DA:1523:U:H2'	36:DA:1524:G:H8	1.67	0.59
7:CG:66:VAL:O	7:CG:69:VAL:HG12	2.03	0.59
14:AN:31:ARG:HH11	14:AN:31:ARG:HG3	1.68	0.59
36:DA:1831:G:H2'	36:DA:1832:C:C6	2.38	0.59
36:BA:519:U:H2'	36:BA:520:G:H8	1.68	0.59
1:AA:973:G:C1'	10:AJ:55:LYS:NZ	2.51	0.58
39:DD:35:LYS:HB3	39:DD:36:PRO:CD	2.33	0.58
41:BF:148:LEU:HD23	41:BF:191:ARG:HH11	1.67	0.58
48:DP:23:PRO:CB	48:DP:33:ARG:HG3	2.31	0.58
52:DT:33:LYS:HZ3	52:DT:74:ARG:HH22	1.51	0.58
39:DD:72:LYS:HZ2	39:DD:101:GLU:HB3	1.68	0.58
4:CD:30:LYS:C	4:CD:32:ALA:N	2.53	0.58
36:DA:1210:A:C8	36:DA:1210:A:H5'	2.37	0.58
54:BV:47:VAL:O	54:BV:49:THR:O	2.20	0.58
54:BV:52:VAL:CG1	54:BV:55:ALA:HB3	2.33	0.58
36:DA:2134:A:H61	36:DA:2157:G:C2'	2.16	0.58
36:DA:943:U:OP2	48:DP:38:GLN:CD	2.41	0.58
10:CJ:57:LYS:NZ	10:CJ:60:ARG:NH2	2.50	0.58
39:BD:61:LEU:O	39:BD:63:ARG:NH1	2.35	0.58
36:BA:202:U:O2'	36:BA:203:C:H5'	2.02	0.58
36:DA:1885:A:H5'	36:DA:1885:A:H8	1.67	0.58
36:DA:64:A:H2'	36:DA:65:C:O4'	2.03	0.58
50:DR:72:ASP:O	50:DR:76:VAL:HG23	2.03	0.58
58:DZ:14:LYS:O	58:DZ:18:LEU:HD13	2.03	0.58
30:D4:9:LEU:CD1	30:D4:10:VAL:H	2.09	0.58
1:CA:8:A:N6	4:CD:205:GLU:O	2.36	0.58
27:D1:62:VAL:CG1	27:D1:67:ILE:HG23	2.33	0.58
36:BA:886:C:H2'	36:BA:887:A:H4'	1.84	0.58
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.33	0.58
36:BA:2446:G:C2'	36:BA:2447:G:H5''	2.31	0.58
46:DN:32:THR:C	46:DN:34:LEU:H	2.07	0.58
55:DW:11:ARG:NH2	55:DW:98:LYS:HB3	2.18	0.58
41:DF:161:GLU:HG2	41:DF:164:ARG:NH2	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:18:LYS:HB3	49:BQ:98:LYS:HZ3	1.67	0.58
46:DN:9:VAL:HG12	46:DN:10:GLU:N	2.18	0.58
26:B0:42:GLY:HA3	36:BA:2331:G:O4'	2.03	0.58
36:BA:675:A:OP1	41:BF:63:LYS:HE2	2.03	0.58
1:CA:1017:G:H2'	1:CA:1018:C:C6	2.38	0.58
50:BR:45:ARG:HG3	50:BR:46:GLY:H	1.67	0.58
1:AA:1229:A:OP2	13:AM:114:ARG:NH1	2.35	0.58
36:DA:272(H):C:C2'	36:DA:272(I):U:H5''	2.33	0.58
1:AA:404:U:C5'	4:AD:122:ARG:HD3	2.32	0.58
42:DG:36:LYS:HD3	42:DG:160:VAL:HG21	1.85	0.58
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.03	0.58
5:AE:82:VAL:HG21	5:AE:138:ALA:CA	2.33	0.58
25:CZ:226:GLU:O	25:CZ:300:ARG:CD	2.51	0.58
20:AT:92:LEU:O	20:AT:94:ALA:N	2.35	0.58
1:CA:179:A:H2'	1:CA:180:U:H6	1.67	0.58
36:BA:882:G:H2'	36:BA:883:G:C8	2.37	0.58
46:DN:1:MET:C	46:DN:2:LYS:HD2	2.24	0.58
8:CH:114:THR:HG22	8:CH:130:GLY:C	2.23	0.58
1:AA:1463:C:H5'	52:BT:115:ARG:HH12	1.67	0.58
15:AO:36:ILE:HG23	15:AO:56:LEU:HD11	1.85	0.58
36:DA:2538:C:H2'	36:DA:2539:C:H6	1.68	0.58
3:AC:19:GLU:O	3:AC:56:ASP:HA	2.03	0.58
58:BZ:5:LEU:HD11	58:BZ:44:PHE:HA	1.85	0.58
36:DA:1286:A:H2'	36:DA:1288:U:OP2	2.03	0.58
36:BA:645:C:H5'	36:BA:646:A:OP2	2.02	0.58
36:BA:950:G:H2'	36:BA:951:C:C6	2.38	0.58
24:CY:76:A:C2	25:CZ:271:GLU:N	2.71	0.58
25:AZ:194:GLU:O	25:AZ:198:LYS:HB2	2.02	0.58
53:DU:92:ARG:CD	53:DU:94:ASN:HB3	2.24	0.58
37:DB:7:G:C3'	37:DB:8:U:H5''	2.33	0.58
36:DA:2199:A:H3'	36:DA:2200:C:C6	2.37	0.58
52:DT:33:LYS:HZ3	52:DT:74:ARG:NH2	2.01	0.58
52:DT:82:LEU:O	52:DT:84:GLN:N	2.37	0.58
42:DG:52:ILE:C	42:DG:54:GLU:H	2.07	0.58
1:CA:1352:C:H2'	1:CA:1353:G:H8	1.59	0.58
51:DS:13:ARG:CG	51:DS:14:VAL:N	2.65	0.58
31:B5:51:TYR:H	31:B5:56:LYS:HE3	1.68	0.58
46:DN:3:THR:C	46:DN:4:TYR:CG	2.76	0.58
34:B8:52:LYS:H	34:B8:53:PRO:HD2	1.68	0.58
30:B4:7:PRO:O	30:B4:8:LYS:CB	2.50	0.58
10:AJ:32:ALA:CB	10:AJ:76:ASN:O	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:12:GLU:HA	32:D6:23:THR:CG2	2.28	0.58
48:BP:147:LEU:O	48:BP:148:LEU:HB2	2.03	0.58
38:DC:100:ILE:O	38:DC:100:ILE:HG22	2.03	0.58
36:DA:1516:C:H2'	36:DA:1517:G:H5'	1.84	0.58
40:DE:171:GLU:OE1	40:DE:185:LYS:HE3	2.03	0.58
36:BA:1598:C:H5'	56:BX:36:LYS:HD3	1.85	0.58
24:CY:64:U:O2'	25:CZ:390:GLU:HA	2.03	0.58
22:AW:67:C:H2'	22:AW:68:C:C6	2.38	0.58
36:BA:2712(A):A:H5''	36:BA:2713:A:OP2	2.02	0.58
1:AA:369:C:OP2	1:AA:388:G:N2	2.36	0.58
1:CA:1162:C:H2'	1:CA:1163:C:H6	1.67	0.58
22:AV:59:U:O2'	22:AV:60:U:H6	1.84	0.58
46:BN:15:LEU:HD12	46:BN:136:GLU:HG2	1.84	0.58
9:AI:99:LEU:O	9:AI:101:PHE:N	2.35	0.58
41:DF:126:VAL:HG11	41:DF:142:TRP:HH2	1.67	0.58
36:BA:2389:G:H5''	36:BA:2390:U:H5'	1.85	0.58
37:DB:96:U:H2'	37:DB:97:G:C8	2.37	0.58
1:AA:105:G:H2'	1:AA:106:C:C6	2.38	0.58
33:B7:5:TRP:NE1	33:B7:7:PRO:HB3	2.17	0.58
36:DA:1991:U:H2'	36:DA:1992:G:H5''	1.86	0.58
1:CA:50:A:N6	1:CA:361:G:H4'	2.17	0.58
49:BQ:79:LEU:HD23	49:BQ:80:GLU:H	1.68	0.58
36:DA:363(F):A:O2'	36:DA:364:C:H5	1.86	0.58
42:BG:150:ASP:O	42:BG:151:ALA:HB2	2.02	0.58
36:BA:231:C:O2'	36:BA:232:G:H5'	2.03	0.58
37:DB:114:C:H4'	51:DS:46:VAL:HG13	1.85	0.58
36:DA:1386:C:H2'	36:DA:1387:C:H6	1.68	0.58
1:AA:17:U:H2'	1:AA:18:C:C6	2.38	0.58
18:AR:36:ASN:HB2	18:AR:38:GLU:HG2	1.85	0.58
51:DS:67:ARG:HH21	51:DS:100:ALA:H	1.49	0.58
57:DY:75:ILE:O	57:DY:76:CYS:HB2	2.02	0.58
1:CA:1354:C:H2'	1:CA:1355:G:C8	2.32	0.58
39:BD:43:ARG:HD3	39:BD:44:ASN:ND2	2.19	0.58
52:BT:80:SER:CB	52:BT:81:PRO:HD3	2.33	0.58
25:AZ:20:VAL:CG1	25:AZ:115:GLN:HE22	2.15	0.58
25:AZ:9:LYS:HE3	25:AZ:74:LYS:C	2.23	0.58
42:DG:111:LEU:N	42:DG:112:PRO:HD2	2.19	0.58
58:DZ:125:LEU:CD2	58:DZ:164:ALA:HB3	2.26	0.58
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.03	0.58
25:CZ:231:ILE:HD13	25:CZ:237:VAL:HB	1.86	0.58
48:DP:83:VAL:HG11	48:DP:112:LEU:HD21	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:40:ARG:NH1	3:CC:40:ARG:HG3	2.18	0.58
40:DE:167:VAL:HG22	40:DE:170:LEU:HD11	1.85	0.58
27:B1:94:LEU:HD12	27:B1:94:LEU:N	2.18	0.58
36:BA:1338:G:N3	36:BA:1338:G:H2'	2.18	0.58
3:AC:38:ARG:NH1	3:AC:38:ARG:HB3	2.19	0.58
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.39	0.58
36:BA:181:A:H5'	36:BA:181:A:C8	2.34	0.58
30:B4:12:ALA:HB1	30:B4:29:PRO:O	2.04	0.58
28:D2:10:LEU:O	28:D2:14:ARG:HB2	2.03	0.58
57:DY:43:ASN:CB	57:DY:64:GLU:HA	2.32	0.58
50:DR:117:VAL:HG22	50:DR:118:GLU:N	2.18	0.58
38:BC:175:VAL:CG1	38:BC:188:ASN:HB3	2.33	0.58
43:BH:163:TYR:HD1	43:BH:163:TYR:N	2.01	0.58
57:DY:54:LYS:O	57:DY:55:TYR:HB2	2.03	0.58
36:DA:1328:G:H2'	36:DA:1330:C:C5	2.38	0.58
36:DA:1843:C:H5'	39:DD:253:GLN:NE2	2.18	0.58
1:AA:296:U:O2'	1:AA:297:G:H5'	2.03	0.58
19:CS:58:VAL:HG13	19:CS:58:VAL:O	2.03	0.58
1:CA:355:C:H4'	1:CA:388:G:O2'	2.04	0.58
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.04	0.58
1:AA:519:C:H2'	1:AA:520:A:O4'	2.02	0.58
38:BC:215:THR:OG1	38:BC:216:THR:N	2.36	0.58
43:BH:146:ALA:O	43:BH:149:ARG:HB3	2.03	0.58
52:BT:93:ARG:CZ	52:BT:95:ARG:HD3	2.33	0.58
31:B5:36:CYS:O	31:B5:38:ALA:N	2.36	0.58
25:AZ:331:HIS:CD2	25:AZ:331:HIS:H	2.21	0.58
34:B8:8:LYS:HE3	36:BA:245:G:O6	2.03	0.58
40:BE:104:VAL:HG22	40:BE:198:VAL:HG22	1.84	0.58
5:CE:147:ASP:CB	5:CE:150:ARG:HH12	2.13	0.58
8:AH:125:ARG:HG3	8:AH:125:ARG:HH11	1.67	0.58
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.32	0.58
22:AW:58:A:H2'	22:AW:60:U:OP2	2.03	0.58
54:DV:21:ARG:O	54:DV:22:VAL:HG13	2.02	0.58
1:CA:367:U:H5''	1:CA:394:G:H21	1.67	0.58
1:CA:975:A:H5'	1:CA:975:A:H8	1.67	0.58
40:BE:117:MET:HE3	40:BE:136:ARG:HA	1.84	0.58
36:BA:1654:A:OP1	50:BR:3:HIS:N	2.36	0.58
1:AA:254:G:H21	17:AQ:16:GLN:NE2	2.01	0.58
41:DF:164:ARG:HG2	41:DF:164:ARG:NH1	2.16	0.58
58:DZ:144:LEU:HD21	58:DZ:150:LEU:HD13	1.86	0.58
36:BA:1349:A:N6	36:BA:1598:C:H42	2.00	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1523:U:H2'	36:BA:1524:G:C8	2.33	0.58
18:AR:55:ARG:HG3	18:AR:55:ARG:HH11	1.66	0.58
46:DN:55:VAL:HG22	46:DN:56:ASN:N	2.19	0.58
46:BN:12:ARG:NH2	46:BN:135:PRO:HG2	2.18	0.58
1:CA:1256:A:H2	1:CA:1277:C:H2'	1.68	0.58
36:DA:1824:G:O2'	36:DA:1825:A:H5'	2.03	0.58
55:DW:36:LEU:HD12	55:DW:48:ALA:HA	1.86	0.58
25:AZ:258:LEU:HD12	25:AZ:299:GLU:CG	2.33	0.58
11:CK:48:ILE:HD11	11:CK:67:ASP:HB2	1.86	0.58
36:BA:765:G:H2'	36:BA:766:C:C6	2.38	0.58
36:BA:796:C:H2'	36:BA:797:C:C6	2.39	0.58
13:CM:121:LYS:O	13:CM:122:LYS:HD3	2.03	0.58
1:AA:39:G:O2'	1:AA:40:C:H5'	2.03	0.58
9:AI:26:VAL:HG13	9:AI:61:ALA:HB3	1.85	0.58
49:BQ:101:ARG:HG3	49:BQ:101:ARG:HH11	1.69	0.58
36:DA:2818:G:O2'	36:DA:2837:G:H5'	2.03	0.58
36:BA:500:G:N2	36:BA:502:A:H3'	2.18	0.58
44:DJ:26:UNK:HA	44:DJ:83:UNK:O	2.03	0.58
3:AC:7:PRO:HG2	3:AC:184:TYR:HB2	1.85	0.58
36:DA:569:U:O4	36:DA:570:G:C6	2.56	0.58
1:CA:927:G:OP2	1:CA:927:G:H4'	2.04	0.58
24:CY:2:G:C4'	25:CZ:88:TYR:CE1	2.86	0.58
4:AD:138:TYR:C	4:AD:138:TYR:HD1	2.06	0.58
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.03	0.58
48:DP:24:GLY:CA	48:DP:33:ARG:NH1	2.67	0.58
4:CD:10:ARG:NH1	4:CD:10:ARG:HG2	2.18	0.58
40:BE:57:LYS:O	40:BE:58:ARG:HG3	2.03	0.58
25:AZ:121:LEU:HG	25:AZ:125:GLN:HE21	1.67	0.58
32:B6:5:VAL:O	32:B6:6:ARG:HB2	2.03	0.58
25:CZ:12:VAL:HG13	25:CZ:100:ASP:OD2	2.03	0.58
49:BQ:141:GLN:CD	58:BZ:72:ARG:NE	2.56	0.58
50:DR:53:HIS:HB2	50:DR:94:TYR:HE2	1.68	0.58
48:DP:102:ARG:HH11	48:DP:102:ARG:CB	2.16	0.58
36:BA:2069:G:O2'	36:BA:2070:G:H5'	2.02	0.58
1:AA:201:C:H2'	1:AA:202:U:H5''	1.85	0.58
40:DE:120:TRP:CD1	40:DE:155:LYS:HB3	2.38	0.58
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.32	0.58
25:AZ:206:ILE:HG23	25:AZ:210:ILE:HG21	1.85	0.58
24:AY:56:C:N1	36:BA:1067:A:C2	2.71	0.58
36:BA:2787:C:O2	40:BE:61:ARG:HD2	2.02	0.58
1:AA:66:G:H21	1:AA:172:A:H2	1.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:28:PHE:O	2:CB:32:ILE:HG22	2.04	0.58
25:CZ:114:PRO:HB2	36:DA:2660:A:O2'	2.02	0.58
40:DE:132:HIS:ND1	40:DE:132:HIS:O	2.36	0.58
3:CC:124:ILE:HG12	3:CC:130:VAL:HG22	1.86	0.58
46:BN:32:THR:HG22	46:BN:37:LYS:HD3	1.85	0.58
36:BA:99:U:H4'	36:BA:102:G:H1'	1.86	0.58
46:DN:56:ASN:HA	46:DN:125:GLY:C	2.24	0.58
22:AV:44:G:H2'	22:AV:45:U:H5'	1.84	0.58
9:CI:52:ALA:HB3	9:CI:95:LYS:HZ2	1.68	0.58
36:DA:407:G:H2'	36:DA:408:G:H8	1.68	0.58
57:DY:17:SER:CB	57:DY:71:LYS:HE2	2.33	0.58
36:BA:469:G:C2'	36:BA:470:A:H5''	2.34	0.58
1:CA:895:G:H2'	1:CA:896:C:C6	2.38	0.58
36:DA:1757:U:O4	36:DA:1762:A:H2	1.86	0.58
50:BR:27:SER:O	50:BR:30:THR:HB	2.03	0.58
1:CA:243:A:C2	1:CA:246:A:C8	2.92	0.58
2:CB:96:ARG:HD3	2:CB:148:TYR:HE1	1.67	0.58
18:CR:85:LEU:HD12	18:CR:86:VAL:N	2.19	0.58
36:DA:2750:A:H5''	36:DA:2751:G:OP2	2.04	0.58
25:AZ:340:PRO:HD2	25:AZ:351:GLY:O	2.03	0.58
4:AD:25:ARG:O	4:AD:27:TYR:N	2.35	0.58
4:CD:103:ASN:OD1	4:CD:114:ARG:CZ	2.51	0.58
43:BH:83:TYR:CB	43:BH:135:GLY:H	2.16	0.58
42:DG:52:ILE:HB	42:DG:54:GLU:CD	2.23	0.58
36:DA:2133:G:C2	36:DA:2157:G:O6	2.57	0.58
57:DY:9:LYS:HB2	57:DY:9:LYS:HZ2	1.69	0.58
50:BR:101:ALA:O	50:BR:102:GLU:HB2	2.04	0.58
1:CA:62:U:H2'	1:CA:63:C:H5'	1.85	0.58
48:BP:29:LYS:H	48:BP:29:LYS:CD	2.17	0.58
10:CJ:33:GLN:HB2	10:CJ:75:ILE:CD1	2.34	0.58
36:BA:139(A):G:H22	56:BX:44:GLU:CD	2.06	0.58
49:BQ:141:GLN:N	58:BZ:53:ILE:HD12	2.18	0.58
10:AJ:78:ASN:HA	10:AJ:79:ARG:NH1	2.17	0.58
22:CV:34:G:O6	23:CX:21:C:N3	2.36	0.58
32:D6:42:TRP:HA	32:D6:42:TRP:HE3	1.68	0.58
58:DZ:6:LYS:HG3	58:DZ:60:GLU:CG	2.34	0.58
25:CZ:268:THR:HG22	25:CZ:289:LEU:O	2.04	0.58
36:BA:1803:A:O3'	39:BD:259:THR:CG2	2.51	0.58
36:DA:2762:G:H2'	36:DA:2763:G:O4'	2.04	0.58
13:AM:2:ALA:O	13:AM:4:ILE:HG13	2.04	0.58
28:D2:53:LEU:O	28:D2:53:LEU:HD23	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:581:C:H2'	36:BA:582:G:H8	1.67	0.58
28:D2:7:ARG:C	28:D2:9:GLN:H	2.06	0.58
36:BA:1658:C:H2'	36:BA:1659:U:H6	1.68	0.58
36:BA:108:U:H2'	36:BA:109:G:H8	1.68	0.58
53:DU:27:LEU:O	53:DU:34:LYS:HB2	2.04	0.58
46:DN:21:LYS:HD3	46:DN:22:THR:H	1.67	0.58
1:CA:22:G:H4'	1:CA:885:G:C8	2.39	0.58
3:AC:21:ARG:NH2	3:AC:56:ASP:OD1	2.37	0.58
36:DA:1385:G:H4'	36:DA:1386:C:OP1	2.03	0.58
36:DA:703:U:H2'	36:DA:704:G:O4'	2.03	0.58
1:AA:580:U:H2'	1:AA:581:G:O4'	2.03	0.58
58:BZ:77:ASP:O	58:BZ:79:ARG:N	2.36	0.58
1:AA:681:C:O2'	1:AA:682:G:H5'	2.04	0.58
36:DA:1005:C:H2'	36:DA:1006:C:H6	1.69	0.58
40:BE:79:ARG:HH11	40:BE:79:ARG:HG2	1.69	0.58
36:BA:2185:C:C2'	36:BA:2186:G:C5'	2.77	0.58
24:CY:65:C:H4'	25:CZ:341:GLN:CD	2.23	0.58
28:B2:46:GLN:O	28:B2:50:ILE:HD13	2.03	0.58
28:B2:18:PRO:HG2	28:B2:72:ALA:OXT	2.03	0.58
4:CD:95:GLY:HA3	4:CD:188:LEU:HD11	1.84	0.58
43:BH:15:VAL:HG12	43:BH:29:PRO:HD3	1.85	0.58
43:BH:85:LYS:HZ1	43:BH:86:GLU:HA	1.68	0.58
4:CD:65:ARG:HB2	4:CD:75:PHE:CE1	2.39	0.58
42:DG:47:LYS:HE3	42:DG:81:LYS:HG3	1.85	0.58
36:BA:587:C:C4	48:BP:33:ARG:HG2	2.38	0.58
36:DA:267:C:H2'	36:DA:268:C:C6	2.39	0.58
2:CB:51:LEU:HD22	2:CB:55:PHE:CE2	2.39	0.58
49:BQ:141:GLN:HE22	58:BZ:72:ARG:HA	1.66	0.58
36:BA:1427:A:H4'	36:BA:1428:C:O5'	2.03	0.58
32:D6:11:LEU:HD12	32:D6:51:GLU:HG3	1.86	0.58
24:CY:56:C:C5	36:DA:1067:A:H2	2.19	0.58
41:DF:39:TRP:CH2	41:DF:106:ARG:HD2	2.39	0.58
40:DE:117:MET:HE1	40:DE:136:ARG:HG2	1.84	0.58
25:CZ:265:THR:CG2	25:CZ:266:VAL:H	2.15	0.58
1:CA:1038:C:H6	1:CA:1038:C:O5'	1.85	0.58
19:CS:16:LEU:HA	19:CS:19:VAL:HB	1.84	0.58
1:CA:150:C:C2'	1:CA:151:A:H5''	2.30	0.58
42:BG:80:PHE:O	42:BG:81:LYS:O	2.21	0.58
2:CB:114:ARG:CZ	2:CB:118:LEU:HD21	2.33	0.58
49:BQ:32:TYR:O	49:BQ:105:GLU:HB2	2.03	0.58
19:AS:53:ASN:ND2	19:AS:55:LYS:H	2.00	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:78:ASN:HB2	10:CJ:81:THR:HG23	1.85	0.58
42:BG:104:GLU:O	42:BG:108:ASN:HB2	2.04	0.58
41:DF:122:LYS:HB3	41:DF:191:ARG:HA	1.85	0.58
36:BA:848:G:C4	36:BA:933:A:H8	2.21	0.58
36:BA:969:U:H2'	36:BA:970:C:C6	2.39	0.58
25:AZ:113:MET:HB3	25:AZ:114:PRO:CD	2.33	0.58
57:DY:43:ASN:C	57:DY:44:ILE:HD12	2.24	0.58
40:DE:36:ARG:HH11	40:DE:36:ARG:HG2	1.68	0.58
36:DA:970:C:H2'	36:DA:971:C:H6	1.68	0.58
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.36	0.58
47:DO:63:VAL:O	47:DO:64:ARG:HB3	2.03	0.58
1:AA:1030(A):G:H1'	1:AA:1031:G:H1	1.69	0.58
1:AA:1239:A:H62	1:AA:1299:A:H62	1.52	0.58
14:AN:23:ARG:HD2	14:AN:28:GLY:O	2.03	0.58
1:CA:242:C:H2'	1:CA:243:A:H5'	1.85	0.58
58:DZ:128:VAL:HG22	58:DZ:129:SER:N	2.18	0.58
22:AW:76:A:O2'	36:BA:2394:C:N3	2.29	0.58
36:BA:2396:G:O2'	36:BA:2397:G:H5'	2.03	0.58
4:CD:83:SER:HA	4:CD:89:THR:HG23	1.85	0.58
8:CH:116:LYS:HD3	8:CH:127:LEU:HD12	1.84	0.58
36:DA:37:C:H2'	36:DA:38:A:C8	2.38	0.58
7:AG:45:ASP:O	7:AG:49:ILE:HG12	2.03	0.58
1:CA:1299:A:N3	1:CA:1299:A:H5''	2.19	0.58
36:DA:2808:U:H5'	36:DA:2891:G:O6	2.03	0.58
32:B6:22:ALA:HB2	32:B6:39:TYR:CZ	2.38	0.58
4:AD:20:TYR:CD2	4:AD:26:CYS:O	2.54	0.58
1:AA:1260:C:OP1	1:AA:1284:C:H4'	2.03	0.58
56:DX:35:THR:HG22	56:DX:38:GLU:H	1.67	0.58
52:DT:28:VAL:CB	52:DT:88:ILE:HG12	2.29	0.58
36:DA:2308:G:N7	36:DA:2310:A:H5'	2.19	0.58
36:DA:832:G:O2'	48:DP:52:GLU:HB3	2.04	0.58
42:DG:86:MET:N	42:DG:87:PRO:CD	2.66	0.58
32:B6:31:PRO:O	32:B6:32:ASN:OD1	2.21	0.58
42:DG:141:PHE:O	42:DG:144:ILE:HG22	2.04	0.58
34:D8:17:THR:CG2	34:D8:21:LYS:HB2	2.32	0.58
39:BD:96:HIS:CE1	39:BD:102:LYS:HE2	2.39	0.58
36:BA:1480:G:H2'	36:BA:1481:U:C5'	2.30	0.58
1:CA:356:A:H2'	1:CA:357:G:H8	1.68	0.58
36:BA:1803:A:C3'	39:BD:259:THR:HG21	2.34	0.58
36:DA:636:G:H2'	48:DP:115:LEU:CD1	2.33	0.58
10:CJ:7:LYS:HB3	10:CJ:97:GLU:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:12:LYS:HD3	48:DP:68:GLN:HG2	1.86	0.58
41:BF:133:ASN:N	41:BF:133:ASN:HD22	2.00	0.58
43:DH:46:GLU:OE1	43:DH:50:VAL:HG21	2.03	0.58
13:CM:54:VAL:HA	13:CM:57:ARG:NH1	2.19	0.58
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.18	0.58
36:DA:1497:U:H5'	36:DA:1498:C:H5	1.69	0.58
11:AK:22:HIS:HB3	11:AK:29:ILE:HG13	1.85	0.58
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	1.84	0.58
16:AP:52:ASP:OD2	16:AP:55:ARG:HG3	2.03	0.58
36:BA:1473:G:C2	36:BA:1474:C:H1'	2.39	0.58
36:BA:1740:G:H4'	36:BA:1741:A:OP1	2.02	0.58
22:AW:64:A:H2'	22:AW:65:G:H8	1.68	0.58
50:DR:75:LEU:HD13	50:DR:75:LEU:O	2.04	0.58
39:DD:161:THR:O	39:DD:196:VAL:HG23	2.03	0.58
46:BN:129:PRO:O	46:BN:130:HIS:HB3	2.02	0.58
1:CA:609:A:H2'	1:CA:610:G:H5'	1.84	0.58
24:CY:43:G:H5'	24:CY:44:G:OP2	2.02	0.58
46:BN:14:VAL:HG11	46:BN:137:LYS:HD2	1.85	0.58
36:BA:1188:U:O2'	36:BA:1189:A:H5'	2.03	0.58
11:CK:27:ASN:ND2	11:CK:55:LYS:HB3	2.19	0.58
22:AV:65:G:O2'	22:AV:66:U:H5'	2.03	0.58
10:CJ:82:ILE:HG22	10:CJ:82:ILE:O	2.03	0.58
25:AZ:230:THR:HG23	25:AZ:230:THR:O	2.03	0.58
1:AA:992:U:H4'	1:AA:993:G:O5'	2.03	0.58
13:AM:83:ASP:C	13:AM:85:GLY:H	2.07	0.58
25:CZ:68:VAL:O	25:CZ:68:VAL:CA	2.50	0.58
52:DT:26:ASP:HB3	52:DT:89:VAL:O	2.04	0.58
37:BB:31:C:H4'	42:BG:29:TRP:HZ2	1.68	0.58
57:DY:82:PRO:O	57:DY:83:THR:HB	2.03	0.58
57:DY:38:ILE:CB	57:DY:66:PRO:HG3	2.24	0.58
39:BD:62:TYR:CE1	39:BD:64:ILE:HA	2.38	0.58
42:DG:144:ILE:HG23	42:DG:144:ILE:O	2.04	0.58
48:BP:84:ASN:ND2	48:BP:116:GLY:HA2	2.19	0.58
40:BE:197:ILE:O	40:BE:197:ILE:CG1	2.52	0.58
34:D8:57:ARG:C	34:D8:59:LYS:H	2.07	0.58
36:BA:1005:C:H2'	36:BA:1006:C:H6	1.69	0.58
22:AW:59:U:C2'	22:AW:60:U:H5'	2.34	0.58
48:DP:102:ARG:HB3	48:DP:102:ARG:NH1	2.19	0.58
22:CW:43:C:H2'	22:CW:44:G:H1'	1.86	0.58
54:DV:28:GLU:HB3	54:DV:29:PRO:HD2	1.85	0.58
10:CJ:8:LEU:HD11	10:CJ:96:ILE:HG22	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:693:C:O2'	36:DA:694:U:H5'	2.04	0.58
31:D5:2:ALA:HA	36:DA:2015:A:C1'	2.31	0.58
52:BT:108:ARG:HA	52:BT:111:ARG:CZ	2.34	0.58
25:CZ:318:ALA:CB	25:CZ:400:VAL:HA	2.33	0.58
19:CS:43:GLU:O	19:CS:45:VAL:N	2.29	0.58
6:CF:72:VAL:HG23	6:CF:90:VAL:HG21	1.85	0.58
25:AZ:318:ALA:CB	25:AZ:400:VAL:HA	2.34	0.58
3:CC:58:GLU:HB2	3:CC:65:ALA:CB	2.32	0.58
43:DH:46:GLU:OE1	43:DH:50:VAL:HG11	2.04	0.58
22:CW:40:C:H2'	22:CW:41:C:C6	2.39	0.58
30:B4:22:ILE:HG21	42:BG:108:ASN:HD22	1.69	0.58
9:AI:43:ALA:C	9:AI:45:ALA:H	2.07	0.58
36:DA:15:G:O2'	36:DA:16:G:H5'	2.03	0.58
53:DU:24:TYR:HB3	53:DU:28:ARG:CB	2.33	0.58
1:CA:666:G:H5'	1:CA:726:C:H1'	1.85	0.58
36:DA:1409:C:H2'	36:DA:1410:G:C8	2.39	0.58
49:BQ:136:ALA:C	49:BQ:138:ASP:H	2.06	0.58
36:DA:1010:A:H1'	36:DA:1153:C:C1'	2.34	0.58
36:DA:1260:G:H2'	36:DA:1261:C:H6	1.68	0.58
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.18	0.58
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.84	0.58
39:BD:28:GLU:H	39:BD:29:PRO:HD2	1.67	0.58
1:CA:290:C:O2'	1:CA:291:C:H5'	2.04	0.58
55:DW:88:ARG:NH1	55:DW:94:ASP:OD2	2.37	0.58
1:AA:1050:G:O2'	1:AA:1051:C:P	2.62	0.58
15:CO:24:SER:O	15:CO:28:GLN:HG3	2.04	0.58
17:CQ:94:ASN:O	17:CQ:96:GLU:N	2.37	0.58
4:AD:22:LYS:HB2	4:AD:26:CYS:HB2	1.86	0.58
1:AA:1325:C:P	21:AU:15:ARG:NH2	2.75	0.58
36:BA:84:A:C5'	57:BY:9:LYS:HB3	2.30	0.58
49:DQ:51:ARG:CB	49:DQ:51:ARG:HH11	1.99	0.58
36:BA:2133:G:C4'	36:BA:2133:G:OP1	2.52	0.58
36:BA:479:A:O2'	36:BA:481:G:H5'	2.04	0.58
52:BT:31:SER:HB2	52:BT:32:TYR:CD1	2.39	0.58
12:AL:79:GLU:O	12:AL:80:HIS:CB	2.52	0.58
25:CZ:9:LYS:HE3	25:CZ:74:LYS:C	2.25	0.58
1:CA:63:C:H2'	1:CA:64:G:C5'	2.25	0.58
36:BA:623:G:H2'	36:BA:624:C:H6	1.68	0.58
50:DR:55:ALA:HB2	50:DR:79:LEU:CD1	2.33	0.58
26:B0:36:ILE:CD1	36:BA:2355:C:H5'	2.30	0.58
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:44:G:H3'	22:CW:45:U:C5	2.39	0.58
10:CJ:4:ILE:HB	10:CJ:74:ILE:HG13	1.86	0.58
46:DN:30:ILE:CG2	46:DN:120:LEU:HD21	2.33	0.58
32:D6:53:LYS:O	32:D6:54:ILE:OXT	2.22	0.58
43:BH:158:HIS:CE1	43:BH:169:VAL:HG12	2.39	0.58
1:AA:686:U:H2'	1:AA:687:A:C8	2.38	0.58
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.39	0.58
3:CC:111:LEU:HD21	3:CC:144:SER:O	2.04	0.58
36:BA:1199:U:H2'	36:BA:1200:C:C6	2.39	0.58
36:BA:2852:G:H2'	36:BA:2853:C:H6	1.69	0.58
38:DC:74:VAL:CG2	38:DC:157:LYS:HE2	2.34	0.58
1:CA:382:A:H2'	1:CA:383:A:H8	1.67	0.58
39:DD:201:HIS:O	39:DD:203:ASN:N	2.36	0.58
36:BA:2659:G:H2'	36:BA:2660:A:H5''	1.86	0.58
49:BQ:54:MET:HB3	49:BQ:64:ILE:HD11	1.86	0.58
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.38	0.58
36:BA:1488:G:H1	36:BA:1501:C:H42	1.50	0.58
50:BR:26:LYS:HE2	50:BR:71:GLN:H	1.69	0.58
36:DA:1198:U:H2'	36:DA:1199:U:C6	2.39	0.58
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.39	0.58
36:DA:654(U):A:H2'	36:DA:654(V):A:C8	2.39	0.58
47:BO:53:LYS:N	47:BO:53:LYS:HD2	2.18	0.58
40:BE:111:ARG:HG2	40:BE:111:ARG:HH11	1.69	0.58
36:BA:603:A:H1'	36:BA:604:G:OP1	2.03	0.58
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.69	0.57
39:DD:35:LYS:HG3	39:DD:63:ARG:HD3	1.86	0.57
51:DS:92:TYR:CG	51:DS:93:LYS:N	2.72	0.57
34:D8:61:LEU:HD12	34:D8:61:LEU:N	2.07	0.57
42:BG:137:GLU:O	42:BG:138:GLN:HB3	2.03	0.57
36:BA:482:A:H4'	57:BY:47:LYS:HG3	1.86	0.57
36:DA:1301:A:H4'	36:DA:1302:A:OP1	2.04	0.57
52:BT:28:VAL:O	52:BT:28:VAL:HG12	2.04	0.57
25:AZ:19:HIS:ND1	25:AZ:20:VAL:HG22	2.18	0.57
58:DZ:151:HIS:CB	58:DZ:170:THR:HA	2.27	0.57
36:BA:1542:A:C8	36:BA:1544:A:H5'	2.39	0.57
1:CA:184:G:C4'	1:CA:224:C:H4'	2.34	0.57
48:BP:23:PRO:HD2	48:BP:33:ARG:NE	2.18	0.57
32:B6:20:ASN:ND2	32:B6:21:TYR:H	2.02	0.57
56:DX:44:GLU:OE2	56:DX:50:LYS:HG3	2.03	0.57
48:BP:131:SER:OG	48:BP:134:ALA:HB3	2.03	0.57
1:AA:858:G:C5	1:AA:869:G:N7	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:52:ILE:HB	50:DR:94:TYR:HD2	1.68	0.57
34:D8:30:ARG:NH2	36:DA:2419:U:O4	2.37	0.57
32:D6:16:CYS:O	32:D6:17:LYS:HG2	2.04	0.57
33:D7:1:MET:HG3	33:D7:3:ARG:NH1	2.15	0.57
36:DA:93:G:H2'	36:DA:94:C:C6	2.38	0.57
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.03	0.57
36:BA:1654:A:OP1	50:BR:2:ARG:HA	2.04	0.57
1:AA:377:G:H2'	1:AA:378:G:C8	2.39	0.57
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.52	0.57
2:CB:130:ARG:NH2	2:CB:134:GLU:HG3	2.18	0.57
17:AQ:75:ARG:HH11	17:AQ:75:ARG:HG3	1.68	0.57
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.04	0.57
36:BA:2303:G:H21	42:BG:132:ASN:ND2	2.02	0.57
1:AA:977:A:N6	1:AA:1224:G:O5'	2.36	0.57
41:DF:63:LYS:HE2	41:DF:75:HIS:O	2.04	0.57
36:BA:1203:G:H3'	36:BA:1204:A:H5''	1.86	0.57
54:BV:72:VAL:HG23	54:BV:85:LYS:HB3	1.85	0.57
50:BR:103:ARG:HG3	55:BW:40:ASN:CG	2.24	0.57
36:BA:2852:G:H2'	36:BA:2853:C:C6	2.39	0.57
49:DQ:112:GLU:HG2	49:DQ:113:GLN:N	2.19	0.57
36:DA:845:G:O2'	36:DA:846:C:H5	1.87	0.57
50:DR:103:ARG:HB3	50:DR:108:GLY:HA2	1.86	0.57
2:CB:69:LEU:O	2:CB:163:PHE:N	2.35	0.57
39:BD:181:GLU:HB2	39:BD:273:ARG:O	2.03	0.57
44:DJ:35:UNK:C	44:DJ:37:UNK:N	2.64	0.57
36:BA:2241:A:H2'	36:BA:2242:G:C8	2.39	0.57
6:AF:47:ARG:NH1	6:AF:47:ARG:HB2	2.19	0.57
4:AD:62:GLN:HA	4:AD:62:GLN:NE2	2.18	0.57
53:DU:88:ILE:HG22	54:DV:47:VAL:O	2.05	0.57
37:DB:7:G:C2'	37:DB:8:U:H5''	2.34	0.57
52:DT:74:ARG:HD2	52:DT:76:PHE:CE1	2.38	0.57
25:CZ:315:LYS:O	25:CZ:403:ILE:HG23	2.04	0.57
42:BG:95:ARG:O	42:BG:96:ARG:O	2.22	0.57
1:AA:495:A:H61	4:AD:119:GLN:NE2	2.01	0.57
32:B6:35:GLU:OE1	32:B6:35:GLU:HA	2.04	0.57
32:B6:9:LEU:O	32:B6:9:LEU:HD13	2.03	0.57
34:B8:30:ARG:NH1	36:BA:2419:U:O4	2.37	0.57
36:DA:2186:G:H2'	36:DA:2187:G:C8	2.38	0.57
2:AB:148:TYR:C	2:AB:149:LEU:HD23	2.24	0.57
36:DA:1453:U:H5'	50:DR:63:ARG:CZ	2.33	0.57
1:CA:1240:U:OP1	7:CG:116:ALA:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:975:A:H5'	1:CA:975:A:C8	2.40	0.57
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.86	0.57
1:CA:1316:G:H4'	14:CN:18:VAL:CG1	2.33	0.57
13:AM:23:TYR:CD1	13:AM:23:TYR:O	2.57	0.57
5:CE:33:VAL:HG22	5:CE:43:LEU:HD13	1.85	0.57
19:AS:16:LEU:HA	19:AS:19:VAL:HB	1.86	0.57
37:BB:91:C:OP1	49:BQ:16:ARG:HG2	2.04	0.57
36:BA:1786:A:H2	36:BA:2606:C:H1'	1.68	0.57
29:B3:43:ILE:HD11	36:BA:927:G:O2'	2.03	0.57
46:DN:23:LEU:CD1	46:DN:98:VAL:HG12	2.34	0.57
2:AB:113:HIS:HA	2:AB:116:GLU:HG2	1.85	0.57
11:AK:29:ILE:HD12	11:AK:29:ILE:C	2.24	0.57
1:CA:723:U:O2'	1:CA:724:G:H5'	2.04	0.57
1:CA:1308:U:H5''	13:CM:98:VAL:HG23	1.87	0.57
39:BD:69:ARG:HH11	39:BD:130:ALA:HB2	1.69	0.57
29:B3:22:ALA:HB1	29:B3:46:ASN:HD21	1.67	0.57
40:BE:36:ARG:HH22	40:BE:88:GLY:N	2.01	0.57
7:CG:78:ARG:HG3	7:CG:78:ARG:O	2.04	0.57
36:DA:271:A:H2	36:DA:366:C:H1'	1.69	0.57
11:AK:48:ILE:HD11	11:AK:67:ASP:HB2	1.86	0.57
18:AR:26:LEU:HD13	18:AR:39:VAL:HG13	1.86	0.57
1:CA:291:C:O2'	1:CA:292:G:H5'	2.04	0.57
24:CY:74:C:O2	25:CZ:295:ARG:NH2	2.36	0.57
25:AZ:86:ALA:C	25:AZ:88:TYR:H	2.08	0.57
36:BA:1930:G:N2	36:BA:1968:G:H2'	2.20	0.57
8:CH:112:LEU:HD23	8:CH:112:LEU:N	2.19	0.57
36:BA:2174:C:C2'	36:BA:2175:C:H5'	2.34	0.57
5:AE:40:ARG:HH11	5:AE:40:ARG:HG2	1.69	0.57
36:BA:2824:C:H2'	36:BA:2825:C:O4'	2.03	0.57
25:AZ:277:LEU:HD11	25:AZ:279:GLU:O	2.03	0.57
1:CA:1268:A:H1'	1:CA:1326:C:O2'	2.04	0.57
41:BF:7:TYR:HB3	41:BF:16:GLY:O	2.03	0.57
52:DT:27:THR:O	52:DT:28:VAL:CB	2.53	0.57
54:BV:38:LEU:HD23	54:BV:39:LEU:N	2.18	0.57
39:BD:35:LYS:HA	39:BD:63:ARG:HA	1.87	0.57
51:DS:15:ARG:HH11	51:DS:15:ARG:CB	2.18	0.57
31:B5:43:HIS:HE1	36:BA:2884:U:OP2	1.87	0.57
42:DG:83:ARG:HB2	42:DG:84:LYS:HD2	1.86	0.57
32:B6:25:LYS:HE2	34:B8:34:TRP:NE1	2.08	0.57
29:D3:45:GLY:C	29:D3:47:VAL:N	2.57	0.57
22:CW:73:A:C3'	22:CW:74:C:H5''	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:39:ILE:CG2	42:DG:157:ILE:HG23	2.32	0.57
56:DX:36:LYS:HZ3	56:DX:55:ASN:HA	1.70	0.57
51:BS:93:LYS:O	51:BS:95:HIS:N	2.37	0.57
46:BN:55:VAL:HG22	46:BN:56:ASN:N	2.19	0.57
40:BE:30:PRO:HD3	40:BE:180:ASN:OD1	2.04	0.57
51:DS:36:TYR:O	51:DS:37:ALA:HB2	2.04	0.57
58:BZ:108:PRO:HB3	58:BZ:141:VAL:CG1	2.34	0.57
36:DA:529:A:H4'	36:DA:530:G:O5'	2.03	0.57
36:DA:2770:G:H5'	36:DA:2771:C:OP2	2.04	0.57
27:B1:76:ARG:NH2	27:B1:95:LEU:HB2	2.19	0.57
38:DC:171:ILE:HD13	38:DC:196:LEU:HD21	1.86	0.57
49:DQ:12:GLN:HE21	49:DQ:72:LYS:HG3	1.69	0.57
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.08	0.57
13:AM:108:ARG:HH11	13:AM:108:ARG:HG3	1.70	0.57
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.69	0.57
36:DA:1879:C:C2'	36:DA:1880:C:H5''	2.33	0.57
43:BH:159:GLU:HG3	43:BH:160:LYS:HG2	1.87	0.57
57:BY:77:PRO:O	57:BY:78:ALA:HB2	2.04	0.57
16:AP:38:TYR:CZ	16:AP:50:LYS:HB3	2.39	0.57
1:CA:666:G:O2'	1:CA:667:G:H5'	2.04	0.57
1:CA:1282:C:C2'	1:CA:1283:G:H5'	2.34	0.57
1:AA:737:A:OP1	6:AF:92:LYS:HB2	2.04	0.57
36:DA:223:A:N7	36:DA:422:A:H1'	2.20	0.57
36:DA:2292:C:H2'	36:DA:2293:C:C6	2.39	0.57
46:BN:9:VAL:HG12	46:BN:10:GLU:H	1.68	0.57
39:BD:176:ARG:CZ	39:BD:176:ARG:HB3	2.33	0.57
36:BA:470:A:OP1	41:BF:59:TYR:CE1	2.57	0.57
41:BF:34:TRP:HB2	48:BP:10:PRO:HB2	1.87	0.57
36:DA:979:G:H3'	36:DA:980:A:H5''	1.87	0.57
10:CJ:64:GLU:HG2	14:CN:59:ALA:HA	1.87	0.57
36:BA:380:U:H2'	36:BA:381:G:H8	1.69	0.57
46:DN:129:PRO:O	46:DN:130:HIS:HB3	2.03	0.57
36:BA:110:G:O2'	36:BA:111:A:H5'	2.04	0.57
47:DO:98:VAL:HG12	47:DO:117:LEU:HB3	1.86	0.57
30:B4:42:PHE:CG	30:B4:42:PHE:O	2.57	0.57
3:CC:33:LEU:HD13	3:CC:33:LEU:C	2.25	0.57
23:CX:26:A:H3'	23:CX:27:A:O4'	2.04	0.57
36:DA:1582:C:H2'	36:DA:1583:A:H8	1.69	0.57
37:DB:66:A:C2	37:DB:109:C:C2	2.93	0.57
36:DA:1590:U:H2'	36:DA:1591:G:C8	2.39	0.57
28:B2:34:GLU:CA	28:B2:37:PHE:HB2	2.30	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:47:ASN:HA	28:B2:50:ILE:CB	2.33	0.57
28:B2:59:ARG:HD3	28:B2:59:ARG:N	2.19	0.57
36:DA:143:G:C1'	56:DX:37:THR:HG21	2.34	0.57
26:D0:42:GLY:HA3	36:DA:2331:G:C4'	2.33	0.57
10:CJ:49:VAL:HG22	14:CN:41:ARG:CG	2.33	0.57
43:DH:85:LYS:NZ	43:DH:86:GLU:HA	2.19	0.57
52:BT:80:SER:CB	52:BT:81:PRO:CD	2.81	0.57
1:CA:1186:G:H2'	1:CA:1187:G:H5''	1.86	0.57
1:AA:1039:C:C6	1:AA:1040:U:C5	2.88	0.57
26:B0:36:ILE:HD12	26:B0:36:ILE:H	1.69	0.57
58:DZ:67:LEU:N	58:DZ:67:LEU:HD12	2.19	0.57
52:BT:100:TYR:HD2	52:BT:103:ARG:HH21	1.53	0.57
31:D5:16:ARG:HD2	31:D5:20:ARG:NH2	2.18	0.57
36:DA:530:G:C5	36:DA:2022:U:H5''	2.39	0.57
28:D2:65:ASN:HD21	36:DA:112:U:C5'	2.15	0.57
38:DC:78:ALA:HB1	38:DC:82:LYS:HB2	1.86	0.57
19:AS:16:LEU:O	19:AS:19:VAL:N	2.37	0.57
36:DA:1689:A:N6	36:DA:1698:A:H2	2.01	0.57
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.85	0.57
43:BH:158:HIS:HE1	43:BH:169:VAL:HG12	1.68	0.57
24:AY:61:C:O2'	24:AY:62:U:H5''	2.04	0.57
36:BA:880:G:H22	36:BA:897:C:N4	2.02	0.57
1:CA:411:A:N6	1:CA:413:G:H21	2.01	0.57
25:CZ:258:LEU:HD12	25:CZ:299:GLU:HG3	1.86	0.57
1:CA:504:C:H2'	1:CA:511:C:H5	1.69	0.57
36:BA:2562:U:C2'	36:BA:2563:U:H5'	2.35	0.57
39:BD:231:HIS:ND1	39:BD:232:PRO:HD2	2.20	0.57
25:AZ:204:ASP:O	25:AZ:208:GLU:HG2	2.04	0.57
36:DA:2695:C:H2'	36:DA:2696:U:C6	2.40	0.57
42:DG:102:PHE:CE1	42:DG:106:LEU:HD22	2.40	0.57
13:AM:86:CYS:HA	19:AS:73:GLU:O	2.04	0.57
36:DA:2505:G:O2'	36:DA:2506:U:H6	1.87	0.57
47:DO:108:GLU:N	47:DO:108:GLU:OE1	2.36	0.57
2:AB:80:ILE:N	2:AB:80:ILE:HD12	2.19	0.57
36:DA:2143:C:O2'	36:DA:2144:U:H5'	2.03	0.57
36:BA:893:C:H2'	36:BA:894:C:H6	1.69	0.57
1:AA:260:G:H2'	1:AA:261:U:C6	2.39	0.57
1:AA:413:G:O6	4:AD:35:ARG:HD3	2.04	0.57
51:DS:89:ARG:O	51:DS:92:TYR:HB3	2.05	0.57
4:AD:100:ARG:HG2	4:AD:103:ASN:H	1.69	0.57
36:DA:2201:C:O2'	36:DA:2202:C:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:836:G:H2'	36:DA:837:C:C6	2.39	0.57
36:DA:84:A:H5'	57:DY:9:LYS:CB	2.34	0.57
58:BZ:152:ALA:CB	58:BZ:167:PRO:HB2	2.34	0.57
36:BA:201:C:H1'	36:BA:250:G:O6	2.05	0.57
25:AZ:331:HIS:HD2	25:AZ:331:HIS:H	1.52	0.57
48:BP:64:LYS:O	48:BP:65:ARG:C	2.43	0.57
34:D8:50:LEU:C	34:D8:53:PRO:HD2	2.25	0.57
51:BS:30:ARG:HH22	51:BS:62:LYS:CD	2.17	0.57
36:BA:141:A:C8	36:BA:1408:C:O2'	2.58	0.57
1:CA:961:U:O2'	1:CA:962:C:O5'	2.22	0.57
36:DA:2392:A:H2	36:DA:2424:C:N4	1.96	0.57
42:DG:77:ILE:H	42:DG:77:ILE:CD1	2.12	0.57
32:D6:15:GLU:OE1	32:D6:18:ARG:NE	2.36	0.57
32:D6:17:LYS:CB	32:D6:18:ARG:NH1	2.67	0.57
27:D1:11:ARG:NH2	36:DA:1365:A:O2'	2.37	0.57
52:BT:128:GLU:CD	52:BT:129:ARG:N	2.58	0.57
1:CA:56:U:H2'	1:CA:57:G:C8	2.40	0.57
36:DA:2734:A:H62	36:DA:2770:G:H21	1.53	0.57
55:DW:84:ARG:HB2	55:DW:96:ILE:CG2	2.34	0.57
36:BA:1337:G:H2'	36:BA:1338:G:C8	2.39	0.57
40:BE:61:ARG:HB3	40:BE:62:PRO:CD	2.33	0.57
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.03	0.57
36:BA:583:G:OP2	53:BU:10:ARG:HD2	2.04	0.57
26:B0:23:VAL:HG22	26:B0:38:VAL:CG1	2.32	0.57
1:AA:1187:G:H8	1:AA:1187:G:H5'	1.70	0.57
36:BA:2713:A:OP1	50:BR:14:SER:HB3	2.04	0.57
36:BA:21:A:O2'	36:BA:22:C:H5'	2.05	0.57
54:BV:34:GLU:O	54:BV:36:PRO:HD3	2.03	0.57
13:CM:97:PRO:CA	13:CM:110:ARG:HD3	2.34	0.57
36:DA:382:G:C2'	36:DA:383:U:H5'	2.34	0.57
9:AI:118:LYS:O	9:AI:119:ALA:CB	2.53	0.57
36:DA:272:G:H1	36:DA:404:C:H42	1.51	0.57
43:DH:143:GLN:HA	43:DH:143:GLN:NE2	2.19	0.57
43:DH:163:TYR:N	43:DH:163:TYR:HD1	2.03	0.57
53:DU:85:LYS:HD3	53:DU:117:GLN:HE22	1.69	0.57
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.04	0.57
1:AA:260:G:H2'	1:AA:261:U:H6	1.69	0.57
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.18	0.57
36:DA:2078:C:H2'	36:DA:2079:U:H6	1.70	0.57
1:CA:156:G:O2'	1:CA:157:G:H5'	2.04	0.57
43:DH:18:GLU:HB2	43:DH:25:LYS:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1098:A:H2'	36:BA:1099:G:H5'	1.87	0.57
36:DA:20:C:O2'	36:DA:21:A:H5'	2.04	0.57
1:CA:648:A:H2'	1:CA:649:G:C8	2.39	0.57
1:CA:373:A:O2'	1:CA:374:A:H5'	2.04	0.57
20:CT:29:LYS:O	20:CT:33:ILE:HG13	2.05	0.57
47:DO:80:ASP:OD2	52:DT:71:GLY:HA3	2.05	0.57
6:CF:47:ARG:HB2	6:CF:47:ARG:NH1	2.19	0.57
36:DA:492:A:H2'	36:DA:493:G:O4'	2.04	0.57
43:DH:97:ARG:O	43:DH:99:VAL:HG23	2.03	0.57
36:BA:1249:U:C4'	53:BU:4:ALA:HB3	2.34	0.57
26:D0:30:VAL:O	26:D0:30:VAL:HG23	2.04	0.57
39:DD:62:TYR:CE2	39:DD:64:ILE:HA	2.39	0.57
26:D0:38:VAL:HG21	26:D0:59:LEU:HD12	1.87	0.57
36:BA:28:A:H61	36:BA:512:G:H1'	1.69	0.57
57:DY:81:LYS:HD2	57:DY:96:ILE:HD12	1.85	0.57
50:BR:99:LYS:N	50:BR:99:LYS:HD2	2.01	0.57
42:DG:80:PHE:O	42:DG:81:LYS:HB2	2.02	0.57
32:B6:11:LEU:O	32:B6:23:THR:HB	2.04	0.57
56:DX:51:VAL:HG13	56:DX:81:VAL:HB	1.86	0.57
56:BX:53:LYS:HG3	56:BX:55:ASN:HD21	1.69	0.57
1:CA:1429:C:H2'	1:CA:1430:C:O2	2.04	0.57
51:BS:13:ARG:O	51:BS:15:ARG:HG3	2.05	0.57
31:D5:50:GLY:HA3	31:D5:56:LYS:HE2	1.87	0.57
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB2	1.86	0.57
41:DF:133:ASN:HD22	41:DF:133:ASN:N	2.03	0.57
30:D4:8:LYS:O	30:D4:9:LEU:CB	2.48	0.57
51:DS:58:LEU:HD23	51:DS:65:VAL:HG13	1.87	0.57
39:DD:146:GLU:OE1	39:DD:190:TYR:HB2	2.04	0.57
36:DA:1141:U:H5	46:DN:64:GLY:H	1.53	0.57
36:BA:2784:C:H2'	36:BA:2785:C:C6	2.39	0.57
1:CA:186:C:O4'	20:CT:81:LYS:HE2	2.05	0.57
11:CK:54:ARG:O	11:CK:57:THR:CG2	2.52	0.57
31:B5:25:LEU:HD13	55:BW:23:LEU:HD22	1.84	0.57
9:AI:43:ALA:O	9:AI:45:ALA:N	2.38	0.57
41:DF:57:VAL:HG21	41:DF:87:GLY:HA2	1.87	0.57
1:CA:1132:C:O2'	1:CA:1133:G:H5'	2.03	0.57
22:CV:75:C:H2'	22:CV:76:A:O4'	2.04	0.57
39:BD:28:GLU:H	39:BD:29:PRO:CD	2.17	0.57
36:DA:2506:U:C6	36:DA:2506:U:H5'	2.39	0.57
36:DA:514:A:O2'	36:DA:515:A:H5'	2.03	0.57
36:DA:1614:A:N1	55:DW:91:GLY:HA2	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1310:G:O2'	1:CA:1311:G:H5'	2.05	0.57
1:AA:83:U:HO2'	1:AA:84:U:H5	1.52	0.57
47:BO:17:ARG:O	47:BO:18:LYS:HG3	2.05	0.57
25:AZ:90:LYS:H	25:AZ:90:LYS:HD2	1.68	0.57
36:DA:2700:C:O2'	36:DA:2701:C:H5'	2.05	0.57
39:DD:35:LYS:HD3	39:DD:61:LEU:HB3	1.86	0.57
37:DB:49:C:H2'	37:DB:50:G:C8	2.39	0.57
28:B2:16:LEU:HD23	28:B2:17:SER:N	2.20	0.57
52:DT:22:PHE:HE2	52:DT:85:LYS:NZ	2.03	0.57
42:DG:45:GLU:HB2	42:DG:53:LEU:CG	2.29	0.57
19:AS:49:ILE:HD11	19:AS:62:ILE:HB	1.86	0.57
19:AS:6:LYS:C	19:AS:7:LYS:HD3	2.25	0.57
25:AZ:136:ASN:ND2	60:AZ:501:GDP:N7	2.45	0.57
50:BR:52:ILE:O	50:BR:55:ALA:N	2.37	0.57
1:AA:1442(B):A:N3	1:AA:1442(B):A:H2'	2.19	0.57
57:BY:81:LYS:HD2	57:BY:96:ILE:HD12	1.86	0.57
20:AT:104:LEU:C	20:AT:104:LEU:HD23	2.25	0.57
28:D2:53:LEU:O	28:D2:57:ILE:HG12	2.04	0.57
36:BA:2051:A:H5'	36:BA:2578:G:O4'	2.04	0.57
1:AA:220:G:C2'	1:AA:221:C:H5'	2.35	0.57
36:DA:1658:C:OP1	40:DE:132:HIS:ND1	2.37	0.57
36:BA:1771:C:H1'	36:BA:1786:A:H8	1.62	0.57
40:DE:68:ALA:HB3	40:DE:69:LYS:NZ	2.19	0.57
8:AH:9:MET:O	8:AH:13:ILE:HG12	2.04	0.57
13:CM:87:TYR:HE1	19:CS:81:ARG:HH22	1.50	0.57
54:DV:2:PHE:H	54:DV:42:GLY:CA	2.17	0.57
36:BA:1495:A:N3	36:BA:1496:A:C2	2.73	0.57
4:CD:170:VAL:HG12	4:CD:174:LEU:HB2	1.85	0.57
58:DZ:77:ASP:HB3	58:DZ:80:ARG:O	2.04	0.57
1:AA:513:C:H42	1:AA:538:G:H1	1.52	0.57
53:BU:24:TYR:HB3	53:BU:28:ARG:HB2	1.86	0.57
35:D9:29:ASN:HD21	35:D9:32:HIS:CE1	2.22	0.57
1:CA:1226:C:C5	13:CM:104:ARG:HB2	2.40	0.57
50:BR:28:LEU:O	50:BR:30:THR:N	2.36	0.57
18:AR:40:LEU:O	18:AR:42:ARG:N	2.37	0.57
42:DG:119:GLY:O	42:DG:181:ARG:HB2	2.02	0.57
50:BR:49:ASP:OD1	50:BR:95:THR:HG22	2.04	0.57
9:AI:126:SER:O	9:AI:128:ARG:HD2	2.05	0.57
1:CA:1385:G:C2'	1:CA:1386:G:H5'	2.34	0.57
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.05	0.57
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:92:A:H2'	36:DA:92:A:N3	2.20	0.57
39:DD:30:GLU:OE1	39:DD:63:ARG:NE	2.37	0.57
28:B2:22:GLU:HA	28:B2:64:LEU:HD21	1.86	0.57
28:B2:35:LEU:CG	28:B2:50:ILE:HG13	2.35	0.57
28:B2:62:THR:O	28:B2:66:GLU:HG3	2.04	0.57
40:DE:50:GLY:CA	40:DE:78:LEU:HB3	2.32	0.57
57:DY:77:PRO:O	57:DY:78:ALA:HB2	2.05	0.57
51:DS:39:ILE:HD11	51:DS:73:LEU:HD21	1.86	0.57
25:AZ:9:LYS:HE3	25:AZ:74:LYS:CA	2.35	0.57
48:BP:38:GLN:O	48:BP:39:LYS:HB2	2.04	0.57
42:DG:141:PHE:HB3	42:DG:142:PRO:CD	2.32	0.57
34:B8:26:LYS:NZ	34:B8:47:LYS:HD2	2.20	0.57
34:B8:50:LEU:C	34:B8:52:LYS:N	2.57	0.57
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.04	0.57
36:DA:631:A:C5'	48:DP:65:ARG:HD3	2.35	0.57
48:BP:113:LYS:O	48:BP:114:ILE:HB	2.05	0.57
26:B0:36:ILE:HD12	26:B0:36:ILE:N	2.19	0.57
36:BA:2159:G:H2'	36:BA:2160:G:C5'	2.34	0.57
46:BN:62:VAL:CG2	46:BN:66:LYS:HD2	2.34	0.57
1:AA:265:G:C2'	1:AA:266:G:H5''	2.31	0.57
1:AA:1442(B):A:O2'	1:AA:1443:G:C8	2.58	0.57
38:DC:123:VAL:HG22	38:DC:127:LEU:CB	2.35	0.57
42:DG:29:TRP:C	42:DG:31:VAL:H	2.07	0.57
48:BP:77:ARG:HH11	48:BP:77:ARG:HG2	1.70	0.57
24:AY:56:C:N1	36:BA:1067:A:H2	2.02	0.57
49:BQ:29:PHE:CB	49:BQ:105:GLU:OE2	2.51	0.57
36:BA:2740:A:H2'	36:BA:2741:A:C8	2.40	0.57
6:CF:19:LEU:HD11	6:CF:59:TYR:CZ	2.40	0.57
22:CW:59:U:H3'	22:CW:60:U:H6	1.69	0.57
38:DC:114:VAL:HG12	38:DC:144:THR:CA	2.35	0.57
50:BR:21:TYR:HB3	50:BR:47:PHE:CE2	2.40	0.57
17:CQ:59:ILE:HG23	17:CQ:71:PHE:HB3	1.86	0.57
12:AL:20:LYS:CD	12:AL:20:LYS:H	2.16	0.57
1:AA:977:A:C2'	1:AA:977:A:N3	2.66	0.57
36:BA:1224:C:O2	36:BA:1224:C:C2'	2.52	0.57
36:BA:634:C:H2'	36:BA:635:C:C6	2.40	0.57
36:BA:1652:A:H2'	36:BA:1653:G:H5'	1.86	0.57
36:DA:2219:G:O2'	36:DA:2220:G:H5'	2.04	0.57
36:DA:569:U:C4	36:DA:570:G:C6	2.93	0.57
24:CY:74:C:C2	25:CZ:295:ARG:NH2	2.71	0.57
36:DA:893:C:H2'	36:DA:894:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:131:LEU:HD22	38:DC:136:LEU:HB2	1.87	0.57
1:CA:271:C:H2'	1:CA:272:C:C6	2.40	0.57
24:AY:43:G:H5'	24:AY:44:G:OP2	2.04	0.57
36:BA:436:C:H2'	36:BA:437:G:H8	1.70	0.57
38:BC:119:VAL:O	38:BC:119:VAL:HG22	2.05	0.57
25:CZ:19:HIS:CE1	36:DA:2661:G:P	2.96	0.57
3:CC:35:GLU:HG3	3:CC:95:THR:OG1	2.04	0.57
4:AD:100:ARG:HG3	4:AD:102:ASP:OD1	2.05	0.57
4:AD:25:ARG:C	4:AD:27:TYR:N	2.58	0.57
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.27	0.57
58:BZ:97:GLU:HA	58:BZ:127:LYS:HA	1.85	0.57
4:CD:65:ARG:HB2	4:CD:75:PHE:CD1	2.40	0.57
42:BG:98:ARG:NH1	42:BG:98:ARG:HG2	2.20	0.57
32:B6:26:ASN:C	32:B6:26:ASN:OD1	2.43	0.57
36:BA:832:G:N3	48:BP:53:GLY:HA2	2.20	0.57
36:BA:833:U:H5''	48:BP:48:PRO:HB3	1.87	0.57
54:DV:99:ILE:HD13	54:DV:99:ILE:N	2.12	0.57
34:D8:15:LYS:HD2	34:D8:16:ILE:H	1.70	0.57
36:BA:2491:U:H4'	36:BA:2570:G:OP1	2.04	0.57
50:DR:52:ILE:HD13	50:DR:79:LEU:HD21	1.86	0.57
4:AD:114:ARG:HG3	4:AD:114:ARG:NH1	2.10	0.57
32:D6:44:ARG:CA	32:D6:45:LYS:HE3	2.34	0.57
52:DT:90:GLN:C	52:DT:92:GLY:N	2.57	0.57
54:BV:19:LYS:HE2	54:BV:19:LYS:HA	1.87	0.57
48:DP:122:PRO:HA	48:DP:141:ALA:O	2.05	0.57
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.70	0.57
22:AV:72:C:C2'	22:AV:73:A:H5''	2.35	0.57
41:DF:167:ALA:CB	41:DF:173:VAL:HG11	2.33	0.57
19:AS:16:LEU:H	19:AS:16:LEU:CD1	2.14	0.57
52:BT:38:ASN:ND2	52:BT:38:ASN:C	2.57	0.57
4:CD:129:ASN:ND2	4:CD:145:GLU:H	2.03	0.57
16:CP:8:ARG:C	16:CP:9:PHE:HD1	2.08	0.57
36:DA:1058:G:H1'	36:DA:1082:U:C4	2.40	0.57
36:DA:856:C:H2'	36:DA:857:C:C6	2.39	0.57
57:DY:44:ILE:HD12	57:DY:44:ILE:N	2.19	0.57
16:AP:22:THR:HG22	16:AP:32:TYR:HB2	1.86	0.57
32:B6:28:ARG:NH1	32:B6:28:ARG:HG2	2.20	0.57
49:BQ:135:ASP:O	49:BQ:138:ASP:OD2	2.23	0.57
52:BT:62:THR:CG2	52:BT:75:ILE:HG13	2.35	0.57
36:BA:2249:U:H4'	36:BA:2275:C:C5	2.40	0.57
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:363:G:H2'	36:BA:363(A):A:C8	2.40	0.57
29:D3:9:VAL:HG11	29:D3:55:ARG:HD3	1.87	0.57
36:BA:533:G:H5'	53:BU:24:TYR:CE1	2.40	0.57
36:BA:2052:G:H4'	40:BE:143:ASN:O	2.05	0.57
2:AB:61:LEU:HD11	2:AB:160:ASP:HB3	1.87	0.57
7:AG:69:VAL:HG13	7:AG:100:ALA:HA	1.86	0.57
33:B7:24:THR:HG23	33:B7:27:GLY:H	1.69	0.57
25:AZ:191:GLY:CA	25:AZ:197:ASP:OD2	2.53	0.57
36:BA:2182:G:O2'	36:BA:2183:C:H5'	2.05	0.57
27:D1:86:SER:HB3	27:D1:89:GLU:OE1	2.05	0.57
51:DS:67:ARG:NH2	51:DS:100:ALA:N	2.52	0.57
1:AA:1283:G:O2'	1:AA:1284:C:P	2.63	0.57
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.70	0.57
39:BD:35:LYS:HB3	39:BD:36:PRO:CD	2.34	0.57
36:BA:2415:G:H4'	48:BP:66:GLY:CA	2.35	0.57
34:B8:12:LYS:HE2	36:BA:247:G:O6	2.05	0.57
28:D2:68:ARG:NH1	28:D2:72:ALA:HB1	2.20	0.57
1:AA:1054:C:N4	24:AY:34:C:C2	2.73	0.57
36:DA:1799:G:C8	39:DD:181:GLU:OE1	2.58	0.57
36:DA:2118:U:H5'	36:DA:2147:G:H21	1.70	0.57
37:BB:49:C:H2'	37:BB:50:G:C8	2.40	0.57
34:D8:57:ARG:O	34:D8:59:LYS:N	2.37	0.57
25:AZ:107:SER:OG	25:AZ:137:LYS:HD2	2.04	0.57
35:B9:29:ASN:HD22	35:B9:29:ASN:H	1.51	0.57
40:BE:93:VAL:O	40:BE:95:ILE:N	2.38	0.57
52:BT:96:ARG:HH11	52:BT:96:ARG:HB2	1.65	0.57
9:AI:19:LEU:CD2	9:AI:59:PHE:HD2	2.17	0.57
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.05	0.57
3:CC:76:VAL:CG2	3:CC:103:VAL:HG11	2.34	0.57
36:BA:1655:A:O2'	40:BE:115:GLY:HA3	2.04	0.57
50:BR:7:GLY:O	50:BR:8:ARG:CZ	2.53	0.57
50:BR:96:ARG:HG2	50:BR:96:ARG:HH11	1.68	0.57
36:DA:303:U:H2'	36:DA:304:G:C8	2.40	0.57
1:CA:501:C:H2'	1:CA:502:G:H8	1.68	0.57
36:BA:1069:A:H1'	36:BA:1070:A:OP1	2.04	0.57
6:CF:91:VAL:CG1	6:CF:92:LYS:H	2.17	0.57
36:DA:2722:G:O2'	50:DR:5:LYS:HB2	2.05	0.57
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.20	0.57
7:CG:20:ASP:HB3	7:CG:23:VAL:CG2	2.34	0.57
43:DH:94:TYR:HA	43:DH:106:THR:O	2.05	0.57
41:BF:84:VAL:C	41:BF:86:GLY:N	2.59	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:973:A:O4'	36:DA:1188:U:C6	2.58	0.57
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.86	0.57
2:CB:77:ALA:O	2:CB:81:VAL:HG23	2.03	0.57
55:DW:36:LEU:N	55:DW:36:LEU:HD23	2.18	0.57
36:BA:1245:G:H5''	41:BF:34:TRP:HZ2	1.69	0.57
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.05	0.57
36:BA:2750:A:H5''	36:BA:2751:G:OP2	2.04	0.57
13:AM:13:LYS:HA	13:AM:44:ARG:NH1	2.20	0.57
36:BA:189:G:H2'	36:BA:205:G:H22	1.70	0.57
36:DA:1678:G:H22	36:DA:1989:G:H22	1.51	0.57
8:CH:1:MET:O	8:CH:2:LEU:O	2.23	0.57
31:B5:19:ARG:HG3	36:BA:2046:G:H5'	1.87	0.57
36:BA:127:A:H5''	36:BA:128:C:O4'	2.04	0.57
58:DZ:75:ASN:N	58:DZ:75:ASN:HD22	2.03	0.57
36:BA:1525:G:O2'	36:BA:1526:G:H5'	2.05	0.57
24:CY:77:TRP:O	25:CZ:273:HIS:HA	2.05	0.56
54:DV:35:LEU:C	54:DV:37:VAL:H	2.07	0.56
51:DS:95:HIS:CG	51:DS:96:GLY:N	2.72	0.56
36:BA:1210:A:H8	36:BA:1210:A:H5'	1.69	0.56
36:BA:92:A:H2'	36:BA:92:A:N3	2.20	0.56
57:BY:73:ARG:HE	57:BY:73:ARG:HA	1.70	0.56
19:CS:53:ASN:C	19:CS:53:ASN:HD22	2.08	0.56
36:DA:143(A):C:H4'	56:DX:38:GLU:OE2	2.04	0.56
52:DT:33:LYS:NZ	52:DT:74:ARG:NH2	2.52	0.56
34:B8:63:PRO:O	34:B8:64:TYR:O	2.23	0.56
53:BU:90:VAL:HG21	54:BV:47:VAL:HG21	1.87	0.56
43:BH:153:LYS:H	43:BH:153:LYS:CD	1.99	0.56
48:BP:38:GLN:CG	48:BP:39:LYS:H	2.12	0.56
36:DA:2185:C:C2'	36:DA:2186:G:H5'	2.29	0.56
30:D4:14:ILE:CD1	30:D4:14:ILE:H	2.18	0.56
36:DA:141:A:H8	36:DA:1408:C:HO2'	1.50	0.56
56:DX:12:VAL:CG2	56:DX:13:LEU:H	2.14	0.56
1:CA:1430:C:H2'	1:CA:1431:C:O2	2.05	0.56
31:D5:36:CYS:O	31:D5:38:ALA:N	2.38	0.56
50:DR:87:TYR:O	50:DR:89:ASP:N	2.38	0.56
49:DQ:133:ARG:HH11	49:DQ:133:ARG:HB2	1.69	0.56
25:AZ:24:LYS:O	25:AZ:26:THR:N	2.33	0.56
24:CY:41:C:C6	24:CY:41:C:H5'	2.35	0.56
14:AN:12:ARG:HB3	14:AN:14:PRO:HD2	1.87	0.56
27:D1:62:VAL:HG22	27:D1:63:ALA:O	2.05	0.56
48:DP:114:ILE:HG21	48:DP:130:PHE:CE2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:583:G:C5	36:DA:584:C:C5	2.92	0.56
41:DF:40:GLN:NE2	41:DF:182:ASN:HB2	2.17	0.56
38:DC:123:VAL:HG21	38:DC:127:LEU:CD2	2.33	0.56
13:AM:34:LEU:CD1	13:AM:41:PRO:HA	2.34	0.56
52:DT:94:ALA:C	52:DT:96:ARG:H	2.07	0.56
6:CF:13:ASN:O	6:CF:14:LEU:HD22	2.06	0.56
3:CC:70:VAL:HG12	3:CC:72:LYS:N	2.19	0.56
10:AJ:89:ASP:O	10:AJ:90:LEU:CB	2.52	0.56
36:BA:580:C:H2'	36:BA:581:C:H6	1.69	0.56
16:CP:17:TYR:HE1	16:CP:41:PRO:HG3	1.67	0.56
57:BY:56:PRO:O	57:BY:57:GLN:C	2.42	0.56
12:CL:45:PRO:HB3	12:CL:92:ASP:HB3	1.87	0.56
20:CT:104:LEU:HD23	20:CT:104:LEU:C	2.26	0.56
46:BN:115:ARG:HA	46:BN:118:LYS:HZ3	1.70	0.56
12:AL:42:THR:CG2	12:AL:52:LEU:HD12	2.35	0.56
37:BB:114:C:H2'	37:BB:115:G:C8	2.40	0.56
42:BG:30:GLU:OE2	42:BG:32:PRO:HD3	2.05	0.56
36:DA:752:A:O2'	36:DA:753:C:OP2	2.22	0.56
37:BB:112:U:H2'	37:BB:113:G:H8	1.69	0.56
36:DA:1092:C:H2'	36:DA:1093:G:H5'	1.86	0.56
49:BQ:112:GLU:HG2	49:BQ:113:GLN:N	2.20	0.56
27:D1:49:VAL:HG12	27:D1:60:PHE:O	2.05	0.56
37:DB:65:C:O2'	37:DB:66:A:H5'	2.05	0.56
36:BA:1322:A:H2'	36:BA:1323:U:C6	2.40	0.56
47:BO:9:GLU:HG3	47:BO:10:VAL:N	2.20	0.56
38:BC:59:ARG:HH21	38:BC:142:ALA:HB2	1.70	0.56
4:CD:86:LYS:HE3	4:CD:86:LYS:HA	1.87	0.56
50:DR:23:ASN:HD22	50:DR:23:ASN:N	2.01	0.56
36:DA:2681:C:O2	36:DA:2681:C:H2'	2.05	0.56
36:DA:2341:G:H2'	36:DA:2342:C:C6	2.40	0.56
36:DA:1120:G:H2'	36:DA:1121:C:C6	2.39	0.56
25:CZ:86:ALA:C	25:CZ:88:TYR:H	2.07	0.56
54:DV:38:LEU:HD23	54:DV:39:LEU:N	2.20	0.56
57:BY:7:VAL:HB	57:BY:8:LYS:CE	2.36	0.56
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.35	0.56
57:DY:8:LYS:HD2	57:DY:8:LYS:N	2.20	0.56
36:BA:271(K):U:H3'	36:BA:271(L):U:C5'	2.35	0.56
25:CZ:221:PHE:HE1	25:CZ:242:ILE:HD12	1.70	0.56
36:BA:1640:C:H3'	36:BA:1641:A:H8	1.70	0.56
42:DG:64:THR:OG1	42:DG:94:LEU:HD11	2.06	0.56
36:DA:1948:G:O2'	36:DA:1949:G:H5'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:51:ALA:N	34:B8:53:PRO:HD2	2.20	0.56
48:DP:58:THR:O	48:DP:58:THR:CG2	2.53	0.56
34:D8:56:GLU:O	34:D8:57:ARG:C	2.44	0.56
36:DA:1482:G:H2'	36:DA:1484:G:H8	1.70	0.56
10:AJ:29:ARG:O	10:AJ:30:SER:HB3	2.05	0.56
24:AY:41:C:C5'	24:AY:41:C:H6	2.16	0.56
5:CE:101:ILE:O	5:CE:120:THR:HB	2.05	0.56
27:D1:70:VAL:HG13	27:D1:71:TYR:N	2.20	0.56
9:AI:4:TYR:CG	9:AI:88:TYR:HB2	2.40	0.56
28:D2:51:ARG:HH11	28:D2:55:ARG:NH2	2.03	0.56
1:CA:1250:A:C4'	9:CI:68:GLY:H	2.14	0.56
14:AN:40:CYS:SG	14:AN:42:ILE:HB	2.44	0.56
52:BT:106:SER:O	52:BT:107:ASP:HB3	2.05	0.56
36:BA:1038:C:C2'	36:BA:1039:G:H5''	2.35	0.56
36:BA:2721:A:H2'	36:BA:2722:G:O4'	2.05	0.56
46:DN:30:ILE:HG23	46:DN:52:VAL:HG11	1.87	0.56
20:AT:30:LYS:HG3	20:AT:34:LYS:HE3	1.87	0.56
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.67	0.56
36:DA:18:C:H5''	53:DU:24:TYR:O	2.05	0.56
36:DA:310:A:P	57:DY:18:GLY:HA2	2.45	0.56
36:DA:654(C):G:C2'	36:DA:654(D):G:H5'	2.35	0.56
14:AN:6:LEU:HB3	14:AN:23:ARG:NH2	2.20	0.56
36:DA:1386:C:H2'	36:DA:1387:C:C6	2.40	0.56
36:DA:1841:U:H2'	36:DA:1842:G:H8	1.69	0.56
36:DA:2836:U:H2'	36:DA:2837:G:C8	2.40	0.56
7:AG:69:VAL:O	7:AG:138:LYS:HG3	2.05	0.56
36:BA:1166:C:H2'	36:BA:1167:U:C6	2.40	0.56
36:DA:225:A:O2'	36:DA:226:G:H5'	2.05	0.56
1:AA:822:C:O2'	1:AA:823:G:H5'	2.05	0.56
36:DA:1320:C:C5	36:DA:1329:U:H5''	2.40	0.56
2:CB:151:GLY:O	2:CB:153:ARG:N	2.37	0.56
15:CO:32:LEU:HD13	15:CO:63:ARG:HB2	1.88	0.56
36:DA:1429:G:O2'	36:DA:1430:C:H5'	2.03	0.56
7:CG:7:ALA:O	7:CG:8:GLU:HB2	2.04	0.56
1:AA:115:G:H1'	1:AA:116:A:N7	2.21	0.56
34:D8:6:THR:HG21	36:DA:243:U:OP1	2.04	0.56
16:CP:71:ARG:HB2	16:CP:71:ARG:HH11	1.70	0.56
36:BA:1847:A:H3'	36:BA:1848:A:H5'	1.87	0.56
18:CR:53:ARG:HG3	18:CR:63:GLN:NE2	2.20	0.56
44:BJ:25:UNK:HA	44:BJ:116:UNK:HA	1.88	0.56
36:DA:2684:U:O2'	47:DO:68:GLU:HG3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DJ:70:UNK:O	44:DJ:71:UNK:C	2.53	0.56
25:CZ:68:VAL:O	25:CZ:69:GLU:HG2	2.05	0.56
25:CZ:26:THR:HG21	60:CZ:501:GDP:H8	1.69	0.56
51:DS:106:ARG:CG	51:DS:106:ARG:HH11	2.18	0.56
57:BY:29:GLU:N	57:BY:29:GLU:OE1	2.35	0.56
27:D1:50:ARG:HD3	36:DA:2200:C:OP1	2.05	0.56
36:DA:2199:A:H5'	36:DA:2200:C:OP2	2.06	0.56
1:CA:79:G:H21	1:CA:91:C:N4	2.03	0.56
2:AB:8:LYS:O	2:AB:10:LEU:N	2.38	0.56
36:BA:474:G:C6	36:BA:510:C:N4	2.73	0.56
36:DA:330:A:HO2'	36:DA:331:A:H8	1.53	0.56
36:BA:481:G:H1'	36:BA:506:G:H21	1.70	0.56
3:AC:14:ILE:CG1	3:AC:15:THR:H	2.18	0.56
47:DO:24:VAL:HG21	47:DO:30:ALA:O	2.06	0.56
34:B8:54:GLU:O	34:B8:58:ILE:HG12	2.05	0.56
36:DA:1538:G:H2'	36:DA:1539:G:C8	2.41	0.56
30:D4:5:ILE:CG1	30:D4:5:ILE:O	2.53	0.56
34:B8:48:PHE:C	34:B8:49:VAL:HG22	2.25	0.56
28:D2:69:ARG:HB2	28:D2:70:GLN:NE2	2.20	0.56
48:DP:62:LEU:H	48:DP:62:LEU:CD2	2.17	0.56
36:DA:2887:U:H2'	36:DA:2888:C:H6	1.70	0.56
40:BE:182:LEU:C	40:BE:183:LEU:HD12	2.26	0.56
36:DA:1480:G:H1	36:DA:1511:C:H42	1.53	0.56
37:DB:77:U:H4'	58:DZ:84:GLU:OE2	2.05	0.56
48:BP:112:LEU:H	48:BP:128:HIS:CD2	2.23	0.56
25:CZ:131:ILE:O	25:CZ:168:VAL:HG13	2.05	0.56
53:DU:17:ILE:HG23	53:DU:39:LEU:CD1	2.36	0.56
58:DZ:58:VAL:HA	58:DZ:67:LEU:O	2.05	0.56
9:CI:17:VAL:CG1	9:CI:81:ILE:HD13	2.35	0.56
52:BT:92:GLY:O	52:BT:94:ALA:N	2.37	0.56
3:CC:113:ALA:HB3	3:CC:114:PRO:CD	2.33	0.56
1:CA:392:G:H2'	1:CA:393:A:H8	1.70	0.56
39:BD:147:LEU:HD13	39:BD:155:LEU:HD11	1.87	0.56
5:CE:110:LEU:CD1	5:CE:118:ILE:HD13	2.33	0.56
2:CB:87:ARG:HD2	2:CB:87:ARG:O	2.04	0.56
1:CA:1151:A:H5'	10:CJ:41:PRO:HA	1.86	0.56
41:DF:114:VAL:O	41:DF:114:VAL:HG12	2.05	0.56
39:BD:267:SER:C	39:BD:269:PHE:N	2.46	0.56
9:CI:19:LEU:HD21	9:CI:59:PHE:CB	2.34	0.56
49:DQ:12:GLN:HG2	49:DQ:73:PRO:HD2	1.86	0.56
49:DQ:64:ILE:HG22	49:DQ:65:PHE:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:40:ARG:NH2	36:BA:2232:U:OP2	2.38	0.56
10:CJ:90:LEU:H	10:CJ:91:PRO:HD3	1.70	0.56
12:CL:122:THR:HG23	12:CL:122:THR:O	2.04	0.56
43:BH:41:MET:O	43:BH:42:ARG:CB	2.53	0.56
58:DZ:123:ASP:C	58:DZ:124:ILE:HG12	2.26	0.56
43:DH:41:MET:HG3	43:DH:42:ARG:O	2.05	0.56
43:DH:42:ARG:HG2	43:DH:43:VAL:N	2.18	0.56
2:CB:190:THR:O	2:CB:191:ASP:HB3	2.04	0.56
2:AB:229:VAL:CG1	2:AB:230:VAL:N	2.67	0.56
1:CA:1086:U:H2'	1:CA:1087:G:C5'	2.35	0.56
52:DT:6:LEU:O	52:DT:10:VAL:HG23	2.05	0.56
1:CA:858:G:C5	1:CA:869:G:N7	2.73	0.56
12:CL:8:ASN:HD22	17:CQ:34:LYS:HZ1	1.52	0.56
12:CL:8:ASN:HD22	17:CQ:34:LYS:HZ3	1.54	0.56
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.85	0.56
36:BA:303:U:H2'	36:BA:304:G:H8	1.68	0.56
1:CA:521:G:H4'	12:CL:73:GLU:HG3	1.86	0.56
22:AV:44:G:C2'	22:AV:45:U:H5'	2.36	0.56
39:BD:132:PRO:HD2	39:BD:135:PHE:HD2	1.70	0.56
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.21	0.56
16:AP:8:ARG:C	16:AP:9:PHE:HD1	2.08	0.56
21:AU:10:ARG:O	21:AU:11:GLY:C	2.42	0.56
13:CM:116:THR:O	13:CM:117:VAL:C	2.42	0.56
36:DA:1784:A:H4'	36:DA:1785:A:O5'	2.04	0.56
51:BS:57:LYS:HD2	51:BS:57:LYS:C	2.25	0.56
38:BC:73:ARG:HH11	38:BC:73:ARG:HG3	1.71	0.56
41:DF:51:THR:CG2	41:DF:92:PRO:HD2	2.35	0.56
36:BA:1946:U:H2'	36:BA:1947:C:H6	1.70	0.56
1:CA:825:G:O2'	1:CA:826:C:H5'	2.06	0.56
1:CA:452:A:O2'	1:CA:453:A:H8	1.89	0.56
36:BA:16:G:O2'	36:BA:17:G:H5'	2.06	0.56
36:BA:1222:C:H2'	36:BA:1223:G:C5'	2.35	0.56
36:BA:1469:A:O2'	36:BA:1470:G:H5'	2.04	0.56
1:CA:160:A:H2'	1:CA:161:A:O4'	2.04	0.56
36:DA:2138:C:H2'	36:DA:2139:C:C6	2.40	0.56
36:BA:176:G:H3'	36:BA:177:G:N2	2.20	0.56
2:CB:96:ARG:HD3	2:CB:148:TYR:CE1	2.40	0.56
36:BA:271(R):G:O2'	36:BA:271(S):G:H5'	2.05	0.56
12:CL:25:PRO:O	12:CL:26:ALA:HB2	2.06	0.56
39:BD:218:ARG:HG3	39:BD:218:ARG:HH11	1.70	0.56
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:233:SER:O	2:AB:235:SER:N	2.38	0.56
36:DA:523:C:O2'	36:DA:524:U:H5'	2.05	0.56
36:DA:445:C:O2'	36:DA:446:G:H5'	2.05	0.56
36:DA:171:G:O2'	36:DA:172:C:H5'	2.05	0.56
1:CA:646:U:H2'	1:CA:647:C:C6	2.41	0.56
42:BG:28:VAL:HG12	42:BG:28:VAL:O	2.05	0.56
36:BA:1839:G:H8	36:BA:1839:G:H5'	1.68	0.56
1:AA:607:A:O2'	1:AA:608:A:H5'	2.06	0.56
15:CO:25:THR:O	15:CO:29:VAL:HG23	2.05	0.56
36:BA:338:G:N2	36:BA:339:U:H1'	2.20	0.56
51:DS:67:ARG:HH21	51:DS:100:ALA:N	2.04	0.56
57:BY:29:GLU:HB2	57:BY:38:ILE:CG2	2.35	0.56
1:CA:430:A:OP2	4:CD:22:LYS:HE2	2.06	0.56
51:BS:35:ILE:H	51:BS:53:SER:HB2	1.69	0.56
51:DS:12:PHE:CD1	51:DS:12:PHE:C	2.79	0.56
52:BT:81:PRO:C	52:BT:82:LEU:HD12	2.26	0.56
31:B5:57:VAL:CG1	31:B5:58:LEU:H	2.13	0.56
25:CZ:221:PHE:CE2	25:CZ:247:VAL:HG11	2.40	0.56
28:B2:55:ARG:NH1	28:B2:55:ARG:HG3	2.21	0.56
36:DA:2297:C:C2'	36:DA:2298:A:H5'	2.35	0.56
2:AB:96:ARG:HH11	2:AB:148:TYR:HE1	1.52	0.56
36:DA:1247:A:OP2	48:DP:18:ARG:NH2	2.38	0.56
51:BS:30:ARG:HD3	51:BS:97:ARG:HG2	1.88	0.56
58:DZ:10:ARG:NE	58:DZ:36:LYS:HB2	2.17	0.56
25:CZ:133:VAL:CG2	25:CZ:168:VAL:HG11	2.28	0.56
10:AJ:3:LYS:C	10:AJ:4:ILE:HD12	2.25	0.56
1:AA:1442(B):A:N1	52:BT:118:ARG:NH2	2.53	0.56
46:BN:47:ALA:HB2	46:BN:112:LEU:CD1	2.34	0.56
56:BX:10:ALA:O	56:BX:28:PHE:HB2	2.05	0.56
58:BZ:109:ALA:N	58:BZ:142:SER:HA	2.20	0.56
25:CZ:101:GLY:HA3	25:CZ:210:ILE:CD1	2.35	0.56
22:CV:68:C:H2'	22:CV:69:G:C5'	2.33	0.56
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.69	0.56
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.40	0.56
1:AA:626:U:H2'	1:AA:627:G:C8	2.40	0.56
8:CH:91:ARG:HG3	17:CQ:34:LYS:H	1.69	0.56
40:BE:38:THR:C	40:BE:40:GLU:H	2.09	0.56
36:BA:321:G:H4'	41:BF:165:ARG:O	2.06	0.56
16:AP:43:LYS:HA	16:AP:48:TRP:CG	2.41	0.56
11:CK:126:ARG:C	11:CK:128:ALA:H	2.08	0.56
2:CB:234:PRO:O	2:CB:235:SER:O	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:72:PRO:O	8:AH:73:ASP:HB3	2.04	0.56
25:CZ:36:ALA:HA	25:CZ:39:ASN:O	2.05	0.56
48:DP:107:LYS:O	48:DP:108:LYS:HB2	2.05	0.56
18:CR:51:LEU:HD22	18:CR:52:PRO:HD2	1.87	0.56
36:DA:271(F):C:H2'	36:DA:271(G):C:O4'	2.04	0.56
42:DG:71:THR:HG22	42:DG:71:THR:O	2.06	0.56
36:BA:1862:G:O2'	36:BA:1863:G:H5'	2.05	0.56
7:CG:14:PRO:HG3	7:CG:21:VAL:CG1	2.36	0.56
21:AU:2:GLY:O	21:AU:4:GLY:N	2.38	0.56
25:CZ:20:VAL:CG1	25:CZ:115:GLN:HE22	2.18	0.56
36:BA:84:A:H2	36:BA:98:G:N3	2.03	0.56
1:CA:1221:G:OP1	1:CA:1321:C:N3	2.38	0.56
47:DO:71:ARG:NH2	47:DO:122:LEU:O	2.36	0.56
40:DE:52:LEU:HB3	40:DE:76:ARG:H	1.70	0.56
30:B4:5:ILE:O	30:B4:5:ILE:CG1	2.54	0.56
34:B8:62:LEU:N	34:B8:63:PRO:HD2	2.20	0.56
42:BG:110:ALA:O	42:BG:111:LEU:C	2.44	0.56
54:BV:8:GLY:C	54:BV:10:LYS:H	2.09	0.56
48:DP:40:SER:O	48:DP:41:ARG:CD	2.53	0.56
42:BG:82:LEU:HD12	42:BG:87:PRO:HA	1.86	0.56
39:BD:37:LEU:O	39:BD:38:LYS:O	2.24	0.56
47:BO:34:THR:HG23	47:BO:35:VAL:N	2.20	0.56
32:B6:12:GLU:HA	32:B6:23:THR:CB	2.35	0.56
58:DZ:152:ALA:C	58:DZ:154:ASP:H	2.07	0.56
30:D4:5:ILE:H	30:D4:5:ILE:HD13	1.70	0.56
1:CA:1418:A:H2	36:DA:1948:G:N3	2.03	0.56
1:AA:1039:C:H2'	1:AA:1040:U:C5	2.41	0.56
49:BQ:141:GLN:C	58:BZ:53:ILE:HB	2.25	0.56
50:DR:63:ARG:HA	50:DR:80:PHE:CE2	2.41	0.56
48:DP:97:PRO:O	48:DP:98:GLU:HB3	2.05	0.56
52:BT:98:LYS:HB3	52:BT:100:TYR:CE1	2.40	0.56
36:BA:1246:A:OP1	48:BP:16:ARG:NH2	2.38	0.56
10:CJ:96:ILE:H	10:CJ:96:ILE:CD1	2.16	0.56
42:BG:113:ARG:HE	42:BG:113:ARG:HA	1.71	0.56
36:BA:1162:G:H4'	54:BV:24:LYS:HB3	1.87	0.56
43:BH:136:ILE:H	43:BH:136:ILE:CD1	2.17	0.56
36:DA:2523:G:H2'	36:DA:2524:G:H5''	1.87	0.56
43:DH:12:PRO:N	43:DH:48:GLY:HA2	2.21	0.56
3:AC:38:ARG:CB	3:AC:38:ARG:HH11	2.18	0.56
38:DC:30:LYS:HD3	38:DC:185:LEU:CD1	2.35	0.56
55:BW:12:ILE:HD13	55:BW:17:VAL:HG22	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:112:G:H4'	1:CA:389:A:H4'	1.87	0.56
26:D0:11:ARG:O	26:D0:14:ARG:NH2	2.38	0.56
36:DA:769:G:H4'	36:DA:1379:A:N1	2.21	0.56
41:DF:69:HIS:CD2	41:DF:69:HIS:N	2.74	0.56
2:CB:111:ARG:HE	2:CB:145:LEU:HD21	1.70	0.56
36:BA:850:C:O2'	36:BA:851:U:H5'	2.06	0.56
39:DD:229:VAL:HG13	39:DD:230:ASP:N	2.20	0.56
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.06	0.56
3:CC:107:GLN:N	3:CC:107:GLN:CD	2.58	0.56
50:BR:59:ASP:O	50:BR:61:HIS:N	2.38	0.56
36:BA:729:G:OP2	39:BD:13:ARG:NH1	2.38	0.56
4:CD:36:ARG:N	4:CD:37:PRO:HD3	2.20	0.56
49:BQ:54:MET:HB3	49:BQ:64:ILE:CD1	2.35	0.56
11:CK:89:ALA:O	11:CK:91:ARG:N	2.39	0.56
36:BA:2295:C:H2'	36:BA:2296:U:H6	1.71	0.56
36:DA:1751:C:H2'	36:DA:1752:C:C6	2.41	0.56
1:AA:384:G:H2'	1:AA:385:C:C6	2.40	0.56
3:CC:21:ARG:NH2	3:CC:56:ASP:OD1	2.38	0.56
36:BA:1417:C:O2'	36:BA:1418:G:H5'	2.05	0.56
36:DA:208:C:H2'	36:DA:209:C:C6	2.40	0.56
36:BA:2455:G:H2'	36:BA:2456:C:C6	2.41	0.56
13:CM:36:LYS:HD2	13:CM:59:TYR:OH	2.06	0.56
25:CZ:270:VAL:CG1	25:CZ:286:VAL:HG21	2.29	0.56
26:D0:26:TYR:HA	26:D0:69:PHE:HE1	1.70	0.56
1:CA:1325:C:H5''	21:CU:15:ARG:HH21	1.71	0.56
13:CM:73:GLU:O	13:CM:76:ALA:N	2.39	0.56
21:CU:6:ARG:HD3	21:CU:15:ARG:HH11	1.68	0.56
52:DT:91:ARG:HG2	52:DT:116:ALA:HA	1.87	0.56
40:DE:73:GLU:HG3	40:DE:74:PRO:HD2	1.86	0.56
2:AB:8:LYS:NZ	2:AB:217:ARG:NH1	2.53	0.56
49:DQ:60:ARG:HA	58:DZ:178:GLU:O	2.05	0.56
31:B5:6:VAL:HG13	36:BA:2016:U:H1'	1.88	0.56
25:AZ:131:ILE:O	25:AZ:168:VAL:HG13	2.05	0.56
3:AC:3:ASN:O	3:AC:4:LYS:CB	2.51	0.56
32:B6:9:LEU:C	32:B6:9:LEU:HD13	2.25	0.56
51:BS:41:ASP:OD2	51:BS:44:LYS:HB2	2.05	0.56
1:AA:1314:C:O5'	1:AA:1314:C:O2	2.23	0.56
50:BR:55:ALA:HB2	50:BR:79:LEU:CD1	2.35	0.56
27:D1:65:SER:O	27:D1:66:HIS:CB	2.54	0.56
2:AB:109:SER:O	2:AB:111:ARG:N	2.39	0.56
1:CA:358:U:H1'	25:CZ:233:GLY:HA2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:393:A:C2'	1:CA:394:G:H5'	2.34	0.56
12:CL:80:HIS:HD2	24:CY:68:C:C4'	2.18	0.56
41:DF:84:VAL:C	41:DF:86:GLY:N	2.59	0.56
55:DW:5:ALA:HB2	55:DW:54:ALA:CB	2.33	0.56
41:DF:157:VAL:O	41:DF:157:VAL:HG23	2.05	0.56
28:D2:62:THR:O	28:D2:65:ASN:HB2	2.06	0.56
36:BA:1887:C:C3'	36:BA:1888:G:H5''	2.36	0.56
25:AZ:174:SER:HB2	25:AZ:177:LEU:HD12	1.87	0.56
6:CF:30:LEU:HD23	6:CF:75:LEU:HD11	1.88	0.56
36:BA:1007:C:OP1	46:BN:37:LYS:HE3	2.05	0.56
26:D0:27:GLU:CD	26:D0:27:GLU:H	2.09	0.56
29:D3:17:LYS:HG2	36:DA:969:U:OP1	2.06	0.56
36:DA:2315:G:H21	42:DG:128:ARG:HE	1.53	0.56
36:DA:793:A:OP2	36:DA:2072:G:H5'	2.05	0.56
39:BD:14:ARG:HD3	39:BD:15:PHE:CZ	2.40	0.56
49:BQ:27:VAL:HG23	49:BQ:137:TYR:CE2	2.40	0.56
12:AL:117:ARG:HB3	12:AL:122:THR:HG23	1.86	0.56
11:CK:126:ARG:O	11:CK:126:ARG:HG2	2.05	0.56
38:DC:159:GLY:O	38:DC:160:ARG:O	2.23	0.56
38:DC:49:ILE:O	38:DC:49:ILE:HD12	2.05	0.56
36:BA:271(E):U:H2'	36:BA:271(F):C:C6	2.41	0.56
1:CA:644:G:H2'	1:CA:645:C:H6	1.71	0.56
36:DA:1813:G:H1'	39:DD:50:THR:OG1	2.06	0.56
40:DE:107:THR:O	40:DE:190:GLY:HA2	2.05	0.56
53:DU:69:CYS:HB2	53:DU:74:LEU:HD11	1.87	0.56
36:DA:107:C:H2'	36:DA:108:U:H6	1.71	0.56
42:DG:49:ASP:CG	42:DG:50:ALA:H	2.08	0.56
21:CU:5:ASP:O	21:CU:11:GLY:HA3	2.06	0.56
46:DN:86:PRO:HG2	46:DN:89:LYS:HG2	1.88	0.56
23:AX:26:A:H3'	23:AX:27:A:O4'	2.05	0.56
2:CB:178:ARG:NH1	8:CH:71:GLY:O	2.39	0.56
43:DH:102:ALA:HB2	43:DH:116:GLU:OE1	2.04	0.56
36:DA:1290:C:H2'	36:DA:1291:C:H6	1.70	0.56
36:DA:1314:C:C6	36:DA:1314:C:H5'	2.40	0.56
36:DA:2153:G:H2'	36:DA:2154:G:H8	1.71	0.56
25:CZ:23:GLY:CA	25:CZ:105:VAL:HG11	2.32	0.56
43:BH:12:PRO:N	43:BH:48:GLY:HA2	2.21	0.56
56:DX:35:THR:CG2	56:DX:37:THR:HB	2.36	0.56
53:BU:79:PHE:HE2	53:BU:110:VAL:HG22	1.69	0.56
53:BU:92:ARG:HD2	53:BU:95:LEU:HG	1.87	0.56
58:BZ:145:GLU:OE1	58:BZ:145:GLU:HA	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:53:LYS:HG2	32:B6:54:ILE:N	2.16	0.56
30:D4:31:ILE:CG2	30:D4:33:VAL:HG23	2.35	0.56
56:BX:55:ASN:HD22	56:BX:55:ASN:N	2.04	0.56
26:B0:49:LYS:HG3	26:B0:80:HIS:HD1	1.70	0.56
25:AZ:26:THR:HG21	60:AZ:501:GDP:H8	1.69	0.56
10:AJ:78:ASN:C	10:AJ:79:ARG:HH11	2.07	0.56
39:DD:99:ASP:OD1	39:DD:99:ASP:C	2.44	0.56
46:BN:70:LYS:HE2	46:BN:72:TYR:OH	2.06	0.56
1:AA:266:G:H5''	1:AA:267:C:H5	1.71	0.56
40:BE:93:VAL:C	40:BE:95:ILE:H	2.09	0.56
24:CY:56:C:N1	36:DA:1067:A:C2	2.74	0.56
43:DH:136:ILE:H	43:DH:136:ILE:CD1	2.16	0.56
55:BW:65:LEU:HD23	55:BW:68:ARG:CD	2.36	0.56
40:DE:63:LEU:HD23	40:DE:63:LEU:O	2.06	0.56
19:CS:35:SER:C	19:CS:37:ARG:H	2.09	0.56
36:DA:691:C:O4'	39:DD:43:ARG:NH1	2.39	0.56
41:DF:175:THR:OG1	41:DF:176:LEU:N	2.37	0.56
39:BD:65:ILE:H	39:BD:65:ILE:CD1	2.14	0.56
46:DN:132:ALA:O	46:DN:133:GLN:CB	2.53	0.56
1:CA:397:A:N7	1:CA:547:A:O2'	2.38	0.56
36:BA:2110:G:N2	36:BA:2178:C:H5	2.03	0.56
36:DA:2556:C:H2'	36:DA:2557:G:O4'	2.06	0.56
1:CA:957:U:O2	1:CA:959:A:H8	1.89	0.56
40:DE:105:THR:O	40:DE:196:VAL:HA	2.06	0.56
7:CG:140:ASP:HA	7:CG:143:ARG:HH12	1.69	0.56
20:CT:63:ILE:HG22	20:CT:64:ASP:N	2.21	0.56
38:DC:53:ARG:HH12	38:DC:55:ASP:CG	2.09	0.56
20:CT:82:SER:O	20:CT:86:ARG:HB2	2.05	0.56
39:DD:118:VAL:HG13	39:DD:123:ALA:HB2	1.87	0.56
36:BA:2777:G:H5''	36:BA:2778:A:C5'	2.35	0.56
25:AZ:176:LEU:HD22	25:AZ:179:LEU:HB3	1.88	0.56
36:BA:548:A:H2'	36:BA:549:G:H5'	1.88	0.56
2:CB:235:SER:O	2:CB:236:TYR:C	2.44	0.56
36:BA:2460:U:H4'	49:BQ:79:LEU:HD11	1.88	0.56
11:CK:84:VAL:HG11	11:CK:95:ILE:HD11	1.87	0.56
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.40	0.56
1:CA:1246:C:O2'	1:CA:1247:U:H5'	2.05	0.56
54:BV:58:VAL:HB	54:BV:98:GLU:HG2	1.88	0.56
5:CE:36:ASP:OD1	5:CE:38:GLN:N	2.37	0.56
2:AB:45:GLN:HA	2:AB:45:GLN:HE21	1.69	0.56
36:BA:2199:A:H3'	36:BA:2200:C:H6	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2187:G:C3'	36:BA:2188:C:H5'	2.35	0.56
13:CM:9:ILE:N	13:CM:9:ILE:HD12	2.21	0.56
4:AD:100:ARG:O	4:AD:103:ASN:HB3	2.06	0.56
52:DT:65:LYS:HG3	52:DT:66:VAL:N	2.21	0.56
52:DT:56:GLY:O	52:DT:59:THR:HG23	2.06	0.56
43:DH:124:GLU:O	43:DH:131:VAL:HG13	2.06	0.56
36:BA:1567:A:H5'	39:BD:58:HIS:CD2	2.41	0.56
36:DA:2128:C:O2'	36:DA:2129:C:P	2.64	0.56
25:AZ:325:LYS:O	25:AZ:328:GLY:N	2.39	0.56
20:AT:50:GLU:OE2	20:AT:100:ILE:HD11	2.06	0.56
32:B6:15:GLU:O	32:B6:17:LYS:N	2.38	0.56
32:B6:53:LYS:O	32:B6:54:ILE:C	2.44	0.56
36:DA:139:G:H2'	36:DA:139(A):G:H5''	1.87	0.56
37:BB:73:A:N1	58:BZ:34:ASN:ND2	2.54	0.56
58:DZ:12:GLY:O	58:DZ:13:GLU:HG3	2.06	0.56
25:CZ:17:ILE:HG13	25:CZ:104:LEU:HA	1.88	0.56
52:BT:98:LYS:HB3	52:BT:100:TYR:HE1	1.71	0.56
25:CZ:290:LEU:HB2	25:CZ:293:VAL:HG21	1.88	0.56
9:CI:4:TYR:HD2	9:CI:85:LEU:HA	1.70	0.56
5:CE:12:LEU:CD1	5:CE:31:LEU:HB2	2.36	0.56
28:D2:59:ARG:O	28:D2:63:VAL:HG23	2.06	0.56
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.06	0.56
50:DR:104:ARG:O	50:DR:104:ARG:HG2	2.05	0.56
36:DA:1720:U:H2'	36:DA:1721:G:C4'	2.35	0.56
13:AM:116:THR:O	13:AM:116:THR:CG2	2.54	0.56
1:CA:955:U:H1'	1:CA:1227:A:H62	1.71	0.56
37:DB:17:C:H2'	37:DB:18:G:O4'	2.06	0.56
36:DA:2019:A:H4'	53:DU:34:LYS:HD2	1.87	0.56
36:DA:1472:A:O2'	36:DA:1473:G:H5'	2.06	0.56
1:AA:646:U:H2'	1:AA:647:C:C6	2.40	0.56
2:AB:32:ILE:O	2:AB:32:ILE:HG12	2.03	0.56
39:DD:108:PRO:HB3	39:DD:143:HIS:CE1	2.41	0.56
1:CA:950:U:H2'	1:CA:951:G:C8	2.41	0.56
36:BA:1411:C:H2'	36:BA:1412:A:H8	1.70	0.56
38:BC:8:ARG:O	38:BC:12:GLU:HG2	2.06	0.56
6:CF:60:PHE:CE2	18:CR:78:LEU:HD21	2.41	0.56
56:DX:68:ARG:HD3	56:DX:68:ARG:O	2.05	0.56
36:DA:2880:C:H1'	50:DR:92:GLY:O	2.06	0.56
24:AY:58:A:O2'	24:AY:59:G:H5''	2.05	0.56
36:BA:1614:A:H62	55:BW:93:ALA:HB2	1.71	0.56
38:BC:83:ILE:O	38:BC:83:ILE:HG22	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:53:LEU:HA	28:B2:56:GLN:CG	2.36	0.56
28:B2:6:VAL:HG13	28:B2:7:ARG:N	2.20	0.56
36:DA:611:C:H2'	36:DA:612:C:H6	1.71	0.56
36:DA:1208:C:O2	36:DA:1208:C:H2'	2.06	0.56
42:BG:138:GLN:HB3	42:BG:153:ARG:O	2.06	0.56
54:DV:62:LEU:HD21	54:DV:95:LEU:CB	2.24	0.56
25:AZ:341:GLN:NE2	25:AZ:389:ARG:O	2.39	0.56
32:B6:15:GLU:CD	32:B6:18:ARG:NE	2.58	0.56
57:DY:95:LYS:HE3	57:DY:100:ALA:CB	2.35	0.56
34:D8:42:ARG:NH2	36:DA:2382:G:H21	2.04	0.56
46:BN:28:THR:HG23	46:BN:29:LYS:N	2.20	0.56
27:D1:4:VAL:HG23	27:D1:10:LYS:O	2.05	0.56
1:CA:59:A:H1'	1:CA:354:G:N2	2.21	0.56
36:BA:1754:C:OP1	52:BT:96:ARG:NH1	2.35	0.56
1:CA:1125:U:H1'	10:CJ:5:ARG:CZ	2.36	0.56
40:BE:120:TRP:CD1	40:BE:155:LYS:HB3	2.41	0.56
36:BA:2712:U:OP1	36:BA:2714:G:H4'	2.05	0.56
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.26	0.56
39:DD:229:VAL:CG1	39:DD:230:ASP:N	2.68	0.56
2:AB:200:ILE:HD12	2:AB:200:ILE:N	2.20	0.56
38:BC:53:ARG:HH11	38:BC:53:ARG:CB	2.18	0.56
4:CD:174:LEU:HA	4:CD:184:LYS:O	2.06	0.56
43:DH:143:GLN:CA	43:DH:143:GLN:NE2	2.69	0.56
15:CO:82:ILE:CG2	15:CO:83:GLU:N	2.68	0.56
36:BA:2174:C:H2'	36:BA:2175:C:H5'	1.87	0.56
38:BC:4:GLY:O	38:BC:8:ARG:HG3	2.06	0.56
36:DA:2162:G:O2'	36:DA:2163:C:H5'	2.06	0.56
46:DN:6:PRO:HG3	46:DN:41:ASP:OD1	2.06	0.56
49:BQ:6:ARG:O	49:BQ:7:MET:HG3	2.05	0.56
36:DA:244:A:O3'	48:DP:74:GLU:HB2	2.05	0.56
1:AA:714:G:H2'	1:AA:715:A:C8	2.41	0.56
1:CA:370:C:O2'	1:CA:371:G:H5'	2.06	0.56
43:DH:65:HIS:O	43:DH:67:LEU:N	2.36	0.56
1:AA:701:C:OP1	1:AA:703:G:H5'	2.06	0.56
10:AJ:54:PHE:C	10:AJ:55:LYS:HE3	2.26	0.56
53:DU:95:LEU:C	53:DU:97:ASP:H	2.09	0.56
36:DA:2376:A:O2'	36:DA:2377:A:H5'	2.06	0.56
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.06	0.56
3:CC:32:LEU:HD22	3:CC:59:ARG:CD	2.36	0.56
1:CA:1362:C:O2'	1:CA:1363:C:H5''	2.06	0.56
28:B2:29:LYS:CG	28:B2:32:LEU:HD13	2.25	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:24:GLY:HA3	48:DP:33:ARG:NH1	2.21	0.56
47:DO:121:VAL:O	47:DO:122:LEU:HD23	2.05	0.56
42:DG:135:LEU:HB2	42:DG:155:MET:CG	2.36	0.56
42:DG:54:GLU:OE1	42:DG:55:LYS:N	2.39	0.56
53:BU:79:PHE:O	53:BU:83:LEU:HD13	2.06	0.56
1:CA:1060:C:H5'	14:CN:45:ARG:HH22	1.71	0.56
20:AT:100:ILE:C	20:AT:102:GLY:H	2.08	0.56
36:DA:2189:U:H3'	36:DA:2190:G:H5''	1.87	0.56
36:DA:1598:C:H5'	56:DX:36:LYS:CG	2.33	0.56
34:D8:14:VAL:CG2	34:D8:24:ALA:HB2	2.31	0.56
58:DZ:60:GLU:HA	58:DZ:60:GLU:OE1	2.06	0.56
50:BR:4:LEU:O	50:BR:5:LYS:HD3	2.05	0.56
30:B4:20:ASN:ND2	30:B4:21:VAL:N	2.50	0.56
1:AA:975:A:H4'	1:AA:976:G:C5'	2.34	0.56
22:AV:72:C:H2'	22:AV:73:A:H5''	1.88	0.56
36:BA:2376:A:H2'	36:BA:2377:A:O4'	2.06	0.56
1:CA:261:U:O2	1:CA:263:A:C8	2.59	0.56
25:AZ:363:MET:HB3	25:AZ:364:PRO:CD	2.36	0.56
1:AA:67:C:H2'	1:AA:68:G:H8	1.71	0.56
2:AB:229:VAL:O	2:AB:230:VAL:HG13	2.06	0.56
36:DA:548:A:C2'	36:DA:549:G:H5'	2.34	0.56
1:CA:1031:G:H2'	1:CA:1032:G:O4'	2.05	0.56
36:BA:1149:G:H2'	36:BA:1150:C:C6	2.41	0.56
36:BA:643:A:O2'	36:BA:644:A:H5'	2.06	0.56
36:DA:1649:G:H2'	36:DA:1650:G:H8	1.70	0.56
30:D4:37:SER:OG	42:DG:108:ASN:HB3	2.06	0.56
36:DA:422:A:C2	36:DA:423:A:C4	2.94	0.56
22:AW:43:C:H2'	22:AW:44:G:H1'	1.88	0.56
36:DA:2505:G:HO2'	36:DA:2506:U:H6	1.54	0.56
2:AB:61:LEU:HD11	2:AB:160:ASP:CB	2.36	0.56
36:BA:189:G:H2'	36:BA:205:G:N2	2.20	0.56
39:DD:108:PRO:HG2	39:DD:111:LEU:HB2	1.87	0.56
50:BR:24:GLN:HB2	50:BR:44:LEU:HD21	1.87	0.56
36:DA:402:A:O2'	36:DA:403:U:H5'	2.06	0.56
36:DA:1101:U:H2'	36:DA:1102:C:C6	2.41	0.56
36:BA:2758:A:C2	36:BA:2759:G:H1'	2.41	0.56
7:CG:9:VAL:HG22	7:CG:94:ARG:NH1	2.21	0.56
1:AA:72:C:H2'	1:AA:73:G:H8	1.70	0.56
36:DA:2032:G:H21	40:DE:146:THR:HG23	1.70	0.56
36:BA:2348:U:O2'	36:BA:2349:G:H5'	2.06	0.56
1:CA:77:G:H2'	1:CA:77:G:N3	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:86:MET:O	10:CJ:87:THR:HG23	2.06	0.56
36:DA:2402:C:H2'	36:DA:2403:C:H5'	1.88	0.56
36:BA:2626:C:O2'	36:BA:2627:G:H5'	2.06	0.55
52:DT:45:PHE:CE2	52:DT:74:ARG:HG3	2.41	0.55
40:DE:50:GLY:HA3	40:DE:74:PRO:HG3	1.88	0.55
42:DG:51:ARG:HD3	42:DG:53:LEU:HD21	1.86	0.55
31:B5:2:ALA:HB3	36:BA:747:U:N1	2.21	0.55
39:BD:43:ARG:HB2	39:BD:54:ARG:CB	2.33	0.55
41:BF:187:VAL:HG12	48:BP:7:ARG:HA	1.87	0.55
36:BA:196:A:OP2	48:BP:51:PHE:HE2	1.89	0.55
56:DX:12:VAL:HG12	56:DX:27:THR:OG1	2.06	0.55
34:B8:26:LYS:CE	34:B8:47:LYS:HD2	2.36	0.55
34:D8:50:LEU:HD12	34:D8:51:ALA:H	1.71	0.55
51:BS:29:PHE:HD1	51:BS:30:ARG:N	2.03	0.55
36:DA:250:G:H2'	36:DA:251:A:H8	1.65	0.55
49:DQ:135:ASP:O	49:DQ:138:ASP:OD2	2.24	0.55
36:BA:1510:G:O2'	36:BA:1511:C:H5'	2.06	0.55
36:BA:1022:G:N2	36:BA:1142(A):A:C2	2.73	0.55
14:AN:13:THR:O	14:AN:14:PRO:O	2.22	0.55
36:BA:1116:C:O2'	36:BA:1117:G:H5'	2.06	0.55
48:DP:122:PRO:HG3	48:DP:141:ALA:HB3	1.88	0.55
9:AI:53:VAL:O	9:AI:53:VAL:HG23	2.06	0.55
1:CA:926:G:O3'	23:CX:16:A:H2	1.89	0.55
36:BA:2177:C:H2'	36:BA:2178:C:O2	2.06	0.55
25:CZ:113:MET:HB3	25:CZ:114:PRO:CD	2.35	0.55
30:B4:22:ILE:N	30:B4:22:ILE:HD12	2.20	0.55
1:AA:355:C:H4'	1:AA:388:G:O2'	2.06	0.55
1:AA:356:A:H2'	1:AA:357:G:H8	1.72	0.55
43:BH:94:TYR:CD1	43:BH:107:VAL:HA	2.38	0.55
20:CT:45:GLN:N	20:CT:45:GLN:HE21	2.03	0.55
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.42	0.55
38:DC:140:PRO:CA	38:DC:145:VAL:HB	2.35	0.55
57:BY:86:ARG:HG2	57:BY:87:LYS:N	2.21	0.55
11:CK:85:ARG:HG2	11:CK:111:ASP:O	2.05	0.55
36:BA:1287:A:OP1	50:BR:104:ARG:HG2	2.05	0.55
36:BA:815:C:H2'	36:BA:816:C:C6	2.41	0.55
36:DA:2807:G:H3'	36:DA:2808:U:H5''	1.88	0.55
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.06	0.55
25:AZ:314:THR:O	25:AZ:373:GLU:HA	2.06	0.55
7:AG:150:ALA:HB2	11:AK:50:TYR:OH	2.06	0.55
6:AF:26:ILE:O	6:AF:29:ALA:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.71	0.55
29:B3:54:VAL:HG12	29:B3:55:ARG:N	2.20	0.55
36:BA:2360:A:O2'	36:BA:2361:A:O4'	2.20	0.55
22:CV:16:U:H5'	22:CV:17:C:OP2	2.07	0.55
22:CV:63:G:H2'	22:CV:64:A:C8	2.41	0.55
1:CA:1314:C:OP2	19:CS:6:LYS:HG3	2.06	0.55
28:B2:32:LEU:HD23	28:B2:32:LEU:C	2.26	0.55
57:DY:81:LYS:HD3	57:DY:97:ARG:O	2.05	0.55
36:DA:194:G:H2'	36:DA:195:A:O4'	2.07	0.55
36:DA:833:U:H5''	48:DP:48:PRO:HB2	1.87	0.55
32:B6:7:ILE:HG23	32:B6:29:ASN:HD22	1.70	0.55
25:AZ:315:LYS:O	25:AZ:403:ILE:HG23	2.06	0.55
36:DA:2186:G:H2'	36:DA:2187:G:N9	2.21	0.55
34:B8:52:LYS:N	34:B8:53:PRO:CD	2.69	0.55
36:DA:2176:A:H8	36:DA:2176:A:H5''	1.71	0.55
49:BQ:140:ALA:HB3	58:BZ:53:ILE:CD1	2.37	0.55
49:BQ:141:GLN:HE21	58:BZ:72:ARG:HA	1.70	0.55
32:D6:11:LEU:HD21	32:D6:26:ASN:ND2	2.20	0.55
32:D6:11:LEU:HD23	32:D6:26:ASN:N	2.20	0.55
36:DA:2397:G:N2	36:DA:2420:C:H1'	2.22	0.55
32:D6:44:ARG:C	32:D6:45:LYS:HE3	2.26	0.55
48:BP:146:VAL:HG13	48:BP:147:LEU:N	2.20	0.55
58:DZ:69:THR:HB	58:DZ:89:PHE:O	2.06	0.55
36:DA:1019:U:HO2'	36:DA:1021:A:H2	1.49	0.55
1:CA:1318:A:H4'	19:CS:10:PHE:CE1	2.42	0.55
36:BA:1058:G:H1'	36:BA:1082:U:O4	2.05	0.55
43:BH:41:MET:HG3	43:BH:42:ARG:N	2.20	0.55
6:CF:61:LEU:HD13	6:CF:63:TYR:OH	2.06	0.55
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.21	0.55
22:AV:43:C:H5'	22:AV:44:G:OP2	2.06	0.55
9:CI:52:ALA:HB1	9:CI:95:LYS:HD2	1.88	0.55
9:CI:95:LYS:HG3	9:CI:96:LEU:CD1	2.36	0.55
1:CA:1127:G:H1'	1:CA:1147:C:H42	1.71	0.55
1:CA:685:G:N2	1:CA:686:U:N3	2.55	0.55
36:BA:654(N):G:N7	36:BA:654(O):G:C4	2.75	0.55
55:DW:7:ALA:HB2	55:DW:50:VAL:HG23	1.87	0.55
46:BN:67:LEU:HD23	46:BN:87:LEU:HD12	1.88	0.55
36:BA:64:A:C5	56:BX:66:LEU:HD12	2.42	0.55
36:BA:2248:C:C2'	36:BA:2249:U:H5'	2.36	0.55
36:BA:466:A:C2'	36:BA:467:G:H5'	2.36	0.55
50:BR:11:ASN:O	50:BR:12:ARG:HG3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2768:C:H5''	46:BN:83:LYS:NZ	2.21	0.55
36:DA:1201:C:H6	36:DA:1201:C:O5'	1.88	0.55
36:DA:36:G:H2'	36:DA:37:C:H6	1.71	0.55
36:DA:2078:C:H2'	36:DA:2079:U:C6	2.40	0.55
39:BD:93:ALA:HB3	39:BD:105:ILE:HG22	1.87	0.55
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.42	0.55
32:D6:22:ALA:CB	32:D6:39:TYR:CZ	2.90	0.55
36:DA:1486:A:H2'	36:DA:1487:G:H8	1.71	0.55
19:CS:51:VAL:O	19:CS:57:HIS:HA	2.07	0.55
36:BA:150:C:O2'	36:BA:151:C:H5'	2.06	0.55
40:BE:65:GLY:HA2	40:BE:70:ALA:HB1	1.87	0.55
40:DE:34:VAL:O	40:DE:35:GLN:CB	2.54	0.55
4:AD:61:LYS:CA	4:AD:203:VAL:HG13	2.34	0.55
25:AZ:184:ARG:HG3	25:AZ:185:ASN:HD22	1.71	0.55
38:BC:123:VAL:O	38:BC:127:LEU:HB3	2.05	0.55
25:CZ:24:LYS:O	25:CZ:26:THR:N	2.35	0.55
25:CZ:331:HIS:CD2	25:CZ:331:HIS:H	2.24	0.55
28:B2:41:ILE:HG13	28:B2:42:GLY:N	2.17	0.55
34:D8:62:LEU:N	34:D8:63:PRO:HD2	2.21	0.55
47:DO:105:GLU:N	47:DO:105:GLU:OE1	2.39	0.55
36:DA:271(K):U:H3'	36:DA:271(L):U:H5'	1.88	0.55
57:DY:14:LEU:HA	57:DY:24:VAL:HG22	1.89	0.55
57:DY:28:LYS:HG2	57:DY:39:VAL:CG2	2.22	0.55
39:BD:62:TYR:HE1	39:BD:64:ILE:HA	1.70	0.55
38:DC:10:LEU:HD13	38:DC:13:LYS:HZ2	1.71	0.55
39:BD:44:ASN:N	39:BD:44:ASN:OD1	2.37	0.55
56:BX:12:VAL:O	56:BX:13:LEU:HB2	2.04	0.55
36:BA:260:G:H1'	36:BA:621:A:H1'	1.88	0.55
37:BB:7:G:H2'	37:BB:8:U:C5'	2.36	0.55
30:B4:9:LEU:CD1	30:B4:10:VAL:H	2.19	0.55
50:DR:52:ILE:HB	50:DR:94:TYR:CD2	2.41	0.55
24:CY:28:C:H2'	24:CY:29:G:C8	2.39	0.55
36:BA:654(E):G:N2	36:BA:654(Q):C:C1'	2.64	0.55
46:BN:57:ALA:HB3	46:BN:124:ALA:HA	1.88	0.55
33:D7:5:TRP:O	36:DA:1612:C:H4'	2.06	0.55
40:BE:30:PRO:HD3	40:BE:180:ASN:ND2	2.21	0.55
46:DN:66:LYS:O	46:DN:70:LYS:HB3	2.07	0.55
13:AM:3:ARG:NH2	13:AM:7:VAL:HG13	2.21	0.55
36:DA:321:G:O2'	36:DA:340:A:N3	2.36	0.55
6:CF:35:ALA:O	6:CF:36:ARG:CB	2.55	0.55
16:CP:1:MET:HG3	16:CP:65:GLN:CG	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:363:MET:HB3	25:CZ:364:PRO:CD	2.36	0.55
1:CA:538:G:O2'	1:CA:539:A:H5'	2.06	0.55
22:CW:55:U:C2'	22:CW:56:C:H5''	2.35	0.55
44:BJ:85:UNK:CG	44:BJ:86:UNK:H	2.20	0.55
1:AA:635:G:O2'	1:AA:636:U:H5'	2.06	0.55
39:DD:211:ARG:HA	39:DD:214:TRP:CE3	2.41	0.55
41:BF:54:ARG:NH2	41:BF:77:ASP:OD1	2.40	0.55
3:AC:55:VAL:HG12	3:AC:55:VAL:O	2.05	0.55
11:CK:44:SER:H	11:CK:47:VAL:CG2	2.20	0.55
36:DA:137:C:O2	36:DA:137:C:H2'	2.06	0.55
38:BC:86:ALA:HB1	38:BC:153:ILE:HD12	1.88	0.55
1:AA:838:G:C6	1:AA:840:C:H1'	2.41	0.55
1:CA:1120:G:H2'	1:CA:1121:U:C6	2.42	0.55
49:BQ:76:LYS:HB3	49:BQ:91:GLU:CG	2.37	0.55
36:DA:1469:A:H2'	36:DA:1470:G:C8	2.42	0.55
36:DA:2050:C:H1'	40:DE:156:MET:HE2	1.87	0.55
33:B7:21:ARG:HG2	33:B7:21:ARG:HH11	1.71	0.55
41:BF:67:GLN:HG3	41:BF:67:GLN:O	2.06	0.55
36:DA:113:G:H5'	36:DA:114:U:OP1	2.05	0.55
35:D9:9:ARG:HD2	35:D9:16:VAL:CG2	2.36	0.55
36:BA:2184:G:H2'	36:BA:2185:C:C1'	2.37	0.55
1:CA:403:C:O2'	1:CA:404:U:H5'	2.06	0.55
41:BF:120:GLU:HB3	41:BF:122:LYS:HD3	1.88	0.55
52:DT:32:TYR:CD2	52:DT:81:PRO:HG2	2.41	0.55
36:DA:611:C:H6	36:DA:611:C:O5'	1.89	0.55
58:BZ:166:SER:HB2	58:BZ:168:GLU:N	2.20	0.55
36:BA:482:A:H1'	36:BA:498:G:N2	2.21	0.55
39:BD:35:LYS:HD3	39:BD:61:LEU:HB3	1.88	0.55
50:BR:99:LYS:CD	50:BR:99:LYS:N	2.65	0.55
58:BZ:114:GLY:CA	58:BZ:146:ILE:HG21	2.35	0.55
48:BP:23:PRO:CD	48:BP:33:ARG:HE	2.16	0.55
53:BU:85:LYS:CD	53:BU:117:GLN:HE22	2.11	0.55
36:BA:1024:G:C3'	36:BA:1025:G:H5''	2.30	0.55
32:D6:5:VAL:O	32:D6:5:VAL:HG12	2.05	0.55
34:D8:32:LEU:CB	34:D8:36:LYS:HZ2	2.19	0.55
53:DU:57:PHE:O	53:DU:58:ARG:C	2.45	0.55
53:DU:82:GLY:C	53:DU:84:LYS:N	2.59	0.55
57:BY:95:LYS:CG	57:BY:100:ALA:HA	2.35	0.55
37:DB:30:C:H2'	37:DB:31:C:O4'	2.06	0.55
51:BS:74:ALA:HB2	51:BS:101:LEU:HD13	1.88	0.55
54:BV:24:LYS:HG3	54:BV:90:PRO:HB2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:150:C:C2'	1:AA:151:A:H5''	2.34	0.55
36:DA:761:A:H3'	36:DA:761:A:C8	2.41	0.55
6:AF:11:ASN:HB3	6:AF:14:LEU:CD2	2.34	0.55
46:DN:11:PRO:HB2	46:DN:13:TRP:CD1	2.41	0.55
36:BA:2807:G:C3'	36:BA:2808:U:H5''	2.36	0.55
17:AQ:75:ARG:HG3	17:AQ:75:ARG:NH1	2.19	0.55
52:DT:37:GLY:O	52:DT:38:ASN:HB3	2.07	0.55
27:B1:52:ARG:O	27:B1:53:VAL:O	2.24	0.55
36:DA:185:U:C2	36:DA:212:G:N2	2.74	0.55
36:DA:2590:A:O2'	36:DA:2591:C:H5'	2.07	0.55
12:CL:41:ARG:CG	12:CL:42:THR:N	2.69	0.55
3:CC:14:ILE:HG13	3:CC:15:THR:N	2.22	0.55
16:CP:64:ALA:O	16:CP:66:PRO:HD3	2.07	0.55
1:CA:178:C:O2'	1:CA:179:A:H5'	2.06	0.55
11:AK:17:GLY:O	11:AK:80:VAL:HA	2.07	0.55
37:BB:3:C:N4	37:BB:118:G:H1	2.05	0.55
36:BA:2869:G:H2'	36:BA:2870:C:H6	1.70	0.55
22:AW:19:G:C5'	22:AW:20:U:H5	2.20	0.55
33:B7:43:THR:HG23	33:B7:44:PRO:CD	2.35	0.55
25:CZ:143:ASP:CG	25:CZ:146:LEU:HB2	2.27	0.55
36:DA:491:G:O2'	36:DA:492:A:H5'	2.06	0.55
1:AA:821:G:H2'	1:AA:822:C:H6	1.70	0.55
36:BA:2360:A:O2'	36:BA:2361:A:P	2.65	0.55
32:D6:22:ALA:HB2	32:D6:39:TYR:CZ	2.41	0.55
22:CV:1:G:C6	22:CV:73:A:N7	2.75	0.55
38:BC:151:GLU:HA	38:BC:154:ARG:HG2	1.87	0.55
55:BW:88:ARG:HG3	55:BW:94:ASP:OD2	2.05	0.55
1:AA:222:U:H2'	1:AA:223:U:C6	2.41	0.55
1:CA:665:A:H2'	1:CA:732:C:O2	2.06	0.55
5:CE:17:ALA:HB2	5:CE:26:PHE:HD1	1.71	0.55
36:DA:300:A:H2'	36:DA:334:C:O2'	2.06	0.55
35:D9:37:GLY:HA2	36:DA:1125:G:C5'	2.37	0.55
4:AD:9:CYS:HA	4:AD:12:CYS:SG	2.46	0.55
13:CM:77:ASN:O	13:CM:80:ARG:HB3	2.06	0.55
43:BH:12:PRO:CD	43:BH:48:GLY:HA2	2.36	0.55
34:B8:3:LYS:HG2	34:B8:4:MET:H	1.72	0.55
39:BD:34:VAL:HG23	39:BD:35:LYS:N	2.21	0.55
39:BD:35:LYS:HG2	39:BD:63:ARG:CA	2.35	0.55
36:DA:2160:G:H5'	36:DA:2160:G:C8	2.40	0.55
48:BP:48:PRO:O	48:BP:49:ARG:C	2.45	0.55
25:CZ:215:ARG:HB3	25:CZ:282:ALA:CB	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:50:LEU:O	34:D8:51:ALA:HB3	2.07	0.55
48:BP:92:GLU:HG2	48:BP:121:LYS:NZ	2.22	0.55
2:CB:8:LYS:O	2:CB:10:LEU:N	2.39	0.55
50:DR:82:GLU:O	50:DR:86:ARG:HD3	2.07	0.55
36:DA:2392:A:H8	48:DP:60:MET:HG2	1.72	0.55
30:D4:9:LEU:HD13	30:D4:10:VAL:N	2.11	0.55
46:BN:58:ASP:C	46:BN:60:ILE:N	2.60	0.55
36:BA:886:C:H2'	36:BA:887:A:C4'	2.37	0.55
1:CA:1280:A:C8	10:CJ:41:PRO:HD3	2.41	0.55
10:CJ:38:ILE:O	10:CJ:70:ARG:HA	2.07	0.55
36:BA:2657:A:C2'	36:BA:2658:C:H5'	2.32	0.55
40:BE:101:ARG:CB	40:BE:201:THR:HG21	2.37	0.55
36:BA:2807:G:C2'	36:BA:2808:U:H5''	2.36	0.55
36:BA:2406:U:N3	48:BP:72:PRO:HB2	2.21	0.55
48:DP:71:VAL:HG12	48:DP:72:PRO:HD3	1.88	0.55
36:BA:2178:C:O4'	36:BA:2178:C:O2	2.25	0.55
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.06	0.55
36:BA:2839:G:H5'	50:BR:46:GLY:HA2	1.88	0.55
1:AA:626:U:H2'	1:AA:627:G:H8	1.70	0.55
43:DH:156:ALA:C	43:DH:158:HIS:N	2.60	0.55
33:D7:29:LYS:NZ	33:D7:29:LYS:CB	2.69	0.55
3:CC:110:ASN:O	3:CC:111:LEU:HD23	2.06	0.55
5:CE:64:ARG:HH11	5:CE:64:ARG:CG	2.18	0.55
36:BA:633:A:H2'	36:BA:634:C:H5'	1.88	0.55
29:B3:22:ALA:HB1	29:B3:46:ASN:ND2	2.22	0.55
22:CV:59:U:O2'	22:CV:60:U:O4'	2.24	0.55
13:CM:108:ARG:NH1	13:CM:108:ARG:HG3	2.20	0.55
36:BA:118:A:H1'	36:BA:178:G:O4'	2.07	0.55
52:BT:35:LYS:CE	52:BT:41:ARG:HG3	2.37	0.55
4:CD:36:ARG:C	4:CD:38:TYR:H	2.09	0.55
43:DH:67:LEU:O	43:DH:71:LEU:HB2	2.07	0.55
36:DA:133:C:O2'	36:DA:134:C:H5'	2.06	0.55
36:DA:1111:A:N3	36:DA:1111:A:H2'	2.21	0.55
36:BA:1362:C:O2'	36:BA:1363:C:H5'	2.06	0.55
18:AR:71:LYS:O	18:AR:75:ILE:HG13	2.07	0.55
56:DX:3:THR:HA	56:DX:6:ASP:OD2	2.07	0.55
36:DA:576:U:O2'	36:DA:577:G:H5'	2.06	0.55
1:AA:226:G:O2'	1:AA:227:G:H5'	2.07	0.55
25:AZ:36:ALA:HA	25:AZ:39:ASN:O	2.07	0.55
24:CY:77:TRP:CD2	25:CZ:67:HIS:HB2	2.40	0.55
4:AD:31:CYS:O	4:AD:32:ALA:CB	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:82:LYS:O	38:BC:84:LYS:N	2.37	0.55
25:CZ:20:VAL:HG23	25:CZ:21:ASP:N	2.20	0.55
51:DS:29:PHE:HD1	51:DS:30:ARG:N	2.04	0.55
28:B2:7:ARG:HA	28:B2:10:LEU:CD1	2.34	0.55
36:BA:72:U:O2'	36:BA:73:A:H5'	2.06	0.55
37:BB:31:C:H4'	42:BG:29:TRP:CZ2	2.40	0.55
36:BA:143:G:H1'	56:BX:37:THR:CG2	2.37	0.55
41:BF:188:ARG:HA	48:BP:7:ARG:HD3	1.88	0.55
25:CZ:9:LYS:HE3	25:CZ:74:LYS:CA	2.37	0.55
36:DA:1540:U:H3'	36:DA:1541:G:H3'	1.87	0.55
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.27	0.55
26:D0:7:LEU:HD13	49:DQ:85:LYS:CG	2.29	0.55
42:DG:133:LEU:N	42:DG:133:LEU:HD23	2.19	0.55
36:DA:2884:U:H2'	36:DA:2885:C:H5'	1.87	0.55
40:BE:8:LYS:HD3	40:BE:191:PRO:O	2.07	0.55
48:DP:91:PHE:HD1	48:DP:91:PHE:N	2.05	0.55
36:DA:1754:C:OP1	52:DT:96:ARG:NH1	2.39	0.55
2:CB:87:ARG:NH1	2:CB:220:ASP:OD1	2.40	0.55
36:DA:2672:G:H3'	36:DA:2673:G:H5''	1.89	0.55
36:DA:1023:U:C2'	36:DA:1024:G:H5'	2.37	0.55
40:BE:59:VAL:HG23	40:BE:63:LEU:HA	1.89	0.55
41:BF:132:VAL:HG13	41:BF:133:ASN:HD22	1.71	0.55
36:BA:856:C:H4'	36:BA:857:C:OP2	2.06	0.55
36:DA:2485:G:H5''	49:DQ:46:GLN:NE2	2.19	0.55
25:AZ:174:SER:CB	25:AZ:177:LEU:HD12	2.37	0.55
43:DH:19:VAL:CG1	43:DH:20:ALA:H	2.18	0.55
26:B0:45:PHE:O	26:B0:59:LEU:HD11	2.07	0.55
46:DN:90:MET:HA	46:DN:90:MET:HE3	1.89	0.55
46:DN:91:LEU:HD21	46:DN:98:VAL:HG21	1.87	0.55
17:CQ:59:ILE:HA	17:CQ:72:ARG:O	2.07	0.55
36:BA:944:G:H5'	36:BA:945:A:O5'	2.07	0.55
22:CW:14:A:C2'	22:CW:15:G:H5'	2.37	0.55
10:AJ:9:ARG:HA	10:AJ:68:HIS:O	2.06	0.55
1:AA:1119:C:O2'	1:AA:1120:G:H5'	2.07	0.55
25:CZ:94:THR:HG21	25:CZ:300:ARG:NH2	2.21	0.55
37:BB:68:C:O2'	37:BB:69:G:H5'	2.06	0.55
39:DD:210:GLY:O	39:DD:211:ARG:HB3	2.06	0.55
39:BD:273:ARG:HH11	39:BD:273:ARG:HG2	1.71	0.55
2:AB:234:PRO:O	2:AB:235:SER:O	2.24	0.55
1:AA:677:U:H3	1:AA:713:G:H22	1.54	0.55
29:B3:29:ARG:HB2	29:B3:29:ARG:HH11	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:47:GLY:O	20:AT:49:ALA:N	2.37	0.55
58:BZ:62:PRO:C	58:BZ:64:GLY:H	2.10	0.55
38:DC:147:PHE:C	38:DC:149:ILE:H	2.10	0.55
1:CA:556:C:O2'	1:CA:557:G:H5'	2.07	0.55
1:AA:953:G:H5'	1:AA:965:A:H61	1.72	0.55
1:CA:939:G:H2'	1:CA:940:C:C6	2.41	0.55
45:BK:95:UNK:C	45:BK:97:UNK:H	2.20	0.55
53:DU:93:LYS:O	53:DU:96:ALA:HB3	2.07	0.55
1:CA:1324:A:H4'	1:CA:1362:C:H4'	1.89	0.55
49:DQ:56:ARG:CG	49:DQ:56:ARG:HH11	2.19	0.55
52:DT:91:ARG:O	52:DT:93:ARG:N	2.40	0.55
40:DE:55:ASN:O	40:DE:56:PRO:C	2.45	0.55
40:DE:52:LEU:CB	40:DE:75:VAL:HB	2.36	0.55
4:CD:58:LEU:O	4:CD:58:LEU:HD23	2.06	0.55
57:DY:14:LEU:HB3	57:DY:73:ARG:HB2	1.88	0.55
31:B5:33:CYS:SG	31:B5:35:GLU:HB2	2.46	0.55
25:AZ:12:VAL:HG21	25:AZ:75:ARG:HH21	1.72	0.55
36:DA:2464:C:O2'	36:DA:2465:C:P	2.65	0.55
56:DX:53:LYS:HG3	56:DX:55:ASN:ND2	2.16	0.55
12:AL:53:ARG:HD2	12:AL:53:ARG:N	2.22	0.55
36:BA:1880:C:H6	36:BA:1880:C:H5'	1.71	0.55
58:BZ:37:VAL:HG23	58:BZ:38:TYR:N	2.21	0.55
53:DU:80:ILE:HG22	53:DU:80:ILE:O	2.07	0.55
46:BN:58:ASP:OD2	46:BN:59:LYS:HG2	2.07	0.55
36:DA:583:G:C4	36:DA:584:C:C5	2.95	0.55
37:DB:31:C:H4'	42:DG:29:TRP:CH2	2.42	0.55
1:CA:359:U:H2'	1:CA:360:A:C8	2.42	0.55
36:BA:2673:G:H5'	36:BA:2673:G:H8	1.71	0.55
6:CF:14:LEU:HD12	6:CF:18:GLN:HB2	1.89	0.55
36:DA:886:C:C2'	36:DA:887:A:H4'	2.36	0.55
36:DA:2014:A:H2'	36:DA:2015:A:C8	2.41	0.55
46:DN:34:LEU:C	46:DN:34:LEU:HD13	2.27	0.55
55:DW:84:ARG:HB2	55:DW:96:ILE:HG23	1.89	0.55
36:DA:760:G:C2'	36:DA:761:A:H5'	2.37	0.55
36:BA:2893:G:H5'	36:BA:2894:G:H5'	1.89	0.55
4:CD:147:ALA:HA	4:CD:181:MET:O	2.07	0.55
2:CB:30:ARG:NH1	2:CB:30:ARG:CB	2.70	0.55
27:B1:17:SER:OG	27:B1:38:SER:HB3	2.07	0.55
13:AM:87:TYR:CE1	19:AS:81:ARG:NH2	2.74	0.55
8:CH:38:ILE:HD11	8:CH:118:VAL:O	2.07	0.55
50:DR:42:LYS:O	50:DR:45:ARG:HG2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:409:C:O2'	36:DA:410:G:H5'	2.06	0.55
36:DA:2009:G:O2'	36:DA:2010:G:H5'	2.06	0.55
15:CO:82:ILE:HD11	15:CO:88:ARG:H	1.71	0.55
2:AB:167:PRO:HG2	2:AB:192:SER:CB	2.37	0.55
1:CA:328:C:C2'	1:CA:328:C:O2	2.55	0.55
8:CH:114:THR:HG22	8:CH:130:GLY:O	2.06	0.55
16:AP:75:ARG:O	16:AP:78:GLY:N	2.40	0.55
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.21	0.55
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.07	0.55
39:DD:32:SER:O	39:DD:36:PRO:CG	2.55	0.55
54:DV:35:LEU:HD23	54:DV:57:VAL:CG1	2.34	0.55
51:DS:89:ARG:CB	51:DS:92:TYR:HB3	2.36	0.55
19:CS:6:LYS:HB2	19:CS:7:LYS:HD3	1.87	0.55
36:BA:1826:G:C4'	39:BD:242:ARG:HH21	2.15	0.55
49:DQ:55:VAL:CG2	49:DQ:56:ARG:N	2.70	0.55
52:DT:89:VAL:HG11	52:DT:91:ARG:NE	2.09	0.55
37:BB:42:C:H4'	42:BG:67:LYS:HG2	1.89	0.55
57:DY:76:CYS:HB3	57:DY:77:PRO:HD2	1.89	0.55
14:CN:24:CYS:HB2	14:CN:40:CYS:HB3	1.89	0.55
58:DZ:153:SER:HB2	58:DZ:167:PRO:CG	2.36	0.55
32:B6:15:GLU:OE1	32:B6:18:ARG:CD	2.55	0.55
42:DG:67:LYS:CD	42:DG:67:LYS:H	2.11	0.55
36:DA:141:A:H8	36:DA:1408:C:O2'	1.89	0.55
32:D6:11:LEU:HD11	32:D6:51:GLU:HG3	1.87	0.55
53:DU:76:TYR:CE1	53:DU:80:ILE:HG13	2.42	0.55
10:AJ:27:ALA:HB3	10:AJ:34:VAL:HG21	1.89	0.55
32:D6:15:GLU:HG2	32:D6:18:ARG:NH1	2.22	0.55
9:CI:16:ARG:CB	9:CI:64:THR:HB	2.33	0.55
57:BY:81:LYS:O	57:BY:82:PRO:O	2.25	0.55
36:DA:1166:C:H2'	36:DA:1167:U:C6	2.42	0.55
36:DA:2801:A:H5''	36:DA:2802:G:N7	2.22	0.55
52:BT:50:ILE:O	52:BT:99:LEU:HD12	2.06	0.55
39:BD:259:THR:O	39:BD:260:ARG:C	2.44	0.55
52:DT:90:GLN:C	52:DT:92:GLY:H	2.09	0.55
40:DE:103:ASP:OD1	40:DE:201:THR:HA	2.07	0.55
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.69	0.55
27:B1:76:ARG:NH1	27:B1:95:LEU:HB2	2.22	0.55
1:AA:1367:C:H5'	10:AJ:60:ARG:NH2	2.22	0.55
9:AI:95:LYS:O	9:AI:96:LEU:HD12	2.06	0.55
22:AV:2:C:H2'	22:AV:3:C:C5'	2.36	0.55
22:CV:12:U:H3	22:CV:23:A:H61	1.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:116:THR:O	13:AM:118:ALA:N	2.39	0.55
1:CA:176:C:H2'	1:CA:177:C:C6	2.39	0.55
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.06	0.55
3:CC:142:MET:O	3:CC:144:SER:N	2.40	0.55
1:AA:111:G:H8	1:AA:111:G:O5'	1.88	0.55
36:BA:1688:U:H1'	36:BA:1701:A:C6	2.42	0.55
22:CW:76:A:O2'	36:DA:2394:C:N3	2.36	0.55
1:AA:476:G:H2'	1:AA:477:A:C8	2.42	0.55
36:BA:2394:C:OP1	48:BP:63:PRO:HD2	2.07	0.55
36:DA:1591:G:H2'	36:DA:1592:C:H5'	1.89	0.55
36:BA:1411:C:H2'	36:BA:1412:A:C8	2.40	0.55
36:DA:1889:A:O2'	36:DA:2087:G:H5'	2.07	0.55
36:BA:271(U):G:H2'	36:BA:271(V):G:H8	1.71	0.55
36:BA:2320:A:H2'	36:BA:2320:A:N3	2.20	0.55
44:BJ:70:UNK:O	44:BJ:71:UNK:C	2.54	0.55
25:AZ:17:ILE:HG13	25:AZ:104:LEU:HA	1.88	0.55
2:AB:223:ILE:HG22	2:AB:228:GLY:O	2.06	0.55
47:BO:24:VAL:HG23	47:BO:24:VAL:O	2.06	0.55
34:D8:7:HIS:O	34:D8:9:GLY:N	2.40	0.55
27:D1:51:VAL:O	27:D1:57:GLU:HG3	2.07	0.55
24:CY:76:A:OP1	25:CZ:274:ARG:CD	2.52	0.55
53:DU:95:LEU:HD11	54:DV:11:GLN:HG3	1.88	0.55
36:DA:587:C:C5	48:DP:33:ARG:HG2	2.42	0.55
51:BS:39:ILE:CD1	51:BS:73:LEU:HD21	2.30	0.55
36:BA:2306:C:H5	36:BA:2307:G:O2'	1.87	0.55
1:AA:585:G:H2'	1:AA:586:C:C6	2.42	0.55
34:B8:36:LYS:O	34:B8:37:SER:O	2.25	0.55
29:D3:45:GLY:O	29:D3:47:VAL:N	2.39	0.55
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.88	0.55
48:BP:23:PRO:HD2	48:BP:33:ARG:HH21	1.72	0.55
51:BS:16:ASN:OD1	51:BS:17:ARG:N	2.40	0.55
31:D5:31:VAL:CG2	36:DA:2886:G:H1'	2.35	0.55
34:D8:25:MET:HG3	48:DP:64:LYS:HB2	1.88	0.55
36:BA:2092:U:H5	36:BA:2226:C:OP2	1.90	0.55
50:DR:78:LYS:O	50:DR:82:GLU:HB2	2.06	0.55
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB2	2.35	0.55
36:DA:582:G:H2'	36:DA:583:G:C8	2.41	0.55
9:CI:63:ILE:HD11	9:CI:81:ILE:HD11	1.88	0.55
1:AA:201:C:H3'	1:AA:202:U:C5'	2.34	0.55
36:DA:1115:G:H2'	36:DA:1116:C:O4'	2.07	0.55
36:BA:1602:U:H3'	36:BA:1603:A:H5''	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:89:ASN:O	9:AI:91:ASP:N	2.40	0.55
49:BQ:51:ARG:O	49:BQ:55:VAL:HG13	2.07	0.55
10:CJ:3:LYS:C	10:CJ:4:ILE:HD12	2.28	0.55
3:CC:77:ILE:C	3:CC:83:ARG:HB3	2.27	0.55
48:BP:62:LEU:HD23	48:BP:62:LEU:N	2.13	0.55
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.71	0.55
1:CA:613:C:H2'	1:CA:614:A:H8	1.71	0.55
1:CA:626:U:H2'	1:CA:627:G:H8	1.72	0.55
1:AA:1441:G:H21	1:AA:1460:A:H62	1.55	0.55
25:CZ:342:PHE:CD1	25:CZ:342:PHE:N	2.73	0.55
36:DA:186:G:H2'	36:DA:187:G:C8	2.41	0.55
9:CI:52:ALA:HB3	9:CI:95:LYS:CE	2.36	0.55
57:BY:75:ILE:O	57:BY:76:CYS:HB2	2.06	0.55
36:DA:1578:U:H2'	36:DA:1579:A:C5'	2.37	0.55
54:BV:35:LEU:HD23	54:BV:57:VAL:HG13	1.89	0.55
53:BU:50:ARG:NH1	54:BV:72:VAL:HG12	2.22	0.55
1:AA:145:G:C2	1:AA:146:G:H1'	2.42	0.55
38:DC:90:GLY:O	38:DC:153:ILE:HG21	2.07	0.55
1:AA:713:G:H2'	1:AA:714:G:C8	2.42	0.55
22:CV:57:G:H2'	22:CV:58:A:H5'	1.88	0.55
38:DC:200:LYS:HE3	38:DC:208:PHE:HB2	1.88	0.55
7:CG:102:ARG:O	7:CG:106:GLN:HG3	2.06	0.55
16:CP:75:ARG:O	16:CP:77:ALA:N	2.40	0.55
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.42	0.55
43:BH:80:SER:O	43:BH:81:GLU:HB2	2.07	0.55
1:AA:862:C:O2'	1:AA:863:U:H5'	2.07	0.55
42:BG:146:TYR:C	42:BG:148:MET:H	2.10	0.55
36:BA:2412:A:C2'	36:BA:2413:G:H5'	2.37	0.55
36:DA:554:U:H2'	36:DA:555:U:C6	2.42	0.55
27:D1:85:LEU:O	27:D1:87:PRO:HD3	2.06	0.55
26:D0:23:VAL:HG22	26:D0:38:VAL:CG1	2.36	0.55
54:DV:35:LEU:HD22	54:DV:35:LEU:N	2.22	0.55
19:CS:5:LEU:C	19:CS:6:LYS:HD3	2.27	0.55
57:BY:6:HIS:CE1	57:BY:30:VAL:HG11	2.41	0.55
1:CA:1220:G:O2'	1:CA:1221:G:H5'	2.07	0.55
25:CZ:189:ARG:CG	25:CZ:190:ARG:N	2.55	0.55
1:CA:972:C:O3'	10:CJ:57:LYS:HG2	2.07	0.55
31:B5:41:PRO:O	31:B5:44:THR:OG1	2.24	0.55
36:DA:2249:U:H4'	36:DA:2275:C:C5	2.41	0.55
36:BA:1023:U:H5'	36:BA:1023:U:H6	1.72	0.55
49:BQ:141:GLN:OXT	58:BZ:99:TYR:HD2	1.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1314:C:H5	1:AA:1323:G:N1	1.95	0.55
58:DZ:122:ARG:NH1	58:DZ:122:ARG:HG2	2.20	0.55
36:BA:1351:C:O2'	36:BA:1571:A:H1'	2.07	0.55
40:BE:44:TYR:O	40:BE:45:THR:CB	2.55	0.55
12:CL:80:HIS:HD2	24:CY:68:C:C3'	2.19	0.55
9:AI:19:LEU:CD2	9:AI:59:PHE:CD2	2.89	0.55
48:BP:16:ARG:HD3	48:BP:16:ARG:C	2.27	0.55
36:DA:2847:U:H2'	36:DA:2847:U:O2	2.06	0.55
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.06	0.55
48:DP:7:ARG:O	48:DP:10:PRO:HD3	2.07	0.55
5:CE:12:LEU:HD13	5:CE:12:LEU:O	2.07	0.55
58:DZ:113:ALA:HB3	58:DZ:146:ILE:HD13	1.87	0.55
48:BP:79:ARG:HG3	48:BP:110:TYR:CD2	2.42	0.55
36:BA:2528:U:O2'	36:BA:2529:G:H3'	2.07	0.55
1:AA:961:U:O2'	1:AA:962:C:P	2.64	0.55
36:BA:958:U:H5''	49:BQ:14:ARG:CD	2.37	0.55
1:CA:537:G:H2'	1:CA:538:G:H8	1.72	0.55
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.06	0.55
40:DE:33:VAL:HG12	40:DE:90:THR:HA	1.88	0.55
36:BA:1721:G:H8	36:BA:1741:A:H62	1.54	0.55
25:CZ:299:GLU:N	25:CZ:302:GLN:OE1	2.35	0.55
11:CK:103:LEU:HD13	11:CK:104:GLN:N	2.22	0.55
36:DA:1786:A:H2	36:DA:2606:C:H1'	1.71	0.55
24:AY:76:A:C8	25:AZ:231:ILE:HG12	2.42	0.55
27:B1:30:VAL:O	27:B1:31:GLY:O	2.25	0.55
36:DA:1591:G:C2'	36:DA:1592:C:H5'	2.38	0.55
55:BW:79:GLY:HA3	55:BW:100:THR:HG23	1.88	0.55
1:CA:410:G:H21	1:CA:432:A:H62	1.55	0.55
7:CG:58:PRO:HG2	7:CG:59:LEU:H	1.72	0.55
1:CA:445:G:H2'	1:CA:446:G:H8	1.72	0.55
36:BA:1292:U:H2'	36:BA:1293:C:C6	2.42	0.55
36:DA:2345:G:N3	36:DA:2381:C:H2'	2.21	0.55
43:DH:44:VAL:HG12	43:DH:45:VAL:N	2.22	0.55
38:BC:49:ILE:O	38:BC:49:ILE:HD12	2.07	0.55
10:AJ:48:THR:HG23	10:AJ:62:HIS:CD2	2.42	0.55
36:BA:353:G:H2'	36:BA:353:G:N3	2.21	0.55
8:CH:30:ARG:HH11	8:CH:30:ARG:HB2	1.72	0.55
30:B4:28:LYS:HE3	30:B4:28:LYS:HA	1.89	0.55
25:CZ:272:MET:HG3	25:CZ:273:HIS:HD2	1.71	0.54
27:D1:87:PRO:HG2	27:D1:88:LYS:N	2.16	0.54
39:DD:61:LEU:O	39:DD:63:ARG:NH1	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:19:HIS:ND1	25:CZ:20:VAL:HG22	2.22	0.54
28:B2:3:LEU:O	28:B2:7:ARG:NE	2.41	0.54
43:BH:124:GLU:CG	43:BH:132:ARG:HG3	2.37	0.54
54:BV:38:LEU:O	54:BV:52:VAL:HG12	2.06	0.54
57:DY:81:LYS:HD2	57:DY:96:ILE:CG1	2.37	0.54
52:DT:55:ASN:ND2	52:DT:58:ASN:HB2	2.18	0.54
36:BA:481:G:H2'	36:BA:507:A:N1	2.23	0.54
43:DH:85:LYS:HG2	43:DH:86:GLU:N	2.20	0.54
31:B5:56:LYS:O	31:B5:57:VAL:C	2.46	0.54
25:AZ:221:PHE:CE2	25:AZ:247:VAL:HG11	2.42	0.54
36:BA:1539:G:C3'	36:BA:1540:U:H5'	2.38	0.54
36:BA:607:U:H3	36:BA:621:A:H2	1.49	0.54
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.75	0.54
5:CE:76:ILE:HD11	5:CE:142:LEU:HD21	1.86	0.54
35:B9:11:CYS:SG	35:B9:12:ASP:N	2.80	0.54
36:DA:498:G:O2'	36:DA:499:U:H5'	2.07	0.54
36:BA:1006:C:C2	36:BA:1138:G:N2	2.76	0.54
38:DC:123:VAL:HG22	38:DC:127:LEU:HB3	1.89	0.54
40:DE:116:VAL:HG22	40:DE:122:PHE:HB2	1.89	0.54
58:BZ:115:GLY:HA3	58:BZ:174:VAL:HG12	1.89	0.54
36:DA:1049:C:H2'	36:DA:1050:A:C8	2.42	0.54
12:CL:27:LEU:HA	12:CL:33:ARG:HD2	1.89	0.54
38:DC:99:ILE:C	38:DC:101:GLN:H	2.11	0.54
19:CS:11:VAL:CG2	19:CS:38:SER:HB2	2.34	0.54
49:DQ:12:GLN:NE2	49:DQ:72:LYS:HG3	2.22	0.54
12:AL:84:LEU:C	12:AL:84:LEU:HD23	2.27	0.54
43:DH:15:VAL:HG12	43:DH:29:PRO:HD3	1.89	0.54
36:DA:389:G:N1	48:DP:71:VAL:HG12	2.22	0.54
6:CF:91:VAL:HG12	6:CF:92:LYS:H	1.72	0.54
1:CA:376:G:H4'	16:CP:5:ARG:NH1	2.22	0.54
58:DZ:132:ASN:O	58:DZ:133:ILE:HD13	2.07	0.54
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.70	0.54
12:AL:85:ILE:CG2	12:AL:98:TYR:HB3	2.37	0.54
54:DV:72:VAL:HG23	54:DV:72:VAL:O	2.07	0.54
7:AG:79:ARG:CB	7:AG:84:ASN:HD22	2.19	0.54
22:CW:75:C:OP1	27:D1:30:VAL:HG21	2.07	0.54
39:DD:45:ASN:CG	39:DD:46:GLN:N	2.60	0.54
37:BB:56:G:H4'	37:BB:57:A:O5'	2.07	0.54
33:B7:43:THR:CG2	33:B7:44:PRO:N	2.70	0.54
1:CA:458:C:H2'	1:CA:460:G:C8	2.41	0.54
14:CN:59:ALA:O	14:CN:60:SER:CB	2.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2340:G:H2'	36:DA:2341:G:H8	1.72	0.54
1:CA:665:A:H1'	1:CA:733:A:O4'	2.07	0.54
25:AZ:178:ALA:O	25:AZ:196:VAL:CG2	2.55	0.54
1:CA:337:C:H2'	1:CA:338:A:C8	2.41	0.54
36:DA:2619:C:O2'	36:DA:2620:C:H5'	2.07	0.54
36:BA:704:G:H1'	36:BA:726:G:N2	2.22	0.54
36:BA:1092:C:H2'	36:BA:1093:G:H5'	1.87	0.54
36:DA:999:U:H5''	36:DA:1154:G:O6	2.07	0.54
1:AA:678:U:H2'	1:AA:679:C:C6	2.42	0.54
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.59	0.54
40:BE:14:ILE:HD11	40:BE:173:VAL:HG11	1.89	0.54
38:BC:50:ASP:OD2	38:BC:52:ARG:HB2	2.07	0.54
15:AO:64:ARG:HG3	15:AO:64:ARG:HH11	1.71	0.54
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.72	0.54
1:AA:250:A:H4'	1:AA:251:G:O5'	2.07	0.54
1:CA:90:U:H5''	1:CA:91:C:O4'	2.07	0.54
48:DP:23:PRO:C	48:DP:33:ARG:CZ	2.76	0.54
37:BB:40:U:H3'	37:BB:41:U:C5'	2.35	0.54
36:DA:197:A:H5'	36:DA:197:A:C8	2.40	0.54
52:BT:28:VAL:CG2	52:BT:47:GLY:O	2.56	0.54
34:B8:34:TRP:O	34:B8:35:GLN:HB2	2.05	0.54
36:BA:1528:A:N1	36:BA:1542:A:H2	2.04	0.54
5:CE:76:ILE:HG12	5:CE:77:PRO:N	2.21	0.54
50:DR:87:TYR:O	50:DR:90:ARG:N	2.39	0.54
58:DZ:24:LEU:HD12	58:DZ:41:LEU:HD23	1.88	0.54
48:BP:147:LEU:O	48:BP:148:LEU:CB	2.54	0.54
40:BE:77:ILE:CG2	40:BE:78:LEU:H	2.11	0.54
24:CY:4:G:C3'	24:CY:5:G:H5''	2.37	0.54
36:BA:1270:C:H5''	36:BA:1271:G:H5'	1.89	0.54
10:CJ:8:LEU:HB2	10:CJ:70:ARG:O	2.07	0.54
3:CC:47:LEU:HG	3:CC:47:LEU:O	2.07	0.54
54:BV:64:HIS:ND1	54:BV:92:THR:HG22	2.22	0.54
1:AA:975:A:N6	1:AA:1367:C:O4'	2.39	0.54
20:AT:82:SER:O	20:AT:86:ARG:HB2	2.05	0.54
5:AE:12:LEU:HD12	5:AE:31:LEU:HB2	1.88	0.54
17:AQ:58:GLU:CG	17:AQ:75:ARG:HG2	2.35	0.54
1:AA:356:A:C2	1:AA:368:U:O2	2.58	0.54
37:BB:65:C:C2'	37:BB:66:A:H5'	2.37	0.54
1:CA:706:A:N7	1:CA:707:C:H5	2.05	0.54
36:BA:90:U:H2'	36:BA:90:U:O2	2.06	0.54
41:BF:53:THR:HG23	41:BF:55:GLY:N	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:609:A:C2'	1:CA:610:G:H5'	2.37	0.54
36:DA:2153:G:H2'	36:DA:2154:G:C8	2.42	0.54
36:BA:703:U:C2'	36:BA:704:G:H5'	2.37	0.54
1:AA:983:A:H5'	1:AA:984:C:OP2	2.07	0.54
36:BA:1171:G:H3'	36:BA:1173:G:O4'	2.07	0.54
16:CP:53:VAL:HG23	16:CP:54:GLU:N	2.23	0.54
43:BH:74:ASN:OD1	43:BH:138:LYS:HD3	2.07	0.54
1:AA:499:A:H4'	1:AA:500:G:H5'	1.89	0.54
1:AA:313:A:H2'	1:AA:314:C:C6	2.42	0.54
9:CI:110:GLU:OE2	9:CI:113:LYS:NZ	2.39	0.54
1:CA:145:G:C2	1:CA:146:G:H1'	2.41	0.54
1:CA:1303:C:O2	1:CA:1303:C:H2'	2.08	0.54
1:AA:1125:U:C6	1:AA:1125:U:H3'	2.42	0.54
41:BF:123:LEU:HD13	41:BF:192:LEU:HD22	1.89	0.54
36:BA:2012:G:C4'	55:BW:96:ILE:HD11	2.14	0.54
36:BA:221:A:O2'	36:BA:222:A:OP2	2.23	0.54
52:DT:81:PRO:C	52:DT:82:LEU:HD12	2.27	0.54
57:DY:8:LYS:HE2	57:DY:72:VAL:HG23	1.89	0.54
36:DA:832:G:N3	48:DP:53:GLY:HA2	2.23	0.54
31:B5:6:VAL:CG1	36:BA:2016:U:H1'	2.37	0.54
42:DG:173:LEU:HD13	42:DG:178:PHE:CD2	2.43	0.54
36:BA:1114:G:H2'	36:BA:1115:G:H8	1.72	0.54
39:BD:70:TRP:O	39:BD:72:LYS:N	2.41	0.54
46:BN:18:ALA:HB1	46:BN:21:LYS:HB3	1.89	0.54
50:BR:84:ALA:HB3	50:BR:85:PRO:CD	2.31	0.54
42:DG:77:ILE:O	42:DG:77:ILE:HG12	2.07	0.54
54:DV:25:LEU:H	54:DV:92:THR:CG2	2.20	0.54
36:DA:2777:G:C4'	36:DA:2778:A:H5'	2.37	0.54
36:BA:1819:A:H5''	39:BD:161:THR:HG21	1.88	0.54
36:DA:1141:U:H4'	36:DA:1142(A):A:C8	2.43	0.54
3:AC:134:ILE:CG2	3:AC:168:ALA:HB3	2.36	0.54
39:DD:147:LEU:HD13	39:DD:155:LEU:CD1	2.37	0.54
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.90	0.54
46:DN:28:THR:O	46:DN:31:ALA:HB3	2.07	0.54
24:AY:56:C:C6	36:BA:1067:A:C2	2.88	0.54
36:DA:296:C:N4	36:DA:343:C:H42	2.05	0.54
58:DZ:150:LEU:HD21	58:DZ:172:ALA:HB3	1.89	0.54
36:DA:2555:U:C2'	36:DA:2556:C:H5'	2.36	0.54
1:CA:1006:C:H2'	1:CA:1007:C:H6	1.72	0.54
57:DY:44:ILE:CG2	57:DY:45:VAL:H	2.20	0.54
36:BA:1720:U:H2'	36:BA:1721:G:C5'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:436:C:H2'	1:CA:437:U:C6	2.43	0.54
36:DA:1825:A:O4'	39:DD:254:THR:HG21	2.08	0.54
5:AE:127:ASN:ND2	5:AE:130:ASN:H	2.04	0.54
12:AL:41:ARG:CG	12:AL:42:THR:N	2.70	0.54
12:AL:42:THR:O	12:AL:42:THR:CG2	2.56	0.54
55:DW:79:GLY:H	55:DW:100:THR:HG23	1.72	0.54
42:BG:91:ARG:C	42:BG:91:ARG:HD2	2.27	0.54
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.37	0.54
36:BA:1652:A:C2'	36:BA:1653:G:H5'	2.37	0.54
12:CL:75:HIS:HD2	12:CL:77:LEU:HB2	1.73	0.54
36:BA:214:G:H1'	36:BA:216:A:O2'	2.07	0.54
18:AR:40:LEU:C	18:AR:42:ARG:H	2.10	0.54
36:BA:271(F):C:H2'	36:BA:271(G):C:O4'	2.08	0.54
53:DU:109:LEU:O	53:DU:113:ALA:HB2	2.07	0.54
1:AA:6:G:O2'	1:AA:7:G:H5''	2.08	0.54
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.07	0.54
58:DZ:101:PRO:HG2	58:DZ:135:GLU:O	2.07	0.54
45:BK:109:UNK:C	45:BK:111:UNK:H	2.19	0.54
1:AA:443:C:H2'	1:AA:444:C:C6	2.41	0.54
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.43	0.54
36:DA:2155:G:H3'	36:DA:2156:G:H8	1.72	0.54
36:BA:1429:G:H2'	36:BA:1430:C:C6	2.42	0.54
38:BC:123:VAL:HG21	38:BC:127:LEU:CD2	2.37	0.54
40:DE:48:GLN:NE2	40:DE:78:LEU:HD22	2.21	0.54
42:BG:76:SER:OG	42:BG:83:ARG:HB3	2.08	0.54
14:CN:32:SER:O	14:CN:40:CYS:HA	2.08	0.54
36:DA:2127:G:H4'	38:DC:37:PHE:CE1	2.43	0.54
48:BP:46:LYS:HG2	48:BP:52:GLU:OE2	2.06	0.54
51:BS:17:ARG:HH21	51:BS:90:GLY:H	1.54	0.54
38:DC:43:VAL:HG23	38:DC:175:VAL:HG21	1.87	0.54
38:DC:64:LEU:HD13	38:DC:188:ASN:ND2	2.23	0.54
54:DV:8:GLY:CA	54:DV:23:GLU:HG3	2.30	0.54
34:D8:56:GLU:O	34:D8:59:LYS:N	2.41	0.54
36:BA:1144:G:H2'	36:BA:1145:C:C6	2.42	0.54
41:DF:132:VAL:HG22	41:DF:133:ASN:N	2.23	0.54
36:BA:1503:U:O2'	36:BA:1504:C:H5'	2.07	0.54
20:AT:65:LYS:O	20:AT:68:LYS:HB2	2.07	0.54
36:DA:954:G:N3	36:DA:2274:A:H2	2.05	0.54
36:DA:954:G:N3	36:DA:2274:A:C2	2.75	0.54
49:DQ:17:LEU:HB3	49:DQ:39:PRO:HB3	1.89	0.54
6:CF:69:GLU:H	6:CF:69:GLU:CD	2.10	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:126:GLU:HA	2:AB:129:GLU:OE2	2.07	0.54
22:CW:38:A:H2'	22:CW:39:U:C4'	2.37	0.54
40:DE:6:GLY:O	40:DE:195:LEU:O	2.25	0.54
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.08	0.54
1:CA:1030(D):A:H2'	1:CA:1031:G:H5'	1.90	0.54
36:DA:2069:G:O2'	36:DA:2070:G:H5'	2.08	0.54
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.07	0.54
6:AF:98:LEU:HD12	6:AF:98:LEU:N	2.23	0.54
7:AG:102:ARG:HG2	7:AG:106:GLN:NE2	2.22	0.54
36:BA:884:C:C2'	36:BA:885:C:H5'	2.37	0.54
26:B0:7:LEU:HD21	49:BQ:81:VAL:CG2	2.37	0.54
36:DA:2475:C:H42	36:DA:2529:G:H22	1.56	0.54
1:CA:826:C:H2'	1:CA:827:U:C6	2.42	0.54
36:DA:90:U:O2	36:DA:90:U:C2'	2.55	0.54
36:DA:2293:C:H2'	36:DA:2294:C:H6	1.72	0.54
53:BU:82:GLY:O	53:BU:84:LYS:N	2.41	0.54
49:BQ:79:LEU:HD23	49:BQ:80:GLU:N	2.22	0.54
36:DA:363(F):A:O2'	36:DA:364:C:C5	2.60	0.54
36:BA:1416:G:H1'	36:BA:1417:C:C6	2.43	0.54
36:BA:1412:A:O2'	36:BA:1413:G:H5'	2.07	0.54
43:DH:44:VAL:HG12	43:DH:45:VAL:H	1.72	0.54
1:CA:17:U:H2'	1:CA:18:C:C6	2.43	0.54
4:CD:190:ASP:OD2	4:CD:192:GLU:HB2	2.06	0.54
11:CK:18:ARG:HH21	11:CK:37:GLY:N	2.06	0.54
49:BQ:103:MET:C	49:BQ:104:PHE:HD1	2.10	0.54
29:B3:31:LEU:C	29:B3:33:GLN:H	2.11	0.54
29:B3:31:LEU:O	29:B3:33:GLN:N	2.40	0.54
1:CA:1208:C:H2'	1:CA:1209:C:H6	1.73	0.54
3:AC:140:ARG:O	3:AC:144:SER:HB2	2.07	0.54
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.07	0.54
36:DA:1462:C:H4'	36:DA:2703:C:H5'	1.89	0.54
25:CZ:118:GLU:OE2	61:CZ:502:KIR:C5	2.56	0.54
53:DU:92:ARG:HH11	53:DU:95:LEU:HG	1.71	0.54
51:DS:89:ARG:HH11	51:DS:92:TYR:HA	1.68	0.54
51:DS:89:ARG:HB3	51:DS:92:TYR:HB3	1.89	0.54
13:CM:11:ARG:HG2	13:CM:12:ASN:N	2.21	0.54
1:CA:980:C:H5'	1:CA:980:C:H6	1.73	0.54
34:B8:62:LEU:N	34:B8:63:PRO:CD	2.69	0.54
10:CJ:50:ILE:HG12	14:CN:41:ARG:NE	2.23	0.54
43:DH:85:LYS:HZ1	43:DH:86:GLU:HA	1.72	0.54
50:BR:101:ALA:O	50:BR:102:GLU:CB	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:42:GLN:C	20:AT:45:GLN:HE22	2.11	0.54
19:AS:62:ILE:HA	19:AS:66:MET:HE1	1.89	0.54
15:CO:39:LEU:HB3	15:CO:56:LEU:HD13	1.90	0.54
40:BE:199:ARG:HG2	40:BE:200:GLU:OE1	2.07	0.54
58:BZ:58:VAL:HA	58:BZ:67:LEU:O	2.07	0.54
34:D8:15:LYS:HG2	48:DP:65:ARG:NH2	2.23	0.54
49:DQ:27:VAL:HG21	49:DQ:133:ARG:O	2.08	0.54
24:AY:28:C:H2'	24:AY:29:G:C8	2.39	0.54
22:AW:57:G:H2'	22:AW:58:A:H5'	1.90	0.54
38:DC:120:MET:CA	38:DC:123:VAL:HG12	2.32	0.54
54:DV:19:LYS:HG2	54:DV:94:LEU:C	2.28	0.54
13:AM:22:ILE:CD1	13:AM:25:ILE:HD12	2.34	0.54
52:BT:106:SER:O	52:BT:107:ASP:CB	2.54	0.54
48:BP:62:LEU:CD2	48:BP:62:LEU:H	2.16	0.54
6:AF:9:VAL:HA	6:AF:59:TYR:O	2.07	0.54
47:BO:80:ASP:OD2	52:BT:71:GLY:HA3	2.08	0.54
7:CG:27:ILE:O	7:CG:30:ILE:HB	2.07	0.54
1:CA:390:C:H4'	16:CP:28:ARG:NH2	2.22	0.54
26:D0:12:ASN:O	26:D0:14:ARG:N	2.35	0.54
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.07	0.54
9:CI:43:ALA:HA	9:CI:74:ILE:HG21	1.90	0.54
4:AD:162:LEU:HD11	4:AD:178:VAL:O	2.08	0.54
46:DN:18:ALA:CB	46:DN:26:LEU:HD22	2.38	0.54
1:CA:1234:C:H2'	1:CA:1235:U:C6	2.42	0.54
15:CO:17:ARG:HG3	15:CO:17:ARG:HH11	1.71	0.54
15:CO:82:ILE:HD13	15:CO:87:ILE:H	1.73	0.54
42:BG:159:VAL:O	42:BG:159:VAL:HG13	2.08	0.54
1:CA:663:A:O2'	1:CA:664:G:H5'	2.07	0.54
57:DY:50:ARG:NE	57:DY:55:TYR:O	2.41	0.54
36:BA:873:G:H2'	36:BA:874:G:C8	2.43	0.54
22:AW:19:G:H5'	22:AW:20:U:H5	1.72	0.54
1:CA:1295:G:O2'	1:CA:1296:C:H5'	2.08	0.54
36:DA:2319:G:H4'	36:DA:2320:A:OP1	2.07	0.54
14:CN:59:ALA:O	14:CN:60:SER:HB2	2.07	0.54
39:BD:229:VAL:HG13	39:BD:230:ASP:N	2.23	0.54
36:BA:908:C:O2'	36:BA:909:A:H5'	2.06	0.54
36:DA:2457:U:C2'	36:DA:2458:G:H5'	2.38	0.54
9:AI:114:TYR:HE1	10:AJ:59:SER:HA	1.72	0.54
40:DE:13:ARG:HD2	40:DE:20:ALA:HB1	1.89	0.54
33:B7:4:THR:CG2	36:BA:788:A:H1'	2.36	0.54
25:CZ:230:THR:O	25:CZ:230:THR:HG23	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:66:ILE:O	49:DQ:66:ILE:HG13	2.07	0.54
58:DZ:108:PRO:HA	58:DZ:141:VAL:CG1	2.38	0.54
1:CA:323:U:H2'	1:CA:324:G:O4'	2.08	0.54
1:AA:973:G:C1'	10:AJ:55:LYS:HE2	2.36	0.54
36:BA:2107:C:H1'	36:BA:2182:G:H22	1.73	0.54
27:D1:88:LYS:HG2	27:D1:92:LYS:HZ2	1.71	0.54
39:DD:65:ILE:HD11	39:DD:67:PHE:CE2	2.43	0.54
1:CA:980:C:H2'	1:CA:981:U:H5'	1.90	0.54
48:DP:24:GLY:O	48:DP:25:SER:HB3	2.08	0.54
36:DA:2099:U:H2'	36:DA:2100:G:H8	1.72	0.54
36:DA:1208:C:C4	36:DA:1209:G:N7	2.76	0.54
54:BV:52:VAL:HG11	54:BV:55:ALA:HB3	1.90	0.54
9:CI:114:TYR:H	9:CI:114:TYR:HD1	1.56	0.54
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.72	0.54
36:DA:2334:G:N3	51:DS:18:ILE:HD13	2.22	0.54
25:AZ:242:ILE:HG21	25:AZ:282:ALA:HA	1.90	0.54
29:D3:42:ALA:HA	36:DA:852:G:O4'	2.06	0.54
48:BP:7:ARG:HB3	48:BP:8:PRO:HD3	1.90	0.54
34:B8:59:LYS:HD3	48:BP:50:ARG:HB3	1.89	0.54
39:DD:218:ARG:NH1	39:DD:218:ARG:CG	2.67	0.54
36:BA:1190:G:OP1	48:BP:32:THR:OG1	2.26	0.54
36:BA:1301:A:HO2'	36:BA:1302:A:P	2.31	0.54
2:CB:48:MET:HA	2:CB:51:LEU:HB2	1.90	0.54
36:DA:2414:G:H21	48:DP:67:MET:CE	2.20	0.54
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.56	0.54
36:DA:479:A:H4'	36:DA:480:A:OP1	2.08	0.54
48:DP:126:VAL:HA	48:DP:145:PRO:CB	2.36	0.54
39:DD:133:LEU:HD13	39:DD:173:VAL:CG1	2.38	0.54
36:DA:2779:U:H1'	36:DA:2781:A:C6	2.41	0.54
17:CQ:76:LEU:HD12	17:CQ:77:VAL:N	2.16	0.54
7:AG:15:ASP:CB	7:AG:20:ASP:H	2.19	0.54
36:DA:2617:C:O2'	36:DA:2618:G:H5'	2.07	0.54
36:BA:2472:G:H5'	36:BA:2473:U:C5'	2.36	0.54
49:DQ:101:ARG:HG3	49:DQ:101:ARG:NH1	2.18	0.54
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CE1	2.43	0.54
36:DA:2873:A:H4'	50:DR:8:ARG:HH12	1.73	0.54
1:AA:62:U:H2'	1:AA:63:C:H5'	1.88	0.54
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.90	0.54
33:B7:29:LYS:CB	33:B7:29:LYS:NZ	2.71	0.54
36:DA:992:C:O3'	54:DV:72:VAL:HG11	2.07	0.54
1:CA:1030:C:C5	1:CA:1030(A):G:H8	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:57:VAL:HA	17:AQ:77:VAL:HG23	1.88	0.54
9:CI:43:ALA:O	9:CI:45:ALA:N	2.37	0.54
1:CA:766:A:H2'	1:CA:767:A:H5'	1.88	0.54
2:AB:30:ARG:HB2	2:AB:30:ARG:NH1	2.22	0.54
2:AB:167:PRO:HG2	2:AB:192:SER:OG	2.08	0.54
57:DY:55:TYR:O	57:DY:56:PRO:O	2.26	0.54
36:DA:1092:C:C2'	36:DA:1093:G:H5'	2.37	0.54
55:DW:9:TYR:H	55:DW:102:HIS:HD2	1.56	0.54
22:CW:53:G:O2'	22:CW:54:U:H5'	2.08	0.54
33:B7:5:TRP:CD1	33:B7:7:PRO:HD3	2.41	0.54
18:AR:26:LEU:CD1	18:AR:39:VAL:HG13	2.37	0.54
39:BD:226:MET:HB3	39:BD:230:ASP:HB2	1.89	0.54
1:AA:662:G:O2'	1:AA:836:G:H5''	2.08	0.54
42:BG:171:ALA:O	42:BG:175:LEU:HG	2.08	0.54
1:CA:639:G:O2'	1:CA:640:A:H5'	2.08	0.54
24:CY:71:C:O2'	24:CY:72:U:H5'	2.08	0.54
36:BA:573:G:O2'	36:BA:574:C:H3'	2.07	0.54
1:CA:770:C:O2'	1:CA:771:G:H5'	2.07	0.54
37:BB:87:G:N2	37:BB:89:G:H3'	2.22	0.54
36:BA:1233:C:H2'	36:BA:1234:U:H6	1.73	0.54
47:BO:7:TYR:CE1	47:BO:20:MET:HB2	2.43	0.54
5:AE:7:GLU:HB3	5:AE:112:LEU:HD22	1.89	0.54
1:CA:111:G:H1	1:CA:330:C:H41	1.52	0.54
36:BA:1221:C:H2'	36:BA:1221:C:O2	2.06	0.54
48:DP:135:LEU:HD13	48:DP:135:LEU:O	2.07	0.54
40:DE:100:GLU:O	40:DE:172:VAL:HG23	2.08	0.54
27:B1:89:GLU:O	27:B1:93:GLU:HG2	2.08	0.54
25:CZ:191:GLY:CA	25:CZ:197:ASP:OD2	2.55	0.54
4:AD:36:ARG:O	4:AD:38:TYR:N	2.41	0.54
1:AA:972:C:O3'	10:AJ:57:LYS:HG2	2.08	0.54
26:D0:36:ILE:N	26:D0:36:ILE:HD12	2.22	0.54
53:DU:90:VAL:CG2	54:DV:47:VAL:HG21	2.36	0.54
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.08	0.54
36:DA:836:G:H2'	36:DA:837:C:H6	1.73	0.54
53:BU:95:LEU:CD1	54:BV:11:GLN:HG3	2.38	0.54
51:DS:39:ILE:O	51:DS:39:ILE:HG22	2.06	0.54
51:DS:73:LEU:C	51:DS:73:LEU:HD23	2.27	0.54
52:BT:33:LYS:HE3	52:BT:43:GLN:HE22	1.72	0.54
42:DG:85:GLY:C	42:DG:87:PRO:CD	2.76	0.54
27:B1:90:ILE:O	27:B1:90:ILE:HG22	2.06	0.54
32:B6:11:LEU:C	32:B6:12:GLU:HG2	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1347:G:C6	9:CI:107:ARG:NH2	2.75	0.54
30:D4:28:LYS:O	30:D4:31:ILE:HD11	2.08	0.54
30:D4:30:GLU:O	30:D4:31:ILE:HD12	2.08	0.54
40:BE:186:GLY:O	40:BE:187:ALA:HB3	2.08	0.54
50:DR:59:ASP:O	50:DR:60:LEU:HB3	2.07	0.54
49:DQ:135:ASP:N	49:DQ:137:TYR:HD2	2.01	0.54
58:DZ:23:LYS:O	58:DZ:24:LEU:CB	2.53	0.54
1:AA:1326:C:OP1	21:AU:12:LYS:NZ	2.31	0.54
23:CX:20:U:O2'	23:CX:21:C:H5'	2.08	0.54
1:CA:59:A:H5'	1:CA:60:A:H5''	1.90	0.54
52:DT:100:TYR:HB3	52:DT:103:ARG:NE	2.14	0.54
9:AI:19:LEU:HD21	9:AI:59:PHE:CB	2.30	0.54
48:DP:88:LEU:HD11	48:DP:95:VAL:HG11	1.89	0.54
8:AH:7:ALA:HB2	8:AH:85:ARG:CD	2.34	0.54
2:AB:18:GLY:N	2:AB:42:ILE:HG22	2.15	0.54
36:DA:562:U:C4	36:DA:2036:C:O4'	2.60	0.54
49:DQ:39:PRO:O	49:DQ:40:ALA:HB2	2.08	0.54
36:BA:389:G:O6	48:BP:70:GLN:HG3	2.08	0.54
36:BA:130:C:O3'	36:BA:1349:A:H1'	2.08	0.54
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.08	0.54
22:CV:68:C:O2'	22:CV:69:G:H5''	2.08	0.54
2:AB:229:VAL:CG1	2:AB:230:VAL:H	2.20	0.54
51:DS:77:ALA:O	51:DS:78:LEU:C	2.46	0.54
36:BA:970:C:H2'	36:BA:971:C:C6	2.42	0.54
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.23	0.54
43:DH:158:HIS:HE1	43:DH:169:VAL:HG12	1.72	0.54
28:D2:6:VAL:HB	28:D2:7:ARG:HE	1.71	0.54
28:D2:7:ARG:HH11	28:D2:7:ARG:HG2	1.72	0.54
36:DA:2352:A:H2'	36:DA:2353:G:H5'	1.90	0.54
10:CJ:65:LEU:HD13	14:CN:55:GLY:O	2.07	0.54
25:CZ:298:VAL:HA	25:CZ:302:GLN:OE1	2.08	0.54
37:BB:96:U:H2'	37:BB:97:G:C8	2.42	0.54
38:DC:61:THR:HG22	38:DC:162:GLU:HA	1.90	0.54
36:BA:524:U:H2'	36:BA:525:U:C6	2.43	0.54
35:D9:29:ASN:N	35:D9:29:ASN:HD22	2.04	0.54
36:BA:521:G:H2'	36:BA:522:G:H8	1.73	0.54
36:DA:2087:G:O2'	36:DA:2088:G:H5'	2.08	0.54
53:DU:110:VAL:O	53:DU:113:ALA:HB3	2.06	0.54
14:CN:50:LYS:HD3	14:CN:52:GLN:NE2	2.23	0.54
36:DA:1534:U:H2'	36:DA:1535:A:O4'	2.08	0.54
58:DZ:104:PHE:HA	58:DZ:139:VAL:HG23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.88	0.54
1:CA:839:U:H2'	1:CA:839:U:O2	2.07	0.54
36:DA:2422:A:H4'	36:DA:2423:U:OP1	2.07	0.54
38:BC:214:VAL:CG2	38:BC:224:ILE:HG21	2.38	0.54
25:CZ:198:LYS:C	25:CZ:198:LYS:HZ2	2.07	0.54
38:BC:82:LYS:C	38:BC:84:LYS:H	2.10	0.54
28:B2:23:LYS:HE2	28:B2:26:ARG:HH11	1.71	0.54
28:B2:25:VAL:CG2	28:B2:57:ILE:HG21	2.38	0.54
36:BA:266:G:C3'	36:BA:267:C:H5''	2.38	0.54
4:CD:65:ARG:C	4:CD:67:ILE:H	2.11	0.54
42:BG:15:VAL:CG1	42:BG:15:VAL:O	2.56	0.54
36:DA:1887:C:C3'	36:DA:1888:G:H5''	2.38	0.54
52:BT:29:ARG:CB	52:BT:85:LYS:HA	2.35	0.54
12:AL:80:HIS:HD2	24:AY:68:C:O3'	1.90	0.54
36:DA:2107:C:H1'	36:DA:2182:G:H22	1.73	0.54
40:BE:165:VAL:O	40:BE:189:PRO:HG3	2.07	0.54
31:D5:47:PRO:O	31:D5:57:VAL:HG21	2.08	0.54
48:DP:105:LEU:HD12	48:DP:105:LEU:N	2.22	0.54
52:BT:128:GLU:CD	52:BT:129:ARG:H	2.11	0.54
41:DF:39:TRP:CZ2	41:DF:106:ARG:HD2	2.43	0.54
1:AA:1104:G:O5'	2:AB:111:ARG:CD	2.56	0.54
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.89	0.54
46:DN:12:ARG:CZ	46:DN:135:PRO:HG2	2.38	0.54
36:BA:389:G:H1	48:BP:71:VAL:HG12	1.71	0.54
48:DP:71:VAL:CG1	48:DP:72:PRO:HD3	2.38	0.54
48:BP:140:ALA:O	48:BP:141:ALA:HB3	2.07	0.54
1:AA:397:A:N7	1:AA:547:A:O2'	2.35	0.54
6:CF:33:TYR:HB2	6:CF:75:LEU:HD13	1.89	0.54
13:AM:108:ARG:N	13:AM:108:ARG:HD2	2.20	0.54
36:BA:1786:A:C2	36:BA:2606:C:H1'	2.42	0.54
50:BR:14:SER:HA	50:BR:17:ARG:NH1	2.22	0.54
57:BY:75:ILE:HG13	57:BY:76:CYS:H	1.71	0.54
58:BZ:70:LEU:HD23	58:BZ:70:LEU:N	2.23	0.54
42:DG:128:ARG:O	42:DG:130:ASN:N	2.41	0.54
1:AA:1277:C:O2'	1:AA:1279:A:C8	2.58	0.54
40:DE:44:TYR:O	40:DE:45:THR:CB	2.56	0.54
41:BF:160:ASN:HD22	41:BF:160:ASN:C	2.11	0.54
27:D1:30:VAL:HG23	27:D1:31:GLY:N	2.22	0.54
1:CA:924:C:H5'	1:CA:1399:C:OP2	2.08	0.54
37:BB:67:G:HO2'	37:BB:68:C:H6	1.55	0.54
16:CP:43:LYS:O	16:CP:45:THR:HG22	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1131:G:H2'	1:CA:1132:C:C5	2.43	0.54
48:BP:10:PRO:O	48:BP:11:GLY:O	2.26	0.54
11:CK:84:VAL:HG21	11:CK:91:ARG:HD3	1.90	0.54
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	1.89	0.54
1:CA:434:U:H2'	1:CA:435:C:C6	2.42	0.54
18:CR:19:LYS:HG3	18:CR:20:ALA:N	2.22	0.54
36:BA:745:G:C2'	36:BA:746:A:H5'	2.38	0.54
41:DF:64:ILE:HG22	41:DF:76:GLY:O	2.08	0.54
11:AK:61:ALA:HB2	11:AK:90:GLY:HA3	1.89	0.54
47:BO:12:ASP:HB3	47:BO:85:VAL:HG13	1.90	0.54
34:D8:26:LYS:NZ	34:D8:47:LYS:HD2	2.23	0.54
36:DA:1029:A:H2'	36:DA:1030:G:O4'	2.08	0.54
24:CY:76:A:N3	25:CZ:287:GLY:O	2.41	0.54
27:D1:88:LYS:HG2	27:D1:92:LYS:NZ	2.23	0.54
25:CZ:325:LYS:O	25:CZ:328:GLY:N	2.41	0.54
26:D0:37:LEU:N	26:D0:59:LEU:O	2.33	0.54
54:DV:34:GLU:O	54:DV:36:PRO:CD	2.55	0.54
36:DA:2377:A:H4'	51:DS:107:GLU:O	2.08	0.54
36:BA:2133:G:C5	36:BA:2157:G:N1	2.76	0.54
36:BA:2307:G:H3'	36:BA:2307:G:N3	2.23	0.54
53:BU:92:ARG:CZ	54:BV:11:GLN:O	2.56	0.54
36:BA:272(H):C:C3'	36:BA:272(I):U:H5''	2.38	0.54
36:BA:201:C:C2'	36:BA:202:U:H5'	2.38	0.54
36:BA:631:A:OP1	48:BP:64:LYS:HE2	2.07	0.54
36:DA:1542:A:C8	36:DA:1544:A:H5'	2.43	0.54
25:AZ:270:VAL:HG13	25:AZ:286:VAL:CG2	2.27	0.54
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB2	1.89	0.54
22:CV:34:G:C6	23:CX:21:C:N3	2.75	0.54
46:DN:46:VAL:HG11	46:DN:48:MET:HG3	1.89	0.54
54:DV:19:LYS:HB3	54:DV:94:LEU:O	2.08	0.54
36:DA:2776:A:H4'	36:DA:2777:G:H5''	1.89	0.54
36:DA:1039:G:H1	36:DA:1116:C:H42	1.56	0.54
9:CI:108:VAL:HG12	9:CI:109:VAL:H	1.73	0.54
8:AH:4:ASP:OD2	8:AH:89:PRO:HD3	2.08	0.54
36:DA:588:U:H2'	36:DA:589:C:C6	2.42	0.54
48:BP:79:ARG:NH1	48:BP:79:ARG:HB3	2.23	0.54
58:BZ:102:LEU:HD21	58:BZ:124:ILE:CD1	2.35	0.54
36:BA:1598:C:H5'	56:BX:36:LYS:CD	2.37	0.54
39:BD:91:ARG:HH11	39:BD:91:ARG:HG2	1.72	0.54
15:AO:24:SER:HB2	15:AO:27:VAL:HG23	1.90	0.54
16:CP:8:ARG:HB3	16:CP:28:ARG:HH12	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.56	0.54
43:DH:157:TYR:O	43:DH:158:HIS:CD2	2.61	0.54
36:BA:67:U:H2'	36:BA:68:G:O4'	2.07	0.54
1:CA:659:U:O2'	1:CA:660:G:H5'	2.08	0.54
9:AI:40:LEU:CD1	9:AI:70:LYS:HG2	2.36	0.54
24:CY:61:C:O2'	24:CY:62:U:H5''	2.08	0.54
36:BA:1494:A:H2'	36:BA:1495:A:H5''	1.89	0.54
54:BV:72:VAL:HG22	54:BV:85:LYS:O	2.08	0.54
55:DW:12:ILE:HB	55:DW:42:ARG:HH12	1.72	0.54
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.42	0.54
36:DA:1224:C:O2	36:DA:1224:C:C2'	2.56	0.54
2:CB:165:VAL:CG2	2:CB:165:VAL:O	2.56	0.54
36:DA:2363:C:O2'	36:DA:2364:C:H5'	2.08	0.54
38:DC:72:VAL:HG23	38:DC:111:ASP:HB3	1.90	0.54
36:DA:1523:U:H2'	36:DA:1524:G:C8	2.42	0.54
36:BA:521:G:H2'	36:BA:522:G:C8	2.43	0.54
18:CR:53:ARG:HG3	18:CR:63:GLN:HE21	1.72	0.54
2:AB:235:SER:O	2:AB:237:ALA:N	2.41	0.54
38:BC:214:VAL:HG23	38:BC:224:ILE:CG2	2.38	0.54
24:AY:71:C:O2'	24:AY:72:U:H5'	2.08	0.54
36:BA:1462:C:H4'	36:BA:2703:C:O4'	2.07	0.54
36:DA:2195:C:O2'	36:DA:2196:C:H5'	2.07	0.54
1:AA:755:G:OP2	15:AO:65:ARG:HD2	2.08	0.54
40:DE:1:MET:HG3	40:DE:83:ASP:HB2	1.88	0.54
39:DD:152:GLY:O	39:DD:154:LYS:HG3	2.07	0.54
36:DA:2492:U:O2'	36:DA:2493:U:H5'	2.07	0.54
4:AD:8:VAL:O	4:AD:10:ARG:N	2.36	0.54
25:CZ:118:GLU:OE2	61:CZ:502:KIR:H51	2.07	0.54
25:CZ:159:ASN:C	25:CZ:161:TYR:N	2.62	0.54
28:B2:41:ILE:HD11	28:B2:44:LEU:HD13	1.90	0.54
42:BG:107:LEU:HD12	42:BG:178:PHE:CD1	2.42	0.54
48:DP:47:ASP:OD2	48:DP:50:ARG:NH1	2.41	0.54
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.90	0.54
1:CA:972:C:H4'	10:CJ:57:LYS:HB2	1.89	0.54
10:CJ:47:PHE:HB2	10:CJ:63:PHE:HB2	1.89	0.54
31:B5:57:VAL:C	31:B5:58:LEU:HD12	2.28	0.54
25:AZ:9:LYS:CE	25:AZ:74:LYS:C	2.77	0.54
42:DG:103:LEU:HD21	42:DG:178:PHE:CE1	2.43	0.54
36:BA:1528:A:O2'	36:BA:1528(A):A:H5'	2.07	0.54
42:DG:68:PRO:HG3	42:DG:92:VAL:HB	1.90	0.54
36:DA:1684:C:O2'	36:DA:1685:C:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:40:ILE:HG13	51:BS:41:ASP:N	2.22	0.54
31:D5:49:CYS:SG	31:D5:50:GLY:N	2.76	0.54
47:BO:8:LEU:HD22	47:BO:19:ILE:HG13	1.90	0.54
34:D8:42:ARG:HH22	36:DA:2382:G:H21	1.53	0.54
53:DU:59:ARG:CG	53:DU:59:ARG:HH11	2.13	0.54
36:DA:1163:G:O2'	36:DA:1164:G:H5'	2.08	0.54
52:BT:23:ARG:O	52:BT:25:GLY:N	2.41	0.54
1:CA:1003:G:N2	1:CA:1039:C:H42	2.05	0.54
34:D8:8:LYS:HD3	34:D8:11:LYS:HD3	1.90	0.54
40:DE:59:VAL:HG23	40:DE:63:LEU:HA	1.90	0.54
25:AZ:134:PHE:CZ	25:AZ:199:ILE:HD11	2.43	0.54
39:BD:131:LEU:N	39:BD:131:LEU:HD12	2.22	0.54
36:BA:2657:A:H2'	36:BA:2658:C:C5'	2.33	0.54
1:AA:192:U:H4'	20:AT:103:GLY:N	2.23	0.54
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.08	0.54
1:AA:534:U:C6	1:AA:534:U:H5'	2.42	0.54
19:CS:63:THR:CG2	19:CS:65:ASN:HB3	2.37	0.54
19:AS:16:LEU:C	19:AS:18:LYS:H	2.11	0.54
36:BA:2575:C:H2'	36:BA:2578:G:O6	2.07	0.54
43:DH:41:MET:O	43:DH:42:ARG:CB	2.56	0.54
8:AH:116:LYS:HD2	8:AH:129:VAL:HG11	1.89	0.54
50:DR:18:LEU:HD11	50:DR:22:ARG:NE	2.23	0.54
3:CC:134:ILE:CG2	3:CC:168:ALA:HB3	2.36	0.54
28:D2:47:ASN:HD22	36:DA:95:G:H1'	1.73	0.54
2:AB:115:LEU:O	2:AB:119:GLU:HB2	2.08	0.54
40:DE:28:ALA:HB1	40:DE:93:VAL:HG22	1.90	0.54
10:CJ:43:ARG:HG3	10:CJ:43:ARG:NH1	2.21	0.54
1:CA:1258:G:H2'	1:CA:1259:C:H6	1.72	0.54
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.42	0.54
12:AL:41:ARG:HG3	12:AL:42:THR:H	1.73	0.54
39:DD:13:ARG:NH1	39:DD:16:MET:SD	2.81	0.54
1:AA:476:G:H2'	1:AA:477:A:H8	1.73	0.54
36:BA:767:U:O2'	36:BA:768:G:H5'	2.08	0.54
37:DB:96:U:H2'	37:DB:97:G:H8	1.71	0.54
40:BE:111:ARG:HD3	40:BE:160:TYR:CD2	2.43	0.54
22:CV:18:G:H1'	22:CV:58:A:C2	2.43	0.54
25:AZ:39:ASN:HA	25:AZ:41:ASN:H	1.73	0.54
4:AD:170:VAL:HG12	4:AD:171:GLY:N	2.23	0.54
3:CC:23:TYR:CD1	3:CC:24:ALA:N	2.76	0.54
38:BC:40:THR:HG23	38:BC:176:GLY:O	2.08	0.54
36:BA:1582:C:H2'	36:BA:1583:A:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:100:VAL:HG23	5:AE:100:VAL:O	2.07	0.54
1:CA:139:G:O2'	1:CA:140:A:H5'	2.07	0.54
1:AA:973:G:O3'	14:AN:41:ARG:NH1	2.41	0.53
10:AJ:54:PHE:CA	10:AJ:55:LYS:HE3	2.38	0.53
39:DD:35:LYS:HD2	39:DD:36:PRO:CA	2.36	0.53
28:B2:3:LEU:HG	28:B2:7:ARG:NH2	2.22	0.53
28:B2:41:ILE:HD11	28:B2:44:LEU:CD1	2.38	0.53
36:BA:58:G:N3	36:BA:73:A:H2	2.06	0.53
40:DE:57:LYS:O	40:DE:58:ARG:HG3	2.08	0.53
36:DA:1827:C:C2'	36:DA:1828:G:H5'	2.38	0.53
51:DS:50:SER:O	51:DS:51:ALA:HB2	2.08	0.53
36:BA:2312:U:C3'	42:BG:71:THR:HG21	2.37	0.53
42:DG:73:ALA:CB	42:DG:87:PRO:HG3	2.30	0.53
36:BA:1885:A:H5'	36:BA:1885:A:H8	1.73	0.53
35:B9:29:ASN:HD21	35:B9:32:HIS:CE1	2.24	0.53
53:DU:58:ARG:O	53:DU:62:ILE:HG13	2.07	0.53
30:D4:7:PRO:O	30:D4:8:LYS:HB3	2.08	0.53
36:BA:1504:C:O2'	36:BA:1505:C:C5'	2.56	0.53
1:CA:1123:A:H2	1:CA:1150:U:H3	1.53	0.53
13:AM:57:ARG:O	13:AM:61:GLU:HB3	2.08	0.53
10:AJ:6:ILE:CG1	10:AJ:72:VAL:HB	2.38	0.53
47:BO:87:ILE:HG23	47:BO:91:LEU:HA	1.89	0.53
41:DF:169:ASN:C	41:DF:169:ASN:HD22	2.10	0.53
9:CI:127:LYS:O	9:CI:128:ARG:O	2.26	0.53
36:DA:1363:C:H2'	36:DA:1364:G:H8	1.73	0.53
17:AQ:4:LYS:CE	17:AQ:6:LEU:HD21	2.37	0.53
1:AA:1320:C:H42	19:AS:36:ARG:HG3	1.73	0.53
22:CW:40:C:H2'	22:CW:41:C:H6	1.72	0.53
46:DN:90:MET:HA	46:DN:90:MET:CE	2.38	0.53
43:BH:158:HIS:O	43:BH:159:GLU:HB2	2.07	0.53
41:DF:160:ASN:OD1	41:DF:163:VAL:HG23	2.08	0.53
36:BA:2596:U:H2'	36:BA:2597:G:O4'	2.09	0.53
1:CA:673:G:H5''	6:CF:87:ARG:NH1	2.23	0.53
22:AV:59:U:O2'	22:AV:60:U:O5'	2.26	0.53
13:CM:35:GLU:C	13:CM:37:THR:N	2.61	0.53
17:CQ:40:LYS:HD3	17:CQ:42:TYR:CZ	2.42	0.53
9:AI:99:LEU:H	9:AI:99:LEU:HD22	1.72	0.53
58:BZ:19:ARG:NH1	58:BZ:84:GLU:O	2.41	0.53
36:BA:1265:A:OP1	36:BA:1265:A:H8	1.90	0.53
36:BA:263:C:O2'	36:BA:429:A:N3	2.40	0.53
11:AK:105:VAL:HG23	11:AK:105:VAL:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:200:GLU:O	4:CD:204:ILE:HG13	2.07	0.53
56:BX:57:LEU:N	56:BX:57:LEU:HD23	2.23	0.53
1:AA:1296:C:H4'	1:AA:1302:U:C5	2.43	0.53
36:DA:1013:C:H2'	36:DA:1014:U:H6	1.73	0.53
35:D9:9:ARG:HD2	35:D9:16:VAL:HG22	1.89	0.53
36:BA:271(V):G:O2'	36:BA:271(W):G:H5'	2.08	0.53
7:AG:113:GLU:O	7:AG:119:ARG:HD3	2.08	0.53
25:AZ:84:GLY:O	25:AZ:85:HIS:HB3	2.06	0.53
36:BA:492:A:H2'	36:BA:493:G:O4'	2.07	0.53
22:AV:50:U:O2'	22:AV:51:U:H5'	2.08	0.53
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.08	0.53
1:CA:115:G:H1'	1:CA:116:A:N7	2.23	0.53
40:DE:197:ILE:O	40:DE:197:ILE:HG12	2.08	0.53
36:BA:2063:C:O2	36:BA:2450:A:N1	2.41	0.53
26:B0:20:ARG:HD3	36:BA:2356:C:O3'	2.08	0.53
42:DG:164:GLU:HB2	42:DG:168:GLU:OE2	2.08	0.53
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.39	0.53
39:DD:32:SER:O	39:DD:36:PRO:HG3	2.08	0.53
13:CM:13:LYS:HA	13:CM:44:ARG:NH1	2.24	0.53
1:AA:1125:U:O5'	1:AA:1125:U:C2	2.61	0.53
36:DA:664:C:O2'	36:DA:665:C:H5'	2.07	0.53
39:DD:101:GLU:OE2	39:DD:103:ARG:HD3	2.08	0.53
40:DE:52:LEU:CG	40:DE:75:VAL:HB	2.38	0.53
36:BA:2306:C:H4'	42:BG:136:ARG:HH22	1.73	0.53
4:CD:18:LYS:CB	4:CD:33:MET:HG2	2.38	0.53
43:DH:84:SER:O	43:DH:85:LYS:HB3	2.09	0.53
31:B5:6:VAL:HG13	31:B5:7:PRO:HD2	1.89	0.53
48:BP:59:LEU:HA	48:BP:61:ARG:CZ	2.38	0.53
36:BA:833:U:H5'	48:BP:48:PRO:CB	2.38	0.53
35:D9:34:GLN:O	35:D9:35:ARG:HB2	2.06	0.53
1:CA:223:U:H2'	1:CA:224:C:H6	1.73	0.53
36:BA:941:A:H4'	48:BP:35:HIS:CE1	2.43	0.53
56:BX:55:ASN:HB2	56:BX:80:ILE:CG2	2.38	0.53
36:BA:2334:G:N3	51:BS:18:ILE:HD13	2.24	0.53
40:BE:183:LEU:HD21	52:BT:11:GLU:HG2	1.90	0.53
5:CE:6:PHE:HB2	5:CE:34:VAL:HG13	1.91	0.53
48:DP:112:LEU:H	48:DP:128:HIS:HD2	1.55	0.53
42:DG:123:ASN:N	42:DG:123:ASN:ND2	2.34	0.53
29:D3:29:ARG:NH1	29:D3:29:ARG:HB2	2.24	0.53
55:DW:25:ARG:NH1	55:DW:25:ARG:CB	2.71	0.53
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:85:LYS:HZ2	4:CD:92:VAL:HG13	1.73	0.53
43:DH:54:ARG:HG2	43:DH:54:ARG:NH1	2.16	0.53
36:BA:1314:C:C6	36:BA:1314:C:H5'	2.35	0.53
20:CT:73:HIS:CB	20:CT:74:LYS:HD3	2.39	0.53
25:AZ:317:GLU:O	25:AZ:401:THR:HB	2.09	0.53
1:AA:220:G:H2'	1:AA:221:C:H5'	1.89	0.53
1:CA:1227:A:C2	1:CA:1228:C:C1'	2.91	0.53
36:DA:1087:G:H8	36:DA:1088:A:H4'	1.71	0.53
57:DY:44:ILE:CG2	57:DY:45:VAL:N	2.71	0.53
37:DB:16:G:O2'	37:DB:17:C:H6	1.91	0.53
46:BN:133:GLN:HG2	46:BN:135:PRO:CD	2.38	0.53
1:CA:865:A:H2	1:CA:918:A:H4'	1.73	0.53
36:BA:2206:G:N3	36:BA:2206:G:H3'	2.23	0.53
36:DA:753:C:O2'	36:DA:754:C:H5'	2.08	0.53
36:BA:2852:G:O2'	36:BA:2853:C:H5'	2.08	0.53
36:BA:17:G:H4'	53:BU:25:TRP:CH2	2.42	0.53
31:D5:6:VAL:HG13	31:D5:7:PRO:HD2	1.91	0.53
49:BQ:109:VAL:HG12	49:BQ:113:GLN:HB2	1.90	0.53
1:CA:346:G:N3	1:CA:346:G:H2'	2.23	0.53
36:BA:272(C):G:H2'	36:BA:272(D):G:H8	1.73	0.53
36:BA:818:G:C2'	36:BA:819:A:H5''	2.39	0.53
11:CK:99:GLN:C	11:CK:101:SER:H	2.12	0.53
36:DA:108:U:H2'	36:DA:109:G:C8	2.43	0.53
36:BA:2199:A:H5''	36:BA:2200:C:H5	1.73	0.53
1:CA:950:U:H2'	1:CA:951:G:H8	1.73	0.53
2:CB:80:ILE:HD12	2:CB:80:ILE:N	2.22	0.53
22:CV:1:G:H1'	26:D0:5:LYS:NZ	2.24	0.53
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.21	0.53
1:CA:1155:G:H2'	1:CA:1156:G:C8	2.44	0.53
36:DA:2168:G:N2	36:DA:2170:A:H3'	2.23	0.53
5:CE:107:ARG:HD3	5:CE:111:GLU:OE2	2.09	0.53
36:BA:36:G:O2'	36:BA:37:C:H5'	2.07	0.53
36:BA:742:G:H2'	36:BA:743:G:H8	1.73	0.53
51:BS:64:GLU:O	51:BS:68:GLN:HG3	2.08	0.53
36:BA:1499:C:O2'	36:BA:1500:G:H5'	2.08	0.53
36:BA:1213:A:H2'	36:BA:1214:A:C8	2.43	0.53
38:DC:40:THR:HA	38:DC:177:LYS:HD2	1.89	0.53
1:AA:792:A:H4'	1:AA:793:U:O5'	2.08	0.53
36:BA:80:G:O2'	36:BA:81:G:H5'	2.09	0.53
58:DZ:127:LYS:O	58:DZ:127:LYS:HG3	2.09	0.53
19:AS:23:ASN:C	19:AS:25:LYS:H	2.11	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2189:U:H2'	36:BA:2190:G:C4'	2.34	0.53
2:AB:8:LYS:NZ	2:AB:217:ARG:HH12	2.06	0.53
36:DA:2133:G:C5	36:DA:2157:G:N1	2.77	0.53
58:BZ:59:LEU:O	58:BZ:66:SER:HA	2.07	0.53
10:AJ:29:ARG:HH11	10:AJ:29:ARG:HG2	1.73	0.53
32:D6:7:ILE:HB	32:D6:27:LYS:HZ1	1.74	0.53
32:D6:5:VAL:HB	32:D6:8:LYS:CB	2.38	0.53
32:D6:42:TRP:O	32:D6:45:LYS:HE2	2.08	0.53
40:BE:52:LEU:HD13	52:BT:1:MET:CE	2.38	0.53
38:DC:118:ASP:O	38:DC:119:VAL:HB	2.08	0.53
42:DG:101:ILE:O	42:DG:104:GLU:HB3	2.08	0.53
40:DE:120:TRP:CG	40:DE:155:LYS:HB3	2.43	0.53
1:CA:392:G:H2'	1:CA:393:A:C8	2.43	0.53
2:CB:87:ARG:NH1	2:CB:223:ILE:HD11	2.18	0.53
20:AT:55:ILE:HD13	20:AT:55:ILE:N	2.18	0.53
39:DD:43:ARG:CZ	39:DD:44:ASN:ND2	2.71	0.53
25:AZ:34:VAL:HG21	25:AZ:199:ILE:HG22	1.90	0.53
1:AA:191:G:H1'	20:AT:105:SER:HA	1.91	0.53
28:D2:35:LEU:O	28:D2:38:GLN:N	2.41	0.53
38:DC:41:VAL:HG21	38:DC:185:LEU:HD22	1.90	0.53
36:BA:2864:G:H2'	36:BA:2865:U:C6	2.42	0.53
19:AS:16:LEU:O	19:AS:18:LYS:N	2.41	0.53
22:CW:39:U:C5'	22:CW:39:U:O2	2.56	0.53
36:BA:1251:C:OP1	53:BU:10:ARG:HG3	2.09	0.53
29:B3:26:LEU:O	29:B3:28:LEU:HG	2.09	0.53
39:BD:209:ALA:C	39:BD:210:GLY:O	2.45	0.53
46:DN:58:ASP:O	46:DN:60:ILE:HG13	2.07	0.53
1:AA:338:A:H2'	1:AA:339:C:C6	2.44	0.53
4:AD:74:GLN:O	4:AD:77:ASN:HB3	2.09	0.53
1:CA:1308:U:H5''	13:CM:98:VAL:HG21	1.90	0.53
27:B1:75:GLU:O	27:B1:78:LYS:HG2	2.08	0.53
15:CO:82:ILE:CG2	15:CO:83:GLU:H	2.21	0.53
37:BB:56:G:O2'	37:BB:57:A:OP2	2.25	0.53
36:BA:729:G:C8	39:BD:208:LYS:HD2	2.43	0.53
1:CA:648:A:H2'	1:CA:649:G:H8	1.74	0.53
1:CA:640:A:O2'	8:CH:115:SER:HB2	2.08	0.53
34:D8:26:LYS:CE	34:D8:47:LYS:HD2	2.37	0.53
36:BA:1272:A:C2	36:BA:1618:A:C2	2.96	0.53
36:BA:291:C:H2'	36:BA:292:C:C6	2.43	0.53
1:CA:99:U:H2'	1:CA:100:C:C6	2.42	0.53
1:CA:1200:C:H4'	1:CA:1201:A:H5''	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1296:G:H1	36:DA:1644:C:H42	1.57	0.53
4:AD:135:LEU:HD13	4:AD:135:LEU:N	2.24	0.53
19:AS:58:VAL:O	19:AS:58:VAL:HG13	2.09	0.53
8:AH:26:VAL:HG13	8:AH:59:LEU:HB2	1.90	0.53
1:AA:412:A:H5'	1:AA:413:G:OP2	2.08	0.53
1:AA:545:C:OP1	4:AD:61:LYS:NZ	2.41	0.53
41:DF:24:LEU:HD12	41:DF:118:ALA:HB1	1.89	0.53
36:DA:252:G:OP2	48:DP:50:ARG:NH2	2.32	0.53
42:DG:83:ARG:HD3	42:DG:84:LYS:HZ1	1.73	0.53
25:CZ:242:ILE:CB	25:CZ:282:ALA:HA	2.38	0.53
36:BA:1541:G:O3'	36:BA:1541:G:OP2	2.26	0.53
36:BA:1190:G:H5'	48:BP:35:HIS:N	2.23	0.53
48:DP:64:LYS:O	48:DP:65:ARG:C	2.47	0.53
50:DR:67:LEU:CD1	50:DR:76:VAL:HG21	2.37	0.53
49:BQ:46:GLN:NE2	49:BQ:126:PRO:HD3	2.23	0.53
1:CA:368:U:P	25:CZ:291:ARG:HH11	2.31	0.53
41:BF:114:VAL:HG12	41:BF:114:VAL:O	2.08	0.53
1:CA:1125:U:C1'	10:CJ:5:ARG:NH2	2.68	0.53
48:DP:5:ASP:OD1	48:DP:6:LEU:HD23	2.08	0.53
39:DD:44:ASN:HB2	39:DD:48:ARG:O	2.09	0.53
58:DZ:113:ALA:HB1	58:DZ:146:ILE:HD13	1.88	0.53
19:CS:16:LEU:C	19:CS:18:LYS:H	2.10	0.53
1:CA:945:G:H2'	1:CA:945:G:N3	2.23	0.53
51:DS:17:ARG:O	51:DS:20:ARG:HG2	2.08	0.53
40:BE:101:ARG:HB2	40:BE:201:THR:HG21	1.90	0.53
48:BP:107:LYS:O	48:BP:108:LYS:HB2	2.09	0.53
9:AI:53:VAL:HG22	9:AI:95:LYS:CD	2.37	0.53
48:DP:77:ARG:CG	48:DP:78:PRO:HD2	2.38	0.53
36:DA:1906:G:O2'	36:DA:1907:G:H5'	2.08	0.53
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CE2	2.44	0.53
36:BA:970:C:H2'	36:BA:971:C:H6	1.73	0.53
55:BW:82:LEU:H	55:BW:82:LEU:CD1	2.20	0.53
39:BD:134:ARG:HG3	39:BD:187:GLY:O	2.08	0.53
47:DO:64:ARG:NH1	47:DO:83:ALA:HB2	2.22	0.53
36:DA:2316:C:H1'	42:DG:128:ARG:NH1	2.23	0.53
36:BA:2087:G:C2'	36:BA:2088:G:H5'	2.38	0.53
54:DV:77:ALA:O	54:DV:79:VAL:N	2.42	0.53
1:CA:924:C:H2'	1:CA:925:G:H8	1.73	0.53
1:CA:1235:U:O3'	21:CU:3:LYS:HB2	2.08	0.53
9:AI:57:GLY:O	9:AI:58:HIS:HB2	2.09	0.53
19:AS:11:VAL:HA	19:AS:38:SER:HB2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:113:PRO:O	13:CM:114:ARG:CB	2.57	0.53
1:CA:602:A:O2'	1:CA:603:U:H5'	2.07	0.53
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.90	0.53
36:DA:1681:G:O2'	36:DA:1762:A:H2'	2.07	0.53
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.72	0.53
36:DA:2758:A:C2	36:DA:2759:G:H1'	2.44	0.53
43:BH:67:LEU:O	43:BH:71:LEU:HB2	2.07	0.53
1:CA:446:G:H2'	1:CA:447:G:H5'	1.90	0.53
25:AZ:196:VAL:CG1	25:AZ:196:VAL:O	2.57	0.53
36:DA:2115:G:N3	36:DA:2117:A:N7	2.55	0.53
2:AB:127:ILE:HG22	2:AB:128:GLU:N	2.22	0.53
11:AK:84:VAL:HG11	11:AK:95:ILE:HD11	1.90	0.53
36:DA:1580:A:OP2	36:DA:1580:A:H8	1.91	0.53
2:CB:71:VAL:HG13	2:CB:93:VAL:HG13	1.90	0.53
27:B1:83:GLU:HG3	27:B1:84:GLY:N	2.23	0.53
25:CZ:325:LYS:HG2	25:CZ:326:GLU:N	2.24	0.53
1:CA:1303:C:H2'	1:CA:1304:G:H5'	1.88	0.53
36:BA:610:G:N2	36:BA:619:G:H1'	2.23	0.53
43:BH:125:VAL:N	43:BH:126:PRO:CD	2.72	0.53
34:D8:62:LEU:N	34:D8:63:PRO:CD	2.72	0.53
25:AZ:9:LYS:HE3	25:AZ:73:ALA:C	2.29	0.53
36:DA:927:G:H3'	36:DA:928:G:H8	1.73	0.53
1:AA:980:C:H6	1:AA:980:C:C5'	2.11	0.53
48:BP:23:PRO:HB2	48:BP:33:ARG:CG	2.38	0.53
54:BV:99:ILE:H	54:BV:99:ILE:CD1	2.05	0.53
29:D3:38:GLU:CB	29:D3:40:THR:HG23	2.35	0.53
39:BD:70:TRP:O	39:BD:71:ASP:C	2.46	0.53
1:AA:858:G:C6	1:AA:869:G:C8	2.96	0.53
34:D8:15:LYS:HG2	48:DP:65:ARG:HH21	1.73	0.53
36:BA:1427:A:O2'	36:BA:1428:C:OP2	2.26	0.53
26:B0:36:ILE:HG13	36:BA:2354:G:O2'	2.08	0.53
2:AB:109:SER:C	2:AB:111:ARG:H	2.12	0.53
39:DD:131:LEU:N	39:DD:131:LEU:HD12	2.23	0.53
2:AB:155:LEU:HD13	2:AB:157:ARG:O	2.09	0.53
13:AM:52:GLU:O	13:AM:55:ARG:HB3	2.09	0.53
36:BA:562:U:C4	36:BA:2036:C:O4'	2.61	0.53
1:AA:148:G:H2'	1:AA:149:A:H8	1.72	0.53
27:B1:94:LEU:CD1	27:B1:94:LEU:H	2.22	0.53
30:B4:30:GLU:O	30:B4:31:ILE:HD12	2.08	0.53
36:BA:310:A:P	57:BY:18:GLY:HA2	2.47	0.53
1:AA:370:C:O2'	1:AA:371:G:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D7:34:ARG:HB2	33:D7:42:LEU:HD23	1.90	0.53
17:CQ:43:LEU:HD11	17:CQ:68:ARG:NH1	2.24	0.53
1:CA:614:A:O2'	1:CA:615:C:H5'	2.08	0.53
22:CV:68:C:C2'	22:CV:69:G:C5'	2.86	0.53
22:CV:68:C:C2'	22:CV:69:G:H5'	2.37	0.53
39:BD:142:VAL:HG23	39:BD:193:VAL:CA	2.37	0.53
41:BF:65:TRP:CZ3	41:BF:73:ALA:O	2.55	0.53
38:BC:171:ILE:CD1	38:BC:196:LEU:HD21	2.37	0.53
8:CH:35:ILE:HG22	8:CH:39:LEU:CD2	2.38	0.53
36:DA:598:G:H5'	48:DP:15:ARG:CB	2.39	0.53
3:AC:16:ARG:CB	3:AC:16:ARG:HH11	2.22	0.53
1:CA:585:G:H4'	12:CL:8:ASN:HD21	1.73	0.53
36:DA:118:A:H5'	36:DA:119:A:H8	1.73	0.53
7:AG:102:ARG:HG2	7:AG:106:GLN:HE21	1.74	0.53
1:CA:1145:C:O2'	1:CA:1146:A:H8	1.91	0.53
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.90	0.53
36:DA:2019:A:O4'	53:DU:34:LYS:HD2	2.08	0.53
32:B6:22:ALA:CB	32:B6:39:TYR:CZ	2.91	0.53
9:AI:128:ARG:HG2	9:AI:128:ARG:OXT	2.08	0.53
36:DA:523:C:C2'	36:DA:524:U:H5'	2.38	0.53
40:DE:146:THR:HA	40:DE:147:PRO:C	2.29	0.53
36:DA:2553:G:H2'	36:DA:2554:U:C4'	2.38	0.53
36:DA:438:G:H2'	36:DA:440:G:H8	1.73	0.53
1:CA:745:C:O2'	1:CA:746:A:H5'	2.07	0.53
10:CJ:56:HIS:O	10:CJ:58:ASP:O	2.27	0.53
10:CJ:88:LEU:HG	10:CJ:88:LEU:O	2.09	0.53
14:CN:57:ARG:HB2	14:CN:57:ARG:HH11	1.72	0.53
25:CZ:176:LEU:HD13	25:CZ:176:LEU:C	2.29	0.53
27:D1:87:PRO:CG	27:D1:88:LYS:N	2.72	0.53
25:CZ:331:HIS:HD2	25:CZ:331:HIS:H	1.56	0.53
36:DA:2376:A:H2'	36:DA:2377:A:O4'	2.09	0.53
13:CM:5:ALA:CB	13:CM:66:LEU:HD23	2.38	0.53
21:CU:23:PRO:O	21:CU:24:ARG:HB2	2.08	0.53
4:CD:122:ARG:O	4:CD:122:ARG:HG3	2.09	0.53
4:CD:138:TYR:CD1	4:CD:139:ARG:N	2.77	0.53
43:BH:98:LEU:HB3	43:BH:125:VAL:CG2	2.38	0.53
4:CD:22:LYS:HB2	4:CD:26:CYS:HB2	1.91	0.53
41:BF:3:GLU:O	41:BF:19:GLU:HG3	2.09	0.53
42:BG:71:THR:CG2	42:BG:72:ARG:N	2.70	0.53
14:CN:49:HIS:C	14:CN:51:GLY:H	2.11	0.53
31:B5:3:LYS:HA	31:B5:3:LYS:CE	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:826:U:H4'	48:BP:55:ARG:HB3	1.90	0.53
42:DG:76:SER:HB2	42:DG:84:LYS:N	2.24	0.53
32:B6:15:GLU:O	32:B6:15:GLU:CG	2.56	0.53
56:DX:27:THR:HG22	56:DX:80:ILE:CG1	2.38	0.53
48:DP:17:LYS:C	48:DP:19:VAL:H	2.11	0.53
37:DB:73:A:C4	37:DB:105:A:C2	2.97	0.53
4:AD:114:ARG:HH11	4:AD:114:ARG:CG	2.12	0.53
39:DD:134:ARG:HG3	39:DD:187:GLY:CA	2.39	0.53
40:BE:117:MET:HA	40:BE:122:PHE:H	1.73	0.53
36:DA:2523:G:H2'	36:DA:2524:G:C5'	2.38	0.53
20:AT:22:ARG:HH11	20:AT:22:ARG:HG3	1.72	0.53
49:DQ:18:LYS:HA	49:DQ:18:LYS:HZ1	1.70	0.53
6:CF:72:VAL:HG22	6:CF:72:VAL:O	2.08	0.53
4:CD:163:GLU:O	4:CD:166:LYS:HG2	2.09	0.53
40:DE:132:HIS:HA	40:DE:135:HIS:CE1	2.44	0.53
22:AW:67:C:H2'	22:AW:68:C:H6	1.72	0.53
22:AW:68:C:H2'	22:AW:69:G:C8	2.38	0.53
39:BD:132:PRO:HG3	39:BD:190:TYR:CE1	2.44	0.53
37:DB:34:U:H5''	37:DB:35:U:OP1	2.09	0.53
52:DT:8:LYS:HA	52:DT:11:GLU:OE1	2.09	0.53
46:BN:132:ALA:O	46:BN:133:GLN:CB	2.56	0.53
39:BD:144:ALA:HB3	39:BD:192:THR:CG2	2.38	0.53
1:AA:189(H):G:HO2'	1:AA:189(I):G:H8	1.47	0.53
1:AA:145:G:N3	1:AA:146:G:H1'	2.24	0.53
4:CD:53:ASP:HB3	4:CD:57:ARG:HH12	1.73	0.53
36:DA:2360:A:HO2'	36:DA:2361:A:H8	1.57	0.53
36:BA:774:A:H2	36:BA:787:U:O2'	1.91	0.53
57:DY:87:LYS:O	57:DY:88:LYS:HB2	2.07	0.53
36:BA:863:A:H61	36:BA:913:U:H3	1.56	0.53
36:DA:2208:A:H1'	36:DA:2219:G:C5	2.43	0.53
36:DA:519:U:H2'	36:DA:520:G:C8	2.44	0.53
25:CZ:39:ASN:HA	25:CZ:41:ASN:H	1.74	0.53
19:CS:51:VAL:HG12	19:CS:52:TYR:N	2.22	0.53
1:CA:444:C:H2'	1:CA:445:G:H8	1.74	0.53
4:AD:152:SER:O	4:AD:155:LEU:N	2.35	0.53
36:DA:2084:C:H2'	36:DA:2085:C:H6	1.73	0.53
1:AA:748:C:H4'	1:AA:749:C:O5'	2.09	0.53
36:DA:1573:G:H2'	36:DA:1574:C:H5'	1.91	0.53
8:CH:55:GLY:O	8:CH:56:LYS:HD3	2.08	0.53
2:CB:40:HIS:C	2:CB:41:ILE:HD12	2.28	0.53
1:CA:683:G:H3'	1:CA:684:A:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1120:G:H2'	36:BA:1121:C:H6	1.74	0.53
27:D1:23:LYS:HE2	27:D1:28:GLY:HA3	1.90	0.53
25:CZ:191:GLY:H	25:CZ:197:ASP:CG	2.09	0.53
25:CZ:93:ILE:HD11	25:CZ:389:ARG:HH11	1.72	0.53
28:B2:53:LEU:HD23	28:B2:56:GLN:HG3	1.91	0.53
36:BA:618:C:H2'	36:BA:619:G:O4'	2.09	0.53
1:CA:542:G:P	4:CD:10:ARG:NH2	2.82	0.53
53:BU:79:PHE:CE2	53:BU:110:VAL:HG22	2.43	0.53
57:DY:29:GLU:HB2	57:DY:38:ILE:CG2	2.38	0.53
36:BA:2884:U:H2'	36:BA:2885:C:C5'	2.35	0.53
36:BA:806:C:C5	48:BP:39:LYS:HE2	2.42	0.53
1:CA:64:G:H4'	1:CA:66:G:OP1	2.09	0.53
36:BA:652:C:O2'	36:BA:653:A:O5'	2.26	0.53
36:DA:2399:G:N2	36:DA:2418:A:H1'	2.24	0.53
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG23	1.91	0.53
35:B9:10:ILE:N	35:B9:10:ILE:HD12	2.15	0.53
13:AM:11:ARG:HE	13:AM:12:ASN:HD21	1.55	0.53
36:BA:676:A:H2	36:BA:802:A:H61	1.50	0.53
52:BT:96:ARG:HG2	52:BT:98:LYS:O	2.09	0.53
42:DG:176:LEU:O	42:DG:176:LEU:HD23	2.08	0.53
25:CZ:251:ASP:O	25:CZ:267:VAL:HG12	2.09	0.53
28:D2:51:ARG:HB3	36:DA:61:G:OP1	2.09	0.53
1:CA:1149:C:O2'	1:CA:1150:U:H5'	2.09	0.53
19:CS:13:ASP:C	19:CS:15:LEU:N	2.61	0.53
19:CS:13:ASP:O	19:CS:15:LEU:N	2.41	0.53
38:DC:47:LEU:HD11	38:DC:171:ILE:HG22	1.90	0.53
12:CL:69:TYR:HB2	12:CL:96:VAL:HG11	1.89	0.53
9:CI:10:ARG:HB3	9:CI:72:GLY:O	2.09	0.53
19:CS:29:ARG:HB3	19:CS:48:THR:H	1.74	0.53
1:AA:1321:C:OP2	1:AA:1322:C:H2'	2.09	0.53
39:BD:79:VAL:HG23	39:BD:115:GLN:O	2.09	0.53
55:BW:29:LEU:HA	55:BW:32:ALA:HB3	1.90	0.53
55:BW:32:ALA:O	55:BW:36:LEU:HG	2.09	0.53
36:BA:1813:G:H1'	39:BD:50:THR:OG1	2.09	0.53
40:BE:34:VAL:O	40:BE:35:GLN:CB	2.56	0.53
36:BA:1677:A:H2'	36:BA:1678:G:C8	2.43	0.53
36:DA:2261:C:O2'	36:DA:2262:U:H5'	2.08	0.53
22:CV:59:U:O2'	22:CV:60:U:O5'	2.27	0.53
25:AZ:94:THR:HG21	25:AZ:300:ARG:NH2	2.24	0.53
3:CC:25:GLY:C	3:CC:27:LYS:H	2.12	0.53
36:BA:363(A):A:C2	36:BA:363(B):G:C8	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AX:12:A:H8	23:AX:12:A:O5'	1.92	0.53
1:AA:333:G:O2'	1:AA:334:C:H5'	2.09	0.53
36:BA:470:A:H2'	36:BA:471:A:C8	2.44	0.53
39:BD:16:MET:CE	39:BD:208:LYS:HG2	2.39	0.53
29:B3:56:VAL:HG12	29:B3:57:GLU:N	2.23	0.53
36:BA:520:G:H2'	36:BA:521:G:C8	2.44	0.53
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.08	0.53
24:CY:74:C:O2'	25:CZ:229:PHE:CE2	2.50	0.53
36:DA:271(E):U:H2'	36:DA:271(F):C:C6	2.43	0.53
36:BA:1614:A:N7	55:BW:93:ALA:HB2	2.23	0.53
36:DA:437:G:H2'	36:DA:438:G:C8	2.44	0.53
1:CA:633:G:H5'	1:CA:634:C:OP2	2.09	0.53
36:BA:2681:C:H5	36:BA:2725:A:H62	1.57	0.53
43:BH:89:ILE:O	43:BH:89:ILE:HG13	2.09	0.53
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.43	0.53
15:AO:45:VAL:HG12	15:AO:46:HIS:CD2	2.44	0.53
52:BT:134:GLU:O	52:BT:135:ALA:HB3	2.09	0.53
39:DD:144:ALA:HB3	39:DD:192:THR:CG2	2.39	0.53
1:AA:633:G:H5'	1:AA:634:C:OP2	2.09	0.53
51:DS:87:PHE:N	51:DS:106:ARG:HD2	2.24	0.53
57:BY:9:LYS:HZ1	57:BY:10:GLY:H	1.56	0.53
1:CA:403:C:O3'	4:CD:122:ARG:HD3	2.09	0.53
42:DG:52:ILE:HG12	42:DG:53:LEU:N	2.24	0.53
4:CD:21:LEU:HD21	4:CD:67:ILE:HA	1.91	0.53
1:AA:80:G:H2'	1:AA:81:U:H6	1.73	0.53
10:CJ:49:VAL:O	10:CJ:60:ARG:HB3	2.09	0.53
38:DC:10:LEU:HA	38:DC:13:LYS:CE	2.38	0.53
25:AZ:325:LYS:HG2	25:AZ:326:GLU:N	2.23	0.53
42:DG:82:LEU:HD13	42:DG:87:PRO:HB2	1.90	0.53
32:B6:30:THR:HG23	32:B6:31:PRO:HD2	1.88	0.53
25:AZ:129:PRO:HB2	25:AZ:130:TYR:CD1	2.44	0.53
19:AS:49:ILE:HD12	19:AS:49:ILE:N	2.16	0.53
56:DX:50:LYS:N	56:DX:87:GLN:HE22	2.00	0.53
48:BP:115:LEU:HG	48:BP:116:GLY:N	2.17	0.53
48:DP:16:ARG:CZ	48:DP:16:ARG:HB2	2.38	0.53
35:D9:14:CYS:SG	35:D9:27:CYS:SG	3.06	0.53
57:DY:86:ARG:HH22	57:DY:95:LYS:HZ3	1.55	0.53
34:D8:30:ARG:NE	34:D8:30:ARG:HA	2.24	0.53
34:D8:32:LEU:HD22	36:DA:2392:A:OP1	2.09	0.53
53:DU:57:PHE:O	53:DU:59:ARG:N	2.42	0.53
29:D3:26:LEU:O	29:D3:28:LEU:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:25:ARG:HH11	55:DW:25:ARG:CB	2.21	0.53
2:AB:47:THR:O	2:AB:47:THR:HG22	2.08	0.53
49:DQ:67:ARG:HB2	49:DQ:103:MET:O	2.09	0.53
36:DA:322:A:OP2	41:DF:169:ASN:HB2	2.08	0.53
3:AC:20:SER:CB	3:AC:40:ARG:HH22	2.17	0.53
1:CA:538:G:OP1	12:CL:115:LYS:HB2	2.09	0.53
36:DA:676:A:H8	36:DA:2069:G:H21	1.57	0.53
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.09	0.53
41:BF:162:LEU:O	41:BF:165:ARG:HB2	2.09	0.53
36:DA:2262:U:H4'	36:DA:2328:A:H2	1.74	0.53
36:DA:2845:G:H2'	36:DA:2846:G:C8	2.39	0.53
57:BY:88:LYS:O	57:BY:89:PHE:HB2	2.08	0.53
22:CV:59:U:H2'	22:CV:60:U:C5	2.44	0.53
43:DH:125:VAL:O	43:DH:125:VAL:HG12	2.09	0.53
36:DA:2010:G:H5''	55:DW:42:ARG:HB2	1.89	0.53
36:DA:720:C:H2'	36:DA:721:C:C6	2.41	0.53
36:DA:2360:A:O2'	36:DA:2361:A:P	2.67	0.53
53:DU:115:ALA:C	53:DU:117:GLN:N	2.61	0.53
36:BA:118:A:N3	36:BA:178:G:H1'	2.24	0.53
36:DA:1820:U:O2	39:DD:201:HIS:HB3	2.08	0.53
36:BA:89:G:H3'	36:BA:90:U:H5'	1.91	0.53
1:AA:455:C:H42	1:AA:476:G:H1	1.56	0.53
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.90	0.53
14:AN:21:TYR:N	14:AN:21:TYR:CD1	2.75	0.53
36:BA:1322:A:H2'	36:BA:1323:U:H6	1.74	0.53
36:BA:2360:A:C2	36:BA:2361:A:H1'	2.44	0.53
36:DA:2050:C:H1'	40:DE:156:MET:CE	2.38	0.53
37:BB:86:G:O2'	37:BB:87:G:H5'	2.09	0.53
36:DA:1315:C:O2'	36:DA:1316:U:H5'	2.09	0.53
26:B0:33:ALA:O	36:BA:2353:G:H1'	2.09	0.53
36:BA:751:A:H5'	55:BW:90:ARG:HA	1.91	0.53
43:BH:139:GLN:C	43:BH:141:VAL:H	2.12	0.53
1:AA:1001:A:H2'	1:AA:1001:A:N3	2.23	0.53
54:DV:89:GLN:OE1	54:DV:89:GLN:HA	2.08	0.53
31:B5:39:MET:HG3	55:BW:34:ASN:OD1	2.09	0.53
1:AA:972:C:O2	10:AJ:55:LYS:HG2	2.09	0.53
38:BC:82:LYS:HG3	38:BC:116:THR:HG21	1.90	0.53
28:B2:29:LYS:CD	28:B2:32:LEU:HD22	2.39	0.53
28:B2:43:GLN:O	28:B2:45:SER:N	2.37	0.53
28:B2:46:GLN:C	28:B2:50:ILE:HB	2.28	0.53
56:BX:8:ILE:HD12	56:BX:8:ILE:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:28:LYS:CG	57:BY:39:VAL:HG13	2.39	0.53
4:CD:133:VAL:HG11	4:CD:138:TYR:HD2	1.74	0.53
41:BF:192:LEU:HD23	41:BF:192:LEU:C	2.29	0.53
4:CD:8:VAL:C	4:CD:10:ARG:N	2.61	0.53
51:BS:36:TYR:O	51:BS:37:ALA:HB2	2.08	0.53
48:DP:38:GLN:HG3	48:DP:39:LYS:N	2.23	0.53
41:BF:32:LEU:HD21	41:BF:105:VAL:HG13	1.90	0.53
42:DG:38:VAL:HG22	42:DG:93:THR:HG23	1.90	0.53
36:DA:658:C:H2'	36:DA:659:C:C6	2.44	0.53
43:BH:52:VAL:HG21	43:BH:69:ARG:CG	2.33	0.53
13:AM:11:ARG:HA	13:AM:45:VAL:CB	2.31	0.53
32:D6:20:ASN:C	32:D6:21:TYR:CG	2.82	0.53
48:DP:97:PRO:HD3	48:DP:126:VAL:O	2.08	0.53
2:AB:109:SER:C	2:AB:111:ARG:N	2.59	0.53
9:AI:6:GLY:N	9:AI:84:ALA:HB2	2.24	0.53
36:DA:984:A:C5'	36:DA:985:C:H5	2.18	0.53
40:BE:116:VAL:HG22	40:BE:117:MET:N	2.23	0.53
19:CS:16:LEU:C	19:CS:18:LYS:N	2.62	0.53
1:CA:201:C:H42	1:CA:216:G:H1	1.56	0.53
25:CZ:134:PHE:CZ	25:CZ:199:ILE:HD11	2.44	0.53
1:CA:613:C:O2	1:CA:628:G:C2	2.62	0.53
1:AA:1503:A:N6	23:AX:16:A:H5'	2.24	0.53
40:DE:137:HIS:CB	40:DE:138:PRO:HD2	2.37	0.53
46:BN:3:THR:CG2	46:BN:5:VAL:HG23	2.39	0.53
55:BW:82:LEU:N	55:BW:82:LEU:CD1	2.72	0.53
50:BR:87:TYR:CD1	50:BR:90:ARG:HD2	2.40	0.53
16:AP:9:PHE:CE2	16:AP:18:ARG:CZ	2.91	0.53
13:CM:96:LEU:C	13:CM:110:ARG:HE	2.12	0.53
36:DA:880:G:N2	36:DA:897:C:H42	2.06	0.53
1:AA:1256:A:H1'	1:AA:1258:G:C6	2.42	0.53
36:BA:1678:G:N2	36:BA:1989:G:N2	2.56	0.53
36:BA:1331:A:O2'	36:BA:1332:G:H5''	2.09	0.53
25:CZ:255:ILE:HD13	25:CZ:298:VAL:HG22	1.91	0.53
2:AB:56:ARG:NH1	2:AB:56:ARG:HG2	2.24	0.53
50:DR:111:LEU:HD12	50:DR:111:LEU:H	1.71	0.53
36:BA:1241:A:H2'	36:BA:1242:A:O4'	2.09	0.53
58:BZ:81:ARG:HB2	58:BZ:81:ARG:CZ	2.38	0.53
42:BG:30:GLU:OE1	42:BG:30:GLU:N	2.35	0.53
36:DA:270:A:N1	36:DA:366:C:O2'	2.42	0.53
36:BA:236:C:H2'	36:BA:237:C:C6	2.44	0.53
39:DD:209:ALA:C	39:DD:210:GLY:O	2.47	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:467:G:O2'	36:DA:468:G:H5'	2.09	0.53
36:DA:729:G:C8	39:DD:208:LYS:HD2	2.44	0.53
1:AA:57:G:H2'	1:AA:58:C:H6	1.74	0.53
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.44	0.53
37:DB:65:C:C2'	37:DB:66:A:H5'	2.39	0.53
36:DA:1678:G:N2	36:DA:1989:G:H22	2.07	0.53
5:CE:36:ASP:OD2	5:CE:40:ARG:HB2	2.09	0.53
36:DA:1534:U:O2'	36:DA:1535:A:H5'	2.09	0.53
36:BA:1582:C:H2'	36:BA:1583:A:C8	2.44	0.53
36:DA:1930:G:N2	36:DA:1968:G:H2'	2.24	0.53
36:DA:309:G:H1'	36:DA:329:G:O2'	2.08	0.53
36:BA:387:U:H1'	36:BA:388:G:OP2	2.09	0.53
36:DA:2842:G:O2'	36:DA:2843:G:H5'	2.08	0.53
44:DJ:30:UNK:O	44:DJ:31:UNK:CB	2.57	0.53
36:DA:1398:C:O2'	36:DA:1399:C:H5'	2.09	0.53
10:CJ:100:THR:HG22	10:CJ:100:THR:O	2.09	0.53
53:DU:47:TYR:CE1	54:DV:74:LYS:NZ	2.77	0.53
39:DD:58:HIS:CD2	39:DD:59:LYS:N	2.77	0.53
28:B2:29:LYS:HB3	28:B2:33:MET:HG3	1.90	0.53
57:BY:29:GLU:HB2	57:BY:38:ILE:HG23	1.91	0.53
42:BG:51:ARG:HB3	42:BG:53:LEU:CD2	2.38	0.53
34:D8:61:LEU:N	34:D8:63:PRO:HD2	2.24	0.53
42:BG:107:LEU:HB2	42:BG:111:LEU:HD12	1.90	0.53
54:BV:53:GLU:O	54:BV:55:ALA:N	2.42	0.53
9:CI:114:TYR:HE2	10:CJ:60:ARG:N	2.00	0.53
52:BT:27:THR:OG1	52:BT:28:VAL:N	2.42	0.53
25:AZ:327:GLU:OE1	61:AZ:502:KIR:H433	2.09	0.53
25:AZ:8:THR:HG22	25:AZ:9:LYS:H	1.73	0.53
1:CA:1186:G:C2'	1:CA:1187:G:H5''	2.39	0.53
36:DA:2189:U:H2'	36:DA:2190:G:C4'	2.35	0.53
36:DA:656:G:H2'	36:DA:657:U:C6	2.44	0.53
34:D8:14:VAL:O	34:D8:14:VAL:HG13	2.09	0.53
1:AA:1004:A:H2'	1:AA:1005:A:H5'	1.91	0.53
25:AZ:143:ASP:CG	25:AZ:146:LEU:HB2	2.30	0.53
51:BS:74:ALA:HB2	51:BS:101:LEU:HD22	1.91	0.53
39:DD:186:HIS:CD2	39:DD:188:GLU:HB2	2.44	0.53
36:DA:1518:U:H2'	36:DA:1519:G:O4'	2.09	0.53
49:DQ:73:PRO:HG3	49:DQ:93:TYR:HE1	1.72	0.53
36:BA:2807:G:H3'	36:BA:2808:U:H5''	1.91	0.53
50:DR:18:LEU:HD13	50:DR:18:LEU:C	2.29	0.53
8:CH:10:LEU:HD22	8:CH:83:ILE:HG12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.43	0.53
2:AB:113:HIS:C	2:AB:115:LEU:H	2.12	0.53
39:DD:83:GLU:HB2	39:DD:92:ILE:HD11	1.91	0.53
1:AA:666:G:H5'	1:AA:726:C:H1'	1.91	0.53
4:CD:150:GLU:O	4:CD:153:ARG:HB2	2.09	0.53
2:CB:137:ARG:O	2:CB:141:GLU:HB2	2.09	0.53
1:AA:337:C:H2'	1:AA:338:A:H8	1.74	0.53
42:DG:34:LEU:O	42:DG:34:LEU:HD12	2.09	0.53
43:DH:70:THR:HG22	43:DH:74:ASN:ND2	2.23	0.53
1:CA:1127:G:H1	1:CA:1145:C:N4	2.07	0.53
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.44	0.53
40:BE:86:PRO:O	40:BE:87:GLU:HB3	2.09	0.53
36:BA:654(N):G:H2'	36:BA:654(O):G:O4'	2.09	0.53
1:CA:865:A:C2	1:CA:918:A:H4'	2.43	0.53
13:AM:80:ARG:HH12	19:AS:67:VAL:HG21	1.74	0.53
5:AE:64:ARG:HH11	5:AE:64:ARG:CG	2.20	0.53
16:AP:45:THR:O	16:AP:45:THR:HG23	2.10	0.53
25:AZ:258:LEU:HD12	25:AZ:299:GLU:HG3	1.91	0.53
58:DZ:8:TYR:O	58:DZ:9:TYR:C	2.47	0.53
36:DA:893:C:H2'	36:DA:894:C:H6	1.72	0.53
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.91	0.53
36:DA:1509(A):A:H2'	36:DA:1509(B):A:C8	2.43	0.53
15:CO:6:GLU:O	15:CO:9:GLN:HB2	2.09	0.53
2:CB:204:ASN:ND2	2:CB:207:ALA:H	2.07	0.53
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.24	0.53
48:DP:90:ARG:O	48:DP:90:ARG:HD2	2.08	0.53
6:CF:21:LEU:HD13	6:CF:21:LEU:C	2.28	0.53
36:DA:2377:A:H4'	51:DS:108:GLY:HA2	1.91	0.52
13:CM:19:LEU:HD11	13:CM:56:LEU:HD11	1.91	0.52
31:D5:4:HIS:CB	31:D5:5:PRO:CD	2.77	0.52
36:BA:1902:C:OP1	39:BD:242:ARG:HD3	2.09	0.52
28:B2:38:GLN:C	28:B2:40:SER:H	2.13	0.52
28:B2:48:HIS:HA	36:BA:95:G:O2'	2.08	0.52
57:BY:31:LEU:HD23	57:BY:36:ALA:C	2.30	0.52
4:CD:78:LEU:O	4:CD:78:LEU:HD23	2.08	0.52
52:DT:83:ILE:CG1	52:DT:84:GLN:H	2.17	0.52
2:AB:10:LEU:O	2:AB:13:ALA:N	2.42	0.52
54:BV:91:TYR:HD1	54:BV:91:TYR:H	1.57	0.52
51:BS:34:HIS:CD2	51:BS:54:LEU:HB2	2.44	0.52
12:AL:80:HIS:NE2	24:AY:69:C:C5'	2.71	0.52
25:AZ:159:ASN:C	25:AZ:161:TYR:H	2.12	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:84:LYS:N	42:DG:84:LYS:HD2	2.23	0.52
32:B6:15:GLU:CD	32:B6:18:ARG:NH2	2.62	0.52
36:DA:2111:C:H1'	36:DA:2118:U:H4'	1.90	0.52
26:B0:36:ILE:HD12	26:B0:36:ILE:O	2.09	0.52
48:BP:16:ARG:CB	48:BP:16:ARG:HH11	2.20	0.52
36:DA:628:G:C3'	36:DA:629:G:H5''	2.39	0.52
1:AA:178:C:O2'	1:AA:179:A:H5'	2.09	0.52
10:AJ:6:ILE:HG12	10:AJ:72:VAL:O	2.09	0.52
27:B1:41:ARG:NH2	36:BA:1365:A:H5''	2.24	0.52
9:CI:97:LYS:N	9:CI:98:PRO:CD	2.73	0.52
4:CD:120:LEU:HB3	4:CD:126:ILE:CD1	2.39	0.52
6:CF:62:TRP:C	6:CF:63:TYR:CD1	2.82	0.52
2:CB:42:ILE:HD12	2:CB:202:PRO:HB2	1.91	0.52
26:B0:37:LEU:N	26:B0:59:LEU:O	2.40	0.52
57:BY:2:ARG:N	57:BY:4:LYS:HZ2	2.07	0.52
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.44	0.52
25:CZ:340:PRO:HG2	25:CZ:342:PHE:CE1	2.44	0.52
28:D2:10:LEU:O	28:D2:10:LEU:HD23	2.09	0.52
41:DF:53:THR:HG22	41:DF:56:GLU:CD	2.29	0.52
25:CZ:299:GLU:O	25:CZ:302:GLN:HG2	2.09	0.52
25:AZ:299:GLU:O	25:AZ:302:GLN:HG2	2.08	0.52
36:BA:644:A:C2	36:BA:2369:A:H1'	2.44	0.52
36:DA:496:G:H1'	55:DW:61:ASN:ND2	2.24	0.52
1:CA:1255:G:P	3:CC:26:LYS:HE2	2.48	0.52
36:BA:523:C:C2'	36:BA:524:U:H5'	2.38	0.52
36:DA:1991:U:C2'	36:DA:1992:G:H5''	2.39	0.52
36:BA:818:G:N7	36:BA:1187:G:C6	2.77	0.52
36:BA:819:A:OP2	36:BA:1187:G:N2	2.35	0.52
36:DA:2694:G:O2'	36:DA:2695:C:H5'	2.09	0.52
36:DA:2695:C:H2'	36:DA:2696:U:H6	1.73	0.52
36:BA:1368:G:O2'	36:BA:1369:G:H5'	2.09	0.52
36:DA:271(C):C:H2'	36:DA:271(D):G:H8	1.72	0.52
1:AA:21:G:H2'	1:AA:22:G:C8	2.45	0.52
1:CA:940:C:H2'	1:CA:941:G:C8	2.44	0.52
36:BA:2412:A:H2'	36:BA:2413:G:H5'	1.91	0.52
46:DN:38:HIS:O	53:DU:67:ALA:HB1	2.09	0.52
2:AB:190:THR:O	2:AB:191:ASP:HB2	2.09	0.52
1:CA:490:G:H2'	1:CA:491:G:C8	2.44	0.52
41:DF:115:ALA:C	41:DF:117:ARG:H	2.13	0.52
49:DQ:47:ILE:O	49:DQ:50:ALA:HB3	2.09	0.52
36:BA:1327:C:H2'	36:BA:1328:G:O4'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:145:ALA:C	7:CG:147:ALA:H	2.13	0.52
3:AC:22:TRP:CE2	14:AN:54:PRO:HG2	2.44	0.52
36:BA:2257:U:O2'	36:BA:2258:C:H5'	2.09	0.52
3:AC:84:ILE:O	3:AC:84:ILE:HG12	2.09	0.52
36:DA:57:C:O2'	36:DA:58:G:H5'	2.09	0.52
36:BA:182:A:H2	36:BA:433:C:O2	1.92	0.52
36:DA:996:A:H4'	53:DU:92:ARG:HE	1.73	0.52
57:BY:24:VAL:HG12	57:BY:25:GLY:N	2.23	0.52
4:AD:194:LEU:HB3	4:AD:196:LEU:HD13	1.90	0.52
1:CA:978:A:C5	1:CA:1319:A:C2	2.96	0.52
1:CA:1320:C:H6	1:CA:1320:C:H5'	1.74	0.52
52:DT:19:LEU:HD13	52:DT:78:LEU:HD22	1.91	0.52
57:BY:59:GLY:O	57:BY:60:PHE:HB2	2.08	0.52
47:BO:63:VAL:O	47:BO:64:ARG:CB	2.44	0.52
32:B6:7:ILE:CB	32:B6:27:LYS:NZ	2.70	0.52
36:BA:2282:G:H5''	36:BA:2283:C:O4'	2.10	0.52
1:CA:1187:G:H8	1:CA:1187:G:H5'	1.75	0.52
48:BP:34:GLY:O	48:BP:35:HIS:CB	2.43	0.52
32:B6:16:CYS:O	32:B6:17:LYS:HG2	2.09	0.52
32:B6:36:LEU:HD12	32:B6:50:ARG:HH12	1.73	0.52
54:BV:99:ILE:N	54:BV:99:ILE:HD13	2.10	0.52
12:AL:90:VAL:O	12:AL:90:VAL:HG12	2.08	0.52
51:BS:90:GLY:C	51:BS:92:TYR:N	2.63	0.52
25:AZ:65:THR:CA	25:AZ:83:PRO:HD3	2.40	0.52
50:DR:55:ALA:HB2	50:DR:79:LEU:HD11	1.90	0.52
48:BP:83:VAL:HG23	48:BP:105:LEU:HD22	1.91	0.52
24:AY:41:C:H5'	24:AY:41:C:C6	2.37	0.52
52:DT:90:GLN:HG3	52:DT:124:ASP:OD2	2.09	0.52
52:BT:109:GLU:HG2	52:BT:112:ARG:NH2	2.24	0.52
10:CJ:38:ILE:CD1	10:CJ:71:LEU:HB3	2.38	0.52
40:DE:59:VAL:HG13	40:DE:60:ASN:N	2.21	0.52
48:DP:9:ASN:H	48:DP:10:PRO:CD	2.23	0.52
50:BR:4:LEU:HD13	50:BR:7:GLY:CA	2.39	0.52
38:BC:87:GLU:HG2	38:BC:94:VAL:CG1	2.35	0.52
36:BA:389:G:H22	48:BP:72:PRO:HG3	1.74	0.52
12:CL:122:THR:O	12:CL:123:LYS:O	2.26	0.52
38:BC:107:TRP:HE1	38:BC:110:PHE:HE2	1.54	0.52
1:AA:718:G:O6	18:AR:74:ARG:NH1	2.42	0.52
6:CF:62:TRP:CD1	18:CR:35:ARG:CZ	2.92	0.52
53:BU:13:LYS:HD3	53:BU:13:LYS:H	1.74	0.52
8:CH:39:LEU:HD11	8:CH:137:VAL:HG21	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:126:GLU:HA	2:CB:129:GLU:OE2	2.08	0.52
17:CQ:58:GLU:HB2	17:CQ:74:LEU:HB3	1.91	0.52
1:AA:404:U:H2'	1:AA:405:U:C6	2.44	0.52
5:CE:90:VAL:C	5:CE:91:LEU:HD12	2.29	0.52
36:BA:1400:G:H2'	36:BA:1401:G:C8	2.44	0.52
24:CY:25:C:O5'	24:CY:25:C:H6	1.92	0.52
39:BD:130:ALA:HB2	39:BD:192:THR:HB	1.90	0.52
13:CM:37:THR:O	13:CM:39:ILE:HG13	2.09	0.52
36:DA:904:C:H2'	36:DA:905:U:C6	2.44	0.52
36:DA:1331:A:HO2'	36:DA:1332:G:H8	1.58	0.52
39:DD:16:MET:CE	39:DD:208:LYS:HG2	2.38	0.52
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB2	1.91	0.52
48:BP:9:ASN:H	48:BP:10:PRO:CD	2.22	0.52
36:BA:729:G:C5	39:BD:208:LYS:HB2	2.45	0.52
1:AA:1377:A:H2'	7:AG:7:ALA:HB2	1.91	0.52
36:DA:2808:U:O2'	36:DA:2809:A:H5'	2.08	0.52
2:CB:69:LEU:HD22	2:CB:70:PHE:N	2.24	0.52
13:AM:13:LYS:HA	13:AM:44:ARG:HH11	1.72	0.52
53:DU:69:CYS:HB2	53:DU:74:LEU:CD1	2.39	0.52
36:DA:1101:U:H2'	36:DA:1102:C:H6	1.74	0.52
3:AC:142:MET:C	3:AC:144:SER:H	2.12	0.52
37:BB:87:G:H2'	37:BB:88:C:H5''	1.92	0.52
36:DA:2081:C:H2'	36:DA:2082:A:H8	1.73	0.52
38:BC:72:VAL:HG13	38:BC:157:LYS:HD3	1.91	0.52
36:DA:2543:G:H2'	36:DA:2544:G:O4'	2.09	0.52
36:DA:295:G:N2	36:DA:344:G:H1'	2.24	0.52
55:DW:26:GLY:H	55:DW:71:VAL:HB	1.74	0.52
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.09	0.52
25:CZ:281:ILE:HD12	25:CZ:284:ASP:OD1	2.10	0.52
36:BA:2186:G:H2'	36:BA:2187:G:C8	2.44	0.52
54:DV:38:LEU:HD23	54:DV:38:LEU:C	2.29	0.52
51:DS:27:SER:HA	51:DS:88:ASP:HB3	1.91	0.52
51:DS:67:ARG:NH2	51:DS:98:VAL:HG12	2.24	0.52
1:CA:1312:G:H2'	1:CA:1313:U:H6	1.75	0.52
1:AA:1129:C:O3'	1:AA:1131:G:OP2	2.27	0.52
1:CA:980:C:C5'	1:CA:980:C:H6	2.22	0.52
41:BF:5:ALA:HB1	41:BF:125:LEU:HD21	1.91	0.52
36:DA:839:U:O2'	36:DA:1191:G:H1'	2.10	0.52
42:BG:41:GLN:HB3	42:BG:43:LEU:HD13	1.91	0.52
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	2.10	0.52
31:B5:31:VAL:HG21	36:BA:2885:C:O2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:68:ARG:HA	28:D2:72:ALA:CB	2.38	0.52
58:BZ:98:MET:HG3	58:BZ:99:TYR:N	2.24	0.52
49:DQ:137:TYR:CE1	58:DZ:81:ARG:NH2	2.78	0.52
25:AZ:28:THR:HG23	25:AZ:79:HIS:ND1	2.25	0.52
35:B9:10:ILE:O	35:B9:11:CYS:CB	2.57	0.52
46:BN:94:HIS:N	46:BN:95:PRO:CD	2.72	0.52
52:DT:2:ASN:C	52:DT:4:GLY:H	2.13	0.52
48:DP:83:VAL:HG23	48:DP:105:LEU:HD22	1.90	0.52
1:CA:59:A:H5''	1:CA:60:A:H5''	1.90	0.52
36:DA:600:G:H2'	36:DA:601:C:C6	2.44	0.52
58:DZ:89:PHE:HE2	58:DZ:96:VAL:CG2	2.22	0.52
1:CA:1239:A:C4	1:CA:1298:C:N4	2.77	0.52
36:DA:1222:C:H2'	36:DA:1223:G:H5'	1.91	0.52
39:DD:265:PRO:O	39:DD:267:SER:N	2.42	0.52
37:DB:90:A:O2'	49:DQ:17:LEU:HD12	2.09	0.52
39:BD:92:ILE:HD13	39:BD:92:ILE:H	1.74	0.52
18:AR:74:ARG:HB3	18:AR:81:PHE:CE1	2.44	0.52
2:CB:190:THR:O	2:CB:191:ASP:CB	2.57	0.52
42:BG:22:ARG:HD3	42:BG:23:PHE:CE1	2.43	0.52
1:AA:390:C:H4'	16:AP:28:ARG:NH2	2.24	0.52
52:BT:39:ARG:N	52:BT:39:ARG:HD2	2.22	0.52
1:AA:1255:G:H3'	1:AA:1279:A:N6	2.25	0.52
58:BZ:155:LEU:HD23	58:BZ:155:LEU:N	2.24	0.52
36:BA:643:A:H2'	36:BA:644:A:H5'	1.90	0.52
1:CA:227:G:H2'	1:CA:228:A:O4'	2.09	0.52
30:D4:37:SER:C	30:D4:39:CYS:N	2.63	0.52
36:DA:90:U:H2'	36:DA:90:U:O2	2.07	0.52
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.44	0.52
1:CA:347:G:N2	1:CA:348:G:H1'	2.24	0.52
36:DA:845:G:OP2	36:DA:845:G:H8	1.92	0.52
36:DA:553:G:O2'	36:DA:554:U:H5'	2.09	0.52
36:BA:2654:A:H62	36:BA:2667:C:N4	2.07	0.52
36:BA:2166:G:H2'	36:BA:2167:U:C6	2.43	0.52
29:D3:15:TYR:O	29:D3:20:LYS:HE3	2.09	0.52
49:BQ:116:GLU:O	49:BQ:120:ILE:HG12	2.10	0.52
49:BQ:38:GLU:OE2	49:BQ:128:LYS:HG3	2.10	0.52
36:BA:1101:U:H2'	36:BA:1102:C:H6	1.74	0.52
3:CC:11:ARG:O	3:CC:13:GLY:N	2.42	0.52
19:AS:32:LYS:O	19:AS:32:LYS:HG2	2.08	0.52
36:BA:2364:C:O2'	36:BA:2365:G:H5'	2.08	0.52
33:B7:10:ARG:O	33:B7:14:LYS:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.24	0.52
25:CZ:159:ASN:C	25:CZ:161:TYR:H	2.11	0.52
25:CZ:19:HIS:CE1	25:CZ:20:VAL:HG22	2.44	0.52
4:AD:190:ASP:OD1	4:AD:191:ARG:N	2.42	0.52
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.34	0.52
1:CA:1322:C:H6	1:CA:1322:C:OP2	1.92	0.52
52:DT:80:SER:HB3	52:DT:81:PRO:CD	2.31	0.52
36:DA:833:U:H5''	48:DP:48:PRO:CB	2.40	0.52
25:AZ:118:GLU:OE2	61:AZ:502:KIR:H51	2.09	0.52
25:AZ:224:PRO:HA	25:AZ:303:VAL:HG13	1.91	0.52
25:AZ:345:ARG:NH1	25:AZ:345:ARG:HG2	2.24	0.52
25:CZ:220:PRO:O	25:CZ:221:PHE:HB2	2.09	0.52
36:BA:1540:U:H3'	36:BA:1541:G:H3'	1.90	0.52
36:DA:1882:C:H2'	36:DA:1882:C:O2	2.10	0.52
50:DR:78:LYS:O	50:DR:83:ILE:HG12	2.10	0.52
40:BE:98:PRO:HD3	40:BE:175:VAL:CG1	2.38	0.52
51:DS:54:LEU:HD21	51:DS:58:LEU:O	2.09	0.52
42:DG:7:LEU:N	42:DG:10:LYS:HD3	2.25	0.52
37:DB:31:C:H4'	42:DG:29:TRP:HH2	1.75	0.52
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.25	0.52
1:AA:9:G:OP2	5:AE:121:LYS:NZ	2.39	0.52
2:AB:92:TYR:CD1	2:AB:94:ASN:ND2	2.77	0.52
46:DN:132:ALA:O	46:DN:133:GLN:HB2	2.08	0.52
25:CZ:317:GLU:O	25:CZ:401:THR:HB	2.09	0.52
19:CS:67:VAL:HG12	19:CS:68:GLY:N	2.24	0.52
50:BR:98:LEU:O	50:BR:113:LEU:N	2.42	0.52
3:AC:50:ALA:O	3:AC:70:VAL:HG13	2.10	0.52
27:B1:62:VAL:HG22	27:B1:63:ALA:N	2.24	0.52
39:DD:226:MET:HB3	39:DD:230:ASP:HB2	1.91	0.52
24:AY:54:5MU:H5''	24:AY:55:PSU:OP2	2.09	0.52
36:DA:710:G:H2'	36:DA:711:G:C8	2.44	0.52
1:AA:782:A:H2'	1:AA:783:C:H5'	1.90	0.52
36:DA:2295:C:H2'	36:DA:2296:U:C6	2.43	0.52
36:DA:1771:C:HO2'	36:DA:1786:A:H8	1.57	0.52
49:BQ:26:TYR:HB2	49:BQ:137:TYR:HD2	1.74	0.52
42:BG:133:LEU:HD11	42:BG:157:ILE:HD12	1.90	0.52
4:AD:86:LYS:HE3	4:AD:86:LYS:CA	2.38	0.52
36:BA:17:G:H2'	36:BA:18:C:C6	2.45	0.52
39:DD:200:ASP:O	39:DD:203:ASN:HB2	2.09	0.52
22:CV:76:A:C2	36:DA:2450:A:N3	2.77	0.52
1:AA:274:A:O2'	1:AA:275:G:H8	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1508:G:O2'	1:CA:1509:C:H5'	2.10	0.52
36:DA:134:C:H2'	36:DA:135:G:H8	1.74	0.52
38:BC:214:VAL:HG23	38:BC:224:ILE:HG21	1.91	0.52
36:DA:1318:C:H3'	36:DA:1319:G:H5''	1.92	0.52
37:BB:13:A:O2'	37:BB:14:U:H3'	2.10	0.52
43:BH:97:ARG:O	43:BH:99:VAL:HG23	2.09	0.52
27:B1:6:GLU:HG2	27:B1:61:ARG:O	2.09	0.52
41:BF:21:ALA:C	41:BF:23:ASP:H	2.13	0.52
49:DQ:76:LYS:HB3	49:DQ:91:GLU:CG	2.39	0.52
36:DA:2892:A:H62	36:DA:2893:G:N2	2.07	0.52
25:CZ:67:HIS:H	25:CZ:67:HIS:CD2	2.28	0.52
4:AD:55:ALA:O	4:AD:59:ARG:HG2	2.08	0.52
10:AJ:54:PHE:CE1	10:AJ:55:LYS:NZ	2.76	0.52
25:CZ:161:TYR:OH	61:CZ:502:KIR:H413	2.10	0.52
26:D0:52:GLY:O	26:D0:59:LEU:HA	2.10	0.52
51:DS:97:ARG:NH2	51:DS:98:VAL:CA	2.73	0.52
28:B2:42:GLY:C	28:B2:43:GLN:HG3	2.30	0.52
4:CD:138:TYR:HD1	4:CD:138:TYR:C	2.12	0.52
47:DO:120:GLU:OE1	47:DO:122:LEU:HD21	2.08	0.52
4:CD:19:LEU:HD12	4:CD:19:LEU:N	2.24	0.52
24:AY:65:C:C5'	25:AZ:341:GLN:HG2	2.39	0.52
25:AZ:313:HIS:HB2	25:AZ:380:LEU:HD12	1.91	0.52
36:BA:832:G:H21	48:BP:53:GLY:CA	2.22	0.52
36:BA:1051:G:H2'	36:BA:1052:C:C5	2.44	0.52
36:BA:1748:G:C8	36:BA:1748:G:H5'	2.45	0.52
51:BS:30:ARG:NH1	51:BS:31:SER:O	2.42	0.52
48:DP:58:THR:O	48:DP:61:ARG:HG3	2.08	0.52
31:D5:50:GLY:CA	31:D5:56:LYS:HE2	2.40	0.52
58:BZ:28:MET:HE1	58:BZ:59:LEU:HD13	1.91	0.52
32:D6:20:ASN:ND2	32:D6:21:TYR:N	2.55	0.52
2:AB:105:PHE:O	2:AB:106:LYS:C	2.48	0.52
36:DA:1165:U:H2'	36:DA:1166:C:C6	2.45	0.52
54:DV:18:LEU:CD2	54:DV:19:LYS:H	2.22	0.52
1:CA:358:U:O3'	25:CZ:235:GLY:CA	2.55	0.52
25:CZ:288:VAL:HG12	25:CZ:290:LEU:CD2	2.32	0.52
36:DA:648:G:H2'	36:DA:649:G:C8	2.45	0.52
48:DP:84:ASN:HB3	48:DP:86:LYS:HB3	1.91	0.52
52:DT:23:ARG:HB2	52:DT:24:PRO:HD2	1.91	0.52
55:BW:64:MET:HE1	55:BW:108:GLY:HA2	1.91	0.52
40:DE:101:ARG:HB2	40:DE:201:THR:HG21	1.91	0.52
41:DF:125:LEU:HD12	41:DF:196:LEU:CD2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:52:ALA:CB	9:AI:95:LYS:HD2	2.39	0.52
23:CX:13:A:O5'	23:CX:13:A:H8	1.93	0.52
50:BR:67:LEU:CD1	50:BR:76:VAL:HG21	2.38	0.52
26:B0:43:THR:N	36:BA:2331:G:H4'	2.21	0.52
36:BA:581:C:H2'	36:BA:582:G:C8	2.43	0.52
55:DW:10:VAL:HG21	55:DW:103:ILE:HG13	1.92	0.52
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.75	0.52
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.08	0.52
36:DA:990:A:N6	36:DA:1186:G:H1'	2.25	0.52
3:CC:14:ILE:HG13	3:CC:15:THR:H	1.73	0.52
40:BE:36:ARG:NH2	40:BE:88:GLY:CA	2.71	0.52
36:DA:1825:A:OP1	39:DD:249:PRO:HD3	2.09	0.52
25:AZ:255:ILE:HD13	25:AZ:298:VAL:HG22	1.92	0.52
1:CA:161:A:H2'	1:CA:162:A:C8	2.44	0.52
22:AV:53:G:O2'	22:AV:54:U:H5'	2.09	0.52
39:BD:28:GLU:N	39:BD:29:PRO:CD	2.72	0.52
36:BA:1416:G:H1'	36:BA:1417:C:C5	2.45	0.52
33:B7:4:THR:HG21	36:BA:788:A:H1'	1.90	0.52
36:DA:2552:U:C2	36:DA:2554:U:H5'	2.44	0.52
1:CA:633:G:H3'	1:CA:634:C:C6	2.44	0.52
36:BA:718:A:H2'	36:BA:719:C:O4'	2.10	0.52
1:CA:986:A:H2'	1:CA:987:G:C8	2.44	0.52
36:BA:2123:G:O2'	36:BA:2124:G:H5'	2.08	0.52
27:B1:35:THR:O	27:B1:35:THR:OG1	2.28	0.52
25:AZ:95:GLY:O	25:AZ:99:MET:HE2	2.10	0.52
6:AF:55:ASP:OD1	6:AF:56:PRO:HD2	2.10	0.52
36:DA:2001:A:H2'	36:DA:2002:G:C8	2.44	0.52
42:BG:18:GLU:HA	42:BG:18:GLU:OE1	2.08	0.52
38:BC:100:ILE:HD13	38:BC:126:LYS:O	2.09	0.52
13:CM:78:ILE:HA	13:CM:81:LEU:HD23	1.91	0.52
28:B2:24:LEU:HB2	28:B2:64:LEU:CD1	2.39	0.52
48:DP:50:ARG:NH2	48:DP:51:PHE:HE1	2.07	0.52
47:BO:105:GLU:OE1	47:BO:105:GLU:N	2.40	0.52
25:AZ:331:HIS:CD2	25:AZ:331:HIS:N	2.77	0.52
25:AZ:378:VAL:HG23	25:AZ:380:LEU:HD21	1.92	0.52
58:DZ:165:VAL:HG12	58:DZ:166:SER:N	2.24	0.52
36:BA:942:G:O2'	36:BA:943:U:H5'	2.10	0.52
48:BP:50:ARG:CZ	48:BP:51:PHE:HE1	2.22	0.52
48:DP:16:ARG:HD3	48:DP:18:ARG:N	2.25	0.52
36:BA:139:G:C6	36:BA:140:G:H2'	2.45	0.52
5:CE:76:ILE:HD13	5:CE:78:HIS:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:60:LEU:O	50:DR:63:ARG:HB3	2.10	0.52
12:AL:58:VAL:HG12	12:AL:60:LEU:HD22	1.91	0.52
32:D6:7:ILE:CB	32:D6:27:LYS:NZ	2.72	0.52
32:D6:17:LYS:HA	32:D6:17:LYS:CE	2.37	0.52
40:BE:55:ASN:O	40:BE:56:PRO:C	2.48	0.52
36:BA:676:A:H8	36:BA:2069:G:N2	1.95	0.52
38:DC:104:LEU:HD13	38:DC:105:ASP:N	2.24	0.52
53:BU:59:ARG:CG	53:BU:59:ARG:NH1	2.73	0.52
54:DV:20:LEU:O	54:DV:22:VAL:HG22	2.09	0.52
46:BN:46:VAL:O	46:BN:47:ALA:CB	2.57	0.52
48:DP:147:LEU:O	48:DP:148:LEU:HB2	2.09	0.52
48:DP:115:LEU:O	48:DP:134:ALA:HB1	2.09	0.52
14:AN:27:CYS:SG	14:AN:40:CYS:SG	3.07	0.52
2:CB:219:VAL:O	2:CB:223:ILE:HG13	2.09	0.52
3:CC:83:ARG:O	3:CC:87:LEU:HG	2.08	0.52
11:CK:33:THR:HB	11:CK:38:ASN:O	2.09	0.52
1:CA:149:A:H2'	1:CA:150:C:C6	2.45	0.52
16:AP:57:ARG:NE	16:AP:79:VAL:O	2.43	0.52
19:CS:31:ILE:CG2	19:CS:49:ILE:HG23	2.39	0.52
36:DA:1287:A:H8	50:DR:104:ARG:HD3	1.73	0.52
52:BT:2:ASN:HB2	52:BT:7:ILE:CD1	2.38	0.52
25:CZ:361:MET:HE2	25:CZ:363:MET:HG3	1.92	0.52
55:BW:14:PRO:HG2	55:BW:78:GLU:HG3	1.91	0.52
4:AD:127:THR:HG22	4:AD:128:VAL:N	2.24	0.52
2:CB:139:LYS:C	2:CB:141:GLU:H	2.12	0.52
40:BE:48:GLN:C	40:BE:49:LEU:HD22	2.29	0.52
36:BA:1720:U:C3'	36:BA:1721:G:H5''	2.38	0.52
2:CB:57:PHE:CE2	2:CB:185:ILE:HD11	2.41	0.52
36:BA:2206:G:H21	36:BA:2207:G:C4'	2.23	0.52
42:BG:150:ASP:OD1	42:BG:150:ASP:N	2.40	0.52
36:DA:1582:C:H2'	36:DA:1583:A:C8	2.45	0.52
36:BA:782:A:H5'	36:BA:783:A:C2	2.45	0.52
43:BH:89:ILE:HD11	43:BH:128:PRO:O	2.10	0.52
1:AA:242:C:H2'	1:AA:243:A:H5'	1.92	0.52
36:DA:2547:U:H2'	36:DA:2548:G:C8	2.45	0.52
1:CA:679:C:O2'	1:CA:680:C:H5'	2.10	0.52
2:AB:21:ARG:HB3	2:AB:39:ILE:HG12	1.92	0.52
17:CQ:3:LYS:HB3	17:CQ:61:GLU:HB3	1.91	0.52
1:CA:294:U:H2'	1:CA:295:C:H6	1.74	0.52
36:DA:1821:A:H2'	36:DA:1822:G:H8	1.74	0.52
57:DY:6:HIS:CD2	57:DY:6:HIS:H	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:669:G:H2'	36:BA:669:G:N3	2.24	0.52
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.44	0.52
25:CZ:195:TRP:C	25:CZ:197:ASP:H	2.13	0.52
1:AA:430:A:OP2	4:AD:22:LYS:HE2	2.10	0.52
28:B2:29:LYS:C	28:B2:31:GLU:H	2.13	0.52
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	1.91	0.52
47:DO:104:ARG:HB3	47:DO:122:LEU:OXT	2.10	0.52
39:DD:241:PRO:C	39:DD:242:ARG:HD2	2.30	0.52
37:BB:54:G:H2'	37:BB:55:U:H6	1.75	0.52
42:BG:5:VAL:HG12	42:BG:6:ALA:H	1.75	0.52
53:BU:83:LEU:HA	53:BU:88:ILE:HG13	1.92	0.52
54:BV:23:GLU:O	54:BV:91:TYR:HA	2.10	0.52
57:BY:46:LYS:HB3	57:BY:62:GLU:HG2	1.91	0.52
56:BX:35:THR:O	56:BX:39:ILE:HG12	2.09	0.52
36:DA:2465:C:O2'	36:DA:2466:C:H5'	2.10	0.52
36:DA:2178:C:O2	36:DA:2178:C:O4'	2.27	0.52
36:BA:2875:C:C4'	52:BT:5:ALA:HB2	2.30	0.52
58:BZ:98:MET:O	58:BZ:125:LEU:HA	2.08	0.52
47:BO:19:ILE:HG22	47:BO:43:VAL:CA	2.30	0.52
25:AZ:108:ALA:HB3	25:AZ:137:LYS:O	2.09	0.52
1:AA:1442(B):A:H5'	52:BT:122:ASP:OD1	2.10	0.52
52:BT:94:ALA:C	52:BT:96:ARG:H	2.14	0.52
22:CW:45:U:O2'	22:CW:46:G:H5'	2.09	0.52
55:BW:69:LEU:HA	55:BW:108:GLY:O	2.10	0.52
55:BW:64:MET:HG2	55:BW:109:GLU:OE2	2.10	0.52
55:BW:28:SER:O	55:BW:70:TYR:HA	2.08	0.52
36:DA:2579:C:O2'	40:DE:131:ALA:CB	2.52	0.52
1:CA:201:C:C2'	1:CA:202:U:H5''	2.39	0.52
7:CG:45:ASP:N	7:CG:45:ASP:OD1	2.42	0.52
36:BA:389:G:C6	48:BP:71:VAL:HG12	2.45	0.52
19:CS:40:ILE:HG21	19:CS:62:ILE:HD11	1.92	0.52
33:D7:10:ARG:NH1	36:DA:771:G:OP1	2.43	0.52
36:DA:1670:C:O2	40:DE:129:HIS:HE1	1.91	0.52
3:CC:130:VAL:CG1	3:CC:134:ILE:HD11	2.40	0.52
1:CA:858:G:C8	1:CA:858:G:OP2	2.62	0.52
1:CA:175:C:O2'	1:CA:176:C:H5'	2.10	0.52
1:CA:1278:U:H5''	1:CA:1279:A:O4'	2.10	0.52
24:AY:25:C:H6	24:AY:25:C:O5'	1.92	0.52
50:DR:34:ILE:HG22	50:DR:36:THR:HG23	1.91	0.52
37:DB:68:C:H2'	37:DB:69:G:H8	1.74	0.52
23:AX:22:U:O2'	23:AX:23:G:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:225:A:O2'	36:DA:257:A:H4'	2.08	0.52
5:AE:145:LYS:HG3	5:AE:149:GLU:OE2	2.10	0.52
55:DW:44:ALA:O	55:DW:46:PHE:N	2.42	0.52
29:D3:7:LYS:HE3	29:D3:32:GLN:O	2.10	0.52
36:BA:2111:C:H1'	36:BA:2118:U:O4'	2.10	0.52
19:AS:8:GLY:O	19:AS:9:VAL:C	2.48	0.52
22:AV:24:G:C6	22:AV:25:C:C4	2.97	0.52
1:CA:1275:A:O2'	1:CA:1276:G:H5'	2.09	0.52
36:BA:1313:U:H2'	36:BA:1610:A:C2	2.44	0.52
25:CZ:263:ARG:HH11	25:CZ:263:ARG:HG3	1.75	0.52
56:DX:33:LYS:HA	56:DX:33:LYS:HE2	1.91	0.52
25:CZ:135:MET:HE2	25:CZ:138:VAL:HG22	1.92	0.52
51:DS:30:ARG:NH2	51:DS:62:LYS:HB3	2.25	0.52
1:CA:1312:G:O2'	1:CA:1313:U:H5'	2.10	0.52
28:B2:17:SER:C	28:B2:19:VAL:N	2.63	0.52
28:B2:33:MET:O	28:B2:37:PHE:HB2	2.10	0.52
28:B2:66:GLU:OE2	28:B2:67:LYS:HB2	2.09	0.52
36:BA:301:G:H5'	36:BA:334:C:O2'	2.10	0.52
41:BF:164:ARG:O	41:BF:166:ALA:N	2.42	0.52
1:CA:1319:A:H5'	1:CA:1320:C:OP1	2.09	0.52
34:D8:62:LEU:HB3	36:DA:242:G:H5'	1.92	0.52
4:CD:10:ARG:NH1	4:CD:40:PRO:HG3	2.24	0.52
54:BV:53:GLU:C	54:BV:55:ALA:H	2.12	0.52
51:BS:58:LEU:O	51:BS:59:LYS:O	2.26	0.52
58:BZ:152:ALA:CA	58:BZ:167:PRO:HB2	2.40	0.52
42:BG:72:ARG:CA	42:BG:87:PRO:HD2	2.39	0.52
39:BD:34:VAL:HG23	39:BD:35:LYS:H	1.74	0.52
31:B5:3:LYS:HB2	36:BA:747:U:H5	1.73	0.52
51:DS:12:PHE:HD1	51:DS:13:ARG:N	2.08	0.52
52:BT:30:VAL:HA	52:BT:44:ASP:HA	1.92	0.52
52:BT:91:ARG:C	52:BT:93:ARG:H	2.13	0.52
25:AZ:159:ASN:C	25:AZ:161:TYR:N	2.62	0.52
25:AZ:93:ILE:HD11	25:AZ:389:ARG:HH11	1.73	0.52
36:BA:2801(A):A:H5'	36:BA:2802:G:C8	2.44	0.52
36:BA:637:A:OP2	48:BP:115:LEU:HB2	2.10	0.52
48:BP:115:LEU:O	48:BP:134:ALA:HB1	2.09	0.52
51:BS:13:ARG:HG3	51:BS:14:VAL:N	2.23	0.52
36:DA:2815:C:H2'	36:DA:2816:C:H6	1.73	0.52
56:BX:43:VAL:HA	56:BX:46:ALA:HB3	1.91	0.52
30:B4:10:VAL:CG2	30:B4:11:PRO:HD2	2.38	0.52
48:BP:144:GLU:N	48:BP:145:PRO:HD3	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:36:ILE:HG12	36:BA:2355:C:C4'	2.39	0.52
53:DU:57:PHE:C	53:DU:59:ARG:N	2.62	0.52
36:BA:654(E):G:H2'	36:BA:654(F):C:H5'	1.92	0.52
29:D3:26:LEU:O	29:D3:27:GLY:C	2.47	0.52
36:DA:1142(A):A:C8	36:DA:1142(A):A:H5'	2.45	0.52
48:DP:147:LEU:O	48:DP:148:LEU:CB	2.57	0.52
3:AC:43:LEU:O	3:AC:47:LEU:HB3	2.09	0.52
2:CB:219:VAL:O	2:CB:222:ILE:HG12	2.10	0.52
1:CA:1316:G:H4'	14:CN:18:VAL:HG13	1.91	0.52
10:AJ:6:ILE:HG22	10:AJ:98:ILE:CD1	2.37	0.52
58:BZ:86:VAL:CG1	58:BZ:87:ASP:H	2.19	0.52
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.45	0.52
46:DN:14:VAL:HG13	46:DN:137:LYS:HG3	1.92	0.52
1:CA:37:U:O2'	1:CA:38:G:H5'	2.10	0.52
2:CB:118:LEU:HD22	2:CB:138:LEU:HD22	1.90	0.52
36:DA:1688:U:H5'	36:DA:1689:A:OP1	2.10	0.52
25:AZ:316:PHE:N	25:AZ:316:PHE:CD1	2.77	0.52
37:BB:92:C:O2'	37:BB:93:G:H5'	2.09	0.52
10:CJ:81:THR:O	10:CJ:83:GLU:N	2.43	0.52
1:AA:955:U:O2'	1:AA:956:U:H5'	2.10	0.52
11:AK:57:THR:HG23	11:AK:60:ALA:CB	2.40	0.52
36:BA:558:G:H1'	46:BN:45:ASN:HB3	1.92	0.52
39:BD:45:ASN:ND2	39:BD:50:THR:HG21	2.25	0.52
1:CA:1067:A:N1	1:CA:1108:G:O2'	2.36	0.52
37:DB:17:C:H2'	37:DB:18:G:C8	2.44	0.52
40:BE:167:VAL:O	40:BE:170:LEU:HD13	2.09	0.52
12:CL:55:VAL:CG2	12:CL:67:THR:HG22	2.40	0.52
43:DH:126:PRO:O	43:DH:127:GLU:CB	2.58	0.52
23:AX:11:U:H3'	23:AX:12:A:N7	2.24	0.52
36:BA:533:G:HO2'	53:BU:45:TYR:HD2	1.56	0.52
36:DA:1847:A:H3'	36:DA:1848:A:C5'	2.39	0.52
36:BA:1558:A:H1'	36:BA:1559:G:OP2	2.09	0.52
36:BA:1098:A:C2'	36:BA:1099:G:H5'	2.40	0.52
1:CA:746:A:O2'	1:CA:747:C:H5'	2.10	0.52
27:B1:34:THR:HG22	27:B1:35:THR:N	2.25	0.52
36:DA:2824:C:H2'	36:DA:2825:C:O4'	2.09	0.52
36:DA:1627:G:C2	36:DA:1628:G:C8	2.97	0.52
58:DZ:40:ASP:OD1	58:DZ:42:VAL:N	2.42	0.52
49:DQ:78:PRO:O	49:DQ:81:VAL:HG12	2.08	0.52
27:D1:45:ASN:HD22	27:D1:45:ASN:C	2.13	0.52
36:BA:1790:C:H2'	36:BA:1791:A:C5	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:74:C:O2'	22:AW:75:C:H5'	2.09	0.52
1:AA:445:G:H2'	1:AA:446:G:H8	1.74	0.52
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.08	0.52
52:DT:67:SER:O	52:DT:68:TYR:C	2.47	0.52
1:AA:546:G:P	4:AD:72:GLU:HB3	2.50	0.52
13:CM:20:THR:C	13:CM:22:ILE:H	2.12	0.52
4:AD:163:GLU:C	4:AD:165:MET:H	2.12	0.52
1:AA:1271:G:C3'	1:AA:1272:G:H5''	2.40	0.52
36:DA:940:G:H2'	36:DA:941:A:C4'	2.40	0.52
52:DT:28:VAL:HG22	52:DT:46:GLU:C	2.30	0.52
42:DG:43:LEU:HB3	42:DG:45:GLU:HG2	1.92	0.52
36:BA:510:C:H2'	36:BA:511:U:O4'	2.10	0.52
4:CD:65:ARG:HD3	4:CD:75:PHE:CG	2.45	0.52
42:BG:107:LEU:HD12	42:BG:178:PHE:CE1	2.45	0.52
25:AZ:315:LYS:HA	25:AZ:372:VAL:O	2.09	0.52
25:CZ:9:LYS:HE3	25:CZ:73:ALA:C	2.30	0.52
42:DG:109:VAL:C	42:DG:112:PRO:HD2	2.30	0.52
22:AV:5:G:H8	22:AV:5:G:C5'	2.12	0.52
2:CB:8:LYS:CE	2:CB:217:ARG:HH22	2.22	0.52
35:D9:27:CYS:SG	35:D9:28:GLU:N	2.78	0.52
43:DH:51:ARG:HG3	43:DH:52:VAL:N	2.25	0.52
57:DY:59:GLY:O	57:DY:60:PHE:HB2	2.10	0.52
48:DP:144:GLU:N	48:DP:145:PRO:HD3	2.25	0.52
36:DA:1252:G:N2	53:DU:33:ARG:HB3	2.25	0.52
9:AI:84:ALA:O	9:AI:85:LEU:HB3	2.09	0.52
49:BQ:63:LYS:HE2	58:BZ:118:GLN:NE2	2.24	0.52
58:BZ:141:VAL:O	58:BZ:142:SER:CB	2.58	0.52
36:DA:815:C:H2'	36:DA:816:C:C6	2.45	0.52
36:DA:389:G:H1	48:DP:72:PRO:HD3	1.75	0.52
35:B9:25:VAL:HB	35:B9:34:GLN:HB3	1.91	0.52
5:AE:12:LEU:HD13	5:AE:31:LEU:HB2	1.92	0.52
41:DF:123:LEU:O	41:DF:124:LEU:HB2	2.10	0.52
41:DF:6:VAL:HG12	41:DF:7:TYR:H	1.73	0.52
53:DU:21:ALA:HB1	53:DU:24:TYR:CD2	2.44	0.52
36:BA:1720:U:C2'	36:BA:1721:G:H5''	2.40	0.52
36:DA:2262:U:H4'	36:DA:2328:A:C2	2.44	0.52
13:CM:14:ARG:HB3	13:CM:16:ASP:OD1	2.09	0.52
37:BB:81:G:H2'	37:BB:82:G:H5'	1.91	0.52
25:AZ:126:VAL:O	25:AZ:126:VAL:HG12	2.10	0.52
22:CV:46:G:H3'	22:CV:47:U:H5''	1.91	0.52
18:AR:36:ASN:HB2	18:AR:38:GLU:CG	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:103:ARG:HG3	55:DW:40:ASN:CG	2.30	0.52
39:BD:231:HIS:CG	39:BD:232:PRO:HD2	2.45	0.52
8:CH:37:ARG:O	8:CH:40:ALA:HB3	2.09	0.52
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.45	0.52
1:CA:814:A:H2'	1:CA:816:A:H5''	1.92	0.52
15:CO:30:ALA:HB2	15:CO:85:LEU:HD11	1.91	0.52
58:DZ:48:PHE:CE2	58:DZ:74:VAL:HG21	2.45	0.52
15:AO:32:LEU:O	15:AO:35:ARG:N	2.43	0.52
36:BA:1404:C:O2'	36:BA:1405:U:H5'	2.10	0.52
26:D0:36:ILE:O	26:D0:36:ILE:HD12	2.09	0.52
36:DA:2200:C:H42	36:DA:2223:G:H1	1.58	0.52
36:DA:839:U:H2'	36:DA:840:C:C6	2.45	0.52
42:DG:136:ARG:HG3	42:DG:137:GLU:H	1.74	0.52
25:CZ:313:HIS:O	25:CZ:380:LEU:CD1	2.58	0.52
34:B8:33:ASN:HA	34:B8:36:LYS:HD2	1.91	0.52
48:BP:41:ARG:NH1	48:BP:41:ARG:HB3	2.20	0.52
25:CZ:9:LYS:CE	25:CZ:74:LYS:C	2.78	0.52
1:CA:1188:A:H2'	1:CA:1189:C:H5'	1.92	0.52
36:DA:1858:G:H2'	36:DA:1883:G:H22	1.75	0.52
36:DA:1798:U:C5'	39:DD:259:THR:HB	2.40	0.52
36:BA:2128:C:N4	36:BA:2160:G:H1	2.07	0.52
52:BT:129:ARG:NE	52:BT:131:ALA:HB3	2.26	0.52
36:BA:1009:A:H1'	53:BU:59:ARG:NH1	2.25	0.52
42:DG:29:TRP:O	42:DG:31:VAL:N	2.40	0.52
41:BF:110:LEU:O	41:BF:110:LEU:HD13	2.10	0.52
3:CC:87:LEU:O	3:CC:91:LEU:HG	2.10	0.52
2:AB:92:TYR:CE1	2:AB:94:ASN:ND2	2.73	0.52
56:BX:30:VAL:HG23	56:BX:31:HIS:N	2.23	0.52
41:BF:133:ASN:HD22	41:BF:133:ASN:H	1.57	0.52
58:DZ:109:ALA:O	58:DZ:111:VAL:HG23	2.10	0.52
36:DA:888:C:H2'	36:DA:889:C:C4'	2.38	0.52
19:AS:53:ASN:HD22	19:AS:55:LYS:H	1.58	0.52
25:CZ:338:TYR:O	25:CZ:340:PRO:HD3	2.09	0.52
36:BA:302:C:H2'	36:BA:303:U:C6	2.45	0.52
36:DA:2854:G:H2'	36:DA:2855:C:C6	2.45	0.52
43:BH:156:ALA:C	43:BH:158:HIS:N	2.63	0.52
17:AQ:52:LYS:HD2	17:AQ:52:LYS:H	1.74	0.52
14:CN:42:ILE:HG22	14:CN:43:CYS:N	2.25	0.52
47:DO:78:ARG:CB	47:DO:78:ARG:NH1	2.72	0.52
36:DA:122:G:H1	36:DA:129:C:N4	2.07	0.52
1:CA:706:A:O2'	11:CK:29:ILE:HD11	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1472:A:H2'	36:DA:1473:G:H5'	1.90	0.52
36:BA:2543:G:H2'	36:BA:2544:G:H8	1.74	0.52
36:BA:1817:G:C2'	36:BA:1818:U:H5'	2.40	0.52
46:BN:6:PRO:HG3	46:BN:41:ASP:OD1	2.10	0.52
36:BA:1469:A:H2'	36:BA:1470:G:O4'	2.10	0.52
36:DA:2136:C:H2'	36:DA:2137:C:H6	1.75	0.52
1:AA:681:C:C2'	1:AA:682:G:H5'	2.40	0.52
38:BC:139:ASN:N	38:BC:144:THR:OG1	2.41	0.52
38:DC:77:ILE:HD13	38:DC:95:GLY:HA3	1.91	0.52
4:AD:79:PHE:HA	4:AD:93:PHE:CD1	2.45	0.52
1:CA:20:U:H2'	1:CA:21:G:O4'	2.10	0.52
8:AH:97:VAL:HG21	8:AH:128:GLY:C	2.31	0.52
36:BA:1666:G:C2'	36:BA:1667:G:H5'	2.40	0.52
36:DA:271(R):G:O2'	36:DA:271(S):G:H5'	2.09	0.52
1:CA:1495:U:H2'	1:CA:1496:C:H6	1.75	0.52
1:CA:386:C:C2'	1:CA:387:U:H5'	2.40	0.52
56:DX:26:TYR:CD2	56:DX:92:LEU:HD12	2.45	0.52
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.45	0.52
35:D9:15:LYS:HB3	35:D9:15:LYS:NZ	2.25	0.52
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.91	0.52
30:D4:20:ASN:HD22	30:D4:21:VAL:N	2.07	0.52
1:AA:335:C:H2'	1:AA:336:C:C6	2.45	0.52
1:CA:796:C:O2'	1:CA:797:C:H5'	2.09	0.52
25:AZ:195:TRP:O	25:AZ:198:LYS:N	2.43	0.51
1:AA:1128:C:O2'	1:AA:1130:A:N7	2.39	0.51
57:BY:38:ILE:CB	57:BY:66:PRO:HG3	2.27	0.51
36:DA:664:C:H4'	36:DA:940:G:O3'	2.09	0.51
52:DT:31:SER:CB	52:DT:32:TYR:CD1	2.93	0.51
52:DT:78:LEU:C	52:DT:79:HIS:ND1	2.64	0.51
51:BS:52:SER:CB	51:BS:55:ALA:HB3	2.40	0.51
10:CJ:54:PHE:HA	10:CJ:55:LYS:HZ2	1.75	0.51
36:BA:747:U:O2	36:BA:2014:A:H1'	2.11	0.51
52:BT:28:VAL:O	52:BT:29:ARG:CB	2.56	0.51
42:DG:83:ARG:CB	42:DG:84:LYS:HD2	2.40	0.51
20:AT:41:ILE:O	20:AT:45:GLN:NE2	2.44	0.51
34:D8:16:ILE:O	34:D8:16:ILE:HG23	2.08	0.51
48:DP:101:VAL:HG23	48:DP:102:ARG:H	1.73	0.51
37:DB:55:U:H2'	37:DB:56:G:C8	2.44	0.51
36:BA:1803:A:H4'	39:BD:259:THR:HG22	1.92	0.51
55:BW:27:LYS:O	55:BW:28:SER:O	2.28	0.51
1:CA:1123:A:H2'	1:CA:1124:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:47:THR:HG23	2:AB:202:PRO:O	2.10	0.51
2:AB:44:LEU:HA	2:AB:47:THR:HB	1.91	0.51
36:BA:1038:C:C3'	36:BA:1039:G:H5''	2.39	0.51
25:AZ:199:ILE:O	25:AZ:203:LEU:HG	2.10	0.51
27:B1:76:ARG:CZ	27:B1:95:LEU:HB2	2.40	0.51
1:AA:59:A:N6	1:AA:331:G:H1'	2.25	0.51
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.10	0.51
38:DC:25:ALA:O	38:DC:29:VAL:HG13	2.10	0.51
53:BU:10:ARG:O	53:BU:12:ARG:N	2.43	0.51
12:AL:55:VAL:HG21	12:AL:67:THR:HG22	1.93	0.51
1:CA:1218:C:H2'	1:CA:1219:U:C5	2.45	0.51
58:DZ:94:GLU:HB3	58:DZ:95:PRO:CD	2.39	0.51
40:DE:44:TYR:O	40:DE:45:THR:HB	2.10	0.51
36:BA:2116:G:N7	36:BA:2117:A:C4	2.78	0.51
33:B7:34:ARG:HG3	33:B7:34:ARG:HH11	1.75	0.51
36:DA:1278:A:H5''	50:DR:36:THR:HG22	1.91	0.51
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.10	0.51
36:DA:1609:A:H4'	36:DA:1617:C:OP1	2.10	0.51
12:AL:109:GLY:HA3	12:AL:122:THR:H	1.75	0.51
36:BA:257:A:C2'	36:BA:258:G:H5'	2.40	0.51
1:AA:332:G:H2'	1:AA:333:G:H8	1.75	0.51
54:BV:66:ARG:CZ	54:BV:88:ARG:HD2	2.40	0.51
36:BA:768:G:H2'	36:BA:769:G:H8	1.75	0.51
36:BA:363(F):A:O2'	36:BA:364:C:C5	2.63	0.51
38:BC:151:GLU:HA	38:BC:154:ARG:HD2	1.92	0.51
1:AA:490:G:H2'	1:AA:491:G:C8	2.45	0.51
36:BA:1628:G:O2'	36:BA:1629:U:H5'	2.10	0.51
25:CZ:129:PRO:HB2	25:CZ:130:TYR:CD1	2.45	0.51
36:BA:1788:C:C2'	36:BA:1789:A:H5'	2.40	0.51
38:BC:82:LYS:HE2	38:BC:82:LYS:HA	1.91	0.51
27:D1:84:GLY:O	27:D1:86:SER:N	2.43	0.51
13:CM:80:ARG:HG2	13:CM:80:ARG:O	2.10	0.51
22:AW:70:G:H2'	22:AW:71:G:C8	2.45	0.51
57:BY:6:HIS:HB3	57:BY:35:TYR:CE1	2.41	0.51
42:BG:52:ILE:O	42:BG:54:GLU:OE2	2.28	0.51
52:DT:85:LYS:O	52:DT:86:ILE:C	2.49	0.51
2:AB:213:LEU:HD23	2:AB:213:LEU:O	2.11	0.51
57:DY:28:LYS:HB2	57:DY:37:VAL:HB	1.91	0.51
57:DY:13:VAL:CG2	57:DY:73:ARG:H	2.22	0.51
14:CN:24:CYS:N	14:CN:33:VAL:HG11	2.24	0.51
52:BT:31:SER:HG	52:BT:32:TYR:HE1	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1539:G:N3	36:BA:1540:U:H4'	2.24	0.51
56:DX:49:VAL:HG12	56:DX:87:GLN:HE21	1.75	0.51
56:BX:55:ASN:ND2	56:BX:55:ASN:N	2.58	0.51
1:AA:1039:C:H2'	1:AA:1040:U:C6	2.44	0.51
31:D5:43:HIS:HE1	36:DA:2884:U:P	2.34	0.51
36:DA:2886:G:O2'	36:DA:2887:U:H5'	2.11	0.51
36:DA:2415:G:H4'	48:DP:66:GLY:CA	2.39	0.51
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.73	0.51
36:BA:2128:C:O2'	36:BA:2129:C:O5'	2.27	0.51
34:D8:37:SER:HB2	36:DA:2383:G:OP2	2.10	0.51
36:DA:1602:U:H3'	36:DA:1603:A:H5''	1.91	0.51
32:D6:19:ARG:HD3	32:D6:20:ASN:H	1.74	0.51
54:DV:18:LEU:CG	54:DV:19:LYS:H	2.23	0.51
1:CA:359:U:P	25:CZ:235:GLY:HA2	2.50	0.51
9:CI:11:LYS:HG3	9:CI:108:VAL:HG13	1.90	0.51
36:DA:2692:C:O2	36:DA:2847:U:O2'	2.27	0.51
20:AT:82:SER:O	20:AT:84:LEU:N	2.37	0.51
51:BS:83:LYS:CG	51:BS:105:ALA:HB3	2.37	0.51
1:CA:625:G:H2'	1:CA:626:U:H6	1.74	0.51
43:DH:147:ASN:O	43:DH:151:ILE:HG12	2.10	0.51
50:DR:7:GLY:O	50:DR:8:ARG:CZ	2.58	0.51
36:DA:1657:C:O2'	36:DA:1658:C:H5'	2.10	0.51
50:BR:97:VAL:HA	50:BR:113:LEU:O	2.11	0.51
36:BA:445:C:O3'	53:BU:3:ARG:HD3	2.10	0.51
3:CC:167:TRP:O	3:CC:168:ALA:HB3	2.10	0.51
36:BA:483:A:C2	36:BA:484:C:H1'	2.44	0.51
36:BA:1658:C:OP1	40:BE:135:HIS:HE1	1.94	0.51
36:BA:632:A:H2'	36:BA:633:A:C8	2.45	0.51
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.92	0.51
6:CF:3:ARG:HD3	6:CF:64:GLN:NE2	2.26	0.51
36:DA:1718:G:H2'	36:DA:1719:G:H8	1.76	0.51
36:DA:2469:A:H2'	36:DA:2470:G:H5'	1.92	0.51
36:BA:2464:C:O2'	36:BA:2465:C:O5'	2.28	0.51
36:BA:1409:C:H2'	36:BA:1410:G:C8	2.44	0.51
1:CA:160:A:H1'	1:CA:344:A:N7	2.26	0.51
58:BZ:79:ARG:O	58:BZ:80:ARG:HB2	2.10	0.51
1:AA:647:C:O2'	1:AA:648:A:H5'	2.09	0.51
36:DA:2880:C:C2	36:DA:2881:C:C5	2.98	0.51
36:BA:2319:G:H4'	36:BA:2320:A:OP1	2.09	0.51
1:AA:491:G:O2'	1:AA:492:G:H5'	2.10	0.51
54:BV:74:LYS:HB2	54:BV:83:ARG:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:706:A:H2'	36:DA:707:G:O4'	2.10	0.51
36:BA:654(C):G:H2'	36:BA:654(D):G:H5'	1.92	0.51
20:AT:25:ARG:HH11	20:AT:25:ARG:HG3	1.75	0.51
25:CZ:68:VAL:O	25:CZ:273:HIS:CE1	2.64	0.51
21:CU:6:ARG:HE	21:CU:6:ARG:N	2.08	0.51
4:CD:138:TYR:C	4:CD:138:TYR:CD1	2.83	0.51
47:DO:71:ARG:NH1	47:DO:104:ARG:HG2	2.25	0.51
42:BG:6:ALA:O	42:BG:10:LYS:HG3	2.10	0.51
48:DP:38:GLN:CG	48:DP:39:LYS:H	2.21	0.51
58:BZ:150:LEU:HG	58:BZ:171:ILE:HD11	1.91	0.51
39:BD:63:ARG:NH1	39:BD:63:ARG:CG	2.62	0.51
38:DC:6:ARG:HH11	38:DC:6:ARG:HG2	1.75	0.51
34:B8:32:LEU:HD13	36:BA:2392:A:OP1	2.10	0.51
25:AZ:12:VAL:HG13	25:AZ:100:ASP:OD2	2.10	0.51
48:BP:40:SER:C	48:BP:41:ARG:HG2	2.31	0.51
32:B6:15:GLU:OE1	32:B6:18:ARG:CG	2.57	0.51
37:BB:7:G:H2'	37:BB:8:U:H5'	1.92	0.51
39:BD:97:TYR:C	39:BD:99:ASP:H	2.12	0.51
36:DA:1484:G:C3'	36:DA:1485:G:H5''	2.39	0.51
48:BP:125:VAL:HG11	48:BP:138:LEU:HD21	1.93	0.51
24:CY:40:C:H2'	24:CY:41:C:C5'	2.31	0.51
46:BN:55:VAL:HG22	46:BN:56:ASN:H	1.73	0.51
48:BP:147:LEU:CG	48:BP:148:LEU:N	2.72	0.51
42:DG:11:TYR:HA	42:DG:15:VAL:HG23	1.90	0.51
1:CA:358:U:H1'	25:CZ:233:GLY:CA	2.40	0.51
36:DA:2810:A:H2'	36:DA:2811:G:O4'	2.10	0.51
36:BA:2523:G:C2'	36:BA:2524:G:H5''	2.40	0.51
36:DA:562:U:O4	36:DA:2036:C:H1'	2.10	0.51
40:BE:103:ASP:OD2	40:BE:201:THR:HA	2.09	0.51
36:BA:310:A:OP1	57:BY:17:SER:O	2.28	0.51
20:AT:81:LYS:O	20:AT:84:LEU:HB3	2.11	0.51
49:DQ:29:PHE:CB	49:DQ:105:GLU:OE2	2.57	0.51
1:AA:376:G:H4'	16:AP:5:ARG:HH11	1.76	0.51
36:DA:2485:G:O2'	36:DA:2486:G:H5'	2.10	0.51
16:CP:21:VAL:O	16:CP:21:VAL:HG13	2.10	0.51
2:CB:121:LEU:HG	2:CB:126:GLU:HB2	1.90	0.51
22:CV:4:C:C2'	22:CV:5:G:H5''	2.40	0.51
36:DA:991:C:H2'	36:DA:992:C:H6	1.75	0.51
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.10	0.51
24:CY:54:5MU:H5''	24:CY:55:PSU:OP2	2.10	0.51
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:112:SER:HB3	3:AC:115:LEU:HB2	1.93	0.51
57:BY:77:PRO:O	57:BY:78:ALA:CB	2.58	0.51
1:AA:994:A:N7	1:AA:1216:G:H4'	2.25	0.51
56:BX:49:VAL:HA	56:BX:87:GLN:NE2	2.24	0.51
12:AL:25:PRO:O	12:AL:26:ALA:CB	2.58	0.51
18:CR:37:VAL:HG23	18:CR:41:LYS:HB2	1.92	0.51
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.57	0.51
42:DG:152:LEU:H	42:DG:152:LEU:HD23	1.76	0.51
37:DB:67:G:HO2'	37:DB:68:C:H6	1.55	0.51
37:DB:68:C:O2'	37:DB:69:G:H5'	2.10	0.51
23:CX:11:U:H3'	23:CX:12:A:N7	2.25	0.51
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.11	0.51
36:DA:1509(A):A:H2'	36:DA:1509(B):A:H8	1.76	0.51
46:BN:86:PRO:HG2	46:BN:89:LYS:HG2	1.91	0.51
55:BW:44:ALA:O	55:BW:46:PHE:N	2.43	0.51
24:CY:58:A:O2'	24:CY:59:G:H5''	2.11	0.51
36:DA:1525:G:O2'	36:DA:1526:G:H5'	2.09	0.51
36:DA:2726:U:H6	47:DO:67:LYS:HZ3	1.56	0.51
1:CA:474:G:H2'	1:CA:475:G:H8	1.75	0.51
1:CA:774:G:O2'	1:CA:775:G:H5'	2.10	0.51
12:AL:126:LYS:HE2	12:AL:127:GLU:HB2	1.91	0.51
6:CF:40:VAL:HG13	6:CF:40:VAL:O	2.10	0.51
36:DA:2289:G:H8	36:DA:2289:G:O5'	1.94	0.51
36:BA:1980:G:O2'	36:BA:1982:C:OP2	2.22	0.51
56:BX:3:THR:HA	56:BX:6:ASP:OD2	2.10	0.51
25:AZ:5:PHE:O	25:AZ:5:PHE:HD1	1.93	0.51
4:AD:8:VAL:C	4:AD:10:ARG:N	2.64	0.51
36:BA:2107:C:H1'	36:BA:2182:G:N2	2.26	0.51
24:CY:2:G:O4'	25:CZ:88:TYR:CE1	2.63	0.51
22:AW:70:G:H2'	22:AW:71:G:H8	1.75	0.51
1:AA:1129:C:OP1	1:AA:1130:A:C5'	2.58	0.51
28:B2:12:GLU:O	28:B2:12:GLU:HG2	2.11	0.51
4:CD:28:SER:CB	4:CD:29:PRO:CD	2.81	0.51
36:DA:1747:G:H2'	36:DA:1747(A):G:H8	1.75	0.51
43:BH:103:LEU:HD22	43:BH:123:PHE:HD2	1.76	0.51
25:AZ:310:ILE:CD1	25:AZ:381:GLU:HB3	2.41	0.51
25:AZ:381:GLU:O	25:AZ:382:GLU:HB3	2.10	0.51
52:DT:50:ILE:HD11	52:DT:64:ARG:CB	2.29	0.51
36:DA:1465:G:H5'	36:DA:1528:A:H1'	1.92	0.51
36:BA:1517:G:H8	36:BA:1517:G:C5'	2.22	0.51
48:BP:33:ARG:O	48:BP:34:GLY:C	2.49	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:51:VAL:HG12	56:DX:52:VAL:H	1.74	0.51
36:DA:267:C:H2'	36:DA:268:C:H6	1.74	0.51
52:DT:107:ASP:O	52:DT:110:ILE:HB	2.10	0.51
50:DR:63:ARG:HA	50:DR:80:PHE:HZ	1.74	0.51
36:BA:2771:C:H2'	36:BA:2772:C:C6	2.45	0.51
36:DA:61:G:H1	36:DA:94:C:N4	1.97	0.51
56:BX:10:ALA:HB1	56:BX:11:PRO:CD	2.40	0.51
52:DT:92:GLY:O	52:DT:94:ALA:N	2.43	0.51
51:BS:74:ALA:O	51:BS:77:ALA:HB3	2.10	0.51
3:CC:45:LYS:HG2	3:CC:46:GLU:N	2.25	0.51
24:AY:4:G:C3'	24:AY:5:G:H5''	2.40	0.51
54:BV:20:LEU:O	54:BV:22:VAL:HG22	2.11	0.51
39:DD:43:ARG:NE	39:DD:49:ILE:HG22	2.18	0.51
41:BF:126:VAL:HG21	41:BF:129:PHE:CZ	2.44	0.51
1:CA:201:C:H3'	1:CA:202:U:C5'	2.35	0.51
50:BR:96:ARG:HH12	50:BR:117:VAL:HG11	1.75	0.51
1:AA:375:U:C2	1:AA:376:G:C8	2.98	0.51
1:AA:377:G:H2'	1:AA:378:G:H8	1.74	0.51
20:AT:22:ARG:NH1	20:AT:22:ARG:HG3	2.24	0.51
19:CS:31:ILE:O	19:CS:31:ILE:HG23	2.10	0.51
4:CD:182:LYS:O	4:CD:183:GLY:O	2.27	0.51
46:BN:3:THR:C	46:BN:4:TYR:CG	2.83	0.51
27:B1:62:VAL:HG13	27:B1:63:ALA:O	2.11	0.51
40:DE:33:VAL:HG21	40:DE:36:ARG:HE	1.76	0.51
36:BA:2691:C:H2'	36:BA:2692:C:H6	1.76	0.51
32:B6:28:ARG:HG2	32:B6:28:ARG:HH11	1.75	0.51
14:AN:57:ARG:HG3	14:AN:58:LYS:N	2.26	0.51
3:CC:142:MET:C	3:CC:144:SER:N	2.62	0.51
36:DA:391:G:H2'	36:DA:392:C:O4'	2.11	0.51
36:DA:880:G:H2'	36:DA:881:G:H8	1.75	0.51
1:CA:992:U:H1'	1:CA:993:G:C2	2.45	0.51
16:CP:25:ARG:HG3	16:CP:25:ARG:NH1	2.25	0.51
36:BA:1827:C:H2'	36:BA:1828:G:H5'	1.92	0.51
1:CA:1485:U:O2'	1:CA:1486:G:H5'	2.11	0.51
4:CD:53:ASP:HB3	4:CD:57:ARG:NH1	2.24	0.51
39:DD:206:LEU:HD12	39:DD:211:ARG:CG	2.40	0.51
36:DA:1063:G:N2	45:DK:89:UNK:N	2.59	0.51
38:DC:153:ILE:O	38:DC:153:ILE:HG22	2.10	0.51
55:BW:47:VAL:HG12	55:BW:47:VAL:O	2.09	0.51
36:BA:864:G:N2	36:BA:913:U:C2	2.78	0.51
42:DG:16:ARG:N	42:DG:17:PRO:HD2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:950:G:H2'	36:BA:951:C:H6	1.75	0.51
36:BA:2389:G:H5''	36:BA:2390:U:O4'	2.11	0.51
1:CA:245:C:O2'	1:CA:246:A:P	2.68	0.51
36:DA:2552:U:H2'	36:DA:2554:U:H5''	1.92	0.51
1:CA:633:G:H3'	1:CA:634:C:H6	1.75	0.51
36:DA:2623:G:H4'	36:DA:2825:C:O2	2.10	0.51
10:AJ:42:THR:HG22	10:AJ:43:ARG:N	2.25	0.51
49:BQ:61:GLY:O	49:BQ:62:GLY:O	2.29	0.51
1:AA:532:A:H2	1:AA:1206:G:H21	1.59	0.51
26:B0:3:HIS:CD2	36:BA:2602:A:H2	2.28	0.51
36:DA:654(A):G:H1	36:DA:654(S):G:H22	1.58	0.51
1:AA:1305:G:P	21:AU:2:GLY:N	2.84	0.51
27:D1:86:SER:CB	27:D1:90:ILE:HD11	2.41	0.51
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.91	0.51
9:AI:68:GLY:O	9:AI:69:GLY:O	2.28	0.51
34:D8:61:LEU:CD2	36:DA:593:G:H4'	2.40	0.51
52:DT:28:VAL:CG2	52:DT:47:GLY:O	2.59	0.51
2:AB:7:VAL:HG12	2:AB:217:ARG:HH21	1.76	0.51
36:BA:2309:A:H2'	36:BA:2310:A:H5'	1.92	0.51
42:BG:56:ALA:HA	42:BG:59:GLU:OE1	2.10	0.51
25:AZ:20:VAL:HG23	25:AZ:21:ASP:N	2.25	0.51
42:DG:46:ALA:HB2	42:DG:88:ILE:HG13	1.91	0.51
36:DA:848:G:N9	36:DA:933:A:H8	2.09	0.51
58:DZ:169:GLU:O	58:DZ:170:THR:C	2.47	0.51
36:BA:1761:C:H3'	36:BA:1762:A:H8	1.74	0.51
39:BD:97:TYR:O	39:BD:99:ASP:N	2.44	0.51
40:BE:188:VAL:CG2	40:BE:189:PRO:HD2	2.40	0.51
2:CB:55:PHE:HD1	2:CB:58:ILE:HD12	1.76	0.51
58:BZ:30:ASN:ND2	58:BZ:30:ASN:C	2.63	0.51
8:AH:112:LEU:CD2	8:AH:112:LEU:N	2.66	0.51
46:BN:72:TYR:CD2	46:BN:90:MET:HG3	2.45	0.51
36:DA:1051:G:H2'	36:DA:1052:C:C5	2.46	0.51
39:DD:183:ARG:HD2	39:DD:269:PHE:O	2.10	0.51
1:CA:1123:A:O3'	10:CJ:36:GLY:HA3	2.11	0.51
10:CJ:71:LEU:HD12	10:CJ:72:VAL:H	1.72	0.51
3:CC:47:LEU:CD1	3:CC:76:VAL:HG12	2.40	0.51
3:CC:47:LEU:HD11	3:CC:76:VAL:HG12	1.92	0.51
1:AA:191:G:C4	20:AT:105:SER:HB2	2.46	0.51
1:AA:376:G:O3'	16:AP:5:ARG:NH1	2.43	0.51
1:CA:1117:G:H5'	1:CA:1117:G:C8	2.43	0.51
51:BS:106:ARG:HB3	51:BS:106:ARG:CZ	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:85:VAL:C	51:BS:106:ARG:HG3	2.31	0.51
1:CA:148:G:H1	1:CA:174:C:N4	2.08	0.51
19:CS:32:LYS:O	19:CS:33:THR:HB	2.10	0.51
1:CA:267:C:OP2	17:CQ:67:LYS:HD2	2.11	0.51
10:CJ:89:ASP:HB3	10:CJ:91:PRO:HD3	1.93	0.51
36:DA:2626:C:O2'	36:DA:2627:G:H5'	2.11	0.51
25:CZ:34:VAL:HG21	25:CZ:199:ILE:HG21	1.92	0.51
43:BH:41:MET:O	43:BH:42:ARG:HB3	2.10	0.51
41:BF:64:ILE:HD11	41:BF:65:TRP:CZ2	2.45	0.51
43:DH:41:MET:O	43:DH:42:ARG:HB3	2.09	0.51
2:AB:84:GLU:OE1	2:AB:216:SER:HA	2.11	0.51
36:DA:17:G:H2'	36:DA:18:C:C6	2.45	0.51
8:CH:135:CYS:O	8:CH:135:CYS:SG	2.69	0.51
40:DE:28:ALA:CB	40:DE:93:VAL:HG22	2.40	0.51
2:CB:109:SER:C	2:CB:111:ARG:N	2.63	0.51
1:AA:637:G:O2'	1:AA:638:G:H5'	2.10	0.51
26:B0:50:ASN:ND2	26:B0:63:VAL:HG21	2.25	0.51
3:AC:175:LEU:HD23	3:AC:182:ILE:CD1	2.40	0.51
18:AR:44:LEU:CD2	18:AR:80:PRO:HD2	2.40	0.51
36:BA:2206:G:N2	36:BA:2207:G:H4'	2.25	0.51
36:DA:1771:C:O2'	36:DA:1786:A:H8	1.94	0.51
1:CA:706:A:N7	1:CA:707:C:C5	2.78	0.51
36:DA:1331:A:O2'	36:DA:1332:G:H8	1.92	0.51
47:DO:66:LYS:H	47:DO:82:ASN:HD21	1.57	0.51
55:DW:12:ILE:HD12	55:DW:42:ARG:NH1	2.26	0.51
36:BA:753:C:O2'	36:BA:754:C:H5'	2.11	0.51
36:DA:2292:C:H2'	36:DA:2293:C:H6	1.74	0.51
25:AZ:179:LEU:HD12	25:AZ:182:MET:HB2	1.93	0.51
36:DA:1952:A:C2	47:DO:22:ILE:HG23	2.45	0.51
36:BA:1932:A:H2'	36:BA:1933:G:O4'	2.10	0.51
5:AE:40:ARG:NH1	5:AE:40:ARG:HG2	2.26	0.51
7:CG:18:TYR:OH	7:CG:58:PRO:HG3	2.11	0.51
2:AB:28:PHE:CD2	2:AB:190:THR:HA	2.46	0.51
51:BS:22:GLY:O	51:BS:23:ARG:O	2.29	0.51
36:DA:1237:A:O3'	36:DA:1238:G:O4'	2.29	0.51
5:AE:20:GLN:NE2	5:AE:25:ARG:NH2	2.59	0.51
25:AZ:156:ASP:O	25:AZ:160:GLN:HG3	2.11	0.51
1:AA:697:U:H2'	1:AA:698:G:H5'	1.91	0.51
2:CB:169:LYS:HD3	2:CB:169:LYS:O	2.11	0.51
8:CH:68:ARG:HH11	8:CH:68:ARG:HG2	1.75	0.51
24:CY:15:A:H3'	24:CY:16:H2U:H5''	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1126:A:H4'	36:DA:1127:A:H5''	1.92	0.51
25:AZ:184:ARG:HG3	25:AZ:185:ASN:ND2	2.25	0.51
36:BA:1210:A:H4'	36:BA:1211:U:O5'	2.10	0.51
4:AD:138:TYR:CD1	4:AD:138:TYR:C	2.78	0.51
4:AD:174:LEU:HD21	4:AD:185:PHE:HD1	1.75	0.51
42:BG:45:GLU:CG	42:BG:53:LEU:HG	2.36	0.51
58:BZ:96:VAL:CG1	58:BZ:97:GLU:N	2.67	0.51
40:DE:52:LEU:HD23	40:DE:75:VAL:CB	2.39	0.51
42:BG:176:LEU:O	42:BG:176:LEU:HD23	2.10	0.51
51:BS:53:SER:C	51:BS:55:ALA:H	2.14	0.51
39:BD:30:GLU:CG	39:BD:63:ARG:HE	2.22	0.51
39:BD:35:LYS:CD	39:BD:36:PRO:N	2.61	0.51
25:AZ:313:HIS:O	25:AZ:380:LEU:CD1	2.58	0.51
20:AT:53:LEU:HD12	20:AT:53:LEU:H	1.75	0.51
46:DN:3:THR:CG2	46:DN:5:VAL:HG23	2.40	0.51
34:B8:21:LYS:HZ2	34:B8:48:PHE:HE2	1.59	0.51
40:DE:181:LEU:HD21	52:DT:7:ILE:HG22	1.92	0.51
51:DS:56:LEU:O	51:DS:57:LYS:O	2.29	0.51
36:DA:2747:G:C2	36:DA:2756:U:H5	2.28	0.51
36:DA:1144:G:H2'	36:DA:1145:C:H6	1.73	0.51
10:CJ:96:ILE:N	10:CJ:96:ILE:HD13	2.15	0.51
17:AQ:67:LYS:O	17:AQ:68:ARG:CB	2.51	0.51
50:BR:96:ARG:NH1	50:BR:117:VAL:CG2	2.70	0.51
1:AA:392:G:H2'	1:AA:393:A:C8	2.46	0.51
43:DH:76:VAL:C	43:DH:78:GLY:N	2.64	0.51
2:CB:17:PHE:CB	2:CB:44:LEU:HD11	2.41	0.51
26:B0:38:VAL:HG21	26:B0:59:LEU:HD12	1.91	0.51
46:BN:2:LYS:HZ3	54:BV:12:TYR:HA	1.76	0.51
39:BD:17:THR:O	39:BD:211:ARG:NH2	2.44	0.51
36:DA:67:U:H2'	36:DA:68:G:O4'	2.11	0.51
8:CH:119:LEU:N	8:CH:119:LEU:HD23	2.22	0.51
39:DD:83:GLU:OE1	39:DD:104:TYR:OH	2.28	0.51
20:CT:45:GLN:HE21	20:CT:46:GLU:H	1.58	0.51
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.10	0.51
2:CB:167:PRO:HG2	2:CB:192:SER:HB3	1.92	0.51
49:BQ:81:VAL:HG22	49:BQ:82:ARG:N	2.26	0.51
1:CA:1126:U:H5	1:CA:1127:G:C6	2.28	0.51
36:DA:1278:A:O2'	36:DA:1279:G:H5'	2.10	0.51
36:DA:2358:G:H2'	36:DA:2359:C:H6	1.75	0.51
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.26	0.51
36:DA:2647:U:H2'	36:DA:2648:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:6:VAL:CG1	36:DA:2016:U:H1'	2.39	0.51
39:BD:10:THR:C	39:BD:11:PRO:O	2.48	0.51
39:BD:10:THR:O	39:BD:11:PRO:O	2.29	0.51
36:DA:2028:U:H2'	36:DA:2029:G:H8	1.76	0.51
1:AA:1378:C:OP1	7:AG:7:ALA:HB3	2.10	0.51
1:CA:953:G:C5'	1:CA:965:A:H61	2.24	0.51
36:DA:1005:C:H2'	36:DA:1006:C:C6	2.46	0.51
36:BA:1839:G:H5'	36:BA:1839:G:C8	2.45	0.51
7:CG:21:VAL:HG23	7:CG:22:LEU:N	2.26	0.51
1:AA:226:G:C2'	1:AA:227:G:H5'	2.41	0.51
49:BQ:97:VAL:HG21	49:BQ:103:MET:CE	2.40	0.51
36:BA:1232:G:H2'	36:BA:1233:C:C6	2.46	0.51
1:CA:99:U:H2'	1:CA:100:C:C5	2.46	0.51
9:CI:9:ARG:CG	9:CI:14:VAL:HG13	2.41	0.51
41:DF:38:ARG:O	41:DF:42:ALA:N	2.43	0.51
36:DA:1607:C:H4'	36:DA:1608:A:O5'	2.11	0.51
36:BA:378:C:O2'	36:BA:379:G:H5'	2.11	0.51
41:BF:89:VAL:HG12	41:BF:90:PHE:CD2	2.46	0.51
36:BA:817:C:O2'	36:BA:839:U:H5''	2.10	0.51
1:AA:946:A:H2'	1:AA:947:G:C8	2.46	0.51
36:DA:2864:G:O2'	36:DA:2865:U:H5'	2.11	0.51
7:CG:13:GLN:HE21	7:CG:13:GLN:C	2.14	0.51
19:AS:10:PHE:CD1	19:AS:10:PHE:C	2.83	0.51
1:CA:580:U:H2'	1:CA:581:G:O4'	2.10	0.51
1:CA:675:A:H1'	11:CK:116:HIS:ND1	2.26	0.51
53:DU:61:TRP:O	53:DU:65:ILE:HG13	2.11	0.51
51:DS:104:GLY:O	51:DS:106:ARG:N	2.38	0.51
51:DS:87:PHE:CG	51:DS:88:ASP:N	2.78	0.51
4:AD:23:GLY:O	4:AD:27:TYR:HB2	2.11	0.51
36:DA:2330:G:O2'	36:DA:2331:G:H5'	2.11	0.51
57:DY:81:LYS:HZ2	57:DY:99:CYS:HB2	1.72	0.51
48:DP:50:ARG:NH1	48:DP:50:ARG:HG2	2.25	0.51
39:BD:35:LYS:HD2	39:BD:36:PRO:CD	2.39	0.51
48:BP:45:LEU:CD1	48:BP:46:LYS:N	2.67	0.51
36:DA:2184:G:H2'	36:DA:2185:C:C1'	2.40	0.51
32:B6:15:GLU:OE2	32:B6:41:PRO:CG	2.58	0.51
36:BA:621:A:H2'	36:BA:622:G:C5'	2.36	0.51
48:DP:16:ARG:CZ	48:DP:18:ARG:CG	2.81	0.51
48:BP:124:LYS:HD3	48:BP:143:GLY:CA	2.30	0.51
34:D8:15:LYS:CG	48:DP:65:ARG:HH21	2.24	0.51
36:BA:1380:G:H21	36:BA:1570:A:H2	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:112:LEU:O	46:DN:115:ARG:HB3	2.11	0.51
20:CT:30:LYS:HG3	20:CT:34:LYS:HE3	1.93	0.51
42:DG:97:ASP:O	42:DG:101:ILE:HG13	2.10	0.51
49:BQ:63:LYS:HD2	58:BZ:175:VAL:HG21	1.93	0.51
55:DW:73:ALA:O	55:DW:106:ILE:HG12	2.10	0.51
20:AT:84:LEU:C	20:AT:86:ARG:H	2.14	0.51
46:DN:134:ARG:N	46:DN:135:PRO:HD3	2.26	0.51
25:CZ:34:VAL:HG21	25:CZ:199:ILE:HG22	1.92	0.51
36:DA:389:G:C6	48:DP:70:GLN:HG3	2.45	0.51
36:BA:2580:U:H4'	40:BE:131:ALA:N	2.25	0.51
49:BQ:17:LEU:HD13	49:BQ:39:PRO:HB2	1.93	0.51
4:CD:145:GLU:HB3	4:CD:183:GLY:O	2.10	0.51
1:AA:66:G:H4'	1:AA:173:U:C5	2.45	0.51
36:BA:582:G:H2'	36:BA:583:G:H8	1.74	0.51
8:AH:117:GLY:O	8:AH:119:LEU:HD23	2.11	0.51
36:DA:2580:U:O3'	40:DE:130:GLY:HA3	2.11	0.51
13:AM:118:ALA:HB3	22:AV:29:G:C5'	2.39	0.51
53:BU:3:ARG:NH1	53:BU:5:LYS:HB2	2.25	0.51
3:AC:95:THR:O	3:AC:97:LYS:N	2.44	0.51
36:DA:1378:A:O2'	36:DA:1379:A:O5'	2.26	0.51
36:DA:2591:C:H2'	36:DA:2592:G:H8	1.74	0.51
46:BN:108:PRO:HG2	46:BN:113:GLY:HA3	1.93	0.51
43:DH:70:THR:HG22	43:DH:74:ASN:HD21	1.76	0.51
36:BA:2075:U:H4'	36:BA:2596:U:O2	2.11	0.51
25:CZ:299:GLU:O	25:CZ:302:GLN:CG	2.59	0.51
50:DR:36:THR:O	50:DR:111:LEU:HA	2.11	0.51
49:BQ:60:ARG:CB	49:BQ:60:ARG:NH1	2.74	0.51
50:BR:29:LEU:N	50:BR:29:LEU:CD1	2.73	0.51
4:AD:150:GLU:CD	4:AD:151:LYS:N	2.64	0.51
26:B0:11:ARG:O	26:B0:12:ASN:ND2	2.43	0.51
23:AX:11:U:H2'	23:AX:12:A:OP1	2.10	0.51
36:BA:2649:U:H2'	36:BA:2650:U:C6	2.46	0.51
54:DV:82:ARG:NH1	54:DV:82:ARG:HG2	2.26	0.51
33:B7:5:TRP:HE1	33:B7:7:PRO:HB3	1.74	0.51
36:DA:1841:U:H2'	36:DA:1842:G:C8	2.46	0.51
9:AI:47:LEU:C	9:AI:47:LEU:HD12	2.31	0.51
24:CY:1:A:H61	24:CY:72:U:H3	1.58	0.51
3:AC:22:TRP:CZ2	14:AN:54:PRO:HG2	2.46	0.51
30:D4:20:ASN:HD22	30:D4:20:ASN:C	2.14	0.51
36:BA:153:C:H2'	36:BA:154:G:C8	2.45	0.51
16:CP:47:ASP:O	16:CP:49:LEU:N	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:821:A:H5''	36:BA:822:U:C6	2.46	0.51
38:BC:65:PRO:HB2	38:BC:66:HIS:CD2	2.46	0.51
36:DA:1345:C:H2'	36:DA:1346:G:H8	1.75	0.51
55:DW:13:SER:HA	55:DW:99:ARG:HB2	1.93	0.51
25:CZ:216:ASP:OD1	25:CZ:244:ARG:HB2	2.11	0.51
46:BN:38:HIS:O	53:BU:67:ALA:HB1	2.10	0.51
36:DA:669:G:H2'	36:DA:669:G:N3	2.26	0.51
10:AJ:54:PHE:CD1	10:AJ:55:LYS:CE	2.94	0.51
38:BC:116:THR:HG22	38:BC:147:PHE:HA	1.93	0.51
27:D1:84:GLY:C	27:D1:86:SER:N	2.63	0.51
54:DV:39:LEU:HA	54:DV:47:VAL:HG11	1.93	0.51
28:B2:21:LEU:HA	28:B2:24:LEU:HD12	1.92	0.51
4:AD:107:ARG:HH21	4:AD:194:LEU:CD1	2.04	0.51
1:CA:978:A:C8	1:CA:1319:A:C2	2.98	0.51
51:BS:51:ALA:CB	51:BS:73:LEU:HB2	2.40	0.51
10:CJ:50:ILE:HD11	14:CN:41:ARG:HD2	1.92	0.51
39:BD:43:ARG:NH1	39:BD:44:ASN:HD21	2.07	0.51
25:AZ:19:HIS:CE1	25:AZ:20:VAL:HG22	2.46	0.51
36:DA:925:C:C3'	36:DA:926:A:H5''	2.40	0.51
25:CZ:8:THR:HG22	25:CZ:9:LYS:H	1.75	0.51
19:AS:40:ILE:HD13	19:AS:62:ILE:CD1	2.40	0.51
35:D9:7:VAL:CG2	35:D9:34:GLN:HG2	2.36	0.51
17:AQ:26:GLN:NE2	17:AQ:37:LYS:HE2	2.10	0.51
34:B8:22:VAL:HB	34:B8:53:PRO:CB	2.41	0.51
36:BA:650:C:H3'	36:BA:651:G:C5'	2.34	0.51
1:AA:1054:C:N3	24:AY:34:C:H1'	2.26	0.51
53:BU:115:ALA:O	53:BU:117:GLN:N	2.44	0.51
46:DN:46:VAL:O	46:DN:47:ALA:CB	2.58	0.51
36:BA:2485:G:O2'	36:BA:2486:G:H5'	2.10	0.51
36:DA:2801:A:O2'	36:DA:2895:U:H5'	2.11	0.51
31:D5:16:ARG:HD2	31:D5:20:ARG:HH22	1.76	0.51
13:AM:19:LEU:HD22	13:AM:19:LEU:H	1.76	0.51
48:DP:124:LYS:CD	48:DP:143:GLY:HA3	2.33	0.51
42:BG:77:ILE:CD1	42:BG:77:ILE:N	2.74	0.51
55:DW:70:TYR:O	55:DW:107:LEU:HB3	2.10	0.51
36:BA:1335:U:H2'	36:BA:1336:A:C8	2.46	0.51
1:CA:1158:C:O2'	1:CA:1159:U:H4'	2.11	0.51
1:CA:266:G:O2'	1:CA:267:C:OP2	2.28	0.51
26:B0:53:MET:HA	26:B0:58:THR:O	2.10	0.51
4:CD:106:TYR:HE2	4:CD:113:SER:HA	1.75	0.51
57:DY:2:ARG:N	57:DY:4:LYS:HG2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:105:C:O2'	57:BY:2:ARG:HG3	2.10	0.51
22:CV:4:C:H2'	22:CV:5:G:H5''	1.93	0.51
26:D0:27:GLU:HA	26:D0:67:VAL:O	2.11	0.51
33:D7:21:ARG:HB3	33:D7:27:GLY:O	2.11	0.51
36:DA:803:U:O2'	36:DA:804:A:H5'	2.11	0.51
1:CA:1392:G:H21	1:CA:1502:A:H8	1.57	0.51
47:BO:114:ILE:H	47:BO:114:ILE:CD1	2.23	0.51
58:BZ:40:ASP:HB3	58:BZ:43:GLU:HG3	1.91	0.51
1:AA:1278:U:H5''	1:AA:1279:A:O4'	2.11	0.51
36:DA:2352:A:C2'	36:DA:2353:G:H5'	2.40	0.51
46:BN:134:ARG:N	46:BN:135:PRO:HD3	2.26	0.51
36:BA:1331:A:HO2'	36:BA:1332:G:H8	1.59	0.51
9:AI:79:LEU:HD22	9:AI:101:PHE:O	2.10	0.51
36:BA:2704:C:H2'	36:BA:2705:A:C8	2.44	0.51
38:DC:155:GLU:O	38:DC:160:ARG:HB2	2.11	0.51
46:DN:1:MET:C	46:DN:1:MET:SD	2.89	0.51
1:CA:1111:A:H2'	1:CA:1112:C:H6	1.73	0.51
57:DY:91:GLU:O	57:DY:92:ASN:HB2	2.11	0.51
41:BF:34:TRP:CE3	48:BP:12:ALA:HA	2.46	0.51
36:BA:520:G:H2'	36:BA:521:G:H8	1.76	0.51
2:CB:80:ILE:CD1	2:CB:80:ILE:H	2.24	0.51
40:DE:34:VAL:HG22	40:DE:34:VAL:O	2.11	0.51
36:DA:1469:A:O2'	36:DA:1470:G:H5'	2.11	0.51
36:BA:1120:G:H2'	36:BA:1121:C:C6	2.45	0.51
43:BH:139:GLN:HG3	43:BH:140:LYS:N	2.26	0.51
17:AQ:44:ALA:HB2	17:AQ:59:ILE:HD12	1.92	0.51
1:CA:675:A:H1'	11:CK:116:HIS:CE1	2.46	0.51
12:AL:81:SER:HB3	12:AL:106:ASP:HB3	1.91	0.51
36:DA:156:U:H2'	36:DA:157:U:O4'	2.10	0.51
4:CD:64:LEU:HD21	4:CD:93:PHE:HE2	1.76	0.51
36:BA:1373:A:O2'	36:BA:1374:G:H5'	2.11	0.51
2:AB:187:LEU:HD13	2:AB:205:ASP:HB3	1.93	0.51
5:AE:45:PHE:CD2	5:AE:47:LYS:HD2	2.46	0.51
36:BA:32:C:OP1	36:BA:1238:G:H5'	2.11	0.51
56:DX:16:LYS:O	56:DX:16:LYS:HG2	2.11	0.51
36:DA:1036:G:O2'	36:DA:1037:G:H5'	2.11	0.51
4:AD:70:ILE:HD12	4:AD:97:LEU:HD21	1.92	0.51
39:DD:62:TYR:HA	39:DD:87:ASN:ND2	2.25	0.51
1:CA:1305:G:C3'	21:CU:6:ARG:HH22	2.24	0.51
13:CM:11:ARG:HA	13:CM:45:VAL:CB	2.39	0.51
1:AA:1125:U:C3'	1:AA:1125:U:C6	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:57:C:C2'	36:BA:58:G:H5'	2.40	0.51
57:BY:33:LYS:C	57:BY:35:TYR:H	2.14	0.51
4:AD:106:TYR:HB2	4:AD:117:ALA:HB2	1.93	0.51
41:BF:176:LEU:HG	41:BF:177:ALA:H	1.75	0.51
4:CD:31:CYS:C	4:CD:33:MET:H	2.14	0.51
42:BG:103:LEU:HA	42:BG:106:LEU:HB3	1.93	0.51
48:DP:47:ASP:OD2	48:DP:50:ARG:HG2	2.10	0.51
36:DA:1748:G:H8	36:DA:1748:G:H5'	1.76	0.51
48:BP:55:ARG:O	48:BP:57:THR:N	2.39	0.51
31:B5:46:CYS:SG	31:B5:48:GLU:O	2.69	0.51
20:AT:100:ILE:HD12	20:AT:100:ILE:N	2.26	0.51
42:DG:111:LEU:N	42:DG:112:PRO:CD	2.74	0.51
13:CM:7:VAL:CG2	42:DG:115:ARG:HG3	2.40	0.51
42:DG:178:PHE:HB3	42:DG:180:PHE:CE1	2.45	0.51
32:B6:14:THR:O	32:B6:49:HIS:HA	2.10	0.51
51:BS:89:ARG:CG	51:BS:92:TYR:HB3	2.40	0.51
34:D8:13:ARG:CB	48:DP:63:PRO:HA	2.41	0.51
48:BP:89:ALA:HB1	48:BP:121:LYS:HD2	1.92	0.51
36:BA:1144:G:H2'	36:BA:1145:C:H6	1.74	0.51
40:BE:32:PRO:O	40:BE:33:VAL:C	2.47	0.51
53:DU:9:VAL:O	53:DU:12:ARG:N	2.43	0.51
36:DA:1164:G:H1	36:DA:1185:C:H42	1.58	0.51
10:AJ:20:ALA:C	10:AJ:22:LYS:H	2.13	0.51
1:CA:954:G:H4'	13:CM:120:LYS:HD2	1.93	0.51
9:AI:19:LEU:CD2	9:AI:59:PHE:HB3	2.34	0.51
36:BA:886:C:O2	36:BA:887:A:H1'	2.11	0.51
17:CQ:9:VAL:HG12	17:CQ:56:VAL:HG22	1.92	0.51
39:DD:265:PRO:HG2	39:DD:266:SER:H	1.75	0.51
1:CA:1190:G:H3'	3:CC:3:ASN:HD22	1.69	0.51
10:AJ:6:ILE:HG13	10:AJ:72:VAL:HB	1.92	0.51
36:BA:1057:A:H2'	36:BA:1058:G:H8	1.75	0.51
51:BS:84:GLN:HA	51:BS:106:ARG:HA	1.91	0.51
25:CZ:134:PHE:HB2	25:CZ:202:LEU:HD13	1.93	0.51
12:CL:120:TYR:O	12:CL:122:THR:N	2.44	0.51
22:AV:76:A:H3'	36:BA:2585:U:C2	2.45	0.51
36:BA:1262:A:P	55:BW:99:ARG:HH12	2.33	0.51
39:DD:22:SER:HA	39:DD:25:THR:OG1	2.11	0.51
26:B0:50:ASN:HD22	26:B0:63:VAL:HG22	1.75	0.51
36:DA:383:U:C2'	36:DA:385:C:H5	2.23	0.51
24:CY:60:U:H5''	24:CY:61:C:C5	2.46	0.51
36:BA:148:C:H5'	36:BA:149:A:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:81:LEU:HD12	15:CO:81:LEU:O	2.11	0.51
17:AQ:45:HIS:CB	17:AQ:65:ILE:HD12	2.41	0.51
36:DA:1473:G:H2'	36:DA:1474:C:O4'	2.10	0.51
20:CT:40:ALA:HB2	20:CT:55:ILE:HG12	1.92	0.51
4:AD:2:GLY:O	4:AD:4:TYR:N	2.44	0.51
39:DD:158:ALA:HB3	39:DD:161:THR:CG2	2.41	0.51
25:CZ:139:ASP:HB2	25:CZ:174:SER:HB2	1.92	0.51
11:CK:48:ILE:HD11	11:CK:67:ASP:CB	2.40	0.51
36:BA:907:U:OP1	49:BQ:24:GLY:N	2.35	0.51
2:CB:69:LEU:O	2:CB:162:ILE:HA	2.11	0.51
50:BR:24:GLN:HB2	50:BR:44:LEU:CD2	2.41	0.51
36:BA:151:C:H42	36:BA:175:G:H1	1.59	0.51
42:BG:148:MET:O	42:BG:149:VAL:HG13	2.10	0.51
36:DA:41:C:H42	36:DA:437:G:H1	1.58	0.51
36:BA:1373:A:H2'	36:BA:1374:G:O4'	2.11	0.51
1:AA:37:U:OP1	12:AL:124:LYS:HB3	2.10	0.51
1:CA:1424:C:H2'	1:CA:1425:U:O4'	2.11	0.51
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.45	0.51
39:BD:148:GLU:HB2	39:BD:151:LYS:HD2	1.93	0.51
36:DA:2685:G:N2	36:DA:2724:C:O2	2.41	0.51
9:CI:30:GLY:O	9:CI:31:GLN:HB2	2.11	0.51
5:CE:92:LYS:HB3	5:CE:119:LEU:HB2	1.93	0.51
49:DQ:6:ARG:O	49:DQ:7:MET:HG3	2.10	0.51
36:DA:2039:C:H2'	36:DA:2040:C:H6	1.76	0.51
54:DV:45:THR:O	54:DV:45:THR:HG22	2.11	0.51
39:DD:142:VAL:HG23	39:DD:193:VAL:HA	1.92	0.51
25:AZ:272:MET:HG3	25:AZ:273:HIS:HD2	1.76	0.51
25:CZ:195:TRP:O	25:CZ:198:LYS:N	2.44	0.51
1:AA:1330:U:H5'	1:AA:1331:G:OP2	2.11	0.51
51:DS:30:ARG:HD3	51:DS:97:ARG:HG2	1.93	0.51
19:CS:6:LYS:N	19:CS:6:LYS:HD3	2.26	0.51
21:CU:9:ARG:HH12	21:CU:22:ARG:HA	1.76	0.51
36:BA:61:G:H1	36:BA:94:C:N4	2.07	0.51
4:AD:110:PHE:HD1	4:AD:110:PHE:N	2.09	0.51
1:AA:1272:G:H5'	1:AA:1272:G:H8	1.75	0.51
39:DD:241:PRO:O	39:DD:242:ARG:HB2	2.11	0.51
36:DA:1854:A:N6	36:DA:1888:G:C8	2.64	0.51
47:BO:63:VAL:HG12	47:BO:106:LEU:HD21	1.93	0.51
42:DG:109:VAL:O	42:DG:112:PRO:HG2	2.10	0.51
36:BA:1464:C:O2'	36:BA:1528:A:H8	1.85	0.51
36:BA:2801:A:O2'	36:BA:2895:U:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1798:U:H5'	39:DD:260:ARG:H	1.76	0.51
48:DP:17:LYS:C	48:DP:19:VAL:N	2.64	0.51
58:BZ:67:LEU:HD23	58:BZ:90:VAL:HG11	1.93	0.51
8:AH:125:ARG:HG3	8:AH:125:ARG:NH1	2.24	0.51
58:DZ:82:ARG:NH1	58:DZ:83:PRO:O	2.44	0.51
14:AN:12:ARG:HH11	14:AN:14:PRO:HG2	1.76	0.51
57:DY:61:ILE:HG22	57:DY:62:GLU:N	2.26	0.51
36:BA:1141:U:H2'	46:BN:63:THR:HG21	1.93	0.51
3:CC:131:ARG:HD2	3:CC:166:GLU:OE2	2.11	0.51
36:DA:2762:G:H2'	36:DA:2763:G:C5'	2.41	0.51
2:CB:86:GLU:C	2:CB:88:ALA:H	2.14	0.51
36:DA:1258:C:C2	36:DA:1259:G:C8	2.99	0.51
46:DN:134:ARG:O	46:DN:136:GLU:N	2.43	0.51
1:AA:375:U:OP1	16:AP:69:THR:HG21	2.10	0.51
36:BA:2808:U:O2'	36:BA:2809:A:H5'	2.11	0.51
16:CP:5:ARG:HH11	16:CP:5:ARG:HG3	1.75	0.51
1:AA:956:U:O2'	1:AA:957:U:H5'	2.11	0.51
36:BA:2341:G:H2'	36:BA:2342:C:C6	2.46	0.51
1:CA:723:U:O2	1:CA:723:U:C2'	2.59	0.51
12:CL:91:LYS:HB3	12:CL:91:LYS:NZ	2.25	0.51
1:CA:1044:A:H2'	1:CA:1045:C:O5'	2.11	0.51
36:BA:2206:G:H21	36:BA:2207:G:H5'	1.73	0.51
21:CU:3:LYS:HD3	21:CU:14:TRP:NE1	2.26	0.51
36:DA:564:C:H2'	36:DA:565:C:H6	1.76	0.51
36:BA:257:A:H2'	36:BA:258:G:H5'	1.93	0.51
36:BA:428:A:H3'	36:BA:429:A:C8	2.42	0.51
38:DC:73:ARG:H	38:DC:111:ASP:CG	2.14	0.51
36:BA:363(F):A:O2'	36:BA:364:C:H5	1.94	0.51
40:DE:111:ARG:HB2	40:DE:160:TYR:O	2.10	0.51
25:AZ:340:PRO:HG2	25:AZ:342:PHE:CE1	2.46	0.51
10:AJ:48:THR:OG1	10:AJ:62:HIS:HD2	1.93	0.51
1:AA:189(A):C:H2'	1:AA:189(B):C:C6	2.46	0.51
36:BA:2867:G:OP2	52:BT:119:LYS:NZ	2.44	0.51
36:DA:736:C:H2'	36:DA:737:C:H6	1.76	0.51
1:CA:575:G:H4'	1:CA:576:G:O5'	2.10	0.51
36:BA:1963:U:H2'	36:BA:1963:U:O2	2.10	0.51
25:AZ:263:ARG:HG3	25:AZ:263:ARG:HH11	1.76	0.51
12:CL:86:ARG:HG3	12:CL:86:ARG:HH11	1.76	0.51
38:DC:83:ILE:HG22	38:DC:83:ILE:O	2.11	0.51
36:DA:2243:U:O2	36:DA:2434:A:C2	2.64	0.51
25:CZ:176:LEU:HD22	25:CZ:179:LEU:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1283:G:O2'	1:AA:1284:C:OP2	2.23	0.50
1:AA:1123:A:O3'	10:AJ:36:GLY:HA3	2.11	0.50
28:B2:21:LEU:O	28:B2:24:LEU:HG	2.11	0.50
54:BV:51:VAL:CG1	54:BV:52:VAL:H	2.15	0.50
25:AZ:118:GLU:OE2	61:AZ:502:KIR:C5	2.59	0.50
42:DG:107:LEU:HD21	42:DG:178:PHE:CE1	2.44	0.50
36:BA:1465:G:H5'	36:BA:1528:A:H1'	1.93	0.50
36:BA:1539:G:C6	36:BA:1540:U:H1'	2.46	0.50
36:DA:2185:C:H2'	36:DA:2186:G:H5''	1.92	0.50
36:BA:2754:U:H2'	36:BA:2756:U:OP1	2.12	0.50
50:DR:83:ILE:HG22	50:DR:87:TYR:HE2	1.76	0.50
58:DZ:28:MET:CE	58:DZ:59:LEU:HD13	2.40	0.50
34:D8:32:LEU:HB3	34:D8:36:LYS:NZ	2.26	0.50
9:CI:28:VAL:HG21	9:CI:33:PHE:HD1	1.76	0.50
49:DQ:141:GLN:HE21	49:DQ:141:GLN:CA	2.25	0.50
42:DG:5:VAL:HB	42:DG:8:LYS:HB2	1.92	0.50
57:BY:81:LYS:HD2	57:BY:96:ILE:CG1	2.41	0.50
1:CA:1150:U:O2	10:CJ:39:PRO:HG2	2.11	0.50
17:AQ:16:GLN:O	17:AQ:17:LYS:HB2	2.11	0.50
58:BZ:135:GLU:HB3	58:BZ:136:PHE:CD1	2.47	0.50
1:CA:148:G:H2'	1:CA:149:A:C8	2.44	0.50
19:CS:45:VAL:HG11	19:CS:64:GLU:HA	1.92	0.50
6:CF:72:VAL:CG2	6:CF:90:VAL:HG21	2.40	0.50
26:B0:53:MET:CG	26:B0:57:PHE:HA	2.41	0.50
4:CD:109:GLY:HA3	4:CD:165:MET:SD	2.50	0.50
2:AB:115:LEU:HB2	2:AB:145:LEU:CD1	2.41	0.50
40:DE:30:PRO:O	40:DE:32:PRO:HD3	2.11	0.50
41:BF:160:ASN:ND2	41:BF:160:ASN:C	2.63	0.50
1:AA:782:A:C2'	1:AA:783:C:H5'	2.41	0.50
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.21	0.50
36:DA:1331:A:O2'	36:DA:1332:G:H5''	2.10	0.50
36:DA:723:G:C6	36:DA:724:U:C4	3.00	0.50
25:AZ:299:GLU:O	25:AZ:302:GLN:CG	2.59	0.50
36:BA:2553:G:H3'	36:BA:2554:U:H5''	1.91	0.50
36:DA:986:C:C2'	36:DA:987:G:H5'	2.41	0.50
36:DA:2361:A:H2'	36:DA:2362:G:C8	2.46	0.50
53:BU:82:GLY:C	53:BU:84:LYS:N	2.65	0.50
49:BQ:73:PRO:HG3	49:BQ:93:TYR:HE2	1.76	0.50
1:AA:328:C:O2	1:AA:328:C:H2'	2.11	0.50
1:AA:344:A:O2'	1:AA:345:C:OP2	2.23	0.50
14:AN:29:ARG:HG3	14:AN:29:ARG:HH11	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2758:A:N6	43:DH:67:LEU:HD11	2.26	0.50
22:CV:1:G:H1'	26:D0:5:LYS:HZ1	1.76	0.50
1:CA:1208:C:O2'	1:CA:1209:C:H5'	2.11	0.50
39:BD:229:VAL:HG13	39:BD:230:ASP:H	1.74	0.50
36:BA:1308:A:N6	36:BA:1608:A:H61	2.09	0.50
39:BD:227:ASN:HB3	39:BD:228:PRO:HD2	1.94	0.50
27:D1:21:ARG:HD2	36:DA:2080:G:OP1	2.12	0.50
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.11	0.50
54:BV:3:ALA:HB3	54:BV:14:VAL:HG23	1.93	0.50
36:DA:1389:G:H2'	36:DA:1390:U:C6	2.46	0.50
36:BA:1750:G:H2'	36:BA:1751:C:C6	2.45	0.50
1:AA:784:C:H4'	36:BA:1837:C:OP1	2.11	0.50
36:BA:1124:C:H2'	36:BA:1125:G:O4'	2.10	0.50
5:CE:10:MET:SD	5:CE:13:ILE:HD11	2.50	0.50
38:BC:70:LYS:HG3	38:BC:71:GLN:N	2.26	0.50
36:BA:145:G:H2'	36:BA:146:G:H5''	1.93	0.50
1:CA:1408:A:O2'	1:CA:1409:C:H5'	2.11	0.50
1:AA:544:G:OP1	4:AD:59:ARG:NH2	2.45	0.50
4:AD:33:MET:O	4:AD:35:ARG:N	2.43	0.50
57:BY:40:GLU:HA	57:BY:40:GLU:OE1	2.10	0.50
36:BA:2157:G:C8	36:BA:2157:G:H3'	2.46	0.50
25:AZ:133:VAL:CG2	25:AZ:168:VAL:HG11	2.39	0.50
1:AA:1065:U:C5	1:AA:1190:G:H1'	2.46	0.50
25:AZ:221:PHE:HE1	25:AZ:242:ILE:HD12	1.76	0.50
1:CA:63:C:C2'	1:CA:64:G:C5'	2.88	0.50
36:DA:2187:G:C3'	36:DA:2188:C:H5'	2.41	0.50
48:BP:24:GLY:N	48:BP:33:ARG:CZ	2.73	0.50
48:BP:23:PRO:O	48:BP:30:THR:HA	2.11	0.50
36:DA:1349:A:N6	36:DA:1598:C:H42	2.09	0.50
34:B8:48:PHE:C	34:B8:49:VAL:CG2	2.79	0.50
36:DA:660:G:H2'	36:DA:661:C:C6	2.46	0.50
40:BE:184:VAL:C	40:BE:186:GLY:H	2.15	0.50
31:D5:57:VAL:CG1	31:D5:58:LEU:H	2.24	0.50
36:BA:1596:A:O2'	36:BA:1597:A:H5'	2.11	0.50
58:BZ:35:ARG:O	58:BZ:37:VAL:HG12	2.10	0.50
4:CD:55:ALA:O	4:CD:59:ARG:HG2	2.11	0.50
46:BN:17:ASP:OD1	46:BN:56:ASN:HB3	2.11	0.50
32:D6:15:GLU:OE2	32:D6:18:ARG:NH2	2.44	0.50
52:BT:92:GLY:HA3	52:BT:120:ARG:HH21	1.74	0.50
40:DE:120:TRP:CE3	40:DE:155:LYS:HD3	2.46	0.50
22:CW:9:A:H2	22:CW:44:G:C6	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:118:VAL:HG23	7:CG:119:ARG:N	2.26	0.50
36:DA:61:G:H8	36:DA:61:G:O5'	1.94	0.50
49:BQ:51:ARG:CG	49:BQ:51:ARG:HH11	2.24	0.50
41:DF:84:VAL:HG13	41:DF:85:GLY:H	1.74	0.50
36:DA:884:C:C2'	36:DA:885:C:H5'	2.40	0.50
41:DF:107:LYS:O	41:DF:110:LEU:N	2.41	0.50
13:AM:2:ALA:O	13:AM:3:ARG:C	2.49	0.50
48:DP:7:ARG:HB3	48:DP:8:PRO:HD3	1.93	0.50
48:DP:140:ALA:O	48:DP:141:ALA:HB3	2.11	0.50
20:AT:64:ASP:OD1	20:AT:81:LYS:HD2	2.11	0.50
43:DH:144:VAL:O	43:DH:148:ILE:HG12	2.12	0.50
36:BA:2579:C:C2'	36:BA:2580:U:H5'	2.42	0.50
53:BU:8:VAL:CG1	53:BU:12:ARG:NE	2.75	0.50
41:DF:152:GLU:OE1	41:DF:191:ARG:HD2	2.11	0.50
40:DE:47:VAL:HG21	40:DE:86:PRO:HD3	1.92	0.50
36:DA:1085:A:H4'	36:DA:1105:U:H4'	1.93	0.50
56:BX:65:ARG:HD3	56:BX:70:LEU:CD2	2.41	0.50
5:CE:80:ILE:HG22	5:CE:91:LEU:HB2	1.92	0.50
36:BA:1151:G:H5''	53:BU:81:HIS:CE1	2.46	0.50
40:DE:38:THR:HG22	40:DE:40:GLU:N	2.24	0.50
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.43	0.50
29:B3:18:ASP:O	29:B3:21:ALA:HB3	2.09	0.50
50:BR:104:ARG:O	50:BR:106:GLY:N	2.44	0.50
36:DA:1651:G:H2'	36:DA:1652:A:O4'	2.10	0.50
36:DA:2472:G:H2'	36:DA:2475:C:H42	1.77	0.50
36:BA:2553:G:H2'	36:BA:2554:U:C4'	2.41	0.50
36:DA:752:A:H4'	36:DA:753:C:O5'	2.12	0.50
12:CL:20:LYS:HD2	12:CL:20:LYS:N	2.26	0.50
1:CA:664:G:P	18:CR:64:ARG:HH21	2.35	0.50
39:BD:176:ARG:CG	39:BD:176:ARG:HH11	2.25	0.50
31:B5:16:ARG:NH1	31:B5:17:ASP:OD1	2.44	0.50
41:BF:53:THR:HG22	41:BF:56:GLU:HG3	1.93	0.50
1:CA:952:U:O2'	1:CA:953:G:H5'	2.12	0.50
36:BA:1488:G:C2	36:BA:1489:U:O2	2.64	0.50
39:BD:273:ARG:O	39:BD:274:ARG:HB3	2.11	0.50
36:BA:742:G:O2'	36:BA:743:G:H5'	2.11	0.50
50:BR:20:LEU:HD21	50:BR:40:LYS:HD3	1.93	0.50
1:AA:865:A:H5'	1:AA:1078:U:O4	2.12	0.50
1:AA:560:U:H4'	1:AA:561:U:O5'	2.12	0.50
36:DA:2741:A:H2'	36:DA:2742:C:O4'	2.11	0.50
36:BA:295:G:N2	36:BA:344:G:H1'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:76:LEU:HD22	58:BZ:82:ARG:O	2.11	0.50
57:BY:23:ARG:HG2	57:BY:23:ARG:HH11	1.76	0.50
19:CS:50:ALA:HA	19:CS:59:PRO:HA	1.93	0.50
49:DQ:61:GLY:O	49:DQ:62:GLY:O	2.29	0.50
1:AA:1418:A:H2	36:BA:1948:G:N3	2.09	0.50
1:AA:417:C:O2'	1:AA:418:C:H5'	2.11	0.50
36:BA:684:G:C4	36:BA:794:G:N2	2.79	0.50
17:CQ:91:ARG:HG3	17:CQ:91:ARG:HH11	1.76	0.50
1:AA:77:G:H2'	1:AA:77:G:N3	2.26	0.50
37:DB:53:A:H2'	37:DB:53:A:N3	2.26	0.50
36:BA:1131:G:OP1	46:BN:80:GLY:N	2.37	0.50
25:CZ:24:LYS:C	25:CZ:26:THR:H	2.14	0.50
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.11	0.50
57:BY:27:VAL:HG12	57:BY:29:GLU:OE1	2.12	0.50
25:CZ:378:VAL:HG23	25:CZ:380:LEU:HD21	1.94	0.50
36:BA:594:U:H2'	36:BA:595:C:H6	1.73	0.50
4:CD:12:CYS:O	4:CD:33:MET:HE2	2.11	0.50
42:BG:56:ALA:O	42:BG:59:GLU:HG2	2.12	0.50
41:BF:4:VAL:HG13	41:BF:19:GLU:OE1	2.11	0.50
57:BY:62:GLU:OE1	57:BY:62:GLU:N	2.44	0.50
14:CN:7:ILE:CG1	14:CN:8:GLU:N	2.72	0.50
49:DQ:60:ARG:HB3	49:DQ:60:ARG:NH1	2.26	0.50
25:AZ:115:GLN:HA	25:AZ:118:GLU:HB2	1.93	0.50
1:CA:198:G:O2'	1:CA:199:G:H8	1.93	0.50
58:BZ:104:PHE:CD2	58:BZ:139:VAL:HG21	2.46	0.50
31:D5:50:GLY:HA3	31:D5:56:LYS:CE	2.41	0.50
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.92	0.50
36:BA:2317:C:H2'	36:BA:2318:G:C5'	2.32	0.50
58:BZ:9:TYR:CZ	58:BZ:35:ARG:HG3	2.47	0.50
58:DZ:122:ARG:HH11	58:DZ:122:ARG:H	1.60	0.50
34:D8:33:ASN:CG	34:D8:34:TRP:N	2.65	0.50
36:DA:2287:A:C2	36:DA:2346:A:N1	2.79	0.50
46:DN:47:ALA:HB2	46:DN:112:LEU:HD11	1.92	0.50
32:D6:43:CYS:O	32:D6:44:ARG:HB2	2.11	0.50
48:DP:96:THR:HG22	48:DP:126:VAL:HG21	1.93	0.50
36:DA:1018:C:H2'	36:DA:1019:U:C6	2.44	0.50
48:BP:16:ARG:CZ	48:BP:16:ARG:HB2	2.40	0.50
36:BA:661:C:H4'	48:BP:16:ARG:HH12	1.76	0.50
43:DH:54:ARG:HH11	43:DH:54:ARG:CG	2.16	0.50
36:BA:2688:U:H5	36:BA:2720:U:OP1	1.93	0.50
36:DA:414:C:H1'	36:DA:1864:U:O2'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:94:GLN:OE1	18:CR:32:ARG:HD2	2.12	0.50
20:CT:78:ALA:O	20:CT:81:LYS:HB2	2.12	0.50
1:AA:674:G:H4'	18:AR:81:PHE:CD2	2.46	0.50
29:B3:52:HIS:CD2	29:B3:52:HIS:H	2.30	0.50
57:DY:3:VAL:O	57:DY:3:VAL:HG12	2.10	0.50
38:DC:151:GLU:HA	38:DC:154:ARG:CD	2.40	0.50
7:AG:78:ARG:CG	7:AG:78:ARG:O	2.60	0.50
1:CA:411:A:H62	1:CA:413:G:N2	2.06	0.50
33:D7:43:THR:CG2	33:D7:44:PRO:N	2.75	0.50
37:DB:93:G:H2'	37:DB:94:C:C6	2.43	0.50
36:BA:1264:G:H3'	36:BA:1265:A:H5''	1.93	0.50
39:DD:210:GLY:C	39:DD:212:SER:H	2.12	0.50
38:DC:74:VAL:HG11	38:DC:153:ILE:HD13	1.92	0.50
1:CA:381:C:H2'	1:CA:382:A:O4'	2.12	0.50
46:BN:9:VAL:HG12	46:BN:10:GLU:N	2.27	0.50
40:DE:182:LEU:C	40:DE:183:LEU:HD12	2.31	0.50
36:BA:90:U:O2	36:BA:90:U:C2'	2.59	0.50
39:BD:11:PRO:O	39:BD:12:SER:C	2.46	0.50
7:AG:7:ALA:O	7:AG:8:GLU:CB	2.60	0.50
54:DV:3:ALA:HB3	54:DV:14:VAL:CG2	2.41	0.50
36:BA:949:C:H2'	36:BA:950:G:H8	1.77	0.50
1:CA:1375:A:H2'	1:CA:1376:U:C6	2.46	0.50
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.46	0.50
22:CV:73:A:H5'	22:CV:74:C:H5'	1.93	0.50
36:BA:1790:C:H5''	36:BA:1791:A:OP1	2.10	0.50
36:BA:821:A:H5''	36:BA:822:U:H6	1.76	0.50
1:CA:159:G:N2	1:CA:163:C:N3	2.60	0.50
39:BD:241:PRO:O	39:BD:243:GLY:N	2.45	0.50
36:BA:1450:G:O2'	36:BA:1450(A):C:H5'	2.12	0.50
36:BA:1466:G:H2'	36:BA:1547:C:N4	2.26	0.50
1:AA:652:U:C2	1:AA:752:G:N2	2.79	0.50
22:AW:11:C:H2'	22:AW:12:U:H6	1.77	0.50
36:BA:1040:C:H2'	36:BA:1041:G:C8	2.46	0.50
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.12	0.50
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.12	0.50
36:BA:319:C:H2'	36:BA:320:A:H8	1.76	0.50
36:DA:2857:G:N2	36:DA:2859:G:H3'	2.26	0.50
1:CA:1010:G:O2'	1:CA:1011:G:H5'	2.12	0.50
6:AF:37:VAL:HG12	6:AF:38:GLU:O	2.11	0.50
36:DA:2033:A:O2'	36:DA:2034:U:P	2.69	0.50
36:BA:275:G:N3	36:BA:275:G:H2'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:195:ASP:OD2	41:BF:197:ASP:HB2	2.12	0.50
1:AA:19:C:H2'	1:AA:20:U:H6	1.76	0.50
25:AZ:195:TRP:C	25:AZ:197:ASP:H	2.14	0.50
24:CY:65:C:C4'	25:CZ:341:GLN:CD	2.80	0.50
26:D0:26:TYR:N	26:D0:26:TYR:CD1	2.80	0.50
53:DU:88:ILE:O	53:DU:88:ILE:HG13	2.11	0.50
13:CM:11:ARG:HG2	13:CM:12:ASN:HD22	1.74	0.50
13:CM:74:VAL:O	13:CM:77:ASN:HB2	2.11	0.50
1:AA:1132:C:N4	1:AA:1133:G:N1	2.60	0.50
28:B2:19:VAL:O	28:B2:20:GLU:C	2.49	0.50
57:BY:28:LYS:O	57:BY:29:GLU:C	2.48	0.50
4:AD:109:GLY:HA3	4:AD:165:MET:CE	2.41	0.50
1:AA:407:G:HO2'	4:AD:116:GLN:HG3	1.77	0.50
4:CD:61:LYS:HE3	4:CD:72:GLU:OE1	2.11	0.50
54:BV:49:THR:O	54:BV:50:PRO:C	2.48	0.50
4:AD:157:LEU:N	4:AD:157:LEU:HD12	2.27	0.50
36:BA:2428:G:H21	48:BP:60:MET:CE	2.24	0.50
56:DX:49:VAL:HB	56:DX:83:VAL:HG13	1.94	0.50
51:BS:13:ARG:CG	51:BS:14:VAL:H	2.24	0.50
51:BS:91:PRO:O	51:BS:92:TYR:O	2.29	0.50
39:BD:72:LYS:NZ	39:BD:99:ASP:OD2	2.41	0.50
31:D5:46:CYS:SG	31:D5:48:GLU:O	2.70	0.50
36:BA:1481:U:H2'	36:BA:1482:G:H4'	1.93	0.50
32:D6:17:LYS:HB2	32:D6:18:ARG:NH1	2.13	0.50
54:DV:17:GLY:O	54:DV:18:LEU:HB3	2.11	0.50
43:BH:18:GLU:CB	43:BH:25:LYS:HB2	2.33	0.50
1:CA:945:G:N1	1:CA:1337:G:C2	2.79	0.50
50:BR:118:GLU:HG3	50:BR:118:GLU:OXT	2.12	0.50
1:AA:1366:C:O2'	10:AJ:60:ARG:NH2	2.40	0.50
39:BD:26:LYS:O	39:BD:27:THR:CB	2.59	0.50
41:DF:156:LEU:HD22	41:DF:167:ALA:HB2	1.94	0.50
50:BR:45:ARG:HD3	50:BR:97:VAL:HG21	1.94	0.50
41:DF:6:VAL:HG12	41:DF:7:TYR:N	2.26	0.50
18:CR:47:THR:HG21	18:CR:49:LYS:HZ1	1.76	0.50
1:AA:402:G:O2'	1:AA:403:C:H5'	2.11	0.50
36:DA:970:C:H2'	36:DA:971:C:C6	2.46	0.50
1:CA:1202:G:O2'	1:CA:1203:C:H5'	2.11	0.50
22:CW:35:A:H2'	22:CW:36:A:C8	2.40	0.50
41:DF:160:ASN:HD21	41:DF:162:LEU:CD1	2.25	0.50
36:DA:121:G:C5'	36:DA:149:A:H5'	2.42	0.50
40:DE:39:PRO:HA	40:DE:43:GLY:HA2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:165:VAL:CG2	2:AB:165:VAL:O	2.59	0.50
39:DD:95:LEU:HD11	39:DD:105:ILE:CG2	2.41	0.50
6:AF:4:TYR:CE1	6:AF:92:LYS:HD2	2.45	0.50
36:BA:2554:U:H2'	36:BA:2555:U:C6	2.46	0.50
1:AA:321:A:C2	1:AA:333:G:C2	2.98	0.50
22:CV:76:A:H2	36:DA:2450:A:N3	2.10	0.50
36:DA:363(E):U:H2'	36:DA:363(F):A:C1'	2.42	0.50
18:AR:36:ASN:OD1	18:AR:39:VAL:HB	2.10	0.50
25:AZ:342:PHE:N	25:AZ:342:PHE:CD1	2.79	0.50
22:AV:50:U:H2'	22:AV:51:U:O4'	2.10	0.50
39:DD:127:VAL:HA	39:DD:193:VAL:HG13	1.91	0.50
36:DA:1935:G:H1'	36:DA:1964:G:N2	2.26	0.50
2:AB:194:PRO:O	2:AB:195:ASP:C	2.50	0.50
55:DW:62:HIS:O	55:DW:64:MET:HG3	2.12	0.50
36:DA:2650:U:O2'	36:DA:2651:C:H5'	2.12	0.50
36:BA:930:U:H4'	36:BA:931:G:O5'	2.12	0.50
1:CA:848:C:O2'	1:CA:849:C:H5'	2.12	0.50
39:DD:11:PRO:O	39:DD:12:SER:C	2.48	0.50
36:DA:2790:A:N3	36:DA:2790:A:H2'	2.26	0.50
49:BQ:69:PHE:CD1	49:BQ:69:PHE:C	2.85	0.50
55:BW:9:TYR:H	55:BW:102:HIS:HD2	1.60	0.50
4:CD:56:VAL:HG12	4:CD:202:LEU:HD13	1.94	0.50
49:BQ:35:VAL:HG12	49:BQ:130:LYS:O	2.10	0.50
36:BA:1259:G:H2'	36:BA:1260:G:C8	2.47	0.50
36:DA:80:G:O2'	36:DA:81:G:H5'	2.11	0.50
38:BC:100:ILE:CD1	38:BC:127:LEU:HB2	2.41	0.50
25:CZ:16:THR:HB	25:CZ:24:LYS:HB3	1.93	0.50
26:D0:36:ILE:HG12	36:DA:2355:C:O4'	2.11	0.50
26:D0:53:MET:HA	26:D0:58:THR:O	2.11	0.50
53:DU:65:ILE:HG12	53:DU:96:ALA:HB1	1.94	0.50
36:DA:2378:A:OP2	51:DS:107:GLU:HG2	2.11	0.50
41:BF:4:VAL:HG11	41:BF:17:ARG:NE	2.26	0.50
47:DO:87:ILE:HG22	47:DO:88:ASN:N	2.26	0.50
48:BP:65:ARG:HB3	48:BP:68:GLN:HE22	1.77	0.50
36:BA:2415:G:H4'	48:BP:66:GLY:O	2.10	0.50
52:DT:50:ILE:CG2	52:DT:99:LEU:HD12	2.42	0.50
3:CC:10:PHE:CE2	3:CC:178:LEU:HD13	2.47	0.50
36:DA:2188:C:H2'	36:DA:2189:U:C6	2.46	0.50
36:DA:139:G:HO2'	36:DA:139(A):G:N2	2.09	0.50
34:D8:23:VAL:HG22	34:D8:48:PHE:CE1	2.46	0.50
36:BA:259:G:N2	36:BA:621:A:C8	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:143:ASP:OD2	25:AZ:146:LEU:HD23	2.10	0.50
36:BA:2159:G:O2'	36:BA:2160:G:H5''	2.10	0.50
36:BA:1142(A):A:H8	36:BA:1142(A):A:H5'	1.75	0.50
36:DA:1603:A:H2'	36:DA:1604:C:O4'	2.11	0.50
32:D6:18:ARG:HG3	32:D6:19:ARG:N	2.27	0.50
27:D1:67:ILE:H	27:D1:68:PRO:HD2	1.74	0.50
56:DX:31:HIS:ND1	56:DX:32:PRO:HD2	2.27	0.50
9:AI:4:TYR:CE2	9:AI:88:TYR:O	2.64	0.50
36:DA:1020:A:N1	36:DA:1141:U:H1'	2.27	0.50
1:CA:1040:U:O2'	1:CA:1041:A:H5'	2.10	0.50
48:DP:84:ASN:C	48:DP:86:LYS:H	2.13	0.50
39:DD:183:ARG:HD2	39:DD:184:LYS:N	2.25	0.50
36:BA:2646:C:OP2	36:BA:2732:G:O2'	2.29	0.50
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.93	0.50
31:D5:2:ALA:HB3	36:DA:747:U:C1'	2.41	0.50
1:CA:948:C:O2'	1:CA:949:A:H5'	2.11	0.50
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.64	0.50
36:DA:654(P):C:H2'	36:DA:654(Q):C:O4'	2.11	0.50
16:CP:19:ILE:HD11	16:CP:73:LEU:HD12	1.93	0.50
1:AA:628:G:O2'	1:AA:629:G:H5'	2.11	0.50
46:DN:91:LEU:HD23	46:DN:98:VAL:HG21	1.94	0.50
46:BN:34:LEU:HD11	46:BN:116:LEU:O	2.11	0.50
1:CA:659:U:H2'	1:CA:660:G:H8	1.77	0.50
40:DE:86:PRO:O	40:DE:87:GLU:HB3	2.11	0.50
41:DF:65:TRP:HB3	41:DF:66:PRO:CD	2.41	0.50
36:BA:1591:G:H2'	36:BA:1592:C:H5'	1.94	0.50
24:AY:60:U:H5''	24:AY:61:C:C5	2.46	0.50
39:DD:176:ARG:CG	39:DD:176:ARG:HH11	2.23	0.50
36:DA:723:G:H2'	36:DA:724:U:C6	2.46	0.50
50:BR:29:LEU:N	50:BR:29:LEU:HD12	2.25	0.50
11:CK:126:ARG:C	11:CK:128:ALA:N	2.64	0.50
38:DC:155:GLU:OE1	38:DC:160:ARG:HD3	2.12	0.50
38:DC:53:ARG:HH11	38:DC:53:ARG:HB3	1.76	0.50
53:BU:27:LEU:C	53:BU:29:SER:H	2.15	0.50
11:CK:44:SER:O	11:CK:48:ILE:HG12	2.11	0.50
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.12	0.50
24:AY:1:A:H61	24:AY:72:U:H3	1.59	0.50
58:DZ:40:ASP:HB3	58:DZ:43:GLU:HG2	1.94	0.50
27:D1:21:ARG:HD2	27:D1:35:THR:HG21	1.94	0.50
38:DC:75:LEU:HD12	38:DC:93:TYR:O	2.12	0.50
36:DA:1107:G:H5''	44:DJ:59:UNK:CB	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:274:A:O2'	1:CA:275:G:H8	1.94	0.50
36:BA:654(A):G:H2'	36:BA:654(B):C:H5'	1.94	0.50
21:CU:13:ILE:O	21:CU:16:GLY:N	2.37	0.50
1:AA:950:U:H2'	1:AA:951:G:C8	2.46	0.50
1:CA:113:G:H2'	1:CA:114:U:C6	2.46	0.50
36:DA:1835:G:H5'	36:DA:1836:C:OP2	2.12	0.50
40:DE:179:GLU:HG3	40:DE:179:GLU:O	2.11	0.50
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.12	0.50
4:AD:68:TYR:CD2	4:AD:97:LEU:HD22	2.47	0.50
25:CZ:115:GLN:HA	25:CZ:118:GLU:HB2	1.94	0.50
26:D0:49:LYS:HB2	26:D0:80:HIS:HB3	1.92	0.50
28:B2:46:GLN:HB3	28:B2:48:HIS:CE1	2.47	0.50
56:BX:7:VAL:HG21	56:BX:42:ALA:CB	2.41	0.50
57:BY:6:HIS:CD2	57:BY:6:HIS:H	2.29	0.50
36:BA:610:G:H22	36:BA:619:G:H1'	1.75	0.50
42:DG:51:ARG:HB3	42:DG:53:LEU:HD21	1.92	0.50
54:BV:38:LEU:C	54:BV:39:LEU:HD13	2.32	0.50
1:CA:1053:G:O6	1:CA:1199:U:H2'	2.11	0.50
36:DA:1299:G:N2	36:DA:1640:C:H5''	2.25	0.50
31:B5:44:THR:HG22	50:BR:99:LYS:O	2.11	0.50
1:CA:1370:G:C2	1:CA:1371:G:C8	2.99	0.50
51:BS:90:GLY:O	51:BS:92:TYR:N	2.45	0.50
36:BA:1683:C:H2'	36:BA:1684:C:C6	2.47	0.50
2:CB:8:LYS:HD3	2:CB:217:ARG:NH2	2.27	0.50
58:DZ:85:HIS:HE1	58:DZ:87:ASP:OD1	1.92	0.50
48:BP:114:ILE:HG23	48:BP:114:ILE:O	2.12	0.50
48:BP:97:PRO:HD3	48:BP:126:VAL:O	2.10	0.50
22:AW:59:U:H2'	22:AW:60:U:C5'	2.42	0.50
32:D6:15:GLU:CD	32:D6:18:ARG:NH2	2.64	0.50
51:DS:53:SER:C	51:DS:55:ALA:H	2.13	0.50
53:DU:9:VAL:HG23	53:DU:10:ARG:H	1.77	0.50
36:DA:2756:U:H1'	36:DA:2757:A:C5'	2.36	0.50
54:DV:19:LYS:NZ	54:DV:22:VAL:HG13	2.26	0.50
52:BT:23:ARG:HA	52:BT:52:ILE:HD11	1.93	0.50
36:DA:2781:A:H5'	36:DA:2782:G:C5'	2.33	0.50
25:CZ:234:ARG:HB3	25:CZ:289:LEU:CD2	2.42	0.50
9:AI:4:TYR:CZ	9:AI:88:TYR:HB3	2.47	0.50
36:DA:632:A:H2'	36:DA:633:A:C8	2.46	0.50
1:AA:1367:C:N3	1:AA:1368:G:C8	2.79	0.50
1:AA:190:U:H6	1:AA:190:U:O5'	1.94	0.50
9:AI:55:ALA:HB3	9:AI:95:LYS:NZ	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:4:LYS:HZ3	39:BD:21:PHE:H	1.59	0.50
58:DZ:102:LEU:HD21	58:DZ:124:ILE:HD13	1.94	0.50
36:BA:580:C:O2'	36:BA:581:C:H5'	2.12	0.50
22:CW:59:U:H3'	22:CW:60:U:C6	2.45	0.50
7:CG:15:ASP:CB	7:CG:20:ASP:H	2.21	0.50
36:DA:16:G:O2'	36:DA:17:G:H5'	2.12	0.50
36:DA:1045:A:H1'	36:DA:1047:G:C2	2.47	0.50
1:CA:858:G:C8	1:CA:858:G:C5'	2.91	0.50
36:DA:990:A:OP2	36:DA:991:C:OP2	2.30	0.50
36:DA:185:U:H2'	36:DA:186:G:C8	2.46	0.50
36:BA:1657:C:O2'	36:BA:1658:C:H5'	2.11	0.50
29:B3:22:ALA:CA	29:B3:46:ASN:HD21	2.25	0.50
1:CA:189(J):G:C2'	1:CA:189(K):U:H5'	2.42	0.50
11:CK:21:ILE:HG12	11:CK:30:VAL:HG12	1.92	0.50
50:BR:29:LEU:O	50:BR:75:LEU:HD21	2.12	0.50
27:B1:74:VAL:O	27:B1:77:ALA:HB3	2.10	0.50
36:BA:2854:G:H1	36:BA:2863:C:H42	1.60	0.50
39:DD:210:GLY:O	39:DD:212:SER:N	2.35	0.50
36:DA:465:G:H2'	36:DA:466:A:C8	2.47	0.50
36:DA:1356:G:H1	36:DA:1375:C:H42	1.58	0.50
1:AA:161:A:H2'	1:AA:162:A:C8	2.47	0.50
1:CA:953:G:H5'	1:CA:965:A:H61	1.76	0.50
36:BA:2241:A:O2'	36:BA:2242:G:H5'	2.12	0.50
36:DA:445:C:O3'	53:DU:3:ARG:HD3	2.11	0.50
2:CB:178:ARG:NH2	2:CB:198:ASP:OD1	2.45	0.50
6:AF:24:GLU:C	6:AF:26:ILE:N	2.64	0.50
29:B3:29:ARG:HH22	36:BA:1183:G:H4'	1.75	0.50
1:CA:324:G:OP1	20:CT:70:SER:HB2	2.11	0.50
49:DQ:47:ILE:CD1	49:DQ:70:PRO:HD3	2.42	0.50
36:BA:1666:G:H2'	36:BA:1667:G:H5'	1.93	0.50
46:BN:75:TYR:CE2	46:BN:77:GLY:HA2	2.46	0.50
36:BA:563:G:C4	36:BA:2018:G:C2	2.99	0.50
22:AW:22:G:H2'	22:AW:23:A:H8	1.77	0.50
3:CC:9:GLY:HA2	3:CC:12:LEU:HD12	1.94	0.50
11:CK:34:ASP:O	11:CK:36:ASP:N	2.44	0.50
1:AA:319:G:O2'	1:AA:320:C:H5'	2.11	0.50
37:DB:37:C:H2'	37:DB:38:C:H5'	1.94	0.50
1:AA:1520:G:O2'	1:AA:1521:G:H5'	2.12	0.50
25:CZ:314:THR:O	25:CZ:373:GLU:HA	2.12	0.50
27:B1:65:SER:O	27:B1:68:PRO:HD2	2.11	0.50
15:CO:49:ASP:C	15:CO:49:ASP:OD1	2.50	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:144:ARG:O	2:CB:144:ARG:HG3	2.10	0.50
16:AP:26:ARG:HH11	16:AP:26:ARG:HG2	1.76	0.50
1:CA:123:C:O2'	1:CA:124:G:H5'	2.11	0.50
1:CA:314:C:O2'	1:CA:315:A:H5'	2.11	0.50
36:BA:690:G:H2'	36:BA:691:C:C6	2.47	0.50
36:DA:1862:G:O2'	36:DA:1863:G:H5'	2.12	0.50
25:CZ:281:ILE:CD1	25:CZ:284:ASP:OD1	2.60	0.50
53:DU:83:LEU:H	53:DU:83:LEU:HD12	1.75	0.50
28:B2:35:LEU:HG	28:B2:50:ILE:HG13	1.94	0.50
57:BY:28:LYS:CB	57:BY:39:VAL:HG22	2.42	0.50
4:AD:109:GLY:O	4:AD:111:ALA:N	2.45	0.50
4:AD:108:LEU:CD1	4:AD:176:LEU:HD13	2.27	0.50
4:CD:78:LEU:C	4:CD:78:LEU:HD23	2.33	0.50
25:CZ:315:LYS:HA	25:CZ:372:VAL:O	2.12	0.50
36:DA:1210:A:H4'	36:DA:1211:U:O5'	2.12	0.50
42:BG:137:GLU:O	42:BG:153:ARG:O	2.30	0.50
53:BU:61:TRP:CH2	53:BU:94:ASN:HB2	2.47	0.50
53:BU:65:ILE:HG12	53:BU:96:ALA:HB1	1.93	0.50
51:DS:51:ALA:HB3	51:DS:73:LEU:HB2	1.91	0.50
36:DA:2134:A:O2'	36:DA:2135:A:H5'	2.11	0.50
10:CJ:57:LYS:HZ2	10:CJ:60:ARG:NH2	2.10	0.50
43:DH:124:GLU:CG	43:DH:132:ARG:HG3	2.42	0.50
39:BD:58:HIS:HD2	39:BD:59:LYS:O	1.94	0.50
25:CZ:65:THR:CA	25:CZ:83:PRO:HD3	2.39	0.50
25:AZ:9:LYS:HE3	25:AZ:74:LYS:N	2.27	0.50
20:AT:41:ILE:C	20:AT:43:LEU:H	2.15	0.50
20:AT:53:LEU:N	20:AT:53:LEU:HD12	2.26	0.50
1:CA:62:U:C2'	1:CA:63:C:H5''	2.42	0.50
36:BA:811:U:H6	48:BP:24:GLY:O	1.94	0.50
51:BS:42:ASP:C	51:BS:44:LYS:H	2.15	0.50
46:BN:23:LEU:HB2	46:BN:60:ILE:CG2	2.42	0.50
46:DN:48:MET:HE3	46:DN:48:MET:H	1.75	0.50
22:AW:16:U:O4	22:AW:60:U:C4	2.65	0.50
1:CA:57:G:H2'	1:CA:58:C:C6	2.47	0.50
39:BD:259:THR:O	39:BD:260:ARG:O	2.30	0.50
1:CA:1003:G:H21	1:CA:1039:C:H42	1.58	0.50
31:D5:25:LEU:HD12	55:DW:19:LEU:O	2.12	0.50
36:DA:638:G:N2	36:DA:651:G:H1'	2.27	0.50
52:BT:109:GLU:HA	52:BT:112:ARG:CZ	2.42	0.50
40:BE:117:MET:HE3	40:BE:136:ARG:CA	2.42	0.50
19:CS:11:VAL:HA	19:CS:38:SER:CB	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:186:GLY:O	40:DE:187:ALA:HB3	2.12	0.50
38:DC:47:LEU:N	38:DC:47:LEU:CD1	2.75	0.50
3:CC:68:VAL:O	3:CC:68:VAL:HG12	2.12	0.50
1:CA:266:G:H5'	1:CA:267:C:C5	2.47	0.50
4:CD:128:VAL:HG22	4:CD:146:ILE:HD12	1.92	0.50
2:CB:42:ILE:HD11	2:CB:202:PRO:HB2	1.94	0.50
57:BY:2:ARG:C	57:BY:4:LYS:H	2.15	0.50
36:DA:1670:C:O2	40:DE:129:HIS:CE1	2.65	0.50
36:BA:483:A:H3'	36:BA:484:C:C6	2.47	0.50
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.10	0.50
1:CA:658:G:C4	1:CA:659:U:C5	2.99	0.50
36:BA:2692:C:O2	36:BA:2847:U:O2'	2.29	0.50
3:CC:82:GLU:OE1	3:CC:82:GLU:N	2.44	0.50
1:CA:695:A:H2'	1:CA:696:A:C8	2.46	0.50
1:CA:918:A:H2'	1:CA:919:A:H8	1.76	0.50
2:CB:74:LYS:HZ2	2:CB:76:GLN:HE22	1.60	0.50
36:BA:1278:A:OP1	50:BR:36:THR:HA	2.12	0.50
1:AA:486:U:O2'	1:AA:487:A:H5'	2.12	0.50
36:BA:466:A:H2'	36:BA:467:G:H5'	1.91	0.50
33:B7:33:ARG:NH1	36:BA:467:G:OP1	2.44	0.50
53:BU:27:LEU:C	53:BU:29:SER:N	2.65	0.50
14:AN:21:TYR:HE2	14:AN:23:ARG:NH2	2.10	0.50
36:BA:1187:G:HO2'	36:BA:1188:U:H6	1.58	0.50
36:DA:1431:U:H2'	36:DA:1432:C:C6	2.46	0.50
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.11	0.50
36:BA:704:G:N3	36:BA:726:G:C2	2.80	0.50
36:BA:744:G:O2'	36:BA:745:G:H5'	2.11	0.50
36:BA:588:U:H1'	41:BF:90:PHE:HB3	1.93	0.50
37:DB:86:G:O2'	37:DB:87:G:H5'	2.11	0.50
38:DC:44:HIS:O	38:DC:212:VAL:HA	2.11	0.50
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.12	0.50
1:AA:940:C:O2'	1:AA:941:G:H5'	2.11	0.50
9:CI:7:THR:HG22	9:CI:8:GLY:N	2.27	0.50
36:BA:1766:U:O2'	36:BA:1767:C:H5'	2.12	0.50
2:CB:189:ASP:C	2:CB:189:ASP:OD1	2.50	0.50
36:BA:2790:A:H2'	36:BA:2790:A:N3	2.27	0.50
4:AD:60:GLU:OE1	4:AD:60:GLU:HA	2.12	0.50
36:DA:1767:C:O5'	36:DA:1767:C:H6	1.95	0.50
36:BA:2728:U:H2'	36:BA:2729:G:H8	1.76	0.50
4:CD:68:TYR:CE2	4:CD:97:LEU:HD22	2.46	0.50
1:CA:1325:C:C5'	21:CU:15:ARG:HH21	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:57:ILE:O	28:B2:61:LEU:HB2	2.12	0.50
36:BA:57:C:H2'	36:BA:58:G:O4'	2.11	0.50
36:BA:62:C:H42	36:BA:93:G:H1	1.60	0.50
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.42	0.50
30:B4:25:TYR:O	30:B4:26:SER:HB3	2.12	0.50
52:BT:19:LEU:HD13	52:BT:78:LEU:HD22	1.93	0.50
42:DG:114:ILE:C	42:DG:116:ASP:H	2.14	0.50
1:CA:143:A:H2	1:CA:220:G:H1	1.58	0.50
56:DX:12:VAL:O	56:DX:13:LEU:HB2	2.12	0.50
56:BX:14:SER:HB3	56:BX:17:ALA:HB2	1.94	0.50
39:DD:259:THR:O	39:DD:260:ARG:C	2.50	0.50
2:CB:8:LYS:HB2	2:CB:9:GLU:OE1	2.12	0.50
5:CE:78:HIS:CG	8:CH:104:ARG:HG3	2.47	0.50
33:D7:47:ARG:O	33:D7:48:LYS:HB3	2.11	0.50
32:D6:18:ARG:HH22	32:D6:47:THR:CG2	2.25	0.50
48:DP:112:LEU:C	48:DP:112:LEU:HD13	2.32	0.50
38:DC:100:ILE:O	38:DC:104:LEU:HB2	2.12	0.50
58:DZ:58:VAL:HG12	58:DZ:68:PRO:CA	2.41	0.50
20:CT:36:LEU:HG	20:CT:62:LEU:CD1	2.41	0.50
55:BW:68:ARG:O	55:BW:109:GLU:HA	2.12	0.50
10:CJ:38:ILE:HD12	10:CJ:38:ILE:O	2.11	0.50
36:DA:2632:A:O2'	40:DE:61:ARG:NH2	2.43	0.50
39:DD:48:ARG:NH1	39:DD:48:ARG:HG3	2.27	0.50
40:DE:101:ARG:CZ	40:DE:171:GLU:HB2	2.42	0.50
41:DF:157:VAL:HG23	41:DF:194:MET:HG3	1.93	0.50
36:BA:1335:U:H2'	36:BA:1336:A:H8	1.76	0.50
6:AF:87:ARG:CG	6:AF:87:ARG:NH1	2.69	0.50
25:CZ:336:SER:HB3	25:CZ:355:LEU:HG	1.93	0.50
1:AA:1227:A:C2	1:AA:1228:C:H1'	2.47	0.50
1:CA:585:G:H4'	12:CL:8:ASN:ND2	2.26	0.50
54:BV:35:LEU:O	54:BV:37:VAL:N	2.41	0.50
1:AA:111:G:O6	1:AA:330:C:H5	1.93	0.50
38:DC:20:TYR:HE2	38:DC:28:LEU:HD12	1.76	0.50
36:BA:1243:G:H2'	36:BA:1244:G:O4'	2.12	0.50
2:AB:30:ARG:NH1	2:AB:30:ARG:CB	2.75	0.50
38:DC:50:ASP:OD2	38:DC:53:ARG:HG3	2.12	0.50
1:AA:1029:C:H4'	1:AA:1033:G:H22	1.77	0.50
48:BP:85:LEU:HA	48:BP:88:LEU:HB3	1.92	0.50
7:AG:145:ALA:O	7:AG:146:GLU:CB	2.59	0.50
1:AA:520:A:N1	1:AA:536:C:H1'	2.26	0.50
39:BD:28:GLU:N	39:BD:29:PRO:HD2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1932:A:H61	36:BA:1968:G:H1'	1.77	0.50
38:BC:49:ILE:HB	38:BC:56:GLN:HB3	1.93	0.50
36:BA:319:C:H2'	36:BA:320:A:C8	2.47	0.50
1:CA:52:G:O2'	1:CA:53:A:H5'	2.12	0.50
3:CC:118:GLN:O	3:CC:122:GLU:HG2	2.11	0.50
40:BE:1:MET:HG2	40:BE:83:ASP:HB2	1.94	0.50
36:DA:2367:G:O2'	36:DA:2368:C:H5'	2.12	0.50
56:BX:84:ALA:HB1	56:BX:85:PRO:HD2	1.94	0.50
38:BC:190:ARG:O	38:BC:194:ARG:HG3	2.12	0.50
5:CE:20:GLN:HE21	5:CE:25:ARG:CZ	2.24	0.50
40:BE:202:LYS:HD2	40:BE:202:LYS:N	2.27	0.50
8:AH:91:ARG:HG2	8:AH:91:ARG:O	2.10	0.50
22:CV:26:A:O5'	22:CV:26:A:H8	1.95	0.50
4:AD:13:ARG:HA	4:AD:33:MET:SD	2.52	0.50
25:CZ:137:LYS:HA	60:CZ:501:GDP:N1	2.27	0.50
25:CZ:19:HIS:O	25:CZ:22:HIS:HB2	2.12	0.50
13:CM:4:ILE:HG22	13:CM:5:ALA:N	2.25	0.50
28:B2:3:LEU:HD22	36:BA:98:G:C5'	2.42	0.50
57:BY:13:VAL:HG11	57:BY:28:LYS:CD	2.42	0.50
41:BF:154:VAL:HG12	41:BF:155:LEU:N	2.27	0.50
41:BF:123:LEU:CD1	41:BF:192:LEU:HD22	2.41	0.50
39:DD:70:TRP:CD1	39:DD:71:ASP:N	2.80	0.50
27:B1:50:ARG:HG2	27:B1:59:THR:HG22	1.94	0.50
38:DC:37:PHE:H	38:DC:37:PHE:HD1	1.59	0.50
52:BT:83:ILE:CG1	52:BT:84:GLN:N	2.74	0.50
52:BT:95:ARG:HH11	52:BT:95:ARG:CB	2.22	0.50
31:B5:36:CYS:C	31:B5:38:ALA:N	2.66	0.50
34:D8:21:LYS:NZ	34:D8:48:PHE:HE2	2.10	0.50
48:DP:16:ARG:HD3	48:DP:16:ARG:C	2.32	0.50
36:DA:661:C:H5''	48:DP:18:ARG:HH11	1.75	0.50
31:D5:56:LYS:O	31:D5:57:VAL:C	2.50	0.50
58:DZ:5:LEU:O	58:DZ:59:LEU:HA	2.11	0.50
48:BP:114:ILE:HD13	48:BP:125:VAL:HG21	1.93	0.50
26:B0:36:ILE:CD1	26:B0:36:ILE:O	2.60	0.50
48:BP:146:VAL:O	48:BP:147:LEU:O	2.29	0.50
41:DF:39:TRP:CD1	41:DF:101:LEU:HB2	2.47	0.50
3:AC:167:TRP:O	3:AC:168:ALA:CB	2.60	0.50
36:DA:1241:A:H2'	36:DA:1242:A:O4'	2.12	0.50
43:BH:16:SER:HB2	43:BH:27:LYS:CG	2.42	0.50
49:DQ:17:LEU:HD13	49:DQ:39:PRO:CB	2.40	0.50
36:BA:299:A:N1	36:BA:322:A:O2'	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:134:GLU:C	2:CB:136:VAL:N	2.65	0.50
19:CS:63:THR:HG23	19:CS:65:ASN:HB3	1.92	0.50
6:AF:10:LEU:HD11	6:AF:61:LEU:CD1	2.41	0.50
22:CW:31:A:N1	22:CW:39:U:O4	2.45	0.50
2:CB:188:ALA:O	2:CB:202:PRO:HA	2.12	0.50
1:AA:625:G:H2'	1:AA:626:U:H6	1.77	0.50
24:CY:64:U:H1'	25:CZ:391:GLY:N	2.26	0.50
25:CZ:339:ARG:HH21	25:CZ:350:THR:HG21	1.77	0.50
1:AA:355:C:H2'	1:AA:356:A:H8	1.77	0.50
46:DN:56:ASN:HA	46:DN:125:GLY:CA	2.42	0.50
36:DA:674:G:H2'	36:DA:804:A:H61	1.76	0.50
1:CA:1095:U:P	1:CA:1108:G:H1	2.35	0.50
41:DF:160:ASN:ND2	41:DF:162:LEU:HB2	2.25	0.50
36:DA:392:C:H5''	36:DA:409:C:H5''	1.94	0.50
36:DA:860:U:C5	36:DA:917:A:N7	2.80	0.50
1:AA:1531:A:H8	1:AA:1531:A:C5'	2.23	0.50
33:B7:34:ARG:HB2	33:B7:42:LEU:HD23	1.94	0.50
1:CA:437:U:C2'	1:CA:438:G:H5'	2.41	0.50
15:CO:17:ARG:NH1	15:CO:77:ARG:NH1	2.59	0.50
25:AZ:298:VAL:HA	25:AZ:302:GLN:OE1	2.12	0.50
36:BA:1907:G:H2'	36:BA:1908:C:C6	2.47	0.50
1:AA:737:A:H2'	1:AA:738:C:C6	2.47	0.50
1:CA:1111:A:O2'	1:CA:1112:C:H5'	2.12	0.50
36:DA:469:G:C2'	36:DA:470:A:H5''	2.42	0.50
36:DA:729:G:N7	39:DD:208:LYS:HB2	2.27	0.50
36:BA:523:C:O2'	36:BA:524:U:H5'	2.12	0.50
25:CZ:175:ALA:O	25:CZ:178:ALA:HB3	2.12	0.50
36:DA:2282:G:OP1	36:DA:2283:C:H1'	2.11	0.50
6:AF:43:LEU:HD21	18:AR:35:ARG:NH1	2.27	0.50
6:CF:38:GLU:O	6:CF:39:LYS:O	2.30	0.50
36:DA:2341:G:H2'	36:DA:2342:C:H6	1.77	0.50
40:DE:107:THR:O	40:DE:190:GLY:CA	2.60	0.50
36:BA:1500:G:H21	39:BD:100:GLY:HA3	1.77	0.50
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.77	0.50
36:DA:271(Q):G:H1'	36:DA:271(R):G:C8	2.46	0.50
36:DA:2439:A:N7	36:DA:2586:C:H4'	2.26	0.50
36:BA:2386:C:H2'	36:BA:2387:U:C6	2.47	0.50
1:CA:899:C:H2'	1:CA:900:A:C8	2.47	0.50
8:AH:36:LEU:HD13	8:AH:61:VAL:HG22	1.93	0.50
36:BA:29:U:O4'	53:BU:11:ARG:NH2	2.45	0.50
1:AA:157:G:H2'	1:AA:158:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:16:ARG:O	52:BT:17:THR:HB	2.12	0.50
36:BA:34:C:H5'	36:BA:35:G:OP1	2.12	0.50
31:D5:45:VAL:HG22	31:D5:51:TYR:HB2	1.94	0.50
36:DA:756:C:C2'	36:DA:757:U:H5'	2.42	0.50
36:BA:2300:G:H2'	36:BA:2301:C:H6	1.77	0.50
36:BA:8:A:H2'	36:BA:9:U:C6	2.47	0.50
36:DA:2574:G:H2'	36:DA:2575:C:O4'	2.12	0.50
36:BA:2145:C:H5''	36:BA:2146:C:OP2	2.12	0.50
36:BA:1851:U:H2'	36:BA:1852:C:O4'	2.11	0.50
39:BD:183:ARG:HD2	39:BD:184:LYS:N	2.27	0.50
1:CA:451:A:N6	1:CA:480:U:H2'	2.27	0.50
36:BA:779:U:O2'	36:BA:780:G:H5'	2.11	0.50
36:DA:1001:A:H2'	36:DA:1002:G:O4'	2.12	0.50
36:BA:1111:A:H2'	36:BA:1111:A:N3	2.26	0.50
41:DF:97:TYR:H	41:DF:97:TYR:HD1	1.58	0.50
4:AD:58:LEU:HD22	4:AD:62:GLN:HG2	1.94	0.49
4:AD:70:ILE:HG22	4:AD:71:SER:O	2.12	0.49
47:DO:114:ILE:H	47:DO:114:ILE:CD1	2.21	0.49
28:B2:35:LEU:HA	28:B2:39:ALA:HB2	1.92	0.49
28:B2:6:VAL:O	28:B2:9:GLN:N	2.45	0.49
57:BY:28:LYS:HG2	57:BY:39:VAL:CG2	2.42	0.49
36:BA:616:G:N2	36:BA:618:C:H1'	2.26	0.49
42:BG:64:THR:OG1	42:BG:94:LEU:HD11	2.12	0.49
48:BP:57:THR:OG1	48:BP:58:THR:N	2.44	0.49
32:B6:27:LYS:HG2	36:BA:2285:C:OP2	2.12	0.49
36:BA:194:G:H2'	36:BA:195:A:O4'	2.12	0.49
36:DA:139(A):G:H22	56:DX:44:GLU:CD	2.14	0.49
34:D8:50:LEU:C	34:D8:52:LYS:N	2.63	0.49
36:DA:64:A:H2'	36:DA:65:C:H6	1.77	0.49
2:CB:61:LEU:HD11	2:CB:160:ASP:CB	2.42	0.49
25:AZ:16:THR:HB	25:AZ:24:LYS:HB3	1.94	0.49
34:D8:32:LEU:HB3	34:D8:36:LYS:HZ1	1.77	0.49
36:BA:1005:C:H2'	36:BA:1006:C:C6	2.47	0.49
36:BA:802:A:C5	36:BA:803:U:C4	3.00	0.49
28:D2:58:ALA:CB	36:DA:76:C:H4'	2.41	0.49
17:CQ:76:LEU:CD1	17:CQ:77:VAL:H	2.18	0.49
13:AM:33:ALA:HB1	13:AM:59:TYR:HD2	1.77	0.49
41:DF:187:VAL:HB	48:DP:7:ARG:NH1	2.17	0.49
55:DW:6:ILE:HG23	55:DW:104:THR:HG22	1.93	0.49
43:BH:18:GLU:HB2	43:BH:25:LYS:CB	2.35	0.49
38:BC:87:GLU:CG	38:BC:94:VAL:HG11	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:761:A:C3'	36:DA:761:A:C8	2.95	0.49
36:DA:761:A:H3'	36:DA:761:A:H8	1.77	0.49
1:CA:202:U:H5'	1:CA:203:U:H5	1.77	0.49
41:DF:125:LEU:HA	41:DF:194:MET:O	2.11	0.49
2:AB:94:ASN:HD22	2:AB:94:ASN:H	1.53	0.49
36:BA:1314:C:C2	36:BA:1339:G:N2	2.80	0.49
7:CG:38:LEU:O	7:CG:41:ARG:HB2	2.11	0.49
36:BA:994:C:OP1	53:BU:53:ARG:NH2	2.45	0.49
19:CS:29:ARG:HG3	19:CS:47:HIS:ND1	2.27	0.49
1:CA:614:A:H2'	1:CA:615:C:H6	1.76	0.49
1:CA:738:C:OP1	6:CF:92:LYS:HE3	2.12	0.49
20:CT:73:HIS:HB3	20:CT:74:LYS:HD3	1.94	0.49
50:BR:111:LEU:N	50:BR:111:LEU:CD1	2.71	0.49
1:AA:61:G:H2'	1:AA:62:U:O4'	2.11	0.49
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.27	0.49
16:CP:6:LEU:HD11	16:CP:19:ILE:HD13	1.94	0.49
4:AD:147:ALA:HA	4:AD:181:MET:O	2.12	0.49
3:AC:68:VAL:CG1	3:AC:70:VAL:HG23	2.42	0.49
11:AK:29:ILE:HD12	11:AK:30:VAL:N	2.26	0.49
47:DO:64:ARG:HD3	47:DO:79:PHE:CD2	2.47	0.49
47:DO:78:ARG:HB3	47:DO:78:ARG:NH1	2.27	0.49
43:BH:37:VAL:CG1	43:BH:38:SER:N	2.75	0.49
40:BE:107:THR:O	40:BE:190:GLY:CA	2.59	0.49
2:CB:74:LYS:HB3	2:CB:74:LYS:NZ	2.27	0.49
50:DR:12:ARG:HD3	50:DR:16:HIS:CE1	2.47	0.49
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.47	0.49
1:AA:346:G:O2'	1:AA:347:G:P	2.70	0.49
1:AA:538:G:OP2	12:AL:115:LYS:CB	2.60	0.49
25:CZ:143:ASP:OD2	25:CZ:146:LEU:HD23	2.12	0.49
41:BF:150:GLY:HA2	41:BF:172:TRP:CD2	2.47	0.49
36:BA:797:C:OP1	41:BF:62:ARG:HB2	2.12	0.49
36:DA:2807:G:C3'	36:DA:2808:U:H5''	2.41	0.49
36:DA:1764:G:C6	36:DA:1989:G:C2	3.00	0.49
36:DA:445:C:O2	36:DA:449:A:H2	1.94	0.49
36:DA:2758:A:C5	43:DH:67:LEU:HD21	2.47	0.49
16:CP:75:ARG:C	16:CP:77:ALA:H	2.16	0.49
36:BA:1092:C:H42	36:BA:1100:C:H42	1.58	0.49
43:BH:141:VAL:O	43:BH:145:ALA:N	2.43	0.49
57:DY:6:HIS:N	57:DY:6:HIS:CD2	2.79	0.49
49:DQ:6:ARG:O	49:DQ:7:MET:CG	2.60	0.49
1:AA:865:A:H2	1:AA:918:A:H4'	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:97:TYR:N	41:DF:97:TYR:CD1	2.80	0.49
22:CW:27:G:H2'	22:CW:28:G:H8	1.77	0.49
36:BA:1256:G:H21	41:BF:82:ILE:HB	1.77	0.49
36:BA:1921:G:O2'	36:BA:1922:G:H5'	2.11	0.49
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.12	0.49
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.77	0.49
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.27	0.49
1:AA:399:G:H2'	1:AA:400:C:C6	2.47	0.49
1:AA:324:G:OP1	20:AT:70:SER:HB2	2.12	0.49
36:DA:2193:G:H5'	36:DA:2193:G:H8	1.77	0.49
43:BH:23:ARG:O	43:BH:24:VAL:HG23	2.11	0.49
1:AA:424:G:O2'	1:AA:425:G:H5'	2.12	0.49
25:CZ:156:ASP:O	25:CZ:160:GLN:HG3	2.12	0.49
25:CZ:68:VAL:O	25:CZ:69:GLU:CG	2.60	0.49
25:AZ:68:VAL:O	25:AZ:273:HIS:ND1	2.46	0.49
27:D1:86:SER:CB	27:D1:89:GLU:HB2	2.41	0.49
13:CM:15:VAL:CG1	13:CM:48:LEU:HD11	2.35	0.49
57:BY:10:GLY:C	57:BY:27:VAL:HG22	2.32	0.49
48:DP:33:ARG:O	48:DP:34:GLY:C	2.50	0.49
52:DT:27:THR:HG23	52:DT:28:VAL:H	1.77	0.49
52:DT:46:GLU:O	52:DT:65:LYS:HD2	2.12	0.49
58:BZ:127:LYS:O	58:BZ:127:LYS:HG3	2.12	0.49
40:DE:52:LEU:HG	40:DE:75:VAL:CG2	2.43	0.49
36:DA:271(K):U:H3'	36:DA:271(L):U:C5'	2.41	0.49
51:BS:54:LEU:HD21	51:BS:58:LEU:O	2.12	0.49
41:DF:3:GLU:O	41:DF:19:GLU:HG3	2.12	0.49
36:DA:195:A:H61	36:DA:198:C:H3'	1.76	0.49
38:DC:6:ARG:NH1	38:DC:6:ARG:HG2	2.27	0.49
58:DZ:166:SER:N	58:DZ:167:PRO:HA	2.22	0.49
36:DA:2182:G:O2'	36:DA:2183:C:H5'	2.12	0.49
36:DA:1599:C:H2'	36:DA:1600:C:C6	2.41	0.49
40:BE:24:THR:HG21	40:BE:188:VAL:HG12	1.93	0.49
36:DA:64:A:H2'	36:DA:65:C:C6	2.47	0.49
25:AZ:108:ALA:HB2	25:AZ:135:MET:HE3	1.94	0.49
32:D6:27:LYS:HG3	36:DA:2285:C:OP2	2.12	0.49
32:D6:19:ARG:HB3	36:DA:2400:G:H4'	1.94	0.49
52:BT:23:ARG:HA	52:BT:52:ILE:CD1	2.42	0.49
31:D5:25:LEU:HD22	31:D5:26:THR:H	1.76	0.49
58:BZ:108:PRO:C	58:BZ:110:GLY:N	2.66	0.49
36:DA:2023:G:H5'	36:DA:2617:C:H4'	1.94	0.49
25:AZ:132:VAL:HG21	25:AZ:206:ILE:HG12	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:20:ARG:HA	51:DS:20:ARG:NE	2.27	0.49
30:B4:14:ILE:HG13	30:B4:31:ILE:HB	1.94	0.49
36:DA:1789:A:H2'	36:DA:1790:C:C6	2.47	0.49
36:DA:415:A:N1	36:DA:2409:G:C6	2.79	0.49
33:D7:34:ARG:HH11	33:D7:34:ARG:CG	2.16	0.49
12:CL:117:ARG:O	12:CL:119:LYS:O	2.30	0.49
18:AR:30:ASP:C	18:AR:32:ARG:H	2.15	0.49
6:CF:35:ALA:O	6:CF:36:ARG:HB3	2.11	0.49
22:CV:3:C:H5'	36:DA:2255:G:O2'	2.12	0.49
6:CF:22:GLU:HA	6:CF:22:GLU:OE1	2.11	0.49
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.42	0.49
49:DQ:43:THR:OG1	49:DQ:45:GLN:HG2	2.11	0.49
1:AA:1531:A:C8	1:AA:1531:A:H5''	2.44	0.49
6:AF:16:GLN:HG2	6:AF:17:SER:N	2.26	0.49
36:DA:901:A:H5'	36:DA:902:C:OP2	2.12	0.49
1:AA:448:A:H2'	1:AA:449:C:H6	1.77	0.49
36:BA:1081:U:H4'	45:BK:123:UNK:HA	1.94	0.49
1:CA:160:A:H1'	1:CA:344:A:C5	2.47	0.49
54:BV:81:TYR:O	54:BV:81:TYR:CD1	2.65	0.49
36:DA:957:A:N1	36:DA:2458:G:H4'	2.27	0.49
36:DA:1573:G:C2'	36:DA:1574:C:H5'	2.41	0.49
36:BA:171:G:O2'	36:BA:172:C:H5'	2.12	0.49
1:AA:1095:U:P	1:AA:1108:G:H1	2.35	0.49
1:AA:29:G:O2'	1:AA:30:U:H5'	2.11	0.49
36:BA:759:G:O4'	36:BA:1981:A:C2	2.65	0.49
36:DA:1263:U:C4	36:DA:1264:G:C6	3.00	0.49
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.12	0.49
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.11	0.49
1:AA:1421:G:O2'	1:AA:1422:G:H5'	2.12	0.49
39:BD:263:ARG:HB3	39:BD:263:ARG:HH11	1.77	0.49
47:DO:17:ARG:O	47:DO:18:LYS:HG3	2.12	0.49
37:DB:111:G:O2'	37:DB:112:U:H5'	2.13	0.49
5:AE:88:LYS:HB3	5:AE:123:LEU:HB2	1.94	0.49
25:CZ:271:GLU:HG2	25:CZ:276:THR:CA	2.38	0.49
25:CZ:179:LEU:HD12	25:CZ:182:MET:HB2	1.95	0.49
3:CC:32:LEU:HD22	3:CC:59:ARG:CZ	2.41	0.49
1:CA:981:U:H2'	1:CA:982:U:C5	2.47	0.49
28:B2:29:LYS:C	28:B2:33:MET:HG3	2.31	0.49
36:DA:821:A:H5''	36:DA:822:U:C6	2.48	0.49
36:DA:143:G:H1'	56:DX:37:THR:CG2	2.42	0.49
39:DD:222:ARG:O	39:DD:223:GLY:C	2.49	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.13	0.49
57:DY:15:VAL:HB	57:DY:20:TYR:O	2.12	0.49
34:B8:39:LYS:HG2	34:B8:43:GLN:OE1	2.12	0.49
41:BF:185:ASP:HA	41:BF:188:ARG:CG	2.42	0.49
48:BP:46:LYS:CB	48:BP:52:GLU:HG2	2.42	0.49
36:DA:1858:G:H2'	36:DA:1883:G:N2	2.27	0.49
36:BA:1885:A:H2'	36:BA:1886:C:O4'	2.12	0.49
42:DG:66:GLN:OE1	42:DG:94:LEU:HD23	2.12	0.49
36:DA:1947:C:C2'	36:DA:1948:G:H5''	2.42	0.49
36:DA:2297:C:O2'	36:DA:2298:A:H5'	2.12	0.49
34:D8:32:LEU:CB	34:D8:36:LYS:HZ1	2.25	0.49
46:BN:17:ASP:HB2	46:BN:55:VAL:CG1	2.41	0.49
22:AW:58:A:N6	22:AW:61:C:C2	2.80	0.49
9:CI:29:ASN:N	9:CI:63:ILE:O	2.45	0.49
57:BY:79:CYS:SG	57:BY:80:GLY:N	2.86	0.49
38:BC:36:LYS:O	38:BC:37:PHE:O	2.29	0.49
36:DA:1166:C:H2'	36:DA:1167:U:H6	1.78	0.49
28:D2:55:ARG:O	28:D2:58:ALA:HB3	2.12	0.49
58:BZ:116:VAL:O	58:BZ:117:LEU:HB3	2.11	0.49
1:CA:1002:G:O2'	1:CA:1003:G:H5'	2.13	0.49
34:D8:12:LYS:HE3	36:DA:249:C:O2	2.11	0.49
41:DF:110:LEU:C	41:DF:110:LEU:HD13	2.32	0.49
48:BP:75:ILE:CD1	48:BP:75:ILE:H	2.17	0.49
40:DE:101:ARG:HD3	40:DE:171:GLU:HA	1.93	0.49
25:AZ:267:VAL:HG23	25:AZ:288:VAL:CG1	2.38	0.49
49:DQ:67:ARG:NE	49:DQ:105:GLU:OE1	2.46	0.49
36:DA:302:C:H2'	36:DA:303:U:H6	1.70	0.49
36:BA:71:A:C2	56:BX:31:HIS:HE1	2.29	0.49
22:AV:2:C:H2'	22:AV:3:C:H5'	1.94	0.49
36:BA:1598:C:C5'	56:BX:36:LYS:HD3	2.43	0.49
36:BA:2330:G:H2'	36:BA:2331:G:O4'	2.12	0.49
8:AH:119:LEU:HD12	8:AH:123:GLU:CB	2.39	0.49
1:CA:1014:A:H5'	19:CS:14:HIS:CD2	2.47	0.49
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.40	0.49
8:CH:4:ASP:OD2	8:CH:89:PRO:HD3	2.12	0.49
22:CV:5:G:O2'	22:CV:6:G:H5'	2.12	0.49
22:CV:21:A:H2'	22:CV:22:G:H5''	1.93	0.49
41:DF:63:LYS:HG2	41:DF:65:TRP:O	2.12	0.49
49:BQ:1:MET:HE1	49:BQ:44:ALA:O	2.13	0.49
58:BZ:40:ASP:HB3	58:BZ:43:GLU:HG2	1.93	0.49
8:AH:10:LEU:HD22	8:AH:83:ILE:CG1	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1306:C:H2'	36:DA:1307:A:H8	1.77	0.49
36:DA:916:G:C2'	36:DA:917:A:H5''	2.43	0.49
7:CG:137:LYS:O	7:CG:140:ASP:HB3	2.13	0.49
38:DC:132:GLY:N	38:DC:133:PRO:CD	2.73	0.49
2:CB:75:LYS:HA	2:CB:78:GLN:NE2	2.27	0.49
22:CV:59:U:C2'	22:CV:60:U:C6	2.95	0.49
49:BQ:60:ARG:HH11	49:BQ:60:ARG:CB	2.25	0.49
36:BA:2854:G:H2'	36:BA:2855:C:C6	2.48	0.49
37:BB:29:A:H2'	37:BB:30:C:C6	2.47	0.49
36:BA:122:G:H1	36:BA:129:C:N4	2.08	0.49
23:AX:11:U:C2'	23:AX:12:A:OP1	2.60	0.49
15:AO:39:LEU:HD23	15:AO:39:LEU:O	2.11	0.49
42:BG:146:TYR:O	42:BG:148:MET:N	2.44	0.49
11:AK:84:VAL:HG21	11:AK:91:ARG:HD3	1.93	0.49
49:BQ:120:ILE:O	49:BQ:123:HIS:HB2	2.12	0.49
37:BB:13:A:H5'	37:BB:13:A:H8	1.76	0.49
36:BA:1608:A:H1'	36:BA:1610:A:OP2	2.12	0.49
36:BA:534:U:H2'	36:BA:535:C:C6	2.48	0.49
36:BA:1632:A:C5	36:BA:1633:G:C6	3.00	0.49
3:AC:23:TYR:CD1	3:AC:24:ALA:N	2.80	0.49
1:CA:1452:C:H4'	1:CA:1456:G:N2	2.27	0.49
1:AA:779:C:O2'	11:AK:120:ARG:HD3	2.12	0.49
30:B4:18:CYS:SG	30:B4:19:GLY:N	2.85	0.49
11:AK:126:ARG:O	11:AK:126:ARG:CG	2.58	0.49
55:DW:14:PRO:HG2	55:DW:78:GLU:CG	2.43	0.49
36:BA:1305:C:O2'	36:BA:1306:C:H5'	2.12	0.49
36:BA:1076:C:O2	45:BK:89:UNK:HA	2.13	0.49
25:AZ:67:HIS:CD2	25:AZ:67:HIS:H	2.29	0.49
25:CZ:277:LEU:HD11	25:CZ:279:GLU:O	2.13	0.49
25:CZ:108:ALA:HB3	25:CZ:137:LYS:O	2.11	0.49
25:CZ:19:HIS:O	25:CZ:20:VAL:C	2.50	0.49
4:AD:110:PHE:N	4:AD:110:PHE:CD1	2.79	0.49
4:CD:114:ARG:HG3	4:CD:114:ARG:HH11	1.78	0.49
36:BA:2131:G:C1'	36:BA:2133:G:H21	2.01	0.49
36:DA:2832:U:C2	36:DA:2834:G:N2	2.80	0.49
34:B8:62:LEU:HB3	36:BA:242:G:H5'	1.94	0.49
30:B4:27:THR:HG23	42:BG:143:GLU:OE1	2.12	0.49
42:BG:72:ARG:HA	42:BG:87:PRO:CD	2.40	0.49
42:DG:73:ALA:N	42:DG:87:PRO:CG	2.73	0.49
58:DZ:126:VAL:HB	58:DZ:161:VAL:HG13	1.95	0.49
3:CC:5:ILE:HG13	3:CC:10:PHE:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:35:HIS:O	48:BP:36:LYS:O	2.30	0.49
56:DX:50:LYS:H	56:DX:87:GLN:NE2	2.01	0.49
36:BA:2801:A:H5''	36:BA:2802:G:N7	2.27	0.49
1:CA:1432:G:OP1	52:DT:108:ARG:HG2	2.13	0.49
36:DA:2256:G:N2	36:DA:2275:C:C4	2.80	0.49
31:D5:30:LEU:HA	31:D5:42:PRO:HD3	1.93	0.49
53:DU:59:ARG:CG	53:DU:59:ARG:NH1	2.72	0.49
41:DF:132:VAL:HG13	41:DF:133:ASN:HD22	1.76	0.49
36:DA:481:G:C2'	36:DA:482:A:OP2	2.61	0.49
51:DS:36:TYR:HD1	51:DS:36:TYR:N	2.06	0.49
38:DC:119:VAL:HG22	38:DC:119:VAL:O	2.11	0.49
36:BA:2485:G:C5'	49:BQ:46:GLN:HE21	2.15	0.49
7:CG:65:ALA:HB1	7:CG:127:ALA:CB	2.41	0.49
7:AG:22:LEU:HD23	7:AG:22:LEU:O	2.13	0.49
1:AA:148:G:H1	1:AA:174:C:H42	1.59	0.49
9:CI:10:ARG:HE	9:CI:105:ASP:HB3	1.76	0.49
25:CZ:316:PHE:N	25:CZ:316:PHE:CD1	2.81	0.49
35:B9:30:PRO:HB2	36:BA:2527:C:H5'	1.94	0.49
1:AA:66:G:N2	1:AA:172:A:C2	2.79	0.49
2:CB:31:TYR:O	2:CB:42:ILE:HG13	2.12	0.49
1:AA:355:C:H2'	1:AA:356:A:C8	2.48	0.49
36:DA:1498:C:H2'	36:DA:1499:C:H6	1.77	0.49
36:BA:1252:G:OP2	53:BU:14:HIS:HE1	1.95	0.49
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.85	0.49
41:BF:84:VAL:CG1	41:BF:85:GLY:N	2.75	0.49
36:BA:1720:U:H3'	36:BA:1721:G:H5''	1.94	0.49
36:BA:1150:C:O2'	36:BA:1151:G:H5'	2.13	0.49
40:DE:43:GLY:O	40:DE:44:TYR:HB3	2.12	0.49
20:CT:12:ALA:O	20:CT:15:ARG:N	2.36	0.49
5:CE:64:ARG:HB2	5:CE:64:ARG:CZ	2.42	0.49
36:DA:2262:U:O2'	36:DA:2263:C:H5'	2.12	0.49
3:CC:29:TYR:OH	14:CN:54:PRO:O	2.30	0.49
56:BX:89:ILE:CG2	56:BX:92:LEU:HG	2.43	0.49
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.13	0.49
38:DC:68:LEU:HD11	38:DC:161:ILE:HG23	1.93	0.49
3:AC:52:LEU:HD11	3:AC:55:VAL:CG2	2.42	0.49
55:DW:88:ARG:HG3	55:DW:94:ASP:OD2	2.12	0.49
36:BA:2562:U:H2'	36:BA:2563:U:H5'	1.94	0.49
40:BE:70:ALA:O	40:BE:71:GLY:C	2.50	0.49
35:D9:37:GLY:HA2	36:DA:1125:G:H5''	1.95	0.49
1:CA:1349:A:O2'	1:CA:1350:A:H5'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:61:ALA:O	11:AK:64:ALA:HB3	2.13	0.49
58:BZ:41:LEU:HG	58:BZ:82:ARG:NH2	2.27	0.49
53:BU:11:ARG:HG2	53:BU:11:ARG:O	2.12	0.49
36:DA:756:C:O2'	36:DA:757:U:H5'	2.12	0.49
1:AA:386:C:C2'	1:AA:387:U:H5'	2.42	0.49
1:CA:802:A:H2'	1:CA:803:G:O4'	2.12	0.49
43:DH:80:SER:O	43:DH:81:GLU:HB2	2.12	0.49
7:CG:70:LYS:O	7:CG:138:LYS:HE3	2.12	0.49
1:CA:756:C:H2'	1:CA:757:U:O4'	2.13	0.49
1:CA:1417:G:C6	1:CA:1482:G:C6	3.00	0.49
39:DD:268:ARG:NH1	39:DD:268:ARG:HB3	2.28	0.49
7:AG:71:PRO:HD3	7:AG:103:TRP:CZ3	2.48	0.49
47:BO:4:PRO:O	47:BO:5:GLN:HB2	2.11	0.49
4:AD:36:ARG:C	4:AD:38:TYR:N	2.66	0.49
36:DA:997:G:O2'	36:DA:998:C:H5'	2.12	0.49
1:AA:1126:U:C5	1:AA:1127:G:C5	3.01	0.49
57:BY:28:LYS:CG	57:BY:39:VAL:HG22	2.40	0.49
4:CD:98:GLU:O	4:CD:100:ARG:N	2.45	0.49
4:CD:21:LEU:O	4:CD:115:ARG:HG3	2.13	0.49
42:BG:5:VAL:HG13	42:BG:101:ILE:HG12	1.94	0.49
42:BG:173:LEU:HD22	42:BG:178:PHE:CE2	2.47	0.49
41:BF:17:ARG:HG3	41:BF:17:ARG:HH11	1.77	0.49
39:BD:37:LEU:HD12	39:BD:64:ILE:HG22	1.93	0.49
36:DA:260:G:C6	36:DA:261:G:C5	3.00	0.49
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.11	0.49
34:B8:23:VAL:HG13	34:B8:46:ARG:HB3	1.95	0.49
12:AL:86:ARG:O	12:AL:87:GLY:O	2.29	0.49
25:AZ:281:ILE:HD12	25:AZ:284:ASP:OD1	2.12	0.49
34:D8:27:THR:HG22	48:DP:62:LEU:CD2	2.42	0.49
37:DB:75:G:H21	58:DZ:85:HIS:CE1	2.30	0.49
37:DB:75:G:O2'	58:DZ:10:ARG:NH2	2.45	0.49
43:DH:52:VAL:HG21	43:DH:69:ARG:CG	2.33	0.49
46:BN:90:MET:HE2	46:BN:94:HIS:HB2	1.94	0.49
32:D6:17:LYS:O	32:D6:18:ARG:HB3	2.12	0.49
40:BE:78:LEU:N	40:BE:78:LEU:HD12	2.28	0.49
1:CA:975:A:C4'	1:CA:976:G:H5''	2.34	0.49
46:BN:46:VAL:HG13	46:BN:47:ALA:N	2.28	0.49
58:BZ:112:ARG:O	58:BZ:113:ALA:O	2.31	0.49
55:BW:65:LEU:HD23	55:BW:68:ARG:NE	2.26	0.49
9:CI:19:LEU:CD2	9:CI:59:PHE:HD2	2.26	0.49
40:DE:103:ASP:CG	40:DE:201:THR:HA	2.32	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:760:G:H2'	36:DA:761:A:H5'	1.94	0.49
46:DN:10:GLU:HG3	46:DN:11:PRO:HD2	1.95	0.49
1:AA:392:G:H2'	1:AA:393:A:H8	1.77	0.49
25:AZ:139:ASP:HB2	25:AZ:174:SER:HB2	1.94	0.49
22:CW:39:U:C2'	22:CW:40:C:H5'	2.41	0.49
3:AC:58:GLU:HB2	3:AC:65:ALA:CB	2.37	0.49
14:CN:14:PRO:O	14:CN:15:LYS:O	2.30	0.49
53:BU:69:CYS:O	53:BU:74:LEU:O	2.31	0.49
51:DS:68:GLN:O	51:DS:72:ALA:N	2.45	0.49
46:DN:94:HIS:N	46:DN:95:PRO:CD	2.74	0.49
24:CY:49:G:O2'	24:CY:50:G:H5'	2.12	0.49
24:CY:52:A:O3'	25:CZ:330:ARG:NH2	2.37	0.49
16:AP:9:PHE:HE2	16:AP:18:ARG:CZ	2.25	0.49
36:BA:1402:C:O2'	36:BA:1403:C:H5'	2.12	0.49
12:AL:91:LYS:HZ2	12:AL:91:LYS:HB3	1.76	0.49
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.44	0.49
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.12	0.49
36:BA:1718:G:H2'	36:BA:1719:G:H8	1.78	0.49
36:BA:2153:G:H2'	36:BA:2154:G:C8	2.45	0.49
49:BQ:134:ARG:C	49:BQ:135:ASP:OD1	2.51	0.49
57:BY:88:LYS:O	57:BY:90:LEU:HD23	2.12	0.49
50:BR:103:ARG:HB3	50:BR:108:GLY:HA2	1.94	0.49
37:BB:111:G:C2'	37:BB:112:U:H5'	2.42	0.49
53:BU:80:ILE:O	53:BU:84:LYS:HB2	2.13	0.49
18:CR:56:THR:C	18:CR:58:LEU:N	2.64	0.49
47:DO:4:PRO:O	47:DO:5:GLN:CB	2.60	0.49
19:AS:17:GLU:O	19:AS:21:GLU:HG2	2.12	0.49
36:DA:2338:G:O2'	36:DA:2339:G:H5'	2.13	0.49
39:DD:79:VAL:HG21	39:DD:111:LEU:HD11	1.92	0.49
1:CA:555:C:H2'	1:CA:556:C:C6	2.47	0.49
36:BA:745:G:H2'	36:BA:746:A:H5'	1.93	0.49
14:CN:57:ARG:CB	14:CN:57:ARG:HH11	2.24	0.49
1:AA:36:C:H2'	1:AA:37:U:O4'	2.12	0.49
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.12	0.49
1:AA:424:G:H2'	1:AA:425:G:H8	1.76	0.49
8:AH:53:VAL:HG23	8:AH:58:TYR:HB2	1.93	0.49
46:BN:42:TRP:N	53:BU:64:ARG:NH1	2.59	0.49
22:AW:25:C:H2'	22:AW:26:A:H8	1.77	0.49
3:AC:139:GLN:HG3	3:AC:143:GLU:OE2	2.12	0.49
46:DN:76:SER:HG	46:DN:78:TYR:HD1	1.60	0.49
37:BB:78:A:H2'	37:BB:79:C:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:143:GLN:CA	43:BH:143:GLN:HE21	2.24	0.49
1:CA:499:A:H4'	1:CA:500:G:H5'	1.93	0.49
1:CA:1050:G:O2'	1:CA:1051:C:P	2.71	0.49
36:BA:62:C:N3	36:BA:93:G:N2	2.52	0.49
57:BY:13:VAL:HG23	57:BY:73:ARG:H	1.77	0.49
4:CD:78:LEU:HD21	4:CD:96:LEU:HB2	1.93	0.49
48:DP:23:PRO:HB2	48:DP:33:ARG:NE	2.26	0.49
34:B8:5:LYS:HG2	36:BA:242:G:C8	2.48	0.49
34:B8:4:MET:O	34:B8:62:LEU:HD12	2.13	0.49
54:BV:47:VAL:O	54:BV:48:GLY:C	2.50	0.49
57:DY:9:LYS:O	57:DY:28:LYS:CE	2.60	0.49
48:DP:45:LEU:HD13	48:DP:46:LYS:N	2.26	0.49
1:AA:585:G:H4'	12:AL:8:ASN:ND2	2.28	0.49
36:DA:1853:A:H2'	36:DA:1854:A:O4'	2.12	0.49
25:AZ:341:GLN:NE2	25:AZ:341:GLN:N	2.61	0.49
1:CA:1186:G:H3'	1:CA:1187:G:H5''	1.93	0.49
36:DA:221:A:H4'	36:DA:222:A:O5'	2.13	0.49
52:DT:106:SER:O	52:DT:107:ASP:HB3	2.11	0.49
25:AZ:63:ILE:N	25:AZ:83:PRO:HB3	2.27	0.49
36:DA:631:A:H4'	48:DP:65:ARG:HA	1.95	0.49
35:B9:10:ILE:O	35:B9:11:CYS:HB3	2.11	0.49
34:D8:33:ASN:HA	34:D8:36:LYS:CD	2.40	0.49
39:DD:77:ALA:CB	39:DD:97:TYR:HA	2.43	0.49
36:BA:2773:C:H5''	40:BE:164:ARG:HG2	1.95	0.49
39:BD:147:LEU:HD13	39:BD:155:LEU:CD1	2.42	0.49
36:BA:887:A:N3	36:BA:887:A:H2'	2.26	0.49
10:CJ:4:ILE:CD1	10:CJ:74:ILE:HG13	2.36	0.49
1:AA:1286:A:O2'	1:AA:1287:A:H5''	2.13	0.49
2:AB:31:TYR:O	2:AB:42:ILE:HG13	2.12	0.49
17:AQ:66:SER:OG	17:AQ:69:LYS:HB2	2.12	0.49
1:AA:186:C:H2'	1:AA:187:C:C6	2.48	0.49
36:BA:1338:G:N2	36:BA:1339:G:C4	2.81	0.49
20:AT:71:THR:C	20:AT:72:LEU:HD23	2.33	0.49
29:B3:17:LYS:CE	29:B3:17:LYS:HA	2.41	0.49
18:CR:47:THR:HG21	18:CR:49:LYS:HZ2	1.77	0.49
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	2.24	0.49
13:CM:96:LEU:HB3	13:CM:97:PRO:HD2	1.93	0.49
18:CR:37:VAL:HA	18:CR:40:LEU:HB2	1.95	0.49
36:BA:2008:C:H2'	36:BA:2009:G:H8	1.77	0.49
36:DA:1652:A:O2'	36:DA:1653:G:H5'	2.12	0.49
36:DA:1260:G:O2'	36:DA:1261:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2043:C:C2	36:BA:2044:C:C5	3.00	0.49
49:BQ:110:THR:HG23	49:BQ:113:GLN:OE1	2.13	0.49
54:BV:81:TYR:C	54:BV:82:ARG:HD2	2.32	0.49
36:BA:1165:U:H2'	36:BA:1166:C:C6	2.48	0.49
48:DP:108:LYS:O	48:DP:110:TYR:N	2.39	0.49
5:CE:36:ASP:OD1	5:CE:36:ASP:C	2.50	0.49
36:BA:1411:C:N4	36:BA:1412:A:H62	2.11	0.49
36:BA:686:G:N2	36:BA:788:A:H61	2.11	0.49
36:DA:2553:G:H2'	36:DA:2554:U:H4'	1.94	0.49
2:CB:204:ASN:ND2	2:CB:207:ALA:N	2.61	0.49
36:DA:2257:U:O2'	36:DA:2258:C:H5'	2.12	0.49
36:DA:963:U:H2'	36:DA:964:C:C6	2.48	0.49
1:AA:650:G:O2'	1:AA:651:C:H5'	2.12	0.49
36:BA:1184:G:O2'	36:BA:1185:C:H5'	2.12	0.49
36:BA:1910:G:O2'	36:BA:1911:U:H5'	2.11	0.49
39:DD:80:ALA:O	39:DD:81:ALA:HB2	2.13	0.49
36:BA:566:U:O4	54:BV:78:LYS:HE3	2.13	0.49
1:CA:229:U:O2'	1:CA:230:G:H5'	2.12	0.49
25:CZ:68:VAL:O	25:CZ:273:HIS:ND1	2.46	0.49
39:DD:35:LYS:HD2	39:DD:36:PRO:CD	2.41	0.49
39:DD:30:GLU:HB2	39:DD:35:LYS:HE3	1.94	0.49
51:DS:89:ARG:HG2	51:DS:92:TYR:HA	1.95	0.49
42:DG:145:THR:HG22	42:DG:147:ASP:OD1	2.13	0.49
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.30	0.49
4:CD:102:ASP:O	4:CD:117:ALA:HB1	2.12	0.49
43:BH:98:LEU:HD11	43:BH:100:GLY:O	2.13	0.49
19:CS:36:ARG:HB2	19:CS:72:GLY:HA3	1.94	0.49
42:DG:137:GLU:HB3	42:DG:140:ILE:HG23	1.95	0.49
10:CJ:62:HIS:N	14:CN:58:LYS:HZ3	2.11	0.49
1:AA:495:A:N6	4:AD:119:GLN:HE22	2.06	0.49
25:AZ:220:PRO:O	25:AZ:221:PHE:HB2	2.12	0.49
19:AS:45:VAL:O	19:AS:47:HIS:N	2.45	0.49
20:CT:9:ASN:O	20:CT:10:LEU:HD13	2.13	0.49
1:AA:1038:C:O5'	1:AA:1038:C:H6	1.94	0.49
38:DC:64:LEU:HD13	38:DC:188:ASN:HD22	1.78	0.49
34:D8:13:ARG:HD3	48:DP:61:ARG:O	2.13	0.49
36:BA:2264:C:C5	36:BA:2265:U:C5	3.01	0.49
36:BA:2092:U:C5	36:BA:2226:C:OP2	2.65	0.49
36:DA:1902:C:H4'	39:DD:244:ARG:HA	1.93	0.49
48:BP:101:VAL:HG12	48:BP:106:LEU:HB3	1.95	0.49
32:D6:30:THR:O	32:D6:32:ASN:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:41:ILE:HG23	34:D8:42:ARG:H	1.77	0.49
25:CZ:131:ILE:HD11	25:CZ:163:PHE:CZ	2.47	0.49
46:BN:56:ASN:ND2	46:BN:125:GLY:O	2.45	0.49
48:DP:101:VAL:C	48:DP:103:ALA:H	2.16	0.49
38:DC:100:ILE:HD11	38:DC:127:LEU:HD22	1.95	0.49
28:D2:51:ARG:NH1	28:D2:55:ARG:NH2	2.61	0.49
36:DA:634:C:H2'	36:DA:635:C:H6	1.73	0.49
48:DP:115:LEU:HD23	48:DP:115:LEU:N	2.27	0.49
36:BA:655:A:C4'	36:BA:656:G:H5'	2.38	0.49
41:DF:83:PHE:HD1	41:DF:84:VAL:N	2.11	0.49
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HD12	1.94	0.49
20:AT:61:SER:C	20:AT:65:LYS:HG3	2.32	0.49
13:AM:67:GLU:CD	13:AM:67:GLU:C	2.71	0.49
17:AQ:18:THR:CG2	17:AQ:69:LYS:HD2	2.41	0.49
38:DC:192:PHE:O	38:DC:195:ALA:HB3	2.13	0.49
36:BA:389:G:H22	48:BP:72:PRO:CG	2.26	0.49
25:CZ:354:GLN:O	25:CZ:370:PHE:HB2	2.13	0.49
36:BA:2739:U:O2'	36:BA:2740:A:H5'	2.13	0.49
41:BF:63:LYS:HA	41:BF:76:GLY:O	2.12	0.49
22:CW:37:A:H3'	22:CW:38:A:C8	2.48	0.49
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.66	0.49
25:CZ:359:VAL:O	25:CZ:359:VAL:HG12	2.13	0.49
25:CZ:359:VAL:C	25:CZ:361:MET:H	2.15	0.49
1:CA:1442(B):A:OP2	1:CA:1442(B):A:H4'	2.12	0.49
28:D2:7:ARG:HA	28:D2:10:LEU:CB	2.42	0.49
36:BA:2290:G:H2'	36:BA:2291:U:O4'	2.12	0.49
1:AA:100:C:H2'	1:AA:101:A:C8	2.48	0.49
10:AJ:63:PHE:HZ	14:AN:45:ARG:HG3	1.78	0.49
40:BE:38:THR:HG22	40:BE:40:GLU:N	2.24	0.49
1:AA:448:A:H2'	1:AA:449:C:C6	2.48	0.49
1:AA:841:U:H3'	1:AA:848:C:O4'	2.12	0.49
36:DA:89:G:H3'	36:DA:90:U:H5'	1.93	0.49
38:DC:106:GLY:O	38:DC:107:TRP:HB3	2.13	0.49
36:DA:1092:C:H42	36:DA:1100:C:N4	2.11	0.49
23:CX:12:A:O5'	23:CX:12:A:H8	1.95	0.49
15:AO:36:ILE:HG23	15:AO:56:LEU:CD1	2.43	0.49
58:DZ:129:SER:HB2	58:DZ:131:ARG:HD3	1.94	0.49
36:BA:6:A:O2'	46:BN:130:HIS:HB2	2.13	0.49
36:BA:2174:C:O2'	36:BA:2175:C:H5'	2.13	0.49
42:DG:106:LEU:O	42:DG:106:LEU:HG	2.12	0.49
49:DQ:76:LYS:HB3	49:DQ:91:GLU:HG3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1788:C:O2'	36:BA:1789:A:H5'	2.11	0.49
7:AG:115:ARG:HB2	7:AG:118:VAL:HG13	1.94	0.49
1:CA:607:A:O2'	1:CA:608:A:H5'	2.13	0.49
56:BX:61:GLY:HA3	56:BX:73:ARG:O	2.11	0.49
54:DV:31:ALA:O	54:DV:60:GLU:HG3	2.12	0.49
36:BA:1196:C:H2'	36:BA:1197:G:H8	1.77	0.49
28:B2:36:ARG:NE	56:BX:9:LEU:O	2.46	0.49
1:CA:487:A:H2'	1:CA:488:C:O4'	2.12	0.49
8:AH:17:THR:CG2	8:AH:63:LEU:HD12	2.43	0.49
42:DG:37:VAL:HG12	42:DG:37:VAL:O	2.13	0.49
1:CA:1001:A:H2'	1:CA:1001:A:N3	2.27	0.49
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.48	0.49
1:AA:1333:A:C2'	1:AA:1334:G:H5'	2.43	0.49
1:AA:1333:A:H2'	1:AA:1334:G:H5'	1.95	0.49
15:CO:35:ARG:CZ	15:CO:59:MET:HE2	2.43	0.49
25:CZ:349:VAL:HG21	25:CZ:374:LEU:HD13	1.94	0.49
1:AA:972:C:H4'	10:AJ:57:LYS:HG3	1.95	0.49
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.66	0.49
13:CM:15:VAL:HA	13:CM:18:ALA:HB3	1.95	0.49
36:BA:1899:G:O2'	36:BA:1900:A:H5''	2.11	0.49
57:BY:44:ILE:HG22	57:BY:45:VAL:N	2.27	0.49
4:CD:70:ILE:HD11	4:CD:100:ARG:HD2	1.93	0.49
1:CA:1223:C:H3'	1:CA:1224:G:H5''	1.93	0.49
37:BB:117:G:H5''	51:BS:55:ALA:O	2.13	0.49
36:BA:2428:G:H21	48:BP:60:MET:HE2	1.76	0.49
41:BF:40:GLN:HE22	41:BF:183:VAL:H	1.58	0.49
36:BA:1191:G:OP1	48:BP:35:HIS:ND1	2.45	0.49
42:DG:133:LEU:HD11	42:DG:157:ILE:HD12	1.95	0.49
34:B8:47:LYS:O	34:B8:48:PHE:HD1	1.95	0.49
37:DB:22:U:H2'	37:DB:23:G:C8	2.47	0.49
58:BZ:33:LEU:CD2	58:BZ:90:VAL:HG21	2.36	0.49
34:D8:41:ILE:HD12	36:DA:2419:U:OP1	2.12	0.49
27:D1:64:ALA:O	27:D1:66:HIS:N	2.45	0.49
9:CI:16:ARG:O	9:CI:63:ILE:HA	2.13	0.49
36:BA:916:G:H2'	36:BA:917:A:H5''	1.94	0.49
7:CG:50:ILE:HD12	7:CG:125:MET:HG3	1.95	0.49
13:AM:15:VAL:O	13:AM:16:ASP:C	2.51	0.49
41:DF:178:PRO:HG2	41:DF:179:GLU:OE1	2.12	0.49
20:AT:89:ARG:HD2	20:AT:104:LEU:CD1	2.38	0.49
40:BE:63:LEU:HD23	40:BE:63:LEU:C	2.33	0.49
51:BS:85:VAL:HG22	51:BS:106:ARG:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:654(E):G:H22	36:DA:654(Q):C:C1'	2.26	0.49
11:AK:27:ASN:HD21	11:AK:45:GLY:H	1.61	0.49
5:AE:11:ILE:HD11	5:AE:33:VAL:HG21	1.95	0.49
36:BA:848:G:O6	36:BA:928:G:H2'	2.13	0.49
16:CP:21:VAL:O	16:CP:33:ILE:HB	2.13	0.49
55:BW:51:LEU:HD23	55:BW:52:GLU:N	2.28	0.49
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD2	1.75	0.49
15:AO:87:ILE:O	15:AO:89:GLY:N	2.46	0.49
36:DA:382:G:H2'	36:DA:383:U:H5'	1.95	0.49
36:DA:390:A:H4'	36:DA:391:G:H5'	1.95	0.49
41:BF:160:ASN:OD1	41:BF:163:VAL:HG23	2.13	0.49
22:CW:75:C:C5'	27:D1:30:VAL:HG11	2.43	0.49
1:CA:1260:C:OP1	1:CA:1284:C:H4'	2.12	0.49
36:BA:64:A:O2'	36:BA:65:C:H5'	2.13	0.49
1:AA:1030(D):A:H2'	1:AA:1031:G:H5'	1.95	0.49
46:BN:73:THR:CG2	46:BN:82:LEU:HD11	2.42	0.49
25:CZ:196:VAL:CG1	25:CZ:196:VAL:O	2.61	0.49
37:DB:67:G:O2'	37:DB:68:C:O5'	2.31	0.49
36:DA:2137:C:H2'	36:DA:2138:C:C6	2.48	0.49
36:DA:2139:C:O2'	36:DA:2140:C:H5'	2.12	0.49
15:AO:39:LEU:CD2	15:AO:43:LEU:HG	2.42	0.49
1:AA:443:C:N4	1:AA:491:G:H1	2.11	0.49
1:AA:443:C:H2'	1:AA:444:C:H6	1.78	0.49
36:BA:2147:G:H2'	36:BA:2148:G:O5'	2.13	0.49
36:DA:2348:U:O2'	36:DA:2349:G:H5'	2.12	0.49
1:CA:583:A:H2'	1:CA:584:G:O4'	2.13	0.49
1:CA:349:A:O2'	1:CA:350:G:H5'	2.13	0.49
36:BA:2401:U:H2'	36:BA:2402:C:H5''	1.94	0.49
36:BA:2512:C:H2'	36:BA:2513:G:O4'	2.12	0.49
36:DA:377:C:O2'	36:DA:378:C:H5'	2.13	0.49
2:AB:239:VAL:O	2:AB:240:GLN:HB3	2.13	0.49
36:BA:220:G:H2'	36:BA:427:U:O4	2.12	0.49
25:CZ:5:PHE:O	25:CZ:5:PHE:HD1	1.96	0.49
25:AZ:5:PHE:O	25:AZ:5:PHE:CD1	2.65	0.49
36:BA:2189:U:H3'	36:BA:2190:G:H5''	1.95	0.49
25:CZ:327:GLU:OE1	61:CZ:502:KIR:H433	2.12	0.49
26:D0:38:VAL:CG2	26:D0:59:LEU:HD12	2.43	0.49
36:DA:996:A:C4'	53:DU:92:ARG:HG3	2.19	0.49
28:B2:29:LYS:HG2	28:B2:32:LEU:HD22	1.94	0.49
56:BX:8:ILE:O	56:BX:8:ILE:HG22	2.11	0.49
4:AD:174:LEU:HD23	4:AD:185:PHE:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D1:50:ARG:HG2	27:D1:59:THR:CG2	2.38	0.49
42:BG:52:ILE:HA	42:BG:54:GLU:OE2	2.13	0.49
34:D8:61:LEU:CD1	34:D8:61:LEU:N	2.73	0.49
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.94	0.49
2:AB:8:LYS:HD3	2:AB:217:ARG:NH2	2.27	0.49
36:DA:827:U:H5'	36:DA:828:U:O5'	2.13	0.49
47:BO:104:ARG:O	47:BO:106:LEU:N	2.46	0.49
25:AZ:19:HIS:O	25:AZ:20:VAL:C	2.50	0.49
42:DG:87:PRO:O	42:DG:88:ILE:HD13	2.13	0.49
25:AZ:9:LYS:HG3	25:AZ:10:PRO:HD2	1.95	0.49
25:CZ:224:PRO:HA	25:CZ:303:VAL:HG13	1.93	0.49
25:CZ:9:LYS:HG3	25:CZ:10:PRO:HD2	1.95	0.49
56:DX:12:VAL:O	56:DX:13:LEU:CB	2.60	0.49
36:DA:2297:C:H2'	36:DA:2298:A:H5'	1.94	0.49
1:CA:1342:C:O2'	9:CI:124:GLN:HG3	2.12	0.49
36:DA:64:A:H5'	56:DX:64:LYS:HD3	1.95	0.49
58:BZ:72:ARG:CG	58:BZ:89:PHE:HB2	2.43	0.49
37:DB:76:G:H5'	58:DZ:10:ARG:HH12	1.78	0.49
24:CY:27:C:H2'	24:CY:28:C:H6	1.78	0.49
25:CZ:120:ILE:HD13	25:CZ:158:LEU:HD23	1.94	0.49
22:AW:53:G:H1	22:AW:61:C:H42	1.60	0.49
48:BP:146:VAL:HG22	48:BP:147:LEU:N	2.18	0.49
38:DC:100:ILE:HD11	38:DC:123:VAL:CG2	2.40	0.49
39:DD:69:ARG:NH1	39:DD:130:ALA:HB2	2.15	0.49
39:DD:131:LEU:HB2	39:DD:136:ILE:HD11	1.93	0.49
7:CG:118:VAL:CG2	7:CG:119:ARG:N	2.76	0.49
46:BN:43:THR:O	46:BN:46:VAL:HG12	2.13	0.49
17:CQ:52:LYS:H	17:CQ:52:LYS:CD	2.26	0.49
36:BA:328:U:H4'	57:BY:68:HIS:NE2	2.28	0.49
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.13	0.49
48:DP:7:ARG:HB3	48:DP:8:PRO:CD	2.43	0.49
39:DD:43:ARG:CZ	39:DD:44:ASN:HD21	2.26	0.49
25:AZ:34:VAL:HG21	25:AZ:199:ILE:HG21	1.94	0.49
46:DN:9:VAL:HG12	46:DN:10:GLU:H	1.78	0.49
25:CZ:27:LEU:CG	25:CZ:31:LEU:HD11	2.37	0.49
20:CT:27:LYS:O	20:CT:27:LYS:HD3	2.13	0.49
3:AC:70:VAL:CG1	3:AC:72:LYS:H	2.22	0.49
22:CW:55:U:H3'	22:CW:56:C:C5'	2.42	0.49
40:DE:70:ALA:O	40:DE:71:GLY:C	2.51	0.49
4:CD:125:HIS:O	4:CD:149:ALA:N	2.33	0.49
36:DA:2444:G:OP2	41:DF:68:LYS:NZ	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:50:GLU:N	20:CT:99:LEU:HD12	2.27	0.49
5:CE:121:LYS:HG3	5:CE:122:GLU:N	2.28	0.49
50:BR:103:ARG:HG3	55:BW:40:ASN:OD1	2.11	0.49
36:DA:1651:G:OP1	50:DR:40:LYS:NZ	2.46	0.49
2:AB:235:SER:O	2:AB:236:TYR:C	2.51	0.49
36:BA:2758:A:C5	43:BH:67:LEU:HD21	2.48	0.49
36:BA:2360:A:O2'	36:BA:2361:A:C5'	2.61	0.49
36:BA:9:U:O4	36:BA:2629:A:C8	2.66	0.49
36:DA:962:G:O2'	36:DA:963:U:H5'	2.12	0.49
56:DX:20:GLY:O	56:DX:23:GLU:O	2.30	0.49
36:BA:1169:G:H2'	36:BA:1170:G:O4'	2.13	0.49
46:BN:120:LEU:HD12	46:BN:122:VAL:HG23	1.94	0.49
11:AK:18:ARG:HH21	11:AK:37:GLY:N	2.10	0.49
1:CA:818:G:O2'	1:CA:819:A:H5'	2.12	0.49
27:D1:40:ARG:NH2	27:D1:42:GLN:HG2	2.27	0.49
36:DA:2793:G:H22	36:DA:2804:C:H1'	1.78	0.49
1:CA:784:C:H4'	36:DA:1837:C:OP1	2.13	0.49
36:DA:1782:C:H1'	36:DA:2609:U:C5'	2.42	0.49
25:AZ:68:VAL:O	25:AZ:68:VAL:CA	2.56	0.49
1:CA:1269:A:H2	1:CA:1312:G:N3	2.11	0.49
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.13	0.49
28:B2:29:LYS:CG	28:B2:32:LEU:HD22	2.43	0.49
28:B2:38:GLN:O	28:B2:40:SER:N	2.45	0.49
57:BY:27:VAL:HG12	57:BY:28:LYS:N	2.28	0.49
1:CA:90:U:P	1:CA:91:C:H5'	2.53	0.49
25:CZ:313:HIS:O	25:CZ:380:LEU:HD11	2.13	0.49
30:B4:25:TYR:HB2	42:BG:101:ILE:HD13	1.93	0.49
42:BG:95:ARG:O	42:BG:96:ARG:C	2.52	0.49
57:DY:30:VAL:HG12	57:DY:31:LEU:N	2.27	0.49
57:DY:39:VAL:O	57:DY:40:GLU:HG2	2.12	0.49
42:BG:83:ARG:O	42:BG:85:GLY:N	2.46	0.49
52:BT:29:ARG:CD	52:BT:30:VAL:H	2.26	0.49
3:AC:10:PHE:CZ	3:AC:178:LEU:HD11	2.47	0.49
25:AZ:349:VAL:HG21	25:AZ:374:LEU:HD13	1.95	0.49
58:DZ:166:SER:HB2	58:DZ:167:PRO:C	2.29	0.49
30:D4:25:TYR:O	30:D4:26:SER:HB3	2.12	0.49
30:D4:27:THR:O	30:D4:28:LYS:HB3	2.12	0.49
12:AL:90:VAL:HG12	12:AL:93:LEU:H	1.77	0.49
25:AZ:150:VAL:CG1	25:AZ:151:GLU:N	2.76	0.49
27:D1:25:LYS:C	27:D1:27:GLU:H	2.15	0.49
36:DA:1310:G:C2'	36:DA:1311:G:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:11:ARG:HG2	13:AM:12:ASN:HD22	1.78	0.49
40:BE:92:THR:O	40:BE:95:ILE:HD11	2.13	0.49
48:DP:144:GLU:HG2	48:DP:144:GLU:O	2.11	0.49
53:DU:14:HIS:C	53:DU:16:LYS:H	2.15	0.49
54:DV:19:LYS:HG3	54:DV:20:LEU:N	2.28	0.49
36:DA:1141:U:H6	46:DN:63:THR:HB	1.77	0.49
22:CW:68:C:H2'	22:CW:69:G:C8	2.48	0.49
40:BE:116:VAL:O	40:BE:117:MET:CB	2.60	0.49
40:DE:101:ARG:CB	40:DE:201:THR:HG21	2.43	0.49
58:BZ:126:VAL:O	58:BZ:126:VAL:HG23	2.12	0.49
28:D2:35:LEU:HB3	28:D2:50:ILE:CG1	2.42	0.49
49:BQ:18:LYS:HZ2	49:BQ:18:LYS:HA	1.75	0.49
39:BD:27:THR:O	39:BD:27:THR:CG2	2.60	0.49
1:CA:36:C:O2'	1:CA:501:C:OP1	2.30	0.49
1:CA:36:C:H5''	12:CL:123:LYS:HA	1.94	0.49
26:B0:41:ARG:O	26:B0:42:GLY:C	2.50	0.49
6:AF:9:VAL:HG22	6:AF:60:PHE:CE2	2.48	0.49
4:CD:129:ASN:N	4:CD:129:ASN:ND2	2.60	0.49
53:BU:9:VAL:HG23	53:BU:10:ARG:H	1.76	0.49
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.48	0.49
26:D0:25:ARG:CD	26:D0:29:GLN:HE22	2.26	0.49
17:CQ:58:GLU:CB	17:CQ:74:LEU:HB3	2.43	0.49
36:DA:654(M):C:H2'	36:DA:654(N):G:N7	2.28	0.49
11:AK:44:SER:H	11:AK:47:VAL:HG22	1.78	0.49
1:CA:192:U:H5'	20:CT:102:GLY:HA2	1.94	0.49
47:DO:35:VAL:HG23	47:DO:64:ARG:H	1.76	0.49
37:DB:33:G:H2'	37:DB:34:U:O4'	2.12	0.49
36:DA:121:G:C4'	36:DA:149:A:H5'	2.43	0.49
22:CV:59:U:O2'	22:CV:60:U:C5'	2.61	0.49
11:CK:120:ARG:HG3	11:CK:126:ARG:HD2	1.95	0.49
7:AG:41:ARG:HH11	7:AG:41:ARG:CG	2.26	0.49
3:CC:60:ALA:H	3:CC:63:ASN:HD21	1.61	0.49
46:DN:2:LYS:NZ	54:DV:12:TYR:HA	2.27	0.49
36:DA:824:A:H1'	36:DA:2358:G:N7	2.28	0.49
1:CA:1089:G:O2'	1:CA:1090:U:H5'	2.13	0.49
40:BE:47:VAL:O	40:BE:80:GLU:HA	2.13	0.49
1:CA:782:A:H2'	1:CA:783:C:H5'	1.94	0.49
36:BA:1216:G:H2'	36:BA:1217:C:H6	1.76	0.49
36:BA:272(D):G:H1	36:BA:364:C:H42	1.61	0.49
36:DA:516:C:O2'	36:DA:517:C:H5'	2.13	0.49
1:AA:308:C:H2'	1:AA:309:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1614:A:H62	55:BW:93:ALA:CA	2.25	0.49
1:AA:443:C:H42	1:AA:491:G:H1	1.59	0.49
36:DA:438:G:H2'	36:DA:440:G:C8	2.47	0.49
1:CA:718:G:C8	11:CK:116:HIS:HB3	2.48	0.49
49:BQ:35:VAL:HG13	49:BQ:130:LYS:HB3	1.94	0.49
36:DA:2366:A:H2'	36:DA:2367:G:H5'	1.94	0.49
1:CA:757:U:H2'	1:CA:758:G:O4'	2.13	0.49
36:BA:2402:C:H2'	36:BA:2403:C:H5'	1.94	0.49
38:DC:214:VAL:HG21	38:DC:224:ILE:HD13	1.94	0.49
12:CL:88:GLY:O	12:CL:99:HIS:ND1	2.45	0.49
42:DG:33:ARG:HH11	42:DG:162:THR:HG21	1.77	0.49
25:CZ:322:VAL:O	25:CZ:323:LEU:O	2.31	0.49
36:DA:253:C:H2'	36:DA:254:G:O4'	2.12	0.49
36:DA:1711:C:O2'	36:DA:1712:C:H5'	2.13	0.49
26:B0:51:VAL:HG21	26:B0:79:VAL:O	2.13	0.49
39:BD:31:LYS:NZ	39:BD:33:LEU:HB2	2.28	0.49
1:CA:591:U:H2'	1:CA:592:G:H8	1.78	0.49
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.48	0.49
36:DA:158:U:H3'	36:DA:158:U:O2	2.13	0.49
5:CE:49:PRO:O	5:CE:50:GLU:HG3	2.13	0.49
39:DD:30:GLU:HB2	39:DD:35:LYS:NZ	2.28	0.48
25:CZ:325:LYS:C	25:CZ:327:GLU:N	2.56	0.48
3:CC:32:LEU:HD22	3:CC:59:ARG:HD3	1.94	0.48
1:AA:1371:G:H4'	9:AI:69:GLY:H	1.76	0.48
41:BF:6:VAL:HB	41:BF:124:LEU:HD13	1.95	0.48
1:CA:80:G:C2'	1:CA:81:U:H5'	2.42	0.48
53:BU:65:ILE:HD11	53:BU:93:LYS:HA	1.95	0.48
36:BA:480:A:H2	36:BA:499:U:O2	1.95	0.48
47:BO:104:ARG:C	47:BO:106:LEU:N	2.64	0.48
52:BT:26:ASP:C	52:BT:26:ASP:OD1	2.51	0.48
1:CA:1188:A:C2'	1:CA:1189:C:H5'	2.43	0.48
36:DA:2189:U:H3'	36:DA:2190:G:C5'	2.43	0.48
48:BP:25:SER:OG	48:BP:30:THR:HG21	2.13	0.48
34:D8:48:PHE:O	34:D8:49:VAL:HG22	2.13	0.48
36:DA:1480:G:C2	36:DA:1481:U:O2	2.66	0.48
24:CY:40:C:C3'	24:CY:41:C:H5''	2.43	0.48
42:DG:77:ILE:CD1	42:DG:77:ILE:N	2.75	0.48
46:DN:35:ARG:O	46:DN:48:MET:HE1	2.12	0.48
40:BE:81:ILE:O	40:BE:81:ILE:HG22	2.12	0.48
48:DP:102:ARG:CB	48:DP:102:ARG:NH1	2.76	0.48
36:DA:2754:U:H2'	36:DA:2756:U:OP1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:27:ARG:NH2	38:BC:182:PRO:HG2	2.28	0.48
48:DP:146:VAL:HG13	48:DP:147:LEU:N	2.27	0.48
2:AB:44:LEU:HA	2:AB:47:THR:CB	2.43	0.48
41:DF:202:PHE:CD1	41:DF:202:PHE:C	2.86	0.48
13:AM:36:LYS:HD2	13:AM:59:TYR:OH	2.13	0.48
54:BV:25:LEU:N	54:BV:92:THR:HG21	2.19	0.48
40:BE:116:VAL:CG2	40:BE:120:TRP:HB2	2.37	0.48
40:BE:117:MET:HE1	40:BE:136:ARG:HG2	1.94	0.48
9:AI:53:VAL:O	9:AI:54:ASP:HB2	2.12	0.48
39:BD:92:ILE:CD1	39:BD:92:ILE:H	2.26	0.48
41:DF:165:ARG:HG3	41:DF:165:ARG:HH11	1.77	0.48
48:DP:77:ARG:HG3	48:DP:78:PRO:HD2	1.94	0.48
10:CJ:89:ASP:O	10:CJ:90:LEU:CB	2.58	0.48
18:AR:32:ARG:CA	18:AR:69:THR:HG21	2.40	0.48
37:BB:91:C:OP1	49:BQ:16:ARG:CG	2.60	0.48
53:BU:6:THR:O	53:BU:9:VAL:CG2	2.60	0.48
46:DN:57:ALA:C	46:DN:58:ASP:OD1	2.50	0.48
27:B1:17:SER:OG	27:B1:18:ILE:N	2.45	0.48
33:D7:25:PRO:O	33:D7:29:LYS:HG2	2.13	0.48
40:BE:34:VAL:O	40:BE:34:VAL:HG22	2.13	0.48
58:BZ:70:LEU:CD2	58:BZ:70:LEU:N	2.76	0.48
36:DA:410:G:OP1	36:DA:411:G:H5'	2.13	0.48
1:CA:412:A:H5'	1:CA:413:G:OP2	2.12	0.48
22:CV:59:U:O2'	22:CV:60:U:C6	2.65	0.48
42:BG:105:LYS:O	42:BG:109:VAL:HG23	2.13	0.48
47:BO:66:LYS:H	47:BO:82:ASN:HD21	1.58	0.48
52:BT:35:LYS:HE2	52:BT:41:ARG:HG3	1.94	0.48
6:CF:47:ARG:HB2	6:CF:47:ARG:CZ	2.43	0.48
26:D0:30:VAL:HA	26:D0:65:GLY:O	2.13	0.48
36:DA:515:A:C8	36:DA:516:C:C6	3.01	0.48
46:BN:42:TRP:H	53:BU:64:ARG:NH1	2.11	0.48
42:DG:167:GLU:CD	42:DG:167:GLU:H	2.15	0.48
36:DA:877:U:O2'	36:DA:878:A:H5''	2.13	0.48
34:D8:4:MET:HB2	36:DA:592:G:O2'	2.12	0.48
36:BA:1201:C:H2'	36:BA:1202:C:C6	2.48	0.48
12:AL:83:VAL:HG11	12:AL:100:ILE:HD13	1.94	0.48
33:B7:39:ARG:HD3	36:BA:458:G:O2'	2.13	0.48
1:CA:255:G:H5'	17:CQ:16:GLN:O	2.13	0.48
36:BA:1286:A:H2'	36:BA:1288:U:OP2	2.13	0.48
36:DA:2736:G:O2'	36:DA:2737:G:H5'	2.12	0.48
3:AC:9:GLY:HA2	3:AC:12:LEU:HD12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:15:A:H3'	24:AY:16:H2U:H5''	1.95	0.48
50:BR:82:GLU:O	50:BR:86:ARG:HD3	2.13	0.48
3:AC:120:VAL:O	3:AC:121:ALA:C	2.50	0.48
25:CZ:171:ILE:HD12	25:CZ:171:ILE:N	2.28	0.48
36:BA:2547:U:H2'	36:BA:2548:G:C8	2.48	0.48
12:CL:60:LEU:HD23	12:CL:66:VAL:HG22	1.94	0.48
1:CA:697:U:H2'	1:CA:698:G:H5'	1.93	0.48
13:CM:6:GLY:O	13:CM:8:GLU:N	2.43	0.48
4:AD:64:LEU:HD22	4:AD:198:VAL:HG11	1.95	0.48
22:AV:47:U:H3'	22:AV:48:C:C5'	2.43	0.48
27:D1:86:SER:OG	27:D1:90:ILE:HD11	2.13	0.48
36:DA:996:A:O2'	36:DA:997:G:H5'	2.13	0.48
51:DS:28:VAL:HB	51:DS:89:ARG:HB2	1.96	0.48
13:CM:77:ASN:O	13:CM:81:LEU:CD2	2.61	0.48
28:B2:7:ARG:HA	28:B2:10:LEU:CG	2.43	0.48
4:AD:187:ARG:HG2	4:AD:188:LEU:N	2.28	0.48
57:DY:29:GLU:N	57:DY:29:GLU:OE1	2.46	0.48
57:DY:8:LYS:HB3	57:DY:28:LYS:HZ2	1.77	0.48
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.12	0.48
42:DG:87:PRO:O	42:DG:88:ILE:HG12	2.13	0.48
36:BA:2392:A:H1'	48:BP:60:MET:HB3	1.95	0.48
36:BA:248:G:H5''	36:BA:386:G:N2	2.27	0.48
42:DG:63:ILE:HG23	42:DG:143:GLU:HB2	1.94	0.48
34:B8:50:LEU:O	34:B8:51:ALA:CB	2.61	0.48
48:BP:84:ASN:C	48:BP:86:LYS:N	2.66	0.48
12:AL:86:ARG:HB3	12:AL:101:VAL:HG23	1.96	0.48
40:BE:26:ILE:HD11	40:BE:182:LEU:HD23	1.93	0.48
25:AZ:137:LYS:HA	60:AZ:501:GDP:N1	2.28	0.48
25:AZ:143:ASP:CB	25:AZ:146:LEU:HB2	2.43	0.48
32:D6:8:LYS:O	32:D6:9:LEU:CB	2.55	0.48
34:D8:33:ASN:CG	34:D8:34:TRP:H	2.16	0.48
46:BN:91:LEU:CD2	46:BN:98:VAL:HG21	2.43	0.48
17:AQ:63:ARG:O	17:AQ:64:PRO:C	2.49	0.48
48:DP:106:LEU:HD21	48:DP:112:LEU:HB2	1.94	0.48
51:DS:34:HIS:CB	51:DS:36:TYR:HE1	2.25	0.48
36:BA:1270:C:C5'	36:BA:1271:G:H5''	2.32	0.48
1:CA:194:C:H5''	20:CT:65:LYS:HG2	1.95	0.48
13:AM:97:PRO:HB2	13:AM:101:GLN:NE2	2.28	0.48
1:CA:1004:A:H5''	1:CA:1025:U:C2	2.48	0.48
36:BA:654(U):A:H2'	36:BA:654(V):A:C8	2.49	0.48
1:AA:1432:G:P	52:BT:107:ASP:HB2	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:327:G:O2'	36:BA:328:U:H5'	2.13	0.48
19:CS:13:ASP:C	19:CS:15:LEU:H	2.15	0.48
36:BA:2631:G:H21	40:BE:61:ARG:HH12	1.58	0.48
36:DA:321:G:O4'	41:DF:165:ARG:HD2	2.13	0.48
2:CB:133:LYS:O	2:CB:136:VAL:HB	2.13	0.48
36:DA:1363:C:H2'	36:DA:1364:G:C8	2.48	0.48
36:BA:1536:C:H2'	36:BA:1537:G:C4'	2.38	0.48
52:DT:38:ASN:C	52:DT:38:ASN:ND2	2.56	0.48
46:DN:23:LEU:HD23	46:DN:23:LEU:C	2.34	0.48
26:D0:25:ARG:HD2	26:D0:29:GLN:HE21	1.75	0.48
33:D7:21:ARG:HG2	33:D7:21:ARG:HH11	1.78	0.48
39:DD:85:ASP:HB2	39:DD:92:ILE:HG23	1.95	0.48
36:DA:203:C:C3'	36:DA:204:A:H5''	2.40	0.48
43:BH:157:TYR:O	43:BH:158:HIS:CD2	2.66	0.48
47:DO:63:VAL:O	47:DO:64:ARG:CG	2.62	0.48
36:DA:614(A):U:H4'	36:DA:614(B):G:C5'	2.39	0.48
27:B1:80:LEU:O	27:B1:82:LEU:HG	2.13	0.48
36:DA:359:A:C2	36:DA:360:G:H1'	2.47	0.48
40:BE:107:THR:HA	40:BE:163:GLU:O	2.13	0.48
36:BA:2153:G:O2'	36:BA:2154:G:H5'	2.13	0.48
36:DA:754:C:O4'	36:DA:1618:A:H2	1.95	0.48
1:CA:602:A:C2	1:CA:637:G:C2	3.01	0.48
46:DN:2:LYS:NZ	54:DV:12:TYR:HB3	2.28	0.48
36:DA:468:G:H2'	36:DA:469:G:O4'	2.13	0.48
1:CA:346:G:C2'	1:CA:346:G:N3	2.75	0.48
13:AM:83:ASP:C	13:AM:85:GLY:N	2.66	0.48
16:CP:47:ASP:C	16:CP:49:LEU:H	2.17	0.48
20:CT:14:LYS:HA	20:CT:17:ARG:HH21	1.78	0.48
1:AA:155:C:H2'	1:AA:156:G:H8	1.78	0.48
36:BA:738:G:H3'	36:BA:739:G:C8	2.48	0.48
36:BA:2749:A:H1'	43:BH:63:SER:OG	2.13	0.48
7:CG:152:ALA:O	7:CG:155:ARG:HB2	2.13	0.48
43:DH:88:LEU:N	43:DH:88:LEU:HD22	2.29	0.48
35:B9:27:CYS:SG	35:B9:28:GLU:N	2.85	0.48
53:BU:26:GLY:O	53:BU:30:LYS:HE2	2.13	0.48
36:BA:1668:A:H1'	36:BA:1670:C:C5	2.48	0.48
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.47	0.48
36:DA:2124:G:H5'	38:DC:174:PRO:HD3	1.93	0.48
1:AA:884:U:H4'	1:AA:885:G:H5''	1.94	0.48
36:DA:2511:U:O2'	40:DE:139:GLY:HA3	2.13	0.48
1:AA:256:U:H3	1:AA:270:A:H61	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:51:LYS:HA	53:DU:54:LYS:HE2	1.95	0.48
39:DD:65:ILE:H	39:DD:65:ILE:CD1	2.25	0.48
25:CZ:28:THR:HG23	25:CZ:79:HIS:ND1	2.28	0.48
51:DS:30:ARG:HH22	51:DS:62:LYS:HD3	1.78	0.48
51:DS:35:ILE:HD11	51:DS:99:LYS:HD3	1.95	0.48
28:B2:47:ASN:N	28:B2:50:ILE:HB	2.29	0.48
28:B2:25:VAL:HG13	28:B2:57:ILE:CD1	2.43	0.48
57:BY:43:ASN:CB	57:BY:64:GLU:HA	2.44	0.48
4:CD:101:LEU:HD23	4:CD:135:LEU:O	2.14	0.48
41:BF:178:PRO:HB3	41:BF:198:ALA:CB	2.43	0.48
48:DP:24:GLY:HA3	48:DP:33:ARG:HH12	1.78	0.48
52:DT:60:THR:HG22	52:DT:77:PRO:HA	1.94	0.48
52:DT:29:ARG:CG	52:DT:85:LYS:HA	2.43	0.48
36:DA:2305:A:C3'	36:DA:2306:C:H5''	2.33	0.48
42:DG:53:LEU:N	42:DG:53:LEU:HD22	2.28	0.48
42:BG:63:ILE:CG2	42:BG:143:GLU:HB2	2.42	0.48
57:DY:75:ILE:HG13	57:DY:76:CYS:H	1.77	0.48
1:AA:79:G:H21	1:AA:91:C:N4	2.11	0.48
10:CJ:61:GLU:OE1	14:CN:45:ARG:HD2	2.13	0.48
52:BT:28:VAL:HG13	52:BT:46:GLU:CA	2.29	0.48
36:BA:247:G:C8	36:BA:249:C:C6	3.00	0.48
1:CA:62:U:C2'	1:CA:63:C:C5'	2.92	0.48
36:DA:1857:G:C6	36:DA:1858:G:C2	3.02	0.48
42:DG:61:ALA:O	42:DG:62:LEU:HD12	2.12	0.48
52:DT:108:ARG:HA	52:DT:111:ARG:HG2	1.95	0.48
36:DA:2317:C:H2'	36:DA:2318:G:C5'	2.30	0.48
48:DP:16:ARG:CB	48:DP:16:ARG:HH11	2.25	0.48
51:BS:20:ARG:HA	51:BS:20:ARG:NE	2.28	0.48
39:BD:97:TYR:C	39:BD:99:ASP:N	2.64	0.48
56:DX:65:ARG:HG2	56:DX:66:LEU:N	2.28	0.48
36:BA:1480:G:H1	36:BA:1511:C:N4	2.01	0.48
48:DP:114:ILE:HG22	48:DP:129:ALA:O	2.13	0.48
36:DA:1115:G:H2'	36:DA:1116:C:H5''	1.96	0.48
25:CZ:268:THR:CG2	25:CZ:289:LEU:HG	2.43	0.48
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.48	0.48
41:DF:78:ILE:O	41:DF:80:ALA:N	2.46	0.48
40:BE:116:VAL:O	40:BE:117:MET:HB2	2.13	0.48
36:DA:2579:C:HO2'	40:DE:131:ALA:HB2	1.76	0.48
25:AZ:101:GLY:HA3	25:AZ:210:ILE:CD1	2.42	0.48
1:AA:1367:C:OP2	9:AI:112:LYS:NZ	2.47	0.48
12:CL:38:THR:O	12:CL:39:VAL:CG2	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:27:GLU:OE1	26:B0:27:GLU:N	2.46	0.48
4:CD:127:THR:HG23	4:CD:131:ARG:O	2.13	0.48
6:CF:62:TRP:CD1	18:CR:35:ARG:NH1	2.82	0.48
12:AL:85:ILE:HG23	12:AL:98:TYR:HB3	1.93	0.48
2:AB:113:HIS:C	2:AB:115:LEU:N	2.65	0.48
28:D2:3:LEU:N	36:DA:98:G:OP1	2.46	0.48
3:AC:188:LEU:HD22	3:AC:195:VAL:HG12	1.95	0.48
54:BV:5:VAL:CG2	54:BV:35:LEU:HG	2.43	0.48
42:DG:96:ARG:O	42:DG:98:ARG:N	2.47	0.48
2:CB:74:LYS:O	2:CB:78:GLN:HG3	2.13	0.48
16:AP:39:TYR:HA	16:AP:48:TRP:O	2.12	0.48
50:BR:92:GLY:HA2	50:BR:94:TYR:CZ	2.47	0.48
37:BB:82:G:O2'	37:BB:83:G:H5'	2.13	0.48
1:CA:1129:C:HO2'	1:CA:1131:G:H8	1.53	0.48
1:CA:1132:C:N4	1:CA:1133:G:N1	2.61	0.48
1:AA:1413:A:C2	1:AA:1488:G:C2	3.01	0.48
47:DO:98:VAL:CG1	47:DO:117:LEU:HB3	2.43	0.48
1:CA:155:C:H2'	1:CA:156:G:H8	1.77	0.48
36:DA:2339:G:O2'	36:DA:2340:G:H5'	2.13	0.48
7:CG:7:ALA:O	7:CG:8:GLU:CB	2.61	0.48
11:CK:95:ILE:O	11:CK:99:GLN:HG3	2.12	0.48
36:DA:106:C:H2'	36:DA:107:C:H6	1.77	0.48
22:CV:1:G:H2'	22:CV:1:G:N3	2.28	0.48
38:BC:138:PRO:HA	38:BC:144:THR:OG1	2.13	0.48
8:CH:68:ARG:NH1	8:CH:68:ARG:HG2	2.29	0.48
36:BA:1124:C:O2'	36:BA:1125:G:H5'	2.12	0.48
1:CA:51:A:N7	1:CA:114:U:O2'	2.46	0.48
3:CC:119:ARG:O	3:CC:122:GLU:HB2	2.13	0.48
36:BA:1095:A:H2'	36:BA:1096:A:H8	1.79	0.48
9:AI:22:GLY:HA3	9:AI:60:ASP:OD2	2.13	0.48
1:AA:603:U:H2'	1:AA:604:G:C8	2.48	0.48
1:CA:119:A:H4'	1:CA:120:A:O5'	2.12	0.48
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.12	0.48
1:CA:1195:C:H2'	1:CA:1197:G:O4'	2.12	0.48
11:AK:127:LYS:O	11:AK:129:SER:N	2.46	0.48
36:BA:1307:A:N3	36:BA:1307:A:H2'	2.29	0.48
28:D2:30:ARG:O	28:D2:34:GLU:HB2	2.14	0.48
36:BA:2836:U:C4	36:BA:2883:A:N6	2.81	0.48
4:AD:15:GLU:HG2	4:AD:63:LYS:HA	1.96	0.48
4:CD:194:LEU:HB3	4:CD:196:LEU:CD1	2.43	0.48
39:DD:148:GLU:HB2	39:DD:151:LYS:HD2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:53:ASN:ND2	19:CS:53:ASN:H	2.10	0.48
25:CZ:378:VAL:O	25:CZ:380:LEU:HG	2.12	0.48
42:DG:51:ARG:NH2	42:DG:52:ILE:CD1	2.76	0.48
4:CD:29:PRO:C	4:CD:30:LYS:HG2	2.33	0.48
57:DY:79:CYS:C	57:DY:81:LYS:H	2.17	0.48
52:BT:30:VAL:CG2	52:BT:84:GLN:HG3	2.44	0.48
42:DG:47:LYS:HE3	42:DG:81:LYS:CB	2.43	0.48
34:B8:30:ARG:NH2	36:BA:2419:U:O4	2.47	0.48
48:BP:47:ASP:CB	48:BP:48:PRO:HA	2.29	0.48
36:BA:1053:C:H2'	36:BA:1054:A:H8	1.74	0.48
36:BA:636:G:H4'	36:BA:638:G:O3'	2.13	0.48
51:BS:29:PHE:CD1	51:BS:29:PHE:C	2.87	0.48
51:BS:29:PHE:HD1	51:BS:29:PHE:C	2.16	0.48
31:D5:43:HIS:HD2	36:DA:2815:C:O2'	1.95	0.48
2:CB:61:LEU:HA	2:CB:64:ARG:CZ	2.44	0.48
50:DR:87:TYR:HD1	50:DR:90:ARG:HD2	1.78	0.48
48:BP:130:PHE:CD2	48:BP:135:LEU:HD23	2.48	0.48
34:D8:30:ARG:HE	34:D8:30:ARG:HA	1.78	0.48
10:AJ:20:ALA:O	10:AJ:24:VAL:HG23	2.13	0.48
48:DP:146:VAL:HG22	48:DP:147:LEU:N	2.20	0.48
36:DA:2617:C:C2'	36:DA:2618:G:H5'	2.44	0.48
54:BV:19:LYS:HB3	54:BV:94:LEU:O	2.14	0.48
39:DD:44:ASN:OD1	39:DD:44:ASN:N	2.46	0.48
31:D5:2:ALA:HB3	36:DA:747:U:C2	2.49	0.48
36:DA:338:G:N2	36:DA:339:U:H1'	2.28	0.48
42:DG:124:SER:HB3	42:DG:131:TYR:CE1	2.48	0.48
19:CS:33:THR:CG2	19:CS:49:ILE:HG22	2.43	0.48
22:CW:31:A:C2'	22:CW:32:U:H5'	2.42	0.48
39:BD:91:ARG:O	39:BD:107:ALA:HB3	2.13	0.48
39:BD:79:VAL:HG11	39:BD:111:LEU:HD13	1.94	0.48
46:BN:2:LYS:NZ	54:BV:12:TYR:HB3	2.28	0.48
24:CY:63:C:O2	25:CZ:391:GLY:HA2	2.14	0.48
36:BA:2061:G:H5''	36:BA:2503:A:C2	2.49	0.48
36:DA:1536:C:H2'	36:DA:1537:G:C4'	2.40	0.48
36:DA:769:G:H5'	36:DA:1379:A:N6	2.28	0.48
1:CA:1030:C:H5	1:CA:1030(A):G:C8	2.32	0.48
43:BH:37:VAL:CG1	43:BH:38:SER:H	2.26	0.48
6:CF:15:ASP:O	6:CF:17:SER:N	2.47	0.48
50:DR:61:HIS:NE2	50:DR:65:LEU:HD22	2.29	0.48
9:AI:118:LYS:HD2	9:AI:121:ARG:HB2	1.95	0.48
54:BV:72:VAL:CG2	54:BV:85:LYS:HB3	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:723:G:H2'	36:DA:724:U:H6	1.78	0.48
1:CA:1492:A:OP1	12:CL:47:LYS:N	2.46	0.48
1:CA:1217:C:OP1	14:CN:9:LYS:NZ	2.44	0.48
7:AG:92:SER:HB2	7:AG:93:PRO:HD2	1.94	0.48
36:BA:1952:A:C5	47:BO:22:ILE:HD12	2.49	0.48
36:DA:2230:G:O2'	36:DA:2231:C:H5'	2.14	0.48
36:DA:2231:C:H2'	36:DA:2232:U:O4'	2.13	0.48
29:D3:54:VAL:HG12	29:D3:55:ARG:N	2.29	0.48
1:AA:321:A:O2'	1:AA:322:C:H5'	2.13	0.48
10:CJ:40:LEU:HB2	10:CJ:69:ASN:HB3	1.94	0.48
1:CA:1507:A:C8	1:CA:1530:G:N2	2.81	0.48
36:BA:642:G:H21	36:BA:646:A:H2	1.61	0.48
22:CV:57:G:C2'	22:CV:58:A:H5'	2.43	0.48
2:AB:190:THR:O	2:AB:190:THR:OG1	2.30	0.48
36:BA:654(C):G:C2'	36:BA:654(D):G:H5'	2.44	0.48
36:DA:2242:G:H2'	36:DA:2243:U:O5'	2.12	0.48
1:AA:865:A:C2	1:AA:918:A:H4'	2.48	0.48
1:CA:310:G:H2'	1:CA:311:C:H6	1.79	0.48
36:DA:2367:G:H2'	36:DA:2368:C:C6	2.49	0.48
12:CL:60:LEU:HD11	12:CL:85:ILE:HG12	1.94	0.48
19:CS:17:GLU:O	19:CS:21:GLU:HG2	2.14	0.48
36:DA:1425:G:H2'	36:DA:1426:G:O4'	2.14	0.48
1:CA:26:A:H2'	1:CA:27:G:H5'	1.95	0.48
2:AB:57:PHE:CE2	2:AB:185:ILE:HD11	2.48	0.48
25:AZ:227:ASP:OD1	25:AZ:228:VAL:N	2.44	0.48
39:DD:227:ASN:HB3	39:DD:228:PRO:HD2	1.93	0.48
36:BA:2537:U:H2'	36:BA:2538:C:C6	2.49	0.48
36:DA:271(V):G:H2'	36:DA:271(W):G:O4'	2.13	0.48
40:DE:164:ARG:HG3	40:DE:164:ARG:HH11	1.77	0.48
1:CA:968:A:H8	1:CA:968:A:O5'	1.96	0.48
9:AI:3:GLN:O	9:AI:3:GLN:HG2	2.13	0.48
11:AK:34:ASP:C	11:AK:34:ASP:OD1	2.52	0.48
36:DA:1671:U:HO2'	36:DA:1673:U:H5	1.61	0.48
39:BD:213:ARG:HD2	39:BD:217:ARG:O	2.14	0.48
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.28	0.48
39:DD:35:LYS:NZ	39:DD:35:LYS:HB3	2.29	0.48
36:DA:2661:G:H2'	36:DA:2662:A:C8	2.48	0.48
51:DS:106:ARG:HH12	51:DS:108:GLY:HA3	1.78	0.48
1:AA:1126:U:C5	1:AA:1127:G:C6	3.01	0.48
48:DP:31:ALA:C	48:DP:33:ARG:N	2.66	0.48
4:CD:62:GLN:O	4:CD:63:LYS:C	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:57:ALA:C	42:BG:59:GLU:N	2.66	0.48
51:BS:34:HIS:HB2	51:BS:36:TYR:CE1	2.36	0.48
36:DA:2430:A:C8	36:DA:2431:U:H5	2.31	0.48
34:B8:33:ASN:CA	34:B8:36:LYS:HD2	2.43	0.48
25:CZ:9:LYS:HE3	25:CZ:74:LYS:N	2.28	0.48
42:DG:120:LEU:HB2	42:DG:179:PRO:O	2.14	0.48
1:CA:62:U:H2'	1:CA:63:C:C5'	2.44	0.48
36:BA:1191:G:H2'	36:BA:1192:G:O4'	2.14	0.48
36:BA:1054:A:H2'	36:BA:1054:A:N3	2.26	0.48
56:DX:14:SER:H	56:DX:17:ALA:HB3	1.79	0.48
56:BX:82:GLN:HG3	56:BX:82:GLN:O	2.14	0.48
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.49	0.48
36:DA:2247:A:O2'	36:DA:2248:C:H5'	2.13	0.48
36:BA:2327:A:H2'	36:BA:2328:A:C8	2.48	0.48
25:AZ:107:SER:HA	25:AZ:136:ASN:O	2.14	0.48
34:D8:31:HIS:O	34:D8:32:LEU:C	2.51	0.48
36:DA:580:C:OP2	53:DU:33:ARG:NH2	2.46	0.48
40:DE:116:VAL:CG2	40:DE:122:PHE:HB2	2.44	0.48
39:BD:155:LEU:HD23	39:BD:177:LEU:HD21	1.94	0.48
36:DA:1022:G:N2	36:DA:1142(A):A:C2	2.80	0.48
9:CI:108:VAL:HG12	9:CI:109:VAL:N	2.29	0.48
49:BQ:63:LYS:HE2	58:BZ:118:GLN:HE22	1.79	0.48
1:CA:1125:U:O4	10:CJ:38:ILE:HG21	2.13	0.48
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.13	0.48
54:BV:17:GLY:O	54:BV:18:LEU:HB3	2.12	0.48
30:B4:14:ILE:N	30:B4:14:ILE:HD12	2.28	0.48
28:D2:24:LEU:HD23	28:D2:25:VAL:N	2.29	0.48
25:CZ:132:VAL:HG21	25:CZ:206:ILE:HG12	1.96	0.48
25:AZ:359:VAL:O	25:AZ:359:VAL:HG12	2.13	0.48
25:AZ:400:VAL:HG12	25:AZ:401:THR:N	2.27	0.48
1:AA:397:A:N3	1:AA:397:A:H3'	2.29	0.48
52:BT:2:ASN:C	52:BT:4:GLY:H	2.17	0.48
1:CA:376:G:O3'	16:CP:5:ARG:NH1	2.46	0.48
52:BT:65:LYS:HZ1	52:BT:66:VAL:H	1.61	0.48
1:AA:355:C:N4	1:AA:356:A:H62	2.11	0.48
51:BS:69:VAL:CG1	51:BS:99:LYS:HD3	2.44	0.48
28:D2:47:ASN:O	28:D2:49:LYS:N	2.47	0.48
1:AA:686:U:O2'	11:AK:42:TRP:NE1	2.47	0.48
1:AA:977:A:C8	1:AA:1223:C:C4	3.01	0.48
15:AO:82:ILE:HD11	15:AO:88:ARG:H	1.76	0.48
37:DB:17:C:H2'	37:DB:18:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2295:C:C2	36:DA:2296:U:C5	3.01	0.48
17:CQ:36:ILE:HD12	17:CQ:38:ARG:NH2	2.29	0.48
1:CA:706:A:C5	1:CA:707:C:C5	3.01	0.48
1:CA:1368:G:O2'	1:CA:1369:C:H5'	2.13	0.48
50:BR:103:ARG:O	50:BR:104:ARG:HB2	2.14	0.48
36:DA:1493:C:C5	36:DA:2206:G:O2'	2.67	0.48
1:AA:345:C:H5'	52:BT:41:ARG:HE	1.78	0.48
18:AR:85:LEU:HD12	18:AR:86:VAL:N	2.27	0.48
36:BA:1361:G:O2'	36:BA:1362:C:H5'	2.14	0.48
1:CA:1155:G:H2'	1:CA:1156:G:H8	1.78	0.48
4:AD:152:SER:O	4:AD:154:ASN:N	2.45	0.48
36:DA:2001:A:H4'	36:DA:2689:U:H2'	1.95	0.48
1:CA:774:G:OP1	39:DD:202:LYS:NZ	2.44	0.48
55:BW:9:TYR:H	55:BW:102:HIS:CD2	2.31	0.48
1:AA:319:G:C2'	1:AA:320:C:H5'	2.44	0.48
41:BF:82:ILE:HG13	41:BF:83:PHE:N	2.26	0.48
36:BA:1196:C:H2'	36:BA:1197:G:C8	2.48	0.48
36:DA:1040:C:H2'	36:DA:1041:G:C8	2.47	0.48
36:BA:748:G:C8	55:BW:89:ALA:HB1	2.48	0.48
1:CA:256:U:H2'	1:CA:257:G:C8	2.48	0.48
43:DH:23:ARG:O	43:DH:24:VAL:HG23	2.13	0.48
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.95	0.48
12:CL:51:ALA:O	12:CL:52:LEU:HD22	2.12	0.48
4:CD:159:ARG:HH11	4:CD:159:ARG:HG3	1.78	0.48
36:DA:1366:A:H2'	36:DA:1367:A:O4'	2.11	0.48
7:CG:72:ARG:N	7:CG:142:GLU:OE2	2.37	0.48
31:B5:52:TYR:HD1	31:B5:52:TYR:N	2.11	0.48
25:AZ:198:LYS:CD	25:AZ:198:LYS:O	2.61	0.48
27:D1:90:ILE:O	27:D1:94:LEU:HD13	2.13	0.48
31:D5:4:HIS:O	36:DA:2056:G:N2	2.43	0.48
57:BY:13:VAL:CG1	57:BY:28:LYS:HD3	2.42	0.48
41:BF:164:ARG:HH11	41:BF:164:ARG:HG2	1.77	0.48
47:DO:71:ARG:HH21	47:DO:77:ILE:HG21	1.77	0.48
52:DT:28:VAL:O	52:DT:29:ARG:CB	2.54	0.48
36:DA:1827:C:H2'	36:DA:1828:G:H5'	1.95	0.48
4:CD:11:LEU:HD13	4:CD:66:ARG:CD	2.43	0.48
57:DY:9:LYS:O	57:DY:28:LYS:NZ	2.44	0.48
39:BD:30:GLU:CD	39:BD:63:ARG:HE	2.17	0.48
36:BA:250:G:H2'	36:BA:251:A:C8	2.49	0.48
36:DA:1638:C:H4'	36:DA:2710:C:O2	2.13	0.48
51:DS:12:PHE:C	51:DS:12:PHE:HD1	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:271(L):U:C5'	36:BA:271(M):G:H5'	2.29	0.48
36:DA:851:U:O2'	36:DA:852:G:H5'	2.12	0.48
34:B8:12:LYS:HD3	48:BP:68:GLN:HG2	1.95	0.48
36:BA:2399:G:O6	36:BA:2417:C:N3	2.46	0.48
12:AL:53:ARG:HB3	12:AL:93:LEU:HD11	1.95	0.48
39:BD:80:ALA:HB2	39:BD:96:HIS:CD2	2.49	0.48
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HG13	1.95	0.48
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HG12	1.95	0.48
2:CB:8:LYS:C	2:CB:10:LEU:H	2.16	0.48
36:DA:1197:G:H5'	36:DA:1227:G:O2'	2.14	0.48
36:DA:1184:G:O2'	36:DA:1185:C:H5'	2.14	0.48
36:DA:2801(A):A:H5'	36:DA:2802:G:C8	2.48	0.48
36:BA:1799:G:N3	36:BA:1800:C:H5	2.11	0.48
36:DA:638:G:C6	36:DA:639:U:N3	2.81	0.48
36:DA:653:A:N3	36:DA:653:A:H2'	2.29	0.48
48:DP:84:ASN:C	48:DP:86:LYS:N	2.66	0.48
39:DD:134:ARG:HB3	39:DD:134:ARG:CZ	2.44	0.48
10:CJ:4:ILE:HD13	10:CJ:74:ILE:O	2.13	0.48
36:DA:2769:C:H2'	36:DA:2770:G:O4'	2.13	0.48
25:AZ:134:PHE:HB2	25:AZ:202:LEU:HD13	1.95	0.48
52:DT:14:TYR:CD1	52:DT:14:TYR:N	2.79	0.48
10:AJ:89:ASP:HB3	10:AJ:91:PRO:HD3	1.96	0.48
10:AJ:90:LEU:H	10:AJ:91:PRO:CD	2.27	0.48
9:AI:95:LYS:HG3	9:AI:96:LEU:CD1	2.42	0.48
36:BA:2472:G:H3'	36:BA:2475:C:N4	2.29	0.48
25:CZ:199:ILE:O	25:CZ:203:LEU:HG	2.13	0.48
1:CA:548:G:H2'	1:CA:549:C:H6	1.78	0.48
49:DQ:20:ALA:O	49:DQ:99:PRO:O	2.31	0.48
22:CW:30:G:H2'	22:CW:31:A:H8	1.77	0.48
36:DA:644:A:C2	36:DA:2369:A:H1'	2.39	0.48
13:AM:108:ARG:HG3	13:AM:108:ARG:NH1	2.29	0.48
36:BA:1047:G:H2'	36:BA:1110:G:N2	2.23	0.48
11:AK:124:LYS:HD2	11:AK:125:PHE:CE2	2.48	0.48
1:CA:176:C:H4'	1:CA:1447:A:H2	1.78	0.48
36:DA:880:G:H1	36:DA:897:C:H42	1.61	0.48
16:CP:4:ILE:HB	16:CP:66:PRO:HA	1.95	0.48
26:D0:33:ALA:O	36:DA:2353:G:H1'	2.14	0.48
1:AA:394:G:O2'	1:AA:395:C:H5'	2.14	0.48
58:BZ:122:ARG:HH11	58:BZ:122:ARG:HG2	1.79	0.48
1:CA:708:C:O2'	1:CA:709:G:H5'	2.14	0.48
42:BG:30:GLU:HG2	42:BG:32:PRO:HD3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:565:C:O2'	36:DA:566:U:H5'	2.14	0.48
2:CB:115:LEU:O	2:CB:119:GLU:HB2	2.13	0.48
36:DA:1681:G:O2'	36:DA:1762:A:C2'	2.62	0.48
36:BA:519:U:H2'	36:BA:520:G:C8	2.48	0.48
38:BC:42:GLU:HG3	38:BC:215:THR:HG23	1.95	0.48
36:DA:35:G:O2'	36:DA:36:G:H5'	2.13	0.48
36:BA:1526:G:H2'	36:BA:1527:G:O4'	2.13	0.48
36:BA:271(U):G:H2'	36:BA:271(V):G:C8	2.48	0.48
1:AA:1210:C:C2	1:AA:1211:U:O2	2.66	0.48
43:BH:70:THR:O	43:BH:74:ASN:ND2	2.45	0.48
36:BA:1462:C:O2'	36:BA:1463:C:H5'	2.14	0.48
2:CB:93:VAL:HG13	2:CB:93:VAL:O	2.13	0.48
43:BH:89:ILE:CG1	43:BH:129:THR:HA	2.43	0.48
38:BC:114:VAL:HG12	38:BC:144:THR:HA	1.95	0.48
16:AP:15:PRO:O	16:AP:16:HIS:O	2.31	0.48
36:DA:1782:C:O5'	36:DA:1782:C:H6	1.95	0.48
31:B5:52:TYR:CD1	31:B5:52:TYR:N	2.81	0.48
41:DF:31:HIS:ND1	48:DP:13:ASN:HB2	2.28	0.48
1:AA:55:A:C2	1:AA:56:U:H1'	2.49	0.48
11:CK:61:ALA:CB	11:CK:90:GLY:HA3	2.43	0.48
7:CG:81:GLY:C	7:CG:83:ALA:H	2.15	0.48
1:CA:1476:G:H2'	1:CA:1477:C:C6	2.48	0.48
44:DJ:48:UNK:O	44:DJ:49:UNK:CB	2.61	0.48
41:BF:28:ILE:H	41:BF:28:ILE:CD1	2.27	0.48
36:BA:2006:C:O2'	36:BA:2823:A:N3	2.46	0.48
36:BA:431:U:O2'	36:BA:432:A:H5'	2.14	0.48
38:BC:78:ALA:HB3	38:BC:83:ILE:HG12	1.95	0.48
24:CY:3:G:OP2	25:CZ:87:ASP:HB3	2.14	0.48
53:DU:93:LYS:HD2	53:DU:93:LYS:H	1.79	0.48
28:B2:35:LEU:HD13	28:B2:35:LEU:C	2.34	0.48
4:AD:98:GLU:CG	4:AD:189:PRO:HG3	2.43	0.48
52:DT:22:PHE:HE2	52:DT:85:LYS:HZ1	1.52	0.48
40:DE:48:GLN:HE21	40:DE:78:LEU:HD22	1.78	0.48
25:CZ:381:GLU:O	25:CZ:382:GLU:HB3	2.14	0.48
42:BG:86:MET:O	42:BG:86:MET:HG2	2.14	0.48
57:BY:46:LYS:CG	57:BY:47:LYS:H	2.21	0.48
14:CN:23:ARG:HH11	14:CN:30:ALA:HB2	1.77	0.48
25:AZ:19:HIS:O	25:AZ:22:HIS:HB2	2.13	0.48
36:BA:247:G:H4'	36:BA:386:G:C5	2.49	0.48
32:B6:20:ASN:C	32:B6:21:TYR:CG	2.87	0.48
42:DG:142:PRO:HG2	42:DG:143:GLU:HG2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:63:ILE:N	42:DG:143:GLU:HG3	2.28	0.48
36:DA:140:G:H1'	36:DA:141:A:C2	2.37	0.48
34:B8:52:LYS:H	34:B8:53:PRO:CD	2.26	0.48
1:CA:1431:C:O4'	1:CA:1431:C:O2	2.32	0.48
51:BS:15:ARG:O	51:BS:18:ILE:HG13	2.13	0.48
54:DV:99:ILE:CD1	54:DV:99:ILE:H	2.11	0.48
36:BA:1019:U:C2'	36:BA:1021:A:H2	2.26	0.48
58:BZ:57:ILE:N	58:BZ:69:THR:O	2.41	0.48
25:AZ:14:VAL:O	25:AZ:79:HIS:HD2	1.96	0.48
32:D6:31:PRO:O	32:D6:32:ASN:OD1	2.32	0.48
21:AU:9:ARG:O	21:AU:12:LYS:HB2	2.13	0.48
40:BE:27:LEU:HD22	52:BT:1:MET:N	2.28	0.48
36:BA:916:G:O2'	36:BA:917:A:H5''	2.14	0.48
48:DP:85:LEU:CA	48:DP:88:LEU:HB3	2.42	0.48
3:AC:46:GLU:O	3:AC:47:LEU:CB	2.57	0.48
41:DF:187:VAL:HG12	48:DP:7:ARG:HD2	1.95	0.48
40:BE:101:ARG:CZ	40:BE:171:GLU:HB2	2.43	0.48
25:AZ:290:LEU:HB2	25:AZ:293:VAL:CG2	2.43	0.48
1:AA:371:G:N2	1:AA:373:A:N6	2.62	0.48
19:CS:45:VAL:HA	19:CS:62:ILE:HG23	1.95	0.48
1:CA:266:G:C5'	1:CA:267:C:C5	2.96	0.48
58:DZ:150:LEU:CD2	58:DZ:150:LEU:H	2.27	0.48
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.94	0.48
25:AZ:354:GLN:O	25:AZ:370:PHE:HB2	2.14	0.48
36:BA:953:A:OP2	49:BQ:16:ARG:NE	2.46	0.48
36:BA:958:U:H5''	49:BQ:14:ARG:HD3	1.96	0.48
2:CB:25:ASN:HB2	2:CB:191:ASP:O	2.14	0.48
42:BG:16:ARG:NH1	42:BG:16:ARG:HG3	2.28	0.48
46:BN:1:MET:C	46:BN:2:LYS:HD2	2.34	0.48
46:DN:57:ALA:O	46:DN:58:ASP:O	2.32	0.48
36:DA:1109:C:C2'	36:DA:1110:G:H5'	2.44	0.48
46:DN:55:VAL:HG22	46:DN:126:PRO:HA	1.96	0.48
11:AK:30:VAL:O	11:AK:30:VAL:HG23	2.13	0.48
36:DA:118:A:H5'	36:DA:119:A:C8	2.48	0.48
47:BO:111:PHE:HB3	47:BO:114:ILE:HD13	1.95	0.48
52:DT:11:GLU:H	52:DT:11:GLU:CD	2.17	0.48
2:AB:134:GLU:C	2:AB:136:VAL:N	2.66	0.48
52:DT:128:GLU:O	52:DT:129:ARG:C	2.52	0.48
36:BA:1717:G:H2'	36:BA:1718:G:H5''	1.95	0.48
1:CA:436:C:H4'	4:CD:157:LEU:HD11	1.95	0.48
1:AA:434:U:H2'	1:AA:435:C:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:132:VAL:HG11	58:BZ:81:ARG:HD3	1.95	0.48
18:CR:40:LEU:O	18:CR:42:ARG:N	2.47	0.48
36:DA:764:A:N3	39:DD:213:ARG:NH1	2.62	0.48
48:BP:88:LEU:HD11	48:BP:95:VAL:HG11	1.96	0.48
1:CA:383:A:C2'	1:CA:384:G:H5'	2.44	0.48
36:BA:1217:C:N3	36:BA:1218:C:C5	2.81	0.48
1:AA:345:C:O5'	52:BT:41:ARG:NH2	2.47	0.48
36:DA:363(E):U:H2'	36:DA:363(F):A:H1'	1.95	0.48
36:BA:2199:A:H3'	36:BA:2200:C:C6	2.48	0.48
1:CA:1119:C:O2'	1:CA:1120:G:H5'	2.13	0.48
1:AA:1269:A:H2	1:AA:1312:G:N3	2.11	0.48
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.29	0.48
36:DA:1835:G:C5'	36:DA:1836:C:OP2	2.61	0.48
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.14	0.48
36:BA:902:C:H2'	36:BA:903:C:C6	2.49	0.48
1:CA:711:G:H2'	1:CA:712:A:C8	2.48	0.48
44:DJ:14:UNK:C	44:DJ:16:UNK:N	2.75	0.48
8:CH:72:PRO:O	8:CH:73:ASP:HB3	2.14	0.48
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.49	0.48
36:DA:2446:G:H2'	36:DA:2447:G:H5''	1.95	0.48
52:BT:14:TYR:CD1	52:BT:14:TYR:N	2.81	0.48
44:BJ:97:UNK:HA	44:BJ:132:UNK:HA	1.95	0.48
9:AI:33:PHE:C	9:AI:35:GLU:H	2.17	0.48
20:CT:77:ALA:O	20:CT:80:ARG:HB2	2.14	0.48
25:CZ:95:GLY:O	25:CZ:99:MET:HE2	2.13	0.48
28:B2:60:LEU:HD23	28:B2:60:LEU:O	2.14	0.48
57:BY:31:LEU:HD22	57:BY:31:LEU:N	2.29	0.48
36:BA:611:C:O5'	36:BA:611:C:H6	1.97	0.48
36:DA:1190:G:H5'	48:DP:35:HIS:N	2.29	0.48
39:DD:33:LEU:HD13	39:DD:102:LYS:HB2	1.95	0.48
39:DD:68:LYS:O	39:DD:68:LYS:HG2	2.13	0.48
26:D0:43:THR:N	36:DA:2331:G:H4'	2.19	0.48
42:BG:13:GLU:O	42:BG:14:GLU:HB3	2.13	0.48
53:BU:95:LEU:HD11	54:BV:11:GLN:O	2.13	0.48
57:DY:77:PRO:O	57:DY:78:ALA:CB	2.61	0.48
36:DA:827:U:H2'	36:DA:2068:U:C2	2.48	0.48
36:DA:850:C:O2'	36:DA:851:U:H5'	2.13	0.48
1:CA:197:A:C5	1:CA:221:C:H4'	2.49	0.48
51:BS:92:TYR:O	51:BS:93:LYS:CB	2.61	0.48
31:D5:36:CYS:SG	31:D5:48:GLU:O	2.72	0.48
49:DQ:134:ARG:NE	58:DZ:122:ARG:HH21	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:84:ALA:CB	50:BR:85:PRO:HD3	2.30	0.48
51:DS:54:LEU:HD13	51:DS:58:LEU:N	2.28	0.48
36:DA:1142(A):A:H3'	36:DA:1142(A):A:OP1	2.13	0.48
8:AH:4:ASP:HB3	8:AH:7:ALA:HB3	1.96	0.48
52:DT:92:GLY:CA	52:DT:120:ARG:NH2	2.71	0.48
36:BA:606:U:H4'	36:BA:658:C:H4'	1.94	0.48
52:BT:107:ASP:OD2	52:BT:109:GLU:HG3	2.13	0.48
10:CJ:7:LYS:CB	10:CJ:97:GLU:HB2	2.43	0.48
36:DA:588:U:H2'	36:DA:589:C:H6	1.79	0.48
9:CI:4:TYR:CG	9:CI:88:TYR:HB2	2.48	0.48
42:BG:77:ILE:HG12	42:BG:77:ILE:O	2.14	0.48
36:DA:896:A:N6	58:DZ:113:ALA:HA	2.29	0.48
19:CS:16:LEU:O	19:CS:18:LYS:N	2.47	0.48
57:BY:17:SER:OG	57:BY:18:GLY:N	2.45	0.48
36:BA:1337:G:H2'	36:BA:1338:G:O4'	2.14	0.48
51:BS:106:ARG:CG	51:BS:106:ARG:NH1	2.75	0.48
43:DH:149:ARG:CA	43:DH:162:ILE:HD11	2.40	0.48
49:DQ:21:THR:OG1	49:DQ:99:PRO:O	2.32	0.48
6:CF:4:TYR:OH	6:CF:69:GLU:HA	2.13	0.48
36:BA:2050:C:H1'	40:BE:156:MET:CE	2.44	0.48
1:AA:673:G:H5''	6:AF:87:ARG:NH1	2.29	0.48
25:AZ:359:VAL:C	25:AZ:361:MET:H	2.17	0.48
3:AC:77:ILE:O	3:AC:83:ARG:HB3	2.13	0.48
3:AC:83:ARG:O	3:AC:85:ARG:N	2.46	0.48
4:CD:176:LEU:HA	4:CD:183:GLY:HA2	1.96	0.48
36:DA:1058:G:C3'	36:DA:1059:G:H5''	2.44	0.48
1:CA:1392:G:N2	1:CA:1502:A:C8	2.81	0.48
47:BO:115:VAL:HG13	47:BO:121:VAL:HG21	1.96	0.48
13:CM:97:PRO:HA	13:CM:110:ARG:CD	2.41	0.48
46:BN:15:LEU:HD13	46:BN:16:ILE:N	2.28	0.48
1:CA:1147:C:HO2'	9:CI:5:TYR:HH	1.62	0.48
39:DD:246:PRO:HB2	39:DD:254:THR:HG22	1.95	0.48
50:DR:20:LEU:HD21	50:DR:40:LYS:HD3	1.95	0.48
50:BR:10:LEU:O	50:BR:11:ASN:HB2	2.13	0.48
7:AG:28:ASN:OD1	7:AG:36:LYS:HE2	2.14	0.48
57:DY:56:PRO:O	57:DY:58:GLY:N	2.47	0.48
36:DA:1569:A:O2'	39:DD:38:LYS:HE2	2.13	0.48
10:CJ:40:LEU:HD12	10:CJ:69:ASN:HB3	1.95	0.48
1:CA:1327:C:O2'	1:CA:1328:C:H5'	2.14	0.48
1:AA:489:C:O2'	1:AA:490:G:H5'	2.14	0.48
34:D8:26:LYS:HD3	34:D8:47:LYS:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:15:ILE:HD13	30:D4:21:VAL:HG13	1.95	0.48
36:DA:2526:G:H5'	36:DA:2742:C:O2'	2.14	0.48
27:B1:67:ILE:N	27:B1:68:PRO:HD2	2.27	0.48
36:DA:1767:C:O2'	36:DA:1768:U:H5'	2.14	0.48
36:BA:443:A:H1'	36:BA:1201:C:O4'	2.14	0.48
44:DJ:93:UNK:O	44:DJ:96:UNK:CB	2.62	0.48
27:D1:69:LYS:O	27:D1:73:LEU:HD13	2.12	0.48
36:BA:2845:G:O2'	36:BA:2846:G:H5'	2.14	0.48
52:DT:134:GLU:O	52:DT:135:ALA:HB3	2.13	0.48
36:DA:1438:U:O5'	36:DA:1438:U:H6	1.96	0.48
56:BX:59:VAL:HG12	56:BX:59:VAL:O	2.13	0.48
1:AA:990:C:H2'	1:AA:991:U:O4'	2.14	0.48
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.49	0.48
36:BA:2107:C:C1'	36:BA:2182:G:H22	2.27	0.48
53:DU:83:LEU:HA	53:DU:88:ILE:CG1	2.44	0.48
53:DU:83:LEU:H	53:DU:83:LEU:CD1	2.26	0.48
36:BA:1899:G:H22	36:BA:1902:C:N4	2.10	0.48
4:CD:194:LEU:N	4:CD:194:LEU:HD22	2.28	0.48
1:CA:978:A:N7	1:CA:1319:A:C2	2.81	0.48
52:DT:32:TYR:O	52:DT:33:LYS:HB2	2.14	0.48
42:DG:52:ILE:HB	42:DG:54:GLU:CG	2.43	0.48
34:B8:4:MET:HB2	36:BA:592:G:O2'	2.14	0.48
26:D0:40:GLN:HE22	26:D0:43:THR:CA	2.07	0.48
36:DA:1639:U:H4'	36:DA:2699:C:H4'	1.94	0.48
47:BO:71:ARG:NH2	47:BO:122:LEU:O	2.46	0.48
25:AZ:378:VAL:O	25:AZ:380:LEU:HG	2.14	0.48
48:BP:47:ASP:HB3	48:BP:48:PRO:C	2.34	0.48
1:CA:173:U:H5''	1:CA:197:A:O4'	2.13	0.48
36:DA:2189:U:C3'	36:DA:2190:G:H4'	2.42	0.48
34:D8:52:LYS:N	34:D8:53:PRO:CD	2.75	0.48
28:D2:68:ARG:O	28:D2:69:ARG:HG2	2.14	0.48
29:D3:35:ARG:HD3	29:D3:37:LEU:HD11	1.94	0.48
34:D8:13:ARG:HA	48:DP:63:PRO:HA	1.96	0.48
36:BA:2092:U:H4'	36:BA:2093:G:C5'	2.30	0.48
48:BP:105:LEU:O	48:BP:106:LEU:HB2	2.14	0.48
25:AZ:24:LYS:C	25:AZ:26:THR:H	2.15	0.48
41:DF:133:ASN:HD22	41:DF:133:ASN:H	1.60	0.48
24:AY:40:C:H2'	24:AY:41:C:C5'	2.33	0.48
36:DA:480:A:H3'	36:DA:481:G:H5''	1.96	0.48
22:AW:61:C:O2'	22:AW:62:C:H6	1.95	0.48
40:BE:45:THR:O	40:BE:46:ALA:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:30:ASN:HD21	58:DZ:32:HIS:HB2	1.78	0.48
42:DG:10:LYS:O	42:DG:15:VAL:HG23	2.13	0.48
52:BT:24:PRO:HD3	52:BT:52:ILE:CD1	2.44	0.48
25:CZ:265:THR:HG23	25:CZ:291:ARG:O	2.14	0.48
12:CL:80:HIS:CD2	24:CY:68:C:O3'	2.67	0.48
9:AI:89:ASN:H	9:AI:90:PRO:CD	2.26	0.48
36:DA:1019:U:C2'	36:DA:1021:A:H2	2.27	0.48
55:BW:3:ALA:O	55:BW:107:LEU:HD12	2.13	0.48
43:DH:54:ARG:NH1	43:DH:62:LYS:HG3	2.29	0.48
1:AA:9:G:C5'	5:AE:122:GLU:OE1	2.54	0.48
36:DA:747:U:C4	36:DA:2613:U:C5	3.02	0.48
27:B1:76:ARG:HH12	27:B1:95:LEU:CD2	2.21	0.48
48:DP:77:ARG:HG3	48:DP:78:PRO:CD	2.44	0.48
5:AE:33:VAL:HG21	5:AE:109:ILE:HG12	1.95	0.48
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.14	0.48
38:BC:195:ALA:O	38:BC:196:LEU:C	2.52	0.48
22:AV:29:G:N2	22:AV:30:G:H1'	2.29	0.48
1:CA:1086:U:C5	1:CA:1099:G:N2	2.82	0.48
36:BA:483:A:H3'	36:BA:484:C:H6	1.79	0.48
1:AA:368:U:C5	25:AZ:234:ARG:NE	2.82	0.48
26:D0:25:ARG:HD2	26:D0:29:GLN:HE22	1.77	0.48
22:CW:64:A:H2'	22:CW:65:G:C8	2.42	0.48
1:AA:977:A:O2'	1:AA:978:A:H5'	2.13	0.48
17:AQ:76:LEU:HD12	17:AQ:77:VAL:N	2.25	0.48
16:AP:21:VAL:HG22	16:AP:21:VAL:O	2.14	0.48
36:DA:391:G:H5'	36:DA:412:A:H4'	1.94	0.48
24:CY:25:C:H4'	36:DA:1914:C:O2'	2.14	0.48
40:DE:45:THR:O	40:DE:46:ALA:CB	2.62	0.48
29:B3:22:ALA:HA	29:B3:46:ASN:HD21	1.78	0.48
1:CA:437:U:H2'	1:CA:438:G:H5'	1.96	0.48
55:DW:12:ILE:HD12	55:DW:42:ARG:HH11	1.78	0.48
7:AG:58:PRO:C	7:AG:60:LYS:H	2.17	0.48
2:CB:212:GLN:NE2	2:CB:216:SER:HB2	2.28	0.48
6:CF:38:GLU:O	6:CF:39:LYS:C	2.51	0.48
36:BA:2389:G:C5'	36:BA:2390:U:H5'	2.44	0.48
36:DA:515:A:C8	36:DA:516:C:C5	3.01	0.48
36:DA:106:C:H2'	36:DA:107:C:C6	2.49	0.48
36:DA:1290:C:H2'	36:DA:1291:C:C6	2.48	0.48
35:D9:16:VAL:HG11	36:DA:1032:A:O3'	2.14	0.48
25:AZ:39:ASN:HA	25:AZ:41:ASN:N	2.28	0.48
37:DB:37:C:C2'	37:DB:38:C:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:4:PRO:O	47:BO:5:GLN:CB	2.60	0.48
36:DA:1231:G:H2'	36:DA:1232:G:C8	2.49	0.48
36:BA:2656:U:N3	36:BA:2665:A:H2	2.11	0.48
36:BA:2576:G:H8	36:BA:2581:G:O6	1.97	0.48
43:BH:58:GLU:O	43:BH:62:LYS:HB2	2.13	0.48
53:BU:15:LYS:O	53:BU:19:LYS:HG3	2.14	0.48
36:BA:2677:G:H2'	36:BA:2678:C:H6	1.79	0.48
1:AA:1485:U:O2'	1:AA:1486:G:H5'	2.14	0.48
41:DF:131:GLY:O	41:DF:138:GLU:HB3	2.14	0.48
36:BA:590:A:H2'	36:BA:591:C:C6	2.47	0.48
36:BA:1594:G:H2'	36:BA:1595:G:O4'	2.14	0.48
36:DA:1655:A:H1'	40:DE:113:PHE:CE1	2.49	0.48
41:DF:27:GLU:OE1	41:DF:27:GLU:HA	2.14	0.48
24:AY:49:G:O2'	24:AY:50:G:H5'	2.14	0.48
1:AA:902:G:H2'	1:AA:903:G:H8	1.79	0.48
1:AA:720:C:H2'	1:AA:721:G:C8	2.49	0.48
36:BA:2192:G:H2'	36:BA:2193:G:C5'	2.44	0.48
39:DD:58:HIS:CD2	39:DD:59:LYS:H	2.32	0.48
25:CZ:331:HIS:CD2	25:CZ:331:HIS:N	2.81	0.48
25:CZ:88:TYR:O	25:CZ:92:MET:HB2	2.14	0.48
36:DA:2378:A:N7	36:DA:2379:G:H1'	2.29	0.48
51:DS:35:ILE:O	51:DS:35:ILE:HG12	2.13	0.48
1:AA:1126:U:H5	1:AA:1127:G:C6	2.32	0.48
1:AA:1131:G:H2'	1:AA:1132:C:C5	2.49	0.48
28:B2:50:ILE:HG22	28:B2:51:ARG:N	2.29	0.48
28:B2:35:LEU:HD11	36:BA:61:G:O2'	2.14	0.48
41:BF:157:VAL:HG22	41:BF:193:VAL:O	2.14	0.48
42:DG:51:ARG:NH1	42:DG:53:LEU:H	2.12	0.48
42:BG:172:LEU:HD23	42:BG:172:LEU:C	2.34	0.48
42:BG:56:ALA:O	42:BG:60:LEU:HB2	2.14	0.48
25:AZ:161:TYR:OH	61:AZ:502:KIR:H413	2.14	0.48
25:AZ:21:ASP:O	25:AZ:21:ASP:OD1	2.31	0.48
30:D4:22:ILE:HD12	30:D4:22:ILE:N	2.07	0.48
25:CZ:345:ARG:NH1	25:CZ:345:ARG:HG2	2.28	0.48
56:BX:12:VAL:CB	56:BX:17:ALA:HB1	2.39	0.48
37:DB:21:G:H2'	37:DB:22:U:H5'	1.96	0.48
36:DA:2145:C:H5''	36:DA:2146:C:OP2	2.14	0.48
36:DA:1338:G:N3	36:DA:1338:G:H2'	2.29	0.48
58:DZ:28:MET:HA	58:DZ:88:PHE:O	2.13	0.48
53:DU:80:ILE:O	53:DU:84:LYS:HB2	2.14	0.48
56:DX:30:VAL:HG23	56:DX:31:HIS:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:52:LEU:HD23	40:BE:75:VAL:HB	1.96	0.48
24:CY:56:C:C5	36:DA:1067:A:C2	3.00	0.48
51:DS:53:SER:O	51:DS:55:ALA:N	2.40	0.48
38:DC:113:VAL:HG12	38:DC:138:PRO:CG	2.42	0.48
1:AA:1015:A:H4'	14:AN:15:LYS:NZ	2.29	0.48
46:DN:12:ARG:HG3	46:DN:12:ARG:O	2.13	0.48
39:BD:24:ILE:HD13	39:BD:24:ILE:C	2.34	0.48
27:D1:44:PRO:HG2	27:D1:46:LEU:CD2	2.44	0.48
23:AX:13:A:H8	23:AX:13:A:O5'	1.96	0.48
11:CK:58:PRO:HB2	11:CK:93:GLN:HG3	1.95	0.48
52:BT:13:ARG:HH22	52:BT:15:VAL:HG11	1.79	0.48
22:CW:59:U:C2'	22:CW:60:U:H5'	2.40	0.48
28:D2:33:MET:SD	56:DX:5:TYR:HB3	2.54	0.48
40:DE:7:VAL:HG23	40:DE:194:GLY:O	2.14	0.48
2:AB:119:GLU:HA	2:AB:119:GLU:OE1	2.14	0.48
1:AA:1255:G:H3'	1:AA:1279:A:H61	1.78	0.48
46:DN:108:PRO:HG2	46:DN:113:GLY:HA3	1.95	0.48
36:DA:2073:C:H2'	36:DA:2074:U:H6	1.78	0.48
50:BR:72:ASP:OD2	50:BR:75:LEU:HB2	2.14	0.48
38:DC:156:ILE:HD11	38:DC:160:ARG:NH2	2.29	0.48
48:BP:12:ALA:O	48:BP:13:ASN:O	2.32	0.48
11:CK:43:SER:OG	11:CK:47:VAL:HG21	2.14	0.48
15:AO:39:LEU:HD23	15:AO:43:LEU:HG	1.95	0.48
1:AA:1044:A:H2'	1:AA:1045:C:O5'	2.13	0.48
36:DA:438:G:O2'	36:DA:440:G:H5'	2.13	0.48
43:BH:139:GLN:NE2	43:BH:140:LYS:HA	2.28	0.48
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.44	0.48
4:CD:79:PHE:CD2	4:CD:207:TYR:HD2	2.32	0.48
25:AZ:322:VAL:O	25:AZ:323:LEU:O	2.32	0.48
58:DZ:185:GLU:HG2	58:DZ:186:GLU:N	2.29	0.48
36:BA:409:C:O2'	36:BA:410:G:H5'	2.14	0.48
9:CI:117:HIS:CD2	9:CI:123:PRO:HA	2.49	0.48
4:CD:156:GLU:H	4:CD:156:GLU:HG3	1.39	0.48
36:DA:2682:U:H6	36:DA:2682:U:H5'	1.79	0.48
36:DA:2150:U:H2'	36:DA:2151:G:C8	2.48	0.48
36:BA:2102:U:C5	36:BA:2103:C:N3	2.82	0.47
54:DV:39:LEU:HA	54:DV:47:VAL:CG1	2.44	0.47
42:BG:7:LEU:HD22	42:BG:100:TRP:CZ3	2.49	0.47
36:DA:336:C:O3'	57:DY:7:VAL:HG22	2.14	0.47
48:DP:48:PRO:O	48:DP:49:ARG:C	2.52	0.47
39:BD:32:SER:OG	39:BD:36:PRO:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1568:G:OP2	39:BD:63:ARG:NH2	2.47	0.47
48:BP:7:ARG:HB3	48:BP:8:PRO:CD	2.44	0.47
42:DG:62:LEU:HB3	42:DG:143:GLU:HB3	1.96	0.47
36:DA:142:A:H5'	36:DA:142(A):C:OP2	2.14	0.47
34:B8:14:VAL:HG21	34:B8:22:VAL:CG1	2.43	0.47
12:AL:86:ARG:NH2	12:AL:99:HIS:CD2	2.82	0.47
36:BA:2334:G:C5'	51:BS:13:ARG:HD3	2.42	0.47
51:BS:16:ASN:O	51:BS:18:ILE:N	2.47	0.47
36:BA:1019:U:H2'	36:BA:1021:A:C2	2.48	0.47
29:B3:35:ARG:CB	29:B3:35:ARG:HH11	2.13	0.47
24:AY:27:C:H2'	24:AY:28:C:H6	1.79	0.47
36:DA:2876:G:OP1	52:DT:4:GLY:HA3	2.14	0.47
13:AM:11:ARG:NE	13:AM:12:ASN:HD21	2.12	0.47
1:CA:358:U:H4'	25:CZ:234:ARG:CA	2.44	0.47
52:DT:24:PRO:HD3	52:DT:52:ILE:HD12	1.96	0.47
10:CJ:38:ILE:HG13	10:CJ:71:LEU:O	2.14	0.47
36:BA:2523:G:H2'	36:BA:2524:G:C5'	2.44	0.47
40:BE:22:PRO:O	40:BE:185:LYS:O	2.31	0.47
38:DC:199:HIS:O	38:DC:201:PRO:HD3	2.14	0.47
41:DF:200:GLU:O	41:DF:204:ASN:ND2	2.46	0.47
10:AJ:90:LEU:H	10:AJ:91:PRO:HD3	1.79	0.47
1:AA:192:U:H2'	1:AA:193:C:C6	2.43	0.47
36:BA:2472:G:C5'	36:BA:2473:U:H5''	2.40	0.47
18:CR:31:LEU:O	18:CR:69:THR:HG21	2.14	0.47
1:CA:262:A:H4'	20:CT:74:LYS:HG3	1.96	0.47
58:DZ:124:ILE:O	58:DZ:124:ILE:HG13	2.14	0.47
36:BA:958:U:O4	49:BQ:17:LEU:HG	2.14	0.47
36:DA:2873:A:O4'	50:DR:8:ARG:NH2	2.47	0.47
2:CB:30:ARG:NE	2:CB:31:TYR:CE1	2.81	0.47
22:AW:4:C:H2'	22:AW:5:G:H8	1.78	0.47
25:AZ:268:THR:CG2	25:AZ:289:LEU:HG	2.44	0.47
36:DA:2113:U:H2'	36:DA:2114:A:C8	2.40	0.47
36:DA:990:A:C5	36:DA:1186:G:H1'	2.49	0.47
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.49	0.47
38:BC:132:GLY:N	38:BC:133:PRO:CD	2.76	0.47
27:B1:81:LYS:O	27:B1:82:LEU:HD23	2.13	0.47
46:DN:21:LYS:HD2	46:DN:26:LEU:HB2	1.96	0.47
1:CA:686:U:H2'	1:CA:687:A:H8	1.79	0.47
9:AI:99:LEU:O	9:AI:100:GLY:C	2.52	0.47
40:BE:87:GLU:HG3	40:BE:88:GLY:N	2.28	0.47
1:CA:692:U:O4	11:CK:52:GLY:O	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:299:GLU:O	25:CZ:300:ARG:O	2.31	0.47
1:AA:449:C:O2	16:AP:42:ARG:HD2	2.14	0.47
22:CV:59:U:O2'	22:CV:60:U:H6	1.97	0.47
22:CW:34:G:N1	23:CX:18:G:C6	2.73	0.47
1:CA:1217:C:OP1	14:CN:9:LYS:HE3	2.14	0.47
15:CO:79:ARG:O	15:CO:82:ILE:HG22	2.14	0.47
36:BA:30:G:H2'	36:BA:31:C:C6	2.48	0.47
29:D3:9:VAL:HG11	29:D3:55:ARG:HB2	1.96	0.47
46:BN:9:VAL:HG13	46:BN:39:ARG:NH2	2.29	0.47
36:BA:2869:G:O2'	50:BR:61:HIS:HE1	1.97	0.47
13:AM:81:LEU:HD22	13:AM:81:LEU:H	1.78	0.47
34:D8:6:THR:CG2	36:DA:243:U:OP1	2.62	0.47
36:DA:1292:U:O2'	36:DA:1293:C:H5'	2.14	0.47
25:AZ:38:GLU:HG3	25:AZ:39:ASN:OD1	2.13	0.47
38:BC:74:VAL:HG12	38:BC:75:LEU:N	2.29	0.47
5:AE:102:ALA:CB	5:AE:120:THR:HG21	2.44	0.47
1:AA:416:G:O2'	1:AA:417:C:H5'	2.14	0.47
41:BF:28:ILE:HD13	41:BF:28:ILE:H	1.79	0.47
9:CI:26:VAL:HG13	9:CI:61:ALA:HB3	1.94	0.47
15:CO:69:TYR:O	15:CO:72:ARG:HB3	2.14	0.47
1:CA:282:A:C6	1:CA:283:C:C2	3.02	0.47
36:DA:272(B):G:H2'	36:DA:272(C):G:H8	1.79	0.47
45:DK:30:UNK:O	45:DK:31:UNK:C	2.62	0.47
49:DQ:139:GLU:OE1	49:DQ:139:GLU:CA	2.62	0.47
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.96	0.47
36:BA:1432:C:H2'	36:BA:1433:U:O4'	2.14	0.47
38:BC:120:MET:HA	38:BC:123:VAL:CG1	2.35	0.47
36:BA:2103:C:H2'	36:BA:2186:G:N2	2.29	0.47
1:AA:1145:C:O2'	1:AA:1146:A:O5'	2.27	0.47
36:BA:330:A:O2'	36:BA:331:A:C8	2.61	0.47
4:CD:185:PHE:CZ	4:CD:188:LEU:HA	2.50	0.47
36:BA:2133:G:C4	36:BA:2157:G:N1	2.82	0.47
1:CA:972:C:OP2	10:CJ:57:LYS:HG3	2.14	0.47
31:B5:57:VAL:O	31:B5:58:LEU:HD12	2.14	0.47
54:BV:62:LEU:CD2	54:BV:62:LEU:N	2.76	0.47
20:AT:45:GLN:HB2	20:AT:91:LEU:HD22	1.97	0.47
19:AS:22:LEU:HD11	19:AS:28:LYS:O	2.14	0.47
56:DX:44:GLU:HB2	56:DX:51:VAL:HG23	1.96	0.47
36:DA:221:A:C8	36:DA:266:G:C6	3.02	0.47
36:BA:2842:G:O2'	36:BA:2843:G:H5'	2.13	0.47
48:BP:93:GLY:O	48:BP:123:LEU:HD12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:105:A:OP1	58:BZ:72:ARG:NH1	2.47	0.47
36:DA:2399:G:H22	36:DA:2418:A:H1'	1.78	0.47
36:DA:1503:U:H2'	36:DA:1504:C:C6	2.49	0.47
58:DZ:122:ARG:HD3	58:DZ:122:ARG:N	2.29	0.47
32:D6:5:VAL:HB	32:D6:8:LYS:HB2	1.96	0.47
46:BN:22:THR:HA	46:BN:61:ARG:O	2.13	0.47
50:BR:63:ARG:HA	50:BR:80:PHE:CE2	2.49	0.47
48:DP:114:ILE:CG2	48:DP:130:PHE:CD2	2.97	0.47
36:BA:1754:C:OP2	52:BT:113:LYS:HE2	2.14	0.47
36:DA:1141:U:C6	46:DN:63:THR:HB	2.49	0.47
36:DA:2692:C:H1'	36:DA:2847:U:O2'	2.14	0.47
36:DA:448:U:H1'	41:DF:84:VAL:CG2	2.44	0.47
13:CM:84:ILE:HG21	19:CS:60:VAL:CG2	2.37	0.47
39:DD:49:ILE:O	39:DD:49:ILE:HG13	2.14	0.47
41:DF:5:ALA:HB3	41:DF:18:ARG:O	2.14	0.47
1:CA:1241:G:H2'	1:CA:1242:C:C5	2.48	0.47
3:AC:77:ILE:C	3:AC:83:ARG:HB3	2.34	0.47
17:CQ:63:ARG:O	17:CQ:65:ILE:HG13	2.13	0.47
1:AA:197:A:N6	1:AA:221:C:C5'	2.77	0.47
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.95	0.47
12:AL:24:VAL:CG1	12:AL:27:LEU:HD13	2.41	0.47
46:DN:96:GLU:H	46:DN:96:GLU:CD	2.16	0.47
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.95	0.47
36:DA:2851:A:H2'	36:DA:2852:G:H8	1.79	0.47
20:CT:41:ILE:HA	20:CT:44:ALA:HB3	1.96	0.47
40:DE:47:VAL:HG21	40:DE:86:PRO:CD	2.45	0.47
36:BA:1473:G:N3	36:BA:1474:C:H1'	2.29	0.47
36:DA:382:G:H1	36:DA:392:C:N4	2.11	0.47
27:B1:81:LYS:HZ1	36:BA:156:U:H4'	1.80	0.47
36:DA:291:C:H2'	36:DA:292:C:H6	1.79	0.47
53:DU:34:LYS:HA	53:DU:34:LYS:CE	2.42	0.47
16:AP:45:THR:O	16:AP:47:ASP:N	2.47	0.47
50:DR:12:ARG:O	50:DR:17:ARG:NH2	2.43	0.47
25:AZ:231:ILE:HD12	25:AZ:231:ILE:N	2.29	0.47
36:DA:729:G:H5'	36:DA:730:C:H5''	1.97	0.47
36:DA:2889:C:H2'	36:DA:2891:G:O4'	2.14	0.47
1:CA:609:A:H2'	1:CA:610:G:C5'	2.43	0.47
25:CZ:39:ASN:HA	25:CZ:41:ASN:N	2.28	0.47
36:BA:703:U:H2'	36:BA:704:G:H5'	1.95	0.47
36:DA:2457:U:H2'	36:DA:2458:G:H5'	1.95	0.47
43:BH:139:GLN:C	43:BH:141:VAL:N	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:34:THR:CG2	27:B1:35:THR:N	2.77	0.47
58:DZ:48:PHE:O	58:DZ:52:SER:N	2.47	0.47
5:AE:20:GLN:NE2	5:AE:25:ARG:CZ	2.77	0.47
9:CI:9:ARG:HG2	9:CI:14:VAL:HG13	1.96	0.47
5:AE:45:PHE:CE1	5:AE:129:ILE:HD11	2.49	0.47
44:BJ:11:UNK:C	44:BJ:13:UNK:N	2.76	0.47
36:BA:654(H):G:C3'	36:BA:654(I):C:H5'	2.45	0.47
36:BA:208:C:H2'	36:BA:209:C:C6	2.48	0.47
36:DA:645:C:H5'	36:DA:646:A:OP2	2.14	0.47
25:AZ:171:ILE:N	25:AZ:171:ILE:HD12	2.29	0.47
1:CA:764:C:H2'	1:CA:765:G:O4'	2.14	0.47
2:AB:169:LYS:HD3	2:AB:169:LYS:O	2.13	0.47
6:AF:77:ARG:HG2	6:AF:77:ARG:HH11	1.80	0.47
36:DA:1780:A:H5'	36:DA:1780:A:H8	1.78	0.47
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.77	0.47
36:DA:214:G:H1'	36:DA:216:A:O2'	2.14	0.47
25:CZ:4:GLU:HA	25:CZ:276:THR:HB	1.96	0.47
36:BA:2101:G:H1	36:BA:2189:U:H3	1.63	0.47
39:DD:35:LYS:CB	39:DD:63:ARG:HA	2.43	0.47
26:D0:69:PHE:O	26:D0:70:GLN:HB2	2.15	0.47
51:DS:84:GLN:HA	51:DS:106:ARG:HA	1.96	0.47
51:DS:89:ARG:HH11	51:DS:89:ARG:CG	2.26	0.47
3:CC:32:LEU:O	3:CC:35:GLU:N	2.48	0.47
1:CA:1323:G:O2'	1:CA:1324:A:H5'	2.13	0.47
41:BF:125:LEU:CD2	41:BF:125:LEU:N	2.77	0.47
41:BF:7:TYR:HD1	41:BF:125:LEU:O	1.98	0.47
41:BF:147:GLY:O	41:BF:191:ARG:NH1	2.47	0.47
41:BF:125:LEU:HD12	41:BF:196:LEU:CD2	2.44	0.47
36:DA:820:A:O2'	36:DA:821:A:H5'	2.15	0.47
26:D0:40:GLN:HE21	26:D0:57:PHE:HB3	1.79	0.47
42:BG:10:LYS:O	42:BG:14:GLU:HG3	2.14	0.47
43:DH:124:GLU:HB2	43:DH:132:ARG:HG2	1.95	0.47
42:DG:83:ARG:O	42:DG:85:GLY:N	2.47	0.47
58:DZ:152:ALA:O	58:DZ:155:LEU:CD2	2.62	0.47
56:BX:14:SER:H	56:BX:17:ALA:HB3	1.79	0.47
36:BA:651:G:O2'	36:BA:652:C:H5'	2.14	0.47
36:BA:1682:G:H5'	36:BA:1762:A:HO2'	1.78	0.47
53:BU:85:LYS:HD3	53:BU:117:GLN:NE2	2.11	0.47
40:BE:11:MET:CB	40:BE:24:THR:HA	2.44	0.47
2:CB:61:LEU:HD11	2:CB:160:ASP:HB2	1.96	0.47
5:CE:93:PRO:HD2	8:CH:105:ARG:NH1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:133:ARG:HG2	49:DQ:134:ARG:N	2.29	0.47
46:BN:90:MET:CE	46:BN:94:HIS:HB2	2.44	0.47
36:DA:1602:U:C3'	36:DA:1603:A:C5'	2.86	0.47
32:D6:15:GLU:OE1	32:D6:18:ARG:CG	2.62	0.47
1:AA:1456:G:C2	1:AA:1457:G:H1'	2.48	0.47
20:CT:61:SER:C	20:CT:65:LYS:HG3	2.35	0.47
20:CT:59:ALA:HA	20:CT:62:LEU:HD12	1.95	0.47
36:DA:527:C:O5'	36:DA:2779:U:H5	1.97	0.47
9:AI:88:TYR:O	9:AI:89:ASN:CB	2.60	0.47
13:AM:40:ASN:O	13:AM:43:THR:OG1	2.31	0.47
36:DA:639:U:H2'	36:DA:640:C:C5	2.49	0.47
48:DP:9:ASN:N	48:DP:10:PRO:CD	2.77	0.47
48:DP:6:LEU:HG	48:DP:9:ASN:HB3	1.95	0.47
55:DW:73:ALA:HB3	55:DW:106:ILE:HD11	1.95	0.47
48:BP:79:ARG:HH11	48:BP:79:ARG:HB3	1.78	0.47
42:DG:121:ASN:HB3	42:DG:124:SER:HB2	1.95	0.47
25:CZ:356:PRO:HG2	25:CZ:369:THR:O	2.14	0.47
36:DA:654(E):G:H2'	36:DA:654(F):C:H5'	1.96	0.47
48:DP:71:VAL:N	48:DP:72:PRO:CD	2.77	0.47
1:AA:1503:A:H62	23:AX:16:A:H5'	1.79	0.47
26:B0:42:GLY:O	26:B0:57:PHE:CG	2.67	0.47
11:CK:57:THR:OG1	11:CK:58:PRO:HD2	2.13	0.47
4:CD:127:THR:HB	4:CD:147:ALA:O	2.14	0.47
2:CB:12:GLU:C	2:CB:14:GLY:N	2.67	0.47
46:BN:1:MET:HE1	46:BN:3:THR:OG1	2.12	0.47
12:AL:20:LYS:HD2	12:AL:20:LYS:N	2.26	0.47
40:DE:93:VAL:C	40:DE:95:ILE:H	2.18	0.47
36:BA:1805:U:C2	36:BA:1813:G:N2	2.82	0.47
9:CI:53:VAL:O	9:CI:53:VAL:HG23	2.14	0.47
36:BA:1809:A:H2'	36:BA:1810:A:C8	2.49	0.47
16:AP:18:ARG:HG3	16:AP:35:LYS:HE2	1.97	0.47
3:AC:13:GLY:HA3	14:AN:57:ARG:HE	1.79	0.47
40:BE:144:ARG:HB3	40:BE:145:LYS:H	1.48	0.47
4:CD:49:ARG:O	4:CD:51:PRO:CD	2.62	0.47
36:DA:2469:A:H2'	36:DA:2470:G:C5'	2.45	0.47
36:DA:2469:A:H61	36:DA:2481:G:H1'	1.79	0.47
1:CA:332:G:H2'	1:CA:333:G:H8	1.79	0.47
38:DC:103:ILE:HA	38:DC:107:TRP:HB2	1.95	0.47
27:B1:29:GLY:O	27:B1:30:VAL:O	2.31	0.47
42:DG:70:VAL:O	42:DG:71:THR:HB	2.14	0.47
18:AR:67:ALA:O	18:AR:71:LYS:HG3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:20:MET:HE3	47:BO:44:LYS:HE3	1.96	0.47
36:DA:41:C:N4	36:DA:437:G:H1	2.13	0.47
36:DA:309:G:O2'	36:DA:329:G:H2'	2.14	0.47
3:CC:11:ARG:HH11	3:CC:11:ARG:HG2	1.77	0.47
36:BA:2728:U:H2'	36:BA:2729:G:C8	2.49	0.47
25:CZ:388:ILE:N	25:CZ:396:GLY:O	2.46	0.47
36:DA:1530:C:H2'	36:DA:1531:C:C6	2.48	0.47
36:DA:811:U:O2'	36:DA:812:C:H5'	2.15	0.47
1:AA:778:G:O2'	11:AK:119:CYS:HB3	2.14	0.47
23:AX:20:U:O2'	23:AX:21:C:H5'	2.14	0.47
45:BK:5:UNK:O	45:BK:6:UNK:C	2.63	0.47
53:BU:111:GLU:OE1	53:BU:111:GLU:HA	2.14	0.47
39:DD:160:GLY:HA2	39:DD:197:GLY:H	1.79	0.47
36:BA:2189:U:H3'	36:BA:2190:G:C5'	2.45	0.47
25:CZ:136:ASN:ND2	60:CZ:501:GDP:C5	2.81	0.47
1:CA:1360:A:O2'	1:CA:1361:G:H5'	2.14	0.47
13:CM:73:GLU:O	13:CM:74:VAL:C	2.53	0.47
57:BY:8:LYS:HD2	57:BY:8:LYS:N	2.29	0.47
36:DA:2093:G:C6	36:DA:2225:A:C8	3.02	0.47
36:DA:1192:G:C2'	36:DA:1193:G:H5'	2.45	0.47
36:DA:611:C:H2'	36:DA:612:C:C6	2.50	0.47
36:BA:2305:A:C3'	36:BA:2306:C:H5''	2.38	0.47
54:BV:38:LEU:O	54:BV:39:LEU:HD13	2.15	0.47
54:BV:47:VAL:O	54:BV:49:THR:N	2.48	0.47
57:DY:78:ALA:CB	57:DY:81:LYS:HE3	2.44	0.47
58:BZ:150:LEU:H	58:BZ:150:LEU:HD23	1.79	0.47
36:DA:2125:G:H4'	38:DC:37:PHE:HE2	1.79	0.47
52:BT:93:ARG:NH2	52:BT:95:ARG:HD3	2.29	0.47
20:AT:57:ARG:HH11	20:AT:102:GLY:HA3	1.77	0.47
36:DA:1541:G:H3'	36:DA:1541:G:OP2	2.14	0.47
1:CA:66:G:N2	1:CA:172:A:C2	2.83	0.47
36:DA:1946:U:H2'	36:DA:1947:C:C6	2.49	0.47
36:BA:2378:A:C2	51:BS:19:LYS:HE3	2.49	0.47
31:D5:42:PRO:O	31:D5:43:HIS:HB2	2.15	0.47
8:AH:121:ASP:O	8:AH:125:ARG:HB2	2.13	0.47
37:DB:75:G:O2'	58:DZ:27:VAL:HG23	2.14	0.47
21:AU:24:ARG:O	21:AU:25:LYS:HB2	2.14	0.47
13:AM:11:ARG:CG	13:AM:12:ASN:N	2.77	0.47
22:CW:7:A:C5	22:CW:49:C:H5	2.32	0.47
58:BZ:117:LEU:HA	58:BZ:174:VAL:HA	1.96	0.47
36:DA:1754:C:P	52:DT:96:ARG:HH12	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:33:TYR:HE2	6:AF:78:GLU:HG2	1.78	0.47
1:AA:1015:A:H2'	1:AA:1016:A:H8	1.76	0.47
36:DA:2761:G:C2'	36:DA:2762:G:C5'	2.89	0.47
41:DF:78:ILE:C	41:DF:80:ALA:H	2.17	0.47
36:BA:2179:C:O2'	36:BA:2180:U:C6	2.63	0.47
55:DW:107:LEU:HD12	55:DW:107:LEU:H	1.77	0.47
20:AT:89:ARG:CD	20:AT:104:LEU:HD11	2.37	0.47
36:BA:1058:G:C3'	36:BA:1059:G:H5''	2.43	0.47
22:AV:2:C:H2'	22:AV:3:C:H5''	1.97	0.47
41:DF:165:ARG:NH1	41:DF:165:ARG:HG3	2.29	0.47
25:CZ:400:VAL:HG12	25:CZ:401:THR:N	2.29	0.47
27:B1:8:SER:HB3	27:B1:66:HIS:CD2	2.49	0.47
17:CQ:65:ILE:HB	17:CQ:69:LYS:HB3	1.97	0.47
36:BA:1133:U:O4	36:BA:2026:C:H1'	2.14	0.47
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.97	0.47
36:DA:99:U:C4'	36:DA:102:G:H1'	2.40	0.47
46:DN:90:MET:CE	46:DN:94:HIS:HB2	2.45	0.47
57:BY:56:PRO:O	57:BY:58:GLY:N	2.48	0.47
36:DA:1496:A:C8	36:DA:1498:C:N3	2.82	0.47
3:AC:6:HIS:CD2	3:AC:8:ILE:HB	2.48	0.47
1:CA:858:G:H5''	1:CA:858:G:C8	2.42	0.47
36:DA:2855:C:O2'	36:DA:2856:C:H5'	2.14	0.47
18:CR:59:SER:N	18:CR:62:GLU:OE1	2.48	0.47
1:CA:176:C:O2'	1:CA:177:C:H5'	2.14	0.47
36:BA:156:U:O2'	36:BA:157:U:H5'	2.14	0.47
36:BA:2139:C:O2'	36:BA:2140:C:H5'	2.14	0.47
46:BN:115:ARG:HA	46:BN:118:LYS:HZ2	1.75	0.47
1:CA:685:G:N2	1:CA:686:U:H3	2.13	0.47
1:CA:686:U:H2'	1:CA:687:A:C8	2.49	0.47
15:CO:26:GLU:HA	15:CO:81:LEU:CD2	2.44	0.47
57:DY:17:SER:HB2	57:DY:71:LYS:HE2	1.96	0.47
50:BR:61:HIS:C	50:BR:61:HIS:CD2	2.87	0.47
1:CA:782:A:C2'	1:CA:783:C:H5'	2.45	0.47
2:CB:239:VAL:O	2:CB:240:GLN:CB	2.63	0.47
21:CU:5:ASP:HB3	21:CU:8:THR:OG1	2.14	0.47
36:DA:1314:C:H6	36:DA:1314:C:H5'	1.79	0.47
29:B3:7:LYS:O	29:B3:54:VAL:HG13	2.15	0.47
36:BA:2360:A:O2'	36:BA:2361:A:O5'	2.33	0.47
16:CP:53:VAL:HG23	16:CP:54:GLU:H	1.77	0.47
2:CB:39:ILE:HG22	2:CB:40:HIS:N	2.29	0.47
43:BH:139:GLN:HE21	43:BH:140:LYS:HA	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:386:C:O2'	1:CA:387:U:H5'	2.14	0.47
1:CA:475:G:O2'	1:CA:476:G:H5'	2.14	0.47
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.49	0.47
36:BA:1170:G:H1	36:BA:1179:C:H42	1.60	0.47
36:DA:272(B):G:H2'	36:DA:272(C):G:C8	2.49	0.47
4:CD:110:PHE:O	4:CD:161:ASN:HB3	2.14	0.47
46:DN:40:PRO:HB3	53:DU:68:ALA:HB2	1.95	0.47
5:CE:71:LEU:HD11	5:CE:113:ALA:O	2.14	0.47
36:BA:272(J):C:H2'	36:BA:274:G:C5'	2.43	0.47
38:BC:62:VAL:O	38:BC:160:ARG:HA	2.13	0.47
36:BA:570:G:H2'	36:BA:2030:A:N7	2.30	0.47
1:CA:1440:C:H42	1:CA:1461:G:H1	1.62	0.47
12:CL:32:PHE:CD1	12:CL:84:LEU:HD21	2.49	0.47
3:CC:191:THR:C	3:CC:193:TYR:H	2.17	0.47
1:CA:417:C:O2'	1:CA:418:C:H5'	2.14	0.47
36:BA:2736:G:O2'	36:BA:2737:G:H5'	2.14	0.47
25:CZ:21:ASP:OD1	25:CZ:21:ASP:O	2.33	0.47
53:DU:92:ARG:NH1	53:DU:94:ASN:ND2	2.61	0.47
1:AA:1126:U:H5	1:AA:1127:G:C5	2.32	0.47
57:BY:9:LYS:HB2	57:BY:9:LYS:NZ	2.21	0.47
41:BF:10:PRO:HG2	41:BF:13:SER:OG	2.15	0.47
52:DT:91:ARG:C	52:DT:93:ARG:H	2.18	0.47
40:DE:52:LEU:CD2	40:DE:75:VAL:HB	2.42	0.47
53:BU:92:ARG:O	53:BU:94:ASN:N	2.47	0.47
41:BF:25:PRO:HD3	41:BF:118:ALA:HB3	1.97	0.47
1:CA:1054:C:N4	24:CY:34:C:N1	2.62	0.47
32:B6:7:ILE:HG22	32:B6:27:LYS:HZ2	1.79	0.47
20:AT:100:ILE:HG22	20:AT:102:GLY:N	2.24	0.47
1:CA:198:G:C6	1:CA:220:G:C2	3.03	0.47
48:BP:23:PRO:HB2	48:BP:33:ARG:NE	2.28	0.47
30:D4:29:PRO:O	30:D4:31:ILE:HD13	2.13	0.47
1:CA:1431:C:O2	1:CA:1431:C:O5'	2.32	0.47
36:BA:2491:U:C5'	36:BA:2570:G:H5''	2.32	0.47
5:CE:144:THR:N	5:CE:147:ASP:OD1	2.48	0.47
36:BA:1351:C:H2'	36:BA:1352:U:O4'	2.15	0.47
32:D6:9:LEU:HD13	32:D6:10:LEU:O	2.15	0.47
4:AD:114:ARG:NH1	4:AD:114:ARG:CG	2.75	0.47
48:DP:114:ILE:O	48:DP:114:ILE:HG23	2.15	0.47
48:DP:127:ALA:HB3	48:DP:130:PHE:CZ	2.49	0.47
56:BX:10:ALA:O	56:BX:28:PHE:CB	2.62	0.47
55:BW:70:TYR:HD1	55:BW:108:GLY:O	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:4:LYS:HD3	55:DW:6:ILE:HD11	1.95	0.47
36:DA:1323:U:P	55:DW:84:ARG:HE	2.37	0.47
38:DC:195:ALA:O	38:DC:198:ALA:HB3	2.14	0.47
12:AL:84:LEU:HB2	12:AL:105:TYR:CE2	2.50	0.47
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.32	0.47
38:DC:180:PHE:N	38:DC:180:PHE:CD1	2.82	0.47
49:DQ:22:LYS:O	49:DQ:22:LYS:HG2	2.13	0.47
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.42	0.47
4:CD:163:GLU:C	4:CD:165:MET:H	2.18	0.47
3:AC:65:ALA:O	3:AC:100:ALA:O	2.33	0.47
1:AA:63:C:C2'	1:AA:64:G:H5'	2.42	0.47
16:CP:5:ARG:HB2	16:CP:6:LEU:H	1.57	0.47
12:AL:43:VAL:HG22	12:AL:55:VAL:CG1	2.44	0.47
16:CP:52:ASP:OD2	16:CP:55:ARG:HG3	2.15	0.47
51:BS:99:LYS:HB3	51:BS:99:LYS:HZ2	1.78	0.47
26:D0:27:GLU:OE2	36:DA:856:C:H1'	2.15	0.47
39:DD:27:THR:HG23	39:DD:27:THR:O	2.14	0.47
17:AQ:52:LYS:CD	17:AQ:52:LYS:H	2.26	0.47
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.27	0.47
37:DB:34:U:H2'	37:DB:44:G:O6	2.15	0.47
36:DA:382:G:O2'	36:DA:383:U:H5'	2.15	0.47
36:DA:2373:G:H2'	36:DA:2374:C:H6	1.76	0.47
50:DR:75:LEU:HD13	50:DR:75:LEU:C	2.35	0.47
36:DA:1436:G:H1'	36:DA:1477:A:O2'	2.14	0.47
40:BE:144:ARG:O	40:BE:148:GLY:HA2	2.14	0.47
50:DR:27:SER:O	50:DR:30:THR:HB	2.15	0.47
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.50	0.47
16:AP:40:ASP:N	16:AP:48:TRP:O	2.45	0.47
36:DA:1649:G:C6	36:DA:2009:G:C6	3.02	0.47
55:BW:43:GLY:O	55:BW:47:VAL:HB	2.14	0.47
25:CZ:143:ASP:CB	25:CZ:146:LEU:HB2	2.43	0.47
12:AL:47:LYS:HD3	23:AX:24:A:OP1	2.14	0.47
1:AA:160:A:O2'	1:AA:161:A:H5'	2.15	0.47
36:BA:893:C:H2'	36:BA:894:C:C6	2.48	0.47
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.96	0.47
1:AA:1310:G:H2'	1:AA:1311:G:C8	2.49	0.47
1:AA:1421:G:H2'	1:AA:1422:G:O4'	2.13	0.47
41:BF:112:MET:O	41:BF:115:ALA:HB3	2.14	0.47
47:DO:49:ARG:HB2	47:DO:50:GLY:H	1.49	0.47
44:BJ:56:UNK:HA	44:BJ:83:UNK:HA	1.95	0.47
36:DA:452:G:N3	36:DA:457:A:H2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1397:C:OP2	5:CE:24:ARG:NH2	2.47	0.47
15:CO:48:LYS:HD3	15:CO:48:LYS:HA	1.72	0.47
39:BD:257:LEU:C	39:BD:257:LEU:HD23	2.35	0.47
36:DA:269:U:O2	36:DA:269:U:H2'	2.14	0.47
38:BC:192:PHE:CG	38:BC:192:PHE:O	2.66	0.47
36:BA:2056:G:H2'	36:BA:2056:G:N3	2.28	0.47
36:BA:2100:G:H2'	36:BA:2101:G:H8	1.74	0.47
25:CZ:150:VAL:CG1	25:CZ:151:GLU:N	2.77	0.47
26:D0:53:MET:HA	26:D0:59:LEU:HD23	1.97	0.47
53:DU:91:ASP:O	53:DU:92:ARG:HB3	2.14	0.47
53:DU:92:ARG:O	53:DU:93:LYS:C	2.52	0.47
54:DV:100:ARG:O	54:DV:101:GLY:OXT	2.32	0.47
13:CM:44:ARG:HB2	13:CM:47:ASP:OD1	2.14	0.47
19:CS:6:LYS:HG2	19:CS:7:LYS:HE3	1.97	0.47
43:BH:126:PRO:O	43:BH:127:GLU:CG	2.63	0.47
2:AB:213:LEU:C	2:AB:213:LEU:HD23	2.35	0.47
4:CD:12:CYS:CA	4:CD:19:LEU:HD13	2.44	0.47
25:AZ:164:PRO:O	25:AZ:166:ASP:N	2.48	0.47
13:AM:84:ILE:HB	19:AS:74:PHE:CD1	2.48	0.47
36:DA:1543:C:C3'	36:DA:1544:A:C5'	2.89	0.47
56:DX:51:VAL:HG12	56:DX:52:VAL:N	2.29	0.47
40:BE:197:ILE:HD11	40:BE:199:ARG:NH2	2.27	0.47
31:D5:43:HIS:HE1	36:DA:2883:A:O3'	1.96	0.47
43:BH:52:VAL:HB	43:BH:69:ARG:HD2	1.95	0.47
48:DP:113:LYS:O	48:DP:114:ILE:HB	2.14	0.47
36:BA:2485:G:H5''	49:BQ:46:GLN:NE2	2.15	0.47
37:DB:28:C:O2'	37:DB:29:A:H5'	2.14	0.47
40:DE:116:VAL:CG2	40:DE:122:PHE:CG	2.96	0.47
38:BC:68:LEU:HD11	38:BC:161:ILE:CG2	2.38	0.47
3:CC:44:GLU:O	3:CC:45:LYS:O	2.32	0.47
1:AA:371:G:H21	1:AA:373:A:N6	2.13	0.47
36:BA:536:A:H4'	53:BU:57:PHE:CZ	2.49	0.47
36:BA:733:G:C8	36:BA:761:A:N1	2.82	0.47
12:CL:109:GLY:HA3	12:CL:122:THR:H	1.78	0.47
25:AZ:361:MET:HE2	25:AZ:363:MET:HG3	1.96	0.47
2:AB:126:GLU:HA	2:AB:129:GLU:CG	2.44	0.47
50:DR:2:ARG:O	50:DR:2:ARG:NH1	2.47	0.47
4:CD:127:THR:HA	4:CD:132:ARG:HA	1.97	0.47
36:DA:1069:A:H1'	36:DA:1070:A:P	2.54	0.47
36:BA:2110:G:C2	36:BA:2178:C:H5	2.32	0.47
36:BA:2121:G:H2'	36:BA:2122:U:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2110:G:N2	36:BA:2178:C:C5	2.76	0.47
46:BN:3:THR:CG2	46:BN:4:TYR:H	2.26	0.47
24:CY:51:G:H5'	25:CZ:337:GLY:O	2.14	0.47
36:BA:1779:U:C5	36:BA:1784:A:N7	2.73	0.47
4:AD:129:ASN:H	4:AD:129:ASN:HD22	1.62	0.47
40:DE:36:ARG:HG2	40:DE:36:ARG:NH1	2.27	0.47
20:CT:50:GLU:HG3	20:CT:100:ILE:HD11	1.94	0.47
37:DB:3:C:N4	37:DB:118:G:H1	2.07	0.47
36:DA:563:G:N2	36:DA:564:C:C2	2.83	0.47
3:CC:25:GLY:C	3:CC:27:LYS:N	2.68	0.47
20:CT:84:LEU:C	20:CT:86:ARG:H	2.18	0.47
7:AG:57:GLU:HB2	7:AG:60:LYS:HB3	1.97	0.47
22:AW:43:C:H3'	22:AW:44:G:H8	1.79	0.47
1:AA:537:G:H2'	1:AA:538:G:C8	2.49	0.47
36:BA:363(F):A:HO2'	36:BA:364:C:H5	1.59	0.47
8:CH:110:ALA:O	8:CH:112:LEU:HD23	2.14	0.47
18:AR:40:LEU:C	18:AR:42:ARG:N	2.67	0.47
2:AB:60:ASP:O	2:AB:61:LEU:C	2.53	0.47
1:CA:336:C:O2'	1:CA:337:C:H5'	2.14	0.47
2:CB:71:VAL:HG13	2:CB:93:VAL:CG1	2.45	0.47
1:CA:744:C:H2'	1:CA:745:C:H6	1.79	0.47
1:CA:1344:C:O2'	1:CA:1345:U:H5'	2.14	0.47
1:AA:602:A:H2'	1:AA:603:U:C6	2.49	0.47
36:DA:1417:C:H2'	36:DA:1418:G:O4'	2.15	0.47
39:DD:112:GLN:HB2	39:DD:115:GLN:HE21	1.80	0.47
53:BU:32:PHE:CB	53:BU:36:ARG:HH12	2.26	0.47
39:DD:162:SER:O	39:DD:178:PRO:HG3	2.14	0.47
58:BZ:26:GLY:HA2	58:BZ:85:HIS:CD2	2.49	0.47
25:CZ:241:ARG:HB2	25:CZ:285:ASN:HD21	1.79	0.47
21:AU:6:ARG:CD	21:AU:15:ARG:HH11	2.22	0.47
36:BA:11:G:H2'	36:BA:12:U:H6	1.79	0.47
1:CA:1272:G:H2'	1:CA:1273:G:O4'	2.15	0.47
31:D5:3:LYS:O	31:D5:4:HIS:O	2.32	0.47
1:AA:1282:C:O2'	1:AA:1283:G:H5'	2.14	0.47
28:B2:23:LYS:HA	28:B2:26:ARG:HB2	1.96	0.47
28:B2:22:GLU:O	28:B2:64:LEU:HD11	2.15	0.47
57:BY:44:ILE:N	57:BY:44:ILE:HD12	2.29	0.47
4:AD:100:ARG:CG	4:AD:102:ASP:OD1	2.63	0.47
36:BA:611:C:H2'	36:BA:612:C:H6	1.76	0.47
36:DA:2200:C:N4	36:DA:2223:G:H1	2.13	0.47
43:BH:85:LYS:HD3	43:BH:133:VAL:HB	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:593:G:H1	36:DA:664:C:N4	2.09	0.47
52:DT:27:THR:OG1	52:DT:28:VAL:N	2.46	0.47
39:DD:70:TRP:O	39:DD:71:ASP:C	2.53	0.47
42:DG:51:ARG:NH2	42:DG:52:ILE:HD13	2.30	0.47
1:CA:542:G:O2'	1:CA:543:C:H5'	2.14	0.47
42:BG:8:LYS:O	42:BG:11:TYR:HB3	2.14	0.47
41:DF:22:ALA:O	41:DF:26:ALA:HB2	2.15	0.47
36:DA:84:A:O3'	36:DA:85:G:O4'	2.33	0.47
1:CA:1054:C:O2	1:CA:1054:C:H2'	2.14	0.47
36:DA:2127:G:H4'	38:DC:37:PHE:CD1	2.49	0.47
52:BT:29:ARG:CD	52:BT:30:VAL:HG13	2.44	0.47
25:AZ:131:ILE:HD11	25:AZ:163:PHE:CZ	2.50	0.47
25:AZ:397:ALA:CB	61:AZ:502:KIR:O27	2.61	0.47
36:DA:847:U:OP2	36:DA:928:G:O6	2.32	0.47
25:AZ:349:VAL:HG21	25:AZ:374:LEU:HD22	1.96	0.47
36:BA:666:G:H4'	48:BP:49:ARG:HH21	1.79	0.47
36:BA:833:U:H2'	36:BA:834:C:H6	1.78	0.47
32:B6:14:THR:HG23	32:B6:16:CYS:H	1.79	0.47
36:DA:603:A:C2	36:DA:604:G:H1'	2.50	0.47
48:BP:84:ASN:HA	48:BP:116:GLY:CA	2.44	0.47
52:DT:106:SER:O	52:DT:107:ASP:CB	2.62	0.47
28:D2:68:ARG:NH1	28:D2:68:ARG:CB	2.76	0.47
39:DD:181:GLU:HG3	39:DD:272:ALA:O	2.15	0.47
36:BA:2264:C:H2'	36:BA:2265:U:H6	1.80	0.47
31:D5:43:HIS:HE1	36:DA:2884:U:OP2	1.98	0.47
30:B4:9:LEU:HD13	30:B4:10:VAL:H	1.79	0.47
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CZ	2.49	0.47
49:BQ:141:GLN:HG2	58:BZ:72:ARG:NH2	2.30	0.47
34:D8:25:MET:HG2	48:DP:64:LYS:HB2	1.95	0.47
24:AY:40:C:C3'	24:AY:41:C:H5''	2.44	0.47
14:AN:12:ARG:C	14:AN:14:PRO:HD2	2.33	0.47
57:DY:46:LYS:HG2	57:DY:47:LYS:N	2.30	0.47
36:BA:654(P):C:H2'	36:BA:654(Q):C:O4'	2.15	0.47
22:CV:35:A:N1	23:CX:20:U:C2	2.82	0.47
46:BN:56:ASN:C	46:BN:57:ALA:O	2.53	0.47
36:DA:1394:U:H4'	36:DA:1603:A:H4'	1.97	0.47
22:AW:59:U:C6	22:AW:60:U:C6	3.02	0.47
48:DP:126:VAL:HG22	48:DP:145:PRO:CG	2.42	0.47
52:BT:129:ARG:O	52:BT:129:ARG:HG3	2.14	0.47
58:DZ:91:LEU:HD21	58:DZ:96:VAL:HG11	1.96	0.47
42:DG:7:LEU:HD11	42:DG:104:GLU:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:25:ARG:HB2	55:DW:25:ARG:NH1	2.30	0.47
39:BD:158:ALA:HB3	39:BD:161:THR:HG21	1.96	0.47
1:CA:1039:C:H6	1:CA:1040:U:H5	1.63	0.47
52:DT:94:ALA:C	52:DT:96:ARG:N	2.68	0.47
3:AC:47:LEU:HD11	3:AC:76:VAL:HB	1.96	0.47
1:CA:1152:A:O2'	1:CA:1153:C:H5'	2.15	0.47
41:DF:202:PHE:CE1	41:DF:206:ILE:HG13	2.50	0.47
18:CR:36:ASN:O	18:CR:36:ASN:OD1	2.31	0.47
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.97	0.47
7:AG:20:ASP:OD1	7:AG:22:LEU:N	2.47	0.47
36:DA:1322:A:H2'	36:DA:1323:U:C6	2.50	0.47
1:CA:945:G:C2	1:CA:946:A:C8	3.03	0.47
25:AZ:251:ASP:O	25:AZ:267:VAL:HG12	2.15	0.47
3:CC:52:LEU:HD13	3:CC:68:VAL:HG13	1.97	0.47
47:BO:1:MET:CG	47:BO:67:LYS:HG2	2.40	0.47
1:AA:186:C:O4'	20:AT:81:LYS:HE2	2.14	0.47
46:DN:10:GLU:CG	46:DN:11:PRO:HD2	2.45	0.47
36:BA:390:A:H4'	36:BA:391:G:H5'	1.96	0.47
36:DA:298:G:H5'	36:DA:299:A:OP1	2.14	0.47
1:AA:59:A:H3'	1:AA:331:G:N2	2.19	0.47
38:DC:87:GLU:HG2	38:DC:94:VAL:CG2	2.41	0.47
25:CZ:199:ILE:CG2	25:CZ:199:ILE:O	2.63	0.47
13:CM:88:ARG:HG2	13:CM:88:ARG:NH1	2.19	0.47
1:AA:1503:A:C4	23:AX:15:A:C6	3.03	0.47
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.30	0.47
22:CW:37:A:H3'	22:CW:38:A:H8	1.78	0.47
5:AE:12:LEU:HD13	5:AE:12:LEU:O	2.15	0.47
42:BG:16:ARG:N	42:BG:17:PRO:CD	2.78	0.47
16:CP:6:LEU:HD11	16:CP:19:ILE:CD1	2.45	0.47
16:CP:5:ARG:NH1	16:CP:5:ARG:HG3	2.29	0.47
40:DE:6:GLY:HA2	40:DE:27:LEU:O	2.15	0.47
15:AO:18:PHE:O	15:AO:21:ASP:HB3	2.15	0.47
1:CA:955:U:H2'	1:CA:956:U:H6	1.79	0.47
7:CG:23:VAL:O	7:CG:27:ILE:HG13	2.14	0.47
7:CG:26:PHE:HE1	7:CG:104:LEU:HB3	1.79	0.47
3:CC:130:VAL:HG12	3:CC:134:ILE:HD11	1.97	0.47
1:CA:1030:C:H5	1:CA:1030(A):G:H8	1.62	0.47
39:BD:146:GLU:OE1	39:BD:190:TYR:HB2	2.15	0.47
20:CT:53:LEU:HD22	20:CT:100:ILE:O	2.15	0.47
44:BJ:85:UNK:HG3	44:BJ:86:UNK:N	2.27	0.47
20:CT:100:ILE:HD12	20:CT:100:ILE:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:535:C:O2'	36:DA:536:A:H5'	2.14	0.47
47:DO:64:ARG:O	47:DO:64:ARG:HG3	2.13	0.47
36:DA:2314:C:H2'	36:DA:2315:G:H8	1.78	0.47
36:DA:407:G:H2'	36:DA:408:G:C8	2.49	0.47
36:BA:1401:G:C6	36:BA:1402:C:N3	2.82	0.47
22:AV:59:U:O2'	22:AV:60:U:O4'	2.33	0.47
36:DA:360:G:H2'	36:DA:361:G:H8	1.79	0.47
2:AB:200:ILE:HG22	2:AB:201:ILE:N	2.30	0.47
1:AA:189(D):C:O2	1:AA:189(H):G:C6	2.68	0.47
1:AA:189(H):G:O2'	1:AA:189(I):G:O5'	2.32	0.47
20:AT:92:LEU:C	20:AT:94:ALA:N	2.63	0.47
36:DA:271(H):G:H1	36:DA:271(P):C:N4	2.12	0.47
17:AQ:47:PRO:HG2	17:AQ:48:GLU:H	1.80	0.47
25:CZ:126:VAL:HG12	25:CZ:126:VAL:O	2.15	0.47
36:DA:223:A:C5	36:DA:422:A:C8	3.03	0.47
36:BA:2591:C:H2'	36:BA:2592:G:H8	1.76	0.47
54:DV:81:TYR:O	54:DV:81:TYR:CD1	2.68	0.47
39:DD:211:ARG:HA	39:DD:214:TRP:CD2	2.49	0.47
1:CA:1112:C:O2'	3:CC:179:ARG:HB3	2.14	0.47
36:DA:2229:C:O2'	36:DA:2230:G:H5'	2.14	0.47
27:D1:43:TYR:HB2	36:DA:2230:G:O3'	2.15	0.47
36:BA:2777:G:C5'	36:BA:2778:A:H5'	2.44	0.47
22:AW:37:A:H2'	22:AW:38:A:O4'	2.14	0.47
1:CA:599:C:O2'	1:CA:600:C:H5'	2.15	0.47
1:CA:913:A:H4'	1:CA:914:A:H4'	1.96	0.47
23:CX:11:U:H2'	23:CX:12:A:OP1	2.13	0.47
1:AA:1299:A:N3	1:AA:1299:A:H5''	2.30	0.47
11:AK:79:SER:OG	11:AK:106:LYS:HD2	2.15	0.47
36:BA:948:G:O2'	36:BA:949:C:H5'	2.15	0.47
37:DB:82:G:O2'	37:DB:83:G:H5'	2.15	0.47
36:DA:35:G:H2'	36:DA:36:G:H8	1.78	0.47
37:DB:65:C:N4	37:DB:109:C:H2'	2.30	0.47
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.78	0.47
36:BA:1249:U:H4'	53:BU:4:ALA:HB3	1.97	0.47
1:CA:272:C:O2'	1:CA:273:A:H5'	2.15	0.47
16:CP:71:ARG:HA	16:CP:74:LEU:HD12	1.95	0.47
55:BW:92:ARG:O	55:BW:93:ALA:O	2.32	0.47
1:AA:676:A:H2'	1:AA:677:U:H6	1.79	0.47
40:DE:149:ARG:NH1	40:DE:149:ARG:HG3	2.29	0.47
16:AP:75:ARG:HG3	16:AP:75:ARG:HH11	1.80	0.47
7:CG:18:TYR:HB3	7:CG:59:LEU:HD13	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1092:C:C2'	36:BA:1093:G:H5'	2.45	0.47
19:AS:25:LYS:HB3	19:AS:27:GLU:OE1	2.14	0.47
36:DA:2083:G:H2'	36:DA:2084:C:C6	2.50	0.47
36:DA:2000:G:O2'	36:DA:2001:A:H5'	2.14	0.47
1:CA:127:G:N2	17:CQ:61:GLU:OE2	2.47	0.47
36:DA:1821:A:H2'	36:DA:1822:G:C8	2.49	0.47
57:BY:22:GLY:O	57:BY:23:ARG:O	2.32	0.47
4:CD:202:LEU:HA	4:CD:202:LEU:HD23	1.71	0.47
12:CL:17:LYS:HD3	12:CL:18:VAL:H	1.79	0.47
11:AK:126:ARG:NH1	11:AK:126:ARG:HG2	2.30	0.47
2:AB:36:ARG:O	2:AB:37:ASN:HB2	2.15	0.47
30:D4:40:HIS:CG	30:D4:41:PRO:HA	2.49	0.47
1:AA:765:G:C6	1:AA:812:C:C2	3.03	0.47
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.35	0.47
36:BA:1833:U:O2'	36:BA:1969:A:N1	2.43	0.47
22:CW:71:G:H2'	22:CW:71:G:N3	2.29	0.47
7:AG:26:PHE:CD1	7:AG:101:LEU:HD22	2.49	0.47
36:DA:1773:A:C2'	36:DA:1774:C:H5'	2.44	0.47
1:CA:792:A:H4'	1:CA:793:U:O5'	2.14	0.47
50:BR:66:VAL:C	50:BR:68:ARG:H	2.18	0.47
12:AL:75:HIS:HA	12:AL:102:ARG:HH12	1.80	0.47
56:DX:89:ILE:O	56:DX:93:GLU:HG3	2.14	0.47
1:AA:739:C:O2'	15:AO:42:HIS:ND1	2.41	0.47
36:DA:559:G:N2	53:DU:49:HIS:CE1	2.83	0.47
25:CZ:198:LYS:CD	25:CZ:198:LYS:O	2.62	0.47
1:AA:1325:C:OP1	21:AU:15:ARG:NH2	2.48	0.47
39:DD:28:GLU:N	39:DD:29:PRO:HD2	2.25	0.47
39:DD:34:VAL:O	39:DD:36:PRO:CD	2.63	0.47
25:CZ:14:VAL:O	25:CZ:79:HIS:HD2	1.97	0.47
26:D0:23:VAL:HG22	26:D0:38:VAL:HG12	1.97	0.47
53:DU:61:TRP:CZ3	53:DU:94:ASN:HB2	2.50	0.47
28:B2:29:LYS:O	28:B2:33:MET:N	2.37	0.47
41:BF:10:PRO:CG	41:BF:13:SER:OG	2.62	0.47
36:BA:2157:G:C8	36:BA:2157:G:C3'	2.98	0.47
52:DT:28:VAL:HG13	52:DT:46:GLU:CA	2.23	0.47
39:DD:73:VAL:HG13	39:DD:120:GLY:HA2	1.97	0.47
2:AB:8:LYS:HE2	2:AB:217:ARG:HH22	1.79	0.47
53:BU:90:VAL:CG2	54:BV:47:VAL:HG21	2.43	0.47
36:DA:2157:G:H3'	36:DA:2157:G:C8	2.50	0.47
57:DY:31:LEU:HB2	57:DY:32:PRO:CA	2.43	0.47
48:DP:52:GLU:CA	48:DP:52:GLU:OE1	2.60	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:54:PHE:CZ	10:CJ:55:LYS:HD2	2.49	0.47
36:DA:1638:C:O2'	36:DA:1639:U:H5'	2.15	0.47
39:BD:43:ARG:NH1	39:BD:49:ILE:HG23	2.29	0.47
1:AA:495:A:O2'	1:AA:496:A:P	2.73	0.47
32:B6:35:GLU:HB3	32:B6:51:GLU:HB2	1.94	0.47
1:AA:980:C:C2'	1:AA:981:U:H5'	2.45	0.47
1:CA:67:C:H2'	1:CA:68:G:H8	1.79	0.47
32:B6:15:GLU:CG	32:B6:18:ARG:CZ	2.93	0.47
30:D4:31:ILE:O	30:D4:31:ILE:HG22	2.15	0.47
34:B8:17:THR:HG23	34:B8:21:LYS:HB2	1.95	0.47
36:DA:1798:U:H5'	39:DD:259:THR:HB	1.97	0.47
36:BA:2843:G:N2	36:BA:2875:C:C2	2.82	0.47
48:BP:101:VAL:HA	48:BP:105:LEU:O	2.15	0.47
36:BA:860:U:H1'	36:BA:2268:A:H5'	1.97	0.47
54:DV:19:LYS:HG2	54:DV:94:LEU:CA	2.45	0.47
27:D1:53:VAL:O	27:D1:54:ALA:HB3	2.14	0.47
40:DE:120:TRP:CE3	40:DE:120:TRP:HA	2.49	0.47
36:DA:1019:U:H2'	36:DA:1021:A:C2	2.50	0.47
4:CD:85:LYS:HZ3	4:CD:92:VAL:HG13	1.79	0.47
52:DT:52:ILE:HG23	52:DT:61:PHE:HB3	1.97	0.47
36:BA:657:U:H2'	36:BA:658:C:C6	2.50	0.47
36:BA:888:C:C2'	36:BA:889:C:H4'	2.39	0.47
40:DE:16:ARG:HD3	40:DE:21:VAL:HG11	1.97	0.47
38:DC:196:LEU:O	38:DC:198:ALA:N	2.48	0.47
49:DQ:97:VAL:HG21	49:DQ:103:MET:HE2	1.97	0.47
49:DQ:103:MET:CE	49:DQ:127:ILE:HD11	2.45	0.47
36:BA:2807:G:H1	36:BA:2893:G:H1	1.62	0.47
22:CV:44:G:H2'	22:CV:45:U:C5'	2.39	0.47
17:CQ:11:VAL:HG23	17:CQ:20:THR:HB	1.95	0.47
36:DA:11:G:N2	36:DA:2627:G:H5''	2.23	0.47
6:AF:10:LEU:HD11	6:AF:61:LEU:HD11	1.96	0.47
36:BA:2526:G:H5'	36:BA:2742:C:O2'	2.15	0.47
8:CH:83:ILE:HG13	8:CH:137:VAL:HG22	1.97	0.47
1:AA:1147:C:O2	9:AI:16:ARG:CZ	2.63	0.47
1:CA:877:C:OP1	8:CH:88:LYS:NZ	2.47	0.47
26:D0:27:GLU:CD	36:DA:856:C:H1'	2.35	0.47
40:DE:69:LYS:HE3	40:DE:88:GLY:O	2.15	0.47
37:DB:44:G:H1'	37:DB:47:C:N4	2.30	0.47
40:BE:38:THR:HG23	40:BE:39:PRO:HD2	1.95	0.47
27:D1:34:THR:CG2	27:D1:37:ILE:HG23	2.44	0.47
6:CF:82:ARG:HB2	6:CF:85:VAL:CG2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.49	0.47
33:D7:18:PHE:CE2	36:DA:117:G:H4'	2.50	0.47
1:AA:367:U:C5'	1:AA:394:G:H21	2.25	0.47
16:AP:44:THR:O	16:AP:45:THR:HB	2.14	0.47
55:DW:24:ILE:CG2	55:DW:36:LEU:HD21	2.43	0.47
18:CR:42:ARG:NH1	18:CR:42:ARG:HG3	2.29	0.47
4:CD:52:SER:O	4:CD:53:ASP:C	2.54	0.47
36:BA:238:C:C4	36:BA:239:U:C5	3.03	0.47
48:BP:85:LEU:CD2	48:BP:85:LEU:H	2.28	0.47
49:BQ:12:GLN:NE2	49:BQ:72:LYS:HG3	2.29	0.47
36:DA:1984:G:O2'	36:DA:1985:G:H5'	2.15	0.47
36:DA:2389:G:H5''	36:DA:2390:U:H5'	1.97	0.47
49:BQ:109:VAL:CG1	49:BQ:113:GLN:HB2	2.45	0.47
1:CA:1296:C:H4'	1:CA:1302:U:C4	2.50	0.47
36:BA:1638:C:H2'	36:BA:1639:U:O4'	2.14	0.47
1:CA:96:U:H2'	1:CA:97:G:C8	2.50	0.47
4:CD:89:THR:O	4:CD:90:GLY:C	2.53	0.47
1:CA:1349:A:OP1	9:CI:118:LYS:O	2.33	0.47
49:DQ:47:ILE:HD12	49:DQ:70:PRO:HD3	1.96	0.47
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	2.14	0.47
47:BO:28:SER:O	47:BO:29:ASN:HB3	2.14	0.47
1:AA:542:G:H5'	4:AD:41:GLY:HA2	1.96	0.47
4:AD:8:VAL:C	4:AD:10:ARG:H	2.17	0.47
4:AD:64:LEU:O	4:AD:67:ILE:HB	2.15	0.47
36:DA:2377:A:H2'	36:DA:2378:A:C8	2.49	0.47
3:CC:35:GLU:OE1	3:CC:95:THR:HG23	2.15	0.47
1:CA:1304:G:C6	1:CA:1305:G:C6	3.03	0.47
28:B2:18:PRO:HG2	28:B2:72:ALA:C	2.35	0.47
28:B2:25:VAL:O	28:B2:29:LYS:N	2.47	0.47
28:B2:29:LYS:C	28:B2:31:GLU:N	2.68	0.47
4:CD:70:ILE:HG23	4:CD:74:GLN:HB2	1.96	0.47
48:DP:24:GLY:O	48:DP:25:SER:CB	2.62	0.47
42:DG:52:ILE:O	42:DG:54:GLU:N	2.39	0.47
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.73	0.47
30:B4:25:TYR:HB2	42:BG:101:ILE:HG21	1.96	0.47
42:BG:27:ASN:O	42:BG:29:TRP:N	2.44	0.47
42:BG:71:THR:HG23	42:BG:72:ARG:N	2.29	0.47
52:BT:83:ILE:HG13	52:BT:84:GLN:N	2.29	0.47
31:B5:43:HIS:CD2	36:BA:2815:C:O2'	2.64	0.47
24:AY:67:G:H2'	24:AY:68:C:C6	2.50	0.47
20:AT:43:LEU:HD22	20:AT:48:LYS:HG3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:100:ASP:OD1	25:CZ:215:ARG:NH2	2.47	0.47
19:AS:62:ILE:HD12	19:AS:66:MET:CE	2.44	0.47
13:CM:7:VAL:HG21	42:DG:115:ARG:HG3	1.97	0.47
42:DG:103:LEU:O	42:DG:103:LEU:HD23	2.14	0.47
42:DG:111:LEU:CD1	42:DG:179:PRO:HD2	2.45	0.47
36:DA:2107:C:C1'	36:DA:2182:G:H22	2.28	0.47
1:CA:1431:C:C2'	1:CA:1432:G:H5'	2.45	0.47
34:D8:56:GLU:N	34:D8:56:GLU:OE1	2.48	0.47
48:BP:97:PRO:O	48:BP:98:GLU:HB2	2.14	0.47
34:D8:33:ASN:HD22	36:DA:2419:U:H5''	1.77	0.47
36:BA:1137:G:O2'	36:BA:1138:G:H5'	2.15	0.47
48:DP:83:VAL:HG23	48:DP:105:LEU:CD2	2.45	0.47
48:DP:112:LEU:H	48:DP:128:HIS:CD2	2.32	0.47
6:CF:14:LEU:CD1	6:CF:18:GLN:HB2	2.45	0.47
1:CA:1151:A:O4'	10:CJ:39:PRO:HB2	2.14	0.47
54:BV:17:GLY:HA2	54:BV:96:ILE:O	2.14	0.47
38:DC:99:ILE:C	38:DC:101:GLN:N	2.68	0.47
1:CA:201:C:H2'	1:CA:202:U:H5''	1.97	0.47
3:CC:70:VAL:CG1	3:CC:72:LYS:H	2.28	0.47
58:BZ:100:VAL:HG23	58:BZ:126:VAL:CG2	2.44	0.47
20:AT:26:ASN:HD22	20:AT:26:ASN:N	2.08	0.47
55:DW:47:VAL:O	55:DW:47:VAL:HG12	2.15	0.47
49:DQ:21:THR:O	49:DQ:22:LYS:HB3	2.14	0.47
49:DQ:21:THR:CG2	49:DQ:23:GLY:O	2.63	0.47
38:BC:107:TRP:CZ2	38:BC:109:ASP:HA	2.49	0.47
35:B9:24:TYR:O	35:B9:25:VAL:HG23	2.15	0.47
1:CA:719:C:OP2	1:CA:720:C:N4	2.39	0.47
2:AB:97:TRP:HZ3	2:AB:176:GLU:OE2	1.98	0.47
43:DH:118:PRO:CG	43:DH:121:ILE:HD12	2.41	0.47
36:DA:534:U:H2'	36:DA:535:C:C6	2.49	0.47
37:DB:43:C:H3'	37:DB:44:G:C5'	2.44	0.47
42:DG:59:GLU:OE1	42:DG:138:GLN:NE2	2.46	0.47
41:BF:160:ASN:ND2	41:BF:162:LEU:HB2	2.28	0.47
1:AA:1139:G:H4'	1:AA:1140:C:O5'	2.15	0.47
1:CA:189(I):G:O2'	1:CA:189(J):G:H5'	2.14	0.47
50:BR:105:ARG:HD2	50:BR:105:ARG:H	1.79	0.47
36:DA:2360:A:O2'	36:DA:2361:A:O5'	2.32	0.47
53:BU:80:ILE:HG22	53:BU:80:ILE:O	2.15	0.47
46:BN:10:GLU:HG3	46:BN:11:PRO:HD2	1.97	0.47
2:CB:164:VAL:HG12	2:CB:165:VAL:N	2.29	0.47
39:DD:3:VAL:CG1	39:DD:17:THR:HB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:76:A:H3'	36:DA:2585:U:H3	1.80	0.47
1:AA:345:C:H5'	52:BT:41:ARG:NE	2.29	0.47
41:BF:57:VAL:HG21	41:BF:87:GLY:HA2	1.96	0.47
25:AZ:338:TYR:O	25:AZ:353:VAL:HG23	2.15	0.47
36:DA:523:C:H5''	36:DA:540:C:O2'	2.15	0.47
36:BA:2295:C:O2'	36:BA:2296:U:H5'	2.15	0.47
36:BA:1614:A:N6	55:BW:93:ALA:H	2.13	0.47
7:CG:57:GLU:HB2	7:CG:60:LYS:CB	2.45	0.47
1:AA:490:G:H2'	1:AA:491:G:H8	1.79	0.47
36:BA:909:A:H2'	36:BA:912:C:C5	2.49	0.47
36:DA:2196:C:H2'	36:DA:2197:U:C6	2.50	0.47
6:CF:21:LEU:O	6:CF:21:LEU:HD13	2.15	0.47
5:AE:145:LYS:HA	8:AH:107:LEU:HD22	1.97	0.47
36:BA:1903:G:OP2	39:BD:241:PRO:HB2	2.15	0.47
1:AA:1310:G:H2'	1:AA:1311:G:H8	1.79	0.47
36:DA:2651:C:O2'	36:DA:2652:C:H5'	2.15	0.47
36:DA:78:A:H2'	36:DA:79:G:H8	1.79	0.47
52:DT:72:VAL:HG12	52:DT:73:GLU:N	2.30	0.47
36:DA:2356:C:O2'	36:DA:2357:U:H5'	2.15	0.47
1:CA:1445:C:H2'	1:CA:1446:U:O4'	2.15	0.47
42:BG:120:LEU:HB2	42:BG:179:PRO:O	2.15	0.47
1:CA:908:A:H2'	1:CA:909:A:C8	2.49	0.47
3:AC:82:GLU:H	3:AC:82:GLU:CD	2.16	0.47
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.15	0.47
4:AD:34:GLU:O	4:AD:35:ARG:HB2	2.14	0.47
57:BY:7:VAL:C	57:BY:8:LYS:HD2	2.34	0.47
36:DA:2201:C:H2'	36:DA:2202:C:C6	2.50	0.47
43:BH:76:VAL:C	43:BH:78:GLY:N	2.68	0.47
40:DE:77:ILE:CG2	40:DE:78:LEU:N	2.69	0.47
42:BG:41:GLN:O	42:BG:43:LEU:N	2.48	0.47
53:BU:92:ARG:NH1	53:BU:94:ASN:HD22	2.13	0.47
57:DY:81:LYS:HD2	57:DY:96:ILE:CD1	2.45	0.47
57:DY:8:LYS:CB	57:DY:28:LYS:HZ2	2.28	0.47
36:DA:943:U:OP2	48:DP:38:GLN:NE2	2.48	0.47
39:BD:35:LYS:HB3	39:BD:36:PRO:HD2	1.96	0.47
24:CY:73:G:O2'	25:CZ:64:ASN:OD1	2.30	0.47
36:DA:2128:C:O2'	36:DA:2129:C:O5'	2.26	0.47
32:B6:18:ARG:CG	32:B6:19:ARG:N	2.69	0.47
36:DA:604:G:O2'	36:DA:605:C:H5'	2.16	0.47
51:BS:89:ARG:CG	51:BS:89:ARG:NH1	2.73	0.47
36:DA:1337:G:H2'	36:DA:1338:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1480:G:H2'	36:DA:1481:U:C5'	2.34	0.47
32:D6:33:LYS:HA	32:D6:33:LYS:CE	2.43	0.47
34:D8:37:SER:O	34:D8:41:ILE:HG22	2.15	0.47
32:D6:15:GLU:OE2	32:D6:41:PRO:CG	2.63	0.47
36:DA:28:A:H2	53:DU:11:ARG:HH22	1.62	0.47
1:CA:1437:C:N4	1:CA:1464:G:H1	2.11	0.47
36:BA:1504:C:O2'	36:BA:1505:C:H5'	2.15	0.47
53:DU:13:LYS:CD	53:DU:13:LYS:H	2.22	0.47
7:CG:118:VAL:O	7:CG:121:ALA:HB3	2.15	0.47
36:DA:1133:U:O2	36:DA:1137:G:H5''	2.14	0.47
58:BZ:177:PRO:O	58:BZ:178:GLU:CB	2.50	0.47
36:DA:1054:A:O2'	36:DA:1055:G:H5'	2.15	0.47
48:DP:115:LEU:O	48:DP:116:GLY:O	2.33	0.47
39:DD:265:PRO:HG2	39:DD:266:SER:N	2.30	0.47
58:BZ:14:LYS:O	58:BZ:18:LEU:HD22	2.16	0.47
1:CA:1317:C:C2	14:CN:16:PHE:CE1	3.03	0.47
20:AT:58:LYS:O	20:AT:61:SER:HB3	2.14	0.47
38:DC:96:GLY:N	38:DC:99:ILE:HD11	2.19	0.47
40:DE:184:VAL:O	40:DE:186:GLY:N	2.46	0.47
46:DN:11:PRO:O	46:DN:13:TRP:N	2.48	0.47
36:DA:1070:A:H5'	36:DA:1072:C:OP2	2.15	0.47
30:B4:22:ILE:CD1	30:B4:22:ILE:H	2.12	0.47
16:CP:34:GLU:HG2	16:CP:35:LYS:N	2.29	0.47
2:CB:124:SER:OG	2:CB:126:GLU:HG3	2.14	0.47
1:CA:1069:C:C2'	1:CA:1070:U:O5'	2.63	0.47
19:AS:78:ARG:HB2	19:AS:81:ARG:NH1	2.29	0.47
18:AR:45:SER:O	18:AR:48:GLY:N	2.42	0.47
43:BH:157:TYR:O	43:BH:158:HIS:CG	2.68	0.47
36:DA:118:A:C8	36:DA:119:A:C8	3.03	0.47
36:BA:2373:G:H2'	36:BA:2374:C:C6	2.50	0.47
1:AA:1152:A:C2'	1:AA:1153:C:H5'	2.44	0.47
56:BX:65:ARG:HD3	56:BX:70:LEU:HD21	1.97	0.47
36:BA:1403:C:H5''	36:BA:1471:A:C1'	2.42	0.47
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.30	0.47
40:BE:36:ARG:NH2	40:BE:88:GLY:N	2.63	0.47
36:BA:1493:C:C2'	36:BA:1493:C:O2	2.62	0.47
25:AZ:285:ASN:HD22	25:AZ:285:ASN:HA	1.58	0.47
36:DA:1890:A:H2'	36:DA:1891:G:H5'	1.97	0.47
46:DN:45:ASN:HD22	46:DN:45:ASN:N	2.12	0.47
38:DC:68:LEU:HD11	38:DC:161:ILE:CG2	2.45	0.47
12:AL:113:ARG:C	12:AL:114:LYS:HD2	2.36	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:513:C:N4	1:AA:538:G:H1	2.13	0.47
1:AA:1492:A:H1'	23:AX:23:G:O2'	2.15	0.47
19:CS:58:VAL:HG11	19:CS:75:ALA:CB	2.45	0.47
37:DB:65:C:H41	37:DB:109:C:H2'	1.79	0.47
36:BA:1847:A:H3'	36:BA:1848:A:C5'	2.44	0.47
44:DJ:70:UNK:O	44:DJ:71:UNK:O	2.33	0.47
10:CJ:86:MET:HG2	10:CJ:86:MET:O	2.14	0.47
7:CG:57:GLU:HB3	7:CG:58:PRO:HD2	1.96	0.47
36:BA:1091:G:C6	36:BA:1092:C:N4	2.83	0.47
37:BB:87:G:C2'	37:BB:88:C:H5''	2.45	0.47
1:CA:490:G:H2'	1:CA:491:G:H8	1.79	0.47
1:CA:718:G:C1'	11:CK:116:HIS:HA	2.45	0.47
37:DB:52:A:H62	51:DS:33:LYS:HG2	1.79	0.47
36:DA:1782:C:H1'	36:DA:2609:U:H5'	1.95	0.47
1:AA:269:C:H2'	1:AA:270:A:H8	1.80	0.47
36:BA:1999:C:H4'	36:BA:2723:C:O2	2.14	0.47
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.14	0.47
30:B4:37:SER:O	30:B4:38:LYS:HB3	2.14	0.47
36:DA:1844:C:O2'	36:DA:1845:G:H5'	2.15	0.47
36:DA:1622:G:C2	36:DA:1623:G:C8	3.03	0.47
51:DS:22:GLY:O	51:DS:23:ARG:O	2.33	0.47
36:DA:1916:A:H2'	36:DA:1917:U:O4'	2.15	0.47
4:AD:52:SER:O	4:AD:56:VAL:HG23	2.14	0.47
36:DA:82:G:H8	36:DA:82:G:OP2	1.97	0.47
36:BA:1644:C:O2	36:BA:1644:C:H2'	2.15	0.47
36:DA:1619:G:O5'	36:DA:1619:G:C8	2.68	0.47
36:DA:275:G:N3	36:DA:275:G:H2'	2.29	0.47
1:AA:342:C:O2'	1:AA:343:U:H5'	2.15	0.47
36:BA:442:G:H4'	41:BF:46:ARG:HB2	1.95	0.47
1:AA:620:C:O2'	1:AA:621:A:H5'	2.15	0.47
44:DJ:74:UNK:O	44:DJ:76:UNK:N	2.49	0.47
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.50	0.47
36:DA:1775:U:H2'	36:DA:1776:G:H5'	1.96	0.47
25:CZ:195:TRP:O	25:CZ:198:LYS:HB3	2.14	0.46
4:AD:11:LEU:N	4:AD:11:LEU:HD23	2.30	0.46
10:AJ:54:PHE:CD1	10:AJ:55:LYS:HE3	2.50	0.46
36:BA:2106:G:O2'	36:BA:2107:C:H5'	2.15	0.46
13:CM:70:LEU:O	13:CM:73:GLU:HB3	2.14	0.46
42:DG:146:TYR:O	42:DG:149:VAL:HG22	2.15	0.46
57:BY:30:VAL:HG12	57:BY:31:LEU:N	2.30	0.46
42:BG:51:ARG:HD3	42:BG:53:LEU:CD2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:55:LYS:HG3	42:BG:58:GLN:CD	2.35	0.46
36:DA:1190:G:H5'	48:DP:35:HIS:H	1.79	0.46
36:BA:2156:G:H5''	36:BA:2157:G:OP2	2.14	0.46
51:BS:50:SER:O	51:BS:51:ALA:CB	2.60	0.46
36:DA:2131:G:O4'	36:DA:2133:G:N3	2.47	0.46
57:DY:38:ILE:HB	57:DY:66:PRO:CG	2.25	0.46
48:DP:39:LYS:CD	48:DP:40:SER:N	2.78	0.46
31:B5:2:ALA:HB2	36:BA:2014:A:O2'	2.14	0.46
41:BF:185:ASP:HA	41:BF:188:ARG:CD	2.45	0.46
20:AT:52:ALA:C	20:AT:54:LYS:H	2.18	0.46
36:DA:2464:C:O2'	36:DA:2465:C:O5'	2.33	0.46
36:DA:657:U:C2	36:DA:658:C:C5	3.04	0.46
58:BZ:139:VAL:HG23	58:BZ:140:ASP:N	2.31	0.46
51:BS:89:ARG:CB	51:BS:92:TYR:HB3	2.45	0.46
36:BA:2492:U:H2'	36:BA:2493:U:H6	1.79	0.46
58:DZ:28:MET:HE3	58:DZ:37:VAL:HG11	1.96	0.46
34:D8:34:TRP:O	34:D8:35:GLN:HB2	2.14	0.46
50:BR:52:ILE:O	50:BR:55:ALA:HB3	2.15	0.46
32:D6:16:CYS:SG	32:D6:48:VAL:CG2	3.01	0.46
51:DS:52:SER:O	51:DS:56:LEU:HB3	2.16	0.46
9:CI:28:VAL:O	9:CI:29:ASN:C	2.53	0.46
42:DG:11:TYR:HA	42:DG:15:VAL:HG21	1.98	0.46
36:DA:1163:G:H4'	54:DV:90:PRO:HG2	1.97	0.46
1:CA:1190:G:C3'	3:CC:3:ASN:ND2	2.70	0.46
36:BA:2469:A:C2'	36:BA:2470:G:H5'	2.40	0.46
1:CA:1148:U:C2'	1:CA:1149:C:H5'	2.45	0.46
36:DA:2036:C:H6	36:DA:2036:C:C5'	2.22	0.46
25:AZ:199:ILE:O	25:AZ:199:ILE:CG2	2.62	0.46
43:BH:16:SER:CB	43:BH:27:LYS:HB2	2.38	0.46
24:AY:56:C:H1'	36:BA:1067:A:N3	2.30	0.46
28:D2:35:LEU:O	28:D2:36:ARG:C	2.53	0.46
7:CG:41:ARG:O	7:CG:45:ASP:OD1	2.33	0.46
39:BD:85:ASP:HB2	39:BD:92:ILE:CG2	2.43	0.46
38:DC:26:ALA:O	38:DC:29:VAL:HG22	2.15	0.46
35:B9:7:VAL:HG13	35:B9:34:GLN:CG	2.45	0.46
35:B9:7:VAL:HG21	35:B9:36:GLN:H	1.80	0.46
36:DA:2722:G:H2'	36:DA:2723:C:H6	1.79	0.46
36:BA:191:A:H2'	36:BA:192:C:C6	2.50	0.46
2:CB:44:LEU:HD12	2:CB:44:LEU:N	2.30	0.46
31:B5:27:PRO:HG3	55:BW:23:LEU:HD11	1.97	0.46
1:CA:959:A:C2'	1:CA:960:U:H4'	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:272(H):C:C3'	36:DA:272(I):U:H5''	2.45	0.46
7:CG:23:VAL:HG13	7:CG:43:PHE:CZ	2.50	0.46
55:BW:14:PRO:O	55:BW:18:ARG:HB2	2.15	0.46
36:BA:945:A:C5'	36:BA:945:A:N3	2.76	0.46
26:D0:10:THR:HG22	26:D0:12:ASN:N	2.26	0.46
4:CD:148:VAL:HG12	4:CD:149:ALA:O	2.15	0.46
36:DA:803:U:C2'	36:DA:804:A:H5'	2.45	0.46
1:AA:1153:C:O2'	1:AA:1154:G:H5''	2.15	0.46
25:AZ:11:HIS:HE1	25:AZ:78:SER:OG	1.98	0.46
9:AI:83:ARG:HA	9:AI:86:VAL:CG1	2.46	0.46
7:AG:126:ASP:O	7:AG:127:ALA:C	2.54	0.46
1:CA:1278:U:O5'	1:CA:1278:U:H6	1.98	0.46
5:CE:127:ASN:HD21	5:CE:129:ILE:HB	1.81	0.46
36:DA:1649:G:N1	36:DA:2009:G:C6	2.84	0.46
15:CO:79:ARG:C	15:CO:82:ILE:HG22	2.36	0.46
36:BA:465:G:H2'	36:BA:466:A:C8	2.51	0.46
26:B0:10:THR:HG22	26:B0:11:ARG:N	2.31	0.46
46:BN:39:ARG:C	46:BN:41:ASP:N	2.68	0.46
56:DX:41:ASN:O	56:DX:45:THR:HG23	2.16	0.46
53:BU:45:TYR:O	53:BU:49:HIS:CG	2.68	0.46
1:AA:1068:G:N2	1:AA:1191:A:N3	2.60	0.46
36:DA:892:G:H2'	36:DA:893:C:C6	2.50	0.46
16:CP:71:ARG:NH1	16:CP:71:ARG:HB2	2.30	0.46
18:CR:51:LEU:CD2	18:CR:52:PRO:HD2	2.45	0.46
1:AA:383:A:H2'	1:AA:384:G:H5'	1.97	0.46
35:D9:16:VAL:HG21	36:DA:1033:U:OP1	2.15	0.46
25:AZ:196:VAL:O	25:AZ:196:VAL:HG12	2.14	0.46
5:CE:20:GLN:OE1	5:CE:21:ALA:N	2.47	0.46
1:AA:158:G:O2'	1:AA:159:G:H5'	2.15	0.46
43:BH:59:ARG:O	43:BH:60:ARG:C	2.53	0.46
45:BK:23:UNK:C	45:BK:25:UNK:N	2.79	0.46
1:CA:533:A:C2	1:CA:536:C:C5	3.03	0.46
36:BA:1010:A:H1'	36:BA:1153:C:H1'	1.96	0.46
1:AA:310:G:H5''	16:AP:31:LYS:HB2	1.96	0.46
36:BA:158:U:H3'	36:BA:158:U:O2	2.15	0.46
4:AD:160:GLN:H	4:AD:160:GLN:HG3	1.47	0.46
45:DK:5:UNK:O	45:DK:6:UNK:C	2.63	0.46
36:BA:244:A:H4'	48:BP:74:GLU:HB2	1.97	0.46
4:AD:11:LEU:HD13	4:AD:66:ARG:CD	2.44	0.46
4:AD:61:LYS:HA	4:AD:203:VAL:CG1	2.42	0.46
57:BY:43:ASN:C	57:BY:44:ILE:HD12	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:95:GLY:O	4:CD:96:LEU:C	2.52	0.46
41:BF:164:ARG:NH1	41:BF:176:LEU:O	2.48	0.46
36:DA:612:C:C3'	36:DA:613:G:H5''	2.42	0.46
36:DA:1269:A:H2'	36:DA:1270:C:C6	2.50	0.46
34:B8:3:LYS:HG2	34:B8:4:MET:N	2.29	0.46
36:DA:1747(A):G:O2'	36:DA:1748:G:H5''	2.14	0.46
10:CJ:63:PHE:HE2	14:CN:45:ARG:HA	1.79	0.46
39:BD:35:LYS:HG3	39:BD:63:ARG:CG	2.45	0.46
1:CA:222:U:H2'	1:CA:223:U:C6	2.50	0.46
42:DG:142:PRO:HG2	42:DG:143:GLU:H	1.80	0.46
42:DG:68:PRO:CB	42:DG:92:VAL:HB	2.45	0.46
56:DX:51:VAL:CG1	56:DX:81:VAL:HB	2.45	0.46
36:BA:639:U:H2'	36:BA:640:C:C6	2.50	0.46
51:BS:97:ARG:C	51:BS:97:ARG:NE	2.69	0.46
36:BA:1761:C:H3'	36:BA:1762:A:C8	2.49	0.46
35:D9:10:ILE:O	35:D9:11:CYS:CB	2.63	0.46
25:CZ:231:ILE:N	25:CZ:231:ILE:CD1	2.79	0.46
32:D6:19:ARG:O	32:D6:20:ASN:O	2.33	0.46
58:DZ:4:ARG:HD2	58:DZ:60:GLU:OE2	2.16	0.46
36:DA:1142:U:H5''	36:DA:1142(A):A:C8	2.51	0.46
48:DP:131:SER:HG	48:DP:134:ALA:HB3	1.77	0.46
51:BS:101:LEU:O	51:BS:101:LEU:CD1	2.56	0.46
2:AB:12:GLU:HG3	2:AB:44:LEU:CD2	2.44	0.46
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.96	0.46
50:BR:4:LEU:HD13	50:BR:7:GLY:N	2.29	0.46
36:BA:2657:A:H5'	36:BA:2657:A:N3	2.29	0.46
11:CK:38:ASN:N	11:CK:38:ASN:HD22	2.13	0.46
1:AA:1086:U:H2'	1:AA:1087:G:C5'	2.38	0.46
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.30	0.46
26:B0:41:ARG:HD3	26:B0:41:ARG:HA	1.69	0.46
26:B0:42:GLY:HA3	36:BA:2331:G:C4'	2.45	0.46
41:BF:65:TRP:HB3	41:BF:66:PRO:CD	2.46	0.46
46:BN:4:TYR:O	46:BN:5:VAL:C	2.54	0.46
29:B3:42:ALA:O	29:B3:43:ILE:C	2.53	0.46
2:CB:125:PRO:O	2:CB:129:GLU:HG3	2.14	0.46
1:AA:368:U:H3'	1:AA:369:C:C5'	2.45	0.46
36:BA:1108:U:H3'	36:BA:1109:C:H6	1.78	0.46
2:AB:102:LEU:HD23	2:AB:158:LEU:HD22	1.96	0.46
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.14	0.46
9:CI:92:TYR:CD2	9:CI:95:LYS:HE2	2.50	0.46
25:CZ:11:HIS:HE1	25:CZ:78:SER:OG	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:13:ASN:HB2	25:AZ:78:SER:O	2.15	0.46
9:AI:83:ARG:HA	9:AI:86:VAL:HG12	1.97	0.46
7:AG:65:ALA:HB1	7:AG:127:ALA:CB	2.43	0.46
36:BA:1642:G:H2'	36:BA:1643:G:H8	1.81	0.46
20:CT:52:ALA:C	20:CT:54:LYS:H	2.19	0.46
55:BW:59:VAL:O	55:BW:60:ASN:HB2	2.15	0.46
39:DD:201:HIS:C	39:DD:203:ASN:N	2.66	0.46
36:BA:1216:G:O2'	36:BA:1217:C:H5'	2.15	0.46
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.49	0.46
25:AZ:338:TYR:O	25:AZ:340:PRO:HD3	2.14	0.46
36:BA:1417:C:H2'	36:BA:1418:G:O4'	2.15	0.46
22:CV:17:C:H2'	22:CV:18:G:H5''	1.97	0.46
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.79	0.46
38:DC:214:VAL:CG2	38:DC:224:ILE:HD13	2.46	0.46
1:AA:269:C:H2'	1:AA:270:A:C8	2.50	0.46
4:CD:154:ASN:O	4:CD:159:ARG:NH2	2.48	0.46
11:CK:60:ALA:O	11:CK:61:ALA:C	2.53	0.46
36:BA:431:U:O5'	36:BA:431:U:H6	1.98	0.46
36:BA:590:A:OP1	41:BF:95:ARG:NH1	2.48	0.46
5:CE:57:LYS:O	5:CE:60:TYR:HB3	2.15	0.46
1:AA:745:C:H2'	1:AA:746:A:C8	2.50	0.46
36:DA:2545:G:N3	36:DA:2565:A:H2	2.13	0.46
1:AA:1114:C:O2'	1:AA:1115:C:H5'	2.15	0.46
1:CA:189:G:O2'	1:CA:189(A):C:H5'	2.15	0.46
36:BA:2695:C:H2'	36:BA:2696:U:C6	2.51	0.46
36:DA:2051:A:H5'	36:DA:2578:G:O4'	2.15	0.46
36:DA:2122:U:H2'	36:DA:2123:G:C8	2.51	0.46
5:AE:57:LYS:HG2	5:AE:61:TYR:CE2	2.50	0.46
36:DA:849:A:H8	36:DA:849:A:O5'	1.98	0.46
15:AO:71:GLN:O	15:AO:71:GLN:HG2	2.14	0.46
42:DG:170:ARG:HH11	42:DG:170:ARG:HG2	1.80	0.46
40:BE:176:ILE:O	40:BE:176:ILE:HG22	2.15	0.46
1:AA:1242:C:H2'	1:AA:1243:C:C6	2.50	0.46
25:CZ:271:GLU:O	25:CZ:286:VAL:HG23	2.16	0.46
1:AA:411:A:H62	1:AA:413:G:N2	2.13	0.46
25:AZ:195:TRP:O	25:AZ:198:LYS:HB3	2.15	0.46
1:CA:1314:C:O4'	1:CA:1314:C:O2	2.33	0.46
1:AA:1129:C:O2'	1:AA:1131:G:H8	1.97	0.46
1:CA:1221:G:O2'	1:CA:1222:G:H5'	2.15	0.46
58:BZ:132:ASN:C	58:BZ:134:PRO:HD3	2.36	0.46
36:DA:2430:A:H8	36:DA:2431:U:H5	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:5:ILE:HD13	3:AC:5:ILE:O	2.15	0.46
19:AS:40:ILE:HG21	19:AS:62:ILE:CD1	2.27	0.46
3:CC:7:PRO:HG2	3:CC:184:TYR:HB2	1.96	0.46
36:BA:1517:G:H2'	36:BA:1518:U:O4'	2.15	0.46
36:DA:2303:G:O2'	42:DG:132:ASN:HB2	2.16	0.46
56:DX:57:LEU:N	56:DX:57:LEU:HD23	2.31	0.46
36:DA:2110:G:O2'	36:DA:2120:G:H5'	2.15	0.46
36:DA:661:C:O3'	48:DP:18:ARG:HD2	2.15	0.46
37:BB:8:U:H5'	37:BB:8:U:H6	1.80	0.46
37:BB:8:U:O2'	51:BS:25:ARG:NH2	2.48	0.46
40:BE:198:VAL:HG12	40:BE:199:ARG:N	2.30	0.46
36:BA:2492:U:O2'	36:BA:2493:U:H5'	2.15	0.46
36:DA:1484:G:H2'	36:DA:1485:G:C5'	2.32	0.46
27:D1:68:PRO:O	27:D1:71:TYR:N	2.48	0.46
40:BE:50:GLY:HA3	40:BE:74:PRO:HG3	1.96	0.46
19:CS:37:ARG:HG3	19:CS:37:ARG:H	1.52	0.46
49:DQ:65:PHE:HD2	49:DQ:105:GLU:O	1.98	0.46
36:DA:302:C:O2'	36:DA:303:U:H5'	2.14	0.46
36:BA:2784:C:O2'	36:BA:2785:C:H5'	2.15	0.46
36:BA:2809:A:H2'	36:BA:2810:A:C8	2.51	0.46
42:BG:47:LYS:HA	42:BG:81:LYS:HD2	1.97	0.46
1:CA:1157:A:O2'	1:CA:1158:C:OP2	2.32	0.46
27:D1:44:PRO:O	27:D1:46:LEU:N	2.43	0.46
36:BA:2865:U:H3'	36:BA:2866:U:O2	2.14	0.46
36:BA:2577:A:H5''	36:BA:2578:G:H5'	1.97	0.46
4:CD:128:VAL:O	4:CD:129:ASN:C	2.53	0.46
22:AV:75:C:H2'	22:AV:76:A:O4'	2.15	0.46
36:BA:2025:C:OP1	40:BE:149:ARG:HD3	2.16	0.46
36:DA:1070:A:H2'	36:DA:1097:U:OP1	2.14	0.46
57:BY:3:VAL:HG12	57:BY:3:VAL:O	2.15	0.46
4:AD:145:GLU:C	4:AD:146:ILE:HD13	2.35	0.46
7:CG:23:VAL:HG13	7:CG:43:PHE:CE2	2.51	0.46
4:AD:148:VAL:HG23	4:AD:181:MET:HB3	1.96	0.46
36:DA:1058:G:N2	36:DA:1081:U:H3	2.13	0.46
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.97	0.46
40:BE:9:VAL:HG12	40:BE:25:VAL:HB	1.96	0.46
54:BV:35:LEU:HD23	54:BV:57:VAL:CG1	2.44	0.46
16:AP:53:VAL:O	16:AP:55:ARG:N	2.49	0.46
7:AG:37:ASN:ND2	9:AI:40:LEU:HA	2.26	0.46
36:DA:2645:G:OP2	36:DA:2645:G:H8	1.98	0.46
16:CP:60:LEU:HD23	16:CP:64:ALA:O	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:165:ARG:HG3	41:BF:165:ARG:HH11	1.80	0.46
36:DA:310:A:OP1	57:DY:18:GLY:HA2	2.14	0.46
36:DA:1440:G:O2'	36:DA:1441:G:H5'	2.15	0.46
36:BA:2009:G:O2'	36:BA:2010:G:H5'	2.15	0.46
36:BA:2552:U:C2	36:BA:2554:U:H5'	2.51	0.46
1:AA:1029:C:H4'	1:AA:1033:G:N2	2.30	0.46
36:DA:978:G:C2	36:DA:986:C:N3	2.83	0.46
36:DA:2563:U:H4'	47:DO:28:SER:HA	1.97	0.46
1:AA:1475:G:OP1	36:BA:1689:A:H1'	2.15	0.46
1:CA:1301:U:H3'	1:CA:1302:U:H5''	1.97	0.46
1:CA:161:A:H2	1:CA:347:G:H21	1.63	0.46
22:CW:52:G:N2	22:CW:53:G:H1'	2.30	0.46
48:BP:91:PHE:N	48:BP:91:PHE:HD1	2.13	0.46
16:CP:82:GLN:O	16:CP:83:GLU:HB2	2.15	0.46
37:DB:98:G:C2'	37:DB:99:G:H5'	2.46	0.46
1:CA:645:C:H2'	1:CA:646:U:C6	2.51	0.46
43:BH:70:THR:HG22	43:BH:74:ASN:ND2	2.30	0.46
36:BA:79:G:H2'	36:BA:80:G:H8	1.81	0.46
19:AS:25:LYS:O	19:AS:27:GLU:OE1	2.33	0.46
15:CO:9:GLN:O	15:CO:10:LYS:C	2.53	0.46
46:BN:120:LEU:CD1	46:BN:122:VAL:HG23	2.45	0.46
36:BA:1201:C:H6	36:BA:1201:C:O5'	1.98	0.46
49:DQ:139:GLU:N	49:DQ:139:GLU:OE1	2.48	0.46
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.15	0.46
27:D1:72:GLU:O	27:D1:75:GLU:HB3	2.15	0.46
58:BZ:54:HIS:HB3	58:BZ:101:PRO:HD3	1.97	0.46
36:BA:2506:U:C6	36:BA:2506:U:H5'	2.50	0.46
1:CA:1473:A:O2'	1:CA:1474:G:H5'	2.15	0.46
36:DA:2678:C:H2'	36:DA:2679:A:O4'	2.15	0.46
39:BD:197:GLY:O	39:BD:198:ASN:HB3	2.16	0.46
43:DH:92:ILE:HG22	43:DH:92:ILE:O	2.15	0.46
2:CB:157:ARG:HH11	2:CB:157:ARG:HG3	1.80	0.46
26:D0:2:ALA:HB1	36:DA:2602:A:H61	1.80	0.46
1:AA:973:G:H1'	10:AJ:55:LYS:HZ1	1.66	0.46
36:BA:2762:G:H2'	36:BA:2763:G:H5'	1.97	0.46
4:CD:73:ARG:O	4:CD:77:ASN:HB2	2.15	0.46
41:BF:122:LYS:HB3	41:BF:191:ARG:HA	1.98	0.46
41:BF:196:LEU:O	41:BF:200:GLU:HB2	2.15	0.46
47:DO:104:ARG:NH2	52:DT:33:LYS:HD2	2.29	0.46
58:BZ:96:VAL:HG12	58:BZ:128:VAL:O	2.14	0.46
4:CD:65:ARG:HD3	4:CD:75:PHE:CB	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:49:VAL:O	51:DS:50:SER:HB3	2.15	0.46
57:DY:31:LEU:HD22	57:DY:31:LEU:N	2.29	0.46
57:DY:38:ILE:HD13	57:DY:66:PRO:CD	2.45	0.46
1:CA:1060:C:O2'	1:CA:1061:G:H5'	2.16	0.46
48:BP:57:THR:OG1	48:BP:59:LEU:N	2.49	0.46
39:BD:44:ASN:HB2	39:BD:48:ARG:O	2.15	0.46
52:BT:89:VAL:HG12	52:BT:91:ARG:CG	2.37	0.46
31:B5:44:THR:HB	50:BR:101:ALA:HB2	1.97	0.46
34:B8:32:LEU:HG	34:B8:36:LYS:NZ	2.30	0.46
36:BA:2419:U:H2'	36:BA:2420:C:H6	1.80	0.46
19:AS:20:LEU:O	19:AS:22:LEU:N	2.46	0.46
30:D4:33:VAL:CG1	30:D4:34:GLU:N	2.78	0.46
36:DA:605:C:H1'	36:DA:657:U:O2'	2.16	0.46
37:DB:22:U:H2'	37:DB:23:G:H8	1.80	0.46
36:BA:1880:C:C5'	36:BA:1880:C:H6	2.28	0.46
36:BA:140:G:C1'	36:BA:141:A:H2	2.16	0.46
48:BP:83:VAL:HG23	48:BP:105:LEU:CD2	2.46	0.46
32:D6:7:ILE:CB	32:D6:27:LYS:HZ3	2.27	0.46
36:DA:386:G:P	36:DA:388:G:H22	2.39	0.46
38:DC:137:LEU:HD22	38:DC:138:PRO:HD2	1.97	0.46
53:BU:59:ARG:O	53:BU:60:LEU:C	2.53	0.46
20:CT:61:SER:OG	20:CT:65:LYS:HD2	2.16	0.46
25:CZ:234:ARG:HB3	25:CZ:289:LEU:HD21	1.97	0.46
17:CQ:77:VAL:O	17:CQ:78:GLU:HB2	2.15	0.46
39:DD:186:HIS:HD2	39:DD:188:GLU:HB2	1.79	0.46
6:AF:75:LEU:O	6:AF:78:GLU:HB3	2.15	0.46
1:AA:1431:C:C2'	1:AA:1432:G:H5'	2.45	0.46
10:CJ:38:ILE:CD1	10:CJ:71:LEU:H	2.27	0.46
19:CS:11:VAL:HG13	19:CS:11:VAL:O	2.15	0.46
40:DE:14:ILE:HB	52:DT:14:TYR:CZ	2.50	0.46
40:DE:16:ARG:CD	40:DE:21:VAL:HG11	2.45	0.46
2:AB:130:ARG:O	2:AB:131:PRO:O	2.34	0.46
41:DF:164:ARG:NH1	41:DF:176:LEU:O	2.48	0.46
12:AL:32:PHE:HB3	12:AL:84:LEU:CD2	2.39	0.46
36:BA:391:G:H1'	36:BA:411:G:O4'	2.15	0.46
25:CZ:132:VAL:HG12	25:CZ:202:LEU:HD11	1.97	0.46
35:B9:1:MET:SD	36:BA:2478:A:OP2	2.73	0.46
25:AZ:139:ASP:CB	25:AZ:177:LEU:HD11	2.46	0.46
50:DR:4:LEU:O	50:DR:5:LYS:HD3	2.15	0.46
3:AC:77:ILE:HG22	3:AC:78:GLY:O	2.16	0.46
2:CB:31:TYR:HD2	2:CB:202:PRO:HG3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:42:LYS:O	50:BR:45:ARG:HG2	2.16	0.46
29:B3:40:THR:OG1	29:B3:43:ILE:HG12	2.14	0.46
36:BA:445:C:H2'	36:BA:446:G:C8	2.51	0.46
36:BA:483:A:H2'	36:BA:484:C:O4'	2.16	0.46
36:DA:1057:A:H2'	36:DA:1058:G:C8	2.43	0.46
55:BW:51:LEU:C	55:BW:53:SER:H	2.18	0.46
1:CA:656:C:H2'	1:CA:657:G:H8	1.80	0.46
18:CR:59:SER:OG	18:CR:62:GLU:HG3	2.13	0.46
54:BV:34:GLU:CG	54:BV:56:SER:HB2	2.45	0.46
22:CW:13:C:O2	22:CW:13:C:C2'	2.62	0.46
36:DA:917:A:H2'	36:DA:918:A:O4'	2.15	0.46
2:CB:74:LYS:HB2	2:CB:77:ALA:HB3	1.97	0.46
3:AC:107:GLN:N	3:AC:107:GLN:CD	2.67	0.46
36:DA:2472:G:H5''	36:DA:2473:U:H5''	1.97	0.46
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.15	0.46
2:CB:120:ALA:O	2:CB:122:PHE:N	2.49	0.46
55:BW:47:VAL:HG22	55:BW:103:ILE:HG21	1.97	0.46
2:CB:155:LEU:CD2	2:CB:159:PRO:HG3	2.45	0.46
53:BU:27:LEU:O	53:BU:29:SER:N	2.48	0.46
54:DV:49:THR:CB	54:DV:50:PRO:CD	2.93	0.46
36:BA:1469:A:H2'	36:BA:1470:G:H8	1.79	0.46
49:BQ:110:THR:OG1	49:BQ:112:GLU:HG2	2.16	0.46
36:BA:949:C:H2'	36:BA:950:G:C8	2.50	0.46
46:DN:129:PRO:O	46:DN:130:HIS:CB	2.63	0.46
1:AA:309:G:H1'	1:AA:608:A:C2	2.50	0.46
36:DA:2084:C:H2'	36:DA:2085:C:C6	2.51	0.46
12:AL:81:SER:HB3	12:AL:106:ASP:CB	2.45	0.46
36:BA:1751:C:H2'	36:BA:1752:C:C6	2.50	0.46
27:D1:69:LYS:O	27:D1:69:LYS:HD3	2.16	0.46
1:AA:540:G:H2'	1:AA:541:G:O4'	2.16	0.46
36:DA:790:C:O2'	36:DA:791:C:OP1	2.29	0.46
36:BA:576:U:H2'	36:BA:577:G:C8	2.49	0.46
6:CF:28:ARG:HG3	6:CF:28:ARG:HH11	1.79	0.46
36:DA:206:U:O2	36:DA:206:U:H2'	2.15	0.46
36:BA:978:G:C2	36:BA:986:C:N3	2.84	0.46
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.16	0.46
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.50	0.46
1:CA:789:U:H2'	1:CA:791:G:OP2	2.16	0.46
4:AD:14:ARG:HD2	4:AD:59:ARG:HH12	1.81	0.46
43:BH:126:PRO:O	43:BH:127:GLU:CB	2.63	0.46
36:DA:1827:C:O2'	36:DA:1828:G:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:27:ASN:C	42:BG:29:TRP:N	2.69	0.46
1:CA:1359:C:OP2	14:CN:22:THR:HG21	2.16	0.46
14:CN:22:THR:O	14:CN:23:ARG:CB	2.64	0.46
38:DC:36:LYS:O	38:DC:37:PHE:O	2.34	0.46
24:AY:65:C:H5'	25:AZ:341:GLN:HG2	1.97	0.46
25:AZ:120:ILE:HD13	25:AZ:158:LEU:HD23	1.98	0.46
25:CZ:215:ARG:NH1	25:CZ:283:GLY:HA3	2.31	0.46
48:BP:31:ALA:C	48:BP:33:ARG:N	2.65	0.46
42:DG:91:ARG:C	42:DG:91:ARG:HD2	2.35	0.46
48:BP:84:ASN:C	48:BP:86:LYS:H	2.19	0.46
52:DT:111:ARG:HB3	52:DT:111:ARG:HH11	1.81	0.46
1:AA:1005:A:H2'	1:AA:1006:C:H5'	1.97	0.46
31:D5:36:CYS:C	31:D5:38:ALA:N	2.69	0.46
36:DA:1336:A:H2'	36:DA:1337:G:H8	1.81	0.46
36:DA:2414:G:H21	48:DP:67:MET:HE1	1.81	0.46
29:B3:35:ARG:NH1	29:B3:35:ARG:HB2	2.15	0.46
49:DQ:132:VAL:HG11	58:DZ:81:ARG:CD	2.46	0.46
49:DQ:134:ARG:C	49:DQ:135:ASP:OD1	2.53	0.46
36:BA:1453:U:H5'	50:BR:63:ARG:NE	2.29	0.46
39:DD:133:LEU:HD12	39:DD:189:CYS:HB2	1.97	0.46
36:BA:654(T):C:O2'	36:BA:654(U):A:O4'	2.30	0.46
39:DD:172:TYR:CG	39:DD:184:LYS:HE2	2.50	0.46
1:CA:1286:A:O2'	1:CA:1287:A:H4'	2.16	0.46
41:BF:126:VAL:HG11	41:BF:142:TRP:CH2	2.32	0.46
1:CA:945:G:C6	1:CA:1337:G:C4	3.04	0.46
58:BZ:103:ARG:CG	58:BZ:138:GLU:HG2	2.45	0.46
46:DN:12:ARG:HH21	46:DN:133:GLN:CD	2.18	0.46
32:D6:53:LYS:NZ	32:D6:54:ILE:HG13	2.30	0.46
1:CA:622:A:C8	1:CA:623:C:C5	3.03	0.46
22:CW:39:U:H4'	22:CW:39:U:OP2	2.16	0.46
4:CD:108:LEU:HD21	4:CD:183:GLY:HA3	1.97	0.46
1:AA:62:U:O2'	1:AA:63:C:H5''	2.16	0.46
8:AH:127:LEU:N	8:AH:127:LEU:CD2	2.78	0.46
8:CH:10:LEU:HD23	8:CH:83:ILE:HD11	1.98	0.46
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.98	0.46
2:AB:139:LYS:C	2:AB:141:GLU:H	2.18	0.46
22:CW:64:A:O2'	22:CW:65:G:H5'	2.15	0.46
17:CQ:33:GLY:O	17:CQ:34:LYS:O	2.34	0.46
36:BA:2291:U:O2'	36:BA:2374:C:H1'	2.14	0.46
36:DA:2645:G:C3'	36:DA:2646:C:H5'	2.43	0.46
9:AI:83:ARG:C	9:AI:86:VAL:HG12	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2495:G:H5''	49:BQ:82:ARG:HB3	1.97	0.46
9:CI:6:GLY:O	9:CI:80:GLY:HA2	2.16	0.46
36:DA:2295:C:O2'	36:DA:2296:U:H5'	2.16	0.46
36:DA:237:C:N3	36:DA:238:C:C5	2.84	0.46
57:BY:91:GLU:HB3	57:BY:92:ASN:H	1.63	0.46
16:AP:42:ARG:O	16:AP:44:THR:HG23	2.15	0.46
11:AK:103:LEU:HD13	11:AK:104:GLN:H	1.81	0.46
25:AZ:226:GLU:OE1	25:AZ:240:GLY:HA2	2.15	0.46
36:DA:1403:C:H5''	36:DA:1471:A:C1'	2.43	0.46
36:BA:813:U:O2'	36:BA:1225:G:H1'	2.15	0.46
36:DA:1847:A:H2'	36:DA:1847:A:N3	2.30	0.46
36:BA:768:G:H2'	36:BA:769:G:C8	2.50	0.46
29:B3:30:ARG:NH2	36:BA:1159:U:OP1	2.48	0.46
36:BA:476:G:H4'	36:BA:502:A:N1	2.30	0.46
18:AR:42:ARG:HG3	18:AR:42:ARG:HH11	1.81	0.46
33:B7:24:THR:O	33:B7:28:ARG:HG3	2.16	0.46
36:DA:2162:G:O2'	36:DA:2173:A:N6	2.48	0.46
47:DO:1:MET:HG3	47:DO:67:LYS:HG2	1.97	0.46
1:CA:841:U:H2'	1:CA:848:C:O4'	2.16	0.46
36:DA:2510:C:C4	36:DA:2511:U:C4	3.04	0.46
1:CA:1333:A:H2'	1:CA:1334:G:H5'	1.98	0.46
8:AH:1:MET:O	8:AH:2:LEU:O	2.33	0.46
5:CE:41:VAL:O	5:CE:67:VAL:HG12	2.14	0.46
36:BA:1275:A:N1	36:BA:1295:C:O2'	2.46	0.46
1:CA:748:C:OP2	1:CA:748:C:H6	1.98	0.46
36:BA:1490:A:H5'	36:BA:1491:G:OP1	2.16	0.46
3:CC:36:ASP:OD2	3:CC:57:ILE:HG21	2.16	0.46
36:BA:1502:C:O2	36:BA:1502:C:H2'	2.16	0.46
11:CK:115:PRO:C	11:CK:117:ASN:H	2.19	0.46
36:DA:614:U:O2	36:DA:614:U:O4'	2.34	0.46
11:CK:108:ILE:HG21	18:CR:88:LYS:OXT	2.15	0.46
25:CZ:69:GLU:HG2	25:CZ:273:HIS:ND1	2.30	0.46
43:BH:162:ILE:HG13	43:BH:162:ILE:O	2.15	0.46
4:AD:102:ASP:O	4:AD:105:VAL:HB	2.15	0.46
4:CD:95:GLY:HA3	4:CD:188:LEU:HD21	1.97	0.46
36:BA:2131:G:H5''	36:BA:2132:U:O5'	2.15	0.46
52:DT:26:ASP:C	52:DT:26:ASP:OD1	2.54	0.46
26:D0:43:THR:HG22	36:DA:2331:G:O2'	2.15	0.46
54:BV:39:LEU:HD22	54:BV:39:LEU:N	2.31	0.46
9:CI:114:TYR:CD1	9:CI:114:TYR:N	2.84	0.46
36:BA:1568:G:P	39:BD:63:ARG:HH22	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:242:ILE:HG21	25:CZ:282:ALA:HA	1.97	0.46
19:AS:49:ILE:O	19:AS:60:VAL:HG12	2.16	0.46
42:DG:103:LEU:HD21	42:DG:178:PHE:HE1	1.78	0.46
36:DA:1798:U:C2'	36:DA:1799:G:O5'	2.63	0.46
51:BS:19:LYS:O	51:BS:20:ARG:NH2	2.49	0.46
58:BZ:10:ARG:HD3	58:BZ:37:VAL:O	2.16	0.46
58:DZ:28:MET:HG3	58:DZ:28:MET:O	2.15	0.46
57:DY:95:LYS:HE3	57:DY:100:ALA:CA	2.46	0.46
32:D6:15:GLU:HA	32:D6:49:HIS:ND1	2.30	0.46
40:BE:4:ILE:HD12	40:BE:92:THR:O	2.16	0.46
53:DU:9:VAL:O	53:DU:10:ARG:C	2.54	0.46
1:AA:1444:C:O2'	1:AA:1445:C:H5'	2.15	0.46
36:BA:918:A:H5''	37:BB:98:G:O2'	2.16	0.46
36:DA:2712:U:O2	36:DA:2712:U:H5''	2.16	0.46
22:CW:9:A:C8	22:CW:46:G:N2	2.83	0.46
39:BD:238:GLY:O	39:BD:239:ARG:C	2.53	0.46
36:DA:652:C:O2'	36:DA:653:A:O5'	2.33	0.46
36:DA:2494:G:O2'	49:DQ:80:GLU:HA	2.16	0.46
36:DA:2811:G:OP2	36:DA:2811:G:H8	1.98	0.46
39:BD:120:GLY:O	39:BD:131:LEU:HG	2.14	0.46
51:DS:19:LYS:O	51:DS:20:ARG:NE	2.49	0.46
20:AT:78:ALA:O	20:AT:81:LYS:HB2	2.16	0.46
38:DC:82:LYS:HA	38:DC:82:LYS:HE2	1.98	0.46
23:AX:14:A:H2'	23:AX:15:A:O5'	2.16	0.46
1:CA:259:G:C4	1:CA:260:G:C8	3.04	0.46
39:BD:142:VAL:HG23	39:BD:193:VAL:N	2.31	0.46
4:CD:126:ILE:HD12	4:CD:126:ILE:N	2.30	0.46
4:CD:165:MET:HE3	4:CD:176:LEU:CD2	2.46	0.46
36:BA:585:G:H2'	36:BA:1251:C:N4	2.27	0.46
39:BD:91:ARG:NH1	39:BD:91:ARG:HG2	2.31	0.46
27:B1:16:ASN:O	27:B1:17:SER:CB	2.59	0.46
22:CV:4:C:H3'	22:CV:5:G:C5'	2.42	0.46
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.36	0.46
42:DG:125:PHE:CB	42:DG:130:ASN:O	2.62	0.46
58:BZ:42:VAL:HG13	58:BZ:43:GLU:N	2.30	0.46
36:DA:579:G:O2'	36:DA:2019:A:OP1	2.26	0.46
36:DA:915:C:H2'	36:DA:916:G:H8	1.80	0.46
40:BE:36:ARG:HG2	40:BE:36:ARG:HH11	1.80	0.46
36:BA:731:C:H2'	36:BA:732:C:H6	1.80	0.46
36:DA:2481:G:C2'	36:DA:2482:G:OP2	2.63	0.46
36:DA:9:U:O2'	36:DA:10:G:P	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:750:A:C2	36:DA:753:C:C6	3.04	0.46
1:AA:1028:C:H2'	1:AA:1029:C:O4'	2.15	0.46
36:DA:1890:A:O5'	36:DA:1890:A:H8	1.98	0.46
1:AA:97:G:H2'	1:AA:98:G:O4'	2.15	0.46
4:CD:2:GLY:C	4:CD:3:ARG:HD3	2.35	0.46
35:D9:18:ARG:O	35:D9:19:ARG:HB3	2.16	0.46
37:DB:98:G:O2'	37:DB:99:G:H5'	2.15	0.46
46:BN:129:PRO:O	46:BN:130:HIS:CB	2.63	0.46
25:AZ:88:TYR:O	25:AZ:92:MET:HB2	2.15	0.46
1:CA:1309:G:N2	1:CA:1329:A:H1'	2.31	0.46
1:CA:644:G:H2'	1:CA:645:C:C6	2.51	0.46
36:DA:1750:G:O2'	36:DA:1751:C:H5'	2.16	0.46
33:B7:21:ARG:NH1	33:B7:21:ARG:HG2	2.30	0.46
36:BA:1231:G:H2'	36:BA:1232:G:C8	2.51	0.46
36:DA:706:A:C2	36:DA:707:G:H1'	2.50	0.46
44:DJ:80:UNK:O	44:DJ:81:UNK:C	2.63	0.46
1:CA:310:G:H2'	1:CA:311:C:C6	2.51	0.46
52:BT:16:ARG:HD2	52:BT:18:ASP:OD1	2.16	0.46
36:BA:696:G:O2'	36:BA:697:C:H5'	2.15	0.46
36:BA:1709:U:H2'	36:BA:1710:C:C6	2.51	0.46
10:AJ:56:HIS:O	10:AJ:58:ASP:O	2.33	0.46
36:BA:1001:A:H2'	36:BA:1002:G:O4'	2.15	0.46
3:AC:73:PRO:HD3	3:AC:105:GLU:HG3	1.98	0.46
36:BA:407:G:H2'	36:BA:408:G:H8	1.79	0.46
36:BA:1914:C:O4'	36:BA:1914:C:O2	2.32	0.46
1:AA:571:U:O5'	1:AA:571:U:H6	1.99	0.46
1:AA:341:C:O2	1:AA:349:A:C2	2.68	0.46
15:CO:27:VAL:O	15:CO:31:LEU:HB2	2.15	0.46
27:D1:87:PRO:HD2	27:D1:89:GLU:OE2	2.16	0.46
36:DA:2223:G:C2'	36:DA:2224:G:H5'	2.45	0.46
58:BZ:128:VAL:HG22	58:BZ:129:SER:H	1.80	0.46
40:DE:52:LEU:HD12	40:DE:53:PRO:HD2	1.97	0.46
4:CD:6:GLY:O	4:CD:8:VAL:HG13	2.15	0.46
36:DA:331:A:C1'	36:DA:332:A:OP1	2.64	0.46
36:DA:2429:G:OP2	36:DA:2430:A:OP2	2.34	0.46
36:BA:479:A:N3	36:BA:481:G:H5''	2.31	0.46
39:BD:30:GLU:HB2	39:BD:35:LYS:HE3	1.98	0.46
30:D4:22:ILE:H	30:D4:22:ILE:CD1	2.01	0.46
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.77	0.46
36:BA:664:C:H4'	36:BA:940:G:O3'	2.15	0.46
32:B6:52:VAL:HG12	32:B6:53:LYS:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:133:LEU:HD21	42:DG:157:ILE:HD12	1.98	0.46
12:AL:90:VAL:HG23	12:AL:99:HIS:HE1	1.80	0.46
2:AB:149:LEU:O	2:AB:150:SER:C	2.54	0.46
39:BD:102:LYS:C	39:BD:103:ARG:HG2	2.36	0.46
1:AA:858:G:N1	1:AA:869:G:C8	2.84	0.46
36:BA:2262:U:H2'	36:BA:2263:C:C6	2.45	0.46
50:DR:54:LEU:O	50:DR:57:ARG:HG2	2.15	0.46
32:D6:9:LEU:HD22	32:D6:10:LEU:N	2.30	0.46
25:CZ:164:PRO:O	25:CZ:166:ASP:N	2.49	0.46
13:CM:101:GLN:NE2	13:CM:101:GLN:N	2.50	0.46
36:DA:580:C:P	53:DU:33:ARG:HH21	2.39	0.46
41:DF:36:VAL:HG22	41:DF:101:LEU:HD21	1.97	0.46
36:DA:2781:A:OP2	36:DA:2781:A:H8	1.98	0.46
24:CY:67:G:H2'	24:CY:68:C:C6	2.50	0.46
22:CW:26:A:N6	22:CW:44:G:H1	2.00	0.46
1:CA:1004:A:H2'	1:CA:1037:C:O2	2.16	0.46
48:DP:84:ASN:ND2	48:DP:116:GLY:CA	2.77	0.46
40:DE:101:ARG:HA	40:DE:170:LEU:O	2.15	0.46
1:AA:149:A:H2'	1:AA:150:C:H6	1.78	0.46
58:BZ:162:GLU:O	58:BZ:163:LEU:O	2.33	0.46
24:AY:56:C:H6	24:AY:56:C:OP1	1.99	0.46
1:AA:59:A:C5'	1:AA:60:A:H5''	2.45	0.46
43:DH:15:VAL:HB	43:DH:27:LYS:O	2.16	0.46
1:CA:501:C:H2'	1:CA:502:G:C8	2.50	0.46
1:CA:548:G:H2'	1:CA:549:C:C6	2.51	0.46
22:CV:12:U:H4'	36:DA:1908:C:O2	2.16	0.46
36:DA:751:A:C5'	55:DW:90:ARG:HA	2.41	0.46
36:DA:1999:C:H5''	36:DA:2723:C:O2'	2.16	0.46
22:CW:31:A:O2'	22:CW:32:U:H5'	2.16	0.46
4:CD:108:LEU:HD11	4:CD:176:LEU:HB2	1.98	0.46
36:DA:1721:G:C2	36:DA:1739:U:OP2	2.69	0.46
10:CJ:78:ASN:HB2	10:CJ:81:THR:CG2	2.45	0.46
15:AO:21:ASP:CG	15:AO:24:SER:HG	2.19	0.46
8:CH:10:LEU:CD2	8:CH:83:ILE:HD11	2.46	0.46
36:DA:500:G:H22	36:DA:502:A:H3'	1.76	0.46
36:BA:968:G:H2'	36:BA:969:U:C6	2.50	0.46
36:DA:67:U:O2'	36:DA:68:G:H5'	2.16	0.46
36:BA:568:U:OP1	36:BA:945:A:N6	2.48	0.46
52:DT:12:SER:O	52:DT:13:ARG:NH2	2.49	0.46
1:AA:686:U:HO2'	11:AK:42:TRP:HE1	1.63	0.46
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1472:A:O2'	36:BA:1473:G:H5'	2.16	0.46
42:DG:34:LEU:HA	42:DG:161:THR:HA	1.98	0.46
14:AN:57:ARG:CG	14:AN:58:LYS:N	2.79	0.46
52:DT:5:ALA:O	52:DT:8:LYS:N	2.48	0.46
36:BA:880:G:N2	36:BA:897:C:H42	2.11	0.46
1:AA:1510:U:H2'	1:AA:1511:G:H8	1.79	0.46
36:BA:1278:A:O2'	36:BA:1279:G:H5'	2.16	0.46
22:CW:34:G:N2	23:CX:18:G:O6	2.48	0.46
12:AL:119:LYS:O	12:AL:120:TYR:HD2	1.99	0.46
36:BA:1198:U:H2'	36:BA:1199:U:H6	1.79	0.46
50:DR:107:ASP:OD1	50:DR:107:ASP:C	2.54	0.46
36:BA:1085:A:H4'	36:BA:1105:U:C4'	2.45	0.46
42:BG:30:GLU:CG	42:BG:32:PRO:HD3	2.46	0.46
36:BA:2555:U:C2'	36:BA:2556:C:H5'	2.45	0.46
39:DD:210:GLY:C	39:DD:212:SER:N	2.67	0.46
36:DA:443:A:H3'	41:DF:45:ARG:NH1	2.31	0.46
1:AA:344:A:HO2'	1:AA:345:C:P	2.37	0.46
36:BA:763:G:C4	36:BA:765:G:C8	3.04	0.46
37:DB:81:G:H2'	37:DB:82:G:H5'	1.98	0.46
49:BQ:79:LEU:HD22	49:BQ:80:GLU:HG3	1.98	0.46
36:BA:604:G:O2'	36:BA:605:C:H5'	2.16	0.46
2:AB:236:TYR:O	2:AB:237:ALA:C	2.54	0.46
36:BA:2348:U:C2'	36:BA:2349:G:H5'	2.45	0.46
22:CV:62:C:O2'	22:CV:63:G:H5'	2.16	0.46
58:BZ:62:PRO:C	58:BZ:64:GLY:N	2.69	0.46
34:D8:7:HIS:C	34:D8:9:GLY:H	2.19	0.46
25:AZ:175:ALA:O	25:AZ:178:ALA:HB3	2.15	0.46
40:DE:12:THR:OG1	40:DE:13:ARG:N	2.49	0.46
58:DZ:104:PHE:CD1	58:DZ:139:VAL:HG21	2.51	0.46
36:BA:1462:C:H4'	36:BA:2703:C:H5'	1.97	0.46
8:CH:37:ARG:HA	8:CH:48:TYR:HE2	1.81	0.46
36:DA:2242:G:C2'	36:DA:2243:U:O5'	2.64	0.46
36:DA:1264:G:C6	36:DA:1265:A:N6	2.84	0.46
1:AA:1137:C:O2'	1:AA:1138:G:N2	2.49	0.46
36:BA:1268:A:H2'	36:BA:1269:A:O4'	2.15	0.46
57:DY:33:LYS:C	57:DY:35:TYR:H	2.19	0.46
1:CA:551:U:H2'	1:CA:552:U:C6	2.51	0.46
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.16	0.46
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.15	0.46
27:D1:13:ILE:O	27:D1:13:ILE:HG23	2.14	0.46
15:CO:18:PHE:CE1	15:CO:21:ASP:HB2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:77:ALA:O	54:BV:79:VAL:N	2.47	0.46
1:AA:428:G:O2'	1:AA:429:U:P	2.73	0.46
1:CA:1325:C:P	21:CU:15:ARG:HH21	2.39	0.46
47:DO:75:SER:HB3	52:DT:32:TYR:OH	2.16	0.46
36:DA:2305:A:C4	42:DG:154:GLY:HA3	2.51	0.46
25:CZ:309:SER:O	25:CZ:310:ILE:CG2	2.56	0.46
36:BA:143:G:H1'	56:BX:37:THR:HG22	1.98	0.46
52:BT:29:ARG:HA	52:BT:29:ARG:HD3	1.68	0.46
1:AA:1113:C:C1'	3:AC:178:LEU:HD23	2.46	0.46
25:AZ:100:ASP:OD1	25:AZ:215:ARG:NH2	2.49	0.46
25:AZ:313:HIS:O	25:AZ:380:LEU:HD11	2.16	0.46
25:CZ:221:PHE:CZ	25:CZ:247:VAL:HG11	2.50	0.46
54:DV:15:GLU:HB3	54:DV:16:PRO:HD2	1.93	0.46
32:B6:15:GLU:CB	32:B6:20:ASN:HB3	2.42	0.46
34:B8:17:THR:OG1	36:BA:651:G:OP1	2.34	0.46
48:BP:84:ASN:HB3	48:BP:86:LYS:HB3	1.97	0.46
34:D8:27:THR:HG22	48:DP:62:LEU:HD22	1.97	0.46
48:DP:57:THR:OG1	48:DP:59:LEU:CB	2.63	0.46
36:BA:626:U:C2	48:BP:105:LEU:HG	2.48	0.46
46:BN:23:LEU:CD2	46:BN:24:GLY:N	2.78	0.46
32:D6:44:ARG:HB3	32:D6:46:HIS:CE1	2.51	0.46
13:AM:88:ARG:NH1	13:AM:88:ARG:CG	2.77	0.46
1:CA:354:G:N3	1:CA:354:G:H2'	2.30	0.46
39:BD:158:ALA:HB3	39:BD:161:THR:CG2	2.46	0.46
9:CI:11:LYS:O	9:CI:12:GLU:CB	2.63	0.46
39:DD:183:ARG:CD	39:DD:269:PHE:O	2.64	0.46
55:BW:70:TYR:O	55:BW:107:LEU:HB3	2.16	0.46
58:BZ:18:LEU:O	58:BZ:21:ALA:HB3	2.16	0.46
36:BA:2820:A:O2'	36:BA:2821:A:OP1	2.32	0.46
1:AA:1086:U:H5	1:AA:1099:G:H22	1.64	0.46
38:DC:196:LEU:C	38:DC:198:ALA:N	2.69	0.46
30:B4:31:ILE:O	30:B4:31:ILE:HG22	2.15	0.46
20:AT:84:LEU:C	20:AT:86:ARG:N	2.69	0.46
40:BE:63:LEU:O	40:BE:64:LYS:C	2.54	0.46
36:BA:2406:U:C2	48:BP:72:PRO:HB2	2.50	0.46
18:AR:53:ARG:CG	18:AR:63:GLN:HE21	2.23	0.46
1:CA:35:G:H2'	1:CA:36:C:H6	1.77	0.46
37:BB:90:A:O2'	49:BQ:17:LEU:HD12	2.16	0.46
1:CA:375:U:C2	1:CA:376:G:C8	3.03	0.46
25:CZ:357:PRO:C	25:CZ:359:VAL:H	2.19	0.46
29:B3:42:ALA:O	29:B3:45:GLY:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:20:VAL:HG21	16:CP:32:TYR:HB2	1.97	0.46
36:DA:1058:G:C2	36:DA:1059:G:C8	3.04	0.46
55:BW:13:SER:HA	55:BW:99:ARG:HB2	1.97	0.46
12:CL:8:ASN:O	12:CL:12:ARG:HG3	2.16	0.46
1:CA:1030:C:N4	1:CA:1032:G:N3	2.64	0.46
5:CE:91:LEU:HD12	5:CE:91:LEU:N	2.30	0.46
6:CF:8:ILE:HG23	6:CF:85:VAL:HG13	1.97	0.46
36:DA:2720:U:H3'	36:DA:2721:A:H8	1.81	0.46
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.64	0.46
36:DA:234:C:O2'	36:DA:235:U:H5'	2.15	0.46
1:CA:708:C:OP1	11:CK:85:ARG:NH2	2.41	0.46
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.16	0.46
36:DA:863:A:H61	36:DA:913:U:H3	1.64	0.46
13:CM:108:ARG:N	13:CM:108:ARG:HD2	2.31	0.46
55:BW:5:ALA:HB2	55:BW:54:ALA:CB	2.46	0.46
2:CB:236:TYR:CD2	2:CB:239:VAL:HG21	2.50	0.46
36:BA:272(C):G:H1	36:BA:365:C:N4	2.12	0.46
36:DA:1199:U:H2'	36:DA:1200:C:C6	2.50	0.46
7:AG:69:VAL:O	7:AG:138:LYS:HB2	2.15	0.46
36:DA:271(C):C:O2'	36:DA:271(D):G:H5'	2.15	0.46
2:AB:32:ILE:HD12	2:AB:40:HIS:CD2	2.50	0.46
38:BC:151:GLU:HA	38:BC:154:ARG:CG	2.46	0.46
2:CB:204:ASN:HD22	2:CB:207:ALA:H	1.62	0.46
49:BQ:119:ARG:O	49:BQ:123:HIS:HD2	1.99	0.46
37:BB:13:A:H2'	37:BB:14:U:H5''	1.97	0.46
58:DZ:48:PHE:CE1	58:DZ:52:SER:HA	2.50	0.46
36:BA:2402:C:OP2	36:BA:2402:C:O4'	2.33	0.46
43:BH:59:ARG:O	43:BH:62:LYS:HB3	2.15	0.46
1:CA:643:C:H4'	8:CH:31:PHE:CE2	2.51	0.46
1:AA:920:U:H2'	1:AA:921:U:C6	2.51	0.46
2:CB:105:PHE:CD1	2:CB:152:PHE:HZ	2.33	0.46
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.15	0.46
36:DA:2239:G:H5'	39:DD:251:GLY:HA3	1.96	0.46
39:DD:165:ILE:HA	39:DD:175:LEU:HD23	1.97	0.46
36:DA:743:G:O2'	36:DA:1659:U:OP1	2.26	0.46
6:AF:28:ARG:HH11	6:AF:28:ARG:HG3	1.80	0.46
31:D5:27:PRO:HG3	55:DW:23:LEU:HD11	1.97	0.46
36:DA:1596:A:O2'	36:DA:1597:A:H5'	2.16	0.46
25:CZ:192:GLU:O	25:CZ:193:ASN:O	2.34	0.46
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.46	0.46
36:BA:2055:C:H5'	36:BA:2056:G:O5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2186:G:H2'	36:BA:2187:G:N9	2.31	0.46
54:DV:52:VAL:CG1	54:DV:55:ALA:HB3	2.46	0.46
37:DB:7:G:C3'	37:DB:8:U:C5'	2.94	0.46
36:BA:1794:U:H1'	36:BA:1900:A:C2	2.51	0.46
36:DA:1191:G:OP1	48:DP:35:HIS:ND1	2.48	0.46
52:DT:29:ARG:CD	52:DT:30:VAL:HG13	2.45	0.46
52:DT:29:ARG:HG3	52:DT:30:VAL:HG22	1.97	0.46
4:CD:19:LEU:HD23	4:CD:67:ILE:HG13	1.98	0.46
53:BU:95:LEU:C	53:BU:97:ASP:H	2.19	0.46
54:BV:39:LEU:HA	54:BV:47:VAL:CG1	2.46	0.46
52:BT:31:SER:HB2	52:BT:32:TYR:CE1	2.51	0.46
34:B8:56:GLU:O	34:B8:57:ARG:C	2.55	0.46
25:CZ:12:VAL:HG21	25:CZ:75:ARG:HH21	1.81	0.46
42:DG:93:THR:O	42:DG:94:LEU:HD23	2.16	0.46
2:CB:94:ASN:N	2:CB:94:ASN:ND2	2.34	0.46
34:B8:21:LYS:NZ	34:B8:48:PHE:HE2	2.13	0.46
34:D8:17:THR:CG2	34:D8:21:LYS:O	2.64	0.46
36:DA:1245:G:OP1	48:DP:16:ARG:NE	2.49	0.46
51:BS:17:ARG:NH2	51:BS:90:GLY:H	2.13	0.46
48:DP:62:LEU:N	48:DP:62:LEU:HD23	2.19	0.46
40:BE:26:ILE:HD12	40:BE:198:VAL:HG21	1.98	0.46
56:BX:41:ASN:HD22	56:BX:41:ASN:N	2.14	0.46
2:CB:7:VAL:O	2:CB:11:LEU:HB2	2.16	0.46
49:BQ:140:ALA:HB3	58:BZ:53:ILE:HD12	1.97	0.46
58:BZ:72:ARG:HG2	58:BZ:89:PHE:HB2	1.98	0.46
35:D9:10:ILE:O	35:D9:14:CYS:SG	2.74	0.46
36:DA:482:A:N6	36:DA:506:G:C8	2.84	0.46
46:DN:43:THR:HB	46:DN:46:VAL:HG12	1.95	0.46
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	1.98	0.46
13:AM:15:VAL:O	13:AM:18:ALA:N	2.49	0.46
6:AF:33:TYR:HB2	6:AF:75:LEU:HD13	1.96	0.46
2:CB:222:ILE:O	2:CB:223:ILE:C	2.54	0.46
36:BA:2781:A:H5''	36:BA:2782:G:H5'	1.93	0.46
43:DH:54:ARG:NH1	43:DH:54:ARG:CG	2.74	0.46
31:D5:2:ALA:N	36:DA:747:U:C4	2.84	0.46
47:BO:61:VAL:O	47:BO:84:ALA:HA	2.16	0.46
41:DF:167:ALA:O	41:DF:170:LEU:HB2	2.16	0.46
43:DH:149:ARG:O	43:DH:151:ILE:N	2.48	0.46
1:CA:737:A:OP1	6:CF:92:LYS:HB2	2.15	0.46
49:BQ:43:THR:HG22	49:BQ:94:VAL:CG1	2.40	0.46
40:DE:134:ILE:HG22	40:DE:137:HIS:CE1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:955:U:O5'	1:CA:955:U:H6	1.98	0.46
41:DF:122:LYS:N	41:DF:122:LYS:HD2	2.30	0.46
29:B3:26:LEU:O	29:B3:28:LEU:N	2.49	0.46
36:BA:848:G:N9	36:BA:933:A:H8	2.14	0.46
36:BA:2653:U:O2'	43:BH:110:SER:HB2	2.15	0.46
20:CT:45:GLN:CB	20:CT:91:LEU:HD22	2.46	0.46
1:CA:1107:C:C4	1:CA:1108:G:C8	3.04	0.46
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.30	0.46
25:CZ:13:ASN:HB2	25:CZ:78:SER:O	2.16	0.46
36:DA:363(A):A:N3	36:DA:363(A):A:H2'	2.30	0.46
36:DA:2018:G:H2'	36:DA:2019:A:C8	2.50	0.46
36:DA:944:G:H5'	36:DA:945:A:O5'	2.16	0.46
1:CA:865:A:O2'	1:CA:866:C:H5'	2.16	0.46
36:BA:2206:G:N2	36:BA:2207:G:C4'	2.79	0.46
49:BQ:136:ALA:O	49:BQ:138:ASP:N	2.41	0.46
27:B1:77:ALA:O	27:B1:78:LYS:C	2.54	0.46
53:DU:85:LYS:CD	53:DU:117:GLN:HE22	2.28	0.46
36:BA:363(A):A:H2'	36:BA:363(A):A:N3	2.31	0.46
36:DA:1063:G:H22	45:DK:89:UNK:HA	1.81	0.46
8:CH:20:TYR:CZ	8:CH:78:GLN:NE2	2.84	0.46
1:AA:538:G:H2'	1:AA:539:A:C8	2.51	0.46
1:AA:106:C:HO2'	1:AA:107:G:H5'	1.81	0.46
36:BA:478:A:N1	36:BA:500:G:H4'	2.31	0.46
27:B1:29:GLY:HA3	36:BA:2396:G:O2'	2.16	0.46
54:BV:58:VAL:O	54:BV:97:LYS:HB2	2.15	0.46
3:CC:175:LEU:HD23	3:CC:182:ILE:HD13	1.98	0.46
1:AA:245:C:O2'	1:AA:246:A:P	2.74	0.46
36:BA:1308:A:N1	36:BA:1611:C:H1'	2.30	0.46
36:DA:1264:G:H2'	36:DA:1265:A:C8	2.51	0.46
36:BA:1289:C:O2'	36:BA:1330:C:H4'	2.16	0.46
36:DA:1424:G:H2'	36:DA:1425:G:O4'	2.16	0.46
38:BC:159:GLY:O	38:BC:160:ARG:O	2.33	0.46
1:AA:141:A:H1'	1:AA:182:U:C2	2.50	0.46
36:DA:696:G:O2'	36:DA:697:C:H5'	2.16	0.46
17:AQ:78:GLU:OE1	17:AQ:81:ARG:HD3	2.15	0.46
49:DQ:38:GLU:OE2	49:DQ:128:LYS:HG3	2.15	0.46
25:AZ:343:TYR:CE2	25:AZ:348:ASP:HB3	2.51	0.46
36:BA:688:U:H5'	36:BA:1780:A:C2	2.51	0.46
22:AW:8:U:O2'	22:AW:9:A:C5'	2.64	0.46
53:DU:101:ARG:HG3	53:DU:101:ARG:HH11	1.81	0.46
46:DN:65:LYS:H	46:DN:65:LYS:HD2	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2032:G:OP2	36:BA:2454:G:O2'	2.34	0.46
11:AK:58:PRO:HB2	11:AK:93:GLN:HG3	1.98	0.46
26:D0:26:TYR:HA	26:D0:69:PHE:CE1	2.48	0.46
36:DA:996:A:H4'	53:DU:92:ARG:NE	2.31	0.46
1:CA:1363:C:H5'	1:CA:1363(A):A:O5'	2.15	0.46
21:CU:6:ARG:HD3	21:CU:15:ARG:HH12	1.68	0.46
28:B2:20:GLU:HG3	28:B2:21:LEU:N	2.31	0.46
57:BY:28:LYS:HG2	57:BY:39:VAL:CG1	2.46	0.46
4:CD:194:LEU:H	4:CD:194:LEU:HD22	1.81	0.46
36:BA:610:G:H2'	36:BA:611:C:C6	2.51	0.46
41:BF:6:VAL:CG1	41:BF:7:TYR:N	2.79	0.46
36:DA:820:A:H4'	36:DA:836:G:N2	2.31	0.46
30:B4:5:ILE:H	30:B4:5:ILE:HD13	1.81	0.46
42:DG:55:LYS:C	42:DG:57:ALA:N	2.69	0.46
4:CD:11:LEU:O	4:CD:13:ARG:O	2.34	0.46
30:B4:26:SER:CB	42:BG:143:GLU:OE2	2.64	0.46
10:CJ:49:VAL:HG21	14:CN:41:ARG:O	2.16	0.46
31:B5:2:ALA:N	36:BA:747:U:C4	2.84	0.46
25:CZ:63:ILE:N	25:CZ:83:PRO:HB3	2.31	0.46
8:CH:29:SER:OG	8:CH:32:LYS:HB2	2.16	0.46
1:CA:68:G:H5'	1:CA:171:A:H1'	1.97	0.46
36:DA:2186:G:H2'	36:DA:2187:G:C4	2.51	0.46
30:D4:28:LYS:O	30:D4:31:ILE:CD1	2.64	0.46
36:BA:640:C:H2'	36:BA:641:C:C6	2.50	0.46
36:DA:2120:G:O2'	36:DA:2121:G:H5'	2.16	0.46
37:BB:7:G:H2'	37:BB:8:U:H5''	1.98	0.46
48:DP:59:LEU:CA	48:DP:61:ARG:NE	2.69	0.46
36:BA:1139:G:H5'	46:BN:23:LEU:HD21	1.98	0.46
36:BA:2772:C:H2'	36:BA:2773:C:H6	1.81	0.46
51:DS:34:HIS:HB2	51:DS:36:TYR:CE1	2.48	0.46
9:CI:16:ARG:HH11	9:CI:16:ARG:HG3	1.80	0.46
57:BY:80:GLY:O	57:BY:81:LYS:C	2.53	0.46
37:DB:29:A:C2	37:DB:56:G:C2	3.04	0.46
42:DG:172:LEU:O	42:DG:176:LEU:HB2	2.16	0.46
25:CZ:236:THR:O	25:CZ:289:LEU:HD12	2.16	0.46
9:AI:4:TYR:HB2	9:AI:19:LEU:HB3	1.97	0.46
46:BN:51:PHE:CZ	46:BN:119:ARG:HD2	2.51	0.46
48:DP:147:LEU:HG	48:DP:148:LEU:N	2.17	0.46
1:CA:1151:A:O2'	1:CA:1152:A:O5'	2.32	0.46
36:BA:2523:G:H2'	36:BA:2524:G:H5'	1.97	0.46
51:DS:17:ARG:C	51:DS:19:LYS:N	2.67	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:617:G:H1	1:CA:623:C:N4	2.07	0.46
36:BA:1069:A:H1'	36:BA:1070:A:P	2.56	0.46
36:BA:2050:C:H2'	36:BA:2051:A:O4'	2.15	0.46
25:AZ:356:PRO:HG2	25:AZ:369:THR:O	2.15	0.46
41:BF:64:ILE:HG12	41:BF:65:TRP:CD1	2.51	0.46
1:AA:1187:G:C8	1:AA:1187:G:H5'	2.51	0.46
36:DA:67:U:H2'	36:DA:68:G:C8	2.51	0.46
36:DA:1499:C:O2'	36:DA:1500:G:H5'	2.16	0.46
36:DA:1087:G:H2'	36:DA:1088:A:H4'	1.98	0.46
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.46	0.46
36:DA:1047:G:C2'	36:DA:1110:G:H21	2.26	0.46
22:AW:65:G:C4'	32:B6:28:ARG:NH2	2.77	0.46
42:DG:34:LEU:HD12	42:DG:99:MET:HE3	1.97	0.46
1:AA:189(H):G:O5'	1:AA:189(H):G:H8	1.99	0.46
51:BS:56:LEU:O	51:BS:57:LYS:O	2.34	0.46
36:BA:64:A:H2'	36:BA:65:C:O4'	2.16	0.46
1:CA:825:G:N2	8:CH:11:THR:HG21	2.31	0.46
53:BU:21:ALA:HA	53:BU:24:TYR:CE2	2.51	0.46
36:DA:2449:U:H4'	36:DA:2450:A:OP1	2.16	0.46
18:CR:58:LEU:HD11	18:CR:66:LEU:HD22	1.99	0.46
10:CJ:40:LEU:HB2	10:CJ:69:ASN:HB2	1.97	0.46
1:AA:455:C:N4	1:AA:476:G:H1	2.14	0.46
54:DV:3:ALA:O	54:DV:14:VAL:HG22	2.15	0.46
17:CQ:88:TYR:OH	17:CQ:92:ARG:CZ	2.63	0.46
14:AN:31:ARG:NH1	14:AN:31:ARG:HG3	2.30	0.46
36:BA:1526:G:O2'	36:BA:1527:G:H5'	2.16	0.46
36:DA:2684:U:O5'	36:DA:2684:U:H6	1.99	0.46
36:BA:271(Q):G:H1'	36:BA:271(R):G:C8	2.50	0.46
2:AB:236:TYR:O	2:AB:238:LEU:N	2.49	0.46
1:CA:1119:C:H2'	1:CA:1120:G:H8	1.81	0.46
36:BA:782:A:N1	39:BD:226:MET:CE	2.79	0.46
41:BF:21:ALA:HB3	41:BF:23:ASP:OD2	2.16	0.46
50:BR:78:LYS:O	50:BR:82:GLU:HB2	2.15	0.46
43:DH:23:ARG:O	43:DH:24:VAL:CG2	2.64	0.46
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD12	1.97	0.46
33:D7:19:ARG:HG3	36:DA:126:A:O5'	2.16	0.46
36:BA:575:A:OP2	36:BA:2499:C:O2'	2.34	0.46
10:CJ:18:ALA:O	10:CJ:22:LYS:HB2	2.15	0.46
36:DA:352:G:H1'	36:DA:354:G:N7	2.31	0.46
36:DA:24:G:O2'	55:DW:77:ASP:HB3	2.16	0.46
1:CA:836:G:C6	1:CA:851:G:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2515:C:H2'	36:BA:2516:G:H8	1.81	0.46
18:AR:29:PHE:CD1	18:AR:29:PHE:N	2.84	0.46
52:DT:39:ARG:H	52:DT:39:ARG:HD2	1.80	0.46
36:DA:2236:C:H2'	36:DA:2237:G:O4'	2.16	0.46
1:AA:995:C:O2'	1:AA:996:A:H8	1.99	0.46
25:CZ:5:PHE:CD1	25:CZ:277:LEU:HD22	2.52	0.45
38:BC:120:MET:HE2	38:BC:123:VAL:HG11	1.98	0.45
38:BC:147:PHE:C	38:BC:149:ILE:H	2.18	0.45
25:CZ:28:THR:C	25:CZ:30:ALA:H	2.19	0.45
37:DB:7:G:H4'	51:DS:29:PHE:CE2	2.51	0.45
39:BD:246:PRO:HG3	39:BD:255:LYS:HG3	1.97	0.45
28:B2:62:THR:O	28:B2:65:ASN:N	2.49	0.45
36:BA:1208:C:C4	36:BA:1209:G:N7	2.84	0.45
4:AD:165:MET:HE3	4:AD:176:LEU:CD2	2.46	0.45
43:BH:83:TYR:O	43:BH:84:SER:O	2.34	0.45
52:DT:89:VAL:HG21	52:DT:91:ARG:NH2	2.20	0.45
36:DA:2306:C:H5	36:DA:2307:G:HO2'	1.63	0.45
39:DD:71:ASP:CG	39:DD:103:ARG:HH22	2.19	0.45
42:DG:52:ILE:HB	42:DG:54:GLU:HG3	1.98	0.45
36:DA:2330:G:C2'	36:DA:2331:G:H5'	2.45	0.45
42:BG:5:VAL:CG1	42:BG:101:ILE:HG12	2.46	0.45
42:BG:170:ARG:O	42:BG:174:GLU:HB2	2.16	0.45
54:BV:47:VAL:HB	54:BV:51:VAL:O	2.15	0.45
36:DA:2157:G:H8	36:DA:2157:G:H3'	1.81	0.45
42:BG:72:ARG:NE	42:BG:86:MET:HA	2.31	0.45
38:DC:37:PHE:N	38:DC:37:PHE:CD1	2.84	0.45
31:B5:36:CYS:SG	31:B5:46:CYS:SG	3.08	0.45
34:B8:30:ARG:HA	34:B8:30:ARG:NE	2.32	0.45
34:B8:37:SER:O	34:B8:38:GLY:C	2.54	0.45
34:B8:55:ALA:HB1	48:BP:49:ARG:O	2.16	0.45
1:CA:221:C:H2'	1:CA:222:U:H6	1.81	0.45
36:BA:1682:G:H5'	36:BA:1762:A:O2'	2.17	0.45
2:CB:58:ILE:O	2:CB:61:LEU:HB3	2.17	0.45
2:CB:62:ALA:O	2:CB:64:ARG:N	2.49	0.45
8:CH:46:LYS:HD2	8:CH:63:LEU:O	2.15	0.45
36:DA:2287:A:H2	36:DA:2346:A:N1	2.14	0.45
46:BN:25:ARG:O	46:BN:28:THR:HG22	2.16	0.45
46:BN:58:ASP:O	46:BN:59:LYS:HB2	2.15	0.45
33:D7:47:ARG:HD3	36:DA:1311:G:N7	2.31	0.45
48:DP:106:LEU:HD11	48:DP:112:LEU:HD23	1.98	0.45
36:BA:2069:G:C2'	36:BA:2070:G:H5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:353:A:H2'	1:CA:354:G:OP2	2.16	0.45
53:DU:14:HIS:O	53:DU:18:LEU:HD23	2.15	0.45
58:DZ:61:LEU:HD11	58:DZ:67:LEU:HD13	1.98	0.45
51:BS:77:ALA:O	51:BS:78:LEU:C	2.54	0.45
39:DD:147:LEU:HD21	39:DD:183:ARG:HH22	1.82	0.45
6:AF:30:LEU:O	6:AF:35:ALA:CB	2.56	0.45
58:BZ:14:LYS:O	58:BZ:17:ALA:HB3	2.15	0.45
48:DP:6:LEU:HD21	48:DP:9:ASN:HD22	1.80	0.45
25:AZ:132:VAL:HG12	25:AZ:202:LEU:HD11	1.99	0.45
36:BA:2531:A:H2	36:BA:2658:C:O2	1.99	0.45
27:D1:3:LYS:O	27:D1:46:LEU:HD21	2.15	0.45
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.98	0.45
52:BT:12:SER:O	52:BT:13:ARG:NH2	2.49	0.45
3:CC:134:ILE:O	3:CC:138:VAL:HG12	2.16	0.45
1:AA:723:U:O2'	1:AA:724:G:H5'	2.15	0.45
2:CB:22:LYS:HE2	2:CB:22:LYS:CA	2.41	0.45
7:AG:43:PHE:O	7:AG:46:ALA:HB3	2.16	0.45
1:CA:44:G:H2'	1:CA:45:U:O4'	2.16	0.45
40:DE:69:LYS:O	40:DE:70:ALA:C	2.55	0.45
36:DA:2590:A:H5''	39:DD:239:ARG:HE	1.80	0.45
2:CB:109:SER:O	2:CB:111:ARG:N	2.49	0.45
13:CM:87:TYR:HE1	19:CS:81:ARG:NH2	2.13	0.45
13:CM:116:THR:O	13:CM:118:ALA:N	2.49	0.45
27:B1:79:GLY:O	27:B1:80:LEU:CB	2.64	0.45
36:DA:148:C:H5'	36:DA:149:A:OP2	2.16	0.45
36:DA:914:C:C2'	36:DA:915:C:H5'	2.45	0.45
36:DA:903:C:O2'	36:DA:904:C:H5'	2.16	0.45
38:DC:53:ARG:CB	38:DC:53:ARG:HH11	2.29	0.45
24:AY:76:A:C2	25:AZ:271:GLU:HG3	2.51	0.45
36:BA:814:C:H1'	36:BA:1225:G:N2	2.31	0.45
36:DA:223:A:N7	36:DA:422:A:C1'	2.79	0.45
20:CT:93:GLU:OE1	20:CT:93:GLU:N	2.48	0.45
36:BA:750:A:C2	36:BA:753:C:C6	3.03	0.45
36:BA:2777:G:C4'	36:BA:2778:A:H5'	2.45	0.45
2:CB:165:VAL:O	2:CB:166:ASP:HB3	2.16	0.45
1:CA:346:G:O2'	1:CA:347:G:P	2.73	0.45
36:BA:1434:A:C2'	36:BA:1435:G:H5'	2.45	0.45
25:AZ:350:THR:HG22	25:AZ:351:GLY:N	2.31	0.45
48:DP:107:LYS:HG3	48:DP:107:LYS:O	2.15	0.45
7:CG:58:PRO:C	7:CG:60:LYS:H	2.18	0.45
49:BQ:104:PHE:N	49:BQ:104:PHE:CD1	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:14:THR:HG21	47:BO:86:ILE:HD13	1.97	0.45
38:DC:38:ASP:O	38:DC:177:LYS:HE3	2.16	0.45
1:CA:1495:U:H2'	1:CA:1496:C:C6	2.51	0.45
36:DA:2241:A:O2'	36:DA:2242:G:H5'	2.16	0.45
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.16	0.45
36:BA:1712:C:O2'	36:BA:1713:U:H5'	2.16	0.45
14:AN:19:ARG:O	14:AN:20:ALA:C	2.53	0.45
58:DZ:62:PRO:C	58:DZ:64:GLY:H	2.18	0.45
35:B9:8:LYS:HZ1	36:BA:1032:A:P	2.39	0.45
1:AA:613:C:H2'	1:AA:614:A:H8	1.79	0.45
36:BA:1692:U:O2'	36:BA:1693:U:H2'	2.16	0.45
1:CA:532:A:H2	1:CA:1206:G:H21	1.63	0.45
15:AO:69:TYR:CZ	15:AO:73:GLU:HG3	2.51	0.45
38:BC:129:ARG:O	38:BC:130:ILE:HG13	2.15	0.45
3:CC:34:LEU:O	3:CC:38:ARG:HG2	2.16	0.45
42:BG:7:LEU:HD21	42:BG:176:LEU:CD2	2.24	0.45
51:DS:49:VAL:CG1	51:DS:50:SER:H	2.01	0.45
57:DY:8:LYS:HB3	57:DY:28:LYS:HZ3	1.79	0.45
42:BG:84:LYS:H	42:BG:84:LYS:HD2	1.81	0.45
10:CJ:57:LYS:HZ3	10:CJ:60:ARG:NH2	2.14	0.45
34:B8:56:GLU:O	34:B8:58:ILE:N	2.49	0.45
13:AM:84:ILE:O	13:AM:84:ILE:HG22	2.16	0.45
36:DA:1465:G:N3	36:DA:1545:A:H2	2.14	0.45
35:D9:34:GLN:HG3	35:D9:35:ARG:N	2.28	0.45
36:DA:2188:C:H2'	36:DA:2189:U:C5	2.50	0.45
58:DZ:28:MET:CE	58:DZ:37:VAL:HG11	2.46	0.45
48:BP:126:VAL:HA	48:BP:145:PRO:CB	2.43	0.45
36:DA:2285:C:H2'	36:DA:2286:A:H5'	1.99	0.45
36:DA:2756:U:O2'	36:DA:2757:A:OP2	2.31	0.45
42:DG:7:LEU:O	42:DG:10:LYS:HB2	2.16	0.45
40:DE:116:VAL:C	40:DE:118:LYS:H	2.19	0.45
36:BA:1799:G:H5''	36:BA:1819:A:N6	2.31	0.45
36:DA:1019:U:H3	36:DA:1142(A):A:N6	2.14	0.45
36:DA:1051:G:C4	36:DA:1052:C:N4	2.84	0.45
13:AM:25:ILE:CD1	13:AM:60:VAL:HG11	2.46	0.45
13:AM:32:GLU:OE1	13:AM:33:ALA:N	2.48	0.45
36:DA:1242:A:N1	48:DP:8:PRO:HG3	2.31	0.45
19:CS:11:VAL:CG2	19:CS:16:LEU:HD11	2.46	0.45
40:DE:202:LYS:N	40:DE:202:LYS:HD2	2.31	0.45
36:DA:321:G:H4'	41:DF:165:ARG:O	2.15	0.45
36:BA:2475:C:H42	36:BA:2529:G:H22	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:501:C:O3'	12:CL:118:SER:HB2	2.17	0.45
3:AC:38:ARG:CB	3:AC:38:ARG:NH1	2.79	0.45
38:DC:180:PHE:HD1	38:DC:180:PHE:N	2.13	0.45
4:CD:106:TYR:C	4:CD:108:LEU:H	2.19	0.45
43:DH:19:VAL:CG1	43:DH:20:ALA:N	2.74	0.45
26:B0:38:VAL:HG11	26:B0:45:PHE:HD2	1.80	0.45
12:CL:113:ARG:HG3	12:CL:113:ARG:HH11	1.82	0.45
43:DH:157:TYR:O	43:DH:158:HIS:CG	2.69	0.45
3:AC:95:THR:CG2	3:AC:97:LYS:HD2	2.46	0.45
1:AA:692:U:OP1	11:AK:124:LYS:HE2	2.17	0.45
36:BA:2651:C:O2'	36:BA:2652:C:H5'	2.17	0.45
1:AA:404:U:H5'	4:AD:122:ARG:HD3	1.97	0.45
40:DE:84:PHE:HD1	40:DE:85:ASN:H	1.62	0.45
2:AB:97:TRP:HZ2	2:AB:102:LEU:CD1	2.23	0.45
22:AW:65:G:H4'	32:B6:28:ARG:HH22	1.79	0.45
36:DA:320:A:C4	41:DF:136:THR:HG21	2.51	0.45
29:B3:18:ASP:O	29:B3:21:ALA:N	2.49	0.45
36:BA:1717:G:C2'	36:BA:1718:G:H5''	2.45	0.45
1:CA:990:C:C4	1:CA:1216:G:N1	2.84	0.45
36:DA:2359:C:C2	36:DA:2360:A:C8	3.04	0.45
36:BA:360:G:H2'	36:BA:361:G:H8	1.80	0.45
36:BA:1991:U:C2'	36:BA:1992:G:H5''	2.45	0.45
49:BQ:109:VAL:HG12	49:BQ:110:THR:H	1.81	0.45
36:BA:1639:U:H4'	36:BA:2699:C:H4'	1.98	0.45
36:BA:769:G:H4'	36:BA:1379:A:N1	2.31	0.45
41:BF:53:THR:HG22	41:BF:56:GLU:CG	2.47	0.45
58:DZ:128:VAL:HG23	58:DZ:160:GLY:O	2.16	0.45
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.36	0.45
33:B7:24:THR:HG23	33:B7:27:GLY:N	2.31	0.45
36:DA:1678:G:N2	36:DA:1989:G:N2	2.65	0.45
36:DA:271(F):C:O2'	36:DA:271(G):C:H5'	2.16	0.45
36:BA:2347:C:H2'	36:BA:2348:U:H6	1.81	0.45
1:CA:1120:G:H2'	1:CA:1121:U:H6	1.81	0.45
43:BH:139:GLN:HE21	43:BH:140:LYS:CA	2.29	0.45
1:CA:386:C:H2'	1:CA:387:U:H5'	1.99	0.45
36:DA:1389:G:H2'	36:DA:1390:U:H6	1.82	0.45
36:BA:1304:C:O2'	36:BA:1305:C:H5'	2.15	0.45
36:DA:1040:C:H2'	36:DA:1041:G:O4'	2.16	0.45
4:AD:159:ARG:HG3	4:AD:159:ARG:NH1	2.31	0.45
53:BU:32:PHE:O	53:BU:35:ALA:HB3	2.16	0.45
36:DA:1619:G:O5'	36:DA:1619:G:H8	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:25:ASP:C	8:CH:26:VAL:HG12	2.37	0.45
36:BA:1532:C:O2'	36:BA:1533:G:H5'	2.16	0.45
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.15	0.45
36:DA:413:C:H42	36:DA:2410:G:H1	1.64	0.45
36:BA:2859:G:H2'	36:BA:2860:A:C8	2.51	0.45
49:BQ:70:PRO:HA	49:BQ:95:ALA:HB2	1.99	0.45
36:DA:280:C:H3'	36:DA:281:G:C8	2.51	0.45
1:AA:511:C:C2	1:AA:512:U:C5	3.04	0.45
36:BA:229:A:N3	36:BA:229:A:H2'	2.30	0.45
36:BA:88:G:N3	36:BA:88:G:H2'	2.31	0.45
12:CL:83:VAL:HG12	12:CL:107:ALA:HB2	1.98	0.45
2:CB:16:HIS:HB3	2:CB:210:SER:CB	2.46	0.45
36:BA:1702:G:H2'	36:BA:1703:G:O4'	2.16	0.45
25:CZ:241:ARG:HB2	25:CZ:285:ASN:ND2	2.32	0.45
54:DV:47:VAL:O	54:DV:48:GLY:C	2.55	0.45
43:BH:146:ALA:O	43:BH:149:ARG:N	2.49	0.45
51:DS:106:ARG:CG	51:DS:106:ARG:NH1	2.80	0.45
36:BA:2832:U:C2	36:BA:2834:G:N2	2.85	0.45
1:CA:1324:A:C4'	1:CA:1362:C:H4'	2.46	0.45
36:BA:76:C:O2'	36:BA:77:C:H5'	2.15	0.45
4:AD:173:TRP:CE2	4:AD:189:PRO:HB3	2.51	0.45
36:BA:265:A:H4'	36:BA:266:G:O5'	2.17	0.45
52:DT:47:GLY:HA3	52:DT:63:VAL:CG1	2.44	0.45
52:DT:86:ILE:O	52:DT:86:ILE:HG23	2.17	0.45
25:CZ:378:VAL:CG2	25:CZ:380:LEU:HD21	2.46	0.45
4:CD:62:GLN:NE2	4:CD:62:GLN:HA	2.31	0.45
37:BB:53:A:N3	37:BB:53:A:H2'	2.31	0.45
42:BG:99:MET:O	42:BG:100:TRP:C	2.53	0.45
39:BD:30:GLU:HB2	39:BD:35:LYS:CE	2.46	0.45
36:BA:2886:G:O2'	36:BA:2887:U:H5'	2.17	0.45
42:DG:87:PRO:C	42:DG:88:ILE:HG12	2.36	0.45
32:B6:12:GLU:CA	32:B6:23:THR:HG22	2.40	0.45
36:DA:1539:G:C3'	36:DA:1540:U:H5'	2.46	0.45
36:BA:1019:U:C2'	36:BA:1021:A:C2	2.99	0.45
56:BX:41:ASN:C	56:BX:43:VAL:H	2.18	0.45
34:D8:33:ASN:HD22	36:DA:2419:U:C5'	2.29	0.45
36:DA:2392:A:C8	48:DP:60:MET:HG2	2.50	0.45
25:CZ:163:PHE:C	25:CZ:165:GLY:H	2.20	0.45
25:CZ:158:LEU:HB2	25:CZ:165:GLY:HA3	1.99	0.45
10:AJ:4:ILE:CD1	10:AJ:74:ILE:HG13	2.35	0.45
27:D1:8:SER:OG	27:D1:10:LYS:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:73:GLU:HG3	40:BE:74:PRO:HD2	1.98	0.45
55:DW:25:ARG:NH2	55:DW:74:ALA:O	2.49	0.45
1:CA:55:A:N1	25:CZ:234:ARG:HD3	2.32	0.45
25:CZ:251:ASP:H	25:CZ:267:VAL:CG1	2.30	0.45
13:AM:97:PRO:HA	13:AM:110:ARG:CD	2.37	0.45
46:DN:67:LEU:HA	46:DN:87:LEU:HB3	1.98	0.45
36:DA:2847:U:H5'	52:DT:97:ALA:HB3	1.96	0.45
55:BW:66:GLU:O	55:BW:68:ARG:N	2.40	0.45
2:CB:82:ARG:O	2:CB:86:GLU:HG3	2.16	0.45
49:BQ:55:VAL:HG22	49:BQ:56:ARG:N	2.30	0.45
1:CA:1125:U:C4	10:CJ:38:ILE:HG12	2.51	0.45
58:BZ:15:PRO:HA	58:BZ:18:LEU:HD23	1.98	0.45
36:DA:2632:A:H1'	40:DE:61:ARG:NH2	2.32	0.45
12:CL:33:ARG:HD3	12:CL:62:SER:OG	2.17	0.45
54:BV:18:LEU:HG	54:BV:19:LYS:N	2.23	0.45
54:BV:19:LYS:HG2	54:BV:94:LEU:C	2.37	0.45
40:BE:117:MET:CE	40:BE:136:ARG:HG2	2.47	0.45
41:DF:196:LEU:O	41:DF:200:GLU:HB2	2.17	0.45
36:BA:413:C:N4	36:BA:2410:G:H1	2.05	0.45
1:CA:263:A:OP2	20:CT:79:ARG:NH1	2.49	0.45
22:CW:29:G:O2'	22:CW:30:G:H5'	2.16	0.45
10:CJ:81:THR:C	10:CJ:83:GLU:N	2.69	0.45
36:DA:2557:G:H2'	36:DA:2558:C:C6	2.52	0.45
40:DE:132:HIS:CG	40:DE:135:HIS:CE1	3.04	0.45
52:DT:38:ASN:CG	52:DT:40:THR:OG1	2.54	0.45
36:DA:83:G:H22	36:DA:102:G:H2'	1.76	0.45
40:DE:105:THR:HG22	40:DE:106:GLY:N	2.32	0.45
15:AO:21:ASP:CG	15:AO:24:SER:OG	2.54	0.45
36:DA:596:G:H2'	36:DA:597:U:O4'	2.16	0.45
36:BA:1108:U:H3'	36:BA:1109:C:C6	2.52	0.45
33:D7:24:THR:HG23	33:D7:27:GLY:N	2.30	0.45
55:BW:36:LEU:HD23	55:BW:36:LEU:N	2.31	0.45
16:AP:32:TYR:HD1	16:AP:32:TYR:O	1.99	0.45
1:CA:526:C:OP2	12:CL:91:LYS:HE3	2.17	0.45
26:D0:16:SER:HB2	36:DA:2262:U:H5	1.82	0.45
4:AD:158:ILE:O	4:AD:162:LEU:HB2	2.17	0.45
40:DE:203:LYS:HD2	40:DE:203:LYS:C	2.37	0.45
36:BA:1204:A:N1	36:BA:1241:A:N1	2.64	0.45
27:B1:75:GLU:C	27:B1:77:ALA:N	2.69	0.45
36:DA:754:C:H4'	36:DA:1272:A:N1	2.31	0.45
2:AB:167:PRO:HG2	2:AB:192:SER:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1573:G:C2'	36:BA:1574:C:H5'	2.45	0.45
36:BA:263:C:H2'	36:BA:264:C:O4'	2.16	0.45
39:DD:210:GLY:O	39:DD:211:ARG:CB	2.63	0.45
36:BA:523:C:H2'	36:BA:524:U:H5'	1.98	0.45
49:BQ:112:GLU:CG	49:BQ:113:GLN:N	2.79	0.45
36:DA:573:G:O2'	36:DA:574:C:H3'	2.16	0.45
52:DT:41:ARG:NH1	52:DT:41:ARG:HG2	2.31	0.45
36:BA:1215:G:C2'	36:BA:1216:G:H5'	2.46	0.45
23:CX:11:U:C2'	23:CX:12:A:OP1	2.64	0.45
36:BA:363(E):U:H2'	36:BA:363(F):A:H1'	1.98	0.45
44:DJ:35:UNK:O	44:DJ:37:UNK:N	2.50	0.45
36:BA:2174:C:H1'	38:BC:217:THR:O	2.16	0.45
1:CA:1309:G:O2'	1:CA:1310:G:H5'	2.15	0.45
29:B3:29:ARG:NH2	36:BA:1183:G:H4'	2.31	0.45
1:AA:498:U:HO2'	1:AA:499:A:P	2.38	0.45
49:BQ:97:VAL:HG21	49:BQ:103:MET:HE3	1.98	0.45
47:BO:11:ALA:HB3	47:BO:85:VAL:HG22	1.97	0.45
36:DA:1296:G:O2'	36:DA:1297:C:H5'	2.17	0.45
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD2	2.52	0.45
11:AK:126:ARG:C	11:AK:128:ALA:N	2.70	0.45
15:CO:35:ARG:CZ	15:CO:59:MET:CE	2.93	0.45
1:CA:1333:A:C2'	1:CA:1334:G:H5'	2.47	0.45
4:CD:159:ARG:HG3	4:CD:159:ARG:NH1	2.31	0.45
36:BA:272(J):C:H2'	36:BA:274:G:H5'	1.99	0.45
1:CA:1445:C:O2'	1:CA:1446:U:H5'	2.16	0.45
1:AA:128:G:O2'	17:AQ:3:LYS:HE2	2.17	0.45
1:AA:1060:C:O2'	1:AA:1061:G:H5'	2.15	0.45
58:BZ:45:ASP:O	58:BZ:47:VAL:N	2.50	0.45
52:BT:61:PHE:CE1	52:BT:76:PHE:HB2	2.51	0.45
13:CM:79:LYS:O	13:CM:82:MET:HG2	2.16	0.45
25:AZ:216:ASP:OD1	25:AZ:244:ARG:HB2	2.16	0.45
53:BU:37:GLU:O	53:BU:38:THR:C	2.55	0.45
36:DA:1098:A:H2'	36:DA:1099:G:H5'	1.98	0.45
37:BB:61:G:O2'	37:BB:62:C:H5'	2.15	0.45
36:DA:42:G:H2'	36:DA:43:A:C8	2.52	0.45
36:BA:2682:U:H5'	36:BA:2682:U:H6	1.80	0.45
12:AL:59:ARG:HG3	12:AL:59:ARG:NH1	2.31	0.45
1:AA:582:U:OP1	15:AO:68:ARG:NH2	2.49	0.45
56:BX:51:VAL:HG12	56:BX:52:VAL:N	2.32	0.45
7:CG:150:ALA:HB2	11:CK:50:TYR:OH	2.16	0.45
4:AD:19:LEU:HD23	4:AD:67:ILE:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.30	0.45
51:DS:91:PRO:O	51:DS:92:TYR:O	2.33	0.45
13:CM:40:ASN:O	13:CM:43:THR:OG1	2.33	0.45
1:CA:979:C:C3'	1:CA:980:C:C5'	2.86	0.45
28:B2:6:VAL:HG22	28:B2:10:LEU:HD21	1.98	0.45
57:BY:13:VAL:CG2	57:BY:72:VAL:HB	2.43	0.45
42:DG:135:LEU:HD22	42:DG:140:ILE:CD1	2.47	0.45
42:DG:135:LEU:CD1	42:DG:140:ILE:HD11	2.40	0.45
36:BA:593:G:C6	36:BA:594:U:C4	3.05	0.45
57:DY:13:VAL:CG2	57:DY:14:LEU:N	2.80	0.45
58:BZ:152:ALA:HB1	58:BZ:167:PRO:CB	2.44	0.45
36:DA:260:G:H1'	36:DA:621:A:H1'	1.99	0.45
25:AZ:19:HIS:O	25:AZ:20:VAL:O	2.35	0.45
42:DG:46:ALA:HB2	42:DG:88:ILE:HG12	1.97	0.45
58:BZ:145:GLU:HG3	58:BZ:146:ILE:H	1.82	0.45
36:BA:628:G:C3'	36:BA:629:G:H5''	2.46	0.45
32:B6:33:LYS:O	32:B6:34:LEU:CB	2.65	0.45
25:AZ:9:LYS:HE2	25:AZ:75:ARG:N	2.31	0.45
41:BF:188:ARG:CA	48:BP:7:ARG:HD3	2.45	0.45
48:BP:51:PHE:HD2	48:BP:52:GLU:OE2	2.00	0.45
3:CC:5:ILE:CG1	3:CC:10:PHE:HB2	2.46	0.45
3:CC:5:ILE:O	3:CC:6:HIS:C	2.54	0.45
36:DA:1539:G:N3	36:DA:1540:U:H4'	2.31	0.45
15:CO:39:LEU:HD22	15:CO:43:LEU:HG	1.98	0.45
36:BA:1299:G:N2	36:BA:1640:C:C6	2.85	0.45
36:BA:1858:G:H2'	36:BA:1883:G:N2	2.30	0.45
5:CE:76:ILE:CG1	5:CE:142:LEU:HD13	2.35	0.45
36:BA:2129:C:OP1	38:BC:6:ARG:HB3	2.17	0.45
22:AW:18:G:N1	22:AW:55:U:H1'	2.16	0.45
1:AA:266:G:O2'	1:AA:267:C:OP2	2.23	0.45
24:CY:56:C:C1'	36:DA:1067:A:N3	2.79	0.45
57:BY:81:LYS:HE2	57:BY:97:ARG:CZ	2.46	0.45
38:BC:161:ILE:H	38:BC:161:ILE:HD12	1.82	0.45
20:AT:55:ILE:O	20:AT:58:LYS:N	2.49	0.45
9:CI:89:ASN:C	9:CI:91:ASP:H	2.20	0.45
18:CR:26:LEU:HD13	18:CR:39:VAL:HG13	1.98	0.45
36:BA:2779:U:H1'	36:BA:2781:A:C4	2.51	0.45
41:DF:157:VAL:CG2	41:DF:194:MET:HG3	2.47	0.45
36:BA:2633:G:H5'	36:BA:2811:G:O2'	2.16	0.45
1:CA:1117:G:O3'	9:CI:104:ARG:HD2	2.16	0.45
9:CI:99:LEU:HB2	9:CI:101:PHE:CE2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.16	0.45
26:B0:27:GLU:CB	26:B0:68:GLU:HA	2.47	0.45
25:AZ:357:PRO:C	25:AZ:359:VAL:H	2.19	0.45
5:AE:11:ILE:HD11	5:AE:33:VAL:HG23	1.98	0.45
1:CA:538:G:OP2	12:CL:115:LYS:HB2	2.17	0.45
8:CH:10:LEU:HD22	8:CH:83:ILE:CG1	2.47	0.45
25:CZ:340:PRO:O	25:CZ:350:THR:HA	2.17	0.45
40:DE:81:ILE:O	40:DE:82:ARG:HB3	2.16	0.45
8:CH:87:SER:OG	8:CH:92:ARG:HA	2.16	0.45
39:DD:83:GLU:HB2	39:DD:92:ILE:CD1	2.46	0.45
8:CH:85:ARG:HH11	8:CH:85:ARG:HG3	1.82	0.45
7:AG:122:HIS:O	7:AG:123:GLU:C	2.54	0.45
40:DE:95:ILE:H	40:DE:95:ILE:HD13	1.78	0.45
1:CA:1096:C:H5'	2:CB:137:ARG:HH21	1.81	0.45
15:AO:82:ILE:HG12	15:AO:87:ILE:HB	1.99	0.45
13:CM:116:THR:O	13:CM:116:THR:HG22	2.16	0.45
36:DA:31:C:H2'	36:DA:32:C:O4'	2.17	0.45
42:DG:56:ALA:HB2	42:DG:153:ARG:NH2	2.31	0.45
3:CC:81:GLY:O	3:CC:85:ARG:HD3	2.17	0.45
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.15	0.45
1:AA:1512:U:H3	1:AA:1523:G:H1	1.62	0.45
36:BA:1279:G:H4'	50:BR:31:HIS:HD2	1.79	0.45
1:CA:766:A:C2'	1:CA:767:A:H5'	2.46	0.45
2:AB:166:ASP:O	2:AB:168:THR:N	2.49	0.45
36:DA:370:G:H5'	36:DA:423:A:N6	2.32	0.45
1:AA:538:G:H2'	1:AA:539:A:H8	1.82	0.45
1:AA:135:C:C2'	1:AA:136:C:H5'	2.47	0.45
36:BA:2241:A:H2'	36:BA:2242:G:H8	1.82	0.45
58:BZ:60:GLU:O	58:BZ:61:LEU:HB2	2.17	0.45
1:CA:1350:A:C6	1:CA:1351:U:C4	3.04	0.45
1:CA:986:A:H2'	1:CA:987:G:H8	1.80	0.45
54:BV:3:ALA:O	54:BV:14:VAL:HG22	2.17	0.45
36:BA:2728:U:O2'	36:BA:2729:G:H5'	2.15	0.45
36:BA:738:G:H1'	36:BA:759:G:N2	2.31	0.45
1:AA:567:G:H2'	1:AA:568:G:O4'	2.17	0.45
3:AC:44:GLU:O	3:AC:45:LYS:O	2.34	0.45
1:CA:864:A:C2	1:CA:917:G:N3	2.85	0.45
1:AA:969:A:H2'	1:AA:970:C:H5'	1.98	0.45
1:CA:1012:U:C2'	1:CA:1013:G:H5'	2.46	0.45
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.15	0.45
2:CB:95:GLN:HA	2:CB:95:GLN:OE1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:190:ARG:HH11	3:AC:190:ARG:HG3	1.81	0.45
3:AC:126:ARG:HG2	3:AC:126:ARG:HH11	1.80	0.45
1:AA:358:U:H2'	1:AA:359:U:C6	2.52	0.45
38:BC:131:LEU:HD22	38:BC:136:LEU:HB2	1.99	0.45
36:DA:687:C:H2'	36:DA:688:U:O4'	2.15	0.45
25:CZ:5:PHE:CD1	25:CZ:5:PHE:O	2.69	0.45
25:CZ:19:HIS:O	25:CZ:20:VAL:O	2.34	0.45
51:DS:85:VAL:HG23	51:DS:86:ALA:N	2.32	0.45
4:AD:175:SER:O	4:AD:176:LEU:HB2	2.17	0.45
43:BH:98:LEU:O	43:BH:98:LEU:HG	2.17	0.45
42:DG:154:GLY:O	42:DG:155:MET:HB3	2.16	0.45
4:CD:15:GLU:CG	4:CD:63:LYS:HG3	2.47	0.45
53:BU:93:LYS:H	53:BU:93:LYS:HD2	1.82	0.45
52:BT:30:VAL:O	52:BT:31:SER:CB	2.63	0.45
52:BT:31:SER:OG	52:BT:32:TYR:CE1	2.69	0.45
31:B5:36:CYS:C	31:B5:38:ALA:H	2.18	0.45
31:B5:48:GLU:O	31:B5:49:CYS:CB	2.64	0.45
36:DA:875:G:H4'	58:DZ:170:THR:HG23	1.96	0.45
1:CA:198:G:O2'	1:CA:199:G:O5'	2.31	0.45
36:BA:1885:A:H2'	36:BA:1886:C:H5'	1.99	0.45
30:D4:14:ILE:N	30:D4:14:ILE:CD1	2.79	0.45
38:DC:64:LEU:HB3	38:DC:188:ASN:ND2	2.32	0.45
36:BA:1683:C:H2'	36:BA:1684:C:H6	1.81	0.45
39:BD:101:GLU:HG2	39:BD:102:LYS:N	2.32	0.45
2:CB:54:THR:HG22	2:CB:55:PHE:CD1	2.52	0.45
36:BA:1142(A):A:C8	36:BA:1142(A):A:H5'	2.51	0.45
36:DA:513:A:H1'	53:DU:11:ARG:HH12	1.82	0.45
58:DZ:3:TYR:O	58:DZ:58:VAL:HG22	2.17	0.45
58:DZ:60:GLU:O	58:DZ:61:LEU:CB	2.64	0.45
36:BA:1028:A:N3	36:BA:2486:G:O2'	2.42	0.45
29:D3:29:ARG:HH11	29:D3:29:ARG:CB	2.27	0.45
29:D3:29:ARG:NH1	36:DA:1184:G:OP1	2.49	0.45
39:DD:171:ASP:O	39:DD:187:GLY:HA3	2.17	0.45
1:AA:1431:C:O2'	1:AA:1432:G:H5'	2.17	0.45
58:BZ:108:PRO:C	58:BZ:110:GLY:H	2.20	0.45
36:BA:2469:A:H2'	36:BA:2470:G:C5'	2.42	0.45
1:CA:1286:A:O2'	1:CA:1287:A:C5'	2.64	0.45
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.17	0.45
13:AM:64:TRP:O	13:AM:66:LEU:HD13	2.16	0.45
9:CI:19:LEU:CD2	9:CI:59:PHE:CD2	2.97	0.45
7:AG:20:ASP:CB	7:AG:23:VAL:HG23	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:29:PRO:HA	54:BV:61:VAL:CG2	2.41	0.45
36:DA:896:A:C8	58:DZ:146:ILE:HD12	2.51	0.45
16:AP:2:VAL:O	16:AP:2:VAL:HG13	2.17	0.45
46:DN:32:THR:O	46:DN:34:LEU:N	2.50	0.45
58:BZ:136:PHE:N	58:BZ:136:PHE:CD1	2.79	0.45
48:BP:71:VAL:N	48:BP:72:PRO:CD	2.79	0.45
1:CA:265:G:C2'	1:CA:266:G:H5'	2.40	0.45
17:AQ:5:VAL:O	17:AQ:6:LEU:HD23	2.17	0.45
6:CF:63:TYR:O	6:CF:65:VAL:HG13	2.17	0.45
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.51	0.45
1:CA:1499:A:C1'	1:CA:1520:G:H5'	2.47	0.45
36:BA:449:A:H4'	53:BU:3:ARG:NH2	2.26	0.45
4:CD:150:GLU:CG	4:CD:151:LYS:N	2.79	0.45
3:AC:114:PRO:O	3:AC:118:GLN:HB2	2.17	0.45
36:BA:1720:U:H2'	36:BA:1721:G:C4'	2.47	0.45
37:DB:42:C:O2'	37:DB:43:C:P	2.75	0.45
13:CM:109:THR:HG22	13:CM:110:ARG:N	2.31	0.45
13:CM:96:LEU:HD22	13:CM:97:PRO:HD2	1.99	0.45
5:CE:82:VAL:CG2	5:CE:138:ALA:HA	2.45	0.45
36:DA:578:A:C8	36:DA:2018:G:H5'	2.51	0.45
11:CK:79:SER:OG	11:CK:104:GLN:HB3	2.17	0.45
36:BA:1493:C:C4	36:BA:2206:G:O2'	2.70	0.45
1:AA:736:C:H2'	1:AA:737:A:C8	2.51	0.45
1:CA:1229:A:OP2	13:CM:114:ARG:HD3	2.17	0.45
1:CA:321:A:C2	1:CA:333:G:C2	3.04	0.45
36:DA:2360:A:O2'	36:DA:2361:A:H8	1.99	0.45
33:D7:33:ARG:NH1	36:DA:467:G:OP1	2.49	0.45
57:BY:52:SER:O	57:BY:54:LYS:N	2.50	0.45
5:CE:9:LYS:CB	5:CE:112:LEU:HD11	2.47	0.45
36:DA:2537:U:H2'	36:DA:2538:C:C6	2.51	0.45
36:DA:207:A:H2'	36:DA:208:C:O4'	2.15	0.45
1:AA:1213:A:N7	1:AA:1215:G:C5	2.84	0.45
43:BH:80:SER:O	43:BH:81:GLU:CB	2.64	0.45
36:DA:553:G:C2'	36:DA:554:U:H5'	2.46	0.45
36:DA:1572:A:O2'	36:DA:1573:G:H5'	2.17	0.45
27:D1:23:LYS:CE	27:D1:28:GLY:HA3	2.46	0.45
49:DQ:5:ARG:NH1	49:DQ:6:ARG:HD3	2.31	0.45
36:DA:1765:C:O2'	36:DA:1766:U:H5'	2.16	0.45
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.52	0.45
1:CA:415:A:H2'	1:CA:416:G:C8	2.51	0.45
36:DA:1418:G:O5'	36:DA:1418:G:H8	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:748:C:OP2	1:CA:748:C:C6	2.69	0.45
1:AA:141:A:H1'	1:AA:182:U:O2	2.16	0.45
53:DU:101:ARG:NH1	53:DU:101:ARG:HG3	2.30	0.45
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.16	0.45
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.50	0.45
36:BA:845:G:HO2'	36:BA:846:C:H5	1.61	0.45
1:AA:770:C:O2'	1:AA:771:G:H5'	2.17	0.45
36:DA:286:C:H2'	36:DA:287:C:C6	2.52	0.45
47:BO:119:PRO:HB2	52:BT:68:TYR:CD2	2.51	0.45
22:CV:24:G:C6	22:CV:25:C:C4	3.05	0.45
36:BA:777:A:C2	36:BA:778:G:C4	3.05	0.45
36:BA:206:U:H2'	36:BA:206:U:O2	2.17	0.45
53:BU:66:ASN:ND2	53:BU:76:TYR:HB2	2.32	0.45
1:AA:429:U:H1'	1:AA:430:A:H5''	1.99	0.45
38:BC:118:ASP:O	38:BC:119:VAL:HB	2.16	0.45
28:B2:16:LEU:O	28:B2:17:SER:C	2.55	0.45
28:B2:66:GLU:OE1	28:B2:67:LYS:HG3	2.16	0.45
57:BY:38:ILE:HB	57:BY:66:PRO:CG	2.27	0.45
36:DA:2199:A:H5''	36:DA:2200:C:H5	1.81	0.45
36:DA:1190:G:OP1	48:DP:32:THR:OG1	2.35	0.45
52:DT:30:VAL:HG12	52:DT:44:ASP:CG	2.37	0.45
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.99	0.45
42:BG:106:LEU:O	42:BG:106:LEU:HD23	2.16	0.45
42:BG:106:LEU:O	42:BG:110:ALA:HB3	2.17	0.45
53:BU:95:LEU:HD12	54:BV:11:GLN:HG3	1.99	0.45
51:BS:54:LEU:HD13	51:BS:58:LEU:H	1.82	0.45
58:BZ:151:HIS:O	58:BZ:152:ALA:O	2.34	0.45
36:BA:2312:U:O3'	42:BG:71:THR:HG21	2.17	0.45
42:DG:86:MET:HG2	42:DG:86:MET:O	2.15	0.45
32:B6:7:ILE:CG2	32:B6:27:LYS:NZ	2.79	0.45
32:B6:25:LYS:O	36:BA:2286:A:N1	2.50	0.45
20:AT:100:ILE:CD1	20:AT:100:ILE:H	2.30	0.45
36:BA:806:C:H5	48:BP:39:LYS:HE2	1.81	0.45
25:CZ:222:LEU:O	25:CZ:243:GLU:HB2	2.17	0.45
36:DA:1539:G:C2	36:DA:1540:U:H4'	2.51	0.45
36:DA:139:G:O6	36:DA:140:G:H2'	2.16	0.45
56:DX:28:PHE:CD1	56:DX:28:PHE:N	2.71	0.45
56:BX:27:THR:HG22	56:BX:80:ILE:CB	2.41	0.45
25:AZ:7:ARG:HH12	25:AZ:281:ILE:CD1	2.28	0.45
36:BA:2262:U:O2'	36:BA:2263:C:H5'	2.16	0.45
34:D8:56:GLU:O	34:D8:58:ILE:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:55:ALA:O	50:DR:58:GLY:N	2.47	0.45
48:BP:96:THR:HG22	48:BP:126:VAL:HB	1.99	0.45
57:DY:95:LYS:HE3	57:DY:100:ALA:HA	1.99	0.45
52:BT:98:LYS:HD2	52:BT:98:LYS:N	2.31	0.45
36:DA:1141:U:H2'	46:DN:63:THR:CG2	2.46	0.45
14:AN:27:CYS:HG	59:AN:101:ZN:ZN	1.30	0.45
36:BA:2393:A:H5'	48:BP:62:LEU:HB3	1.98	0.45
27:B1:76:ARG:HH22	27:B1:95:LEU:HB2	1.82	0.45
25:AZ:251:ASP:H	25:AZ:267:VAL:CG1	2.30	0.45
36:BA:1854:A:N6	36:BA:1888:G:H8	2.04	0.45
43:DH:83:TYR:HB2	43:DH:134:SER:HA	1.98	0.45
27:B1:8:SER:OG	27:B1:10:LYS:HG3	2.17	0.45
27:B1:40:ARG:HG2	27:B1:40:ARG:HH11	1.82	0.45
36:BA:1536:C:C4	36:BA:1537:G:H1'	2.51	0.45
5:AE:11:ILE:CD1	5:AE:33:VAL:HG23	2.46	0.45
2:CB:17:PHE:HB2	2:CB:44:LEU:HD11	1.99	0.45
2:CB:44:LEU:HA	2:CB:47:THR:OG1	2.17	0.45
36:BA:2110:G:H1	36:BA:2178:C:H41	1.64	0.45
40:DE:132:HIS:ND1	40:DE:135:HIS:HE1	2.15	0.45
36:BA:848:G:H8	36:BA:848:G:H5'	1.80	0.45
4:CD:43:HIS:O	4:CD:45:GLN:HG2	2.17	0.45
46:BN:45:ASN:ND2	46:BN:45:ASN:H	2.08	0.45
36:BA:83:G:H22	36:BA:102:G:H2'	1.78	0.45
28:D2:2:LYS:N	36:DA:98:G:P	2.90	0.45
1:AA:1217:C:C2'	1:AA:1218:C:H5'	2.47	0.45
6:CF:87:ARG:HG2	6:CF:87:ARG:NH1	2.29	0.45
50:DR:33:ARG:HD3	50:DR:113:LEU:HD21	1.99	0.45
36:BA:2206:G:C2	36:BA:2207:G:H5'	2.51	0.45
41:DF:185:ASP:CA	41:DF:188:ARG:HG2	2.46	0.45
19:AS:67:VAL:CG1	19:AS:68:GLY:N	2.75	0.45
36:BA:2777:G:H4'	36:BA:2778:A:H5'	1.99	0.45
1:AA:457:C:H2'	1:AA:458:C:H6	1.81	0.45
56:BX:57:LEU:HG	56:BX:78:LYS:HG2	1.99	0.45
36:DA:2282:G:H5''	36:DA:2283:C:O4'	2.16	0.45
36:BA:1434:A:H61	36:BA:1558:A:N6	2.14	0.45
36:DA:1842:G:H2'	36:DA:1843:C:C6	2.51	0.45
36:DA:553:G:H2'	36:DA:554:U:O4'	2.17	0.45
47:BO:12:ASP:C	47:BO:14:THR:H	2.18	0.45
36:BA:1374:G:H2'	36:BA:1375:C:C6	2.52	0.45
36:DA:736:C:H2'	36:DA:737:C:C6	2.51	0.45
36:BA:1259:G:H2'	36:BA:1260:G:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:20:GLN:HE21	5:CE:25:ARG:NH1	2.14	0.45
11:AK:126:ARG:HH11	11:AK:126:ARG:HG2	1.80	0.45
36:BA:1196:C:O4'	36:BA:1226:A:C2	2.70	0.45
25:CZ:349:VAL:HG21	25:CZ:374:LEU:HD22	1.99	0.45
42:DG:166:ASP:O	42:DG:167:GLU:C	2.55	0.45
36:DA:1624:G:C5	36:DA:1625:C:C5	3.05	0.45
36:BA:1709:U:O2'	36:BA:1710:C:H5'	2.17	0.45
12:AL:59:ARG:HG3	12:AL:59:ARG:HH11	1.81	0.45
36:DA:2562:U:H4'	47:DO:25:LEU:HD21	1.97	0.45
36:DA:1691:C:O2'	36:DA:1692:U:H5'	2.16	0.45
49:BQ:48:GLU:O	49:BQ:49:ALA:C	2.55	0.45
57:DY:22:GLY:O	57:DY:23:ARG:O	2.34	0.45
36:DA:1324:G:H4'	36:DA:1616:A:C2	2.51	0.45
30:D4:43:TYR:CG	30:D4:44:THR:N	2.82	0.45
36:BA:39:C:O2'	36:BA:40:C:H5'	2.16	0.45
36:BA:2715:C:O2'	36:BA:2716:U:H5'	2.16	0.45
36:DA:616:G:N2	36:DA:618:C:H1'	2.32	0.45
36:DA:13:A:C2	36:DA:14:A:N6	2.84	0.45
36:BA:455:C:N3	36:BA:472:A:H2'	2.31	0.45
13:AM:29:ARG:O	13:AM:30:ALA:C	2.52	0.45
36:DA:2748:A:H2'	36:DA:2749:A:C8	2.51	0.45
22:AV:39:U:H2'	22:AV:40:C:C6	2.51	0.45
36:BA:2136:C:H2'	36:BA:2137:C:H6	1.81	0.45
1:AA:43:C:OP1	16:AP:12:LYS:HD2	2.17	0.45
44:DJ:36:UNK:O	44:DJ:40:UNK:N	2.49	0.45
1:AA:503:C:H2'	1:AA:504:C:C6	2.51	0.45
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.99	0.45
48:DP:138:LEU:N	48:DP:138:LEU:HD12	2.32	0.45
46:DN:128:HIS:O	46:DN:128:HIS:CG	2.70	0.45
1:AA:528:C:H2'	1:AA:529:G:H5'	1.99	0.45
25:AZ:4:GLU:HA	25:AZ:276:THR:HB	1.97	0.45
25:CZ:193:ASN:C	25:CZ:195:TRP:H	2.20	0.45
1:AA:542:G:H2'	1:AA:543:C:C6	2.48	0.45
38:BC:120:MET:HE2	38:BC:123:VAL:CG1	2.46	0.45
37:DB:50:G:OP2	51:DS:62:LYS:HB2	2.17	0.45
1:CA:1326:C:OP1	21:CU:12:LYS:NZ	2.50	0.45
36:BA:70:G:O4'	36:BA:73:A:H1'	2.16	0.45
2:AB:8:LYS:HZ3	2:AB:217:ARG:NH1	2.14	0.45
4:CD:6:GLY:O	4:CD:7:PRO:C	2.55	0.45
42:BG:139:LEU:HA	42:BG:144:ILE:CG2	2.46	0.45
41:BF:25:PRO:CG	41:BF:119:ARG:HB2	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:43:LEU:N	20:AT:45:GLN:HE22	2.14	0.45
36:BA:832:G:H21	48:BP:53:GLY:HA3	1.81	0.45
36:BA:1192:G:O2'	36:BA:1193:G:H5'	2.17	0.45
26:D0:7:LEU:HD22	49:DQ:85:LYS:HB2	1.99	0.45
34:D8:48:PHE:HB3	34:D8:49:VAL:H	1.63	0.45
58:BZ:104:PHE:HD2	58:BZ:139:VAL:HG21	1.81	0.45
36:DA:1683:C:H2'	36:DA:1684:C:C6	2.52	0.45
36:DA:2416:C:C2	36:DA:2417:C:C5	3.04	0.45
37:DB:76:G:O3'	58:DZ:19:ARG:NH2	2.50	0.45
32:D6:10:LEU:N	32:D6:10:LEU:CD2	2.71	0.45
32:D6:27:LYS:HB3	32:D6:30:THR:CB	2.34	0.45
34:D8:37:SER:O	34:D8:39:LYS:N	2.49	0.45
2:AB:107:THR:O	2:AB:110:GLN:HG3	2.16	0.45
52:BT:24:PRO:HD3	52:BT:52:ILE:CG1	2.44	0.45
1:AA:202:U:O3'	1:AA:203:U:H6	1.99	0.45
58:BZ:178:GLU:O	58:BZ:178:GLU:OE1	2.35	0.45
41:BF:110:LEU:C	41:BF:110:LEU:HD13	2.37	0.45
36:DA:2811:G:C2'	36:DA:2812:G:H5'	2.47	0.45
41:DF:104:LYS:O	41:DF:108:LYS:HG2	2.16	0.45
41:DF:202:PHE:O	41:DF:206:ILE:HG12	2.16	0.45
2:AB:73:THR:HG22	2:AB:94:ASN:O	2.17	0.45
1:AA:191:G:H2'	1:AA:192:U:C6	2.50	0.45
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.80	0.45
3:AC:34:LEU:HD23	3:AC:34:LEU:O	2.17	0.45
6:CF:72:VAL:O	6:CF:72:VAL:CG2	2.64	0.45
25:AZ:316:PHE:HD2	25:AZ:400:VAL:HG13	1.81	0.45
4:CD:165:MET:HE3	4:CD:176:LEU:HD22	1.97	0.45
1:AA:198:G:O2'	1:AA:199:G:P	2.75	0.45
55:BW:12:ILE:HD12	55:BW:42:ARG:HH11	1.81	0.45
4:AD:145:GLU:HA	4:AD:183:GLY:O	2.17	0.45
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.17	0.45
36:BA:848:G:C2	36:BA:933:A:H1'	2.51	0.45
3:CC:167:TRP:HB3	3:CC:168:ALA:H	1.29	0.45
36:DA:585:G:C2'	36:DA:1251:C:H42	2.24	0.45
57:BY:49:VAL:O	57:BY:50:ARG:HG2	2.17	0.45
8:CH:38:ILE:HG21	8:CH:120:THR:HG22	1.99	0.45
36:DA:769:G:C2'	36:DA:770:G:H5'	2.47	0.45
28:D2:3:LEU:HA	28:D2:6:VAL:CG2	2.47	0.45
40:DE:29:GLY:O	40:DE:30:PRO:C	2.55	0.45
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.79	0.45
36:DA:534:U:H5'	53:DU:42:ALA:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:13:ASN:HA	25:AZ:78:SER:H	1.81	0.45
36:DA:29:U:H5''	53:DU:7:GLY:HA2	1.99	0.45
41:BF:165:ARG:HG3	41:BF:165:ARG:NH1	2.32	0.45
36:DA:796:C:H2'	36:DA:797:C:H6	1.80	0.45
2:CB:74:LYS:NZ	2:CB:76:GLN:HE22	2.13	0.45
36:DA:1472:A:H2'	36:DA:1473:G:C5'	2.47	0.45
50:BR:107:ASP:C	50:BR:107:ASP:OD1	2.55	0.45
46:DN:1:MET:HE1	46:DN:2:LYS:C	2.37	0.45
43:BH:54:ARG:CB	43:BH:55:PRO:HD2	2.47	0.45
36:DA:2648:C:H2'	36:DA:2649:U:C6	2.52	0.45
1:CA:884:U:H4'	1:CA:885:G:H5''	1.98	0.45
55:BW:37:ARG:HG3	55:BW:37:ARG:NH1	2.30	0.45
1:AA:40:C:H2'	1:AA:41:G:H8	1.82	0.45
49:BQ:24:GLY:HA3	49:BQ:101:ARG:NH1	2.32	0.45
36:BA:271(F):C:C2'	36:BA:271(G):C:H5'	2.46	0.45
36:DA:271(C):C:H2'	36:DA:271(D):G:C8	2.50	0.45
1:AA:72:C:H2'	1:AA:73:G:C8	2.50	0.45
7:CG:57:GLU:O	7:CG:60:LYS:HB3	2.17	0.45
36:BA:1090:U:H2'	36:BA:1091:G:O4'	2.16	0.45
38:BC:74:VAL:CG2	38:BC:157:LYS:HE2	2.47	0.45
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.99	0.45
2:CB:169:LYS:HD3	2:CB:169:LYS:C	2.36	0.45
46:BN:38:HIS:C	53:BU:67:ALA:HB1	2.37	0.45
36:DA:80:G:H1'	36:DA:346:A:C6	2.51	0.45
1:CA:1101:A:C4	2:CB:99:GLY:HA3	2.52	0.45
1:AA:386:C:O2'	1:AA:387:U:H5'	2.17	0.45
44:DJ:95:UNK:O	44:DJ:99:UNK:N	2.50	0.45
15:AO:80:ALA:O	15:AO:84:LYS:HG3	2.17	0.45
1:AA:826:C:H2'	1:AA:827:U:H6	1.82	0.45
24:AY:75:C:C5	25:AZ:232:THR:OG1	2.68	0.45
44:DJ:97:UNK:HA	44:DJ:131:UNK:O	2.17	0.45
1:CA:1458:G:OP1	20:CT:35:THR:OG1	2.28	0.45
36:DA:350:U:C2'	36:DA:351:G:H5'	2.47	0.45
25:CZ:162:GLU:HA	25:CZ:162:GLU:OE1	2.17	0.45
56:BX:63:LYS:HB2	56:BX:63:LYS:HE3	1.83	0.45
1:CA:506:G:H2'	1:CA:507:C:C6	2.52	0.45
1:CA:794:A:C5	1:CA:795:C:C4	3.04	0.45
4:AD:17:VAL:O	4:AD:18:LYS:C	2.54	0.45
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	1.98	0.45
27:D1:86:SER:HB2	27:D1:90:ILE:CD1	2.47	0.45
36:DA:1568:G:H4'	39:DD:59:LYS:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:92:ARG:O	53:DU:95:LEU:N	2.50	0.45
54:DV:34:GLU:CG	54:DV:56:SER:HB2	2.46	0.45
51:DS:97:ARG:C	51:DS:97:ARG:NE	2.70	0.45
21:CU:12:LYS:HB2	21:CU:22:ARG:HD3	1.98	0.45
36:BA:2762:G:H2'	36:BA:2763:G:C5'	2.47	0.45
4:CD:95:GLY:O	4:CD:98:GLU:N	2.50	0.45
49:DQ:56:ARG:CG	49:DQ:56:ARG:NH1	2.79	0.45
42:BG:55:LYS:HA	42:BG:58:GLN:HG2	1.99	0.45
36:BA:511:U:H5''	36:BA:512:G:OP2	2.17	0.45
4:CD:29:PRO:O	4:CD:30:LYS:CB	2.63	0.45
53:BU:92:ARG:HB3	54:BV:11:GLN:NE2	2.32	0.45
48:DP:40:SER:O	48:DP:41:ARG:HD2	2.17	0.45
36:BA:479:A:H4'	36:BA:480:A:H5'	1.99	0.45
14:CN:8:GLU:C	14:CN:10:ALA:N	2.70	0.45
39:BD:49:ILE:H	39:BD:49:ILE:HG12	1.63	0.45
54:DV:62:LEU:N	54:DV:62:LEU:HD22	2.31	0.45
25:AZ:163:PHE:C	25:AZ:165:GLY:H	2.19	0.45
42:DG:47:LYS:HE3	42:DG:81:LYS:CG	2.47	0.45
58:DZ:157:LEU:HD22	58:DZ:161:VAL:CG1	2.47	0.45
32:B6:17:LYS:CB	32:B6:18:ARG:NH1	2.79	0.45
36:DA:221:A:O2'	36:DA:222:A:OP2	2.33	0.45
34:B8:48:PHE:HB3	34:B8:49:VAL:H	1.50	0.45
2:AB:95:GLN:NE2	2:AB:96:ARG:NH1	2.64	0.45
25:AZ:65:THR:N	25:AZ:83:PRO:HD3	2.32	0.45
48:BP:123:LEU:O	48:BP:143:GLY:N	2.49	0.45
36:BA:140:G:N2	36:BA:1596:A:H4'	2.32	0.45
58:BZ:63:ASP:C	58:BZ:65:GLN:H	2.19	0.45
49:DQ:27:VAL:HG12	49:DQ:28:ALA:N	2.32	0.45
32:D6:11:LEU:CD2	32:D6:26:ASN:H	2.28	0.45
57:DY:46:LYS:HG2	57:DY:47:LYS:H	1.81	0.45
1:CA:8:A:N7	4:CD:208:SER:CB	2.80	0.45
36:DA:1038:C:C3'	36:DA:1039:G:C5'	2.95	0.45
58:BZ:141:VAL:O	58:BZ:142:SER:HB3	2.17	0.45
3:CC:75:VAL:O	3:CC:83:ARG:HG2	2.16	0.45
25:AZ:199:ILE:O	25:AZ:199:ILE:HG23	2.17	0.45
58:BZ:29:TYR:OH	58:BZ:87:ASP:OD2	2.28	0.45
1:AA:255:G:OP1	17:AQ:69:LYS:NZ	2.50	0.45
1:AA:195:A:H2'	1:AA:196:A:C8	2.52	0.45
23:CX:14:A:H2'	23:CX:15:A:O5'	2.16	0.45
22:AV:72:C:H3'	22:AV:73:A:C5'	2.38	0.45
25:CZ:316:PHE:HD2	25:CZ:400:VAL:HG13	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:82:G:H5'	36:BA:296:C:H5''	1.99	0.45
36:BA:298:G:H5'	36:BA:299:A:P	2.57	0.45
41:BF:133:ASN:HB2	41:BF:138:GLU:OE1	2.17	0.45
1:CA:265:G:H2'	1:CA:267:C:H5	1.82	0.45
49:DQ:35:VAL:HA	49:DQ:101:ARG:O	2.16	0.45
38:BC:107:TRP:NE1	38:BC:110:PHE:CE2	2.84	0.45
36:BA:2050:C:H1'	40:BE:156:MET:HE1	1.99	0.45
36:BA:580:C:H2'	36:BA:581:C:C6	2.51	0.45
31:B5:25:LEU:HB3	31:B5:26:THR:H	1.55	0.45
46:BN:2:LYS:CE	54:BV:13:ARG:HB3	2.47	0.45
58:DZ:130:PRO:HA	58:DZ:133:ILE:HD11	1.97	0.45
51:DS:78:LEU:HD11	51:DS:103:GLU:HB2	1.98	0.45
36:DA:548:A:H2'	36:DA:549:G:C5'	2.45	0.45
1:CA:1069:C:H2'	1:CA:1070:U:O5'	2.17	0.45
36:DA:1422:G:H1'	36:DA:1496:A:N6	2.31	0.45
33:D7:24:THR:OG1	33:D7:25:PRO:HD2	2.17	0.45
1:AA:403:C:O2'	1:AA:404:U:H5'	2.17	0.45
4:AD:129:ASN:HD21	4:AD:144:ASP:CA	2.24	0.45
39:BD:45:ASN:CG	39:BD:46:GLN:N	2.65	0.45
15:AO:82:ILE:O	15:AO:82:ILE:HD13	2.16	0.45
10:AJ:50:ILE:CD1	10:AJ:50:ILE:H	2.21	0.45
36:BA:2848:G:H8	52:BT:97:ALA:HB2	1.82	0.45
10:AJ:61:GLU:HG3	14:AN:58:LYS:HE2	1.99	0.45
54:DV:2:PHE:CE2	54:DV:13:ARG:NH1	2.84	0.45
22:AV:59:U:O2'	22:AV:60:U:C5'	2.65	0.45
1:AA:1226:C:C5	13:AM:104:ARG:HB2	2.51	0.45
46:DN:18:ALA:HB2	46:DN:26:LEU:HD22	1.98	0.45
27:B1:11:ARG:HB2	27:B1:12:PRO:HD2	1.99	0.45
36:BA:2206:G:N2	36:BA:2207:G:C5'	2.75	0.45
37:BB:68:C:H2'	37:BB:69:G:H8	1.82	0.45
25:AZ:241:ARG:HB2	25:AZ:285:ASN:HD21	1.81	0.45
38:DC:155:GLU:O	38:DC:160:ARG:CB	2.65	0.45
28:D2:52:ASP:C	28:D2:54:LYS:N	2.67	0.45
36:BA:18:C:H5''	53:BU:24:TYR:O	2.17	0.45
37:DB:67:G:O2'	37:DB:68:C:H6	2.00	0.45
36:BA:469:G:H2'	36:BA:470:A:H5''	1.99	0.45
36:BA:962:G:H2'	36:BA:963:U:H5'	1.97	0.45
43:DH:37:VAL:HG12	43:DH:38:SER:H	1.79	0.45
41:BF:53:THR:O	41:BF:57:VAL:HG23	2.17	0.45
36:BA:272(C):G:H2'	36:BA:272(D):G:C8	2.51	0.45
36:BA:231:C:C2	36:BA:232:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:38:A:H2'	36:DA:39:C:C6	2.51	0.45
36:BA:271(F):C:O2'	36:BA:271(G):C:H5'	2.16	0.45
36:BA:782:A:N1	39:BD:226:MET:HE2	2.32	0.45
43:BH:89:ILE:HG13	43:BH:129:THR:HA	1.99	0.45
38:BC:75:LEU:HD12	38:BC:93:TYR:O	2.17	0.45
27:D1:45:ASN:ND2	27:D1:45:ASN:O	2.49	0.45
47:DO:119:PRO:HB2	52:DT:68:TYR:CD2	2.52	0.45
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.98	0.45
1:CA:811:C:H4'	1:CA:900:A:N6	2.32	0.45
11:AK:126:ARG:C	11:AK:128:ALA:H	2.18	0.45
36:BA:1289:C:N3	36:BA:1290:C:C5	2.85	0.45
36:BA:2816:C:O2	36:BA:2883:A:O2'	2.35	0.45
1:CA:25:C:O2'	1:CA:26:A:H5'	2.17	0.45
25:AZ:347:THR:HG23	25:AZ:348:ASP:N	2.32	0.45
36:DA:2819:G:H1	36:DA:2827:C:H42	1.65	0.45
53:BU:16:LYS:O	53:BU:20:LEU:HD23	2.17	0.45
20:AT:9:ASN:O	20:AT:10:LEU:HD13	2.17	0.45
47:DO:113:LYS:HA	47:DO:116:SER:OG	2.17	0.45
36:DA:1277:G:O2'	50:DR:24:GLN:HG2	2.16	0.45
3:CC:69:HIS:HA	3:CC:104:GLN:O	2.17	0.45
1:CA:83:U:HO2'	1:CA:84:U:H5	1.63	0.45
36:BA:2106:G:N1	36:BA:2183:C:N3	2.61	0.45
27:D1:86:SER:HB2	27:D1:90:ILE:HD11	1.98	0.45
1:CA:1271:G:C3'	1:CA:1272:G:H5''	2.42	0.45
28:B2:33:MET:O	28:B2:37:PHE:N	2.50	0.45
57:BY:14:LEU:HD12	57:BY:15:VAL:N	2.29	0.45
4:AD:100:ARG:O	4:AD:101:LEU:C	2.56	0.45
36:DA:1971:A:C8	39:DD:241:PRO:HB3	2.52	0.45
4:CD:18:LYS:HE3	4:CD:31:CYS:HB3	1.97	0.45
41:BF:17:ARG:HG3	41:BF:17:ARG:NH1	2.32	0.45
41:BF:2:LYS:O	41:BF:25:PRO:HG2	2.17	0.45
10:CJ:57:LYS:NZ	10:CJ:60:ARG:HH22	2.14	0.45
1:CA:1187:G:O2'	1:CA:1188:A:H5'	2.17	0.45
3:CC:16:ARG:HD3	3:CC:17:ASP:H	1.82	0.45
1:CA:172:A:H5'	1:CA:173:U:OP1	2.17	0.45
36:BA:1856:G:H2'	36:BA:1857:G:O4'	2.15	0.45
36:BA:1858:G:O2'	36:BA:1884:A:N6	2.49	0.45
36:DA:266:G:C3'	36:DA:267:C:H5''	2.46	0.45
37:BB:7:G:H4'	51:BS:29:PHE:CE2	2.52	0.45
56:DX:64:LYS:HG2	56:DX:65:ARG:N	2.32	0.45
2:CB:160:ASP:O	2:CB:161:ALA:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:46:LYS:O	57:DY:60:PHE:O	2.35	0.45
46:BN:63:THR:OG1	46:BN:66:LYS:NZ	2.50	0.45
48:DP:97:PRO:HA	48:DP:100:LEU:HB3	1.99	0.45
36:DA:1196:C:H2'	36:DA:1197:G:H8	1.82	0.45
3:CC:166:GLU:OE1	3:CC:166:GLU:HA	2.16	0.45
38:DC:118:ASP:O	38:DC:119:VAL:CB	2.65	0.45
3:CC:3:ASN:O	3:CC:4:LYS:HB2	2.17	0.45
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.52	0.45
38:DC:99:ILE:O	38:DC:99:ILE:HG22	2.17	0.45
50:BR:2:ARG:CD	50:BR:2:ARG:O	2.59	0.45
2:CB:97:TRP:CZ2	2:CB:173:ALA:HA	2.52	0.45
36:DA:1790:C:H2'	36:DA:1791:A:C5	2.52	0.45
36:BA:414:C:H2'	36:BA:415:A:C8	2.51	0.45
1:CA:267:C:P	17:CQ:67:LYS:HB2	2.57	0.45
49:DQ:35:VAL:HG11	49:DQ:130:LYS:HE2	1.98	0.45
26:B0:27:GLU:CD	36:BA:856:C:H1'	2.37	0.45
6:CF:10:LEU:CD1	6:CF:59:TYR:HB3	2.47	0.45
52:BT:10:VAL:C	52:BT:12:SER:N	2.71	0.45
46:BN:1:MET:C	46:BN:1:MET:SD	2.95	0.45
22:AV:28:G:H2'	22:AV:29:G:H8	1.82	0.45
39:BD:206:LEU:HG	39:BD:211:ARG:HG2	1.98	0.45
3:AC:51:GLY:O	3:AC:70:VAL:HA	2.16	0.45
50:BR:21:TYR:OH	50:BR:43:GLU:HG2	2.16	0.45
18:AR:45:SER:HB3	18:AR:51:LEU:HD23	1.94	0.45
36:BA:487:C:O2	55:BW:53:SER:OG	2.35	0.45
2:CB:110:GLN:OE1	2:CB:111:ARG:HG2	2.17	0.45
36:BA:1472:A:C2'	36:BA:1473:G:H5'	2.46	0.45
47:DO:63:VAL:HB	47:DO:102:VAL:CG1	2.46	0.45
36:DA:2315:G:H21	42:DG:128:ARG:NE	2.15	0.45
42:DG:56:ALA:CB	42:DG:153:ARG:HH21	2.29	0.45
41:DF:154:VAL:HG12	41:DF:155:LEU:N	2.32	0.45
26:D0:16:SER:CB	36:DA:2262:U:H5	2.30	0.45
1:CA:1044:A:C2'	1:CA:1045:C:O5'	2.65	0.45
37:BB:68:C:H2'	37:BB:69:G:O4'	2.16	0.45
5:AE:64:ARG:CZ	5:AE:64:ARG:HB2	2.47	0.45
50:BR:53:HIS:HB2	50:BR:94:TYR:HE2	1.82	0.45
1:AA:8:A:C6	4:AD:209:ARG:HB3	2.52	0.45
25:AZ:299:GLU:O	25:AZ:300:ARG:O	2.34	0.45
50:DR:10:LEU:O	50:DR:11:ASN:HB2	2.16	0.45
13:CM:108:ARG:CG	13:CM:108:ARG:HH11	2.28	0.45
36:DA:25:U:H5'	55:DW:79:GLY:HA2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:827:U:C2	1:CA:870:U:O4	2.70	0.45
20:CT:86:ARG:O	20:CT:90:GLN:HG3	2.16	0.45
47:DO:47:ILE:HG23	47:DO:48:PRO:CD	2.46	0.45
36:DA:1958:C:C2'	36:DA:1959:G:H5'	2.47	0.45
1:AA:160:A:H2'	1:AA:161:A:O4'	2.17	0.45
8:CH:53:VAL:HB	8:CH:58:TYR:CD1	2.52	0.45
38:BC:76:ALA:HB2	38:BC:153:ILE:HD11	1.99	0.45
35:D9:23:VAL:HG21	36:DA:1032:A:H1'	1.97	0.45
36:DA:878:A:H2'	36:DA:879:G:O4'	2.17	0.45
1:CA:520:A:N1	1:CA:536:C:H1'	2.32	0.45
49:DQ:37:LEU:C	49:DQ:38:GLU:HG3	2.38	0.45
33:B7:32:LYS:HE2	36:BA:180:G:OP2	2.16	0.45
2:CB:154:LEU:O	2:CB:156:LYS:HG3	2.16	0.45
22:AV:14:A:C2'	22:AV:15:G:H5'	2.47	0.45
1:AA:1012:U:C2'	1:AA:1013:G:H5'	2.46	0.45
36:BA:1285:G:C6	36:BA:1329:U:C5	3.05	0.45
39:BD:196:VAL:HG12	39:BD:196:VAL:O	2.16	0.45
36:BA:2774:C:H2'	36:BA:2775:A:O4'	2.16	0.45
11:CK:69:ALA:O	11:CK:72:ALA:N	2.47	0.45
36:DA:571:A:C8	36:DA:2030:A:N6	2.85	0.45
7:AG:63:LYS:O	7:AG:63:LYS:HG3	2.16	0.45
47:BO:73:ASP:O	47:BO:73:ASP:OD1	2.35	0.45
22:CV:50:U:C2	22:CV:65:G:C2	3.04	0.45
36:DA:1034:G:H2'	36:DA:1035:U:O4'	2.17	0.45
10:AJ:54:PHE:CD2	10:AJ:55:LYS:HD2	2.51	0.45
39:DD:35:LYS:CD	39:DD:36:PRO:N	2.65	0.45
25:CZ:137:LYS:HA	60:CZ:501:GDP:HN1	1.82	0.45
54:DV:53:GLU:C	54:DV:55:ALA:H	2.20	0.45
56:BX:8:ILE:HD11	56:BX:42:ALA:O	2.17	0.45
4:AD:137:SER:O	4:AD:138:TYR:C	2.55	0.45
1:CA:402:G:C5	1:CA:403:C:C5	3.04	0.45
36:BA:2156:G:H2'	36:BA:2157:G:H1'	1.99	0.45
42:DG:57:ALA:HA	42:DG:90:LEU:CD2	2.47	0.45
4:CD:17:VAL:HG21	4:CD:63:LYS:NZ	2.31	0.45
26:D0:42:GLY:O	26:D0:57:PHE:CG	2.70	0.45
42:BG:61:ALA:HA	42:BG:66:GLN:O	2.17	0.45
53:BU:61:TRP:CZ3	53:BU:94:ASN:HB2	2.52	0.45
31:B5:7:PRO:HG2	36:BA:2016:U:O2	2.17	0.45
58:BZ:114:GLY:O	58:BZ:146:ILE:HB	2.17	0.45
32:B6:26:ASN:OD1	32:B6:27:LYS:N	2.50	0.45
38:DC:64:LEU:HA	38:DC:65:PRO:HD3	1.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1757:U:O4	36:BA:1762:A:C2	2.70	0.45
25:AZ:281:ILE:CD1	25:AZ:284:ASP:OD1	2.65	0.45
36:DA:2415:G:H4'	48:DP:66:GLY:O	2.17	0.45
32:D6:5:VAL:N	32:D6:8:LYS:HB3	2.32	0.45
48:DP:105:LEU:O	48:DP:106:LEU:HB2	2.16	0.45
36:DA:582:G:OP1	53:DU:14:HIS:HD2	1.99	0.45
36:DA:1054:A:N3	36:DA:1054:A:H2'	2.31	0.45
36:BA:2590:A:OP2	39:BD:238:GLY:HA2	2.16	0.45
36:DA:633:A:H8	36:DA:633:A:O5'	2.00	0.45
7:AG:15:ASP:HB2	7:AG:20:ASP:H	1.81	0.45
36:DA:692:C:H2'	36:DA:693:C:H6	1.82	0.45
2:CB:100:GLY:N	2:CB:176:GLU:OE2	2.41	0.45
3:CC:48:TYR:C	3:CC:50:ALA:H	2.20	0.45
1:AA:190:U:H2'	1:AA:191:G:H8	1.82	0.45
36:BA:322:A:H5'	36:BA:340:A:H1'	1.98	0.45
53:BU:48:ALA:O	53:BU:52:ARG:HG3	2.16	0.45
1:AA:63:C:H2'	1:AA:64:G:C5'	2.39	0.45
1:CA:112:G:OP2	16:CP:27:LYS:HE2	2.16	0.45
16:CP:39:TYR:CE1	16:CP:41:PRO:HA	2.51	0.45
50:BR:18:LEU:HD13	50:BR:18:LEU:C	2.36	0.45
16:CP:9:PHE:HE2	16:CP:18:ARG:CZ	2.30	0.45
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.80	0.45
36:DA:1495:A:H2'	36:DA:1496:A:C2	2.52	0.45
27:B1:46:LEU:CD2	27:B1:63:ALA:HA	2.44	0.45
4:CD:45:GLN:O	4:CD:46:LYS:HG2	2.17	0.45
43:DH:89:ILE:HD12	43:DH:95:ARG:HA	1.99	0.45
46:BN:109:LYS:HE3	46:BN:109:LYS:HB2	1.80	0.45
25:CZ:13:ASN:HA	25:CZ:78:SER:H	1.81	0.45
8:AH:83:ILE:CG2	8:AH:83:ILE:O	2.62	0.45
16:CP:4:ILE:CG1	16:CP:64:ALA:HB1	2.46	0.45
36:DA:150:C:H2'	36:DA:151:C:C6	2.52	0.45
36:BA:897:C:O2	36:BA:897:C:H2'	2.17	0.45
2:AB:200:ILE:H	2:AB:200:ILE:CD1	2.28	0.45
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.98	0.45
25:CZ:258:LEU:O	25:CZ:259:ALA:O	2.35	0.45
39:DD:245:PRO:O	39:DD:246:PRO:C	2.55	0.45
37:BB:17:C:H2'	37:BB:18:G:C8	2.52	0.45
16:AP:43:LYS:HA	16:AP:48:TRP:CB	2.46	0.45
36:DA:1442:G:H1	36:DA:1549:C:N4	2.13	0.45
55:BW:40:ASN:O	55:BW:41:LYS:HG2	2.16	0.45
36:DA:1649:G:O2'	36:DA:1650:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2629:A:N3	36:DA:2629:A:H2'	2.31	0.45
1:CA:601:C:O2'	1:CA:602:A:H5'	2.17	0.45
36:DA:834:C:H1'	36:DA:2358:G:N3	2.32	0.45
1:AA:457:C:H2'	1:AA:458:C:C6	2.51	0.45
1:CA:781:A:H4'	1:CA:1522:U:O2'	2.17	0.45
1:CA:458:C:H2'	1:CA:460:G:H8	1.82	0.45
36:BA:176:G:C2'	36:BA:177:G:H5'	2.47	0.45
36:BA:1363:C:H2'	36:BA:1364:G:H8	1.81	0.45
7:CG:58:PRO:O	7:CG:60:LYS:N	2.50	0.45
36:DA:1107:G:H4'	44:DJ:81:UNK:HA	1.99	0.45
36:DA:1264:G:C2'	36:DA:1265:A:OP1	2.65	0.45
55:DW:14:PRO:O	55:DW:18:ARG:HB2	2.16	0.45
43:DH:80:SER:O	43:DH:81:GLU:CB	2.64	0.45
36:DA:285:C:O2'	36:DA:286:C:H5'	2.16	0.45
24:AY:75:C:H5	25:AZ:232:THR:OG1	1.98	0.45
1:AA:279:A:OP2	17:AQ:95:TYR:OH	2.20	0.45
8:CH:28:ALA:CB	8:CH:59:LEU:HG	2.47	0.45
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.52	0.45
36:DA:1361:G:O2'	36:DA:1362:C:H5'	2.17	0.45
36:DA:1395:A:O2'	36:DA:1397:U:C5	2.67	0.45
36:BA:1957:C:H2'	36:BA:1958:C:C6	2.52	0.45
36:DA:2792:G:H2'	36:DA:2792:G:N3	2.32	0.45
51:BS:11:LYS:N	51:BS:11:LYS:HD2	2.32	0.45
36:BA:608:A:H2'	36:BA:609:A:C8	2.52	0.45
4:AD:12:CYS:HA	4:AD:19:LEU:HD13	1.99	0.44
4:AD:61:LYS:HE2	4:AD:62:GLN:NE2	2.32	0.44
53:DU:92:ARG:HB3	54:DV:11:GLN:NE2	2.31	0.44
13:CM:60:VAL:HG12	13:CM:66:LEU:HD21	1.98	0.44
57:BY:6:HIS:HE1	57:BY:30:VAL:CG1	2.30	0.44
19:CS:36:ARG:HB2	19:CS:72:GLY:CA	2.47	0.44
58:BZ:133:ILE:O	58:BZ:133:ILE:HG22	2.17	0.44
42:DG:54:GLU:HG3	42:DG:54:GLU:H	1.63	0.44
4:CD:61:LYS:O	4:CD:62:GLN:C	2.55	0.44
36:DA:2331:G:N2	36:DA:2385:C:C4	2.86	0.44
53:BU:65:ILE:HG12	53:BU:96:ALA:CB	2.48	0.44
36:DA:195:A:OP1	48:DP:46:LYS:HE2	2.17	0.44
36:DA:2068:U:N3	36:DA:2430:A:C2	2.67	0.44
36:DA:1747:G:H2'	36:DA:1747(A):G:C8	2.51	0.44
41:BF:3:GLU:HB2	41:BF:24:LEU:HD23	1.99	0.44
51:DS:13:ARG:O	51:DS:14:VAL:HB	2.18	0.44
36:BA:2888:C:H2'	36:BA:2889:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:45:VAL:C	19:AS:47:HIS:N	2.69	0.44
36:DA:1528(A):A:N6	36:DA:1541:G:C2	2.86	0.44
36:BA:1857:G:C6	36:BA:1858:G:C2	3.05	0.44
30:D4:14:ILE:HG23	30:D4:31:ILE:HG22	1.99	0.44
26:B0:16:SER:OG	36:BA:2261:C:H3'	2.17	0.44
40:BE:26:ILE:CD1	40:BE:182:LEU:HD23	2.47	0.44
31:D5:43:HIS:CD2	36:DA:2815:C:O2'	2.69	0.44
5:CE:76:ILE:CG1	5:CE:77:PRO:HD2	2.47	0.44
32:D6:9:LEU:HD13	32:D6:9:LEU:C	2.37	0.44
53:DU:56:ASP:O	53:DU:59:ARG:HB2	2.18	0.44
46:BN:57:ALA:O	46:BN:58:ASP:O	2.34	0.44
22:AW:59:U:H3'	22:AW:60:U:C6	2.51	0.44
36:DA:1227:G:C2'	36:DA:1228:G:H5'	2.47	0.44
58:DZ:6:LYS:CD	58:DZ:60:GLU:HG3	2.46	0.44
2:AB:106:LYS:O	2:AB:109:SER:HB2	2.17	0.44
54:DV:19:LYS:CE	54:DV:20:LEU:H	2.29	0.44
25:CZ:236:THR:HB	25:CZ:293:VAL:HG23	1.99	0.44
46:BN:48:MET:H	46:BN:48:MET:CE	2.22	0.44
36:DA:650:C:H3'	36:DA:651:G:C5'	2.37	0.44
10:CJ:96:ILE:N	10:CJ:96:ILE:CD1	2.75	0.44
34:D8:8:LYS:HA	34:D8:11:LYS:HB3	1.99	0.44
55:DW:4:LYS:HG2	55:DW:5:ALA:N	2.28	0.44
36:BA:2523:G:O2'	36:BA:2524:G:H5''	2.17	0.44
19:CS:16:LEU:N	19:CS:16:LEU:CD1	2.77	0.44
1:AA:174:C:O5'	1:AA:174:C:H6	2.00	0.44
36:DA:953:A:O2'	36:DA:954:G:H5'	2.17	0.44
48:BP:108:LYS:C	48:BP:110:TYR:H	2.20	0.44
39:BD:20:ASP:C	39:BD:20:ASP:OD1	2.56	0.44
20:AT:26:ASN:ND2	20:AT:26:ASN:N	2.53	0.44
38:DC:41:VAL:HG21	38:DC:185:LEU:CD2	2.46	0.44
20:CT:66:ALA:O	20:CT:71:THR:HB	2.16	0.44
36:DA:2486:G:H2'	36:DA:2487:G:O5'	2.17	0.44
3:CC:65:ALA:O	3:CC:66:VAL:HB	2.18	0.44
29:B3:15:TYR:HD2	29:B3:19:GLN:HE22	1.64	0.44
57:BY:2:ARG:HG2	57:BY:2:ARG:HH11	1.82	0.44
57:BY:2:ARG:CD	57:BY:3:VAL:HG23	2.43	0.44
25:CZ:355:LEU:CD1	25:CZ:360:GLU:HA	2.46	0.44
22:AW:6:G:N2	22:AW:68:C:N4	2.66	0.44
46:BN:32:THR:C	46:BN:34:LEU:H	2.20	0.44
3:AC:36:ASP:O	3:AC:39:ILE:HB	2.17	0.44
24:CY:54:5MU:OP2	24:CY:54:5MU:H71	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1030(D):A:C2'	1:CA:1031:G:H5'	2.47	0.44
36:BA:2847:U:H5'	52:BT:97:ALA:HB3	1.99	0.44
36:BA:1591:G:C2'	36:BA:1592:C:H5'	2.47	0.44
36:BA:1926:U:O2	36:BA:1928:A:C8	2.71	0.44
7:CG:78:ARG:NH1	7:CG:80:VAL:HG21	2.32	0.44
36:DA:238:C:C2	36:DA:239:U:C6	3.05	0.44
11:CK:21:ILE:HD13	11:CK:94:ALA:HB3	1.99	0.44
20:CT:90:GLN:C	20:CT:93:GLU:OE1	2.55	0.44
36:BA:752:A:O2'	36:BA:753:C:OP2	2.32	0.44
36:BA:30:G:C5	36:BA:31:C:C4	3.05	0.44
1:AA:328:C:O2	1:AA:328:C:C2'	2.63	0.44
36:BA:962:G:O2'	36:BA:963:U:H5'	2.17	0.44
43:DH:37:VAL:HG11	43:DH:68:THR:HG21	1.98	0.44
2:CB:233:SER:O	2:CB:235:SER:N	2.50	0.44
36:DA:1344:G:O2'	36:DA:1385:G:H2'	2.17	0.44
1:AA:308:C:H2'	1:AA:309:G:H8	1.81	0.44
25:CZ:38:GLU:HG3	25:CZ:39:ASN:OD1	2.16	0.44
29:B3:31:LEU:C	29:B3:33:GLN:N	2.71	0.44
48:DP:135:LEU:C	48:DP:137:LYS:N	2.69	0.44
1:CA:294:U:H2'	1:CA:295:C:C6	2.52	0.44
36:BA:9:U:O4	36:BA:2629:A:H8	2.00	0.44
42:DG:166:ASP:O	42:DG:169:ALA:N	2.49	0.44
36:BA:2515:C:H2'	36:BA:2516:G:C8	2.51	0.44
6:CF:12:PRO:HA	6:CF:45:LEU:HD11	1.99	0.44
15:CO:2:PRO:O	15:CO:3:ILE:C	2.53	0.44
1:AA:473:G:H2'	1:AA:474:G:H8	1.82	0.44
36:BA:919:G:H2'	36:BA:920:G:O4'	2.16	0.44
38:DC:225:ASN:HA	38:DC:226:PRO:HD2	1.84	0.44
5:CE:84:PHE:HB3	5:CE:134:ALA:HB2	1.98	0.44
1:AA:922:G:N3	1:AA:1398:A:H2	2.16	0.44
36:BA:1386:C:H2'	36:BA:1387:C:H6	1.83	0.44
17:CQ:85:VAL:O	17:CQ:89:LEU:HG	2.17	0.44
20:AT:44:ALA:CB	20:AT:88:VAL:HG13	2.47	0.44
28:D2:16:LEU:O	28:D2:67:LYS:NZ	2.43	0.44
50:DR:74:LYS:NZ	50:DR:77:ARG:NH1	2.64	0.44
6:AF:79:LEU:N	6:AF:79:LEU:HD23	2.32	0.44
8:AH:54:ASP:CG	8:AH:54:ASP:O	2.55	0.44
44:DJ:62:UNK:C	44:DJ:64:UNK:N	2.80	0.44
17:AQ:83:ASP:N	17:AQ:83:ASP:OD1	2.50	0.44
52:BT:34:VAL:O	52:BT:34:VAL:HG12	2.16	0.44
37:DB:63:G:C2	37:DB:64:C:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:347:THR:HG23	25:CZ:348:ASP:N	2.32	0.44
44:DJ:128:UNK:C	44:DJ:130:UNK:N	2.77	0.44
25:CZ:281:ILE:H	25:CZ:281:ILE:HG13	1.70	0.44
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.48	0.44
54:DV:39:LEU:CD1	54:DV:47:VAL:HG11	2.45	0.44
43:BH:162:ILE:CG1	43:BH:162:ILE:O	2.65	0.44
13:CM:23:TYR:CE1	13:CM:70:LEU:HD13	2.52	0.44
36:BA:2760:C:C2'	36:BA:2761:G:H5''	2.47	0.44
27:D1:58:ILE:HG12	27:D1:59:THR:N	2.32	0.44
36:DA:940:G:H2'	36:DA:941:A:O4'	2.17	0.44
25:CZ:310:ILE:CD1	25:CZ:381:GLU:HB3	2.47	0.44
57:DY:76:CYS:CB	57:DY:77:PRO:HD2	2.47	0.44
51:DS:49:VAL:CG1	51:DS:50:SER:N	2.71	0.44
57:DY:7:VAL:HB	57:DY:8:LYS:NZ	2.32	0.44
41:BF:24:LEU:HD22	41:BF:24:LEU:N	2.33	0.44
1:CA:1367:C:H4'	10:CJ:48:THR:HG21	1.98	0.44
10:CJ:62:HIS:H	14:CN:58:LYS:HZ3	1.63	0.44
14:CN:8:GLU:C	14:CN:10:ALA:H	2.19	0.44
39:BD:37:LEU:HD12	39:BD:64:ILE:CG2	2.48	0.44
39:BD:35:LYS:HA	39:BD:64:ILE:H	1.82	0.44
36:BA:190:A:H5''	36:BA:204:A:N1	2.32	0.44
36:DA:1299:G:H4'	36:DA:1301:A:C4	2.53	0.44
29:D3:42:ALA:O	29:D3:43:ILE:C	2.55	0.44
20:AT:54:LYS:O	20:AT:57:ARG:HB3	2.17	0.44
36:DA:1541:G:O2'	36:DA:1542:A:P	2.76	0.44
1:CA:198:G:HO2'	1:CA:199:G:P	2.40	0.44
36:DA:1341:U:H5'	56:DX:57:LEU:HB3	1.99	0.44
52:DT:109:GLU:O	52:DT:112:ARG:HG2	2.17	0.44
1:AA:858:G:O2'	1:AA:859:A:H5''	2.16	0.44
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	1.98	0.44
36:BA:2492:U:H2'	36:BA:2493:U:C6	2.51	0.44
25:AZ:23:GLY:O	25:AZ:24:LYS:O	2.35	0.44
21:AU:9:ARG:NH1	21:AU:22:ARG:HA	2.32	0.44
1:AA:267:C:H2'	1:AA:268:C:H6	1.82	0.44
40:BE:44:TYR:O	40:BE:45:THR:HB	2.16	0.44
48:DP:101:VAL:CG2	48:DP:102:ARG:N	2.80	0.44
48:DP:125:VAL:O	48:DP:125:VAL:HG13	2.17	0.44
58:DZ:6:LYS:HG3	58:DZ:60:GLU:HG3	1.98	0.44
36:DA:2491:U:C5'	36:DA:2570:G:H5''	2.37	0.44
36:DA:2777:G:H4'	36:DA:2778:A:H5'	1.98	0.44
36:DA:1221(A):C:H2'	36:DA:1222:C:C5	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:527:C:C4	36:BA:2779:U:H5''	2.52	0.44
46:DN:28:THR:HG23	46:DN:29:LYS:N	2.32	0.44
40:DE:171:GLU:O	40:DE:184:VAL:HA	2.17	0.44
40:DE:21:VAL:HG23	40:DE:21:VAL:O	2.17	0.44
52:DT:14:TYR:HD1	52:DT:14:TYR:N	2.14	0.44
9:AI:53:VAL:HG13	9:AI:95:LYS:HD2	1.99	0.44
25:CZ:199:ILE:HA	25:CZ:199:ILE:HD12	1.61	0.44
20:CT:23:ARG:HD3	20:CT:24:LEU:HD22	1.99	0.44
6:AF:19:LEU:HD11	6:AF:59:TYR:CE2	2.52	0.44
25:AZ:361:MET:HE1	25:AZ:363:MET:SD	2.58	0.44
1:AA:961:U:O2'	1:AA:962:C:C6	2.57	0.44
4:CD:127:THR:O	4:CD:147:ALA:N	2.45	0.44
6:CF:9:VAL:HG12	6:CF:86:ARG:CG	2.45	0.44
36:DA:1069:A:C1'	36:DA:1070:A:OP1	2.63	0.44
57:DY:2:ARG:CD	57:DY:3:VAL:HG23	2.41	0.44
1:CA:958:A:C6	1:CA:959:A:N1	2.85	0.44
41:DF:6:VAL:HB	41:DF:124:LEU:HD13	1.99	0.44
27:B1:3:LYS:N	27:B1:46:LEU:HD12	2.32	0.44
3:AC:6:HIS:HD2	3:AC:8:ILE:HB	1.79	0.44
4:AD:128:VAL:O	4:AD:129:ASN:C	2.54	0.44
1:CA:42:G:C6	1:CA:43:C:N4	2.85	0.44
43:BH:156:ALA:HB3	43:BH:159:GLU:HB3	1.98	0.44
24:AY:54:5MU:OP2	24:AY:54:5MU:H71	2.18	0.44
42:DG:130:ASN:OD1	42:DG:161:THR:N	2.48	0.44
37:DB:32:C:C4	37:DB:33:G:N7	2.85	0.44
9:AI:75:ASP:O	9:AI:78:LYS:HB3	2.16	0.44
40:DE:38:THR:C	40:DE:40:GLU:H	2.21	0.44
1:CA:1126:U:C5	1:CA:1127:G:C6	3.05	0.44
1:AA:782:A:H2'	1:AA:783:C:C5'	2.46	0.44
3:CC:177:THR:CG2	3:CC:179:ARG:HG3	2.47	0.44
20:CT:26:ASN:H	20:CT:26:ASN:HD22	1.62	0.44
36:BA:910:A:H2'	36:BA:911:A:C8	2.52	0.44
36:DA:1569:A:O2'	39:DD:38:LYS:HG3	2.18	0.44
39:BD:176:ARG:CG	39:BD:176:ARG:NH1	2.79	0.44
25:CZ:178:ALA:O	25:CZ:196:VAL:HG23	2.17	0.44
58:DZ:128:VAL:CG2	58:DZ:129:SER:N	2.80	0.44
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.81	0.44
58:DZ:75:ASN:ND2	58:DZ:75:ASN:N	2.65	0.44
7:CG:22:LEU:HD22	7:CG:62:PHE:CE2	2.52	0.44
39:DD:50:THR:O	39:DD:51:VAL:HG23	2.17	0.44
2:CB:178:ARG:O	8:CH:71:GLY:HA2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1486:A:H2'	36:DA:1487:G:C8	2.52	0.44
18:AR:66:LEU:O	18:AR:67:ALA:C	2.56	0.44
2:CB:40:HIS:O	2:CB:41:ILE:HD12	2.18	0.44
36:BA:1040:C:H2'	36:BA:1041:G:H8	1.81	0.44
55:DW:62:HIS:O	55:DW:63:ASP:C	2.54	0.44
43:BH:23:ARG:O	43:BH:24:VAL:CG2	2.64	0.44
1:CA:591:U:H2'	1:CA:592:G:C8	2.53	0.44
1:CA:1236:A:H2'	1:CA:1237:C:C6	2.52	0.44
8:CH:72:PRO:O	8:CH:73:ASP:CB	2.65	0.44
23:AX:20:U:H2'	23:AX:21:C:C6	2.51	0.44
1:AA:1242:C:H2'	1:AA:1243:C:H6	1.82	0.44
1:AA:995:C:O2'	1:AA:996:A:P	2.75	0.44
11:CK:69:ALA:O	11:CK:70:LYS:C	2.55	0.44
36:DA:1973:G:H2'	36:DA:1974:C:C6	2.53	0.44
38:DC:190:ARG:NH2	38:DC:228:SER:O	2.46	0.44
36:DA:712:G:O2'	36:DA:713:G:H5'	2.17	0.44
36:DA:1350:C:C2	36:DA:1382:G:N2	2.85	0.44
1:AA:311:C:HO2'	1:AA:312:C:H5'	1.82	0.44
36:DA:272(D):G:O2'	36:DA:272(E):G:H5'	2.17	0.44
25:CZ:227:ASP:OD1	25:CZ:228:VAL:N	2.50	0.44
38:BC:167:LYS:O	38:BC:167:LYS:HD2	2.17	0.44
38:BC:123:VAL:HG22	38:BC:127:LEU:CB	2.48	0.44
39:DD:29:PRO:O	39:DD:30:GLU:C	2.56	0.44
39:DD:30:GLU:HB2	39:DD:35:LYS:CE	2.47	0.44
51:DS:29:PHE:C	51:DS:29:PHE:CD1	2.91	0.44
42:DG:149:VAL:O	42:DG:149:VAL:HG23	2.16	0.44
10:AJ:5:ARG:HG2	10:AJ:73:ASP:OD1	2.17	0.44
36:BA:92:A:OP2	57:BY:33:LYS:HE2	2.17	0.44
4:CD:96:LEU:H	4:CD:96:LEU:CD1	2.30	0.44
4:CD:98:GLU:HG2	4:CD:194:LEU:HD11	2.00	0.44
36:DA:2200:C:H5'	36:DA:2201:C:OP2	2.18	0.44
34:D8:61:LEU:C	34:D8:63:PRO:HD2	2.37	0.44
57:DY:31:LEU:CB	57:DY:32:PRO:HA	2.45	0.44
14:CN:6:LEU:HD13	14:CN:23:ARG:NH2	2.26	0.44
48:BP:59:LEU:N	48:BP:61:ARG:HE	2.14	0.44
47:BO:104:ARG:C	47:BO:106:LEU:H	2.20	0.44
32:B6:33:LYS:O	32:B6:34:LEU:HB2	2.17	0.44
36:BA:1541:G:C8	36:BA:1542:A:C2	3.06	0.44
36:DA:1885:A:H2'	36:DA:1886:C:H5'	1.98	0.44
36:DA:995:C:O2	46:DN:4:TYR:OH	2.35	0.44
32:B6:18:ARG:HE	32:B6:43:CYS:HB3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:19:ARG:HB3	36:BA:2400:G:H4'	1.98	0.44
1:CA:1372:U:H2'	1:CA:1373:G:O4'	2.17	0.44
30:D4:25:TYR:N	30:D4:25:TYR:CD1	2.85	0.44
36:DA:2110:G:H5''	36:DA:2145:C:N4	2.32	0.44
40:BE:11:MET:HB3	40:BE:24:THR:HA	1.99	0.44
40:BE:197:ILE:CD1	40:BE:199:ARG:HH21	2.26	0.44
36:DA:2399:G:O6	36:DA:2417:C:N3	2.49	0.44
36:BA:2491:U:O2'	36:BA:2492:U:H5'	2.18	0.44
52:BT:23:ARG:CG	52:BT:120:ARG:NH1	2.77	0.44
39:DD:267:SER:C	39:DD:269:PHE:N	2.62	0.44
36:DA:2762:G:H5'	36:DA:2762:G:C8	2.45	0.44
10:CJ:7:LYS:O	10:CJ:8:LEU:HD12	2.17	0.44
20:AT:55:ILE:H	20:AT:55:ILE:CD1	2.19	0.44
20:AT:20:LEU:O	20:AT:24:LEU:CD2	2.63	0.44
41:DF:164:ARG:NH1	41:DF:164:ARG:CG	2.81	0.44
49:DQ:10:ARG:O	49:DQ:73:PRO:HG2	2.17	0.44
58:BZ:157:LEU:HD11	58:BZ:163:LEU:HD22	1.99	0.44
22:AV:1:G:C4	22:AV:2:C:C5	3.05	0.44
36:BA:856:C:H2'	36:BA:857:C:C6	2.52	0.44
6:AF:22:GLU:HA	6:AF:25:ILE:HG22	1.99	0.44
2:AB:121:LEU:HG	2:AB:126:GLU:OE1	2.18	0.44
1:AA:1320:C:H5''	19:AS:70:LYS:HG3	1.99	0.44
1:CA:264:U:H4'	17:CQ:63:ARG:HD3	1.99	0.44
8:AH:127:LEU:N	8:AH:127:LEU:HD22	2.32	0.44
52:DT:38:ASN:OD1	52:DT:40:THR:OG1	2.34	0.44
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.51	0.44
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.98	0.44
46:DN:96:GLU:OE1	46:DN:96:GLU:N	2.49	0.44
36:DA:1815:A:C8	36:DA:1817:G:C4	3.06	0.44
40:DE:36:ARG:NH2	40:DE:88:GLY:HA2	2.32	0.44
41:DF:87:GLY:O	41:DF:88:VAL:HB	2.17	0.44
13:CM:87:TYR:CE1	19:CS:81:ARG:NH2	2.85	0.44
43:DH:139:GLN:NE2	43:DH:140:LYS:HA	2.32	0.44
36:DA:359:A:H2'	36:DA:360:G:O4'	2.17	0.44
36:DA:1717:G:H3'	36:DA:1718:G:H5''	1.99	0.44
7:CG:78:ARG:O	7:CG:78:ARG:CG	2.65	0.44
37:BB:67:G:O2'	37:BB:68:C:H6	2.00	0.44
55:DW:36:LEU:HD23	55:DW:36:LEU:H	1.81	0.44
36:DA:366:C:H5'	36:DA:370:G:H5'	1.98	0.44
7:AG:59:LEU:O	7:AG:59:LEU:HD23	2.17	0.44
55:BW:20:VAL:HG21	55:BW:43:GLY:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:10:GLU:CG	46:BN:11:PRO:HD2	2.48	0.44
25:AZ:176:LEU:O	25:AZ:176:LEU:HD13	2.18	0.44
22:AW:38:A:C6	22:AW:39:U:C4	3.06	0.44
16:AP:1:MET:HG3	16:AP:65:GLN:CG	2.47	0.44
1:CA:308:C:H2'	1:CA:309:G:C8	2.48	0.44
36:BA:877:U:C2'	36:BA:878:A:H5''	2.48	0.44
22:AV:61:C:O2	22:AV:61:C:H2'	2.17	0.44
6:CF:37:VAL:HG12	6:CF:38:GLU:N	2.32	0.44
14:AN:29:ARG:NH1	14:AN:31:ARG:O	2.50	0.44
1:AA:40:C:H2'	1:AA:41:G:C8	2.53	0.44
36:DA:271(F):C:C2'	36:DA:271(G):C:H5'	2.47	0.44
47:BO:12:ASP:CG	47:BO:85:VAL:HG13	2.38	0.44
3:CC:11:ARG:NH2	3:CC:182:ILE:HD12	2.32	0.44
2:AB:21:ARG:HB2	2:AB:38:GLY:O	2.17	0.44
1:CA:597:G:H2'	1:CA:598:U:H5'	1.99	0.44
36:BA:2641:G:P	46:BN:74:ARG:HH21	2.41	0.44
24:CY:18:G:H1'	24:CY:58:A:C2	2.52	0.44
1:AA:1442(A):G:N2	52:BT:119:LYS:HA	2.32	0.44
36:DA:2033:A:HO2'	36:DA:2034:U:P	2.41	0.44
1:AA:318:G:H2'	1:AA:319:G:C8	2.52	0.44
1:AA:921:U:O2	5:AE:19:MET:HB2	2.17	0.44
13:CM:82:MET:O	13:CM:83:ASP:O	2.35	0.44
36:BA:1534:U:O2'	36:BA:1535:A:H5'	2.17	0.44
26:D0:82:ARG:HA	26:D0:83:PRO:HD3	1.85	0.44
36:BA:990:A:C6	36:BA:1186:G:H1'	2.52	0.44
25:AZ:344:PHE:O	25:AZ:346:THR:N	2.50	0.44
22:AW:1:G:H2'	22:AW:1:G:N3	2.32	0.44
42:BG:38:VAL:HG22	42:BG:93:THR:HG23	1.99	0.44
36:BA:1695:G:H2'	36:BA:1696:G:O4'	2.17	0.44
45:DK:119:UNK:N	45:DK:123:UNK:CB	2.80	0.44
39:DD:28:GLU:H	39:DD:29:PRO:CD	2.25	0.44
25:CZ:135:MET:HB3	25:CZ:172:ARG:HG3	1.99	0.44
25:CZ:325:LYS:CG	25:CZ:326:GLU:N	2.79	0.44
28:B2:3:LEU:HD22	36:BA:98:G:H5'	1.98	0.44
4:CD:196:LEU:C	4:CD:198:VAL:H	2.20	0.44
41:BF:147:GLY:C	41:BF:191:ARG:HH12	2.20	0.44
52:DT:22:PHE:C	52:DT:22:PHE:CD1	2.91	0.44
52:DT:33:LYS:HD3	52:DT:33:LYS:HA	1.83	0.44
4:CD:11:LEU:O	4:CD:12:CYS:C	2.55	0.44
42:BG:172:LEU:C	42:BG:172:LEU:CD2	2.86	0.44
53:BU:92:ARG:HH11	53:BU:95:LEU:HG	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:13:VAL:HG11	57:DY:28:LYS:HD3	2.00	0.44
48:DP:39:LYS:O	48:DP:40:SER:CB	2.66	0.44
42:BG:73:ALA:N	42:BG:87:PRO:HG3	2.32	0.44
38:DC:10:LEU:HD12	38:DC:32:LEU:CA	2.40	0.44
25:AZ:221:PHE:O	25:AZ:222:LEU:HB2	2.17	0.44
25:CZ:9:LYS:HE2	25:CZ:75:ARG:N	2.32	0.44
32:B6:14:THR:C	32:B6:16:CYS:H	2.21	0.44
36:DA:1948:G:C2'	36:DA:1949:G:H5'	2.48	0.44
34:D8:22:VAL:HB	34:D8:53:PRO:CB	2.47	0.44
1:AA:858:G:C5	1:AA:869:G:C5	3.05	0.44
48:BP:121:LYS:O	48:BP:123:LEU:HD23	2.17	0.44
49:DQ:26:TYR:HB2	49:DQ:137:TYR:HD1	1.81	0.44
58:DZ:19:ARG:NH1	58:DZ:84:GLU:O	2.44	0.44
36:BA:1138:G:H2'	36:BA:1139:G:O4'	2.17	0.44
46:BN:24:GLY:C	46:BN:26:LEU:N	2.68	0.44
46:DN:115:ARG:O	46:DN:118:LYS:HB2	2.16	0.44
27:D1:62:VAL:CG2	27:D1:67:ILE:HA	2.47	0.44
27:D1:68:PRO:O	27:D1:70:VAL:N	2.51	0.44
41:DF:105:VAL:HG12	41:DF:105:VAL:O	2.17	0.44
49:DQ:141:GLN:HE21	49:DQ:141:GLN:HA	1.81	0.44
36:DA:635:C:O2'	36:DA:639:U:H5''	2.17	0.44
2:CB:219:VAL:HA	2:CB:222:ILE:HG12	1.99	0.44
36:DA:2631:G:N2	40:DE:61:ARG:NH1	2.65	0.44
40:DE:61:ARG:CB	40:DE:62:PRO:CD	2.92	0.44
41:DF:107:LYS:O	41:DF:108:LYS:C	2.56	0.44
13:AM:56:LEU:O	13:AM:59:TYR:N	2.51	0.44
36:BA:1037:G:H2'	36:BA:1038:C:C6	2.52	0.44
25:AZ:34:VAL:CG1	25:AZ:200:TRP:CZ2	3.01	0.44
20:CT:92:LEU:C	20:CT:94:ALA:N	2.70	0.44
56:BX:31:HIS:ND1	56:BX:32:PRO:HD2	2.33	0.44
32:D6:53:LYS:O	32:D6:54:ILE:C	2.55	0.44
49:DQ:18:LYS:CE	49:DQ:18:LYS:CA	2.96	0.44
12:CL:121:GLY:O	12:CL:122:THR:C	2.56	0.44
23:AX:14:A:C2'	23:AX:15:A:O5'	2.66	0.44
36:BA:2668:G:C2'	36:BA:2669:G:H5'	2.47	0.44
36:BA:2578:G:C5	40:BE:140:SER:HB2	2.53	0.44
36:BA:958:U:H5''	49:BQ:14:ARG:HD2	1.99	0.44
29:B3:19:GLN:HE22	29:B3:52:HIS:CE1	2.19	0.44
16:CP:39:TYR:CD1	16:CP:39:TYR:C	2.89	0.44
40:DE:137:HIS:HB3	40:DE:138:PRO:CD	2.44	0.44
38:BC:163:PHE:CD2	38:BC:171:ILE:HD11	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:22:ASP:HA	55:BW:25:ARG:NH1	2.24	0.44
46:BN:45:ASN:N	46:BN:45:ASN:HD22	2.01	0.44
36:DA:654(L):G:H2'	36:DA:654(M):C:H4'	1.99	0.44
1:CA:858:G:C6	1:CA:869:G:C8	3.05	0.44
40:DE:87:GLU:HG3	40:DE:88:GLY:N	2.33	0.44
19:CS:78:ARG:HB2	19:CS:81:ARG:NH1	2.33	0.44
57:BY:75:ILE:CG2	57:BY:76:CYS:N	2.78	0.44
41:DF:160:ASN:ND2	41:DF:162:LEU:H	2.15	0.44
36:DA:363(A):A:C2	36:DA:363(B):G:C8	3.05	0.44
50:DR:48:VAL:HG13	50:DR:49:ASP:N	2.32	0.44
11:CK:17:GLY:HA3	11:CK:77:MET:CE	2.46	0.44
2:AB:72:GLY:HA2	2:AB:165:VAL:HG22	1.99	0.44
58:BZ:122:ARG:CG	58:BZ:122:ARG:HH11	2.31	0.44
49:BQ:60:ARG:CZ	49:BQ:60:ARG:HB3	2.48	0.44
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.52	0.44
55:DW:51:LEU:C	55:DW:53:SER:H	2.21	0.44
48:BP:85:LEU:CD2	48:BP:85:LEU:N	2.81	0.44
2:CB:120:ALA:C	2:CB:122:PHE:N	2.70	0.44
36:BA:359:A:C2	36:BA:360:G:H1'	2.52	0.44
36:DA:1356:G:C2	36:DA:1357:U:C2	3.06	0.44
1:AA:274:A:H4'	1:AA:275:G:O5'	2.17	0.44
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.33	0.44
36:BA:1187:G:H5''	54:BV:81:TYR:CE2	2.51	0.44
36:BA:2659:G:C2'	36:BA:2660:A:H5''	2.46	0.44
36:DA:1120:G:H2'	36:DA:1121:C:H6	1.82	0.44
36:DA:1469:A:H2'	36:DA:1470:G:H8	1.82	0.44
47:BO:44:LYS:O	47:BO:45:GLU:HB2	2.18	0.44
1:AA:35:G:H2'	1:AA:36:C:C6	2.52	0.44
36:BA:691:C:O2'	36:BA:692:C:H5'	2.16	0.44
39:BD:33:LEU:C	39:BD:33:LEU:HD23	2.38	0.44
36:DA:1438:U:H2'	36:DA:1439:A:H8	1.82	0.44
1:CA:1423:G:H5'	47:DO:49:ARG:HH22	1.82	0.44
36:BA:2505:G:O2'	36:BA:2506:U:H6	2.01	0.44
1:CA:1055:A:C6	1:CA:1206:G:C5	3.05	0.44
36:BA:845:G:O2'	36:BA:846:C:H5	2.01	0.44
1:CA:69:G:H2'	1:CA:70:G:H8	1.82	0.44
36:DA:1759:A:H5'	36:DA:2715:C:H1'	1.98	0.44
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.17	0.44
19:AS:50:ALA:HA	19:AS:59:PRO:HA	1.99	0.44
55:DW:69:LEU:HA	55:DW:108:GLY:O	2.18	0.44
37:DB:14:U:H3'	37:DB:15:A:C5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1466:G:H2'	36:DA:1547:C:N4	2.32	0.44
39:DD:257:LEU:C	39:DD:257:LEU:HD23	2.38	0.44
36:BA:2441:C:OP1	36:BA:2441:C:H4'	2.17	0.44
54:BV:45:THR:HG22	54:BV:45:THR:O	2.17	0.44
36:DA:2148:G:O2'	36:DA:2149:G:H5'	2.18	0.44
24:CY:76:A:C2	25:CZ:287:GLY:O	2.70	0.44
25:CZ:136:ASN:ND2	60:CZ:501:GDP:C6	2.84	0.44
25:CZ:86:ALA:O	25:CZ:87:ASP:HB2	2.18	0.44
28:B2:37:PHE:HB3	28:B2:38:GLN:H	1.54	0.44
4:AD:105:VAL:O	4:AD:110:PHE:HB2	2.17	0.44
41:BF:177:ALA:HB1	41:BF:178:PRO:HD2	1.99	0.44
2:AB:8:LYS:CD	2:AB:217:ARG:NH2	2.79	0.44
34:B8:61:LEU:C	34:B8:63:PRO:HD2	2.37	0.44
4:CD:17:VAL:O	4:CD:18:LYS:O	2.36	0.44
53:BU:92:ARG:NH1	54:BV:11:GLN:O	2.51	0.44
38:DC:10:LEU:HA	38:DC:13:LYS:HE3	1.99	0.44
39:BD:43:ARG:HD3	39:BD:44:ASN:CG	2.38	0.44
1:AA:1189:C:H5''	3:AC:5:ILE:HG13	1.99	0.44
48:BP:46:LYS:HG2	48:BP:52:GLU:HG2	1.98	0.44
36:BA:1464:C:O2'	36:BA:1528:A:C8	2.62	0.44
42:DG:139:LEU:HA	42:DG:144:ILE:CG1	2.39	0.44
1:CA:1430:C:O4'	1:CA:1430:C:O2	2.35	0.44
36:DA:2110:G:H5''	36:DA:2145:C:H42	1.82	0.44
2:CB:54:THR:HG22	2:CB:55:PHE:N	2.33	0.44
1:CA:961:U:O2'	1:CA:962:C:P	2.75	0.44
25:AZ:137:LYS:HA	60:AZ:501:GDP:HN1	1.82	0.44
32:D6:11:LEU:HB2	32:D6:24:GLU:C	2.37	0.44
34:D8:33:ASN:N	34:D8:36:LYS:HD2	2.32	0.44
57:DY:46:LYS:HB3	57:DY:62:GLU:HG2	1.99	0.44
9:CI:77:ILE:C	9:CI:79:LEU:N	2.71	0.44
57:BY:81:LYS:HD2	57:BY:96:ILE:CD1	2.48	0.44
1:CA:359:U:H2'	1:CA:360:A:H8	1.82	0.44
9:AI:19:LEU:HD21	9:AI:59:PHE:CG	2.50	0.44
48:DP:147:LEU:CG	48:DP:148:LEU:N	2.78	0.44
36:BA:2672:G:C3'	36:BA:2673:G:H5''	2.47	0.44
51:BS:101:LEU:HD12	51:BS:103:GLU:O	2.16	0.44
36:DA:1800:C:H5''	39:DD:147:LEU:CD2	2.48	0.44
6:AF:36:ARG:NH1	6:AF:66:GLU:OE2	2.50	0.44
55:BW:65:LEU:HD23	55:BW:68:ARG:NH1	2.33	0.44
49:BQ:55:VAL:CG2	49:BQ:56:ARG:N	2.80	0.44
36:BA:328:U:H4'	57:BY:68:HIS:CD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:21:ARG:C	54:BV:22:VAL:HG22	2.37	0.44
39:BD:165:ILE:HA	39:BD:175:LEU:HD23	1.99	0.44
11:CK:33:THR:HG22	11:CK:39:PRO:CA	2.41	0.44
36:DA:813:U:O2'	36:DA:814:C:H5'	2.17	0.44
19:AS:42:PRO:O	19:AS:44:MET:SD	2.76	0.44
25:CZ:199:ILE:O	25:CZ:199:ILE:HG23	2.18	0.44
25:AZ:355:LEU:CD1	25:AZ:360:GLU:HA	2.48	0.44
1:CA:693:G:H21	22:CW:37:A:H2	1.65	0.44
2:CB:30:ARG:CZ	2:CB:30:ARG:HB3	2.47	0.44
53:BU:6:THR:HG21	53:BU:10:ARG:NH2	2.33	0.44
46:BN:2:LYS:HE3	54:BV:13:ARG:HB3	2.00	0.44
1:CA:538:G:H2'	1:CA:539:A:C8	2.52	0.44
16:CP:9:PHE:CE2	16:CP:18:ARG:CZ	3.01	0.44
24:CY:63:C:O2'	25:CZ:391:GLY:C	2.56	0.44
2:CB:124:SER:C	2:CB:126:GLU:H	2.21	0.44
41:DF:121:GLY:C	41:DF:123:LEU:H	2.21	0.44
18:AR:51:LEU:HD13	18:AR:55:ARG:HB3	1.98	0.44
36:DA:1047:G:H2'	36:DA:1110:G:N2	2.25	0.44
28:D2:7:ARG:HA	28:D2:10:LEU:HB2	2.00	0.44
1:CA:658:G:O2'	1:CA:659:U:H5'	2.17	0.44
40:DE:68:ALA:HB3	40:DE:69:LYS:HZ3	1.82	0.44
31:D5:29:THR:CG2	36:DA:2814:C:O2'	2.64	0.44
1:AA:1216:G:H5''	14:AN:5:ALA:HB2	2.00	0.44
2:AB:15:VAL:H	2:AB:16:HIS:CE1	2.34	0.44
17:CQ:7:THR:HG22	17:CQ:8:GLY:N	2.33	0.44
25:CZ:94:THR:HG21	25:CZ:300:ARG:CZ	2.47	0.44
1:CA:189(C):C:C2'	1:CA:189(D):C:H5'	2.48	0.44
39:DD:52:ARG:HB3	39:DD:53:PHE:CE2	2.53	0.44
12:AL:119:LYS:O	12:AL:120:TYR:CD2	2.71	0.44
12:AL:122:THR:O	12:AL:122:THR:CG2	2.63	0.44
1:AA:671:G:N2	1:AA:736:C:C2	2.85	0.44
1:AA:1029:C:O2'	1:AA:1030:C:C5	2.67	0.44
36:DA:2361:A:C4	36:DA:2362:G:C8	3.05	0.44
37:BB:29:A:OP2	51:BS:32:LEU:HD12	2.18	0.44
36:BA:1688:U:H5'	36:BA:1689:A:OP1	2.17	0.44
42:DG:17:PRO:O	42:DG:21:ARG:HB2	2.17	0.44
1:CA:157:G:H2'	1:CA:158:G:H8	1.81	0.44
13:CM:33:ALA:HB1	13:CM:59:TYR:HD2	1.82	0.44
37:BB:87:G:C2	37:BB:89:G:H5''	2.52	0.44
1:CA:476:G:H2'	1:CA:477:A:H8	1.83	0.44
36:BA:145:G:H2'	36:BA:146:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1010:G:H2'	1:CA:1011:G:H8	1.82	0.44
38:DC:75:LEU:HB3	38:DC:112:ALA:O	2.17	0.44
1:CA:123:C:OP1	1:CA:312:C:H5'	2.17	0.44
44:DJ:96:UNK:HA	44:DJ:99:UNK:CB	2.47	0.44
52:BT:67:SER:O	52:BT:68:TYR:C	2.56	0.44
1:CA:605:U:O2'	1:CA:606:G:H5'	2.17	0.44
36:DA:327:G:H2'	36:DA:328:U:H6	1.83	0.44
36:DA:2278:A:H2'	36:DA:2279:G:O5'	2.17	0.44
36:BA:673:C:P	41:BF:81:PRO:HG3	2.57	0.44
5:CE:86:ALA:O	5:CE:125:SER:N	2.50	0.44
36:BA:42:G:H2'	36:BA:43:A:C8	2.53	0.44
1:CA:285:G:O2'	1:CA:286:G:H5'	2.17	0.44
40:DE:4:ILE:CG2	40:DE:96:PHE:HE2	2.31	0.44
1:AA:879:C:O2'	1:AA:880:C:H5'	2.18	0.44
1:AA:414:A:C5	1:AA:431:A:C2	3.05	0.44
56:DX:63:LYS:HE3	56:DX:63:LYS:HB2	1.77	0.44
1:AA:170:U:H2'	1:AA:171:A:H8	1.82	0.44
25:CZ:270:VAL:HG12	25:CZ:277:LEU:HB3	1.99	0.44
13:CM:13:LYS:O	13:CM:45:VAL:HG23	2.17	0.44
10:AJ:35:SER:N	10:AJ:73:ASP:O	2.45	0.44
31:D5:4:HIS:C	36:DA:2056:G:H22	2.20	0.44
4:AD:141:ARG:O	4:AD:185:PHE:HD2	2.00	0.44
4:AD:98:GLU:HB3	4:AD:189:PRO:HG3	2.00	0.44
4:CD:98:GLU:C	4:CD:100:ARG:N	2.70	0.44
36:DA:1191:G:H2'	36:DA:1192:G:O4'	2.17	0.44
37:BB:42:C:O2'	37:BB:43:C:P	2.76	0.44
54:BV:53:GLU:C	54:BV:55:ALA:N	2.71	0.44
42:BG:82:LEU:CD1	42:BG:87:PRO:HA	2.47	0.44
10:CJ:54:PHE:HA	10:CJ:55:LYS:NZ	2.33	0.44
14:CN:4:LYS:O	14:CN:5:ALA:C	2.55	0.44
49:DQ:59:ARG:O	49:DQ:60:ARG:HB2	2.16	0.44
34:B8:13:ARG:HD2	48:BP:61:ARG:HD3	1.99	0.44
52:BT:114:LEU:HD23	52:BT:114:LEU:HA	1.81	0.44
32:B6:40:CYS:SG	32:B6:45:LYS:HB3	2.58	0.44
32:B6:37:ARG:O	32:B6:48:VAL:O	2.35	0.44
56:DX:25:LYS:HA	56:DX:81:VAL:O	2.18	0.44
34:B8:50:LEU:CA	34:B8:53:PRO:CD	2.96	0.44
31:D5:36:CYS:C	31:D5:38:ALA:H	2.21	0.44
58:BZ:27:VAL:HG22	58:BZ:28:MET:N	2.29	0.44
5:CE:145:LYS:HA	8:CH:107:LEU:HD22	1.98	0.44
10:AJ:32:ALA:HB2	10:AJ:76:ASN:CB	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:26:ASN:HA	36:DA:2286:A:C2	2.41	0.44
36:BA:654(E):G:C2'	36:BA:654(F):C:H5'	2.48	0.44
21:AU:9:ARG:NH1	21:AU:23:PRO:HD2	2.16	0.44
46:BN:23:LEU:C	46:BN:23:LEU:HD23	2.37	0.44
32:D6:48:VAL:O	32:D6:49:HIS:O	2.35	0.44
40:BE:8:LYS:HB2	40:BE:196:VAL:HG11	1.98	0.44
57:BY:81:LYS:HZ2	57:BY:99:CYS:CB	2.29	0.44
57:BY:81:LYS:HD2	57:BY:96:ILE:HB	2.00	0.44
31:D5:24:ALA:O	31:D5:25:LEU:CB	2.56	0.44
52:BT:105:LEU:O	52:BT:106:SER:C	2.56	0.44
41:DF:82:ILE:O	41:DF:83:PHE:O	2.35	0.44
58:BZ:15:PRO:HA	58:BZ:18:LEU:CD2	2.48	0.44
1:AA:1286:A:O2'	1:AA:1287:A:C5'	2.66	0.44
54:BV:18:LEU:CG	54:BV:19:LYS:N	2.80	0.44
48:DP:122:PRO:HB3	48:DP:141:ALA:CB	2.41	0.44
40:DE:101:ARG:HB2	40:DE:201:THR:CG2	2.47	0.44
36:DA:1322:A:H2'	36:DA:1323:U:H6	1.81	0.44
1:AA:276:G:O2'	17:AQ:68:ARG:NH1	2.51	0.44
28:D2:32:LEU:HA	28:D2:53:LEU:HD13	1.98	0.44
25:CZ:27:LEU:HG	25:CZ:31:LEU:CD1	2.39	0.44
20:CT:49:ALA:HA	20:CT:92:LEU:HD21	1.99	0.44
20:CT:94:ALA:O	20:CT:95:ALA:CB	2.66	0.44
40:BE:59:VAL:HG13	40:BE:60:ASN:N	2.27	0.44
19:CS:45:VAL:HG11	19:CS:64:GLU:CA	2.47	0.44
36:BA:596:G:H2'	36:BA:597:U:O4'	2.17	0.44
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	2.01	0.44
39:BD:112:GLN:O	39:BD:115:GLN:HB2	2.18	0.44
8:CH:85:ARG:HA	8:CH:135:CYS:HB3	1.99	0.44
36:BA:185:U:H4'	36:BA:218:A:H4'	1.99	0.44
36:BA:304:G:O2'	36:BA:305:U:H5'	2.17	0.44
40:DE:84:PHE:CD1	40:DE:85:ASN:N	2.86	0.44
40:DE:90:THR:CG2	40:DE:91:VAL:N	2.79	0.44
1:AA:687:A:H4'	11:AK:47:VAL:CG1	2.46	0.44
18:CR:59:SER:O	18:CR:60:ALA:C	2.56	0.44
41:DF:53:THR:HG22	41:DF:56:GLU:HG3	1.99	0.44
1:AA:1153:C:O2'	1:AA:1154:G:C5'	2.65	0.44
2:CB:109:SER:C	2:CB:111:ARG:H	2.20	0.44
2:CB:109:SER:O	2:CB:112:VAL:N	2.50	0.44
36:DA:1188:U:C2'	36:DA:1189:A:H5'	2.48	0.44
3:AC:13:GLY:HA3	14:AN:57:ARG:NE	2.33	0.44
36:BA:2074:U:C2	36:BA:2436:G:N2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1344:G:H5'	36:BA:1384:A:C6	2.52	0.44
36:DA:916:G:H2'	36:DA:917:A:H5''	1.99	0.44
29:B3:46:ASN:O	29:B3:46:ASN:ND2	2.51	0.44
50:BR:72:ASP:HB3	50:BR:75:LEU:CB	2.46	0.44
36:DA:531:C:C5	36:DA:2035:G:C4	3.06	0.44
13:CM:113:PRO:O	13:CM:114:ARG:HB3	2.18	0.44
13:CM:108:ARG:NH2	13:CM:114:ARG:HA	2.31	0.44
36:BA:286:C:H2'	36:BA:287:C:H6	1.80	0.44
1:CA:826:C:H2'	1:CA:827:U:H6	1.81	0.44
36:BA:363(A):A:H2	36:BA:363(B):G:C8	2.35	0.44
1:AA:41:G:H2'	1:AA:42:G:C8	2.53	0.44
1:CA:241:C:O2'	1:CA:242:C:H5'	2.17	0.44
39:DD:79:VAL:O	39:DD:113:VAL:HG13	2.18	0.44
40:DE:147:PRO:HB2	40:DE:149:ARG:HG2	1.99	0.44
3:AC:108:ASN:ND2	3:AC:144:SER:OG	2.51	0.44
36:DA:2367:G:H2'	36:DA:2368:C:H6	1.82	0.44
36:BA:2547:U:H2'	36:BA:2548:G:H8	1.83	0.44
1:AA:603:U:H2'	1:AA:604:G:H8	1.82	0.44
1:AA:602:A:H2'	1:AA:603:U:H6	1.82	0.44
15:CO:70:LEU:C	15:CO:72:ARG:H	2.21	0.44
36:BA:2735:G:H2'	36:BA:2736:G:H8	1.82	0.44
27:D1:75:GLU:O	27:D1:78:LYS:HG2	2.18	0.44
33:D7:19:ARG:HG2	33:D7:19:ARG:HH11	1.81	0.44
37:DB:13:A:O2'	37:DB:15:A:H5'	2.17	0.44
3:CC:141:VAL:O	3:CC:141:VAL:HG12	2.18	0.44
17:CQ:48:GLU:O	17:CQ:49:GLU:C	2.56	0.44
3:AC:132:ARG:O	3:AC:136:GLN:HG3	2.18	0.44
41:DF:150:GLY:HA2	41:DF:172:TRP:CD2	2.53	0.44
2:CB:36:ARG:HG3	2:CB:37:ASN:N	2.32	0.44
49:DQ:52:VAL:O	49:DQ:53:ALA:C	2.55	0.44
1:AA:316:G:H2'	1:AA:317:G:H8	1.82	0.44
22:CW:16:U:H5'	22:CW:17:C:OP2	2.18	0.44
7:CG:88:PRO:HG3	7:CG:148:ASN:O	2.17	0.44
1:AA:889:A:H4'	1:AA:890:G:OP1	2.18	0.44
20:AT:90:GLN:HA	20:AT:93:GLU:CD	2.38	0.44
20:AT:93:GLU:OE1	20:AT:93:GLU:N	2.51	0.44
1:AA:411:A:N6	1:AA:413:G:H21	2.16	0.44
25:CZ:161:TYR:HA	61:CZ:502:KIR:O15	2.18	0.44
54:DV:37:VAL:O	54:DV:38:LEU:HB2	2.17	0.44
13:CM:2:ALA:HB3	13:CM:9:ILE:HG23	2.00	0.44
28:B2:6:VAL:HG13	28:B2:7:ARG:H	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:331:A:C1'	36:BA:332:A:OP1	2.66	0.44
43:BH:84:SER:O	43:BH:85:LYS:HE3	2.17	0.44
52:DT:78:LEU:HB3	52:DT:79:HIS:CE1	2.53	0.44
2:AB:8:LYS:CE	2:AB:217:ARG:HH12	2.31	0.44
42:DG:52:ILE:O	42:DG:54:GLU:HG3	2.18	0.44
57:DY:81:LYS:HB3	57:DY:96:ILE:HD12	2.00	0.44
48:DP:47:ASP:CB	48:DP:51:PHE:HB2	2.30	0.44
43:BH:123:PHE:CD1	43:BH:123:PHE:N	2.86	0.44
52:BT:31:SER:CB	52:BT:32:TYR:CD1	3.01	0.44
58:DZ:168:GLU:CA	58:DZ:168:GLU:OE1	2.66	0.44
19:AS:63:THR:HG22	19:AS:66:MET:SD	2.58	0.44
1:CA:1187:G:C8	1:CA:1187:G:H5'	2.52	0.44
1:CA:61:G:H2'	1:CA:62:U:O4'	2.18	0.44
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.18	0.44
56:DX:27:THR:HG22	56:DX:80:ILE:HG13	1.99	0.44
38:DC:64:LEU:HB3	38:DC:188:ASN:CG	2.38	0.44
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB2	2.48	0.44
48:BP:101:VAL:CG2	48:BP:102:ARG:N	2.80	0.44
43:DH:51:ARG:CG	43:DH:52:VAL:H	2.30	0.44
25:AZ:28:THR:C	25:AZ:30:ALA:H	2.20	0.44
38:BC:10:LEU:HD12	38:BC:32:LEU:HA	1.96	0.44
34:D8:43:GLN:C	34:D8:44:LYS:HD2	2.38	0.44
46:BN:29:LYS:O	46:BN:33:LEU:HD13	2.17	0.44
53:DU:9:VAL:CA	53:DU:13:LYS:HE2	2.48	0.44
58:DZ:53:ILE:HG22	58:DZ:71:VAL:HB	1.99	0.44
58:DZ:90:VAL:HG12	58:DZ:90:VAL:O	2.18	0.44
37:DB:27:C:H5'	37:DB:28:C:OP2	2.18	0.44
3:CC:112:SER:O	3:CC:113:ALA:C	2.56	0.44
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.17	0.44
38:BC:99:ILE:C	38:BC:101:GLN:N	2.69	0.44
14:AN:42:ILE:HA	14:AN:42:ILE:HD13	1.83	0.44
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.37	0.44
19:CS:11:VAL:HG21	19:CS:16:LEU:HD11	2.00	0.44
1:AA:193:C:O2'	1:AA:194:C:H5'	2.18	0.44
49:DQ:67:ARG:HB2	49:DQ:102:VAL:O	2.18	0.44
36:DA:2406:U:H4'	36:DA:2407:G:H5''	1.99	0.44
36:BA:415:A:N1	36:BA:2409:G:C6	2.86	0.44
2:CB:200:ILE:CD1	2:CB:200:ILE:H	2.15	0.44
20:CT:75:ASN:O	20:CT:79:ARG:CB	2.66	0.44
36:DA:751:A:C6	36:DA:789:A:C5	3.05	0.44
25:AZ:355:LEU:HD13	25:AZ:359:VAL:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:6:LEU:HD23	52:BT:6:LEU:O	2.17	0.44
7:AG:50:ILE:HD12	7:AG:125:MET:HG3	1.99	0.44
40:DE:65:GLY:O	40:DE:66:HIS:C	2.56	0.44
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.31	0.44
36:BA:2847:U:C5'	52:BT:97:ALA:HB3	2.48	0.44
3:CC:139:GLN:HG3	3:CC:143:GLU:OE2	2.18	0.44
1:AA:1118:C:H2'	1:AA:1119:C:H6	1.80	0.44
58:BZ:119:GLU:C	58:BZ:121:HIS:H	2.20	0.44
11:CK:65:ALA:HB1	11:CK:98:LEU:CD2	2.47	0.44
52:BT:62:THR:HA	52:BT:74:ARG:O	2.18	0.44
42:BG:32:PRO:HA	42:BG:162:THR:HG1	1.82	0.44
36:DA:2530:A:H2'	36:DA:2531:A:H5''	2.00	0.44
36:BA:224:G:N2	36:BA:225:A:H1'	2.32	0.44
3:CC:179:ARG:HD2	3:CC:207:VAL:H	1.83	0.44
56:DX:7:VAL:C	56:DX:8:ILE:HD12	2.38	0.44
49:DQ:109:VAL:HG12	49:DQ:110:THR:N	2.33	0.44
2:CB:238:LEU:O	2:CB:239:VAL:C	2.55	0.44
25:AZ:339:ARG:HH21	25:AZ:350:THR:HG21	1.81	0.44
36:DA:602:G:N1	36:DA:654(U):A:N7	2.65	0.44
36:BA:1526:G:C6	36:BA:1527:G:C2	3.05	0.44
36:DA:2703:C:O2'	36:DA:2704:C:H5'	2.16	0.44
36:BA:1231:G:H2'	36:BA:1232:G:H8	1.81	0.44
5:AE:45:PHE:CZ	5:AE:129:ILE:HD11	2.53	0.44
16:AP:26:ARG:NH1	16:AP:26:ARG:HG2	2.33	0.44
9:CI:8:GLY:O	9:CI:76:ALA:HB1	2.17	0.44
1:CA:499:A:H4'	1:CA:500:G:OP1	2.18	0.44
1:AA:650:G:C2'	1:AA:651:C:H5'	2.48	0.44
1:AA:620:C:H2'	1:AA:621:A:O4'	2.18	0.44
36:BA:1275:A:N6	36:BA:1296:G:H4'	2.32	0.44
36:DA:2253:G:H2'	36:DA:2254:C:O4'	2.17	0.44
8:CH:16:ALA:HB1	8:CH:21:LYS:HB2	1.99	0.44
58:DZ:182:LYS:O	58:DZ:183:LEU:HD23	2.18	0.44
3:AC:151:VAL:HA	3:AC:199:LYS:O	2.17	0.44
44:BJ:74:UNK:O	44:BJ:75:UNK:C	2.66	0.44
1:CA:936:C:H2'	1:CA:937:A:C8	2.52	0.44
4:AD:104:VAL:HG21	4:AD:140:VAL:HG21	2.00	0.44
18:CR:55:ARG:HH11	18:CR:55:ARG:HG3	1.81	0.44
1:AA:166:G:O2'	1:AA:167:G:H5'	2.18	0.44
36:BA:1436:G:H3'	36:BA:1437:C:H5''	1.98	0.44
25:AZ:193:ASN:C	25:AZ:195:TRP:H	2.20	0.44
36:BA:2191:G:H3'	36:BA:2192:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:30:GLU:CB	39:DD:35:LYS:HE3	2.47	0.44
24:CY:2:G:C4'	25:CZ:88:TYR:CD1	3.01	0.44
28:B2:70:GLN:O	28:B2:71:ASN:HB2	2.16	0.44
36:BA:333:G:N2	36:BA:334:C:H1'	2.33	0.44
56:BX:5:TYR:HA	56:BX:8:ILE:HD13	1.99	0.44
48:DP:24:GLY:N	48:DP:33:ARG:CZ	2.81	0.44
57:DY:37:VAL:HG22	57:DY:69:ALA:HB2	2.00	0.44
36:DA:623:G:H2'	36:DA:624:C:C6	2.52	0.44
36:BA:143:G:C1'	56:BX:37:THR:HG21	2.48	0.44
52:BT:32:TYR:HD1	52:BT:32:TYR:N	2.10	0.44
31:B5:42:PRO:HB2	36:BA:2815:C:O2'	2.18	0.44
25:AZ:158:LEU:HB2	25:AZ:165:GLY:HA3	1.98	0.44
54:BV:62:LEU:N	54:BV:62:LEU:HD22	2.32	0.44
3:AC:178:LEU:C	3:AC:180:ALA:H	2.21	0.44
32:B6:30:THR:HG22	32:B6:31:PRO:CD	2.46	0.44
36:BA:2287:A:N1	36:BA:2346:A:C2	2.86	0.44
36:BA:197:A:N6	36:BA:2430:A:H2'	2.33	0.44
48:BP:46:LYS:HB3	48:BP:52:GLU:HG2	2.00	0.44
36:DA:1946:U:H2'	36:DA:1947:C:H6	1.82	0.44
34:B8:48:PHE:N	34:B8:48:PHE:CD1	2.85	0.44
37:BB:8:U:O2'	51:BS:40:ILE:HD13	2.18	0.44
34:D8:33:ASN:HD21	36:DA:2419:U:H5''	1.79	0.44
46:BN:56:ASN:HA	46:BN:125:GLY:C	2.38	0.44
48:DP:100:LEU:O	48:DP:103:ALA:HB3	2.18	0.44
57:BY:83:THR:HA	57:BY:96:ILE:HG22	1.99	0.44
36:BA:614:U:C2'	36:BA:614(A):U:H5'	2.48	0.44
9:AI:85:LEU:C	9:AI:85:LEU:HD12	2.38	0.44
13:AM:15:VAL:HG13	13:AM:43:THR:O	2.17	0.44
58:BZ:110:GLY:CA	58:BZ:113:ALA:HB3	2.39	0.44
40:DE:60:ASN:O	40:DE:61:ARG:C	2.56	0.44
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.48	0.44
25:AZ:34:VAL:CG1	25:AZ:200:TRP:CE2	3.01	0.44
46:DN:34:LEU:C	46:DN:34:LEU:CD1	2.86	0.44
36:BA:2179:C:H4'	36:BA:2180:U:C4	2.51	0.44
58:BZ:102:LEU:HD23	58:BZ:137:ILE:O	2.18	0.44
26:D0:60:PHE:CD1	26:D0:60:PHE:N	2.85	0.44
31:D5:41:PRO:HD3	55:DW:38:TYR:CZ	2.52	0.44
1:AA:674:G:OP1	6:AF:87:ARG:NH2	2.50	0.44
3:AC:83:ARG:C	3:AC:85:ARG:N	2.68	0.44
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.83	0.44
22:CW:65:G:O2'	32:D6:28:ARG:NH2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:53:ARG:HD2	12:CL:53:ARG:N	2.31	0.44
36:DA:2851:A:H2'	36:DA:2852:G:C8	2.53	0.44
36:DA:2443:C:H2'	36:DA:2444:G:H8	1.82	0.44
1:AA:1256:A:H2	1:AA:1277:C:H2'	1.83	0.44
1:AA:1514:C:O2'	1:AA:1515:C:H5'	2.18	0.44
10:CJ:65:LEU:HD13	14:CN:55:GLY:C	2.37	0.44
12:AL:25:PRO:HG2	12:AL:25:PRO:O	2.18	0.44
36:DA:2606:C:O2'	36:DA:2607:G:H5'	2.17	0.44
36:BA:271(H):G:H1	36:BA:271(P):C:H42	1.65	0.44
36:DA:1471:A:H2'	36:DA:1472:A:H8	1.82	0.44
36:BA:1055:G:N2	36:BA:1105:U:C2	2.86	0.44
36:DA:531:C:N3	36:DA:563:G:C8	2.86	0.44
36:BA:2553:G:H2'	36:BA:2554:U:H4'	1.99	0.44
11:CK:127:LYS:HD3	11:CK:127:LYS:HA	1.85	0.44
1:AA:1303:C:C2'	1:AA:1304:G:H5'	2.46	0.44
1:AA:1397:C:H4'	23:AX:26:A:C2	2.53	0.44
36:BA:1614:A:N6	55:BW:93:ALA:N	2.66	0.44
40:BE:14:ILE:HG13	40:BE:21:VAL:CG2	2.48	0.44
1:AA:632:A:H2'	1:AA:633:G:O4'	2.18	0.44
1:AA:902:G:H2'	1:AA:903:G:C8	2.52	0.44
1:AA:826:C:C2	1:AA:827:U:C5	3.06	0.44
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.32	0.44
2:CB:229:VAL:HG12	2:CB:230:VAL:N	2.33	0.44
45:DK:95:UNK:C	45:DK:97:UNK:H	2.30	0.44
2:AB:51:LEU:HD22	2:AB:55:PHE:CE2	2.52	0.44
42:BG:134:GLY:C	42:BG:135:LEU:HD12	2.39	0.44
49:BQ:75:THR:HA	49:BQ:89:ASN:O	2.18	0.44
36:DA:734:A:O2'	36:DA:1635:G:H5'	2.17	0.44
44:BJ:125:UNK:O	44:BJ:126:UNK:C	2.65	0.44
10:CJ:23:ILE:CG2	10:CJ:23:ILE:O	2.66	0.44
31:D5:52:TYR:N	31:D5:52:TYR:CD1	2.86	0.44
25:CZ:198:LYS:HZ2	25:CZ:201:GLU:HB2	1.83	0.44
25:AZ:185:ASN:OD1	25:AZ:185:ASN:O	2.34	0.44
36:BA:2192:G:H2'	36:BA:2193:G:H5'	1.99	0.44
28:B2:35:LEU:HB2	28:B2:50:ILE:HG13	2.00	0.44
4:CD:74:GLN:O	4:CD:77:ASN:HB3	2.17	0.44
36:DA:2308:G:O2'	36:DA:2309:A:C8	2.69	0.44
36:BA:2305:A:O2'	42:BG:136:ARG:HG3	2.18	0.44
52:BT:86:ILE:O	52:BT:86:ILE:HG23	2.18	0.44
52:BT:26:ASP:HB3	52:BT:89:VAL:O	2.18	0.44
31:B5:40:LYS:NZ	31:B5:44:THR:O	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2312:U:OP1	42:DG:73:ALA:HA	2.18	0.44
42:DG:87:PRO:O	42:DG:88:ILE:CD1	2.66	0.44
20:AT:50:GLU:C	20:AT:52:ALA:H	2.20	0.44
36:BA:195:A:C8	36:BA:197:A:OP1	2.71	0.44
25:CZ:303:VAL:HG21	25:CZ:345:ARG:NH1	2.33	0.44
36:DA:1528(A):A:H2'	36:DA:1529:G:O4'	2.17	0.44
32:B6:36:LEU:HD12	32:B6:50:ARG:NH1	2.32	0.44
30:D4:12:ALA:HB1	30:D4:29:PRO:O	2.17	0.44
56:DX:36:LYS:HE3	56:DX:56:THR:HG23	1.98	0.44
36:DA:1341:U:H4'	56:DX:56:THR:O	2.17	0.44
36:BA:1747:G:H2'	36:BA:1747(A):G:H8	1.83	0.44
36:BA:2334:G:N3	51:BS:18:ILE:CD1	2.81	0.44
51:BS:89:ARG:HB3	51:BS:92:TYR:HB3	2.00	0.44
39:BD:72:LYS:HZ3	39:BD:99:ASP:CG	2.21	0.44
56:DX:65:ARG:CG	56:DX:66:LEU:N	2.81	0.44
36:DA:1510:G:O2'	36:DA:1511:C:H5'	2.17	0.44
58:DZ:27:VAL:CG1	58:DZ:28:MET:N	2.81	0.44
48:BP:114:ILE:HG21	48:BP:130:PHE:CE2	2.52	0.44
32:D6:7:ILE:CG2	32:D6:27:LYS:NZ	2.81	0.44
36:DA:480:A:H2	36:DA:499:U:O2	2.00	0.44
32:D6:20:ASN:CG	32:D6:21:TYR:N	2.71	0.44
27:D1:41:ARG:HH22	36:DA:1365:A:C5'	2.18	0.44
40:DE:116:VAL:O	40:DE:117:MET:CB	2.59	0.44
1:CA:1190:G:H3'	3:CC:3:ASN:HD21	1.78	0.44
52:BT:106:SER:O	52:BT:107:ASP:OD1	2.36	0.44
36:DA:885:C:H2'	36:DA:886:C:H5''	2.00	0.44
48:DP:9:ASN:H	48:DP:10:PRO:HD3	1.82	0.44
9:CI:85:LEU:HD12	9:CI:85:LEU:C	2.38	0.44
36:BA:1038:C:H3'	36:BA:1039:G:C5'	2.47	0.44
36:DA:2770:G:C5'	36:DA:2771:C:OP2	2.65	0.44
26:D0:34:GLY:O	26:D0:35:ASN:C	2.57	0.44
31:D5:41:PRO:HD3	55:DW:38:TYR:CE1	2.53	0.44
38:DC:30:LYS:HD3	38:DC:185:LEU:HD11	2.00	0.44
26:B0:27:GLU:OE2	36:BA:856:C:H4'	2.17	0.44
35:B9:35:ARG:O	35:B9:36:GLN:C	2.57	0.44
17:CQ:45:HIS:HB2	17:CQ:65:ILE:HD13	2.00	0.44
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.51	0.44
2:CB:12:GLU:C	2:CB:14:GLY:H	2.21	0.44
1:CA:375:U:H3	1:CA:389:A:H61	1.65	0.44
16:CP:15:PRO:HB2	16:CP:41:PRO:CG	2.48	0.44
28:D2:48:HIS:CD2	28:D2:49:LYS:N	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:94:LEU:O	3:AC:95:THR:CB	2.57	0.44
1:CA:860:A:H2'	1:CA:861:G:O4'	2.18	0.44
28:D2:7:ARG:HA	28:D2:10:LEU:HB3	2.00	0.44
10:AJ:9:ARG:HG2	10:AJ:69:ASN:OD1	2.18	0.44
16:AP:51:VAL:HG12	16:AP:52:ASP:N	2.32	0.44
34:B8:42:ARG:HH22	36:BA:2382:G:H21	1.64	0.44
15:AO:74:ASP:O	15:AO:76:GLU:N	2.51	0.44
36:DA:2869:G:H2'	36:DA:2870:C:C6	2.53	0.44
1:CA:1256:A:C2	1:CA:1277:C:H2'	2.49	0.44
56:BX:89:ILE:HG22	56:BX:92:LEU:HG	2.00	0.44
39:DD:52:ARG:NH1	39:DD:249:PRO:HG3	2.32	0.44
25:AZ:257:GLY:HA3	25:AZ:302:GLN:HB3	2.00	0.44
52:BT:45:PHE:CE2	52:BT:74:ARG:HG3	2.53	0.44
3:CC:192:THR:O	3:CC:192:THR:CG2	2.65	0.44
2:CB:193:ASP:C	2:CB:193:ASP:OD1	2.57	0.44
36:DA:763:G:O2'	36:DA:764:A:H3'	2.18	0.44
36:BA:2208:A:H1'	36:BA:2219:G:C5	2.53	0.44
56:DX:41:ASN:C	56:DX:43:VAL:H	2.21	0.44
7:AG:144:MET:C	7:AG:145:ALA:O	2.49	0.44
54:BV:66:ARG:NH2	54:BV:88:ARG:HD2	2.33	0.44
39:BD:10:THR:HG23	39:BD:13:ARG:CB	2.48	0.44
1:CA:160:A:O2'	1:CA:161:A:H5'	2.18	0.44
36:DA:2320:A:C2	36:DA:2333:A:C8	3.06	0.44
27:D1:60:PHE:CD1	27:D1:91:LYS:HE3	2.53	0.44
4:CD:36:ARG:O	4:CD:38:TYR:N	2.50	0.44
22:AV:53:G:H1	22:AV:61:C:H42	1.66	0.44
13:CM:59:TYR:O	13:CM:63:THR:OG1	2.36	0.44
56:DX:6:ASP:O	56:DX:9:LEU:HD23	2.18	0.44
36:BA:1101:U:H2'	36:BA:1102:C:C6	2.53	0.44
33:B7:10:ARG:HH12	33:B7:14:LYS:NZ	2.16	0.44
30:D4:20:ASN:C	30:D4:20:ASN:ND2	2.71	0.44
12:CL:18:VAL:HG23	12:CL:19:ARG:N	2.32	0.44
5:CE:19:MET:SD	5:CE:24:ARG:HB3	2.58	0.44
1:CA:532:A:N6	1:CA:1206:G:O2'	2.51	0.44
1:AA:1012:U:O2'	1:AA:1013:G:H5'	2.17	0.44
1:AA:689:C:P	11:AK:46:GLY:HA3	2.58	0.44
36:DA:1996:C:H5	47:DO:32:TYR:OH	2.00	0.44
7:AG:14:PRO:HG3	7:AG:21:VAL:HG12	1.99	0.44
36:BA:1206:G:C6	36:BA:1207:C:C4	3.06	0.44
36:DA:2594:C:O2'	36:DA:2595:G:H5'	2.16	0.44
25:CZ:185:ASN:OD1	25:CZ:185:ASN:O	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:11:LYS:HG2	51:DS:11:LYS:O	2.17	0.44
27:B1:45:ASN:HD22	27:B1:45:ASN:C	2.21	0.44
8:CH:14:ARG:HD3	8:CH:18:ARG:NH1	2.33	0.44
28:B2:22:GLU:C	28:B2:24:LEU:H	2.21	0.43
28:B2:39:ALA:O	28:B2:45:SER:HB3	2.18	0.43
4:AD:98:GLU:O	4:AD:103:ASN:ND2	2.45	0.43
52:DT:82:LEU:N	52:DT:82:LEU:HD12	2.33	0.43
36:DA:2102:U:C5	36:DA:2103:C:N3	2.86	0.43
1:CA:429:U:H1'	1:CA:430:A:H5''	2.00	0.43
1:CA:963:G:N2	10:CJ:55:LYS:HG2	2.33	0.43
14:CN:32:SER:HB3	14:CN:41:ARG:HB3	2.00	0.43
39:BD:61:LEU:HD12	39:BD:61:LEU:HA	1.72	0.43
52:BT:27:THR:HG23	52:BT:28:VAL:N	2.33	0.43
32:B6:27:LYS:O	32:B6:27:LYS:HD2	2.18	0.43
36:DA:1528:A:H2'	36:DA:1528(A):A:C8	2.52	0.43
1:CA:67:C:OP1	1:CA:199:G:H5''	2.17	0.43
36:BA:1885:A:C2'	36:BA:1886:C:H5'	2.48	0.43
34:D8:17:THR:HG22	34:D8:21:LYS:O	2.18	0.43
12:AL:90:VAL:HG23	12:AL:99:HIS:CE1	2.53	0.43
36:DA:829:A:N7	36:DA:2248:C:H5'	2.33	0.43
36:DA:2176:A:C3'	36:DA:2177:C:H5''	2.42	0.43
51:BS:15:ARG:CB	51:BS:15:ARG:NH1	2.79	0.43
48:DP:57:THR:OG1	48:DP:58:THR:N	2.51	0.43
31:D5:47:PRO:HG3	55:DW:37:ARG:NH2	2.33	0.43
56:BX:40:LYS:CG	56:BX:41:ASN:N	2.80	0.43
36:BA:1428:C:N4	36:BA:1570:A:OP2	2.43	0.43
32:D6:11:LEU:C	32:D6:12:GLU:HG2	2.35	0.43
41:DF:133:ASN:N	41:DF:133:ASN:ND2	2.65	0.43
39:DD:97:TYR:O	39:DD:98:VAL:C	2.55	0.43
27:D1:63:ALA:O	27:D1:64:ALA:O	2.36	0.43
48:DP:101:VAL:HG12	48:DP:106:LEU:CB	2.48	0.43
36:DA:2781:A:H5''	36:DA:2782:G:H5'	1.94	0.43
1:CA:368:U:OP2	25:CZ:291:ARG:CD	2.56	0.43
6:AF:35:ALA:O	6:AF:36:ARG:CB	2.62	0.43
22:AV:67:C:H2'	22:AV:68:C:C6	2.53	0.43
41:DF:78:ILE:HG12	41:DF:83:PHE:CE2	2.53	0.43
36:DA:145:G:C3'	36:DA:146:G:H5''	2.48	0.43
40:DE:184:VAL:C	40:DE:186:GLY:H	2.21	0.43
58:BZ:103:ARG:HE	58:BZ:138:GLU:HG3	1.83	0.43
36:BA:2785:C:O2'	40:BE:64:LYS:NZ	2.45	0.43
51:BS:106:ARG:O	51:BS:106:ARG:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:69:GLU:O	6:CF:71:ARG:N	2.51	0.43
6:AF:10:LEU:HD13	6:AF:59:TYR:CD2	2.50	0.43
6:CF:10:LEU:HD12	6:CF:59:TYR:HB3	2.00	0.43
36:BA:584:C:OP2	53:BU:10:ARG:NH2	2.50	0.43
1:CA:1442(B):A:C8	52:DT:118:ARG:NH1	2.86	0.43
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.31	0.43
40:DE:36:ARG:HH22	40:DE:87:GLU:H	1.66	0.43
39:DD:238:GLY:O	39:DD:239:ARG:C	2.56	0.43
36:DA:29:U:OP1	53:DU:5:LYS:HE2	2.17	0.43
36:BA:633:A:C2'	36:BA:634:C:H5'	2.48	0.43
36:DA:2687:U:C4	36:DA:2688:U:C5	3.05	0.43
53:DU:78:THR:O	53:DU:81:HIS:HB3	2.19	0.43
2:AB:9:GLU:HB3	2:AB:48:MET:CE	2.48	0.43
36:BA:1103:A:H3'	36:BA:1104:C:H6	1.83	0.43
36:BA:51:G:N3	36:BA:119:A:C2	2.86	0.43
53:BU:21:ALA:O	53:BU:29:SER:HB3	2.18	0.43
40:DE:183:LEU:N	40:DE:183:LEU:CD1	2.81	0.43
36:DA:2136:C:H2'	36:DA:2137:C:C6	2.51	0.43
19:CS:58:VAL:HG11	19:CS:75:ALA:HB1	2.00	0.43
36:DA:1430:C:H2'	36:DA:1431:U:C6	2.53	0.43
48:DP:108:LYS:HD2	48:DP:108:LYS:N	2.33	0.43
1:AA:383:A:C2'	1:AA:384:G:H5'	2.48	0.43
1:AA:1397:C:H4'	23:AX:26:A:N1	2.33	0.43
36:DA:2880:C:N3	36:DA:2881:C:C5	2.86	0.43
40:DE:149:ARG:HH11	40:DE:149:ARG:HG3	1.83	0.43
7:CG:57:GLU:HB2	7:CG:60:LYS:HB2	1.99	0.43
15:AO:64:ARG:HG2	15:AO:64:ARG:O	2.18	0.43
36:DA:2289:G:O5'	36:DA:2289:G:C8	2.70	0.43
5:AE:20:GLN:OE1	5:AE:22:GLY:N	2.39	0.43
36:DA:2039:C:H2'	36:DA:2040:C:C6	2.53	0.43
1:AA:1333:A:H2'	1:AA:1334:G:C5'	2.47	0.43
36:DA:1782:C:O2'	36:DA:2609:U:H5''	2.18	0.43
1:CA:256:U:H2'	1:CA:257:G:H8	1.81	0.43
3:AC:190:ARG:NH1	3:AC:190:ARG:HG3	2.33	0.43
36:BA:1958:C:O2'	36:BA:1959:G:H5'	2.18	0.43
36:DA:2253:G:O2'	36:DA:2254:C:H5'	2.18	0.43
1:AA:166:G:H2'	1:AA:167:G:H8	1.83	0.43
36:BA:356:G:N2	36:BA:357:A:H1'	2.32	0.43
36:DA:1792:G:H5''	39:DD:205:VAL:HG13	2.00	0.43
1:CA:821:G:O2'	1:CA:822:C:H5'	2.18	0.43
11:CK:16:SER:O	11:CK:35:PRO:HD3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:116:C:O2'	36:BA:117:G:H5'	2.18	0.43
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.33	0.43
49:BQ:2:LEU:HG	49:BQ:2:LEU:O	2.17	0.43
36:DA:306:U:H2'	36:DA:307:G:O4'	2.17	0.43
29:D3:31:LEU:C	29:D3:33:GLN:H	2.21	0.43
3:AC:156:ARG:HB3	3:AC:160:ALA:O	2.17	0.43
38:BC:78:ALA:HB1	38:BC:82:LYS:HB2	1.99	0.43
37:DB:7:G:H3'	37:DB:8:U:C5'	2.48	0.43
3:CC:34:LEU:HD23	3:CC:34:LEU:O	2.18	0.43
57:BY:38:ILE:O	57:BY:38:ILE:HG23	2.18	0.43
36:DA:2199:A:C2	36:DA:2200:C:H1'	2.53	0.43
36:DA:1828:G:O6	39:DD:222:ARG:HD3	2.18	0.43
42:BG:98:ARG:CG	42:BG:98:ARG:HH11	2.27	0.43
1:AA:79:G:HO2'	1:AA:80:G:C5'	2.31	0.43
39:BD:30:GLU:HG3	39:BD:63:ARG:CZ	2.45	0.43
36:DA:2698:U:H2'	36:DA:2699:C:C6	2.53	0.43
52:BT:30:VAL:HG21	52:BT:84:GLN:HG3	1.99	0.43
1:AA:495:A:O2'	1:AA:496:A:O5'	2.28	0.43
43:DH:115:VAL:O	43:DH:117:PRO:HD3	2.17	0.43
48:BP:23:PRO:C	48:BP:33:ARG:NE	2.71	0.43
25:AZ:64:ASN:O	25:AZ:65:THR:C	2.57	0.43
36:DA:1337:G:H2'	36:DA:1338:G:C1'	2.47	0.43
37:BB:73:A:H2'	37:BB:74:U:C5'	2.44	0.43
5:CE:144:THR:O	5:CE:147:ASP:OD1	2.36	0.43
50:DR:79:LEU:HA	50:DR:83:ILE:HG12	2.00	0.43
50:DR:94:TYR:CD1	50:DR:94:TYR:N	2.84	0.43
58:DZ:16:SER:O	58:DZ:19:ARG:N	2.51	0.43
24:CY:29:G:H1	24:CY:41:C:N4	2.15	0.43
34:D8:30:ARG:CZ	36:DA:2419:U:O4	2.66	0.43
5:CE:100:VAL:O	5:CE:101:ILE:HD13	2.17	0.43
53:DU:14:HIS:C	53:DU:16:LYS:N	2.71	0.43
42:DG:6:ALA:HB1	42:DG:10:LYS:NZ	2.33	0.43
36:BA:656:G:H2'	36:BA:657:U:C6	2.51	0.43
16:AP:2:VAL:O	16:AP:64:ALA:HA	2.18	0.43
19:CS:11:VAL:CA	19:CS:38:SER:HB2	2.48	0.43
1:AA:191:G:N3	20:AT:105:SER:HB2	2.34	0.43
36:BA:2893:G:H5'	36:BA:2894:G:C5'	2.48	0.43
27:D1:44:PRO:HA	36:DA:396:G:O3'	2.18	0.43
3:AC:34:LEU:HD22	3:AC:38:ARG:NE	2.33	0.43
20:CT:66:ALA:HB1	20:CT:71:THR:HG21	2.00	0.43
25:AZ:401:THR:O	25:AZ:402:LYS:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:357:PRO:O	25:CZ:359:VAL:HG23	2.18	0.43
40:DE:126:PRO:C	40:DE:128:SER:N	2.71	0.43
51:DS:103:GLU:CD	51:DS:103:GLU:H	2.16	0.43
29:B3:26:LEU:HD11	29:B3:47:VAL:HG22	1.99	0.43
29:B3:14:GLY:HA2	36:BA:969:U:O3'	2.18	0.43
39:BD:3:VAL:HG13	39:BD:17:THR:HB	1.97	0.43
36:DA:598:G:H5'	48:DP:15:ARG:HB3	2.01	0.43
8:CH:119:LEU:O	8:CH:120:THR:O	2.36	0.43
55:BW:29:LEU:CD1	55:BW:51:LEU:HD21	2.47	0.43
3:AC:95:THR:HG23	3:AC:97:LYS:HD2	2.00	0.43
36:BA:218:A:H2'	36:BA:219:G:O4'	2.18	0.43
1:CA:40:C:H2'	1:CA:41:G:H8	1.82	0.43
20:CT:50:GLU:HB2	20:CT:99:LEU:CD1	2.48	0.43
41:DF:160:ASN:HD21	41:DF:162:LEU:CB	2.28	0.43
36:BA:1400:G:H2'	36:BA:1401:G:H8	1.80	0.43
40:DE:39:PRO:HA	40:DE:43:GLY:CA	2.48	0.43
46:BN:131:GLN:HE22	46:BN:134:ARG:HG2	1.82	0.43
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.99	0.43
13:CM:34:LEU:HD13	13:CM:41:PRO:HA	2.00	0.43
36:BA:1821:A:OP1	39:BD:201:HIS:NE2	2.48	0.43
53:DU:38:THR:O	53:DU:41:ALA:HB3	2.17	0.43
39:BD:69:ARG:NH1	39:BD:128:GLY:O	2.50	0.43
36:BA:2019:A:H2'	36:BA:2020:A:O5'	2.18	0.43
36:DA:48:G:N2	36:DA:177:G:N2	2.66	0.43
37:DB:94:C:O2'	37:DB:95:C:H5'	2.18	0.43
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.65	0.43
39:DD:52:ARG:HB3	39:DD:53:PHE:CD2	2.53	0.43
25:AZ:226:GLU:O	25:AZ:300:ARG:HD2	2.16	0.43
42:BG:40:ASN:HB2	42:BG:91:ARG:HB2	2.00	0.43
36:BA:2201:C:HO2'	36:BA:2202:C:H5'	1.83	0.43
9:CI:65:VAL:HG21	9:CI:73:GLN:CG	2.48	0.43
36:BA:1353:A:H2'	36:BA:1354:A:C8	2.53	0.43
36:BA:18:C:O3'	53:BU:23:GLY:HA2	2.18	0.43
36:DA:2393:A:H2'	36:DA:2394:C:H6	1.83	0.43
48:BP:9:ASN:N	48:BP:10:PRO:CD	2.81	0.43
42:DG:18:GLU:HG2	42:DG:175:LEU:HD13	2.00	0.43
2:CB:235:SER:O	2:CB:237:ALA:N	2.51	0.43
36:DA:2807:G:H2'	36:DA:2808:U:H5''	1.99	0.43
39:BD:258:LYS:HE2	39:BD:273:ARG:HE	1.83	0.43
42:DG:49:ASP:CG	42:DG:50:ALA:N	2.69	0.43
21:CU:10:ARG:O	21:CU:11:GLY:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:79:VAL:HG21	39:DD:111:LEU:CD1	2.48	0.43
1:AA:250:A:O5'	1:AA:250:A:H8	2.01	0.43
36:BA:782:A:O2'	39:BD:225:ALA:HB1	2.17	0.43
47:BO:86:ILE:HG21	47:BO:94:ARG:HE	1.82	0.43
36:DA:2094:G:H1'	36:DA:2198:A:N6	2.33	0.43
36:DA:2492:U:H2'	36:DA:2493:U:C6	2.53	0.43
36:BA:839:U:H2'	36:BA:840:C:C6	2.53	0.43
36:BA:1257:C:H2'	36:BA:1258:C:C6	2.53	0.43
36:DA:2366:A:C2'	36:DA:2367:G:H5'	2.48	0.43
39:BD:263:ARG:CB	39:BD:263:ARG:NH1	2.81	0.43
55:DW:14:PRO:HG2	55:DW:78:GLU:HB2	2.00	0.43
39:BD:257:LEU:C	39:BD:257:LEU:CD2	2.86	0.43
36:DA:42:G:H3'	36:DA:43:A:C8	2.54	0.43
39:BD:106:ILE:HD11	39:BD:196:VAL:HG22	2.00	0.43
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.18	0.43
46:DN:42:TRP:N	53:DU:64:ARG:NH1	2.66	0.43
41:DF:153:SER:OG	41:DF:190:GLU:HG3	2.18	0.43
36:DA:2095:C:H2'	36:DA:2096:U:C6	2.53	0.43
36:BA:2850:A:C2	36:BA:2851:A:C4	3.06	0.43
1:CA:448:A:H2'	1:CA:449:C:C6	2.53	0.43
13:AM:35:GLU:C	13:AM:37:THR:H	2.21	0.43
36:BA:55:G:H2'	36:BA:56:A:H8	1.82	0.43
45:DK:23:UNK:C	45:DK:25:UNK:N	2.80	0.43
49:DQ:11:LYS:HD3	49:DQ:87:LYS:HD3	2.01	0.43
55:DW:75:TYR:N	55:DW:75:TYR:CD1	2.86	0.43
2:AB:74:LYS:NZ	2:AB:74:LYS:HB3	2.33	0.43
10:CJ:51:ARG:H	10:CJ:51:ARG:HG3	1.58	0.43
38:BC:57:ASN:HA	38:BC:57:ASN:HD22	1.50	0.43
3:AC:92:ALA:O	3:AC:96:GLY:HA2	2.18	0.43
36:BA:957:A:N1	36:BA:2458:G:H4'	2.34	0.43
4:AD:17:VAL:O	4:AD:18:LYS:O	2.36	0.43
4:AD:63:LYS:O	4:AD:67:ILE:HD12	2.19	0.43
25:CZ:125:GLN:HG2	61:CZ:502:KIR:C22	2.48	0.43
37:DB:8:U:O3'	51:DS:25:ARG:NH2	2.50	0.43
36:BA:2762:G:C2'	36:BA:2763:G:H5'	2.49	0.43
28:B2:53:LEU:HA	28:B2:56:GLN:HG3	2.00	0.43
1:AA:407:G:H4'	4:AD:115:ARG:O	2.18	0.43
37:BB:43:C:H3'	37:BB:44:G:C5'	2.48	0.43
4:CD:6:GLY:O	4:CD:8:VAL:N	2.51	0.43
36:DA:2335:A:O2'	36:DA:2336:A:H5''	2.18	0.43
53:BU:95:LEU:HD11	54:BV:11:GLN:HG3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2428:G:H5''	36:DA:2429:G:O5'	2.19	0.43
1:CA:1353:G:C2	1:CA:1354:C:C5	3.06	0.43
42:BG:85:GLY:C	42:BG:87:PRO:CD	2.86	0.43
14:CN:49:HIS:C	14:CN:51:GLY:N	2.70	0.43
36:DA:260:G:C6	36:DA:261:G:N7	2.86	0.43
25:CZ:65:THR:N	25:CZ:83:PRO:HD3	2.33	0.43
34:B8:32:LEU:HB2	34:B8:36:LYS:HZ2	1.82	0.43
36:DA:927:G:H3'	36:DA:928:G:C8	2.52	0.43
58:DZ:151:HIS:HD2	58:DZ:170:THR:HG23	1.83	0.43
36:BA:832:G:P	48:BP:40:SER:HB3	2.58	0.43
36:BA:1448:G:N2	36:BA:1528(A):A:H2	2.16	0.43
35:D9:24:TYR:HB3	35:D9:25:VAL:H	1.72	0.43
36:DA:2106:G:O2'	36:DA:2107:C:H5'	2.18	0.43
30:D4:26:SER:OG	30:D4:27:THR:N	2.50	0.43
42:DG:91:ARG:HD2	42:DG:92:VAL:CA	2.48	0.43
36:DA:655:A:H4'	36:DA:656:G:C5'	2.33	0.43
51:BS:14:VAL:HG12	51:BS:15:ARG:H	1.80	0.43
39:BD:75:ILE:HD13	39:BD:75:ILE:H	1.83	0.43
36:DA:2415:G:H4'	48:DP:66:GLY:HA3	1.99	0.43
58:DZ:14:LYS:HE3	58:DZ:17:ALA:CB	2.49	0.43
48:BP:96:THR:HG22	48:BP:126:VAL:CB	2.49	0.43
25:AZ:138:VAL:CG2	25:AZ:173:GLY:H	2.28	0.43
1:CA:8:A:H5'	5:CE:120:THR:O	2.19	0.43
53:DU:8:VAL:CG1	53:DU:12:ARG:NE	2.81	0.43
57:BY:96:ILE:HG13	57:BY:99:CYS:CB	2.38	0.43
36:DA:2777:G:H5''	36:DA:2778:A:H5''	1.97	0.43
36:DA:2782:G:N2	36:DA:2783:G:H1'	2.33	0.43
1:AA:201:C:C3'	1:AA:202:U:C5'	2.87	0.43
36:DA:637:A:C6	36:DA:652:C:H4'	2.53	0.43
36:BA:654(V):A:OP2	36:BA:655:A:H3'	2.18	0.43
39:DD:134:ARG:HG3	39:DD:187:GLY:HA3	2.00	0.43
39:DD:186:HIS:CD2	39:DD:188:GLU:H	2.36	0.43
49:BQ:51:ARG:CG	49:BQ:51:ARG:NH1	2.79	0.43
36:DA:1257:C:C2	36:DA:1258:C:C5	3.06	0.43
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.17	0.43
3:CC:43:LEU:HD13	3:CC:68:VAL:CG2	2.48	0.43
28:D2:38:GLN:HB3	28:D2:44:LEU:HD22	1.99	0.43
49:DQ:67:ARG:HD2	49:DQ:105:GLU:CG	2.47	0.43
36:BA:323:G:C8	41:BF:171:PRO:HG3	2.53	0.43
19:CS:33:THR:HG21	19:CS:49:ILE:HG22	1.99	0.43
17:AQ:53:LEU:HD23	17:AQ:82:MET:SD	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:44:THR:HB	50:DR:101:ALA:HB2	2.00	0.43
26:B0:26:TYR:N	26:B0:26:TYR:CD1	2.87	0.43
36:BA:2176:A:H8	36:BA:2176:A:H5'	1.82	0.43
1:CA:1514:C:O2'	1:CA:1515:C:H5'	2.18	0.43
12:AL:43:VAL:HG22	12:AL:55:VAL:HG12	2.00	0.43
25:CZ:338:TYR:O	25:CZ:353:VAL:HG23	2.18	0.43
55:BW:13:SER:HA	55:BW:14:PRO:HD3	1.92	0.43
36:DA:674:G:H1'	41:DF:74:ARG:HE	1.83	0.43
1:CA:192:U:O3'	20:CT:57:ARG:HD2	2.18	0.43
43:DH:139:GLN:C	43:DH:139:GLN:CD	2.77	0.43
36:BA:1658:C:C2	36:BA:1659:U:C5	3.06	0.43
9:AI:81:ILE:HG22	9:AI:81:ILE:O	2.18	0.43
16:CP:60:LEU:HD21	16:CP:66:PRO:CG	2.48	0.43
40:DE:38:THR:HB	40:DE:41:LYS:HG2	2.01	0.43
7:AG:126:ASP:O	7:AG:129:GLU:N	2.46	0.43
36:DA:918:A:N3	37:DB:80:U:O2'	2.39	0.43
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.17	0.43
1:CA:694:A:H2'	1:CA:695:A:O4'	2.18	0.43
36:BA:1240:U:O2'	36:BA:1241:A:H5'	2.18	0.43
25:AZ:255:ILE:CG2	25:AZ:302:GLN:NE2	2.81	0.43
36:DA:1471:A:H2'	36:DA:1472:A:C8	2.53	0.43
1:CA:1368:G:C5'	9:CI:112:LYS:O	2.65	0.43
36:DA:2475:C:N4	36:DA:2529:G:H22	2.17	0.43
20:CT:55:ILE:N	20:CT:55:ILE:HD13	2.30	0.43
36:DA:2294:C:O2	36:DA:2294:C:C2'	2.66	0.43
1:CA:1089:G:HO2'	1:CA:1170:A:H2	1.62	0.43
39:DD:212:SER:O	39:DD:217:ARG:HB2	2.17	0.43
47:DO:101:PRO:HD2	52:DT:70:VAL:HG21	1.99	0.43
36:DA:2206:G:C2	36:DA:2207:G:H5'	2.53	0.43
57:DY:50:ARG:HA	57:DY:50:ARG:HD3	1.63	0.43
39:BD:176:ARG:CZ	39:BD:176:ARG:CB	2.95	0.43
36:BA:539:G:C5	36:BA:540:C:C5	3.06	0.43
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.78	0.43
36:DA:980:A:C6	36:DA:981:A:N1	2.86	0.43
1:AA:106:C:O2'	1:AA:107:G:H5'	2.17	0.43
7:CG:58:PRO:C	7:CG:60:LYS:N	2.70	0.43
36:DA:2197:U:H1'	36:DA:2198:A:C8	2.52	0.43
26:B0:20:ARG:HH12	36:BA:2271:G:H4'	1.84	0.43
27:B1:19:GLN:HB2	27:B1:35:THR:O	2.18	0.43
1:AA:241:C:O2'	1:AA:242:C:H5'	2.18	0.43
1:AA:445:G:O2'	1:AA:446:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1525:G:H2'	36:DA:1526:G:H8	1.83	0.43
22:AW:24:G:H2'	22:AW:25:C:O4'	2.18	0.43
1:CA:1402:C:O2	1:CA:1500:A:N1	2.51	0.43
36:BA:654(H):G:H2'	36:BA:654(I):C:H5'	1.99	0.43
1:AA:995:C:HO2'	1:AA:996:A:P	2.41	0.43
25:CZ:343:TYR:CE2	25:CZ:348:ASP:HB3	2.53	0.43
39:BD:89:SER:HB2	39:BD:159:ALA:HB2	2.00	0.43
36:BA:1923:U:H2'	36:BA:1924:C:C6	2.54	0.43
1:AA:593:G:O2'	1:AA:594:G:H5'	2.18	0.43
33:B7:19:ARG:NH1	33:B7:19:ARG:HG2	2.33	0.43
36:DA:229:A:N3	36:DA:229:A:H2'	2.33	0.43
36:BA:2584:U:O4'	36:BA:2584:U:O2	2.36	0.43
36:DA:2006:C:H6	36:DA:2006:C:O5'	2.01	0.43
7:AG:156:TRP:CG	7:AG:156:TRP:O	2.69	0.43
22:AW:48:C:P	22:AW:48:C:H6	2.41	0.43
53:BU:101:ARG:HH11	53:BU:101:ARG:HG3	1.83	0.43
53:BU:44:ASN:HD21	54:BV:75:PHE:HB3	1.83	0.43
1:CA:509:A:H5'	4:CD:54:TYR:HD2	1.82	0.43
25:CZ:389:ARG:HG2	25:CZ:394:THR:HA	2.01	0.43
53:DU:90:VAL:HB	53:DU:91:ASP:H	1.52	0.43
51:DS:67:ARG:HH22	51:DS:100:ALA:CB	2.25	0.43
51:DS:97:ARG:HH21	51:DS:98:VAL:HA	1.83	0.43
42:DG:145:THR:HB	42:DG:148:MET:HB3	2.01	0.43
28:B2:47:ASN:HB3	36:BA:95:G:H1'	1.99	0.43
41:BF:122:LYS:NZ	41:BF:152:GLU:OE2	2.48	0.43
41:BF:178:PRO:HB3	41:BF:198:ALA:HB1	1.99	0.43
43:BH:127:GLU:HB2	43:BH:130:ARG:HB2	2.01	0.43
48:DP:25:SER:OG	48:DP:30:THR:HG21	2.17	0.43
4:CD:29:PRO:O	4:CD:30:LYS:HB3	2.17	0.43
42:BG:106:LEU:C	42:BG:106:LEU:HD23	2.38	0.43
42:BG:34:LEU:HD23	42:BG:161:THR:CG2	2.47	0.43
53:BU:83:LEU:HD12	53:BU:83:LEU:N	2.33	0.43
54:BV:91:TYR:N	54:BV:91:TYR:CD1	2.86	0.43
57:DY:13:VAL:HG22	57:DY:14:LEU:N	2.32	0.43
56:BX:35:THR:O	56:BX:38:GLU:HB2	2.18	0.43
25:AZ:325:LYS:CG	25:AZ:326:GLU:N	2.79	0.43
36:BA:2392:A:H8	48:BP:60:MET:HA	1.83	0.43
36:DA:874:G:H2'	36:DA:875:G:H8	1.82	0.43
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	2.33	0.43
36:DA:1882:C:H5'	36:DA:1883:G:OP2	2.18	0.43
36:BA:1517:G:C5'	36:BA:1517:G:C8	2.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:12:VAL:CG2	56:BX:13:LEU:N	2.67	0.43
34:D8:22:VAL:HB	34:D8:53:PRO:HB3	2.00	0.43
36:BA:1757:U:O4	36:BA:1762:A:H2	2.01	0.43
2:CB:201:ILE:O	2:CB:201:ILE:HG22	2.18	0.43
2:CB:8:LYS:HZ3	2:CB:217:ARG:NH1	2.15	0.43
34:D8:57:ARG:C	34:D8:59:LYS:N	2.72	0.43
25:AZ:23:GLY:HA3	25:AZ:105:VAL:CG1	2.44	0.43
10:AJ:78:ASN:CA	10:AJ:79:ARG:HH11	2.32	0.43
32:D6:11:LEU:O	32:D6:23:THR:HB	2.17	0.43
32:D6:44:ARG:CG	32:D6:46:HIS:HE1	2.32	0.43
40:BE:93:VAL:C	40:BE:95:ILE:N	2.70	0.43
36:DA:1196:C:H2'	36:DA:1197:G:C8	2.53	0.43
1:AA:1443:G:H5'	1:AA:1444:C:OP2	2.18	0.43
9:AI:4:TYR:HD2	9:AI:85:LEU:HA	1.83	0.43
41:DF:85:GLY:O	41:DF:86:GLY:O	2.36	0.43
1:CA:1288:A:O2'	1:CA:1289:A:H5'	2.19	0.43
25:AZ:199:ILE:HA	25:AZ:199:ILE:HD12	1.61	0.43
36:DA:910:A:N7	49:DQ:13:GLN:HG3	2.33	0.43
36:BA:1337:G:H2'	36:BA:1338:G:C1'	2.48	0.43
36:DA:813:U:O2'	36:DA:1225:G:H1'	2.18	0.43
36:DA:299:A:N1	36:DA:322:A:O2'	2.40	0.43
19:CS:63:THR:HG22	19:CS:66:MET:CG	2.48	0.43
33:D7:10:ARG:HH11	33:D7:10:ARG:CG	2.20	0.43
43:DH:157:TYR:O	43:DH:158:HIS:CB	2.67	0.43
1:CA:521:G:O2'	1:CA:522:C:H5'	2.18	0.43
1:CA:992:U:O2	1:CA:992:U:C2'	2.67	0.43
36:DA:320:A:C5	41:DF:136:THR:HG21	2.53	0.43
29:B3:21:ALA:O	29:B3:22:ALA:C	2.56	0.43
25:CZ:98:GLN:OE1	25:CZ:226:GLU:OE2	2.36	0.43
1:CA:189(D):C:O2	1:CA:189(H):G:C6	2.71	0.43
49:BQ:136:ALA:C	49:BQ:138:ASP:N	2.71	0.43
17:AQ:48:GLU:O	17:AQ:49:GLU:C	2.56	0.43
12:AL:119:LYS:O	12:AL:120:TYR:CB	2.66	0.43
12:AL:38:THR:O	12:AL:39:VAL:CG2	2.66	0.43
11:CK:59:TYR:CE2	11:CK:63:LEU:HD11	2.53	0.43
1:CA:1296:C:C5	1:CA:1297:C:N3	2.86	0.43
11:CK:47:VAL:HG23	11:CK:48:ILE:N	2.33	0.43
36:BA:1357:U:H2'	36:BA:1358:G:O4'	2.17	0.43
50:DR:103:ARG:HG3	55:DW:40:ASN:OD1	2.18	0.43
1:AA:114:U:H2'	1:AA:115:G:C8	2.53	0.43
36:DA:1468:C:H2'	36:DA:1469:A:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:151:GLU:CA	38:BC:154:ARG:HG2	2.47	0.43
5:CE:15:ARG:HD2	5:CE:26:PHE:CG	2.54	0.43
36:BA:1168:G:C2	36:BA:1182:A:C2	3.07	0.43
1:CA:556:C:C2'	1:CA:557:G:H5'	2.48	0.43
1:CA:140:A:H2'	1:CA:141:A:C8	2.54	0.43
22:AV:51:U:H2'	22:AV:52:G:C8	2.53	0.43
36:BA:2147:G:H2'	36:BA:2148:G:O4'	2.18	0.43
38:BC:139:ASN:H	38:BC:144:THR:HG1	1.62	0.43
30:D4:19:GLY:O	30:D4:21:VAL:HG23	2.19	0.43
46:BN:74:ARG:NH1	46:BN:85:ILE:HD11	2.34	0.43
1:CA:1010:G:H2'	1:CA:1011:G:C8	2.54	0.43
1:CA:123:C:H5''	1:CA:311:C:O2'	2.18	0.43
38:DC:44:HIS:CE1	38:DC:172:HIS:HB3	2.53	0.43
36:DA:1766:U:O2'	36:DA:1767:C:H5'	2.19	0.43
25:AZ:322:VAL:HG13	25:AZ:395:VAL:O	2.18	0.43
15:CO:70:LEU:C	15:CO:72:ARG:N	2.71	0.43
36:DA:1915:U:H3'	36:DA:1916:A:H8	1.83	0.43
1:CA:1055:A:O2'	3:CC:156:ARG:HD2	2.18	0.43
36:BA:2850:A:H2'	36:BA:2851:A:O4'	2.18	0.43
7:CG:36:LYS:O	7:CG:37:ASN:C	2.55	0.43
12:CL:98:TYR:CD1	12:CL:98:TYR:N	2.86	0.43
45:BK:30:UNK:O	45:BK:31:UNK:C	2.66	0.43
36:BA:473:G:H5''	36:BA:508:G:N2	2.33	0.43
1:CA:915:A:H2'	1:CA:916:G:O5'	2.17	0.43
6:AF:86:ARG:H	6:AF:86:ARG:HG2	1.42	0.43
36:DA:1206:G:H2'	36:DA:1207:C:H5'	2.00	0.43
38:DC:46:LYS:NZ	38:DC:168:THR:O	2.52	0.43
36:DA:1217:C:N3	36:DA:1218:C:C5	2.86	0.43
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.82	0.43
53:DU:92:ARG:C	53:DU:94:ASN:N	2.68	0.43
42:DG:145:THR:O	42:DG:148:MET:N	2.47	0.43
28:B2:51:ARG:HG3	28:B2:52:ASP:N	2.34	0.43
4:AD:24:GLU:O	4:AD:27:TYR:CB	2.67	0.43
4:CD:78:LEU:HD21	4:CD:96:LEU:CB	2.48	0.43
56:DX:37:THR:O	56:DX:38:GLU:C	2.56	0.43
1:CA:542:G:H5'	4:CD:41:GLY:HA3	2.01	0.43
42:BG:4:ASP:OD1	42:BG:5:VAL:N	2.51	0.43
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.43	0.43
34:B8:37:SER:HB2	36:BA:2383:G:OP2	2.17	0.43
34:B8:58:ILE:HG22	34:B8:58:ILE:O	2.19	0.43
42:DG:114:ILE:HG12	42:DG:114:ILE:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1448:G:HO2'	36:DA:1528(A):A:N6	2.16	0.43
35:D9:25:VAL:O	35:D9:25:VAL:HG12	2.17	0.43
1:CA:739:C:O2'	15:CO:42:HIS:ND1	2.43	0.43
32:B6:19:ARG:O	32:B6:20:ASN:O	2.37	0.43
34:B8:23:VAL:HA	34:B8:47:LYS:O	2.17	0.43
36:BA:648:G:O2'	36:BA:649:G:H5'	2.18	0.43
26:B0:70:GLN:NE2	26:B0:80:HIS:NE2	2.65	0.43
58:DZ:10:ARG:N	58:DZ:37:VAL:HA	2.22	0.43
48:BP:114:ILE:HG21	48:BP:130:PHE:CD2	2.54	0.43
39:DD:97:TYR:O	39:DD:99:ASP:N	2.52	0.43
53:DU:16:LYS:HE3	53:DU:16:LYS:HB2	1.83	0.43
36:DA:2747:G:C2	36:DA:2756:U:C5	3.07	0.43
54:DV:24:LYS:HG3	54:DV:90:PRO:HB2	2.00	0.43
36:DA:527:C:O5'	36:DA:2779:U:C5	2.70	0.43
36:DA:1114:G:H2'	36:DA:1115:G:C8	2.53	0.43
22:CW:44:G:O4'	22:CW:44:G:P	2.76	0.43
31:D5:23:HIS:O	31:D5:24:ALA:C	2.56	0.43
36:DA:630:G:HO2'	36:DA:632:A:H62	1.67	0.43
41:BF:199:TRP:O	41:BF:202:PHE:HB3	2.17	0.43
41:DF:183:VAL:O	41:DF:187:VAL:HG23	2.18	0.43
54:BV:15:GLU:O	54:BV:96:ILE:HG21	2.18	0.43
36:BA:2821:A:OP2	50:BR:5:LYS:NZ	2.51	0.43
46:DN:28:THR:CG2	46:DN:29:LYS:N	2.81	0.43
46:DN:31:ALA:O	46:DN:34:LEU:HB3	2.19	0.43
40:BE:129:HIS:HB3	40:BE:130:GLY:H	1.68	0.43
50:BR:96:ARG:HH11	50:BR:117:VAL:CB	2.31	0.43
58:BZ:100:VAL:CG1	58:BZ:135:GLU:O	2.67	0.43
51:BS:83:LYS:HE2	51:BS:83:LYS:HB3	1.81	0.43
1:AA:373:A:H61	1:AA:391:G:H1'	1.82	0.43
16:AP:5:ARG:C	16:AP:6:LEU:HD12	2.39	0.43
43:DH:30:LYS:HZ2	43:DH:83:TYR:HE2	1.66	0.43
33:D7:34:ARG:CG	33:D7:34:ARG:NH1	2.78	0.43
1:CA:623:C:C4	1:CA:624:C:C4	3.06	0.43
36:BA:1060:U:H1'	36:BA:1061:U:P	2.58	0.43
2:AB:124:SER:OG	2:AB:126:GLU:HG3	2.18	0.43
4:CD:177:ASP:O	4:CD:181:MET:N	2.51	0.43
6:CF:10:LEU:HD11	6:CF:61:LEU:HD11	1.99	0.43
7:CG:26:PHE:CE1	7:CG:104:LEU:HD23	2.54	0.43
1:CA:659:U:H2'	1:CA:660:G:C8	2.51	0.43
11:AK:43:SER:HA	11:AK:47:VAL:HG21	2.01	0.43
36:BA:1812:A:O2'	39:BD:45:ASN:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:70:LEU:CD2	58:BZ:70:LEU:H	2.29	0.43
16:AP:33:ILE:O	16:AP:34:GLU:HB2	2.19	0.43
3:AC:13:GLY:N	14:AN:57:ARG:HD2	2.31	0.43
36:BA:1889:A:O2'	36:BA:2087:G:H5'	2.19	0.43
5:CE:81:GLU:OE1	5:CE:81:GLU:HA	2.18	0.43
1:CA:1145:C:O2'	1:CA:1146:A:O5'	2.35	0.43
55:BW:40:ASN:C	55:BW:41:LYS:HG2	2.38	0.43
36:DA:1812:A:C1'	39:DD:46:GLN:HE22	2.31	0.43
42:BG:131:TYR:O	42:BG:158:ALA:O	2.37	0.43
47:DO:28:SER:O	47:DO:29:ASN:CB	2.65	0.43
36:BA:1103:A:H5''	36:BA:1104:C:C5	2.50	0.43
2:CB:115:LEU:C	2:CB:117:GLU:N	2.71	0.43
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.86	0.43
36:DA:2207:G:O2'	36:DA:2208:A:H5''	2.18	0.43
12:AL:113:ARG:HG3	12:AL:113:ARG:HH11	1.83	0.43
11:AK:48:ILE:HA	11:AK:48:ILE:HD13	1.75	0.43
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.53	0.43
25:AZ:338:TYR:OH	25:AZ:390:GLU:HB3	2.19	0.43
36:DA:34:C:H5'	36:DA:35:G:OP1	2.19	0.43
40:BE:111:ARG:HH11	40:BE:111:ARG:CG	2.32	0.43
36:DA:1429:G:H2'	36:DA:1430:C:C6	2.54	0.43
36:DA:1429:G:H2'	36:DA:1430:C:H6	1.82	0.43
36:DA:2163:C:H2'	36:DA:2164:C:H5'	2.01	0.43
8:CH:30:ARG:CB	8:CH:30:ARG:HH11	2.30	0.43
43:BH:70:THR:HG22	43:BH:74:ASN:HD21	1.84	0.43
48:DP:135:LEU:C	48:DP:137:LYS:H	2.20	0.43
49:DQ:76:LYS:CB	49:DQ:91:GLU:HG3	2.48	0.43
36:BA:1308:A:H61	36:BA:1608:A:H61	1.65	0.43
1:CA:19:C:O2'	1:CA:20:U:H5'	2.18	0.43
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.53	0.43
22:AW:11:C:H2'	22:AW:12:U:C6	2.54	0.43
43:DH:24:VAL:O	43:DH:24:VAL:HG12	2.17	0.43
41:BF:28:ILE:HD13	41:BF:28:ILE:N	2.33	0.43
36:DA:2122:U:H2'	36:DA:2123:G:H8	1.82	0.43
36:DA:1691:C:C2'	36:DA:1692:U:H5'	2.48	0.43
1:AA:189(E):U:O2'	1:AA:189(F):U:C5'	2.66	0.43
33:B7:19:ARG:HH11	33:B7:19:ARG:HG2	1.82	0.43
36:DA:807:U:O2'	36:DA:808:G:H5'	2.18	0.43
36:DA:265:A:C2	36:DA:428:A:C2	3.06	0.43
39:BD:167:GLY:O	39:BD:173:VAL:HG23	2.18	0.43
37:BB:58:A:H2'	37:BB:59:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1561:G:O2'	36:DA:1562:A:H5'	2.19	0.43
4:CD:119:GLN:O	4:CD:119:GLN:HG3	2.18	0.43
2:CB:23:ARG:HA	2:CB:23:ARG:HD2	1.79	0.43
25:CZ:344:PHE:O	25:CZ:346:THR:N	2.51	0.43
25:AZ:5:PHE:CD1	25:AZ:277:LEU:HD22	2.54	0.43
31:B5:8:LYS:HE3	36:BA:2055:C:OP1	2.19	0.43
39:DD:35:LYS:HA	39:DD:63:ARG:HA	2.00	0.43
24:CY:65:C:C4'	25:CZ:341:GLN:CG	2.72	0.43
25:CZ:397:ALA:CB	61:CZ:502:KIR:O27	2.61	0.43
28:B2:44:LEU:N	28:B2:44:LEU:HD12	2.33	0.43
57:BY:40:GLU:HA	57:BY:64:GLU:OE2	2.19	0.43
4:CD:133:VAL:HG11	4:CD:138:TYR:CD2	2.52	0.43
58:BZ:133:ILE:O	58:BZ:134:PRO:C	2.57	0.43
42:BG:174:GLU:O	42:BG:176:LEU:N	2.48	0.43
41:DF:119:ARG:HH11	41:DF:119:ARG:HG2	1.84	0.43
52:BT:53:ARG:O	52:BT:59:THR:HA	2.18	0.43
42:BG:72:ARG:HG2	42:BG:87:PRO:HD2	1.99	0.43
25:CZ:64:ASN:H	25:CZ:83:PRO:CG	2.25	0.43
56:BX:35:THR:HG22	56:BX:38:GLU:H	1.83	0.43
25:AZ:215:ARG:HB3	25:AZ:282:ALA:CB	2.41	0.43
20:AT:41:ILE:C	20:AT:43:LEU:N	2.72	0.43
36:BA:666:G:H4'	48:BP:49:ARG:CZ	2.47	0.43
25:CZ:221:PHE:CD2	25:CZ:305:ALA:HA	2.54	0.43
36:BA:811:U:O2'	36:BA:812:C:C5'	2.66	0.43
29:D3:35:ARG:HG2	29:D3:37:LEU:HG	1.99	0.43
34:D8:13:ARG:CA	48:DP:63:PRO:HA	2.49	0.43
37:BB:73:A:C4	37:BB:105:A:C2	3.06	0.43
58:DZ:14:LYS:HE3	58:DZ:17:ALA:HB2	2.00	0.43
36:DA:1899:G:O2'	36:DA:1900:A:H5"	2.17	0.43
32:D6:11:LEU:HD23	32:D6:25:LYS:CA	2.39	0.43
25:CZ:104:LEU:CD2	25:CZ:120:ILE:HD11	2.49	0.43
25:CZ:231:ILE:HD13	25:CZ:237:VAL:CG2	2.48	0.43
32:D6:21:TYR:CD1	32:D6:21:TYR:N	2.87	0.43
9:CI:63:ILE:HG21	9:CI:77:ILE:CD1	2.49	0.43
42:DG:7:LEU:CA	42:DG:10:LYS:HD3	2.49	0.43
52:BT:120:ARG:O	52:BT:124:ASP:OD2	2.37	0.43
22:CW:8:U:C6	22:CW:8:U:OP2	2.71	0.43
36:DA:2692:C:H2'	36:DA:2693:A:C8	2.53	0.43
52:DT:23:ARG:HG2	52:DT:120:ARG:NH1	2.33	0.43
52:DT:96:ARG:HG2	52:DT:98:LYS:O	2.18	0.43
55:BW:1:MET:SD	55:BW:64:MET:HG3	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1149:C:H2'	1:CA:1150:U:H6	1.77	0.43
1:CA:1287:A:C8	1:CA:1288:A:N7	2.86	0.43
3:CC:76:VAL:O	3:CC:83:ARG:HG3	2.18	0.43
36:BA:2645:G:H8	36:BA:2645:G:OP2	2.01	0.43
54:BV:19:LYS:NZ	54:BV:22:VAL:HG13	2.33	0.43
54:BV:61:VAL:HG22	54:BV:61:VAL:O	2.17	0.43
48:DP:121:LYS:HA	48:DP:122:PRO:HD3	1.82	0.43
50:BR:96:ARG:NH1	50:BR:117:VAL:CG1	2.79	0.43
1:AA:187:C:O2'	20:AT:89:ARG:HD3	2.19	0.43
49:DQ:64:ILE:CG2	49:DQ:65:PHE:N	2.82	0.43
36:BA:1578:U:H2'	36:BA:1579:A:C5'	2.43	0.43
1:AA:391:G:H2'	1:AA:392:G:O4'	2.19	0.43
2:CB:29:ALA:O	2:CB:32:ILE:HG23	2.18	0.43
50:DR:9:LYS:HD2	50:DR:43:GLU:OE1	2.19	0.43
16:CP:58:TYR:CD1	16:CP:58:TYR:C	2.92	0.43
29:B3:44:ARG:O	29:B3:48:GLU:HG2	2.19	0.43
1:AA:368:U:H3'	1:AA:369:C:H5'	2.00	0.43
36:DA:547:A:H2'	36:DA:548:A:C8	2.54	0.43
51:BS:99:LYS:NZ	51:BS:99:LYS:CB	2.77	0.43
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.19	0.43
38:DC:151:GLU:HA	38:DC:154:ARG:CG	2.48	0.43
26:B0:62:LEU:HD23	26:B0:62:LEU:HA	1.80	0.43
40:BE:132:HIS:ND1	40:BE:135:HIS:CE1	2.86	0.43
36:DA:2262:U:H2'	36:DA:2263:C:C6	2.49	0.43
1:CA:1281:U:H4'	1:CA:1282:C:OP2	2.18	0.43
52:DT:129:ARG:HH11	52:DT:129:ARG:HG3	1.84	0.43
36:DA:176:G:C2'	36:DA:177:G:H5'	2.48	0.43
11:CK:65:ALA:O	11:CK:68:ALA:HB3	2.18	0.43
57:BY:91:GLU:O	57:BY:92:ASN:HB2	2.19	0.43
16:AP:46:PRO:O	16:AP:47:ASP:CB	2.66	0.43
17:AQ:45:HIS:NE2	17:AQ:47:PRO:HD3	2.33	0.43
11:AK:103:LEU:HD13	11:AK:104:GLN:N	2.32	0.43
36:BA:2008:C:H2'	36:BA:2009:G:C8	2.53	0.43
1:AA:1032:G:H2'	1:AA:1033:G:C8	2.53	0.43
36:BA:814:C:H1'	36:BA:1225:G:H21	1.84	0.43
1:CA:320:C:H2'	1:CA:321:A:O4'	2.18	0.43
46:DN:1:MET:SD	46:DN:2:LYS:N	2.91	0.43
7:CG:76:ARG:NH1	7:CG:76:ARG:HG2	2.33	0.43
36:BA:524:U:H5''	36:BA:539:G:N2	2.33	0.43
22:AW:40:C:H2'	22:AW:41:C:C6	2.53	0.43
1:CA:344:A:O2'	1:CA:345:C:OP2	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:213:LEU:O	2:CB:216:SER:HB3	2.18	0.43
1:AA:106:C:O2	1:AA:379:C:H4'	2.19	0.43
18:AR:36:ASN:O	18:AR:36:ASN:OD1	2.37	0.43
36:BA:894:C:O2'	36:BA:895:U:H5'	2.18	0.43
1:CA:1309:G:OP1	13:CM:92:HIS:HE1	2.01	0.43
36:BA:2295:C:H2'	36:BA:2296:U:C6	2.53	0.43
36:DA:2155:G:H3'	36:DA:2156:G:C8	2.52	0.43
5:AE:7:GLU:HG2	5:AE:112:LEU:CD2	2.49	0.43
36:DA:437:G:H2'	36:DA:438:G:H8	1.83	0.43
36:BA:2111:C:H1'	36:BA:2118:U:C4'	2.48	0.43
36:BA:1308:A:H2'	36:BA:1309:G:O4'	2.18	0.43
15:AO:32:LEU:HD12	15:AO:63:ARG:CB	2.48	0.43
36:DA:1389:G:H2'	36:DA:1390:U:O4'	2.18	0.43
16:AP:14:ASN:OD1	16:AP:16:HIS:HE1	2.02	0.43
36:DA:1655:A:H1'	40:DE:113:PHE:CD1	2.53	0.43
27:D1:78:LYS:HG2	27:D1:78:LYS:H	1.63	0.43
36:BA:1956:U:H2'	36:BA:1957:C:H5'	2.00	0.43
38:DC:19:VAL:HG12	38:DC:225:ASN:HB2	1.99	0.43
36:DA:272(D):G:C2	36:DA:272(E):G:C8	3.07	0.43
46:DN:36:GLY:O	46:DN:42:TRP:CE3	2.71	0.43
24:CY:46:7MG:O2'	24:CY:47:U:H5''	2.17	0.43
36:BA:373:U:H2'	36:BA:374:A:H8	1.83	0.43
36:DA:2567:G:H2'	36:DA:2568:C:C6	2.54	0.43
37:BB:5:C:O2'	37:BB:6:C:H5'	2.18	0.43
12:AL:69:TYR:O	12:AL:71:PRO:HD3	2.18	0.43
36:DA:477:A:H2'	36:DA:478:A:C8	2.53	0.43
1:CA:131:C:H2'	1:CA:132:C:C6	2.52	0.43
36:BA:12:U:O2	36:BA:2626:C:O3'	2.36	0.43
39:DD:58:HIS:HD2	39:DD:59:LYS:O	2.01	0.43
36:DA:996:A:C4'	53:DU:92:ARG:HE	2.32	0.43
28:B2:35:LEU:HD23	28:B2:50:ILE:HG13	1.99	0.43
36:BA:301:G:H3'	36:BA:335:C:OP2	2.18	0.43
4:AD:106:TYR:HE1	4:AD:112:VAL:O	2.01	0.43
36:DA:2203:U:H1'	39:DD:151:LYS:HE3	2.00	0.43
2:AB:8:LYS:HG2	2:AB:8:LYS:H	1.69	0.43
4:CD:16:GLY:C	4:CD:33:MET:HE3	2.38	0.43
42:BG:114:ILE:O	42:BG:114:ILE:HG23	2.19	0.43
42:BG:172:LEU:CD2	42:BG:176:LEU:HD12	2.49	0.43
42:BG:8:LYS:O	42:BG:11:TYR:N	2.44	0.43
36:DA:2133:G:O2'	36:DA:2158:A:N6	2.51	0.43
57:DY:9:LYS:NZ	57:DY:10:GLY:H	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:481:G:C2'	36:BA:482:A:OP2	2.66	0.43
10:CJ:54:PHE:C	10:CJ:55:LYS:CE	2.68	0.43
36:BA:201:C:H2'	36:BA:202:U:H5'	2.01	0.43
52:BT:22:PHE:HE2	52:BT:85:LYS:NZ	2.16	0.43
36:BA:942:G:C2'	36:BA:943:U:H5'	2.49	0.43
36:DA:1541:G:H3'	36:DA:1541:G:P	2.59	0.43
22:AV:5:G:C8	22:AV:5:G:C5'	2.94	0.43
32:B6:18:ARG:CG	32:B6:19:ARG:H	2.22	0.43
56:DX:40:LYS:O	56:DX:44:GLU:N	2.52	0.43
1:AA:1054:C:H2'	1:AA:1054:C:O2	2.18	0.43
36:DA:1797:C:C2'	36:DA:1798:U:H5'	2.49	0.43
48:DP:17:LYS:O	48:DP:17:LYS:HG2	2.19	0.43
34:D8:16:ILE:HD12	34:D8:57:ARG:HG2	1.99	0.43
5:CE:147:ASP:HA	5:CE:150:ARG:NH1	2.33	0.43
47:BO:19:ILE:HB	47:BO:41:ALA:HB1	2.00	0.43
48:BP:113:LYS:O	48:BP:114:ILE:CB	2.66	0.43
27:D1:25:LYS:HB2	36:DA:388:G:H5'	2.01	0.43
57:DY:47:LYS:O	57:DY:48:ALA:HB2	2.19	0.43
46:BN:66:LYS:O	46:BN:70:LYS:HB3	2.19	0.43
22:AW:54:U:H2'	22:AW:55:U:O4'	2.19	0.43
24:CY:56:C:H6	24:CY:56:C:OP1	2.01	0.43
52:BT:94:ALA:O	52:BT:96:ARG:N	2.51	0.43
36:DA:2776:A:H4'	36:DA:2777:G:C5'	2.49	0.43
1:CA:1288:A:C2	1:CA:1289:A:C4	3.07	0.43
3:CC:73:PRO:O	3:CC:74:GLY:C	2.56	0.43
13:AM:54:VAL:HA	13:AM:57:ARG:HH11	1.76	0.43
13:AM:66:LEU:O	13:AM:70:LEU:HB2	2.18	0.43
58:BZ:86:VAL:CG1	58:BZ:87:ASP:N	2.76	0.43
28:D2:31:GLU:HB3	28:D2:53:LEU:HD11	2.00	0.43
1:CA:1115:C:H2'	1:CA:1116:C:H6	1.82	0.43
41:BF:135:LYS:O	41:BF:138:GLU:HB2	2.18	0.43
1:CA:547:A:O2'	1:CA:548:G:OP2	2.37	0.43
25:AZ:336:SER:OG	25:AZ:354:GLN:HA	2.19	0.43
25:AZ:317:GLU:HA	25:AZ:370:PHE:O	2.18	0.43
57:DY:2:ARG:C	57:DY:4:LYS:H	2.22	0.43
3:CC:167:TRP:O	3:CC:168:ALA:CB	2.67	0.43
46:DN:57:ALA:O	46:DN:58:ASP:C	2.55	0.43
36:DA:1817:G:OP1	39:DD:88:ARG:NH2	2.52	0.43
36:DA:1378:A:HO2'	36:DA:1379:A:C5'	2.31	0.43
28:D2:3:LEU:O	28:D2:3:LEU:HD12	2.19	0.43
2:AB:97:TRP:CZ3	2:AB:176:GLU:OE2	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:35:LEU:H	54:BV:35:LEU:HD22	1.84	0.43
1:AA:99:U:H2'	1:AA:100:C:C6	2.53	0.43
42:DG:130:ASN:OD1	42:DG:160:VAL:HG13	2.19	0.43
3:CC:14:ILE:HG12	3:CC:15:THR:N	2.34	0.43
13:CM:16:ASP:HB2	13:CM:31:LYS:CE	2.49	0.43
36:DA:2264:C:H2'	36:DA:2265:U:O4'	2.19	0.43
5:AE:82:VAL:CG2	5:AE:138:ALA:HA	2.46	0.43
1:CA:692:U:O2	1:CA:694:A:C8	2.71	0.43
36:DA:1411:C:N4	36:DA:1412:A:H62	2.16	0.43
38:BC:73:ARG:H	38:BC:111:ASP:CG	2.22	0.43
37:BB:65:C:H41	37:BB:109:C:H2'	1.84	0.43
36:BA:1827:C:H2'	36:BA:1828:G:C5'	2.49	0.43
50:DR:14:SER:HA	50:DR:17:ARG:NH1	2.34	0.43
51:BS:67:ARG:O	51:BS:71:ARG:HD3	2.19	0.43
36:DA:1890:A:C2'	36:DA:1891:G:H5'	2.48	0.43
7:AG:57:GLU:HB3	7:AG:58:PRO:HD2	2.00	0.43
36:DA:2206:G:N2	36:DA:2207:G:H5'	2.34	0.43
9:CI:40:LEU:C	9:CI:42:ARG:N	2.72	0.43
6:AF:62:TRP:CD1	18:AR:35:ARG:CZ	3.02	0.43
36:DA:2340:G:H2'	36:DA:2341:G:C8	2.53	0.43
36:DA:445:C:H2'	36:DA:446:G:O4'	2.17	0.43
54:BV:58:VAL:HB	54:BV:98:GLU:CG	2.49	0.43
54:BV:97:LYS:HD3	54:BV:97:LYS:HA	1.90	0.43
16:CP:75:ARG:HH11	16:CP:75:ARG:HG3	1.83	0.43
36:BA:182:A:H2'	36:BA:183:C:O4'	2.19	0.43
38:BC:72:VAL:HG11	38:BC:156:ILE:O	2.18	0.43
39:DD:127:VAL:HG13	39:DD:127:VAL:O	2.19	0.43
36:BA:319:C:H2'	36:BA:320:A:O4'	2.19	0.43
1:AA:950:U:H2'	1:AA:951:G:H8	1.84	0.43
1:AA:156:G:O2'	1:AA:157:G:H5'	2.19	0.43
1:CA:1050:G:HO2'	1:CA:1051:C:H6	1.65	0.43
36:BA:2479:G:OP1	36:BA:2537:U:H1'	2.19	0.43
36:DA:2446:G:C2	36:DA:2501:C:C5	3.07	0.43
36:DA:695:G:N2	36:DA:696:G:H1'	2.32	0.43
1:CA:864:A:H2	1:CA:917:G:N3	2.16	0.43
50:DR:74:LYS:NZ	50:DR:74:LYS:HB2	2.33	0.43
36:BA:1534:U:H2'	36:BA:1535:A:O4'	2.18	0.43
1:CA:131:C:H2'	1:CA:132:C:H6	1.82	0.43
36:DA:1961:C:C2'	36:DA:1962:C:H5'	2.48	0.43
41:DF:4:VAL:HG11	41:DF:17:ARG:HE	1.84	0.43
39:BD:264:LYS:HG2	39:BD:266:SER:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:10:C:O2'	37:DB:11:C:H5'	2.19	0.43
1:AA:126:G:H2'	1:AA:127:G:O4'	2.18	0.43
38:DC:15:ASP:HA	38:DC:16:PRO:HD2	1.88	0.43
3:AC:110:ASN:O	3:AC:111:LEU:HD23	2.19	0.43
55:DW:34:ASN:HD22	55:DW:34:ASN:HA	1.63	0.43
9:AI:44:VAL:HG23	9:AI:44:VAL:O	2.18	0.43
39:BD:95:LEU:N	39:BD:95:LEU:HD12	2.34	0.43
36:BA:1477:A:C2	36:BA:1515:G:C2	3.07	0.43
53:DU:83:LEU:HD12	53:DU:83:LEU:N	2.33	0.43
51:DS:89:ARG:HG2	51:DS:92:TYR:CA	2.49	0.43
28:B2:6:VAL:C	28:B2:8:LYS:H	2.21	0.43
41:BF:6:VAL:CG1	41:BF:7:TYR:H	2.26	0.43
43:BH:125:VAL:HG12	43:BH:125:VAL:O	2.19	0.43
52:DT:30:VAL:HA	52:DT:43:GLN:O	2.18	0.43
52:DT:65:LYS:HZ2	52:DT:66:VAL:H	1.65	0.43
40:DE:55:ASN:HA	40:DE:55:ASN:HD22	1.66	0.43
36:BA:512:G:C2'	36:BA:513:A:OP2	2.67	0.43
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.50	0.43
4:CD:18:LYS:HA	4:CD:33:MET:HE2	1.99	0.43
42:BG:102:PHE:O	42:BG:103:LEU:CB	2.62	0.43
37:BB:55:U:H1'	42:BG:29:TRP:CD1	2.54	0.43
54:BV:55:ALA:HA	54:BV:101:GLY:OXT	2.19	0.43
1:CA:973:G:H1'	10:CJ:55:LYS:CD	2.48	0.43
49:DQ:60:ARG:HG3	58:DZ:180:VAL:HG21	2.00	0.43
36:DA:2128:C:H42	36:DA:2160:G:H1	1.67	0.43
52:BT:30:VAL:HG21	52:BT:83:ILE:HG12	2.01	0.43
32:B6:7:ILE:CG2	32:B6:29:ASN:HD22	2.31	0.43
15:CO:39:LEU:O	15:CO:42:HIS:HB3	2.19	0.43
32:B6:19:ARG:HB2	32:B6:20:ASN:H	1.48	0.43
32:B6:41:PRO:HG2	32:B6:44:ARG:O	2.19	0.43
42:DG:139:LEU:HB3	42:DG:144:ILE:HG12	1.99	0.43
42:DG:60:LEU:C	42:DG:62:LEU:H	2.20	0.43
1:AA:1040:U:O2'	1:AA:1041:A:H5'	2.18	0.43
36:BA:2262:U:H4'	36:BA:2328:A:C2	2.54	0.43
36:DA:1336:A:H2'	36:DA:1337:G:C8	2.54	0.43
36:BA:139:G:O6	36:BA:140:G:H2'	2.18	0.43
56:BX:41:ASN:O	56:BX:43:VAL:N	2.47	0.43
56:BX:44:GLU:HG3	56:BX:50:LYS:HA	2.01	0.43
37:DB:73:A:C2'	37:DB:74:U:H5'	2.49	0.43
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	2.19	0.43
57:DY:95:LYS:CG	57:DY:100:ALA:HA	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:33:ASN:ND2	36:DA:2419:U:OP1	2.52	0.43
1:CA:8:A:N7	4:CD:208:SER:HB2	2.34	0.43
33:D7:47:ARG:NH1	36:DA:1311:G:H2'	2.33	0.43
36:DA:2370:G:H2'	36:DA:2371:G:C8	2.54	0.43
48:DP:100:LEU:HD13	48:DP:100:LEU:O	2.19	0.43
38:DC:119:VAL:HG13	38:DC:120:MET:HE2	1.97	0.43
52:BT:25:GLY:O	52:BT:49:VAL:HG12	2.18	0.43
22:CW:8:U:O2'	22:CW:9:A:H5''	2.19	0.43
36:DA:1019:U:C2'	36:DA:1021:A:C2	3.02	0.43
36:DA:1138:G:H2'	36:DA:1139:G:O4'	2.19	0.43
36:DA:1137:G:O2'	36:DA:1138:G:H5'	2.18	0.43
36:DA:2848:G:H8	52:DT:97:ALA:HB2	1.84	0.43
36:DA:1257:C:O2'	41:DF:83:PHE:HA	2.18	0.43
1:AA:177:C:O2	1:AA:177:C:H2'	2.18	0.43
43:DH:54:ARG:CB	43:DH:55:PRO:HD2	2.47	0.43
41:DF:176:LEU:CG	41:DF:177:ALA:H	2.18	0.43
27:B1:91:LYS:HG3	27:B1:92:LYS:N	2.33	0.43
28:D2:28:LYS:O	28:D2:31:GLU:HB2	2.19	0.43
36:DA:324:A:H2'	36:DA:325:G:O4'	2.19	0.43
36:DA:324:A:N6	36:DA:338:G:O2'	2.52	0.43
40:BE:59:VAL:O	40:BE:60:ASN:CG	2.57	0.43
19:CS:29:ARG:O	19:CS:30:LEU:C	2.57	0.43
48:DP:77:ARG:CG	48:DP:77:ARG:HH11	2.32	0.43
19:AS:36:ARG:NH1	19:AS:53:ASN:HA	2.33	0.43
6:CF:19:LEU:HD21	6:CF:59:TYR:CE2	2.54	0.43
1:AA:955:U:H1'	1:AA:1227:A:N6	2.33	0.43
1:CA:1442:G:O6	1:CA:1442(B):A:C2	2.71	0.43
20:AT:33:ILE:HG13	20:AT:33:ILE:H	1.61	0.43
2:AB:119:GLU:O	2:AB:122:PHE:HB3	2.18	0.43
4:AD:120:LEU:HD13	4:AD:126:ILE:HD11	2.00	0.43
39:BD:46:GLN:HA	39:BD:46:GLN:OE1	2.19	0.43
10:AJ:92:THR:HG23	10:AJ:93:GLY:N	2.29	0.43
36:DA:1104:C:H2'	36:DA:1105:U:C6	2.54	0.43
42:DG:128:ARG:O	42:DG:129:GLY:C	2.57	0.43
5:CE:80:ILE:HG12	5:CE:81:GLU:N	2.33	0.43
40:BE:38:THR:C	40:BE:40:GLU:N	2.72	0.43
36:BA:1495:A:H2'	36:BA:1496:A:C2	2.53	0.43
1:CA:1256:A:C2	1:CA:1277:C:C2	3.07	0.43
1:CA:1282:C:H2'	1:CA:1283:G:H5'	2.01	0.43
25:CZ:226:GLU:OE1	25:CZ:240:GLY:HA2	2.18	0.43
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:245:PRO:O	39:DD:245:PRO:HD2	2.18	0.43
1:CA:251:G:H4'	1:CA:252:U:O5'	2.18	0.43
47:BO:21:CYS:O	47:BO:22:ILE:HD13	2.19	0.43
36:DA:89:G:OP2	36:DA:90:U:H2'	2.18	0.43
23:AX:12:A:P	23:AX:12:A:H8	2.42	0.43
39:BD:6:PHE:HE2	39:BD:13:ARG:HH21	1.65	0.43
9:CI:40:LEU:C	9:CI:42:ARG:H	2.21	0.43
1:AA:477:A:O2'	1:AA:479:C:H5'	2.18	0.43
35:D9:29:ASN:O	35:D9:29:ASN:ND2	2.52	0.43
1:CA:952:U:C5	13:CM:104:ARG:NH2	2.87	0.43
36:BA:2240:C:O2'	36:BA:2241:A:H5'	2.18	0.43
39:BD:231:HIS:ND1	39:BD:232:PRO:CD	2.80	0.43
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.86	0.43
36:BA:491:G:O2'	36:BA:492:A:H5'	2.18	0.43
36:BA:1374:G:H2'	36:BA:1375:C:H6	1.83	0.43
36:DA:2257:U:H2'	36:DA:2258:C:C6	2.54	0.43
36:BA:443:A:H2'	41:BF:45:ARG:NH2	2.34	0.43
36:BA:1094:U:H2'	36:BA:1096:A:OP2	2.19	0.43
48:DP:12:ALA:O	48:DP:13:ASN:O	2.36	0.43
41:BF:113:ALA:C	41:BF:115:ALA:H	2.22	0.43
26:D0:3:HIS:CD2	36:DA:2602:A:H2	2.37	0.43
1:AA:1396:A:O4'	1:AA:1398:A:H1'	2.18	0.43
29:D3:31:LEU:HD12	36:DA:1157:G:O2'	2.18	0.43
46:DN:42:TRP:H	53:DU:64:ARG:NH1	2.16	0.43
58:DZ:137:ILE:HG23	58:DZ:158:PRO:HD3	2.01	0.43
36:DA:758:C:O2'	36:DA:1981:A:N3	2.44	0.43
36:BA:2795:G:H2'	36:BA:2796:U:H5'	2.01	0.43
11:AK:76:GLY:O	11:AK:78:GLN:HG3	2.19	0.43
2:AB:93:VAL:HG13	2:AB:93:VAL:O	2.18	0.43
3:AC:99:VAL:HG23	3:AC:99:VAL:O	2.19	0.43
36:BA:654:A:H3'	36:BA:654:A:P	2.58	0.43
22:AW:33:U:O5'	22:AW:33:U:H6	2.00	0.43
36:BA:370:G:H5''	36:BA:423:A:N6	2.34	0.43
45:DK:66:UNK:C	45:DK:68:UNK:N	2.81	0.43
22:CW:24:G:H2'	22:CW:25:C:C6	2.54	0.43
36:BA:1529:G:C2	36:BA:1530:C:C2	3.07	0.43
4:AD:34:GLU:O	4:AD:35:ARG:CB	2.66	0.43
27:D1:89:GLU:O	27:D1:93:GLU:HB2	2.18	0.43
39:DD:35:LYS:CA	39:DD:63:ARG:HA	2.49	0.43
51:DS:97:ARG:O	51:DS:99:LYS:N	2.51	0.43
28:B2:6:VAL:C	28:B2:8:LYS:N	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:11:ASP:N	57:BY:27:VAL:HG22	2.34	0.43
41:BF:157:VAL:HG23	41:BF:157:VAL:O	2.19	0.43
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.19	0.43
56:DX:37:THR:HG22	56:DX:38:GLU:N	2.33	0.43
42:DG:137:GLU:O	42:DG:140:ILE:HG23	2.19	0.43
40:DE:51:PHE:O	40:DE:53:PRO:HD3	2.19	0.43
36:DA:2101:G:C3'	36:DA:2102:U:H5''	2.46	0.43
4:CD:9:CYS:HB3	4:CD:32:ALA:CB	2.49	0.43
53:BU:88:ILE:O	53:BU:90:VAL:N	2.43	0.43
51:BS:34:HIS:NE2	51:BS:54:LEU:HB2	2.34	0.43
1:CA:1352:C:C2'	1:CA:1353:G:C8	2.83	0.43
57:BY:47:LYS:O	57:BY:48:ALA:HB2	2.19	0.43
25:CZ:64:ASN:CA	25:CZ:83:PRO:HG2	2.45	0.43
52:BT:29:ARG:NH2	52:BT:46:GLU:OE2	2.52	0.43
1:AA:495:A:H1'	1:AA:496:A:C8	2.53	0.43
34:B8:33:ASN:OD1	34:B8:36:LYS:HG3	2.19	0.43
36:BA:2287:A:C2	36:BA:2346:A:C2	3.07	0.43
20:AT:52:ALA:C	20:AT:54:LYS:N	2.72	0.43
48:BP:39:LYS:HD3	48:BP:40:SER:N	2.27	0.43
36:BA:1448:G:H5'	36:BA:1449:A:OP1	2.19	0.43
1:CA:739:C:HO2'	15:CO:42:HIS:CE1	2.34	0.43
32:B6:14:THR:HB	32:B6:52:VAL:HG21	2.01	0.43
34:D8:50:LEU:CA	34:D8:53:PRO:HD2	2.49	0.43
1:CA:1430:C:O2	1:CA:1430:C:O5'	2.37	0.43
2:CB:187:LEU:HD23	2:CB:201:ILE:O	2.19	0.43
25:CZ:131:ILE:HD11	25:CZ:163:PHE:CE2	2.53	0.43
23:CX:20:U:H2'	23:CX:21:C:H6	1.82	0.43
33:D7:5:TRP:NE1	33:D7:7:PRO:HB3	2.34	0.43
51:DS:57:LYS:O	51:DS:58:LEU:HB2	2.18	0.43
40:DE:117:MET:HE1	40:DE:136:ARG:HA	1.99	0.43
1:CA:356:A:H2	1:CA:368:U:O2	2.01	0.43
1:CA:55:A:C6	1:CA:56:U:C2	3.06	0.43
36:DA:1142(A):A:C4	36:DA:1144:G:N7	2.87	0.43
36:DA:983:A:H2'	36:DA:984:A:C8	2.53	0.43
48:DP:88:LEU:HD12	48:DP:91:PHE:CE1	2.53	0.43
36:DA:2692:C:H2'	36:DA:2693:A:H8	1.84	0.43
19:CS:70:LYS:HA	19:CS:70:LYS:HD3	1.82	0.43
36:BA:2720:U:O2	36:BA:2720:U:C2'	2.66	0.43
40:DE:201:THR:OG1	40:DE:202:LYS:N	2.52	0.43
25:AZ:265:THR:HG23	25:AZ:291:ARG:O	2.19	0.43
1:AA:174:C:O2'	1:AA:175:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1600:C:C2'	36:BA:1601:G:H5'	2.49	0.43
48:BP:107:LYS:HE3	48:BP:107:LYS:HB2	1.81	0.43
36:DA:813:U:H2'	36:DA:814:C:C6	2.53	0.43
22:CV:45:U:H2'	22:CV:45:U:OP2	2.19	0.43
19:CS:63:THR:HG22	19:CS:66:MET:HG2	2.01	0.43
1:AA:1503:A:C1'	23:AX:15:A:N6	2.82	0.43
35:B9:1:MET:CG	35:B9:31:LYS:O	2.63	0.43
2:AB:121:LEU:HG	2:AB:126:GLU:CB	2.49	0.43
43:DH:41:MET:SD	43:DH:53:GLU:O	2.77	0.43
1:AA:173:U:H5''	1:AA:197:A:O4'	2.19	0.43
13:CM:54:VAL:HA	13:CM:57:ARG:HH12	1.83	0.43
16:CP:34:GLU:HG2	16:CP:35:LYS:O	2.19	0.43
22:CV:2:C:H5''	26:D0:8:GLY:HA2	2.00	0.43
39:BD:206:LEU:HA	39:BD:206:LEU:HD12	1.76	0.43
36:BA:1109:C:C2'	36:BA:1110:G:H5'	2.48	0.43
46:BN:34:LEU:O	46:BN:34:LEU:HD13	2.19	0.43
27:B1:52:ARG:O	27:B1:53:VAL:C	2.57	0.43
1:CA:1006:C:N4	1:CA:1024:G:H21	2.17	0.43
40:DE:47:VAL:O	40:DE:80:GLU:HA	2.19	0.43
36:DA:802:A:C5	36:DA:803:U:C4	3.05	0.43
17:AQ:52:LYS:HD2	17:AQ:55:ASP:CG	2.39	0.43
1:AA:1153:C:O2'	1:AA:1154:G:P	2.77	0.43
36:DA:149:A:O2'	36:DA:150:C:H5'	2.19	0.43
46:BN:133:GLN:C	46:BN:135:PRO:HD3	2.39	0.43
25:CZ:257:GLY:HA3	25:CZ:302:GLN:HB3	2.01	0.43
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.51	0.43
49:BQ:12:GLN:HE21	49:BQ:72:LYS:HG3	1.84	0.43
36:BA:2776:A:H4'	36:BA:2777:G:H5''	2.01	0.43
39:DD:5:LYS:C	39:DD:6:PHE:CD1	2.92	0.43
1:CA:347:G:H21	1:CA:348:G:H1'	1.83	0.43
58:BZ:95:PRO:O	58:BZ:95:PRO:HG2	2.19	0.43
36:DA:1327:C:H2'	36:DA:1328:G:O4'	2.19	0.43
36:DA:1385:G:H1'	36:DA:1386:C:C6	2.54	0.43
36:BA:2242:G:H2'	36:BA:2243:U:O5'	2.18	0.43
50:DR:23:ASN:N	50:DR:23:ASN:ND2	2.67	0.43
1:CA:445:G:H2'	1:CA:446:G:C8	2.53	0.43
1:CA:769:G:O2'	1:CA:770:C:H5'	2.18	0.43
25:CZ:263:ARG:HG3	25:CZ:263:ARG:NH1	2.33	0.43
1:CA:596:C:O2'	1:CA:597:G:H5'	2.19	0.43
39:DD:126:GLN:O	39:DD:193:VAL:CG1	2.67	0.43
1:AA:918:A:H2'	1:AA:919:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:29:U:H5''	53:BU:7:GLY:HA2	2.00	0.43
49:BQ:70:PRO:CA	49:BQ:95:ALA:HB2	2.49	0.43
36:BA:1386:C:H2'	36:BA:1387:C:C6	2.53	0.43
1:CA:71:C:H2'	1:CA:72:C:C6	2.54	0.43
36:BA:2745:C:C4	36:BA:2746:U:C4	3.07	0.43
36:DA:2624:G:O2'	36:DA:2625:G:H5'	2.19	0.43
36:DA:1605:C:H2'	36:DA:1606:G:O4'	2.19	0.43
40:DE:144:ARG:O	40:DE:148:GLY:HA2	2.19	0.43
36:DA:373:U:C2	36:DA:374:A:C8	3.07	0.43
47:DO:86:ILE:HG22	47:DO:94:ARG:HG3	2.01	0.43
30:D4:13:ARG:HG3	30:D4:13:ARG:O	2.19	0.43
39:BD:220:HIS:C	39:BD:220:HIS:CD2	2.92	0.43
27:B1:21:ARG:HH11	27:B1:21:ARG:HG3	1.82	0.43
48:BP:90:ARG:O	48:BP:90:ARG:HD2	2.19	0.43
36:BA:2187:G:C3'	36:BA:2188:C:C5'	2.97	0.43
13:CM:22:ILE:HB	13:CM:25:ILE:HB	1.99	0.43
13:CM:64:TRP:N	13:CM:64:TRP:CD1	2.86	0.43
28:B2:25:VAL:HG12	28:B2:29:LYS:HG3	2.00	0.43
36:BA:333:G:N3	36:BA:333:G:H2'	2.33	0.43
4:AD:101:LEU:HB2	4:AD:138:TYR:HB3	2.00	0.43
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.18	0.43
41:BF:164:ARG:HG2	41:BF:164:ARG:NH1	2.34	0.43
36:DA:593:G:O2'	36:DA:594:U:H5'	2.19	0.43
34:B8:6:THR:HG21	34:B8:63:PRO:HD3	1.98	0.43
51:BS:59:LYS:CG	51:BS:60:GLY:N	2.70	0.43
36:DA:195:A:C8	36:DA:197:A:OP1	2.71	0.43
14:CN:7:ILE:CG1	14:CN:8:GLU:H	2.30	0.43
31:B5:41:PRO:O	31:B5:42:PRO:O	2.37	0.43
36:BA:2812:G:N2	36:BA:2889:C:C2	2.87	0.43
34:B8:30:ARG:CZ	36:BA:2419:U:O4	2.67	0.43
34:B8:33:ASN:OD1	34:B8:34:TRP:N	2.51	0.43
34:B8:32:LEU:CB	34:B8:36:LYS:NZ	2.82	0.43
25:AZ:378:VAL:CG2	25:AZ:380:LEU:HD21	2.49	0.43
48:BP:51:PHE:HB3	48:BP:52:GLU:H	1.54	0.43
43:DH:123:PHE:CD1	43:DH:123:PHE:N	2.86	0.43
48:BP:23:PRO:O	48:BP:33:ARG:CD	2.64	0.43
51:BS:47:THR:C	51:BS:48:LEU:HD12	2.39	0.43
36:BA:2264:C:H2'	36:BA:2265:U:O4'	2.18	0.43
56:DX:65:ARG:HH11	56:DX:65:ARG:HG2	1.84	0.43
49:BQ:141:GLN:CD	58:BZ:72:ARG:HE	2.20	0.43
58:BZ:28:MET:HA	58:BZ:88:PHE:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:57:ALA:O	46:BN:58:ASP:C	2.57	0.43
40:BE:7:VAL:HG13	40:BE:7:VAL:O	2.18	0.43
33:D7:3:ARG:HH11	33:D7:3:ARG:HG2	1.83	0.43
36:DA:583:G:H2'	36:DA:584:C:H6	1.83	0.43
36:DA:527:C:H4'	36:DA:528:A:O4'	2.19	0.43
1:CA:357:G:O2'	1:CA:358:U:H5'	2.18	0.43
31:D5:16:ARG:NH1	31:D5:17:ASP:OD1	2.52	0.43
48:DP:84:ASN:CG	48:DP:116:GLY:HA2	2.39	0.43
54:DV:61:VAL:O	54:DV:61:VAL:HG22	2.19	0.43
41:DF:108:LYS:H	41:DF:108:LYS:HG2	1.65	0.43
40:BE:115:GLY:O	40:BE:116:VAL:O	2.36	0.43
43:BH:16:SER:CB	43:BH:27:LYS:HD3	2.49	0.43
50:BR:96:ARG:HH11	50:BR:117:VAL:HG11	1.80	0.43
58:BZ:137:ILE:CD1	58:BZ:158:PRO:HG2	2.49	0.43
36:DA:815:C:C2	36:DA:816:C:C5	3.07	0.43
25:CZ:317:GLU:CG	25:CZ:404:LEU:HD21	2.43	0.43
43:DH:28:GLY:HA3	43:DH:79:VAL:CB	2.47	0.43
36:BA:1060:U:H1'	36:BA:1061:U:OP2	2.19	0.43
6:CF:62:TRP:O	6:CF:63:TYR:CG	2.72	0.43
1:AA:598:U:H2'	1:AA:599:C:C6	2.54	0.43
8:AH:114:THR:HG21	8:AH:129:VAL:CG2	2.46	0.43
55:BW:12:ILE:HG23	55:BW:17:VAL:HG21	2.00	0.43
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.54	0.43
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.54	0.43
16:CP:62:VAL:HG12	16:CP:62:VAL:O	2.18	0.43
15:AO:21:ASP:OD2	15:AO:24:SER:OG	2.34	0.43
51:DS:78:LEU:HD11	51:DS:103:GLU:CB	2.49	0.43
1:AA:368:U:C4	25:AZ:234:ARG:CD	3.02	0.43
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.84	0.43
1:CA:1073:U:O2'	1:CA:1074:G:H5'	2.19	0.43
1:AA:1158:C:H2'	1:AA:1158:C:O2	2.18	0.43
1:CA:719:C:H3'	1:CA:720:C:C6	2.53	0.43
14:CN:3:ARG:CG	14:CN:3:ARG:O	2.66	0.43
2:CB:145:LEU:CD1	2:CB:149:LEU:HD12	2.49	0.43
2:CB:149:LEU:HD23	2:CB:149:LEU:HA	1.80	0.43
36:DA:272(J):C:H42	36:DA:363:G:H1	1.67	0.43
36:DA:2870:C:H2'	36:DA:2871:C:O4'	2.18	0.43
1:AA:1257:U:H2'	1:AA:1258:G:OP1	2.18	0.43
36:DA:2351:G:O2'	36:DA:2352:A:H8	2.00	0.43
29:B3:49:LYS:HG2	29:B3:49:LYS:O	2.19	0.43
36:BA:654(M):C:H2'	36:BA:654(N):G:N7	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:170:VAL:HG11	4:CD:174:LEU:HB2	2.00	0.43
36:BA:1242:A:C5'	36:BA:1243:G:OP2	2.65	0.43
43:DH:105:LEU:N	43:DH:105:LEU:HD23	2.32	0.43
36:BA:271(H):G:N1	36:BA:271(P):C:N4	2.64	0.43
25:AZ:258:LEU:O	25:AZ:259:ALA:O	2.37	0.43
12:AL:42:THR:O	12:AL:42:THR:HG22	2.19	0.43
46:BN:87:LEU:O	46:BN:88:GLU:C	2.58	0.43
36:DA:2010:G:C5	36:DA:2011:U:C5	3.07	0.43
36:BA:2822:G:H5''	40:BE:159:HIS:CD2	2.54	0.43
36:BA:2552:U:O2	36:BA:2554:U:H5'	2.19	0.43
56:DX:45:THR:OG1	56:DX:46:ALA:N	2.52	0.43
53:BU:46:ALA:O	53:BU:49:HIS:N	2.52	0.43
1:CA:599:C:H2'	1:CA:600:C:C6	2.53	0.43
36:BA:876:C:H2'	36:BA:877:U:O4'	2.19	0.43
22:CV:63:G:H2'	22:CV:64:A:H8	1.81	0.43
58:DZ:107:THR:O	58:DZ:108:PRO:C	2.58	0.43
47:BO:12:ASP:CB	47:BO:85:VAL:HG13	2.49	0.43
1:AA:587:G:C6	1:AA:755:G:C6	3.07	0.43
38:BC:74:VAL:HG23	38:BC:157:LYS:HE2	2.00	0.43
36:BA:2111:C:C2	36:BA:2147:G:N2	2.82	0.43
58:DZ:40:ASP:HB3	58:DZ:43:GLU:CG	2.48	0.43
36:DA:2726:U:H6	47:DO:67:LYS:NZ	2.15	0.43
1:CA:472:A:O3'	16:CP:81:ARG:HA	2.19	0.43
12:AL:126:LYS:HD2	12:AL:126:LYS:HA	1.73	0.43
1:AA:865:A:H2'	1:AA:866:C:C6	2.54	0.43
6:AF:48:LEU:HD13	6:AF:52:ILE:HD12	2.01	0.43
36:DA:271(U):G:H2'	36:DA:271(V):G:H8	1.84	0.43
18:CR:88:LYS:HD3	18:CR:88:LYS:C	2.38	0.43
36:BA:809:G:O4'	36:BA:1254:A:H1'	2.19	0.43
36:BA:734:A:O2'	36:BA:1635:G:H5'	2.19	0.43
4:CD:14:ARG:HA	4:CD:39:PRO:HG3	2.01	0.43
36:BA:2793:G:H22	36:BA:2804:C:H1'	1.83	0.43
37:BB:101:G:H2'	37:BB:102:A:O4'	2.19	0.43
19:CS:8:GLY:O	19:CS:9:VAL:C	2.58	0.43
36:BA:137:C:O2	36:BA:137:C:H2'	2.18	0.43
46:BN:128:HIS:O	46:BN:128:HIS:CG	2.69	0.43
36:BA:2104:G:H3'	36:BA:2104:G:N3	2.34	0.43
26:D0:47:PRO:O	26:D0:78:TYR:HB3	2.18	0.43
22:CV:56:C:O5'	22:CV:56:C:H6	2.01	0.43
24:AY:19:G:C8	24:AY:57:G:N2	2.86	0.43
2:CB:132:LYS:HG3	2:CB:135:GLN:OE1	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:270:VAL:HG13	25:CZ:286:VAL:CG2	2.33	0.42
25:CZ:181:GLN:O	25:CZ:182:MET:HG2	2.19	0.42
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	2.01	0.42
53:DU:92:ARG:CZ	53:DU:94:ASN:HD22	2.32	0.42
54:DV:4:ILE:HG22	54:DV:4:ILE:O	2.19	0.42
28:B2:29:LYS:O	28:B2:31:GLU:N	2.52	0.42
28:B2:35:LEU:CA	28:B2:39:ALA:HB3	2.47	0.42
1:AA:407:G:O2'	4:AD:116:GLN:CG	2.61	0.42
43:BH:30:LYS:NZ	43:BH:83:TYR:HE2	2.17	0.42
52:DT:28:VAL:O	52:DT:28:VAL:HG12	2.19	0.42
52:DT:30:VAL:HG12	52:DT:44:ASP:OD2	2.18	0.42
36:DA:336:C:C4'	57:DY:7:VAL:HG21	2.49	0.42
52:BT:93:ARG:O	52:BT:114:LEU:HD23	2.19	0.42
42:DG:114:ILE:HG23	42:DG:114:ILE:O	2.19	0.42
36:BA:1541:G:O2'	36:BA:1542:A:C5'	2.67	0.42
36:DA:1945:G:O2'	36:DA:1946:U:H5'	2.19	0.42
56:DX:54:VAL:HG13	56:DX:81:VAL:HG12	2.00	0.42
34:B8:50:LEU:C	34:B8:53:PRO:HD2	2.40	0.42
37:BB:7:G:C2'	37:BB:8:U:C5'	2.97	0.42
37:BB:7:G:C2'	37:BB:8:U:H5''	2.49	0.42
25:AZ:136:ASN:ND2	60:AZ:501:GDP:C6	2.86	0.42
25:AZ:146:LEU:O	25:AZ:150:VAL:N	2.48	0.42
36:BA:2160:G:H8	36:BA:2160:G:C5'	2.19	0.42
32:D6:33:LYS:O	32:D6:34:LEU:CB	2.67	0.42
34:D8:40:GLU:O	34:D8:44:LYS:HE3	2.20	0.42
36:BA:1142(A):A:H4'	46:BN:25:ARG:HH22	1.83	0.42
36:DA:1252:G:OP2	53:DU:14:HIS:CE1	2.68	0.42
53:DU:8:VAL:HG12	53:DU:9:VAL:N	2.33	0.42
57:BY:95:LYS:NZ	57:BY:100:ALA:HB2	2.34	0.42
36:DA:1166:C:C2	36:DA:1184:G:C2	3.07	0.42
36:DA:1038:C:H3'	36:DA:1039:G:C5'	2.49	0.42
7:CG:119:ARG:O	7:CG:120:ILE:C	2.57	0.42
36:DA:1139:G:C5'	46:DN:70:LYS:HZ3	2.19	0.42
58:BZ:115:GLY:CA	58:BZ:177:PRO:HD3	2.49	0.42
48:DP:115:LEU:HG	48:DP:116:GLY:H	1.84	0.42
48:DP:7:ARG:HD2	48:DP:7:ARG:HA	1.79	0.42
40:BE:120:TRP:CG	40:BE:155:LYS:HB3	2.54	0.42
51:DS:19:LYS:O	51:DS:20:ARG:NH2	2.52	0.42
36:DA:2179:C:H4'	36:DA:2180:U:C4	2.52	0.42
1:AA:187:C:C2	1:AA:188:C:C5	3.07	0.42
28:D2:35:LEU:O	28:D2:39:ALA:N	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2810:A:H2'	36:BA:2811:G:O4'	2.19	0.42
51:BS:106:ARG:HH12	51:BS:108:GLY:CA	2.32	0.42
2:CB:134:GLU:O	2:CB:138:LEU:HB2	2.19	0.42
49:BQ:33:GLY:HA2	49:BQ:105:GLU:HA	2.00	0.42
20:CT:74:LYS:HD3	20:CT:74:LYS:N	2.34	0.42
58:DZ:123:ASP:O	58:DZ:124:ILE:CG2	2.61	0.42
2:CB:30:ARG:NH1	2:CB:30:ARG:HB3	2.33	0.42
6:CF:1:MET:HG2	6:CF:68:PRO:N	2.34	0.42
1:CA:1018:C:H2'	1:CA:1019:C:C6	2.54	0.42
13:AM:116:THR:O	13:AM:117:VAL:C	2.55	0.42
50:BR:100:LEU:HD11	50:BR:113:LEU:HD13	2.01	0.42
1:CA:1442(B):A:C8	52:DT:118:ARG:CZ	3.02	0.42
29:B3:44:ARG:O	29:B3:47:VAL:HB	2.19	0.42
25:CZ:338:TYR:OH	25:CZ:390:GLU:HB3	2.19	0.42
1:AA:1235:U:O3'	21:AU:3:LYS:HB2	2.19	0.42
27:B1:44:PRO:HA	36:BA:396:G:O3'	2.19	0.42
28:D2:11:GLU:HA	28:D2:14:ARG:CB	2.44	0.42
34:B8:42:ARG:NH2	36:BA:2382:G:H21	2.17	0.42
36:DA:272(J):C:H2'	36:DA:274:G:C5'	2.49	0.42
40:BE:38:THR:HB	40:BE:41:LYS:CG	2.48	0.42
25:CZ:255:ILE:CG2	25:CZ:302:GLN:NE2	2.80	0.42
36:DA:271(H):G:H1'	36:DA:271(I):G:H8	1.81	0.42
11:CK:77:MET:HE3	11:CK:80:VAL:HG12	2.00	0.42
7:AG:9:VAL:CG2	7:AG:94:ARG:HD3	2.45	0.42
11:CK:21:ILE:HD13	11:CK:94:ALA:CB	2.49	0.42
37:BB:16:G:N2	37:BB:69:G:H1'	2.34	0.42
17:AQ:49:GLU:OE1	17:AQ:49:GLU:HA	2.19	0.42
6:CF:98:LEU:HD12	6:CF:98:LEU:N	2.29	0.42
36:BA:644:A:H2	36:BA:2369:A:H1'	1.84	0.42
1:CA:1216:G:H2'	1:CA:1217:C:H6	1.84	0.42
1:AA:1347:G:C5	9:AI:107:ARG:NH2	2.87	0.42
36:DA:469:G:H2'	36:DA:470:A:H5''	2.01	0.42
35:B9:19:ARG:C	35:B9:21:GLY:H	2.22	0.42
36:BA:1222:C:C2'	36:BA:1223:G:C5'	2.97	0.42
54:DV:82:ARG:HD2	54:DV:82:ARG:N	2.33	0.42
1:CA:1309:G:N1	1:CA:1329:A:C4	2.87	0.42
53:DU:107:ALA:O	53:DU:110:VAL:HB	2.19	0.42
1:CA:986:A:C6	1:CA:987:G:C6	3.06	0.42
25:AZ:96:ALA:O	25:AZ:99:MET:HG2	2.19	0.42
12:AL:127:GLU:O	12:AL:128:ALA:C	2.58	0.42
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.86	0.42
31:B5:52:TYR:CD1	31:B5:52:TYR:O	2.72	0.42
44:DJ:49:UNK:O	44:DJ:51:UNK:N	2.52	0.42
36:DA:1438:U:O2'	36:DA:1439:A:H5'	2.19	0.42
36:DA:1655:A:C8	36:DA:1656:C:C5	3.07	0.42
44:DJ:74:UNK:C	44:DJ:76:UNK:N	2.81	0.42
36:DA:1466:G:H2'	36:DA:1547:C:C4	2.54	0.42
36:DA:327:G:N2	36:DA:328:U:H1'	2.34	0.42
36:DA:758:C:O2	36:DA:1981:A:H2	2.02	0.42
1:CA:16:A:C2	1:CA:920:U:O2	2.72	0.42
44:BJ:30:UNK:O	44:BJ:31:UNK:CB	2.67	0.42
57:DY:94:LYS:O	57:DY:101:LYS:HA	2.19	0.42
5:AE:38:GLN:OE1	5:AE:38:GLN:HA	2.19	0.42
41:DF:43:LYS:HA	41:DF:98:SER:HB3	2.01	0.42
36:DA:2599:G:O2'	36:DA:2600:A:H5'	2.19	0.42
13:AM:111:LYS:O	13:AM:112:GLY:O	2.36	0.42
8:CH:97:VAL:O	8:CH:97:VAL:HG22	2.18	0.42
49:BQ:66:ILE:HG13	49:BQ:66:ILE:O	2.19	0.42
49:BQ:139:GLU:OE1	49:BQ:139:GLU:CA	2.66	0.42
36:BA:2468:G:N2	36:BA:2481:G:O2'	2.52	0.42
4:AD:8:VAL:HG23	4:AD:9:CYS:N	2.34	0.42
51:DS:98:VAL:HG12	51:DS:100:ALA:H	1.83	0.42
28:B2:3:LEU:CD2	36:BA:98:G:H5''	2.49	0.42
4:AD:107:ARG:HH11	4:AD:107:ARG:HG2	1.84	0.42
4:CD:98:GLU:C	4:CD:100:ARG:H	2.23	0.42
37:BB:44:G:H1'	37:BB:47:C:N4	2.35	0.42
42:DG:55:LYS:C	42:DG:57:ALA:H	2.21	0.42
4:CD:12:CYS:O	4:CD:33:MET:CE	2.66	0.42
42:BG:42:GLY:O	42:BG:43:LEU:HB2	2.19	0.42
1:CA:1054:C:C2'	1:CA:1054:C:O2	2.67	0.42
40:BE:57:LYS:C	40:BE:58:ARG:HG3	2.39	0.42
39:BD:35:LYS:CB	39:BD:36:PRO:CD	2.97	0.42
36:DA:853:G:H1	36:DA:924:C:H42	1.66	0.42
42:DG:116:ASP:O	42:DG:117:PHE:CB	2.67	0.42
36:BA:1052:C:O2'	36:BA:1053:C:P	2.78	0.42
36:DA:1341:U:H4'	56:DX:57:LEU:HB3	2.00	0.42
34:B8:22:VAL:HB	34:B8:53:PRO:HB2	2.02	0.42
34:D8:14:VAL:HG21	34:D8:22:VAL:CG1	2.49	0.42
36:BA:1747(A):G:O2'	36:BA:1748:G:H5''	2.17	0.42
36:DA:2110:G:C2	36:DA:2178:C:H5	2.35	0.42
51:BS:89:ARG:HG3	51:BS:92:TYR:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:64:ASN:CA	25:AZ:83:PRO:HG2	2.48	0.42
50:DR:79:LEU:HD13	50:DR:79:LEU:O	2.18	0.42
49:DQ:134:ARG:NE	58:DZ:122:ARG:NH2	2.67	0.42
38:BC:10:LEU:HA	38:BC:13:LYS:HE2	2.00	0.42
32:D6:15:GLU:CD	32:D6:18:ARG:NE	2.73	0.42
48:DP:101:VAL:HG12	48:DP:106:LEU:HB2	2.00	0.42
48:DP:113:LYS:HG2	48:DP:114:ILE:H	1.84	0.42
27:D1:18:ILE:HA	27:D1:36:GLY:O	2.19	0.42
58:DZ:60:GLU:O	58:DZ:61:LEU:HB2	2.19	0.42
36:DA:1164:G:C6	36:DA:1165:U:C4	3.07	0.42
1:CA:1240:U:OP1	7:CG:119:ARG:NH2	2.52	0.42
36:DA:648:G:O2'	36:DA:649:G:H5'	2.18	0.42
3:AC:76:VAL:CG2	3:AC:103:VAL:HG21	2.49	0.42
36:DA:2762:G:O2'	36:DA:2763:G:H5'	2.19	0.42
41:DF:199:TRP:O	41:DF:202:PHE:HB3	2.20	0.42
36:DA:1242:A:C5'	36:DA:1243:G:OP2	2.63	0.42
36:DA:1517:G:O2'	36:DA:1518:U:H5'	2.19	0.42
12:CL:24:VAL:CG1	12:CL:27:LEU:HD22	2.48	0.42
16:AP:66:PRO:HB2	16:AP:71:ARG:HB2	2.01	0.42
36:DA:1322:A:OP1	55:DW:11:ARG:HG3	2.19	0.42
30:B4:14:ILE:O	30:B4:21:VAL:HG13	2.19	0.42
3:CC:70:VAL:O	3:CC:105:GLU:HA	2.19	0.42
1:AA:186:C:H2'	1:AA:187:C:H6	1.84	0.42
28:D2:35:LEU:HB3	28:D2:50:ILE:CD1	2.49	0.42
36:DA:322:A:H5'	36:DA:340:A:H1'	2.01	0.42
36:BA:322:A:H3'	41:BF:169:ASN:OD1	2.19	0.42
19:CS:29:ARG:O	19:CS:31:ILE:N	2.53	0.42
48:DP:77:ARG:HG3	48:DP:78:PRO:N	2.35	0.42
36:BA:1389:G:H2'	36:BA:1390:U:O4'	2.19	0.42
38:DC:29:VAL:HG23	38:DC:30:LYS:N	2.35	0.42
49:DQ:21:THR:CG2	49:DQ:101:ARG:HD2	2.49	0.42
38:BC:106:GLY:O	38:BC:107:TRP:CB	2.66	0.42
50:DR:4:LEU:HD13	50:DR:7:GLY:CA	2.49	0.42
1:AA:66:G:H4'	1:AA:173:U:C4	2.54	0.42
52:BT:65:LYS:NZ	52:BT:66:VAL:N	2.65	0.42
40:DE:129:HIS:HB3	40:DE:130:GLY:H	1.67	0.42
12:AL:24:VAL:HG11	12:AL:27:LEU:CD2	2.41	0.42
25:AZ:236:THR:O	25:AZ:289:LEU:HD12	2.19	0.42
36:DA:1498:C:H2'	36:DA:1499:C:C6	2.53	0.42
1:CA:534:U:C6	1:CA:534:U:H5'	2.45	0.42
7:AG:91:VAL:CG2	7:AG:95:ARG:HB3	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:95:ARG:HG3	7:AG:95:ARG:HH11	1.82	0.42
31:D5:29:THR:HG21	36:DA:2814:C:HO2'	1.80	0.42
37:DB:40:U:H3'	37:DB:41:U:H5''	2.01	0.42
46:BN:134:ARG:O	46:BN:136:GLU:N	2.52	0.42
53:DU:34:LYS:HE2	53:DU:37:GLU:OE1	2.20	0.42
36:DA:1352:U:C2'	36:DA:1353:A:H5'	2.49	0.42
29:B3:21:ALA:O	29:B3:24:LYS:N	2.53	0.42
39:DD:93:ALA:HB3	39:DD:105:ILE:CG2	2.49	0.42
15:AO:66:LEU:HD12	15:AO:66:LEU:HA	1.81	0.42
55:BW:10:VAL:HG23	55:BW:101:SER:O	2.18	0.42
36:DA:2393:A:C5	36:DA:2394:C:C5	3.07	0.42
36:BA:1378:A:H4'	36:BA:1379:A:O5'	2.19	0.42
36:BA:2689:U:H5''	36:BA:2690:C:H5'	2.00	0.42
36:DA:1706:U:O2	36:DA:1757:U:H5'	2.18	0.42
31:B5:47:PRO:HG3	55:BW:37:ARG:HH21	1.84	0.42
36:BA:2724:C:OP1	40:BE:111:ARG:NH1	2.51	0.42
38:DC:131:LEU:HD13	38:DC:136:LEU:HB3	2.01	0.42
36:DA:1751:C:H2'	36:DA:1752:C:H6	1.80	0.42
32:D6:22:ALA:HB1	32:D6:39:TYR:CZ	2.54	0.42
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.18	0.42
8:AH:26:VAL:HG12	8:AH:59:LEU:O	2.19	0.42
54:DV:74:LYS:HB2	54:DV:83:ARG:HB2	2.00	0.42
36:BA:1767:C:O2'	36:BA:1768:U:H5'	2.19	0.42
41:BF:82:ILE:O	41:BF:83:PHE:O	2.37	0.42
1:AA:779:C:H2'	1:AA:780:A:O4'	2.19	0.42
36:DA:2735:G:H2'	36:DA:2736:G:H8	1.84	0.42
1:AA:903:G:H2'	1:AA:904:C:C6	2.55	0.42
15:CO:31:LEU:HA	15:CO:31:LEU:HD12	1.87	0.42
36:BA:919:G:N2	36:BA:2269:A:OP2	2.52	0.42
1:AA:123:C:C4	1:AA:124:G:N7	2.87	0.42
36:BA:1530:C:H6	36:BA:1530:C:O5'	2.01	0.42
1:CA:247:G:OP2	17:CQ:100:LYS:N	2.42	0.42
46:DN:51:PHE:CE1	46:DN:119:ARG:HD2	2.54	0.42
5:CE:72:GLN:O	5:CE:74:GLY:N	2.51	0.42
36:BA:2239:G:H5'	39:BD:251:GLY:HA3	2.00	0.42
1:CA:838:G:C6	1:CA:840:C:H1'	2.54	0.42
3:CC:151:VAL:HA	3:CC:199:LYS:O	2.19	0.42
9:AI:41:VAL:O	9:AI:41:VAL:HG12	2.20	0.42
48:BP:139:LYS:HG2	48:BP:139:LYS:O	2.19	0.42
30:B4:46:GLN:NE2	30:B4:47:GLN:H	2.16	0.42
36:DA:1855:G:O2'	36:DA:1856:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1478:G:N2	36:BA:1514:U:C2	2.86	0.42
36:BA:2642:G:O2'	36:BA:2643:G:H5'	2.19	0.42
38:BC:116:THR:O	38:BC:118:ASP:N	2.52	0.42
47:DO:111:PHE:O	47:DO:115:VAL:HG23	2.19	0.42
54:DV:52:VAL:O	54:DV:52:VAL:HG22	2.19	0.42
1:CA:1314:C:C5	1:CA:1315:U:C4	3.07	0.42
34:D8:61:LEU:HD23	36:DA:593:G:O2'	2.19	0.42
36:BA:2133:G:C8	36:BA:2157:G:N2	2.87	0.42
26:D0:43:THR:HG21	36:DA:2336:A:H61	1.84	0.42
42:BG:137:GLU:O	42:BG:138:GLN:CB	2.67	0.42
41:DF:3:GLU:HB2	41:DF:24:LEU:HD23	2.01	0.42
42:BG:72:ARG:HE	42:BG:86:MET:HA	1.84	0.42
57:BY:61:ILE:HG22	57:BY:62:GLU:N	2.35	0.42
39:BD:34:VAL:CG2	39:BD:35:LYS:H	2.30	0.42
27:B1:50:ARG:HG2	27:B1:59:THR:CG2	2.49	0.42
36:BA:143:G:H1'	56:BX:37:THR:HG21	2.01	0.42
47:BO:63:VAL:CG2	47:BO:63:VAL:O	2.66	0.42
52:BT:27:THR:O	52:BT:88:ILE:HG12	2.19	0.42
52:BT:89:VAL:CG1	52:BT:91:ARG:CG	2.96	0.42
41:BF:185:ASP:HA	41:BF:188:ARG:HD3	2.02	0.42
36:BA:1858:G:HO2'	36:BA:1859:A:H8	1.65	0.42
56:DX:10:ALA:HB1	56:DX:11:PRO:HD2	2.00	0.42
36:BA:2801(A):A:C3'	36:BA:2802:G:H5'	2.49	0.42
37:BB:7:G:C3'	37:BB:8:U:C5'	2.97	0.42
40:BE:26:ILE:HD12	40:BE:198:VAL:CG2	2.49	0.42
30:B4:8:LYS:O	30:B4:9:LEU:CB	2.49	0.42
5:CE:152:ARG:NH2	8:CH:107:LEU:O	2.47	0.42
36:BA:1509(B):A:H2'	36:BA:1510:G:O4'	2.18	0.42
48:BP:97:PRO:HA	48:BP:100:LEU:CB	2.50	0.42
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	2.01	0.42
57:BY:80:GLY:O	57:BY:81:LYS:O	2.36	0.42
54:DV:19:LYS:NZ	54:DV:20:LEU:N	2.52	0.42
54:DV:18:LEU:O	54:DV:19:LYS:O	2.37	0.42
28:D2:58:ALA:HB1	36:DA:76:C:C4'	2.49	0.42
36:BA:2469:A:O2'	49:BQ:56:ARG:CD	2.63	0.42
13:AM:23:TYR:CD1	13:AM:23:TYR:C	2.93	0.42
20:AT:23:ARG:HD3	20:AT:24:LEU:HD22	2.01	0.42
36:BA:2720:U:H5'	36:BA:2721:A:OP2	2.19	0.42
40:DE:167:VAL:O	40:DE:167:VAL:HG13	2.18	0.42
38:BC:87:GLU:CG	38:BC:94:VAL:HG21	2.48	0.42
36:DA:910:A:C6	36:DA:911:A:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:414:C:O2'	36:BA:415:A:H5'	2.19	0.42
43:DH:148:ILE:O	43:DH:162:ILE:HD11	2.20	0.42
36:BA:1349:A:N6	36:BA:1598:C:N4	2.66	0.42
18:CR:32:ARG:O	18:CR:32:ARG:HG3	2.20	0.42
6:AF:60:PHE:HE2	18:AR:76:LEU:HD12	1.85	0.42
52:BT:7:ILE:O	52:BT:10:VAL:HB	2.18	0.42
2:AB:120:ALA:C	2:AB:122:PHE:N	2.72	0.42
52:DT:10:VAL:C	52:DT:12:SER:N	2.71	0.42
28:D2:3:LEU:HA	28:D2:6:VAL:HG23	2.00	0.42
10:AJ:8:LEU:O	10:AJ:69:ASN:HA	2.20	0.42
15:AO:79:ARG:HA	15:AO:82:ILE:HG22	2.02	0.42
16:AP:32:TYR:O	16:AP:32:TYR:CD1	2.72	0.42
36:BA:2848:G:C8	52:BT:97:ALA:HB2	2.54	0.42
47:DO:34:THR:O	47:DO:35:VAL:C	2.57	0.42
9:CI:43:ALA:C	9:CI:45:ALA:H	2.20	0.42
27:D1:33:LYS:O	27:D1:34:THR:C	2.57	0.42
1:CA:107:G:N7	20:CT:15:ARG:NH2	2.53	0.42
16:AP:25:ARG:HH11	16:AP:25:ARG:CG	2.31	0.42
36:DA:238:C:C4	36:DA:239:U:C5	3.07	0.42
49:BQ:27:VAL:HG23	49:BQ:137:TYR:CD2	2.53	0.42
5:AE:64:ARG:NH1	5:AE:64:ARG:CG	2.82	0.42
11:CK:29:ILE:C	11:CK:29:ILE:HD12	2.40	0.42
1:AA:502:G:OP1	12:AL:118:SER:HB3	2.19	0.42
1:AA:1030(D):A:C2'	1:AA:1031:G:H5'	2.48	0.42
40:BE:47:VAL:CG2	40:BE:84:PHE:O	2.67	0.42
39:DD:5:LYS:C	39:DD:6:PHE:HD1	2.23	0.42
1:CA:1245:A:C2	1:CA:1293:G:C2	3.07	0.42
36:BA:1165:U:H2'	36:BA:1166:C:H6	1.83	0.42
36:DA:271(D):G:O2'	36:DA:271(E):U:H5'	2.18	0.42
36:BA:1614:A:H62	55:BW:93:ALA:N	2.17	0.42
40:DE:34:VAL:O	40:DE:35:GLN:HB2	2.19	0.42
2:AB:25:ASN:HB2	2:AB:191:ASP:O	2.19	0.42
2:AB:39:ILE:HG22	2:AB:41:ILE:HD12	2.01	0.42
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.20	0.42
36:DA:2526:G:H5'	36:DA:2742:C:HO2'	1.84	0.42
49:BQ:130:LYS:HE2	49:BQ:130:LYS:HB3	1.79	0.42
36:BA:1668:A:N7	36:BA:1674:G:C6	2.87	0.42
18:AR:73:ALA:CB	18:AR:79:LEU:HD12	2.50	0.42
1:CA:710:G:O2'	1:CA:711:G:H5'	2.19	0.42
1:CA:790:A:C6	1:CA:791:G:C6	3.07	0.42
22:AW:8:U:H5'	22:AW:49:C:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:73:ASP:OD1	47:BO:73:ASP:C	2.57	0.42
20:AT:90:GLN:HA	20:AT:93:GLU:OE1	2.19	0.42
48:BP:90:ARG:HE	48:BP:90:ARG:HB3	1.72	0.42
31:D5:34:PRO:O	31:D5:35:GLU:HG2	2.19	0.42
36:DA:2639:A:H2'	36:DA:2640:G:O4'	2.18	0.42
36:BA:1649:G:O2'	36:BA:1650:G:H5'	2.19	0.42
2:AB:100:GLY:O	2:AB:104:ASN:HB3	2.19	0.42
36:DA:1171:G:H3'	36:DA:1173:G:O4'	2.19	0.42
1:CA:772:U:C4	1:CA:773:G:N7	2.88	0.42
36:DA:2867:G:OP2	52:DT:119:LYS:NZ	2.51	0.42
13:AM:115:LYS:N	13:AM:115:LYS:HD3	2.34	0.42
1:CA:1215:G:N3	1:CA:1215:G:H2'	2.34	0.42
51:DS:80:LEU:O	51:DS:80:LEU:HD23	2.20	0.42
24:AY:46:7MG:O2'	24:AY:47:U:H5''	2.19	0.42
36:DA:110:G:O2'	36:DA:111:A:H5'	2.19	0.42
36:BA:425:G:O2'	36:BA:426:C:H5'	2.20	0.42
22:CV:53:G:H2'	22:CV:54:U:H6	1.85	0.42
36:DA:685:A:C8	36:DA:773:U:C4	3.07	0.42
4:AD:11:LEU:O	4:AD:12:CYS:C	2.56	0.42
39:DD:63:ARG:O	39:DD:65:ILE:HG23	2.20	0.42
28:B2:26:ARG:HB3	56:BX:5:TYR:CE1	2.55	0.42
1:AA:1250:A:C4'	9:AI:68:GLY:H	1.94	0.42
41:BF:143:ALA:CB	41:BF:148:LEU:HB2	2.39	0.42
1:CA:977:A:O2'	1:CA:978:A:O5'	2.38	0.42
42:BG:52:ILE:C	42:BG:54:GLU:N	2.71	0.42
36:DA:613:G:C8	36:DA:613:G:H5'	2.49	0.42
57:DY:38:ILE:HD13	57:DY:66:PRO:HD3	2.01	0.42
36:DA:1639:U:C2'	36:DA:1640:C:O5'	2.67	0.42
12:AL:80:HIS:CD2	24:AY:68:C:O2'	2.72	0.42
25:AZ:131:ILE:HD11	25:AZ:163:PHE:CE2	2.55	0.42
36:DA:852:G:H2'	36:DA:853:G:H8	1.84	0.42
20:AT:50:GLU:HG3	20:AT:100:ILE:CD1	2.49	0.42
20:AT:53:LEU:O	20:AT:57:ARG:HB2	2.19	0.42
36:BA:196:A:OP2	48:BP:51:PHE:CE2	2.71	0.42
42:DG:114:ILE:C	42:DG:116:ASP:N	2.72	0.42
36:BA:1448:G:O2'	36:BA:1528:A:N6	2.52	0.42
36:BA:1544:A:O2'	36:BA:1545:A:H5'	2.19	0.42
36:BA:1516:C:O2'	36:BA:1517:G:H5''	2.19	0.42
36:BA:638:G:N2	36:BA:651:G:H1'	2.33	0.42
51:BS:17:ARG:HA	51:BS:20:ARG:NH1	2.34	0.42
1:AA:1037:C:H2'	1:AA:1038:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:30:LEU:HB3	31:D5:40:LYS:O	2.19	0.42
36:DA:2414:G:H21	48:DP:67:MET:HE2	1.85	0.42
8:AH:112:LEU:HD21	8:AH:121:ASP:HA	2.01	0.42
35:D9:11:CYS:SG	35:D9:14:CYS:SG	3.16	0.42
36:BA:654(E):G:H22	36:BA:654(Q):C:C1'	2.28	0.42
57:BY:81:LYS:NZ	57:BY:98:VAL:O	2.52	0.42
36:BA:858:U:O2	36:BA:2268:A:H2'	2.19	0.42
10:AJ:19:SER:HA	10:AJ:22:LYS:CB	2.49	0.42
36:BA:1800:C:H5''	39:BD:147:LEU:HD21	1.98	0.42
36:DA:637:A:N1	36:DA:652:C:H5'	2.34	0.42
51:BS:74:ALA:CB	51:BS:101:LEU:HD13	2.48	0.42
36:DA:1240:U:O2'	36:DA:1241:A:H5'	2.19	0.42
36:DA:494:G:O2'	55:DW:5:ALA:O	2.34	0.42
39:DD:43:ARG:NH2	39:DD:49:ILE:CG2	2.77	0.42
25:AZ:210:ILE:O	25:AZ:210:ILE:HG23	2.18	0.42
41:DF:179:GLU:N	41:DF:179:GLU:OE1	2.53	0.42
48:BP:77:ARG:CD	48:BP:78:PRO:HD2	2.40	0.42
58:BZ:135:GLU:HB3	58:BZ:136:PHE:H	1.59	0.42
36:BA:2810:A:H1'	40:BE:61:ARG:NH1	2.34	0.42
52:BT:111:ARG:CB	52:BT:111:ARG:HH11	2.23	0.42
36:DA:389:G:C6	48:DP:71:VAL:HG12	2.53	0.42
20:CT:74:LYS:HB2	20:CT:75:ASN:H	1.65	0.42
4:CD:176:LEU:HA	4:CD:183:GLY:CA	2.49	0.42
2:CB:30:ARG:NE	2:CB:31:TYR:HE1	2.17	0.42
1:CA:389:A:H2'	1:CA:389:A:N3	2.35	0.42
8:CH:35:ILE:O	8:CH:36:LEU:C	2.57	0.42
41:DF:122:LYS:HB3	41:DF:191:ARG:HG3	2.02	0.42
36:BA:847:U:H2'	36:BA:848:G:H5''	2.01	0.42
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.49	0.42
36:DA:1494:A:C3'	36:DA:1494:A:N3	2.79	0.42
18:AR:55:ARG:HG3	18:AR:55:ARG:NH1	2.33	0.42
33:D7:21:ARG:HG2	33:D7:21:ARG:NH1	2.34	0.42
17:CQ:57:VAL:HG23	17:CQ:58:GLU:N	2.33	0.42
57:DY:64:GLU:O	57:DY:65:ALA:HB2	2.19	0.42
40:DE:31:CYS:O	40:DE:90:THR:HG23	2.19	0.42
16:AP:9:PHE:CE2	16:AP:18:ARG:NE	2.87	0.42
1:AA:1216:G:O2'	1:AA:1217:C:H5'	2.20	0.42
1:AA:1256:A:C2	1:AA:1277:C:H2'	2.55	0.42
36:BA:1315:C:C2'	36:BA:1316:U:H5'	2.50	0.42
1:CA:722:A:HO2'	1:CA:724:G:H8	1.66	0.42
53:DU:37:GLU:O	53:DU:40:PHE:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:22:THR:HG22	46:DN:61:ARG:NH1	2.35	0.42
39:DD:95:LEU:CD1	39:DD:105:ILE:HG22	2.45	0.42
37:BB:66:A:HO2'	37:BB:67:G:P	2.42	0.42
12:AL:117:ARG:O	12:AL:119:LYS:O	2.37	0.42
36:BA:643:A:H2'	36:BA:644:A:C5'	2.49	0.42
4:AD:4:TYR:O	4:AD:5:ILE:CB	2.67	0.42
36:BA:1222:C:C2'	36:BA:1223:G:H5''	2.49	0.42
1:AA:160:A:H1'	1:AA:344:A:C5	2.54	0.42
49:DQ:14:ARG:HG2	49:DQ:41:TRP:CH2	2.52	0.42
36:DA:1011:G:O2'	36:DA:1013:C:H5''	2.19	0.42
1:CA:1311:G:C2	1:CA:1327:C:N3	2.88	0.42
36:BA:271(F):C:C2	36:BA:271(S):G:N2	2.88	0.42
1:AA:382:A:H2'	1:AA:383:A:C8	2.54	0.42
1:AA:648:A:H2'	1:AA:649:G:H8	1.84	0.42
36:DA:136:G:C2	36:DA:137:C:C6	3.07	0.42
36:DA:2893:G:H5'	36:DA:2894:G:H5'	2.00	0.42
58:DZ:48:PHE:CD1	58:DZ:52:SER:HA	2.55	0.42
36:BA:172:C:H2'	36:BA:173:G:O4'	2.18	0.42
36:BA:1632:A:H2'	36:BA:1633:G:C8	2.55	0.42
43:DH:88:LEU:HD23	43:DH:164:TYR:O	2.20	0.42
11:CK:61:ALA:HB2	11:CK:90:GLY:HA3	2.00	0.42
44:DJ:96:UNK:C	44:DJ:98:UNK:N	2.78	0.42
23:AX:20:U:H2'	23:AX:21:C:H6	1.84	0.42
1:CA:416:G:C5	1:CA:417:C:C4	3.08	0.42
36:DA:1792:G:H2'	36:DA:1793:C:C6	2.55	0.42
22:CW:58:A:N7	22:CW:61:C:N4	2.67	0.42
36:DA:220:G:N1	36:DA:427:U:H2'	2.34	0.42
19:AS:51:VAL:O	19:AS:57:HIS:HA	2.19	0.42
5:CE:87:SER:HB3	5:CE:131:ILE:HD13	2.01	0.42
8:AH:44:PHE:HB3	8:AH:80:ILE:HG12	2.01	0.42
5:AE:41:VAL:O	5:AE:67:VAL:HG12	2.19	0.42
55:DW:85:VAL:CG1	55:DW:86:LEU:N	2.82	0.42
37:BB:106:G:O2'	37:BB:107:G:H5'	2.19	0.42
53:BU:51:LYS:O	53:BU:55:ARG:HG3	2.18	0.42
43:DH:72:ILE:O	43:DH:75:ALA:N	2.50	0.42
1:CA:689:C:O5'	1:CA:689:C:H6	2.02	0.42
54:DV:91:TYR:H	54:DV:91:TYR:HD1	1.67	0.42
36:BA:2321:G:H2'	36:BA:2321:G:N3	2.34	0.42
36:DA:1289:C:O2	36:DA:1289:C:H2'	2.17	0.42
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.55	0.42
27:D1:86:SER:O	27:D1:90:ILE:CG1	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:125:GLN:HG2	61:CZ:502:KIR:H423	2.02	0.42
51:DS:93:LYS:HA	51:DS:93:LYS:HD2	1.69	0.42
1:CA:1330:U:H5'	1:CA:1331:G:OP2	2.19	0.42
31:D5:3:LYS:HG3	31:D5:4:HIS:N	2.35	0.42
28:B2:26:ARG:O	28:B2:29:LYS:HB2	2.19	0.42
36:BA:1210:A:O2'	36:BA:1211:U:OP2	2.33	0.42
36:BA:616:G:OP1	41:BF:107:LYS:NZ	2.52	0.42
52:DT:19:LEU:HA	52:DT:20:PRO:HD3	1.83	0.42
52:DT:76:PHE:HA	52:DT:77:PRO:HD3	1.76	0.42
34:B8:61:LEU:CD1	34:B8:61:LEU:N	2.80	0.42
26:D0:43:THR:HG22	36:DA:2331:G:O3'	2.20	0.42
42:BG:11:TYR:CZ	42:BG:33:ARG:HB3	2.54	0.42
42:BG:43:LEU:HD11	42:BG:153:ARG:CD	2.45	0.42
14:CN:23:ARG:HD2	14:CN:28:GLY:O	2.20	0.42
49:DQ:60:ARG:CB	49:DQ:60:ARG:HH11	2.32	0.42
36:BA:142(A):C:O2'	36:BA:143:G:H5'	2.19	0.42
34:B8:37:SER:O	34:B8:39:LYS:N	2.53	0.42
25:AZ:221:PHE:CZ	25:AZ:247:VAL:HG11	2.54	0.42
36:BA:2415:G:C6	36:BA:2416:C:C4	3.08	0.42
36:DA:1528(A):A:H3'	36:DA:1529:G:H8	1.85	0.42
32:B6:44:ARG:O	32:B6:45:LYS:CD	2.67	0.42
56:DX:12:VAL:HG12	56:DX:27:THR:O	2.20	0.42
56:DX:49:VAL:CG1	56:DX:87:GLN:HE21	2.33	0.42
36:DA:605:C:O2'	36:DA:606:U:H5'	2.18	0.42
34:D8:23:VAL:HG22	34:D8:48:PHE:HE1	1.84	0.42
39:BD:75:ILE:HG21	39:BD:99:ASP:CB	2.49	0.42
40:BE:184:VAL:C	40:BE:186:GLY:N	2.73	0.42
31:D5:33:CYS:SG	31:D5:36:CYS:SG	3.13	0.42
50:DR:57:ARG:O	50:DR:58:GLY:C	2.57	0.42
58:BZ:8:TYR:O	58:BZ:37:VAL:HA	2.19	0.42
30:D4:9:LEU:O	30:D4:10:VAL:HB	2.18	0.42
30:D4:9:LEU:CD1	30:D4:10:VAL:N	2.78	0.42
42:BG:39:ILE:O	42:BG:39:ILE:HG13	2.20	0.42
40:BE:50:GLY:CA	40:BE:78:LEU:HB3	2.34	0.42
48:DP:94:GLU:HG2	48:DP:96:THR:HG23	2.01	0.42
36:DA:582:G:H2'	36:DA:583:G:H8	1.83	0.42
53:DU:8:VAL:O	53:DU:9:VAL:C	2.57	0.42
25:CZ:267:VAL:O	25:CZ:267:VAL:HG13	2.20	0.42
36:DA:1221:C:H2'	36:DA:1221(A):C:C6	2.55	0.42
52:BT:105:LEU:HD22	52:BT:109:GLU:CD	2.39	0.42
36:DA:2656:U:C2'	36:DA:2657:A:H5''	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1151:A:C5'	10:CJ:41:PRO:HA	2.48	0.42
2:AB:69:LEU:HB2	2:AB:159:PRO:CG	2.49	0.42
36:DA:954:G:H4'	49:DQ:13:GLN:NE2	2.34	0.42
36:DA:815:C:H2'	36:DA:816:C:H6	1.84	0.42
36:BA:2892:A:H62	36:BA:2893:G:N2	2.16	0.42
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.24	0.42
43:DH:30:LYS:NZ	43:DH:83:TYR:HE2	2.18	0.42
22:CV:68:C:C2'	22:CV:69:G:H5''	2.49	0.42
26:B0:43:THR:CG2	26:B0:43:THR:O	2.65	0.42
2:CB:30:ARG:HB2	2:CB:30:ARG:NH1	2.29	0.42
40:BE:181:LEU:HD21	52:BT:7:ILE:HG22	2.01	0.42
31:B5:23:HIS:O	31:B5:24:ALA:C	2.57	0.42
40:DE:126:PRO:O	40:DE:135:HIS:HD2	2.01	0.42
29:B3:26:LEU:O	29:B3:27:GLY:C	2.57	0.42
1:CA:877:C:O2'	1:CA:878:G:H5'	2.20	0.42
8:CH:119:LEU:C	8:CH:120:THR:O	2.57	0.42
43:BH:157:TYR:CD1	43:BH:157:TYR:O	2.72	0.42
13:CM:87:TYR:CZ	13:CM:91:ARG:HD3	2.54	0.42
20:CT:100:ILE:HG22	20:CT:102:GLY:N	2.30	0.42
36:DA:1103:A:H5''	36:DA:1104:C:C5	2.55	0.42
36:BA:2692:C:C2	36:BA:2693:A:C8	3.07	0.42
47:DO:78:ARG:CG	47:DO:79:PHE:N	2.78	0.42
36:DA:880:G:H2'	36:DA:881:G:C8	2.54	0.42
42:DG:56:ALA:HA	42:DG:59:GLU:OE2	2.19	0.42
26:B0:7:LEU:CD2	49:BQ:81:VAL:CG2	2.97	0.42
36:DA:1304:C:H2'	36:DA:1305:C:C6	2.49	0.42
50:DR:33:ARG:O	50:DR:34:ILE:HD13	2.20	0.42
38:BC:73:ARG:NH1	38:BC:73:ARG:HG3	2.32	0.42
36:DA:708:C:N4	36:DA:723:G:H1	2.14	0.42
1:AA:671:G:H2'	1:AA:672:U:O4'	2.20	0.42
36:DA:2529:G:OP2	36:DA:2530:A:H8	2.02	0.42
1:CA:852:G:C6	1:CA:853:G:N7	2.88	0.42
36:BA:2202:C:H2'	36:BA:2203:U:O4'	2.19	0.42
1:AA:277:C:O2'	1:AA:278:G:H5'	2.20	0.42
42:BG:150:ASP:O	42:BG:151:ALA:CB	2.67	0.42
36:BA:231:C:C2	36:BA:232:G:H8	2.38	0.42
36:BA:2174:C:H1'	38:BC:218:MET:HA	2.01	0.42
1:CA:373:A:C2	1:CA:374:A:C8	3.07	0.42
36:DA:225:A:H2'	36:DA:226:G:O4'	2.19	0.42
44:BJ:25:UNK:HA	44:BJ:116:UNK:CB	2.50	0.42
25:AZ:38:GLU:HG3	25:AZ:39:ASN:CG	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2319:G:O4'	36:BA:2319:G:OP1	2.38	0.42
38:BC:74:VAL:HG22	38:BC:156:ILE:HG21	2.01	0.42
33:B7:10:ARG:NH1	33:B7:14:LYS:HZ2	2.17	0.42
1:AA:19:C:H2'	1:AA:20:U:C6	2.54	0.42
41:DF:97:TYR:HD1	41:DF:97:TYR:N	2.16	0.42
1:AA:423:G:C2'	1:AA:424:G:H5'	2.50	0.42
25:CZ:96:ALA:O	25:CZ:99:MET:HG2	2.18	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.19	0.42
3:AC:82:GLU:N	3:AC:82:GLU:OE1	2.45	0.42
36:BA:977:G:O2'	36:BA:978:G:H5'	2.20	0.42
11:CK:107:SER:C	11:CK:108:ILE:HD12	2.40	0.42
1:AA:189(E):U:OP2	1:AA:189(E):U:H6	2.03	0.42
8:AH:104:ARG:NH2	8:AH:138:TRP:CH2	2.87	0.42
36:DA:748:G:C8	55:DW:89:ALA:HB1	2.54	0.42
2:AB:71:VAL:HG12	2:AB:170:GLU:HG2	2.00	0.42
36:BA:417:C:C4	36:BA:418:G:N7	2.87	0.42
52:DT:95:ARG:NH1	52:DT:95:ARG:HB3	2.33	0.42
36:DA:387:U:H6	36:DA:387:U:O5'	2.01	0.42
36:DA:2517:C:C2	36:DA:2542:A:N1	2.88	0.42
25:CZ:192:GLU:HG3	25:CZ:192:GLU:H	1.55	0.42
25:CZ:108:ALA:HB2	25:CZ:135:MET:HE2	2.00	0.42
25:CZ:86:ALA:O	25:CZ:88:TYR:N	2.52	0.42
26:D0:24:LYS:HG3	36:DA:2355:C:H4'	2.00	0.42
43:BH:85:LYS:NZ	43:BH:86:GLU:CA	2.82	0.42
2:AB:8:LYS:HE2	2:AB:217:ARG:HH12	1.85	0.42
34:B8:4:MET:O	34:B8:62:LEU:CD1	2.67	0.42
10:CJ:49:VAL:HG13	10:CJ:50:ILE:N	2.33	0.42
58:DZ:120:ILE:HG13	58:DZ:170:THR:HB	2.01	0.42
42:DG:177:GLY:O	42:DG:179:PRO:HD3	2.19	0.42
26:D0:7:LEU:CD1	49:DQ:85:LYS:HG3	2.31	0.42
1:AA:858:G:N7	1:AA:869:G:O6	2.52	0.42
10:CJ:31:GLY:O	10:CJ:32:ALA:O	2.38	0.42
49:BQ:141:GLN:HE21	49:BQ:141:GLN:HA	1.85	0.42
32:D6:26:ASN:CA	36:DA:2286:A:H2	2.28	0.42
46:BN:91:LEU:HD21	46:BN:98:VAL:HG21	2.00	0.42
40:BE:3:GLY:O	40:BE:4:ILE:HB	2.19	0.42
40:BE:7:VAL:O	40:BE:8:LYS:C	2.58	0.42
1:CA:59:A:H2'	1:CA:59:A:N3	2.33	0.42
27:D1:18:ILE:HD11	27:D1:20:ARG:NH1	2.33	0.42
42:DG:11:TYR:HD1	42:DG:15:VAL:HB	1.84	0.42
42:DG:31:VAL:HG13	42:DG:31:VAL:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:985:C:C2	1:AA:1221:G:N2	2.87	0.42
1:AA:177:C:O2'	1:AA:178:C:H5'	2.19	0.42
9:CI:4:TYR:CE2	9:CI:88:TYR:HB2	2.55	0.42
36:DA:733:G:C8	36:DA:761:A:N1	2.88	0.42
41:DF:176:LEU:HG	41:DF:177:ALA:N	2.22	0.42
48:BP:79:ARG:HG3	48:BP:110:TYR:HD2	1.83	0.42
48:BP:77:ARG:CZ	48:BP:77:ARG:HB2	2.49	0.42
28:D2:28:LYS:HD3	28:D2:28:LYS:HA	1.86	0.42
1:CA:1117:G:O2'	9:CI:104:ARG:HD2	2.20	0.42
1:CA:150:C:O5'	1:CA:150:C:H6	2.02	0.42
43:DH:12:PRO:HB2	43:DH:15:VAL:HG22	2.01	0.42
53:BU:53:ARG:O	53:BU:56:ASP:HB2	2.20	0.42
27:D1:39:LYS:HZ2	27:D1:39:LYS:HB3	1.82	0.42
18:CR:32:ARG:CA	18:CR:69:THR:HG21	2.47	0.42
41:BF:63:LYS:O	41:BF:64:ILE:C	2.57	0.42
1:AA:63:C:H5'	1:AA:63:C:H6	1.85	0.42
2:CB:18:GLY:H	2:CB:42:ILE:CG2	2.32	0.42
36:DA:1060:U:H1'	36:DA:1061:U:OP2	2.20	0.42
36:DA:2660:A:OP1	36:DA:2660:A:H8	2.02	0.42
36:DA:1675:C:O2	40:DE:129:HIS:HA	2.19	0.42
58:DZ:94:GLU:O	58:DZ:130:PRO:HD3	2.20	0.42
24:CY:52:A:C2	24:CY:63:C:N3	2.88	0.42
57:DY:63:LYS:HB3	57:DY:64:GLU:H	1.51	0.42
40:DE:65:GLY:O	40:DE:70:ALA:HB2	2.20	0.42
26:B0:50:ASN:HD22	26:B0:63:VAL:CG1	2.33	0.42
10:AJ:86:MET:O	10:AJ:87:THR:HG23	2.20	0.42
7:CG:79:ARG:HA	7:CG:84:ASN:HA	2.01	0.42
36:DA:915:C:H2'	36:DA:916:G:C8	2.54	0.42
39:DD:176:ARG:NH1	39:DD:176:ARG:CG	2.81	0.42
41:DF:62:ARG:HG2	41:DF:62:ARG:HH11	1.84	0.42
25:CZ:94:THR:O	25:CZ:98:GLN:HG2	2.20	0.42
50:DR:33:ARG:HG2	50:DR:113:LEU:HD11	2.02	0.42
9:AI:56:LEU:HB3	9:AI:57:GLY:H	1.60	0.42
1:CA:189(H):G:O2'	1:CA:189(I):G:O5'	2.35	0.42
36:BA:1263:U:C4	36:BA:1264:G:C6	3.07	0.42
1:CA:1217:C:P	14:CN:9:LYS:NZ	2.91	0.42
43:DH:125:VAL:N	43:DH:126:PRO:CD	2.83	0.42
36:DA:1649:G:H2'	36:DA:1650:G:C8	2.54	0.42
36:DA:608:A:H2'	36:DA:609:A:H8	1.77	0.42
36:DA:2360:A:O2'	36:DA:2361:A:C5'	2.67	0.42
36:DA:1063:G:N2	45:DK:89:UNK:HA	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:383:A:H2'	1:CA:384:G:C5'	2.48	0.42
36:DA:2230:G:C5	36:DA:2231:C:C5	3.07	0.42
1:AA:756:C:O2'	1:AA:757:U:H5'	2.18	0.42
1:AA:329:A:C5	1:AA:332:G:C6	3.08	0.42
25:CZ:196:VAL:O	25:CZ:196:VAL:HG12	2.19	0.42
27:D1:60:PHE:HE1	27:D1:91:LYS:HG3	1.84	0.42
1:AA:275:G:P	17:AQ:14:LYS:HD2	2.59	0.42
1:CA:460:G:N2	1:CA:471:G:OP2	2.53	0.42
1:CA:1299:A:N3	1:CA:1299:A:H2'	2.34	0.42
1:AA:992:U:H1'	1:AA:993:G:C2	2.54	0.42
1:AA:1050:G:O2'	1:AA:1051:C:OP2	2.38	0.42
17:CQ:94:ASN:C	17:CQ:96:GLU:H	2.23	0.42
36:BA:271(D):G:O2'	36:BA:271(E):U:H5'	2.20	0.42
38:BC:90:GLY:O	38:BC:153:ILE:HG21	2.19	0.42
1:AA:837:G:O2'	1:AA:838:G:H5'	2.19	0.42
16:CP:75:ARG:O	16:CP:78:GLY:N	2.49	0.42
36:BA:718:A:H3'	36:BA:719:C:H6	1.85	0.42
1:AA:243:A:C2	1:AA:246:A:C8	3.08	0.42
58:DZ:40:ASP:OD1	58:DZ:40:ASP:C	2.58	0.42
36:BA:154:G:C6	36:BA:173:G:N1	2.88	0.42
16:CP:46:PRO:O	16:CP:47:ASP:HB2	2.19	0.42
1:CA:841:U:C2'	1:CA:848:C:O4'	2.68	0.42
1:CA:51:A:H4'	1:CA:52:G:H5''	2.01	0.42
36:DA:876:C:H2'	36:DA:877:U:O4'	2.20	0.42
39:BD:109:ASP:HB2	39:BD:197:GLY:CA	2.49	0.42
53:BU:37:GLU:O	53:BU:40:PHE:N	2.52	0.42
36:DA:1217:C:C4	36:DA:1218:C:C5	3.08	0.42
25:AZ:388:ILE:N	25:AZ:396:GLY:O	2.53	0.42
16:AP:80:PHE:O	16:AP:82:GLN:N	2.53	0.42
36:DA:432:A:O2'	36:DA:433:C:H5'	2.19	0.42
36:DA:2027:G:N2	36:DA:2037:G:C4	2.88	0.42
36:DA:1506:C:H2'	36:DA:1506:C:O2	2.20	0.42
25:AZ:155:ARG:NH1	25:AZ:155:ARG:HG2	2.34	0.42
1:CA:1405:G:H21	1:CA:1518:A:H1'	1.84	0.42
25:CZ:138:VAL:CG2	25:CZ:173:GLY:H	2.31	0.42
26:D0:36:ILE:HG12	36:DA:2355:C:C4'	2.49	0.42
42:DG:146:TYR:CG	42:DG:147:ASP:N	2.88	0.42
1:AA:1282:C:C2'	1:AA:1283:G:H5'	2.49	0.42
28:B2:26:ARG:C	28:B2:28:LYS:H	2.22	0.42
57:BY:28:LYS:HB3	57:BY:37:VAL:HB	2.02	0.42
4:CD:122:ARG:NH1	4:CD:134:ASP:HB2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2199:A:C8	36:DA:2225:A:C6	3.08	0.42
39:DD:73:VAL:HA	39:DD:119:ALA:O	2.20	0.42
4:CD:62:GLN:HA	4:CD:62:GLN:HE21	1.84	0.42
37:BB:54:G:O2'	37:BB:55:U:H5'	2.19	0.42
36:DA:2157:G:C3'	36:DA:2157:G:C8	3.02	0.42
50:DR:99:LYS:N	50:DR:99:LYS:CD	2.67	0.42
38:DC:14:VAL:HG21	38:DC:32:LEU:HD11	2.01	0.42
32:B6:27:LYS:CD	32:B6:30:THR:OG1	2.68	0.42
1:CA:66:G:N2	1:CA:172:A:H2	2.18	0.42
32:B6:15:GLU:O	32:B6:16:CYS:C	2.58	0.42
36:DA:1947:C:H2'	36:DA:1948:G:H5''	2.02	0.42
36:DA:139(A):G:H3'	36:DA:140:G:H8	1.82	0.42
36:BA:649:G:C6	36:BA:650:C:C4	3.07	0.42
58:BZ:4:ARG:CG	58:BZ:58:VAL:HB	2.33	0.42
36:DA:1503:U:O2'	36:DA:1504:C:H5'	2.19	0.42
32:D6:27:LYS:CD	32:D6:30:THR:OG1	2.68	0.42
24:AY:27:C:H2'	24:AY:28:C:C6	2.55	0.42
10:AJ:4:ILE:CD1	10:AJ:4:ILE:N	2.69	0.42
10:AJ:4:ILE:HB	10:AJ:74:ILE:CG1	2.50	0.42
32:D6:15:GLU:CG	32:D6:18:ARG:CZ	2.97	0.42
41:DF:101:LEU:O	41:DF:106:ARG:HD3	2.19	0.42
57:BY:79:CYS:C	57:BY:81:LYS:H	2.23	0.42
22:CW:43:C:C3'	22:CW:44:G:O4'	2.68	0.42
46:BN:46:VAL:HG13	46:BN:47:ALA:H	1.84	0.42
39:DD:172:TYR:CD1	39:DD:186:HIS:HA	2.55	0.42
36:BA:2779:U:H1'	36:BA:2781:A:C6	2.53	0.42
19:CS:16:LEU:HA	19:CS:19:VAL:CB	2.50	0.42
28:D2:32:LEU:C	28:D2:32:LEU:HD23	2.40	0.42
39:BD:4:LYS:HZ2	39:BD:20:ASP:HA	1.83	0.42
25:CZ:317:GLU:HA	25:CZ:370:PHE:O	2.19	0.42
17:CQ:20:THR:HG23	17:CQ:43:LEU:CD2	2.50	0.42
58:DZ:149:SER:OG	58:DZ:173:ALA:HA	2.19	0.42
1:CA:501:C:H1'	1:CA:549:C:H1'	2.02	0.42
50:DR:104:ARG:O	50:DR:105:ARG:C	2.56	0.42
36:BA:2578:G:H2'	36:BA:2579:C:C6	2.54	0.42
25:AZ:355:LEU:HA	25:AZ:356:PRO:HD3	1.88	0.42
36:DA:1060:U:H1'	36:DA:1061:U:P	2.58	0.42
57:BY:2:ARG:HG2	57:BY:2:ARG:NH1	2.34	0.42
15:AO:18:PHE:C	15:AO:18:PHE:CD1	2.92	0.42
15:AO:24:SER:O	15:AO:25:THR:C	2.56	0.42
36:DA:2852:G:H2'	36:DA:2853:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2341:G:H2'	36:BA:2342:C:H6	1.83	0.42
14:AN:9:LYS:O	14:AN:9:LYS:HG2	2.19	0.42
36:BA:2692:C:H1'	36:BA:2847:U:O2'	2.20	0.42
42:DG:125:PHE:HB2	42:DG:126:ASP:H	1.62	0.42
54:DV:13:ARG:HG3	54:DV:13:ARG:NH1	2.33	0.42
47:BO:49:ARG:HB2	47:BO:50:GLY:H	1.64	0.42
36:DA:2072:G:C6	36:DA:2073:C:C4	3.08	0.42
40:BE:145:LYS:NZ	40:BE:145:LYS:HB3	2.35	0.42
36:BA:2154:G:H2'	36:BA:2155:G:C8	2.49	0.42
16:AP:43:LYS:HA	16:AP:48:TRP:CD1	2.54	0.42
36:DA:2007:C:H2'	36:DA:2008:C:C6	2.55	0.42
43:BH:54:ARG:CG	43:BH:54:ARG:HH11	2.32	0.42
39:DD:6:PHE:CE2	39:DD:13:ARG:NH2	2.88	0.42
39:DD:3:VAL:HG23	39:DD:200:ASP:OD1	2.18	0.42
25:CZ:178:ALA:HA	25:CZ:196:VAL:HG23	2.01	0.42
4:CD:80:GLU:O	4:CD:83:SER:HB2	2.20	0.42
39:BD:273:ARG:O	39:BD:274:ARG:CB	2.68	0.42
48:DP:108:LYS:C	48:DP:110:TYR:H	2.21	0.42
36:DA:2403:C:OP2	36:DA:2404:C:OP2	2.38	0.42
29:B3:54:VAL:CG1	29:B3:55:ARG:N	2.82	0.42
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.18	0.42
36:DA:1468:C:H2'	36:DA:1469:A:C8	2.54	0.42
36:BA:78:A:H2'	36:BA:79:G:H8	1.83	0.42
1:CA:475:G:H2'	1:CA:476:G:H8	1.84	0.42
1:CA:51:A:H4'	1:CA:52:G:C5'	2.49	0.42
36:DA:271(V):G:O2'	36:DA:271(W):G:H5'	2.20	0.42
39:BD:213:ARG:HD2	39:BD:213:ARG:HA	1.90	0.42
53:BU:15:LYS:HA	53:BU:18:LEU:HB2	2.00	0.42
1:CA:282:A:H3'	1:CA:283:C:H6	1.85	0.42
30:B4:37:SER:O	30:B4:38:LYS:CB	2.68	0.42
22:AW:8:U:O2'	22:AW:9:A:H5'	2.19	0.42
1:AA:123:C:OP1	1:AA:311:C:O2'	2.38	0.42
49:BQ:75:THR:HG23	49:BQ:88:GLY:C	2.40	0.42
58:DZ:137:ILE:HD12	58:DZ:158:PRO:CD	2.49	0.42
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.55	0.42
1:CA:582:U:OP1	15:CO:68:ARG:NH2	2.52	0.42
26:B0:34:GLY:O	26:B0:35:ASN:C	2.58	0.42
38:BC:181:PRO:HG2	38:BC:184:LYS:HG2	2.00	0.42
36:DA:745:G:C2'	36:DA:746:A:H5'	2.49	0.42
15:CO:14:GLU:OE1	15:CO:14:GLU:HA	2.19	0.42
36:DA:766:C:H6	36:DA:766:C:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:145:GLU:HG2	25:AZ:145:GLU:O	2.20	0.42
27:D1:26:ARG:O	27:D1:26:ARG:HD2	2.19	0.42
56:BX:21:PHE:CD1	56:BX:21:PHE:N	2.87	0.42
11:AK:13:GLN:HG2	11:AK:75:TYR:O	2.19	0.42
1:AA:1337:G:H5''	1:AA:1338:G:OP2	2.19	0.42
25:AZ:69:GLU:HG2	25:AZ:273:HIS:ND1	2.35	0.42
39:DD:35:LYS:CE	39:DD:36:PRO:HD3	2.49	0.42
25:CZ:135:MET:CE	25:CZ:138:VAL:HG22	2.50	0.42
1:CA:1313:U:OP2	19:CS:6:LYS:HA	2.18	0.42
28:B2:12:GLU:HA	28:B2:15:LYS:HE3	2.01	0.42
28:B2:22:GLU:N	28:B2:64:LEU:HD21	2.34	0.42
57:BY:73:ARG:HE	57:BY:73:ARG:CA	2.31	0.42
4:CD:107:ARG:NH1	4:CD:114:ARG:HH21	2.18	0.42
36:DA:821:A:H5''	36:DA:822:U:H6	1.85	0.42
40:DE:56:PRO:O	40:DE:57:LYS:HD2	2.19	0.42
57:DY:29:GLU:HB2	57:DY:38:ILE:HG23	2.01	0.42
36:DA:827:U:H2'	36:DA:2068:U:O2	2.20	0.42
42:BG:73:ALA:H	42:BG:87:PRO:HD3	1.84	0.42
39:BD:34:VAL:O	39:BD:36:PRO:CD	2.67	0.42
51:DS:15:ARG:CB	51:DS:15:ARG:NH1	2.82	0.42
52:BT:29:ARG:HD2	52:BT:30:VAL:HG13	2.02	0.42
43:BH:45:VAL:O	43:BH:45:VAL:HG12	2.19	0.42
58:DZ:152:ALA:HB3	58:DZ:168:GLU:HA	2.02	0.42
34:B8:12:LYS:CE	36:BA:247:G:O6	2.67	0.42
46:DN:3:THR:CG2	46:DN:4:TYR:N	2.70	0.42
17:AQ:26:GLN:HA	17:AQ:36:ILE:O	2.20	0.42
2:AB:149:LEU:O	2:AB:153:ARG:HB2	2.20	0.42
37:DB:21:G:H2'	37:DB:22:U:C5'	2.50	0.42
50:DR:87:TYR:O	50:DR:88:ARG:C	2.58	0.42
32:D6:33:LYS:CA	32:D6:33:LYS:HE2	2.45	0.42
39:DD:97:TYR:C	39:DD:99:ASP:N	2.72	0.42
43:BH:51:ARG:HG3	43:BH:52:VAL:N	2.34	0.42
50:BR:60:LEU:O	50:BR:64:ARG:N	2.38	0.42
57:BY:81:LYS:HG3	57:BY:97:ARG:HD3	2.02	0.42
52:DT:23:ARG:HG2	52:DT:120:ARG:HH12	1.85	0.42
13:CM:49:THR:HG22	13:CM:51:ALA:N	2.18	0.42
55:BW:62:HIS:O	55:BW:63:ASP:C	2.57	0.42
41:DF:116:ASP:OD2	48:DP:5:ASP:N	2.53	0.42
36:BA:2447:G:H1	36:BA:2451:A:H62	1.68	0.42
25:AZ:200:TRP:CE3	25:AZ:203:LEU:CD1	2.93	0.42
40:DE:16:ARG:HH12	40:DE:171:GLU:CD	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1993:U:C5'	40:BE:128:SER:HB3	2.50	0.42
3:CC:68:VAL:CG1	3:CC:70:VAL:HG23	2.49	0.42
58:BZ:162:GLU:O	58:BZ:162:GLU:HG3	2.19	0.42
19:AS:41:VAL:HA	19:AS:42:PRO:HD3	1.97	0.42
38:DC:84:LYS:HA	38:DC:87:GLU:OE1	2.19	0.42
43:DH:16:SER:HB2	43:DH:27:LYS:CB	2.42	0.42
41:BF:170:LEU:HB2	41:BF:173:VAL:HB	2.01	0.42
17:CQ:20:THR:HG23	17:CQ:43:LEU:HD23	2.01	0.42
20:CT:72:LEU:O	20:CT:76:ALA:HB3	2.20	0.42
36:BA:2742:C:O2'	36:BA:2743:C:H5'	2.19	0.42
25:AZ:354:GLN:HB2	25:AZ:371:THR:HB	2.02	0.42
31:B5:27:PRO:HG3	55:BW:23:LEU:CD1	2.49	0.42
36:BA:284:U:H6	36:BA:284:U:O5'	2.02	0.42
36:DA:2659:G:C3'	36:DA:2660:A:H5''	2.50	0.42
50:BR:38:VAL:CB	50:BR:39:PRO:HD3	2.42	0.42
2:AB:115:LEU:HD11	2:AB:146:GLN:HB3	2.01	0.42
17:CQ:58:GLU:O	17:CQ:59:ILE:HD13	2.19	0.42
4:AD:127:THR:CG2	4:AD:128:VAL:N	2.83	0.42
20:CT:41:ILE:C	20:CT:43:LEU:H	2.23	0.42
1:AA:987:G:H2'	1:AA:988:G:H8	1.84	0.42
18:CR:70:ILE:O	18:CR:73:ALA:N	2.52	0.42
36:BA:1085:A:C4'	36:BA:1105:U:H4'	2.49	0.42
12:CL:20:LYS:H	12:CL:20:LYS:CD	2.31	0.42
36:BA:237:C:H2'	36:BA:238:C:H6	1.85	0.42
37:BB:28:C:O2'	37:BB:29:A:H5'	2.19	0.42
36:BA:359:A:H2'	36:BA:360:G:O4'	2.20	0.42
6:CF:78:GLU:C	6:CF:80:ARG:H	2.23	0.42
36:BA:18:C:O2'	36:BA:554:U:OP1	2.37	0.42
37:DB:114:C:O2'	51:DS:46:VAL:HG13	2.19	0.42
36:DA:226:G:O2'	36:DA:227:A:C8	2.71	0.42
36:BA:1614:A:H62	55:BW:93:ALA:CB	2.31	0.42
40:BE:65:GLY:HA2	40:BE:70:ALA:CB	2.49	0.42
36:DA:2380:C:O2'	36:DA:2381:C:H5'	2.20	0.42
5:CE:107:ARG:O	5:CE:108:ALA:C	2.58	0.42
36:DA:2547:U:H2'	36:DA:2548:G:H8	1.84	0.42
10:AJ:42:THR:HG23	10:AJ:67:THR:O	2.20	0.42
27:D1:21:ARG:HH11	27:D1:21:ARG:HB2	1.83	0.42
36:BA:1259:G:O2'	36:BA:1260:G:H5'	2.20	0.42
1:CA:274:A:H4'	1:CA:275:G:O5'	2.19	0.42
40:DE:176:ILE:HG22	40:DE:179:GLU:H	1.85	0.42
1:AA:155:C:H2'	1:AA:156:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:451:A:H61	1:CA:480:U:H2'	1.83	0.42
2:AB:209:ARG:NH1	2:AB:239:VAL:HG11	2.35	0.42
12:CL:32:PHE:HB3	12:CL:84:LEU:HD21	2.01	0.42
12:CL:97:ARG:C	12:CL:98:TYR:CD1	2.93	0.42
5:CE:72:GLN:C	5:CE:74:GLY:N	2.72	0.42
36:DA:2174:C:O2'	36:DA:2175:C:H5'	2.20	0.42
37:BB:15:A:H1'	37:BB:110:G:C5	2.55	0.42
40:DE:5:LEU:HD11	40:DE:49:LEU:O	2.20	0.42
42:BG:122:PRO:HG2	42:BG:123:ASN:N	2.35	0.42
1:AA:304:U:O2'	1:AA:305:G:H5'	2.20	0.42
36:BA:2358:G:O2'	36:BA:2359:C:H5'	2.20	0.42
56:BX:33:LYS:HA	56:BX:33:LYS:HE2	2.01	0.42
17:CQ:13:ASP:N	17:CQ:13:ASP:OD1	2.51	0.42
29:D3:36:VAL:HG23	29:D3:36:VAL:O	2.20	0.42
15:CO:57:LEU:HD23	15:CO:57:LEU:HA	1.63	0.42
1:AA:252:U:C4	1:AA:253:U:O4	2.73	0.42
1:AA:1354:C:H2'	1:AA:1355:G:H8	1.84	0.42
24:CY:76:A:OP1	25:CZ:274:ARG:NH1	2.50	0.42
25:CZ:217:VAL:HG11	25:CZ:281:ILE:HG22	2.02	0.42
21:AU:2:GLY:C	21:AU:4:GLY:N	2.73	0.42
27:D1:82:LEU:HD11	27:D1:90:ILE:CD1	2.49	0.42
26:D0:23:VAL:HG11	26:D0:69:PHE:HZ	1.85	0.42
26:D0:36:ILE:H	26:D0:36:ILE:HD12	1.85	0.42
26:D0:56:ASP:OD1	26:D0:58:THR:OG1	2.30	0.42
10:AJ:38:ILE:HD12	10:AJ:38:ILE:C	2.39	0.42
4:AD:190:ASP:HB3	4:AD:193:ASP:OD2	2.19	0.42
49:DQ:55:VAL:HG22	49:DQ:56:ARG:N	2.35	0.42
39:DD:72:LYS:HZ1	39:DD:101:GLU:HB3	1.84	0.42
42:BG:66:GLN:OE1	42:BG:98:ARG:HD2	2.20	0.42
54:BV:91:TYR:HD1	54:BV:91:TYR:N	2.18	0.42
41:DF:25:PRO:CG	41:DF:119:ARG:HB2	2.49	0.42
36:DA:194:G:C6	36:DA:195:A:C5	3.07	0.42
43:DH:85:LYS:NZ	43:DH:85:LYS:C	2.73	0.42
42:DG:81:LYS:O	42:DG:82:LEU:O	2.38	0.42
36:BA:2282:G:H4'	36:BA:2283:C:O5'	2.19	0.42
25:AZ:100:ASP:O	25:AZ:129:PRO:HG2	2.19	0.42
20:AT:100:ILE:C	20:AT:102:GLY:N	2.73	0.42
35:D9:7:VAL:HG13	35:D9:34:GLN:HG2	2.01	0.42
46:DN:4:TYR:O	46:DN:5:VAL:C	2.59	0.42
36:BA:1855:G:O2'	36:BA:1856:G:H5'	2.20	0.42
36:BA:1051:G:C4	36:BA:1052:C:N4	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:27:THR:HA	56:BX:79:ALA:O	2.20	0.42
36:BA:636:G:H2'	48:BP:115:LEU:HD12	2.02	0.42
36:BA:1747(A):G:C3'	36:BA:1748:G:H5''	2.49	0.42
1:AA:1036:G:H5'	1:AA:1037:C:OP2	2.19	0.42
36:BA:2263:C:O2'	36:BA:2264:C:H5'	2.20	0.42
56:BX:41:ASN:O	56:BX:45:THR:HG23	2.20	0.42
12:AL:34:ARG:O	12:AL:60:LEU:HD13	2.19	0.42
36:BA:2134:A:H1'	36:BA:2159:G:N3	2.35	0.42
27:D1:29:GLY:HA3	36:DA:2396:G:O2'	2.20	0.42
36:BA:1141:U:C6	46:BN:63:THR:HB	2.55	0.42
40:BE:6:GLY:C	40:BE:196:VAL:HG22	2.40	0.42
40:BE:27:LEU:HD22	52:BT:1:MET:H3	1.85	0.42
36:DA:600:G:O2'	41:DF:105:VAL:HG22	2.20	0.42
52:BT:96:ARG:CB	52:BT:96:ARG:HH11	2.30	0.42
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.19	0.42
36:DA:2810:A:O2'	40:DE:61:ARG:CZ	2.68	0.42
41:DF:187:VAL:CG1	48:DP:7:ARG:HA	2.47	0.42
5:CE:12:LEU:CD1	5:CE:31:LEU:CB	2.97	0.42
37:BB:22:U:H2'	37:BB:23:G:C8	2.55	0.42
31:D5:2:ALA:N	36:DA:747:U:N3	2.68	0.42
36:DA:733:G:N7	36:DA:761:A:N1	2.68	0.42
38:DC:45:ALA:HB3	38:DC:171:ILE:HG22	2.02	0.42
38:DC:196:LEU:O	38:DC:199:HIS:N	2.53	0.42
25:AZ:267:VAL:HG13	25:AZ:267:VAL:O	2.19	0.42
3:CC:52:LEU:HD11	3:CC:55:VAL:HG23	2.00	0.42
39:BD:65:ILE:N	39:BD:65:ILE:CD1	2.79	0.42
12:AL:31:PRO:HB2	12:AL:32:PHE:CD2	2.55	0.42
49:BQ:18:LYS:CB	49:BQ:98:LYS:NZ	2.82	0.42
1:CA:1158:C:C5	1:CA:1160:G:H1'	2.55	0.42
19:CS:49:ILE:HD12	19:CS:49:ILE:H	1.84	0.42
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.19	0.42
3:AC:78:GLY:HA3	3:AC:83:ARG:CB	2.50	0.42
2:CB:17:PHE:O	2:CB:18:GLY:O	2.37	0.42
55:BW:17:VAL:C	55:BW:19:LEU:N	2.73	0.42
40:DE:128:SER:O	40:DE:129:HIS:HB2	2.20	0.42
16:CP:18:ARG:CG	16:CP:35:LYS:HE2	2.49	0.42
38:DC:139:ASN:H	38:DC:144:THR:HG1	1.64	0.42
9:CI:47:LEU:C	9:CI:49:PRO:HD2	2.39	0.42
57:DY:68:HIS:CE1	57:DY:70:SER:HB2	2.55	0.42
1:CA:878:G:H5'	8:CH:89:PRO:HG2	2.01	0.42
43:DH:169:VAL:HG22	43:DH:170:ARG:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:67:THR:CG2	16:AP:68:ASP:H	2.27	0.42
40:DE:33:VAL:CG1	40:DE:69:LYS:HD2	2.47	0.42
36:DA:2058:A:N6	36:DA:2059:A:N6	2.68	0.42
9:CI:52:ALA:CB	9:CI:95:LYS:HD2	2.50	0.42
40:BE:34:VAL:O	40:BE:34:VAL:HG13	2.20	0.42
36:BA:2847:U:H5''	52:BT:97:ALA:CB	2.50	0.42
47:DO:102:VAL:HB	47:DO:106:LEU:HD12	2.02	0.42
13:CM:96:LEU:CB	13:CM:97:PRO:HD2	2.49	0.42
27:B1:81:LYS:HE2	36:BA:155:U:C5	2.55	0.42
36:BA:984:A:H5''	36:BA:985:C:C5	2.44	0.42
36:BA:7:G:H4'	46:BN:13:TRP:CZ2	2.54	0.42
1:CA:1126:U:OP2	1:CA:1281:U:C2	2.72	0.42
11:CK:80:VAL:N	11:CK:104:GLN:O	2.48	0.42
2:AB:164:VAL:HG12	2:AB:165:VAL:N	2.35	0.42
36:BA:2464:C:O2'	36:BA:2465:C:P	2.77	0.42
1:AA:501:C:O2'	1:AA:502:G:H5'	2.20	0.42
8:CH:11:THR:O	8:CH:12:ARG:C	2.58	0.42
1:CA:1129:C:O2'	1:CA:1131:G:C8	2.67	0.42
41:BF:60:SER:OG	41:BF:61:GLY:N	2.53	0.42
1:AA:135:C:O2	16:AP:1:MET:N	2.48	0.42
13:AM:78:ILE:HA	13:AM:81:LEU:HD23	2.01	0.42
1:CA:22:G:O2'	1:CA:913:A:N1	2.49	0.42
1:AA:1299:A:C6	1:AA:1301:U:C2	3.08	0.42
58:BZ:79:ARG:O	58:BZ:80:ARG:CB	2.68	0.42
1:CA:511:C:C2	1:CA:512:U:C5	3.07	0.42
39:DD:79:VAL:CG2	39:DD:111:LEU:HD11	2.50	0.42
36:BA:2360:A:O2'	36:BA:2361:A:H8	2.03	0.42
5:CE:17:ALA:HB2	5:CE:26:PHE:CD1	2.52	0.42
36:DA:1048:A:N6	36:DA:1111:A:C8	2.88	0.42
1:CA:1348:U:H2'	1:CA:1349:A:H8	1.85	0.42
1:CA:1200:C:O2'	1:CA:1201:A:P	2.78	0.42
36:DA:1644:C:O2	36:DA:1644:C:H2'	2.19	0.42
36:BA:1628:G:H2'	36:BA:1629:U:C6	2.54	0.42
53:BU:47:TYR:CE1	54:BV:74:LYS:NZ	2.88	0.42
1:CA:473:G:OP1	16:CP:81:ARG:HB2	2.20	0.42
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.20	0.42
2:AB:194:PRO:O	2:AB:197:VAL:N	2.53	0.42
27:B1:65:SER:C	27:B1:67:ILE:H	2.23	0.42
40:DE:164:ARG:NH1	40:DE:164:ARG:HG3	2.34	0.42
36:BA:2678:C:C2	36:BA:2679:A:C8	3.08	0.42
1:AA:902:G:O2'	1:AA:903:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1623:G:C2	36:DA:1624:G:C8	3.08	0.42
52:BT:76:PHE:HA	52:BT:77:PRO:HD3	1.89	0.42
36:DA:1759:A:H4'	36:DA:2715:C:O4'	2.20	0.42
22:CV:53:G:O2'	22:CV:54:U:H5'	2.19	0.42
47:BO:113:LYS:HA	47:BO:116:SER:OG	2.20	0.42
36:DA:2266:A:H1'	36:DA:2272:U:O4	2.20	0.42
36:DA:2048:G:H2'	36:DA:2049:G:O5'	2.20	0.42
36:DA:2680:C:OP1	40:DE:109:LYS:HG3	2.20	0.42
11:AK:108:ILE:HG21	18:AR:88:LYS:OXT	2.20	0.42
36:DA:1641:A:H2'	36:DA:1642:G:O4'	2.20	0.42
1:CA:117:G:C2'	1:CA:118:U:H5'	2.50	0.42
11:CK:66:LEU:HD23	11:CK:66:LEU:HA	1.85	0.42
16:AP:60:LEU:HA	16:AP:60:LEU:HD23	1.75	0.42
10:AJ:46:ARG:HH11	10:AJ:46:ARG:CG	2.33	0.42
25:AZ:214:VAL:O	25:AZ:214:VAL:HG13	2.20	0.42
39:DD:273:ARG:O	39:DD:274:ARG:HB3	2.20	0.42
41:BF:41:LEU:O	41:BF:44:ARG:HG2	2.20	0.42
30:B4:4:GLY:N	30:B4:6:HIS:CE1	2.88	0.42
36:BA:2189:U:H5'	36:BA:2190:G:OP2	2.19	0.42
13:CM:10:PRO:CG	13:CM:18:ALA:HB1	2.50	0.42
34:D8:61:LEU:CD1	34:D8:61:LEU:H	2.02	0.42
37:BB:52:A:O2'	37:BB:53:A:C8	2.73	0.42
42:BG:8:LYS:O	42:BG:9:ARG:C	2.57	0.42
57:DY:38:ILE:HG23	57:DY:38:ILE:O	2.19	0.42
1:CA:963:G:H21	10:CJ:55:LYS:HG2	1.85	0.42
36:DA:2129:C:OP1	38:DC:6:ARG:HB3	2.19	0.42
31:B5:30:LEU:HB3	31:B5:40:LYS:O	2.20	0.42
25:AZ:116:THR:O	25:AZ:120:ILE:HG13	2.19	0.42
25:AZ:309:SER:O	25:AZ:310:ILE:CG2	2.58	0.42
19:AS:63:THR:HG23	19:AS:66:MET:HG2	2.01	0.42
13:CM:3:ARG:HE	13:CM:7:VAL:HA	1.84	0.42
42:DG:112:PRO:O	42:DG:114:ILE:HG22	2.20	0.42
56:DX:36:LYS:HE3	56:DX:36:LYS:HB2	1.81	0.42
37:BB:7:G:N3	51:BS:38:GLN:NE2	2.63	0.42
25:AZ:7:ARG:NH1	25:AZ:281:ILE:CD1	2.82	0.42
55:DW:37:ARG:NH1	55:DW:37:ARG:CG	2.83	0.42
58:DZ:23:LYS:HD3	58:DZ:38:TYR:CE1	2.55	0.42
47:BO:43:VAL:HG23	47:BO:56:ASP:O	2.20	0.42
48:BP:113:LYS:HG2	48:BP:114:ILE:N	2.30	0.42
48:BP:125:VAL:O	48:BP:125:VAL:HG13	2.19	0.42
35:B9:29:ASN:ND2	35:B9:29:ASN:O	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:52:LEU:HD23	40:BE:75:VAL:CG1	2.50	0.42
52:BT:128:GLU:O	52:BT:129:ARG:C	2.58	0.42
54:DV:64:HIS:CE1	54:DV:92:THR:HB	2.55	0.42
41:BF:201:VAL:O	41:BF:202:PHE:C	2.58	0.42
36:DA:2811:G:O2'	36:DA:2812:G:H5'	2.20	0.42
40:DE:59:VAL:O	40:DE:60:ASN:CG	2.59	0.42
3:CC:43:LEU:HD13	3:CC:68:VAL:HG21	2.01	0.42
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.83	0.42
36:DA:303:U:H2'	36:DA:304:G:H8	1.82	0.42
47:BO:61:VAL:HG12	47:BO:87:ILE:HD11	2.02	0.42
36:BA:385:C:O2	48:BP:71:VAL:HG21	2.19	0.42
25:AZ:363:MET:O	25:AZ:366:ASP:HB2	2.20	0.42
36:DA:2486:G:C2'	36:DA:2487:G:O5'	2.67	0.42
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.19	0.42
4:CD:109:GLY:HA3	4:CD:165:MET:CE	2.50	0.42
1:AA:199:G:O2'	1:AA:200:G:H5'	2.20	0.42
36:DA:1720:U:H2'	36:DA:1721:G:O4'	2.19	0.42
53:BU:6:THR:HG21	53:BU:10:ARG:CZ	2.49	0.42
47:BO:80:ASP:OD2	52:BT:71:GLY:CA	2.68	0.42
30:B4:22:ILE:HG21	42:BG:108:ASN:ND2	2.34	0.42
50:BR:22:ARG:HG2	50:BR:69:ASP:HB3	2.02	0.42
9:AI:43:ALA:C	9:AI:45:ALA:N	2.73	0.42
1:CA:956:U:H2'	1:CA:957:U:O4'	2.20	0.42
36:BA:927:G:H3'	36:BA:928:G:H8	1.84	0.42
36:BA:968:G:H2'	36:BA:969:U:H6	1.83	0.42
25:AZ:234:ARG:HB3	25:AZ:289:LEU:CD2	2.49	0.42
6:CF:22:GLU:HA	6:CF:25:ILE:HG22	2.01	0.42
43:DH:154:PRO:O	43:DH:155:SER:OG	2.23	0.42
1:AA:404:U:H5''	4:AD:122:ARG:HD3	2.00	0.42
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.35	0.42
40:DE:68:ALA:HB3	40:DE:69:LYS:HZ1	1.84	0.42
36:DA:2443:C:O2'	36:DA:2444:G:H5'	2.19	0.42
36:DA:178:G:C6	36:DA:179:G:N7	2.88	0.42
43:DH:106:THR:HG22	43:DH:112:PRO:HB3	2.02	0.42
41:DF:53:THR:O	41:DF:57:VAL:HG23	2.20	0.42
16:AP:22:THR:HG22	16:AP:32:TYR:HB3	2.02	0.42
36:DA:29:U:O2'	36:DA:30:G:H5'	2.20	0.42
2:AB:15:VAL:N	2:AB:16:HIS:CE1	2.87	0.42
5:CE:64:ARG:HG2	5:CE:64:ARG:O	2.20	0.42
1:CA:1308:U:OP2	13:CM:99:ARG:HG3	2.20	0.42
36:DA:860:U:H1'	36:DA:2268:A:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:438:G:H4'	4:CD:123:HIS:CE1	2.55	0.42
11:AK:103:LEU:CD1	11:AK:104:GLN:N	2.83	0.42
37:BB:114:C:H4'	51:BS:46:VAL:HG13	2.02	0.42
52:BT:74:ARG:C	52:BT:75:ILE:HD12	2.39	0.42
36:DA:2010:G:O2'	36:DA:2011:U:H5'	2.20	0.42
36:DA:863:A:H2'	36:DA:864:G:C8	2.54	0.42
1:AA:1031:G:H2'	1:AA:1032:G:O4'	2.20	0.42
55:DW:53:SER:O	55:DW:56:ALA:HB3	2.19	0.42
36:BA:1652:A:N7	36:BA:1653:G:C6	2.88	0.42
36:DA:2207:G:C2'	36:DA:2208:A:H5''	2.50	0.42
18:AR:31:LEU:N	18:AR:31:LEU:HD23	2.35	0.42
54:BV:66:ARG:HE	54:BV:88:ARG:HD2	1.81	0.42
36:BA:1409:C:O2'	36:BA:1410:G:H5'	2.20	0.42
35:D9:19:ARG:C	35:D9:21:GLY:H	2.23	0.42
58:BZ:5:LEU:HD23	58:BZ:6:LYS:N	2.35	0.42
37:DB:97:G:C2	37:DB:98:G:C8	3.08	0.42
50:BR:28:LEU:HD12	50:BR:28:LEU:HA	1.94	0.42
36:DA:36:G:H2'	36:DA:37:C:C6	2.53	0.42
36:BA:2242:G:C2'	36:BA:2243:U:O5'	2.68	0.42
36:BA:2174:C:H2'	36:BA:2175:C:C5'	2.50	0.42
1:CA:1377:A:O3'	1:CA:1378:C:H6	2.03	0.42
36:DA:2403:C:H2'	36:DA:2403:C:O2	2.20	0.42
36:BA:703:U:O2'	36:BA:704:G:H5'	2.20	0.42
49:BQ:97:VAL:O	49:BQ:97:VAL:HG23	2.19	0.42
36:BA:1221:C:C2'	36:BA:1221:C:O2	2.68	0.42
43:BH:141:VAL:O	43:BH:145:ALA:HB2	2.19	0.42
15:CO:6:GLU:HG2	15:CO:7:GLU:H	1.85	0.42
19:AS:32:LYS:HZ2	19:AS:32:LYS:HB3	1.85	0.42
35:D9:15:LYS:HZ2	35:D9:15:LYS:HB3	1.85	0.42
36:DA:1525:G:H2'	36:DA:1526:G:C8	2.54	0.42
1:CA:474:G:H2'	1:CA:475:G:C8	2.55	0.42
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.55	0.42
1:CA:1343:G:O2'	9:CI:121:ARG:HA	2.20	0.42
45:BK:88:UNK:O	45:BK:89:UNK:CB	2.68	0.42
53:BU:35:ALA:O	53:BU:36:ARG:C	2.57	0.42
39:DD:257:LEU:HD23	39:DD:258:LYS:N	2.35	0.42
36:DA:327:G:O2'	36:DA:328:U:H5'	2.20	0.42
36:DA:1149:G:H2'	36:DA:1150:C:C6	2.54	0.42
24:CY:19:G:C8	24:CY:57:G:N2	2.88	0.42
36:BA:2624:G:O2'	36:BA:2625:G:H5'	2.20	0.42
36:BA:2517:C:C2	36:BA:2542:A:N6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:143:ALA:O	41:DF:146:ALA:HB3	2.19	0.42
40:DE:64:LYS:HG2	40:DE:64:LYS:O	2.19	0.42
1:CA:966:G:H2'	1:CA:967:C:C6	2.55	0.42
25:AZ:192:GLU:O	25:AZ:193:ASN:O	2.39	0.41
1:CA:1266:G:H2'	1:CA:1268:A:OP2	2.20	0.41
21:CU:18:TYR:HA	21:CU:22:ARG:HB3	2.02	0.41
28:B2:29:LYS:HB3	28:B2:33:MET:CG	2.50	0.41
28:B2:52:ASP:N	28:B2:52:ASP:OD1	2.52	0.41
28:B2:48:HIS:N	36:BA:95:G:H4'	2.35	0.41
28:B2:3:LEU:HB3	36:BA:98:G:OP1	2.19	0.41
4:CD:95:GLY:CA	4:CD:188:LEU:HD21	2.50	0.41
41:BF:123:LEU:HD12	41:BF:124:LEU:N	2.33	0.41
47:DO:71:ARG:NH1	47:DO:105:GLU:OE1	2.53	0.41
51:BS:73:LEU:HD23	51:BS:73:LEU:C	2.40	0.41
25:CZ:310:ILE:HA	25:CZ:310:ILE:HD13	1.88	0.41
36:DA:1827:C:H2'	36:DA:1828:G:C5'	2.50	0.41
36:DA:1826:G:C3'	39:DD:242:ARG:HH21	2.31	0.41
1:CA:428:G:O2'	1:CA:429:U:P	2.78	0.41
42:BG:114:ILE:O	42:BG:115:ARG:C	2.58	0.41
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.54	0.41
36:DA:2160:G:H8	36:DA:2160:G:C5'	2.29	0.41
32:B6:9:LEU:HD13	32:B6:11:LEU:HD22	2.02	0.41
36:BA:2282:G:OP1	36:BA:2283:C:H1'	2.20	0.41
32:B6:18:ARG:HD2	32:B6:19:ARG:HD2	2.02	0.41
1:CA:1370:G:C2	1:CA:1371:G:N7	2.88	0.41
56:DX:10:ALA:O	56:DX:28:PHE:CB	2.68	0.41
34:D8:48:PHE:C	34:D8:49:VAL:CG2	2.88	0.41
51:BS:13:ARG:CG	51:BS:14:VAL:N	2.82	0.41
1:AA:858:G:H8	1:AA:858:G:O5'	2.02	0.41
2:CB:61:LEU:O	2:CB:64:ARG:HG2	2.20	0.41
2:CB:8:LYS:HB2	2:CB:9:GLU:H	1.57	0.41
58:BZ:30:ASN:ND2	58:BZ:33:LEU:HB3	2.34	0.41
36:BA:1510:G:H2'	36:BA:1511:C:C6	2.55	0.41
36:BA:1351:C:C6	36:BA:1381:G:C2	3.08	0.41
32:D6:7:ILE:O	32:D6:7:ILE:HG22	2.20	0.41
4:CD:59:ARG:CA	4:CD:59:ARG:NE	2.75	0.41
21:AU:9:ARG:HH12	21:AU:23:PRO:CD	2.18	0.41
36:DA:1309:G:O2'	36:DA:1310:G:H5'	2.20	0.41
32:D6:45:LYS:HB2	36:DA:2371:G:H4'	2.00	0.41
27:D1:70:VAL:CG1	27:D1:71:TYR:N	2.82	0.41
9:CI:16:ARG:NH1	9:CI:16:ARG:HG3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:917:A:O2'	36:BA:918:A:H5'	2.20	0.41
54:DV:22:VAL:HG23	54:DV:92:THR:O	2.19	0.41
42:DG:176:LEU:HD23	42:DG:176:LEU:C	2.40	0.41
1:CA:55:A:C2	1:CA:56:U:H1'	2.55	0.41
1:AA:878:G:H5''	8:AH:89:PRO:HG2	2.01	0.41
52:DT:120:ARG:HA	52:DT:123:GLN:HG2	2.02	0.41
55:BW:107:LEU:CD1	55:BW:107:LEU:N	2.81	0.41
10:CJ:35:SER:HB3	10:CJ:73:ASP:HB2	2.02	0.41
1:AA:177:C:OP1	20:AT:65:LYS:NZ	2.48	0.41
13:AM:56:LEU:O	13:AM:57:ARG:C	2.58	0.41
36:DA:690:G:H2'	36:DA:691:C:C6	2.56	0.41
40:BE:101:ARG:HB3	40:BE:201:THR:HG21	2.02	0.41
58:BZ:103:ARG:NH1	58:BZ:136:PHE:HB2	2.35	0.41
39:BD:27:THR:HG23	39:BD:27:THR:O	2.19	0.41
36:BA:733:G:N7	36:BA:761:A:N1	2.67	0.41
19:CS:40:ILE:HG13	19:CS:69:HIS:O	2.20	0.41
50:DR:104:ARG:O	50:DR:106:GLY:N	2.53	0.41
52:BT:38:ASN:ND2	52:BT:38:ASN:O	2.28	0.41
3:CC:64:VAL:HG12	3:CC:66:VAL:CG2	2.48	0.41
8:AH:38:ILE:CG2	8:AH:120:THR:HG22	2.50	0.41
36:BA:445:C:H4'	53:BU:3:ARG:HD2	2.02	0.41
28:D2:48:HIS:HD2	28:D2:49:LYS:H	1.61	0.41
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.79	0.41
40:DE:36:ARG:NH2	40:DE:88:GLY:CA	2.82	0.41
36:DA:2059:A:O3'	41:DF:69:HIS:HA	2.20	0.41
1:AA:977:A:O2'	1:AA:978:A:C5'	2.68	0.41
43:DH:94:TYR:CD1	43:DH:107:VAL:CA	3.02	0.41
36:DA:782:A:N1	39:DD:226:MET:CE	2.81	0.41
22:CW:35:A:C2	23:CX:17:U:O4	2.73	0.41
1:AA:101:A:C2	1:AA:102:G:C8	3.07	0.41
5:CE:133:TYR:C	5:CE:135:THR:H	2.24	0.41
50:DR:61:HIS:C	50:DR:61:HIS:CD2	2.93	0.41
40:DE:38:THR:CG2	40:DE:39:PRO:HD2	2.48	0.41
12:AL:91:LYS:HZ3	12:AL:91:LYS:HB3	1.80	0.41
1:CA:105:G:H2'	1:CA:106:C:H6	1.83	0.41
1:CA:1283:G:O2'	1:CA:1284:C:P	2.77	0.41
36:BA:1493:C:C5	36:BA:2206:G:O2'	2.72	0.41
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HD12	2.02	0.41
1:CA:990:C:C6	1:CA:1216:G:N2	2.88	0.41
36:DA:1651:G:C2	36:DA:2007:C:C2	3.07	0.41
50:DR:14:SER:HA	50:DR:17:ARG:HH12	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:11:VAL:O	15:AO:15:PHE:HD1	2.02	0.41
36:BA:547:A:H2'	36:BA:548:A:C8	2.54	0.41
38:DC:72:VAL:HG13	38:DC:72:VAL:O	2.19	0.41
3:CC:203:PHE:C	3:CC:203:PHE:CD1	2.93	0.41
1:CA:471:G:H21	16:CP:82:GLN:HE22	1.65	0.41
1:CA:1529:G:H4'	1:CA:1530:G:OP2	2.19	0.41
58:BZ:5:LEU:HD23	58:BZ:6:LYS:H	1.84	0.41
18:CR:85:LEU:HD12	18:CR:86:VAL:H	1.83	0.41
36:DA:2694:G:C2'	36:DA:2695:C:H5'	2.50	0.41
1:CA:644:G:C4	1:CA:645:C:C6	3.07	0.41
50:BR:44:LEU:O	50:BR:44:LEU:HD13	2.20	0.41
36:BA:1363:C:H2'	36:BA:1364:G:C8	2.55	0.41
4:CD:190:ASP:O	4:CD:191:ARG:C	2.58	0.41
1:AA:835:U:O2'	1:AA:836:G:H5'	2.20	0.41
1:AA:748:C:H1'	1:AA:749:C:H5	1.85	0.41
29:D3:15:TYR:HB3	29:D3:16:PRO:HD2	2.02	0.41
27:D1:45:ASN:ND2	27:D1:45:ASN:C	2.73	0.41
46:BN:85:ILE:HG22	46:BN:89:LYS:HB2	2.02	0.41
1:CA:675:A:H2'	1:CA:676:A:O4'	2.20	0.41
36:DA:2038:G:C6	36:DA:2039:C:C4	3.08	0.41
17:CQ:91:ARG:CG	17:CQ:91:ARG:HH11	2.32	0.41
1:AA:425:G:O2'	1:AA:426:G:H5'	2.20	0.41
25:AZ:169:PRO:O	25:AZ:171:ILE:HD12	2.20	0.41
36:DA:560:C:O2	53:DU:49:HIS:CE1	2.72	0.41
1:CA:1055:A:H2'	1:CA:1056:U:O5'	2.20	0.41
6:CF:45:LEU:O	6:CF:46:ARG:HG3	2.20	0.41
36:BA:975(A):G:H1'	36:BA:990:A:C2	2.55	0.41
46:DN:42:TRP:CZ2	46:DN:44:PRO:HA	2.54	0.41
1:AA:184:G:C4'	1:AA:224:C:H4'	2.50	0.41
37:BB:34:U:OP1	42:BG:3:LEU:HD13	2.20	0.41
38:BC:77:ILE:HB	38:BC:115:ALA:HB2	2.02	0.41
7:AG:132:GLY:O	7:AG:136:LYS:HG2	2.19	0.41
36:BA:556:G:H2'	36:BA:557:U:C6	2.55	0.41
33:D7:32:LYS:O	33:D7:36:GLN:HB2	2.20	0.41
3:AC:87:LEU:O	3:AC:91:LEU:HG	2.18	0.41
36:DA:678:C:H2'	36:DA:679:C:C6	2.54	0.41
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.85	0.41
36:BA:2168:G:N2	36:BA:2170:A:H3'	2.35	0.41
24:CY:76:A:C5	25:CZ:271:GLU:CD	2.94	0.41
4:AD:59:ARG:O	4:AD:63:LYS:HB2	2.20	0.41
25:AZ:181:GLN:OE1	25:AZ:193:ASN:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:161:TYR:CA	61:CZ:502:KIR:O15	2.68	0.41
26:D0:37:LEU:CD1	26:D0:51:VAL:HG22	2.49	0.41
26:D0:51:VAL:CG2	26:D0:79:VAL:O	2.65	0.41
53:DU:98:LEU:C	53:DU:100:VAL:H	2.23	0.41
13:CM:64:TRP:O	13:CM:66:LEU:CD1	2.63	0.41
31:D5:3:LYS:HG3	31:D5:4:HIS:H	1.85	0.41
28:B2:34:GLU:C	28:B2:37:PHE:H	2.23	0.41
28:B2:3:LEU:HG	28:B2:7:ARG:NH1	2.31	0.41
4:AD:165:MET:HE3	4:AD:176:LEU:HD21	2.02	0.41
36:DA:2223:G:H2'	36:DA:2224:G:H5'	2.02	0.41
43:BH:83:TYR:HB2	43:BH:134:SER:HA	2.02	0.41
36:BA:2131:G:H4'	36:BA:2132:U:O5'	2.19	0.41
52:DT:83:ILE:CG1	52:DT:84:GLN:N	2.67	0.41
42:BG:107:LEU:HD23	42:BG:107:LEU:C	2.41	0.41
53:BU:61:TRP:O	53:BU:65:ILE:HG13	2.19	0.41
41:DF:24:LEU:O	41:DF:26:ALA:N	2.53	0.41
1:CA:1047:G:O3'	14:CN:4:LYS:HB2	2.20	0.41
10:CJ:50:ILE:HG22	10:CJ:60:ARG:HD3	2.02	0.41
23:CX:24:A:N6	23:CX:25:A:C6	2.89	0.41
36:BA:1568:G:H4'	39:BD:59:LYS:HB3	2.01	0.41
52:BT:29:ARG:HD3	52:BT:30:VAL:N	2.30	0.41
52:BT:33:LYS:HA	52:BT:33:LYS:HD3	1.91	0.41
42:DG:79:ASN:O	42:DG:80:PHE:CD2	2.73	0.41
42:DG:87:PRO:O	42:DG:88:ILE:CG1	2.68	0.41
41:BF:188:ARG:HA	48:BP:7:ARG:CD	2.50	0.41
20:AT:50:GLU:HG3	20:AT:100:ILE:HD11	2.01	0.41
48:BP:65:ARG:O	48:BP:68:GLN:OE1	2.38	0.41
22:AV:5:G:H2'	22:AV:6:G:O4'	2.20	0.41
1:CA:1371:G:C6	1:CA:1372:U:C4	3.07	0.41
1:CA:1371:G:O2'	1:CA:1372:U:H5'	2.20	0.41
56:DX:27:THR:HA	56:DX:79:ALA:O	2.19	0.41
34:B8:47:LYS:C	34:B8:48:PHE:CD1	2.88	0.41
36:DA:2249:U:H4'	36:DA:2275:C:H5	1.82	0.41
58:BZ:65:GLN:O	58:BZ:67:LEU:HD12	2.19	0.41
5:CE:78:HIS:O	5:CE:93:PRO:HG3	2.21	0.41
58:BZ:37:VAL:CG2	58:BZ:38:TYR:N	2.82	0.41
36:DA:481:G:H1'	36:DA:506:G:N2	2.35	0.41
23:CX:20:U:C2	23:CX:21:C:C5	3.08	0.41
32:D6:18:ARG:HH22	32:D6:47:THR:HG23	1.84	0.41
40:BE:81:ILE:O	40:BE:82:ARG:O	2.38	0.41
36:DA:1184:G:C6	36:DA:1185:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2711:A:OP1	36:DA:2712(A):A:P	2.79	0.41
36:DA:2779:U:O2	36:DA:2781:A:C2	2.73	0.41
42:DG:32:PRO:HB3	42:DG:163:ALA:HA	2.01	0.41
9:CI:106:ALA:O	9:CI:108:VAL:HG23	2.20	0.41
4:CD:85:LYS:HZ3	4:CD:92:VAL:HG22	1.85	0.41
8:AH:85:ARG:NH1	8:AH:85:ARG:CG	2.82	0.41
36:BA:327:G:H2'	36:BA:328:U:H6	1.84	0.41
10:CJ:4:ILE:HG22	10:CJ:6:ILE:CG2	2.50	0.41
58:BZ:18:LEU:H	58:BZ:18:LEU:CD2	2.17	0.41
13:AM:36:LYS:HD2	13:AM:59:TYR:CZ	2.55	0.41
18:CR:36:ASN:OD1	18:CR:39:VAL:CB	2.59	0.41
36:BA:1038:C:C3'	36:BA:1039:G:C5'	2.97	0.41
40:BE:117:MET:HE3	40:BE:136:ARG:CB	2.50	0.41
19:CS:16:LEU:HA	19:CS:19:VAL:CG2	2.50	0.41
38:DC:87:GLU:HG2	38:DC:94:VAL:CG1	2.48	0.41
41:BF:132:VAL:CG1	41:BF:133:ASN:H	2.20	0.41
1:CA:266:G:H5''	1:CA:267:C:H5	1.84	0.41
32:D6:53:LYS:N	32:D6:53:LYS:HD3	2.30	0.41
36:BA:191:A:H2'	36:BA:192:C:H6	1.86	0.41
2:CB:28:PHE:CD1	2:CB:28:PHE:O	2.73	0.41
8:AH:114:THR:OG1	8:AH:119:LEU:HD21	2.20	0.41
40:DE:134:ILE:CD1	40:DE:134:ILE:O	2.68	0.41
33:D7:39:ARG:HD3	36:DA:458:G:O2'	2.20	0.41
1:CA:1015:A:C6	1:CA:1016:A:C6	3.09	0.41
36:DA:67:U:H2'	36:DA:68:G:H8	1.85	0.41
36:DA:1058:G:H1'	36:DA:1082:U:N3	2.34	0.41
40:DE:36:ARG:HH22	40:DE:88:GLY:N	2.17	0.41
36:DA:676:A:C8	36:DA:2443:C:H1'	2.55	0.41
10:AJ:7:LYS:HE3	10:AJ:40:LEU:CD1	2.51	0.41
36:BA:740:U:O2'	36:BA:741:G:H5'	2.19	0.41
39:DD:125:ILE:CG2	39:DD:125:ILE:O	2.62	0.41
41:DF:65:TRP:HB3	41:DF:66:PRO:HD2	2.02	0.41
3:CC:139:GLN:O	3:CC:142:MET:HB2	2.21	0.41
1:AA:1257:U:C2'	1:AA:1258:G:OP1	2.68	0.41
36:BA:1274:A:N3	36:BA:1297:C:H1'	2.34	0.41
36:BA:998:C:H2'	36:BA:999:U:O5'	2.19	0.41
36:DA:2688:U:H5	36:DA:2720:U:OP1	2.03	0.41
36:BA:2152:G:O2'	36:BA:2153:G:H5'	2.20	0.41
4:CD:25:ARG:C	4:CD:27:TYR:N	2.70	0.41
10:CJ:44:VAL:HG13	10:CJ:66:ARG:HE	1.85	0.41
18:CR:42:ARG:HG2	18:CR:42:ARG:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:104:ARG:O	50:BR:105:ARG:C	2.58	0.41
39:DD:46:GLN:N	39:DD:46:GLN:OE1	2.53	0.41
50:DR:10:LEU:O	50:DR:11:ASN:CB	2.67	0.41
36:DA:609:A:H2'	36:DA:610:G:O4'	2.20	0.41
36:DA:566:U:H2'	36:DA:567:A:O4'	2.20	0.41
36:BA:2249:U:H4'	36:BA:2275:C:H5	1.82	0.41
20:CT:56:MET:HE2	20:CT:56:MET:C	2.40	0.41
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	2.01	0.41
53:BU:24:TYR:HB3	53:BU:28:ARG:CB	2.49	0.41
22:AW:39:U:O2'	22:AW:40:C:H5'	2.20	0.41
47:DO:98:VAL:O	47:DO:98:VAL:HG13	2.20	0.41
42:DG:181:ARG:O	42:DG:182:LYS:OXT	2.38	0.41
1:CA:1378:C:OP1	7:CG:7:ALA:HB3	2.20	0.41
36:DA:105:C:H2'	36:DA:106:C:C6	2.55	0.41
45:BK:95:UNK:C	45:BK:97:UNK:N	2.83	0.41
14:AN:59:ALA:HB1	14:AN:61:TRP:HZ3	1.84	0.41
36:BA:1173:G:H3'	36:BA:1174:A:C5'	2.49	0.41
1:CA:1350:A:C5	1:CA:1351:U:C5	3.08	0.41
4:CD:190:ASP:HB3	4:CD:193:ASP:OD2	2.20	0.41
58:DZ:108:PRO:HA	58:DZ:141:VAL:HG12	2.02	0.41
36:DA:1345:C:O2'	36:DA:1346:G:H5'	2.20	0.41
36:BA:1258:C:H2'	36:BA:1259:G:C8	2.55	0.41
36:DA:1835:G:H2'	36:DA:1835:G:N3	2.35	0.41
1:CA:551:U:H2'	1:CA:552:U:H6	1.85	0.41
15:CO:40:SER:O	15:CO:44:LYS:HG3	2.21	0.41
1:AA:825:G:N2	8:AH:11:THR:HG21	2.35	0.41
1:AA:833:U:H2'	1:AA:834:C:C6	2.54	0.41
1:AA:1200:C:O2'	1:AA:1201:A:OP2	2.32	0.41
41:BF:8:GLN:OE1	41:BF:146:ALA:HA	2.20	0.41
1:AA:1027:C:O2	1:AA:1035:A:N1	2.53	0.41
1:CA:831:U:H2'	1:CA:832:C:C6	2.55	0.41
25:CZ:145:GLU:O	25:CZ:145:GLU:HG2	2.19	0.41
1:AA:617:G:H1	1:AA:623:C:H42	1.67	0.41
20:CT:25:ARG:HH11	20:CT:25:ARG:HG3	1.85	0.41
36:BA:514:A:O2'	36:BA:515:A:H5'	2.20	0.41
4:AD:68:TYR:CE1	4:AD:97:LEU:HD13	2.54	0.41
25:CZ:20:VAL:CG2	25:CZ:21:ASP:H	2.25	0.41
28:B2:46:GLN:O	28:B2:50:ILE:HB	2.20	0.41
57:BY:27:VAL:HG12	57:BY:29:GLU:N	2.31	0.41
39:DD:70:TRP:HA	39:DD:73:VAL:HG22	2.01	0.41
40:DE:52:LEU:O	40:DE:53:PRO:O	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1826:G:H2'	36:DA:1827:C:H6	1.85	0.41
36:DA:1209:G:N2	36:DA:1210:A:N6	2.58	0.41
26:D0:42:GLY:HA3	36:DA:2331:G:C1'	2.50	0.41
57:DY:10:GLY:C	57:DY:27:VAL:HG22	2.41	0.41
1:CA:1048:G:P	14:CN:4:LYS:HB2	2.60	0.41
36:DA:2128:C:H1'	36:DA:2129:C:H5'	2.03	0.41
47:BO:35:VAL:CG1	47:BO:105:GLU:HB2	2.50	0.41
36:BA:1528:A:H2'	36:BA:1528(A):A:C8	2.55	0.41
36:DA:2191:G:H3'	36:DA:2192:G:H8	1.84	0.41
36:DA:1341:U:C4'	56:DX:57:LEU:HB3	2.50	0.41
52:DT:110:ILE:C	52:DT:112:ARG:H	2.24	0.41
36:DA:1798:U:H5''	39:DD:259:THR:HB	2.01	0.41
2:CB:9:GLU:HB3	2:CB:48:MET:CE	2.51	0.41
58:BZ:8:TYR:N	58:BZ:8:TYR:CD1	2.88	0.41
25:AZ:135:MET:HB3	25:AZ:172:ARG:HG3	2.01	0.41
26:B0:36:ILE:HG12	36:BA:2355:C:H4'	2.02	0.41
36:DA:2287:A:N1	36:DA:2346:A:C2	2.88	0.41
53:DU:62:ILE:HG23	53:DU:76:TYR:CE2	2.55	0.41
57:DY:62:GLU:OE1	57:DY:62:GLU:N	2.53	0.41
32:D6:19:ARG:HD3	32:D6:20:ASN:N	2.34	0.41
32:D6:15:GLU:OE2	32:D6:41:PRO:CB	2.69	0.41
40:BE:7:VAL:HG12	40:BE:27:LEU:CB	2.46	0.41
40:BE:28:ALA:HB3	40:BE:93:VAL:HG22	2.02	0.41
51:DS:57:LYS:C	51:DS:57:LYS:HD2	2.40	0.41
51:DS:61:ASN:O	51:DS:65:VAL:CG2	2.65	0.41
3:CC:51:GLY:O	3:CC:115:LEU:HD21	2.20	0.41
1:CA:356:A:C2	1:CA:368:U:O2	2.72	0.41
1:CA:391:G:C6	1:CA:392:G:C5	3.08	0.41
36:DA:649:G:C2	36:DA:650:C:C2	3.08	0.41
36:DA:2847:U:OP1	52:DT:98:LYS:HE2	2.21	0.41
1:AA:1016:A:OP1	14:AN:15:LYS:HE3	2.20	0.41
10:CJ:96:ILE:HG12	10:CJ:96:ILE:O	2.19	0.41
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.80	0.41
58:BZ:17:ALA:O	58:BZ:20:ARG:HG2	2.21	0.41
41:DF:33:LEU:O	41:DF:34:TRP:C	2.58	0.41
48:DP:5:ASP:O	48:DP:6:LEU:C	2.57	0.41
9:CI:4:TYR:CD2	9:CI:85:LEU:HA	2.51	0.41
27:B1:94:LEU:O	27:B1:95:LEU:C	2.59	0.41
1:AA:186:C:H5'	20:AT:78:ALA:HB1	2.02	0.41
36:BA:1337:G:C4	36:BA:1338:G:C8	3.08	0.41
28:D2:24:LEU:HD23	28:D2:24:LEU:C	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2407:G:N2	36:DA:2408:U:C2	2.88	0.41
39:BD:4:LYS:CD	39:BD:18:VAL:HG12	2.42	0.41
36:BA:1577:C:H2'	36:BA:1578:U:O4'	2.20	0.41
1:AA:374:A:H2'	1:AA:375:U:H6	1.84	0.41
36:BA:391:G:O2'	36:BA:392:C:H5'	2.21	0.41
43:DH:16:SER:HB2	43:DH:27:LYS:HD3	2.02	0.41
53:BU:52:ARG:O	53:BU:56:ASP:N	2.52	0.41
46:DN:7:LYS:O	46:DN:8:GLN:C	2.58	0.41
1:AA:197:A:C5	1:AA:221:C:H4'	2.55	0.41
6:CF:35:ALA:O	6:CF:66:GLU:O	2.38	0.41
16:CP:1:MET:SD	16:CP:3:LYS:HG3	2.60	0.41
39:BD:211:ARG:HA	39:BD:214:TRP:CE3	2.55	0.41
22:CW:56:C:O2'	22:CW:57:G:H8	1.98	0.41
1:CA:40:C:H2'	1:CA:41:G:C8	2.55	0.41
36:DA:184:C:H2'	36:DA:185:U:H6	1.76	0.41
41:DF:52:LYS:O	41:DF:87:GLY:O	2.39	0.41
36:BA:1809:A:C6	36:BA:1810:A:C6	3.08	0.41
43:BH:19:VAL:CG1	43:BH:20:ALA:H	2.29	0.41
50:DR:95:THR:OG1	50:DR:96:ARG:N	2.53	0.41
8:AH:10:LEU:CD2	8:AH:83:ILE:HD11	2.51	0.41
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.56	0.41
38:DC:20:TYR:CE2	38:DC:28:LEU:CD1	2.99	0.41
36:DA:235:U:H2'	36:DA:236:C:H6	1.85	0.41
39:BD:14:ARG:HG3	39:BD:15:PHE:N	2.35	0.41
49:BQ:134:ARG:CZ	58:BZ:122:ARG:HE	2.33	0.41
37:BB:66:A:C2'	37:BB:67:G:OP2	2.68	0.41
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	2.02	0.41
47:BO:66:LYS:HA	47:BO:79:PHE:O	2.19	0.41
6:AF:91:VAL:CG1	6:AF:92:LYS:N	2.83	0.41
15:CO:87:ILE:O	15:CO:89:GLY:N	2.53	0.41
48:BP:85:LEU:HD22	48:BP:85:LEU:H	1.85	0.41
55:BW:10:VAL:O	55:BW:10:VAL:HG12	2.21	0.41
15:AO:8:LYS:O	15:AO:11:VAL:HB	2.21	0.41
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.19	0.41
36:BA:1379:A:OP2	36:BA:1379:A:C4'	2.68	0.41
11:CK:44:SER:H	11:CK:47:VAL:HG22	1.85	0.41
14:AN:28:GLY:O	14:AN:29:ARG:C	2.59	0.41
40:BE:119:ARG:HG3	40:BE:160:TYR:CD1	2.56	0.41
36:BA:2623:G:H4'	36:BA:2825:C:O2	2.20	0.41
1:CA:271:C:H2'	1:CA:272:C:H6	1.85	0.41
36:DA:1805:U:O2	39:DD:50:THR:HB	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:65:HIS:C	43:DH:67:LEU:H	2.20	0.41
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.55	0.41
36:BA:782:A:C6	39:BD:226:MET:HE3	2.55	0.41
1:CA:987:G:H2'	1:CA:988:G:H8	1.85	0.41
5:AE:102:ALA:HA	5:AE:120:THR:HG22	2.01	0.41
1:CA:718:G:H1'	11:CK:116:HIS:HA	2.01	0.41
36:DA:80:G:H1'	36:DA:346:A:N6	2.36	0.41
31:D5:19:ARG:NH1	36:DA:1265:A:H3'	2.36	0.41
36:DA:1845:G:O2'	36:DA:1846:G:H5'	2.21	0.41
47:DO:86:ILE:HG22	47:DO:94:ARG:HB2	2.02	0.41
57:DY:94:LYS:HG3	57:DY:94:LYS:O	2.20	0.41
37:DB:71:C:O2'	37:DB:72:G:H5'	2.19	0.41
36:DA:1514:U:H2'	36:DA:1515:G:H8	1.85	0.41
47:DO:54:GLU:C	47:DO:56:ASP:H	2.23	0.41
36:DA:55:G:H2'	36:DA:56:A:H8	1.85	0.41
41:DF:9:ILE:H	41:DF:9:ILE:HG13	1.57	0.41
1:AA:815:A:H4'	1:AA:817:C:C5	2.55	0.41
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.53	0.41
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	2.02	0.41
25:CZ:325:LYS:HB2	25:CZ:331:HIS:HB3	2.02	0.41
25:CZ:341:GLN:N	25:CZ:341:GLN:CD	2.73	0.41
57:BY:24:VAL:CG1	57:BY:25:GLY:N	2.83	0.41
57:BY:9:LYS:O	57:BY:28:LYS:NZ	2.52	0.41
4:CD:101:LEU:HB2	4:CD:138:TYR:HB3	2.03	0.41
1:CA:403:C:OP1	4:CD:137:SER:HB3	2.20	0.41
42:BG:52:ILE:O	42:BG:54:GLU:N	2.52	0.41
34:D8:63:PRO:O	34:D8:64:TYR:O	2.39	0.41
42:DG:45:GLU:OE1	42:DG:45:GLU:HA	2.19	0.41
36:DA:2385:C:O2'	36:DA:2386:C:H5'	2.21	0.41
42:BG:115:ARG:NH1	42:BG:137:GLU:OE2	2.53	0.41
42:BG:173:LEU:O	42:BG:176:LEU:CB	2.67	0.41
42:BG:170:ARG:HG3	42:BG:174:GLU:OE1	2.20	0.41
42:BG:60:LEU:HD13	42:BG:68:PRO:CG	2.50	0.41
57:DY:80:GLY:O	57:DY:81:LYS:C	2.58	0.41
36:BA:2884:U:C6	36:BA:2885:C:C6	3.08	0.41
36:BA:2889:C:O2	36:BA:2889:C:H2'	2.19	0.41
32:B6:11:LEU:HD13	32:B6:11:LEU:HA	1.89	0.41
58:DZ:151:HIS:HB3	58:DZ:170:THR:CA	2.32	0.41
36:DA:1541:G:O3'	36:DA:1541:G:OP2	2.38	0.41
36:BA:1528:A:O2'	36:BA:1528(A):A:C5'	2.68	0.41
36:DA:2107:C:H1'	36:DA:2182:G:N2	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:23:PRO:CA	48:BP:29:LYS:O	2.60	0.41
42:DG:132:ASN:HA	42:DG:157:ILE:O	2.21	0.41
56:DX:11:PRO:O	56:DX:12:VAL:O	2.39	0.41
34:D8:14:VAL:CG1	34:D8:14:VAL:O	2.68	0.41
1:CA:1431:C:H5	1:CA:1469:G:H1	0.77	0.41
36:DA:2245:U:H1'	36:DA:2435:A:H5''	2.03	0.41
37:BB:50:G:OP2	51:BS:62:LYS:HB2	2.20	0.41
25:AZ:7:ARG:NH1	25:AZ:281:ILE:HD11	2.35	0.41
52:BT:8:LYS:HA	52:BT:11:GLU:OE1	2.20	0.41
36:BA:139:G:C2'	36:BA:139(A):G:H5''	2.45	0.41
56:BX:40:LYS:O	56:BX:44:GLU:HB2	2.19	0.41
35:D9:1:MET:CE	35:D9:10:ILE:HG12	2.50	0.41
27:D1:25:LYS:HG3	36:DA:388:G:OP1	2.20	0.41
32:D6:35:GLU:HA	32:D6:35:GLU:OE1	2.20	0.41
36:DA:479:A:HO2'	36:DA:481:G:H8	1.65	0.41
40:BE:29:GLY:HA2	40:BE:180:ASN:HB3	2.02	0.41
40:BE:27:LEU:C	40:BE:29:GLY:H	2.23	0.41
36:DA:580:C:P	53:DU:33:ARG:NH2	2.93	0.41
38:DC:100:ILE:O	38:DC:100:ILE:CG2	2.68	0.41
38:DC:127:LEU:C	38:DC:129:ARG:H	2.23	0.41
58:DZ:30:ASN:HB3	58:DZ:90:VAL:HB	2.02	0.41
52:BT:94:ALA:HB1	52:BT:99:LEU:HD23	2.02	0.41
46:DN:63:THR:O	46:DN:64:GLY:O	2.38	0.41
36:DA:1055:G:C6	36:DA:1056:G:N2	2.89	0.41
13:AM:15:VAL:O	13:AM:19:LEU:HD22	2.20	0.41
3:AC:130:VAL:HG12	3:AC:134:ILE:HD11	2.03	0.41
58:BZ:109:ALA:C	58:BZ:111:VAL:N	2.73	0.41
36:DA:2617:C:C4	36:DA:2618:G:N7	2.89	0.41
43:BH:16:SER:HB2	43:BH:27:LYS:HD3	2.02	0.41
46:DN:32:THR:C	46:DN:34:LEU:N	2.72	0.41
12:AL:32:PHE:CB	12:AL:84:LEU:HD21	2.39	0.41
28:D2:63:VAL:O	28:D2:65:ASN:N	2.54	0.41
38:DC:78:ALA:HA	38:DC:116:THR:H	1.85	0.41
36:DA:1364:G:C2	36:DA:1368:G:C5	3.09	0.41
36:DA:11:G:O2'	36:DA:12:U:H5'	2.20	0.41
5:CE:18:ARG:CG	5:CE:18:ARG:NH1	2.78	0.41
50:DR:101:ALA:O	50:DR:102:GLU:HB2	2.21	0.41
36:BA:1070:A:H5'	36:BA:1072:C:OP2	2.19	0.41
36:BA:1341:U:H4'	56:BX:56:THR:O	2.19	0.41
25:AZ:316:PHE:HD1	25:AZ:316:PHE:N	2.17	0.41
5:AE:33:VAL:HG22	5:AE:43:LEU:HD13	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:20:ILE:O	42:BG:23:PHE:O	2.38	0.41
1:CA:376:G:H4'	16:CP:5:ARG:HH11	1.83	0.41
39:BD:107:ALA:HA	39:BD:108:PRO:HD2	1.90	0.41
36:DA:1658:C:OP1	40:DE:132:HIS:O	2.38	0.41
1:CA:1227:A:N3	1:CA:1227:A:H2'	2.35	0.41
16:CP:2:VAL:HG23	16:CP:22:THR:O	2.20	0.41
39:BD:211:ARG:HA	39:BD:214:TRP:CD2	2.55	0.41
1:CA:1192:C:H5''	3:CC:167:TRP:HZ2	1.86	0.41
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.55	0.41
22:AV:19:G:H4'	22:AV:20:U:OP1	2.20	0.41
3:AC:94:LEU:O	3:AC:94:LEU:HD12	2.19	0.41
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.83	0.41
38:DC:150:GLY:O	38:DC:154:ARG:NH1	2.53	0.41
43:BH:94:TYR:HA	43:BH:106:THR:O	2.20	0.41
42:BG:125:PHE:CD1	42:BG:125:PHE:N	2.82	0.41
54:DV:13:ARG:O	54:DV:13:ARG:HG2	2.20	0.41
36:DA:121:G:H2'	36:DA:122:G:C8	2.55	0.41
36:DA:1785:A:H2	36:DA:2588:G:N3	2.17	0.41
36:DA:2261:C:O4'	36:DA:2388:A:H1'	2.21	0.41
36:BA:2116:G:N7	36:BA:2117:A:C2	2.88	0.41
1:AA:1511:G:C5	1:AA:1512:U:C5	3.08	0.41
2:CB:74:LYS:HZ3	2:CB:74:LYS:HB3	1.84	0.41
37:BB:67:G:O2'	37:BB:68:C:O5'	2.38	0.41
52:BT:62:THR:HG22	52:BT:75:ILE:HG23	2.01	0.41
42:DG:108:ASN:N	42:DG:108:ASN:OD1	2.53	0.41
38:DC:90:GLY:O	38:DC:91:ALA:HB2	2.20	0.41
1:AA:1525:G:C4	1:AA:1526:G:C8	3.09	0.41
1:AA:346:G:N3	1:AA:346:G:C2'	2.81	0.41
36:BA:2130:U:H6	36:BA:2130:U:H5''	1.85	0.41
56:DX:8:ILE:HG12	56:DX:43:VAL:HG23	2.01	0.41
58:DZ:70:LEU:HD12	58:DZ:70:LEU:N	2.34	0.41
1:CA:609:A:C5	1:CA:610:G:C8	3.08	0.41
1:AA:1191:A:H2'	1:AA:1192:C:C6	2.55	0.41
1:CA:504:C:H2'	1:CA:511:C:C5	2.53	0.41
1:AA:382:A:H2'	1:AA:383:A:H8	1.85	0.41
24:AY:18:G:H1'	24:AY:58:A:C2	2.55	0.41
38:BC:49:ILE:HD12	38:BC:49:ILE:C	2.40	0.41
47:BO:7:TYR:HE1	47:BO:20:MET:HE3	1.85	0.41
47:BO:20:MET:CE	47:BO:44:LYS:HE3	2.50	0.41
38:BC:214:VAL:CG2	38:BC:224:ILE:HD13	2.51	0.41
36:BA:78:A:O2'	36:BA:79:G:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:39:ILE:HG22	2:AB:41:ILE:CD1	2.50	0.41
1:AA:1357:A:N6	1:AA:1363(A):A:C2	2.88	0.41
36:DA:2864:G:H2'	36:DA:2865:U:O4'	2.20	0.41
36:DA:2243:U:H2'	36:DA:2244:U:C6	2.55	0.41
36:BA:1547:C:O2'	36:BA:1548:C:H5'	2.20	0.41
1:CA:841:U:H3'	1:CA:848:C:O4'	2.20	0.41
36:DA:79:G:H2'	36:DA:80:G:H8	1.84	0.41
36:DA:253:C:O2'	36:DA:254:G:H5'	2.21	0.41
36:BA:2538:C:O2'	36:BA:2539:C:H5'	2.21	0.41
37:BB:60:C:O2'	37:BB:61:G:H5'	2.21	0.41
22:AV:39:U:H2'	22:AV:40:C:H6	1.86	0.41
25:AZ:155:ARG:HH11	25:AZ:155:ARG:HG2	1.85	0.41
36:DA:255:A:H2'	36:DA:256:A:O4'	2.20	0.41
36:BA:1497:U:H5'	36:BA:1498:C:H5	1.85	0.41
1:AA:694:A:H2'	1:AA:695:A:O4'	2.20	0.41
36:DA:398:G:H2'	36:DA:399:G:O4'	2.20	0.41
7:CG:95:ARG:O	7:CG:99:LEU:HG	2.21	0.41
15:CO:38:ARG:HG2	15:CO:38:ARG:HH11	1.85	0.41
26:D0:75:LEU:O	26:D0:75:LEU:CD2	2.68	0.41
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.41	0.41
14:AN:3:ARG:O	14:AN:3:ARG:HG2	2.19	0.41
36:DA:1777:U:O2'	36:DA:1778:U:H5'	2.21	0.41
1:AA:963:G:N2	10:AJ:55:LYS:HD3	2.35	0.41
39:DD:63:ARG:CG	39:DD:63:ARG:NH1	2.77	0.41
1:CA:1315:U:O2	1:CA:1360:A:H2	2.03	0.41
28:B2:25:VAL:HG13	28:B2:57:ILE:HD12	2.03	0.41
43:BH:84:SER:HB3	43:BH:85:LYS:H	1.69	0.41
42:DG:45:GLU:O	42:DG:53:LEU:HD21	2.20	0.41
1:CA:542:G:H2'	1:CA:543:C:C6	2.51	0.41
36:DA:332:A:O2'	36:DA:333:G:P	2.78	0.41
26:D0:41:ARG:HA	26:D0:41:ARG:HD3	1.65	0.41
54:BV:8:GLY:C	54:BV:10:LYS:N	2.73	0.41
41:BF:119:ARG:HH11	41:BF:119:ARG:HG2	1.85	0.41
3:CC:18:TRP:HD1	14:CN:51:GLY:O	2.04	0.41
1:CA:973:G:H1'	10:CJ:55:LYS:HD3	2.03	0.41
32:B6:8:LYS:HA	32:B6:8:LYS:HD2	1.77	0.41
20:AT:42:GLN:HB2	20:AT:42:GLN:HE21	1.68	0.41
20:AT:45:GLN:CB	20:AT:91:LEU:HD22	2.51	0.41
36:BA:2415:G:H2'	36:BA:2416:C:H6	1.84	0.41
19:AS:49:ILE:CD1	19:AS:62:ILE:HB	2.49	0.41
32:B6:36:LEU:O	32:B6:37:ARG:NE	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:12:THR:O	40:BE:23:VAL:O	2.39	0.41
58:BZ:30:ASN:O	58:BZ:31:ARG:C	2.59	0.41
32:D6:11:LEU:HD11	32:D6:51:GLU:CG	2.50	0.41
36:BA:1141:U:O5'	46:BN:63:THR:HG21	2.20	0.41
22:AW:59:U:C6	22:AW:60:U:H6	2.39	0.41
27:D1:6:GLU:O	27:D1:7:ILE:HG13	2.20	0.41
40:BE:52:LEU:CD2	40:BE:75:VAL:HB	2.50	0.41
48:DP:98:GLU:HA	48:DP:101:VAL:HG22	2.03	0.41
57:BY:81:LYS:HE3	57:BY:81:LYS:HB2	1.87	0.41
57:BY:82:PRO:O	57:BY:83:THR:HB	2.21	0.41
36:BA:1798:U:H5'	39:BD:259:THR:HB	2.02	0.41
58:BZ:115:GLY:CA	58:BZ:175:VAL:O	2.63	0.41
36:DA:636:G:H4'	36:DA:638:G:O3'	2.20	0.41
52:DT:24:PRO:HD3	52:DT:52:ILE:HD11	2.01	0.41
36:DA:1800:C:H5''	39:DD:147:LEU:HD22	2.03	0.41
9:CI:4:TYR:CZ	9:CI:88:TYR:HB3	2.55	0.41
36:BA:1036:G:O2'	36:BA:1037:G:H5'	2.20	0.41
51:DS:17:ARG:O	51:DS:19:LYS:N	2.54	0.41
41:DF:157:VAL:HG12	41:DF:176:LEU:HD23	2.02	0.41
9:CI:10:ARG:HE	9:CI:105:ASP:CB	2.34	0.41
36:BA:1205:U:C5	41:BF:171:PRO:HA	2.55	0.41
26:B0:77:ARG:HH22	36:BA:857:C:H5'	1.85	0.41
35:B9:22:ARG:HB2	35:B9:24:TYR:HE1	1.85	0.41
25:AZ:357:PRO:O	25:AZ:359:VAL:HG23	2.21	0.41
5:AE:31:LEU:HA	5:AE:31:LEU:HD23	1.91	0.41
2:CB:32:ILE:HA	2:CB:42:ILE:HA	2.01	0.41
16:CP:5:ARG:NH2	16:CP:24:ALA:O	2.54	0.41
1:AA:1147:C:O2'	9:AI:16:ARG:HD2	2.20	0.41
1:AA:723:U:C2'	1:AA:723:U:O2	2.59	0.41
1:AA:405:U:C3'	1:AA:406:G:H5'	2.45	0.41
46:DN:56:ASN:H	46:DN:125:GLY:HA3	1.86	0.41
36:BA:1842:G:H2'	36:BA:1843:C:H6	1.83	0.41
19:CS:78:ARG:HB2	19:CS:81:ARG:HH12	1.86	0.41
24:CY:23:A:H2'	24:CY:24:A:H5'	2.00	0.41
1:CA:106:C:O2'	1:CA:107:G:H5'	2.20	0.41
36:DA:860:U:O2	36:DA:860:U:O4'	2.38	0.41
50:BR:107:ASP:OD1	50:BR:109:ALA:N	2.53	0.41
2:CB:119:GLU:O	2:CB:122:PHE:HB3	2.20	0.41
36:BA:2768:C:O2'	36:BA:2769:C:H5'	2.21	0.41
2:AB:189:ASP:OD1	2:AB:189:ASP:C	2.58	0.41
57:DY:91:GLU:HB3	57:DY:92:ASN:H	1.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:513:C:O2'	1:AA:514:C:H5'	2.20	0.41
1:AA:458:C:H3'	1:AA:460:G:H8	1.85	0.41
23:AX:23:G:C5	24:AY:36:A:C2	3.08	0.41
5:AE:10:MET:SD	5:AE:13:ILE:CG1	3.08	0.41
24:AY:52:A:C2	24:AY:63:C:N3	2.88	0.41
13:CM:104:ARG:HG3	13:CM:104:ARG:O	2.20	0.41
1:CA:1328:C:O2'	1:CA:1329:A:H5'	2.19	0.41
1:CA:1375:A:C5	1:CA:1376:U:C4	3.08	0.41
36:DA:244:A:H2'	36:DA:245:G:O4'	2.21	0.41
42:BG:146:TYR:O	42:BG:149:VAL:HG22	2.20	0.41
1:AA:499:A:H4'	1:AA:500:G:OP1	2.20	0.41
1:CA:111:G:H1	1:CA:330:C:N4	2.19	0.41
36:BA:744:G:C2'	36:BA:745:G:H5'	2.51	0.41
36:BA:1461:G:O2'	36:BA:1462:C:H5'	2.21	0.41
2:CB:39:ILE:CG2	2:CB:40:HIS:N	2.83	0.41
37:DB:52:A:O2'	37:DB:53:A:N7	2.53	0.41
36:BA:566:U:H2'	36:BA:567:A:O4'	2.21	0.41
36:BA:1286:A:N6	36:BA:1289:C:N3	2.68	0.41
7:AG:26:PHE:HD1	7:AG:101:LEU:HD22	1.86	0.41
1:CA:1261:A:C2'	1:CA:1262:C:H5'	2.50	0.41
20:AT:44:ALA:HB2	20:AT:88:VAL:HG13	2.02	0.41
44:BJ:72:UNK:C	44:BJ:74:UNK:N	2.83	0.41
53:BU:101:ARG:HG3	53:BU:101:ARG:NH1	2.35	0.41
20:CT:96:GLY:O	20:CT:97:ALA:HB3	2.20	0.41
8:CH:42:GLU:HG3	8:CH:109:ILE:HD13	2.00	0.41
1:CA:1463:C:H5'	52:DT:115:ARG:HH12	1.86	0.41
1:AA:1309:G:OP1	13:AM:92:HIS:HE1	2.03	0.41
8:CH:113:SER:O	8:CH:131:GLY:HA3	2.20	0.41
36:DA:451:C:N4	36:DA:454:A:H5'	2.36	0.41
15:AO:52:SER:O	15:AO:55:GLY:N	2.53	0.41
44:BJ:117:UNK:HA	44:BJ:122:UNK:HA	2.02	0.41
36:DA:288:C:H2'	36:DA:289:A:H8	1.86	0.41
1:AA:1500:A:C6	1:AA:1501:C:C4	3.09	0.41
36:DA:654(H):G:C3'	36:DA:654(I):C:H5'	2.51	0.41
36:BA:402:A:O2'	36:BA:403:U:H5'	2.20	0.41
43:BH:17:VAL:HG12	43:BH:17:VAL:O	2.19	0.41
38:BC:137:LEU:C	38:BC:137:LEU:HD13	2.41	0.41
54:BV:89:GLN:OE1	54:BV:89:GLN:HA	2.20	0.41
35:B9:16:VAL:O	35:B9:16:VAL:HG12	2.20	0.41
36:BA:223:A:N7	36:BA:422:A:H1'	2.36	0.41
39:DD:35:LYS:HB3	39:DD:36:PRO:HD2	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1568:G:H4'	39:DD:59:LYS:HG2	2.02	0.41
25:CZ:19:HIS:CE1	36:DA:2661:G:C5'	3.04	0.41
3:CC:35:GLU:CD	3:CC:95:THR:HG23	2.40	0.41
57:BY:6:HIS:HE1	57:BY:30:VAL:HG11	1.84	0.41
39:DD:148:GLU:CB	39:DD:151:LYS:HD2	2.49	0.41
36:DA:587:C:H6	36:DA:587:C:O5'	2.03	0.41
2:AB:7:VAL:O	2:AB:8:LYS:O	2.39	0.41
42:BG:7:LEU:N	42:BG:10:LYS:HE2	2.36	0.41
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.55	0.41
43:DH:124:GLU:HG2	43:DH:132:ARG:HG3	2.03	0.41
43:BH:46:GLU:OE1	43:BH:50:VAL:HG11	2.20	0.41
25:AZ:221:PHE:CD2	25:AZ:305:ALA:HA	2.56	0.41
58:DZ:152:ALA:O	58:DZ:155:LEU:HD23	2.20	0.41
20:AT:100:ILE:CD1	20:AT:100:ILE:N	2.83	0.41
1:CA:184:G:H4'	1:CA:224:C:H4'	2.02	0.41
36:DA:2181:G:N2	36:DA:2182:G:C6	2.89	0.41
42:DG:133:LEU:CD2	42:DG:157:ILE:HB	2.47	0.41
36:DA:2121:G:C2	36:DA:2177:C:O2	2.73	0.41
48:DP:16:ARG:O	48:DP:17:LYS:C	2.59	0.41
39:BD:75:ILE:N	39:BD:75:ILE:HD13	2.34	0.41
31:D5:31:VAL:O	31:D5:40:LYS:HG3	2.20	0.41
31:D5:43:HIS:CE1	36:DA:2884:U:OP2	2.73	0.41
2:CB:7:VAL:HB	2:CB:217:ARG:HH21	1.86	0.41
36:DA:2414:G:C2	36:DA:2415:G:C8	3.09	0.41
58:DZ:81:ARG:O	58:DZ:82:ARG:CB	2.68	0.41
46:BN:90:MET:HE2	46:BN:90:MET:HA	2.00	0.41
50:BR:79:LEU:O	50:BR:79:LEU:HD22	2.21	0.41
33:D7:5:TRP:CZ3	36:DA:464:U:H4'	2.56	0.41
56:DX:30:VAL:HG23	56:DX:31:HIS:N	2.33	0.41
9:CI:63:ILE:HG21	9:CI:77:ILE:HD11	2.03	0.41
29:D3:29:ARG:CZ	36:DA:1183:G:O3'	2.69	0.41
54:DV:18:LEU:HG	54:DV:19:LYS:H	1.86	0.41
36:BA:1754:C:O2	36:BA:2717:G:H5'	2.20	0.41
42:DG:19:LEU:HD13	42:DG:32:PRO:CG	2.46	0.41
36:BA:1799:G:N3	36:BA:1800:C:C5	2.89	0.41
22:CW:7:A:C4	22:CW:49:C:H5	2.39	0.41
7:CG:50:ILE:CD1	7:CG:121:ALA:HB1	2.51	0.41
36:DA:94:C:H2'	36:DA:94(A):G:H5'	2.02	0.41
45:DK:67:UNK:O	45:DK:69:UNK:N	2.54	0.41
36:DA:1052:C:O2'	36:DA:1053:C:P	2.78	0.41
38:BC:99:ILE:HG22	38:BC:99:ILE:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:34:GLY:O	6:AF:35:ALA:C	2.59	0.41
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.20	0.41
2:CB:220:ASP:HA	2:CB:223:ILE:HD12	2.03	0.41
41:DF:199:TRP:CH2	41:DF:203:GLN:OE1	2.73	0.41
41:DF:23:ASP:OD2	41:DF:203:GLN:NE2	2.53	0.41
39:BD:2:ALA:HB3	39:BD:20:ASP:OD2	2.21	0.41
36:BA:1577:C:H2'	36:BA:1578:U:C6	2.55	0.41
4:CD:158:ILE:O	4:CD:162:LEU:CB	2.65	0.41
36:BA:2630:G:H21	36:BA:2892:A:H1'	1.86	0.41
36:BA:2810:A:N3	40:BE:61:ARG:NH2	2.55	0.41
48:DP:70:GLN:HB3	48:DP:72:PRO:CD	2.43	0.41
26:B0:27:GLU:HA	26:B0:67:VAL:O	2.20	0.41
49:BQ:3:MET:HB2	49:BQ:4:PRO:CD	2.43	0.41
8:AH:119:LEU:HD12	8:AH:124:ALA:N	2.36	0.41
57:BY:2:ARG:C	57:BY:4:LYS:N	2.74	0.41
51:DS:70:GLY:C	51:DS:101:LEU:HB3	2.41	0.41
1:CA:390:C:C4'	16:CP:28:ARG:HH21	2.28	0.41
12:AL:27:LEU:O	12:AL:30:ALA:HB3	2.20	0.41
36:BA:1109:C:H2'	36:BA:1110:G:H5'	2.01	0.41
43:DH:157:TYR:O	43:DH:157:TYR:CD1	2.74	0.41
2:AB:142:LEU:O	2:AB:146:GLN:HG2	2.20	0.41
39:DD:26:LYS:O	39:DD:27:THR:CG2	2.66	0.41
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	2.02	0.41
16:CP:26:ARG:HH11	16:CP:26:ARG:CG	2.28	0.41
36:DA:1410:G:O2'	36:DA:1411:C:H5'	2.20	0.41
25:CZ:301:GLY:O	25:CZ:302:GLN:C	2.58	0.41
38:BC:73:ARG:HB2	38:BC:111:ASP:OD2	2.21	0.41
16:AP:42:ARG:O	16:AP:44:THR:N	2.44	0.41
55:DW:82:LEU:H	55:DW:82:LEU:CD1	2.29	0.41
50:BR:29:LEU:CD1	50:BR:29:LEU:H	2.33	0.41
36:DA:2009:G:H1'	50:DR:107:ASP:O	2.20	0.41
1:CA:321:A:H5''	1:CA:328:C:C4	2.55	0.41
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.56	0.41
55:DW:57:ASN:O	55:DW:61:ASN:N	2.44	0.41
20:CT:22:ARG:O	20:CT:26:ASN:ND2	2.53	0.41
9:CI:65:VAL:HG21	9:CI:73:GLN:CB	2.49	0.41
12:CL:75:HIS:CB	12:CL:102:ARG:HH12	2.32	0.41
46:BN:73:THR:HG23	46:BN:83:LYS:O	2.20	0.41
36:BA:523:C:H2'	36:BA:524:U:C5'	2.51	0.41
36:BA:89:G:OP2	36:BA:90:U:H2'	2.21	0.41
36:BA:1638:C:O2'	36:BA:1639:U:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:768:G:O2'	36:BA:1379:A:N6	2.53	0.41
36:BA:363(E):U:H2'	36:BA:363(F):A:C1'	2.51	0.41
36:BA:878:A:C8	36:BA:879:G:H1'	2.56	0.41
7:AG:152:ALA:O	7:AG:155:ARG:N	2.52	0.41
16:CP:80:PHE:O	16:CP:82:GLN:N	2.54	0.41
25:AZ:86:ALA:C	25:AZ:88:TYR:N	2.74	0.41
1:AA:676:A:H2'	1:AA:677:U:C6	2.56	0.41
36:DA:2402:C:H2'	36:DA:2403:C:C5'	2.51	0.41
5:AE:7:GLU:HG2	5:AE:112:LEU:HD21	2.03	0.41
38:BC:22:ILE:HG12	38:BC:224:ILE:HD12	2.02	0.41
1:AA:245:C:O2'	1:AA:246:A:O5'	2.38	0.41
36:DA:2240:C:O2'	36:DA:2241:A:H5'	2.20	0.41
27:D1:35:THR:HG23	36:DA:2080:G:O5'	2.21	0.41
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.36	0.41
36:BA:2538:C:H2'	36:BA:2539:C:C6	2.55	0.41
36:BA:2656:U:H3	36:BA:2665:A:H2	1.66	0.41
36:DA:1773:A:H2'	36:DA:1774:C:O4'	2.20	0.41
1:AA:827:U:C2	1:AA:870:U:C4	3.08	0.41
51:BS:11:LYS:HG2	51:BS:11:LYS:O	2.20	0.41
36:DA:2253:G:C2'	36:DA:2254:C:H5'	2.50	0.41
7:AG:13:GLN:O	7:AG:14:PRO:O	2.38	0.41
39:DD:9:TYR:CD2	39:DD:10:THR:HG22	2.55	0.41
1:AA:1288:A:O2'	1:AA:1289:A:H5'	2.20	0.41
40:BE:94:GLU:OE2	40:BE:177:PRO:HB3	2.20	0.41
36:BA:1107:G:H4'	44:BJ:80:UNK:HA	2.01	0.41
53:BU:39:LEU:O	53:BU:43:GLY:N	2.53	0.41
36:BA:2198:A:H5'	36:BA:2198:A:H8	1.85	0.41
1:AA:945:G:N3	1:AA:945:G:H2'	2.36	0.41
36:DA:1174:A:OP2	36:DA:1174:A:H3'	2.20	0.41
36:BA:2680:C:OP1	40:BE:109:LYS:HG3	2.20	0.41
1:AA:818:G:O2'	1:AA:819:A:H5'	2.21	0.41
39:DD:62:TYR:HE2	39:DD:64:ILE:HA	1.83	0.41
53:DU:61:TRP:CD2	53:DU:94:ASN:HA	2.56	0.41
36:BA:1902:C:O2'	39:BD:244:ARG:CB	2.67	0.41
4:CD:185:PHE:HZ	4:CD:188:LEU:HA	1.84	0.41
39:DD:72:LYS:HE3	39:DD:101:GLU:OE1	2.20	0.41
36:DA:1826:G:O2'	39:DD:242:ARG:NH2	2.53	0.41
1:CA:426:G:O2'	1:CA:427:U:H5'	2.21	0.41
42:BG:34:LEU:HD12	42:BG:100:TRP:CZ3	2.55	0.41
57:DY:31:LEU:CB	57:DY:32:PRO:CA	2.99	0.41
1:AA:80:G:C2'	1:AA:81:U:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:62:LEU:N	54:DV:62:LEU:CD2	2.84	0.41
25:AZ:303:VAL:HG21	25:AZ:345:ARG:NH1	2.36	0.41
1:CA:197:A:C6	1:CA:221:C:H4'	2.56	0.41
32:B6:21:TYR:N	32:B6:21:TYR:CD1	2.89	0.41
36:BA:640:C:H2'	36:BA:641:C:H6	1.85	0.41
26:B0:49:LYS:HG3	26:B0:49:LYS:H	1.62	0.41
48:DP:16:ARG:CD	48:DP:18:ARG:H	2.33	0.41
48:BP:124:LYS:CD	48:BP:143:GLY:HA3	2.34	0.41
49:BQ:141:GLN:HB3	58:BZ:99:TYR:CE2	2.56	0.41
58:BZ:51:ALA:HB3	58:BZ:57:ILE:HD11	2.02	0.41
36:DA:1481:U:H2'	36:DA:1482:G:H4'	2.03	0.41
47:BO:8:LEU:HD22	47:BO:19:ILE:CG1	2.51	0.41
36:BA:1427:A:H1'	36:BA:1428:C:C5	2.56	0.41
46:BN:28:THR:CG2	46:BN:29:LYS:N	2.83	0.41
32:D6:18:ARG:CG	32:D6:19:ARG:N	2.81	0.41
36:DA:2370:G:C6	36:DA:2371:G:C6	3.08	0.41
36:BA:2770:G:C5'	36:BA:2771:C:OP2	2.68	0.41
40:BE:4:ILE:HG12	40:BE:5:LEU:N	2.36	0.41
1:CA:59:A:H5'	1:CA:60:A:C5'	2.49	0.41
41:DF:32:LEU:HD11	41:DF:105:VAL:HG13	2.02	0.41
9:CI:77:ILE:O	9:CI:79:LEU:N	2.54	0.41
36:BA:2717:G:O2'	52:BT:96:ARG:HD3	2.20	0.41
40:DE:115:GLY:O	40:DE:116:VAL:O	2.39	0.41
22:CW:43:C:H5'	22:CW:44:G:P	2.61	0.41
36:DA:1019:U:O2'	36:DA:1021:A:C2	2.62	0.41
36:DA:62:C:N3	36:DA:93:G:N2	2.67	0.41
58:BZ:117:LEU:O	58:BZ:117:LEU:HG	2.19	0.41
13:AM:16:ASP:N	13:AM:16:ASP:OD1	2.54	0.41
52:DT:94:ALA:O	52:DT:96:ARG:N	2.53	0.41
36:DA:2717:G:O2'	52:DT:96:ARG:HD3	2.21	0.41
36:DA:2760:C:H2'	36:DA:2761:G:H5''	2.02	0.41
57:BY:41:GLY:O	57:BY:42:VAL:C	2.59	0.41
10:CJ:5:ARG:O	10:CJ:99:LYS:HB2	2.21	0.41
36:BA:2646:C:H6	36:BA:2646:C:O5'	2.02	0.41
36:DA:588:U:H6	36:DA:588:U:O5'	2.03	0.41
39:BD:136:ILE:CG2	39:BD:165:ILE:HD12	2.51	0.41
38:BC:87:GLU:HG2	38:BC:94:VAL:CG2	2.47	0.41
30:B4:33:VAL:CG1	30:B4:34:GLU:N	2.83	0.41
9:AI:53:VAL:CG2	9:AI:95:LYS:HD3	2.47	0.41
36:BA:2894:G:H2'	36:BA:2894:G:N3	2.36	0.41
31:D5:44:THR:CB	50:DR:101:ALA:HB2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:99:TYR:CD2	58:DZ:123:ASP:HB3	2.51	0.41
4:CD:127:THR:N	4:CD:147:ALA:O	2.54	0.41
4:CD:180:GLY:O	4:CD:181:MET:C	2.58	0.41
17:CQ:65:ILE:HG22	17:CQ:65:ILE:O	2.20	0.41
53:BU:8:VAL:CG1	53:BU:12:ARG:HE	2.34	0.41
38:BC:47:LEU:CD1	38:BC:47:LEU:N	2.82	0.41
1:CA:1015:A:H1'	1:CA:1218:C:O2'	2.20	0.41
36:DA:83:G:H21	36:DA:102:G:H2'	1.83	0.41
50:BR:38:VAL:CG1	50:BR:42:LYS:HE3	2.50	0.41
3:AC:48:TYR:C	3:AC:50:ALA:H	2.23	0.41
3:AC:68:VAL:HG13	3:AC:70:VAL:HG23	2.03	0.41
27:B1:7:ILE:HG13	27:B1:62:VAL:HG23	2.03	0.41
36:DA:1057:A:O2'	36:DA:1058:G:H5'	2.20	0.41
26:D0:29:GLN:O	26:D0:67:VAL:HG23	2.21	0.41
26:D0:27:GLU:OE1	36:DA:856:C:C1'	2.69	0.41
17:CQ:75:ARG:HG3	17:CQ:75:ARG:NH1	2.36	0.41
20:CT:41:ILE:C	20:CT:43:LEU:N	2.73	0.41
40:DE:31:CYS:HA	40:DE:32:PRO:HD3	1.89	0.41
2:CB:149:LEU:O	2:CB:150:SER:C	2.58	0.41
47:DO:35:VAL:CG2	47:DO:64:ARG:N	2.77	0.41
36:DA:383:U:H2'	36:DA:385:C:C5	2.45	0.41
39:BD:69:ARG:HD3	39:BD:130:ALA:CB	2.50	0.41
9:AI:97:LYS:N	9:AI:98:PRO:CD	2.84	0.41
1:CA:109:A:O2'	1:CA:110:C:OP1	2.36	0.41
4:CD:50:ARG:O	4:CD:51:PRO:C	2.59	0.41
36:DA:1786:A:C2	36:DA:2606:C:H1'	2.53	0.41
49:BQ:137:TYR:CE2	58:BZ:81:ARG:CZ	3.04	0.41
36:BA:992:C:H2'	36:BA:993:G:C8	2.56	0.41
6:AF:2:ARG:HD2	6:AF:69:GLU:HB3	2.02	0.41
25:CZ:97:ALA:N	25:CZ:126:VAL:HG11	2.36	0.41
36:BA:2852:G:C2	36:BA:2853:C:C2	3.08	0.41
6:CF:77:ARG:O	6:CF:80:ARG:HB2	2.21	0.41
25:CZ:188:THR:HG21	25:CZ:196:VAL:HG11	2.03	0.41
36:DA:1847:A:H4'	36:DA:1848:A:OP2	2.20	0.41
41:BF:87:GLY:O	41:BF:88:VAL:HB	2.21	0.41
36:BA:363(F):A:H4'	36:BA:363(F):A:OP2	2.21	0.41
36:BA:2825:C:H2'	36:BA:2826:A:H5'	2.03	0.41
7:CG:14:PRO:HG3	7:CG:21:VAL:HG13	2.02	0.41
1:AA:227:G:H2'	1:AA:228:A:O4'	2.21	0.41
1:CA:323:U:O5'	1:CA:323:U:H6	2.04	0.41
8:CH:34:GLU:O	8:CH:37:ARG:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:473:G:H2'	1:CA:474:G:H8	1.85	0.41
1:CA:575:G:H4'	1:CA:576:G:C5'	2.49	0.41
4:CD:60:GLU:HG2	4:CD:202:LEU:HB2	2.03	0.41
9:CI:8:GLY:HA3	9:CI:76:ALA:O	2.20	0.41
40:DE:152:LYS:HG2	46:DN:78:TYR:CE1	2.55	0.41
34:D8:3:LYS:HG2	34:D8:4:MET:N	2.36	0.41
36:BA:2678:C:H2'	36:BA:2679:A:O4'	2.20	0.41
4:CD:79:PHE:CD2	4:CD:207:TYR:CD2	3.09	0.41
36:BA:453:C:H4'	36:BA:472:A:N6	2.34	0.41
39:BD:106:ILE:HG12	39:BD:106:ILE:O	2.20	0.41
3:CC:137:ALA:O	3:CC:141:VAL:HG23	2.21	0.41
36:BA:55:G:H2'	36:BA:56:A:C8	2.55	0.41
22:AW:48:C:OP1	22:AW:48:C:H6	2.03	0.41
36:DA:1206:G:C2'	36:DA:1207:C:H5'	2.50	0.41
44:BJ:48:UNK:O	44:BJ:49:UNK:CB	2.68	0.41
49:DQ:33:GLY:O	49:DQ:131:ILE:HA	2.20	0.41
28:B2:11:GLU:HA	28:B2:14:ARG:HD2	2.03	0.41
36:DA:1713:U:O2'	36:DA:1714:G:H5'	2.20	0.41
1:CA:218:C:O2'	1:CA:219:C:H5'	2.20	0.41
11:AK:59:TYR:CZ	11:AK:63:LEU:HD21	2.56	0.41
45:BK:78:UNK:C	45:BK:80:UNK:N	2.82	0.41
36:DA:1275:A:O2'	36:DA:1645:G:N3	2.54	0.41
13:AM:50:GLU:CD	13:AM:50:GLU:H	2.23	0.41
1:CA:135:C:H2'	1:CA:136:C:H5'	2.01	0.41
36:BA:1425:G:H2'	36:BA:1426:G:C8	2.55	0.41
2:CB:218:ALA:O	2:CB:221:LEU:HB3	2.21	0.41
1:AA:807:A:C5	1:AA:808:C:C4	3.09	0.41
27:D1:86:SER:O	27:D1:90:ILE:HG12	2.20	0.41
1:CA:1331:G:OP2	13:CM:23:TYR:CD2	2.74	0.41
39:BD:233:HIS:NE2	39:BD:246:PRO:HA	2.35	0.41
28:B2:35:LEU:C	28:B2:35:LEU:HD22	2.40	0.41
28:B2:18:PRO:HB2	28:B2:71:ASN:O	2.21	0.41
4:AD:111:ALA:HB3	4:AD:117:ALA:HB2	2.03	0.41
4:AD:163:GLU:C	4:AD:165:MET:N	2.74	0.41
52:DT:62:THR:HG22	52:DT:75:ILE:HG23	2.02	0.41
52:DT:91:ARG:C	52:DT:93:ARG:N	2.74	0.41
36:DA:197:A:N6	36:DA:2430:A:H2'	2.36	0.41
1:CA:972:C:OP2	10:CJ:57:LYS:HE3	2.20	0.41
10:CJ:47:PHE:N	10:CJ:63:PHE:O	2.51	0.41
36:DA:623:G:H2'	36:DA:624:C:H6	1.85	0.41
31:B5:36:CYS:SG	31:B5:48:GLU:O	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:124:ARG:HB3	61:AZ:502:KIR:H421	2.02	0.41
1:AA:495:A:C2	1:AA:496:A:C6	3.09	0.41
36:DA:847:U:H2'	36:DA:848:G:H5''	2.03	0.41
36:DA:848:G:C2	36:DA:933:A:H1'	2.55	0.41
36:DA:1464:C:H2'	36:DA:1465:G:C8	2.55	0.41
42:DG:142:PRO:HG2	42:DG:143:GLU:N	2.36	0.41
48:BP:84:ASN:CA	48:BP:116:GLY:HA3	2.49	0.41
34:D8:52:LYS:O	34:D8:55:ALA:CB	2.61	0.41
1:AA:1054:C:O2	1:AA:1054:C:C2'	2.68	0.41
36:DA:2435:A:H2'	36:DA:2436:G:O5'	2.21	0.41
34:D8:15:LYS:HE3	34:D8:16:ILE:O	2.21	0.41
49:DQ:135:ASP:C	49:DQ:137:TYR:H	2.23	0.41
36:BA:1351:C:O2	36:BA:1351:C:O4'	2.38	0.41
25:AZ:23:GLY:CA	25:AZ:105:VAL:HG11	2.43	0.41
39:DD:77:ALA:HB2	39:DD:97:TYR:CG	2.55	0.41
40:BE:28:ALA:CB	40:BE:93:VAL:HG22	2.51	0.41
36:DA:1227:G:O2'	36:DA:1228:G:H5'	2.20	0.41
36:DA:600:G:H2'	36:DA:601:C:H6	1.85	0.41
36:BA:1270:C:C5'	36:BA:1271:G:C5'	2.91	0.41
52:BT:24:PRO:HA	52:BT:49:VAL:HG13	2.02	0.41
41:BF:202:PHE:CE1	41:BF:206:ILE:HG13	2.56	0.41
30:B4:20:ASN:ND2	30:B4:20:ASN:C	2.74	0.41
28:D2:31:GLU:O	28:D2:35:LEU:HD23	2.20	0.41
36:BA:2784:C:H2'	36:BA:2785:C:H6	1.85	0.41
36:BA:385:C:O2	36:BA:390:A:C2	2.74	0.41
41:BF:171:PRO:C	41:BF:173:VAL:H	2.24	0.41
36:BA:2527:C:C4	36:BA:2528:U:C5	3.08	0.41
1:AA:599:C:H4'	8:AH:130:GLY:C	2.41	0.41
46:BN:3:THR:CG2	46:BN:4:TYR:N	2.83	0.41
1:CA:538:G:H2'	1:CA:539:A:H8	1.86	0.41
1:CA:957:U:O2	1:CA:959:A:C8	2.72	0.41
25:AZ:234:ARG:HH11	25:AZ:234:ARG:HG3	1.86	0.41
36:DA:532:A:N3	53:DU:28:ARG:NH2	2.69	0.41
43:BH:157:TYR:O	43:BH:158:HIS:CB	2.69	0.41
36:DA:804:A:H2	36:DA:2444:G:H4'	1.85	0.41
20:CT:45:GLN:HE21	20:CT:46:GLU:N	2.19	0.41
43:DH:94:TYR:O	43:DH:95:ARG:HB3	2.20	0.41
7:AG:79:ARG:HB2	7:AG:84:ASN:HB2	2.02	0.41
36:DA:408:G:C5	36:DA:409:C:C5	3.08	0.41
6:CF:8:ILE:CG2	6:CF:85:VAL:HG13	2.50	0.41
36:DA:237:C:O2'	36:DA:238:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:65:ALA:HB1	11:CK:98:LEU:HD23	2.03	0.41
47:DO:8:LEU:HD22	47:DO:8:LEU:O	2.21	0.41
36:BA:1688:U:O2	36:BA:1700:A:H8	2.04	0.41
39:DD:158:ALA:O	39:DD:159:ALA:C	2.59	0.41
55:BW:47:VAL:O	55:BW:47:VAL:CG1	2.69	0.41
56:DX:46:ALA:C	56:DX:47:PHE:CD1	2.94	0.41
36:BA:494:G:O2'	55:BW:5:ALA:O	2.34	0.41
36:DA:573:G:N2	36:DA:2029:G:N2	2.69	0.41
55:BW:79:GLY:HA3	55:BW:100:THR:CG2	2.49	0.41
36:DA:1154:G:O5'	36:DA:1154:G:H8	2.04	0.41
27:D1:76:ARG:HB2	36:DA:271(R):G:H5'	2.02	0.41
25:CZ:129:PRO:HB2	25:CZ:130:TYR:CE1	2.56	0.41
25:AZ:263:ARG:HG3	25:AZ:263:ARG:NH1	2.35	0.41
6:AF:38:GLU:O	6:AF:39:LYS:O	2.39	0.41
5:CE:20:GLN:NE2	5:CE:25:ARG:CZ	2.83	0.41
22:AW:10:G:C6	22:AW:26:A:C2	3.09	0.41
36:BA:2539:C:O2'	36:BA:2540:C:H5'	2.20	0.41
6:AF:77:ARG:HG2	6:AF:77:ARG:NH1	2.35	0.41
1:CA:414:A:O2'	1:CA:415:A:H5'	2.21	0.41
36:DA:696:G:C2	36:DA:767:U:O2	2.74	0.41
36:DA:1098:A:N6	36:DA:1099:G:N2	2.68	0.41
36:BA:2136:C:H2'	36:BA:2137:C:C6	2.56	0.41
24:AY:47:U:H5''	24:AY:48:U:OP2	2.20	0.41
36:DA:1850:G:N2	36:DA:1893:C:H1'	2.36	0.41
7:AG:135:VAL:O	7:AG:139:GLU:HB2	2.20	0.41
27:B1:20:ARG:HA	27:B1:33:LYS:O	2.21	0.41
41:BF:51:THR:CG2	41:BF:92:PRO:HD2	2.51	0.41
1:CA:128:G:H5'	17:CQ:2:PRO:N	2.36	0.41
36:DA:1488:G:H2'	36:DA:1489:U:O4'	2.21	0.41
36:BA:60:G:C6	36:BA:74:A:N6	2.89	0.41
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.20	0.41
43:DH:130:ARG:HB3	43:DH:130:ARG:NH1	2.36	0.41
36:BA:1901:A:OP2	36:BA:1901:A:H4'	2.21	0.41
36:BA:798:G:H2'	36:BA:799:G:H8	1.86	0.41
16:AP:19:ILE:HG22	16:AP:36:ILE:HD11	2.02	0.41
45:BK:134:UNK:O	45:BK:135:UNK:CB	2.68	0.41
36:DA:1203:G:C6	36:DA:1204:A:N6	2.88	0.41
36:BA:2277:G:C6	36:BA:2278:A:N7	2.88	0.41
36:DA:2130:U:OP1	38:DC:5:LYS:HG2	2.20	0.41
25:CZ:272:MET:HE2	25:CZ:284:ASP:OD2	2.20	0.41
4:AD:61:LYS:HE2	4:AD:62:GLN:HE21	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:22:HIS:NE2	25:CZ:107:SER:HB3	2.36	0.41
26:D0:23:VAL:HG13	26:D0:37:LEU:O	2.21	0.41
26:D0:36:ILE:HG22	26:D0:58:THR:CG2	2.50	0.41
53:DU:91:ASP:O	53:DU:92:ARG:O	2.39	0.41
51:DS:106:ARG:O	51:DS:107:GLU:CB	2.69	0.41
3:CC:34:LEU:O	3:CC:37:GLN:HB2	2.20	0.41
3:CC:35:GLU:O	3:CC:38:ARG:HG3	2.21	0.41
13:CM:9:ILE:HG21	42:DG:146:TYR:OH	2.21	0.41
1:AA:1281:U:H4'	1:AA:1282:C:OP2	2.21	0.41
39:BD:245:PRO:O	39:BD:246:PRO:C	2.60	0.41
36:BA:2762:G:H5'	36:BA:2762:G:C8	2.56	0.41
28:B2:38:GLN:C	28:B2:40:SER:N	2.73	0.41
28:B2:3:LEU:CA	28:B2:6:VAL:HG12	2.51	0.41
28:B2:64:LEU:O	28:B2:65:ASN:ND2	2.54	0.41
57:BY:13:VAL:HA	57:BY:73:ARG:O	2.21	0.41
4:AD:100:ARG:NE	4:AD:102:ASP:OD2	2.50	0.41
4:AD:111:ALA:HA	4:AD:116:GLN:OE1	2.21	0.41
41:BF:179:GLU:HA	41:BF:205:ARG:HH12	1.86	0.41
36:DA:2202:C:H2'	36:DA:2203:U:O4'	2.20	0.41
43:BH:72:ILE:O	43:BH:76:VAL:N	2.51	0.41
19:CS:53:ASN:C	19:CS:53:ASN:ND2	2.73	0.41
1:CA:977:A:C8	1:CA:1223:C:N3	2.89	0.41
1:CA:1320:C:H42	19:CS:36:ARG:HG3	1.85	0.41
36:DA:1191:G:O2'	36:DA:1192:G:H5'	2.20	0.41
56:DX:35:THR:HG21	56:DX:37:THR:HB	2.02	0.41
36:DA:143:G:H2'	36:DA:143(A):C:C6	2.56	0.41
58:BZ:128:VAL:CG2	58:BZ:129:SER:N	2.84	0.41
40:DE:78:LEU:HD12	40:DE:78:LEU:N	2.35	0.41
37:BB:40:U:O2	37:BB:43:C:H5''	2.21	0.41
4:CD:16:GLY:O	4:CD:33:MET:HE3	2.21	0.41
4:CD:65:ARG:C	4:CD:67:ILE:N	2.73	0.41
42:BG:173:LEU:HB3	42:BG:178:PHE:CG	2.56	0.41
42:BG:56:ALA:C	42:BG:59:GLU:HG2	2.40	0.41
57:DY:82:PRO:O	57:DY:83:THR:CB	2.69	0.41
53:BU:92:ARG:CD	53:BU:95:LEU:HG	2.51	0.41
57:DY:38:ILE:HD13	57:DY:66:PRO:HG3	2.02	0.41
48:DP:47:ASP:OD2	48:DP:49:ARG:HB2	2.21	0.41
1:CA:973:G:O3'	14:CN:41:ARG:NH1	2.54	0.41
36:BA:143:G:O4'	56:BX:37:THR:HG21	2.20	0.41
52:BT:32:TYR:O	52:BT:33:LYS:CB	2.68	0.41
52:BT:47:GLY:HA3	52:BT:63:VAL:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:124:ARG:HD2	25:AZ:124:ARG:HA	1.76	0.41
34:B8:56:GLU:O	34:B8:59:LYS:N	2.36	0.41
1:CA:1188:A:H2'	1:CA:1189:C:C5'	2.51	0.41
1:CA:1187:G:H2'	1:CA:1188:A:O4'	2.21	0.41
35:D9:7:VAL:HG12	35:D9:8:LYS:N	2.35	0.41
1:CA:61:G:OP1	20:CT:10:LEU:HG	2.21	0.41
36:BA:940:G:H2'	36:BA:941:A:H5''	2.02	0.41
36:BA:811:U:O2'	36:BA:812:C:H5''	2.20	0.41
32:B6:44:ARG:HD2	32:B6:44:ARG:N	2.35	0.41
30:D4:5:ILE:O	42:DG:67:LYS:HD2	2.21	0.41
56:BX:24:GLY:O	56:BX:82:GLN:CA	2.51	0.41
49:BQ:141:GLN:HE21	49:BQ:141:GLN:CA	2.33	0.41
5:CE:148:VAL:HG21	8:CH:107:LEU:HD13	2.03	0.41
8:CH:46:LYS:HG3	8:CH:64:LYS:HB2	2.02	0.41
1:AA:1314:C:O4'	1:AA:1314:C:O2	2.38	0.41
50:DR:52:ILE:O	50:DR:55:ALA:HB3	2.21	0.41
37:DB:73:A:H2'	37:DB:74:U:H5'	2.03	0.41
36:DA:2477:C:O5'	36:DA:2477:C:H6	2.04	0.41
35:B9:10:ILE:O	35:B9:32:HIS:CE1	2.73	0.41
32:D6:10:LEU:HD12	34:D8:34:TRP:HB2	2.01	0.41
22:AW:61:C:O2'	22:AW:62:C:C6	2.73	0.41
40:BE:32:PRO:HD2	40:BE:50:GLY:O	2.21	0.41
40:BE:92:THR:C	40:BE:95:ILE:HD11	2.41	0.41
40:BE:93:VAL:HG11	40:BE:175:VAL:HG23	2.03	0.41
40:BE:46:ALA:HB2	40:BE:82:ARG:HA	2.02	0.41
36:BA:1503:U:H2'	36:BA:1504:C:C6	2.56	0.41
38:DC:127:LEU:HD23	38:DC:137:LEU:HD23	2.01	0.41
3:CC:51:GLY:O	3:CC:53:ALA:N	2.54	0.41
58:BZ:116:VAL:HG12	58:BZ:116:VAL:O	2.21	0.41
17:CQ:52:LYS:N	17:CQ:52:LYS:CD	2.83	0.41
13:AM:22:ILE:HB	13:AM:25:ILE:HD12	2.02	0.41
48:DP:85:LEU:HD23	48:DP:85:LEU:C	2.42	0.41
52:DT:92:GLY:N	52:DT:120:ARG:HH21	2.17	0.41
22:CW:67:C:O2'	22:CW:68:C:H5'	2.21	0.41
1:CA:1190:G:C3'	3:CC:3:ASN:HD22	2.33	0.41
52:BT:105:LEU:HD22	52:BT:109:GLU:OE1	2.21	0.41
10:CJ:16:LEU:HD11	10:CJ:70:ARG:HB2	2.02	0.41
10:CJ:3:LYS:HD2	10:CJ:77:PRO:CD	2.51	0.41
13:AM:57:ARG:O	13:AM:61:GLU:CB	2.69	0.41
36:BA:527:C:N4	36:BA:2779:U:OP2	2.54	0.41
39:BD:136:ILE:HG22	39:BD:165:ILE:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:15:LEU:HB3	19:CS:16:LEU:HD12	2.02	0.41
43:BH:27:LYS:HE2	43:BH:27:LYS:HB3	1.87	0.41
43:BH:136:ILE:N	43:BH:136:ILE:CD1	2.79	0.41
40:BE:171:GLU:OE1	40:BE:185:LYS:HE3	2.21	0.41
30:B4:21:VAL:O	30:B4:21:VAL:HG12	2.21	0.41
1:AA:1366:C:O2'	1:AA:1367:C:H5'	2.21	0.41
36:BA:2726:U:H6	47:BO:67:LYS:HZ3	1.68	0.41
36:DA:910:A:N1	36:DA:2277:G:H1'	2.36	0.41
12:AL:32:PHE:CD1	12:AL:84:LEU:HD21	2.56	0.41
28:D2:22:GLU:O	28:D2:26:ARG:HB2	2.20	0.41
28:D2:25:VAL:CG2	28:D2:60:LEU:HB3	2.50	0.41
28:D2:25:VAL:HG22	28:D2:60:LEU:HD13	2.03	0.41
28:D2:35:LEU:HB3	28:D2:50:ILE:HD11	2.03	0.41
28:D2:60:LEU:O	28:D2:63:VAL:HB	2.21	0.41
9:AI:53:VAL:HG22	9:AI:95:LYS:NZ	2.35	0.41
17:AQ:12:SER:O	17:AQ:13:ASP:HB3	2.20	0.41
40:BE:61:ARG:CB	40:BE:62:PRO:HD3	2.41	0.41
48:BP:70:GLN:HB3	48:BP:72:PRO:CD	2.47	0.41
1:AA:59:A:N3	1:AA:59:A:H2'	2.36	0.41
43:DH:120:GLY:O	43:DH:135:GLY:HA2	2.21	0.41
1:CA:1158:C:H4'	2:CB:133:LYS:NZ	2.35	0.41
36:BA:412:A:H2'	36:BA:413:C:H5'	2.03	0.41
38:DC:25:ALA:O	38:DC:29:VAL:HG22	2.21	0.41
18:CR:31:LEU:HD23	18:CR:31:LEU:N	2.36	0.41
26:B0:27:GLU:OE2	36:BA:856:C:C4'	2.69	0.41
20:CT:73:HIS:C	20:CT:74:LYS:HD3	2.41	0.41
36:BA:2578:G:H2'	36:BA:2579:C:H6	1.86	0.41
39:BD:127:VAL:HA	39:BD:193:VAL:HG22	2.02	0.41
11:AK:116:HIS:O	11:AK:117:ASN:HB2	2.21	0.41
35:B9:2:LYS:NZ	36:BA:2526:G:O2'	2.45	0.41
25:AZ:404:LEU:HD22	25:AZ:404:LEU:N	2.36	0.41
5:AE:33:VAL:CG2	5:AE:109:ILE:HG12	2.50	0.41
6:CF:29:ALA:O	6:CF:30:LEU:C	2.57	0.41
55:BW:12:ILE:CD1	55:BW:42:ARG:NH1	2.81	0.41
1:CA:984:C:O2'	1:CA:985:C:H5'	2.21	0.41
57:DY:2:ARG:N	57:DY:4:LYS:HZ3	2.18	0.41
46:DN:82:LEU:HA	46:DN:82:LEU:HD12	1.76	0.41
1:AA:1458:G:C6	1:AA:1459:C:C4	3.09	0.41
50:BR:18:LEU:CD1	50:BR:22:ARG:CZ	2.94	0.41
40:DE:126:PRO:C	40:DE:128:SER:H	2.23	0.41
12:AL:55:VAL:CG2	12:AL:67:THR:HG22	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:957:U:C2	1:CA:959:A:OP2	2.74	0.41
36:BA:848:G:C8	36:BA:928:G:N2	2.89	0.41
33:B7:25:PRO:O	33:B7:29:LYS:HG2	2.20	0.41
26:D0:27:GLU:N	26:D0:27:GLU:CD	2.73	0.41
27:B1:56:GLN:O	27:B1:57:GLU:O	2.39	0.41
30:B4:12:ALA:HB1	30:B4:29:PRO:HA	2.01	0.41
3:AC:35:GLU:HG3	3:AC:95:THR:OG1	2.21	0.41
1:AA:724:G:O2'	1:AA:725:G:H5'	2.21	0.41
39:BD:186:HIS:HD2	39:BD:188:GLU:HB2	1.83	0.41
2:AB:102:LEU:CD2	2:AB:182:ILE:HD12	2.50	0.41
40:DE:104:VAL:CG1	40:DE:188:VAL:HG21	2.46	0.41
1:CA:1203:C:H2'	1:CA:1204:A:H8	1.85	0.41
3:AC:112:SER:O	3:AC:113:ALA:C	2.58	0.41
16:AP:53:VAL:O	16:AP:56:ALA:N	2.53	0.41
42:DG:125:PHE:CD1	42:DG:125:PHE:N	2.89	0.41
50:DR:96:ARG:NH1	50:DR:117:VAL:CG2	2.82	0.41
36:DA:32:C:H5'	36:DA:33:U:OP2	2.21	0.41
49:DQ:45:GLN:H	49:DQ:45:GLN:NE2	2.19	0.41
36:BA:880:G:H1	36:BA:897:C:H42	1.67	0.41
36:BA:1344:G:H4'	36:BA:1384:A:C6	2.55	0.41
1:CA:413:G:O6	4:CD:35:ARG:HD3	2.21	0.41
46:DN:61:ARG:HH11	46:DN:61:ARG:HB3	1.85	0.41
29:B3:21:ALA:O	29:B3:23:LEU:N	2.54	0.41
36:DA:48:G:O3'	36:DA:51:G:H5'	2.21	0.41
36:BA:2040:C:H2'	36:BA:2041:U:O4'	2.21	0.41
1:CA:865:A:H2'	1:CA:866:C:C6	2.56	0.41
36:BA:1204:A:N1	36:BA:1241:A:C2	2.89	0.41
58:BZ:75:ASN:HB3	58:BZ:84:GLU:OE1	2.21	0.41
36:DA:1403:C:H2'	36:DA:1404:C:O4'	2.20	0.41
43:DH:98:LEU:HB3	43:DH:125:VAL:HG21	2.02	0.41
36:DA:1010:A:N3	36:DA:1153:C:H1'	2.36	0.41
42:BG:91:ARG:CD	42:BG:91:ARG:C	2.90	0.41
1:CA:1133:G:N3	1:CA:1142:G:N2	2.67	0.41
20:CT:51:GLU:O	20:CT:55:ILE:HD12	2.21	0.41
4:AD:151:LYS:HG2	4:AD:151:LYS:O	2.20	0.41
36:BA:1817:G:OP1	39:BD:88:ARG:NH2	2.47	0.41
42:DG:152:LEU:N	42:DG:152:LEU:CD2	2.83	0.41
36:BA:2196:C:H2'	36:BA:2197:U:C6	2.55	0.41
2:CB:113:HIS:O	2:CB:117:GLU:HB2	2.19	0.41
36:BA:801:G:O4'	41:BF:54:ARG:HD3	2.21	0.41
1:AA:1411:C:C2'	1:AA:1412:C:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:9:TYR:CE1	58:DZ:35:ARG:NH1	2.88	0.41
36:DA:979:G:H2'	36:DA:982:C:H42	1.85	0.41
43:DH:37:VAL:CG1	43:DH:38:SER:N	2.84	0.41
36:BA:876:C:C2'	36:BA:877:U:H5'	2.51	0.41
36:DA:1288:U:C2	36:DA:1327:C:O2	2.74	0.41
58:BZ:79:ARG:O	58:BZ:79:ARG:HG3	2.21	0.41
27:B1:29:GLY:O	27:B1:30:VAL:C	2.58	0.41
39:BD:181:GLU:HG3	39:BD:272:ALA:O	2.21	0.41
36:DA:2505:G:H2'	36:DA:2576:G:O6	2.20	0.41
1:CA:1328:C:OP2	21:CU:7:ARG:HD3	2.21	0.41
2:AB:61:LEU:HD11	2:AB:160:ASP:HB2	2.02	0.41
33:B7:28:ARG:NH2	36:BA:1368:G:OP1	2.53	0.41
36:BA:2750:A:H4'	36:BA:2751:G:OP1	2.21	0.41
2:CB:178:ARG:HH11	2:CB:178:ARG:CG	2.33	0.41
36:BA:2199:A:H5'	36:BA:2200:C:OP2	2.21	0.41
6:AF:8:ILE:HD13	6:AF:26:ILE:HD13	2.03	0.41
58:DZ:107:THR:O	58:DZ:108:PRO:O	2.39	0.41
47:BO:14:THR:HG23	47:BO:16:ALA:H	1.86	0.41
43:BH:139:GLN:CG	43:BH:140:LYS:N	2.84	0.41
37:BB:12:C:H4'	37:BB:13:A:OP1	2.21	0.41
27:B1:6:GLU:H	27:B1:6:GLU:HG2	1.67	0.41
1:CA:474:G:C2	1:CA:475:G:C5	3.08	0.41
39:BD:227:ASN:HB3	39:BD:228:PRO:CD	2.51	0.41
58:BZ:76:LEU:HD23	58:BZ:83:PRO:HA	2.02	0.41
36:BA:1258:C:H2'	36:BA:1259:G:H8	1.84	0.41
36:BA:654(A):G:C2'	36:BA:654(B):C:H5'	2.50	0.41
36:BA:1303:G:C6	36:BA:1304:C:C4	3.09	0.41
22:AW:24:G:O2'	22:AW:25:C:H5'	2.21	0.41
13:CM:83:ASP:N	13:CM:83:ASP:OD1	2.53	0.41
36:DA:42:G:H3'	36:DA:43:A:H8	1.84	0.41
22:CV:24:G:O2'	36:DA:1923:U:H5''	2.21	0.41
36:DA:349:G:C2'	36:DA:350:U:H5'	2.51	0.41
41:DF:150:GLY:HA2	41:DF:172:TRP:CE3	2.56	0.41
31:D5:52:TYR:HD1	31:D5:52:TYR:N	2.18	0.41
58:DZ:158:PRO:HB3	58:DZ:159:PRO:HD2	2.02	0.41
1:AA:1063:C:N4	1:AA:1064:G:C2	2.89	0.41
36:DA:2048:G:C2	36:DA:2621:A:C2	3.09	0.41
29:D3:50:VAL:O	29:D3:52:HIS:N	2.54	0.41
7:AG:87:VAL:HG13	7:AG:151:TYR:O	2.20	0.41
22:AW:30:G:H2'	22:AW:31:A:H8	1.85	0.41
1:CA:779:C:O2'	1:CA:780:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:707:C:H2'	1:AA:708:C:C6	2.55	0.41
4:AD:168:ARG:HD2	4:AD:168:ARG:N	2.36	0.41
36:DA:284:U:O5'	36:DA:284:U:H6	2.04	0.41
1:AA:1162:C:H42	1:AA:1174:G:H1	1.69	0.41
37:DB:5:C:O2'	37:DB:6:C:H5'	2.20	0.41
7:AG:32:ARG:NH2	7:AG:109:ASN:OD1	2.53	0.41
1:AA:743:U:H2'	1:AA:744:C:C6	2.55	0.41
36:DA:898:C:H2'	36:DA:899:A:O4'	2.21	0.41
1:CA:300:A:H2'	1:CA:301:G:O4'	2.21	0.41
1:AA:484:G:H4'	1:AA:485:G:O5'	2.21	0.41
1:CA:1290:G:C6	1:CA:1291:G:C5	3.09	0.41
3:AC:203:PHE:HZ	3:AC:206:GLU:HG3	1.86	0.41
1:CA:102:G:O2'	1:CA:103:C:H5'	2.21	0.41
1:AA:1508:G:O2'	1:AA:1509:C:H5'	2.21	0.41
35:D9:17:ILE:HA	35:D9:17:ILE:HD13	1.95	0.41
49:DQ:2:LEU:HG	49:DQ:2:LEU:O	2.20	0.41
36:DA:6:A:O2'	36:DA:7:G:H5'	2.21	0.41
41:DF:139:PHE:HB3	41:DF:166:ALA:HB1	2.03	0.41
51:DS:106:ARG:HH12	51:DS:108:GLY:N	2.19	0.41
36:BA:336:C:C4'	57:BY:7:VAL:HG21	2.47	0.41
40:DE:55:ASN:ND2	40:DE:75:VAL:HG22	2.36	0.41
37:BB:53:A:C2	37:BB:54:G:C8	3.09	0.41
42:BG:57:ALA:O	42:BG:59:GLU:N	2.54	0.41
42:BG:71:THR:H	42:BG:90:LEU:H	1.69	0.41
43:DH:131:VAL:HG12	43:DH:132:ARG:N	2.36	0.41
31:B5:2:ALA:N	36:BA:2015:A:N3	2.68	0.41
47:BO:34:THR:O	47:BO:35:VAL:C	2.60	0.41
31:B5:41:PRO:HG3	50:BR:101:ALA:HB1	2.01	0.41
24:AY:66:C:H2'	24:AY:67:G:C8	2.56	0.41
36:DA:851:U:H2'	36:DA:852:G:H8	1.86	0.41
25:AZ:374:LEU:HD12	25:AZ:378:VAL:HG22	2.03	0.41
15:CO:55:GLY:O	15:CO:56:LEU:C	2.58	0.41
36:BA:940:G:H2'	36:BA:941:A:C4'	2.50	0.41
42:DG:60:LEU:HA	42:DG:63:ILE:CD1	2.49	0.41
36:DA:1348:G:C2	36:DA:1599:C:N3	2.89	0.41
34:B8:26:LYS:HZ3	34:B8:47:LYS:HD2	1.85	0.41
28:D2:70:GLN:N	28:D2:70:GLN:CD	2.74	0.41
29:D3:37:LEU:O	29:D3:38:GLU:O	2.39	0.41
41:BF:101:LEU:HD12	41:BF:102:PRO:HD2	2.02	0.41
36:DA:2246:G:H2'	36:DA:2247:A:C8	2.56	0.41
10:CJ:33:GLN:H	10:CJ:75:ILE:HD11	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2416:C:OP1	48:DP:64:LYS:O	2.39	0.41
36:DA:1504:C:O2'	36:DA:1505:C:C5'	2.69	0.41
58:DZ:65:GLN:HB3	58:DZ:66:SER:H	1.71	0.41
32:D6:33:LYS:O	32:D6:34:LEU:HB2	2.21	0.41
36:DA:2396:G:C2'	36:DA:2397:G:H5'	2.51	0.41
36:BA:1142(A):A:C5	36:BA:1144:G:C5	3.09	0.41
25:CZ:120:ILE:HD13	25:CZ:158:LEU:CD2	2.50	0.41
27:D1:12:PRO:HB2	27:D1:41:ARG:NH2	2.36	0.41
27:D1:68:PRO:C	27:D1:70:VAL:N	2.73	0.41
48:DP:98:GLU:CA	48:DP:101:VAL:HG22	2.50	0.41
53:DU:16:LYS:O	53:DU:20:LEU:CD2	2.65	0.41
42:DG:10:LYS:HD2	42:DG:10:LYS:N	2.35	0.41
36:BA:860:U:O4'	36:BA:860:U:O2	2.38	0.41
39:DD:132:PRO:HD2	39:DD:135:PHE:HD2	1.86	0.41
36:DA:2778:A:H4'	36:DA:2779:U:OP1	2.21	0.41
7:CG:65:ALA:HB2	7:CG:124:LEU:O	2.21	0.41
7:CG:50:ILE:CD1	7:CG:125:MET:SD	3.08	0.41
39:DD:172:TYR:HD1	39:DD:185:VAL:C	2.24	0.41
55:DW:4:LYS:O	55:DW:54:ALA:HB1	2.21	0.41
36:DA:2022:U:HO2'	36:DA:2617:C:H5'	1.86	0.41
36:BA:1655:A:O2'	40:BE:115:GLY:CA	2.68	0.41
40:DE:24:THR:CG2	40:DE:184:VAL:CG2	2.96	0.41
1:CA:202:U:O3'	1:CA:203:U:H6	2.04	0.41
36:BA:1337:G:H2'	36:BA:1338:G:H8	1.85	0.41
28:D2:25:VAL:O	28:D2:28:LYS:HB2	2.21	0.41
23:CX:14:A:C2'	23:CX:15:A:O5'	2.68	0.41
1:CA:1115:C:H2'	1:CA:1116:C:C6	2.56	0.41
27:D1:44:PRO:HA	36:DA:397:G:OP1	2.21	0.41
36:BA:2474:C:H5'	36:BA:2475:C:OP2	2.21	0.41
18:AR:30:ASP:O	18:AR:32:ARG:N	2.54	0.41
35:B9:31:LYS:HE2	36:BA:2478:A:OP1	2.21	0.41
41:BF:64:ILE:HD11	41:BF:65:TRP:CE2	2.56	0.41
37:BB:91:C:O2'	37:BB:92:C:H5'	2.21	0.41
36:BA:1227:G:C2'	36:BA:1228:G:H5'	2.51	0.41
1:CA:926:G:O3'	23:CX:16:A:C2	2.73	0.41
1:CA:377:G:H2'	1:CA:378:G:C8	2.56	0.41
57:BY:2:ARG:HD3	57:BY:2:ARG:C	2.42	0.41
16:CP:55:ARG:O	16:CP:58:TYR:N	2.54	0.41
7:CG:24:THR:O	7:CG:27:ILE:HB	2.21	0.41
46:DN:57:ALA:C	46:DN:58:ASP:O	2.58	0.41
36:DA:1495:A:C4	36:DA:1496:A:H2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:7:ILE:HG13	14:AN:8:GLU:N	2.36	0.41
1:CA:877:C:O2'	8:CH:3:THR:HB	2.21	0.41
1:CA:558:G:H2'	1:CA:559:A:H2	1.86	0.41
1:AA:1152:A:OP1	10:AJ:68:HIS:HD2	2.04	0.41
1:CA:1097:C:OP1	2:CB:137:ARG:NH1	2.54	0.41
36:BA:448:U:H1'	41:BF:84:VAL:CG2	2.51	0.41
9:CI:37:PHE:HB3	9:CI:43:ALA:HB2	2.03	0.41
13:CM:14:ARG:NH2	13:CM:16:ASP:OD2	2.52	0.41
40:BE:36:ARG:CZ	40:BE:88:GLY:HA2	2.51	0.41
36:DA:1412:A:O2'	36:DA:1413:G:H5'	2.20	0.41
15:CO:26:GLU:OE2	15:CO:77:ARG:CD	2.67	0.41
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	2.02	0.41
36:BA:270:A:C2'	36:BA:271:A:H5'	2.51	0.41
36:DA:2228:G:C6	36:DA:2229:C:C4	3.09	0.41
33:D7:41:ARG:NH1	36:DA:459:U:H5''	2.36	0.41
1:AA:346:G:O2'	1:AA:347:G:O5'	2.38	0.41
36:DA:2166:G:H2'	36:DA:2167:U:H6	1.82	0.41
36:BA:1221(A):C:H2'	36:BA:1222:C:H6	1.85	0.41
45:BK:119:UNK:N	45:BK:123:UNK:CB	2.84	0.41
1:CA:781:A:C3'	1:CA:782:A:H5'	2.51	0.41
44:DJ:37:UNK:C	44:DJ:39:UNK:N	2.79	0.41
25:AZ:86:ALA:O	25:AZ:87:ASP:HB2	2.21	0.41
12:CL:25:PRO:HG2	12:CL:25:PRO:O	2.21	0.41
2:AB:179:LYS:HA	8:AH:72:PRO:HG3	2.01	0.41
36:DA:1291:C:H2'	36:DA:1292:U:C6	2.56	0.41
36:BA:2758:A:C2	36:BA:2759:G:C1'	3.04	0.41
1:AA:751:U:H1'	15:AO:23:GLY:O	2.20	0.41
25:AZ:188:THR:HG21	25:AZ:196:VAL:HG11	2.02	0.41
36:BA:1429:G:H2'	36:BA:1430:C:H6	1.84	0.41
36:BA:319:C:O2'	36:BA:320:A:H5'	2.21	0.41
38:DC:44:HIS:ND1	38:DC:172:HIS:ND1	2.66	0.41
22:AW:24:G:C2	22:AW:25:C:C2	3.09	0.41
1:CA:1489:G:O2'	1:CA:1490:C:H5'	2.21	0.41
1:CA:748:C:H1'	1:CA:749:C:H5	1.85	0.41
14:AN:3:ARG:O	14:AN:3:ARG:CG	2.68	0.41
42:BG:49:ASP:O	42:BG:50:ALA:HB3	2.21	0.41
4:AD:88:VAL:HG13	5:AE:97:GLY:HA2	2.04	0.41
48:BP:5:ASP:O	48:BP:6:LEU:C	2.60	0.41
9:AI:8:GLY:O	9:AI:76:ALA:HB1	2.21	0.41
36:BA:1385:G:O2'	36:BA:1396:U:O2	2.34	0.41
36:DA:908:C:O2'	36:DA:909:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.21	0.41
52:DT:114:LEU:HD23	52:DT:114:LEU:HA	1.89	0.41
19:AS:37:ARG:HG3	19:AS:37:ARG:H	1.48	0.41
51:BS:26:LEU:CD2	51:BS:26:LEU:O	2.69	0.41
18:AR:22:VAL:O	18:AR:25:THR:HB	2.20	0.41
1:AA:1359:C:OP2	14:AN:35:ARG:NH1	2.49	0.41
36:BA:1163:G:O2'	36:BA:1164:G:H5'	2.20	0.41
4:AD:20:TYR:HA	4:AD:26:CYS:CB	2.49	0.40
1:AA:963:G:N2	10:AJ:55:LYS:HG2	2.36	0.40
53:DU:92:ARG:CZ	54:DV:11:GLN:O	2.70	0.40
36:DA:2377:A:O2'	36:DA:2378:A:C5'	2.68	0.40
28:B2:25:VAL:HG22	28:B2:57:ILE:CG2	2.44	0.40
28:B2:62:THR:OG1	36:BA:76:C:H4'	2.20	0.40
36:BA:616:G:H2'	36:BA:618:C:O4'	2.21	0.40
19:CS:53:ASN:N	19:CS:53:ASN:ND2	2.67	0.40
52:DT:30:VAL:O	52:DT:31:SER:CB	2.66	0.40
58:BZ:128:VAL:CG2	58:BZ:132:ASN:O	2.68	0.40
42:DG:52:ILE:C	42:DG:54:GLU:N	2.73	0.40
39:DD:242:ARG:N	39:DD:242:ARG:HD2	2.35	0.40
1:CA:541:G:H2'	1:CA:542:G:H8	1.86	0.40
26:D0:41:ARG:O	26:D0:42:GLY:O	2.38	0.40
30:B4:25:TYR:N	30:B4:25:TYR:CD1	2.89	0.40
57:DY:77:PRO:HB2	57:DY:99:CYS:SG	2.61	0.40
1:CA:973:G:OP1	10:CJ:57:LYS:HE2	2.21	0.40
39:BD:35:LYS:CG	39:BD:63:ARG:CG	2.96	0.40
36:DA:2127:G:O2'	36:DA:2128:C:H5'	2.20	0.40
25:AZ:158:LEU:O	25:AZ:163:PHE:HB2	2.21	0.40
36:DA:924:C:O2'	36:DA:925:C:H5'	2.22	0.40
36:DA:875:G:H4'	58:DZ:170:THR:CG2	2.51	0.40
36:BA:1042:G:H1'	36:BA:1114:G:H22	1.86	0.40
56:BX:12:VAL:HA	56:BX:27:THR:O	2.21	0.40
36:BA:638:G:C6	36:BA:639:U:N3	2.89	0.40
36:BA:652:C:O2'	36:BA:653:A:P	2.79	0.40
10:CJ:42:THR:HG22	10:CJ:67:THR:O	2.21	0.40
48:BP:114:ILE:HG22	48:BP:129:ALA:O	2.21	0.40
34:D8:30:ARG:HD3	34:D8:30:ARG:O	2.21	0.40
53:DU:76:TYR:C	53:DU:76:TYR:CD1	2.94	0.40
36:DA:481:G:OP1	57:DY:47:LYS:NZ	2.54	0.40
22:AW:53:G:O2'	22:AW:54:U:H5'	2.20	0.40
32:D6:15:GLU:OE1	32:D6:18:ARG:CZ	2.66	0.40
53:DU:13:LYS:O	53:DU:17:ILE:HD13	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:127:LEU:C	38:DC:129:ARG:N	2.75	0.40
39:DD:133:LEU:C	39:DD:135:PHE:N	2.75	0.40
46:DN:63:THR:OG1	46:DN:66:LYS:NZ	2.52	0.40
46:BN:47:ALA:O	46:BN:119:ARG:NH2	2.51	0.40
31:D5:25:LEU:CD2	31:D5:26:THR:H	2.33	0.40
38:BC:99:ILE:C	38:BC:101:GLN:H	2.24	0.40
48:DP:86:LYS:HB2	48:DP:117:GLU:O	2.21	0.40
41:DF:113:ALA:HB1	41:DF:186:ILE:CG2	2.38	0.40
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.51	0.40
10:CJ:5:ARG:HG2	10:CJ:73:ASP:OD1	2.20	0.40
1:AA:234:C:H2'	1:AA:235:C:C6	2.56	0.40
36:BA:2474:C:H5''	36:BA:2475:C:C5	2.56	0.40
25:CZ:34:VAL:CG1	25:CZ:200:TRP:CZ2	3.04	0.40
1:AA:718:G:C4	11:AK:116:HIS:CD2	3.09	0.40
36:DA:1998:G:O2'	36:DA:1999:C:H5'	2.20	0.40
4:CD:145:GLU:CB	4:CD:183:GLY:O	2.70	0.40
2:CB:42:ILE:HG21	2:CB:203:GLY:HA2	2.03	0.40
14:CN:12:ARG:HB3	14:CN:14:PRO:HD2	2.03	0.40
4:AD:145:GLU:H	4:AD:145:GLU:HG3	1.58	0.40
1:AA:1228:C:OP1	13:AM:108:ARG:NH2	2.53	0.40
52:DT:117:ASP:O	52:DT:118:ARG:C	2.59	0.40
36:DA:532:A:C2	53:DU:28:ARG:NH2	2.89	0.40
27:B1:53:VAL:O	27:B1:54:ALA:CB	2.67	0.40
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.53	0.40
36:DA:187:G:C2	36:DA:210:C:O2	2.75	0.40
40:DE:188:VAL:HG22	40:DE:189:PRO:HD2	2.02	0.40
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.21	0.40
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.55	0.40
10:AJ:61:GLU:OE1	14:AN:45:ARG:HD2	2.21	0.40
36:DA:2869:G:H2'	36:DA:2870:C:O4'	2.22	0.40
7:AG:106:GLN:O	7:AG:110:GLN:HG3	2.21	0.40
9:CI:5:TYR:CG	9:CI:6:GLY:N	2.89	0.40
53:DU:37:GLU:O	53:DU:38:THR:C	2.59	0.40
9:AI:99:LEU:CD2	9:AI:99:LEU:N	2.78	0.40
3:CC:29:TYR:HE2	10:CJ:65:LEU:CD2	2.32	0.40
25:CZ:226:GLU:O	25:CZ:300:ARG:HD2	2.19	0.40
1:CA:189(H):G:O2'	1:CA:189(I):G:C8	2.67	0.40
43:BH:163:TYR:HD1	43:BH:163:TYR:H	1.68	0.40
36:DA:9:U:O4	36:DA:2629:A:C8	2.73	0.40
36:BA:465:G:C6	36:BA:466:A:N6	2.89	0.40
20:CT:55:ILE:HG12	20:CT:56:MET:N	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1373:G:H5'	7:AG:36:LYS:HB2	2.03	0.40
36:DA:466:A:H2'	36:DA:467:G:H5'	2.03	0.40
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.56	0.40
38:DC:62:VAL:HG13	38:DC:161:ILE:HD11	2.01	0.40
25:CZ:178:ALA:CA	25:CZ:196:VAL:HG23	2.50	0.40
7:AG:145:ALA:C	7:AG:147:ALA:H	2.22	0.40
49:DQ:109:VAL:CG1	49:DQ:113:GLN:OE1	2.69	0.40
1:AA:278:G:OP2	17:AQ:41:LYS:NZ	2.48	0.40
1:CA:965:A:C2	1:CA:969:A:C2	3.08	0.40
7:CG:69:VAL:CG1	7:CG:100:ALA:HB1	2.51	0.40
37:DB:81:G:O6	37:DB:96:U:O2	2.39	0.40
2:AB:61:LEU:HA	2:AB:64:ARG:CZ	2.50	0.40
12:CL:25:PRO:O	12:CL:26:ALA:CB	2.69	0.40
1:CA:644:G:C5	1:CA:645:C:C5	3.09	0.40
36:DA:134:C:H2'	36:DA:135:G:C8	2.55	0.40
42:BG:146:TYR:C	42:BG:148:MET:N	2.74	0.40
48:DP:120:ALA:HB3	48:DP:137:LYS:O	2.21	0.40
36:BA:2147:G:H2'	36:BA:2148:G:C4'	2.51	0.40
36:BA:1131:G:HO2'	36:BA:1132:A:H8	1.67	0.40
1:AA:157:G:H2'	1:AA:158:G:C8	2.56	0.40
11:AK:126:ARG:O	11:AK:126:ARG:HG2	2.21	0.40
55:DW:18:ARG:HG3	55:DW:76:VAL:CG1	2.51	0.40
53:DU:51:LYS:H	53:DU:51:LYS:HG2	1.66	0.40
36:BA:2836:U:H2'	36:BA:2837:G:C8	2.56	0.40
20:AT:90:GLN:HA	20:AT:93:GLU:OE2	2.21	0.40
36:BA:809:G:O2'	36:BA:810:U:H5'	2.22	0.40
22:CV:56:C:O2	42:DG:78:SER:HB2	2.21	0.40
2:CB:231:GLU:HA	2:CB:232:PRO:HD3	1.84	0.40
2:AB:231:GLU:HA	2:AB:232:PRO:HD3	1.75	0.40
38:DC:125:SER:O	38:DC:126:LYS:HG2	2.21	0.40
36:DA:1895:C:H2'	36:DA:1896:G:O4'	2.21	0.40
29:D3:13:ILE:HD11	36:DA:989:G:C4	2.55	0.40
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.21	0.40
36:BA:1395:A:O2'	36:BA:1397:U:C6	2.74	0.40
2:AB:19:HIS:HB2	2:AB:204:ASN:OD1	2.21	0.40
1:CA:650:G:O2'	1:CA:651:C:H5'	2.21	0.40
35:D9:31:LYS:HG2	36:DA:2478:A:H5'	2.02	0.40
36:DA:2300:G:O2'	36:DA:2301:C:H5'	2.21	0.40
5:AE:71:LEU:HA	5:AE:71:LEU:HD23	1.92	0.40
39:BD:126:GLN:HG3	39:BD:129:ASN:ND2	2.37	0.40
1:AA:413:G:N2	1:AA:428:G:O2'	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:123:VAL:HG22	38:BC:127:LEU:HB3	2.03	0.40
47:DO:114:ILE:O	47:DO:118:ALA:N	2.52	0.40
53:DU:95:LEU:HD13	54:DV:4:ILE:HG23	2.02	0.40
54:DV:55:ALA:O	54:DV:56:SER:HB3	2.21	0.40
13:CM:81:LEU:HD12	13:CM:86:CYS:SG	2.61	0.40
31:D5:3:LYS:CG	31:D5:4:HIS:H	2.34	0.40
57:BY:38:ILE:HD13	57:BY:66:PRO:HG3	2.03	0.40
4:CD:188:LEU:HD23	4:CD:189:PRO:O	2.20	0.40
41:BF:152:GLU:O	41:BF:153:SER:C	2.59	0.40
36:BA:221:A:C8	36:BA:266:G:C6	3.10	0.40
34:B8:6:THR:HG21	36:BA:243:U:OP1	2.21	0.40
36:DA:1971:A:N3	39:DD:241:PRO:HD3	2.35	0.40
42:BG:172:LEU:HD23	42:BG:176:LEU:HD12	2.02	0.40
36:DA:833:U:O5'	36:DA:833:U:H6	2.03	0.40
36:BA:2683:C:OP1	52:BT:53:ARG:NH2	2.54	0.40
42:DG:173:LEU:HD22	42:DG:178:PHE:CE2	2.56	0.40
35:D9:35:ARG:O	35:D9:35:ARG:HG2	2.21	0.40
1:CA:67:C:H2'	1:CA:68:G:C8	2.57	0.40
36:BA:1885:A:H2'	36:BA:1886:C:C5'	2.51	0.40
56:DX:12:VAL:CB	56:DX:17:ALA:HB1	2.47	0.40
2:AB:151:GLY:O	2:AB:153:ARG:N	2.54	0.40
36:DA:1796:U:H2'	36:DA:1797:C:C6	2.56	0.40
1:AA:1004:A:C3'	1:AA:1005:A:H5'	2.51	0.40
2:CB:187:LEU:CD1	2:CB:205:ASP:HA	2.51	0.40
5:CE:78:HIS:HD2	8:CH:107:LEU:HD12	1.86	0.40
50:DR:76:VAL:O	50:DR:79:LEU:HB3	2.22	0.40
25:AZ:135:MET:CE	25:AZ:138:VAL:HG22	2.52	0.40
30:D4:10:VAL:CG2	30:D4:11:PRO:CD	2.97	0.40
36:DA:26:G:O2'	36:DA:27:G:H5'	2.21	0.40
10:CJ:20:ALA:O	10:CJ:24:VAL:HG23	2.21	0.40
54:DV:19:LYS:HD3	54:DV:22:VAL:HG21	2.04	0.40
24:CY:6:C:N4	24:CY:67:G:H1	2.14	0.40
48:DP:146:VAL:O	48:DP:147:LEU:O	2.40	0.40
3:CC:3:ASN:HB2	3:CC:4:LYS:H	1.51	0.40
10:CJ:35:SER:O	10:CJ:36:GLY:C	2.59	0.40
36:DA:589:C:H2'	36:DA:590:A:H8	1.85	0.40
40:DE:14:ILE:HG12	40:DE:21:VAL:HG23	2.03	0.40
1:AA:192:U:C4'	20:AT:103:GLY:N	2.85	0.40
28:D2:59:ARG:O	28:D2:60:LEU:C	2.58	0.40
23:CX:13:A:P	23:CX:13:A:H8	2.45	0.40
39:BD:21:PHE:HB3	39:BD:24:ILE:HG23	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2523:G:O2'	36:DA:2524:G:H5''	2.20	0.40
22:AV:2:C:C2'	22:AV:3:C:H5''	2.51	0.40
9:CI:126:SER:C	9:CI:128:ARG:HD2	2.40	0.40
1:AA:1503:A:H1'	23:AX:15:A:H61	1.84	0.40
36:DA:1688:U:O2	36:DA:1700:A:H8	2.04	0.40
20:CT:74:LYS:C	20:CT:76:ALA:N	2.74	0.40
35:B9:4:ARG:HB3	35:B9:4:ARG:HE	1.77	0.40
36:DA:1721:G:H5'	36:DA:1721:G:N3	2.37	0.40
36:BA:581:C:C2	36:BA:582:G:C8	3.09	0.40
52:BT:13:ARG:NE	52:BT:13:ARG:CA	2.82	0.40
36:BA:2121:G:C2	36:BA:2177:C:O2	2.74	0.40
1:CA:450:G:H4'	16:CP:41:PRO:O	2.21	0.40
57:DY:2:ARG:C	57:DY:4:LYS:N	2.74	0.40
4:AD:145:GLU:CG	4:AD:184:LYS:HG2	2.50	0.40
25:CZ:355:LEU:HD13	25:CZ:359:VAL:O	2.21	0.40
50:DR:18:LEU:O	50:DR:21:TYR:HB2	2.20	0.40
36:DA:83:G:H5'	57:DY:5:MET:SD	2.61	0.40
50:BR:45:ARG:HG3	50:BR:46:GLY:N	2.35	0.40
56:BX:18:TYR:C	56:BX:20:GLY:N	2.75	0.40
55:BW:18:ARG:NH1	55:BW:76:VAL:HG13	2.36	0.40
40:DE:71:GLY:O	40:DE:72:VAL:O	2.39	0.40
20:CT:45:GLN:H	20:CT:45:GLN:NE2	2.10	0.40
41:DF:53:THR:HG22	41:DF:56:GLU:CG	2.51	0.40
1:CA:1202:G:N3	14:CN:42:ILE:HG21	2.36	0.40
20:CT:53:LEU:N	20:CT:53:LEU:HD12	2.36	0.40
43:BH:19:VAL:CG1	43:BH:20:ALA:N	2.83	0.40
41:DF:63:LYS:HZ1	41:DF:67:GLN:HA	1.86	0.40
24:CY:24:A:C5	24:CY:25:C:C4	3.10	0.40
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.21	0.40
36:DA:900:A:H3'	36:DA:901:A:H8	1.85	0.40
1:CA:280:C:O2	17:CQ:38:ARG:HD3	2.22	0.40
12:AL:119:LYS:C	12:AL:120:TYR:CD2	2.95	0.40
36:DA:565:C:H2'	36:DA:566:U:H6	1.86	0.40
36:DA:2358:G:C5	36:DA:2359:C:C5	3.09	0.40
39:DD:213:ARG:O	39:DD:216:GLY:N	2.54	0.40
20:CT:22:ARG:HG3	20:CT:22:ARG:NH1	2.37	0.40
36:DA:459:U:H2'	36:DA:460:A:H8	1.85	0.40
7:CG:109:ASN:N	7:CG:109:ASN:ND2	2.67	0.40
57:DY:52:SER:O	57:DY:54:LYS:N	2.54	0.40
46:BN:39:ARG:O	46:BN:41:ASP:N	2.53	0.40
48:BP:9:ASN:H	48:BP:10:PRO:HD3	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:40:LEU:CD1	9:CI:70:LYS:HG2	2.49	0.40
24:AY:51:G:N2	24:AY:64:U:C2	2.90	0.40
1:CA:1507:A:C2	1:CA:1508:G:C4	3.09	0.40
38:BC:218:MET:HB3	38:BC:218:MET:HE3	1.89	0.40
36:BA:338:G:N2	36:BA:339:U:C1'	2.84	0.40
53:DU:69:CYS:O	53:DU:74:LEU:HD12	2.21	0.40
22:CV:18:G:O2'	22:CV:57:G:N2	2.55	0.40
55:BW:88:ARG:HG3	55:BW:88:ARG:HH11	1.86	0.40
56:DX:6:ASP:O	56:DX:9:LEU:CD2	2.69	0.40
34:D8:7:HIS:C	34:D8:9:GLY:N	2.74	0.40
29:B3:31:LEU:HA	29:B3:31:LEU:HD23	1.91	0.40
36:DA:2825:C:H2'	36:DA:2826:A:H5'	2.02	0.40
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.21	0.40
1:CA:814:A:N7	1:CA:816:A:C4	2.88	0.40
36:DA:2038:G:H2'	36:DA:2039:C:O4'	2.21	0.40
16:AP:14:ASN:OD1	16:AP:16:HIS:CE1	2.74	0.40
1:AA:710:G:OP1	6:AF:54:LYS:HE3	2.21	0.40
11:AK:127:LYS:HD3	11:AK:127:LYS:HA	1.76	0.40
19:CS:17:GLU:HG2	19:CS:17:GLU:O	2.21	0.40
36:BA:2540:C:H2'	36:BA:2541:A:O4'	2.21	0.40
36:BA:227:A:H61	36:BA:410:G:H21	1.69	0.40
27:D1:78:LYS:HE2	27:D1:78:LYS:HB3	1.85	0.40
1:AA:16:A:C2	1:AA:920:U:O2	2.73	0.40
36:BA:1759:A:C5'	36:BA:2715:C:H1'	2.52	0.40
36:DA:1635:G:H2'	36:DA:1636:C:H6	1.86	0.40
10:CJ:23:ILE:HG22	10:CJ:23:ILE:O	2.20	0.40
1:CA:509:A:H5'	4:CD:54:TYR:CD2	2.55	0.40
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.56	0.40
26:B0:18:ALA:HB2	36:BA:2272:U:OP2	2.21	0.40
36:DA:228:A:C4	36:DA:230:U:H1'	2.57	0.40
1:CA:1168:A:H2'	1:CA:1169:A:C8	2.56	0.40
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	2.04	0.40
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.22	0.40
36:DA:487:C:C5	36:DA:488:G:N7	2.89	0.40
1:CA:577:G:O2'	1:CA:578:C:H5'	2.20	0.40
2:AB:152:PHE:CD1	2:AB:152:PHE:C	2.94	0.40
2:AB:24:TRP:N	2:AB:24:TRP:CD1	2.90	0.40
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.22	0.40
36:DA:1568:G:P	39:DD:63:ARG:HH22	2.45	0.40
24:CY:65:C:OP2	25:CZ:90:LYS:CE	2.69	0.40
13:CM:56:LEU:HD13	13:CM:60:VAL:HG23	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:26:ARG:O	28:B2:29:LYS:N	2.42	0.40
57:BY:36:ALA:O	57:BY:37:VAL:HG13	2.20	0.40
36:DA:941:A:H4'	48:DP:35:HIS:CE1	2.56	0.40
1:CA:545:C:OP1	4:CD:61:LYS:NZ	2.55	0.40
51:BS:61:ASN:O	51:BS:65:VAL:CG2	2.67	0.40
43:DH:85:LYS:HZ1	43:DH:85:LYS:C	2.24	0.40
39:BD:35:LYS:CA	39:BD:63:ARG:HA	2.50	0.40
52:BT:85:LYS:CB	52:BT:85:LYS:HZ2	2.34	0.40
24:AY:65:C:O2'	24:AY:66:C:H5'	2.21	0.40
1:AA:1190:G:C3'	3:AC:3:ASN:HD22	2.22	0.40
3:CC:6:HIS:NE2	3:CC:184:TYR:CD2	2.89	0.40
3:CC:8:ILE:CD1	3:CC:184:TYR:HB3	2.51	0.40
35:D9:7:VAL:CG1	35:D9:25:VAL:HG21	2.52	0.40
36:BA:1516:C:C3'	36:BA:1517:G:H5''	2.50	0.40
32:B6:53:LYS:N	32:B6:53:LYS:HD3	2.35	0.40
56:BX:14:SER:HB3	56:BX:17:ALA:CB	2.52	0.40
34:B8:18:ALA:C	34:B8:20:GLY:H	2.25	0.40
36:DA:1799:G:H8	39:DD:181:GLU:OE1	2.01	0.40
51:BS:96:GLY:C	51:BS:98:VAL:H	2.25	0.40
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.98	0.40
37:DB:107:G:C6	37:DB:108:U:C4	3.09	0.40
32:D6:19:ARG:H	32:D6:19:ARG:HG3	1.59	0.40
36:DA:1022:G:O6	46:DN:66:LYS:HE3	2.22	0.40
46:BN:46:VAL:HG13	46:BN:48:MET:HE3	2.03	0.40
49:BQ:63:LYS:HD2	58:BZ:175:VAL:CG2	2.51	0.40
58:BZ:115:GLY:N	58:BZ:177:PRO:HD3	2.37	0.40
49:DQ:79:LEU:HD23	49:DQ:80:GLU:HG3	1.95	0.40
6:AF:30:LEU:HB3	6:AF:35:ALA:CB	2.52	0.40
1:CA:1152:A:C6	1:CA:1153:C:C4	3.09	0.40
1:CA:1286:A:O2'	1:CA:1287:A:H5''	2.21	0.40
13:AM:57:ARG:HG2	13:AM:61:GLU:OE1	2.21	0.40
50:BR:96:ARG:NH1	50:BR:117:VAL:CB	2.85	0.40
57:BY:17:SER:CB	57:BY:71:LYS:HE2	2.52	0.40
20:AT:63:ILE:HG21	20:AT:81:LYS:HG3	2.03	0.40
38:DC:82:LYS:O	38:DC:84:LYS:N	2.46	0.40
43:DH:15:VAL:CG1	43:DH:29:PRO:HD3	2.51	0.40
36:DA:654(E):G:N2	36:DA:654(Q):C:C1'	2.76	0.40
1:AA:718:G:C5	11:AK:116:HIS:HD2	2.39	0.40
36:BA:723:G:H2'	36:BA:724:U:O4'	2.21	0.40
18:AR:30:ASP:C	18:AR:32:ARG:N	2.74	0.40
25:AZ:358:GLY:C	25:AZ:360:GLU:H	2.25	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:65:TRP:CB	41:BF:66:PRO:CD	2.99	0.40
36:DA:1999:C:H4'	36:DA:2723:C:O2	2.21	0.40
22:CW:30:G:H2'	22:CW:31:A:C8	2.55	0.40
36:BA:581:C:O2'	36:BA:582:G:H5'	2.21	0.40
13:CM:57:ARG:HG2	13:CM:61:GLU:OE1	2.21	0.40
4:AD:129:ASN:N	4:AD:129:ASN:HD22	2.19	0.40
3:CC:173:VAL:N	3:CC:174:PRO:CD	2.84	0.40
2:CB:137:ARG:HA	2:CB:137:ARG:HD3	1.98	0.40
57:BY:76:CYS:O	57:BY:77:PRO:C	2.60	0.40
20:CT:100:ILE:C	20:CT:102:GLY:H	2.24	0.40
54:BV:2:PHE:H	54:BV:42:GLY:HA3	1.85	0.40
36:DA:1352:U:O2	36:DA:1570:A:H2	2.05	0.40
50:DR:30:THR:HG22	50:DR:31:HIS:CE1	2.56	0.40
36:DA:2481:G:O2'	36:DA:2482:G:P	2.79	0.40
37:BB:69:G:N2	37:BB:70:C:H1'	2.37	0.40
1:CA:268:C:O2'	1:CA:269:C:H5'	2.21	0.40
54:DV:68:LYS:HD3	54:DV:69:LYS:N	2.32	0.40
25:CZ:122:LEU:O	25:CZ:126:VAL:HG23	2.21	0.40
38:DC:74:VAL:HG21	38:DC:153:ILE:HG23	2.04	0.40
55:BW:59:VAL:O	55:BW:59:VAL:CG1	2.69	0.40
36:BA:533:G:H5'	53:BU:24:TYR:CD1	2.57	0.40
7:AG:145:ALA:O	7:AG:146:GLU:HB2	2.21	0.40
36:DA:2283:C:C5	36:DA:2389:G:C4	3.10	0.40
22:AV:53:G:H2'	22:AV:54:U:H6	1.87	0.40
33:B7:7:PRO:HG3	36:BA:1612:C:H5'	2.02	0.40
36:DA:892:G:O5'	36:DA:892:G:H8	2.03	0.40
2:CB:92:TYR:CE1	2:CB:151:GLY:HA2	2.56	0.40
36:BA:2347:C:H2'	36:BA:2348:U:C6	2.55	0.40
8:CH:30:ARG:CB	8:CH:30:ARG:NH1	2.84	0.40
24:CY:1:A:O2'	25:CZ:91:ASN:CG	2.59	0.40
34:D8:26:LYS:HD3	34:D8:47:LYS:CD	2.51	0.40
1:CA:489:C:H2'	1:CA:490:G:H8	1.86	0.40
46:BN:36:GLY:HA2	46:BN:38:HIS:CE1	2.56	0.40
39:DD:142:VAL:CG2	39:DD:191:ALA:HB1	2.52	0.40
43:BH:24:VAL:HG12	43:BH:24:VAL:O	2.21	0.40
3:AC:23:TYR:C	3:AC:23:TYR:CD1	2.95	0.40
7:CG:103:TRP:HZ3	7:CG:138:LYS:HB2	1.86	0.40
1:CA:697:U:C2'	1:CA:698:G:H5'	2.52	0.40
1:CA:1489:G:H2'	1:CA:1490:C:H6	1.86	0.40
39:DD:227:ASN:HB3	39:DD:228:PRO:CD	2.52	0.40
36:BA:569:U:C4	36:BA:570:G:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:56:VAL:HG23	17:AQ:81:ARG:HG3	2.03	0.40
53:BU:62:ILE:HG23	53:BU:76:TYR:CE2	2.55	0.40
44:BJ:73:UNK:C	44:BJ:75:UNK:N	2.84	0.40
36:DA:2053:G:OP1	40:DE:144:ARG:HD3	2.22	0.40
27:B1:21:ARG:NH1	27:B1:21:ARG:HG3	2.37	0.40
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.53	0.40
41:BF:42:ALA:O	41:BF:44:ARG:N	2.54	0.40
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.56	0.40
4:CD:140:VAL:CG1	4:CD:144:ASP:HB2	2.51	0.40
36:DA:1445:A:H5'	36:DA:1460:A:H1'	2.04	0.40
44:BJ:62:UNK:C	44:BJ:64:UNK:N	2.84	0.40
40:DE:97:LYS:HA	40:DE:98:PRO:HD3	1.96	0.40
1:CA:1483:A:H2'	1:CA:1484:C:H5'	2.02	0.40
36:DA:60:G:C6	36:DA:74:A:N6	2.90	0.40
36:DA:1927:A:C6	36:DA:1928:A:C6	3.09	0.40
9:AI:31:GLN:HE21	9:AI:31:GLN:HB2	1.67	0.40
55:DW:31:GLU:O	55:DW:35:ILE:HG12	2.20	0.40
25:CZ:285:ASN:HD22	25:CZ:285:ASN:HA	1.51	0.40
25:CZ:23:GLY:O	25:CZ:24:LYS:O	2.40	0.40
4:AD:190:ASP:O	4:AD:194:LEU:HD23	2.21	0.40
47:DO:104:ARG:NH1	52:DT:35:LYS:HB3	2.36	0.40
39:DD:72:LYS:HZ1	39:DD:101:GLU:CB	2.34	0.40
34:B8:61:LEU:CD1	34:B8:61:LEU:H	2.27	0.40
26:D0:42:GLY:O	26:D0:57:PHE:CD1	2.74	0.40
42:BG:7:LEU:C	42:BG:7:LEU:HD23	2.41	0.40
57:DY:81:LYS:HD2	57:DY:96:ILE:HB	2.04	0.40
14:CN:4:LYS:O	14:CN:6:LEU:N	2.54	0.40
12:AL:7:ILE:HG22	12:AL:8:ASN:N	2.36	0.40
47:BO:105:GLU:O	47:BO:109:LYS:HG2	2.22	0.40
42:DG:88:ILE:HG22	42:DG:89:GLY:N	2.36	0.40
34:B8:15:LYS:HD2	34:B8:16:ILE:H	1.85	0.40
20:CT:10:LEU:O	20:CT:11:SER:C	2.60	0.40
36:BA:1192:G:C2'	36:BA:1193:G:H5'	2.51	0.40
42:DG:144:ILE:O	42:DG:144:ILE:CG2	2.69	0.40
42:DG:67:LYS:HA	42:DG:68:PRO:HD3	1.89	0.40
34:D8:50:LEU:N	34:D8:53:PRO:HD3	2.37	0.40
12:AL:45:PRO:HB3	12:AL:92:ASP:CB	2.32	0.40
36:BA:621:A:C2'	36:BA:622:G:H5'	2.39	0.40
58:BZ:28:MET:O	58:BZ:34:ASN:HA	2.20	0.40
50:DR:54:LEU:HD22	50:DR:62:ALA:HB1	2.02	0.40
58:DZ:12:GLY:HA2	58:DZ:36:LYS:NZ	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:52:VAL:HG11	43:DH:69:ARG:HB2	2.04	0.40
38:BC:7:TYR:O	38:BC:10:LEU:HB2	2.22	0.40
40:BE:29:GLY:O	40:BE:51:PHE:HE1	2.04	0.40
40:BE:52:LEU:HG	40:BE:75:VAL:CG2	2.52	0.40
51:DS:36:TYR:HA	51:DS:52:SER:HA	2.02	0.40
42:DG:7:LEU:O	42:DG:8:LYS:C	2.60	0.40
20:CT:61:SER:O	20:CT:62:LEU:C	2.60	0.40
36:DA:2570:G:O2'	36:DA:2571:C:H5'	2.21	0.40
1:CA:368:U:H3'	1:CA:369:C:C5'	2.51	0.40
7:CG:115:ARG:CB	7:CG:118:VAL:HG13	2.52	0.40
48:BP:16:ARG:CB	48:BP:16:ARG:NH1	2.72	0.40
17:CQ:52:LYS:HD2	17:CQ:55:ASP:CG	2.42	0.40
10:CJ:4:ILE:HG22	10:CJ:6:ILE:HG23	2.04	0.40
10:AJ:6:ILE:CD1	10:AJ:72:VAL:HB	2.51	0.40
39:BD:24:ILE:HD13	39:BD:25:THR:CA	2.51	0.40
36:BA:2410:G:H2'	36:BA:2411:A:O4'	2.22	0.40
36:DA:789:A:OP1	36:DA:789:A:H3'	2.21	0.40
25:AZ:401:THR:O	25:AZ:402:LYS:O	2.40	0.40
1:CA:234:C:H2'	1:CA:235:C:C6	2.56	0.40
36:DA:1721:G:N3	36:DA:1721:G:C5'	2.84	0.40
1:AA:598:U:H2'	1:AA:599:C:H6	1.87	0.40
26:B0:23:VAL:HA	26:B0:38:VAL:HG13	2.03	0.40
16:CP:15:PRO:HB2	16:CP:41:PRO:HG2	2.03	0.40
17:AQ:58:GLU:HB2	17:AQ:74:LEU:CB	2.43	0.40
50:DR:21:TYR:CZ	50:DR:43:GLU:HG2	2.55	0.40
51:DS:68:GLN:C	51:DS:70:GLY:N	2.74	0.40
56:BX:18:TYR:C	56:BX:20:GLY:H	2.25	0.40
39:BD:206:LEU:HG	39:BD:211:ARG:CG	2.51	0.40
16:AP:67:THR:CG2	16:AP:68:ASP:N	2.83	0.40
7:AG:122:HIS:O	7:AG:125:MET:N	2.54	0.40
43:BH:90:LYS:O	43:BH:94:TYR:HD2	2.05	0.40
36:BA:1843:C:O5'	36:BA:1843:C:H6	2.05	0.40
37:DB:17:C:O2'	37:DB:18:G:H5'	2.21	0.40
16:AP:9:PHE:CD1	16:AP:9:PHE:N	2.88	0.40
3:CC:136:GLN:O	3:CC:139:GLN:HB3	2.22	0.40
51:BS:76:LYS:O	51:BS:80:LEU:HD12	2.21	0.40
36:DA:797:C:OP1	41:DF:62:ARG:HB2	2.22	0.40
41:DF:62:ARG:HG2	41:DF:62:ARG:NH1	2.36	0.40
39:DD:94:LEU:HD22	39:DD:95:LEU:N	2.36	0.40
36:DA:181:A:H2'	36:DA:182:A:H8	1.84	0.40
16:AP:43:LYS:O	16:AP:44:THR:C	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:59:U:HO2'	22:CV:60:U:H6	1.61	0.40
1:CA:707:C:H2'	1:CA:708:C:C6	2.56	0.40
6:AF:69:GLU:H	6:AF:69:GLU:CD	2.25	0.40
36:BA:1455:G:H1'	36:BA:2852:G:H4'	2.04	0.40
36:DA:223:A:C8	36:DA:422:A:O4'	2.74	0.40
1:CA:1129:C:O2'	1:CA:1131:G:H8	2.04	0.40
54:DV:12:TYR:N	54:DV:12:TYR:CD1	2.89	0.40
2:CB:115:LEU:O	2:CB:117:GLU:N	2.54	0.40
7:AG:145:ALA:C	7:AG:147:ALA:N	2.75	0.40
22:AW:39:U:O5'	22:AW:39:U:O2	2.39	0.40
36:DA:1708:C:H2'	36:DA:1709:U:H6	1.86	0.40
6:AF:43:LEU:HD13	6:AF:43:LEU:N	2.36	0.40
14:AN:29:ARG:CG	14:AN:29:ARG:HH11	2.34	0.40
41:BF:62:ARG:HG2	41:BF:62:ARG:HH11	1.85	0.40
25:AZ:340:PRO:O	25:AZ:350:THR:HA	2.21	0.40
43:DH:17:VAL:O	43:DH:18:GLU:C	2.60	0.40
2:CB:80:ILE:CD1	2:CB:80:ILE:N	2.84	0.40
36:BA:1182:A:H2'	36:BA:1183:G:H8	1.86	0.40
58:BZ:61:LEU:HA	58:BZ:62:PRO:HD3	1.90	0.40
14:AN:60:SER:O	14:AN:61:TRP:HB3	2.22	0.40
1:CA:1207:G:C6	1:CA:1208:C:C4	3.10	0.40
12:AL:77:LEU:HD21	12:AL:107:ALA:CA	2.50	0.40
1:CA:433:C:H2'	1:CA:434:U:C6	2.57	0.40
36:DA:2553:G:H2'	36:DA:2554:U:O4'	2.21	0.40
46:DN:38:HIS:C	53:DU:67:ALA:HB1	2.41	0.40
36:DA:654(R):C:H2'	36:DA:654(S):G:C8	2.57	0.40
27:D1:35:THR:HG23	27:D1:35:THR:O	2.20	0.40
36:BA:145:G:C3'	36:BA:146:G:H5''	2.51	0.40
1:AA:417:C:C2'	1:AA:418:C:H5'	2.50	0.40
36:DA:2857:G:N2	36:DA:2860:A:OP2	2.37	0.40
36:BA:2511:U:C4	36:BA:2512:C:C4	3.10	0.40
1:AA:991:U:O2	1:AA:991:U:H2'	2.21	0.40
4:CD:110:PHE:CD1	4:CD:110:PHE:N	2.89	0.40
1:AA:1242:C:O5'	1:AA:1242:C:H6	2.05	0.40
36:BA:2452:C:C4	36:BA:2453:A:C6	3.09	0.40
36:BA:2453:A:H2'	36:BA:2454:G:H8	1.86	0.40
36:DA:1635:G:O2'	36:DA:1636:C:H5'	2.22	0.40
36:DA:374:A:H2'	36:DA:375:C:O4'	2.21	0.40
26:D0:47:PRO:HB2	26:D0:48:GLY:H	1.65	0.40
1:CA:117:G:H2'	1:CA:118:U:H5'	2.03	0.40
8:CH:23:SER:HA	8:CH:61:VAL:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:5:GLU:OE1	18:CR:34:TYR:OH	2.26	0.40
49:BQ:67:ARG:HB2	49:BQ:102:VAL:O	2.22	0.40
36:DA:2738:A:C2	36:DA:2739:U:H1'	2.57	0.40
1:CA:890:G:O2'	1:CA:906:G:O6	2.35	0.40
2:CB:208:ILE:O	2:CB:209:ARG:C	2.59	0.40
19:CS:71:LEU:HD23	19:CS:71:LEU:HA	1.66	0.40
25:AZ:162:GLU:HA	25:AZ:162:GLU:OE1	2.21	0.40
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.21	0.40
36:DA:2468:G:H5''	49:DQ:120:ILE:HD11	2.02	0.40
36:DA:994:C:OP1	53:DU:53:ARG:NH2	2.54	0.40
25:CZ:277:LEU:HD13	25:CZ:278:GLN:N	2.36	0.40
25:AZ:68:VAL:O	25:AZ:273:HIS:CE1	2.74	0.40
21:CU:18:TYR:CD2	21:CU:22:ARG:HG2	2.57	0.40
28:B2:49:LYS:O	28:B2:50:ILE:HD12	2.22	0.40
28:B2:56:GLN:O	28:B2:60:LEU:HD13	2.21	0.40
57:BY:13:VAL:HG11	57:BY:28:LYS:CG	2.52	0.40
57:BY:39:VAL:HB	57:BY:40:GLU:H	1.68	0.40
4:AD:101:LEU:HD23	4:AD:121:VAL:HG11	2.03	0.40
4:AD:3:ARG:HH11	4:AD:3:ARG:HG2	1.85	0.40
41:BF:154:VAL:HA	41:BF:191:ARG:O	2.21	0.40
36:DA:2199:A:N3	36:DA:2199:A:H2'	2.37	0.40
30:B4:5:ILE:CD1	30:B4:5:ILE:H	2.35	0.40
42:DG:53:LEU:C	42:DG:55:LYS:N	2.75	0.40
42:BG:29:TRP:C	42:BG:31:VAL:H	2.23	0.40
42:BG:7:LEU:O	42:BG:8:LYS:C	2.60	0.40
57:DY:81:LYS:O	57:DY:82:PRO:O	2.39	0.40
36:BA:1816:G:C8	39:BD:62:TYR:CZ	3.10	0.40
39:BD:30:GLU:HB2	39:BD:35:LYS:HZ1	1.83	0.40
39:BD:43:ARG:NH1	39:BD:44:ASN:HD22	2.03	0.40
47:BO:35:VAL:HA	47:BO:62:VAL:O	2.21	0.40
36:BA:197:A:C2'	36:BA:198:C:H5'	2.52	0.40
25:CZ:221:PHE:O	25:CZ:222:LEU:HB2	2.22	0.40
42:DG:63:ILE:HG22	42:DG:141:PHE:HB3	2.03	0.40
42:DG:68:PRO:CG	42:DG:92:VAL:HB	2.51	0.40
36:DA:1799:G:OP1	39:DD:260:ARG:HD2	2.22	0.40
1:AA:1005:A:C2'	1:AA:1006:C:H5'	2.51	0.40
37:BB:104:U:O2'	37:BB:105:A:H5'	2.21	0.40
34:D8:15:LYS:HD2	34:D8:16:ILE:N	2.35	0.40
48:BP:101:VAL:C	48:BP:103:ALA:H	2.24	0.40
48:BP:112:LEU:HD22	48:BP:113:LYS:N	2.37	0.40
48:BP:113:LYS:CG	48:BP:114:ILE:H	2.27	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:5:VAL:HB	32:D6:8:LYS:HB3	2.03	0.40
22:AW:59:U:H2'	22:AW:60:U:O4'	2.22	0.40
40:BE:7:VAL:CG2	40:BE:193:GLY:HA2	2.52	0.40
24:CY:56:C:H1'	36:DA:1067:A:N3	2.37	0.40
53:DU:8:VAL:HG13	53:DU:12:ARG:HE	1.85	0.40
41:DF:36:VAL:HG12	41:DF:36:VAL:O	2.21	0.40
58:DZ:61:LEU:C	58:DZ:63:ASP:N	2.75	0.40
57:BY:96:ILE:HD11	57:BY:99:CYS:SG	2.61	0.40
36:DA:527:C:N4	36:DA:2779:U:P	2.95	0.40
12:CL:80:HIS:HD2	24:CY:68:C:O3'	2.03	0.40
36:BA:1971:A:O2'	39:BD:239:ARG:HG3	2.22	0.40
39:DD:265:PRO:C	39:DD:267:SER:N	2.75	0.40
6:CF:14:LEU:HA	6:CF:14:LEU:HD13	1.84	0.40
36:DA:1242:A:N1	48:DP:8:PRO:CG	2.85	0.40
46:DN:34:LEU:CD1	46:DN:116:LEU:HD22	2.52	0.40
40:DE:171:GLU:H	40:DE:185:LYS:HB2	1.87	0.40
30:B4:20:ASN:HD22	30:B4:20:ASN:C	2.17	0.40
25:AZ:251:ASP:H	25:AZ:267:VAL:HG12	1.87	0.40
3:CC:55:VAL:HG22	3:CC:68:VAL:HG22	2.03	0.40
36:DA:201:C:H2'	36:DA:202:U:H5'	2.03	0.40
48:BP:110:TYR:CD1	48:BP:111:ARG:HG3	2.57	0.40
58:BZ:103:ARG:O	58:BZ:138:GLU:HA	2.22	0.40
28:D2:22:GLU:C	28:D2:24:LEU:H	2.24	0.40
47:BO:87:ILE:HG21	47:BO:91:LEU:HA	1.97	0.40
36:DA:2523:G:C2'	36:DA:2524:G:C5'	2.97	0.40
36:DA:322:A:H3'	41:DF:169:ASN:OD1	2.21	0.40
41:BF:170:LEU:HA	41:BF:171:PRO:HD3	1.98	0.40
36:BA:536:A:H5''	53:BU:53:ARG:HD2	2.04	0.40
6:CF:97:PHE:HD2	18:CR:31:LEU:HD21	1.85	0.40
36:DA:99:U:C6	36:DA:102:G:C2	3.10	0.40
20:AT:13:LEU:C	20:AT:15:ARG:N	2.75	0.40
40:DE:9:VAL:HG11	40:DE:25:VAL:HB	2.02	0.40
1:AA:725:G:O2'	1:AA:726:C:H5'	2.22	0.40
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.57	0.40
38:DC:150:GLY:C	38:DC:154:ARG:HH11	2.24	0.40
20:CT:42:GLN:HB2	20:CT:42:GLN:HE21	1.65	0.40
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.21	0.40
40:BE:167:VAL:HG22	40:BE:167:VAL:O	2.22	0.40
41:DF:61:GLY:O	41:DF:62:ARG:C	2.60	0.40
1:CA:918:A:H2'	1:CA:919:A:O4'	2.21	0.40
36:DA:271(Z):C:O2	36:DA:272:G:N7	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1824:G:C2'	36:DA:1825:A:H5'	2.51	0.40
13:AM:80:ARG:NH2	19:AS:69:HIS:NE2	2.70	0.40
1:CA:705:U:C5	1:CA:706:A:C5	3.09	0.40
25:AZ:98:GLN:OE1	25:AZ:226:GLU:OE2	2.40	0.40
1:CA:826:C:C2	1:CA:827:U:C5	3.09	0.40
36:BA:2022:U:O2'	36:BA:2617:C:H5'	2.22	0.40
36:DA:2206:G:N3	36:DA:2206:G:C3'	2.84	0.40
57:DY:54:LYS:O	57:DY:55:TYR:CB	2.69	0.40
26:D0:77:ARG:NH2	36:DA:858:U:OP2	2.50	0.40
11:CK:44:SER:N	11:CK:47:VAL:HG22	2.37	0.40
36:BA:763:G:C8	36:BA:763:G:H3'	2.56	0.40
36:DA:363(F):A:HO2'	36:DA:364:C:H5	1.62	0.40
25:CZ:38:GLU:HG3	25:CZ:39:ASN:CG	2.42	0.40
36:DA:271(D):G:H1	36:DA:271(T):C:N4	2.19	0.40
1:AA:1397:C:OP2	5:AE:24:ARG:NH2	2.53	0.40
1:CA:443:C:H2'	1:CA:444:C:C6	2.57	0.40
1:CA:115:G:H4'	1:CA:116:A:O5'	2.22	0.40
36:BA:2790:A:C2'	36:BA:2790:A:N3	2.85	0.40
36:BA:9:U:HO2'	36:BA:10:G:P	2.44	0.40
7:AG:71:PRO:HD3	7:AG:103:TRP:HZ3	1.86	0.40
7:AG:101:LEU:HD23	7:AG:101:LEU:HA	1.93	0.40
39:DD:257:LEU:C	39:DD:257:LEU:CD2	2.90	0.40
40:DE:49:LEU:N	40:DE:49:LEU:HD22	2.37	0.40
1:CA:1483:A:C2'	1:CA:1484:C:H5'	2.52	0.40
1:CA:524:G:H2'	1:CA:525:C:C6	2.57	0.40
18:AR:19:LYS:HG3	18:AR:20:ALA:N	2.37	0.40
8:CH:100:ILE:HA	8:CH:101:PRO:HD3	1.80	0.40
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.21	0.40
38:BC:45:ALA:HA	38:BC:211:SER:O	2.21	0.40
49:BQ:74:TYR:O	49:BQ:90:VAL:HA	2.22	0.40
16:AP:17:TYR:HE1	16:AP:41:PRO:HG3	1.86	0.40
44:DJ:57:UNK:O	44:DJ:58:UNK:O	2.40	0.40
36:BA:1609:A:H4'	36:BA:1617:C:OP1	2.22	0.40
49:BQ:36:ALA:C	49:BQ:37:LEU:HD23	2.42	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	232/256 (91%)	168 (72%)	35 (15%)	29 (12%)	0	1
2	CB	232/256 (91%)	154 (66%)	50 (22%)	28 (12%)	0	2
3	AC	204/239 (85%)	161 (79%)	29 (14%)	14 (7%)	1	8
3	CC	204/239 (85%)	147 (72%)	40 (20%)	17 (8%)	1	6
4	AD	206/209 (99%)	139 (68%)	44 (21%)	23 (11%)	0	3
4	CD	206/209 (99%)	128 (62%)	44 (21%)	34 (16%)	0	0
5	AE	148/162 (91%)	138 (93%)	8 (5%)	2 (1%)	14	48
5	CE	148/162 (91%)	122 (82%)	25 (17%)	1 (1%)	26	65
6	AF	99/101 (98%)	78 (79%)	15 (15%)	6 (6%)	2	11
6	CF	99/101 (98%)	75 (76%)	13 (13%)	11 (11%)	0	3
7	AG	153/156 (98%)	121 (79%)	20 (13%)	12 (8%)	1	6
7	CG	153/156 (98%)	121 (79%)	24 (16%)	8 (5%)	2	15
8	AH	136/138 (99%)	124 (91%)	8 (6%)	4 (3%)	6	29
8	CH	136/138 (99%)	117 (86%)	12 (9%)	7 (5%)	2	15
9	AI	125/128 (98%)	85 (68%)	26 (21%)	14 (11%)	0	3
9	CI	125/128 (98%)	79 (63%)	31 (25%)	15 (12%)	0	2
10	AJ	96/105 (91%)	72 (75%)	15 (16%)	9 (9%)	1	4
10	CJ	96/105 (91%)	71 (74%)	16 (17%)	9 (9%)	1	4
11	AK	117/129 (91%)	103 (88%)	13 (11%)	1 (1%)	21	61
11	CK	117/129 (91%)	88 (75%)	23 (20%)	6 (5%)	2	15
12	AL	122/132 (92%)	97 (80%)	15 (12%)	10 (8%)	1	6
12	CL	122/132 (92%)	92 (75%)	22 (18%)	8 (7%)	1	9
13	AM	122/126 (97%)	75 (62%)	31 (25%)	16 (13%)	0	1
13	CM	122/126 (97%)	72 (59%)	35 (29%)	15 (12%)	0	2
14	AN	58/61 (95%)	40 (69%)	10 (17%)	8 (14%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CN	58/61 (95%)	34 (59%)	15 (26%)	9 (16%)	0	0
15	AO	86/89 (97%)	68 (79%)	13 (15%)	5 (6%)	2	12
15	CO	86/89 (97%)	68 (79%)	15 (17%)	3 (4%)	4	24
16	AP	81/88 (92%)	50 (62%)	21 (26%)	10 (12%)	0	2
16	CP	81/88 (92%)	49 (60%)	22 (27%)	10 (12%)	0	2
17	AQ	97/105 (92%)	84 (87%)	9 (9%)	4 (4%)	3	20
17	CQ	97/105 (92%)	80 (82%)	11 (11%)	6 (6%)	2	10
18	AR	68/88 (77%)	52 (76%)	12 (18%)	4 (6%)	2	12
18	CR	68/88 (77%)	51 (75%)	12 (18%)	5 (7%)	1	7
19	AS	76/93 (82%)	50 (66%)	16 (21%)	10 (13%)	0	1
19	CS	76/93 (82%)	45 (59%)	20 (26%)	11 (14%)	0	1
20	AT	97/106 (92%)	62 (64%)	24 (25%)	11 (11%)	0	2
20	CT	97/106 (92%)	64 (66%)	19 (20%)	14 (14%)	0	1
21	AU	22/27 (82%)	16 (73%)	3 (14%)	3 (14%)	0	1
21	CU	22/27 (82%)	14 (64%)	5 (23%)	3 (14%)	0	1
25	AZ	381/405 (94%)	272 (71%)	66 (17%)	43 (11%)	0	2
25	CZ	381/405 (94%)	270 (71%)	68 (18%)	43 (11%)	0	2
26	B0	82/85 (96%)	65 (79%)	10 (12%)	7 (8%)	1	5
26	D0	82/85 (96%)	62 (76%)	12 (15%)	8 (10%)	1	4
27	B1	91/98 (93%)	58 (64%)	18 (20%)	15 (16%)	0	0
27	D1	91/98 (93%)	64 (70%)	12 (13%)	15 (16%)	0	0
28	B2	69/72 (96%)	34 (49%)	20 (29%)	15 (22%)	0	0
28	D2	69/72 (96%)	44 (64%)	19 (28%)	6 (9%)	1	5
29	B3	57/60 (95%)	42 (74%)	9 (16%)	6 (10%)	1	3
29	D3	57/60 (95%)	39 (68%)	10 (18%)	8 (14%)	0	1
30	B4	42/71 (59%)	25 (60%)	10 (24%)	7 (17%)	0	0
30	D4	42/71 (59%)	17 (40%)	17 (40%)	8 (19%)	0	0
31	B5	57/60 (95%)	40 (70%)	7 (12%)	10 (18%)	0	0
31	D5	57/60 (95%)	40 (70%)	8 (14%)	9 (16%)	0	0
32	B6	48/54 (89%)	20 (42%)	10 (21%)	18 (38%)	0	0
32	D6	48/54 (89%)	20 (42%)	14 (29%)	14 (29%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
33	B7	46/49 (94%)	44 (96%)	2 (4%)	0	100	100
33	D7	46/49 (94%)	40 (87%)	6 (13%)	0	100	100
34	B8	61/65 (94%)	31 (51%)	18 (30%)	12 (20%)	0	0
34	D8	61/65 (94%)	27 (44%)	19 (31%)	15 (25%)	0	0
35	B9	35/37 (95%)	19 (54%)	11 (31%)	5 (14%)	0	1
35	D9	35/37 (95%)	17 (49%)	13 (37%)	5 (14%)	0	1
38	BC	226/229 (99%)	176 (78%)	33 (15%)	17 (8%)	1	7
38	DC	226/229 (99%)	170 (75%)	37 (16%)	19 (8%)	1	6
39	BD	273/276 (99%)	199 (73%)	46 (17%)	28 (10%)	1	4
39	DD	273/276 (99%)	197 (72%)	43 (16%)	33 (12%)	0	2
40	BE	202/206 (98%)	125 (62%)	45 (22%)	32 (16%)	0	0
40	DE	202/206 (98%)	129 (64%)	38 (19%)	35 (17%)	0	0
41	BF	205/210 (98%)	145 (71%)	34 (17%)	26 (13%)	0	1
41	DF	205/210 (98%)	129 (63%)	54 (26%)	22 (11%)	0	3
42	BG	179/182 (98%)	110 (62%)	33 (18%)	36 (20%)	0	0
42	DG	179/182 (98%)	99 (55%)	53 (30%)	27 (15%)	0	0
43	BH	157/180 (87%)	97 (62%)	31 (20%)	29 (18%)	0	0
43	DH	157/180 (87%)	99 (63%)	27 (17%)	31 (20%)	0	0
46	BN	136/140 (97%)	91 (67%)	27 (20%)	18 (13%)	0	1
46	DN	136/140 (97%)	89 (65%)	27 (20%)	20 (15%)	0	1
47	BO	120/122 (98%)	97 (81%)	15 (12%)	8 (7%)	1	9
47	DO	120/122 (98%)	97 (81%)	15 (12%)	8 (7%)	1	9
48	BP	144/150 (96%)	77 (54%)	36 (25%)	31 (22%)	0	0
48	DP	144/150 (96%)	78 (54%)	34 (24%)	32 (22%)	0	0
49	BQ	139/141 (99%)	112 (81%)	20 (14%)	7 (5%)	3	16
49	DQ	139/141 (99%)	112 (81%)	17 (12%)	10 (7%)	1	7
50	BR	115/118 (98%)	81 (70%)	15 (13%)	19 (16%)	0	0
50	DR	115/118 (98%)	73 (64%)	27 (24%)	15 (13%)	0	1
51	BS	96/112 (86%)	44 (46%)	29 (30%)	23 (24%)	0	0
51	DS	96/112 (86%)	44 (46%)	22 (23%)	30 (31%)	0	0
52	BT	135/146 (92%)	76 (56%)	28 (21%)	31 (23%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
52	DT	135/146 (92%)	71 (53%)	35 (26%)	29 (22%)	0	0
53	BU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	6
53	DU	115/118 (98%)	74 (64%)	34 (30%)	7 (6%)	2	11
54	BV	99/101 (98%)	65 (66%)	21 (21%)	13 (13%)	0	1
54	DV	99/101 (98%)	67 (68%)	19 (19%)	13 (13%)	0	1
55	BW	111/113 (98%)	78 (70%)	17 (15%)	16 (14%)	0	1
55	DW	111/113 (98%)	72 (65%)	23 (21%)	16 (14%)	0	1
56	BX	90/96 (94%)	63 (70%)	15 (17%)	12 (13%)	0	1
56	DX	90/96 (94%)	58 (64%)	22 (24%)	10 (11%)	0	3
57	BY	98/110 (89%)	43 (44%)	28 (29%)	27 (28%)	0	0
57	DY	98/110 (89%)	43 (44%)	26 (26%)	29 (30%)	0	0
58	BZ	181/206 (88%)	117 (65%)	38 (21%)	26 (14%)	0	1
58	DZ	181/206 (88%)	114 (63%)	42 (23%)	25 (14%)	0	1
All	All	12270/13100 (94%)	8441 (69%)	2326 (19%)	1503 (12%)	0	2

All (1503) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	8	LYS
2	AB	9	GLU
2	AB	15	VAL
2	AB	127	ILE
2	AB	131	PRO
2	AB	190	THR
2	AB	191	ASP
2	AB	195	ASP
2	AB	230	VAL
2	AB	234	PRO
2	AB	235	SER
2	AB	236	TYR
2	AB	238	LEU
3	AC	15	THR
3	AC	45	LYS
3	AC	47	LEU
3	AC	146	ALA
3	AC	180	ALA
3	AC	181	ASN

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Mol	Chain	Res	Type
4	AD	3	ARG
4	AD	14	ARG
4	AD	18	LYS
4	AD	35	ARG
4	AD	181	MET
6	AF	36	ARG
7	AG	7	ALA
7	AG	8	GLU
8	AH	2	LEU
8	AH	83	ILE
9	AI	44	VAL
9	AI	58	HIS
9	AI	69	GLY
9	AI	85	LEU
9	AI	89	ASN
9	AI	100	GLY
10	AJ	30	SER
10	AJ	32	ALA
10	AJ	36	GLY
10	AJ	85	LEU
10	AJ	86	MET
10	AJ	87	THR
10	AJ	90	LEU
12	AL	26	ALA
12	AL	80	HIS
12	AL	122	THR
13	AM	7	VAL
13	AM	11	ARG
13	AM	67	GLU
13	AM	83	ASP
14	AN	3	ARG
14	AN	14	PRO
14	AN	15	LYS
14	AN	16	PHE
14	AN	59	ALA
15	AO	88	ARG
16	AP	16	HIS
16	AP	44	THR
16	AP	45	THR
16	AP	47	ASP
17	AQ	13	ASP
17	AQ	38	ARG

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Mol	Chain	Res	Type
19	AS	9	VAL
19	AS	22	LEU
19	AS	28	LYS
19	AS	44	MET
19	AS	67	VAL
20	AT	11	SER
20	AT	12	ALA
20	AT	74	LYS
20	AT	99	LEU
21	AU	3	LYS
21	AU	23	PRO
21	AU	24	ARG
25	AZ	20	VAL
25	AZ	24	LYS
25	AZ	69	GLU
25	AZ	109	ALA
25	AZ	141	VAL
25	AZ	166	ASP
25	AZ	211	PRO
25	AZ	300	ARG
25	AZ	310	ILE
25	AZ	323	LEU
25	AZ	326	GLU
25	AZ	357	PRO
25	AZ	402	LYS
26	B0	42	GLY
26	B0	47	PRO
27	B1	17	SER
27	B1	30	VAL
27	B1	53	VAL
27	B1	57	GLU
28	B2	21	LEU
28	B2	22	GLU
28	B2	26	ARG
28	B2	41	ILE
29	B3	32	GLN
29	B3	42	ALA
30	B4	8	LYS
30	B4	9	LEU
31	B5	4	HIS
31	B5	24	ALA
31	B5	25	LEU

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Mol	Chain	Res	Type
31	B5	26	THR
31	B5	43	HIS
31	B5	49	CYS
32	B6	16	CYS
32	B6	17	LYS
32	B6	18	ARG
32	B6	20	ASN
32	B6	23	THR
32	B6	28	ARG
32	B6	31	PRO
32	B6	33	LYS
34	B8	33	ASN
34	B8	35	GLN
34	B8	37	SER
34	B8	43	GLN
34	B8	49	VAL
35	B9	11	CYS
38	BC	36	LYS
38	BC	37	PHE
38	BC	79	LYS
38	BC	83	ILE
38	BC	95	GLY
38	BC	119	VAL
38	BC	128	GLY
38	BC	160	ARG
39	BD	25	THR
39	BD	27	THR
39	BD	34	VAL
39	BD	35	LYS
39	BD	71	ASP
39	BD	239	ARG
39	BD	245	PRO
39	BD	260	ARG
40	BE	35	GLN
40	BE	45	THR
40	BE	53	PRO
40	BE	56	PRO
40	BE	66	HIS
40	BE	76	ARG
40	BE	87	GLU
40	BE	94	GLU
40	BE	185	LYS

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Mol	Chain	Res	Type
40	BE	189	PRO
40	BE	195	LEU
41	BF	10	PRO
41	BF	86	GLY
41	BF	175	THR
41	BF	176	LEU
42	BG	14	GLU
42	BG	28	VAL
42	BG	47	LYS
42	BG	81	LYS
42	BG	84	LYS
42	BG	86	MET
42	BG	96	ARG
42	BG	103	LEU
42	BG	115	ARG
42	BG	137	GLU
42	BG	138	GLN
42	BG	147	ASP
42	BG	151	ALA
43	BH	41	MET
43	BH	42	ARG
43	BH	47	GLU
43	BH	55	PRO
43	BH	81	GLU
43	BH	84	SER
43	BH	127	GLU
43	BH	137	ASP
43	BH	138	LYS
43	BH	156	ALA
43	BH	158	HIS
43	BH	159	GLU
46	BN	63	THR
46	BN	64	GLY
46	BN	127	ASP
46	BN	130	HIS
47	BO	29	ASN
47	BO	48	PRO
47	BO	49	ARG
47	BO	98	VAL
48	BP	11	GLY
48	BP	13	ASN
48	BP	35	HIS

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Mol	Chain	Res	Type
48	BP	36	LYS
48	BP	40	SER
48	BP	47	ASP
48	BP	52	GLU
48	BP	56	SER
48	BP	57	THR
48	BP	58	THR
48	BP	65	ARG
48	BP	67	MET
48	BP	98	GLU
48	BP	114	ILE
48	BP	147	LEU
48	BP	148	LEU
49	BQ	2	LEU
50	BR	9	LYS
50	BR	11	ASN
50	BR	12	ARG
50	BR	60	LEU
50	BR	103	ARG
50	BR	104	ARG
50	BR	105	ARG
50	BR	107	ASP
50	BR	117	VAL
51	BS	13	ARG
51	BS	17	ARG
51	BS	23	ARG
51	BS	51	ALA
51	BS	57	LYS
51	BS	59	LYS
51	BS	92	TYR
51	BS	93	LYS
51	BS	94	TYR
51	BS	98	VAL
52	BT	17	THR
52	BT	24	PRO
52	BT	27	THR
52	BT	28	VAL
52	BT	30	VAL
52	BT	32	TYR
52	BT	80	SER
52	BT	83	ILE
52	BT	91	ARG

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Mol	Chain	Res	Type
52	BT	92	GLY
52	BT	93	ARG
52	BT	107	ASP
53	BU	91	ASP
54	BV	18	LEU
54	BV	22	VAL
55	BW	28	SER
55	BW	67	ASP
55	BW	93	ALA
55	BW	110	LYS
56	BX	9	LEU
56	BX	11	PRO
56	BX	12	VAL
56	BX	19	ALA
57	BY	23	ARG
57	BY	26	LYS
57	BY	42	VAL
57	BY	56	PRO
57	BY	57	GLN
57	BY	60	PHE
57	BY	61	ILE
57	BY	63	LYS
57	BY	74	PRO
57	BY	75	ILE
57	BY	77	PRO
57	BY	78	ALA
57	BY	82	PRO
58	BZ	78	LYS
58	BZ	111	VAL
58	BZ	113	ALA
58	BZ	135	GLU
58	BZ	140	ASP
58	BZ	152	ALA
58	BZ	163	LEU
2	CB	8	LYS
2	CB	9	GLU
2	CB	15	VAL
2	CB	127	ILE
2	CB	191	ASP
2	CB	234	PRO
2	CB	235	SER
2	CB	236	TYR

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Mol	Chain	Res	Type
3	CC	12	LEU
3	CC	26	LYS
3	CC	45	LYS
3	CC	52	LEU
3	CC	65	ALA
3	CC	157	ILE
3	CC	180	ALA
3	CC	181	ASN
4	CD	18	LYS
4	CD	30	LYS
4	CD	35	ARG
4	CD	44	GLY
4	CD	110	PHE
4	CD	153	ARG
6	CF	35	ALA
6	CF	36	ARG
6	CF	42	GLU
6	CF	62	TRP
7	CG	7	ALA
7	CG	8	GLU
7	CG	79	ARG
8	CH	2	LEU
8	CH	44	PHE
8	CH	120	THR
9	CI	44	VAL
9	CI	85	LEU
9	CI	89	ASN
9	CI	100	GLY
9	CI	118	LYS
10	CJ	30	SER
10	CJ	32	ALA
10	CJ	75	ILE
10	CJ	87	THR
10	CJ	90	LEU
11	CK	89	ALA
12	CL	26	ALA
12	CL	122	THR
12	CL	123	LYS
13	CM	11	ARG
13	CM	83	ASP
13	CM	117	VAL
14	CN	14	PRO

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Mol	Chain	Res	Type
14	CN	15	LYS
14	CN	22	THR
14	CN	59	ALA
14	CN	60	SER
16	CP	3	LYS
16	CP	15	PRO
16	CP	26	ARG
16	CP	44	THR
16	CP	47	ASP
16	CP	48	TRP
16	CP	76	GLN
17	CQ	34	LYS
17	CQ	38	ARG
17	CQ	95	TYR
19	CS	28	LYS
19	CS	67	VAL
20	CT	12	ALA
20	CT	48	LYS
20	CT	63	ILE
20	CT	74	LYS
20	CT	95	ALA
21	CU	23	PRO
21	CU	24	ARG
25	CZ	20	VAL
25	CZ	24	LYS
25	CZ	69	GLU
25	CZ	109	ALA
25	CZ	130	TYR
25	CZ	141	VAL
25	CZ	166	ASP
25	CZ	211	PRO
25	CZ	300	ARG
25	CZ	310	ILE
25	CZ	323	LEU
25	CZ	326	GLU
25	CZ	357	PRO
25	CZ	402	LYS
26	D0	13	GLY
26	D0	47	PRO
26	D0	70	GLN
27	D1	7	ILE
27	D1	28	GLY

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Mol	Chain	Res	Type
27	D1	45	ASN
27	D1	53	VAL
27	D1	56	GLN
27	D1	64	ALA
27	D1	66	HIS
27	D1	87	PRO
28	D2	44	LEU
28	D2	47	ASN
28	D2	48	HIS
29	D3	29	ARG
29	D3	38	GLU
29	D3	42	ALA
29	D3	43	ILE
30	D4	9	LEU
30	D4	26	SER
31	D5	4	HIS
31	D5	24	ALA
31	D5	25	LEU
32	D6	18	ARG
32	D6	19	ARG
32	D6	20	ASN
32	D6	23	THR
32	D6	28	ARG
32	D6	31	PRO
32	D6	33	LYS
32	D6	49	HIS
34	D8	31	HIS
34	D8	33	ASN
34	D8	34	TRP
34	D8	35	GLN
34	D8	37	SER
34	D8	43	GLN
34	D8	58	ILE
35	D9	11	CYS
35	D9	25	VAL
35	D9	35	ARG
38	DC	36	LYS
38	DC	37	PHE
38	DC	119	VAL
38	DC	128	GLY
38	DC	160	ARG
38	DC	167	LYS

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Mol	Chain	Res	Type
39	DD	13	ARG
39	DD	25	THR
39	DD	27	THR
39	DD	34	VAL
39	DD	35	LYS
39	DD	36	PRO
39	DD	38	LYS
39	DD	58	HIS
39	DD	239	ARG
39	DD	245	PRO
39	DD	260	ARG
39	DD	268	ARG
40	DE	4	ILE
40	DE	35	GLN
40	DE	53	PRO
40	DE	66	HIS
40	DE	71	GLY
40	DE	76	ARG
40	DE	87	GLU
40	DE	116	VAL
40	DE	185	LYS
40	DE	189	PRO
40	DE	195	LEU
41	DF	10	PRO
41	DF	14	PRO
41	DF	86	GLY
41	DF	176	LEU
41	DF	206	ILE
42	DG	49	ASP
42	DG	70	VAL
42	DG	82	LEU
42	DG	84	LYS
42	DG	86	MET
42	DG	115	ARG
42	DG	116	ASP
42	DG	126	ASP
42	DG	129	GLY
43	DH	24	VAL
43	DH	41	MET
43	DH	55	PRO
43	DH	84	SER
43	DH	127	GLU

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Mol	Chain	Res	Type
43	DH	138	LYS
43	DH	155	SER
43	DH	156	ALA
43	DH	158	HIS
43	DH	159	GLU
46	DN	58	ASP
46	DN	63	THR
46	DN	64	GLY
46	DN	108	PRO
46	DN	127	ASP
46	DN	130	HIS
46	DN	133	GLN
47	DO	29	ASN
47	DO	48	PRO
47	DO	49	ARG
47	DO	98	VAL
48	DP	11	GLY
48	DP	13	ASN
48	DP	25	SER
48	DP	34	GLY
48	DP	35	HIS
48	DP	40	SER
48	DP	46	LYS
48	DP	47	ASP
48	DP	52	GLU
48	DP	57	THR
48	DP	58	THR
48	DP	65	ARG
48	DP	67	MET
48	DP	98	GLU
48	DP	114	ILE
48	DP	116	GLY
48	DP	132	LYS
48	DP	147	LEU
48	DP	148	LEU
49	DQ	27	VAL
49	DQ	62	GLY
50	DR	6	SER
50	DR	8	ARG
50	DR	9	LYS
50	DR	11	ASN
50	DR	12	ARG

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Mol	Chain	Res	Type
50	DR	58	GLY
50	DR	88	ARG
50	DR	117	VAL
51	DS	13	ARG
51	DS	23	ARG
51	DS	51	ALA
51	DS	53	SER
51	DS	57	LYS
51	DS	59	LYS
51	DS	87	PHE
51	DS	92	TYR
51	DS	93	LYS
51	DS	94	TYR
51	DS	98	VAL
51	DS	103	GLU
51	DS	107	GLU
52	DT	2	ASN
52	DT	4	GLY
52	DT	24	PRO
52	DT	27	THR
52	DT	30	VAL
52	DT	32	TYR
52	DT	80	SER
52	DT	81	PRO
52	DT	83	ILE
52	DT	91	ARG
52	DT	93	ARG
52	DT	107	ASP
53	DU	9	VAL
53	DU	83	LEU
53	DU	91	ASP
53	DU	93	LYS
54	DV	15	GLU
54	DV	16	PRO
54	DV	19	LYS
55	DW	28	SER
55	DW	29	LEU
55	DW	50	VAL
55	DW	110	LYS
56	DX	12	VAL
56	DX	13	LEU
57	DY	17	SER

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Mol	Chain	Res	Type
57	DY	23	ARG
57	DY	42	VAL
57	DY	56	PRO
57	DY	57	GLN
57	DY	60	PHE
57	DY	61	ILE
57	DY	63	LYS
57	DY	74	PRO
57	DY	75	ILE
57	DY	77	PRO
57	DY	78	ALA
57	DY	82	PRO
57	DY	92	ASN
58	DZ	11	GLU
58	DZ	23	LYS
58	DZ	24	LEU
58	DZ	82	ARG
58	DZ	124	ILE
58	DZ	153	SER
58	DZ	159	PRO
58	DZ	163	LEU
58	DZ	180	VAL
2	AB	18	GLY
2	AB	77	ALA
2	AB	153	ARG
2	AB	216	SER
3	AC	96	GLY
3	AC	168	ALA
4	AD	13	ARG
4	AD	26	CYS
4	AD	30	LYS
4	AD	40	PRO
4	AD	44	GLY
4	AD	110	PHE
4	AD	125	HIS
4	AD	129	ASN
4	AD	153	ARG
4	AD	159	ARG
5	AE	153	LYS
6	AF	34	GLY
6	AF	35	ALA
6	AF	39	LYS

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Mol	Chain	Res	Type
6	AF	40	VAL
7	AG	14	PRO
7	AG	33	ASP
7	AG	42	ILE
9	AI	24	GLY
9	AI	68	GLY
9	AI	90	PRO
9	AI	118	LYS
9	AI	119	ALA
10	AJ	59	SER
12	AL	79	GLU
12	AL	87	GLY
12	AL	123	LYS
13	AM	60	VAL
13	AM	112	GLY
13	AM	116	THR
13	AM	117	VAL
13	AM	124	PRO
15	AO	5	LYS
16	AP	81	ARG
18	AR	41	LYS
19	AS	5	LEU
20	AT	48	LYS
20	AT	93	GLU
20	AT	95	ALA
25	AZ	36	ALA
25	AZ	65	THR
25	AZ	130	TYR
25	AZ	165	GLY
25	AZ	193	ASN
25	AZ	258	LEU
25	AZ	302	GLN
25	AZ	329	GLY
25	AZ	345	ARG
26	B0	74	ARG
26	B0	75	LEU
27	B1	18	ILE
27	B1	31	GLY
27	B1	78	LYS
27	B1	80	LEU
27	B1	94	LEU
28	B2	16	LEU

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Mol	Chain	Res	Type
28	B2	20	GLU
28	B2	38	GLN
28	B2	39	ALA
28	B2	44	LEU
29	B3	27	GLY
29	B3	29	ARG
29	B3	43	ILE
31	B5	35	GLU
31	B5	37	LYS
31	B5	57	VAL
32	B6	19	ARG
32	B6	44	ARG
32	B6	49	HIS
34	B8	31	HIS
34	B8	34	TRP
34	B8	38	GLY
35	B9	17	ILE
35	B9	36	GLN
38	BC	195	ALA
39	BD	3	VAL
39	BD	36	PRO
39	BD	38	LYS
39	BD	42	GLY
39	BD	58	HIS
39	BD	246	PRO
39	BD	267	SER
39	BD	268	ARG
40	BE	4	ILE
40	BE	71	GLY
40	BE	72	VAL
40	BE	77	ILE
40	BE	82	ARG
40	BE	109	LYS
40	BE	116	VAL
41	BF	21	ALA
41	BF	82	ILE
41	BF	85	GLY
41	BF	130	ALA
41	BF	133	ASN
41	BF	165	ARG
42	BG	5	VAL
42	BG	42	GLY

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Mol	Chain	Res	Type
42	BG	52	ILE
42	BG	80	PHE
42	BG	87	PRO
42	BG	89	GLY
42	BG	99	MET
42	BG	124	SER
42	BG	145	THR
42	BG	149	VAL
42	BG	159	VAL
42	BG	176	LEU
43	BH	24	VAL
43	BH	43	VAL
43	BH	45	VAL
43	BH	46	GLU
43	BH	80	SER
43	BH	155	SER
46	BN	23	LEU
46	BN	36	GLY
46	BN	49	GLY
46	BN	57	ALA
46	BN	58	ASP
46	BN	108	PRO
46	BN	109	LYS
46	BN	133	GLN
47	BO	64	ARG
48	BP	9	ASN
48	BP	15	ARG
48	BP	19	VAL
48	BP	25	SER
48	BP	34	GLY
48	BP	116	GLY
48	BP	132	LYS
48	BP	149	GLU
49	BQ	27	VAL
49	BQ	29	PHE
49	BQ	62	GLY
49	BQ	135	ASP
49	BQ	140	ALA
50	BR	8	ARG
50	BR	30	THR
50	BR	58	GLY
50	BR	102	GLU

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Mol	Chain	Res	Type
51	BS	37	ALA
51	BS	78	LEU
51	BS	80	LEU
51	BS	97	ARG
51	BS	103	GLU
52	BT	2	ASN
52	BT	4	GLY
52	BT	33	LYS
52	BT	37	GLY
52	BT	38	ASN
52	BT	66	VAL
52	BT	90	GLN
52	BT	95	ARG
53	BU	11	ARG
53	BU	83	LEU
53	BU	93	LYS
54	BV	40	LEU
54	BV	54	GLY
55	BW	45	TYR
55	BW	50	VAL
55	BW	60	ASN
55	BW	63	ASP
56	BX	42	ALA
56	BX	52	VAL
56	BX	53	LYS
56	BX	93	GLU
57	BY	3	VAL
57	BY	17	SER
57	BY	92	ASN
58	BZ	46	LYS
58	BZ	96	VAL
58	BZ	142	SER
58	BZ	146	ILE
58	BZ	166	SER
58	BZ	168	GLU
58	BZ	178	GLU
2	CB	18	GLY
2	CB	20	GLU
2	CB	63	MET
2	CB	77	ALA
2	CB	93	VAL
2	CB	121	LEU

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Mol	Chain	Res	Type
2	CB	190	THR
2	CB	230	VAL
2	CB	238	LEU
2	CB	239	VAL
3	CC	47	LEU
3	CC	93	LYS
3	CC	130	VAL
3	CC	143	GLU
4	CD	14	ARG
4	CD	16	GLY
4	CD	24	GLU
4	CD	95	GLY
4	CD	166	LYS
4	CD	183	GLY
6	CF	16	GLN
6	CF	34	GLY
6	CF	39	LYS
6	CF	40	VAL
6	CF	70	ASP
7	CG	58	PRO
7	CG	155	ARG
8	CH	83	ILE
9	CI	24	GLY
9	CI	29	ASN
9	CI	40	LEU
10	CJ	59	SER
10	CJ	82	ILE
10	CJ	89	ASP
11	CK	35	PRO
11	CK	90	GLY
12	CL	79	GLU
12	CL	80	HIS
12	CL	121	GLY
13	CM	21	TYR
13	CM	26	GLY
13	CM	114	ARG
14	CN	16	PHE
14	CN	18	VAL
15	CO	88	ARG
17	CQ	68	ARG
18	CR	41	LYS
18	CR	57	GLY

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Mol	Chain	Res	Type
19	CS	5	LEU
19	CS	9	VAL
19	CS	22	LEU
19	CS	30	LEU
20	CT	11	SER
20	CT	84	LEU
21	CU	3	LYS
25	CZ	36	ALA
25	CZ	65	THR
25	CZ	165	GLY
25	CZ	193	ASN
25	CZ	258	LEU
25	CZ	302	GLN
25	CZ	329	GLY
25	CZ	345	ARG
26	D0	32	ARG
26	D0	42	GLY
27	D1	32	LYS
27	D1	65	SER
27	D1	83	GLU
29	D3	27	GLY
29	D3	51	ALA
31	D5	3	LYS
31	D5	37	LYS
31	D5	49	CYS
31	D5	57	VAL
32	D6	17	LYS
32	D6	41	PRO
34	D8	8	LYS
34	D8	42	ARG
34	D8	56	GLU
34	D8	57	ARG
38	DC	83	ILE
38	DC	95	GLY
39	DD	41	GLY
39	DD	42	GLY
39	DD	152	GLY
39	DD	202	LYS
39	DD	236	GLY
39	DD	246	PRO
39	DD	266	SER
39	DD	267	SER

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Mol	Chain	Res	Type
39	DD	274	ARG
40	DE	2	LYS
40	DE	29	GLY
40	DE	41	LYS
40	DE	44	TYR
40	DE	46	ALA
40	DE	54	GLN
40	DE	56	PRO
40	DE	72	VAL
40	DE	75	VAL
40	DE	77	ILE
40	DE	98	PRO
40	DE	196	VAL
41	DF	79	GLY
41	DF	83	PHE
41	DF	85	GLY
41	DF	132	VAL
42	DG	6	ALA
42	DG	30	GLU
42	DG	80	PHE
42	DG	87	PRO
42	DG	96	ARG
42	DG	114	ILE
42	DG	127	GLY
43	DH	42	ARG
43	DH	43	VAL
43	DH	44	VAL
43	DH	81	GLU
46	DN	33	LEU
46	DN	36	GLY
46	DN	57	ALA
46	DN	136	GLU
47	DO	43	VAL
47	DO	64	ARG
48	DP	19	VAL
48	DP	33	ARG
48	DP	39	LYS
48	DP	56	SER
48	DP	122	PRO
49	DQ	2	LEU
49	DQ	29	PHE
49	DQ	135	ASP

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Mol	Chain	Res	Type
50	DR	103	ARG
50	DR	105	ARG
51	DS	49	VAL
51	DS	80	LEU
51	DS	89	ARG
51	DS	105	ALA
52	DT	28	VAL
52	DT	36	GLU
52	DT	37	GLY
52	DT	68	TYR
52	DT	86	ILE
52	DT	92	GLY
52	DT	129	ARG
54	DV	18	LEU
54	DV	22	VAL
54	DV	23	GLU
54	DV	36	PRO
54	DV	53	GLU
54	DV	78	LYS
55	DW	5	ALA
55	DW	6	ILE
55	DW	45	TYR
55	DW	49	LYS
55	DW	60	ASN
55	DW	67	ASP
56	DX	24	GLY
56	DX	43	VAL
56	DX	52	VAL
57	DY	3	VAL
57	DY	26	LYS
57	DY	39	VAL
57	DY	83	THR
58	DZ	9	TYR
58	DZ	32	HIS
58	DZ	142	SER
58	DZ	177	PRO
2	AB	11	LEU
2	AB	121	LEU
2	AB	167	PRO
3	AC	4	LYS
3	AC	84	ILE
4	AD	24	GLU

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Mol	Chain	Res	Type
4	AD	32	ALA
4	AD	34	GLU
6	AF	42	GLU
7	AG	56	GLN
7	AG	58	PRO
12	AL	47	LYS
13	AM	3	ARG
13	AM	65	LYS
13	AM	114	ARG
14	AN	20	ALA
14	AN	22	THR
16	AP	54	GLU
16	AP	76	GLN
18	AR	31	LEU
18	AR	34	TYR
18	AR	58	LEU
19	AS	17	GLU
19	AS	46	GLY
20	AT	84	LEU
25	AZ	144	PRO
25	AZ	209	TYR
25	AZ	220	PRO
25	AZ	221	PHE
25	AZ	325	LYS
25	AZ	364	PRO
27	B1	52	ARG
28	B2	3	LEU
28	B2	43	GLN
28	B2	65	ASN
29	B3	30	ARG
30	B4	26	SER
30	B4	28	LYS
31	B5	42	PRO
32	B6	41	PRO
34	B8	3	LYS
34	B8	32	LEU
38	BC	82	LYS
38	BC	117	PRO
38	BC	127	LEU
38	BC	149	ILE
39	BD	13	ARG
39	BD	144	ALA

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Mol	Chain	Res	Type
39	BD	234	GLY
40	BE	2	LYS
40	BE	30	PRO
40	BE	62	PRO
40	BE	98	PRO
40	BE	131	ALA
40	BE	196	VAL
41	BF	14	PRO
41	BF	24	LEU
41	BF	83	PHE
41	BF	127	GLU
41	BF	140	LEU
41	BF	169	ASN
42	BG	6	ALA
42	BG	46	ALA
42	BG	97	ASP
42	BG	113	ARG
42	BG	174	GLU
43	BH	21	PRO
43	BH	95	ARG
46	BN	13	TRP
46	BN	47	ALA
47	BO	43	VAL
48	BP	17	LYS
48	BP	39	LYS
48	BP	43	GLY
49	BQ	137	TYR
50	BR	28	LEU
50	BR	29	LEU
51	BS	14	VAL
51	BS	89	ARG
51	BS	104	GLY
52	BT	31	SER
52	BT	41	ARG
52	BT	55	ASN
52	BT	68	TYR
52	BT	111	ARG
52	BT	129	ARG
54	BV	16	PRO
54	BV	19	LYS
54	BV	50	PRO
55	BW	5	ALA

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Mol	Chain	Res	Type
55	BW	6	ILE
55	BW	66	GLU
56	BX	13	LEU
57	BY	33	LYS
57	BY	68	HIS
57	BY	81	LYS
58	BZ	81	ARG
58	BZ	139	VAL
58	BZ	151	HIS
2	CB	116	GLU
2	CB	152	PHE
2	CB	216	SER
3	CC	15	THR
3	CC	66	VAL
3	CC	146	ALA
3	CC	168	ALA
4	CD	61	LYS
4	CD	99	SER
4	CD	107	ARG
6	CF	61	LEU
7	CG	15	ASP
9	CI	55	ALA
9	CI	105	ASP
13	CM	7	VAL
13	CM	46	LYS
16	CP	45	THR
18	CR	58	LEU
18	CR	60	ALA
19	CS	33	THR
19	CS	44	MET
20	CT	93	GLU
20	CT	99	LEU
25	CZ	144	PRO
25	CZ	209	TYR
25	CZ	220	PRO
25	CZ	221	PHE
25	CZ	325	LYS
25	CZ	364	PRO
26	D0	75	LEU
27	D1	26	ARG
27	D1	30	VAL
27	D1	85	LEU

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Mol	Chain	Res	Type
28	D2	35	LEU
29	D3	46	ASN
30	D4	8	LYS
31	D5	35	GLU
32	D6	22	ALA
34	D8	49	VAL
35	D9	36	GLN
38	DC	55	ASP
38	DC	82	LYS
38	DC	117	PRO
38	DC	197	GLU
38	DC	217	THR
39	DD	45	ASN
39	DD	71	ASP
39	DD	156	ALA
40	DE	61	ARG
40	DE	62	PRO
40	DE	90	THR
41	DF	24	LEU
41	DF	31	HIS
41	DF	58	ALA
41	DF	82	ILE
41	DF	124	LEU
41	DF	130	ALA
41	DF	168	ARG
42	DG	14	GLU
42	DG	97	ASP
42	DG	120	LEU
42	DG	155	MET
43	DH	14	GLY
43	DH	25	LYS
43	DH	52	VAL
43	DH	95	ARG
43	DH	137	ASP
43	DH	150	ALA
43	DH	152	ARG
43	DH	160	LYS
43	DH	165	ALA
46	DN	4	TYR
46	DN	13	TRP
46	DN	47	ALA
46	DN	59	LYS

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Mol	Chain	Res	Type
46	DN	76	SER
46	DN	109	LYS
46	DN	129	PRO
47	DO	5	GLN
48	DP	9	ASN
48	DP	15	ARG
48	DP	17	LYS
48	DP	31	ALA
49	DQ	21	THR
49	DQ	88	GLY
50	DR	14	SER
50	DR	17	ARG
50	DR	107	ASP
51	DS	14	VAL
51	DS	88	ASP
52	DT	41	ARG
52	DT	46	GLU
52	DT	95	ARG
54	DV	40	LEU
54	DV	54	GLY
55	DW	9	TYR
55	DW	65	LEU
56	DX	46	ALA
56	DX	53	LYS
57	DY	49	VAL
57	DY	79	CYS
57	DY	91	GLU
58	DZ	12	GLY
58	DZ	25	PRO
58	DZ	108	PRO
58	DZ	113	ALA
2	AB	110	GLN
2	AB	237	ALA
3	AC	95	THR
3	AC	157	ILE
4	AD	92	VAL
4	AD	101	LEU
5	AE	8	GLU
7	AG	34	GLY
7	AG	41	ARG
8	AH	91	ARG
15	AO	86	GLY

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
17	AQ	68	ARG
20	AT	96	GLY
20	AT	97	ALA
25	AZ	25	THR
25	AZ	41	ASN
25	AZ	222	LEU
25	AZ	360	GLU
28	B2	18	PRO
32	B6	6	ARG
32	B6	15	GLU
32	B6	34	LEU
32	B6	36	LEU
34	B8	57	ARG
38	BC	97	GLU
39	BD	11	PRO
39	BD	29	PRO
39	BD	98	VAL
39	BD	230	ASP
39	BD	244	ARG
40	BE	34	VAL
40	BE	46	ALA
40	BE	130	GLY
40	BE	187	ALA
41	BF	22	ALA
41	BF	64	ILE
41	BF	87	GLY
41	BF	171	PRO
42	BG	31	VAL
42	BG	43	LEU
42	BG	58	GLN
42	BG	117	PHE
43	BH	25	LYS
43	BH	52	VAL
43	BH	98	LEU
47	BO	50	GLY
48	BP	6	LEU
48	BP	31	ALA
50	BR	6	SER
51	BS	24	LEU
52	BT	36	GLU
52	BT	86	ILE
54	BV	15	GLU

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Mol	Chain	Res	Type
54	BV	48	GLY
54	BV	53	GLU
55	BW	29	LEU
55	BW	65	LEU
57	BY	49	VAL
57	BY	62	GLU
58	BZ	120	ILE
58	BZ	180	VAL
2	CB	87	ARG
2	CB	95	GLN
2	CB	195	ASP
4	CD	3	ARG
4	CD	37	PRO
4	CD	63	LYS
4	CD	178	VAL
4	CD	187	ARG
7	CG	41	ARG
7	CG	59	LEU
8	CH	135	CYS
9	CI	12	GLU
9	CI	68	GLY
9	CI	70	LYS
9	CI	78	LYS
11	CK	100	ALA
13	CM	30	ALA
13	CM	65	LYS
13	CM	67	GLU
13	CM	112	GLY
13	CM	124	PRO
14	CN	41	ARG
15	CO	86	GLY
17	CQ	13	ASP
20	CT	50	GLU
20	CT	70	SER
20	CT	96	GLY
20	CT	97	ALA
25	CZ	25	THR
25	CZ	41	ASN
25	CZ	360	GLU
26	D0	69	PHE
28	D2	23	LYS
28	D2	64	LEU

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Mol	Chain	Res	Type
29	D3	16	PRO
30	D4	28	LYS
30	D4	43	TYR
32	D6	9	LEU
32	D6	34	LEU
34	D8	11	LYS
34	D8	28	GLY
34	D8	38	GLY
38	DC	79	LYS
38	DC	111	ASP
38	DC	127	LEU
39	DD	244	ARG
39	DD	273	ARG
40	DE	30	PRO
40	DE	45	THR
40	DE	162	ALA
41	DF	11	VAL
41	DF	127	GLU
41	DF	133	ASN
42	DG	61	ALA
42	DG	104	GLU
42	DG	112	PRO
42	DG	117	PHE
43	DH	46	GLU
43	DH	80	SER
48	DP	43	GLY
49	DQ	57	HIS
49	DQ	140	ALA
50	DR	102	GLU
51	DS	22	GLY
51	DS	29	PHE
51	DS	37	ALA
51	DS	43	GLU
51	DS	85	VAL
51	DS	97	ARG
51	DS	102	ALA
52	DT	3	ARG
52	DT	38	ASN
52	DT	55	ASN
52	DT	111	ARG
53	DU	7	GLY
53	DU	10	ARG

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Mol	Chain	Res	Type
54	DV	56	SER
54	DV	68	LYS
55	DW	35	ILE
55	DW	36	LEU
55	DW	93	ALA
2	AB	128	GLU
2	AB	239	VAL
3	AC	49	SER
4	AD	5	ILE
7	AG	59	LEU
7	AG	79	ARG
9	AI	12	GLU
9	AI	34	ASN
12	AL	19	ARG
13	AM	100	GLY
13	AM	120	LYS
25	AZ	40	PRO
25	AZ	68	VAL
25	AZ	196	VAL
25	AZ	382	GLU
27	B1	76	ARG
28	B2	17	SER
30	B4	41	PRO
32	B6	9	LEU
35	B9	10	ILE
35	B9	33	LYS
38	BC	57	ASN
38	BC	207	THR
39	BD	193	VAL
41	BF	43	LYS
41	BF	88	VAL
41	BF	172	TRP
43	BH	76	VAL
46	BN	5	VAL
48	BP	23	PRO
50	BR	14	SER
51	BS	39	ILE
51	BS	49	VAL
52	BT	12	SER
52	BT	46	GLU
52	BT	135	ALA
53	BU	9	VAL

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Mol	Chain	Res	Type
53	BU	92	ARG
53	BU	116	ALA
54	BV	36	PRO
54	BV	44	LYS
55	BW	12	ILE
56	BX	18	TYR
56	BX	43	VAL
57	BY	29	GLU
57	BY	30	VAL
57	BY	39	VAL
57	BY	91	GLU
58	BZ	14	LYS
58	BZ	30	ASN
2	CB	23	ARG
2	CB	161	ALA
2	CB	204	ASN
3	CC	160	ALA
4	CD	5	ILE
4	CD	7	PRO
4	CD	26	CYS
4	CD	28	SER
4	CD	40	PRO
4	CD	50	ARG
4	CD	51	PRO
4	CD	62	GLN
4	CD	129	ASN
4	CD	164	ALA
4	CD	172	PRO
4	CD	181	MET
4	CD	189	PRO
9	CI	90	PRO
11	CK	69	ALA
14	CN	23	ARG
15	CO	3	ILE
16	CP	16	HIS
16	CP	39	TYR
18	CR	31	LEU
19	CS	14	HIS
19	CS	17	GLU
20	CT	13	LEU
25	CZ	68	VAL
25	CZ	196	VAL

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Mol	Chain	Res	Type
25	CZ	349	VAL
25	CZ	382	GLU
26	D0	35	ASN
27	D1	69	LYS
35	D9	30	PRO
38	DC	109	ASP
39	DD	3	VAL
39	DD	28	GLU
39	DD	48	ARG
39	DD	144	ALA
40	DE	82	ARG
41	DF	87	GLY
41	DF	88	VAL
42	DG	113	ARG
42	DG	177	GLY
43	DH	47	GLU
43	DH	79	VAL
46	DN	5	VAL
48	DP	42	SER
49	DQ	80	GLU
51	DS	32	LEU
51	DS	50	SER
51	DS	54	LEU
52	DT	31	SER
56	DX	11	PRO
56	DX	42	ALA
57	DY	53	PRO
57	DY	62	GLU
58	DZ	17	ALA
58	DZ	61	LEU
58	DZ	66	SER
58	DZ	120	ILE
58	DZ	166	SER
2	AB	105	PHE
2	AB	145	LEU
2	AB	232	PRO
4	AD	37	PRO
11	AK	35	PRO
14	AN	23	ARG
16	AP	43	LYS
20	AT	100	ILE
25	AZ	114	PRO

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Mol	Chain	Res	Type
25	AZ	245	GLY
25	AZ	349	VAL
26	B0	73	GLY
27	B1	63	ALA
28	B2	47	ASN
30	B4	10	VAL
39	BD	41	GLY
39	BD	242	ARG
40	BE	61	ARG
41	BF	132	VAL
42	BG	90	LEU
43	BH	44	VAL
43	BH	169	VAL
50	BR	5	LYS
50	BR	84	ALA
53	BU	28	ARG
57	BY	53	PRO
58	BZ	147	GLY
58	BZ	161	VAL
6	CF	79	LEU
11	CK	128	ALA
12	CL	39	VAL
13	CM	120	LYS
25	CZ	40	PRO
31	D5	26	THR
39	DD	98	VAL
39	DD	241	PRO
40	DE	55	ASN
42	DG	176	LEU
43	DH	18	GLU
46	DN	135	PRO
47	DO	35	VAL
50	DR	39	PRO
52	DT	70	VAL
53	DU	90	VAL
57	DY	9	LYS
57	DY	55	TYR
57	DY	65	ALA
58	DZ	20	ARG
8	AH	73	ASP
13	AM	4	ILE
15	AO	87	ILE

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Mol	Chain	Res	Type
17	AQ	64	PRO
19	AS	8	GLY
19	AS	45	VAL
27	B1	84	GLY
43	BH	128	PRO
46	BN	135	PRO
48	BP	37	GLY
51	BS	85	VAL
55	BW	35	ILE
5	CE	70	PRO
8	CH	73	ASP
10	CJ	74	ILE
13	CM	4	ILE
25	CZ	114	PRO
25	CZ	259	ALA
32	D6	52	VAL
40	DE	186	GLY
41	DF	25	PRO
43	DH	76	VAL
51	DS	18	ILE
57	DY	31	LEU
2	AB	130	ARG
3	AC	66	VAL
7	AG	112	PRO
12	AL	39	VAL
12	AL	121	GLY
16	AP	46	PRO
25	AZ	259	ALA
26	B0	83	PRO
27	B1	37	ILE
38	BC	130	ILE
40	BE	190	GLY
41	BF	25	PRO
41	BF	126	VAL
42	BG	179	PRO
43	BH	107	VAL
51	BS	91	PRO
53	BU	90	VAL
54	BV	99	ILE
56	BX	10	ALA
57	BY	31	LEU
58	BZ	158	PRO

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Mol	Chain	Res	Type
2	CB	211	ILE
12	CL	74	GLY
19	CS	45	VAL
25	CZ	245	GLY
30	D4	45	GLY
39	DD	238	GLY
40	DE	52	LEU
57	DY	76	CYS
58	DZ	146	ILE
58	DZ	165	VAL
2	AB	93	VAL
9	AI	21	PRO
10	AJ	77	PRO
16	AP	15	PRO
25	AZ	154	VAL
30	B4	19	GLY
34	B8	28	GLY
39	BD	28	GLU
43	BH	79	VAL
46	BN	40	PRO
46	BN	129	PRO
47	BO	35	VAL
25	CZ	359	VAL
43	DH	107	VAL
48	DP	23	PRO
57	DY	27	VAL
4	AD	183	GLY
25	AZ	34	VAL
25	AZ	359	VAL
26	B0	8	GLY
40	BE	191	PRO
55	BW	80	PRO
58	BZ	165	VAL
25	CZ	154	VAL
25	CZ	340	PRO
30	D4	29	PRO
38	DC	65	PRO
38	DC	130	ILE
40	DE	14	ILE
48	DP	109	GLY
52	DT	66	VAL
55	DW	91	GLY

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Mol	Chain	Res	Type
13	AM	10	PRO
15	AO	12	ILE
27	B1	7	ILE
32	B6	52	VAL
40	BE	33	VAL
58	BZ	61	LEU
4	CD	90	GLY
8	CH	26	VAL
17	CQ	77	VAL
25	CZ	292	GLY
30	D4	19	GLY
40	DE	59	VAL
43	DH	17	VAL
56	DX	85	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%)	178 (88%)	24 (12%)	6	25
2	CB	202/220 (92%)	177 (88%)	25 (12%)	6	23
3	AC	160/188 (85%)	142 (89%)	18 (11%)	7	28
3	CC	160/188 (85%)	144 (90%)	16 (10%)	9	34
4	AD	180/181 (99%)	151 (84%)	29 (16%)	3	13
4	CD	180/181 (99%)	153 (85%)	27 (15%)	3	15
5	AE	115/123 (94%)	106 (92%)	9 (8%)	16	49
5	CE	115/123 (94%)	105 (91%)	10 (9%)	13	44
6	AF	90/90 (100%)	79 (88%)	11 (12%)	6	24
6	CF	90/90 (100%)	77 (86%)	13 (14%)	4	17
7	AG	126/127 (99%)	113 (90%)	13 (10%)	9	32
7	CG	126/127 (99%)	116 (92%)	10 (8%)	15	49
8	AH	119/119 (100%)	108 (91%)	11 (9%)	11	40

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	CH	119/119 (100%)	112 (94%)	7 (6%)	24	60
9	AI	98/99 (99%)	89 (91%)	9 (9%)	11	40
9	CI	98/99 (99%)	88 (90%)	10 (10%)	9	33
10	AJ	88/92 (96%)	77 (88%)	11 (12%)	6	22
10	CJ	88/92 (96%)	74 (84%)	14 (16%)	3	13
11	AK	90/99 (91%)	77 (86%)	13 (14%)	4	17
11	CK	90/99 (91%)	77 (86%)	13 (14%)	4	17
12	AL	104/109 (95%)	91 (88%)	13 (12%)	6	22
12	CL	104/109 (95%)	93 (89%)	11 (11%)	8	31
13	AM	99/101 (98%)	85 (86%)	14 (14%)	4	18
13	CM	99/101 (98%)	85 (86%)	14 (14%)	4	18
14	AN	49/50 (98%)	42 (86%)	7 (14%)	4	17
14	CN	49/50 (98%)	43 (88%)	6 (12%)	6	24
15	AO	79/80 (99%)	69 (87%)	10 (13%)	5	22
15	CO	79/80 (99%)	69 (87%)	10 (13%)	5	22
16	AP	72/74 (97%)	68 (94%)	4 (6%)	26	62
16	CP	72/74 (97%)	65 (90%)	7 (10%)	10	36
17	AQ	94/97 (97%)	87 (93%)	7 (7%)	17	51
17	CQ	94/97 (97%)	92 (98%)	2 (2%)	61	86
18	AR	61/77 (79%)	54 (88%)	7 (12%)	7	27
18	CR	61/77 (79%)	54 (88%)	7 (12%)	7	27
19	AS	69/80 (86%)	58 (84%)	11 (16%)	3	13
19	CS	69/80 (86%)	54 (78%)	15 (22%)	1	5
20	AT	76/82 (93%)	66 (87%)	10 (13%)	5	20
20	CT	76/82 (93%)	67 (88%)	9 (12%)	6	25
21	AU	19/22 (86%)	17 (90%)	2 (10%)	8	31
21	CU	19/22 (86%)	16 (84%)	3 (16%)	3	13
25	AZ	322/338 (95%)	282 (88%)	40 (12%)	6	23
25	CZ	322/338 (95%)	281 (87%)	41 (13%)	5	22
26	B0	66/67 (98%)	53 (80%)	13 (20%)	1	7
26	D0	66/67 (98%)	55 (83%)	11 (17%)	3	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	B1	78/83 (94%)	68 (87%)	10 (13%)	5	21
27	D1	78/83 (94%)	70 (90%)	8 (10%)	9	32
28	B2	66/67 (98%)	55 (83%)	11 (17%)	3	11
28	D2	66/67 (98%)	60 (91%)	6 (9%)	12	40
29	B3	51/52 (98%)	44 (86%)	7 (14%)	4	19
29	D3	51/52 (98%)	45 (88%)	6 (12%)	6	25
30	B4	39/63 (62%)	28 (72%)	11 (28%)	0	1
30	D4	39/63 (62%)	29 (74%)	10 (26%)	0	2
31	B5	51/52 (98%)	44 (86%)	7 (14%)	4	19
31	D5	51/52 (98%)	45 (88%)	6 (12%)	6	25
32	B6	49/52 (94%)	32 (65%)	17 (35%)	0	0
32	D6	49/52 (94%)	36 (74%)	13 (26%)	0	2
33	B7	41/42 (98%)	37 (90%)	4 (10%)	10	36
33	D7	41/42 (98%)	35 (85%)	6 (15%)	4	16
34	B8	53/55 (96%)	43 (81%)	10 (19%)	2	8
34	D8	53/55 (96%)	43 (81%)	10 (19%)	2	8
35	B9	34/34 (100%)	28 (82%)	6 (18%)	2	10
35	D9	34/34 (100%)	29 (85%)	5 (15%)	4	16
38	BC	180/181 (99%)	168 (93%)	12 (7%)	20	56
38	DC	180/181 (99%)	165 (92%)	15 (8%)	14	46
39	BD	217/218 (100%)	176 (81%)	41 (19%)	2	8
39	DD	217/218 (100%)	185 (85%)	32 (15%)	4	16
40	BE	165/166 (99%)	137 (83%)	28 (17%)	2	11
40	DE	165/166 (99%)	137 (83%)	28 (17%)	2	11
41	BF	165/166 (99%)	147 (89%)	18 (11%)	8	30
41	DF	165/166 (99%)	152 (92%)	13 (8%)	15	49
42	BG	155/156 (99%)	130 (84%)	25 (16%)	3	13
42	DG	155/156 (99%)	127 (82%)	28 (18%)	2	9
43	BH	132/148 (89%)	122 (92%)	10 (8%)	16	51
43	DH	132/148 (89%)	123 (93%)	9 (7%)	20	55
46	BN	117/119 (98%)	102 (87%)	15 (13%)	5	21

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
46	DN	117/119 (98%)	99 (85%)	18 (15%)	3	14
47	BO	100/100 (100%)	92 (92%)	8 (8%)	15	48
47	DO	100/100 (100%)	90 (90%)	10 (10%)	9	34
48	BP	112/116 (97%)	89 (80%)	23 (20%)	1	6
48	DP	112/116 (97%)	92 (82%)	20 (18%)	2	10
49	BQ	111/111 (100%)	94 (85%)	17 (15%)	3	14
49	DQ	111/111 (100%)	97 (87%)	14 (13%)	5	22
50	BR	100/101 (99%)	88 (88%)	12 (12%)	6	24
50	DR	100/101 (99%)	89 (89%)	11 (11%)	8	30
51	BS	77/88 (88%)	65 (84%)	12 (16%)	3	14
51	DS	77/88 (88%)	61 (79%)	16 (21%)	1	6
52	BT	120/127 (94%)	101 (84%)	19 (16%)	3	13
52	DT	120/127 (94%)	102 (85%)	18 (15%)	3	15
53	BU	92/94 (98%)	84 (91%)	8 (9%)	13	44
53	DU	92/94 (98%)	85 (92%)	7 (8%)	16	51
54	BV	82/82 (100%)	69 (84%)	13 (16%)	3	13
54	DV	82/82 (100%)	66 (80%)	16 (20%)	2	7
55	BW	91/92 (99%)	85 (93%)	6 (7%)	21	56
55	DW	91/92 (99%)	85 (93%)	6 (7%)	21	56
56	BX	74/78 (95%)	65 (88%)	9 (12%)	6	24
56	DX	74/78 (95%)	68 (92%)	6 (8%)	15	47
57	BY	84/91 (92%)	72 (86%)	12 (14%)	4	17
57	DY	84/91 (92%)	73 (87%)	11 (13%)	5	21
58	BZ	161/179 (90%)	134 (83%)	27 (17%)	2	11
58	DZ	161/179 (90%)	138 (86%)	23 (14%)	4	17
All	All	10350/10856 (95%)	9014 (87%)	1336 (13%)	5	21

All (1336) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	16	HIS
2	AB	24	TRP

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Mol	Chain	Res	Type
2	AB	32	ILE
2	AB	36	ARG
2	AB	42	ILE
2	AB	45	GLN
2	AB	69	LEU
2	AB	76	GLN
2	AB	94	ASN
2	AB	102	LEU
2	AB	110	GLN
2	AB	119	GLU
2	AB	141	GLU
2	AB	145	LEU
2	AB	155	LEU
2	AB	170	GLU
2	AB	178	ARG
2	AB	187	LEU
2	AB	189	ASP
2	AB	196	LEU
2	AB	208	ILE
2	AB	210	SER
2	AB	222	ILE
3	AC	3	ASN
3	AC	5	ILE
3	AC	11	ARG
3	AC	14	ILE
3	AC	16	ARG
3	AC	26	LYS
3	AC	36	ASP
3	AC	38	ARG
3	AC	46	GLU
3	AC	76	VAL
3	AC	79	ARG
3	AC	107	GLN
3	AC	118	GLN
3	AC	119	ARG
3	AC	131	ARG
3	AC	138	VAL
3	AC	178	LEU
3	AC	179	ARG
4	AD	3	ARG
4	AD	9	CYS
4	AD	15	GLU

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Mol	Chain	Res	Type
4	AD	20	TYR
4	AD	27	TYR
4	AD	33	MET
4	AD	36	ARG
4	AD	58	LEU
4	AD	62	GLN
4	AD	67	ILE
4	AD	78	LEU
4	AD	86	LYS
4	AD	91	SER
4	AD	100	ARG
4	AD	107	ARG
4	AD	114	ARG
4	AD	122	ARG
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	138	TYR
4	AD	145	GLU
4	AD	154	ASN
4	AD	160	GLN
4	AD	181	MET
4	AD	187	ARG
4	AD	190	ASP
4	AD	192	GLU
4	AD	209	ARG
5	AE	8	GLU
5	AE	12	LEU
5	AE	20	GLN
5	AE	31	LEU
5	AE	38	GLN
5	AE	52	PRO
5	AE	116	THR
5	AE	120	THR
5	AE	147	ASP
6	AF	16	GLN
6	AF	25	ILE
6	AF	27	GLN
6	AF	31	GLU
6	AF	32	ASN
6	AF	43	LEU
6	AF	45	LEU

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Mol	Chain	Res	Type
6	AF	79	LEU
6	AF	83	ASP
6	AF	86	ARG
6	AF	98	LEU
7	AG	3	ARG
7	AG	13	GLN
7	AG	38	LEU
7	AG	69	VAL
7	AG	73	MET
7	AG	74	GLU
7	AG	85	TYR
7	AG	104	LEU
7	AG	113	GLU
7	AG	114	ARG
7	AG	118	VAL
7	AG	137	LYS
7	AG	140	ASP
8	AH	1	MET
8	AH	3	THR
8	AH	14	ARG
8	AH	39	LEU
8	AH	49	GLU
8	AH	85	ARG
8	AH	92	ARG
8	AH	102	ARG
8	AH	104	ARG
8	AH	112	LEU
8	AH	119	LEU
9	AI	4	TYR
9	AI	10	ARG
9	AI	79	LEU
9	AI	99	LEU
9	AI	104	ARG
9	AI	118	LYS
9	AI	121	ARG
9	AI	126	SER
9	AI	128	ARG
10	AJ	4	ILE
10	AJ	16	LEU
10	AJ	22	LYS
10	AJ	49	VAL
10	AJ	50	ILE

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Mol	Chain	Res	Type
10	AJ	55	LYS
10	AJ	67	THR
10	AJ	70	ARG
10	AJ	74	ILE
10	AJ	87	THR
10	AJ	96	ILE
11	AK	27	ASN
11	AK	29	ILE
11	AK	36	ASP
11	AK	48	ILE
11	AK	51	LYS
11	AK	57	THR
11	AK	81	ASP
11	AK	84	VAL
11	AK	87	THR
11	AK	96	ARG
11	AK	103	LEU
11	AK	106	LYS
11	AK	117	ASN
12	AL	7	ILE
12	AL	13	LYS
12	AL	20	LYS
12	AL	33	ARG
12	AL	42	THR
12	AL	53	ARG
12	AL	55	VAL
12	AL	78	GLN
12	AL	80	HIS
12	AL	89	ARG
12	AL	99	HIS
12	AL	111	LYS
12	AL	114	LYS
13	AM	7	VAL
13	AM	23	TYR
13	AM	43	THR
13	AM	64	TRP
13	AM	65	LYS
13	AM	67	GLU
13	AM	70	LEU
13	AM	81	LEU
13	AM	88	ARG
13	AM	93	ARG

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Mol	Chain	Res	Type
13	AM	101	GLN
13	AM	108	ARG
13	AM	115	LYS
13	AM	120	LYS
14	AN	3	ARG
14	AN	14	PRO
14	AN	21	TYR
14	AN	22	THR
14	AN	41	ARG
14	AN	57	ARG
14	AN	58	LYS
15	AO	6	GLU
15	AO	21	ASP
15	AO	25	THR
15	AO	33	THR
15	AO	36	ILE
15	AO	38	ARG
15	AO	41	GLU
15	AO	66	LEU
15	AO	82	ILE
15	AO	88	ARG
16	AP	1	MET
16	AP	5	ARG
16	AP	15	PRO
16	AP	69	THR
17	AQ	18	THR
17	AQ	37	LYS
17	AQ	38	ARG
17	AQ	41	LYS
17	AQ	49	GLU
17	AQ	52	LYS
17	AQ	74	LEU
18	AR	29	PHE
18	AR	32	ARG
18	AR	38	GLU
18	AR	44	LEU
18	AR	46	GLU
18	AR	47	THR
18	AR	54	ARG
19	AS	6	LYS
19	AS	7	LYS
19	AS	10	PHE

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Mol	Chain	Res	Type
19	AS	15	LEU
19	AS	27	GLU
19	AS	32	LYS
19	AS	37	ARG
19	AS	44	MET
19	AS	49	ILE
19	AS	53	ASN
19	AS	66	MET
20	AT	10	LEU
20	AT	26	ASN
20	AT	36	LEU
20	AT	45	GLN
20	AT	55	ILE
20	AT	64	ASP
20	AT	74	LYS
20	AT	75	ASN
20	AT	82	SER
20	AT	104	LEU
21	AU	22	ARG
21	AU	24	ARG
25	AZ	4	GLU
25	AZ	5	PHE
25	AZ	7	ARG
25	AZ	9	LYS
25	AZ	21	ASP
25	AZ	22	HIS
25	AZ	39	ASN
25	AZ	63	ILE
25	AZ	64	ASN
25	AZ	69	GLU
25	AZ	100	ASP
25	AZ	114	PRO
25	AZ	146	LEU
25	AZ	163	PHE
25	AZ	166	ASP
25	AZ	174	SER
25	AZ	180	GLU
25	AZ	197	ASP
25	AZ	198	LYS
25	AZ	199	ILE
25	AZ	218	ASP
25	AZ	241	ARG

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Mol	Chain	Res	Type
25	AZ	261	GLU
25	AZ	262	THR
25	AZ	274	ARG
25	AZ	277	LEU
25	AZ	281	ILE
25	AZ	285	ASN
25	AZ	303	VAL
25	AZ	310	ILE
25	AZ	316	PHE
25	AZ	321	TYR
25	AZ	323	LEU
25	AZ	325	LYS
25	AZ	326	GLU
25	AZ	331	HIS
25	AZ	341	GLN
25	AZ	345	ARG
25	AZ	364	PRO
25	AZ	370	PHE
26	B0	3	HIS
26	B0	14	ARG
26	B0	20	ARG
26	B0	26	TYR
26	B0	27	GLU
26	B0	36	ILE
26	B0	38	VAL
26	B0	47	PRO
26	B0	49	LYS
26	B0	56	ASP
26	B0	64	ASP
26	B0	75	LEU
26	B0	84	LEU
27	B1	3	LYS
27	B1	21	ARG
27	B1	30	VAL
27	B1	35	THR
27	B1	40	ARG
27	B1	45	ASN
27	B1	52	ARG
27	B1	59	THR
27	B1	73	LEU
27	B1	76	ARG
28	B2	12	GLU

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Mol	Chain	Res	Type
28	B2	22	GLU
28	B2	32	LEU
28	B2	34	GLU
28	B2	35	LEU
28	B2	51	ARG
28	B2	59	ARG
28	B2	61	LEU
28	B2	65	ASN
28	B2	66	GLU
28	B2	69	ARG
29	B3	8	LEU
29	B3	11	SER
29	B3	18	ASP
29	B3	29	ARG
29	B3	31	LEU
29	B3	35	ARG
29	B3	46	ASN
30	B4	5	ILE
30	B4	6	HIS
30	B4	9	LEU
30	B4	20	ASN
30	B4	22	ILE
30	B4	26	SER
30	B4	27	THR
30	B4	32	TYR
30	B4	34	GLU
30	B4	43	TYR
30	B4	47	GLN
31	B5	3	LYS
31	B5	4	HIS
31	B5	25	LEU
31	B5	48	GLU
31	B5	51	TYR
31	B5	52	TYR
31	B5	56	LYS
32	B6	9	LEU
32	B6	10	LEU
32	B6	14	THR
32	B6	18	ARG
32	B6	19	ARG
32	B6	21	TYR
32	B6	23	THR

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Mol	Chain	Res	Type
32	B6	26	ASN
32	B6	31	PRO
32	B6	33	LYS
32	B6	35	GLU
32	B6	36	LEU
32	B6	37	ARG
32	B6	42	TRP
32	B6	47	THR
32	B6	48	VAL
32	B6	53	LYS
33	B7	4	THR
33	B7	12	ARG
33	B7	36	GLN
33	B7	46	VAL
34	B8	2	PRO
34	B8	17	THR
34	B8	30	ARG
34	B8	32	LEU
34	B8	34	TRP
34	B8	41	ILE
34	B8	44	LYS
34	B8	49	VAL
34	B8	56	GLU
34	B8	61	LEU
35	B9	1	MET
35	B9	2	LYS
35	B9	11	CYS
35	B9	18	ARG
35	B9	28	GLU
35	B9	29	ASN
38	BC	5	LYS
38	BC	11	LEU
38	BC	28	LEU
38	BC	30	LYS
38	BC	55	ASP
38	BC	57	ASN
38	BC	70	LYS
38	BC	154	ARG
38	BC	161	ILE
38	BC	167	LYS
38	BC	211	SER
38	BC	215	THR

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Mol	Chain	Res	Type
39	BD	10	THR
39	BD	14	ARG
39	BD	20	ASP
39	BD	24	ILE
39	BD	26	LYS
39	BD	27	THR
39	BD	28	GLU
39	BD	35	LYS
39	BD	43	ARG
39	BD	44	ASN
39	BD	46	GLN
39	BD	49	ILE
39	BD	61	LEU
39	BD	63	ARG
39	BD	64	ILE
39	BD	65	ILE
39	BD	67	PHE
39	BD	68	LYS
39	BD	71	ASP
39	BD	75	ILE
39	BD	89	SER
39	BD	92	ILE
39	BD	94	LEU
39	BD	99	ASP
39	BD	105	ILE
39	BD	106	ILE
39	BD	111	LEU
39	BD	115	GLN
39	BD	117	VAL
39	BD	157	ARG
39	BD	166	GLN
39	BD	192	THR
39	BD	200	ASP
39	BD	206	LEU
39	BD	212	SER
39	BD	228	PRO
39	BD	239	ARG
39	BD	242	ARG
39	BD	257	LEU
39	BD	260	ARG
39	BD	266	SER
40	BE	18	ASP

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Mol	Chain	Res	Type
40	BE	21	VAL
40	BE	26	ILE
40	BE	36	ARG
40	BE	49	LEU
40	BE	55	ASN
40	BE	56	PRO
40	BE	57	LYS
40	BE	62	PRO
40	BE	67	PHE
40	BE	73	GLU
40	BE	76	ARG
40	BE	78	LEU
40	BE	79	ARG
40	BE	82	ARG
40	BE	94	GLU
40	BE	95	ILE
40	BE	107	THR
40	BE	111	ARG
40	BE	128	SER
40	BE	133	LYS
40	BE	144	ARG
40	BE	145	LYS
40	BE	146	THR
40	BE	168	MET
40	BE	196	VAL
40	BE	202	LYS
40	BE	203	LYS
41	BF	19	GLU
41	BF	28	ILE
41	BF	41	LEU
41	BF	64	ILE
41	BF	65	TRP
41	BF	83	PHE
41	BF	84	VAL
41	BF	96	ASP
41	BF	125	LEU
41	BF	133	ASN
41	BF	135	LYS
41	BF	149	ASP
41	BF	160	ASN
41	BF	164	ARG
41	BF	169	ASN

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Mol	Chain	Res	Type
41	BF	175	THR
41	BF	179	GLU
41	BF	195	ASP
42	BG	16	ARG
42	BG	29	TRP
42	BG	33	ARG
42	BG	40	ASN
42	BG	51	ARG
42	BG	54	GLU
42	BG	60	LEU
42	BG	67	LYS
42	BG	71	THR
42	BG	77	ILE
42	BG	87	PRO
42	BG	91	ARG
42	BG	92	VAL
42	BG	107	LEU
42	BG	109	VAL
42	BG	113	ARG
42	BG	121	ASN
42	BG	124	SER
42	BG	125	PHE
42	BG	139	LEU
42	BG	147	ASP
42	BG	148	MET
42	BG	150	ASP
42	BG	152	LEU
42	BG	181	ARG
43	BH	43	VAL
43	BH	54	ARG
43	BH	65	HIS
43	BH	83	TYR
43	BH	85	LYS
43	BH	105	LEU
43	BH	139	GLN
43	BH	143	GLN
43	BH	153	LYS
43	BH	163	TYR
46	BN	1	MET
46	BN	4	TYR
46	BN	7	LYS
46	BN	10	GLU

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Mol	Chain	Res	Type
46	BN	25	ARG
46	BN	32	THR
46	BN	45	ASN
46	BN	48	MET
46	BN	56	ASN
46	BN	65	LYS
46	BN	87	LEU
46	BN	90	MET
46	BN	120	LEU
46	BN	127	ASP
46	BN	136	GLU
47	BO	8	LEU
47	BO	17	ARG
47	BO	23	ARG
47	BO	34	THR
47	BO	48	PRO
47	BO	65	THR
47	BO	73	ASP
47	BO	78	ARG
48	BP	16	ARG
48	BP	35	HIS
48	BP	39	LYS
48	BP	41	ARG
48	BP	42	SER
48	BP	52	GLU
48	BP	55	ARG
48	BP	58	THR
48	BP	61	ARG
48	BP	70	GLN
48	BP	75	ILE
48	BP	79	ARG
48	BP	85	LEU
48	BP	91	PHE
48	BP	98	GLU
48	BP	100	LEU
48	BP	105	LEU
48	BP	108	LYS
48	BP	110	TYR
48	BP	112	LEU
48	BP	114	ILE
48	BP	115	LEU
48	BP	133	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
49	BQ	1	MET
49	BQ	18	LYS
49	BQ	29	PHE
49	BQ	42	ILE
49	BQ	45	GLN
49	BQ	51	ARG
49	BQ	54	MET
49	BQ	56	ARG
49	BQ	58	PHE
49	BQ	59	ARG
49	BQ	79	LEU
49	BQ	110	THR
49	BQ	132	VAL
49	BQ	134	ARG
49	BQ	135	ASP
49	BQ	139	GLU
49	BQ	141	GLN
50	BR	2	ARG
50	BR	3	HIS
50	BR	10	LEU
50	BR	36	THR
50	BR	44	LEU
50	BR	54	LEU
50	BR	71	GLN
50	BR	74	LYS
50	BR	96	ARG
50	BR	99	LYS
50	BR	105	ARG
50	BR	111	LEU
51	BS	11	LYS
51	BS	12	PHE
51	BS	15	ARG
51	BS	27	SER
51	BS	29	PHE
51	BS	36	TYR
51	BS	40	ILE
51	BS	67	ARG
51	BS	89	ARG
51	BS	92	TYR
51	BS	97	ARG
51	BS	99	LYS
52	BT	6	LEU

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Mol	Chain	Res	Type
52	BT	15	VAL
52	BT	16	ARG
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	44	ASP
52	BT	48	ILE
52	BT	53	ARG
52	BT	65	LYS
52	BT	83	ILE
52	BT	99	LEU
52	BT	108	ARG
52	BT	111	ARG
52	BT	123	GLN
52	BT	128	GLU
53	BU	11	ARG
53	BU	52	ARG
53	BU	60	LEU
53	BU	66	ASN
53	BU	72	HIS
53	BU	74	LEU
53	BU	92	ARG
53	BU	108	GLU
54	BV	16	PRO
54	BV	18	LEU
54	BV	19	LYS
54	BV	22	VAL
54	BV	39	LEU
54	BV	40	LEU
54	BV	61	VAL
54	BV	62	LEU
54	BV	68	LYS
54	BV	81	TYR
54	BV	82	ARG
54	BV	91	TYR
54	BV	99	ILE
55	BW	11	ARG
55	BW	51	LEU
55	BW	70	TYR

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Mol	Chain	Res	Type
55	BW	82	LEU
55	BW	101	SER
55	BW	107	LEU
56	BX	11	PRO
56	BX	28	PHE
56	BX	35	THR
56	BX	37	THR
56	BX	40	LYS
56	BX	55	ASN
56	BX	68	ARG
56	BX	75	ASP
56	BX	80	ILE
57	BY	2	ARG
57	BY	6	HIS
57	BY	7	VAL
57	BY	9	LYS
57	BY	28	LYS
57	BY	29	GLU
57	BY	32	PRO
57	BY	50	ARG
57	BY	62	GLU
57	BY	73	ARG
57	BY	77	PRO
57	BY	97	ARG
58	BZ	5	LEU
58	BZ	9	TYR
58	BZ	10	ARG
58	BZ	18	LEU
58	BZ	24	LEU
58	BZ	30	ASN
58	BZ	32	HIS
58	BZ	37	VAL
58	BZ	63	ASP
58	BZ	70	LEU
58	BZ	72	ARG
58	BZ	73	GLN
58	BZ	77	ASP
58	BZ	81	ARG
58	BZ	87	ASP
58	BZ	93	ASP
58	BZ	121	HIS
58	BZ	123	ASP

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Mol	Chain	Res	Type
58	BZ	124	ILE
58	BZ	127	LYS
58	BZ	140	ASP
58	BZ	148	ASP
58	BZ	151	HIS
58	BZ	155	LEU
58	BZ	166	SER
58	BZ	175	VAL
58	BZ	178	GLU
2	CB	15	VAL
2	CB	17	PHE
2	CB	24	TRP
2	CB	32	ILE
2	CB	42	ILE
2	CB	51	LEU
2	CB	54	THR
2	CB	69	LEU
2	CB	76	GLN
2	CB	94	ASN
2	CB	110	GLN
2	CB	141	GLU
2	CB	145	LEU
2	CB	154	LEU
2	CB	170	GLU
2	CB	178	ARG
2	CB	187	LEU
2	CB	189	ASP
2	CB	191	ASP
2	CB	193	ASP
2	CB	196	LEU
2	CB	200	ILE
2	CB	208	ILE
2	CB	222	ILE
2	CB	226	ARG
3	CC	3	ASN
3	CC	5	ILE
3	CC	14	ILE
3	CC	16	ARG
3	CC	29	TYR
3	CC	36	ASP
3	CC	46	GLU
3	CC	79	ARG

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Mol	Chain	Res	Type
3	CC	94	LEU
3	CC	104	GLN
3	CC	107	GLN
3	CC	118	GLN
3	CC	119	ARG
3	CC	178	LEU
3	CC	179	ARG
3	CC	195	VAL
4	CD	3	ARG
4	CD	9	CYS
4	CD	15	GLU
4	CD	24	GLU
4	CD	36	ARG
4	CD	49	ARG
4	CD	53	ASP
4	CD	59	ARG
4	CD	60	GLU
4	CD	67	ILE
4	CD	86	LYS
4	CD	89	THR
4	CD	97	LEU
4	CD	98	GLU
4	CD	107	ARG
4	CD	129	ASN
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR
4	CD	145	GLU
4	CD	160	GLN
4	CD	163	GLU
4	CD	179	GLU
4	CD	181	MET
4	CD	192	GLU
4	CD	200	GLU
5	CE	12	LEU
5	CE	18	ARG
5	CE	31	LEU
5	CE	38	GLN
5	CE	53	LEU
5	CE	68	GLU
5	CE	76	ILE

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Mol	Chain	Res	Type
5	CE	116	THR
5	CE	120	THR
5	CE	147	ASP
6	CF	10	LEU
6	CF	14	LEU
6	CF	16	GLN
6	CF	25	ILE
6	CF	32	ASN
6	CF	43	LEU
6	CF	45	LEU
6	CF	69	GLU
6	CF	73	ASN
6	CF	79	LEU
6	CF	83	ASP
6	CF	86	ARG
6	CF	98	LEU
7	CG	13	GLN
7	CG	24	THR
7	CG	36	LYS
7	CG	38	LEU
7	CG	45	ASP
7	CG	104	LEU
7	CG	109	ASN
7	CG	113	GLU
7	CG	114	ARG
7	CG	137	LYS
8	CH	1	MET
8	CH	3	THR
8	CH	26	VAL
8	CH	30	ARG
8	CH	102	ARG
8	CH	104	ARG
8	CH	112	LEU
9	CI	4	TYR
9	CI	10	ARG
9	CI	70	LYS
9	CI	79	LEU
9	CI	99	LEU
9	CI	104	ARG
9	CI	114	TYR
9	CI	118	LYS
9	CI	121	ARG

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Mol	Chain	Res	Type
9	CI	128	ARG
10	CJ	4	ILE
10	CJ	8	LEU
10	CJ	22	LYS
10	CJ	42	THR
10	CJ	44	VAL
10	CJ	49	VAL
10	CJ	50	ILE
10	CJ	54	PHE
10	CJ	55	LYS
10	CJ	67	THR
10	CJ	71	LEU
10	CJ	80	LYS
10	CJ	87	THR
10	CJ	96	ILE
11	CK	27	ASN
11	CK	28	THR
11	CK	29	ILE
11	CK	35	PRO
11	CK	36	ASP
11	CK	51	LYS
11	CK	84	VAL
11	CK	87	THR
11	CK	93	GLN
11	CK	103	LEU
11	CK	106	LYS
11	CK	116	HIS
11	CK	117	ASN
12	CL	7	ILE
12	CL	20	LYS
12	CL	33	ARG
12	CL	42	THR
12	CL	53	ARG
12	CL	67	THR
12	CL	80	HIS
12	CL	89	ARG
12	CL	98	TYR
12	CL	111	LYS
12	CL	114	LYS
13	CM	9	ILE
13	CM	16	ASP
13	CM	43	THR

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Mol	Chain	Res	Type
13	CM	64	TRP
13	CM	65	LYS
13	CM	67	GLU
13	CM	69	GLU
13	CM	70	LEU
13	CM	93	ARG
13	CM	101	GLN
13	CM	108	ARG
13	CM	109	THR
13	CM	115	LYS
13	CM	120	LYS
14	CN	6	LEU
14	CN	14	PRO
14	CN	18	VAL
14	CN	41	ARG
14	CN	42	ILE
14	CN	44	LEU
15	CO	13	GLN
15	CO	14	GLU
15	CO	24	SER
15	CO	25	THR
15	CO	26	GLU
15	CO	38	ARG
15	CO	39	LEU
15	CO	41	GLU
15	CO	77	ARG
15	CO	82	ILE
16	CP	1	MET
16	CP	5	ARG
16	CP	20	VAL
16	CP	23	ASP
16	CP	32	TYR
16	CP	55	ARG
16	CP	69	THR
17	CQ	37	LYS
17	CQ	52	LYS
18	CR	28	GLU
18	CR	29	PHE
18	CR	37	VAL
18	CR	38	GLU
18	CR	44	LEU
18	CR	46	GLU

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Mol	Chain	Res	Type
18	CR	76	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	10	PHE
19	CS	12	ASP
19	CS	15	LEU
19	CS	27	GLU
19	CS	32	LYS
19	CS	37	ARG
19	CS	42	PRO
19	CS	44	MET
19	CS	49	ILE
19	CS	53	ASN
19	CS	66	MET
19	CS	71	LEU
19	CS	77	THR
20	CT	19	SER
20	CT	26	ASN
20	CT	36	LEU
20	CT	42	GLN
20	CT	45	GLN
20	CT	55	ILE
20	CT	56	MET
20	CT	64	ASP
20	CT	74	LYS
21	CU	6	ARG
21	CU	18	TYR
21	CU	22	ARG
25	CZ	4	GLU
25	CZ	5	PHE
25	CZ	7	ARG
25	CZ	9	LYS
25	CZ	21	ASP
25	CZ	22	HIS
25	CZ	39	ASN
25	CZ	63	ILE
25	CZ	64	ASN
25	CZ	69	GLU
25	CZ	100	ASP
25	CZ	146	LEU
25	CZ	163	PHE
25	CZ	166	ASP

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Mol	Chain	Res	Type
25	CZ	174	SER
25	CZ	180	GLU
25	CZ	192	GLU
25	CZ	197	ASP
25	CZ	198	LYS
25	CZ	199	ILE
25	CZ	218	ASP
25	CZ	241	ARG
25	CZ	261	GLU
25	CZ	262	THR
25	CZ	274	ARG
25	CZ	277	LEU
25	CZ	281	ILE
25	CZ	284	ASP
25	CZ	285	ASN
25	CZ	303	VAL
25	CZ	310	ILE
25	CZ	316	PHE
25	CZ	321	TYR
25	CZ	323	LEU
25	CZ	325	LYS
25	CZ	326	GLU
25	CZ	331	HIS
25	CZ	341	GLN
25	CZ	345	ARG
25	CZ	364	PRO
25	CZ	370	PHE
26	D0	3	HIS
26	D0	14	ARG
26	D0	20	ARG
26	D0	26	TYR
26	D0	27	GLU
26	D0	36	ILE
26	D0	38	VAL
26	D0	60	PHE
26	D0	64	ASP
26	D0	75	LEU
26	D0	84	LEU
27	D1	18	ILE
27	D1	33	LYS
27	D1	35	THR
27	D1	38	SER

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Mol	Chain	Res	Type
27	D1	39	LYS
27	D1	45	ASN
27	D1	46	LEU
27	D1	83	GLU
28	D2	7	ARG
28	D2	44	LEU
28	D2	48	HIS
28	D2	59	ARG
28	D2	66	GLU
28	D2	68	ARG
29	D3	8	LEU
29	D3	18	ASP
29	D3	35	ARG
29	D3	37	LEU
29	D3	38	GLU
29	D3	46	ASN
30	D4	5	ILE
30	D4	6	HIS
30	D4	9	LEU
30	D4	20	ASN
30	D4	22	ILE
30	D4	26	SER
30	D4	27	THR
30	D4	32	TYR
30	D4	34	GLU
30	D4	47	GLN
31	D5	3	LYS
31	D5	4	HIS
31	D5	25	LEU
31	D5	51	TYR
31	D5	52	TYR
31	D5	56	LYS
32	D6	10	LEU
32	D6	18	ARG
32	D6	19	ARG
32	D6	21	TYR
32	D6	31	PRO
32	D6	32	ASN
32	D6	33	LYS
32	D6	37	ARG
32	D6	42	TRP
32	D6	43	CYS

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Mol	Chain	Res	Type
32	D6	45	LYS
32	D6	49	HIS
32	D6	53	LYS
33	D7	12	ARG
33	D7	23	ARG
33	D7	34	ARG
33	D7	36	GLN
33	D7	43	THR
33	D7	46	VAL
34	D8	6	THR
34	D8	17	THR
34	D8	30	ARG
34	D8	32	LEU
34	D8	34	TRP
34	D8	41	ILE
34	D8	44	LYS
34	D8	49	VAL
34	D8	56	GLU
34	D8	61	LEU
35	D9	2	LYS
35	D9	11	CYS
35	D9	28	GLU
35	D9	29	ASN
35	D9	36	GLN
38	DC	11	LEU
38	DC	30	LYS
38	DC	37	PHE
38	DC	55	ASP
38	DC	57	ASN
38	DC	70	LYS
38	DC	71	GLN
38	DC	104	LEU
38	DC	156	ILE
38	DC	165	ASN
38	DC	167	LYS
38	DC	177	LYS
38	DC	180	PHE
38	DC	183	GLU
38	DC	215	THR
39	DD	10	THR
39	DD	24	ILE
39	DD	26	LYS

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Mol	Chain	Res	Type
39	DD	28	GLU
39	DD	35	LYS
39	DD	37	LEU
39	DD	43	ARG
39	DD	44	ASN
39	DD	46	GLN
39	DD	48	ARG
39	DD	61	LEU
39	DD	63	ARG
39	DD	64	ILE
39	DD	65	ILE
39	DD	75	ILE
39	DD	92	ILE
39	DD	94	LEU
39	DD	106	ILE
39	DD	111	LEU
39	DD	126	GLN
39	DD	131	LEU
39	DD	138	VAL
39	DD	162	SER
39	DD	166	GLN
39	DD	192	THR
39	DD	198	ASN
39	DD	206	LEU
39	DD	211	ARG
39	DD	212	SER
39	DD	218	ARG
39	DD	254	THR
39	DD	273	ARG
40	DE	9	VAL
40	DE	17	ASP
40	DE	18	ASP
40	DE	26	ILE
40	DE	36	ARG
40	DE	55	ASN
40	DE	56	PRO
40	DE	57	LYS
40	DE	62	PRO
40	DE	67	PHE
40	DE	73	GLU
40	DE	76	ARG
40	DE	78	LEU

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Mol	Chain	Res	Type
40	DE	79	ARG
40	DE	94	GLU
40	DE	95	ILE
40	DE	107	THR
40	DE	111	ARG
40	DE	121	ASN
40	DE	128	SER
40	DE	133	LYS
40	DE	144	ARG
40	DE	146	THR
40	DE	163	GLU
40	DE	181	LEU
40	DE	197	ILE
40	DE	202	LYS
40	DE	203	LYS
41	DF	19	GLU
41	DF	27	GLU
41	DF	28	ILE
41	DF	41	LEU
41	DF	83	PHE
41	DF	96	ASP
41	DF	97	TYR
41	DF	125	LEU
41	DF	160	ASN
41	DF	164	ARG
41	DF	169	ASN
41	DF	175	THR
41	DF	179	GLU
42	DG	10	LYS
42	DG	21	ARG
42	DG	33	ARG
42	DG	36	LYS
42	DG	43	LEU
42	DG	51	ARG
42	DG	52	ILE
42	DG	54	GLU
42	DG	60	LEU
42	DG	67	LYS
42	DG	77	ILE
42	DG	80	PHE
42	DG	86	MET
42	DG	93	THR

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Mol	Chain	Res	Type
42	DG	97	ASP
42	DG	98	ARG
42	DG	105	LYS
42	DG	108	ASN
42	DG	113	ARG
42	DG	123	ASN
42	DG	125	PHE
42	DG	136	ARG
42	DG	146	TYR
42	DG	150	ASP
42	DG	152	LEU
42	DG	153	ARG
42	DG	156	ASP
42	DG	157	ILE
43	DH	43	VAL
43	DH	54	ARG
43	DH	83	TYR
43	DH	85	LYS
43	DH	136	ILE
43	DH	139	GLN
43	DH	143	GLN
43	DH	153	LYS
43	DH	163	TYR
46	DN	1	MET
46	DN	4	TYR
46	DN	7	LYS
46	DN	10	GLU
46	DN	19	GLU
46	DN	25	ARG
46	DN	45	ASN
46	DN	48	MET
46	DN	56	ASN
46	DN	63	THR
46	DN	65	LYS
46	DN	83	LYS
46	DN	87	LEU
46	DN	90	MET
46	DN	106	MET
46	DN	120	LEU
46	DN	127	ASP
46	DN	136	GLU
47	DO	8	LEU

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Mol	Chain	Res	Type
47	DO	9	GLU
47	DO	10	VAL
47	DO	23	ARG
47	DO	24	VAL
47	DO	47	ILE
47	DO	48	PRO
47	DO	64	ARG
47	DO	78	ARG
47	DO	108	GLU
48	DP	16	ARG
48	DP	35	HIS
48	DP	36	LYS
48	DP	38	GLN
48	DP	41	ARG
48	DP	42	SER
48	DP	45	LEU
48	DP	48	PRO
48	DP	52	GLU
48	DP	55	ARG
48	DP	61	ARG
48	DP	70	GLN
48	DP	85	LEU
48	DP	91	PHE
48	DP	100	LEU
48	DP	108	LYS
48	DP	110	TYR
48	DP	112	LEU
48	DP	115	LEU
48	DP	136	GLU
49	DQ	1	MET
49	DQ	16	ARG
49	DQ	18	LYS
49	DQ	45	GLN
49	DQ	51	ARG
49	DQ	55	VAL
49	DQ	56	ARG
49	DQ	59	ARG
49	DQ	67	ARG
49	DQ	110	THR
49	DQ	134	ARG
49	DQ	135	ASP
49	DQ	139	GLU

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Mol	Chain	Res	Type
49	DQ	141	GLN
50	DR	2	ARG
50	DR	3	HIS
50	DR	4	LEU
50	DR	10	LEU
50	DR	14	SER
50	DR	44	LEU
50	DR	49	ASP
50	DR	71	GLN
50	DR	74	LYS
50	DR	99	LYS
50	DR	111	LEU
51	DS	11	LYS
51	DS	12	PHE
51	DS	15	ARG
51	DS	29	PHE
51	DS	35	ILE
51	DS	36	TYR
51	DS	40	ILE
51	DS	52	SER
51	DS	64	GLU
51	DS	67	ARG
51	DS	73	LEU
51	DS	80	LEU
51	DS	89	ARG
51	DS	92	TYR
51	DS	97	ARG
51	DS	99	LYS
52	DT	6	LEU
52	DT	14	TYR
52	DT	16	ARG
52	DT	24	PRO
52	DT	27	THR
52	DT	29	ARG
52	DT	32	TYR
52	DT	38	ASN
52	DT	39	ARG
52	DT	41	ARG
52	DT	44	ASP
52	DT	48	ILE
52	DT	49	VAL
52	DT	53	ARG

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Mol	Chain	Res	Type
52	DT	82	LEU
52	DT	99	LEU
52	DT	111	ARG
52	DT	128	GLU
53	DU	14	HIS
53	DU	60	LEU
53	DU	66	ASN
53	DU	72	HIS
53	DU	74	LEU
53	DU	92	ARG
53	DU	108	GLU
54	DV	13	ARG
54	DV	18	LEU
54	DV	19	LYS
54	DV	22	VAL
54	DV	33	VAL
54	DV	39	LEU
54	DV	51	VAL
54	DV	61	VAL
54	DV	62	LEU
54	DV	68	LYS
54	DV	79	VAL
54	DV	81	TYR
54	DV	82	ARG
54	DV	89	GLN
54	DV	91	TYR
54	DV	99	ILE
55	DW	11	ARG
55	DW	34	ASN
55	DW	51	LEU
55	DW	70	TYR
55	DW	75	TYR
55	DW	107	LEU
56	DX	11	PRO
56	DX	28	PHE
56	DX	30	VAL
56	DX	37	THR
56	DX	68	ARG
56	DX	75	ASP
57	DY	2	ARG
57	DY	6	HIS
57	DY	7	VAL

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Mol	Chain	Res	Type
57	DY	9	LYS
57	DY	28	LYS
57	DY	32	PRO
57	DY	50	ARG
57	DY	62	GLU
57	DY	73	ARG
57	DY	77	PRO
57	DY	97	ARG
58	DZ	6	LYS
58	DZ	11	GLU
58	DZ	16	SER
58	DZ	20	ARG
58	DZ	24	LEU
58	DZ	37	VAL
58	DZ	38	TYR
58	DZ	40	ASP
58	DZ	41	LEU
58	DZ	63	ASP
58	DZ	70	LEU
58	DZ	86	VAL
58	DZ	90	VAL
58	DZ	105	VAL
58	DZ	122	ARG
58	DZ	125	LEU
58	DZ	127	LYS
58	DZ	136	PHE
58	DZ	148	ASP
58	DZ	151	HIS
58	DZ	159	PRO
58	DZ	168	GLU
58	DZ	170	THR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (314) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	40	HIS
2	AB	45	GLN
2	AB	78	GLN
2	AB	94	ASN
2	AB	95	GLN
2	AB	146	GLN
2	AB	212	GLN

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Mol	Chain	Res	Type
3	AC	3	ASN
3	AC	118	GLN
3	AC	170	GLN
4	AD	62	GLN
4	AD	119	GLN
4	AD	129	ASN
4	AD	161	ASN
4	AD	201	GLN
5	AE	73	ASN
5	AE	127	ASN
6	AF	27	GLN
6	AF	32	ASN
6	AF	84	ASN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	84	ASN
7	AG	106	GLN
7	AG	110	GLN
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	116	HIS
11	AK	117	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	80	HIS
12	AL	99	HIS
13	AM	12	ASN
13	AM	77	ASN
13	AM	92	HIS
13	AM	101	GLN
15	AO	9	GLN
15	AO	37	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	AO	53	HIS
16	AP	16	HIS
16	AP	76	GLN
17	AQ	16	GLN
17	AQ	26	GLN
18	AR	63	GLN
19	AS	14	HIS
19	AS	53	ASN
20	AT	26	ASN
20	AT	42	GLN
20	AT	45	GLN
25	AZ	11	HIS
25	AZ	64	ASN
25	AZ	67	HIS
25	AZ	79	HIS
25	AZ	115	GLN
25	AZ	285	ASN
25	AZ	331	HIS
26	B0	12	ASN
26	B0	29	GLN
26	B0	50	ASN
26	B0	70	GLN
27	B1	45	ASN
28	B2	43	GLN
28	B2	65	ASN
28	B2	70	GLN
28	B2	71	ASN
29	B3	19	GLN
29	B3	46	ASN
29	B3	52	HIS
30	B4	20	ASN
30	B4	40	HIS
30	B4	46	GLN
30	B4	47	GLN
31	B5	43	HIS
32	B6	20	ASN
32	B6	29	ASN
32	B6	32	ASN
33	B7	36	GLN
35	B9	29	ASN
38	BC	57	ASN
38	BC	66	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	BC	165	ASN
38	BC	225	ASN
39	BD	44	ASN
39	BD	58	HIS
39	BD	96	HIS
39	BD	164	GLN
39	BD	166	GLN
39	BD	186	HIS
39	BD	198	ASN
39	BD	253	GLN
40	BE	48	GLN
40	BE	54	GLN
40	BE	55	ASN
40	BE	129	HIS
40	BE	169	ASN
40	BE	192	ASN
41	BF	29	ASN
41	BF	69	HIS
41	BF	75	HIS
41	BF	133	ASN
41	BF	160	ASN
41	BF	204	ASN
42	BG	58	GLN
42	BG	132	ASN
43	BH	139	GLN
43	BH	147	ASN
46	BN	45	ASN
46	BN	56	ASN
46	BN	131	GLN
47	BO	82	ASN
48	BP	38	GLN
48	BP	68	GLN
48	BP	81	GLN
48	BP	84	ASN
48	BP	128	HIS
49	BQ	12	GLN
49	BQ	89	ASN
49	BQ	123	HIS
49	BQ	141	GLN
50	BR	13	HIS
50	BR	23	ASN
50	BR	71	GLN

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Mol	Chain	Res	Type
52	BT	38	ASN
52	BT	43	GLN
52	BT	123	GLN
53	BU	14	HIS
53	BU	44	ASN
53	BU	66	ASN
53	BU	94	ASN
53	BU	117	GLN
54	BV	11	GLN
55	BW	57	ASN
56	BX	31	HIS
56	BX	41	ASN
56	BX	55	ASN
56	BX	87	GLN
58	BZ	30	ASN
58	BZ	34	ASN
58	BZ	73	GLN
58	BZ	118	GLN
58	BZ	121	HIS
2	CB	45	GLN
2	CB	76	GLN
2	CB	78	GLN
2	CB	94	ASN
2	CB	146	GLN
2	CB	204	ASN
2	CB	212	GLN
3	CC	3	ASN
3	CC	28	GLN
3	CC	31	HIS
3	CC	118	GLN
3	CC	170	GLN
4	CD	62	GLN
4	CD	129	ASN
5	CE	73	ASN
5	CE	78	HIS
5	CE	127	ASN
6	CF	27	GLN
6	CF	32	ASN
6	CF	64	GLN
6	CF	84	ASN
6	CF	100	ASN
7	CG	13	GLN

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Mol	Chain	Res	Type
7	CG	84	ASN
7	CG	86	GLN
7	CG	109	ASN
7	CG	110	GLN
7	CG	153	HIS
9	CI	31	GLN
9	CI	73	GLN
9	CI	124	GLN
10	CJ	13	HIS
10	CJ	56	HIS
10	CJ	62	HIS
10	CJ	68	HIS
10	CJ	78	ASN
11	CK	22	HIS
11	CK	27	ASN
11	CK	38	ASN
11	CK	117	ASN
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
12	CL	80	HIS
13	CM	12	ASN
13	CM	77	ASN
13	CM	92	HIS
13	CM	101	GLN
14	CN	49	HIS
14	CN	52	GLN
15	CO	37	ASN
15	CO	53	HIS
16	CP	16	HIS
16	CP	76	GLN
17	CQ	16	GLN
17	CQ	26	GLN
17	CQ	45	HIS
19	CS	14	HIS
19	CS	53	ASN
20	CT	16	HIS
20	CT	26	ASN
20	CT	42	GLN
20	CT	45	GLN
20	CT	75	ASN
25	CZ	11	HIS

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Mol	Chain	Res	Type
25	CZ	67	HIS
25	CZ	79	HIS
25	CZ	85	HIS
25	CZ	115	GLN
25	CZ	285	ASN
25	CZ	331	HIS
26	D0	12	ASN
26	D0	29	GLN
26	D0	50	ASN
26	D0	70	GLN
27	D1	45	ASN
27	D1	47	GLN
28	D2	43	GLN
28	D2	47	ASN
28	D2	48	HIS
28	D2	56	GLN
28	D2	65	ASN
28	D2	70	GLN
28	D2	71	ASN
29	D3	19	GLN
29	D3	46	ASN
29	D3	52	HIS
30	D4	20	ASN
30	D4	47	GLN
31	D5	22	HIS
31	D5	43	HIS
32	D6	32	ASN
32	D6	46	HIS
34	D8	31	HIS
35	D9	29	ASN
38	DC	57	ASN
38	DC	188	ASN
39	DD	44	ASN
39	DD	58	HIS
39	DD	87	ASN
39	DD	96	HIS
39	DD	115	GLN
39	DD	126	GLN
39	DD	166	GLN
39	DD	186	HIS
39	DD	198	ASN
39	DD	253	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	DE	48	GLN
40	DE	54	GLN
40	DE	55	ASN
40	DE	129	HIS
40	DE	135	HIS
40	DE	192	ASN
41	DF	29	ASN
41	DF	69	HIS
41	DF	75	HIS
41	DF	133	ASN
41	DF	160	ASN
41	DF	169	ASN
41	DF	204	ASN
42	DG	123	ASN
43	DH	139	GLN
43	DH	147	ASN
46	DN	45	ASN
46	DN	56	ASN
46	DN	69	GLN
46	DN	94	HIS
46	DN	131	GLN
47	DO	3	GLN
47	DO	82	ASN
48	DP	9	ASN
48	DP	38	GLN
48	DP	68	GLN
48	DP	81	GLN
48	DP	84	ASN
48	DP	128	HIS
49	DQ	12	GLN
49	DQ	13	GLN
49	DQ	45	GLN
49	DQ	89	ASN
49	DQ	141	GLN
50	DR	16	HIS
50	DR	23	ASN
50	DR	71	GLN
51	DS	34	HIS
51	DS	84	GLN
52	DT	55	ASN
52	DT	123	GLN
53	DU	14	HIS

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Mol	Chain	Res	Type
53	DU	94	ASN
53	DU	117	GLN
54	DV	11	GLN
55	DW	57	ASN
56	DX	41	ASN
56	DX	55	ASN
56	DX	87	GLN
57	DY	6	HIS
58	DZ	30	ASN
58	DZ	75	ASN
58	DZ	85	HIS
58	DZ	118	GLN
58	DZ	151	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	227 (15%)	50 (3%)
1	CA	1503/1522 (98%)	229 (15%)	41 (2%)
22	AV	75/76 (98%)	20 (26%)	0
22	AW	75/76 (98%)	20 (26%)	0
22	CV	75/76 (98%)	19 (25%)	2 (2%)
22	CW	75/76 (98%)	22 (29%)	2 (2%)
23	AX	17/27 (62%)	8 (47%)	1 (5%)
23	CX	17/27 (62%)	9 (52%)	1 (5%)
24	AY	74/77 (96%)	24 (32%)	1 (1%)
24	CY	74/77 (96%)	25 (33%)	1 (1%)
36	BA	2900/2915 (99%)	511 (17%)	48 (1%)
36	DA	2900/2915 (99%)	513 (17%)	43 (1%)
37	BB	118/122 (96%)	26 (22%)	4 (3%)
37	DB	118/122 (96%)	26 (22%)	4 (3%)
All	All	9524/9630 (98%)	1679 (17%)	198 (2%)

All (1679) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C

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Mol	Chain	Res	Type
1	AA	48	C
1	AA	51	A
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
1	AA	90	U
1	AA	101	A
1	AA	110	C
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
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	281	G
1	AA	289	G
1	AA	321	A
1	AA	328	C
1	AA	330	C

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Mol	Chain	Res	Type
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	368	U
1	AA	369	C
1	AA	372	C
1	AA	373	A
1	AA	388	G
1	AA	389	A
1	AA	397	A
1	AA	398	C
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	452	A
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	518	C
1	AA	527	G
1	AA	532	A
1	AA	533	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

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Mol	Chain	Res	Type
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	703	G
1	AA	721	G
1	AA	722	A
1	AA	723	U
1	AA	731	G
1	AA	748	C
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	817	C
1	AA	821	G
1	AA	828	A
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	858	G
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	962	C
1	AA	968	A
1	AA	969	A
1	AA	975	A
1	AA	976	G
1	AA	977	A

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Mol	Chain	Res	Type
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
1	AA	1026	G
1	AA	1030	C
1	AA	1050	G
1	AA	1051	C
1	AA	1054	C
1	AA	1056	U
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	1126	U
1	AA	1129	C
1	AA	1130	A
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	1145	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	1181	G
1	AA	1184	G
1	AA	1186	G

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Mol	Chain	Res	Type
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	1214	C
1	AA	1238	A
1	AA	1240	U
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1272	G
1	AA	1280	A
1	AA	1284	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1290	G
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
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	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1364	U
1	AA	1370	G
1	AA	1398	A
1	AA	1399	C
1	AA	1419	G
1	AA	1420	C
1	AA	1442(A)	G
1	AA	1446	U
1	AA	1447	A
1	AA	1452	C

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Mol	Chain	Res	Type
1	AA	1456	G
1	AA	1457	G
1	AA	1492	A
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
22	AV	3	C
22	AV	5	G
22	AV	8	U
22	AV	9	A
22	AV	16	U
22	AV	17	C
22	AV	18	G
22	AV	19	G
22	AV	21	A
22	AV	22	G
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	69	G
22	AV	73	A
22	AV	76	A
22	AW	4	C
22	AW	7	A
22	AW	9	A
22	AW	10	G
22	AW	18	G
22	AW	19	G
22	AW	20	U
22	AW	21	A
22	AW	34	G
22	AW	43	C

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Mol	Chain	Res	Type
22	AW	44	G
22	AW	45	U
22	AW	47	U
22	AW	48	C
22	AW	50	U
22	AW	57	G
22	AW	59	U
22	AW	61	C
22	AW	62	C
22	AW	73	A
23	AX	12	A
23	AX	13	A
23	AX	14	A
23	AX	16	A
23	AX	17	U
23	AX	18	G
23	AX	26	A
23	AX	27	A
24	AY	5	G
24	AY	8	4SU
24	AY	9	A
24	AY	10	G
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	22	G
24	AY	24	A
24	AY	41	C
24	AY	44	G
24	AY	45	U
24	AY	46	7MG
24	AY	48	U
24	AY	49	G
24	AY	55	PSU
24	AY	56	C
24	AY	58	A
24	AY	59	G
24	AY	62	U
24	AY	76	A

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Mol	Chain	Res	Type
36	BA	10	G
36	BA	45	C
36	BA	51	G
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	88	G
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	131	G
36	BA	139(A)	G
36	BA	141	A
36	BA	146	G
36	BA	149	A
36	BA	174	C
36	BA	181	A
36	BA	182	A
36	BA	196	A
36	BA	197	A
36	BA	199	A
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	241	A
36	BA	245	G
36	BA	248	G
36	BA	267	C
36	BA	271(K)	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	271(L)	U
36	BA	271(M)	G
36	BA	271(N)	U
36	BA	271(O)	C
36	BA	271(P)	C
36	BA	271(R)	G
36	BA	271(Y)	U
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	299	A
36	BA	310	A
36	BA	311	A
36	BA	324	A
36	BA	329	G
36	BA	330	A
36	BA	332	A
36	BA	333	G
36	BA	352	G
36	BA	353	G
36	BA	358	U
36	BA	362	U
36	BA	363	G
36	BA	363(A)	A
36	BA	363(E)	U
36	BA	363(F)	A
36	BA	372	G
36	BA	386	G
36	BA	388	G
36	BA	391	G
36	BA	396	G
36	BA	405	U
36	BA	406	G
36	BA	411	G
36	BA	412	A
36	BA	428	A
36	BA	443	A
36	BA	444	C
36	BA	448	U
36	BA	451	C

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Mol	Chain	Res	Type
36	BA	456	C
36	BA	457	A
36	BA	467	G
36	BA	470	A
36	BA	473	G
36	BA	480	A
36	BA	481	G
36	BA	482	A
36	BA	494	G
36	BA	505	A
36	BA	508	G
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	537	C
36	BA	543	C
36	BA	556	G
36	BA	563	G
36	BA	573	G
36	BA	575	A
36	BA	586	A
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	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	A
36	BA	654(H)	G
36	BA	654(J)	A

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Mol	Chain	Res	Type
36	BA	654(M)	C
36	BA	654(T)	C
36	BA	655	A
36	BA	656	G
36	BA	669	G
36	BA	670	A
36	BA	686	G
36	BA	708	C
36	BA	717	G
36	BA	722	A
36	BA	730	C
36	BA	740	U
36	BA	753	C
36	BA	761	A
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	941	A
36	BA	945	A
36	BA	946	G
36	BA	958	U
36	BA	959	A
36	BA	961	C
36	BA	965	C
36	BA	974	G
36	BA	975	C
36	BA	983	A
36	BA	996	A
36	BA	1011	G
36	BA	1012	U
36	BA	1013	C
36	BA	1022	G
36	BA	1023	U
36	BA	1025	G
36	BA	1026	U
36	BA	1033	U
36	BA	1038	C
36	BA	1039	G
36	BA	1045	A
36	BA	1047	G
36	BA	1048	A
36	BA	1053	C
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	1073	A
36	BA	1074	G
36	BA	1079	C
36	BA	1087	G
36	BA	1088	A
36	BA	1090	U
36	BA	1111	A
36	BA	1112	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	1135	C
36	BA	1136	G
36	BA	1143	A
36	BA	1155	A
36	BA	1167	U
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	1253	A
36	BA	1256	G
36	BA	1265	A
36	BA	1271	G
36	BA	1272	A
36	BA	1273	U
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	1338	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	1395	A
36	BA	1396	U
36	BA	1407	C
36	BA	1416	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	1419	A
36	BA	1427	A
36	BA	1428	C
36	BA	1437	C
36	BA	1445	A
36	BA	1449	A
36	BA	1455	G
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	1481	U
36	BA	1482	G
36	BA	1485	G
36	BA	1487	G
36	BA	1490	A
36	BA	1493	C
36	BA	1494	A
36	BA	1495	A
36	BA	1496	A
36	BA	1497	U
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	1554	A
36	BA	1558	A
36	BA	1559	G
36	BA	1569	A
36	BA	1578	U
36	BA	1579	A
36	BA	1584	C
36	BA	1586	A
36	BA	1588	C
36	BA	1591	G
36	BA	1603	A

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Mol	Chain	Res	Type
36	BA	1608	A
36	BA	1617	C
36	BA	1618	A
36	BA	1619	G
36	BA	1634	A
36	BA	1648	C
36	BA	1654	A
36	BA	1674	G
36	BA	1696	G
36	BA	1718	G
36	BA	1721	G
36	BA	1722	A
36	BA	1739	U
36	BA	1742	G
36	BA	1744	C
36	BA	1748	G
36	BA	1756	G
36	BA	1758	G
36	BA	1763	G
36	BA	1764	G
36	BA	1773	A
36	BA	1780	A
36	BA	1781	C
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	1829	A
36	BA	1835	G
36	BA	1847	A
36	BA	1858	G
36	BA	1865	G
36	BA	1880	C
36	BA	1882	C
36	BA	1885	A
36	BA	1888	G
36	BA	1889	A
36	BA	1900	A
36	BA	1903	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	1906	G
36	BA	1912	A
36	BA	1913	A
36	BA	1929	G
36	BA	1930	G
36	BA	1936	A
36	BA	1937	A
36	BA	1938	A
36	BA	1947	C
36	BA	1955	U
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	2020	A
36	BA	2023	G
36	BA	2031	A
36	BA	2032	G
36	BA	2033	A
36	BA	2034	U
36	BA	2036	C
36	BA	2043	C
36	BA	2049	G
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	2111	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	2116	G
36	BA	2118	U
36	BA	2127	G
36	BA	2129	C
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	2177	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
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	2310	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	2393	A
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	2441	C
36	BA	2448	A
36	BA	2465	C
36	BA	2469	A
36	BA	2476	A
36	BA	2482	G
36	BA	2484	G
36	BA	2487	G
36	BA	2502	G
36	BA	2505	G
36	BA	2518	A
36	BA	2524	G
36	BA	2529	G
36	BA	2542	A
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	2602	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BA	2612	C
36	BA	2615	U
36	BA	2630	G
36	BA	2645	G
36	BA	2646	C
36	BA	2657	A
36	BA	2660	A
36	BA	2673	G
36	BA	2682	U
36	BA	2690	C
36	BA	2691	C
36	BA	2702	U
36	BA	2703	C
36	BA	2712	U
36	BA	2712(A)	A
36	BA	2713	A
36	BA	2714	G
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	2765	A
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	2794	C
36	BA	2799	C
36	BA	2802	G
36	BA	2803	C
36	BA	2808	U
36	BA	2818	G
36	BA	2820	A
36	BA	2821	A

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Mol	Chain	Res	Type
36	BA	2823	A
36	BA	2833	G
36	BA	2834	G
36	BA	2847	U
36	BA	2849	U
36	BA	2872	G
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	26	A
37	BB	27	C
37	BB	32	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	68	C
37	BB	73	A
37	BB	81	G
37	BB	82	G
37	BB	88	C
37	BB	97	G
37	BB	110	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	61	G
1	CA	63	C

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Mol	Chain	Res	Type
1	CA	79	G
1	CA	80	G
1	CA	81	U
1	CA	90	U
1	CA	101	A
1	CA	110	C
1	CA	116	A
1	CA	120	A
1	CA	121	C
1	CA	131	C
1	CA	146	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	216	G
1	CA	244	U
1	CA	246	A
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	267	C
1	CA	274	A
1	CA	275	G
1	CA	281	G
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	330	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

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Mol	Chain	Res	Type
1	CA	353	A
1	CA	354	G
1	CA	369	C
1	CA	372	C
1	CA	373	A
1	CA	388	G
1	CA	389	A
1	CA	397	A
1	CA	398	C
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	423	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	439	A
1	CA	452	A
1	CA	484	G
1	CA	485	G
1	CA	495	A
1	CA	496	A
1	CA	499	A
1	CA	508	C
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	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

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Mol	Chain	Res	Type
1	CA	577	G
1	CA	632	A
1	CA	653	A
1	CA	665	A
1	CA	687	A
1	CA	688	G
1	CA	701	C
1	CA	702	A
1	CA	703	G
1	CA	721	G
1	CA	722	A
1	CA	723	U
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	792	A
1	CA	793	U
1	CA	816	A
1	CA	817	C
1	CA	821	G
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	874	G
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	962	C
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A

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Mol	Chain	Res	Type
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	1051	C
1	CA	1054	C
1	CA	1056	U
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	1126	U
1	CA	1129	C
1	CA	1130	A
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	1145	C
1	CA	1146	A
1	CA	1152	A
1	CA	1154	G
1	CA	1158	C
1	CA	1159	U
1	CA	1171	G
1	CA	1181	G
1	CA	1184	G
1	CA	1187	G
1	CA	1196	U

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Mol	Chain	Res	Type
1	CA	1197	G
1	CA	1199	U
1	CA	1200	C
1	CA	1201	A
1	CA	1212	U
1	CA	1227	A
1	CA	1238	A
1	CA	1240	U
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
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	1301	U
1	CA	1302	U
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1335	C
1	CA	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1363	C
1	CA	1370	G
1	CA	1398	A
1	CA	1400	C
1	CA	1419	G
1	CA	1437	C
1	CA	1442	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G

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Mol	Chain	Res	Type
1	CA	1492	A
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	1529	G
1	CA	1530	G
1	CA	1531	A
22	CV	4	C
22	CV	5	G
22	CV	8	U
22	CV	16	U
22	CV	17	C
22	CV	18	G
22	CV	19	G
22	CV	20	U
22	CV	21	A
22	CV	22	G
22	CV	44	G
22	CV	45	U
22	CV	46	G
22	CV	47	U
22	CV	60	U
22	CV	61	C
22	CV	62	C
22	CV	69	G
22	CV	76	A
22	CW	5	G
22	CW	8	U
22	CW	18	G
22	CW	19	G
22	CW	21	A
22	CW	22	G
22	CW	39	U
22	CW	43	C
22	CW	44	G
22	CW	45	U
22	CW	47	U
22	CW	48	C
22	CW	50	U

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Mol	Chain	Res	Type
22	CW	56	C
22	CW	57	G
22	CW	58	A
22	CW	59	U
22	CW	60	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	14	A
23	CX	16	A
23	CX	17	U
23	CX	18	G
23	CX	22	U
23	CX	26	A
23	CX	27	A
24	CY	5	G
24	CY	8	4SU
24	CY	9	A
24	CY	10	G
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	22	G
24	CY	24	A
24	CY	41	C
24	CY	44	G
24	CY	45	U
24	CY	46	7MG
24	CY	48	U
24	CY	49	G
24	CY	55	PSU
24	CY	56	C
24	CY	58	A
24	CY	59	G
24	CY	61	C
24	CY	62	U

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Mol	Chain	Res	Type
24	CY	76	A
36	DA	10	G
36	DA	45	C
36	DA	64	A
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	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	174	C
36	DA	181	A
36	DA	182	A
36	DA	196	A
36	DA	197	A
36	DA	199	A
36	DA	204	A
36	DA	205	G
36	DA	215	G
36	DA	216	A
36	DA	221	A
36	DA	222	A
36	DA	229	A
36	DA	233	A
36	DA	241	A
36	DA	248	G
36	DA	252	G
36	DA	261	G
36	DA	267	C

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Mol	Chain	Res	Type
36	DA	271(K)	U
36	DA	271(L)	U
36	DA	271(M)	G
36	DA	271(N)	U
36	DA	271(O)	C
36	DA	271(P)	C
36	DA	271(Y)	U
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	299	A
36	DA	311	A
36	DA	324	A
36	DA	329	G
36	DA	330	A
36	DA	332	A
36	DA	333	G
36	DA	352	G
36	DA	353	G
36	DA	358	U
36	DA	362	U
36	DA	363	G
36	DA	363(A)	A
36	DA	363(E)	U
36	DA	363(F)	A
36	DA	372	G
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	412	A
36	DA	428	A
36	DA	443	A
36	DA	444	C
36	DA	448	U
36	DA	451	C
36	DA	456	C
36	DA	457	A

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Mol	Chain	Res	Type
36	DA	470	A
36	DA	480	A
36	DA	481	G
36	DA	482	A
36	DA	494	G
36	DA	505	A
36	DA	508	G
36	DA	512	G
36	DA	513	A
36	DA	528	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	543	C
36	DA	556	G
36	DA	563	G
36	DA	573	G
36	DA	575	A
36	DA	586	A
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	627	A
36	DA	628	G
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	A
36	DA	654(H)	G
36	DA	654(J)	A
36	DA	654(M)	C

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Mol	Chain	Res	Type
36	DA	654(T)	C
36	DA	655	A
36	DA	656	G
36	DA	669	G
36	DA	686	G
36	DA	722	A
36	DA	730	C
36	DA	753	C
36	DA	775	G
36	DA	776	G
36	DA	782	A
36	DA	784	A
36	DA	785	G
36	DA	789	A
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	958	U
36	DA	959	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	DA	961	C
36	DA	965	C
36	DA	974	G
36	DA	975	C
36	DA	983	A
36	DA	996	A
36	DA	1011	G
36	DA	1012	U
36	DA	1013	C
36	DA	1022	G
36	DA	1023	U
36	DA	1025	G
36	DA	1026	U
36	DA	1033	U
36	DA	1038	C
36	DA	1039	G
36	DA	1045	A
36	DA	1046	A
36	DA	1047	G
36	DA	1048	A
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	1073	A
36	DA	1074	G
36	DA	1079	C
36	DA	1083	U
36	DA	1087	G
36	DA	1088	A
36	DA	1090	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

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Mol	Chain	Res	Type
36	DA	1155	A
36	DA	1174	A
36	DA	1175	U
36	DA	1176	G
36	DA	1178	C
36	DA	1205	U
36	DA	1210	A
36	DA	1211	U
36	DA	1212	G
36	DA	1223	G
36	DA	1244	G
36	DA	1247	A
36	DA	1248	G
36	DA	1250	G
36	DA	1253	A
36	DA	1255	U
36	DA	1256	G
36	DA	1265	A
36	DA	1271	G
36	DA	1272	A
36	DA	1273	U
36	DA	1287	A
36	DA	1300	U
36	DA	1301	A
36	DA	1302	A
36	DA	1314	C
36	DA	1319	G
36	DA	1321	A
36	DA	1332	G
36	DA	1338	G
36	DA	1349	A
36	DA	1359	A
36	DA	1365	A
36	DA	1379	A
36	DA	1380	G
36	DA	1384	A
36	DA	1385	G
36	DA	1386	C
36	DA	1395	A
36	DA	1396	U
36	DA	1407	C
36	DA	1416	G

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Mol	Chain	Res	Type
36	DA	1419	A
36	DA	1427	A
36	DA	1428	C
36	DA	1437	C
36	DA	1445	A
36	DA	1449	A
36	DA	1455	G
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	1481	U
36	DA	1482	G
36	DA	1485	G
36	DA	1490	A
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	1558	A
36	DA	1559	G
36	DA	1569	A
36	DA	1578	U
36	DA	1579	A
36	DA	1580	A
36	DA	1584	C
36	DA	1586	A
36	DA	1588	C
36	DA	1591	G
36	DA	1602	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	DA	1603	A
36	DA	1608	A
36	DA	1617	C
36	DA	1618	A
36	DA	1634	A
36	DA	1635	G
36	DA	1648	C
36	DA	1654	A
36	DA	1674	G
36	DA	1718	G
36	DA	1721	G
36	DA	1722	A
36	DA	1739	U
36	DA	1742	G
36	DA	1746	G
36	DA	1748	G
36	DA	1756	G
36	DA	1758	G
36	DA	1763	G
36	DA	1764	G
36	DA	1773	A
36	DA	1780	A
36	DA	1781	C
36	DA	1791	A
36	DA	1799	G
36	DA	1800	C
36	DA	1802	A
36	DA	1816	G
36	DA	1819	A
36	DA	1820	U
36	DA	1821	A
36	DA	1847	A
36	DA	1858	G
36	DA	1865	G
36	DA	1880	C
36	DA	1882	C
36	DA	1885	A
36	DA	1888	G
36	DA	1896	G
36	DA	1900	A
36	DA	1903	G
36	DA	1906	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	DA	1912	A
36	DA	1913	A
36	DA	1929	G
36	DA	1937	A
36	DA	1938	A
36	DA	1945	G
36	DA	1947	C
36	DA	1948	G
36	DA	1955	U
36	DA	1963	U
36	DA	1967	C
36	DA	1968	G
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	2020	A
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	2118	U
36	DA	2127	G

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Mol	Chain	Res	Type
36	DA	2129	C
36	DA	2131	G
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	2171	A
36	DA	2172	U
36	DA	2173	A
36	DA	2174	C
36	DA	2177	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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	DA	2320	A
36	DA	2334	G
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	2393	A
36	DA	2399	G
36	DA	2402	C
36	DA	2403	C
36	DA	2406	U
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	2441	C
36	DA	2448	A
36	DA	2465	C
36	DA	2468	G
36	DA	2469	A
36	DA	2470	G
36	DA	2471	C
36	DA	2476	A
36	DA	2482	G
36	DA	2484	G
36	DA	2502	G
36	DA	2505	G
36	DA	2518	A
36	DA	2520	C
36	DA	2524	G
36	DA	2529	G
36	DA	2543	G
36	DA	2554	U
36	DA	2566	A
36	DA	2567	G
36	DA	2573	C

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Mol	Chain	Res	Type
36	DA	2578	G
36	DA	2602	A
36	DA	2609	U
36	DA	2612	C
36	DA	2615	U
36	DA	2630	G
36	DA	2645	G
36	DA	2646	C
36	DA	2657	A
36	DA	2660	A
36	DA	2673	G
36	DA	2690	C
36	DA	2691	C
36	DA	2702	U
36	DA	2703	C
36	DA	2712	U
36	DA	2712(A)	A
36	DA	2713	A
36	DA	2714	G
36	DA	2720	U
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	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	2794	C
36	DA	2799	C
36	DA	2802	G
36	DA	2803	C
36	DA	2808	U

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Mol	Chain	Res	Type
36	DA	2818	G
36	DA	2820	A
36	DA	2821	A
36	DA	2823	A
36	DA	2833	G
36	DA	2834	G
36	DA	2847	U
36	DA	2849	U
36	DA	2872	G
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	26	A
37	DB	27	C
37	DB	32	C
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	68	C
37	DB	73	A
37	DB	81	G
37	DB	88	C
37	DB	89	G
37	DB	110	G
37	DB	116	G

All (198) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A

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Mol	Chain	Res	Type
1	AA	79	G
1	AA	109	A
1	AA	115	G
1	AA	119	A
1	AA	189(H)	G
1	AA	197	A
1	AA	202	U
1	AA	243	A
1	AA	245	C
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	367	U
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	573	A
1	AA	575	G
1	AA	576	G
1	AA	587	G
1	AA	687	A
1	AA	748	C
1	AA	792	A
1	AA	961	U
1	AA	968	A
1	AA	980	C
1	AA	982	U
1	AA	992	U
1	AA	1053	G
1	AA	1054	C
1	AA	1101	A
1	AA	1117	G
1	AA	1139	G
1	AA	1145	C

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Mol	Chain	Res	Type
1	AA	1157	A
1	AA	1200	C
1	AA	1213	A
1	AA	1239	A
1	AA	1285	A
1	AA	1529	G
23	AX	11	U
24	AY	20	H2U
36	BA	71	A
36	BA	181	A
36	BA	197	A
36	BA	221	A
36	BA	331	A
36	BA	332	A
36	BA	387	U
36	BA	481	G
36	BA	512	G
36	BA	587	C
36	BA	603	A
36	BA	614(C)	A
36	BA	752	A
36	BA	764	A
36	BA	790	C
36	BA	856	C
36	BA	1052	C
36	BA	1060	U
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	1912	A
36	BA	1970	A
36	BA	1992	G

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Mol	Chain	Res	Type
36	BA	2033	A
36	BA	2126	A
36	BA	2131	G
36	BA	2145	C
36	BA	2282	G
36	BA	2422	A
36	BA	2464	C
36	BA	2481	G
36	BA	2524	G
36	BA	2581	G
36	BA	2689	U
36	BA	2750	A
36	BA	2756	U
36	BA	2873	A
37	BB	16	G
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	109	A
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
1	CA	274	A
1	CA	344	A
1	CA	351	G
1	CA	368	U
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	575	G

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Mol	Chain	Res	Type
1	CA	687	A
1	CA	748	C
1	CA	792	A
1	CA	961	U
1	CA	968	A
1	CA	980	C
1	CA	982	U
1	CA	992	U
1	CA	1053	G
1	CA	1101	A
1	CA	1139	G
1	CA	1145	C
1	CA	1157	A
1	CA	1200	C
1	CA	1239	A
1	CA	1285	A
1	CA	1399	C
22	CV	18	G
22	CV	60	U
22	CW	7	A
22	CW	44	G
23	CX	11	U
24	CY	20	H2U
36	DA	71	A
36	DA	221	A
36	DA	331	A
36	DA	332	A
36	DA	387	U
36	DA	481	G
36	DA	512	G
36	DA	528	A
36	DA	587	C
36	DA	603	A
36	DA	614(C)	A
36	DA	752	A
36	DA	790	C
36	DA	856	C
36	DA	1052	C
36	DA	1060	U
36	DA	1068	G
36	DA	1069	A
36	DA	1210	A

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Mol	Chain	Res	Type
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	1912	A
36	DA	1948	G
36	DA	1970	A
36	DA	1992	G
36	DA	2033	A
36	DA	2126	A
36	DA	2131	G
36	DA	2160	G
36	DA	2282	G
36	DA	2422	A
36	DA	2481	G
36	DA	2689	U
36	DA	2750	A
36	DA	2756	U
37	DB	34	U
37	DB	42	C
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	H2U	AY	16	24	17,21,22	0.95	1 (5%)	23,30,33	1.83	4 (17%)
24	H2U	AY	17	24	17,21,22	0.91	0	23,30,33	1.85	5 (21%)
24	H2U	AY	20	24	17,21,22	0.95	1 (5%)	23,30,33	1.96	5 (21%)
24	OMC	AY	32	24	13,22,23	0.88	0	20,31,34	1.05	2 (10%)
24	MIA	AY	37	24	21,31,32	1.38	1 (4%)	26,44,47	1.88	4 (15%)
24	7MG	AY	46	24	19,26,27	1.67	3 (15%)	24,39,42	2.27	3 (12%)
24	5MU	AY	54	24	12,22,23	1.33	3 (25%)	14,32,35	4.49	3 (21%)
24	PSU	AY	55	24	13,21,22	1.22	2 (15%)	18,30,33	3.65	6 (33%)
24	4SU	AY	8	24	11,21,22	1.74	2 (18%)	13,30,33	2.42	1 (7%)
24	H2U	CY	16	24	17,21,22	1.05	2 (11%)	23,30,33	1.85	4 (17%)
24	H2U	CY	17	24	17,21,22	0.98	0	23,30,33	1.91	5 (21%)
24	H2U	CY	20	24	17,21,22	0.96	0	23,30,33	1.99	6 (26%)
24	OMC	CY	32	24	13,22,23	0.89	0	20,31,34	1.05	2 (10%)
24	MIA	CY	37	24	21,31,32	1.55	3 (14%)	26,44,47	1.44	3 (11%)
24	7MG	CY	46	24	19,26,27	1.62	3 (15%)	24,39,42	2.26	3 (12%)
24	5MU	CY	54	24	12,22,23	1.34	3 (25%)	14,32,35	4.51	3 (21%)
24	PSU	CY	55	24	13,21,22	1.25	2 (15%)	18,30,33	3.80	6 (33%)
24	4SU	CY	8	24	11,21,22	1.81	2 (18%)	13,30,33	2.45	1 (7%)

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

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	MIA	CY	37	24	-	0/11/33/34	0/3/3/3
24	7MG	CY	46	24	-	0/7/37/38	0/3/3/3
24	5MU	CY	54	24	-	0/3/25/26	0/2/2/2
24	PSU	CY	55	24	-	0/7/25/26	0/2/2/2
24	4SU	CY	8	24	-	0/3/25/26	0/2/2/2

All (28) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	46	7MG	C8-N9	-4.92	1.38	1.45
24	CY	46	7MG	C8-N9	-4.80	1.38	1.45
24	CY	46	7MG	C8-N7	-2.74	1.31	1.43
24	AY	46	7MG	C8-N7	-2.73	1.31	1.43
24	CY	37	MIA	C12-N6	-2.27	1.40	1.46
24	CY	54	5MU	C6-C5	-2.13	1.34	1.40
24	AY	54	5MU	C6-C5	-2.05	1.34	1.40
24	AY	20	H2U	C2-N1	2.01	1.38	1.35
24	CY	16	H2U	C1'-N1	2.02	1.49	1.45
24	AY	16	H2U	C6-N1	2.03	1.49	1.47
24	CY	37	MIA	C6-N1	2.12	1.36	1.33
24	CY	16	H2U	C6-N1	2.21	1.50	1.47
24	AY	55	PSU	C6-N1	2.39	1.39	1.34
24	CY	54	5MU	C6-N1	2.45	1.38	1.35
24	AY	54	5MU	C6-N1	2.53	1.38	1.35
24	AY	55	PSU	C4-N3	2.60	1.37	1.33
24	CY	55	PSU	C6-N1	2.67	1.40	1.34
24	CY	55	PSU	C4-N3	2.95	1.38	1.33
24	AY	54	5MU	C4-N3	3.04	1.38	1.33
24	CY	54	5MU	C4-N3	3.11	1.38	1.33
24	AY	8	4SU	C6-C5	3.29	1.45	1.38
24	CY	8	4SU	C6-C5	3.44	1.45	1.38
24	CY	46	7MG	C6-N1	3.48	1.39	1.33
24	AY	46	7MG	C6-N1	3.66	1.39	1.33
24	AY	8	4SU	C5-C4	4.21	1.44	1.38
24	CY	8	4SU	C5-C4	4.42	1.44	1.38
24	AY	37	MIA	C2-S10	4.47	1.79	1.75
24	CY	37	MIA	C2-S10	5.26	1.80	1.75

All (66) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	CY	55	PSU	N1-C2-N3	-12.97	120.06	128.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AY	55	PSU	N1-C2-N3	-12.47	120.38	128.33
24	CY	54	5MU	C5-C4-N3	-8.95	115.17	125.14
24	AY	54	5MU	C5-C4-N3	-8.80	115.34	125.14
24	CY	8	4SU	C5-C4-N3	-8.56	115.24	123.63
24	AY	8	4SU	C5-C4-N3	-8.35	115.45	123.63
24	AY	46	7MG	C5-C6-N1	-7.74	111.56	123.46
24	CY	46	7MG	C5-C6-N1	-7.68	111.65	123.46
24	CY	20	H2U	C4-N3-C2	-4.99	121.67	125.79
24	CY	17	H2U	C4-N3-C2	-4.86	121.78	125.79
24	AY	20	H2U	C4-N3-C2	-4.79	121.84	125.79
24	AY	16	H2U	C4-N3-C2	-4.65	121.95	125.79
24	AY	17	H2U	C4-N3-C2	-4.65	121.95	125.79
24	CY	16	H2U	C4-N3-C2	-4.62	121.98	125.79
24	AY	37	MIA	C5-C6-N1	-2.86	117.53	120.48
24	AY	55	PSU	C5-C6-N1	-2.75	120.51	124.39
24	CY	55	PSU	C5-C6-N1	-2.73	120.53	124.39
24	CY	37	MIA	C5-C6-N1	-2.70	117.70	120.48
24	CY	16	H2U	O2-C2-N1	-2.35	120.23	123.30
24	AY	17	H2U	O2-C2-N1	-2.26	120.34	123.30
24	AY	16	H2U	O2-C2-N1	-2.22	120.40	123.30
24	CY	17	H2U	O2-C2-N1	-2.17	120.47	123.30
24	CY	20	H2U	O2-C2-N1	-2.11	120.54	123.30
24	AY	20	H2U	O4'-C1'-C2'	-2.11	101.70	106.58
24	CY	20	H2U	O4'-C1'-C2'	-2.11	101.70	106.58
24	AY	37	MIA	C5-C6-N6	2.04	123.83	120.47
24	CY	54	5MU	C5M-C5-C6	2.05	122.75	118.62
24	AY	54	5MU	C5M-C5-C6	2.15	122.96	118.62
24	AY	17	H2U	C1'-N1-C2	2.21	121.33	118.27
24	CY	46	7MG	CM7-N7-C8	2.28	126.99	120.52
24	AY	46	7MG	CM7-N7-C8	2.31	127.06	120.52
24	AY	55	PSU	O4'-C1'-C2'	2.32	107.10	104.73
24	CY	17	H2U	C1'-N1-C2	2.39	121.58	118.27
24	CY	55	PSU	O4'-C1'-C2'	2.48	107.26	104.73
24	AY	32	OMC	O2'-C2'-C3'	2.64	117.81	111.21
24	CY	32	OMC	O2'-C2'-C3'	2.69	117.94	111.21
24	AY	37	MIA	C12-N6-C6	2.80	126.90	123.42
24	CY	37	MIA	C12-N6-C6	2.80	126.91	123.42
24	CY	20	H2U	C1'-N1-C2	3.04	122.48	118.27
24	AY	32	OMC	C2-N3-C4	3.11	120.00	115.61
24	AY	20	H2U	C1'-N1-C2	3.25	122.76	118.27
24	CY	32	OMC	C2-N3-C4	3.26	120.21	115.61
24	AY	55	PSU	O3'-C3'-C2'	3.26	122.42	111.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AY	55	PSU	C6-N1-C2	3.33	120.83	115.47
24	CY	55	PSU	C6-N1-C2	3.34	120.84	115.47
24	CY	55	PSU	O3'-C3'-C2'	3.49	123.18	111.83
24	AY	20	H2U	N3-C2-N1	4.01	120.61	116.60
24	CY	20	H2U	N3-C2-N1	4.14	120.74	116.60
24	AY	17	H2U	C5-C4-N3	4.16	120.63	116.71
24	AY	20	H2U	C5-C4-N3	4.19	120.65	116.71
24	CY	20	H2U	C5-C4-N3	4.29	120.75	116.71
24	CY	17	H2U	C5-C4-N3	4.32	120.77	116.71
24	CY	16	H2U	C5-C4-N3	4.34	120.80	116.71
24	AY	16	H2U	C5-C4-N3	4.36	120.81	116.71
24	AY	16	H2U	N3-C2-N1	4.38	120.98	116.60
24	AY	17	H2U	N3-C2-N1	4.40	120.99	116.60
24	CY	37	MIA	C11-S10-C2	4.47	105.12	102.26
24	CY	16	H2U	N3-C2-N1	4.52	121.12	116.60
24	CY	17	H2U	N3-C2-N1	4.59	121.19	116.60
24	AY	55	PSU	C4-N3-C2	6.58	120.93	115.25
24	CY	46	7MG	C6-N1-C2	6.71	125.25	115.94
24	AY	46	7MG	C6-N1-C2	6.75	125.30	115.94
24	CY	55	PSU	C4-N3-C2	6.91	121.22	115.25
24	AY	37	MIA	C11-S10-C2	7.47	107.05	102.26
24	CY	54	5MU	C4-N3-C2	14.09	127.43	115.25
24	AY	54	5MU	C4-N3-C2	14.10	127.44	115.25

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

14 monomers are involved in 24 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	AY	16	H2U	1	0
24	AY	20	H2U	3	0
24	AY	32	OMC	1	0
24	AY	46	7MG	1	0
24	AY	54	5MU	3	0
24	AY	55	PSU	2	0
24	AY	8	4SU	3	0
24	CY	16	H2U	1	0
24	CY	20	H2U	3	0
24	CY	32	OMC	1	0
24	CY	46	7MG	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	CY	54	5MU	3	0
24	CY	55	PSU	2	0
24	CY	8	4SU	3	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	$\# Z  > 2$
60	GDP	AZ	501	-	23,30,30	1.29	3 (13%)	30,47,47	1.87	7 (23%)
61	KIR	AZ	502	-	55,59,59	3.84	22 (40%)	53,84,84	1.75	12 (22%)
60	GDP	CZ	501	-	23,30,30	1.29	3 (13%)	30,47,47	1.83	8 (26%)
61	KIR	CZ	502	-	55,59,59	3.82	22 (40%)	53,84,84	1.73	11 (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
60	GDP	AZ	501	-	-	0/12/32/32	0/3/3/3
61	KIR	AZ	502	-	-	0/54/98/98	0/3/3/3
60	GDP	CZ	501	-	-	0/12/32/32	0/3/3/3
61	KIR	CZ	502	-	-	0/54/98/98	0/3/3/3

All (50) bond length outliers are listed below:



Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AZ	502	KIR	O18-C17	-14.85	1.22	1.44
61	CZ	502	KIR	O18-C17	-14.14	1.23	1.44
61	CZ	502	KIR	O30-C30	-11.65	1.18	1.42
61	AZ	502	KIR	O30-C30	-11.46	1.18	1.42
61	AZ	502	KIR	O34-C33	-10.32	1.30	1.44
61	CZ	502	KIR	O34-C33	-10.09	1.30	1.44
60	CZ	501	GDP	O4'-C1'	2.00	1.43	1.41
60	AZ	501	GDP	O4'-C1'	2.13	1.43	1.41
61	AZ	502	KIR	C25-C24	2.23	1.55	1.50
61	AZ	502	KIR	C44-C21	2.26	1.54	1.50
61	CZ	502	KIR	O2-C2	2.29	1.30	1.24
61	AZ	502	KIR	C6-N1	2.31	1.39	1.34
61	CZ	502	KIR	C9-C8	2.36	1.42	1.34
60	CZ	501	GDP	C2-N1	2.51	1.39	1.35
61	AZ	502	KIR	C9-C8	2.60	1.43	1.34
60	AZ	501	GDP	C2-N1	2.61	1.40	1.35
61	CZ	502	KIR	C29-C30	2.62	1.58	1.53
61	CZ	502	KIR	C20-C21	2.86	1.56	1.51
61	AZ	502	KIR	C20-C21	2.88	1.56	1.51
61	CZ	502	KIR	C6-N1	2.97	1.41	1.34
61	AZ	502	KIR	C2-C3	3.02	1.50	1.44
61	AZ	502	KIR	C37-C38	3.14	1.38	1.32
61	AZ	502	KIR	C19-C17	3.19	1.62	1.54
61	CZ	502	KIR	C37-C38	3.39	1.38	1.32
61	CZ	502	KIR	C19-C17	3.46	1.63	1.54
61	AZ	502	KIR	C42-C19	3.51	1.61	1.53
61	AZ	502	KIR	O34-C29	3.52	1.50	1.43
61	AZ	502	KIR	C5-C4	3.55	1.46	1.39
61	AZ	502	KIR	C8-C7	3.58	1.57	1.47
61	CZ	502	KIR	C8-C7	3.76	1.57	1.47
61	CZ	502	KIR	C2-C3	3.77	1.52	1.44
61	AZ	502	KIR	O29-C29	3.82	1.48	1.40
61	CZ	502	KIR	C42-C19	3.92	1.62	1.53
61	CZ	502	KIR	C5-C4	4.07	1.47	1.39
60	AZ	501	GDP	C6-N1	4.23	1.41	1.33
60	CZ	501	GDP	C6-N1	4.30	1.41	1.33
61	AZ	502	KIR	C2-N1	4.37	1.41	1.33
61	AZ	502	KIR	C32-C31	4.38	1.62	1.55
61	CZ	502	KIR	C19-C20	4.54	1.61	1.53
61	CZ	502	KIR	O34-C29	4.83	1.52	1.43
61	CZ	502	KIR	O29-C29	4.93	1.50	1.40
61	CZ	502	KIR	C22-C21	4.96	1.38	1.34
61	CZ	502	KIR	C32-C31	5.08	1.63	1.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	CZ	502	KIR	C2-N1	5.15	1.42	1.33
61	CZ	502	KIR	C27-N26	5.32	1.44	1.33
61	AZ	502	KIR	C19-C20	5.38	1.62	1.53
61	AZ	502	KIR	C27-N26	5.53	1.45	1.33
61	CZ	502	KIR	C45-C28	5.84	1.62	1.54
61	AZ	502	KIR	C22-C21	6.02	1.39	1.34
61	AZ	502	KIR	C45-C28	7.98	1.64	1.54

All (38) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	AZ	501	GDP	PA-O3A-PB	-4.80	116.58	132.67
61	AZ	502	KIR	O29-C29-O34	-4.65	102.49	110.18
60	CZ	501	GDP	PA-O3A-PB	-4.63	117.13	132.67
60	CZ	501	GDP	N3-C2-N1	-4.60	120.44	127.44
60	AZ	501	GDP	N3-C2-N1	-4.45	120.67	127.44
61	CZ	502	KIR	O29-C29-O34	-4.35	102.99	110.18
61	CZ	502	KIR	C11-C10-C9	-3.94	114.68	123.39
61	AZ	502	KIR	C11-C10-C9	-3.89	114.79	123.39
61	AZ	502	KIR	C48-C32-C47	-3.82	101.41	107.74
61	CZ	502	KIR	C48-C32-C47	-3.80	101.44	107.74
60	AZ	501	GDP	C5-C6-N1	-3.80	118.40	123.59
60	CZ	501	GDP	C5-C6-N1	-3.54	118.75	123.59
61	CZ	502	KIR	C23-C22-C21	-3.06	124.17	127.39
61	AZ	502	KIR	C23-C22-C21	-2.88	124.36	127.39
60	AZ	501	GDP	C5'-C4'-C3'	-2.52	105.22	115.21
61	CZ	502	KIR	O27-C27-C28	-2.50	118.41	122.03
61	AZ	502	KIR	C29-C30-C31	-2.32	107.39	110.76
60	CZ	501	GDP	C5'-C4'-C3'	-2.27	106.22	115.21
61	AZ	502	KIR	O27-C27-C28	-2.24	118.80	122.03
61	AZ	502	KIR	C5-C6-N1	-2.22	121.37	123.90
61	CZ	502	KIR	C29-C30-C31	-2.20	107.56	110.76
60	CZ	501	GDP	C6-C5-C4	-2.03	118.47	120.90
61	CZ	502	KIR	C5-C6-N1	-2.02	121.60	123.90
61	AZ	502	KIR	C6-N1-C2	2.03	121.74	116.57
60	CZ	501	GDP	O3B-PB-O2B	2.13	115.51	107.38
60	AZ	501	GDP	O3B-PB-O2B	2.15	115.57	107.38
61	AZ	502	KIR	C44-C21-C20	2.31	119.62	115.58
60	CZ	501	GDP	N2-C2-N1	2.48	121.30	117.20
61	CZ	502	KIR	C48-C32-C31	2.55	113.58	109.19
61	CZ	502	KIR	C44-C21-C20	2.55	120.05	115.58
60	AZ	501	GDP	N2-C2-N1	2.66	121.61	117.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AZ	502	KIR	O18-C17-C16	2.72	109.75	104.21
61	AZ	502	KIR	C48-C32-C31	2.72	113.88	109.19
60	CZ	501	GDP	C6-N1-C2	2.74	119.74	115.94
60	AZ	501	GDP	C6-N1-C2	2.83	119.86	115.94
61	CZ	502	KIR	O18-C17-C16	2.97	110.25	104.21
61	CZ	502	KIR	C45-C28-C27	4.17	112.44	108.29
61	AZ	502	KIR	C45-C28-C27	4.77	113.03	108.29

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 50 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	AZ	501	GDP	12	0
61	AZ	502	KIR	11	0
60	CZ	501	GDP	13	0
61	CZ	502	KIR	14	0

## 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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	AA	1504/1522 (98%)	-0.26	30 (1%) 68 46	22, 58, 151, 200	0
1	CA	1504/1522 (98%)	-0.23	25 (1%) 73 52	39, 79, 157, 200	0
2	AB	234/256 (91%)	-0.30	3 (1%) 79 62	33, 66, 135, 154	0
2	CB	234/256 (91%)	-0.25	3 (1%) 79 62	50, 89, 142, 150	0
3	AC	206/239 (86%)	-0.58	0 100 100	25, 49, 78, 88	0
3	CC	206/239 (86%)	-0.42	1 (0%) 91 83	53, 80, 106, 113	0
4	AD	208/209 (99%)	0.10	8 (3%) 44 21	59, 88, 122, 126	0
4	CD	208/209 (99%)	0.18	10 (4%) 34 15	79, 105, 125, 135	0
5	AE	150/162 (92%)	-0.61	0 100 100	30, 45, 71, 97	0
5	CE	150/162 (92%)	-0.46	0 100 100	48, 63, 85, 102	0
6	AF	101/101 (100%)	-0.48	1 (0%) 84 69	48, 74, 94, 105	0
6	CF	101/101 (100%)	-0.12	1 (0%) 84 69	79, 98, 111, 119	0
7	AG	155/156 (99%)	-0.36	5 (3%) 51 27	39, 65, 96, 117	0
7	CG	155/156 (99%)	-0.06	5 (3%) 51 27	71, 95, 115, 127	0
8	AH	138/138 (100%)	-0.54	0 100 100	32, 49, 69, 74	0
8	CH	138/138 (100%)	-0.43	0 100 100	46, 64, 80, 87	0
9	AI	127/128 (99%)	-0.19	1 (0%) 87 75	32, 68, 111, 124	0
9	CI	127/128 (99%)	0.44	12 (9%) 11 4	66, 106, 132, 139	0
10	AJ	98/105 (93%)	-0.08	1 (1%) 84 69	33, 70, 112, 125	0
10	CJ	98/105 (93%)	0.46	10 (10%) 9 3	66, 109, 144, 148	0
11	AK	119/129 (92%)	-0.41	2 (1%) 73 52	32, 50, 92, 118	0
11	CK	119/129 (92%)	-0.21	3 (2%) 61 37	52, 76, 100, 120	0
12	AL	124/132 (93%)	-0.26	1 (0%) 87 75	33, 61, 85, 124	0
12	CL	124/132 (93%)	-0.15	2 (1%) 74 55	47, 72, 99, 131	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AM	124/126 (98%)	-0.07	5 (4%) 42 20	43, 72, 103, 131	0
13	CM	124/126 (98%)	0.07	7 (5%) 28 11	76, 99, 122, 142	0
14	AN	60/61 (98%)	-0.27	1 (1%) 73 52	30, 53, 78, 84	0
14	CN	60/61 (98%)	0.07	2 (3%) 50 26	65, 83, 102, 105	0
15	AO	88/89 (98%)	-0.50	0 100 100	36, 54, 82, 88	0
15	CO	88/89 (98%)	-0.29	0 100 100	44, 68, 90, 98	0
16	AP	83/88 (94%)	0.01	2 (2%) 62 39	61, 74, 98, 133	0
16	CP	83/88 (94%)	0.19	1 (1%) 81 64	74, 90, 110, 132	0
17	AQ	99/105 (94%)	-0.36	0 100 100	40, 60, 79, 89	0
17	CQ	99/105 (94%)	-0.20	0 100 100	53, 71, 91, 102	0
18	AR	70/88 (79%)	-0.42	0 100 100	39, 60, 90, 99	0
18	CR	70/88 (79%)	-0.24	0 100 100	56, 81, 108, 118	0
19	AS	78/93 (83%)	-0.03	2 (2%) 59 35	52, 73, 117, 127	0
19	CS	78/93 (83%)	0.17	6 (7%) 16 5	81, 97, 126, 132	0
20	AT	99/106 (93%)	0.16	4 (4%) 42 20	55, 80, 126, 130	0
20	CT	99/106 (93%)	0.11	2 (2%) 68 46	74, 90, 120, 122	0
21	AU	24/27 (88%)	0.00	2 (8%) 14 5	41, 55, 79, 99	0
21	CU	24/27 (88%)	0.64	2 (8%) 14 5	74, 92, 105, 113	0
22	AV	76/76 (100%)	-0.45	0 100 100	35, 72, 107, 124	0
22	AW	76/76 (100%)	0.40	9 (11%) 6 2	64, 140, 185, 199	0
22	CV	76/76 (100%)	-0.28	0 100 100	51, 86, 120, 137	0
22	CW	76/76 (100%)	0.45	7 (9%) 11 4	94, 170, 191, 200	0
23	AX	17/27 (62%)	0.49	2 (11%) 6 2	31, 91, 142, 143	0
23	CX	17/27 (62%)	2.34	12 (70%) 0 0	69, 122, 155, 157	0
24	AY	68/77 (88%)	0.27	2 (2%) 55 31	57, 140, 177, 197	0
24	CY	68/77 (88%)	0.39	1 (1%) 76 58	73, 142, 175, 198	0
25	AZ	385/405 (95%)	0.67	33 (8%) 13 4	87, 124, 151, 169	0
25	CZ	385/405 (95%)	1.42	110 (28%) 1 0	111, 133, 156, 170	0
26	B0	84/85 (98%)	0.18	6 (7%) 19 7	58, 73, 107, 122	0
26	D0	84/85 (98%)	0.51	9 (10%) 8 3	69, 86, 113, 123	0
27	B1	93/98 (94%)	0.05	4 (4%) 39 18	45, 69, 129, 134	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
27	D1	93/98 (94%)	0.18	1 (1%) 82 66	59, 86, 133, 139	0
28	B2	71/72 (98%)	1.43	20 (28%) 1 0	130, 143, 155, 158	0
28	D2	71/72 (98%)	0.53	11 (15%) 3 1	100, 122, 136, 143	0
29	B3	59/60 (98%)	0.23	3 (5%) 32 13	65, 81, 106, 122	0
29	D3	59/60 (98%)	0.33	3 (5%) 32 13	60, 93, 106, 126	0
30	B4	44/71 (61%)	0.70	5 (11%) 7 2	111, 140, 167, 173	0
30	D4	44/71 (61%)	1.21	13 (29%) 1 0	136, 163, 184, 186	0
31	B5	59/60 (98%)	0.18	4 (6%) 20 7	62, 87, 148, 163	0
31	D5	59/60 (98%)	0.27	4 (6%) 20 7	63, 92, 145, 154	0
32	B6	50/54 (92%)	0.54	4 (8%) 15 5	57, 84, 103, 110	0
32	D6	50/54 (92%)	0.98	9 (18%) 2 1	73, 97, 116, 122	0
33	B7	48/49 (97%)	0.16	3 (6%) 23 9	51, 64, 101, 121	0
33	D7	48/49 (97%)	0.12	3 (6%) 23 9	64, 73, 104, 125	0
34	B8	63/65 (96%)	0.26	2 (3%) 51 27	56, 73, 91, 115	0
34	D8	63/65 (96%)	0.42	5 (7%) 15 5	72, 85, 101, 120	0
35	B9	37/37 (100%)	0.61	4 (10%) 8 2	73, 85, 103, 104	0
35	D9	37/37 (100%)	1.18	6 (16%) 3 1	67, 96, 107, 120	0
36	BA	2901/2915 (99%)	-0.13	79 (2%) 58 34	26, 77, 181, 200	0
36	DA	2901/2915 (99%)	-0.08	80 (2%) 56 32	37, 87, 180, 200	0
37	BB	119/122 (97%)	-0.47	0 100 100	59, 85, 112, 132	0
37	DB	119/122 (97%)	-0.43	0 100 100	69, 101, 126, 132	0
38	BC	228/229 (99%)	0.04	14 (6%) 25 10	50, 79, 160, 173	0
38	DC	228/229 (99%)	0.51	26 (11%) 7 2	68, 103, 170, 180	0
39	BD	275/276 (99%)	-0.40	4 (1%) 76 58	30, 49, 83, 105	0
39	DD	275/276 (99%)	-0.30	3 (1%) 82 66	42, 61, 91, 111	0
40	BE	204/206 (99%)	0.01	5 (2%) 61 37	50, 79, 128, 140	0
40	DE	204/206 (99%)	0.03	6 (2%) 55 31	47, 84, 133, 138	0
41	BF	207/210 (98%)	0.35	14 (6%) 20 7	53, 112, 162, 170	0
41	DF	207/210 (98%)	0.46	18 (8%) 13 4	62, 118, 161, 170	0
42	BG	181/182 (99%)	-0.02	9 (4%) 32 13	63, 86, 117, 130	0
42	DG	181/182 (99%)	0.08	8 (4%) 38 17	89, 108, 136, 144	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
43	BH	159/180 (88%)	0.78	25 (15%) 3 1	93, 134, 152, 156	0
43	DH	159/180 (88%)	0.56	13 (8%) 14 5	87, 129, 146, 154	0
44	BJ	0/173	-	-	-	-
44	DJ	0/173	-	-	-	-
45	BK	0/147	-	-	-	-
45	DK	0/147	-	-	-	-
46	BN	138/140 (98%)	-0.06	1 (0%) 89 78	63, 89, 125, 134	0
46	DN	138/140 (98%)	-0.16	0 100 100	69, 90, 125, 133	0
47	BO	122/122 (100%)	-0.43	0 100 100	46, 63, 77, 85	0
47	DO	122/122 (100%)	-0.37	0 100 100	47, 67, 83, 89	0
48	BP	146/150 (97%)	0.56	13 (8%) 12 4	55, 103, 133, 150	0
48	DP	146/150 (97%)	0.75	22 (15%) 3 1	64, 115, 137, 153	0
49	BQ	141/141 (100%)	-0.20	3 (2%) 67 44	46, 64, 86, 128	0
49	DQ	141/141 (100%)	-0.20	2 (1%) 78 60	51, 66, 90, 126	0
50	BR	117/118 (99%)	0.09	3 (2%) 59 35	60, 85, 107, 126	0
50	DR	117/118 (99%)	0.09	1 (0%) 85 72	57, 90, 105, 123	0
51	BS	98/112 (87%)	0.15	3 (3%) 52 28	63, 90, 116, 126	0
51	DS	98/112 (87%)	0.47	9 (9%) 11 4	77, 102, 126, 128	0
52	BT	137/146 (93%)	0.01	8 (5%) 26 11	58, 84, 142, 167	0
52	DT	137/146 (93%)	-0.00	10 (7%) 18 6	63, 90, 147, 169	0
53	BU	117/118 (99%)	-0.03	1 (0%) 85 72	64, 79, 111, 128	0
53	DU	117/118 (99%)	-0.01	2 (1%) 73 52	63, 86, 110, 124	0
54	BV	101/101 (100%)	0.31	5 (4%) 32 13	62, 116, 129, 136	0
54	DV	101/101 (100%)	0.41	6 (5%) 26 11	71, 115, 134, 136	0
55	BW	113/113 (100%)	0.13	5 (4%) 38 17	65, 90, 116, 141	0
55	DW	113/113 (100%)	0.34	5 (4%) 38 17	73, 93, 123, 145	0
56	BX	92/96 (95%)	0.24	1 (1%) 82 66	75, 95, 110, 118	0
56	DX	92/96 (95%)	0.23	1 (1%) 82 66	82, 100, 116, 120	0
57	BY	100/110 (90%)	1.30	26 (26%) 1 0	108, 134, 162, 168	0
57	DY	100/110 (90%)	1.19	21 (21%) 1 0	107, 136, 160, 169	0
58	BZ	183/206 (88%)	-0.11	5 (2%) 58 34	56, 83, 120, 132	0
58	DZ	183/206 (88%)	-0.03	5 (2%) 58 34	62, 88, 120, 140	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å <sup>2</sup> )	Q<0.9
All	All	21996/23370 (94%)	-0.00	917 (4%)	40	19	22, 84, 151, 200	0

All (917) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	CZ	183	HIS	12.6
41	BF	24	LEU	11.7
25	AZ	85	HIS	11.1
49	BQ	141	GLN	10.7
36	BA	1077	A	9.7
58	DZ	114	GLY	9.5
42	DG	2	PRO	9.3
41	DF	24	LEU	9.2
35	D9	37	GLY	9.0
41	DF	1	MET	8.8
36	BA	654(K)	C	8.7
36	DA	1077	A	8.7
36	BA	654(T)	C	8.7
38	DC	1	PRO	8.5
25	CZ	141	VAL	8.5
36	BA	654(S)	G	8.2
58	DZ	113	ALA	8.1
31	D5	59	GLU	8.1
38	BC	1	PRO	8.0
25	AZ	63	ILE	7.8
25	CZ	36	ALA	7.6
1	CA	89	C	7.6
25	CZ	83	PRO	7.6
36	BA	1066	U	7.6
36	BA	654(G)	C	7.5
38	DC	106	GLY	7.5
26	B0	3	HIS	7.4
25	CZ	199	ILE	7.4
36	BA	654(C)	G	7.4
36	BA	654(I)	C	7.4
11	AK	129	SER	7.2
31	D5	2	ALA	7.2
35	D9	1	MET	7.2
36	DA	1066	U	7.1
57	BY	2	ARG	7.1
57	DY	51	VAL	7.1
36	DA	654(E)	G	7.1

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Mol	Chain	Res	Type	RSRZ
57	BY	51	VAL	7.1
29	D3	1	MET	7.0
38	DC	105	ASP	7.0
31	B5	59	GLU	6.9
42	BG	48	GLU	6.8
43	DH	170	ARG	6.8
1	CA	88	A	6.8
36	DA	654(V)	A	6.8
54	DV	36	PRO	6.7
57	DY	53	PRO	6.7
49	DQ	141	GLN	6.6
1	AA	88	A	6.5
38	DC	115	ALA	6.5
25	CZ	186	PRO	6.5
14	CN	2	ALA	6.4
30	B4	47	GLN	6.3
58	BZ	114	GLY	6.2
36	BA	2802	G	6.2
41	BF	20	LEU	6.2
20	AT	106	ALA	6.1
36	DA	654(C)	G	6.1
43	BH	52	VAL	6.1
36	DA	654(K)	C	6.0
25	CZ	193	ASN	6.0
36	DA	654(J)	A	6.0
40	BE	204	ALA	6.0
25	CZ	33	TYR	6.0
43	BH	170	ARG	6.0
30	D4	13	ARG	5.9
22	AW	5	G	5.9
43	DH	169	VAL	5.9
36	BA	654(V)	A	5.8
36	DA	2802	G	5.8
36	DA	2896	C	5.8
43	BH	169	VAL	5.7
26	D0	6	GLY	5.7
43	DH	53	GLU	5.7
36	DA	1509	C	5.7
28	B2	63	VAL	5.7
57	BY	45	VAL	5.7
31	B5	2	ALA	5.6
26	B0	4	LYS	5.6

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Mol	Chain	Res	Type	RSRZ
25	AZ	42	VAL	5.6
32	B6	42	TRP	5.6
41	BF	8	GLN	5.6
35	B9	1	MET	5.6
36	BA	654(J)	A	5.5
38	BC	105	ASP	5.5
25	CZ	37	ALA	5.5
28	B2	71	ASN	5.5
28	D2	72	ALA	5.5
25	CZ	72	THR	5.5
28	B2	38	GLN	5.4
30	B4	32	TYR	5.4
13	AM	125	ARG	5.4
26	B0	2	ALA	5.4
13	AM	124	PRO	5.4
57	BY	6	HIS	5.3
25	AZ	41	ASN	5.2
52	BT	136	GLN	5.2
48	DP	149	GLU	5.2
36	BA	654(F)	C	5.2
12	AL	128	ALA	5.1
32	D6	26	ASN	5.1
13	AM	84	ILE	5.1
22	AW	7	A	5.1
30	D4	32	TYR	5.1
1	CA	81	U	5.0
28	B2	42	GLY	5.0
38	BC	106	GLY	5.0
36	DA	614(B)	G	5.0
36	BA	2896	C	4.9
36	DA	352	G	4.9
57	BY	52	SER	4.9
58	DZ	112	ARG	4.9
36	BA	654(E)	G	4.9
30	D4	23	GLU	4.9
42	BG	50	ALA	4.9
38	DC	107	TRP	4.9
36	DA	1534	U	4.9
36	BA	2207	G	4.9
42	BG	2	PRO	4.9
1	CA	1036	G	4.8
57	DY	54	LYS	4.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
38	BC	109	ASP	4.8
36	DA	2897	U	4.8
36	BA	654(H)	G	4.8
36	DA	654(S)	G	4.7
36	DA	275	G	4.7
48	BP	150	ALA	4.7
25	CZ	184	ARG	4.7
31	D5	60	VAL	4.7
25	CZ	143	ASP	4.7
25	CZ	41	ASN	4.7
36	DA	654(I)	C	4.7
25	CZ	87	ASP	4.7
36	DA	277	C	4.6
36	BA	2799	C	4.6
28	B2	64	LEU	4.6
36	DA	156	U	4.6
36	BA	1093	G	4.6
25	AZ	112	PRO	4.6
4	AD	209	ARG	4.6
1	AA	1036	G	4.6
36	DA	654(F)	C	4.6
25	CZ	195	TRP	4.6
57	BY	55	TYR	4.5
1	AA	78	G	4.5
1	AA	1030(A)	G	4.5
36	DA	654(H)	G	4.5
36	BA	352	G	4.5
32	D6	42	TRP	4.5
41	BF	12	LEU	4.5
34	B8	64	TYR	4.5
30	D4	47	GLN	4.5
36	BA	2796	U	4.5
36	BA	654(D)	G	4.5
25	CZ	73	ALA	4.5
36	DA	2804	C	4.5
42	DG	48	GLU	4.5
57	BY	39	VAL	4.5
36	BA	654(L)	G	4.4
43	BH	81	GLU	4.4
7	CG	81	GLY	4.4
41	DF	12	LEU	4.4
25	CZ	337	GLY	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	82	U	4.3
57	BY	15	VAL	4.3
25	CZ	185	ASN	4.3
57	BY	28	LYS	4.3
30	B4	42	PHE	4.3
33	B7	47	ARG	4.3
9	CI	4	TYR	4.3
25	CZ	290	LEU	4.3
36	BA	1087	G	4.3
36	DA	2796	U	4.3
29	B3	1	MET	4.3
28	B2	16	LEU	4.3
36	DA	1076	C	4.3
25	CZ	233	GLY	4.2
31	B5	58	LEU	4.2
13	CM	125	ARG	4.2
22	AW	6	G	4.2
28	B2	50	ILE	4.2
38	BC	122	ALA	4.2
25	AZ	183	HIS	4.2
57	BY	5	MET	4.2
25	CZ	9	LYS	4.1
25	CZ	247	VAL	4.1
23	CX	27	A	4.1
25	CZ	40	PRO	4.1
40	BE	69	LYS	4.1
20	AT	9	ASN	4.1
1	AA	81	U	4.1
42	DG	84	LYS	4.1
40	DE	204	ALA	4.1
26	D0	7	LEU	4.1
25	CZ	140	MET	4.1
14	AN	2	ALA	4.1
57	DY	52	SER	4.1
57	DY	91	GLU	4.1
57	BY	53	PRO	4.1
25	CZ	206	ILE	4.1
52	BT	135	ALA	4.1
25	CZ	196	VAL	4.0
36	BA	2795	G	4.0
28	B2	49	LYS	4.0
58	BZ	113	ALA	4.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	B2	4	SER	4.0
57	DY	5	MET	4.0
36	DA	1535	A	4.0
57	BY	3	VAL	4.0
28	B2	68	ARG	4.0
13	CM	123	ALA	4.0
55	DW	113	LYS	4.0
53	BU	118	GLY	4.0
58	BZ	115	GLY	3.9
25	CZ	63	ILE	3.9
57	DY	55	TYR	3.9
35	D9	34	GLN	3.9
40	BE	68	ALA	3.9
25	CZ	179	LEU	3.9
36	BA	277	C	3.9
57	DY	28	LYS	3.9
32	D6	46	HIS	3.9
2	CB	7	VAL	3.9
36	DA	2207	G	3.9
52	DT	137	LYS	3.9
25	AZ	102	ALA	3.9
51	DS	80	LEU	3.9
48	DP	7	ARG	3.8
4	CD	152	SER	3.8
51	DS	59	LYS	3.8
1	AA	76	C	3.8
21	CU	9	ARG	3.8
41	DF	23	ASP	3.8
25	CZ	42	VAL	3.8
43	BH	53	GLU	3.8
57	BY	91	GLU	3.8
9	CI	19	LEU	3.8
9	CI	92	TYR	3.8
36	BA	1065	U	3.8
36	BA	2801(A)	A	3.8
31	D5	58	LEU	3.8
39	DD	276	LYS	3.8
1	CA	204	U	3.8
36	DA	654	A	3.8
4	AD	151	LYS	3.8
1	AA	1129	C	3.8
25	CZ	335	PHE	3.7

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Mol	Chain	Res	Type	RSRZ
36	BA	275	G	3.7
25	CZ	176	LEU	3.7
25	CZ	39	ASN	3.7
32	D6	37	ARG	3.7
25	CZ	235	GLY	3.7
34	D8	64	TYR	3.7
41	BF	9	ILE	3.7
42	BG	26	GLN	3.7
13	CM	7	VAL	3.7
13	CM	84	ILE	3.7
36	DA	654(G)	C	3.7
55	DW	112	GLY	3.7
1	AA	77	G	3.7
25	CZ	29	ALA	3.7
25	CZ	322	VAL	3.6
42	BG	127	GLY	3.6
36	DA	155	U	3.6
51	BS	107	GLU	3.6
41	BF	1	MET	3.6
25	CZ	139	ASP	3.6
36	BA	271(N)	U	3.6
41	BF	18	ARG	3.6
36	DA	1104	C	3.6
12	CL	127	GLU	3.6
39	DD	25	THR	3.6
7	AG	156	TRP	3.6
25	CZ	217	VAL	3.6
30	D4	38	LYS	3.6
41	BF	11	VAL	3.6
25	CZ	212	THR	3.5
36	DA	1065	U	3.5
32	B6	54	ILE	3.5
41	BF	25	PRO	3.5
57	BY	85	VAL	3.5
36	BA	229	A	3.5
1	AA	1026	G	3.5
10	CJ	85	LEU	3.5
25	CZ	260	PRO	3.5
38	DC	76	ALA	3.5
36	DA	1074	G	3.5
36	BA	1509	C	3.5
42	DG	49	ASP	3.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
38	DC	77	ILE	3.5
36	DA	276	A	3.5
32	D6	36	LEU	3.5
25	CZ	318	ALA	3.4
36	DA	1087	G	3.4
23	CX	13	A	3.4
19	CS	42	PRO	3.4
38	DC	109	ASP	3.4
57	BY	61	ILE	3.4
51	DS	90	GLY	3.4
25	CZ	213	PRO	3.4
36	DA	1174	A	3.4
48	BP	125	VAL	3.4
1	AA	89	C	3.4
43	DH	86	GLU	3.4
30	D4	42	PHE	3.4
43	BH	51	ARG	3.4
43	DH	21	PRO	3.4
36	DA	654(L)	G	3.4
25	AZ	326	GLU	3.4
52	DT	39	ARG	3.4
28	B2	41	ILE	3.4
25	AZ	23	GLY	3.4
40	BE	54	GLN	3.4
28	B2	53	LEU	3.4
52	DT	135	ALA	3.4
4	CD	209	ARG	3.4
1	AA	1030(C)	G	3.3
36	BA	654	A	3.3
57	DY	86	ARG	3.3
57	BY	56	PRO	3.3
36	DA	654(R)	C	3.3
57	DY	34	LYS	3.3
25	CZ	280	GLY	3.3
28	B2	37	PHE	3.3
38	DC	125	SER	3.3
25	CZ	142	ASP	3.3
23	AX	27	A	3.3
32	D6	20	ASN	3.3
36	BA	2894	G	3.3
36	BA	1174	A	3.3
48	BP	17	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
41	DF	11	VAL	3.3
25	CZ	336	SER	3.3
32	B6	46	HIS	3.3
1	AA	1031	G	3.3
28	B2	8	LYS	3.3
11	CK	129	SER	3.3
38	DC	93	TYR	3.3
57	DY	45	VAL	3.3
1	AA	1447	A	3.2
19	AS	81	ARG	3.2
36	DA	2795	G	3.2
28	B2	56	GLN	3.2
54	DV	48	GLY	3.2
56	DX	5	TYR	3.2
35	B9	28	GLU	3.2
51	BS	54	LEU	3.2
4	CD	47	ARG	3.2
43	DH	148	ILE	3.2
48	BP	103	ALA	3.2
27	D1	85	LEU	3.2
22	CW	21	A	3.2
39	BD	276	LYS	3.2
36	DA	271(L)	U	3.2
48	DP	107	LYS	3.2
29	D3	2	PRO	3.2
20	AT	101	GLY	3.2
25	CZ	287	GLY	3.2
55	BW	112	GLY	3.2
42	BG	49	ASP	3.2
21	AU	25	LYS	3.2
7	CG	79	ARG	3.2
26	D0	5	LYS	3.2
28	D2	8	LYS	3.2
25	AZ	40	PRO	3.2
36	DA	2792	G	3.2
26	D0	85	ALA	3.2
25	CZ	264	ARG	3.2
36	BA	1069	A	3.2
57	DY	2	ARG	3.2
30	D4	6	HIS	3.2
43	BH	88	LEU	3.2
23	CX	12	A	3.1

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Mol	Chain	Res	Type	RSRZ
25	AZ	334	PHE	3.1
38	DC	121	GLY	3.1
11	CK	12	ARG	3.1
50	DR	2	ARG	3.1
36	DA	2801	A	3.1
49	DQ	140	ALA	3.1
27	B1	85	LEU	3.1
33	D7	1	MET	3.1
48	DP	15	ARG	3.1
16	CP	1	MET	3.1
23	CX	15	A	3.1
32	D6	54	ILE	3.1
48	BP	84	ASN	3.1
32	D6	35	GLU	3.1
40	DE	76	ARG	3.1
25	CZ	320	VAL	3.1
1	AA	1030(D)	A	3.1
52	DT	132	LYS	3.1
25	AZ	82	CYS	3.1
25	AZ	218	ASP	3.1
25	CZ	85	HIS	3.1
26	B0	6	GLY	3.1
38	DC	55	ASP	3.1
48	DP	121	LYS	3.1
25	AZ	169	PRO	3.1
36	BA	1068	G	3.1
30	D4	34	GLU	3.1
7	AG	79	ARG	3.1
14	CN	14	PRO	3.1
36	DA	1078	U	3.1
25	CZ	13	ASN	3.1
38	BC	125	SER	3.0
1	CA	77	G	3.0
23	CX	11	U	3.0
43	BH	34	GLU	3.0
38	DC	86	ALA	3.0
25	CZ	177	LEU	3.0
36	BA	1073	A	3.0
36	DA	1097	U	3.0
25	CZ	253	VAL	3.0
13	AM	122	LYS	3.0
30	B4	5	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
19	AS	43	GLU	3.0
25	AZ	186	PRO	3.0
52	BT	39	ARG	3.0
57	DY	75	ILE	3.0
36	DA	1089	G	3.0
28	D2	60	LEU	3.0
57	BY	86	ARG	3.0
36	BA	1080	C	3.0
56	BX	48	LYS	3.0
1	CA	80	G	3.0
25	CZ	307	PRO	3.0
1	AA	1030(B)	C	3.0
32	B6	23	THR	3.0
36	BA	654(M)	C	3.0
34	D8	48	PHE	3.0
36	DA	34	C	3.0
51	DS	60	GLY	3.0
28	B2	54	LYS	2.9
36	DA	271(J)	C	2.9
25	CZ	71	GLU	2.9
10	CJ	23	ILE	2.9
22	CW	5	G	2.9
25	CZ	157	LEU	2.9
36	BA	1420	U	2.9
38	DC	97	GLU	2.9
43	BH	44	VAL	2.9
7	AG	78	ARG	2.9
38	BC	95	GLY	2.9
48	DP	76	LYS	2.9
25	CZ	266	VAL	2.9
36	DA	278	A	2.9
48	DP	114	ILE	2.9
13	AM	7	VAL	2.9
9	AI	58	HIS	2.9
35	D9	20	HIS	2.9
10	CJ	77	PRO	2.9
25	CZ	202	LEU	2.9
36	DA	1068	G	2.9
57	BY	54	LYS	2.9
25	CZ	8	THR	2.9
32	D6	21	TYR	2.9
27	B1	84	GLY	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
36	BA	1535	A	2.9
1	CA	1129	C	2.9
36	BA	654(R)	C	2.9
36	DA	654(D)	G	2.9
23	AX	13	A	2.9
52	DT	134	GLU	2.9
23	CX	18	G	2.9
28	D2	71	ASN	2.9
4	CD	112	VAL	2.9
36	BA	2803	C	2.9
22	AW	71	G	2.8
36	BA	157	U	2.8
28	B2	51	ARG	2.8
36	BA	2801	A	2.8
50	BR	118	GLU	2.8
36	BA	271(K)	U	2.8
57	DY	3	VAL	2.8
38	DC	89	ALA	2.8
1	AA	1029	C	2.8
9	CI	8	GLY	2.8
25	CZ	79	HIS	2.8
28	D2	42	GLY	2.8
1	CA	1137	C	2.8
34	B8	63	PRO	2.8
57	BY	4	LYS	2.8
36	DA	1173	G	2.8
36	DA	1740	G	2.8
36	BA	156	U	2.8
6	AF	101	ALA	2.8
1	AA	1038	C	2.8
36	DA	229	A	2.8
25	CZ	145	GLU	2.8
25	CZ	216	ASP	2.8
36	BA	1079	C	2.8
19	CS	9	VAL	2.8
28	B2	9	GLN	2.8
28	D2	43	GLN	2.8
7	CG	82	GLY	2.8
36	BA	1078	U	2.8
36	DA	1072	C	2.8
43	BH	26	VAL	2.8
30	B4	30	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
52	BT	27	THR	2.7
1	CA	1257	U	2.7
30	D4	11	PRO	2.7
1	CA	91	C	2.7
4	AD	167	GLY	2.7
23	CX	14	A	2.7
36	DA	2793	G	2.7
25	AZ	372	VAL	2.7
29	B3	9	VAL	2.7
36	BA	10	G	2.7
20	AT	104	LEU	2.7
52	BT	132	LYS	2.7
22	CW	44	G	2.7
36	DA	1093	G	2.7
55	DW	1	MET	2.7
24	AY	19	G	2.7
22	CW	16	U	2.7
48	DP	102	ARG	2.7
6	CF	101	ALA	2.7
42	BG	126	ASP	2.7
4	AD	152	SER	2.7
36	DA	1071	G	2.7
2	AB	137	ARG	2.7
36	BA	654(U)	A	2.7
55	BW	113	LYS	2.7
40	DE	59	VAL	2.7
48	BP	7	ARG	2.7
26	D0	22	GLY	2.7
41	DF	2	LYS	2.7
40	DE	53	PRO	2.7
48	BP	102	ARG	2.7
40	DE	69	LYS	2.7
50	BR	3	HIS	2.7
1	AA	1024	G	2.7
36	DA	1064	C	2.7
25	CZ	321	TYR	2.6
51	DS	107	GLU	2.6
38	DC	130	ILE	2.6
25	CZ	132	VAL	2.6
25	AZ	1	ALA	2.6
28	D2	64	LEU	2.6
38	DC	129	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
2	CB	132	LYS	2.6
43	DH	43	VAL	2.6
25	CZ	158	LEU	2.6
25	CZ	180	GLU	2.6
26	D0	13	GLY	2.6
36	BA	271(L)	U	2.6
42	DG	50	ALA	2.6
54	DV	73	SER	2.6
22	AW	34	G	2.6
33	B7	48	LYS	2.6
25	AZ	64	ASN	2.6
34	D8	35	GLN	2.6
13	CM	122	LYS	2.6
42	DG	75	LYS	2.6
36	BA	271(J)	C	2.6
42	BG	28	VAL	2.6
25	AZ	181	GLN	2.6
25	CZ	82	CYS	2.6
24	CY	18	G	2.6
35	B9	37	GLY	2.6
36	BA	1177	A	2.6
49	BQ	80	GLU	2.6
57	DY	89	PHE	2.6
38	BC	93	TYR	2.6
57	BY	34	LYS	2.6
4	CD	42	GLN	2.6
43	BH	56	SER	2.6
38	DC	95	GLY	2.6
43	BH	49	VAL	2.6
2	AB	128	GLU	2.6
25	CZ	261	GLU	2.6
1	CA	78	G	2.6
1	CA	723	U	2.6
36	DA	1073	A	2.6
53	DU	118	GLY	2.6
28	D2	68	ARG	2.6
25	AZ	84	GLY	2.6
25	CZ	215	ARG	2.6
38	BC	121	GLY	2.6
38	BC	100	ILE	2.6
25	CZ	251	ASP	2.6
41	DF	172	TRP	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
20	CT	104	LEU	2.6
25	CZ	296	GLU	2.6
11	AK	13	GLN	2.6
25	CZ	268	THR	2.6
36	BA	1081	U	2.6
36	BA	2897	U	2.6
25	CZ	200	TRP	2.6
36	BA	614(B)	G	2.6
9	CI	88	TYR	2.6
57	DY	19	LYS	2.6
28	D2	4	SER	2.6
1	AA	1001	A	2.5
1	CA	1002	G	2.5
9	CI	17	VAL	2.5
1	CA	1026	G	2.5
22	CW	34	G	2.5
7	CG	85	TYR	2.5
12	CL	128	ALA	2.5
51	BS	23	ARG	2.5
41	DF	194	MET	2.5
1	CA	1030(B)	C	2.5
25	CZ	227	ASP	2.5
36	DA	1099	G	2.5
48	BP	118	GLY	2.5
43	DH	51	ARG	2.5
2	CB	135	GLN	2.5
28	D2	38	GLN	2.5
55	BW	5	ALA	2.5
36	BA	888	C	2.5
36	DA	271(K)	U	2.5
25	CZ	263	ARG	2.5
41	DF	25	PRO	2.5
39	BD	25	THR	2.5
25	CZ	70	TYR	2.5
51	DS	54	LEU	2.5
1	AA	79	G	2.5
25	AZ	65	THR	2.5
36	BA	2190	G	2.5
4	CD	161	ASN	2.5
25	CZ	277	LEU	2.5
7	AG	84	ASN	2.5
25	AZ	252	GLU	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
48	DP	95	VAL	2.5
39	BD	275	LYS	2.5
38	DC	103	ILE	2.5
30	D4	30	GLU	2.5
38	BC	97	GLU	2.5
48	DP	127	ALA	2.5
57	BY	65	ALA	2.5
54	BV	101	GLY	2.5
25	CZ	405	GLU	2.5
36	DA	157	U	2.4
58	DZ	186	GLU	2.4
25	CZ	105	VAL	2.4
26	D0	4	LYS	2.4
3	CC	161	GLU	2.4
19	CS	43	GLU	2.4
41	DF	18	ARG	2.4
43	BH	101	ARG	2.4
48	BP	15	ARG	2.4
57	DY	4	LYS	2.4
51	DS	58	LEU	2.4
4	CD	21	LEU	2.4
4	CD	154	ASN	2.4
1	AA	1003	G	2.4
1	AA	1456	G	2.4
36	DA	654(T)	C	2.4
22	CW	47	U	2.4
41	BF	21	ALA	2.4
51	DS	83	LYS	2.4
4	AD	154	ASN	2.4
25	CZ	115	GLN	2.4
38	DC	69	GLY	2.4
41	BF	14	PRO	2.4
54	BV	53	GLU	2.4
2	AB	122	PHE	2.4
25	CZ	168	VAL	2.4
36	BA	654(Q)	C	2.4
36	BA	1088	A	2.4
43	BH	137	ASP	2.4
25	AZ	88	TYR	2.4
25	CZ	130	TYR	2.4
28	B2	6	VAL	2.4
48	DP	90	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
22	AW	48	C	2.4
36	BA	6	A	2.4
33	D7	48	LYS	2.4
43	DH	168	PRO	2.4
25	CZ	30	ALA	2.4
25	CZ	252	GLU	2.4
40	BE	88	GLY	2.4
48	DP	53	GLY	2.4
25	CZ	304	LEU	2.4
36	BA	1509(A)	A	2.4
48	DP	99	LEU	2.4
57	BY	47	LYS	2.4
21	AU	9	ARG	2.4
30	D4	43	TYR	2.4
36	DA	2794	C	2.4
52	BT	134	GLU	2.4
25	CZ	232	THR	2.4
57	DY	56	PRO	2.4
36	BA	1175	U	2.4
23	CX	16	A	2.4
23	CX	26	A	2.4
38	BC	107	TRP	2.4
25	CZ	6	VAL	2.4
1	AA	93	G	2.3
43	DH	54	ARG	2.3
54	DV	94	LEU	2.3
1	CA	1005	A	2.3
10	CJ	73	ASP	2.3
25	CZ	153	GLU	2.3
54	BV	36	PRO	2.3
48	BP	149	GLU	2.3
25	CZ	75	ARG	2.3
41	BF	134	GLY	2.3
48	DP	87	ASP	2.3
25	CZ	259	ALA	2.3
43	BH	136	ILE	2.3
43	BH	168	PRO	2.3
11	CK	11	LYS	2.3
48	BP	107	LYS	2.3
48	BP	126	VAL	2.3
43	BH	158	HIS	2.3
36	DA	271(N)	U	2.3

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Mol	Chain	Res	Type	RSRZ
36	BA	1063	G	2.3
36	DA	508	G	2.3
36	DA	1063	G	2.3
4	CD	164	ALA	2.3
42	DG	118	ARG	2.3
1	CA	1001(A)	G	2.3
58	BZ	162	GLU	2.3
52	BT	137	LYS	2.3
41	DF	129	PHE	2.3
9	CI	15	ALA	2.3
25	CZ	1	ALA	2.3
10	CJ	33	GLN	2.3
25	CZ	65	THR	2.3
34	D8	20	GLY	2.3
1	AA	83	U	2.3
43	BH	155	SER	2.3
25	AZ	301	GLY	2.3
41	DF	181	LEU	2.3
57	DY	21	LYS	2.3
1	AA	82	U	2.3
36	DA	1420	U	2.3
43	BH	42	ARG	2.3
35	B9	20	HIS	2.3
54	DV	1	MET	2.3
55	BW	82	LEU	2.3
30	D4	15	ILE	2.3
25	CZ	248	LYS	2.3
57	BY	92	ASN	2.3
25	CZ	76	HIS	2.3
25	CZ	250	GLY	2.3
36	BA	654(A)	G	2.3
42	BG	5	VAL	2.3
25	CZ	326	GLU	2.2
25	AZ	75	ARG	2.2
48	DP	65	ARG	2.2
1	CA	1022	G	2.2
25	CZ	254	GLU	2.2
36	DA	2801(A)	A	2.2
57	BY	79	CYS	2.2
38	DC	102	LYS	2.2
41	DF	83	PHE	2.2
48	DP	51	PHE	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	AD	35	ARG	2.2
19	CS	41	VAL	2.2
28	D2	19	VAL	2.2
36	DA	271(G)	C	2.2
38	DC	94	VAL	2.2
1	AA	1446	U	2.2
1	AA	204	U	2.2
16	AP	80	PHE	2.2
26	B0	7	LEU	2.2
43	BH	33	LEU	2.2
7	CG	80	VAL	2.2
36	DA	1088	A	2.2
41	BF	10	PRO	2.2
41	BF	26	ALA	2.2
1	AA	73	G	2.2
36	BA	1173	G	2.2
7	AG	81	GLY	2.2
36	DA	2799	C	2.2
25	CZ	210	ILE	2.2
36	BA	2173	A	2.2
25	CZ	203	LEU	2.2
41	DF	131	GLY	2.2
36	BA	1541	G	2.2
1	CA	90	U	2.2
57	DY	39	VAL	2.2
16	AP	82	GLN	2.2
36	DA	888	C	2.2
52	BT	2	ASN	2.2
34	D8	2	PRO	2.2
57	BY	57	GLN	2.2
25	CZ	11	HIS	2.2
25	CZ	147	LEU	2.2
25	CZ	187	LYS	2.2
52	DT	2	ASN	2.2
9	CI	13	ALA	2.2
22	AW	70	G	2.2
36	BA	1089	G	2.2
36	DA	363	G	2.2
49	BQ	140	ALA	2.2
39	BD	38	LYS	2.2
25	AZ	212	THR	2.2
38	DC	142	ALA	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
48	DP	150	ALA	2.2
55	DW	55	ALA	2.2
10	CJ	90	LEU	2.2
26	B0	5	LYS	2.2
28	B2	60	LEU	2.2
36	BA	2189	U	2.2
36	BA	2895	U	2.2
42	DG	47	LYS	2.2
27	B1	89	GLU	2.2
41	DF	156	LEU	2.2
4	AD	174	LEU	2.2
55	DW	73	ALA	2.2
26	D0	3	HIS	2.2
38	DC	100	ILE	2.2
10	CJ	55	LYS	2.1
25	CZ	102	ALA	2.1
25	CZ	334	PHE	2.1
19	CS	81	ARG	2.1
21	CU	24	ARG	2.1
25	AZ	124	ARG	2.1
26	D0	76	GLY	2.1
27	B1	86	SER	2.1
13	CM	43	THR	2.1
38	DC	113	VAL	2.1
43	DH	81	GLU	2.1
48	DP	5	ASP	2.1
9	CI	128	ARG	2.1
23	CX	17	U	2.1
55	BW	1	MET	2.1
40	DE	68	ALA	2.1
25	AZ	371	THR	2.1
36	BA	654(B)	C	2.1
36	BA	2804	C	2.1
36	DA	889	C	2.1
36	DA	1080	C	2.1
25	CZ	35	ALA	2.1
43	BH	86	GLU	2.1
48	DP	92	GLU	2.1
57	BY	90	LEU	2.1
25	CZ	398	GLY	2.1
1	CA	1125	U	2.1
22	AW	16	U	2.1

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Mol	Chain	Res	Type	RSRZ
23	CX	20	U	2.1
36	BA	1534	U	2.1
48	BP	33	ARG	2.1
4	AD	18	LYS	2.1
29	D3	10	LYS	2.1
36	BA	274	G	2.1
36	DA	6	A	2.1
30	D4	4	GLY	2.1
58	DZ	184	ALA	2.1
41	DF	39	TRP	2.1
10	CJ	4	ILE	2.1
36	DA	2179	C	2.1
33	D7	47	ARG	2.1
41	DF	14	PRO	2.1
25	CZ	77	TYR	2.1
33	B7	1	MET	2.1
1	CA	73	G	2.1
36	DA	2805	G	2.1
43	DH	52	VAL	2.1
13	CM	31	LYS	2.1
38	DC	126	LYS	2.1
25	AZ	144	PRO	2.1
48	DP	27	HIS	2.1
25	AZ	35	ALA	2.1
52	DT	106	SER	2.1
41	DF	161	GLU	2.1
48	DP	79	ARG	2.1
36	DA	2893	G	2.1
20	CT	73	HIS	2.1
38	BC	108	MET	2.1
1	CA	1452	C	2.1
23	CX	21	C	2.1
9	CI	33	PHE	2.1
46	BN	33	LEU	2.1
25	CZ	274	ARG	2.1
43	DH	97	ARG	2.1
9	CI	6	GLY	2.1
10	CJ	86	MET	2.1
39	DD	35	LYS	2.1
43	BH	32	GLU	2.1
54	DV	46	VAL	2.1
1	AA	1257	U	2.0

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Mol	Chain	Res	Type	RSRZ
36	DA	1508	A	2.0
51	DS	68	GLN	2.0
4	CD	110	PHE	2.0
25	AZ	369	THR	2.0
38	BC	55	ASP	2.0
58	BZ	148	ASP	2.0
1	AA	1001(A)	G	2.0
57	DY	88	LYS	2.0
19	CS	8	GLY	2.0
53	DU	7	GLY	2.0
10	AJ	34	VAL	2.0
29	B3	59	VAL	2.0
35	D9	16	VAL	2.0
22	CW	36	A	2.0
36	BA	2179	C	2.0
35	D9	23	VAL	2.0
22	AW	44	G	2.0
24	AY	18	G	2.0
50	BR	2	ARG	2.0
43	BH	161	GLY	2.0
52	DT	27	THR	2.0
36	BA	1048	A	2.0
1	CA	79	G	2.0
36	BA	321	G	2.0
43	BH	58	GLU	2.0
9	CI	16	ARG	2.0
52	DT	1	MET	2.0
43	BH	29	PRO	2.0
25	CZ	4	GLU	2.0
52	DT	133	GLU	2.0
25	AZ	6	VAL	2.0
25	CZ	249	VAL	2.0
25	CZ	291	ARG	2.0
25	CZ	366	ASP	2.0
31	B5	31	VAL	2.0
48	DP	71	VAL	2.0
54	BV	30	GLY	2.0
54	BV	58	VAL	2.0
10	CJ	75	ILE	2.0
25	AZ	361	MET	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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> 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	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
24	MIA	AY	37	29/30	0.91	0.25	-	64,78,89,98	0
24	H2U	AY	16	20/21	0.61	0.47	-	196,198,199,200	0
24	OMC	AY	32	21/22	0.89	0.20	-	101,105,115,115	0
24	PSU	AY	55	20/21	0.77	0.25	-	156,161,162,162	0
24	H2U	AY	20	20/21	0.83	0.43	-	186,189,193,193	0
24	5MU	CY	54	21/22	0.84	0.26	-	139,149,151,155	0
24	MIA	CY	37	29/30	0.92	0.23	-	80,87,95,99	0
24	PSU	CY	55	20/21	0.69	0.29	-	158,161,162,162	0
24	H2U	CY	17	20/21	0.62	0.57	-	199,199,200,200	0
24	OMC	CY	32	21/22	0.87	0.29	-	108,114,121,121	0
24	7MG	AY	46	24/25	0.84	0.27	-	145,150,151,151	0
24	7MG	CY	46	24/25	0.85	0.30	-	148,153,154,154	0
24	5MU	AY	54	21/22	0.81	0.20	-	139,150,152,154	0
24	4SU	AY	8	20/21	0.77	0.21	-	142,144,146,146	0
24	H2U	CY	20	20/21	0.79	0.38	-	188,191,192,192	0
24	H2U	CY	16	20/21	0.60	0.44	-	194,198,199,199	0
24	H2U	AY	17	20/21	0.68	0.36	-	199,199,200,200	0
24	4SU	CY	8	20/21	0.81	0.27	-	143,145,147,148	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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> 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	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
61	KIR	CZ	502	57/57	0.67	0.61	3.17	122,131,140,141	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
61	KIR	AZ	502	57/57	0.81	0.36	0.83	115,122,129,130	0
59	ZN	AN	101	1/1	0.98	0.18	0.80	48,48,48,48	0
59	ZN	AD	301	1/1	0.99	0.27	0.47	74,74,74,74	0
60	GDP	AZ	501	28/28	0.69	0.31	0.29	129,133,138,138	0
59	ZN	CD	301	1/1	0.99	0.28	0.10	79,79,79,79	0
60	GDP	CZ	501	28/28	0.70	0.27	-0.30	137,140,141,141	0
59	ZN	CN	101	1/1	0.99	0.17	-0.58	77,77,77,77	0
59	ZN	D4	101	1/1	0.85	0.12	-0.89	196,196,196,196	0
59	ZN	B9	101	1/1	0.92	0.12	-0.95	113,113,113,113	0
59	ZN	B4	101	1/1	0.95	0.13	-0.97	112,112,112,112	0
59	ZN	D9	101	1/1	0.90	0.17	-1.19	141,141,141,141	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.