



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:05 PM GMT

PDB ID : 4V7L
Title : The structures of viomycin bound to the 70S ribosome.
Authors : Stanley, R.E.; Blaha, G.
Deposited on : 2009-11-12
Resolution : 3.00 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (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

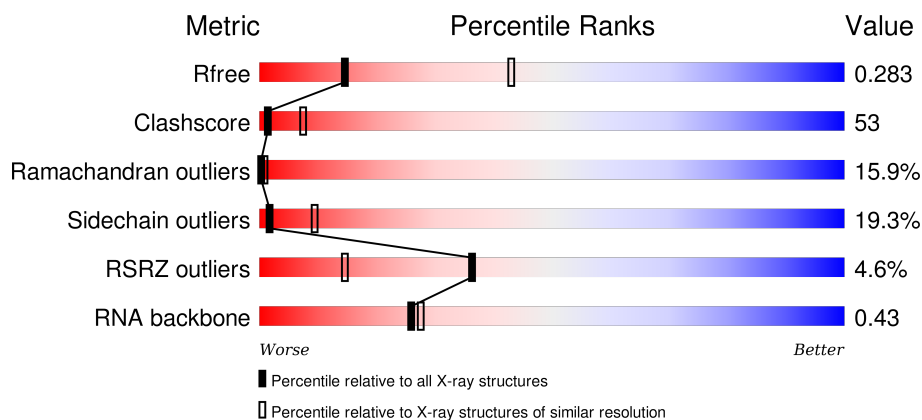
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 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	1578 (3.00-3.00)
Clashscore	102246	1912 (3.00-3.00)
Ramachandran outliers	100387	1853 (3.00-3.00)
Sidechain outliers	100360	1856 (3.00-3.00)
RSRZ outliers	91569	1592 (3.00-3.00)
RNA backbone	2183	1036 (3.40-2.60)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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	1509	<div> <div>2%</div> <div>14% 58% 23% . .</div> </div>
1	CA	1509	<div> <div>2%</div> <div>9% 64% 23% . .</div> </div>
2	AB	256	<div> <div>6%</div> <div>15% 56% 18% . 8%</div> </div>
2	CB	256	<div> <div>5%</div> <div>15% 60% 16% . 8%</div> </div>

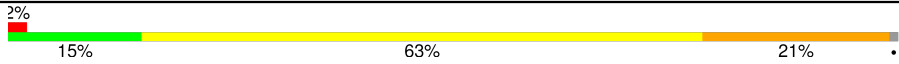
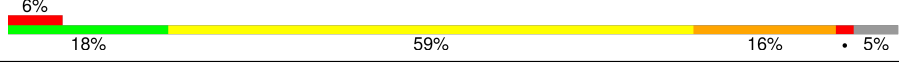
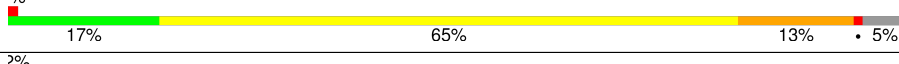
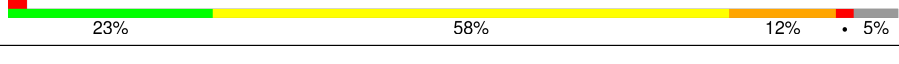
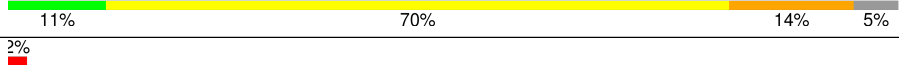
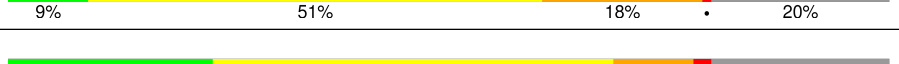
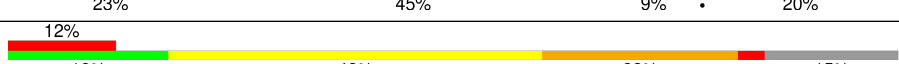
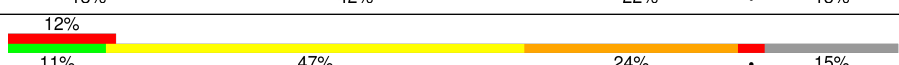
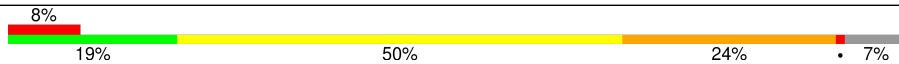
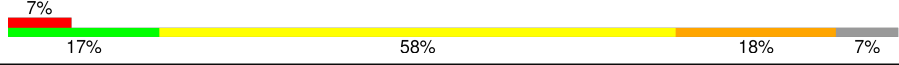
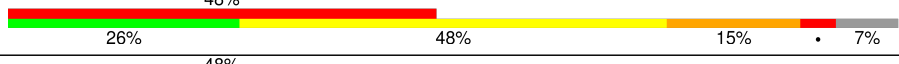
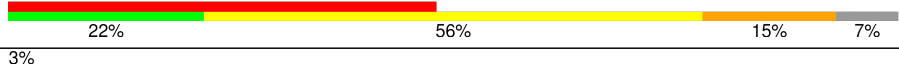

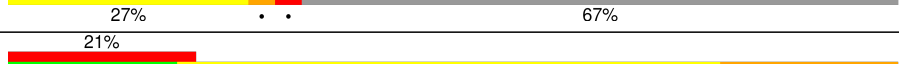
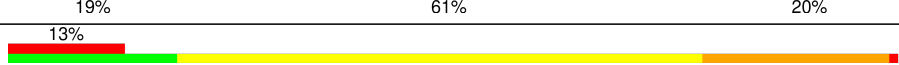
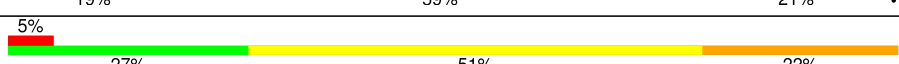
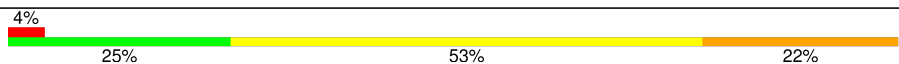
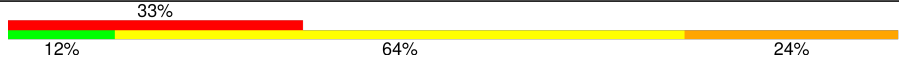
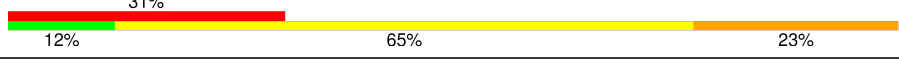






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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	132	
12	CL	132	
13	AM	126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

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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	30	
22	CV	30	
23	AW	75	
23	CW	75	
24	AX	77	
24	CX	77	
25	AY	75	
25	CY	75	
26	AZ	6	
26	CZ	6	
27	BA	2915	
27	DA	2915	


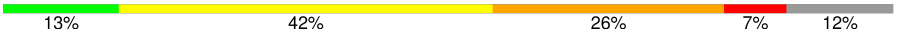


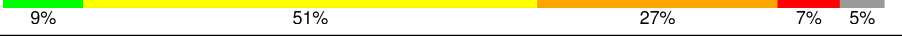
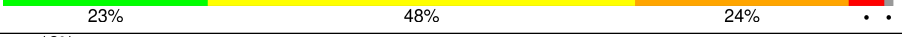
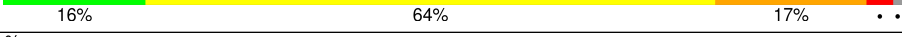

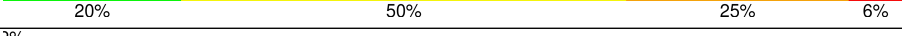

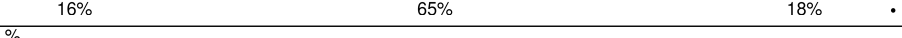
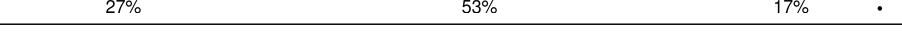
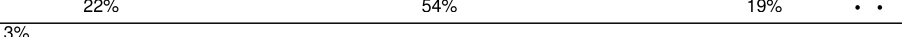
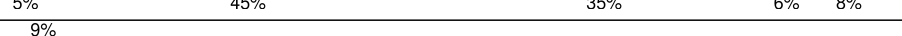


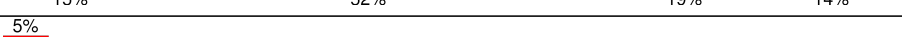
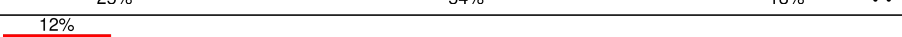
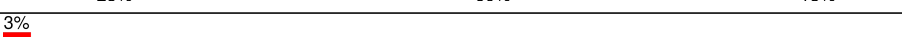




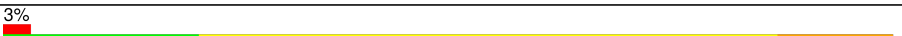

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Mol	Chain	Length	Quality of chain
28	BB	122	
28	DB	122	
29	BC	229	
29	DC	229	
30	BD	276	
30	DD	276	
31	BE	206	
31	DE	206	
32	BF	210	
32	DF	210	
33	BG	182	
33	DG	182	
34	BH	180	
34	DH	180	
35	BI	148	
35	DI	148	
36	BN	140	
36	DN	140	
37	BO	122	
37	DO	122	
38	BP	150	
38	DP	150	
39	BQ	141	
39	DQ	141	
40	BR	118	

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Mol	Chain	Length	Quality of chain
40	DR	118	
41	BS	112	
41	DS	112	
42	BT	146	
42	DT	146	
43	BU	118	
43	DU	118	
44	BV	101	
44	DV	101	
45	BW	113	
45	DW	113	
46	BX	96	
46	DX	96	
47	BY	110	
47	DY	110	
48	BZ	206	
48	DZ	206	
49	B0	85	
49	D0	85	
50	B1	98	
50	D1	98	
51	B2	72	
51	D2	72	
52	B3	60	
52	D3	60	

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Mol	Chain	Length	Quality of chain
53	B4	71	
53	D4	71	
54	B5	60	
54	D5	60	
55	B6	54	
55	D6	54	
56	B7	49	
56	D7	49	
57	B8	65	
57	D8	65	
58	B9	37	
58	D9	37	

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
26	UAL	CZ	5	-	-	X	-
26	5OH	CZ	6	-	-	X	-
59	MG	AA	1603	-	-	-	X
59	MG	AA	1619	-	-	-	X
59	MG	AA	1622	-	-	-	X
59	MG	AA	1637	-	-	-	X
59	MG	AA	1640	-	-	-	X
59	MG	AA	1665	-	-	-	X
59	MG	AA	1677	-	-	-	X
59	MG	AA	1697	-	-	-	X
59	MG	AX	105	-	-	-	X
59	MG	BA	3010	-	-	-	X
59	MG	BA	3012	-	-	-	X
59	MG	BA	3014	-	-	-	X
59	MG	BA	3018	-	-	-	X
59	MG	BA	3020	-	-	-	X
59	MG	BA	3021	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	MG	BA	3023	-	-	-	X
59	MG	BA	3024	-	-	-	X
59	MG	BA	3047	-	-	-	X
59	MG	BA	3050	-	-	-	X
59	MG	BA	3056	-	-	-	X
59	MG	BA	3066	-	-	-	X
59	MG	BA	3081	-	-	-	X
59	MG	BA	3088	-	-	-	X
59	MG	BA	3091	-	-	-	X
59	MG	BA	3095	-	-	-	X
59	MG	BA	3106	-	-	-	X
59	MG	BA	3115	-	-	-	X
59	MG	BA	3120	-	-	-	X
59	MG	BA	3128	-	-	-	X
59	MG	BA	3134	-	-	-	X
59	MG	BA	3151	-	-	-	X
59	MG	BA	3154	-	-	-	X
59	MG	BA	3161	-	-	-	X
59	MG	BA	3183	-	-	-	X
59	MG	BA	3188	-	-	-	X
59	MG	BA	3189	-	-	-	X
59	MG	BA	3192	-	-	-	X
59	MG	BA	3193	-	-	-	X
59	MG	BA	3194	-	-	-	X
59	MG	BA	3199	-	-	-	X
59	MG	BA	3213	-	-	-	X
59	MG	BA	3216	-	-	-	X
59	MG	BA	3223	-	-	-	X
59	MG	BA	3251	-	-	-	X
59	MG	BA	3295	-	-	-	X
59	MG	BA	3336	-	-	-	X
59	MG	BA	3337	-	-	-	X
59	MG	BA	3341	-	-	-	X
59	MG	BA	3345	-	-	-	X
59	MG	BA	3381	-	-	-	X
59	MG	BU	201	-	-	-	X
59	MG	CA	1606	-	-	-	X
59	MG	CA	1610	-	-	-	X
59	MG	CA	1615	-	-	-	X
59	MG	CA	1616	-	-	-	X
59	MG	CA	1620	-	-	-	X
59	MG	CA	1629	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	MG	CA	1633	-	-	-	X
59	MG	CA	1639	-	-	-	X
59	MG	CA	1642	-	-	-	X
59	MG	CA	1663	-	-	-	X
59	MG	DA	3002	-	-	-	X
59	MG	DA	3003	-	-	-	X
59	MG	DA	3005	-	-	-	X
59	MG	DA	3007	-	-	-	X
59	MG	DA	3010	-	-	-	X
59	MG	DA	3015	-	-	-	X
59	MG	DA	3035	-	-	-	X
59	MG	DA	3039	-	-	-	X
59	MG	DA	3043	-	-	-	X
59	MG	DA	3061	-	-	-	X
59	MG	DA	3077	-	-	-	X
59	MG	DA	3079	-	-	-	X
59	MG	DA	3082	-	-	-	X
59	MG	DA	3097	-	-	-	X
59	MG	DA	3099	-	-	-	X
59	MG	DA	3108	-	-	-	X
59	MG	DA	3112	-	-	-	X
59	MG	DA	3130	-	-	-	X
59	MG	DA	3147	-	-	-	X
59	MG	DA	3152	-	-	-	X
59	MG	DA	3164	-	-	-	X
59	MG	DA	3177	-	-	-	X
59	MG	DA	3216	-	-	-	X
59	MG	DA	3241	-	-	-	X
59	MG	DA	3243	-	-	-	X
59	MG	DA	3249	-	-	-	X
59	MG	DA	3257	-	-	-	X
59	MG	DD	301	-	-	-	X
59	MG	DE	302	-	-	-	X

2 Entry composition

There are 60 unique types of molecules in this entry. The entry contains 294559 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1495	Total	C	N	O	P	0	0	0
			32141	14306	5964	10377	1494			
1	CA	1495	Total	C	N	O	P	0	0	0
			32141	14306	5964	10377	1494			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			
2	CB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			
3	CC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			
5	CE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O		0	0	0
			1005	636	195	174				
9	CI	127	Total	C	N	O		0	0	0
			1006	637	195	174				

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			
12	CL	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	120	Total	C	N	O	S	0	0	0
			947	585	195	165	2			
13	CM	119	Total	C	N	O	S	0	0	0
			910	564	180	164	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	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			
16	CP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			
17	CQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			
19	CS	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			

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

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

- Molecule 21 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	25	Total	C	N	O	0	0	1
			209	128	51	30			
21	CU	25	Total	C	N	O	0	0	1
			209	128	51	30			

- Molecule 22 is a RNA chain called RNA (5'-R(*AP*AP*AP*AP*AP*GP*GP*AP*AP*AP*UP*A*AP*AP*AP*AP*UP*GP*CP*AP*GP*UP*UP*CP*AP*AP*UP*CP*UP*A)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	10	Total	C	N	O	P	0	0	0
			213	97	42	65	9			
22	CV	10	Total	C	N	O	P	0	0	0
			213	97	42	65	9			

- Molecule 23 is a RNA chain called tRNA-Gln.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AW	75	Total	C	N	O	P	0	0	0
			1593	711	281	526	75			
23	CW	75	Total	C	N	O	P	0	0	0
			1593	711	281	526	75			

- Molecule 24 is a RNA chain called tRNA-Met.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AX	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
24	CX	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			

- Molecule 25 is a RNA chain called tRNA-Gln.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	AY	75	Total	C	N	O	P	0	0	0
			1591	711	280	526	74			
25	CY	75	Total	C	N	O	P	0	0	0
			1591	711	280	526	74			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AY	33	G	C	CONFLICT	GB CP001637.1
AY	44	U	A	CONFLICT	GB CP001637.1

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Chain	Residue	Modelled	Actual	Comment	Reference
CY	33	G	C	CONFLICT	GB CP001637.1
CY	44	U	A	CONFLICT	GB CP001637.1

- Molecule 26 is a protein called Viomycin.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	AZ	6	Total	C	N	O	0	0	0
			48	25	13	10			
26	CZ	6	Total	C	N	O	0	0	0
			48	25	13	10			

- Molecule 27 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BA	2800	Total	C	N	O	P	0	0	0
			60311	26841	11284	19387	2799			
27	DA	2800	Total	C	N	O	P	0	0	0
			60313	26842	11286	19386	2799			

- Molecule 28 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BB	118	Total	C	N	O	P	0	0	0
			2528	1126	466	819	117			
28	DB	118	Total	C	N	O	P	0	0	0
			2528	1126	466	819	117			

- Molecule 29 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
29	BC	191	Total	C	N	O	0	0	1
			1142	691	221	230			
29	DC	191	Total	C	N	O	0	0	1
			1142	691	221	230			

- Molecule 30 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			
30	DD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			

- Molecule 31 is a protein called 50S ribosomal protein L3.

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

- Molecule 32 is a protein called 50S ribosomal protein L4.

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

- Molecule 33 is a protein called 50S ribosomal protein L5.

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

- Molecule 34 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BH	164	Total	C	N	O	S	0	0	1
			1252	794	233	224	1			
34	DH	160	Total	C	N	O	S	0	0	1
			1223	773	229	220	1			

- Molecule 35 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BI	146	Total	C	N	O	S	0	0	1
			1042	668	175	198	1			
35	DI	146	Total	C	N	O	S	0	0	1
			1046	670	175	200	1			

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
39	DQ	139	Total	C	N	O	S	0	0	0
			1107	707	209	184	7			

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

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

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

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

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
41	DS	101	Total	C	N	O	0	0	1
			777	489	156	132			

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BZ	177	Total	C	N	O	S	0	0	1
			1404	897	253	252	2			
48	DZ	177	Total	C	N	O	S	0	0	1
			1404	897	253	252	2			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B1	94	Total	C	N	O	S	0	0	1
			715	448	141	125	1			
50	D1	94	Total	C	N	O	S	0	0	1
			732	460	146	125	1			

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	B6	51	Total	C	N	O	S	0	0	1
			411	253	84	70	4			
55	D6	46	Total	C	N	O	S	0	0	1
			390	241	80	65	4			

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

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

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

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

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

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

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

- Molecule 59 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	BA	400	Total	Mg	0	0
			400	400		
59	AK	2	Total	Mg	0	0
			2	2		
59	DF	1	Total	Mg	0	0
			1	1		
59	CV	2	Total	Mg	0	0
			2	2		
59	BE	1	Total	Mg	0	0
			1	1		
59	AW	7	Total	Mg	0	0
			7	7		
59	BP	1	Total	Mg	0	0
			1	1		
59	AX	7	Total	Mg	0	0
			7	7		
59	DR	1	Total	Mg	0	0
			1	1		
59	CA	92	Total	Mg	0	0
			92	92		
59	B5	1	Total	Mg	0	0
			1	1		
59	BB	1	Total	Mg	0	0
			1	1		
59	D6	1	Total	Mg	0	0
			1	1		
59	AE	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	BF	2	Total 2	Mg 2	0	0
59	BX	1	Total 1	Mg 1	0	0
59	AA	133	Total 133	Mg 133	0	0
59	BQ	1	Total 1	Mg 1	0	0
59	CQ	1	Total 1	Mg 1	0	0
59	CX	3	Total 3	Mg 3	0	0
59	BU	1	Total 1	Mg 1	0	0
59	AD	1	Total 1	Mg 1	0	0
59	BN	1	Total 1	Mg 1	0	0
59	BY	1	Total 1	Mg 1	0	0
59	BR	1	Total 1	Mg 1	0	0
59	DA	275	Total 275	Mg 275	0	0
59	CE	2	Total 2	Mg 2	0	0
59	DD	3	Total 3	Mg 3	0	0
59	AL	1	Total 1	Mg 1	0	0
59	DE	3	Total 3	Mg 3	0	0
59	AH	1	Total 1	Mg 1	0	0
59	BZ	1	Total 1	Mg 1	0	0
59	DZ	1	Total 1	Mg 1	0	0
59	AC	1	Total 1	Mg 1	0	0
59	DB	1	Total 1	Mg 1	0	0

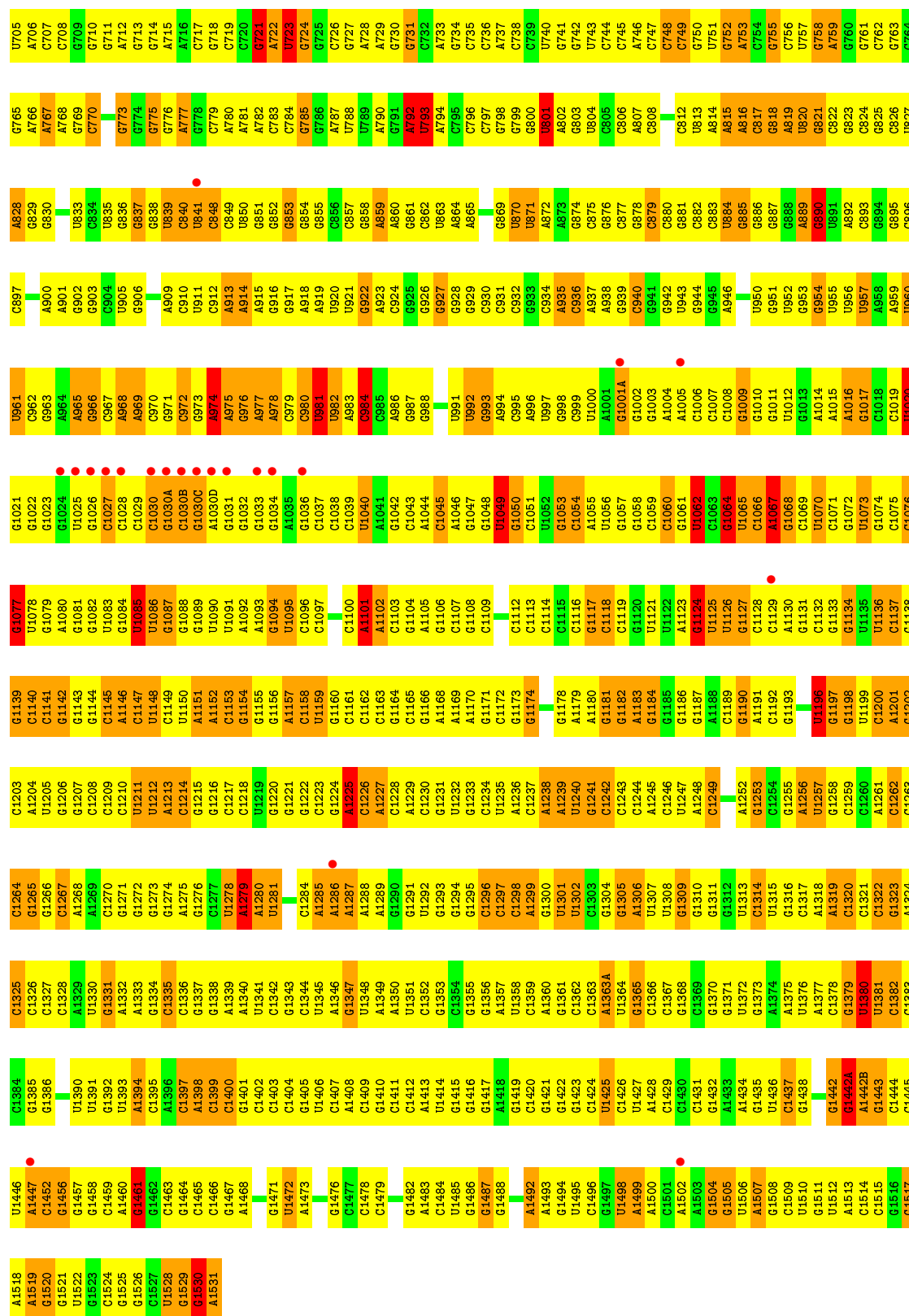
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	D5	2	Total 2	Mg 2	0	0
59	BD	1	Total 1	Mg 1	0	0
59	AT	2	Total 2	Mg 2	0	0
59	B0	2	Total 2	Mg 2	0	0
59	AO	1	Total 1	Mg 1	0	0
59	AY	2	Total 2	Mg 2	0	0
59	AF	1	Total 1	Mg 1	0	0
59	BH	1	Total 1	Mg 1	0	0

- Molecule 60 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	B5	1	Total 1	Zn 1	0	0
60	B4	1	Total 1	Zn 1	0	0
60	AD	1	Total 1	Zn 1	0	0
60	B9	1	Total 1	Zn 1	0	0
60	D9	1	Total 1	Zn 1	0	0
60	D5	1	Total 1	Zn 1	0	0
60	D4	1	Total 1	Zn 1	0	0
60	CD	1	Total 1	Zn 1	0	0

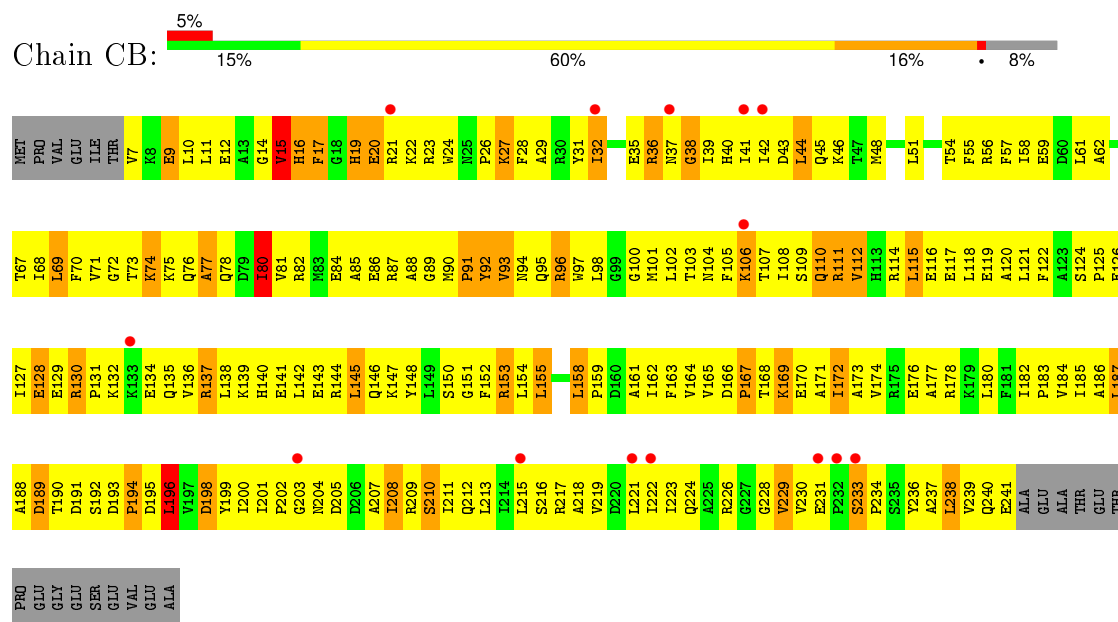


• Molecule 1: 16S ribosomal RNA

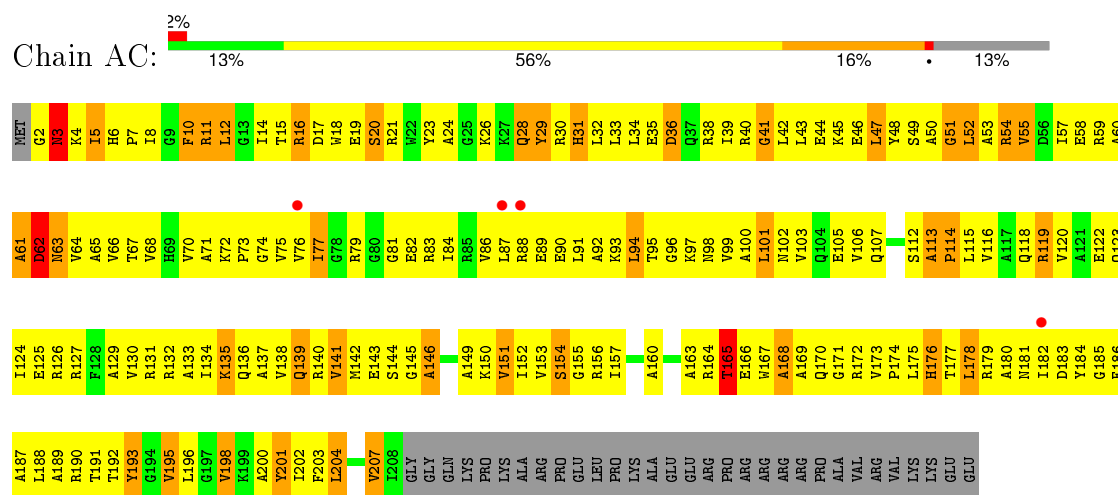
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G939	G876	C810	C749	C689	G628	C564	C504	A431	C371	G310	C246	G189	G128	G61	U
C940	C877	C811	G750	G690	G629	C565	G505	A432	C372	C311	G249	C189A	G129	G62	U
G941	G878	G812	G751	G691	G630	G566	G506	C433	C373	C312	A250	C189B	G130	C63	U
G942	C879	G813	G752	G692	G631	G567	C507	C434	C374	A313	G251	C189C	G131	G64	U
U943	C880	A814	A753	G693	A632	G568	C508	C435	C375	G316	G252	C189D	C131	U65	U5
G944	G881	A815	C754	A694	G633	C569	A509	C436	C376	G317	G253	U189E	C132	G66	G6
G945	C882	A816	G755	A695	C634	G570	A510	C437	C377	G318	G254	U189F	U133	G67	G7
G946	C883	C817	C756	A696	G635	U571	C511	G438	C378	A8	G255	U189G	C68	A8	A8
G947	U884	G818	U757	G697	U636	A572	U512	A439	C379	G319	U256	G189H	C69	G9	G9
C948	G885	A819	G758	G698	G637	A573	C513	C441	G380	C320	G257	G189I	C135	G10	A10
A949	G886	U820	A759	G699	G638	A574	C514	C442	C381	A321	G258	G189J	C136	G70	G11
U950	G887	G821	G760	G700	G639	G575	C515	C443	C382	C322	G259	U189K	C137	C71	G11
G951	A889	C822	G761	C701	A640	G576	U516	C444	C383	G323	G260	G189L	G138	C72	U12
U952	G890	G823	G762	A702	A641	G577	C517	G445	C384	U323	G261	G189M	G139	G73	U13
G953	U891	C824	G763	A703	U642	G578	C518	G446	C385	G324	U261	U190	A140	G74	U14
G954	A892	G825	C764	U704	C643	G579	C519	G447	C386	A325	A262	G191	A141	G75	G15
G955	C893	C826	G765	U705	G644	U580	C520	G447	C387	G326	A263	U192	A142	G76	A16
U956	G894	U827	A766	A706	G645	G581	C521	G450	C388	C328	G265	C194	G143	U17	U17
U957	G895	A828	A767	C707	U646	U582	C522	A451	C389	A329	G266	A195	G144	C18	C18
A958	C896	G829	A768	C708	G647	A583	C523	A452	C390	G330	C267	A196	G145	C19	C19
A959	C897	G830	G769	G709	A648	G584	C524	A453	C391	G331	C268	U197	G146	U20	U20
U960	G898	U831	C770	G710	G649	G585	C525	C454	C392	G332	C269	G198	G147	U21	G21
U961	C899	C832	G771	G711	G650	C586	C526	C455	C393	G333	A270	G199	G148	U22	G22
C962	A900	U833	U772	A712	C651	G587	C527	C456	C394	G334	C271	G200	A151	C23	C23
G963	A901	C834	G773	G713	U652	C528	C528	C457	C395	C335	C272	C201	A152	U24	U24
A964	G902	U835	G774	G714	A653	C529	C529	C458	C396	G336	A273	U202	A153	C25	C25
U965	C903	G836	G775	A715	G654	U591	C530	G460	A397	C337	A274	U203	C154	A26	A26
G966	C904	G837	G776	A716	G655	G592	U531	A461	C403	G338	G275	U204	C155	G27	G27
U967	U905	G838	A777	C717	G657	G593	A532	C470	C399	G339	G276	G216	C156	G28	G28
A968	G906	U839	G778	G718	G658	G594	A533	G471	C400	U340	C277	C217	G157	G29	G29
U969	A908	C840	C779	C719	U659	G595	U534	A472	C401	C341	G278	C218	G158	U30	U30
C970	A909	U841	A780	C720	G660	C596	A535	G473	G402	G342	A279	C219	G159	G31	G31
G971	C910	C848	G781	G721	G661	G597	C536	G474	U403	U343	C280	G220	C100	U99	U99
C972	G911	G849	A782	A722	G662	U598	C537	G475	U404	A344	G281	C221	A161	C32	C32
G973	U913	U850	C783	U723	A663	C599	G538	A476	U405	C345	A282	U222	A162	G102	A101
A974	A914	G851	G784	G724	G664	C600	A539	A477	G406	G346	C283	U223	C163	G103	G35
A975	A915	C852	G785	G725	A665	C601	C540	C479	G407	G347	G284	C224	U164	G104	C36
G976	G916	G853	G786	C726	G666	A602	G541	U480	A408	G348	G285	C225	C165	U37	U37
A977	C917	C854	U788	G727	G667	U603	C542	G481	G409	A349	G286	G226	C106	G38	G38
A978	A918	G855	U789	G728	G668	G604	C543	A482	G410	G350	U287	G227	C107	G39	G39
C979	A919	C856	A790	A729	U669	U605	C544	C483	A411	C352	A288	U229	G108	G40	G40
U980	U920	C857	G791	G730	G670	G606	C545	G484	A412	A353	G289	C230	A109	G41	G41
G981	U921	G858	A792	G731	G671	A607	C546	G485	G413	C354	C290	G231	C110	G42	G42
U982	G922	A859	U793	C732	U672	A608	A547	U486	A414	C355	G292	G232	G111	G43	G43
A983	A923	G860	A794	A733	G673	A609	C548	A487	A415	G357	G293	C233	C174	G44	G44
C984	C924	G861	C795	G734	G674	G610	C549	C488	G416	C358	G294	C234	G112	G45	U45
C985	G925	C862	C796	C735	A675	A611	C550	C489	G417	A359	G295	C235	U114	G46	G46
A986	G926	U863	C797	C736	G676	C612	U551	G490	C418	U358	G296	C236	C175	C47	C47
G987	G927	A864	A798	A737	U677	C613	U552	G491	C419	U359	G297	G237	C176	U49	U49
G988	G928	A865	G799	C738	U678	A614	A553	G492	U420	A360	A298	C237	C177	A50	A50
C989	G929	C866	G800	C739	G679	U619	C554	G493	U421	G361	G299	G238	C178	A51	A51
C990	C930	G867	U801	U740	C680	C555	C556	U494	C422	G362	A300	U239	U180	G52	G52
U991	C931	C868	A802	G741	C681	C620	C556	A495	G423	A363	G301	C240	G181	A53	A53
U992	C932	G869	G742	G682	A671	A621	C557	A496	G424	A364	G302	C241	C121	C54	C54
G993	G933	U870	U743	G683	A622	C623	C558	U498	G425	U365	A303	C242	G182	A55	A55
A994	C934	U871	C744	A684	A623	C624	A559	A499	G426	C366	U304	A243	G183	U56	U56
C995	A935	A872	C745	G685	U560	C625	U561	G500	U427	U367	G305	U244	G184	G57	G57
A996	C936	A873	U746	U686	U562	G626	C562	G501	G428	U368	G306	C245	A185	C58	C58
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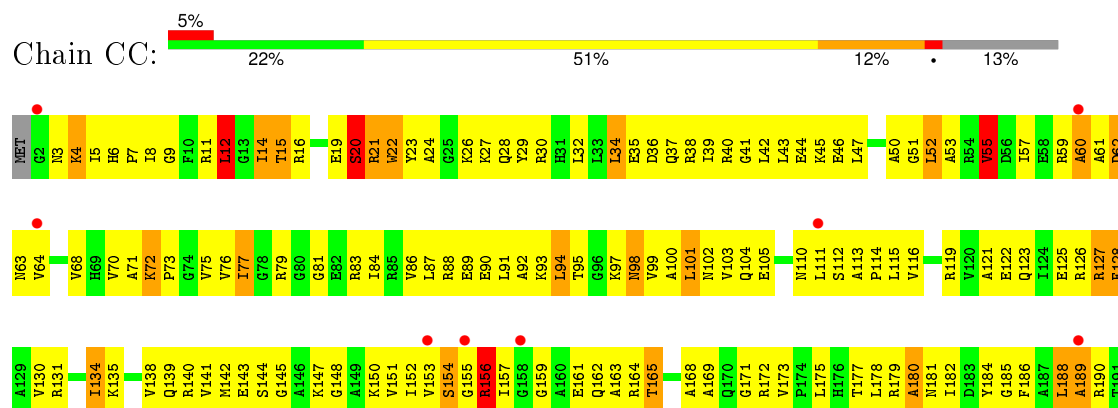
- Molecule 2: 30S ribosomal protein S2

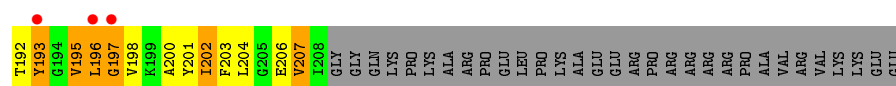


- Molecule 3: 30S ribosomal protein S3

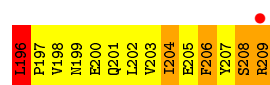
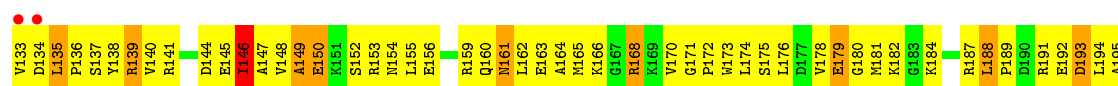
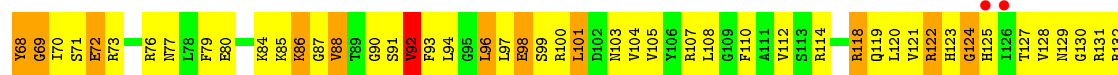
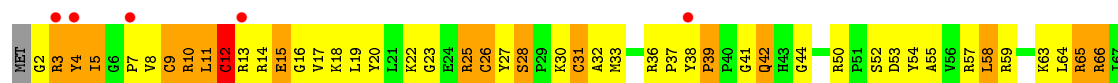


- Molecule 3: 30S ribosomal protein S3

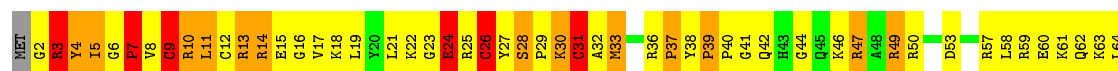




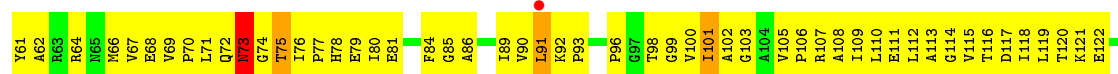
• Molecule 4: 30S ribosomal protein S4



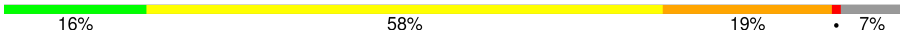
• Molecule 4: 30S ribosomal protein S4

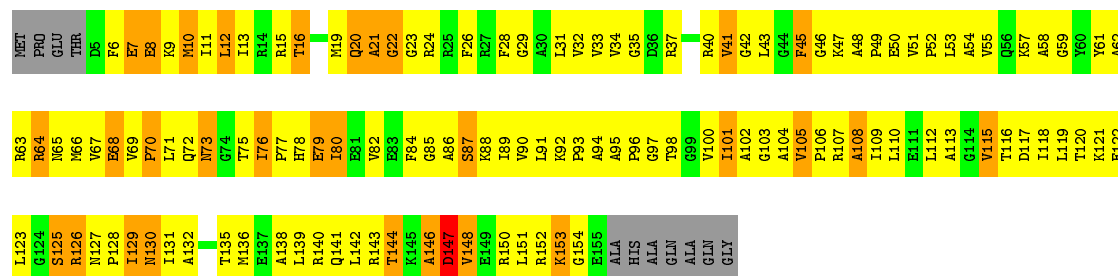


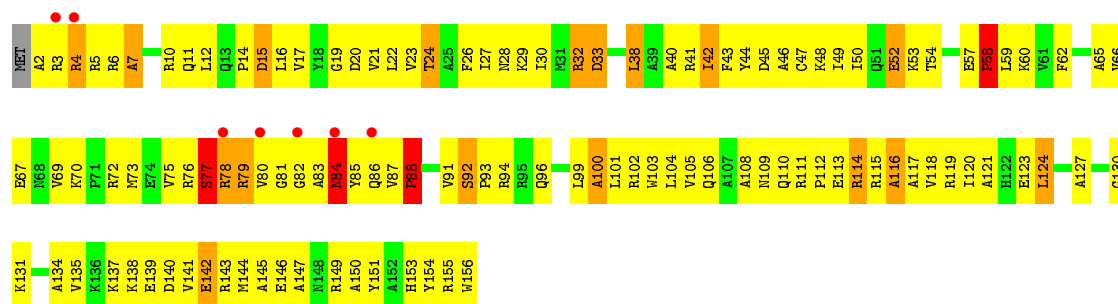
• Molecule 5: 30S ribosomal protein S5



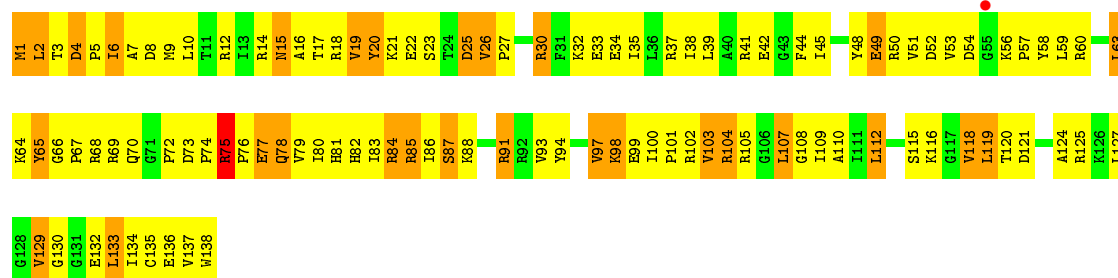
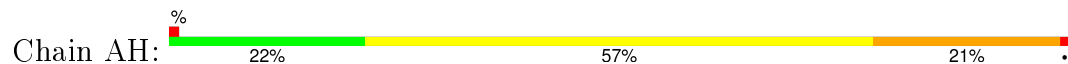
- Molecule 5: 30S ribosomal protein S5

Chain CE: 





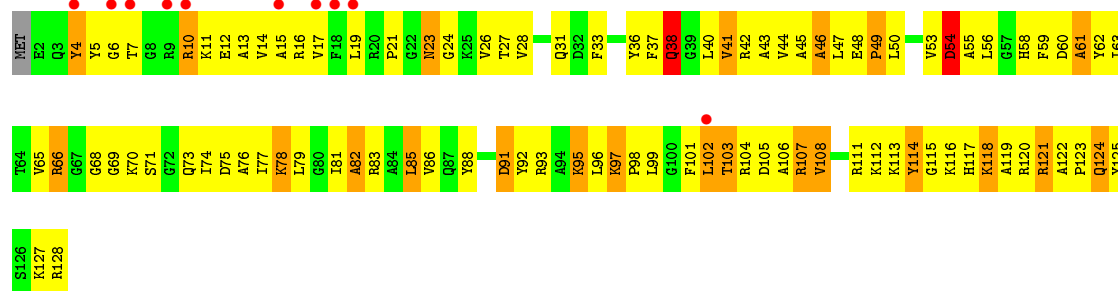
- Molecule 8: 30S ribosomal protein S8



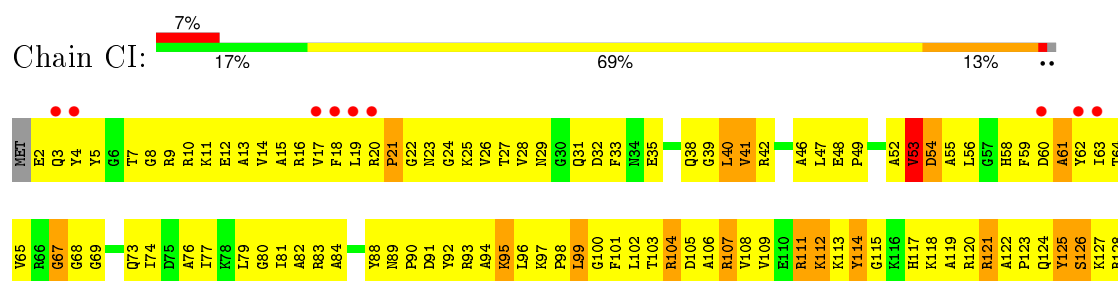
- Molecule 8: 30S ribosomal protein S8



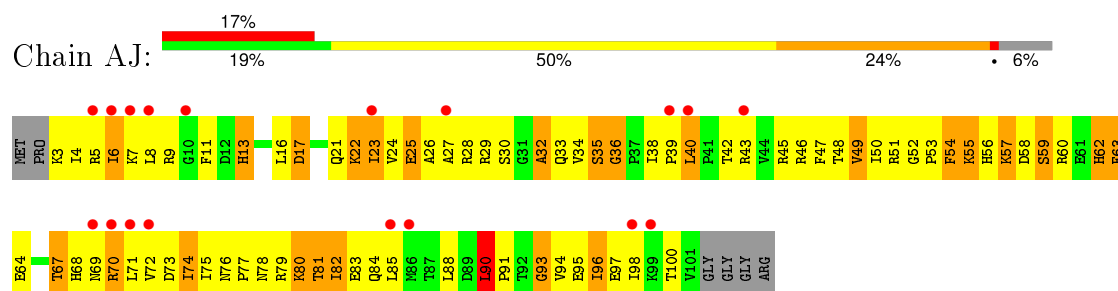
- Molecule 9: 30S ribosomal protein S9

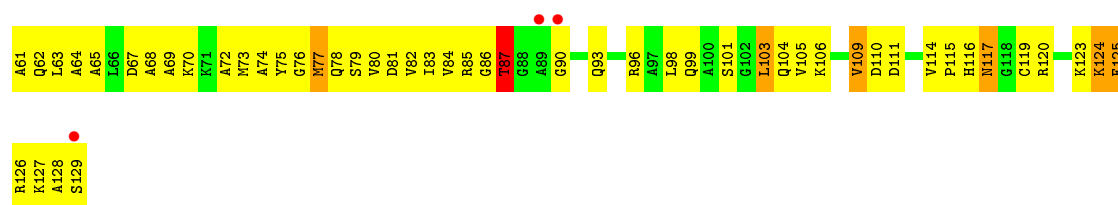


- Molecule 9: 30S ribosomal protein S9



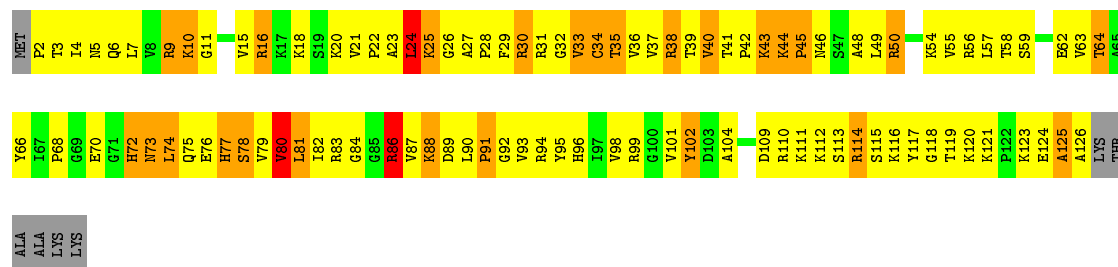
• Molecule 10: 30S ribosomal protein S10





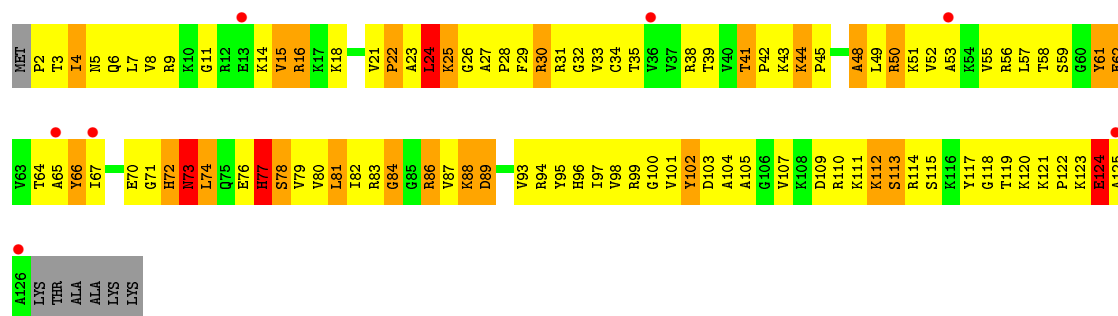
- Molecule 12: 30S ribosomal protein S12

Chain AL: 19% 54% 20% 5%



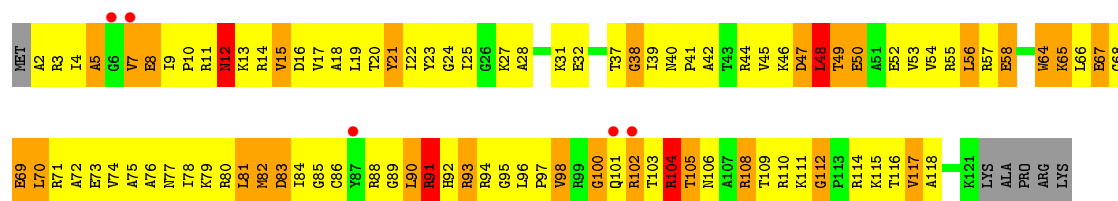
- Molecule 12: 30S ribosomal protein S12

Chain CL: 5% 19% 55% 18% 5%



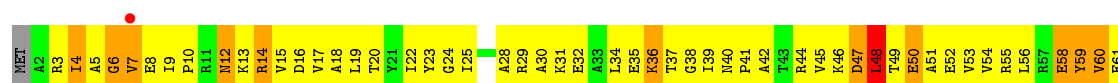
- Molecule 13: 30S ribosomal protein S13

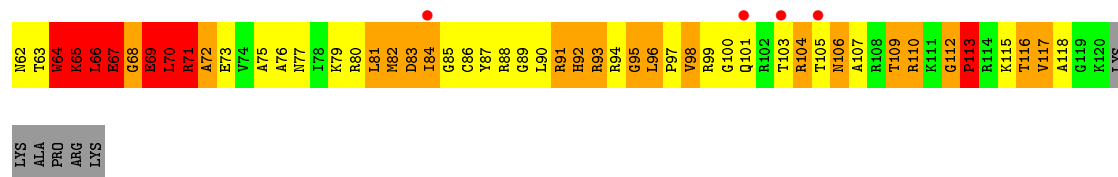
Chain AM: 4% 17% 52% 22% 5%



- Molecule 13: 30S ribosomal protein S13

Chain CM: 4% 13% 51% 24% 7% 6%

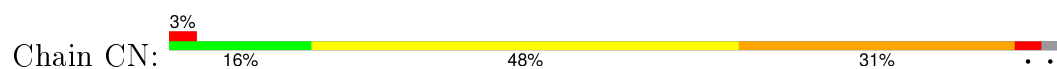




- Molecule 14: 30S ribosomal protein S14



- Molecule 14: 30S ribosomal protein S14



- Molecule 15: 30S ribosomal protein S15



- Molecule 15: 30S ribosomal protein S15

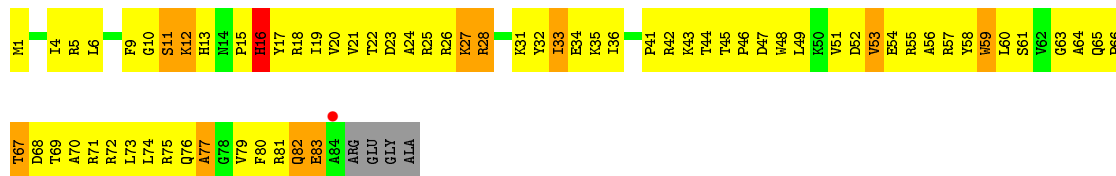


- Molecule 16: 30S ribosomal protein S16



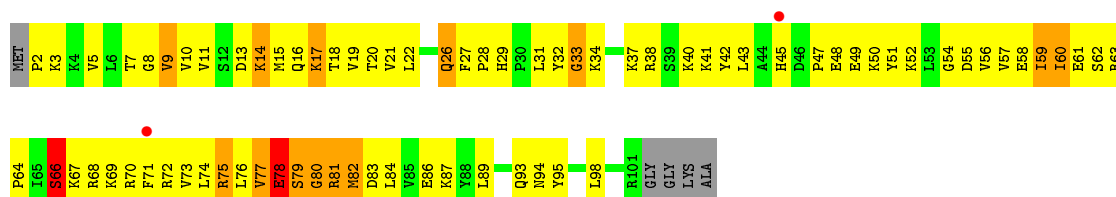
- Molecule 16: 30S ribosomal protein S16

Chain CP: 



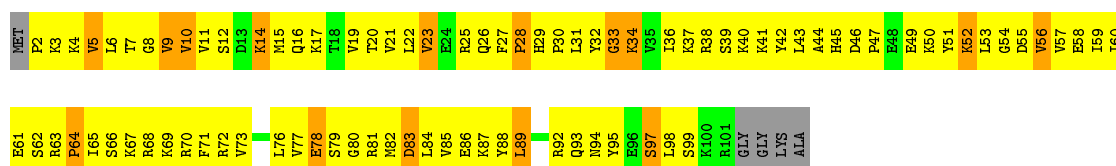
- Molecule 17: 30S ribosomal protein S17

Chain AQ: 

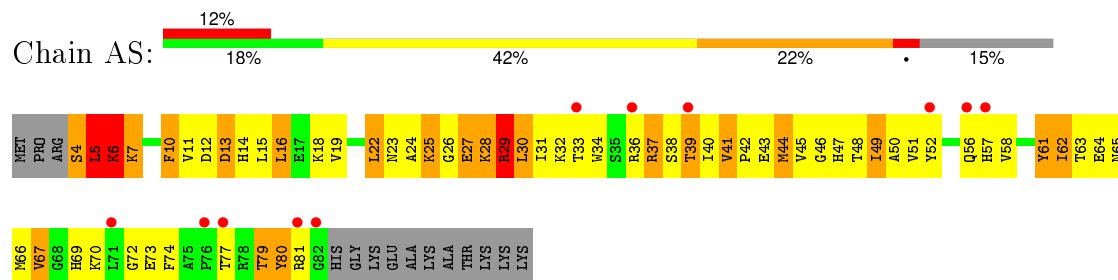


- Molecule 17: 30S ribosomal protein S17

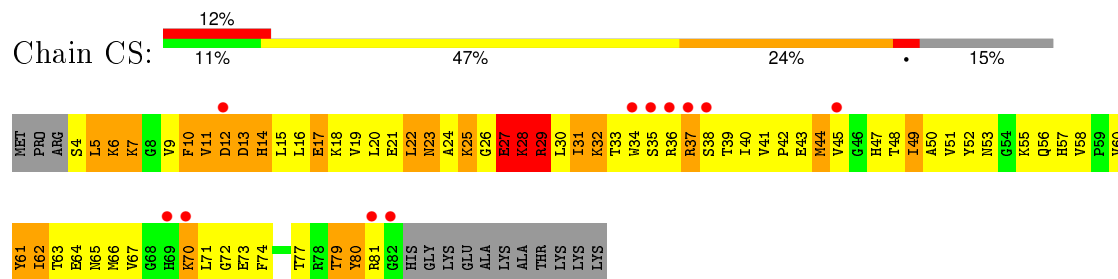
Chain CQ: 



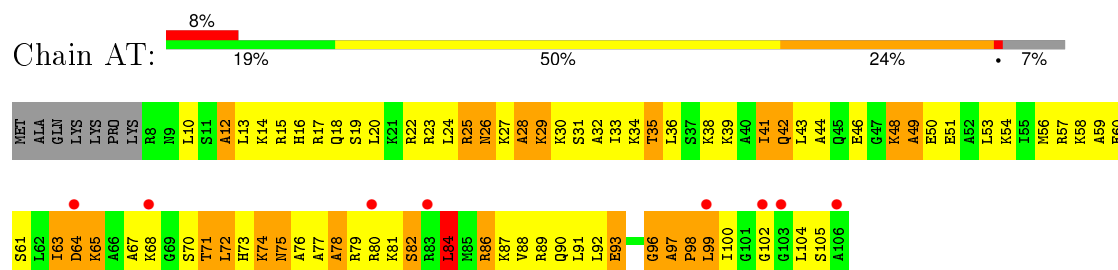
- Molecule 19: 30S ribosomal protein S19



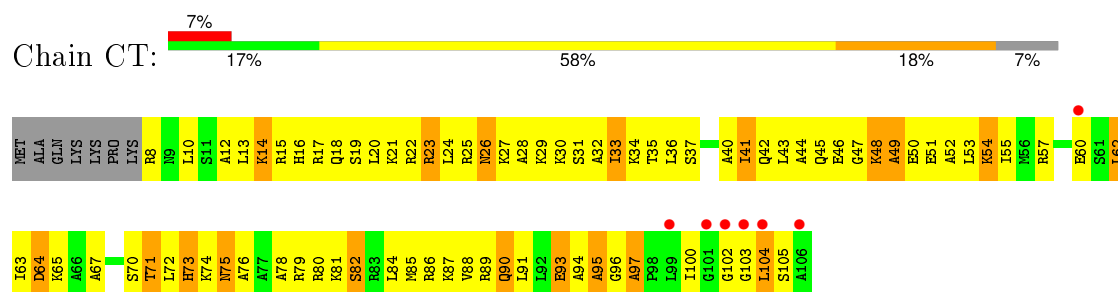
- Molecule 19: 30S ribosomal protein S19



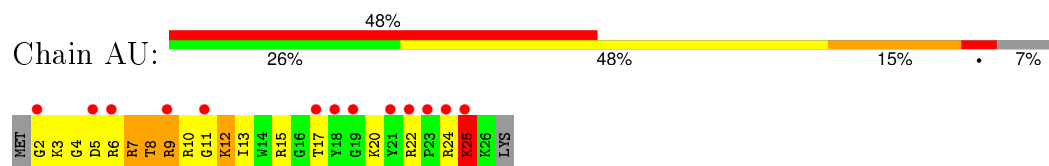
- Molecule 20: 30S ribosomal protein S20



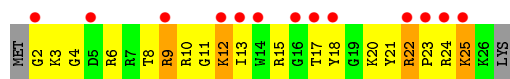
- Molecule 20: 30S ribosomal protein S20



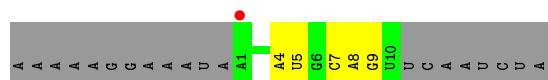
- Molecule 21: 30S ribosomal protein Thx



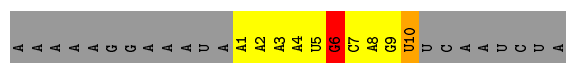
- Molecule 21: 30S ribosomal protein Thx



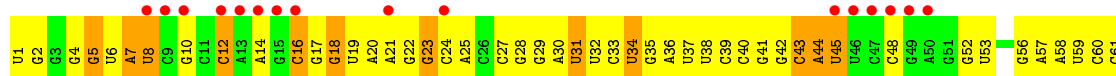
- Molecule 22: RNA (5'-R(*AP*AP*AP*AP*AP*GP*GP*AP*AP*AP*UP*A*AP*AP*AP*AP*UP*GP*CP*AP*GP*UP*UP*CP*AP*AP*UP*CP*UP*A)-3')



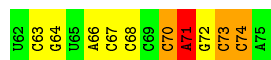
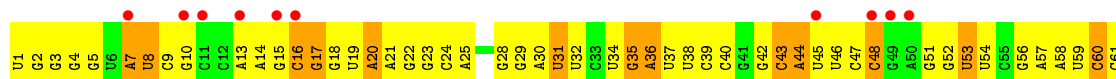
- Molecule 22: RNA (5'-R(*AP*AP*AP*AP*AP*GP*GP*AP*AP*AP*UP*A*AP*AP*AP*AP*UP*GP*CP*AP*GP*UP*UP*CP*AP*AP*UP*CP*UP*A)-3')



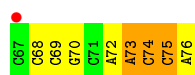
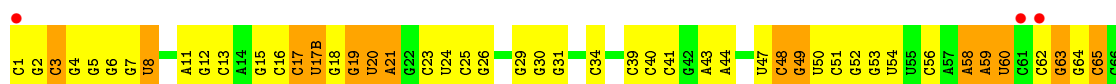
- Molecule 23: tRNA-Gln



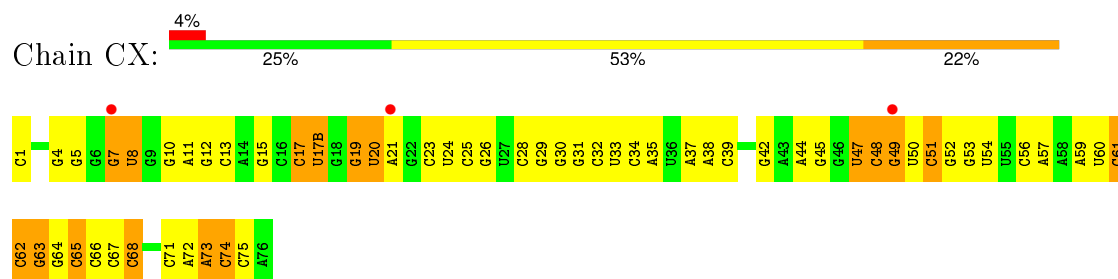
- Molecule 23: tRNA-Gln



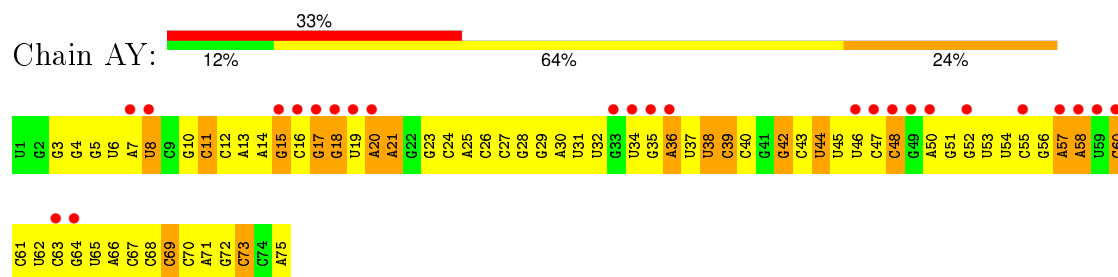
- Molecule 24: tRNA-Met



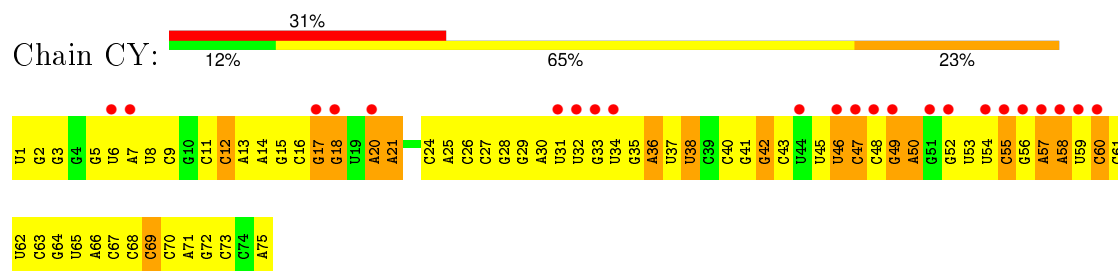
- Molecule 24: tRNA-Met



- Molecule 25: tRNA-Gln



- Molecule 25: tRNA-Gln



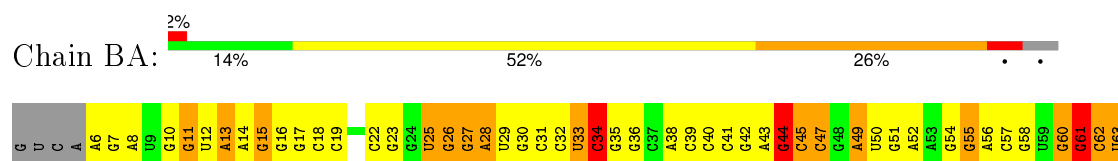
- Molecule 26: Viomycin



- Molecule 26: Viomycin

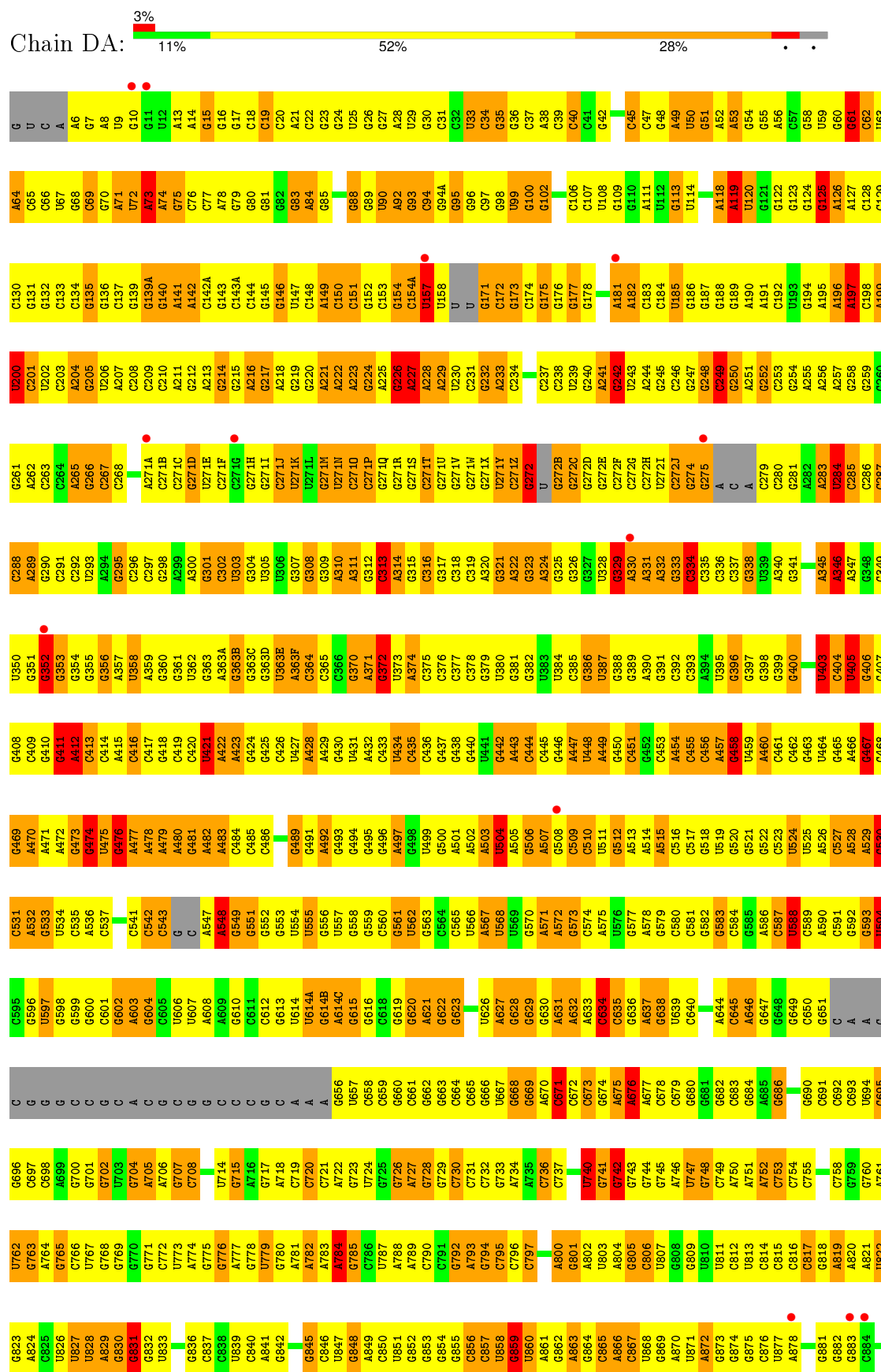


- Molecule 27: 23S ribosomal RNA



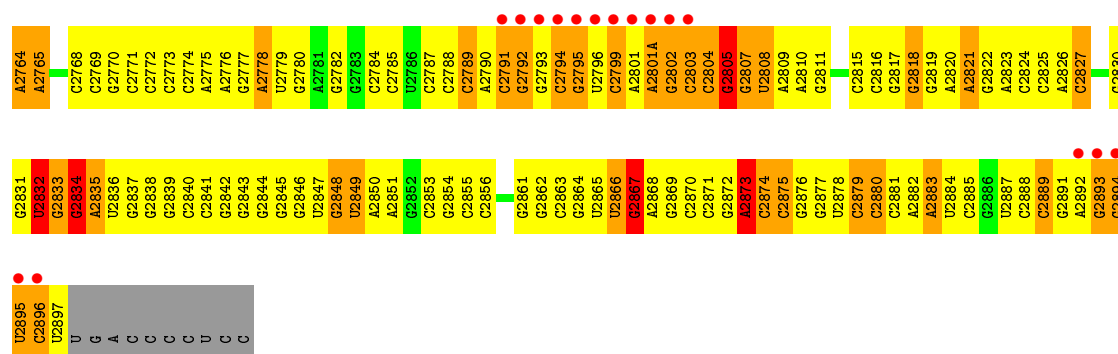
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C1924	A1854	C1790	C1710	G1649	A1587	G1520	A1457	C1398	U1335	A1272	G1210	C1146	U	A1020
C1925	G1855	A1791	C1711	G1650	C1588	G1523	C1458	C1399	U1336	U1273	U1211	C1147	A	A1021
U1926	G1856		C1712	G1651	G1524	G1525	A1459	G1400	G1337	A1274	G1212		A	U1022
A1927	G1857	U1794	U1713	A1652	G1526	G1528	A1460	G1401	G1338	A1275	A1213		A	G1023
A1928	G1858	C1795	G1714	G1653	G1527	G1529	G1461	G1402	G1339	A1276	A1214		A	U1024
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• Molecule 27: 23S ribosomal RNA

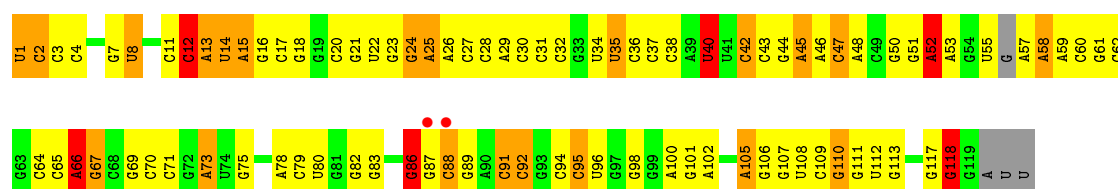


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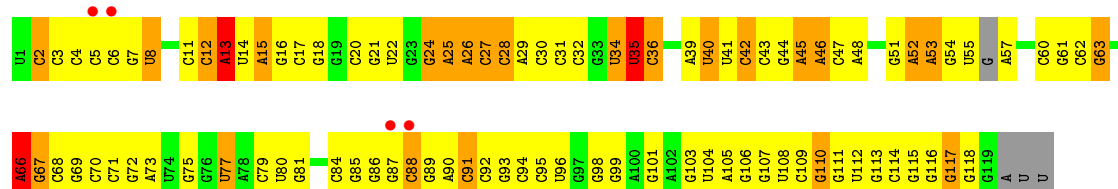
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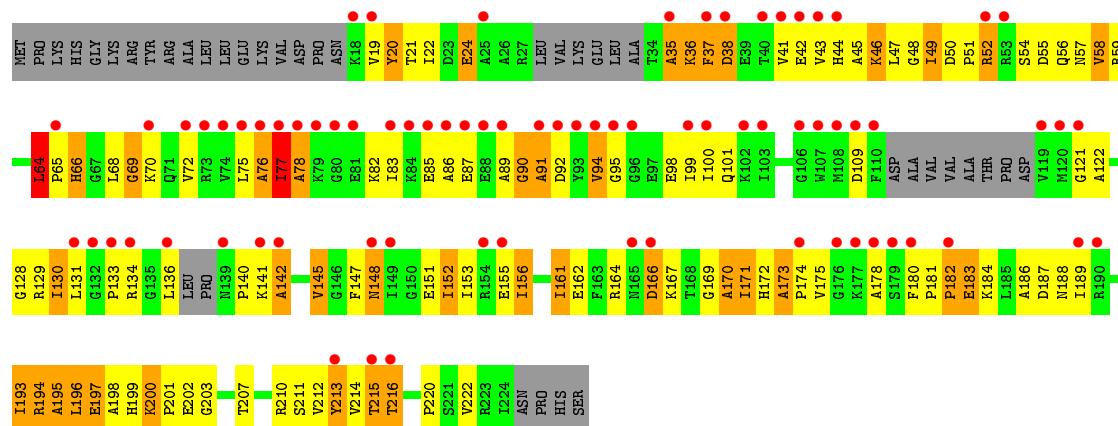
• Molecule 28: 5S ribosomal RNA



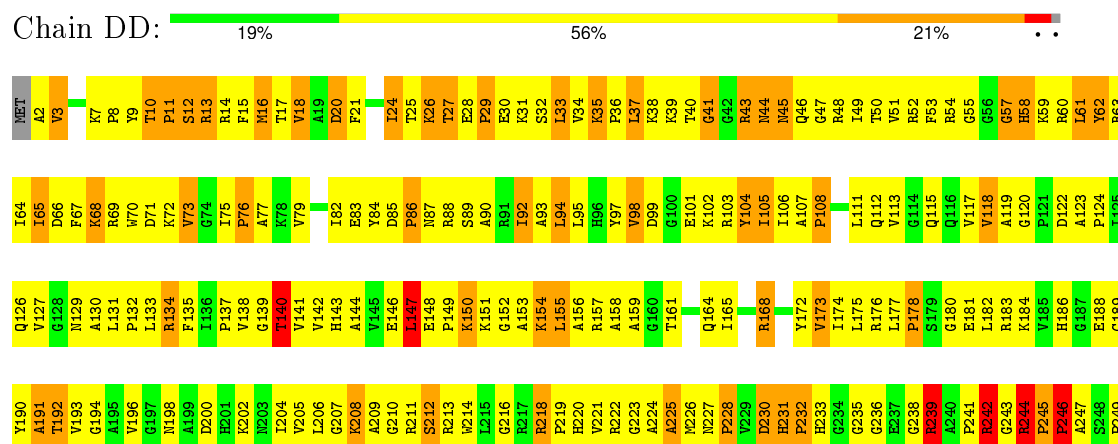
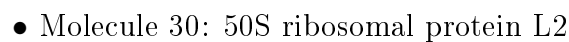
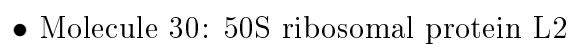
• Molecule 28: 5S ribosomal RNA



• Molecule 29: 50S ribosomal protein L1

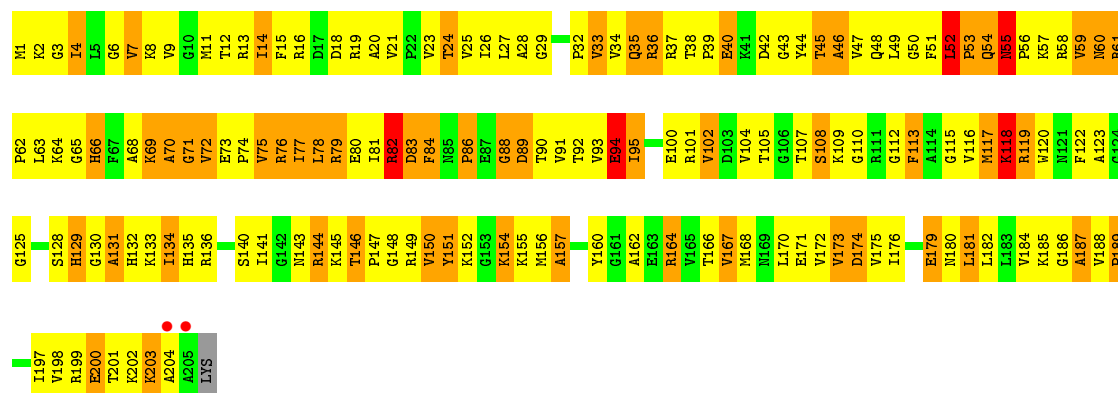


• Molecule 29: 50S ribosomal protein L1

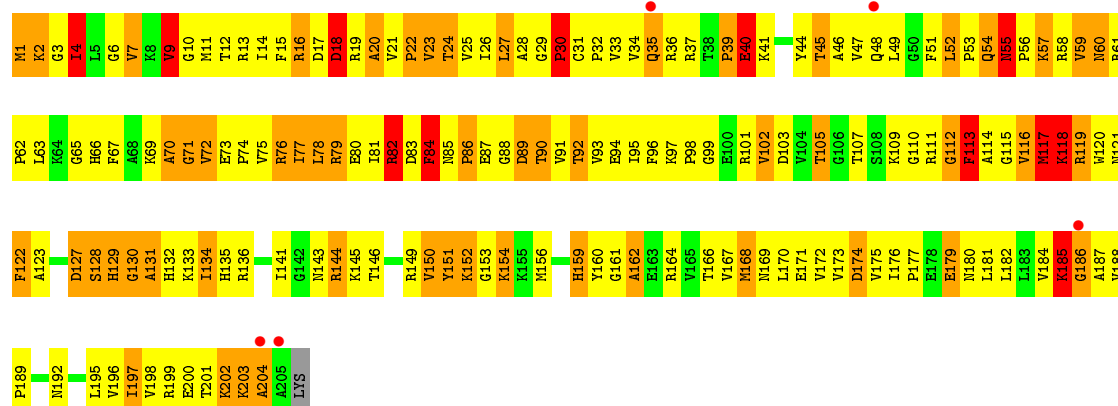
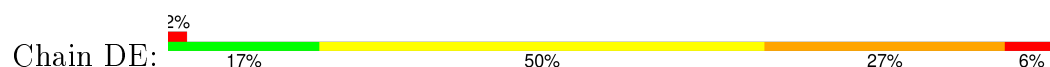




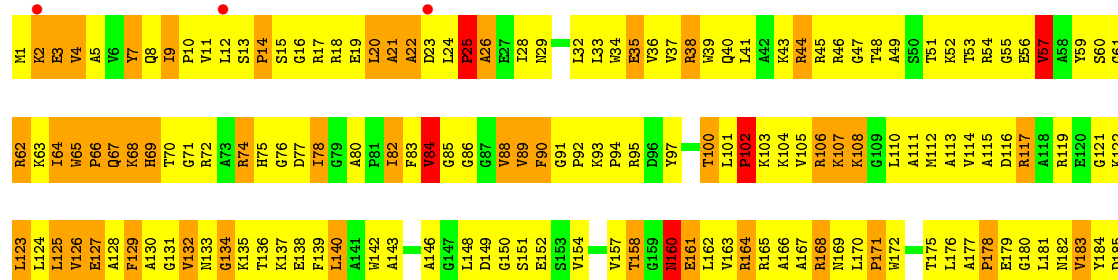
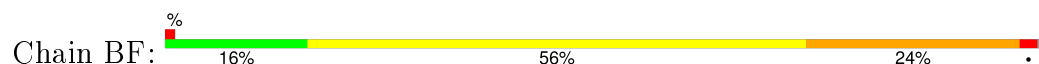
• Molecule 31: 50S ribosomal protein L3



• Molecule 31: 50S ribosomal protein L3

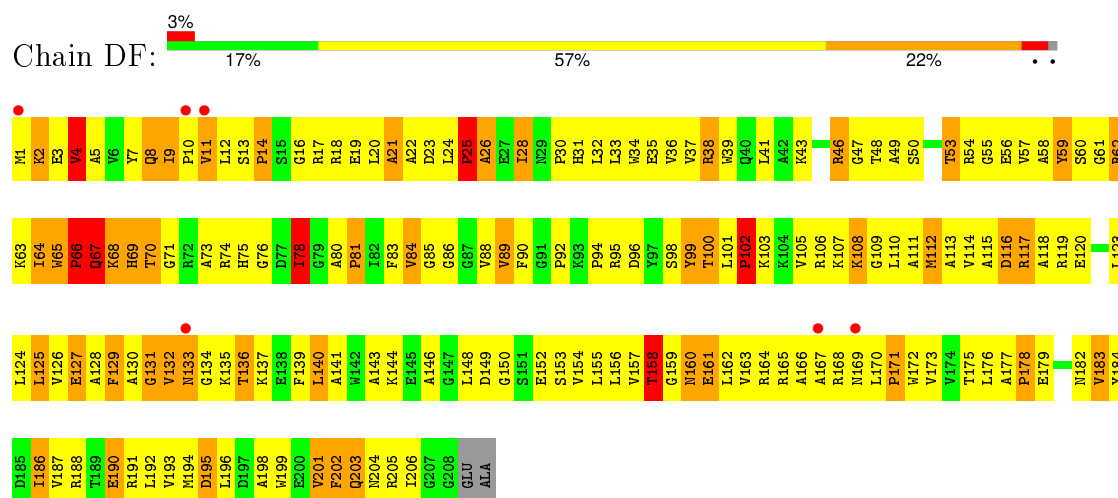


• Molecule 32: 50S ribosomal protein L4

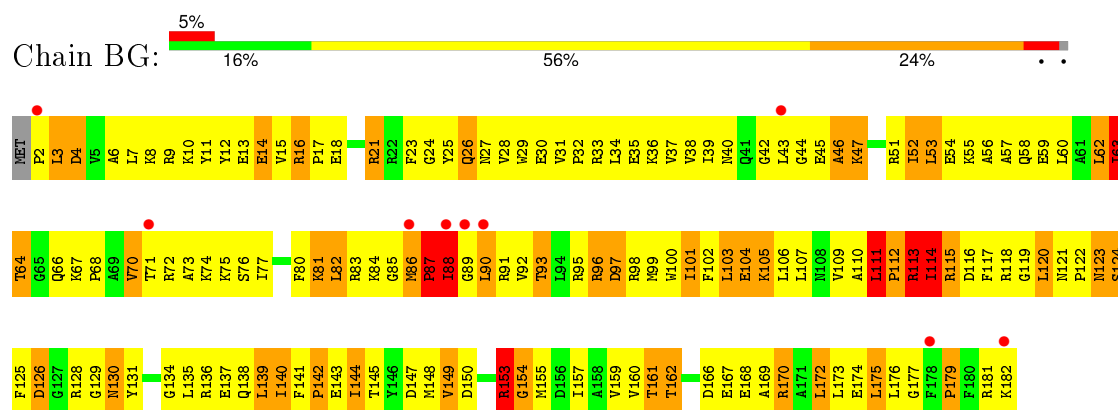




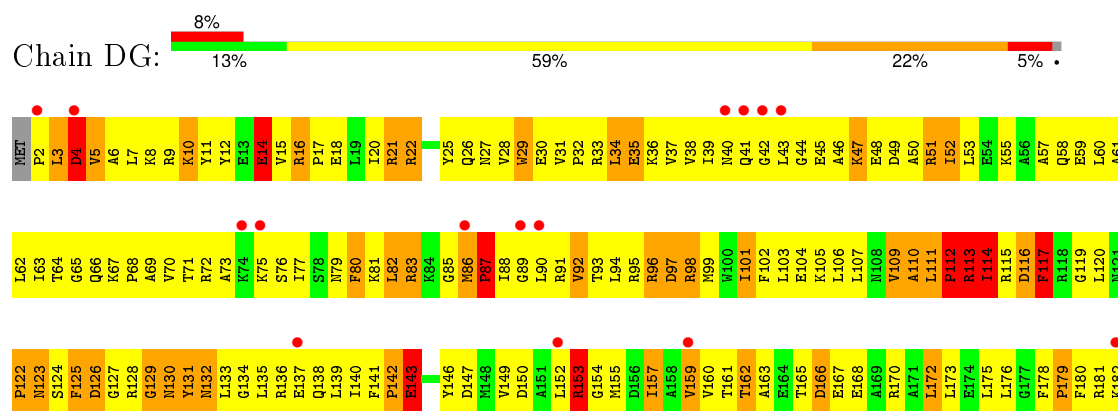
• Molecule 32: 50S ribosomal protein L4



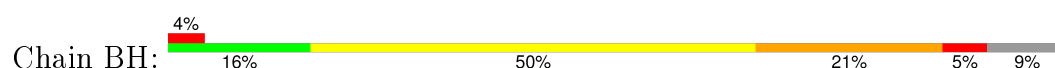
• Molecule 33: 50S ribosomal protein L5

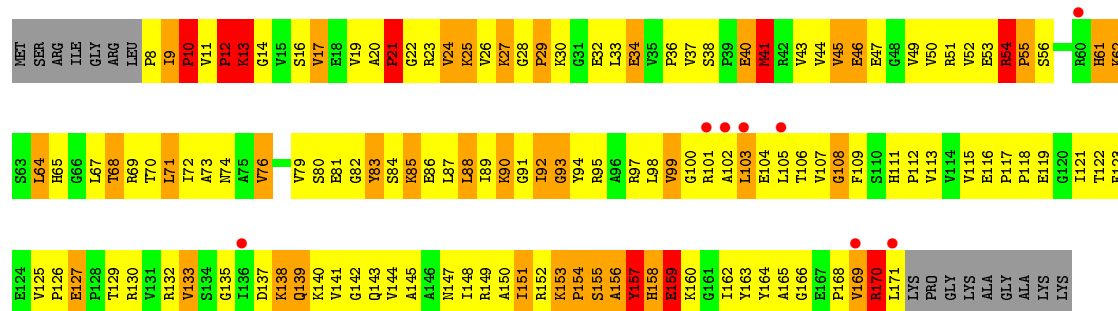


• Molecule 33: 50S ribosomal protein L5

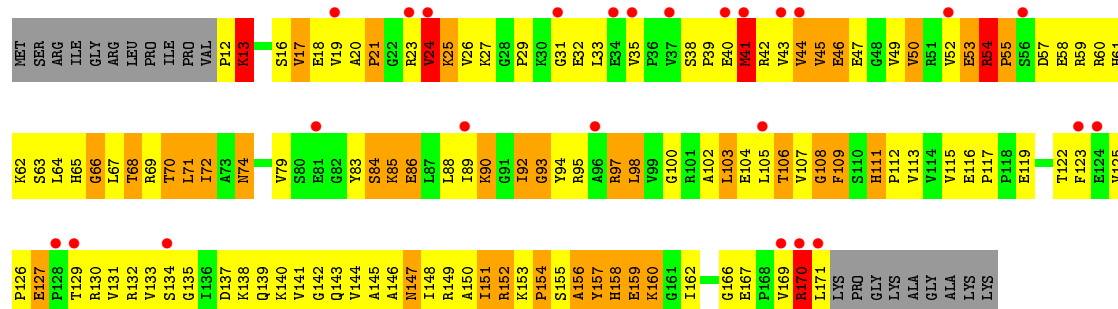


• Molecule 34: 50S ribosomal protein L6

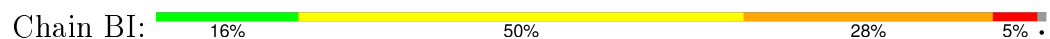




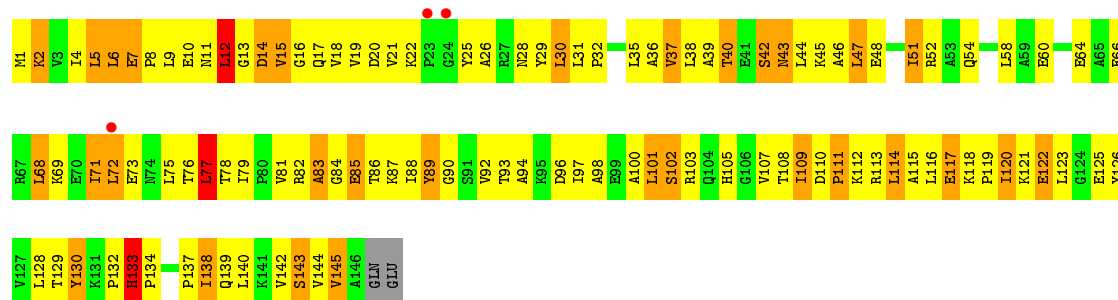
• Molecule 34: 50S ribosomal protein L6



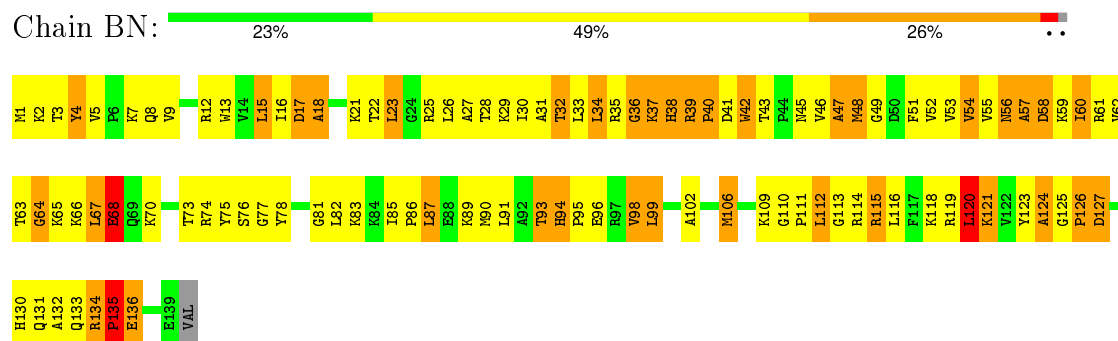
• Molecule 35: 50S ribosomal protein L9



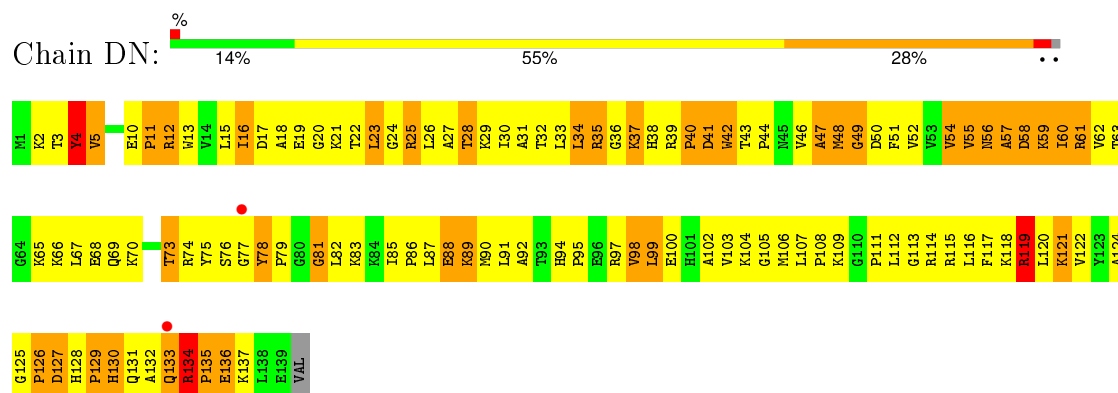
• Molecule 35: 50S ribosomal protein L9



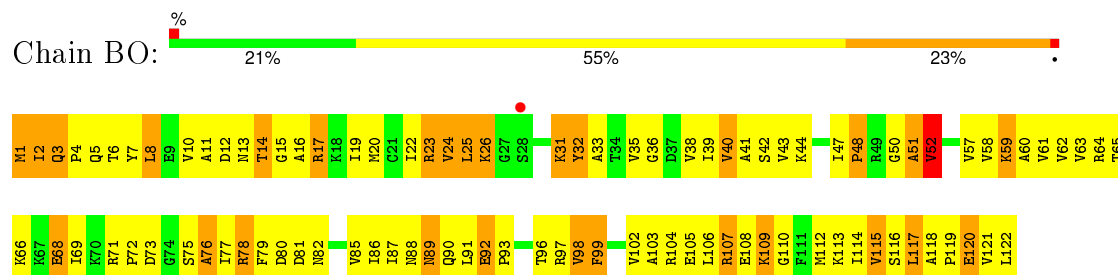
• Molecule 36: 50S ribosomal protein L13



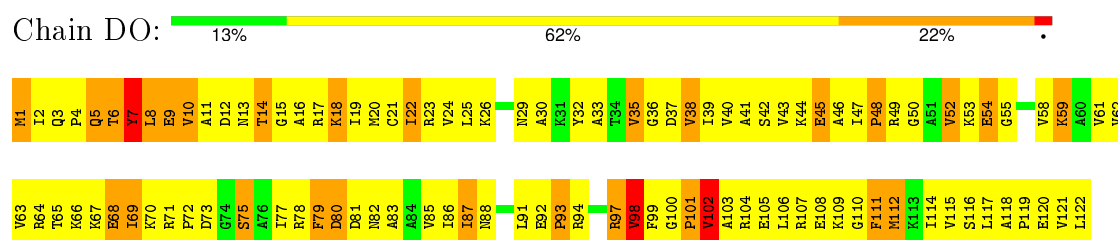
• Molecule 36: 50S ribosomal protein L13



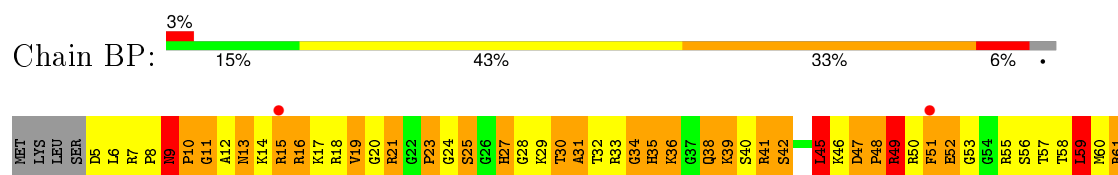
• Molecule 37: 50S ribosomal protein L14

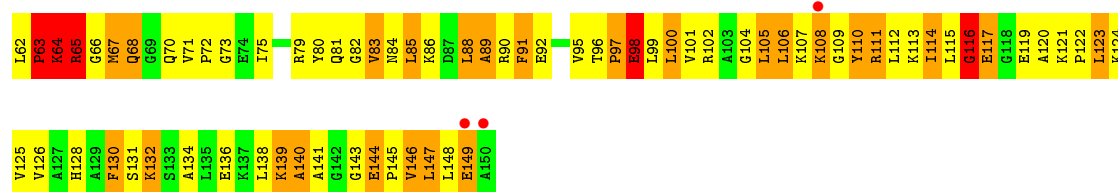


• Molecule 37: 50S ribosomal protein L14

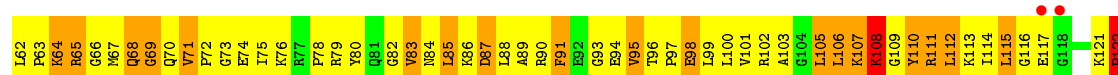
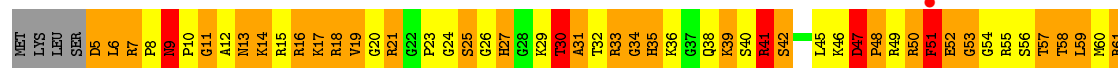


• Molecule 38: 50S ribosomal protein L15

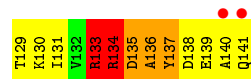
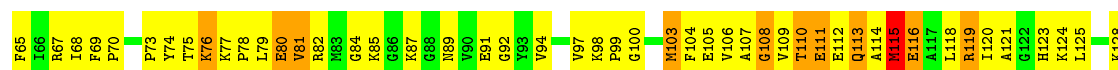




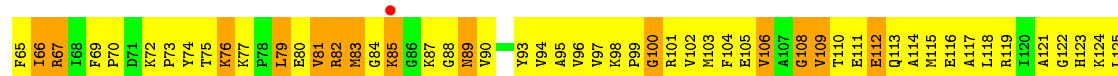
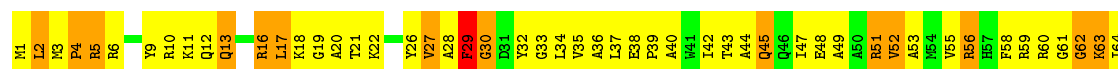
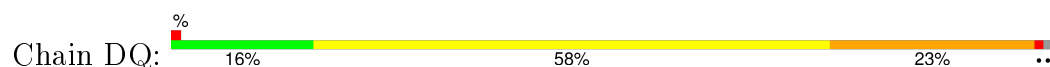
• Molecule 38: 50S ribosomal protein L15



• Molecule 39: 50S ribosomal protein L16

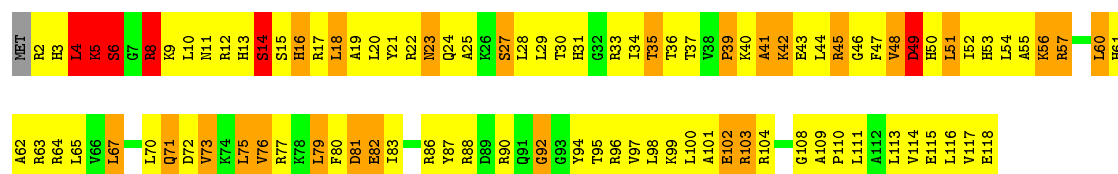


• Molecule 39: 50S ribosomal protein L16



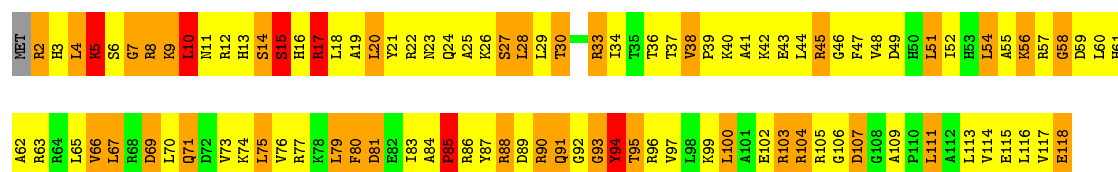
• Molecule 40: 50S ribosomal protein L17





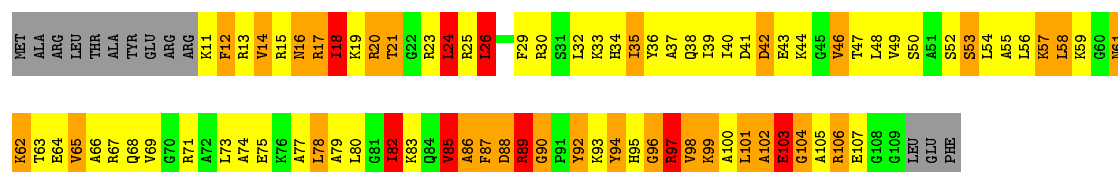
- Molecule 40: 50S ribosomal protein L17

Chain DR: 13% 51% 31% 5%



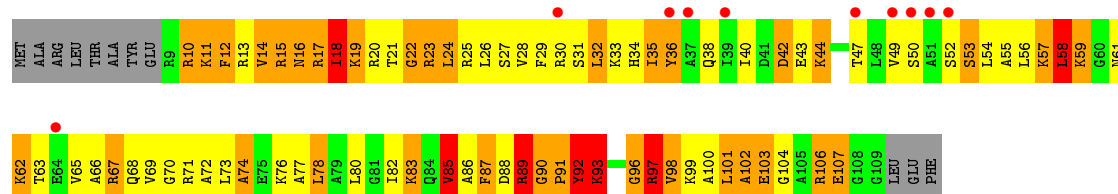
- Molecule 41: 50S ribosomal protein L18

Chain BS: 13% 42% 26% 7% 12%



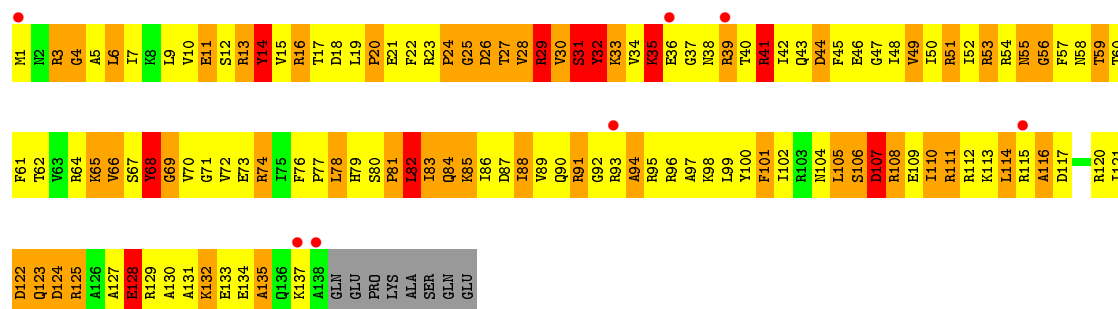
- Molecule 41: 50S ribosomal protein L18

Chain DS: 9% 17% 37% 30% 6% 10%

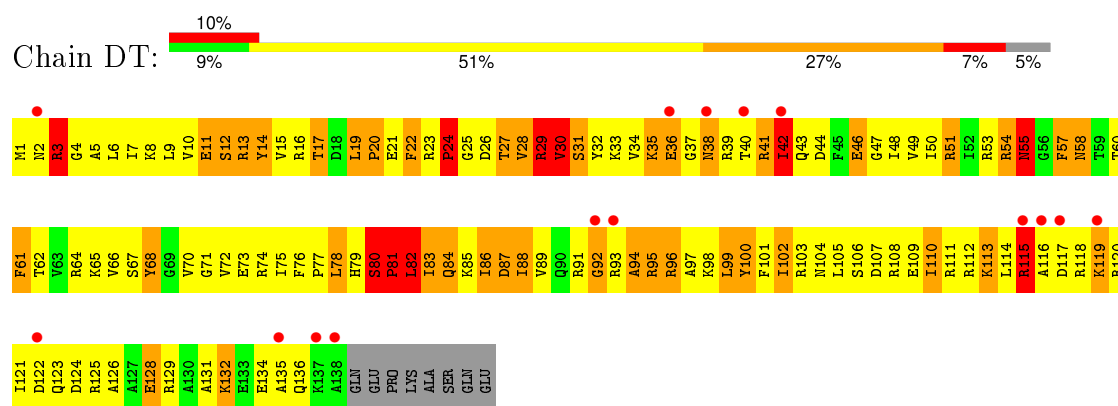


- Molecule 42: 50S ribosomal protein L19

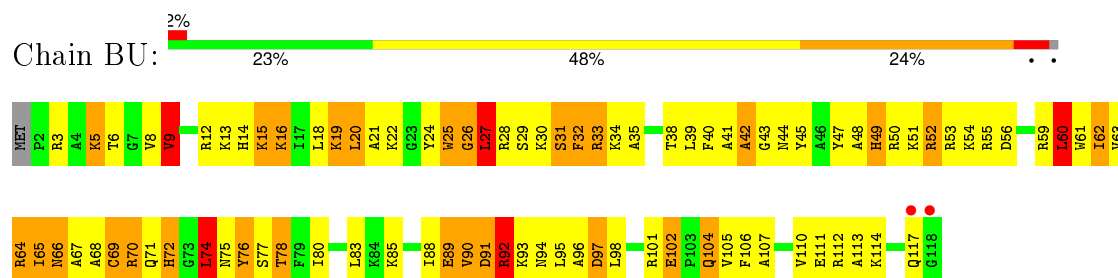
Chain BT: 5% 7% 48% 33% 7% 5%



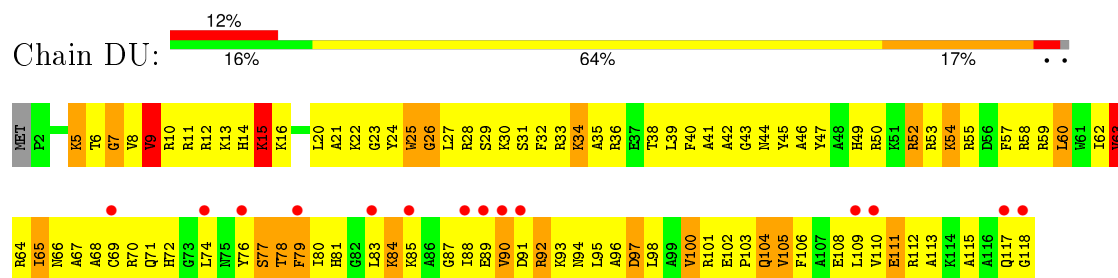
- Molecule 42: 50S ribosomal protein L19



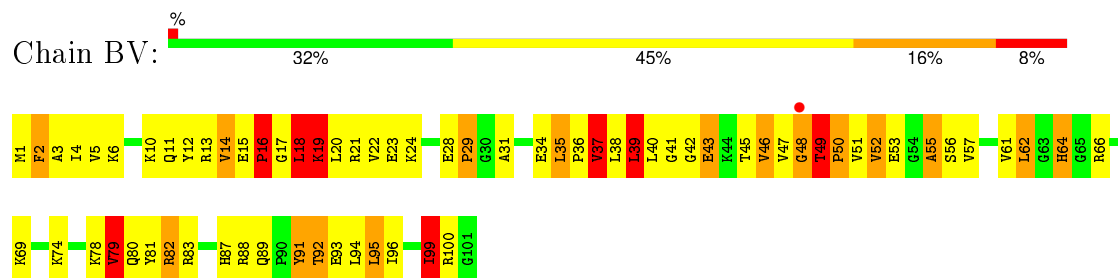
• Molecule 43: 50S ribosomal protein L20



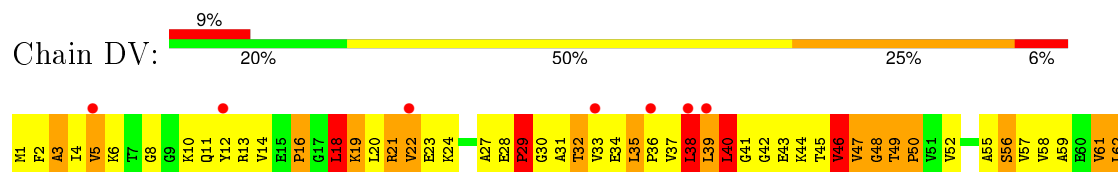
• Molecule 43: 50S ribosomal protein L20

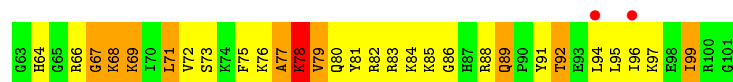


• Molecule 44: 50S ribosomal protein L21

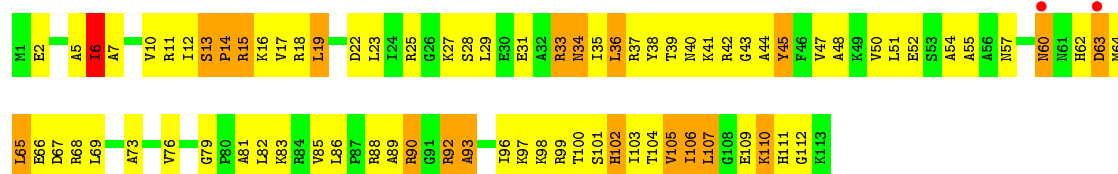


• Molecule 44: 50S ribosomal protein L21

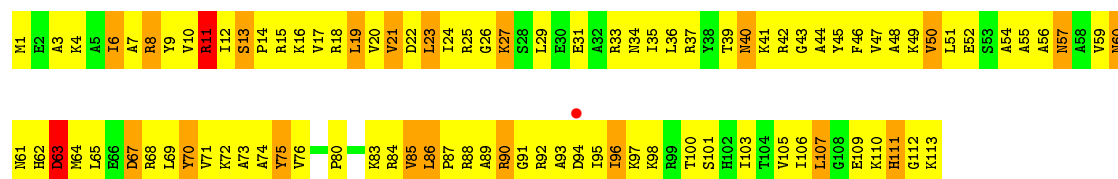




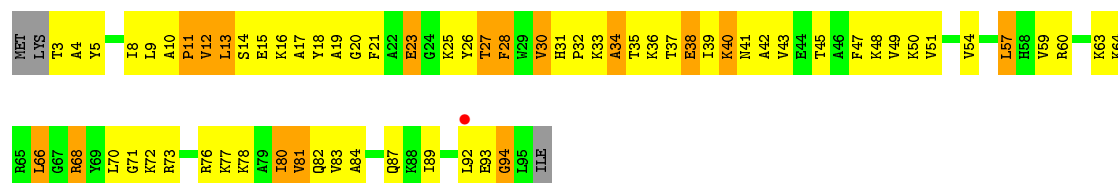
- Molecule 45: 50S ribosomal protein L22



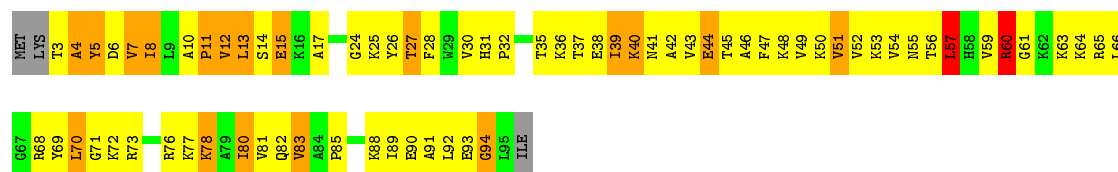
- Molecule 45: 50S ribosomal protein L22



- Molecule 46: 50S ribosomal protein L23

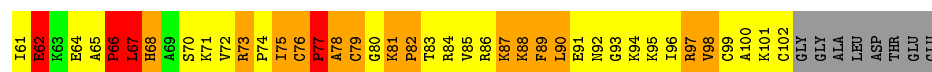


- Molecule 46: 50S ribosomal protein L23

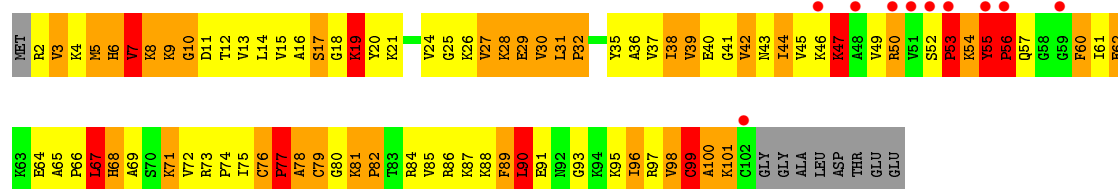


- Molecule 47: 50S ribosomal protein L24

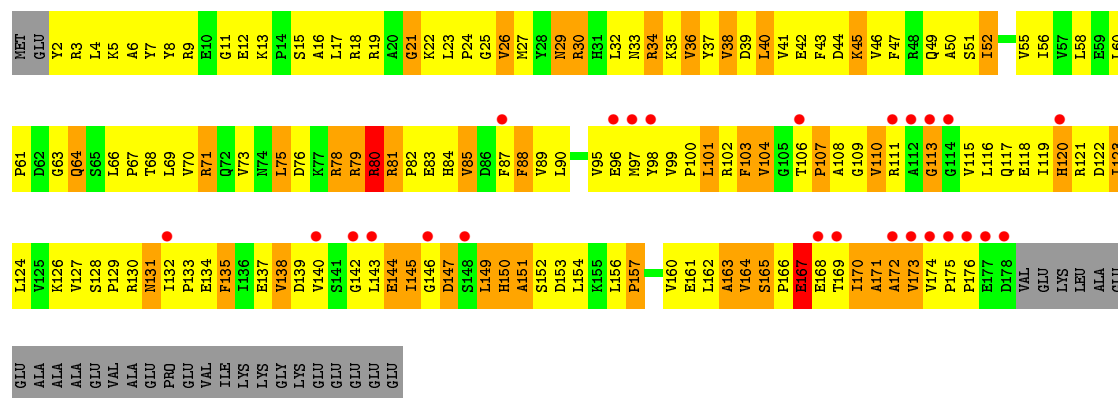
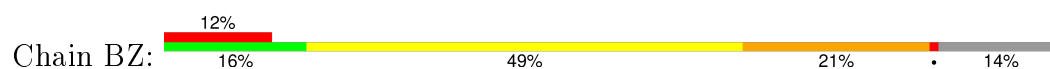




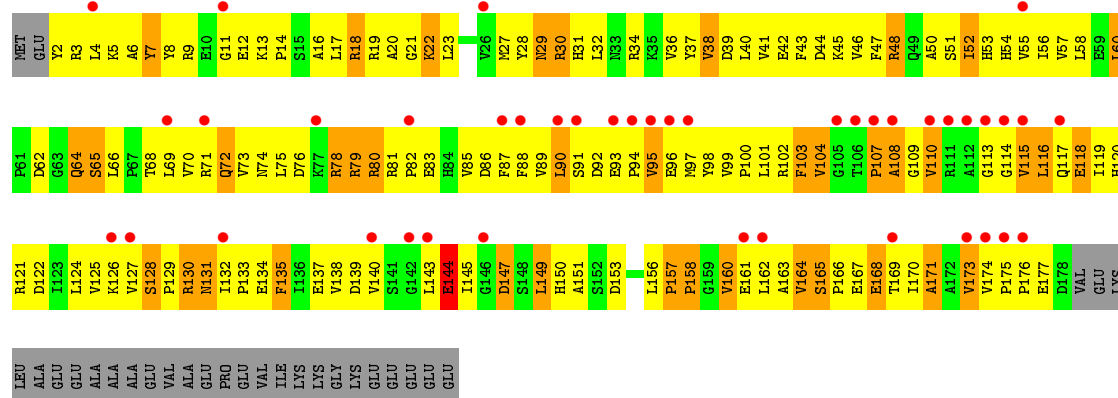
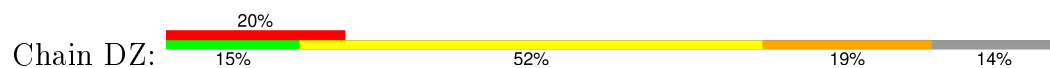
• Molecule 47: 50S ribosomal protein L24



• Molecule 48: 50S ribosomal protein L25

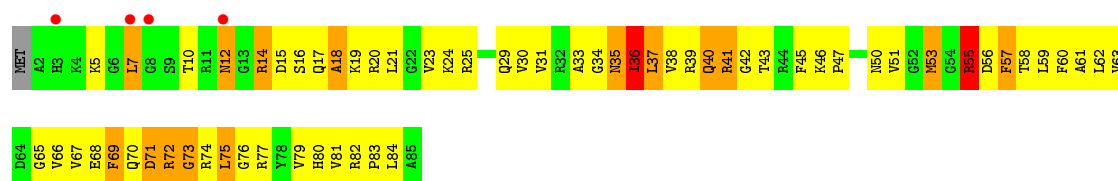


• Molecule 48: 50S ribosomal protein L25

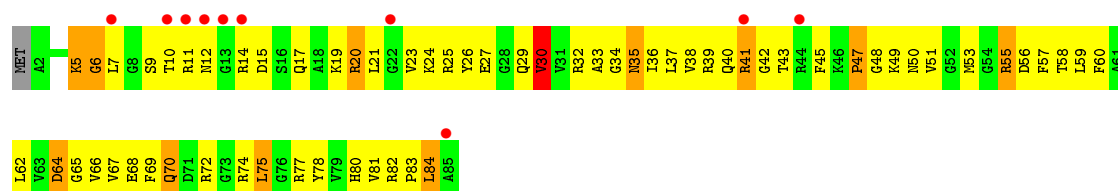


• Molecule 49: 50S ribosomal protein L27

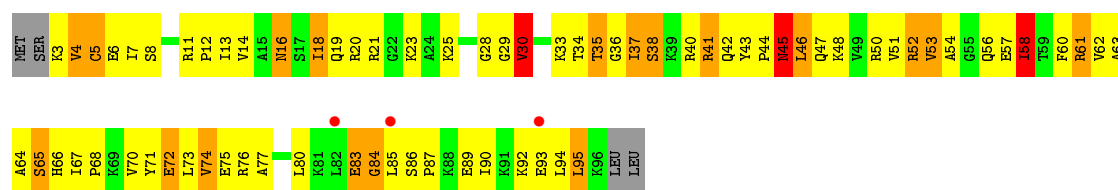




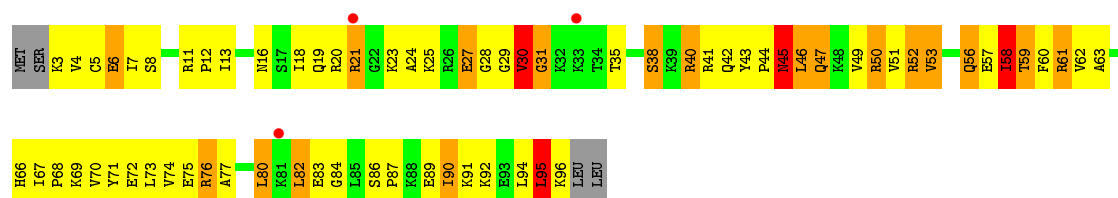
• Molecule 49: 50S ribosomal protein L27



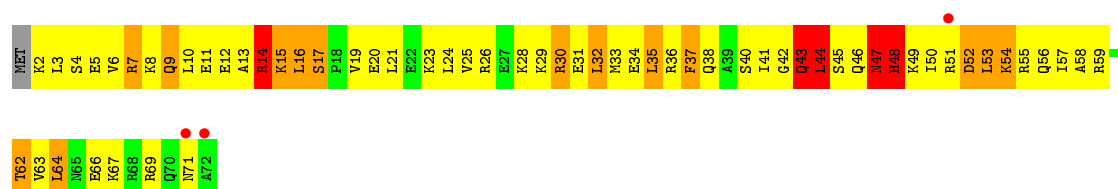
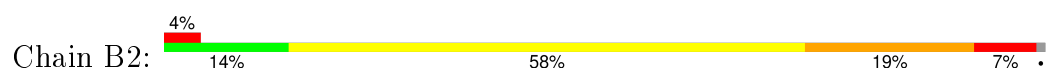
• Molecule 50: 50S ribosomal protein L28



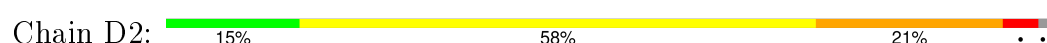
• Molecule 50: 50S ribosomal protein L28

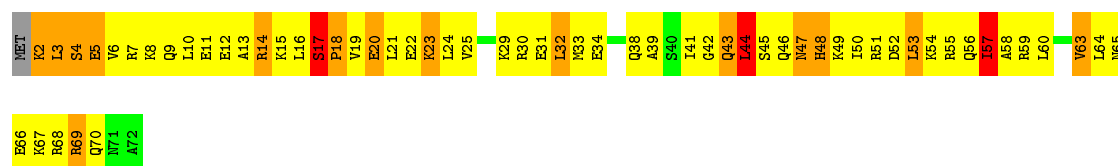


• Molecule 51: 50S ribosomal protein L29

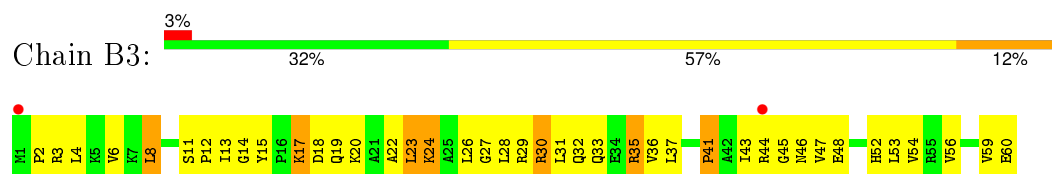


• Molecule 51: 50S ribosomal protein L29

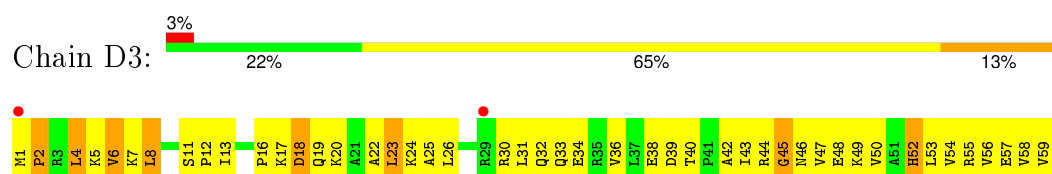




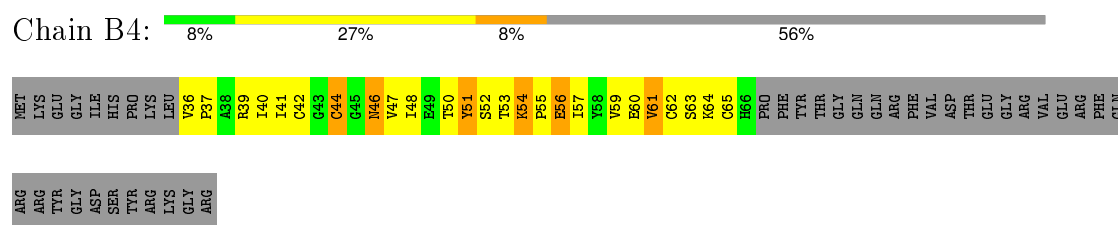
- Molecule 52: 50S ribosomal protein L30



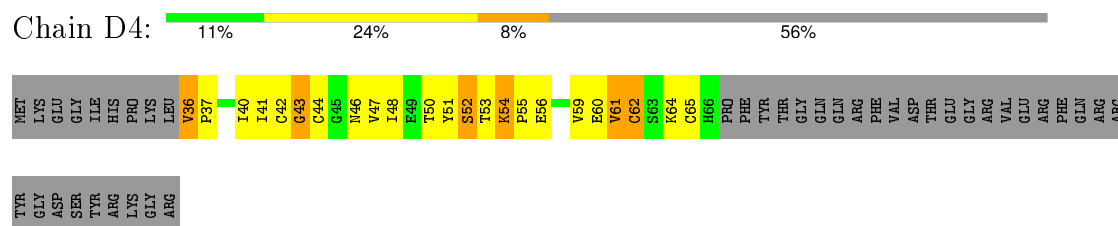
- Molecule 52: 50S ribosomal protein L30



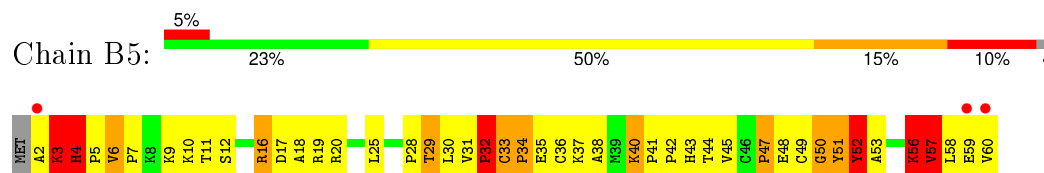
- Molecule 53: 50S ribosomal protein L31



- Molecule 53: 50S ribosomal protein L31



- Molecule 54: 50S ribosomal protein L32



- Molecule 54: 50S ribosomal protein L32





- Molecule 55: 50S ribosomal protein L33



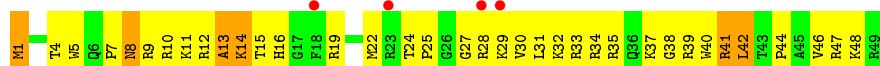
- Molecule 55: 50S ribosomal protein L33



- Molecule 56: 50S ribosomal protein L34



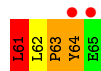
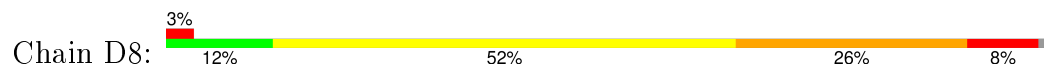
- Molecule 56: 50S ribosomal protein L34



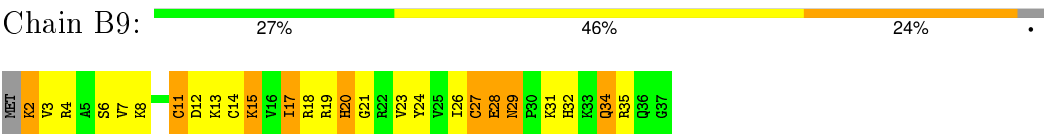
- Molecule 57: 50S ribosomal protein L35



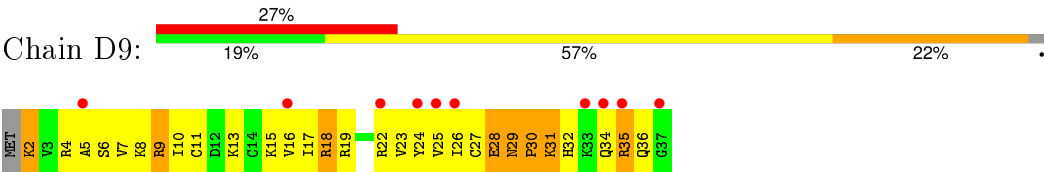
- Molecule 57: 50S ribosomal protein L35



● Molecule 58: 50S ribosomal protein L36



● Molecule 58: 50S ribosomal protein L36



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.23Å 448.51Å 633.62Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 3.00 49.93 – 3.00	Depositor EDS
% Data completeness (in resolution range)	(Not available) (50.00-3.00) 94.2 (49.93-3.00)	Depositor EDS
R_{merge}	0.31	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.01 (at 3.01Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.248 , 0.272 0.252 , 0.283	Depositor DCC
R_{free} test set	55515 reflections (5.27%)	DCC
Wilson B-factor (Å ²)	88.5	Xtriage
Anisotropy	0.155	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 91.4	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.36$, $\langle L^2 \rangle = 0.18$	Xtriage
Outliers	0 of 1109073 reflections	Xtriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	294559	wwPDB-VP
Average B, all atoms (Å ²)	86.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.68% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 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: ZN, DPP, MG, KBE, UAL, 5OH

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	0.52	0/35980	0.82	47/56157 (0.1%)
1	CA	0.50	0/35980	0.82	32/56157 (0.1%)
2	AB	0.38	0/1936	0.73	0/2611
2	CB	0.37	0/1936	0.71	0/2611
3	AC	0.37	0/1637	0.74	1/2207 (0.0%)
3	CC	0.37	0/1637	0.73	0/2207
4	AD	0.45	0/1733	0.76	1/2318 (0.0%)
4	CD	0.44	0/1733	0.80	2/2318 (0.1%)
5	AE	0.43	0/1163	0.77	0/1566
5	CE	0.43	0/1163	0.77	0/1566
6	AF	0.41	0/856	0.71	0/1154
6	CF	0.41	0/856	0.72	0/1154
7	AG	0.39	0/1276	0.75	1/1709 (0.1%)
7	CG	0.40	0/1276	0.69	0/1709
8	AH	0.42	0/1136	0.76	0/1527
8	CH	0.40	0/1136	0.73	0/1527
9	AI	0.36	0/1023	0.71	0/1371
9	CI	0.37	0/1024	0.68	0/1372
10	AJ	0.37	0/808	0.68	0/1087
10	CJ	0.39	0/808	0.72	0/1087
11	AK	0.40	0/900	0.77	1/1213 (0.1%)
11	CK	0.41	0/900	0.77	1/1213 (0.1%)
12	AL	0.47	0/987	0.89	0/1322
12	CL	0.43	0/987	0.79	0/1322
13	AM	0.44	0/957	0.80	0/1284
13	CM	0.89	5/920 (0.5%)	1.22	13/1241 (1.0%)
14	AN	0.43	0/501	0.73	0/664
14	CN	0.42	0/501	0.72	1/664 (0.2%)
15	AO	0.43	0/745	0.71	0/992
15	CO	0.41	0/745	0.67	0/992
16	AP	0.43	0/717	0.78	1/965 (0.1%)
16	CP	0.40	0/717	0.70	0/965

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.44	0/837	0.77	0/1119
17	CQ	0.40	0/837	0.74	0/1119
18	AR	0.45	0/579	0.82	0/768
18	CR	0.44	0/579	0.82	0/768
19	AS	0.41	0/643	0.71	0/867
19	CS	0.39	0/643	0.69	0/867
20	AT	0.38	0/765	0.80	0/1007
20	CT	0.39	0/765	0.77	0/1007
21	AU	0.46	0/213	0.77	0/279
21	CU	0.36	0/213	0.66	0/279
22	AV	0.56	0/239	0.66	0/371
22	CV	0.49	0/239	0.81	1/371 (0.3%)
23	AW	0.50	0/1778	0.76	0/2768
23	CW	0.43	0/1778	0.74	0/2768
24	AX	0.50	0/1832	0.74	0/2855
24	CX	0.49	0/1832	0.73	1/2855 (0.0%)
25	AY	0.36	0/1776	0.71	0/2766
25	CY	0.39	0/1776	0.73	0/2766
26	AZ	0.95	0/11	0.62	0/13
26	CZ	1.05	0/11	0.87	0/13
27	BA	0.64	0/67544	0.87	94/105433 (0.1%)
27	DA	0.55	0/67547	0.85	93/105438 (0.1%)
28	BB	0.58	0/2826	0.85	4/4406 (0.1%)
28	DB	0.50	0/2826	0.85	4/4406 (0.1%)
29	BC	0.29	0/1145	0.64	0/1556
29	DC	0.30	0/1145	0.67	0/1556
30	BD	0.60	2/2155 (0.1%)	0.94	3/2907 (0.1%)
30	DD	0.52	0/2155	0.90	5/2907 (0.2%)
31	BE	0.55	0/1597	0.92	0/2155
31	DE	0.46	0/1597	0.89	3/2155 (0.1%)
32	BF	0.50	0/1659	0.83	0/2246
32	DF	0.44	0/1659	0.81	1/2246 (0.0%)
33	BG	0.52	1/1499 (0.1%)	0.91	5/2016 (0.2%)
33	DG	0.50	1/1499 (0.1%)	0.89	5/2016 (0.2%)
34	BH	0.54	1/1277 (0.1%)	0.89	3/1729 (0.2%)
34	DH	0.35	0/1246	0.76	0/1684
35	BI	0.37	0/1057	0.81	0/1453
35	DI	0.38	0/1061	0.81	0/1458
36	BN	0.54	0/1132	0.89	2/1527 (0.1%)
36	DN	0.41	0/1132	0.79	0/1527
37	BO	0.50	0/943	0.90	4/1269 (0.3%)
37	DO	0.48	0/943	0.79	0/1269
38	BP	0.60	0/1131	1.14	9/1504 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DP	0.49	0/1131	0.97	5/1504 (0.3%)
39	BQ	0.52	0/1143	0.79	0/1527
39	DQ	0.41	0/1128	0.73	0/1508
40	BR	0.53	0/974	0.94	6/1302 (0.5%)
40	DR	0.45	0/974	0.87	2/1302 (0.2%)
41	BS	0.50	0/779	1.01	4/1038 (0.4%)
41	DS	0.42	0/785	0.92	3/1048 (0.3%)
42	BT	0.54	0/1156	0.99	5/1544 (0.3%)
42	DT	0.48	0/1156	0.89	2/1544 (0.1%)
43	BU	0.57	0/975	0.86	2/1297 (0.2%)
43	DU	0.42	0/975	0.84	3/1297 (0.2%)
44	BV	0.51	0/790	0.95	3/1057 (0.3%)
44	DV	0.42	0/790	0.82	0/1057
45	BW	0.52	0/907	0.88	2/1216 (0.2%)
45	DW	0.50	0/907	0.85	0/1216
46	BX	0.53	0/740	0.89	0/995
46	DX	0.48	0/740	0.81	1/995 (0.1%)
47	BY	0.56	0/789	1.06	3/1053 (0.3%)
47	DY	0.48	0/789	0.93	3/1053 (0.3%)
48	BZ	0.42	0/1436	0.74	0/1951
48	DZ	0.36	0/1436	0.70	0/1951
49	B0	0.53	0/671	0.81	1/892 (0.1%)
49	D0	0.45	0/671	0.73	0/892
50	B1	0.49	0/722	0.82	0/964
50	D1	0.47	0/739	0.79	0/983
51	B2	0.55	0/600	0.86	1/793 (0.1%)
51	D2	0.42	0/600	0.74	0/793
52	B3	0.52	0/473	0.84	0/636
52	D3	0.41	0/473	0.81	0/636
53	B4	0.42	0/229	0.86	0/311
53	D4	0.50	0/229	1.01	2/311 (0.6%)
54	B5	0.53	0/473	0.95	2/639 (0.3%)
54	D5	0.46	0/473	0.79	0/639
55	B6	0.75	0/418	1.17	3/562 (0.5%)
55	D6	0.80	1/397 (0.3%)	1.20	4/531 (0.8%)
56	B7	0.59	0/427	0.92	1/563 (0.2%)
56	D7	0.50	0/427	0.85	0/563
57	B8	0.59	0/516	1.01	1/681 (0.1%)
57	D8	0.50	0/516	0.95	3/681 (0.4%)
58	B9	0.54	0/302	0.88	0/397
58	D9	0.33	0/302	0.74	0/397
All	All	0.54	11/318953 (0.0%)	0.84	400/477060 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	0	90
1	CA	1	81
13	CM	0	1
22	CV	0	2
23	AW	0	1
23	CW	0	2
27	BA	0	223
27	DA	0	164
28	BB	0	6
28	DB	0	6
30	DD	0	1
36	DN	0	1
47	BY	0	1
54	D5	0	1
55	B6	0	1
55	D6	0	1
All	All	1	582

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	CM	113	PRO	N-CD	-7.63	1.37	1.47
55	D6	46	HIS	C-N	-6.65	1.18	1.34
34	BH	11	VAL	C-N	6.53	1.46	1.34
13	CM	65	LYS	C-N	6.24	1.48	1.34
33	BG	111	LEU	C-N	5.78	1.45	1.34
30	BD	246	PRO	N-CD	5.75	1.55	1.47
13	CM	112	GLY	C-O	-5.56	1.14	1.23
13	CM	65	LYS	CA-C	5.43	1.67	1.52
13	CM	72	ALA	CA-CB	5.31	1.63	1.52
30	BD	245	PRO	C-N	-5.22	1.24	1.34
33	DG	111	LEU	C-N	5.21	1.44	1.34

All (400) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	CM	70	LEU	N-CA-C	-12.04	78.50	111.00
27	BA	2424	C	N1-C1'-C2'	-11.64	98.86	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	B6	46	HIS	N-CA-C	11.54	142.16	111.00
38	BP	52	GLU	N-CA-C	11.01	140.73	111.00
27	DA	1782	C	N1-C1'-C2'	-10.49	100.36	114.00
55	D6	46	HIS	N-CA-C	10.23	138.63	111.00
1	AA	52	G	N9-C1'-C2'	-10.22	100.71	114.00
27	DA	1992	G	N9-C1'-C2'	10.09	127.12	114.00
38	BP	116	GLY	N-CA-C	9.33	136.42	113.10
1	CA	517	G	C2'-C3'-O3'	9.26	129.88	109.50
38	DP	52	GLU	N-CA-C	9.24	135.96	111.00
1	CA	874	G	N9-C1'-C2'	-8.89	102.22	112.00
27	DA	226	G	C2'-C3'-O3'	8.89	129.06	109.50
1	AA	508	C	C2'-C3'-O3'	8.64	128.51	109.50
13	CM	70	LEU	CB-CG-CD1	-8.56	96.44	111.00
13	CM	70	LEU	CB-CG-CD2	-8.41	96.71	111.00
1	AA	131	C	N1-C1'-C2'	-8.40	102.76	112.00
13	CM	69	GLU	O-C-N	8.30	135.98	122.70
1	CA	199	G	N9-C1'-C2'	-8.20	102.98	112.00
1	CA	533	A	C2'-C3'-O3'	8.13	127.38	109.50
27	BA	1992	G	C2'-C3'-O3'	8.11	127.34	109.50
47	DY	54	LYS	N-CA-C	-7.86	89.79	111.00
1	AA	266	G	C2'-C3'-O3'	7.78	126.61	109.50
27	BA	467	G	N9-C1'-C2'	-7.76	103.46	112.00
27	DA	421	U	C2'-C3'-O3'	7.74	126.52	109.50
27	DA	2873	A	C5'-C4'-O4'	7.72	118.37	109.10
1	AA	498	U	N1-C1'-C2'	-7.63	103.61	112.00
1	AA	1265	G	N9-C1'-C2'	-7.55	103.69	112.00
27	BA	329	G	C2'-C3'-O3'	7.54	126.08	109.50
38	BP	53	GLY	N-CA-C	-7.54	94.26	113.10
27	DA	1289	C	N1-C1'-C2'	-7.44	103.81	112.00
30	BD	245	PRO	N-CA-C	-7.44	92.76	112.10
13	CM	65	LYS	CA-CB-CG	-7.40	97.11	113.40
27	BA	2776	A	C2'-C3'-O3'	7.37	125.72	109.50
27	DA	1386	C	N1-C1'-C2'	-7.36	103.91	112.00
27	BA	996	A	N9-C1'-C2'	-7.34	103.92	112.00
1	AA	1077	G	N9-C1'-C2'	-7.31	103.96	112.00
27	DA	2525	G	N9-C1'-C2'	-7.30	103.97	112.00
27	BA	1126	A	C2'-C3'-O3'	7.29	125.54	109.50
33	DG	114	ILE	N-CA-C	-7.26	91.41	111.00
38	DP	53	GLY	N-CA-C	-7.23	95.02	113.10
27	DA	2127	G	N9-C1'-C2'	-7.20	104.08	112.00
43	DU	78	THR	N-CA-C	-7.15	91.69	111.00
1	AA	140	A	N9-C1'-C2'	-7.12	104.17	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DE	186	GLY	N-CA-C	7.11	130.88	113.10
41	DS	16	ASN	N-CA-C	-7.09	91.86	111.00
31	DE	87	GLU	N-CA-C	-7.07	91.90	111.00
1	AA	578	C	N1-C1'-C2'	-7.06	104.24	112.00
27	DA	1781	C	O4'-C1'-N1	7.05	113.84	108.20
1	AA	1067	A	C2'-C3'-O3'	7.04	124.98	109.50
36	BN	18	ALA	N-CA-C	-7.03	92.02	111.00
1	AA	494	U	N1-C1'-C2'	-7.02	104.28	112.00
33	DG	112	PRO	N-CA-CB	-7.01	94.89	102.60
1	AA	1196	U	N1-C1'-C2'	7.01	123.11	114.00
27	DA	831	G	C5'-C4'-C3'	-6.95	104.88	116.00
55	D6	48	VAL	N-CA-C	6.92	129.70	111.00
27	DA	2134	A	N9-C1'-C2'	-6.92	104.39	112.00
1	CA	266	G	C2'-C3'-O3'	6.87	124.69	113.70
27	BA	2346	A	N9-C1'-C2'	6.86	122.92	114.00
1	CA	1154	G	N9-C1'-C2'	-6.84	104.48	112.00
27	DA	1700	A	N9-C1'-C2'	-6.82	104.50	112.00
27	BA	2832	U	C2'-C3'-O3'	6.80	124.58	113.70
54	B5	52	TYR	N-CA-C	-6.78	92.70	111.00
13	CM	64	TRP	C-N-CA	-6.77	104.77	121.70
27	DA	467	G	N9-C1'-C2'	-6.76	104.57	112.00
38	BP	51	PHE	N-CA-C	6.75	129.23	111.00
27	BA	2491	U	O4'-C1'-N1	6.74	113.59	108.20
1	AA	1021	G	N9-C1'-C2'	-6.74	104.59	112.00
30	DD	244	ARG	C-N-CD	-6.73	105.79	120.60
47	DY	7	VAL	N-CA-C	6.71	129.13	111.00
1	AA	1461	G	N9-C1'-C2'	-6.71	104.62	112.00
28	DB	117	G	N9-C1'-C2'	-6.70	104.63	112.00
27	BA	1616	A	N9-C1'-C2'	6.68	122.69	114.00
40	BR	8	ARG	N-CA-C	6.68	129.04	111.00
27	BA	301	G	C2'-C3'-O3'	6.68	124.38	113.70
27	BA	2068	U	N1-C1'-C2'	-6.65	104.68	112.00
27	BA	2477	C	N1-C1'-C2'	6.63	122.62	114.00
27	DA	548	A	O4'-C1'-N9	6.59	113.47	108.20
27	DA	1786	A	N9-C1'-C2'	6.59	122.57	114.00
33	BG	114	ILE	N-CA-C	-6.56	93.30	111.00
27	DA	1945	G	N9-C1'-C2'	-6.56	104.79	112.00
27	BA	2820	A	C2'-C3'-O3'	6.55	124.19	113.70
30	BD	246	PRO	CA-N-CD	-6.55	102.33	111.50
27	BA	2318	G	C2'-C3'-O3'	6.55	124.17	113.70
27	DA	1992	G	C2'-C3'-O3'	6.53	124.15	113.70
27	BA	2830	G	C5'-C4'-C3'	-6.53	105.56	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	1996	C	N1-C1'-C2'	6.53	122.48	114.00
40	DR	10	LEU	CA-CB-CG	6.49	130.24	115.30
53	D4	62	CYS	CA-CB-SG	-6.49	102.32	114.00
34	BH	157	TYR	N-CA-C	-6.49	93.49	111.00
13	CM	66	LEU	CB-CG-CD2	-6.49	99.97	111.00
27	BA	1947	C	C5'-C4'-C3'	-6.47	105.65	116.00
27	BA	2036	C	N1-C1'-C2'	-6.46	104.90	112.00
27	BA	588	U	O5'-P-OP2	-6.41	99.93	105.70
27	DA	33	U	C5'-C4'-O4'	6.39	116.76	109.10
57	B8	45	GLY	N-CA-C	-6.38	97.15	113.10
30	DD	41	GLY	N-CA-C	-6.36	97.19	113.10
27	BA	1698	A	N9-C1'-C2'	6.36	122.27	114.00
27	DA	334	C	N1-C1'-C2'	-6.35	105.01	112.00
38	BP	45	LEU	N-CA-C	-6.35	93.86	111.00
27	DA	424	G	N9-C1'-C2'	-6.35	105.02	112.00
41	DS	18	ILE	N-CA-C	-6.33	93.90	111.00
1	AA	792	A	C2'-C3'-O3'	6.33	123.83	113.70
27	DA	1653	G	C2'-C3'-O3'	6.33	123.83	113.70
49	B0	36	ILE	N-CA-C	-6.28	94.06	111.00
1	AA	682	G	N9-C1'-C2'	-6.27	105.10	112.00
1	AA	6	G	N9-C1'-C2'	6.27	122.15	114.00
27	BA	729	G	N9-C1'-C2'	6.22	122.09	114.00
1	CA	288	A	N9-C1'-C2'	-6.21	105.17	112.00
27	BA	2669	G	N9-C1'-C2'	-6.21	105.17	112.00
27	BA	2468	G	N9-C1'-C2'	6.18	122.03	114.00
27	DA	2497	A	C2'-C3'-O3'	6.17	123.57	113.70
28	BB	118	G	N9-C1'-C2'	-6.15	105.23	112.00
1	AA	785	G	C5'-C4'-C3'	-6.15	106.16	116.00
1	CA	966	G	N9-C1'-C2'	-6.14	105.25	112.00
27	BA	61	G	N9-C1'-C2'	-6.13	105.26	112.00
27	BA	1266	G	N9-C1'-C2'	6.12	121.96	114.00
38	DP	51	PHE	N-CA-C	6.12	127.52	111.00
1	AA	189(E)	U	N1-C1'-C2'	6.11	121.94	114.00
27	BA	1427	A	C2'-C3'-O3'	6.10	123.46	113.70
24	CX	7	G	N9-C1'-C2'	6.10	121.93	114.00
27	DA	1283	G	N9-C1'-C2'	-6.08	105.31	112.00
33	DG	129	GLY	N-CA-C	-6.07	97.93	113.10
42	BT	29	ARG	N-CA-C	6.07	127.38	111.00
27	BA	1616	A	O4'-C1'-N9	6.06	113.05	108.20
27	DA	1781	C	N1-C1'-C2'	6.06	121.88	114.00
27	BA	856	C	C2'-C3'-O3'	6.05	123.38	113.70
1	AA	700	G	N9-C1'-C2'	-6.05	105.35	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	D4	43	GLY	N-CA-C	-6.05	97.98	113.10
41	BS	17	ARG	N-CA-C	-6.04	94.70	111.00
27	BA	2473	U	N1-C1'-C2'	6.02	121.83	114.00
27	DA	352	G	N9-C1'-C2'	6.00	121.80	114.00
27	DA	1159	U	C5'-C4'-C3'	-6.00	106.40	116.00
27	BA	44	G	N9-C1'-C2'	-5.98	105.43	112.00
27	DA	945	A	C5'-C4'-O4'	5.96	116.25	109.10
27	BA	945	A	C5'-C4'-O4'	5.95	116.24	109.10
1	AA	331	G	N9-C1'-C2'	-5.95	105.46	112.00
1	CA	1177	G	N9-C1'-C2'	-5.94	105.46	112.00
1	CA	511	C	C2'-C3'-O3'	5.94	123.21	113.70
1	CA	27	G	N9-C1'-C2'	-5.94	105.47	112.00
42	BT	105	LEU	CA-CB-CG	5.94	128.95	115.30
27	BA	146	G	C5'-C4'-C3'	-5.92	106.52	116.00
27	DA	412	A	C5'-C4'-O4'	-5.92	101.99	109.10
27	DA	2498	C	N1-C1'-C2'	-5.92	105.48	112.00
38	DP	54	GLY	N-CA-C	-5.92	98.30	113.10
1	AA	686	U	C2'-C3'-O3'	5.92	123.16	113.70
27	BA	474	G	N9-C1'-C2'	5.91	121.68	114.00
55	B6	19	ARG	N-CA-C	5.91	126.96	111.00
27	DA	313	C	N1-C1'-C2'	-5.91	105.50	112.00
27	DA	740	U	C5'-C4'-O4'	-5.90	102.03	109.10
51	B2	47	ASN	N-CA-C	5.89	126.91	111.00
27	DA	61	G	N9-C1'-C2'	-5.88	105.53	112.00
57	D8	32	LEU	N-CA-C	-5.88	95.13	111.00
27	BA	945	A	C1'-O4'-C4'	-5.88	105.20	109.90
27	BA	2585	U	O4'-C1'-N1	5.87	112.90	108.20
27	DA	1623	G	N9-C1'-C2'	-5.87	105.54	112.00
27	BA	2304	G	C5'-C4'-C3'	-5.87	106.61	116.00
43	BU	27	LEU	N-CA-C	-5.85	95.20	111.00
41	BS	12	PHE	N-CA-C	-5.85	95.21	111.00
1	AA	723	U	N1-C1'-C2'	-5.84	105.57	112.00
27	DA	1653	G	N9-C1'-C2'	5.83	121.58	114.00
27	BA	1744	C	C5'-C4'-C3'	-5.83	106.68	116.00
30	DD	212	SER	N-CA-C	-5.80	95.33	111.00
27	BA	1784	A	C2'-C3'-O3'	-5.79	96.75	109.50
27	DA	1929	G	C1'-O4'-C4'	-5.79	105.27	109.90
27	DA	1236	G	C2'-C3'-O3'	5.79	122.96	113.70
3	AC	139	GLN	N-CA-C	-5.78	95.39	111.00
27	BA	906	G	C5'-C4'-C3'	-5.78	106.75	116.00
27	BA	784	A	N9-C1'-C2'	5.78	121.51	114.00
27	BA	1698	A	O4'-C1'-N9	5.77	112.82	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	DA	1698	A	N9-C1'-C2'	5.77	121.50	114.00
13	CM	66	LEU	O-C-N	5.77	131.93	122.70
38	DP	41	ARG	N-CA-C	-5.77	95.43	111.00
28	BB	40	U	N1-C1'-C2'	5.76	121.49	114.00
1	CA	362	G	N9-C1'-C2'	-5.76	105.66	112.00
27	DA	2222	G	N9-C1'-C2'	-5.76	105.66	112.00
27	BA	442	G	N9-C1'-C2'	5.76	121.49	114.00
16	AP	27	LYS	N-CA-C	-5.76	95.46	111.00
27	BA	669	G	N9-C1'-C2'	5.76	121.48	114.00
34	BH	166	GLY	N-CA-C	-5.75	98.72	113.10
27	BA	2746	U	N1-C1'-C2'	-5.75	105.67	112.00
42	BT	4	GLY	N-CA-C	-5.75	98.74	113.10
38	BP	52	GLU	CA-C-N	-5.74	104.72	116.20
1	AA	957	U	N1-C1'-C2'	-5.74	105.69	112.00
31	DE	117	MET	N-CA-C	-5.72	95.55	111.00
27	BA	2200	C	C5'-C4'-C3'	-5.72	106.85	116.00
33	DG	113	ARG	CA-CB-CG	-5.71	100.84	113.40
27	DA	2681	C	N1-C1'-C2'	5.71	121.42	114.00
27	BA	951	C	N1-C1'-C2'	-5.70	105.73	112.00
42	BT	31	SER	N-CA-C	5.70	126.39	111.00
27	BA	548	A	O4'-C1'-N9	5.70	112.76	108.20
1	CA	960	U	C5'-C4'-O4'	5.70	115.94	109.10
43	BU	64	ARG	NE-CZ-NH2	-5.69	117.45	120.30
27	DA	2130	U	N1-C1'-C2'	-5.69	105.74	112.00
57	D8	32	LEU	CA-CB-CG	5.68	128.37	115.30
27	DA	736	C	N1-C1'-C2'	-5.68	105.75	112.00
27	DA	1930	G	N9-C1'-C2'	5.68	121.38	114.00
1	AA	1049	U	N1-C1'-C2'	5.68	121.38	114.00
1	CA	952	U	N1-C1'-C2'	-5.68	105.75	112.00
27	DA	1838	C	C2'-C3'-O3'	5.67	122.78	113.70
28	BB	52	A	N9-C1'-C2'	5.67	121.37	114.00
1	AA	428	G	C2'-C3'-O3'	5.67	122.76	113.70
27	BA	1517	G	C5'-C4'-C3'	-5.67	106.94	116.00
13	CM	70	LEU	N-CA-CB	5.67	121.73	110.40
1	AA	1105	A	N9-C1'-C2'	-5.66	105.77	112.00
27	BA	453	C	C5'-C4'-C3'	-5.66	106.94	116.00
41	BS	26	LEU	N-CA-C	-5.65	95.73	111.00
27	BA	2546	U	O4'-C1'-N1	5.65	112.72	108.20
33	BG	129	GLY	N-CA-C	-5.65	98.98	113.10
28	DB	75	G	C5'-C4'-C3'	-5.64	106.97	116.00
1	AA	559	A	N9-C1'-C2'	5.63	121.32	114.00
27	DA	1190	G	N9-C1'-C2'	-5.61	105.83	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1363(A)	A	N9-C1'-C2'	5.59	121.27	114.00
1	AA	400	C	N1-C1'-C2'	-5.59	105.86	112.00
1	CA	323	U	N1-C1'-C2'	-5.58	105.86	112.00
42	DT	3	ARG	N-CA-C	-5.57	95.96	111.00
1	AA	1274	G	N9-C1'-C2'	-5.57	105.88	112.00
27	DA	119	A	N9-C1'-C2'	5.57	121.23	114.00
27	BA	1838	C	C5'-C4'-O4'	5.56	115.77	109.10
11	CK	81	ASP	N-CA-C	-5.56	96.00	111.00
27	DA	2092	U	N1-C1'-C2'	5.55	121.22	114.00
27	BA	1204	A	C5'-C4'-C3'	5.54	124.87	116.00
40	BR	57	ARG	N-CA-C	-5.54	96.04	111.00
41	BS	16	ASN	N-CA-C	-5.54	96.05	111.00
27	DA	1016	G	N9-C1'-C2'	-5.54	105.91	112.00
27	DA	2092	U	C2'-C3'-O3'	5.53	122.55	113.70
28	BB	86	G	N9-C1'-C2'	-5.52	105.93	112.00
27	BA	934	G	C5'-C4'-C3'	-5.51	107.18	116.00
45	BW	98	LYS	N-CA-C	-5.51	96.12	111.00
27	BA	1048	A	N9-C1'-C2'	5.51	121.16	114.00
27	DA	2867	G	N9-C1'-C2'	5.51	121.16	114.00
27	BA	2110	G	N9-C1'-C2'	5.51	121.16	114.00
4	CD	31	CYS	N-CA-C	-5.51	96.13	111.00
27	DA	1379	A	C2'-C3'-O3'	5.50	122.50	113.70
38	BP	28	GLY	N-CA-C	-5.49	99.37	113.10
1	CA	1053	G	C1'-O4'-C4'	-5.49	105.51	109.90
38	BP	59	LEU	CA-CB-CG	5.49	127.92	115.30
27	DA	2638	G	C2'-C3'-O3'	5.48	122.47	113.70
4	CD	87	GLY	N-CA-C	-5.48	99.40	113.10
34	BH	64	LEU	CA-CB-CG	-5.47	102.71	115.30
27	BA	1786	A	N9-C1'-C2'	5.47	121.11	114.00
7	AG	81	GLY	N-CA-C	-5.47	99.43	113.10
13	CM	68	GLY	N-CA-C	-5.47	99.43	113.10
27	DA	2304	G	C5'-C4'-O4'	5.46	115.65	109.10
27	DA	1799	G	N9-C1'-C2'	5.46	121.10	114.00
40	BR	60	LEU	CA-CB-CG	5.45	127.84	115.30
40	BR	4	LEU	N-CA-C	5.45	125.72	111.00
27	BA	670	A	C2'-C3'-O3'	5.45	122.42	113.70
1	AA	1134	G	N9-C1'-C2'	-5.45	106.01	112.00
1	CA	517	G	C4'-C3'-O3'	5.45	123.90	113.00
1	AA	108	G	O4'-C1'-N9	5.45	112.56	108.20
27	BA	1815	A	N9-C1'-C2'	5.45	121.08	114.00
41	DS	17	ARG	N-CA-C	-5.45	96.30	111.00
1	CA	1201	A	C2'-C3'-O3'	5.44	122.41	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	DG	113	ARG	CA-C-N	-5.44	105.23	117.20
1	CA	994	A	N9-C1'-C2'	-5.44	106.02	112.00
42	BT	35	LYS	N-CA-C	-5.43	96.32	111.00
13	CM	66	LEU	CA-CB-CG	5.42	127.77	115.30
27	DA	157	U	N1-C1'-C2'	5.41	121.04	114.00
27	DA	2419	U	N1-C1'-C2'	-5.41	106.05	112.00
27	DA	2585	U	N1-C1'-C2'	5.41	121.04	114.00
1	CA	699	C	N1-C1'-C2'	-5.41	106.05	112.00
27	DA	125	G	N9-C1'-C2'	5.40	121.02	114.00
1	AA	1442(A)	G	O4'-C1'-N9	5.39	112.51	108.20
27	DA	40	C	N1-C1'-C2'	-5.39	106.07	112.00
27	DA	1963	U	N1-C1'-C2'	5.39	121.01	114.00
27	BA	572	A	O5'-P-OP2	-5.39	100.85	105.70
27	DA	2832	U	C2'-C3'-O3'	5.39	122.32	113.70
27	BA	717	G	N9-C1'-C2'	-5.39	106.08	112.00
27	BA	1033	U	OP1-P-O3'	5.38	117.03	105.20
27	BA	2873	A	O4'-C1'-N9	5.37	112.50	108.20
55	D6	19	ARG	N-CA-C	5.37	125.49	111.00
1	AA	1442(A)	G	C2'-C3'-O3'	-5.37	97.70	109.50
27	BA	2042	A	N9-C1'-C2'	-5.35	106.11	112.00
33	BG	87	PRO	N-CA-C	5.35	126.02	112.10
28	DB	35	U	N1-C1'-C2'	-5.35	106.11	112.00
1	AA	154	C	N1-C1'-C2'	-5.35	106.11	112.00
27	BA	1559	G	O4'-C1'-N9	5.35	112.48	108.20
27	BA	1175	U	N1-C1'-C2'	5.35	120.95	114.00
47	BY	54	LYS	N-CA-C	-5.34	96.58	111.00
27	BA	1772	G	N9-C1'-C2'	-5.34	106.13	112.00
27	DA	2021	C	OP1-P-O3'	5.34	116.95	105.20
27	DA	2440	C	O4'-C1'-N1	5.34	112.47	108.20
27	DA	1460	A	C2'-C3'-O3'	5.34	122.24	113.70
1	AA	189(I)	G	N9-C1'-C2'	-5.34	106.13	112.00
43	DU	9	VAL	N-CA-C	5.33	125.39	111.00
1	AA	1380	U	N1-C1'-C2'	5.33	120.92	114.00
27	DA	2276	G	N9-C1'-C2'	-5.32	106.15	112.00
27	BA	1139	G	N9-C1'-C2'	-5.32	106.15	112.00
27	DA	271(D)	G	N9-C1'-C2'	-5.32	106.15	112.00
27	BA	629	G	C5'-C4'-C3'	-5.31	107.50	116.00
27	DA	2702	U	N1-C1'-C2'	5.31	120.90	114.00
44	BV	39	LEU	CA-CB-CG	5.30	127.49	115.30
27	BA	2672	G	C5'-C4'-C3'	-5.30	107.52	116.00
27	BA	945	A	O4'-C1'-N9	5.30	112.44	108.20
54	B5	3	LYS	N-CA-C	5.30	125.30	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	DU	97	ASP	N-CA-C	-5.30	96.70	111.00
1	CA	890	G	N9-C1'-C2'	5.29	120.88	114.00
27	BA	454	A	OP1-P-O3'	5.29	116.83	105.20
44	BV	37	VAL	N-CA-C	-5.28	96.74	111.00
1	CA	429	U	O4'-C1'-N1	5.27	112.42	108.20
27	DA	2060	A	C2'-C3'-O3'	5.27	122.13	113.70
27	DA	2140	C	N1-C1'-C2'	-5.27	106.20	112.00
1	AA	1064	G	C2'-C3'-O3'	5.27	122.13	113.70
27	BA	11	G	N9-C1'-C2'	-5.26	106.21	112.00
40	BR	6	SER	N-CA-C	5.26	125.21	111.00
1	CA	328	C	N1-C1'-C2'	5.26	120.84	114.00
27	DA	469	G	N9-C1'-C2'	-5.26	106.21	112.00
27	DA	742	G	N9-C1'-C2'	-5.25	106.22	112.00
1	AA	1174	G	N9-C1'-C2'	-5.25	106.23	112.00
36	BN	124	ALA	N-CA-C	-5.25	96.84	111.00
1	CA	723	U	N1-C1'-C2'	-5.24	106.23	112.00
27	DA	33	U	C1'-O4'-C4'	-5.24	105.70	109.90
27	DA	1165	U	N1-C1'-C2'	-5.24	106.23	112.00
27	BA	1308	A	N9-C1'-C2'	-5.24	106.24	112.00
27	DA	1914	C	O4'-C1'-N1	5.24	112.39	108.20
1	AA	533	A	C2'-C3'-O3'	5.24	122.08	113.70
1	CA	1141	C	N1-C1'-C2'	5.24	120.81	114.00
47	BY	47	LYS	N-CA-C	5.23	125.13	111.00
37	BO	59	LYS	N-CA-C	-5.22	96.90	111.00
1	CA	454	C	O4'-C1'-N1	5.22	112.38	108.20
4	AD	12	CYS	N-CA-C	-5.22	96.91	111.00
27	BA	2231	C	N1-C1'-C2'	-5.21	106.27	112.00
57	D8	38	GLY	N-CA-C	-5.21	100.07	113.10
13	CM	70	LEU	CA-CB-CG	-5.21	103.32	115.30
27	BA	2699	C	N1-C1'-C2'	-5.21	106.27	112.00
27	DA	790	C	N1-C1'-C2'	5.20	120.77	114.00
27	DA	284	U	N1-C1'-C2'	-5.20	106.28	112.00
27	DA	779	U	N1-C1'-C2'	-5.20	106.28	112.00
37	BO	40	VAL	N-CA-C	-5.20	96.96	111.00
27	DA	1936	A	C1'-O4'-C4'	-5.20	105.74	109.90
27	BA	2712	U	C5'-C4'-O4'	5.20	115.33	109.10
22	CV	6	G	N9-C1'-C2'	5.19	120.75	114.00
1	AA	1020	U	N1-C1'-C2'	-5.19	106.29	112.00
1	AA	181	G	C5'-C4'-O4'	5.19	115.32	109.10
27	DA	1321	A	C5'-C4'-C3'	-5.18	107.71	116.00
1	AA	351	G	N9-C1'-C2'	5.17	120.73	114.00
27	DA	676	A	C1'-O4'-C4'	-5.17	105.76	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	770	C	N1-C1'-C2'	-5.17	106.31	112.00
27	DA	474	G	N9-C1'-C2'	5.17	120.72	114.00
1	AA	1530	G	N9-C1'-C2'	-5.16	106.32	112.00
1	CA	401	C	N1-C1'-C2'	-5.16	106.32	112.00
27	BA	1126	A	C4'-C3'-C2'	5.16	107.76	102.60
27	BA	2712	U	O4'-C1'-N1	5.16	112.33	108.20
38	BP	27	HIS	N-CA-C	5.16	124.93	111.00
1	AA	1124	G	N9-C1'-C2'	5.16	120.70	114.00
27	BA	2682	U	C5'-C4'-O4'	-5.15	102.92	109.10
27	DA	2712	U	O4'-C1'-N1	5.15	112.32	108.20
27	BA	349	G	C5'-C4'-C3'	-5.15	107.77	116.00
56	B7	42	LEU	CA-CB-CG	5.14	127.13	115.30
27	BA	2447	G	C5'-C4'-O4'	-5.14	102.93	109.10
27	DA	2286	A	N9-C1'-C2'	5.14	120.68	114.00
27	BA	272(B)	G	C5'-C4'-C3'	5.13	124.20	116.00
27	BA	2092	U	N1-C1'-C2'	5.12	120.66	114.00
1	AA	872	A	N9-C1'-C2'	5.12	120.65	114.00
27	BA	310	A	C1'-O4'-C4'	-5.12	105.81	109.90
32	DF	85	GLY	N-CA-C	-5.12	100.31	113.10
27	BA	493	G	C5'-C4'-C3'	-5.11	107.82	116.00
27	DA	671	C	N1-C1'-C2'	-5.11	106.38	112.00
27	BA	748	G	N9-C1'-C2'	5.11	120.64	114.00
27	BA	142	A	N9-C1'-C2'	5.10	120.64	114.00
27	BA	343	C	C5'-C4'-C3'	-5.09	107.85	116.00
30	DD	259	THR	N-CA-C	5.09	124.75	111.00
47	DY	99	CYS	CA-CB-SG	5.09	123.17	114.00
30	BD	241	PRO	N-CA-C	5.09	125.34	112.10
47	BY	59	GLY	N-CA-C	5.09	125.82	113.10
1	CA	356	A	N9-C1'-C2'	-5.09	106.40	112.00
40	BR	70	LEU	N-CA-C	-5.09	97.26	111.00
40	DR	5	LYS	N-CA-C	-5.09	97.26	111.00
45	BW	102	HIS	N-CA-C	-5.08	97.28	111.00
1	CA	781	A	N9-C1'-C2'	-5.08	106.41	112.00
27	DA	242	G	N9-C1'-C2'	5.07	120.59	114.00
27	DA	1360	A	C5'-C4'-C3'	-5.07	107.89	116.00
27	BA	1272	A	C5'-C4'-O4'	5.07	115.18	109.10
27	DA	1775	U	N1-C1'-C2'	-5.06	106.43	112.00
42	DT	30	VAL	N-CA-C	5.06	124.67	111.00
27	DA	1034	G	N9-C1'-C2'	-5.06	106.43	112.00
13	CM	113	PRO	CA-N-CD	-5.06	104.42	111.50
27	DA	1015	G	C5'-C4'-C3'	-5.06	107.91	116.00
33	BG	88	ILE	N-CA-C	5.06	124.66	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	DX	57	LEU	CA-CB-CG	5.06	126.93	115.30
27	BA	1051	G	N9-C1'-C2'	-5.05	106.45	112.00
37	BO	50	GLY	N-CA-C	5.05	125.72	113.10
11	AK	86	GLY	N-CA-C	5.04	125.71	113.10
55	D6	46	HIS	O-C-N	5.04	130.77	122.70
27	BA	2879	C	OP1-P-O3'	5.04	116.29	105.20
33	BG	113	ARG	CA-C-N	-5.04	106.11	117.20
27	DA	119	A	C2'-C3'-O3'	5.04	121.76	113.70
37	BO	51	ALA	N-CA-C	-5.03	97.41	111.00
30	DD	68	LYS	N-CA-C	-5.03	97.41	111.00
1	CA	1380	U	C2'-C3'-O3'	5.03	121.74	113.70
55	B6	48	VAL	N-CA-C	5.03	124.57	111.00
27	DA	2021	C	N1-C1'-C2'	5.02	120.52	114.00
14	CN	40	CYS	N-CA-C	-5.01	97.46	111.00
1	CA	974	A	N9-C1'-C2'	5.01	120.52	114.00
28	DB	84	C	N1-C1'-C2'	-5.01	106.49	112.00
44	BV	49	THR	N-CA-C	-5.01	97.48	111.00
27	DA	656	G	O4'-C1'-N9	5.01	112.21	108.20
27	BA	1862	G	N9-C1'-C2'	-5.00	106.50	112.00
27	DA	797	C	N1-C1'-C2'	-5.00	106.50	112.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	CA	517	G	C3'

All (582) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1000	U	Sidechain
1	AA	1020	U	Sidechain
1	AA	1040	U	Sidechain
1	AA	1060	C	Sidechain
1	AA	1062	U	Sidechain
1	AA	1073	U	Sidechain
1	AA	1076	C	Sidechain
1	AA	1077	G	Sidechain
1	AA	1085	U	Sidechain
1	AA	1101	A	Sidechain
1	AA	1124	G	Sidechain
1	AA	115	G	Sidechain
1	AA	1152	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1198	G	Sidechain
1	AA	12	U	Sidechain
1	AA	1225	A	Sidechain
1	AA	1264	C	Sidechain
1	AA	1279	A	Sidechain
1	AA	1309	G	Sidechain
1	AA	131	C	Sidechain
1	AA	1314	C	Sidechain
1	AA	142	G	Sidechain
1	AA	1437	C	Sidechain
1	AA	1461	G	Sidechain
1	AA	1472	U	Sidechain
1	AA	1505	G	Sidechain
1	AA	151	A	Sidechain
1	AA	1519	A	Sidechain
1	AA	1530	G	Sidechain
1	AA	154	C	Sidechain
1	AA	17	U	Sidechain
1	AA	182	U	Sidechain
1	AA	190	U	Sidechain
1	AA	198	G	Sidechain
1	AA	240	C	Sidechain
1	AA	253	U	Sidechain
1	AA	287	U	Sidechain
1	AA	290	C	Sidechain
1	AA	297	G	Sidechain
1	AA	315	A	Sidechain
1	AA	34	C	Sidechain
1	AA	343	U	Sidechain
1	AA	365	U	Sidechain
1	AA	372	C	Sidechain
1	AA	425	G	Sidechain
1	AA	438	G	Sidechain
1	AA	450	G	Sidechain
1	AA	461	A	Sidechain
1	AA	470	C	Sidechain
1	AA	471	G	Sidechain
1	AA	484	G	Sidechain
1	AA	486	U	Sidechain
1	AA	49	U	Sidechain
1	AA	498	U	Sidechain
1	AA	508	C	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	512	U	Sidechain
1	AA	518	C	Sidechain
1	AA	52	G	Sidechain
1	AA	528	C	Sidechain
1	AA	534	U	Sidechain
1	AA	545	C	Sidechain
1	AA	577	G	Sidechain
1	AA	578	C	Sidechain
1	AA	603	U	Sidechain
1	AA	657	G	Sidechain
1	AA	664	G	Sidechain
1	AA	669	U	Sidechain
1	AA	672	U	Sidechain
1	AA	678	U	Sidechain
1	AA	682	G	Sidechain
1	AA	688	G	Sidechain
1	AA	697	U	Sidechain
1	AA	700	G	Sidechain
1	AA	721	G	Sidechain
1	AA	723	U	Sidechain
1	AA	729	A	Sidechain
1	AA	752	G	Sidechain
1	AA	775	G	Sidechain
1	AA	793	U	Sidechain
1	AA	801	U	Sidechain
1	AA	837	G	Sidechain
1	AA	879	C	Sidechain
1	AA	882	C	Sidechain
1	AA	890	G	Sidechain
1	AA	897	C	Sidechain
1	AA	936	C	Sidechain
1	AA	940	C	Sidechain
1	AA	974	A	Sidechain
1	AA	981	U	Sidechain
1	AA	984	C	Sidechain
23	AW	34	U	Sidechain
55	B6	46	HIS	Sidechain
27	BA	1007	C	Sidechain
27	BA	1017	G	Sidechain
27	BA	1021	A	Sidechain
27	BA	1025	G	Sidechain
27	BA	1048	A	Sidechain

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Mol	Chain	Res	Type	Group
27	BA	1051	G	Sidechain
27	BA	1121	C	Sidechain
27	BA	1130	U	Sidechain
27	BA	1133	U	Sidechain
27	BA	1139	G	Sidechain
27	BA	1140	C	Sidechain
27	BA	1143	A	Sidechain
27	BA	1192	G	Sidechain
27	BA	120	U	Sidechain
27	BA	1205	U	Sidechain
27	BA	1215	G	Sidechain
27	BA	1225	G	Sidechain
27	BA	1231	G	Sidechain
27	BA	1253	A	Sidechain
27	BA	1265	A	Sidechain
27	BA	1271	G	Sidechain
27	BA	1283	G	Sidechain
27	BA	1288	U	Sidechain
27	BA	1300	U	Sidechain
27	BA	1308	A	Sidechain
27	BA	1309	G	Sidechain
27	BA	1310	G	Sidechain
27	BA	1323	U	Sidechain
27	BA	1349	A	Sidechain
27	BA	1364	G	Sidechain
27	BA	1379	A	Sidechain
27	BA	1391	U	Sidechain
27	BA	1396	U	Sidechain
27	BA	140	G	Sidechain
27	BA	1405	U	Sidechain
27	BA	1410	G	Sidechain
27	BA	1425	G	Sidechain
27	BA	1428	C	Sidechain
27	BA	1433	U	Sidechain
27	BA	1437	C	Sidechain
27	BA	1451	C	Sidechain
27	BA	1497	U	Sidechain
27	BA	15	G	Sidechain
27	BA	1603	A	Sidechain
27	BA	1620	G	Sidechain
27	BA	1630	G	Sidechain
27	BA	1659	U	Sidechain

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Mol	Chain	Res	Type	Group
27	BA	1680	U	Sidechain
27	BA	1704	G	Sidechain
27	BA	1709	U	Sidechain
27	BA	1742	G	Sidechain
27	BA	1745(A)	C	Sidechain
27	BA	1772	G	Sidechain
27	BA	1775	U	Sidechain
27	BA	1779	U	Sidechain
27	BA	1780	A	Sidechain
27	BA	1783	A	Sidechain
27	BA	1784	A	Sidechain
27	BA	1796	U	Sidechain
27	BA	1861	G	Sidechain
27	BA	1884	A	Sidechain
27	BA	1903	G	Sidechain
27	BA	1915	U	Sidechain
27	BA	1935	G	Sidechain
27	BA	1938	A	Sidechain
27	BA	1952	A	Sidechain
27	BA	1976	U	Sidechain
27	BA	1978	A	Sidechain
27	BA	1983	C	Sidechain
27	BA	1984	G	Sidechain
27	BA	1996	C	Sidechain
27	BA	1998	G	Sidechain
27	BA	1999	C	Sidechain
27	BA	2000	G	Sidechain
27	BA	2010	G	Sidechain
27	BA	2022	U	Sidechain
27	BA	2032	G	Sidechain
27	BA	2036	C	Sidechain
27	BA	2041	U	Sidechain
27	BA	2053	G	Sidechain
27	BA	2068	U	Sidechain
27	BA	2074	U	Sidechain
27	BA	2086	U	Sidechain
27	BA	2110	G	Sidechain
27	BA	2126	A	Sidechain
27	BA	2127	G	Sidechain
27	BA	22	C	Sidechain
27	BA	223	A	Sidechain
27	BA	2232	U	Sidechain

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Mol	Chain	Res	Type	Group
27	BA	2233	U	Sidechain
27	BA	2243	U	Sidechain
27	BA	2249	U	Sidechain
27	BA	226	G	Sidechain
27	BA	2308	G	Sidechain
27	BA	2319	G	Sidechain
27	BA	2335	A	Sidechain
27	BA	2344	U	Sidechain
27	BA	235	U	Sidechain
27	BA	2370	G	Sidechain
27	BA	2375	G	Sidechain
27	BA	2390	U	Sidechain
27	BA	2401	U	Sidechain
27	BA	2406	U	Sidechain
27	BA	2424	C	Sidechain
27	BA	2437	U	Sidechain
27	BA	2461	C	Sidechain
27	BA	2475	C	Sidechain
27	BA	2477	C	Sidechain
27	BA	2481	G	Sidechain
27	BA	2484	G	Sidechain
27	BA	2486	G	Sidechain
27	BA	249	C	Sidechain
27	BA	2491	U	Sidechain
27	BA	2504	U	Sidechain
27	BA	2511	U	Sidechain
27	BA	2519	U	Sidechain
27	BA	2522	U	Sidechain
27	BA	2523	G	Sidechain
27	BA	2524	G	Sidechain
27	BA	2525	G	Sidechain
27	BA	2529	G	Sidechain
27	BA	2542	A	Sidechain
27	BA	2554	U	Sidechain
27	BA	2555	U	Sidechain
27	BA	2558	C	Sidechain
27	BA	256	A	Sidechain
27	BA	2574	G	Sidechain
27	BA	2589	A	Sidechain
27	BA	2595	G	Sidechain
27	BA	2597	G	Sidechain
27	BA	2606	C	Sidechain

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Mol	Chain	Res	Type	Group
27	BA	2607	G	Sidechain
27	BA	2608	G	Sidechain
27	BA	2609	U	Sidechain
27	BA	2636	U	Sidechain
27	BA	2640	G	Sidechain
27	BA	2689	U	Sidechain
27	BA	2692	C	Sidechain
27	BA	271(D)	G	Sidechain
27	BA	271(E)	U	Sidechain
27	BA	271(K)	U	Sidechain
27	BA	2712	U	Sidechain
27	BA	2720	U	Sidechain
27	BA	2724	C	Sidechain
27	BA	2739	U	Sidechain
27	BA	2778	A	Sidechain
27	BA	2779	U	Sidechain
27	BA	2832	U	Sidechain
27	BA	2836	U	Sidechain
27	BA	2846	G	Sidechain
27	BA	2857	G	Sidechain
27	BA	2866	U	Sidechain
27	BA	2872	G	Sidechain
27	BA	2873	A	Sidechain
27	BA	2875	C	Sidechain
27	BA	2884	U	Sidechain
27	BA	2885	C	Sidechain
27	BA	2887	U	Sidechain
27	BA	301	G	Sidechain
27	BA	326	G	Sidechain
27	BA	34	C	Sidechain
27	BA	340	A	Sidechain
27	BA	363(E)	U	Sidechain
27	BA	373	U	Sidechain
27	BA	387	U	Sidechain
27	BA	390	A	Sidechain
27	BA	396	G	Sidechain
27	BA	403	U	Sidechain
27	BA	434	U	Sidechain
27	BA	436	C	Sidechain
27	BA	44	G	Sidechain
27	BA	463	G	Sidechain
27	BA	467	G	Sidechain

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Mol	Chain	Res	Type	Group
27	BA	47	C	Sidechain
27	BA	479	A	Sidechain
27	BA	511	U	Sidechain
27	BA	562	U	Sidechain
27	BA	607	U	Sidechain
27	BA	61	G	Sidechain
27	BA	614	U	Sidechain
27	BA	614(A)	U	Sidechain
27	BA	628	G	Sidechain
27	BA	630	G	Sidechain
27	BA	648	G	Sidechain
27	BA	652	C	Sidechain
27	BA	657	U	Sidechain
27	BA	661	C	Sidechain
27	BA	663	G	Sidechain
27	BA	668	G	Sidechain
27	BA	674	G	Sidechain
27	BA	695	G	Sidechain
27	BA	715	G	Sidechain
27	BA	725	G	Sidechain
27	BA	742	G	Sidechain
27	BA	743	G	Sidechain
27	BA	750	A	Sidechain
27	BA	77	C	Sidechain
27	BA	777	A	Sidechain
27	BA	787	U	Sidechain
27	BA	808	G	Sidechain
27	BA	827	U	Sidechain
27	BA	834	C	Sidechain
27	BA	842	G	Sidechain
27	BA	847	U	Sidechain
27	BA	859	G	Sidechain
27	BA	868	U	Sidechain
27	BA	871	U	Sidechain
27	BA	88	G	Sidechain
27	BA	90	U	Sidechain
27	BA	916	G	Sidechain
27	BA	928	G	Sidechain
27	BA	937	U	Sidechain
27	BA	943	U	Sidechain
27	BA	947	G	Sidechain
27	BA	950	G	Sidechain

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Mol	Chain	Res	Type	Group
27	BA	951	C	Sidechain
27	BA	956	G	Sidechain
27	BA	958	U	Sidechain
27	BA	959	A	Sidechain
27	BA	964	C	Sidechain
27	BA	985	C	Sidechain
27	BA	996	A	Sidechain
27	BA	999	U	Sidechain
28	BB	1	U	Sidechain
28	BB	105	A	Sidechain
28	BB	118	G	Sidechain
28	BB	12	C	Sidechain
28	BB	40	U	Sidechain
28	BB	66	A	Sidechain
47	BY	55	TYR	Sidechain
1	CA	1052	U	Sidechain
1	CA	1055	A	Sidechain
1	CA	106	C	Sidechain
1	CA	1077	G	Sidechain
1	CA	1122	U	Sidechain
1	CA	1140	C	Sidechain
1	CA	1160	G	Sidechain
1	CA	1177	G	Sidechain
1	CA	1217	C	Sidechain
1	CA	1225	A	Sidechain
1	CA	1226	C	Sidechain
1	CA	1240	U	Sidechain
1	CA	1282	C	Sidechain
1	CA	1289	A	Sidechain
1	CA	1293	G	Sidechain
1	CA	13	U	Sidechain
1	CA	1302	U	Sidechain
1	CA	131	C	Sidechain
1	CA	1316	G	Sidechain
1	CA	133	U	Sidechain
1	CA	1331	G	Sidechain
1	CA	1351	U	Sidechain
1	CA	1363(A)	A	Sidechain
1	CA	1405	G	Sidechain
1	CA	1498	U	Sidechain
1	CA	1504	G	Sidechain
1	CA	1506	U	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	182	U	Sidechain
1	CA	189(G)	G	Sidechain
1	CA	195	A	Sidechain
1	CA	199	G	Sidechain
1	CA	21	G	Sidechain
1	CA	245	C	Sidechain
1	CA	246	A	Sidechain
1	CA	250	A	Sidechain
1	CA	253	U	Sidechain
1	CA	266	G	Sidechain
1	CA	277	C	Sidechain
1	CA	279	A	Sidechain
1	CA	298	A	Sidechain
1	CA	305	G	Sidechain
1	CA	323	U	Sidechain
1	CA	324	G	Sidechain
1	CA	352	C	Sidechain
1	CA	356	A	Sidechain
1	CA	380	G	Sidechain
1	CA	401	C	Sidechain
1	CA	432	A	Sidechain
1	CA	437	U	Sidechain
1	CA	45	U	Sidechain
1	CA	454	C	Sidechain
1	CA	47	C	Sidechain
1	CA	498	U	Sidechain
1	CA	5	U	Sidechain
1	CA	526	C	Sidechain
1	CA	530	G	Sidechain
1	CA	551	U	Sidechain
1	CA	560	U	Sidechain
1	CA	576	G	Sidechain
1	CA	62	U	Sidechain
1	CA	657	G	Sidechain
1	CA	690	G	Sidechain
1	CA	691	G	Sidechain
1	CA	723	U	Sidechain
1	CA	730	G	Sidechain
1	CA	754	C	Sidechain
1	CA	789	U	Sidechain
1	CA	835	U	Sidechain
1	CA	838	G	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	870	U	Sidechain
1	CA	879	C	Sidechain
1	CA	898	G	Sidechain
1	CA	901	A	Sidechain
1	CA	920	U	Sidechain
1	CA	922	G	Sidechain
1	CA	935	A	Sidechain
1	CA	952	U	Sidechain
1	CA	966	G	Sidechain
1	CA	974	A	Sidechain
1	CA	994	A	Sidechain
1	CA	995	C	Sidechain
13	CM	70	LEU	Mainchain
22	CV	10	U	Sidechain
22	CV	6	G	Sidechain
23	CW	35	G	Sidechain
23	CW	71	A	Sidechain
54	D5	52	TYR	Sidechain
55	D6	46	HIS	Sidechain
27	DA	1034	G	Sidechain
27	DA	1142(A)	A	Sidechain
27	DA	1165	U	Sidechain
27	DA	1171	G	Sidechain
27	DA	1188	U	Sidechain
27	DA	1190	G	Sidechain
27	DA	120	U	Sidechain
27	DA	1248	G	Sidechain
27	DA	125	G	Sidechain
27	DA	1282	U	Sidechain
27	DA	1289	C	Sidechain
27	DA	1298	C	Sidechain
27	DA	1300	U	Sidechain
27	DA	1309	G	Sidechain
27	DA	1311	G	Sidechain
27	DA	1332	G	Sidechain
27	DA	135	G	Sidechain
27	DA	1373	A	Sidechain
27	DA	1379	A	Sidechain
27	DA	1396	U	Sidechain
27	DA	145	G	Sidechain
27	DA	1461	G	Sidechain
27	DA	1494	A	Sidechain

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Mol	Chain	Res	Type	Group
27	DA	15	G	Sidechain
27	DA	151	C	Sidechain
27	DA	154(A)	C	Sidechain
27	DA	1558	A	Sidechain
27	DA	1567	A	Sidechain
27	DA	157	U	Sidechain
27	DA	1633	G	Sidechain
27	DA	1648	C	Sidechain
27	DA	1664	A	Sidechain
27	DA	1702	G	Sidechain
27	DA	1769	G	Sidechain
27	DA	1772	G	Sidechain
27	DA	1780	A	Sidechain
27	DA	1781	C	Sidechain
27	DA	1782	C	Sidechain
27	DA	1783	A	Sidechain
27	DA	1801	G	Sidechain
27	DA	1815	A	Sidechain
27	DA	1816	G	Sidechain
27	DA	1841	U	Sidechain
27	DA	1849	G	Sidechain
27	DA	185	U	Sidechain
27	DA	1854	A	Sidechain
27	DA	1926	U	Sidechain
27	DA	1963	U	Sidechain
27	DA	197	A	Sidechain
27	DA	1980	G	Sidechain
27	DA	1990	C	Sidechain
27	DA	1992	G	Sidechain
27	DA	1993	U	Sidechain
27	DA	200	U	Sidechain
27	DA	2009	G	Sidechain
27	DA	2019	A	Sidechain
27	DA	2023	G	Sidechain
27	DA	2034	U	Sidechain
27	DA	2036	C	Sidechain
27	DA	2052	G	Sidechain
27	DA	2068	U	Sidechain
27	DA	2096	U	Sidechain
27	DA	2113	U	Sidechain
27	DA	2127	G	Sidechain
27	DA	2134	A	Sidechain

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Mol	Chain	Res	Type	Group
27	DA	2222	G	Sidechain
27	DA	223	A	Sidechain
27	DA	2244	U	Sidechain
27	DA	2248	C	Sidechain
27	DA	2251	G	Sidechain
27	DA	227	A	Sidechain
27	DA	2278	A	Sidechain
27	DA	229	A	Sidechain
27	DA	2305	A	Sidechain
27	DA	2335	A	Sidechain
27	DA	2347	C	Sidechain
27	DA	2348	U	Sidechain
27	DA	2381	C	Sidechain
27	DA	2387	U	Sidechain
27	DA	2401	U	Sidechain
27	DA	2419	U	Sidechain
27	DA	2424	C	Sidechain
27	DA	2428	G	Sidechain
27	DA	2431	U	Sidechain
27	DA	2466	C	Sidechain
27	DA	248	G	Sidechain
27	DA	249	C	Sidechain
27	DA	2498	C	Sidechain
27	DA	2500	U	Sidechain
27	DA	2504	U	Sidechain
27	DA	2524	G	Sidechain
27	DA	2525	G	Sidechain
27	DA	2569	G	Sidechain
27	DA	2572	A	Sidechain
27	DA	2578	G	Sidechain
27	DA	2593	U	Sidechain
27	DA	2596	U	Sidechain
27	DA	2597	G	Sidechain
27	DA	2599	G	Sidechain
27	DA	2611	U	Sidechain
27	DA	2612	C	Sidechain
27	DA	2613	U	Sidechain
27	DA	2622	C	Sidechain
27	DA	2637	U	Sidechain
27	DA	2647	U	Sidechain
27	DA	2654	A	Sidechain
27	DA	2656	U	Sidechain

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Mol	Chain	Res	Type	Group
27	DA	2681	C	Sidechain
27	DA	2702	U	Sidechain
27	DA	272	G	Sidechain
27	DA	272(B)	G	Sidechain
27	DA	2732	G	Sidechain
27	DA	2805	G	Sidechain
27	DA	2834	G	Sidechain
27	DA	284	U	Sidechain
27	DA	295	G	Sidechain
27	DA	303	U	Sidechain
27	DA	308	G	Sidechain
27	DA	313	C	Sidechain
27	DA	329	G	Sidechain
27	DA	334	C	Sidechain
27	DA	346	A	Sidechain
27	DA	372	G	Sidechain
27	DA	384	U	Sidechain
27	DA	400	G	Sidechain
27	DA	403	U	Sidechain
27	DA	405	U	Sidechain
27	DA	411	G	Sidechain
27	DA	451	C	Sidechain
27	DA	458	G	Sidechain
27	DA	467	G	Sidechain
27	DA	474	G	Sidechain
27	DA	476	G	Sidechain
27	DA	489	G	Sidechain
27	DA	497	A	Sidechain
27	DA	504	U	Sidechain
27	DA	524	U	Sidechain
27	DA	530	G	Sidechain
27	DA	567	A	Sidechain
27	DA	588	U	Sidechain
27	DA	593	G	Sidechain
27	DA	594	U	Sidechain
27	DA	597	U	Sidechain
27	DA	61	G	Sidechain
27	DA	634	C	Sidechain
27	DA	671	C	Sidechain
27	DA	673	C	Sidechain
27	DA	675	A	Sidechain
27	DA	695	G	Sidechain

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Mol	Chain	Res	Type	Group
27	DA	73	A	Sidechain
27	DA	734	A	Sidechain
27	DA	742	G	Sidechain
27	DA	784	A	Sidechain
27	DA	79	G	Sidechain
27	DA	793	A	Sidechain
27	DA	859	G	Sidechain
27	DA	860	U	Sidechain
27	DA	89	G	Sidechain
27	DA	919	G	Sidechain
27	DA	950	G	Sidechain
27	DA	976	C	Sidechain
27	DA	979	G	Sidechain
27	DA	986	C	Sidechain
27	DA	989	G	Sidechain
28	DB	116	G	Sidechain
28	DB	117	G	Sidechain
28	DB	13	A	Sidechain
28	DB	34	U	Sidechain
28	DB	35	U	Sidechain
28	DB	66	A	Sidechain
30	DD	62	TYR	Sidechain
36	DN	4	TYR	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32141	0	16225	1913	0
1	CA	32141	0	16225	2200	0
2	AB	1901	0	1951	267	0
2	CB	1901	0	1951	267	0
3	AC	1613	0	1677	233	0
3	CC	1613	0	1677	215	0
4	AD	1703	0	1764	222	0
4	CD	1703	0	1764	256	0
5	AE	1147	0	1207	175	0
5	CE	1147	0	1207	184	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	AF	843	0	857	110	0
6	CF	843	0	857	121	0
7	AG	1257	0	1296	180	0
7	CG	1257	0	1296	149	0
8	AH	1116	0	1177	206	0
8	CH	1116	0	1177	178	0
9	AI	1005	0	1032	145	0
9	CI	1006	0	1034	145	0
10	AJ	795	0	840	164	0
10	CJ	795	0	840	157	0
11	AK	885	0	904	123	0
11	CK	885	0	904	113	0
12	AL	971	0	1057	167	0
12	CL	971	0	1057	185	0
13	AM	947	0	999	196	0
13	CM	910	0	931	185	0
14	AN	492	0	533	99	0
14	CN	492	0	533	106	0
15	AO	734	0	771	116	0
15	CO	734	0	771	104	0
16	AP	701	0	720	113	0
16	CP	701	0	720	96	0
17	AQ	824	0	891	109	0
17	CQ	824	0	891	121	0
18	AR	574	0	644	90	0
18	CR	574	0	644	73	0
19	AS	630	0	652	109	0
19	CS	630	0	652	106	0
20	AT	763	0	861	118	0
20	CT	763	0	861	132	0
21	AU	209	0	221	24	0
21	CU	209	0	221	33	0
22	AV	213	0	110	6	0
22	CV	213	0	110	12	0
23	AW	1593	0	810	80	0
23	CW	1593	0	810	75	0
24	AX	1640	0	837	69	0
24	CX	1640	0	837	73	0
25	AY	1591	0	810	83	0
25	CY	1591	0	810	87	0
26	AZ	48	0	40	12	0
26	CZ	48	0	40	19	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	BA	60311	0	30410	3523	0
27	DA	60313	0	30409	3995	0
28	BB	2528	0	1285	121	0
28	DB	2528	0	1285	141	0
29	BC	1142	0	865	101	0
29	DC	1142	0	865	133	0
30	BD	2105	0	2182	414	0
30	DD	2105	0	2182	386	0
31	BE	1564	0	1629	294	0
31	DE	1564	0	1629	325	0
32	BF	1624	0	1677	321	0
32	DF	1624	0	1677	262	0
33	BG	1474	0	1535	226	0
33	DG	1474	0	1535	259	0
34	BH	1252	0	1316	235	0
34	DH	1223	0	1282	194	0
35	BI	1042	0	1031	193	0
35	DI	1046	0	1035	152	0
36	BN	1105	0	1180	171	0
36	DN	1105	0	1180	214	0
37	BO	933	0	996	170	0
37	DO	933	0	996	165	0
38	BP	1114	0	1187	295	0
38	DP	1114	0	1187	327	0
39	BQ	1122	0	1179	176	0
39	DQ	1107	0	1166	203	0
40	BR	960	0	1021	164	0
40	DR	960	0	1021	179	0
41	BS	771	0	832	160	0
41	DS	777	0	825	148	0
42	BT	1142	0	1202	279	0
42	DT	1142	0	1202	273	0
43	BU	958	0	1015	185	0
43	DU	958	0	1015	196	0
44	BV	779	0	852	166	0
44	DV	779	0	852	168	0
45	BW	896	0	953	103	0
45	DW	896	0	953	157	0
46	BX	726	0	778	103	0
46	DX	726	0	778	127	0
47	BY	776	0	870	215	0
47	DY	776	0	870	191	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	BZ	1404	0	1432	184	0
48	DZ	1404	0	1432	221	0
49	B0	662	0	688	89	0
49	D0	662	0	688	103	0
50	B1	715	0	766	118	0
50	D1	732	0	808	98	0
51	B2	598	0	653	112	0
51	D2	598	0	653	84	0
52	B3	468	0	523	56	0
52	D3	468	0	523	84	0
53	B4	226	0	226	40	0
53	D4	226	0	227	33	0
54	B5	459	0	476	76	0
54	D5	459	0	476	70	0
55	B6	411	0	403	122	0
55	D6	390	0	403	103	0
56	B7	419	0	467	49	0
56	D7	419	0	467	80	0
57	B8	508	0	576	122	0
57	D8	508	0	576	135	0
58	B9	299	0	323	50	0
58	D9	299	0	323	49	0
59	AA	133	0	0	0	0
59	AC	1	0	0	0	0
59	AD	1	0	0	0	0
59	AE	1	0	0	0	0
59	AF	1	0	0	0	0
59	AH	1	0	0	0	0
59	AK	2	0	0	0	0
59	AL	1	0	0	0	0
59	AO	1	0	0	0	0
59	AT	2	0	0	0	0
59	AW	7	0	0	0	0
59	AX	7	0	0	0	0
59	AY	2	0	0	0	0
59	B0	2	0	0	0	0
59	B5	1	0	0	0	0
59	BA	400	0	0	0	0
59	BB	1	0	0	0	0
59	BD	1	0	0	0	0
59	BE	1	0	0	0	0
59	BF	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	BH	1	0	0	0	0
59	BN	1	0	0	0	0
59	BP	1	0	0	0	0
59	BQ	1	0	0	0	0
59	BR	1	0	0	0	0
59	BU	1	0	0	0	0
59	BX	1	0	0	0	0
59	BY	1	0	0	1	0
59	BZ	1	0	0	0	0
59	CA	92	0	0	0	0
59	CE	2	0	0	0	0
59	CQ	1	0	0	0	0
59	CV	2	0	0	0	0
59	CX	3	0	0	0	0
59	D5	2	0	0	0	0
59	D6	1	0	0	0	0
59	DA	275	0	0	0	0
59	DB	1	0	0	0	0
59	DD	3	0	0	0	0
59	DE	3	0	0	0	0
59	DF	1	0	0	0	0
59	DR	1	0	0	0	0
59	DZ	1	0	0	0	0
60	AD	1	0	0	1	0
60	B4	1	0	0	0	0
60	B5	1	0	0	0	0
60	B9	1	0	0	0	0
60	CD	1	0	0	1	0
60	D4	1	0	0	0	0
60	D5	1	0	0	0	0
60	D9	1	0	0	0	0
All	All	294559	0	198754	25938	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 53.

All (25938) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:59:LEU:HA	38:BP:61:ARG:CZ	1.58	1.32
30:DD:231:HIS:ND1	30:DD:232:PRO:HD2	1.55	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1363(A):A:H1'	1:CA:1365:G:N7	1.57	1.19
40:BR:100:LEU:HD21	40:BR:113:LEU:HD13	1.24	1.19
27:BA:2787:C:H1'	31:BE:61:ARG:HG3	1.25	1.18
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	1.24	1.17
41:BS:97:ARG:NH2	41:BS:98:VAL:HA	1.60	1.16
32:BF:3:GLU:HB2	32:BF:19:GLU:HB2	1.23	1.16
27:BA:2680:C:H5'	31:BE:189:PRO:HA	1.28	1.16
47:BY:96:ILE:HB	47:BY:99:CYS:HB2	1.21	1.15
12:AL:29:PHE:HB3	12:AL:81:LEU:HD11	1.19	1.15
34:BH:85:LYS:HD3	34:BH:133:VAL:HB	1.24	1.15
37:BO:14:THR:HG21	37:BO:86:ILE:HD12	1.21	1.15
12:AL:44:LYS:HB3	12:AL:45:PRO:HD3	1.15	1.15
36:DN:70:LYS:HG2	36:DN:87:LEU:HD12	1.25	1.15
46:BX:30:VAL:HG21	46:BX:39:ILE:HD11	1.26	1.15
27:DA:242:G:H5''	57:D8:62:LEU:HD13	1.29	1.14
12:CL:44:LYS:HB3	12:CL:45:PRO:HD2	1.23	1.14
38:BP:65:ARG:NH2	57:B8:15:LYS:HB2	1.60	1.14
38:DP:45:LEU:HD23	38:DP:46:LYS:H	0.97	1.14
39:DQ:12:GLN:HE21	39:DQ:72:LYS:HG3	1.11	1.13
27:DA:271(S):G:H2'	27:DA:271(T):C:H5''	1.26	1.13
1:CA:1101:A:H4'	1:CA:1102:A:O5'	1.46	1.13
30:BD:165:ILE:HD13	30:BD:175:LEU:HD21	1.24	1.13
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.14	1.13
30:DD:239:ARG:HG2	30:DD:239:ARG:HH21	1.11	1.13
27:BA:27:G:N2	27:BA:512:G:H2'	1.63	1.13
48:DZ:149:LEU:HD23	48:DZ:170:ILE:HG13	1.30	1.13
11:AK:127:LYS:HE2	11:AK:127:LYS:HA	1.24	1.12
48:DZ:157:PRO:HG2	48:DZ:160:VAL:HG21	1.30	1.12
4:CD:9:CYS:SG	4:CD:22:LYS:HD2	1.88	1.12
33:BG:106:LEU:O	33:BG:111:LEU:HB2	1.48	1.12
27:BA:661:C:H4'	38:BP:16:ARG:HH12	1.02	1.12
12:CL:43:LYS:HG2	12:CL:44:LYS:H	1.12	1.12
13:CM:25:ILE:HD11	13:CM:66:LEU:HD23	1.28	1.12
27:BA:480:A:H1'	47:BY:44:ILE:HG21	1.31	1.11
42:DT:65:LYS:HZ2	42:DT:66:VAL:N	1.47	1.11
32:BF:2:LYS:H	32:BF:2:LYS:HD3	1.08	1.11
27:BA:2729:G:H1'	31:BE:187:ALA:HB2	1.31	1.11
31:BE:59:VAL:HG22	31:BE:60:ASN:H	1.11	1.11
54:B5:4:HIS:HB3	54:B5:5:PRO:HD3	1.23	1.11
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.06	1.11
1:CA:1347:G:N2	1:CA:1373:G:H2'	1.66	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:204:ASN:HD21	2:CB:207:ALA:HB3	1.15	1.10
32:BF:67:GLN:HG3	32:BF:67:GLN:O	1.48	1.10
5:AE:129:ILE:HG22	5:AE:130:ASN:H	1.16	1.10
16:CP:82:GLN:HE21	16:CP:82:GLN:N	1.49	1.10
44:BV:18:LEU:HD13	44:BV:19:LYS:H	1.14	1.10
42:DT:65:LYS:NZ	42:DT:66:VAL:H	1.50	1.10
1:CA:721:G:H4'	1:CA:722:A:O5'	1.52	1.10
38:DP:71:VAL:HG13	38:DP:72:PRO:HD3	1.17	1.10
27:DA:1891:G:H2'	27:DA:1892:C:H6	1.11	1.10
42:BT:79:HIS:O	42:BT:81:PRO:HD3	1.50	1.10
5:AE:33:VAL:HG23	5:AE:43:LEU:HD13	1.35	1.09
27:DA:1891:G:H2'	27:DA:1892:C:C6	1.87	1.09
17:AQ:17:LYS:HG2	17:AQ:47:PRO:HA	1.13	1.09
27:BA:2327:A:H2'	27:BA:2328:A:C8	1.87	1.09
31:DE:144:ARG:HH11	31:DE:144:ARG:HG3	1.11	1.09
32:DF:7:TYR:HB3	32:DF:16:GLY:H	1.15	1.09
29:BC:83:ILE:HG23	29:BC:94:VAL:HG23	1.34	1.09
44:BV:19:LYS:HG2	44:BV:94:LEU:HB2	1.26	1.09
8:AH:63:LEU:HB3	8:AH:65:TYR:HE1	1.13	1.09
34:BH:85:LYS:HZ2	34:BH:133:VAL:HG11	1.16	1.09
12:CL:44:LYS:HB3	12:CL:45:PRO:CD	1.83	1.09
27:DA:1796:U:H2'	27:DA:1797:C:H6	1.14	1.09
27:BA:285:C:H2'	27:BA:286:C:H5''	1.21	1.09
19:CS:19:VAL:HG11	19:CS:44:MET:HG3	1.27	1.09
27:DA:2230:G:H1'	50:D1:45:ASN:HB2	1.23	1.09
42:BT:27:THR:O	42:BT:28:VAL:HG23	1.50	1.09
1:AA:1080:A:H5'	5:AE:14:ARG:HH21	1.03	1.09
43:DU:55:ARG:HA	43:DU:58:ARG:HB2	1.31	1.09
27:BA:2476:A:H2'	27:BA:2477:C:H5''	1.34	1.09
14:CN:37:PHE:HB3	14:CN:39:LEU:HG	1.32	1.08
47:BY:46:LYS:HB2	47:BY:62:GLU:HG2	1.28	1.08
42:BT:91:ARG:HB3	42:BT:116:ALA:HA	1.32	1.08
27:BA:2701:C:H3'	27:BA:2702:U:H5''	1.16	1.08
47:DY:75:ILE:HG13	47:DY:79:CYS:HA	1.29	1.08
27:DA:492:A:H2'	27:DA:493:G:O4'	1.51	1.08
27:DA:35:G:H1'	27:DA:454:A:H1'	1.30	1.08
29:BC:41:VAL:HA	29:BC:213:TYR:HA	1.26	1.08
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.16	1.08
41:BS:34:HIS:NE2	41:BS:54:LEU:HB2	1.69	1.08
30:DD:118:VAL:HG22	30:DD:119:ALA:H	1.06	1.08
27:DA:1568:G:H5''	30:DD:61:LEU:HD23	1.31	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BD:24:ILE:HG13	30:BD:25:THR:N	1.66	1.08
27:DA:1826:G:H4'	30:DD:242:ARG:HH21	1.09	1.08
4:CD:82:ALA:HB1	4:CD:89:THR:HG23	1.34	1.08
12:CL:52:VAL:HG22	12:CL:66:TYR:HA	1.34	1.08
37:BO:104:ARG:HH12	42:BT:35:LYS:HE2	1.16	1.08
52:B3:23:LEU:H	52:B3:23:LEU:HD12	1.17	1.08
27:DA:94(A):G:H2'	27:DA:95:G:H5''	1.27	1.08
44:BV:19:LYS:HE2	44:BV:20:LEU:H	1.14	1.08
31:BE:77:ILE:HG22	31:BE:78:LEU:H	1.15	1.07
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.03	1.07
30:DD:24:ILE:HG13	30:DD:25:THR:H	1.18	1.07
27:DA:1884:A:H2'	27:DA:1885:A:H5''	1.32	1.07
27:DA:2833:G:H3'	27:DA:2834:G:H5''	1.11	1.07
54:B5:16:ARG:HG2	54:B5:16:ARG:HH11	1.12	1.07
27:BA:1899:G:N2	27:BA:1902:C:H41	1.53	1.07
27:BA:2801(A):A:H4'	27:BA:2802:G:H5'	1.31	1.07
27:BA:1378:A:O2'	27:BA:1379:A:H5'	1.52	1.07
42:DT:42:ILE:H	42:DT:42:ILE:HD12	1.14	1.07
1:AA:473:G:H2'	1:AA:474:G:H8	1.19	1.07
45:DW:7:ALA:HB3	45:DW:103:ILE:HB	1.30	1.07
47:DY:76:CYS:SG	47:DY:77:PRO:HD2	1.94	1.07
1:CA:1363(A):A:H4'	1:CA:1364:U:H5''	1.36	1.07
1:CA:979:C:H3'	1:CA:980:C:H5''	1.36	1.07
43:BU:92:ARG:HH11	43:BU:92:ARG:HB2	0.97	1.07
41:DS:85:VAL:H	41:DS:106:ARG:HB2	1.14	1.07
33:BG:39:ILE:HD11	33:BG:155:MET:HB2	1.32	1.07
38:DP:45:LEU:HD23	38:DP:46:LYS:N	1.69	1.07
27:DA:906:G:H2'	27:DA:907:U:H5''	1.32	1.07
11:AK:32:ILE:HD12	11:AK:72:ALA:HB2	1.31	1.07
27:BA:1884:A:H2'	27:BA:1885:A:H5''	1.37	1.07
27:BA:1747(A):G:H2'	27:BA:1748:G:H5''	1.23	1.07
31:DE:77:ILE:HG22	31:DE:78:LEU:H	0.94	1.07
27:DA:2701:C:H3'	27:DA:2702:U:C5'	1.84	1.07
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	1.37	1.06
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.31	1.06
55:D6:33:LYS:HA	55:D6:33:LYS:HE2	1.32	1.06
11:CK:32:ILE:HD11	11:CK:41:THR:HG22	1.20	1.06
33:DG:22:ARG:HH11	33:DG:22:ARG:HB3	1.18	1.06
4:AD:196:LEU:HD12	4:AD:196:LEU:H	1.14	1.06
1:AA:1080:A:H5'	5:AE:14:ARG:NH2	1.69	1.06
47:DY:27:VAL:HA	47:DY:28:LYS:HZ1	1.20	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:63:PRO:HB3	57:D8:13:ARG:HB3	1.20	1.06
56:D7:41:ARG:NH1	56:D7:41:ARG:HB2	1.71	1.06
47:BY:15:VAL:HG22	47:BY:72:VAL:HG12	1.37	1.06
36:DN:34:LEU:HD11	36:DN:120:LEU:HD23	1.37	1.06
27:BA:2317:C:C2'	27:BA:2318:G:H5'	1.85	1.06
14:CN:41:ARG:HG3	14:CN:42:ILE:H	1.19	1.06
27:DA:586:A:H5'	32:DF:89:VAL:HG21	1.38	1.06
20:AT:71:THR:HG22	20:AT:72:LEU:H	1.16	1.06
27:BA:1020:A:H4'	27:BA:1021:A:O5'	1.56	1.06
27:BA:2701:C:H3'	27:BA:2702:U:C5'	1.85	1.06
27:DA:2787:C:H1'	31:DE:61:ARG:HG3	1.37	1.06
27:DA:704:G:H2'	27:DA:726:G:H22	1.17	1.06
23:AW:30:A:H2'	23:AW:31:U:H5''	1.38	1.06
30:BD:26:LYS:NZ	30:BD:82:ILE:H	1.54	1.05
31:DE:36:ARG:NH2	31:DE:88:GLY:HA3	1.71	1.05
44:BV:41:GLY:HA3	44:BV:45:THR:OG1	1.56	1.05
27:BA:286:C:C2'	27:BA:287:C:H5'	1.84	1.05
27:DA:2701:C:H3'	27:DA:2702:U:H5''	1.06	1.05
1:CA:1137:C:H4'	1:CA:1138:G:C2	1.91	1.05
2:CB:69:LEU:HD22	2:CB:91:PRO:HB2	1.30	1.05
43:BU:90:VAL:HG12	43:BU:91:ASP:H	1.21	1.05
39:BQ:110:THR:HG23	39:BQ:113:GLN:HB2	1.37	1.05
50:B1:37:ILE:HG22	50:B1:38:SER:H	1.14	1.05
55:B6:40:CYS:HA	55:B6:46:HIS:HB3	1.33	1.05
38:DP:48:PRO:HG2	38:DP:49:ARG:H	1.20	1.05
47:DY:81:LYS:HD3	47:DY:97:ARG:HB3	1.36	1.05
45:BW:6:ILE:HG12	45:BW:104:THR:HG23	1.37	1.05
47:BY:76:CYS:SG	47:BY:77:PRO:HD2	1.97	1.05
55:D6:40:CYS:HA	55:D6:46:HIS:HB3	1.39	1.04
1:CA:1106:G:H5''	3:CC:172:ARG:HG2	1.39	1.04
6:AF:43:LEU:H	6:AF:43:LEU:HD12	1.21	1.04
31:DE:36:ARG:HH22	31:DE:88:GLY:HA3	1.19	1.04
27:DA:228:A:O2'	27:DA:229:A:H5'	1.55	1.04
27:BA:2483:C:H3'	27:BA:2484:G:H5''	1.37	1.04
18:CR:82:THR:HG22	18:CR:83:GLU:H	1.19	1.04
46:DX:35:THR:O	46:DX:39:ILE:HG12	1.55	1.04
48:DZ:32:LEU:HD23	48:DZ:89:VAL:HG21	1.39	1.04
31:DE:179:GLU:HB3	31:DE:181:LEU:HD13	1.40	1.04
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	1.32	1.04
47:DY:42:VAL:HB	47:DY:65:ALA:HB3	1.36	1.04
27:BA:1685:C:H2'	27:BA:1686:C:H5''	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:286:C:H2'	27:BA:287:C:H5'	1.36	1.04
42:BT:89:VAL:HB	42:BT:91:ARG:HE	1.21	1.04
44:DV:18:LEU:HD22	44:DV:19:LYS:H	1.21	1.04
27:DA:2579:C:O3'	31:DE:131:ALA:HB2	1.57	1.04
13:CM:13:LYS:HA	13:CM:44:ARG:HH11	1.18	1.04
34:BH:44:VAL:HG12	34:BH:45:VAL:H	1.15	1.04
30:BD:118:VAL:HG22	30:BD:119:ALA:H	1.20	1.04
41:DS:52:SER:HB2	41:DS:55:ALA:HB3	1.36	1.04
4:CD:173:TRP:NE1	4:CD:189:PRO:HG3	1.72	1.04
1:CA:198:G:H2'	1:CA:199:G:C8	1.93	1.04
47:DY:28:LYS:HB3	47:DY:39:VAL:H	1.21	1.03
38:DP:59:LEU:HA	38:DP:61:ARG:CZ	1.87	1.03
35:DI:133:HIS:HB2	35:DI:134:PRO:HD3	1.39	1.03
9:AI:53:VAL:HG23	9:AI:54:ASP:H	1.21	1.03
47:BY:26:LYS:HG2	47:BY:27:VAL:H	1.23	1.03
55:B6:40:CYS:HA	55:B6:46:HIS:CB	1.87	1.03
30:BD:60:ARG:HD3	30:BD:86:PRO:HG2	1.39	1.03
51:D2:4:SER:HA	51:D2:7:ARG:HH11	1.20	1.03
48:BZ:81:ARG:HH21	48:BZ:83:GLU:HA	1.19	1.03
8:AH:34:GLU:HB3	8:AH:118:VAL:HG21	1.39	1.03
27:BA:2701:C:C3'	27:BA:2702:U:H5''	1.89	1.03
12:CL:29:PHE:HB3	12:CL:81:LEU:HD11	1.37	1.03
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.37	1.03
27:DA:1798:U:H5'	30:DD:259:THR:HG22	1.40	1.03
40:DR:61:HIS:O	40:DR:65:LEU:HD13	1.57	1.03
27:DA:869:G:H2'	27:DA:870:A:H8	1.19	1.03
1:AA:676:A:H1'	11:AK:115:PRO:HB3	1.38	1.03
30:BD:186:HIS:CD2	30:BD:188:GLU:H	1.75	1.03
42:DT:28:VAL:HG22	42:DT:47:GLY:H	1.15	1.03
1:AA:533:A:O2'	1:AA:534:U:H5''	1.58	1.03
46:BX:64:LYS:NZ	46:BX:73:ARG:HE	1.56	1.03
41:DS:24:LEU:HB3	41:DS:85:VAL:HG12	1.33	1.03
1:AA:299:G:H2'	1:AA:300:A:C8	1.93	1.03
1:CA:377:G:H1	1:CA:386:C:H42	1.07	1.03
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.35	1.02
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.39	1.02
33:DG:22:ARG:NH1	33:DG:22:ARG:HB3	1.74	1.02
39:DQ:16:ARG:HG2	39:DQ:17:LEU:H	1.20	1.02
42:DT:88:ILE:HG22	42:DT:89:VAL:H	1.21	1.02
27:DA:90:U:O2'	27:DA:92:A:H5''	1.58	1.02
27:BA:954:G:H5''	39:BQ:13:GLN:HG2	1.40	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DD:133:LEU:HD11	30:DD:175:LEU:HD11	1.41	1.02
58:D9:15:LYS:HE2	58:D9:17:ILE:HD11	1.40	1.02
27:BA:857:C:H5'	49:B0:77:ARG:HH22	1.19	1.02
46:BX:63:LYS:HE3	46:BX:72:LYS:HE3	1.38	1.02
16:AP:18:ARG:HH11	16:AP:35:LYS:HD2	1.24	1.02
43:BU:104:GLN:HE22	43:BU:105:VAL:HG23	1.20	1.02
41:DS:30:ARG:HH22	41:DS:62:LYS:HD2	1.17	1.02
42:BT:28:VAL:HG22	42:BT:46:GLU:HA	1.41	1.02
42:BT:89:VAL:HG12	42:BT:91:ARG:HG2	1.39	1.02
3:CC:53:ALA:HB2	3:CC:115:LEU:HD21	1.41	1.02
12:CL:15:VAL:HG23	12:CL:16:ARG:H	1.22	1.02
27:BA:1249:U:H5'	27:BA:1249:U:H6	1.21	1.02
49:D0:41:ARG:HD2	49:D0:41:ARG:H	1.21	1.02
31:DE:77:ILE:HG22	31:DE:78:LEU:N	1.72	1.02
9:AI:53:VAL:HG23	9:AI:55:ALA:H	1.23	1.02
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.24	1.02
1:CA:957:U:H2'	1:CA:959:A:OP2	1.60	1.01
43:DU:92:ARG:HG2	43:DU:92:ARG:HH11	1.22	1.01
11:CK:32:ILE:HD12	11:CK:72:ALA:HB2	1.35	1.01
1:CA:234:C:H2'	1:CA:235:C:H6	1.24	1.01
27:DA:2498:C:O2'	27:DA:2499:C:H5''	1.60	1.01
26:CZ:4:SER:O	26:CZ:5:UAL:N1	1.93	1.01
27:BA:795:C:H2'	27:BA:796:C:H6	1.25	1.01
23:CW:73:C:H2'	23:CW:74:C:H5'	1.38	1.01
3:AC:155:GLY:HA3	3:AC:163:ALA:HB1	1.42	1.01
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.39	1.01
17:AQ:7:THR:HG22	17:AQ:58:GLU:HG2	1.43	1.01
39:DQ:36:ALA:HB2	39:DQ:103:MET:SD	2.00	1.01
1:CA:562:C:H4'	1:CA:563:A:H5'	1.43	1.01
27:BA:1747(A):G:C2'	27:BA:1748:G:H5''	1.89	1.01
19:AS:10:PHE:HZ	19:AS:70:LYS:HZ3	1.04	1.01
1:AA:100:C:H2'	1:AA:101:A:C8	1.95	1.01
1:CA:161:A:H2'	1:CA:162:A:C8	1.94	1.01
50:D1:52:ARG:HG3	50:D1:53:VAL:H	1.21	1.01
27:BA:1784:A:H4'	27:BA:1785:A:O5'	1.57	1.01
27:DA:2833:G:H3'	27:DA:2834:G:C5'	1.90	1.00
56:D7:41:ARG:HH11	56:D7:41:ARG:HB2	0.87	1.00
31:BE:36:ARG:NH2	31:BE:88:GLY:HA3	1.75	1.00
32:BF:83:PHE:O	32:BF:84:VAL:HB	1.61	1.00
11:CK:22:HIS:HB3	11:CK:29:ILE:HG23	1.41	1.00
27:DA:2572:A:H5''	27:DA:2574:G:H4'	1.39	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BH:8:PRO:HD2	34:BH:69:ARG:HD2	1.42	1.00
57:D8:6:THR:HG22	57:D8:63:PRO:HD3	1.37	1.00
55:D6:13:CYS:O	55:D6:21:TYR:HA	1.62	1.00
2:AB:18:GLY:H	2:AB:42:ILE:HG22	1.23	1.00
38:DP:9:ASN:ND2	38:DP:10:PRO:HD3	1.76	1.00
1:CA:1363(A):A:H4'	1:CA:1364:U:C5'	1.91	1.00
27:DA:519:U:H2'	27:DA:520:G:C8	1.95	1.00
2:CB:32:ILE:HD11	2:CB:40:HIS:HB3	1.41	1.00
27:BA:1879:C:H2'	27:BA:1880:C:H5''	1.43	1.00
1:CA:309:G:H1'	1:CA:608:A:H2	1.27	1.00
41:BS:97:ARG:HH21	41:BS:98:VAL:CA	1.74	1.00
30:BD:49:ILE:HD11	30:BD:52:ARG:HA	1.40	1.00
48:BZ:68:THR:HG22	48:BZ:89:VAL:HA	1.40	1.00
41:BS:24:LEU:HB3	41:BS:85:VAL:HG12	1.42	1.00
27:BA:969:U:OP1	52:B3:17:LYS:HD3	1.61	1.00
32:BF:123:LEU:HD12	32:BF:124:LEU:H	1.24	1.00
27:DA:2838:G:H1'	40:DR:45:ARG:NH1	1.77	1.00
27:BA:2331:G:H4'	49:B0:43:THR:H	1.27	1.00
27:BA:2317:C:H2'	27:BA:2318:G:H5'	1.40	0.99
27:BA:2068:U:H3	27:BA:2430:A:H2	1.01	0.99
27:BA:1273:U:H5''	27:BA:1273:U:H6	1.27	0.99
33:DG:105:LYS:HE2	53:D4:52:SER:HB3	1.44	0.99
27:BA:2755:C:H3'	58:B9:19:ARG:NH2	1.77	0.99
45:BW:90:ARG:HB2	45:BW:90:ARG:HH11	1.27	0.99
27:BA:360:G:H2'	27:BA:361:G:H8	1.27	0.99
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	1.77	0.99
30:BD:43:ARG:HD2	30:BD:44:ASN:OD1	1.61	0.99
27:BA:1173:G:H3'	27:BA:1174:A:H5'	1.44	0.99
15:CO:35:ARG:HH21	15:CO:59:MET:HE2	1.23	0.99
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.62	0.99
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.43	0.99
27:DA:1747(A):G:H2'	27:DA:1748:G:H5''	1.40	0.99
7:AG:54:THR:OG1	7:AG:56:GLN:HG2	1.60	0.99
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.26	0.99
46:DX:12:VAL:HG23	46:DX:13:LEU:H	1.23	0.99
27:DA:633:A:H2'	27:DA:634:C:H5'	1.41	0.99
2:CB:96:ARG:H	2:CB:96:ARG:HD2	1.24	0.99
8:CH:60:ARG:HH11	8:CH:60:ARG:HG3	1.26	0.99
36:DN:133:GLN:HG2	36:DN:135:PRO:HD3	1.44	0.99
27:BA:1865:G:H5'	27:BA:1866:C:OP2	1.61	0.99
1:AA:580:U:H3	1:AA:761:G:H1	1.10	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:200:U:H5'	27:DA:200:U:H6	1.27	0.98
52:B3:29:ARG:HB2	52:B3:33:GLN:HE22	1.26	0.98
32:DF:111:ALA:HB2	32:DF:206:ILE:HG21	1.43	0.98
1:CA:992:U:H4'	1:CA:993:G:O5'	1.62	0.98
11:AK:124:LYS:HE3	11:AK:125:PHE:HE1	1.25	0.98
27:BA:1603:A:C8	27:BA:1603:A:H5'	1.98	0.98
30:BD:33:LEU:O	30:BD:34:VAL:HG12	1.63	0.98
27:DA:2732:G:H3'	27:DA:2733:A:H5'	1.40	0.98
1:AA:452:A:HO2'	1:AA:453:A:H8	1.02	0.98
27:BA:1184:G:OP1	52:B3:29:ARG:HD3	1.63	0.98
1:CA:198:G:H2'	1:CA:199:G:H8	1.23	0.98
1:CA:1321:C:H5''	1:CA:1322:C:H5''	1.45	0.98
30:DD:242:ARG:H	30:DD:242:ARG:HD2	1.25	0.98
36:BN:63:THR:HG22	36:BN:64:GLY:H	1.28	0.98
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.41	0.98
20:CT:50:GLU:HA	20:CT:100:ILE:HG12	1.46	0.98
12:CL:52:VAL:HG13	12:CL:65:ALA:O	1.63	0.98
45:BW:88:ARG:HB2	45:BW:92:ARG:HB2	1.45	0.98
4:AD:25:ARG:HH12	4:AD:30:LYS:HG3	1.25	0.98
32:BF:66:PRO:HD2	32:BF:70:THR:HG21	1.44	0.98
47:DY:28:LYS:HB2	47:DY:38:ILE:H	1.24	0.98
1:AA:751:U:H4'	15:AO:24:SER:HA	1.44	0.98
16:AP:82:GLN:HE21	16:AP:83:GLU:H	1.04	0.98
27:DA:514:A:O2'	27:DA:515:A:H5'	1.63	0.98
27:BA:1336:A:H2'	27:BA:1337:G:H8	1.28	0.98
41:BS:68:GLN:HA	41:BS:71:ARG:HD2	1.42	0.97
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.42	0.97
23:CW:42:G:H3'	23:CW:43:C:H5''	1.46	0.97
55:D6:32:ASN:HD22	55:D6:33:LYS:N	1.63	0.97
55:D6:39:TYR:O	55:D6:46:HIS:HB2	1.64	0.97
30:BD:60:ARG:HD3	30:BD:86:PRO:CG	1.95	0.97
42:DT:51:ARG:HD2	42:DT:62:THR:HG23	1.46	0.97
41:DS:19:LYS:O	41:DS:20:ARG:HD3	1.62	0.97
48:DZ:150:HIS:HB3	48:DZ:169:THR:HG22	1.41	0.97
31:DE:26:ILE:HG22	31:DE:27:LEU:H	1.24	0.97
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	1.99	0.97
12:CL:76:GLU:O	12:CL:77:HIS:HB2	1.62	0.97
27:BA:2467:C:H4'	39:BQ:123:HIS:CD2	1.98	0.97
27:DA:2172:U:H1'	27:DA:2173:A:OP1	1.63	0.97
41:BS:46:VAL:HG12	41:BS:47:THR:H	1.25	0.97
27:DA:1775:U:H2'	27:DA:1776:G:H5'	1.45	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:721:G:H4'	1:AA:722:A:O5'	1.63	0.97
1:AA:1321:C:H5'	1:AA:1322:C:H5''	1.47	0.97
34:BH:156:ALA:C	34:BH:158:HIS:H	1.52	0.97
27:BA:285:C:C2'	27:BA:286:C:H5''	1.93	0.97
35:DI:93:THR:HG22	35:DI:119:PRO:HB3	1.47	0.97
30:DD:24:ILE:HG13	30:DD:25:THR:N	1.79	0.97
56:D7:41:ARG:HH11	56:D7:41:ARG:CB	1.76	0.97
27:DA:1410:G:H2'	27:DA:1411:C:C6	1.99	0.97
27:BA:740:U:H6	27:BA:740:U:H5'	1.26	0.97
1:CA:1066:C:H5''	1:CA:1066:C:C6	1.99	0.97
38:BP:23:PRO:O	38:BP:33:ARG:HD2	1.62	0.97
43:DU:90:VAL:HG12	43:DU:91:ASP:H	1.29	0.97
44:DV:2:PHE:HB2	44:DV:42:GLY:HA2	1.47	0.97
47:BY:27:VAL:HA	47:BY:28:LYS:NZ	1.80	0.97
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD2	1.43	0.97
37:BO:22:ILE:HG12	37:BO:41:ALA:HA	1.47	0.97
8:AH:60:ARG:HG3	8:AH:60:ARG:HH11	1.27	0.97
30:BD:31:LYS:HE3	30:BD:33:LEU:HD22	1.47	0.97
1:CA:189(L):G:H2'	1:CA:190:U:C6	1.99	0.97
32:BF:89:VAL:HG12	32:BF:90:PHE:H	1.27	0.96
11:AK:124:LYS:HE3	11:AK:125:PHE:CE1	1.99	0.96
13:AM:37:THR:HG21	13:AM:56:LEU:HA	1.46	0.96
9:CI:82:ALA:HB1	9:CI:96:LEU:HD11	1.46	0.96
47:BY:7:VAL:HB	47:BY:8:LYS:HZ2	1.30	0.96
55:B6:15:GLU:OE2	55:B6:18:ARG:NE	1.97	0.96
27:BA:2784:C:H1'	31:BE:42:ASP:OD1	1.64	0.96
1:CA:179:A:H2'	1:CA:180:U:H6	1.26	0.96
27:DA:71:A:H5''	27:DA:73:A:C8	2.00	0.96
12:AL:44:LYS:HB3	12:AL:45:PRO:CD	1.95	0.96
27:BA:2792:G:O2'	27:BA:2793:G:H8	1.48	0.96
31:BE:59:VAL:HG22	31:BE:60:ASN:N	1.80	0.96
43:DU:92:ARG:HD2	44:DV:11:GLN:NE2	1.80	0.96
20:AT:26:ASN:HD22	20:AT:26:ASN:H	0.99	0.96
20:AT:26:ASN:O	20:AT:30:LYS:HB2	1.66	0.96
40:BR:79:LEU:HA	40:BR:83:ILE:HG13	1.45	0.96
27:DA:571:A:H4'	27:DA:572:A:OP1	1.63	0.96
47:BY:96:ILE:CB	47:BY:99:CYS:HB2	1.94	0.96
27:BA:661:C:H4'	38:BP:16:ARG:NH1	1.79	0.96
44:BV:19:LYS:CE	44:BV:20:LEU:H	1.78	0.96
27:DA:35:G:C1'	27:DA:454:A:H1'	1.95	0.96
27:BA:1899:G:H22	27:BA:1902:C:N4	1.64	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:D6:40:CYS:CA	55:D6:46:HIS:HB3	1.95	0.96
30:DD:44:ASN:HB2	30:DD:49:ILE:HA	1.47	0.96
46:BX:9:LEU:HA	51:B2:36:ARG:HH21	1.29	0.96
44:BV:5:VAL:HG11	44:BV:57:VAL:HG11	1.47	0.96
9:CI:9:ARG:HG3	9:CI:14:VAL:HG22	1.48	0.96
27:DA:2712:U:HO2'	27:DA:2712(A):A:H8	0.98	0.96
1:CA:1163:C:H2'	1:CA:1164:G:C8	2.01	0.96
27:BA:2200:C:H5''	27:BA:2200:C:H6	1.29	0.96
17:AQ:43:LEU:HD12	17:AQ:68:ARG:HG2	1.48	0.96
4:AD:17:VAL:HG11	4:AD:197:PRO:HG3	1.45	0.96
27:BA:1562:A:H2'	27:BA:1563:G:C8	2.00	0.96
38:DP:13:ASN:C	38:DP:13:ASN:HD22	1.69	0.96
27:DA:2555:U:H2'	27:DA:2556:C:H5'	1.46	0.96
1:CA:373:A:H2'	1:CA:374:A:H8	1.30	0.96
1:CA:309:G:H1'	1:CA:608:A:C2	2.00	0.96
4:CD:153:ARG:HB3	4:CD:153:ARG:HH11	1.30	0.96
44:BV:46:VAL:HG22	44:BV:47:VAL:H	1.30	0.95
27:DA:2758:A:H2'	27:DA:2759:G:H5''	1.48	0.95
3:CC:47:LEU:HD11	3:CC:76:VAL:HG12	1.44	0.95
50:D1:51:VAL:HG21	50:D1:74:VAL:HG21	1.46	0.95
9:CI:125:TYR:HE2	9:CI:127:LYS:HB2	1.31	0.95
27:BA:2206:G:H21	27:BA:2207:G:H5'	1.30	0.95
50:B1:25:LYS:HA	50:B1:29:GLY:HA2	1.48	0.95
43:BU:92:ARG:HE	44:BV:11:GLN:HB2	1.31	0.95
27:DA:2749:A:H4'	34:DH:62:LYS:HB3	1.47	0.95
27:DA:2475:C:H42	27:DA:2529:G:H22	0.99	0.95
27:BA:1434:A:H61	27:BA:1558:A:N6	1.63	0.95
27:DA:373:U:H2'	27:DA:374:A:H8	1.29	0.95
32:DF:155:LEU:HD23	32:DF:192:LEU:HD21	1.49	0.95
37:BO:93:PRO:HG3	37:BO:114:ILE:CD1	1.96	0.95
27:DA:49:A:H61	27:DA:177:G:H2'	1.32	0.95
1:AA:911:U:H2'	1:AA:912:C:C6	2.01	0.95
27:DA:271(S):G:C2'	27:DA:271(T):C:H5''	1.96	0.95
12:AL:73:ASN:HD22	12:AL:74:LEU:H	0.96	0.95
51:D2:13:ALA:HA	51:D2:16:LEU:HD12	1.48	0.95
27:DA:13:A:H1'	27:DA:15:G:N7	1.82	0.95
28:BB:40:U:H3	28:BB:43:C:H5''	1.31	0.95
47:BY:31:LEU:HB2	47:BY:32:PRO:HA	1.45	0.95
37:DO:71:ARG:HB3	37:DO:72:PRO:HD2	1.48	0.95
1:CA:386:C:H2'	1:CA:387:U:H5'	1.49	0.95
1:AA:553:A:H2'	1:AA:554:C:C6	2.02	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1422:G:H1	1:AA:1478:C:H42	1.15	0.95
27:BA:2832:U:H4'	27:BA:2833:G:H5''	1.46	0.95
11:AK:32:ILE:HD11	11:AK:41:THR:HB	1.49	0.95
20:CT:72:LEU:HD23	20:CT:73:HIS:H	1.29	0.95
27:DA:2107:C:H42	27:DA:2182:G:H1	1.13	0.95
38:DP:39:LYS:HA	38:DP:39:LYS:HE2	1.48	0.95
6:CF:38:GLU:O	6:CF:39:LYS:HB2	1.67	0.95
27:BA:1798:U:H5'	30:BD:259:THR:HG22	1.49	0.95
47:BY:10:GLY:HA2	47:BY:27:VAL:HG13	1.48	0.95
47:BY:27:VAL:HA	47:BY:28:LYS:HZ2	1.31	0.95
27:DA:52:A:O2'	27:DA:53:A:H8	1.49	0.95
18:AR:53:ARG:NH2	18:AR:60:ALA:H	1.63	0.95
27:DA:543:C:H42	27:DA:551:G:H1	1.07	0.95
1:CA:676:A:H1'	11:CK:115:PRO:HB3	1.49	0.95
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.46	0.94
5:CE:50:GLU:HB3	5:CE:53:LEU:HD13	1.49	0.94
8:AH:97:VAL:HG13	8:AH:98:LYS:H	1.30	0.94
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	1.49	0.94
36:DN:73:THR:HG22	36:DN:82:LEU:HD11	1.49	0.94
42:BT:50:ILE:HG13	42:BT:102:ILE:HD11	1.47	0.94
27:DA:1020:A:H4'	27:DA:1021:A:O5'	1.63	0.94
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.30	0.94
27:BA:2271:G:H4'	49:B0:20:ARG:NH1	1.82	0.94
38:BP:16:ARG:CZ	38:BP:18:ARG:HG2	1.97	0.94
36:DN:4:TYR:HB2	43:DU:64:ARG:HH12	1.30	0.94
34:DH:12:PRO:HG2	34:DH:49:VAL:HA	1.46	0.94
1:AA:707:C:O2'	1:AA:708:C:H5'	1.67	0.94
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.02	0.94
27:DA:94(A):G:C2'	27:DA:95:G:H5''	1.97	0.94
38:BP:23:PRO:HD2	38:BP:33:ARG:NE	1.81	0.94
27:BA:2263:C:H2'	27:BA:2264:C:H6	1.32	0.94
32:BF:135:LYS:HB3	32:BF:138:GLU:HG3	1.46	0.94
6:CF:33:TYR:HD2	6:CF:71:ARG:HD2	1.33	0.94
12:AL:38:ARG:HG2	12:AL:39:THR:H	1.32	0.94
54:B5:16:ARG:HH11	54:B5:16:ARG:CG	1.80	0.94
55:B6:20:ASN:HD22	55:B6:21:TYR:H	1.14	0.94
27:DA:1798:U:C5'	30:DD:259:THR:HG22	1.98	0.94
1:CA:1181:G:H2'	1:CA:1182:G:C4	2.01	0.94
27:BA:2580:U:H5'	31:BE:131:ALA:CB	1.98	0.94
27:BA:554:U:O2'	27:BA:555:U:H5'	1.66	0.94
32:BF:11:VAL:HG12	32:BF:12:LEU:H	1.32	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1685:C:C2'	27:BA:1686:C:H5''	1.97	0.94
1:AA:1348:U:H2'	1:AA:1349:A:C8	2.03	0.94
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.33	0.94
1:CA:1208:C:H2'	1:CA:1209:C:H6	1.32	0.94
27:DA:154(A):C:H41	27:DA:172:C:H42	0.97	0.94
1:CA:192:U:C4'	20:CT:103:GLY:HA2	1.98	0.94
27:BA:1484:G:H3'	27:BA:1485:G:H5''	1.47	0.94
14:CN:12:ARG:C	14:CN:14:PRO:HD2	1.87	0.94
2:CB:55:PHE:HA	2:CB:58:ILE:HG12	1.47	0.94
4:AD:80:GLU:O	4:AD:84:LYS:HG2	1.67	0.94
47:BY:46:LYS:HB2	47:BY:62:GLU:CG	1.97	0.94
43:BU:90:VAL:HG21	44:BV:47:VAL:HG21	1.49	0.94
27:DA:2875:C:H4'	42:DT:5:ALA:HB2	1.49	0.94
27:DA:2870:C:H2'	27:DA:2871:C:H5'	1.48	0.94
52:B3:11:SER:OG	52:B3:13:ILE:HD12	1.66	0.94
41:BS:82:ILE:HD13	41:BS:82:ILE:H	1.30	0.94
41:BS:85:VAL:H	41:BS:106:ARG:HB2	1.31	0.94
27:DA:740:U:H6	27:DA:740:U:H5'	1.28	0.94
27:BA:2836:U:H2'	27:BA:2837:G:C8	2.02	0.93
30:DD:43:ARG:HH11	30:DD:44:ASN:ND2	1.66	0.93
48:DZ:127:VAL:HG22	48:DZ:128:SER:H	1.32	0.93
30:BD:108:PRO:HG3	30:BD:143:HIS:NE2	1.83	0.93
39:DQ:45:GLN:H	39:DQ:45:GLN:HE21	1.05	0.93
1:CA:693:G:O2'	7:CG:82:GLY:HA3	1.67	0.93
13:CM:4:ILE:HG22	13:CM:5:ALA:H	1.32	0.93
47:DY:10:GLY:HA2	47:DY:27:VAL:HG13	1.50	0.93
46:BX:64:LYS:HZ3	46:BX:73:ARG:HE	1.02	0.93
1:AA:166:G:H2'	1:AA:167:G:C8	2.02	0.93
27:BA:2841:C:H2'	27:BA:2842:G:H8	1.31	0.93
8:CH:10:LEU:HD23	8:CH:83:ILE:HG12	1.51	0.93
8:AH:63:LEU:HB3	8:AH:65:TYR:CE1	2.03	0.93
1:AA:553:A:H2'	1:AA:554:C:H6	1.33	0.93
46:DX:65:ARG:HD3	46:DX:70:LEU:HD12	1.48	0.93
41:BS:102:ALA:HB3	41:BS:103:GLU:OE1	1.67	0.93
16:CP:82:GLN:HE21	16:CP:82:GLN:H	1.12	0.93
43:BU:92:ARG:NH1	43:BU:92:ARG:HB2	1.83	0.93
42:BT:88:ILE:HG22	42:BT:89:VAL:H	1.31	0.93
27:DA:34:C:O2'	27:DA:35:G:H5'	1.69	0.93
28:DB:87:G:H3'	28:DB:88:C:H5''	1.50	0.93
37:DO:105:GLU:HA	37:DO:108:GLU:HG3	1.51	0.93
27:DA:133:C:N4	27:DA:146:G:H1	1.65	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:173:TRP:HE3	4:CD:173:TRP:H	1.16	0.93
1:AA:1057:G:H4'	3:AC:196:LEU:O	1.68	0.93
2:AB:112:VAL:HG23	2:AB:149:LEU:HD13	1.46	0.93
20:CT:50:GLU:CA	20:CT:100:ILE:HG12	1.98	0.93
34:BH:158:HIS:O	34:BH:159:GLU:HB2	1.69	0.93
30:DD:44:ASN:CB	30:DD:49:ILE:HA	1.99	0.93
27:BA:2875:C:H4'	42:BT:5:ALA:HB2	1.51	0.93
40:DR:38:VAL:HB	40:DR:39:PRO:HD3	1.49	0.93
32:BF:176:LEU:HD11	32:BF:180:GLY:HA3	1.50	0.93
5:AE:43:LEU:HD22	5:AE:109:ILE:HD11	1.48	0.93
32:DF:16:GLY:O	32:DF:17:ARG:HG3	1.66	0.93
43:DU:49:HIS:HA	43:DU:52:ARG:HB2	1.51	0.93
27:DA:1565:C:O2'	27:DA:1566:A:H2'	1.67	0.93
56:B7:8:ASN:HD22	56:B7:8:ASN:C	1.69	0.93
32:DF:34:TRP:CZ2	38:DP:12:ALA:HB2	2.02	0.93
48:DZ:4:LEU:HD21	48:DZ:42:GLU:HB3	1.49	0.93
47:BY:90:LEU:HD12	47:BY:91:GLU:H	1.31	0.93
35:DI:37:VAL:HG12	35:DI:38:LEU:HD12	1.48	0.93
38:BP:106:LEU:HD13	38:BP:112:LEU:HD23	1.51	0.93
25:AY:68:C:H2'	25:AY:69:C:H5''	1.51	0.93
1:CA:1320:C:O2	19:CS:72:GLY:HA3	1.68	0.93
27:BA:1292:U:H2'	27:BA:1293:C:C6	2.04	0.93
1:CA:652:U:O2'	1:CA:653:A:H5''	1.68	0.93
27:BA:2172:U:H1'	27:BA:2173:A:OP1	1.69	0.93
49:D0:53:MET:HB3	49:D0:59:LEU:HD23	1.51	0.93
1:AA:911:U:H2'	1:AA:912:C:H6	1.33	0.93
27:DA:1494:A:O2'	27:DA:1495:A:H5''	1.67	0.93
30:BD:43:ARG:NH1	30:BD:44:ASN:HD21	1.65	0.93
1:CA:165:C:H2'	1:CA:166:G:C8	2.04	0.93
24:CX:17:C:H2'	24:CX:17(B):U:H6	1.32	0.93
27:DA:881:G:H1	27:DA:895:U:H3	1.16	0.93
27:DA:2126:A:H5''	29:DC:36:LYS:HE2	1.50	0.93
36:DN:128:HIS:HB2	36:DN:130:HIS:CE1	2.03	0.93
27:DA:2810:A:O2'	31:DE:61:ARG:HB2	1.69	0.93
30:BD:95:LEU:O	30:BD:95:LEU:HD12	1.69	0.93
32:BF:89:VAL:O	32:BF:91:GLY:N	2.02	0.93
34:BH:156:ALA:C	34:BH:158:HIS:N	2.22	0.93
36:DN:15:LEU:HD12	36:DN:136:GLU:HG2	1.51	0.93
35:DI:107:VAL:HG12	35:DI:108:THR:H	1.33	0.93
1:AA:438:G:H4'	1:AA:439:A:OP1	1.69	0.93
4:CD:200:GLU:HG2	4:CD:201:GLN:N	1.83	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:52:SER:OG	41:BS:55:ALA:HB3	1.69	0.93
38:BP:146:VAL:HG22	38:BP:147:LEU:H	1.32	0.93
58:B9:29:ASN:HD22	58:B9:29:ASN:H	0.98	0.93
27:BA:7:G:H2'	27:BA:8:A:C8	2.04	0.93
1:CA:1502:A:H2	1:CA:1505:G:H1	0.94	0.93
27:BA:242:G:H5''	57:B8:62:LEU:HD13	1.49	0.92
27:DA:906:G:C2'	27:DA:907:U:H5''	1.97	0.92
31:DE:36:ARG:HH22	31:DE:88:GLY:CA	1.83	0.92
1:AA:975:A:H4'	1:AA:976:G:H5''	1.51	0.92
27:DA:288:C:H42	27:DA:353:G:H1	1.07	0.92
27:DA:1199:U:H2'	27:DA:1200:C:H6	1.32	0.92
2:CB:158:LEU:HD12	2:CB:158:LEU:H	1.34	0.92
27:BA:152:G:H1	27:BA:174:C:H42	0.92	0.92
27:DA:2701:C:C3'	27:DA:2702:U:H5''	1.98	0.92
27:DA:2476:A:N3	27:DA:2477:C:H5''	1.85	0.92
32:DF:125:LEU:HB3	32:DF:196:LEU:HD21	1.48	0.92
39:DQ:85:LYS:HG3	49:D0:7:LEU:HD13	1.49	0.92
1:CA:67:C:H2'	1:CA:68:G:C8	2.05	0.92
2:CB:185:ILE:HG23	2:CB:199:TYR:HB2	1.48	0.92
1:CA:1003:G:H2'	1:CA:1004:A:C4'	1.99	0.92
49:B0:23:VAL:HA	49:B0:38:VAL:HG22	1.51	0.92
1:AA:15:G:H4'	5:AE:24:ARG:HH12	1.33	0.92
23:AW:6:U:H3'	23:AW:7:A:H5''	1.50	0.92
27:BA:27:G:H22	27:BA:512:G:H2'	1.22	0.92
12:AL:73:ASN:HD22	12:AL:74:LEU:N	1.67	0.92
47:BY:87:LYS:O	47:BY:88:LYS:HB2	1.67	0.92
27:DA:271(N):U:H4'	27:DA:271(O):C:OP2	1.69	0.92
27:BA:1431:U:H2'	27:BA:1432:C:H6	1.34	0.92
27:DA:2223:G:H2'	27:DA:2224:G:H5'	1.49	0.92
27:DA:1614:A:H62	45:DW:93:ALA:HB2	1.35	0.92
29:DC:41:VAL:HG23	29:DC:178:ALA:HB3	1.50	0.92
56:D7:8:ASN:ND2	56:D7:11:LYS:H	1.66	0.92
36:DN:60:ILE:HD13	36:DN:99:LEU:HD23	1.51	0.92
35:BI:111:PRO:HA	35:BI:114:LEU:HD21	1.50	0.92
48:BZ:157:PRO:HG2	48:BZ:160:VAL:HG21	1.52	0.92
27:BA:2563:U:O2	27:BA:2565:A:H8	1.49	0.92
33:BG:51:ARG:CZ	33:BG:53:LEU:HD21	1.99	0.92
37:BO:104:ARG:NH1	42:BT:35:LYS:HE2	1.82	0.92
27:BA:2012:G:O3'	45:BW:96:ILE:HD11	1.68	0.92
27:BA:1899:G:H22	27:BA:1902:C:H41	0.95	0.92
55:B6:36:LEU:O	55:B6:37:ARG:HD2	1.68	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1034:G:H5'	58:D9:18:ARG:HD2	1.51	0.92
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	1.48	0.92
32:DF:32:LEU:HD13	32:DF:112:MET:HE1	1.51	0.92
38:BP:112:LEU:H	38:BP:128:HIS:HD2	1.16	0.92
27:BA:571:A:H4'	27:BA:572:A:OP1	1.66	0.92
1:AA:490:G:H2'	1:AA:491:G:H8	1.32	0.92
32:BF:2:LYS:HE2	32:BF:25:PRO:HB3	1.50	0.92
43:DU:83:LEU:HG	43:DU:88:ILE:HD11	1.49	0.92
41:BS:36:TYR:HD2	41:BS:52:SER:HB2	1.34	0.92
57:D8:14:VAL:HG21	57:D8:22:VAL:HG13	1.50	0.92
41:DS:89:ARG:HB3	41:DS:92:TYR:CB	1.98	0.92
57:B8:33:ASN:ND2	57:B8:33:ASN:H	1.68	0.92
48:BZ:149:LEU:HD23	48:BZ:170:ILE:HG13	1.49	0.92
27:BA:33:U:H4'	27:BA:34:C:OP1	1.70	0.92
43:BU:92:ARG:HH11	43:BU:92:ARG:CB	1.82	0.92
33:BG:60:LEU:HD22	33:BG:63:ILE:HD11	1.49	0.92
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.50	0.92
47:BY:88:LYS:HZ3	47:BY:93:GLY:HA3	1.31	0.92
45:DW:73:ALA:O	45:DW:106:ILE:HG12	1.69	0.92
27:DA:1267:U:O2'	27:DA:1268:A:H8	1.52	0.92
27:BA:1210:A:H5'	27:BA:1212:G:H5'	1.51	0.92
40:DR:4:LEU:HD21	40:DR:8:ARG:HH21	1.34	0.92
52:B3:44:ARG:O	52:B3:48:GLU:HG2	1.69	0.92
32:BF:2:LYS:N	32:BF:2:LYS:HD3	1.85	0.92
8:AH:17:THR:HB	8:AH:78:GLN:OE1	1.69	0.92
42:BT:89:VAL:HG21	42:BT:91:ARG:HH21	1.34	0.92
41:BS:58:LEU:HD23	41:BS:65:VAL:HG13	1.52	0.92
30:BD:89:SER:HB2	30:BD:201:HIS:CD2	2.05	0.92
1:CA:1502:A:H2	1:CA:1505:G:N1	1.66	0.92
27:DA:2336:A:H61	49:D0:43:THR:HG21	1.32	0.92
41:DS:74:ALA:HB1	41:DS:103:GLU:HB2	1.48	0.92
55:B6:41:PRO:HD3	55:B6:46:HIS:CB	1.99	0.91
14:AN:26:ARG:HG3	14:AN:27:CYS:H	1.36	0.91
30:BD:241:PRO:O	30:BD:242:ARG:HB2	1.70	0.91
27:BA:142:A:C8	27:BA:1408:C:H1'	2.04	0.91
35:BI:5:LEU:HD22	35:BI:13:GLY:HA2	1.48	0.91
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.69	0.91
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.49	0.91
32:BF:132:VAL:HG13	32:BF:133:ASN:H	1.33	0.91
30:DD:8:PRO:HB3	30:DD:14:ARG:HB2	1.51	0.91
54:B5:16:ARG:HG3	54:B5:17:ASP:N	1.85	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:27:CYS:O	14:AN:29:ARG:N	2.04	0.91
1:CA:386:C:C2'	1:CA:387:U:H5'	1.99	0.91
35:BI:115:ALA:HB3	35:BI:129:THR:H	1.34	0.91
27:BA:2321:G:H2'	27:BA:2321:G:N3	1.84	0.91
27:DA:956:G:H5''	39:DQ:77:LYS:HD2	1.52	0.91
27:BA:807:U:O2'	27:BA:808:G:H5'	1.71	0.91
27:DA:647:G:H21	27:DA:2350:C:H4'	1.32	0.91
1:AA:1305:G:N2	1:AA:1331:G:H2'	1.84	0.91
27:BA:2508:G:H1	27:BA:2580:U:H3	1.18	0.91
19:CS:41:VAL:HB	19:CS:44:MET:HG2	1.52	0.91
30:DD:60:ARG:HG3	30:DD:86:PRO:HB3	1.51	0.91
27:DA:2070:G:H2'	27:DA:2071:A:H8	1.34	0.91
27:BA:2092:U:H4'	27:BA:2093:G:O5'	1.70	0.91
5:AE:141:GLN:HA	5:AE:143:ARG:NH2	1.86	0.91
55:B6:29:ASN:CG	55:B6:30:THR:H	1.73	0.91
7:CG:115:ARG:O	7:CG:118:VAL:HG22	1.70	0.91
27:BA:1022:G:H4'	27:BA:1023:U:O5'	1.71	0.91
30:BD:108:PRO:HG3	30:BD:143:HIS:HE2	1.35	0.91
7:AG:74:GLU:HG2	7:AG:91:VAL:HG22	1.52	0.91
42:BT:92:GLY:C	42:BT:94:ALA:H	1.72	0.91
1:CA:797:C:OP1	11:CK:124:LYS:HE2	1.69	0.91
27:BA:2790:A:H2	27:BA:2791:C:H3'	1.36	0.91
5:AE:129:ILE:HG22	5:AE:130:ASN:N	1.80	0.91
30:BD:26:LYS:HZ3	30:BD:82:ILE:H	1.09	0.91
27:DA:97:C:H4'	51:D2:2:LYS:HB3	1.53	0.91
38:DP:9:ASN:HD22	38:DP:10:PRO:HD3	1.35	0.91
1:AA:501:C:H2'	1:AA:502:G:C8	2.04	0.91
37:BO:16:ALA:HB2	37:BO:52:VAL:HG11	1.52	0.91
27:DA:1762:A:H8	27:DA:1762:A:O5'	1.54	0.91
27:BA:2883:A:H5'	27:BA:2884:U:H5'	1.52	0.91
27:DA:1826:G:H4'	30:DD:242:ARG:NH2	1.85	0.91
27:DA:438:G:H2'	27:DA:440:G:H8	1.34	0.91
31:DE:69:LYS:HD3	31:DE:89:ASP:HA	1.50	0.91
27:DA:333:G:H2'	27:DA:334:C:H6	1.35	0.91
2:AB:63:MET:HB3	2:AB:225:ALA:HB1	1.53	0.91
27:DA:579:G:H2'	27:DA:580:C:C6	2.06	0.91
3:CC:134:ILE:HG21	3:CC:168:ALA:HB3	1.53	0.91
33:DG:43:LEU:HB2	33:DG:88:ILE:HD11	1.51	0.91
1:AA:36:C:H5''	12:AL:119:THR:O	1.71	0.91
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.53	0.91
38:DP:63:PRO:CB	57:D8:13:ARG:HB3	2.01	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BF:29:ASN:HB3	32:BF:112:MET:HE1	1.53	0.90
27:BA:574:C:H42	31:BE:145:LYS:HE2	1.30	0.90
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB2	1.52	0.90
48:DZ:60:LEU:HB2	48:DZ:64:GLN:HB2	1.53	0.90
38:BP:30:THR:HG22	38:BP:31:ALA:H	1.36	0.90
1:CA:155:C:H2'	1:CA:156:G:H8	1.35	0.90
27:BA:481:G:H1'	27:BA:506:G:H21	1.36	0.90
27:DA:1747:G:H2'	27:DA:1747(A):G:H8	1.36	0.90
27:BA:2879:C:H4'	27:BA:2880:C:OP1	1.68	0.90
47:DY:75:ILE:CG1	47:DY:79:CYS:HA	2.02	0.90
27:DA:2784:C:H1'	31:DE:37:ARG:HH12	1.34	0.90
30:BD:186:HIS:HD2	30:BD:188:GLU:N	1.68	0.90
33:DG:5:VAL:HG23	33:DG:8:LYS:HG3	1.52	0.90
31:BE:134:ILE:O	31:BE:134:ILE:HG12	1.71	0.90
54:B5:4:HIS:HB3	54:B5:5:PRO:CD	2.01	0.90
48:DZ:18:ARG:HB3	48:DZ:81:ARG:HH22	1.36	0.90
27:BA:1636:C:H2'	27:BA:1637:A:C8	2.06	0.90
27:BA:1359:A:H2'	27:BA:1360:A:H5'	1.52	0.90
7:CG:85:TYR:CD1	7:CG:154:TYR:HE1	1.90	0.90
15:AO:37:ASN:HD22	15:AO:37:ASN:N	1.68	0.90
30:BD:68:LYS:HZ1	30:BD:70:TRP:HE1	1.20	0.90
36:BN:115:ARG:HA	36:BN:118:LYS:HD2	1.52	0.90
2:CB:14:GLY:O	2:CB:15:VAL:HG13	1.69	0.90
7:CG:78:ARG:HG3	7:CG:79:ARG:H	1.35	0.90
50:B1:46:LEU:HA	50:B1:63:ALA:HA	1.52	0.90
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.34	0.90
8:AH:84:ARG:HG2	8:AH:84:ARG:HH11	1.37	0.90
54:B5:56:LYS:H	54:B5:56:LYS:HD2	1.35	0.90
32:BF:8:GLN:HB3	32:BF:125:LEU:O	1.71	0.90
1:AA:473:G:H2'	1:AA:474:G:C8	2.05	0.90
49:D0:26:TYR:H	49:D0:29:GLN:HE21	0.93	0.90
32:DF:67:GLN:O	32:DF:67:GLN:HG3	1.72	0.90
14:CN:29:ARG:HG2	14:CN:40:CYS:HB2	1.53	0.90
30:DD:18:VAL:HG13	30:DD:211:ARG:HH22	1.36	0.90
27:BA:360:G:H2'	27:BA:361:G:C8	2.06	0.90
7:AG:113:GLU:CG	7:AG:119:ARG:HG2	2.01	0.90
37:DO:17:ARG:HD3	37:DO:47:ILE:HD13	1.52	0.90
33:BG:42:GLY:O	33:BG:88:ILE:HD11	1.69	0.90
27:DA:662:G:OP1	38:DP:18:ARG:HD2	1.71	0.90
47:BY:95:LYS:NZ	47:BY:100:ALA:HB2	1.85	0.90
38:DP:64:LYS:O	38:DP:66:GLY:N	2.05	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:62:U:H3	1:AA:105:G:H1	1.19	0.90
46:BX:12:VAL:HG23	46:BX:13:LEU:H	1.36	0.90
1:CA:179:A:H2'	1:CA:180:U:C6	2.07	0.90
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.52	0.90
51:B2:53:LEU:O	51:B2:57:ILE:HG12	1.72	0.90
28:BB:40:U:N3	28:BB:43:C:H5''	1.87	0.90
57:D8:52:LYS:N	57:D8:53:PRO:HD2	1.85	0.90
1:CA:161:A:H2'	1:CA:162:A:H8	1.34	0.90
27:DA:50:U:H4'	27:DA:51:G:OP2	1.71	0.90
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.52	0.90
27:DA:1681:G:OP2	27:DA:1681:G:H8	1.55	0.90
36:DN:76:SER:O	36:DN:78:TYR:N	2.05	0.90
1:AA:262:A:H5'	20:AT:74:LYS:HG3	1.52	0.90
27:DA:1461:G:H2'	27:DA:1462:C:H6	1.36	0.90
1:AA:358:U:H2'	1:AA:359:U:H6	1.37	0.90
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	1.53	0.90
41:BS:97:ARG:HH21	41:BS:98:VAL:HA	0.79	0.90
27:DA:1796:U:H2'	27:DA:1797:C:C6	2.05	0.90
27:BA:1213:A:H8	27:BA:1213:A:H5'	1.33	0.90
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.54	0.90
1:AA:271:C:H2'	1:AA:272:C:C6	2.06	0.90
3:CC:153:VAL:HG12	3:CC:196:LEU:HD11	1.51	0.90
1:CA:916:G:H2'	1:CA:917:G:H8	1.37	0.90
27:BA:1414:G:H1	27:BA:1588:C:H42	1.13	0.90
47:BY:95:LYS:HZ3	47:BY:100:ALA:HB2	1.34	0.89
34:BH:85:LYS:HD2	34:BH:141:VAL:CG1	2.03	0.89
12:CL:43:LYS:CG	12:CL:44:LYS:H	1.85	0.89
2:CB:204:ASN:ND2	2:CB:207:ALA:HB3	1.88	0.89
42:BT:41:ARG:O	42:BT:41:ARG:HD2	1.72	0.89
9:AI:53:VAL:HG23	9:AI:54:ASP:N	1.87	0.89
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.02	0.89
27:BA:2876:G:H4'	42:BT:3:ARG:CD	2.02	0.89
47:BY:88:LYS:NZ	47:BY:93:GLY:HA3	1.86	0.89
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.53	0.89
19:CS:49:ILE:HD12	19:CS:49:ILE:H	1.35	0.89
29:DC:83:ILE:HG23	29:DC:94:VAL:HG23	1.52	0.89
41:BS:48:LEU:O	41:BS:49:VAL:HG23	1.71	0.89
1:AA:64:G:H4'	1:AA:65:U:O5'	1.71	0.89
20:AT:82:SER:O	20:AT:86:ARG:HB3	1.72	0.89
17:AQ:87:LYS:HA	17:AQ:87:LYS:HE2	1.54	0.89
30:DD:31:LYS:O	30:DD:35:LYS:HB2	1.71	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BR:98:LEU:HD12	40:BR:113:LEU:HD23	1.51	0.89
30:DD:10:THR:HG23	30:DD:13:ARG:HB3	1.54	0.89
32:DF:7:TYR:HB2	32:DF:17:ARG:N	1.87	0.89
42:BT:28:VAL:CG2	42:BT:47:GLY:H	1.85	0.89
27:DA:2611:U:H1'	54:D5:3:LYS:HE3	1.54	0.89
27:BA:1249:U:H5'	27:BA:1249:U:C6	2.07	0.89
28:BB:3:C:H42	28:BB:118:G:H1	1.04	0.89
34:DH:107:VAL:HG21	34:DH:152:ARG:HG2	1.54	0.89
31:BE:8:LYS:HE3	31:BE:188:VAL:HG13	1.53	0.89
34:BH:85:LYS:HZ2	34:BH:133:VAL:CG1	1.85	0.89
30:DD:61:LEU:HB3	30:DD:63:ARG:NH1	1.87	0.89
27:BA:1023:U:H2'	27:BA:1024:G:H5'	1.54	0.89
20:CT:14:LYS:HB2	20:CT:17:ARG:HH21	1.33	0.89
1:CA:1398:A:H5''	1:CA:1398:A:H8	1.36	0.89
27:DA:736:C:H42	27:DA:760:G:H1	1.20	0.89
27:BA:1596:A:C2'	27:BA:1597:A:H5'	2.02	0.89
27:DA:1689:A:H62	27:DA:1698:A:H2	0.94	0.89
32:BF:2:LYS:H	32:BF:2:LYS:CD	1.85	0.89
27:BA:1213:A:C8	27:BA:1213:A:H5'	2.07	0.89
45:BW:90:ARG:CB	45:BW:90:ARG:HH11	1.84	0.89
27:DA:2161:C:H2'	27:DA:2162:G:C8	2.06	0.89
42:BT:125:ARG:O	42:BT:128:GLU:HG3	1.72	0.89
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	1.53	0.89
1:AA:486:U:HO2'	1:AA:487:A:H8	0.92	0.89
28:DB:40:U:HO2'	28:DB:43:C:H5	0.92	0.89
1:CA:99:U:H2'	1:CA:100:C:H6	1.36	0.89
3:CC:43:LEU:HD13	3:CC:55:VAL:HG11	1.53	0.89
27:BA:64:A:O3'	46:BX:71:GLY:HA3	1.71	0.89
31:DE:59:VAL:HG22	31:DE:60:ASN:H	1.35	0.89
34:BH:43:VAL:HG11	34:BH:52:VAL:HG13	1.53	0.89
27:DA:2645:G:H4'	27:DA:2732:G:O2'	1.73	0.89
39:BQ:134:ARG:HH21	48:BZ:121:ARG:CZ	1.83	0.89
52:D3:23:LEU:HA	52:D3:26:LEU:HD12	1.54	0.89
35:DI:144:VAL:HG23	35:DI:145:VAL:HG23	1.53	0.89
42:BT:89:VAL:CB	42:BT:91:ARG:HE	1.86	0.89
30:DD:118:VAL:HG22	30:DD:119:ALA:N	1.86	0.89
12:CL:81:LEU:HD13	12:CL:82:ILE:H	1.35	0.89
1:AA:736:C:H2'	1:AA:737:A:C8	2.07	0.89
27:DA:143(A):C:H4'	46:DX:38:GLU:OE1	1.73	0.89
57:B8:50:LEU:HD12	57:B8:51:ALA:H	1.36	0.89
10:CJ:48:THR:HG23	10:CJ:62:HIS:HB3	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:59:LEU:HA	38:BP:61:ARG:NH1	1.86	0.89
35:DI:75:LEU:HD21	35:DI:105:HIS:CE1	2.08	0.89
43:BU:90:VAL:O	43:BU:92:ARG:N	2.05	0.89
27:DA:2787:C:H1'	31:DE:61:ARG:CG	2.02	0.89
27:DA:2052:G:H21	31:DE:149:ARG:HA	1.36	0.89
27:DA:125:G:H21	56:D7:48:LYS:HE3	1.36	0.89
1:AA:501:C:H2'	1:AA:502:G:H8	1.35	0.89
6:CF:8:ILE:HG22	6:CF:10:LEU:HD11	1.53	0.89
30:BD:13:ARG:NH1	30:BD:16:MET:SD	2.46	0.89
13:AM:68:GLY:HA2	13:AM:71:ARG:HH21	1.37	0.89
1:CA:1028:C:N4	1:CA:1034:G:H21	1.71	0.89
23:CW:35:G:HO2'	23:CW:36:A:H8	1.21	0.89
38:DP:45:LEU:CD2	38:DP:46:LYS:H	1.84	0.89
27:BA:1884:A:C2'	27:BA:1885:A:H5''	2.02	0.89
38:DP:105:LEU:O	38:DP:106:LEU:HB2	1.70	0.89
42:DT:88:ILE:HG22	42:DT:89:VAL:N	1.83	0.89
28:DB:7:G:H2'	28:DB:8:U:H5''	1.53	0.89
1:CA:750:G:N3	15:CO:23:GLY:HA3	1.88	0.89
1:CA:922:G:H2'	1:CA:923:A:C8	2.08	0.89
27:DA:1416:G:HO2'	27:DA:1417:C:H6	0.92	0.89
27:BA:1246:A:OP2	38:BP:18:ARG:HG3	1.73	0.89
31:BE:78:LEU:HD23	31:BE:78:LEU:N	1.88	0.89
1:AA:70:G:H1	1:AA:99:U:H3	1.21	0.89
48:DZ:52:ILE:HG21	48:DZ:70:VAL:O	1.71	0.89
27:DA:1504:C:C2'	27:DA:1505:C:H5''	2.03	0.89
11:AK:50:TYR:HB3	11:AK:54:ARG:O	1.73	0.89
42:BT:68:TYR:O	42:BT:70:VAL:N	2.04	0.89
27:DA:2150:U:H2'	27:DA:2151:G:H8	1.38	0.89
38:BP:23:PRO:HB3	38:BP:29:LYS:HB2	1.55	0.88
39:DQ:81:VAL:HG21	49:D0:7:LEU:HD21	1.54	0.88
38:DP:41:ARG:HE	38:DP:41:ARG:HA	1.38	0.88
49:D0:41:ARG:CD	49:D0:41:ARG:H	1.86	0.88
34:BH:113:VAL:HG21	34:BH:151:ILE:HG21	1.55	0.88
12:AL:73:ASN:ND2	12:AL:74:LEU:H	1.68	0.88
11:AK:127:LYS:CE	11:AK:127:LYS:HA	2.03	0.88
12:AL:38:ARG:HH12	12:AL:54:LYS:NZ	1.71	0.88
38:BP:107:LYS:O	38:BP:109:GLY:N	2.06	0.88
27:BA:2516:G:C2'	27:BA:2517:C:H5'	2.03	0.88
27:BA:1291:C:H2'	27:BA:1292:U:H6	1.37	0.88
34:BH:85:LYS:HD2	34:BH:141:VAL:HG12	1.53	0.88
37:BO:10:VAL:HG21	37:BO:16:ALA:O	1.74	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BD:165:ILE:HD13	30:BD:175:LEU:CD2	2.03	0.88
27:DA:1826:G:C4'	30:DD:242:ARG:HH21	1.86	0.88
1:CA:250:A:H4'	1:CA:251:G:O5'	1.71	0.88
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.34	0.88
35:BI:38:LEU:HD12	35:BI:38:LEU:H	1.36	0.88
27:DA:1146:C:O2'	27:DA:1147:C:H5'	1.74	0.88
57:D8:10:ALA:HB3	57:D8:60:LEU:HD21	1.55	0.88
27:DA:2887:U:H2'	27:DA:2888:C:H6	1.37	0.88
10:CJ:8:LEU:HD21	10:CJ:96:ILE:HG22	1.55	0.88
27:BA:1292:U:H2'	27:BA:1293:C:H6	1.38	0.88
51:B2:41:ILE:HG13	51:B2:42:GLY:O	1.72	0.88
47:DY:96:ILE:HD12	47:DY:99:CYS:SG	2.13	0.88
5:AE:76:ILE:HG13	5:AE:77:PRO:HD2	1.53	0.88
5:CE:11:ILE:HG22	5:CE:12:LEU:H	1.39	0.88
23:AW:66:A:H2'	23:AW:67:C:C6	2.09	0.88
2:CB:98:LEU:O	2:CB:101:MET:HG3	1.72	0.88
42:BT:65:LYS:NZ	42:BT:66:VAL:HG23	1.88	0.88
27:DA:908:C:H3'	39:DQ:22:LYS:NZ	1.89	0.88
55:D6:32:ASN:ND2	55:D6:33:LYS:H	1.72	0.88
27:DA:2550:G:H22	27:DA:2559:C:H1'	1.39	0.88
38:DP:38:GLN:HG3	38:DP:39:LYS:H	1.37	0.88
27:BA:1296:G:O2'	27:BA:1297:C:H5'	1.73	0.88
12:AL:33:VAL:O	12:AL:55:VAL:HG13	1.74	0.88
33:DG:39:ILE:HG23	33:DG:92:VAL:HG13	1.55	0.88
1:AA:736:C:H5''	18:AR:72:ARG:HH21	1.36	0.88
27:DA:1504:C:H2'	27:DA:1505:C:H5''	1.53	0.88
1:CA:351:G:H4'	1:CA:352:C:OP1	1.74	0.88
27:BA:845:G:H4'	27:BA:846:C:OP1	1.73	0.88
27:DA:2683:C:P	42:DT:53:ARG:HH22	1.96	0.88
49:D0:26:TYR:N	49:D0:29:GLN:HE21	1.71	0.88
12:CL:81:LEU:HD13	12:CL:82:ILE:N	1.87	0.88
32:DF:36:VAL:HG11	32:DF:183:VAL:HG21	1.53	0.88
42:DT:118:ARG:HA	42:DT:121:ILE:HB	1.55	0.88
27:BA:2694:G:H5'	27:BA:2694:G:H8	1.39	0.88
27:BA:197:A:H5'	27:BA:197:A:H8	1.35	0.88
43:BU:91:ASP:OD2	43:BU:96:ALA:HB2	1.72	0.88
27:DA:904:C:H2'	27:DA:905:U:H5'	1.52	0.88
34:BH:20:ALA:HB1	34:BH:21:PRO:HD2	1.54	0.88
14:AN:6:LEU:HD13	14:AN:23:ARG:HH22	1.34	0.88
31:BE:132:HIS:O	31:BE:133:LYS:HG3	1.73	0.88
42:DT:99:LEU:HB2	42:DT:101:PHE:HE1	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:85:LEU:HD21	38:BP:116:GLY:O	1.73	0.88
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.08	0.88
16:AP:22:THR:OG1	16:AP:26:ARG:HG3	1.72	0.88
27:BA:805:G:H4'	27:BA:806:C:OP2	1.71	0.88
25:CY:68:C:H2'	25:CY:69:C:H5''	1.55	0.88
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	1.71	0.88
34:BH:10:PRO:HG3	34:BH:50:VAL:O	1.73	0.88
1:CA:838:G:H2'	1:CA:839:U:H5''	1.55	0.88
27:DA:1658:C:OP1	31:DE:132:HIS:ND1	2.07	0.88
27:BA:2657:A:O2'	34:BH:160:LYS:HE3	1.73	0.88
27:DA:630:G:H1	27:DA:634:C:N4	1.71	0.88
4:AD:196:LEU:N	4:AD:196:LEU:HD12	1.89	0.88
27:DA:676:A:H2	27:DA:802:A:H61	1.22	0.88
1:CA:1502:A:H4'	1:CA:1503:A:OP2	1.72	0.88
57:B8:43:GLN:C	57:B8:44:LYS:HD2	1.94	0.88
25:CY:2:G:H1	25:CY:70:C:H42	1.17	0.88
54:B5:16:ARG:HG2	54:B5:16:ARG:NH1	1.81	0.88
38:DP:101:VAL:HG12	38:DP:106:LEU:HD23	1.56	0.88
46:DX:12:VAL:HG13	46:DX:27:THR:O	1.73	0.88
27:DA:690:G:H2'	27:DA:691:C:C6	2.09	0.88
3:CC:95:THR:HG22	3:CC:97:LYS:HB2	1.53	0.88
27:BA:2283:C:H2'	27:BA:2284:C:H5'	1.56	0.88
27:DA:2296:U:H4'	27:DA:2297:C:OP1	1.74	0.88
36:BN:30:ILE:HG23	36:BN:52:VAL:HG11	1.56	0.88
27:DA:271(H):G:H2'	27:DA:271(I):G:H8	1.38	0.88
39:DQ:42:ILE:HD13	39:DQ:97:VAL:HG21	1.56	0.88
1:CA:1226:C:C5	13:CM:104:ARG:HA	2.09	0.87
42:BT:28:VAL:HG22	42:BT:47:GLY:H	1.38	0.87
27:DA:142:A:C8	27:DA:1408:C:H1'	2.09	0.87
27:BA:1372:U:H2'	27:BA:1373:A:C8	2.08	0.87
37:BO:119:PRO:O	37:BO:120:GLU:HB3	1.71	0.87
34:DH:44:VAL:HG12	34:DH:45:VAL:H	1.39	0.87
39:DQ:55:VAL:HG13	39:DQ:56:ARG:H	1.39	0.87
4:AD:127:THR:HB	4:AD:130:GLY:O	1.74	0.87
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.55	0.87
27:BA:2524:G:H5'	27:BA:2525:G:OP2	1.73	0.87
1:CA:1315:U:H2'	1:CA:1316:G:O4'	1.74	0.87
37:BO:104:ARG:HH12	42:BT:35:LYS:CE	1.87	0.87
27:DA:806:C:OP2	38:DP:39:LYS:HD3	1.75	0.87
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.74	0.87
27:BA:2189:U:H3'	27:BA:2190:G:H5''	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BE:59:VAL:CG2	31:BE:60:ASN:H	1.87	0.87
44:BV:15:GLU:HB3	44:BV:16:PRO:HD2	1.57	0.87
27:DA:574:C:H1'	27:DA:2055:C:C6	2.09	0.87
41:DS:34:HIS:CE1	41:DS:54:LEU:HB2	2.08	0.87
27:DA:1410:G:H2'	27:DA:1411:C:H6	1.34	0.87
34:DH:126:PRO:O	34:DH:127:GLU:HB2	1.75	0.87
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.74	0.87
42:BT:13:ARG:HA	42:BT:13:ARG:CZ	2.04	0.87
30:BD:246:PRO:HG2	30:BD:255:LYS:HG3	1.56	0.87
27:DA:1449:A:C2	27:DA:1450:G:H1'	2.08	0.87
34:BH:86:GLU:HB2	34:BH:132:ARG:HH12	1.38	0.87
38:BP:23:PRO:HB2	38:BP:33:ARG:HG3	1.56	0.87
32:DF:25:PRO:HG3	32:DF:119:ARG:HB2	1.56	0.87
55:D6:32:ASN:HD22	55:D6:33:LYS:H	0.87	0.87
27:DA:748:G:H5'	45:DW:89:ALA:HB2	1.54	0.87
45:BW:76:VAL:HB	45:BW:103:ILE:HG23	1.57	0.87
44:DV:66:ARG:HH21	44:DV:88:ARG:HD3	1.39	0.87
38:BP:23:PRO:HD2	38:BP:33:ARG:CZ	2.04	0.87
42:BT:91:ARG:HA	42:BT:117:ASP:H	1.39	0.87
47:DY:28:LYS:CB	47:DY:39:VAL:H	1.87	0.87
27:DA:2475:C:H42	27:DA:2529:G:N2	1.72	0.87
1:AA:1004:A:H5''	1:AA:1025:U:H3	1.38	0.87
1:AA:1002:G:H21	1:AA:1003:G:H1'	1.40	0.87
19:CS:32:LYS:HE3	19:CS:32:LYS:H	1.39	0.87
4:CD:9:CYS:SG	4:CD:31:CYS:O	2.33	0.87
12:CL:80:VAL:HG12	12:CL:81:LEU:H	1.39	0.87
27:BA:2439:A:H5'	27:BA:2439:A:C8	2.09	0.87
1:CA:452:A:O2'	1:CA:453:A:H5''	1.74	0.87
27:BA:1378:A:H4'	27:BA:1379:A:OP1	1.73	0.87
27:DA:519:U:H2'	27:DA:520:G:H8	1.32	0.87
14:CN:23:ARG:HD2	14:CN:28:GLY:O	1.72	0.87
4:AD:149:ALA:HB3	4:AD:152:SER:HB2	1.54	0.87
27:DA:2883:A:H3'	27:DA:2884:U:H5'	1.54	0.87
13:AM:86:CYS:HB2	19:AS:73:GLU:HB3	1.54	0.87
27:BA:480:A:C1'	47:BY:44:ILE:HG21	2.04	0.87
1:AA:1399:C:H4'	1:AA:1400:C:O5'	1.74	0.87
37:BO:78:ARG:HH11	37:BO:78:ARG:HB2	1.37	0.87
31:DE:4:ILE:HG12	31:DE:28:ALA:HB1	1.57	0.87
33:DG:111:LEU:HD11	33:DG:120:LEU:HD21	1.57	0.87
27:DA:1403:C:H5''	27:DA:1471:A:H1'	1.57	0.87
17:AQ:26:GLN:HB3	17:AQ:37:LYS:HG2	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DD:270:ILE:O	30:DD:271:ILE:HG23	1.74	0.87
42:DT:105:LEU:HD13	42:DT:109:GLU:OE2	1.75	0.87
41:BS:89:ARG:O	41:BS:92:TYR:HB3	1.72	0.87
13:CM:68:GLY:O	13:CM:71:ARG:HB3	1.73	0.87
47:DY:27:VAL:HG12	47:DY:28:LYS:H	1.38	0.87
19:AS:49:ILE:HD12	19:AS:49:ILE:H	1.40	0.87
27:BA:2128:C:OP1	29:BC:35:ALA:HB1	1.75	0.87
27:DA:2150:U:H2'	27:DA:2151:G:C8	2.10	0.87
27:BA:2516:G:O2'	27:BA:2517:C:H5'	1.75	0.87
42:DT:96:ARG:HG2	42:DT:96:ARG:HH11	1.40	0.87
48:BZ:119:ILE:O	48:BZ:120:HIS:HB2	1.75	0.87
2:AB:219:VAL:HA	2:AB:222:ILE:HD12	1.55	0.87
1:AA:577:G:HO2'	1:AA:578:C:H6	0.91	0.87
27:DA:2526:G:H21	58:D9:2:LYS:HG3	1.38	0.87
27:BA:626:U:H5'	27:BA:627:A:H5'	1.55	0.87
36:BN:1:MET:HG2	36:BN:2:LYS:N	1.86	0.86
27:DA:863:A:H2'	27:DA:864:G:C8	2.09	0.86
31:DE:77:ILE:CG2	31:DE:78:LEU:H	1.78	0.86
27:BA:754:C:H2'	27:BA:755:C:H6	1.38	0.86
37:BO:65:THR:HA	37:BO:82:ASN:HD22	1.40	0.86
27:BA:2271:G:H4'	49:B0:20:ARG:HH12	1.40	0.86
37:DO:80:ASP:OD2	42:DT:71:GLY:HA3	1.75	0.86
1:AA:815:A:H5''	1:AA:817:C:N4	1.90	0.86
25:CY:17:G:H22	25:CY:54:U:H1'	1.39	0.86
33:BG:82:LEU:HD22	33:BG:87:PRO:HG3	1.53	0.86
27:DA:272(C):G:H1	27:DA:365:C:H42	1.22	0.86
1:CA:601:C:H2'	1:CA:602:A:H8	1.37	0.86
27:DA:2619:C:H5''	31:DE:152:LYS:HA	1.55	0.86
1:CA:718:G:H21	18:CR:49:LYS:NZ	1.73	0.86
27:BA:2723:C:H5'	40:BR:5:LYS:HZ2	1.37	0.86
3:AC:59:ARG:HG2	3:AC:63:ASN:O	1.74	0.86
27:BA:271(Q):G:H2'	27:BA:271(R):G:C8	2.10	0.86
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.57	0.86
1:AA:1278:U:H5''	1:AA:1279:A:H5'	1.56	0.86
1:CA:1154:G:HO2'	1:CA:1155:G:H8	0.88	0.86
27:DA:1019:U:H3	27:DA:1142(A):A:N6	1.73	0.86
27:DA:200:U:H5'	27:DA:200:U:C6	2.10	0.86
39:DQ:12:GLN:NE2	39:DQ:72:LYS:HG3	1.89	0.86
30:DD:242:ARG:N	30:DD:242:ARG:HD2	1.88	0.86
27:DA:2612:C:O2'	27:DA:2613:U:H5'	1.76	0.86
4:AD:9:CYS:H	4:AD:22:LYS:HZ3	1.24	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2645:G:H4'	27:DA:2732:G:HO2'	1.40	0.86
1:CA:1065:U:H5''	1:CA:1190:G:H21	1.39	0.86
38:BP:71:VAL:HG12	38:BP:72:PRO:HD3	1.56	0.86
5:CE:91:LEU:HG	5:CE:120:THR:HG22	1.54	0.86
42:BT:104:ASN:O	42:BT:105:LEU:HD23	1.75	0.86
42:DT:14:TYR:H	42:DT:14:TYR:HD1	1.23	0.86
12:AL:29:PHE:HB3	12:AL:81:LEU:CD1	2.05	0.86
39:BQ:111:GLU:O	39:BQ:115:MET:HB2	1.76	0.86
41:DS:89:ARG:HB3	41:DS:92:TYR:HB3	1.57	0.86
3:CC:156:ARG:HH21	3:CC:161:GLU:HG3	1.40	0.86
1:CA:838:G:C2'	1:CA:839:U:H5''	2.06	0.86
7:CG:150:ALA:HB2	11:CK:50:TYR:OH	1.75	0.86
27:BA:1474:C:H2'	27:BA:1475:G:H8	1.37	0.86
30:BD:267:SER:O	30:BD:269:PHE:N	2.09	0.86
11:CK:111:ASP:HA	18:CR:84:LYS:HG3	1.57	0.86
32:BF:181:LEU:HB3	32:BF:205:ARG:NH1	1.90	0.86
1:CA:471:G:O2'	1:CA:472:A:H8	1.58	0.86
36:BN:4:TYR:CD1	36:BN:4:TYR:N	2.39	0.86
43:BU:88:ILE:HG22	44:BV:47:VAL:HG23	1.57	0.86
9:AI:82:ALA:HA	9:AI:85:LEU:HD11	1.56	0.86
27:BA:1173:G:H3'	27:BA:1174:A:C5'	2.02	0.86
27:BA:2138:C:H2'	27:BA:2139:C:H6	1.39	0.86
34:BH:97:ARG:HG2	34:BH:98:LEU:H	1.40	0.86
38:DP:78:PRO:HB2	38:DP:111:ARG:HD2	1.57	0.86
27:DA:2880:C:O2'	40:DR:90:ARG:HD3	1.75	0.86
23:CW:20:A:N6	23:CW:46:U:H1'	1.89	0.86
13:CM:23:TYR:HB3	13:CM:67:GLU:HB2	1.57	0.86
11:CK:32:ILE:CD1	11:CK:72:ALA:HB2	2.04	0.86
27:DA:830:G:H4'	27:DA:831:G:OP2	1.74	0.86
27:DA:969:U:OP1	52:D3:17:LYS:HG2	1.75	0.86
23:AW:30:A:C2'	23:AW:31:U:H5''	2.04	0.86
41:DS:17:ARG:O	41:DS:18:ILE:HB	1.72	0.86
32:DF:109:GLY:HA2	32:DF:112:MET:HB3	1.57	0.86
37:BO:20:MET:O	37:BO:41:ALA:HB1	1.75	0.86
3:AC:83:ARG:O	3:AC:86:VAL:HG22	1.76	0.86
48:BZ:52:ILE:CG2	48:BZ:70:VAL:HB	2.06	0.86
27:BA:1577:C:H2'	27:BA:1578:U:C6	2.09	0.86
27:BA:2505:G:O2'	27:BA:2506:U:H5'	1.76	0.86
44:BV:19:LYS:HE2	44:BV:20:LEU:N	1.91	0.86
55:B6:40:CYS:CA	55:B6:46:HIS:HB3	2.06	0.86
2:AB:18:GLY:N	2:AB:42:ILE:HG22	1.89	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BX:12:VAL:HG13	46:BX:27:THR:O	1.74	0.86
27:BA:2876:G:H4'	42:BT:3:ARG:HD3	1.58	0.86
58:B9:29:ASN:N	58:B9:29:ASN:HD22	1.71	0.86
36:DN:57:ALA:HB3	36:DN:124:ALA:HA	1.58	0.86
40:DR:10:LEU:HB3	40:DR:17:ARG:NE	1.91	0.86
12:CL:3:THR:O	12:CL:7:LEU:HD12	1.74	0.86
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.56	0.86
27:BA:1336:A:H2'	27:BA:1337:G:C8	2.09	0.86
27:BA:2200:C:H2'	27:BA:2201:C:H6	1.41	0.86
27:BA:2723:C:H5'	40:BR:5:LYS:NZ	1.91	0.86
13:AM:7:VAL:HG12	13:AM:9:ILE:HD11	1.58	0.86
27:BA:271(F):C:H42	27:BA:271(R):G:H1	1.22	0.86
2:AB:178:ARG:HH22	2:AB:196:LEU:HA	1.40	0.86
27:DA:8:A:H2'	27:DA:9:U:C6	2.11	0.86
27:BA:109:G:O2'	27:BA:110:G:H5'	1.75	0.86
50:D1:11:ARG:HB2	50:D1:12:PRO:HD2	1.55	0.86
3:AC:129:ALA:HB3	3:AC:132:ARG:HB3	1.58	0.86
1:AA:631:G:H5''	1:AA:632:A:OP1	1.75	0.86
47:BY:96:ILE:HG22	47:BY:97:ARG:N	1.89	0.86
27:BA:795:C:H2'	27:BA:796:C:C6	2.11	0.86
27:BA:2199:A:C8	27:BA:2199:A:H5'	2.10	0.86
35:DI:37:VAL:HG12	35:DI:38:LEU:H	1.40	0.86
33:DG:39:ILE:CG2	33:DG:92:VAL:HG13	2.06	0.86
13:CM:3:ARG:HG2	13:CM:9:ILE:CG1	2.05	0.86
27:DA:2467:C:H4'	39:DQ:123:HIS:CD2	2.11	0.86
27:BA:2090:G:N2	50:B1:45:ASN:HD21	1.74	0.86
34:DH:53:GLU:O	34:DH:54:ARG:HB3	1.73	0.86
40:BR:24:GLN:HE21	40:BR:36:THR:HG21	1.40	0.86
42:BT:65:LYS:CE	42:BT:66:VAL:H	1.88	0.86
27:DA:560:C:H4'	43:DU:52:ARG:NH2	1.90	0.86
9:AI:53:VAL:CG2	9:AI:54:ASP:H	1.88	0.86
9:AI:50:LEU:HB3	9:AI:55:ALA:O	1.76	0.86
27:DA:2756:U:H1'	27:DA:2757:A:H5''	1.57	0.86
1:CA:234:C:H2'	1:CA:235:C:C6	2.09	0.86
27:DA:1718:G:H1	27:DA:1744:C:H42	1.24	0.86
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.55	0.86
11:CK:127:LYS:HA	11:CK:127:LYS:HE2	1.58	0.86
27:DA:1273:U:H5''	27:DA:1273:U:H6	1.39	0.86
27:DA:869:G:H2'	27:DA:870:A:C8	2.09	0.85
30:BD:71:ASP:HB2	30:BD:103:ARG:HH22	1.38	0.85
1:CA:566:G:H4'	1:CA:567:G:OP1	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DH:13:LYS:HA	34:DH:13:LYS:HE2	1.58	0.85
1:CA:1270:C:O2'	1:CA:1271:G:H5'	1.76	0.85
14:CN:13:THR:N	14:CN:14:PRO:HD2	1.89	0.85
27:BA:2863:C:H2'	27:BA:2864:G:H5''	1.55	0.85
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.11	0.85
27:BA:2571:C:H5'	27:BA:2572:A:H5''	1.58	0.85
1:CA:1173:G:H2'	1:CA:1174:G:H8	1.41	0.85
8:CH:42:GLU:HG3	8:CH:109:ILE:HD12	1.56	0.85
27:BA:200:U:H5'	27:BA:200:U:H6	1.40	0.85
1:AA:1270:C:O2'	1:AA:1271:G:H5'	1.74	0.85
57:B8:6:THR:HA	57:B8:61:LEU:HD11	1.58	0.85
55:B6:19:ARG:H	55:B6:19:ARG:HD2	1.39	0.85
30:BD:35:LYS:HZ3	30:BD:103:ARG:HA	1.40	0.85
16:CP:5:ARG:HH12	16:CP:24:ALA:HA	1.40	0.85
27:DA:2752:C:H2'	27:DA:2753:A:C8	2.11	0.85
28:DB:7:G:H5'	41:DS:29:PHE:CE1	2.11	0.85
27:BA:2071:A:H2	27:BA:2441:C:N3	1.72	0.85
34:BH:92:ILE:HG22	34:BH:93:GLY:N	1.89	0.85
27:BA:1562:A:H2'	27:BA:1563:G:H8	1.38	0.85
1:CA:1208:C:H2'	1:CA:1209:C:C6	2.10	0.85
15:CO:16:ALA:HB1	15:CO:21:ASP:HB3	1.57	0.85
23:CW:20:A:H62	23:CW:44:A:H2'	1.41	0.85
8:CH:109:ILE:HG12	8:CH:110:ALA:H	1.41	0.85
27:DA:2100:G:H2'	27:DA:2101:G:C8	2.10	0.85
10:AJ:46:ARG:HG2	10:AJ:64:GLU:OE1	1.74	0.85
46:DX:24:GLY:O	46:DX:82:GLN:HA	1.76	0.85
57:D8:6:THR:HG22	57:D8:63:PRO:CD	2.07	0.85
30:DD:239:ARG:HH21	30:DD:239:ARG:CG	1.88	0.85
32:DF:186:ILE:HG23	32:DF:192:LEU:HD11	1.58	0.85
56:D7:9:ARG:HB3	56:D7:48:LYS:NZ	1.91	0.85
27:DA:184:C:H2'	27:DA:185:U:H6	1.41	0.85
8:CH:95:VAL:HA	8:CH:99:GLU:OE2	1.77	0.85
46:BX:39:ILE:O	46:BX:43:VAL:HG23	1.76	0.85
36:BN:1:MET:HG2	36:BN:2:LYS:H	1.38	0.85
31:DE:144:ARG:NH1	31:DE:144:ARG:HG3	1.91	0.85
41:DS:85:VAL:C	41:DS:106:ARG:HG3	1.97	0.85
49:B0:10:THR:HG23	49:B0:12:ASN:OD1	1.77	0.85
1:CA:1356:G:H1	1:CA:1366:C:H42	1.24	0.85
8:AH:6:ILE:H	8:AH:6:ILE:HD12	1.39	0.85
27:BA:491:G:H2'	27:BA:492:A:H8	1.40	0.85
19:AS:63:THR:HG22	19:AS:66:MET:CE	2.07	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:232:G:H4'	27:DA:233:A:OP1	1.76	0.85
27:BA:608:A:OP1	32:BF:100:THR:HG21	1.75	0.85
42:BT:65:LYS:HZ2	42:BT:66:VAL:HG23	1.41	0.85
1:CA:33:A:OP2	1:CA:398:C:H5'	1.76	0.85
39:DQ:45:GLN:H	39:DQ:45:GLN:NE2	1.74	0.85
33:DG:37:VAL:O	33:DG:94:LEU:HB2	1.75	0.85
27:BA:1412:A:H2'	27:BA:1413:G:C8	2.11	0.85
41:DS:97:ARG:NH2	41:DS:98:VAL:HA	1.92	0.85
48:DZ:27:MET:CE	48:DZ:34:ARG:HB2	2.06	0.85
15:CO:77:ARG:HA	15:CO:80:ALA:HB3	1.59	0.85
1:CA:192:U:O4'	20:CT:103:GLY:HA2	1.77	0.85
30:DD:181:GLU:HA	30:DD:272:ALA:HB3	1.59	0.85
27:DA:2807:G:H22	27:DA:2892:A:H62	1.24	0.85
27:BA:814:C:H41	38:BP:27:HIS:HD2	1.23	0.85
1:AA:854:G:H3'	1:AA:871:U:O4	1.77	0.85
40:DR:26:LYS:CE	40:DR:71:GLN:H	1.90	0.85
27:BA:80:G:O2'	27:BA:81:G:H5'	1.76	0.85
27:BA:232:G:H4'	27:BA:233:A:OP1	1.73	0.85
27:BA:1111:A:O2'	27:BA:1112:G:H4'	1.75	0.85
26:AZ:4:SER:O	26:AZ:5:UAL:N1	2.08	0.85
27:DA:783:A:H2'	27:DA:784:A:H4'	1.59	0.85
27:DA:330:A:HO2'	27:DA:331:A:H8	1.21	0.85
48:BZ:81:ARG:NH2	48:BZ:83:GLU:HA	1.90	0.85
46:BX:80:ILE:O	46:BX:80:ILE:HD13	1.76	0.85
38:BP:95:VAL:HG22	38:BP:125:VAL:HG12	1.57	0.85
24:CX:17:C:H2'	24:CX:17(B):U:C6	2.12	0.85
36:BN:133:GLN:O	36:BN:134:ARG:HG3	1.76	0.85
10:AJ:64:GLU:HG2	14:AN:59:ALA:HB2	1.57	0.85
27:DA:796:C:H2'	27:DA:797:C:C6	2.12	0.85
27:BA:2503:A:H4'	27:BA:2504:U:OP1	1.75	0.85
27:BA:1591:G:H2'	27:BA:1592:C:C6	2.12	0.85
12:AL:48:ALA:O	12:AL:49:LEU:HD13	1.77	0.85
45:DW:84:ARG:HB2	45:DW:96:ILE:HG23	1.57	0.85
36:BN:4:TYR:CB	43:BU:64:ARG:HH22	1.88	0.85
9:CI:125:TYR:CE2	9:CI:127:LYS:HB2	2.11	0.85
27:BA:1434:A:H61	27:BA:1558:A:H62	1.18	0.85
27:DA:999:U:C2'	27:DA:1000:A:H5''	2.07	0.85
27:DA:999:U:H2'	27:DA:1000:A:H5''	1.57	0.85
43:DU:87:GLY:O	44:DV:50:PRO:HD3	1.77	0.85
47:DY:27:VAL:HA	47:DY:28:LYS:NZ	1.90	0.85
27:BA:1006:C:H1'	36:BN:106:MET:HG2	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:14:LYS:HB2	20:CT:17:ARG:NH2	1.90	0.85
27:BA:1431:U:H2'	27:BA:1432:C:C6	2.12	0.85
57:B8:50:LEU:HD12	57:B8:51:ALA:N	1.91	0.85
27:BA:363(B):G:N3	27:BA:363(B):G:H2'	1.92	0.85
33:BG:2:PRO:HG2	53:B4:51:TYR:CD2	2.12	0.85
27:BA:2809:A:N1	27:BA:2892:A:H1'	1.92	0.85
34:BH:85:LYS:CD	34:BH:133:VAL:HB	2.06	0.85
16:CP:82:GLN:H	16:CP:82:GLN:NE2	1.74	0.85
27:DA:908:C:OP1	39:DQ:22:LYS:HB3	1.77	0.85
27:DA:2383:G:H2'	27:DA:2384:G:C8	2.12	0.85
47:BY:39:VAL:O	47:BY:40:GLU:HG2	1.77	0.85
3:CC:83:ARG:O	3:CC:87:LEU:HG	1.76	0.85
27:BA:2870:C:H2'	27:BA:2871:C:H5'	1.57	0.85
27:DA:1199:U:H2'	27:DA:1200:C:C6	2.11	0.85
27:DA:1484:G:H3'	27:DA:1485:G:H5''	1.58	0.85
18:AR:37:VAL:HG23	18:AR:38:GLU:H	1.39	0.85
27:DA:1917:U:H2'	27:DA:1918:A:C8	2.12	0.85
31:BE:33:VAL:HG13	31:BE:69:LYS:HE3	1.58	0.85
27:BA:1771:C:HO2'	27:BA:1786:A:H8	0.86	0.85
27:BA:1291:C:H2'	27:BA:1292:U:C6	2.12	0.84
33:BG:112:PRO:O	33:BG:113:ARG:NH1	2.10	0.84
55:B6:16:CYS:O	55:B6:17:LYS:HB2	1.75	0.84
55:B6:19:ARG:HG2	55:B6:20:ASN:H	1.39	0.84
6:AF:2:ARG:HD2	6:AF:69:GLU:HB3	1.58	0.84
27:DA:476:G:O2'	27:DA:477:A:H3'	1.75	0.84
24:AX:72:A:H3'	24:AX:73:A:H8	1.41	0.84
40:BR:98:LEU:HB2	40:BR:113:LEU:HB2	1.58	0.84
27:DA:389:G:N1	38:DP:71:VAL:HG12	1.92	0.84
54:D5:4:HIS:HB2	54:D5:5:PRO:HD3	1.59	0.84
1:CA:1137:C:H4'	1:CA:1138:G:N2	1.92	0.84
34:BH:43:VAL:HG21	34:BH:52:VAL:HG22	1.59	0.84
30:DD:218:ARG:HB3	30:DD:219:PRO:HD2	1.57	0.84
27:BA:1636:C:H2'	27:BA:1637:A:H8	1.40	0.84
1:AA:877:C:OP1	8:AH:88:LYS:HE2	1.76	0.84
13:AM:76:ALA:HA	13:AM:79:LYS:CG	2.07	0.84
42:DT:23:ARG:O	42:DT:25:GLY:N	2.10	0.84
27:BA:2020:A:OP1	43:BU:26:GLY:HA3	1.77	0.84
27:BA:1887:C:H2'	27:BA:1888:G:H5''	1.59	0.84
33:BG:118:ARG:H	33:BG:181:ARG:HH21	1.20	0.84
1:CA:1346:A:H61	1:CA:1374:A:H3'	1.42	0.84
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BE:37:ARG:O	31:BE:45:THR:HA	1.77	0.84
31:BE:132:HIS:CD2	31:BE:135:HIS:NE2	2.44	0.84
20:CT:26:ASN:O	20:CT:30:LYS:HB2	1.77	0.84
1:CA:539:A:H2'	1:CA:540:G:C8	2.12	0.84
13:AM:76:ALA:HA	13:AM:79:LYS:HG3	1.59	0.84
13:CM:3:ARG:HH21	13:CM:7:VAL:HG13	1.42	0.84
31:BE:141:ILE:O	31:BE:150:VAL:HG13	1.76	0.84
39:DQ:101:ARG:HD2	39:DQ:102:VAL:H	1.42	0.84
27:BA:1278:A:OP1	40:BR:36:THR:HG22	1.76	0.84
36:DN:65:LYS:O	36:DN:69:GLN:HB2	1.77	0.84
38:DP:144:GLU:H	38:DP:145:PRO:HD3	1.42	0.84
27:DA:2572:A:C5'	27:DA:2574:G:H4'	2.07	0.84
20:AT:26:ASN:ND2	20:AT:26:ASN:H	1.76	0.84
13:CM:13:LYS:HA	13:CM:44:ARG:NH1	1.93	0.84
42:DT:28:VAL:HG21	42:DT:46:GLU:HG3	1.59	0.84
20:CT:76:ALA:HA	20:CT:79:ARG:NH1	1.93	0.84
48:DZ:75:LEU:HD12	48:DZ:80:ARG:O	1.75	0.84
27:BA:71:A:H8	27:BA:71:A:H5'	1.43	0.84
42:DT:99:LEU:HB2	42:DT:101:PHE:CE1	2.11	0.84
27:DA:2808:U:O2'	27:DA:2809:A:H5'	1.76	0.84
27:BA:1179:C:C2'	27:BA:1180:C:H5''	2.08	0.84
1:CA:1125:U:O4	10:CJ:5:ARG:HD3	1.77	0.84
27:BA:1114:G:C3'	27:BA:1115:G:H5''	2.07	0.84
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.13	0.84
27:BA:28:A:H61	27:BA:512:G:H1'	1.43	0.84
4:CD:8:VAL:HG12	4:CD:21:LEU:HD13	1.57	0.84
30:DD:77:ALA:HB3	30:DD:117:VAL:HG22	1.57	0.84
55:D6:18:ARG:HD2	55:D6:43:CYS:SG	2.17	0.84
27:DA:2247:A:H2'	27:DA:2248:C:H6	1.42	0.84
42:DT:28:VAL:HG22	42:DT:47:GLY:N	1.93	0.84
34:BH:92:ILE:HG22	34:BH:93:GLY:H	1.42	0.84
1:CA:539:A:H2'	1:CA:540:G:H8	1.42	0.84
39:DQ:27:VAL:H	39:DQ:137:TYR:HD1	1.25	0.84
27:BA:271(F):C:H2'	27:BA:271(G):C:O4'	1.78	0.84
27:DA:2734:A:H62	27:DA:2770:G:H21	1.25	0.84
1:CA:735:C:H2'	1:CA:736:C:H6	1.39	0.84
1:CA:935:A:H2	1:CA:1383:C:H42	1.24	0.84
7:AG:24:THR:HA	7:AG:27:ILE:HD12	1.57	0.84
42:DT:28:VAL:O	42:DT:29:ARG:HB2	1.75	0.84
1:CA:603:U:H2'	1:CA:604:G:H8	1.42	0.84
1:CA:707:C:H2'	1:CA:708:C:H6	1.42	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:30:ARG:HH22	41:BS:62:LYS:HD2	1.40	0.84
48:BZ:138:VAL:HG12	48:BZ:139:ASP:H	1.43	0.84
27:BA:2443:C:H2'	27:BA:2444:G:H8	1.41	0.84
32:BF:123:LEU:HD12	32:BF:124:LEU:N	1.93	0.84
33:BG:102:PHE:HA	33:BG:105:LYS:NZ	1.93	0.84
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.12	0.84
44:DV:2:PHE:CB	44:DV:42:GLY:HA2	2.06	0.84
16:AP:21:VAL:HG13	16:AP:33:ILE:HB	1.56	0.84
1:AA:373:A:C8	1:AA:373:A:H5'	2.13	0.84
27:DA:154(A):C:N4	27:DA:172:C:H42	1.75	0.84
1:CA:975:A:H61	10:CJ:48:THR:HB	1.41	0.84
5:AE:76:ILE:HD11	5:AE:142:LEU:CD2	2.07	0.84
32:DF:57:VAL:CG1	32:DF:59:TYR:HD1	1.89	0.84
55:D6:30:THR:HB	55:D6:31:PRO:HD2	1.59	0.84
5:AE:20:GLN:HE22	5:AE:25:ARG:CZ	1.90	0.84
38:BP:47:ASP:HB3	38:BP:48:PRO:HA	1.58	0.84
44:BV:62:LEU:H	44:BV:62:LEU:HD22	1.43	0.84
8:AH:20:TYR:HA	8:AH:65:TYR:HE2	1.43	0.84
27:DA:1188:U:H4'	44:DV:79:VAL:HG22	1.60	0.84
27:DA:2018:G:H21	43:DU:34:LYS:NZ	1.75	0.84
27:DA:704:G:H2'	27:DA:726:G:N2	1.92	0.84
1:CA:199:G:HO2'	1:CA:200:G:H8	1.25	0.84
15:AO:74:ASP:OD2	15:AO:77:ARG:HG2	1.76	0.84
27:DA:740:U:H5'	27:DA:740:U:C6	2.10	0.84
8:CH:68:ARG:HG2	8:CH:68:ARG:HH11	1.41	0.84
32:BF:160:ASN:OD1	32:BF:163:VAL:HG23	1.78	0.84
12:CL:43:LYS:HG2	12:CL:44:LYS:N	1.93	0.84
44:BV:35:LEU:HB2	44:BV:57:VAL:HG12	1.57	0.84
30:BD:146:GLU:HG2	30:BD:152:GLY:O	1.77	0.84
2:CB:178:ARG:HH22	8:CH:68:ARG:HH22	1.21	0.84
27:BA:1114:G:H3'	27:BA:1115:G:H5''	1.57	0.84
27:BA:648:G:H2'	27:BA:649:G:H8	1.43	0.84
15:AO:6:GLU:O	15:AO:10:LYS:HB3	1.77	0.84
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.78	0.84
43:BU:92:ARG:O	43:BU:94:ASN:N	2.10	0.84
27:DA:919:G:H5'	28:DB:81:G:H1'	1.60	0.84
35:BI:82:ARG:HB2	35:BI:82:ARG:HH11	1.40	0.84
1:CA:507:C:H2'	1:CA:508:C:H5	1.41	0.83
27:DA:35:G:H1'	27:DA:454:A:C1'	2.08	0.83
27:DA:1244:G:H4'	38:DP:11:GLY:HA2	1.60	0.83
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.07	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:916:G:H2'	1:CA:917:G:C8	2.13	0.83
27:DA:2482:G:H2'	27:DA:2483:C:C6	2.13	0.83
1:CA:685:G:C2	1:CA:686:U:H5	1.96	0.83
27:BA:2312:U:OP2	33:BG:74:LYS:HE2	1.76	0.83
27:DA:484:C:H2'	27:DA:485:C:H6	1.42	0.83
27:BA:34:C:O2'	27:BA:35:G:H5'	1.78	0.83
38:BP:16:ARG:NH1	38:BP:18:ARG:HG2	1.91	0.83
27:DA:434:U:H4'	27:DA:435:C:OP1	1.77	0.83
27:DA:1188:U:H4'	44:DV:79:VAL:CG2	2.08	0.83
20:CT:72:LEU:HD23	20:CT:73:HIS:N	1.92	0.83
27:BA:2571:C:C5'	27:BA:2572:A:H5''	2.07	0.83
6:CF:37:VAL:HA	6:CF:65:VAL:HG12	1.59	0.83
35:DI:5:LEU:HD12	35:DI:5:LEU:H	1.43	0.83
27:DA:1707:G:H2'	27:DA:1708:C:H6	1.44	0.83
20:AT:50:GLU:HG3	20:AT:51:GLU:N	1.91	0.83
29:BC:49:ILE:HD12	29:BC:49:ILE:H	1.43	0.83
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.42	0.83
27:DA:865:C:H4'	27:DA:866:A:OP1	1.78	0.83
55:D6:15:GLU:OE2	55:D6:43:CYS:SG	2.36	0.83
30:BD:182:LEU:O	30:BD:271:ILE:HG12	1.78	0.83
27:BA:2126:A:H4'	27:BA:2127:G:O5'	1.78	0.83
48:BZ:162:LEU:HD21	48:BZ:166:PRO:HG3	1.60	0.83
55:B6:10:LEU:HD12	57:B8:34:TRP:CD1	2.13	0.83
5:CE:10:MET:HA	5:CE:32:VAL:HG13	1.58	0.83
27:BA:272(B):G:H1	27:BA:366:C:H42	1.23	0.83
33:BG:128:ARG:C	33:BG:130:ASN:H	1.77	0.83
27:BA:1332:G:N2	27:BA:1609:A:O2'	2.11	0.83
38:BP:50:ARG:HB3	57:B8:59:LYS:HD3	1.59	0.83
31:DE:76:ARG:HG2	31:DE:195:LEU:HD13	1.60	0.83
55:B6:20:ASN:ND2	55:B6:21:TYR:H	1.76	0.83
34:BH:23:ARG:HB3	34:BH:34:GLU:OE1	1.78	0.83
3:CC:155:GLY:O	3:CC:156:ARG:HB2	1.78	0.83
27:BA:2123:G:H2'	27:BA:2124:G:C8	2.12	0.83
8:AH:84:ARG:HH11	8:AH:84:ARG:CG	1.91	0.83
38:DP:16:ARG:HD3	38:DP:18:ARG:H	1.41	0.83
27:DA:2199:A:H3'	27:DA:2200:C:H6	1.42	0.83
1:AA:203:U:H1'	1:AA:216:G:C6	2.13	0.83
3:CC:14:ILE:HG12	3:CC:15:THR:H	1.43	0.83
11:CK:79:SER:HB2	11:CK:106:LYS:HD2	1.58	0.83
16:AP:56:ALA:O	16:AP:60:LEU:HG	1.77	0.83
25:CY:35:G:H2'	25:CY:36:A:C8	2.13	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2472:G:H5'	27:BA:2473:U:H5''	1.61	0.83
38:BP:48:PRO:HG2	38:BP:49:ARG:H	1.42	0.83
43:DU:97:ASP:O	43:DU:100:VAL:HB	1.77	0.83
30:DD:27:THR:HG21	30:DD:83:GLU:HG2	1.60	0.83
1:AA:1321:C:H5'	1:AA:1322:C:C5'	2.09	0.83
27:BA:2841:C:H2'	27:BA:2842:G:C8	2.14	0.83
33:DG:114:ILE:HG22	33:DG:116:ASP:H	1.42	0.83
12:AL:15:VAL:HG23	12:AL:16:ARG:N	1.93	0.83
11:CK:18:ARG:HB3	11:CK:33:THR:OG1	1.79	0.83
1:CA:1385:G:O2'	1:CA:1386:G:H5'	1.78	0.83
1:CA:868:C:H2'	1:CA:869:G:O4'	1.77	0.83
15:AO:3:ILE:HG22	15:AO:38:ARG:NH1	1.92	0.83
57:D8:4:MET:O	57:D8:62:LEU:HD11	1.77	0.83
44:DV:31:ALA:H	44:DV:61:VAL:HG13	1.44	0.83
47:DY:28:LYS:HB3	47:DY:39:VAL:N	1.94	0.83
38:DP:7:ARG:O	38:DP:10:PRO:HD2	1.78	0.83
29:DC:36:LYS:HD3	29:DC:37:PHE:H	1.42	0.83
1:AA:495:A:H1'	1:AA:496:A:H5'	1.60	0.83
48:DZ:134:GLU:O	48:DZ:135:PHE:HB3	1.78	0.83
27:DA:1793:C:H2'	27:DA:1794:U:H6	1.44	0.83
42:BT:91:ARG:CB	42:BT:116:ALA:HA	2.08	0.83
27:DA:858:U:O2	27:DA:2268:A:H2'	1.79	0.83
30:BD:101:GLU:OE1	30:BD:103:ARG:HD3	1.79	0.83
30:BD:43:ARG:NH1	30:BD:44:ASN:ND2	2.27	0.83
1:CA:754:C:O2	1:CA:754:C:H2'	1.77	0.83
27:BA:2090:G:H21	50:B1:45:ASN:HD21	1.21	0.83
27:DA:322:A:OP2	32:DF:169:ASN:HB2	1.79	0.83
2:AB:114:ARG:NH1	2:AB:118:LEU:HD21	1.94	0.83
27:BA:56:A:O2'	27:BA:57:C:H5'	1.78	0.83
2:CB:172:ILE:HD12	2:CB:172:ILE:N	1.92	0.83
27:DA:389:G:H1	38:DP:71:VAL:HG12	1.42	0.83
32:DF:2:LYS:O	32:DF:25:PRO:HD2	1.79	0.83
38:DP:99:LEU:HA	38:DP:102:ARG:HH12	1.44	0.83
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.58	0.83
34:BH:13:LYS:HD3	34:BH:14:GLY:N	1.92	0.83
40:DR:66:VAL:HG12	40:DR:70:LEU:HD12	1.61	0.83
19:AS:13:ASP:HA	19:AS:16:LEU:HD22	1.60	0.83
54:B5:41:PRO:HG2	54:B5:44:THR:HG21	1.59	0.83
27:DA:1713:U:O2'	27:DA:1714:G:H5'	1.78	0.83
1:AA:509:A:H5'	4:AD:54:TYR:HD2	1.41	0.83
27:DA:1973:G:H2'	27:DA:1974:C:C6	2.13	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:172:ILE:CD1	2:CB:172:ILE:H	1.83	0.83
27:DA:1158:C:O2'	27:DA:1159:U:H5''	1.77	0.83
27:DA:2350:C:H2'	27:DA:2351:G:O4'	1.79	0.83
27:DA:2351:G:H2'	27:DA:2365:G:H22	1.44	0.83
27:DA:1673:U:H2'	27:DA:1674:G:H5'	1.61	0.83
18:CR:82:THR:HG22	18:CR:83:GLU:N	1.93	0.83
27:DA:2732:G:H3'	27:DA:2733:A:C5'	2.08	0.83
35:BI:77:LEU:HB3	35:BI:140:LEU:HD13	1.60	0.83
7:CG:49:ILE:HG23	7:CG:53:LYS:HD2	1.60	0.83
12:AL:25:LYS:HB2	12:AL:30:ARG:HH12	1.44	0.83
27:DA:17:G:H4'	43:DU:25:TRP:CH2	2.14	0.83
50:B1:19:GLN:HB3	50:B1:35:THR:HG23	1.61	0.83
1:AA:681:C:H2'	1:AA:682:G:C8	2.13	0.83
36:BN:2:LYS:HZ1	43:BU:95:LEU:HG	1.42	0.83
27:DA:93:G:H2'	27:DA:94:C:O4'	1.76	0.83
38:DP:59:LEU:HA	38:DP:61:ARG:NH1	1.92	0.83
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB2	2.09	0.83
42:DT:83:ILE:HG13	42:DT:84:GLN:H	1.42	0.83
36:BN:15:LEU:HD12	36:BN:136:GLU:HG2	1.59	0.83
1:CA:99:U:H2'	1:CA:100:C:C6	2.13	0.83
27:BA:1411:C:H2'	27:BA:1412:A:H8	1.41	0.83
27:BA:2315:G:H21	33:BG:128:ARG:NH1	1.76	0.83
37:BO:13:ASN:HD21	37:BO:97:ARG:N	1.77	0.83
27:BA:380:U:H3	27:BA:394:A:H61	1.27	0.83
27:BA:1365:A:H5''	50:B1:41:ARG:HH22	1.43	0.83
50:D1:67:ILE:N	50:D1:68:PRO:HD2	1.93	0.83
29:DC:50:ASP:HB2	29:DC:54:SER:O	1.78	0.83
32:DF:167:ALA:HB1	32:DF:173:VAL:HG11	1.59	0.83
27:BA:28:A:N6	27:BA:512:G:H1'	1.94	0.82
27:DA:1862:G:H1	27:DA:1880:C:H42	1.26	0.82
33:DG:28:VAL:C	33:DG:30:GLU:H	1.81	0.82
46:DX:57:LEU:HD21	46:DX:78:LYS:HD3	1.61	0.82
1:CA:142:G:H2'	1:CA:143:A:C8	2.13	0.82
10:AJ:51:ARG:HG2	14:AN:45:ARG:HH12	1.42	0.82
27:BA:828:U:H4'	27:BA:831:G:N1	1.94	0.82
1:CA:1504:G:H4'	1:CA:1505:G:H5'	1.60	0.82
27:DA:333:G:H2'	27:DA:334:C:C6	2.14	0.82
32:DF:132:VAL:HG22	32:DF:133:ASN:H	1.43	0.82
1:AA:1182:G:H4'	1:AA:1183:A:O5'	1.79	0.82
38:BP:23:PRO:HB2	38:BP:33:ARG:CD	2.08	0.82
43:DU:92:ARG:HD2	44:DV:11:GLN:CD	1.99	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:61:VAL:HA	44:DV:94:LEU:HD23	1.61	0.82
47:DY:28:LYS:HB2	47:DY:38:ILE:N	1.93	0.82
49:D0:23:VAL:HG13	49:D0:38:VAL:HG22	1.59	0.82
27:DA:2784:C:H1'	31:DE:37:ARG:NH1	1.94	0.82
2:CB:163:PHE:HA	2:CB:185:ILE:O	1.79	0.82
58:B9:13:LYS:HD3	58:B9:28:GLU:HG2	1.61	0.82
27:DA:1461:G:H2'	27:DA:1462:C:C6	2.13	0.82
3:AC:52:LEU:HD23	3:AC:52:LEU:N	1.94	0.82
1:CA:817:C:H1'	1:CA:819:A:H5'	1.59	0.82
1:CA:979:C:C3'	1:CA:980:C:H5''	2.09	0.82
1:CA:458:C:H2'	1:CA:460:G:H8	1.41	0.82
42:BT:28:VAL:HG22	42:BT:46:GLU:CA	2.09	0.82
30:BD:243:GLY:O	30:BD:244:ARG:HB3	1.77	0.82
27:DA:865:C:H2'	27:DA:865:C:O2	1.79	0.82
31:DE:73:GLU:HG3	31:DE:74:PRO:HD2	1.60	0.82
43:DU:31:SER:HB3	43:DU:34:LYS:HB2	1.59	0.82
41:BS:85:VAL:N	41:BS:106:ARG:HB2	1.93	0.82
16:AP:82:GLN:HE21	16:AP:83:GLU:N	1.76	0.82
1:CA:132:C:O2	1:CA:230:G:N2	2.13	0.82
39:DQ:44:ALA:HB3	39:DQ:45:GLN:NE2	1.94	0.82
27:BA:2283:C:C2'	27:BA:2284:C:H5'	2.07	0.82
27:DA:956:G:N2	27:DA:959:A:H3'	1.94	0.82
27:DA:1503:U:H2'	27:DA:1504:C:H6	1.44	0.82
1:CA:578:C:H42	1:CA:763:G:H1	1.25	0.82
28:BB:7:G:H3'	28:BB:8:U:H5''	1.61	0.82
27:BA:1860:G:H1	27:BA:1882:C:H42	1.26	0.82
27:DA:2801(A):A:H4'	27:DA:2802:G:H5'	1.61	0.82
1:AA:1085:U:H4'	1:AA:1086:U:OP2	1.79	0.82
27:BA:639:U:H2'	27:BA:640:C:C6	2.15	0.82
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.14	0.82
9:AI:46:ALA:O	9:AI:47:LEU:HD12	1.79	0.82
56:B7:8:ASN:ND2	56:B7:11:LYS:H	1.77	0.82
34:BH:148:ILE:O	34:BH:151:ILE:HG12	1.78	0.82
11:CK:84:VAL:HG23	11:CK:110:ASP:OD1	1.78	0.82
27:DA:482:A:N6	27:DA:506:G:H2'	1.95	0.82
15:CO:12:ILE:O	15:CO:14:GLU:N	2.12	0.82
27:DA:271(S):G:H2'	27:DA:271(T):C:C5'	2.08	0.82
1:CA:1250:A:H4'	9:CI:68:GLY:N	1.94	0.82
41:DS:97:ARG:HH12	41:DS:99:LYS:HG2	1.45	0.82
11:AK:32:ILE:CD1	11:AK:72:ALA:HB2	2.10	0.82
27:DA:310:A:OP1	47:DY:17:SER:O	1.97	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:167:PRO:HG2	2:AB:192:SER:OG	1.79	0.82
1:CA:280:C:O2	17:CQ:38:ARG:HG3	1.80	0.82
33:DG:101:ILE:HD13	33:DG:102:PHE:N	1.94	0.82
37:BO:93:PRO:HG3	37:BO:114:ILE:HD11	1.61	0.82
27:BA:572:A:C8	27:BA:572:A:H5'	2.15	0.82
40:DR:4:LEU:HD21	40:DR:8:ARG:NH2	1.94	0.82
27:BA:897:C:O2	27:BA:897:C:H2'	1.79	0.82
27:BA:637:A:H4'	27:BA:638:G:O5'	1.78	0.82
55:B6:41:PRO:HD3	55:B6:46:HIS:CA	2.10	0.82
1:CA:1163:C:H2'	1:CA:1164:G:H8	1.45	0.82
27:BA:2197:U:O2'	27:BA:2198:A:H2'	1.80	0.82
1:AA:443:C:H2'	1:AA:444:C:C6	2.14	0.82
8:CH:104:ARG:HB3	8:CH:108:GLY:H	1.45	0.82
27:BA:906:G:H5'	39:BQ:26:TYR:OH	1.80	0.82
52:D3:59:VAL:HG12	52:D3:60:GLU:N	1.94	0.82
32:BF:41:LEU:HD11	32:BF:184:TYR:HE1	1.43	0.82
6:CF:89:MET:SD	18:CR:76:LEU:HD21	2.19	0.82
38:BP:23:PRO:HD2	38:BP:33:ARG:HE	1.42	0.82
27:BA:2728:U:O2'	27:BA:2729:G:H5'	1.79	0.82
30:BD:89:SER:HB2	30:BD:201:HIS:HD2	1.41	0.82
1:AA:580:U:H2'	1:AA:581:G:O4'	1.78	0.82
16:AP:82:GLN:NE2	16:AP:83:GLU:H	1.76	0.82
27:DA:2475:C:N4	27:DA:2529:G:H22	1.74	0.82
1:CA:1258:G:H2'	1:CA:1259:C:H6	1.45	0.82
27:DA:2126:A:C6	27:DA:2163:C:H4'	2.14	0.82
38:DP:18:ARG:HB3	38:DP:18:ARG:NH1	1.95	0.82
27:DA:2815:C:H2'	27:DA:2816:C:C6	2.14	0.82
8:CH:111:ILE:HG22	8:CH:112:LEU:H	1.44	0.82
27:BA:594:U:H2'	27:BA:595:C:C6	2.15	0.82
27:BA:1598:C:H5'	46:BX:36:LYS:HB2	1.61	0.82
27:BA:1607:C:H4'	27:BA:1608:A:O5'	1.80	0.82
27:DA:628:G:H2'	27:DA:629:G:C8	2.14	0.82
27:DA:857:C:H5'	49:D0:77:ARG:HH12	1.45	0.82
55:B6:9:LEU:O	55:B6:9:LEU:HD23	1.79	0.82
1:AA:495:A:H4'	1:AA:496:A:H5''	1.62	0.82
27:BA:154(A):C:H41	27:BA:172:C:H42	1.25	0.82
1:CA:458:C:H2'	1:CA:460:G:C8	2.14	0.82
30:DD:118:VAL:CG2	30:DD:119:ALA:H	1.91	0.82
30:BD:25:THR:O	30:BD:27:THR:HG22	1.79	0.82
11:CK:32:ILE:CD1	11:CK:41:THR:HG22	2.07	0.82
2:AB:151:GLY:O	2:AB:152:PHE:HB2	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:4:ILE:HG12	10:AJ:100:THR:CG2	2.10	0.82
27:BA:2391:G:OP1	57:B8:32:LEU:HD12	1.79	0.82
5:CE:91:LEU:HG	5:CE:120:THR:CG2	2.09	0.82
27:DA:512:G:OP1	27:DA:1235:G:H5'	1.80	0.82
27:BA:402:A:O2'	27:BA:403:U:H5'	1.78	0.82
27:DA:762:U:H4'	27:DA:763:G:O5'	1.78	0.82
1:AA:979:C:H3'	1:AA:980:C:H5''	1.61	0.82
27:DA:1791:A:N6	27:DA:1828:G:O2'	2.12	0.82
33:BG:101:ILE:HG12	33:BG:105:LYS:HE3	1.59	0.82
13:CM:69:GLU:OE1	13:CM:69:GLU:HA	1.80	0.82
29:BC:42:GLU:H	29:BC:213:TYR:H	1.27	0.82
27:DA:1493:C:H4'	27:DA:1494:A:OP1	1.78	0.82
30:DD:24:ILE:CG1	30:DD:25:THR:H	1.84	0.82
27:DA:2052:G:H4'	31:DE:143:ASN:O	1.80	0.82
38:DP:23:PRO:HB2	38:DP:33:ARG:HD2	1.61	0.82
41:BS:86:ALA:N	41:BS:106:ARG:HG3	1.94	0.82
14:CN:24:CYS:SG	14:CN:40:CYS:HB3	2.20	0.82
30:BD:68:LYS:NZ	30:BD:70:TRP:HE1	1.78	0.82
9:CI:24:GLY:HA2	9:CI:59:PHE:O	1.80	0.82
27:BA:96:G:H4'	51:B2:48:HIS:CD2	2.15	0.82
13:AM:90:LEU:O	13:AM:92:HIS:N	2.12	0.82
47:BY:66:PRO:O	47:BY:67:LEU:HB3	1.80	0.82
27:BA:992:C:O2'	27:BA:993:G:H5'	1.78	0.82
1:AA:250:A:H4'	1:AA:251:G:O5'	1.80	0.82
55:D6:32:ASN:O	55:D6:33:LYS:HB2	1.79	0.81
27:DA:628:G:H2'	27:DA:629:G:H8	1.43	0.81
27:DA:1668:A:H5'	27:DA:1669:A:N7	1.94	0.81
1:CA:664:G:H22	1:CA:741:G:H1	1.24	0.81
44:DV:66:ARG:NH2	44:DV:88:ARG:HD3	1.94	0.81
8:AH:132:GLU:HG2	8:AH:134:ILE:HD13	1.60	0.81
1:CA:918:A:H2'	1:CA:919:A:H8	1.44	0.81
27:BA:1509(A):A:H2'	27:BA:1509(B):A:H8	1.42	0.81
36:DN:28:THR:HG23	36:DN:29:LYS:H	1.44	0.81
27:DA:1019:U:H3	27:DA:1142(A):A:H62	1.24	0.81
30:BD:24:ILE:HG13	30:BD:25:THR:H	1.43	0.81
27:DA:1885:A:H2'	27:DA:1886:C:O4'	1.78	0.81
50:B1:37:ILE:HG22	50:B1:38:SER:N	1.94	0.81
32:DF:32:LEU:HD23	32:DF:32:LEU:O	1.80	0.81
35:BI:123:LEU:HD23	35:BI:142:VAL:HG12	1.62	0.81
55:B6:11:LEU:HD11	55:B6:51:GLU:HG2	1.61	0.81
1:AA:681:C:H2'	1:AA:682:G:H8	1.43	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D3:7:LYS:O	52:D3:54:VAL:HG13	1.78	0.81
42:BT:54:ARG:HA	42:BT:59:THR:HB	1.60	0.81
17:CQ:26:GLN:HB3	17:CQ:37:LYS:HG2	1.62	0.81
1:CA:1305:G:H22	1:CA:1331:G:C2'	1.92	0.81
43:BU:92:ARG:NE	44:BV:11:GLN:HB2	1.94	0.81
27:DA:438:G:H2'	27:DA:440:G:C8	2.14	0.81
27:DA:1884:A:C2'	27:DA:1885:A:H5''	2.11	0.81
38:DP:123:LEU:HD12	38:DP:125:VAL:HG12	1.63	0.81
36:BN:67:LEU:O	36:BN:68:GLU:HG2	1.79	0.81
27:BA:1603:A:H5'	27:BA:1603:A:H8	1.46	0.81
41:BS:46:VAL:HG12	41:BS:47:THR:N	1.95	0.81
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.61	0.81
27:DA:525:U:O2'	27:DA:526:A:H5'	1.78	0.81
39:DQ:32:TYR:HE2	39:DQ:133:ARG:HG2	1.45	0.81
1:CA:165:C:H2'	1:CA:166:G:H8	1.43	0.81
56:D7:8:ASN:HD21	56:D7:11:LYS:H	1.28	0.81
31:DE:111:ARG:HD2	31:DE:160:TYR:CE1	2.14	0.81
1:AA:1380:U:H4'	1:AA:1381:U:O5'	1.81	0.81
27:DA:2562:U:O2	27:DA:2562:U:H2'	1.78	0.81
15:AO:62:GLN:HA	15:AO:65:ARG:HH11	1.45	0.81
29:DC:212:VAL:O	29:DC:218:MET:HA	1.78	0.81
30:DD:112:GLN:H	30:DD:115:GLN:NE2	1.78	0.81
1:CA:148:G:H1	1:CA:174:C:H42	1.28	0.81
1:CA:284:G:H2'	1:CA:285:G:H8	1.44	0.81
1:AA:598:U:H2'	1:AA:599:C:H6	1.43	0.81
1:AA:627:G:H2'	1:AA:628:G:H8	1.43	0.81
24:AX:4:G:H2'	24:AX:5:G:C8	2.15	0.81
2:AB:14:GLY:O	2:AB:15:VAL:HG13	1.80	0.81
34:DH:159:GLU:HG3	34:DH:160:LYS:HG3	1.59	0.81
33:BG:11:TYR:HA	33:BG:15:VAL:HB	1.60	0.81
27:DA:1983:C:H4'	27:DA:2606:C:H4'	1.63	0.81
43:BU:27:LEU:N	43:BU:27:LEU:HD23	1.96	0.81
27:DA:644:A:H4'	27:DA:645:C:C5	2.15	0.81
27:DA:1794:U:H2'	27:DA:1795:C:C6	2.15	0.81
29:BC:41:VAL:O	29:BC:178:ALA:HB3	1.80	0.81
27:DA:941:A:H4'	38:DP:35:HIS:CE1	2.14	0.81
2:CB:187:LEU:HD13	2:CB:187:LEU:O	1.81	0.81
15:AO:82:ILE:HD11	15:AO:87:ILE:H	1.44	0.81
27:BA:1484:G:C3'	27:BA:1485:G:H5''	2.09	0.81
23:AW:6:U:C3'	23:AW:7:A:H5''	2.09	0.81
27:BA:389:G:H1	38:BP:71:VAL:HG12	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:76:ILE:HD11	5:CE:142:LEU:HD11	1.60	0.81
36:DN:55:VAL:HG22	36:DN:126:PRO:HA	1.62	0.81
5:AE:101:ILE:N	5:AE:101:ILE:HD13	1.95	0.81
39:DQ:66:ILE:O	39:DQ:66:ILE:HG13	1.80	0.81
39:DQ:20:ALA:O	39:DQ:98:LYS:HB3	1.80	0.81
27:DA:1968:G:O2'	27:DA:1969:A:H5''	1.81	0.81
4:AD:8:VAL:O	4:AD:10:ARG:N	2.13	0.81
1:CA:17:U:H2'	1:CA:18:C:C6	2.16	0.81
27:DA:184:C:H2'	27:DA:185:U:C6	2.14	0.81
24:CX:51:C:H2'	24:CX:52:G:H8	1.44	0.81
27:DA:873:G:N2	27:DA:905:U:H1'	1.96	0.81
27:DA:917:A:H2'	27:DA:918:A:H8	1.46	0.81
28:DB:87:G:C3'	28:DB:88:C:H5''	2.11	0.81
36:BN:62:VAL:CG2	36:BN:66:LYS:HB2	2.11	0.81
30:BD:65:ILE:HG12	30:BD:104:TYR:O	1.80	0.81
27:DA:1485:G:H2'	27:DA:1486:A:C8	2.16	0.81
39:DQ:56:ARG:HA	39:DQ:56:ARG:CZ	2.11	0.81
27:DA:1278:A:H5''	40:DR:36:THR:HG22	1.62	0.81
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	1.80	0.81
39:BQ:63:LYS:HZ3	48:BZ:174:VAL:HG11	1.44	0.81
27:DA:1512:U:H2'	27:DA:1513:C:H6	1.44	0.81
36:DN:67:LEU:O	36:DN:68:GLU:HB2	1.77	0.81
35:BI:3:VAL:HA	35:BI:39:ALA:HB2	1.61	0.81
27:BA:1564:C:O2'	27:BA:1565:C:H5'	1.81	0.81
48:DZ:6:ALA:HB3	48:DZ:58:LEU:HB3	1.63	0.81
39:DQ:34:LEU:HD13	39:DQ:118:LEU:HD22	1.62	0.81
1:CA:980:C:H1'	14:CN:19:ARG:HG2	1.63	0.81
27:BA:2476:A:C2'	27:BA:2477:C:H5''	2.11	0.81
27:BA:754:C:H2'	27:BA:755:C:C6	2.15	0.81
38:BP:125:VAL:O	38:BP:145:PRO:HD2	1.80	0.81
57:B8:33:ASN:ND2	57:B8:33:ASN:N	2.29	0.81
40:DR:18:LEU:HD11	40:DR:22:ARG:CZ	2.11	0.81
57:B8:49:VAL:HG23	57:B8:53:PRO:HB3	1.63	0.81
27:DA:1485:G:H2'	27:DA:1486:A:H8	1.45	0.81
1:CA:52:G:H2'	1:CA:53:A:H8	1.46	0.81
27:BA:2138:C:H2'	27:BA:2139:C:C6	2.15	0.81
27:DA:221:A:H4'	27:DA:222:A:O5'	1.81	0.81
43:BU:26:GLY:C	43:BU:28:ARG:H	1.83	0.81
27:DA:2199:A:H5''	27:DA:2200:C:H5	1.46	0.81
2:CB:11:LEU:HB3	2:CB:213:LEU:HD11	1.59	0.81
27:DA:227:A:H61	27:DA:410:G:H21	1.29	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2443:C:H2'	27:DA:2444:G:H8	1.43	0.81
27:DA:587:C:H3'	38:DP:33:ARG:NH2	1.95	0.81
47:BY:31:LEU:CB	47:BY:32:PRO:HA	2.09	0.81
12:CL:22:PRO:O	12:CL:24:LEU:HD13	1.80	0.81
12:AL:38:ARG:HH12	12:AL:54:LYS:HZ2	1.28	0.81
33:DG:112:PRO:O	33:DG:113:ARG:NH1	2.13	0.81
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.81	0.81
39:BQ:26:TYR:CD1	39:BQ:28:ALA:HB2	2.16	0.81
27:BA:2462:U:H3	27:BA:2488:A:H61	1.24	0.81
27:DA:1221(A):C:H42	27:DA:1228:G:H1	1.29	0.81
27:DA:1747(A):G:C2'	27:DA:1748:G:H5''	2.11	0.81
1:CA:1398:A:H5''	1:CA:1398:A:C8	2.15	0.81
27:BA:2290:G:H5'	27:BA:2290:G:H8	1.43	0.81
1:AA:487:A:H2'	1:AA:488:C:O4'	1.81	0.81
1:CA:939:G:H5''	7:CG:102:ARG:HH22	1.45	0.81
12:AL:20:LYS:O	12:AL:21:VAL:HG23	1.81	0.81
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.15	0.81
32:DF:141:ALA:O	32:DF:144:LYS:HB3	1.81	0.81
3:AC:173:VAL:O	3:AC:175:LEU:HD12	1.78	0.81
27:DA:1826:G:H2'	27:DA:1827:C:H6	1.42	0.81
42:BT:28:VAL:HG22	42:BT:47:GLY:N	1.96	0.81
30:DD:133:LEU:CD1	30:DD:175:LEU:HD11	2.10	0.81
56:B7:8:ASN:HD21	56:B7:11:LYS:H	1.29	0.81
27:BA:1782:C:H1'	27:BA:2609:U:H5''	1.61	0.81
50:D1:52:ARG:HG3	50:D1:53:VAL:N	1.96	0.81
33:DG:105:LYS:CE	53:D4:52:SER:HB3	2.09	0.81
1:CA:924:C:H2'	1:CA:925:G:C8	2.16	0.81
6:CF:91:VAL:HG11	18:CR:72:ARG:HH12	1.44	0.81
33:BG:6:ALA:HB3	33:BG:104:GLU:OE1	1.80	0.81
1:AA:1116:C:H2'	1:AA:1117:G:H5'	1.63	0.81
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.15	0.81
51:D2:2:LYS:O	51:D2:6:VAL:HG23	1.80	0.80
38:DP:112:LEU:H	38:DP:128:HIS:CD2	1.99	0.80
27:DA:754:C:H2'	27:DA:755:C:C6	2.15	0.80
1:CA:373:A:H2'	1:CA:374:A:C8	2.16	0.80
19:AS:31:ILE:HG23	19:AS:49:ILE:HG23	1.62	0.80
27:BA:90:U:H2'	27:BA:90:U:O2	1.79	0.80
27:DA:2152:G:H2'	27:DA:2153:G:H8	1.43	0.80
27:DA:1473:G:C2'	27:DA:1474:C:H5'	2.11	0.80
52:B3:59:VAL:HG12	52:B3:60:GLU:N	1.96	0.80
42:DT:57:PHE:CD2	42:DT:58:ASN:N	2.47	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1123:A:H4'	10:AJ:36:GLY:HA3	1.63	0.80
32:DF:2:LYS:HD3	32:DF:2:LYS:N	1.96	0.80
1:AA:322:C:H2'	1:AA:323:U:H6	1.44	0.80
30:BD:33:LEU:HD12	30:BD:33:LEU:H	1.45	0.80
2:AB:44:LEU:HD12	2:AB:44:LEU:H	1.45	0.80
27:DA:2752:C:H2'	27:DA:2753:A:H8	1.45	0.80
1:CA:742:G:C5'	15:CO:58:MET:HE1	2.11	0.80
36:DN:16:ILE:O	36:DN:54:VAL:HA	1.80	0.80
1:AA:37:U:O2'	1:AA:500:G:H4'	1.81	0.80
27:BA:1359:A:H62	27:BA:1372:U:H3	1.28	0.80
27:DA:660:G:H2'	27:DA:661:C:O4'	1.80	0.80
30:DD:65:ILE:H	30:DD:65:ILE:HD13	1.46	0.80
57:B8:52:LYS:N	57:B8:53:PRO:HD2	1.96	0.80
2:AB:178:ARG:HH12	2:AB:196:LEU:CB	1.94	0.80
12:AL:15:VAL:HG23	12:AL:16:ARG:H	1.46	0.80
2:AB:49:GLU:O	2:AB:52:GLU:HB3	1.81	0.80
40:BR:41:ALA:O	40:BR:44:LEU:N	2.15	0.80
27:BA:2056:G:N2	54:B5:4:HIS:O	2.13	0.80
31:DE:51:PHE:O	31:DE:74:PRO:HB2	1.80	0.80
27:DA:581:C:H2'	27:DA:582:G:H8	1.46	0.80
27:BA:1019:U:HO2'	27:BA:1021:A:H2	0.83	0.80
46:DX:25:LYS:NZ	46:DX:80:ILE:HD11	1.97	0.80
31:DE:93:VAL:C	31:DE:95:ILE:H	1.85	0.80
35:DI:133:HIS:CB	35:DI:134:PRO:HD3	2.11	0.80
1:CA:677:U:H3	1:CA:714:G:H22	1.29	0.80
1:CA:680:C:H2'	1:CA:681:C:C6	2.15	0.80
1:CA:194:C:H2'	1:CA:195:A:H5''	1.61	0.80
39:DQ:45:GLN:HE21	39:DQ:45:GLN:N	1.78	0.80
29:DC:83:ILE:HA	29:DC:94:VAL:HG21	1.61	0.80
15:AO:36:ILE:HG23	15:AO:56:LEU:HD11	1.64	0.80
30:DD:168:ARG:H	30:DD:168:ARG:HD3	1.44	0.80
37:BO:63:VAL:HG12	37:BO:106:LEU:HD11	1.61	0.80
27:DA:665:C:H2'	27:DA:666:G:H8	1.44	0.80
29:DC:51:PRO:HG3	29:DC:204:ALA:HB2	1.62	0.80
32:BF:202:PHE:O	32:BF:205:ARG:HB3	1.82	0.80
30:BD:165:ILE:HA	30:BD:175:LEU:HD23	1.62	0.80
27:DA:84:A:H5''	47:DY:9:LYS:HZ1	1.47	0.80
27:DA:627:A:H62	38:DP:84:ASN:ND2	1.79	0.80
20:AT:71:THR:HG22	20:AT:72:LEU:N	1.95	0.80
27:BA:1021:A:C8	27:BA:1021:A:H3'	2.17	0.80
33:DG:63:ILE:HA	33:DG:143:GLU:HG3	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DX:12:VAL:CG1	46:DX:27:THR:HG23	2.10	0.80
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	1.62	0.80
30:BD:270:ILE:O	30:BD:271:ILE:HG23	1.81	0.80
1:AA:815:A:H5''	1:AA:817:C:H41	1.47	0.80
16:AP:13:HIS:C	16:AP:15:PRO:HD3	2.02	0.80
27:BA:1919:A:H5''	27:BA:1920:C:H5	1.47	0.80
36:DN:89:LYS:HB3	36:DN:89:LYS:HZ2	1.44	0.80
2:CB:80:ILE:HD11	2:CB:212:GLN:HA	1.64	0.80
1:CA:414:A:H2'	1:CA:415:A:O4'	1.80	0.80
50:D1:69:LYS:HE2	50:D1:72:GLU:OE2	1.81	0.80
25:CY:37:U:H3'	25:CY:38:U:H5''	1.63	0.80
32:BF:20:LEU:HD13	32:BF:203:GLN:HE22	1.45	0.80
27:DA:943:U:OP1	38:DP:38:GLN:HB3	1.82	0.80
4:CD:150:GLU:H	4:CD:150:GLU:CD	1.83	0.80
1:AA:405:U:O2	1:AA:498:U:H2'	1.81	0.80
5:AE:20:GLN:OE1	5:AE:25:ARG:HD2	1.82	0.80
2:CB:233:SER:OG	2:CB:234:PRO:HD2	1.82	0.80
1:CA:477:A:O2'	1:CA:479:C:H5'	1.80	0.80
28:BB:40:U:H3	28:BB:43:C:C5'	1.95	0.80
33:BG:177:GLY:O	33:BG:179:PRO:HD3	1.81	0.80
27:BA:335:C:H5''	47:BY:73:ARG:NH2	1.97	0.80
10:AJ:49:VAL:HG21	14:AN:41:ARG:HB2	1.63	0.80
30:BD:43:ARG:HH11	30:BD:44:ASN:CG	1.85	0.80
41:BS:85:VAL:HG23	41:BS:106:ARG:CB	2.11	0.80
45:BW:90:ARG:CG	45:BW:90:ARG:HH11	1.93	0.80
31:DE:188:VAL:HG22	31:DE:189:PRO:HD2	1.63	0.80
16:CP:71:ARG:HA	16:CP:74:LEU:HD12	1.64	0.80
27:DA:1784:A:H4'	27:DA:1785:A:O5'	1.80	0.80
14:CN:41:ARG:HG3	14:CN:42:ILE:N	1.97	0.80
3:CC:53:ALA:HB2	3:CC:115:LEU:CD2	2.11	0.80
32:DF:157:VAL:HB	32:DF:194:MET:HB3	1.63	0.80
27:BA:142:A:H8	27:BA:1408:C:H1'	1.43	0.80
13:AM:65:LYS:HG3	13:AM:69:GLU:O	1.81	0.80
1:CA:1109:C:H2'	1:CA:1110:A:O4'	1.82	0.80
1:AA:233:C:H2'	1:AA:233:C:O2	1.79	0.80
10:CJ:51:ARG:HE	10:CJ:61:GLU:HB2	1.47	0.80
41:BS:97:ARG:HE	41:BS:98:VAL:N	1.80	0.80
49:D0:20:ARG:CG	49:D0:20:ARG:HH11	1.95	0.80
39:DQ:30:GLY:HA3	39:DQ:106:VAL:O	1.81	0.80
35:BI:115:ALA:HB2	35:BI:129:THR:OG1	1.80	0.80
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:628:G:H2'	1:CA:629:G:H8	1.45	0.80
34:BH:126:PRO:O	34:BH:127:GLU:HB2	1.80	0.80
40:BR:33:ARG:HG3	40:BR:115:GLU:HB3	1.62	0.80
43:BU:69:CYS:HB2	43:BU:74:LEU:HD13	1.64	0.80
27:DA:412:A:H8	27:DA:412:A:H5'	1.47	0.80
12:CL:67:ILE:CD1	12:CL:74:LEU:HD12	2.12	0.80
38:DP:65:ARG:HH11	57:D8:46:ARG:HH22	1.29	0.80
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.45	0.80
31:DE:203:LYS:HE3	31:DE:203:LYS:C	2.01	0.80
27:DA:2692:C:O2'	27:DA:2693:A:H5'	1.82	0.80
27:BA:2206:G:N2	27:BA:2207:G:H5'	1.96	0.80
32:BF:135:LYS:HB3	32:BF:138:GLU:CG	2.12	0.80
1:AA:1002:G:N2	1:AA:1003:G:H1'	1.96	0.80
1:CA:769:G:O2'	1:CA:770:C:H5'	1.82	0.80
2:CB:218:ALA:O	2:CB:222:ILE:HG13	1.82	0.80
36:DN:25:ARG:HG3	36:DN:25:ARG:HH11	1.47	0.80
14:AN:12:ARG:C	14:AN:14:PRO:HD2	2.01	0.80
27:DA:2037:G:H2'	27:DA:2038:G:C8	2.17	0.80
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.47	0.80
39:DQ:10:ARG:HG3	39:DQ:10:ARG:HH11	1.44	0.80
8:CH:24:THR:HG22	8:CH:25:ASP:H	1.47	0.80
1:CA:1250:A:H5'	9:CI:67:GLY:HA2	1.62	0.80
30:DD:61:LEU:HB3	30:DD:63:ARG:HH12	1.42	0.80
41:DS:97:ARG:HH21	41:DS:98:VAL:HA	1.44	0.80
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	1.64	0.80
42:DT:35:LYS:HE2	42:DT:41:ARG:HG3	1.64	0.80
41:DS:90:GLY:C	41:DS:92:TYR:H	1.84	0.80
48:DZ:72:GLN:HG2	48:DZ:86:ASP:OD1	1.81	0.80
36:DN:78:TYR:HB3	36:DN:79:PRO:CD	2.09	0.80
27:BA:1353:A:H4'	30:BD:38:LYS:HE3	1.63	0.80
27:BA:2047:U:H2'	27:BA:2048:G:H5'	1.64	0.80
9:CI:48:GLU:N	9:CI:49:PRO:HD2	1.97	0.80
1:CA:885:G:H2'	1:CA:886:G:H8	1.47	0.80
4:AD:105:VAL:HG13	4:AD:110:PHE:HD2	1.48	0.80
41:DS:77:ALA:HB1	41:DS:82:ILE:HB	1.64	0.80
27:DA:1826:G:H2'	27:DA:1827:C:C6	2.15	0.79
36:DN:120:LEU:CD1	36:DN:122:VAL:HG23	2.12	0.79
4:AD:26:CYS:HA	4:AD:31:CYS:HB2	1.64	0.79
28:DB:7:G:C2'	28:DB:8:U:H5"	2.12	0.79
27:BA:2200:C:C6	27:BA:2200:C:H5"	2.15	0.79
1:CA:1057:G:H5"	3:CC:154:SER:OG	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:152:G:H1	27:BA:174:C:N4	1.77	0.79
27:DA:855:G:H2'	27:DA:856:C:C6	2.17	0.79
1:AA:178:C:H2'	1:AA:179:A:H8	1.44	0.79
17:AQ:17:LYS:CG	17:AQ:47:PRO:HA	2.05	0.79
27:DA:1494:A:N3	27:DA:1494:A:H5'	1.97	0.79
47:DY:39:VAL:HG12	47:DY:40:GLU:N	1.96	0.79
27:DA:2784:C:O2'	27:DA:2785:C:H5'	1.83	0.79
1:AA:1199:U:H4'	10:AJ:54:PHE:CZ	2.17	0.79
12:CL:21:VAL:O	12:CL:21:VAL:HG13	1.80	0.79
1:AA:69:G:H2'	1:AA:70:G:C8	2.17	0.79
1:CA:158:G:O2'	1:CA:159:G:H5'	1.83	0.79
20:CT:54:LYS:HA	20:CT:57:ARG:NH2	1.97	0.79
1:CA:1094:G:H3'	1:CA:1108:G:H22	1.47	0.79
1:AA:1424:C:H42	1:AA:1476:G:H1	1.30	0.79
1:CA:1060:C:H5'	14:CN:45:ARG:NH2	1.98	0.79
27:BA:2173:A:O2'	27:BA:2174:C:H5'	1.81	0.79
27:BA:2355:C:H1'	49:B0:39:ARG:HH21	1.46	0.79
13:AM:17:VAL:O	13:AM:20:THR:HB	1.82	0.79
1:AA:833:U:H3	1:AA:853:G:H1	1.30	0.79
46:BX:57:LEU:HD21	46:BX:78:LYS:HE2	1.64	0.79
27:DA:428:A:H5'	27:DA:429:A:OP2	1.82	0.79
27:DA:1163:G:O2'	27:DA:1164:G:H5'	1.82	0.79
27:BA:1931:U:H5'	27:BA:1931:U:C6	2.17	0.79
38:BP:23:PRO:HB2	38:BP:33:ARG:CG	2.12	0.79
38:BP:59:LEU:HA	38:BP:61:ARG:NH2	1.97	0.79
34:BH:85:LYS:NZ	34:BH:133:VAL:HG11	1.96	0.79
44:BV:18:LEU:CD1	44:BV:19:LYS:H	1.93	0.79
44:BV:57:VAL:HG23	44:BV:99:ILE:HG22	1.64	0.79
31:DE:15:PHE:CE2	42:DT:80:SER:HB2	2.16	0.79
1:AA:60:A:H4'	1:AA:61:G:O5'	1.80	0.79
48:DZ:4:LEU:HD12	48:DZ:5:LYS:H	1.45	0.79
27:DA:768:G:H2'	27:DA:769:G:H8	1.47	0.79
57:B8:28:GLY:O	57:B8:32:LEU:HD23	1.81	0.79
33:BG:43:LEU:HB2	33:BG:88:ILE:CD1	2.13	0.79
13:AM:76:ALA:N	13:AM:79:LYS:HZ2	1.81	0.79
52:D3:7:LYS:HG3	52:D3:34:GLU:HG2	1.62	0.79
1:AA:1118:C:H2'	1:AA:1119:C:H6	1.47	0.79
42:BT:122:ASP:C	42:BT:124:ASP:H	1.85	0.79
4:AD:33:MET:CE	4:AD:37:PRO:HA	2.13	0.79
40:BR:28:LEU:HD12	40:BR:48:VAL:HG11	1.62	0.79
27:DA:246:C:O2'	27:DA:247:G:H5'	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:536:A:H2'	27:BA:537:C:C6	2.18	0.79
42:BT:18:ASP:C	42:BT:19:LEU:HD12	2.02	0.79
44:DV:95:LEU:HD13	44:DV:97:LYS:HZ1	1.47	0.79
30:BD:76:PRO:O	30:BD:98:VAL:HG23	1.83	0.79
38:BP:97:PRO:O	38:BP:99:LEU:N	2.13	0.79
1:CA:652:U:H1'	1:CA:653:A:H2	1.48	0.79
35:BI:12:LEU:HD12	35:BI:19:VAL:HG11	1.64	0.79
27:DA:956:G:H22	27:DA:959:A:H3'	1.46	0.79
13:AM:22:ILE:HB	13:AM:25:ILE:HB	1.64	0.79
13:AM:69:GLU:HA	13:AM:69:GLU:OE1	1.82	0.79
27:BA:1550:C:H2'	27:BA:1551:C:H6	1.45	0.79
5:CE:42:GLY:HA3	5:CE:65:ASN:O	1.83	0.79
27:DA:2123:G:H2'	27:DA:2124:G:C8	2.17	0.79
27:BA:1401:G:H2'	27:BA:1402:C:H6	1.48	0.79
5:AE:50:GLU:HG3	5:AE:52:PRO:CD	2.05	0.79
1:AA:346:G:N3	1:AA:346:G:H2'	1.98	0.79
27:BA:753:C:H2'	27:BA:754:C:H5'	1.63	0.79
27:DA:311:A:H1'	27:DA:332:A:C8	2.16	0.79
28:DB:42:C:O2	33:DG:92:VAL:HA	1.81	0.79
1:AA:735:C:O2'	1:AA:736:C:H5'	1.81	0.79
38:BP:71:VAL:CG1	38:BP:72:PRO:HD3	2.12	0.79
1:CA:1173:G:H2'	1:CA:1174:G:C8	2.18	0.79
31:BE:33:VAL:O	31:BE:69:LYS:HD2	1.82	0.79
32:DF:102:PRO:HB2	32:DF:105:VAL:HG23	1.65	0.79
27:BA:2777:G:H5''	27:BA:2778:A:H5''	1.63	0.79
27:BA:1029:A:H2'	27:BA:1030:G:H5'	1.65	0.79
38:BP:115:LEU:HA	38:BP:134:ALA:HB2	1.65	0.79
38:BP:47:ASP:HB3	38:BP:48:PRO:CA	2.11	0.79
27:DA:1187:G:H8	27:DA:1187:G:O5'	1.65	0.79
46:DX:26:TYR:HD2	46:DX:92:LEU:HD12	1.48	0.79
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.13	0.79
8:AH:118:VAL:O	8:AH:119:LEU:HD23	1.82	0.79
27:DA:690:G:H2'	27:DA:691:C:H6	1.47	0.79
27:DA:686:G:N2	27:DA:788:A:H61	1.79	0.79
42:BT:13:ARG:HA	42:BT:13:ARG:NH1	1.98	0.79
27:BA:1771:C:O2'	27:BA:1786:A:H8	1.66	0.79
1:AA:857:C:H2'	1:AA:858:G:O4'	1.83	0.79
27:DA:2681:C:H5	27:DA:2725:A:H62	1.28	0.79
27:BA:271(B):C:O2'	27:BA:271(C):C:H5'	1.82	0.79
27:DA:345:A:H4'	27:DA:346:A:OP1	1.82	0.79
1:AA:1245:A:H2'	1:AA:1246:C:H6	1.46	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:104:ARG:HG2	13:AM:105:THR:HG23	1.63	0.79
4:CD:67:ILE:HD13	4:CD:196:LEU:HD23	1.63	0.79
1:AA:141:A:H1'	1:AA:182:U:O2	1.82	0.79
27:BA:2432:A:H2'	27:BA:2433:A:C8	2.18	0.79
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.12	0.79
34:BH:85:LYS:NZ	34:BH:133:VAL:HG21	1.97	0.79
27:DA:1497:U:H5'	27:DA:1498:C:H5	1.48	0.79
27:DA:574:C:H1'	27:DA:2055:C:H6	1.46	0.79
27:DA:2555:U:C2'	27:DA:2556:C:H5'	2.11	0.79
31:DE:46:ALA:HA	31:DE:82:ARG:O	1.81	0.79
53:D4:53:THR:O	53:D4:54:LYS:HG2	1.82	0.79
27:DA:1655:A:H4'	31:DE:114:ALA:HA	1.63	0.79
39:BQ:135:ASP:C	39:BQ:137:TYR:H	1.84	0.79
7:AG:60:LYS:HA	7:AG:60:LYS:NZ	1.96	0.79
1:CA:1187:G:H4'	9:CI:111:ARG:NH1	1.98	0.79
23:CW:35:G:O2'	23:CW:36:A:H8	1.66	0.79
30:BD:25:THR:HG22	30:BD:26:LYS:H	1.47	0.79
41:DS:97:ARG:HH22	41:DS:99:LYS:H	1.28	0.79
27:BA:335:C:O2'	27:BA:336:C:H5'	1.83	0.79
4:AD:9:CYS:H	4:AD:22:LYS:NZ	1.80	0.79
27:BA:742:G:O2'	27:BA:743:G:H5'	1.83	0.79
1:CA:678:U:H2'	1:CA:679:C:C6	2.18	0.79
38:BP:24:GLY:O	38:BP:25:SER:HB3	1.83	0.79
1:CA:155:C:H2'	1:CA:156:G:C8	2.18	0.79
27:DA:2290:G:H8	27:DA:2290:G:H5'	1.46	0.79
27:BA:2103:C:H3'	27:BA:2104:G:H5''	1.62	0.79
18:CR:86:VAL:O	18:CR:87:ARG:HD3	1.82	0.79
47:BY:96:ILE:HB	47:BY:99:CYS:CB	2.09	0.79
55:D6:37:ARG:O	55:D6:48:VAL:O	2.01	0.79
11:CK:32:ILE:HD11	11:CK:41:THR:CG2	2.10	0.79
23:CW:73:C:H2'	23:CW:74:C:C5'	2.12	0.79
27:DA:948:G:H1	27:DA:969:U:H3	1.30	0.79
1:AA:153:C:H2'	1:AA:154:C:H6	1.48	0.79
27:BA:1019:U:O2'	27:BA:1021:A:H2	1.64	0.79
41:DS:30:ARG:NH2	41:DS:62:LYS:HD2	1.98	0.79
1:AA:1137:C:H4'	1:AA:1138:G:N2	1.98	0.79
1:CA:686:U:O2	1:CA:686:U:H2'	1.83	0.79
32:DF:132:VAL:HG22	32:DF:133:ASN:OD1	1.82	0.79
28:BB:11:C:OP1	49:B0:72:ARG:HD2	1.82	0.79
3:AC:92:ALA:HB2	3:AC:99:VAL:HG11	1.65	0.79
27:DA:287:C:H5'	27:DA:287:C:H6	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:16:ARG:HD3	38:BP:18:ARG:H	1.46	0.79
27:DA:307:G:N2	27:DA:309:G:H3'	1.98	0.79
27:DA:2756:U:H3	27:DA:2758:A:H62	1.29	0.79
27:BA:751:A:O4'	45:BW:90:ARG:HG2	1.82	0.79
4:AD:25:ARG:NH1	4:AD:30:LYS:HG3	1.95	0.79
6:AF:7:ASN:O	6:AF:88:VAL:HA	1.82	0.79
35:BI:114:LEU:HA	35:BI:130:TYR:CD1	2.18	0.79
27:DA:744:G:O2'	27:DA:745:G:H5'	1.83	0.79
2:CB:11:LEU:HD12	2:CB:217:ARG:NH2	1.98	0.79
6:AF:16:GLN:NE2	6:AF:16:GLN:H	1.81	0.79
27:BA:1482:G:H22	27:BA:1507:A:H1'	1.46	0.79
48:BZ:140:VAL:HG23	48:BZ:143:LEU:HD23	1.64	0.79
27:DA:1767:C:O2'	27:DA:1768:U:H5'	1.82	0.79
30:DD:231:HIS:ND1	30:DD:232:PRO:CD	2.44	0.78
12:CL:66:TYR:HD2	12:CL:67:ILE:N	1.81	0.78
27:BA:1819:A:H2'	30:BD:178:PRO:HB2	1.65	0.78
42:BT:106:SER:HB3	42:BT:110:ILE:CD1	2.13	0.78
6:CF:75:LEU:O	6:CF:79:LEU:HG	1.83	0.78
50:B1:19:GLN:NE2	50:B1:19:GLN:HA	1.97	0.78
3:AC:50:ALA:HB1	3:AC:72:LYS:HB3	1.63	0.78
27:DA:1921:G:O2'	27:DA:1922:G:H5'	1.82	0.78
34:DH:103:LEU:HD22	34:DH:123:PHE:HD2	1.48	0.78
4:CD:42:GLN:HG2	4:CD:42:GLN:O	1.80	0.78
38:BP:84:ASN:ND2	38:BP:115:LEU:HG	1.97	0.78
4:CD:33:MET:HA	4:CD:33:MET:CE	2.13	0.78
47:DY:39:VAL:HG12	47:DY:40:GLU:H	1.46	0.78
33:DG:28:VAL:O	33:DG:31:VAL:HG12	1.82	0.78
39:BQ:1:MET:SD	39:BQ:2:LEU:HB2	2.24	0.78
31:DE:26:ILE:HB	31:DE:182:LEU:HB3	1.65	0.78
30:BD:155:LEU:HD23	30:BD:177:LEU:HD22	1.63	0.78
27:BA:2870:C:C2'	27:BA:2871:C:H5'	2.12	0.78
45:DW:72:LYS:HB3	45:DW:106:ILE:O	1.84	0.78
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.65	0.78
43:BU:27:LEU:HB2	43:BU:31:SER:HB3	1.64	0.78
27:BA:2048:G:H5'	27:BA:2048:G:H8	1.48	0.78
27:BA:2016:U:H2'	27:BA:2017:U:C6	2.18	0.78
25:AY:71:A:H2'	25:AY:72:G:C8	2.18	0.78
12:AL:76:GLU:O	12:AL:77:HIS:HB2	1.82	0.78
20:AT:75:ASN:ND2	20:AT:75:ASN:H	1.80	0.78
11:CK:74:ALA:C	11:CK:76:GLY:H	1.86	0.78
27:BA:30:G:H2'	27:BA:31:C:C6	2.19	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BE:50:GLY:HA2	31:BE:78:LEU:HB3	1.65	0.78
1:CA:1343:G:H4'	9:CI:122:ALA:HB3	1.64	0.78
1:CA:471:G:HO2'	1:CA:472:A:H8	0.79	0.78
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.18	0.78
12:CL:66:TYR:HD1	12:CL:87:VAL:HG21	1.48	0.78
27:DA:2070:G:H2'	27:DA:2071:A:C8	2.17	0.78
27:DA:2061:G:OP2	27:DA:2502:G:H5'	1.83	0.78
19:AS:42:PRO:O	19:AS:44:MET:SD	2.42	0.78
27:DA:154(A):C:H41	27:DA:172:C:N4	1.79	0.78
58:B9:29:ASN:H	58:B9:29:ASN:ND2	1.77	0.78
15:AO:37:ASN:HD22	15:AO:37:ASN:H	1.27	0.78
27:BA:71:A:H2	46:BX:31:HIS:CE1	2.01	0.78
28:BB:4:C:H42	28:BB:117:G:H1	1.27	0.78
27:DA:1984:G:O2'	27:DA:1985:G:H5'	1.84	0.78
13:CM:95:GLY:O	13:CM:96:LEU:HB2	1.81	0.78
32:DF:78:ILE:HA	32:DF:83:PHE:CD1	2.18	0.78
27:DA:1782:C:H42	27:DA:2586:C:H42	1.31	0.78
50:B1:52:ARG:HG3	50:B1:53:VAL:H	1.48	0.78
7:AG:31:MET:HG2	7:AG:34:GLY:HA2	1.64	0.78
48:BZ:13:LYS:HB3	48:BZ:16:ALA:HB3	1.65	0.78
32:BF:32:LEU:HD21	32:BF:105:VAL:HG13	1.63	0.78
27:DA:704:G:C2'	27:DA:726:G:H22	1.93	0.78
48:DZ:27:MET:HE3	48:DZ:34:ARG:HB2	1.66	0.78
17:CQ:81:ARG:HH11	17:CQ:84:LEU:HD11	1.48	0.78
31:BE:116:VAL:O	31:BE:117:MET:HB3	1.82	0.78
38:BP:144:GLU:H	38:BP:145:PRO:HD3	1.48	0.78
27:BA:271(S):G:H2'	27:BA:271(T):C:H5'	1.64	0.78
24:CX:10:G:N2	24:CX:26:G:H1'	1.98	0.78
58:B9:14:CYS:O	58:B9:15:LYS:HB2	1.81	0.78
27:DA:980:A:O2'	27:DA:981:A:H5'	1.82	0.78
27:DA:2197:U:O2'	27:DA:2198:A:H2'	1.82	0.78
50:B1:86:SER:HB2	50:B1:89:GLU:HB2	1.65	0.78
28:DB:16:G:H1	28:DB:68:C:H42	1.31	0.78
38:DP:146:VAL:HG22	38:DP:147:LEU:H	1.47	0.78
38:DP:146:VAL:O	38:DP:148:LEU:HG	1.83	0.78
42:DT:28:VAL:CG2	42:DT:46:GLU:HG3	2.13	0.78
48:DZ:52:ILE:HD12	48:DZ:52:ILE:H	1.47	0.78
46:DX:60:ARG:NH2	56:D7:47:ARG:CZ	2.47	0.78
1:AA:1136:U:H5''	1:AA:1137:C:C5	2.19	0.78
27:BA:1411:C:H2'	27:BA:1412:A:C8	2.19	0.78
1:AA:643:C:O2'	1:AA:644:G:H5'	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BC:196:LEU:C	29:BC:198:ALA:H	1.87	0.78
12:AL:72:HIS:HB3	12:AL:99:ARG:HH12	1.49	0.78
27:BA:2065:C:H2'	27:BA:2066:C:H6	1.47	0.78
57:D8:21:LYS:HD3	57:D8:48:PHE:CZ	2.18	0.78
1:CA:1132:C:O2'	1:CA:1133:G:H5'	1.84	0.78
10:CJ:9:ARG:HH21	10:CJ:95:GLU:HG2	1.49	0.78
44:BV:13:ARG:HH11	44:BV:13:ARG:HG2	1.49	0.78
44:BV:38:LEU:C	44:BV:38:LEU:HD23	2.04	0.78
8:AH:69:ARG:NH1	8:AH:76:PRO:HA	1.99	0.78
42:BT:65:LYS:HE3	42:BT:66:VAL:H	1.45	0.78
27:BA:2702:U:H4'	27:BA:2703:C:OP1	1.83	0.78
27:DA:2034:U:O2'	27:DA:2035:G:H5'	1.83	0.78
27:DA:581:C:H2'	27:DA:582:G:C8	2.18	0.78
31:DE:179:GLU:HB3	31:DE:181:LEU:CD1	2.13	0.78
31:DE:2:LYS:HE2	31:DE:95:ILE:CG2	2.14	0.78
4:AD:25:ARG:HH12	4:AD:30:LYS:CG	1.95	0.78
32:BF:132:VAL:HG13	32:BF:133:ASN:N	1.97	0.78
3:AC:87:LEU:C	3:AC:89:GLU:H	1.84	0.78
27:DA:2481:G:H4'	27:DA:2482:G:H5'	1.66	0.78
10:AJ:63:PHE:HA	14:AN:59:ALA:HB3	1.66	0.78
27:DA:2473:U:O2	27:DA:2473:U:H2'	1.81	0.78
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.19	0.78
1:CA:1321:C:H4'	13:CM:87:TYR:CE2	2.18	0.78
1:AA:472:A:H4'	16:AP:80:PHE:O	1.83	0.78
27:DA:627:A:H62	38:DP:84:ASN:HD21	1.31	0.78
27:DA:2554:U:C6	27:DA:2555:U:H5	2.02	0.78
39:BQ:118:LEU:HD13	39:BQ:131:ILE:HG23	1.64	0.78
2:AB:69:LEU:HD23	2:AB:159:PRO:HG2	1.66	0.78
42:DT:35:LYS:HZ3	42:DT:41:ARG:HE	1.31	0.78
27:DA:2527:C:H5'	58:D9:30:PRO:HB2	1.65	0.78
31:DE:111:ARG:HA	40:DR:2:ARG:HG3	1.63	0.78
37:DO:35:VAL:HG22	37:DO:65:THR:HG21	1.65	0.78
32:BF:165:ARG:HA	32:BF:168:ARG:HD2	1.66	0.78
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.48	0.78
27:DA:2543:G:H2'	27:DA:2544:G:C8	2.19	0.78
27:BA:258:G:O2'	27:BA:259:G:H5'	1.83	0.78
31:BE:184:VAL:HG12	31:BE:185:LYS:N	1.98	0.78
57:D8:4:MET:SD	57:D8:61:LEU:HD21	2.24	0.78
27:BA:484:C:H2'	27:BA:485:C:C6	2.19	0.78
27:DA:459:U:H2'	27:DA:460:A:H8	1.49	0.78
27:BA:1020:A:N1	27:BA:1141:U:O2'	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BN:87:LEU:HD21	36:BN:98:VAL:HG11	1.65	0.78
27:BA:1490:A:H2'	27:BA:1490:A:N3	1.99	0.78
47:BY:38:ILE:HG22	47:BY:39:VAL:N	1.97	0.78
1:CA:562:C:H4'	1:CA:563:A:C5'	2.13	0.78
46:DX:12:VAL:HG23	46:DX:13:LEU:N	1.97	0.78
1:CA:1002:G:N2	1:CA:1003:G:H1'	1.99	0.78
18:AR:53:ARG:HH21	18:AR:60:ALA:H	1.31	0.78
1:CA:652:U:H1'	1:CA:653:A:C2	2.17	0.78
36:DN:128:HIS:O	36:DN:130:HIS:N	2.15	0.78
55:B6:10:LEU:HD12	57:B8:34:TRP:HD1	1.49	0.78
33:DG:60:LEU:HD12	33:DG:68:PRO:HG3	1.65	0.78
1:CA:1360:A:H2'	1:CA:1361:G:O4'	1.84	0.78
4:AD:155:LEU:O	4:AD:159:ARG:HG2	1.84	0.78
27:DA:2483:C:H5'	27:DA:2484:G:OP2	1.82	0.78
2:AB:181:PHE:CE1	8:AH:70:GLN:HB2	2.19	0.78
1:AA:601:C:O2'	1:AA:602:A:H5'	1.84	0.78
16:CP:4:ILE:HG12	16:CP:21:VAL:HG23	1.65	0.78
27:DA:2593:U:H2'	27:DA:2594:C:C6	2.19	0.78
31:BE:203:LYS:O	31:BE:203:LYS:HD2	1.84	0.78
27:BA:344:G:N2	27:BA:345:A:H62	1.81	0.78
38:DP:47:ASP:HB3	38:DP:48:PRO:CA	2.12	0.78
42:BT:89:VAL:CG1	42:BT:91:ARG:HG2	2.13	0.78
42:BT:26:ASP:HB3	42:BT:89:VAL:O	1.84	0.78
55:D6:11:LEU:HD13	55:D6:12:GLU:H	1.49	0.78
20:AT:26:ASN:HD22	20:AT:26:ASN:N	1.75	0.78
1:CA:896:C:O2'	1:CA:897:C:H5'	1.83	0.78
1:AA:166:G:H2'	1:AA:167:G:H8	1.45	0.78
39:DQ:39:PRO:HD3	39:DQ:99:PRO:HG3	1.64	0.78
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.65	0.78
9:AI:113:LYS:HD3	9:AI:119:ALA:O	1.83	0.78
1:CA:689:C:H2'	1:CA:690:G:O4'	1.82	0.78
7:CG:46:ALA:O	7:CG:50:ILE:HG12	1.83	0.78
4:CD:198:VAL:HG12	4:CD:199:ASN:N	1.96	0.78
44:BV:18:LEU:HD13	44:BV:19:LYS:N	1.98	0.78
19:CS:20:LEU:HA	19:CS:23:ASN:HD22	1.49	0.78
38:DP:34:GLY:O	38:DP:35:HIS:HB2	1.84	0.78
27:DA:330:A:O2'	27:DA:331:A:H8	1.67	0.78
9:AI:99:LEU:HB3	9:AI:101:PHE:CE1	2.18	0.78
14:AN:29:ARG:HH12	14:AN:31:ARG:HB2	1.47	0.78
27:BA:2439:A:H5'	27:BA:2439:A:H8	1.48	0.78
27:BA:779:U:OP1	30:BD:49:ILE:HG22	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:125:PHE:H	11:AK:125:PHE:HD1	1.30	0.78
27:BA:740:U:H5'	27:BA:740:U:C6	2.17	0.78
11:AK:28:THR:HG21	11:AK:61:ALA:HB1	1.66	0.78
27:DA:2848:G:H4'	27:DA:2849:U:OP1	1.84	0.78
27:DA:226:G:HO2'	27:DA:227:A:H8	1.29	0.78
3:CC:22:TRP:HZ3	3:CC:32:LEU:HB3	1.48	0.78
27:BA:1401:G:H2'	27:BA:1402:C:C6	2.18	0.78
46:BX:49:VAL:HG23	46:BX:50:LYS:N	1.99	0.78
1:CA:507:C:H3'	1:CA:508:C:C6	2.19	0.77
33:BG:36:LYS:HD3	33:BG:95:ARG:HH12	1.49	0.77
32:DF:9:ILE:HA	32:DF:13:SER:O	1.83	0.77
8:AH:69:ARG:HH12	8:AH:76:PRO:HA	1.49	0.77
55:D6:19:ARG:HG2	55:D6:20:ASN:H	1.48	0.77
27:DA:953:A:O2'	27:DA:954:G:H5'	1.83	0.77
38:DP:144:GLU:N	38:DP:145:PRO:CD	2.47	0.77
13:CM:13:LYS:CA	13:CM:44:ARG:HH11	1.96	0.77
30:BD:72:LYS:HD3	30:BD:75:ILE:HD12	1.65	0.77
27:BA:587:C:H6	27:BA:587:C:O5'	1.66	0.77
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.18	0.77
7:CG:78:ARG:HG3	7:CG:79:ARG:N	1.98	0.77
13:AM:79:LYS:O	13:AM:82:MET:HB3	1.84	0.77
27:DA:1512:U:H2'	27:DA:1513:C:C6	2.19	0.77
27:DA:2532:G:H22	27:DA:2663:G:H1'	1.48	0.77
13:AM:50:GLU:O	13:AM:54:VAL:HG23	1.83	0.77
35:DI:60:GLU:O	35:DI:64:GLU:HG2	1.84	0.77
10:AJ:96:ILE:N	10:AJ:96:ILE:HD13	1.99	0.77
48:DZ:149:LEU:CD2	48:DZ:170:ILE:HG13	2.13	0.77
13:CM:25:ILE:CD1	13:CM:66:LEU:HD23	2.10	0.77
37:DO:71:ARG:HH12	42:DT:74:ARG:HH22	1.32	0.77
15:CO:69:TYR:CE2	15:CO:73:GLU:HG3	2.19	0.77
27:DA:1481:U:H5'	27:DA:1482:G:OP2	1.84	0.77
34:BH:98:LEU:O	34:BH:99:VAL:HG23	1.84	0.77
48:DZ:54:HIS:NE2	48:DZ:134:GLU:HA	2.00	0.77
42:DT:57:PHE:CG	42:DT:58:ASN:N	2.50	0.77
3:CC:24:ALA:HB1	3:CC:32:LEU:HD12	1.66	0.77
40:BR:104:ARG:O	40:BR:108:GLY:HA2	1.84	0.77
28:DB:28:C:H2'	28:DB:29:A:H8	1.48	0.77
1:CA:1187:G:H4'	9:CI:111:ARG:HH11	1.50	0.77
1:CA:982:U:H5''	14:CN:6:LEU:HD11	1.65	0.77
44:BV:49:THR:HG22	44:BV:50:PRO:HD3	1.66	0.77
32:DF:10:PRO:HD2	32:DF:13:SER:O	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DD:30:GLU:HG3	30:DD:63:ARG:CZ	2.15	0.77
7:AG:50:ILE:HG22	7:AG:56:GLN:O	1.84	0.77
24:AX:2:G:H2'	24:AX:3:C:H6	1.50	0.77
27:DA:2037:G:H2'	27:DA:2038:G:H8	1.50	0.77
27:BA:2836:U:H2'	27:BA:2837:G:H8	1.43	0.77
37:BO:87:ILE:HG22	37:BO:88:ASN:O	1.84	0.77
38:DP:50:ARG:HB3	57:D8:59:LYS:CD	2.14	0.77
27:DA:2370:G:H21	55:D6:45:LYS:HZ1	1.28	0.77
27:BA:1490:A:H5'	27:BA:1491:G:OP2	1.84	0.77
2:CB:74:LYS:H	2:CB:74:LYS:HD2	1.50	0.77
37:BO:8:LEU:CD1	37:BO:82:ASN:HB3	2.14	0.77
2:CB:158:LEU:HD12	2:CB:158:LEU:N	1.99	0.77
1:AA:823:G:H21	8:AH:1:MET:HE1	1.48	0.77
7:AG:116:ALA:HA	7:AG:119:ARG:HE	1.49	0.77
1:CA:763:G:H2'	1:CA:764:C:C6	2.17	0.77
24:AX:4:G:H2'	24:AX:5:G:H8	1.45	0.77
1:AA:221:C:O2'	1:AA:222:U:H5'	1.85	0.77
23:CW:2:G:H2'	23:CW:3:G:O4'	1.85	0.77
31:DE:134:ILE:H	31:DE:134:ILE:HD13	1.49	0.77
30:BD:35:LYS:H	30:BD:36:PRO:CD	1.97	0.77
41:DS:89:ARG:HD2	41:DS:92:TYR:HA	1.66	0.77
27:BA:2590:A:OP2	30:BD:238:GLY:HA2	1.84	0.77
46:DX:12:VAL:HG11	46:DX:17:ALA:HB1	1.67	0.77
33:BG:46:ALA:C	33:BG:51:ARG:HG3	2.04	0.77
40:DR:10:LEU:HD22	40:DR:17:ARG:HD2	1.65	0.77
1:AA:939:G:H5''	7:AG:102:ARG:NH1	2.00	0.77
7:AG:151:TYR:HA	7:AG:153:HIS:CE1	2.19	0.77
27:BA:111:A:H4'	51:B2:69:ARG:NH2	1.99	0.77
27:BA:491:G:H2'	27:BA:492:A:C8	2.20	0.77
45:DW:50:VAL:HG13	45:DW:51:LEU:H	1.49	0.77
1:CA:627:G:H2'	1:CA:628:G:H8	1.48	0.77
37:DO:37:ASP:O	37:DO:61:VAL:HA	1.83	0.77
1:CA:29:G:H1	1:CA:554:C:H42	1.29	0.77
27:DA:67:U:H2'	27:DA:68:G:H8	1.49	0.77
33:BG:112:PRO:C	33:BG:113:ARG:HH11	1.86	0.77
1:AA:16:A:O2'	1:AA:17:U:H5'	1.85	0.77
44:DV:40:LEU:HD13	44:DV:46:VAL:HA	1.66	0.77
51:D2:47:ASN:O	51:D2:49:LYS:N	2.16	0.77
55:D6:40:CYS:HA	55:D6:46:HIS:CB	2.13	0.77
27:DA:704:G:C2'	27:DA:726:G:N2	2.48	0.77
1:CA:222:U:H2'	1:CA:223:U:C6	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DR:76:VAL:O	40:DR:79:LEU:HB3	1.84	0.77
32:BF:61:GLY:O	32:BF:77:ASP:HB3	1.82	0.77
32:DF:33:LEU:HD11	32:DF:109:GLY:HA2	1.66	0.77
1:CA:192:U:H4'	20:CT:103:GLY:HA2	1.66	0.77
27:DA:2870:C:C2'	27:DA:2871:C:H5'	2.14	0.77
39:DQ:27:VAL:HG12	39:DQ:29:PHE:H	1.50	0.77
27:BA:2123:G:H2'	27:BA:2124:G:H8	1.50	0.77
27:DA:1689:A:N6	27:DA:1698:A:H2	1.79	0.77
27:BA:626:U:H5'	27:BA:627:A:C5'	2.15	0.77
5:CE:78:HIS:O	5:CE:93:PRO:HD3	1.84	0.77
8:CH:108:GLY:HA3	8:CH:138:TRP:HB3	1.65	0.77
48:BZ:52:ILE:HG23	48:BZ:70:VAL:HB	1.62	0.77
47:BY:2:ARG:HD3	47:BY:3:VAL:HG23	1.65	0.77
27:BA:2020:A:O2'	27:BA:2021:C:H3'	1.84	0.77
27:BA:1175:U:O5'	27:BA:1176:G:H5'	1.83	0.77
7:AG:26:PHE:HD1	7:AG:101:LEU:HD22	1.50	0.77
15:AO:10:LYS:HG3	15:AO:11:VAL:N	2.00	0.77
36:BN:76:SER:O	36:BN:78:TYR:N	2.17	0.77
53:B4:46:ASN:HD22	53:B4:47:VAL:H	1.31	0.77
53:B4:46:ASN:HD22	53:B4:47:VAL:N	1.81	0.77
27:BA:693:C:O2'	27:BA:694:U:H5'	1.85	0.77
38:BP:63:PRO:HB3	57:B8:13:ARG:HB3	1.67	0.77
27:BA:1278:A:O2'	27:BA:1279:G:H5'	1.85	0.77
32:BF:67:GLN:O	32:BF:68:LYS:HB2	1.83	0.77
36:DN:4:TYR:HB2	43:DU:64:ARG:NH1	1.99	0.77
27:DA:328:U:H4'	47:DY:68:HIS:ND1	1.99	0.77
1:AA:1076:C:H42	1:AA:1081:G:H1	1.33	0.77
1:AA:1158:C:H2'	1:AA:1158:C:O2	1.82	0.77
33:DG:152:LEU:O	33:DG:153:ARG:HD3	1.83	0.77
33:DG:111:LEU:CD1	33:DG:120:LEU:HD21	2.14	0.77
27:DA:414:C:H2'	27:DA:415:A:H8	1.47	0.77
36:DN:86:PRO:HG2	36:DN:89:LYS:HG2	1.66	0.77
13:CM:82:MET:HG2	13:CM:82:MET:O	1.83	0.77
50:D1:80:LEU:HD13	50:D1:82:LEU:HD21	1.63	0.77
37:BO:19:ILE:HG22	37:BO:43:VAL:HG13	1.65	0.77
32:BF:10:PRO:HG2	32:BF:11:VAL:HG23	1.65	0.77
1:CA:1347:G:H22	1:CA:1373:G:C2'	1.93	0.77
5:AE:129:ILE:O	5:AE:131:ILE:N	2.18	0.77
52:B3:29:ARG:CB	52:B3:33:GLN:HE22	1.98	0.77
8:AH:63:LEU:CB	8:AH:65:TYR:HE1	1.97	0.77
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DX:12:VAL:HG12	46:DX:27:THR:OG1	1.83	0.77
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	1.84	0.77
48:BZ:162:LEU:CD2	48:BZ:166:PRO:HG3	2.15	0.77
45:DW:17:VAL:O	45:DW:20:VAL:N	2.16	0.77
45:DW:68:ARG:HH12	45:DW:113:LYS:H	1.31	0.77
27:DA:1473:G:H2'	27:DA:1474:C:H5'	1.66	0.77
42:DT:16:ARG:O	42:DT:17:THR:HB	1.85	0.77
32:BF:53:THR:HB	32:BF:56:GLU:HG3	1.67	0.77
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.04	0.77
4:CD:201:GLN:HA	4:CD:201:GLN:OE1	1.84	0.77
53:B4:62:CYS:SG	53:B4:64:LYS:HG3	2.25	0.77
27:DA:1153:C:H2'	27:DA:1154:G:O4'	1.85	0.77
55:B6:20:ASN:OD1	55:B6:41:PRO:HA	1.85	0.77
32:DF:182:ASN:O	32:DF:186:ILE:HG12	1.85	0.77
15:AO:78:TYR:OH	15:AO:88:ARG:HD2	1.83	0.77
31:DE:7:VAL:HG23	31:DE:27:LEU:HB3	1.67	0.77
54:D5:32:PRO:O	54:D5:33:CYS:HB3	1.83	0.77
27:BA:143:G:H1'	46:BX:37:THR:HG21	1.65	0.77
1:CA:1151:A:H1'	10:CJ:39:PRO:HG2	1.64	0.77
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.20	0.77
1:AA:308:C:H2'	1:AA:309:G:H8	1.49	0.77
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.20	0.77
1:CA:1267:C:O2	1:CA:1267:C:H2'	1.84	0.77
43:DU:88:ILE:O	43:DU:88:ILE:HG13	1.82	0.77
55:D6:11:LEU:HD11	55:D6:52:VAL:O	1.83	0.77
38:DP:115:LEU:HD23	38:DP:115:LEU:N	2.00	0.77
38:DP:23:PRO:HB2	38:DP:33:ARG:CD	2.14	0.77
30:BD:43:ARG:HH11	30:BD:44:ASN:ND2	1.82	0.77
20:CT:76:ALA:HA	20:CT:79:ARG:HH11	1.49	0.77
27:DA:2716:U:O2'	27:DA:2717:G:H5'	1.85	0.77
25:CY:37:U:C3'	25:CY:38:U:H5''	2.15	0.77
38:DP:91:PHE:N	38:DP:91:PHE:CD1	2.51	0.77
27:DA:473:G:H5''	27:DA:508:G:N2	1.99	0.77
27:BA:518:G:H2'	27:BA:519:U:C6	2.20	0.77
41:BS:13:ARG:O	41:BS:15:ARG:HG2	1.84	0.76
43:DU:89:GLU:CG	44:DV:50:PRO:HG3	2.14	0.76
44:DV:19:LYS:HB2	44:DV:96:ILE:HG12	1.67	0.76
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.20	0.76
27:BA:1656:C:O2'	27:BA:1657:C:H5'	1.84	0.76
1:CA:1037:C:H2'	1:CA:1038:C:C6	2.19	0.76
1:CA:226:G:O2'	1:CA:227:G:H5'	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:774:A:H2	27:DA:787:U:HO2'	1.33	0.76
6:AF:55:ASP:HB3	6:AF:86:ARG:HH12	1.50	0.76
33:DG:43:LEU:CB	33:DG:88:ILE:HD11	2.15	0.76
27:BA:90:U:H1'	27:BA:92:A:C8	2.20	0.76
19:CS:40:ILE:HG21	19:CS:62:ILE:HD11	1.66	0.76
27:DA:2629:A:N3	27:DA:2629:A:H5'	1.99	0.76
27:DA:1284:A:H2'	27:DA:1285:G:O4'	1.85	0.76
4:AD:119:GLN:HE21	4:AD:123:HIS:CD2	2.03	0.76
9:CI:13:ALA:HB2	9:CI:68:GLY:HA3	1.68	0.76
39:DQ:63:LYS:HE2	39:DQ:65:PHE:CE1	2.19	0.76
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD1	1.50	0.76
33:DG:101:ILE:HD11	33:DG:105:LYS:HZ1	1.50	0.76
15:CO:54:ARG:NE	15:CO:58:MET:SD	2.58	0.76
16:CP:43:LYS:HA	16:CP:48:TRP:CB	2.15	0.76
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.20	0.76
39:DQ:32:TYR:CE2	39:DQ:133:ARG:HG2	2.19	0.76
38:BP:146:VAL:HG22	38:BP:147:LEU:N	2.01	0.76
25:CY:65:U:H2'	25:CY:66:A:C8	2.21	0.76
37:BO:13:ASN:HD21	37:BO:96:THR:C	1.87	0.76
27:BA:594:U:H2'	27:BA:595:C:H6	1.50	0.76
31:BE:203:LYS:HE3	31:BE:204:ALA:HB2	1.66	0.76
1:AA:1377:A:H2'	7:AG:7:ALA:HB3	1.67	0.76
29:DC:77:ILE:HB	29:DC:122:ALA:HA	1.65	0.76
4:AD:170:VAL:HG12	4:AD:171:GLY:N	2.00	0.76
25:CY:63:C:H2'	25:CY:64:G:H8	1.50	0.76
31:DE:105:THR:HG21	31:DE:164:ARG:CZ	2.15	0.76
42:BT:99:LEU:O	42:BT:99:LEU:HD12	1.84	0.76
1:AA:1528:U:HO2'	1:AA:1529:G:H3'	1.50	0.76
32:BF:46:ARG:HB3	32:BF:48:THR:HG23	1.67	0.76
27:DA:1384:A:N3	27:DA:1405:U:H1'	2.00	0.76
32:BF:4:VAL:HG12	32:BF:19:GLU:OE1	1.86	0.76
36:BN:2:LYS:NZ	43:BU:95:LEU:HG	1.99	0.76
43:BU:92:ARG:HG2	44:BV:11:GLN:CD	2.06	0.76
31:DE:33:VAL:CG2	31:DE:69:LYS:HE3	2.15	0.76
27:DA:2399:G:H21	55:D6:21:TYR:HE1	1.30	0.76
27:DA:459:U:H4'	56:D7:40:TRP:CZ3	2.19	0.76
27:DA:2571:C:C5'	27:DA:2572:A:H5'	2.14	0.76
4:AD:4:TYR:O	4:AD:5:ILE:HB	1.85	0.76
12:CL:25:LYS:HE3	12:CL:30:ARG:HH12	1.50	0.76
27:DA:1378:A:H4'	27:DA:1379:A:OP1	1.83	0.76
35:BI:133:HIS:HB2	35:BI:134:PRO:CD	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DO:66:LYS:HD3	37:DO:79:PHE:O	1.84	0.76
27:BA:627:A:H4'	27:BA:628:G:OP1	1.84	0.76
6:AF:21:LEU:O	6:AF:24:GLU:HG2	1.86	0.76
27:DA:528:A:C2	27:DA:2043:C:H4'	2.20	0.76
11:CK:101:SER:C	11:CK:103:LEU:H	1.87	0.76
11:AK:12:ARG:HE	11:AK:14:VAL:HG12	1.49	0.76
23:CW:14:A:H2'	23:CW:15:G:O4'	1.85	0.76
1:CA:784:C:H4'	27:DA:1837:C:OP1	1.85	0.76
27:DA:1213:A:H2'	27:DA:1214:A:H8	1.48	0.76
1:CA:321:A:O2'	1:CA:322:C:H5'	1.84	0.76
27:BA:2611:U:H5'	27:BA:2611:U:H6	1.50	0.76
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.21	0.76
30:BD:134:ARG:HD3	30:BD:135:PHE:CZ	2.21	0.76
16:CP:82:GLN:NE2	16:CP:82:GLN:N	2.31	0.76
1:CA:197:A:N6	1:CA:221:C:H5'	2.01	0.76
41:DS:92:TYR:O	41:DS:93:LYS:HB3	1.86	0.76
1:CA:678:U:H2'	1:CA:679:C:H6	1.49	0.76
1:CA:1057:G:H4'	3:CC:196:LEU:O	1.85	0.76
1:CA:1060:C:H5'	14:CN:45:ARG:HH22	1.50	0.76
36:DN:128:HIS:HB2	36:DN:130:HIS:HE1	1.46	0.76
1:CA:924:C:H2'	1:CA:925:G:H8	1.49	0.76
27:BA:2863:C:C2'	27:BA:2864:G:H5''	2.15	0.76
27:DA:662:G:H5''	38:DP:18:ARG:O	1.85	0.76
1:AA:577:G:O2'	1:AA:578:C:H6	1.69	0.76
8:CH:39:LEU:HD22	8:CH:39:LEU:H	1.51	0.76
19:AS:4:SER:O	19:AS:5:LEU:HB2	1.83	0.76
27:BA:675:A:C8	27:BA:804:A:C6	2.73	0.76
3:AC:43:LEU:O	3:AC:47:LEU:HB3	1.84	0.76
27:DA:2532:G:N2	27:DA:2663:G:H1'	2.00	0.76
8:CH:86:ILE:HG22	8:CH:87:SER:H	1.51	0.76
1:AA:1256:A:H5'	1:AA:1257:U:OP1	1.84	0.76
27:DA:2842:G:O2'	27:DA:2843:G:H5'	1.85	0.76
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.67	0.76
1:AA:258:G:H1	1:AA:268:C:H42	1.33	0.76
30:DD:26:LYS:O	30:DD:27:THR:HB	1.85	0.76
9:AI:115:GLY:O	9:AI:116:LYS:HG2	1.85	0.76
1:CA:310:G:H2'	1:CA:311:C:H6	1.51	0.76
1:CA:1175:G:H2'	1:CA:1176:A:H8	1.50	0.76
27:DA:2825:C:H2'	27:DA:2826:A:O4'	1.85	0.76
5:AE:141:GLN:HG2	5:AE:143:ARG:NH2	2.00	0.76
27:DA:1484:G:C3'	27:DA:1485:G:H5''	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:112:LEU:HA	8:AH:134:ILE:HG12	1.66	0.76
1:CA:269:C:H2'	1:CA:270:A:C8	2.19	0.76
27:DA:363(E):U:O2	27:DA:363(E):U:H2'	1.86	0.76
27:DA:558:G:OP1	36:DN:111:PRO:HD2	1.85	0.76
27:DA:927:G:H2'	27:DA:928:G:O4'	1.85	0.76
27:BA:2654:A:H4'	27:BA:2655:G:OP1	1.85	0.76
1:CA:1246:C:H2'	1:CA:1247:U:H6	1.51	0.76
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.01	0.76
5:AE:41:VAL:HG11	5:AE:113:ALA:HA	1.66	0.76
44:DV:18:LEU:CD2	44:DV:19:LYS:H	1.99	0.76
1:CA:551:U:O2'	1:CA:552:U:H5'	1.84	0.76
31:DE:134:ILE:HD13	31:DE:134:ILE:N	1.99	0.76
16:AP:5:ARG:NH2	16:AP:26:ARG:HB2	1.99	0.76
27:BA:125:G:H5''	27:BA:126:A:OP2	1.85	0.76
31:BE:36:ARG:HH21	31:BE:88:GLY:HA3	1.48	0.76
1:CA:1066:C:H6	1:CA:1066:C:H5''	1.47	0.76
27:DA:2712:U:O2'	27:DA:2712(A):A:H8	1.69	0.76
27:BA:2847:U:OP1	42:BT:98:LYS:HD3	1.86	0.76
27:DA:2308:G:H2'	27:DA:2309:A:C8	2.21	0.76
33:DG:76:SER:HA	33:DG:83:ARG:HB2	1.68	0.76
27:BA:1372:U:H2'	27:BA:1373:A:H8	1.49	0.76
27:DA:1448:G:H2'	27:DA:1449:A:C8	2.21	0.76
27:BA:2061:G:H5''	27:BA:2503:A:C2	2.20	0.76
29:DC:49:ILE:HD12	29:DC:49:ILE:H	1.49	0.76
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.51	0.76
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.67	0.76
27:BA:1911:U:H2'	27:BA:1918:A:N1	2.01	0.76
1:AA:8:A:N7	4:AD:208:SER:HB2	2.01	0.76
27:BA:1995:U:O2'	37:BO:31:LYS:HE3	1.86	0.76
38:BP:122:PRO:HB3	38:BP:141:ALA:HB3	1.67	0.76
45:DW:95:ILE:O	45:DW:95:ILE:HG13	1.84	0.76
8:CH:17:THR:HB	8:CH:78:GLN:OE1	1.85	0.76
43:BU:90:VAL:HG22	44:BV:39:LEU:HG	1.66	0.76
36:DN:2:LYS:NZ	44:DV:13:ARG:H	1.83	0.76
27:DA:36:G:O2'	27:DA:37:C:H5'	1.85	0.76
41:BS:54:LEU:HD12	41:BS:57:LYS:O	1.85	0.76
41:DS:85:VAL:N	41:DS:106:ARG:HB2	1.97	0.76
1:CA:123:C:OP1	1:CA:312:C:H5'	1.86	0.76
37:BO:65:THR:HA	37:BO:82:ASN:ND2	1.99	0.76
27:BA:2580:U:C5'	31:BE:131:ALA:HB2	2.16	0.76
27:BA:1430:C:H2'	27:BA:1431:U:C6	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB2	2.14	0.76
1:AA:358:U:H2'	1:AA:359:U:C6	2.21	0.76
27:DA:2836:U:H2'	27:DA:2837:G:H8	1.51	0.76
12:AL:82:ILE:HG23	12:AL:95:TYR:HB3	1.68	0.76
7:AG:60:LYS:HA	7:AG:60:LYS:HZ3	1.51	0.76
27:DA:2094:G:P	35:DI:22:LYS:HD2	2.26	0.76
27:DA:2225:A:O2'	27:DA:2226:C:OP2	2.02	0.76
27:BA:2037:G:H2'	27:BA:2038:G:C8	2.21	0.76
4:CD:30:LYS:C	4:CD:32:ALA:H	1.89	0.76
41:BS:17:ARG:HA	41:BS:20:ARG:HG2	1.66	0.76
32:BF:3:GLU:CA	32:BF:24:LEU:HG	2.14	0.76
1:CA:472:A:H2'	1:CA:473:G:O4'	1.86	0.76
43:DU:110:VAL:O	43:DU:113:ALA:HB3	1.85	0.76
55:D6:15:GLU:OE1	55:D6:43:CYS:HB3	1.86	0.76
27:BA:2483:C:C3'	27:BA:2484:G:H5''	2.14	0.76
31:DE:47:VAL:HG21	31:DE:86:PRO:HD2	1.68	0.76
30:BD:31:LYS:HG3	30:BD:33:LEU:HD13	1.68	0.76
27:DA:19:C:OP1	43:DU:22:LYS:HD2	1.85	0.76
1:CA:1308:U:O2'	1:CA:1309:G:H5'	1.85	0.76
29:DC:36:LYS:HB2	29:DC:36:LYS:HZ3	1.49	0.76
27:DA:2586:C:C2'	27:DA:2587:A:H5'	2.16	0.76
1:AA:1377:A:H2'	7:AG:7:ALA:CB	2.16	0.76
27:BA:747:U:H5	54:B5:3:LYS:HB2	1.51	0.76
27:BA:2654:A:H1'	27:BA:2656:U:C6	2.20	0.76
27:DA:1638:C:H1'	27:DA:2698:U:O2'	1.84	0.76
2:AB:68:ILE:CD1	2:AB:161:ALA:HB3	2.16	0.76
27:BA:2873:A:C2	40:BR:6:SER:HB2	2.21	0.76
34:BH:89:ILE:O	34:BH:89:ILE:HD12	1.84	0.76
14:CN:41:ARG:HG3	14:CN:42:ILE:HG12	1.67	0.76
32:BF:38:ARG:HH11	32:BF:38:ARG:HG3	1.50	0.76
27:BA:481:G:H1'	27:BA:506:G:N2	2.00	0.76
54:B5:16:ARG:CG	54:B5:17:ASP:N	2.48	0.76
31:DE:59:VAL:HG22	31:DE:60:ASN:N	2.01	0.76
31:DE:116:VAL:O	31:DE:117:MET:HB3	1.83	0.76
27:BA:1499:C:H2'	27:BA:1500:G:H5'	1.68	0.76
30:BD:43:ARG:HH12	30:BD:44:ASN:HD21	1.33	0.76
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.51	0.76
1:CA:1207:G:O2'	1:CA:1208:C:H5'	1.85	0.76
55:B6:32:ASN:ND2	55:B6:33:LYS:H	1.84	0.76
33:DG:51:ARG:NE	33:DG:51:ARG:HA	2.00	0.76
10:CJ:97:GLU:O	10:CJ:98:ILE:HD12	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:348:G:H2'	1:CA:349:A:H8	1.49	0.76
27:DA:1448:G:H2'	27:DA:1449:A:H8	1.49	0.76
28:BB:75:G:H5''	48:BZ:35:LYS:HE2	1.68	0.76
54:B5:41:PRO:CG	54:B5:44:THR:HG21	2.14	0.76
27:BA:1365:A:H5''	50:B1:41:ARG:NH2	2.01	0.76
3:AC:187:ALA:O	3:AC:198:VAL:HG23	1.84	0.76
1:CA:674:G:H2'	1:CA:675:A:H8	1.48	0.76
1:CA:980:C:H5'	1:CA:981:U:C5	2.21	0.76
31:DE:77:ILE:CG2	31:DE:78:LEU:N	2.44	0.76
27:DA:586:A:C5'	32:DF:89:VAL:HG21	2.15	0.76
30:BD:35:LYS:NZ	30:BD:103:ARG:HA	2.01	0.76
1:CA:159:G:H2'	1:CA:161:A:OP2	1.86	0.76
31:BE:46:ALA:HB2	31:BE:82:ARG:HA	1.68	0.76
31:BE:1:MET:HB2	31:BE:84:PHE:HB2	1.68	0.76
1:CA:1064:G:H1'	1:CA:1066:C:C5	2.21	0.76
27:BA:1798:U:C5'	30:BD:259:THR:HG22	2.14	0.76
3:CC:134:ILE:CG2	3:CC:168:ALA:HB3	2.15	0.76
1:CA:193:C:O2'	1:CA:194:C:H5'	1.85	0.76
7:CG:85:TYR:HD1	7:CG:154:TYR:HE1	1.33	0.76
8:AH:83:ILE:HG13	8:AH:137:VAL:HG22	1.68	0.76
27:BA:1913:A:H4'	27:BA:1914:C:H5''	1.67	0.76
2:CB:107:THR:HA	2:CB:110:GLN:HG2	1.65	0.76
7:AG:80:VAL:HG21	7:AG:85:TYR:CD1	2.21	0.76
7:AG:95:ARG:O	7:AG:99:LEU:HG	1.85	0.76
27:BA:1641:A:H2'	27:BA:1642:G:O4'	1.86	0.76
10:CJ:82:ILE:HG22	10:CJ:82:ILE:O	1.86	0.76
27:DA:2113:U:O2'	27:DA:2114:A:H8	1.69	0.76
36:BN:57:ALA:O	36:BN:58:ASP:O	2.04	0.76
40:BR:97:VAL:HA	40:BR:113:LEU:O	1.85	0.75
32:BF:3:GLU:HB2	32:BF:19:GLU:CB	2.09	0.75
1:CA:507:C:H3'	1:CA:508:C:H6	1.50	0.75
43:BU:112:ARG:HH21	44:BV:46:VAL:HG11	1.50	0.75
36:BN:62:VAL:HG11	36:BN:67:LEU:HD21	1.68	0.75
57:B8:33:ASN:N	57:B8:33:ASN:HD22	1.82	0.75
45:DW:26:GLY:H	45:DW:71:VAL:HB	1.51	0.75
3:CC:22:TRP:CZ3	3:CC:32:LEU:HB3	2.21	0.75
16:CP:31:LYS:HG2	16:CP:32:TYR:H	1.49	0.75
7:CG:16:LEU:HD11	9:CI:42:ARG:HA	1.68	0.75
3:CC:150:LYS:HD3	3:CC:201:TYR:HD1	1.51	0.75
5:AE:91:LEU:HD12	5:AE:120:THR:HG22	1.67	0.75
34:BH:85:LYS:HE2	34:BH:145:ALA:HB2	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:19:LYS:HG3	44:BV:20:LEU:O	1.85	0.75
27:DA:560:C:H4'	43:DU:52:ARG:HH22	1.49	0.75
43:DU:89:GLU:HG2	44:DV:50:PRO:HG3	1.69	0.75
27:DA:2615:U:C2	54:D5:7:PRO:HA	2.21	0.75
18:CR:82:THR:CG2	18:CR:83:GLU:H	1.98	0.75
31:DE:1:MET:N	31:DE:84:PHE:HB2	2.01	0.75
1:AA:751:U:C4'	15:AO:24:SER:HA	2.16	0.75
30:DD:43:ARG:NH1	30:DD:44:ASN:ND2	2.34	0.75
50:B1:29:GLY:O	50:B1:30:VAL:HG22	1.85	0.75
5:CE:53:LEU:HD12	5:CE:53:LEU:H	1.51	0.75
1:CA:1355:G:H2'	1:CA:1356:G:H8	1.50	0.75
27:BA:2845:G:O2'	27:BA:2846:G:H5'	1.85	0.75
33:DG:45:GLU:H	33:DG:88:ILE:HD13	1.51	0.75
27:DA:760:G:O2'	27:DA:761:A:H5'	1.85	0.75
27:DA:852:G:N2	27:DA:926:A:H1'	2.02	0.75
12:AL:48:ALA:C	12:AL:49:LEU:HD22	2.06	0.75
27:DA:1215:G:H2'	27:DA:1216:G:O4'	1.86	0.75
27:BA:1400:G:H2'	27:BA:1401:G:H8	1.50	0.75
42:DT:16:ARG:HB3	42:DT:19:LEU:HD11	1.67	0.75
4:AD:170:VAL:HG11	4:AD:174:LEU:HB2	1.68	0.75
18:CR:62:GLU:HA	18:CR:65:ILE:HD12	1.66	0.75
1:AA:837:G:O2'	1:AA:838:G:H5'	1.86	0.75
1:CA:9:G:H5'	5:CE:122:GLU:OE1	1.86	0.75
4:AD:58:LEU:O	4:AD:58:LEU:HD22	1.87	0.75
27:BA:1890:A:H2'	27:BA:1891:G:O4'	1.86	0.75
38:BP:49:ARG:HD2	57:B8:59:LYS:HG2	1.69	0.75
27:BA:2810:A:H2'	31:BE:61:ARG:HH21	1.51	0.75
27:DA:1822:G:O2'	27:DA:1823:G:H5'	1.86	0.75
47:DY:96:ILE:HD12	47:DY:99:CYS:CB	2.17	0.75
1:CA:1254:C:OP1	10:CJ:45:ARG:HA	1.86	0.75
47:DY:27:VAL:HG12	47:DY:28:LYS:N	2.01	0.75
47:DY:29:GLU:N	47:DY:29:GLU:OE1	2.20	0.75
55:B6:19:ARG:HG2	55:B6:20:ASN:N	2.00	0.75
1:CA:184:G:H2'	1:CA:185:A:H8	1.50	0.75
42:DT:62:THR:HA	42:DT:74:ARG:O	1.86	0.75
35:BI:123:LEU:HD21	35:BI:143:SER:O	1.87	0.75
33:BG:170:ARG:HD2	33:BG:174:GLU:HB2	1.68	0.75
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.01	0.75
13:AM:96:LEU:CD2	13:AM:97:PRO:HD2	2.16	0.75
17:CQ:4:LYS:HE3	17:CQ:6:LEU:HD11	1.67	0.75
27:BA:339:U:O2'	27:BA:340:A:H5'	1.84	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:17:G:H1	23:CW:54:U:H1'	1.51	0.75
31:BE:167:VAL:HG23	31:BE:170:LEU:HD11	1.68	0.75
47:BY:7:VAL:C	47:BY:8:LYS:HD2	2.06	0.75
27:BA:558:G:P	36:BN:111:PRO:HD2	2.26	0.75
27:DA:633:A:H2'	27:DA:634:C:C5'	2.14	0.75
27:BA:125:G:H21	56:B7:48:LYS:NZ	1.84	0.75
27:DA:2564:A:C2	27:DA:2647:U:H4'	2.21	0.75
15:AO:26:GLU:OE2	15:AO:77:ARG:HD2	1.86	0.75
27:BA:2870:C:H2'	27:BA:2871:C:C5'	2.15	0.75
25:AY:68:C:C2'	25:AY:69:C:H5''	2.16	0.75
27:DA:1697:G:H3'	27:DA:1698:A:H5''	1.69	0.75
27:DA:136:G:H1	27:DA:143(A):C:H42	1.33	0.75
35:DI:83:ALA:HA	35:DI:89:TYR:CE1	2.22	0.75
37:DO:6:THR:HG22	37:DO:7:TYR:H	1.51	0.75
27:BA:2571:C:H5'	27:BA:2572:A:C5'	2.16	0.75
27:BA:1179:C:H2'	27:BA:1180:C:H5''	1.67	0.75
8:AH:101:PRO:HG2	8:AH:133:LEU:HD11	1.67	0.75
10:CJ:40:LEU:HG	10:CJ:69:ASN:HB3	1.68	0.75
1:AA:1508:G:H2'	1:AA:1509:C:H6	1.51	0.75
27:BA:1843:C:H5'	30:BD:253:GLN:NE2	2.02	0.75
12:CL:73:ASN:ND2	12:CL:105:ALA:HB2	2.02	0.75
19:AS:24:ALA:O	19:AS:25:LYS:HB2	1.85	0.75
37:BO:16:ALA:HB2	37:BO:52:VAL:CG1	2.15	0.75
21:CU:2:GLY:C	21:CU:4:GLY:H	1.90	0.75
32:BF:63:LYS:HA	32:BF:76:GLY:O	1.87	0.75
32:DF:22:ALA:C	32:DF:24:LEU:H	1.87	0.75
27:DA:1560:G:N2	27:DA:1561:G:H1'	2.02	0.75
27:DA:2547:U:H2'	27:DA:2548:G:C8	2.21	0.75
1:AA:170:U:O2'	1:AA:171:A:H5'	1.86	0.75
27:BA:2466:C:H5''	58:B9:6:SER:HB2	1.67	0.75
30:BD:34:VAL:O	30:BD:34:VAL:HG13	1.87	0.75
43:BU:104:GLN:NE2	43:BU:105:VAL:HG23	1.98	0.75
32:DF:187:VAL:CG1	38:DP:7:ARG:HH21	1.99	0.75
3:CC:92:ALA:HB2	3:CC:99:VAL:CG2	2.16	0.75
38:BP:146:VAL:O	38:BP:148:LEU:HG	1.87	0.75
1:AA:441:A:H3'	1:AA:442:C:H6	1.49	0.75
1:AA:1068:G:OP2	1:AA:1094:G:H5''	1.86	0.75
1:CA:821:G:H2'	1:CA:822:C:H6	1.51	0.75
37:DO:87:ILE:HD11	37:DO:114:ILE:HD11	1.67	0.75
27:DA:1946:U:H2'	27:DA:1947:C:H6	1.52	0.75
40:BR:10:LEU:HA	40:BR:17:ARG:HD2	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BF:20:LEU:HD22	32:BF:203:GLN:NE2	2.01	0.75
57:D8:11:LYS:HE2	57:D8:64:TYR:HE1	1.51	0.75
27:DA:979:G:N2	27:DA:985:C:H42	1.85	0.75
41:BS:36:TYR:CD2	41:BS:52:SER:HB2	2.20	0.75
27:DA:908:C:H3'	39:DQ:22:LYS:HZ1	1.51	0.75
34:DH:144:VAL:O	34:DH:148:ILE:HG12	1.86	0.75
27:DA:520:G:H2'	27:DA:521:G:C8	2.22	0.75
51:D2:12:GLU:O	51:D2:16:LEU:HG	1.86	0.75
1:CA:1313:U:OP1	19:CS:6:LYS:HG3	1.87	0.75
30:BD:143:HIS:ND1	30:BD:194:GLY:O	2.19	0.75
33:DG:77:ILE:H	33:DG:83:ARG:HB3	1.51	0.75
3:CC:39:ILE:HG22	3:CC:43:LEU:HD12	1.68	0.75
27:DA:851:U:H3	27:DA:926:A:H61	1.33	0.75
27:DA:2887:U:H2'	27:DA:2888:C:C6	2.20	0.75
1:CA:840:C:H5''	1:CA:841:U:OP1	1.87	0.75
1:AA:1285:A:H5'	1:AA:1286:A:C8	2.21	0.75
50:B1:19:GLN:HB2	50:B1:36:GLY:H	1.52	0.75
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.69	0.75
27:DA:1947:C:H42	27:DA:1959:G:H1	1.35	0.75
1:CA:999:C:O2'	1:CA:1000:U:H5'	1.87	0.75
27:BA:549:G:H2'	27:BA:551:G:H5''	1.66	0.75
27:BA:2114:A:H2'	27:BA:2115:G:O4'	1.87	0.75
27:BA:1289:C:H5'	27:BA:1289:C:H6	1.51	0.75
11:CK:17:GLY:HA3	11:CK:77:MET:SD	2.26	0.75
1:AA:687:A:N3	1:AA:688:G:H1'	2.00	0.75
2:CB:27:LYS:HB2	2:CB:193:ASP:HB2	1.68	0.75
27:DA:649:G:H2'	27:DA:650:C:C6	2.22	0.75
4:AD:146:ILE:HD12	4:AD:146:ILE:H	1.50	0.75
25:AY:30:A:H2'	25:AY:31:U:H6	1.50	0.75
27:DA:1590:U:H2'	27:DA:1591:G:H5''	1.68	0.75
39:DQ:85:LYS:CG	49:D0:7:LEU:HD13	2.16	0.75
27:DA:800:A:H1'	27:DA:802:A:OP2	1.86	0.75
36:BN:93:THR:HG23	36:BN:93:THR:O	1.86	0.75
17:AQ:74:LEU:HD13	17:AQ:74:LEU:O	1.86	0.75
27:DA:271(M):G:H2'	27:DA:271(N):U:H5''	1.69	0.75
40:DR:11:ASN:HB3	40:DR:12:ARG:NH1	2.01	0.75
7:CG:78:ARG:CG	7:CG:79:ARG:H	1.99	0.75
27:DA:1416:G:O2'	27:DA:1417:C:H6	1.68	0.75
5:CE:15:ARG:HG3	5:CE:28:PHE:CE2	2.21	0.75
3:CC:40:ARG:HB3	3:CC:44:GLU:OE2	1.87	0.75
29:DC:77:ILE:HG21	29:DC:123:VAL:H	1.52	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DO:87:ILE:HG21	37:DO:91:LEU:HA	1.69	0.75
18:AR:43:PHE:O	18:AR:51:LEU:HD12	1.87	0.75
10:CJ:12:ASP:OD1	10:CJ:15:THR:HG23	1.86	0.75
8:CH:72:PRO:O	8:CH:73:ASP:HB3	1.85	0.75
27:BA:176:G:O2'	27:BA:177:G:H5'	1.85	0.75
27:BA:514:A:H1'	27:BA:581:C:O2'	1.87	0.75
4:AD:98:GLU:HG3	4:AD:103:ASN:ND2	2.01	0.75
4:CD:146:ILE:HD12	4:CD:146:ILE:N	2.02	0.75
38:BP:23:PRO:HD2	38:BP:33:ARG:NH2	2.01	0.75
38:DP:48:PRO:CG	38:DP:49:ARG:H	1.99	0.75
27:BA:559:G:H22	43:BU:49:HIS:CD2	2.05	0.75
55:D6:33:LYS:HA	55:D6:33:LYS:CE	2.05	0.75
34:BH:44:VAL:HG12	34:BH:45:VAL:N	1.97	0.75
30:BD:118:VAL:HG22	30:BD:119:ALA:N	1.97	0.75
42:DT:28:VAL:HB	42:DT:88:ILE:HG12	1.68	0.75
27:DA:2756:U:H4'	27:DA:2757:A:O5'	1.85	0.75
27:BA:2875:C:O2'	42:BT:5:ALA:CB	2.35	0.75
36:DN:58:ASP:O	36:DN:60:ILE:N	2.18	0.75
35:BI:115:ALA:CB	35:BI:129:THR:H	1.98	0.75
1:AA:1239:A:H62	1:AA:1299:A:H62	1.33	0.75
27:BA:71:A:H3'	27:BA:71:A:OP2	1.86	0.75
27:BA:271(U):G:O2'	27:BA:271(V):G:H5'	1.87	0.75
58:D9:4:ARG:O	58:D9:36:GLN:HA	1.87	0.75
27:DA:2283:C:H2'	27:DA:2284:C:H5'	1.68	0.75
43:BU:8:VAL:HG11	43:BU:12:ARG:NE	2.01	0.75
33:DG:161:THR:HG22	33:DG:163:ALA:H	1.50	0.75
27:BA:703:U:C2'	27:BA:704:G:H5'	2.16	0.75
6:AF:75:LEU:HD23	6:AF:79:LEU:HG	1.68	0.75
36:DN:70:LYS:HB3	36:DN:87:LEU:HB2	1.69	0.75
27:DA:1968:G:C2'	27:DA:1969:A:H5''	2.15	0.75
19:CS:19:VAL:CG1	19:CS:44:MET:HG3	2.14	0.75
27:DA:140:G:HO2'	27:DA:141:A:H2	1.35	0.75
27:BA:1273:U:H6	27:BA:1273:U:C5'	2.00	0.75
1:CA:1285:A:O2'	1:CA:1286:A:OP2	2.04	0.75
35:DI:37:VAL:CG1	35:DI:38:LEU:HD12	2.16	0.75
48:BZ:152:SER:H	48:BZ:166:PRO:HB3	1.51	0.75
34:DH:147:ASN:N	34:DH:147:ASN:HD22	1.85	0.75
11:AK:61:ALA:O	11:AK:64:ALA:HB3	1.85	0.75
35:DI:81:VAL:HG12	35:DI:82:ARG:H	1.51	0.75
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.68	0.75
37:DO:35:VAL:HG21	37:DO:69:ILE:CD1	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:57:A:H2'	25:CY:60:C:H41	1.52	0.75
21:CU:24:ARG:O	21:CU:25:LYS:HB2	1.85	0.75
1:AA:992:U:H3	1:AA:1044:A:H62	1.33	0.75
40:BR:24:GLN:NE2	40:BR:36:THR:HG21	2.02	0.74
30:DD:239:ARG:NH2	30:DD:239:ARG:HG2	1.88	0.74
32:DF:126:VAL:O	32:DF:196:LEU:HG	1.87	0.74
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.69	0.74
27:DA:2509:G:H2'	27:DA:2510:C:H6	1.52	0.74
27:DA:2550:G:C2'	27:DA:2551:C:H5'	2.17	0.74
27:DA:820:A:H2'	27:DA:821:A:O4'	1.86	0.74
38:DP:33:ARG:O	38:DP:34:GLY:C	2.25	0.74
20:AT:63:ILE:HD13	20:AT:80:ARG:HB2	1.69	0.74
35:DI:133:HIS:HB2	35:DI:134:PRO:CD	2.16	0.74
1:CA:386:C:H2'	1:CA:387:U:C5'	2.17	0.74
34:DH:85:LYS:HB3	34:DH:133:VAL:O	1.87	0.74
41:DS:89:ARG:HB3	41:DS:92:TYR:HB2	1.69	0.74
27:BA:748:G:C8	45:BW:89:ALA:HB1	2.21	0.74
20:CT:48:LYS:O	20:CT:49:ALA:HB2	1.87	0.74
39:BQ:106:VAL:HG21	39:BQ:114:ALA:HB1	1.67	0.74
27:DA:2560:C:N4	27:DA:2561:A:H62	1.84	0.74
37:DO:1:MET:HG3	37:DO:32:TYR:CD1	2.22	0.74
25:CY:68:C:C2'	25:CY:69:C:H5''	2.17	0.74
34:DH:17:VAL:HB	34:DH:45:VAL:HG13	1.69	0.74
23:CW:53:U:H4'	39:DQ:52:VAL:HG22	1.69	0.74
33:DG:114:ILE:HG12	33:DG:140:ILE:HD13	1.68	0.74
42:DT:105:LEU:HB3	42:DT:109:GLU:OE1	1.86	0.74
52:D3:7:LYS:HG2	52:D3:8:LEU:H	1.50	0.74
37:DO:87:ILE:HG22	37:DO:88:ASN:O	1.87	0.74
1:AA:9:G:OP1	5:AE:122:GLU:HG3	1.86	0.74
43:BU:29:SER:O	43:BU:30:LYS:HD3	1.87	0.74
30:BD:137:PRO:O	30:BD:140:THR:HG23	1.85	0.74
27:BA:1033:U:H5''	27:BA:1034:G:OP1	1.87	0.74
51:B2:4:SER:O	51:B2:7:ARG:HG2	1.86	0.74
27:DA:55:G:H2'	27:DA:56:A:H8	1.50	0.74
13:CM:30:ALA:O	13:CM:34:LEU:HG	1.86	0.74
43:BU:83:LEU:HG	43:BU:88:ILE:HG13	1.70	0.74
55:D6:15:GLU:HG2	55:D6:18:ARG:HE	1.51	0.74
27:DA:2384:G:H5''	27:DA:2386:C:OP1	1.87	0.74
1:AA:943:U:H1'	9:AI:124:GLN:HE22	1.52	0.74
42:DT:35:LYS:NZ	42:DT:41:ARG:HE	1.86	0.74
16:AP:21:VAL:CG1	16:AP:33:ILE:HB	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.52	0.74
39:DQ:44:ALA:HB3	39:DQ:45:GLN:HE21	1.50	0.74
33:BG:51:ARG:NE	33:BG:51:ARG:HA	2.00	0.74
27:BA:71:A:C8	27:BA:71:A:H5'	2.21	0.74
27:DA:265:A:H1'	27:DA:266:G:O4'	1.86	0.74
1:CA:939:G:H5''	7:CG:102:ARG:HH12	1.52	0.74
46:DX:64:LYS:HZ2	46:DX:73:ARG:HH12	1.34	0.74
48:BZ:102:ARG:HD3	48:BZ:135:PHE:CE1	2.22	0.74
27:DA:1468:C:H2'	27:DA:1469:A:H8	1.52	0.74
40:BR:100:LEU:HD21	40:BR:113:LEU:CD1	2.13	0.74
27:BA:485:C:H2'	27:BA:486:C:C6	2.22	0.74
27:DA:1157:G:H2'	27:DA:1158:C:C6	2.22	0.74
27:DA:533:G:O2'	43:DU:42:ALA:HB2	1.88	0.74
27:DA:993:G:O2'	27:DA:994:C:H5'	1.87	0.74
43:DU:74:LEU:HD12	43:DU:74:LEU:O	1.88	0.74
30:DD:72:LYS:HE2	30:DD:101:GLU:OE2	1.87	0.74
30:DD:30:GLU:HA	30:DD:83:GLU:OE1	1.87	0.74
47:DY:28:LYS:N	47:DY:28:LYS:HZ2	1.84	0.74
1:AA:323:U:O3'	20:AT:22:ARG:HD3	1.86	0.74
4:AD:8:VAL:HB	4:AD:22:LYS:NZ	2.03	0.74
34:BH:45:VAL:O	34:BH:45:VAL:HG12	1.87	0.74
47:BY:29:GLU:N	47:BY:29:GLU:OE1	2.20	0.74
27:BA:1643:G:N2	27:BA:1644:C:H1'	2.01	0.74
1:CA:1191:A:H5''	3:CC:4:LYS:NZ	2.02	0.74
12:AL:80:VAL:HA	12:AL:102:TYR:HD1	1.51	0.74
38:BP:126:VAL:HA	38:BP:145:PRO:HB2	1.66	0.74
27:DA:962:G:O2'	27:DA:963:U:H5'	1.85	0.74
33:DG:111:LEU:HD22	33:DG:117:PHE:CZ	2.22	0.74
15:AO:33:THR:HG23	15:AO:63:ARG:HH11	1.52	0.74
1:CA:1154:G:O2'	1:CA:1155:G:H8	1.68	0.74
27:BA:676:A:H2	27:BA:802:A:H61	1.33	0.74
27:BA:648:G:H2'	27:BA:649:G:C8	2.21	0.74
4:AD:105:VAL:HG13	4:AD:110:PHE:CD2	2.21	0.74
27:BA:1441:G:H2'	27:BA:1442:G:H8	1.51	0.74
6:AF:16:GLN:NE2	6:AF:16:GLN:N	2.34	0.74
2:AB:61:LEU:CD2	2:AB:68:ILE:HD11	2.17	0.74
37:DO:18:LYS:HB2	37:DO:45:GLU:HG2	1.69	0.74
27:BA:2052:G:H4'	31:BE:143:ASN:O	1.87	0.74
5:AE:11:ILE:HG21	5:AE:105:VAL:HG22	1.67	0.74
23:AW:10:G:N2	23:AW:25:A:H1'	2.02	0.74
28:DB:20:C:C2'	28:DB:21:G:H5'	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1408:A:O2'	1:AA:1409:C:H5'	1.87	0.74
28:BB:91:C:H2'	28:BB:92:C:C6	2.23	0.74
27:BA:2834:G:H5'	27:BA:2835:A:OP2	1.87	0.74
1:CA:425:G:O2'	1:CA:426:G:H5'	1.86	0.74
2:AB:69:LEU:CD2	2:AB:159:PRO:HG2	2.18	0.74
1:CA:259:G:O2'	1:CA:260:G:H5'	1.87	0.74
27:BA:2580:U:H5'	31:BE:131:ALA:HB2	1.68	0.74
27:BA:151:C:O2'	27:BA:152:G:H5'	1.87	0.74
27:DA:2815:C:H2'	27:DA:2816:C:H6	1.51	0.74
5:CE:105:VAL:O	5:CE:108:ALA:HB3	1.87	0.74
11:CK:21:ILE:HD11	11:CK:82:VAL:HG13	1.68	0.74
10:CJ:22:LYS:NZ	10:CJ:23:ILE:HG12	2.03	0.74
2:AB:68:ILE:HD12	2:AB:161:ALA:HB3	1.69	0.74
28:DB:22:U:H3	28:DB:61:G:H1	1.35	0.74
1:AA:1464:G:O2'	1:AA:1465:C:H5'	1.87	0.74
1:CA:20:U:H2'	1:CA:21:G:O4'	1.87	0.74
27:BA:406:G:H8	27:BA:406:G:O5'	1.70	0.74
4:CD:33:MET:CE	4:CD:37:PRO:HA	2.17	0.74
27:DA:1495:A:H2'	27:DA:1496:A:C2	2.23	0.74
38:DP:106:LEU:HD11	38:DP:112:LEU:HB2	1.69	0.74
30:BD:64:ILE:HG23	30:BD:64:ILE:O	1.87	0.74
12:CL:25:LYS:NZ	12:CL:30:ARG:HH22	1.85	0.74
27:DA:133:C:H42	27:DA:146:G:H1	0.83	0.74
1:AA:1397:C:H3'	1:AA:1398:A:H5'	1.66	0.74
29:DC:78:ALA:HB2	29:DC:82:LYS:HD2	1.69	0.74
27:BA:2516:G:H2'	27:BA:2517:C:H5'	1.70	0.74
37:DO:35:VAL:HG22	37:DO:65:THR:CG2	2.17	0.74
37:BO:110:GLY:HA2	37:BO:112:MET:HE3	1.68	0.74
27:BA:1929:G:H4'	27:BA:1930:G:OP1	1.86	0.74
6:AF:18:GLN:HA	6:AF:21:LEU:HB2	1.69	0.74
7:AG:28:ASN:HA	7:AG:31:MET:HE2	1.68	0.74
27:BA:1848:A:HO2'	27:BA:1849:G:H8	1.31	0.74
27:BA:2412:A:H2'	27:BA:2413:G:O4'	1.87	0.74
36:BN:32:THR:HG22	36:BN:37:LYS:HB3	1.67	0.74
31:BE:9:VAL:HG12	31:BE:25:VAL:O	1.88	0.74
27:BA:634:C:H2'	27:BA:635:C:C6	2.22	0.74
31:DE:116:VAL:O	31:DE:117:MET:CB	2.33	0.74
30:BD:31:LYS:HB3	30:BD:35:LYS:HG3	1.68	0.74
30:BD:60:ARG:HD3	30:BD:86:PRO:CB	2.16	0.74
27:BA:71:A:H5''	27:BA:73:A:C8	2.23	0.74
27:BA:64:A:C4	46:BX:66:LEU:HD12	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DI:83:ALA:CB	35:DI:88:ILE:HA	2.17	0.74
27:BA:847:U:H2'	27:BA:848:G:H5''	1.69	0.74
14:AN:13:THR:N	14:AN:14:PRO:HD2	2.02	0.74
27:DA:66:C:H2'	27:DA:67:U:C6	2.22	0.74
2:AB:21:ARG:HB2	2:AB:38:GLY:O	1.86	0.74
5:AE:72:GLN:HE21	5:AE:144:THR:HG22	1.52	0.74
27:BA:591:C:O2	57:B8:2:PRO:HA	1.87	0.74
44:BV:34:GLU:HG2	44:BV:36:PRO:HD3	1.69	0.74
31:BE:40:GLU:N	31:BE:40:GLU:OE1	2.21	0.74
27:BA:2415:G:H4'	38:BP:66:GLY:HA3	1.67	0.74
1:CA:971:G:H5''	1:CA:972:C:H5''	1.69	0.74
34:BH:138:LYS:H	34:BH:141:VAL:HG23	1.51	0.74
13:CM:66:LEU:O	13:CM:67:GLU:O	2.06	0.74
27:DA:411:G:N2	38:DP:71:VAL:HG21	2.02	0.74
27:DA:1014:U:H2'	27:DA:1015:G:C8	2.22	0.74
27:DA:1567:A:H5''	30:DD:58:HIS:CD2	2.23	0.74
12:CL:67:ILE:HD13	12:CL:74:LEU:HD12	1.68	0.74
31:DE:117:MET:O	31:DE:118:LYS:HB2	1.86	0.74
55:B6:41:PRO:HD3	55:B6:46:HIS:HB3	1.68	0.74
45:BW:15:ARG:HA	45:BW:18:ARG:HD2	1.69	0.74
1:CA:237:C:H5''	17:CQ:25:ARG:NH1	2.02	0.74
6:AF:10:LEU:HD12	6:AF:10:LEU:N	2.02	0.74
27:DA:2181:G:O2'	27:DA:2182:G:H5'	1.88	0.74
51:B2:33:MET:C	51:B2:35:LEU:H	1.91	0.74
27:DA:2312:U:H2'	27:DA:2313:C:H5''	1.70	0.74
13:AM:57:ARG:CZ	53:B4:60:GLU:HG3	2.18	0.74
39:DQ:42:ILE:HD12	39:DQ:42:ILE:H	1.52	0.74
27:DA:2836:U:H2'	27:DA:2837:G:C8	2.22	0.74
8:CH:104:ARG:CB	8:CH:108:GLY:H	2.01	0.74
10:AJ:63:PHE:HB3	14:AN:58:LYS:HA	1.69	0.74
32:DF:57:VAL:CG1	32:DF:59:TYR:CD1	2.71	0.74
2:AB:114:ARG:HA	2:AB:117:GLU:HB2	1.69	0.74
28:DB:28:C:O2'	28:DB:29:A:H5'	1.87	0.74
1:CA:256:U:H2'	1:CA:257:G:H8	1.50	0.74
45:BW:81:ALA:O	45:BW:82:LEU:HD23	1.88	0.74
27:BA:2533:A:H2'	27:BA:2534:A:H5''	1.70	0.74
2:CB:36:ARG:NE	2:CB:36:ARG:HA	2.02	0.74
27:BA:1322:A:H2'	27:BA:1323:U:H6	1.51	0.74
36:DN:18:ALA:HB1	36:DN:21:LYS:HB2	1.68	0.74
13:CM:51:ALA:O	13:CM:55:ARG:HB3	1.87	0.74
1:CA:985:C:HO2'	1:CA:986:A:H8	1.36	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:47:VAL:HB	44:BV:49:THR:O	1.88	0.74
9:AI:95:LYS:O	9:AI:99:LEU:HB2	1.87	0.74
8:AH:35:ILE:O	8:AH:39:LEU:HD23	1.88	0.74
42:DT:88:ILE:HG22	42:DT:89:VAL:HG23	1.68	0.74
1:AA:531:U:H5''	1:AA:532:A:OP1	1.87	0.74
48:DZ:150:HIS:CB	48:DZ:169:THR:HG22	2.18	0.74
27:DA:15:G:OP1	54:D5:24:ALA:HB2	1.87	0.74
35:BI:133:HIS:HB2	35:BI:134:PRO:HD2	1.70	0.74
51:B2:53:LEU:HD22	51:B2:57:ILE:HD11	1.69	0.74
27:DA:2339:G:O2'	27:DA:2340:G:H5'	1.88	0.74
1:AA:979:C:C3'	1:AA:980:C:H5''	2.17	0.74
32:BF:164:ARG:HH11	32:BF:164:ARG:HG2	1.52	0.74
27:DA:1225:G:OP1	44:DV:86:GLY:HA3	1.88	0.74
11:AK:79:SER:HB2	11:AK:106:LYS:HE2	1.69	0.74
28:BB:88:C:H2'	28:BB:89:G:C8	2.23	0.74
53:B4:53:THR:O	53:B4:54:LYS:HG2	1.85	0.74
1:AA:21:G:H2'	1:AA:22:G:C8	2.23	0.74
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.23	0.74
27:DA:1400:G:H2'	27:DA:1401:G:H8	1.52	0.74
5:AE:129:ILE:CG2	5:AE:130:ASN:H	1.95	0.74
27:BA:1902:C:O2'	30:BD:244:ARG:HB2	1.88	0.74
31:DE:51:PHE:CE1	31:DE:52:LEU:HD13	2.22	0.74
27:DA:2426:A:H3'	27:DA:2427:C:C5'	2.18	0.74
38:DP:102:ARG:HG2	38:DP:102:ARG:O	1.87	0.74
34:BH:20:ALA:HB3	34:BH:23:ARG:HB2	1.70	0.74
30:BD:35:LYS:HZ3	30:BD:103:ARG:CA	1.99	0.74
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.17	0.74
8:AH:110:ALA:HB3	8:AH:121:ASP:HB3	1.70	0.74
42:DT:28:VAL:HG13	42:DT:46:GLU:HA	1.69	0.74
35:BI:129:THR:HG22	35:BI:137:PRO:HG3	1.69	0.74
35:BI:77:LEU:HD23	35:BI:78:THR:H	1.51	0.74
37:DO:101:PRO:HG3	42:DT:67:SER:OG	1.88	0.74
27:BA:986:C:O2'	27:BA:987:G:H5'	1.88	0.74
1:CA:1471:G:O2'	1:CA:1472:U:H5'	1.87	0.74
27:BA:1447:G:H2'	27:BA:1448:G:H8	1.53	0.74
57:B8:23:VAL:HG12	57:B8:46:ARG:HB3	1.70	0.74
27:BA:356:G:H5'	27:BA:357:A:OP2	1.88	0.74
27:BA:2298:A:C2	27:BA:2299:G:H1'	2.23	0.74
13:CM:14:ARG:H	13:CM:44:ARG:NH1	1.84	0.74
30:BD:36:PRO:HB2	30:BD:61:LEU:HD11	1.70	0.74
19:AS:44:MET:O	19:AS:47:HIS:HB2	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:96:ARG:H	2:CB:96:ARG:CD	2.01	0.74
27:DA:514:A:C2'	27:DA:515:A:H5'	2.18	0.74
46:BX:12:VAL:HB	46:BX:17:ALA:CB	2.17	0.74
27:BA:1557:C:OP2	27:BA:1558:A:H2'	1.87	0.74
55:B6:33:LYS:HA	55:B6:33:LYS:HE2	1.69	0.74
3:AC:53:ALA:HB2	3:AC:115:LEU:HG	1.69	0.74
25:CY:40:C:H2'	25:CY:41:G:H8	1.51	0.74
40:DR:26:LYS:HE2	40:DR:71:GLN:H	1.52	0.74
15:CO:7:GLU:O	15:CO:11:VAL:HG23	1.88	0.74
1:AA:954:G:H21	1:AA:1227:A:H62	1.36	0.74
13:AM:104:ARG:CG	13:AM:105:THR:H	2.01	0.74
13:CM:88:ARG:HA	13:CM:98:VAL:CG1	2.17	0.74
46:DX:61:GLY:HA3	46:DX:73:ARG:O	1.88	0.74
23:AW:22:G:H2'	23:AW:23:G:H5'	1.68	0.74
5:CE:101:ILE:N	5:CE:101:ILE:HD13	2.03	0.74
1:CA:1479:C:O2'	1:CA:1480:G:H5'	1.88	0.74
1:CA:93:G:C2'	1:CA:96:U:H5'	2.16	0.74
19:CS:32:LYS:HE3	19:CS:32:LYS:N	2.03	0.73
32:BF:20:LEU:HB3	32:BF:23:ASP:OD1	1.88	0.73
27:DA:1022:G:O6	36:DN:66:LYS:HE2	1.87	0.73
4:CD:82:ALA:CB	4:CD:89:THR:HG23	2.16	0.73
27:BA:673:C:H2'	27:BA:674:G:H5'	1.70	0.73
27:DA:36:G:H4'	27:DA:451:C:C2	2.23	0.73
31:DE:34:VAL:O	31:DE:35:GLN:HB2	1.87	0.73
27:DA:1991:U:O2'	27:DA:1992:G:H5''	1.87	0.73
4:AD:9:CYS:SG	60:AD:302:ZN:ZN	1.77	0.73
30:BD:35:LYS:H	30:BD:36:PRO:HD2	1.53	0.73
1:AA:1360:A:O2'	1:AA:1361:G:H5'	1.88	0.73
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.85	0.73
1:CA:386:C:O2'	1:CA:387:U:H5'	1.88	0.73
36:DN:13:TRP:O	36:DN:135:PRO:HD2	1.88	0.73
15:CO:82:ILE:HG12	15:CO:87:ILE:HB	1.68	0.73
5:AE:141:GLN:HG2	5:AE:143:ARG:HH22	1.53	0.73
33:DG:131:TYR:HE2	33:DG:133:LEU:HD23	1.53	0.73
27:DA:271(H):G:H2'	27:DA:271(I):G:C8	2.22	0.73
27:DA:340:A:H2'	27:DA:341:G:O4'	1.87	0.73
36:DN:67:LEU:HB3	36:DN:88:GLU:HG2	1.70	0.73
1:AA:179:A:H2'	1:AA:180:U:C6	2.23	0.73
27:BA:344:G:H22	27:BA:345:A:H62	1.32	0.73
27:BA:1192:G:C2'	27:BA:1193:G:H5''	2.18	0.73
3:AC:141:VAL:HG11	3:AC:149:ALA:HB2	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:633:A:H2'	27:BA:634:C:H5'	1.70	0.73
40:BR:23:ASN:H	40:BR:23:ASN:HD22	1.36	0.73
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.70	0.73
27:BA:2728:U:C2'	27:BA:2729:G:H5'	2.18	0.73
44:BV:21:ARG:HB3	44:BV:91:TYR:HB2	1.70	0.73
30:BD:26:LYS:HZ3	30:BD:82:ILE:N	1.86	0.73
39:DQ:81:VAL:CG2	49:D0:7:LEU:HD21	2.17	0.73
38:DP:23:PRO:HD2	38:DP:33:ARG:NH2	2.02	0.73
39:BQ:118:LEU:CD1	39:BQ:131:ILE:HG23	2.17	0.73
27:BA:1686:C:H6	27:BA:1686:C:C5'	2.01	0.73
27:DA:2758:A:H2'	27:DA:2759:G:C5'	2.17	0.73
6:CF:3:ARG:HH11	6:CF:3:ARG:HG3	1.53	0.73
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.70	0.73
1:CA:350:G:H2'	1:CA:351:G:C8	2.23	0.73
39:DQ:55:VAL:HG13	39:DQ:56:ARG:N	2.03	0.73
27:BA:747:U:C5	54:B5:3:LYS:HB2	2.22	0.73
2:CB:194:PRO:O	2:CB:196:LEU:HD12	1.87	0.73
1:AA:57:G:H2'	1:AA:58:C:C6	2.23	0.73
39:DQ:79:LEU:HD22	39:DQ:80:GLU:HG3	1.68	0.73
27:DA:2327:A:H2'	27:DA:2328:A:C8	2.24	0.73
51:D2:43:GLN:O	51:D2:44:LEU:HB2	1.87	0.73
1:CA:1075:C:OP1	2:CB:103:THR:HG21	1.87	0.73
33:BG:103:LEU:HA	33:BG:106:LEU:HB3	1.70	0.73
31:BE:77:ILE:HG22	31:BE:78:LEU:N	1.98	0.73
1:CA:472:A:H4'	16:CP:82:GLN:HE22	1.52	0.73
27:DA:1130:U:OP2	27:DA:2570:G:N2	2.18	0.73
27:DA:2572:A:H5''	27:DA:2574:G:C4'	2.17	0.73
1:CA:199:G:O2'	1:CA:200:G:H8	1.71	0.73
8:AH:27:PRO:O	8:AH:32:LYS:NZ	2.19	0.73
30:BD:44:ASN:HB3	30:BD:48:ARG:O	1.87	0.73
3:CC:134:ILE:HD11	3:CC:153:VAL:HG23	1.70	0.73
6:CF:33:TYR:HB2	6:CF:75:LEU:HD12	1.71	0.73
30:DD:35:LYS:O	30:DD:64:ILE:HG22	1.88	0.73
27:DA:1211:U:H4'	27:DA:1212:G:OP2	1.87	0.73
27:DA:484:C:H2'	27:DA:485:C:C6	2.22	0.73
27:BA:1550:C:H2'	27:BA:1551:C:C6	2.23	0.73
31:DE:103:ASP:OD2	31:DE:201:THR:HA	1.87	0.73
7:CG:120:ILE:HG22	7:CG:124:LEU:HD12	1.70	0.73
7:CG:59:LEU:O	7:CG:59:LEU:HD23	1.87	0.73
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.69	0.73
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B2:41:ILE:HD11	51:B2:44:LEU:HB2	1.70	0.73
57:D8:53:PRO:O	57:D8:56:GLU:N	2.19	0.73
27:BA:483:A:HO2'	47:BY:60:PHE:HZ	1.34	0.73
34:BH:44:VAL:CG1	34:BH:45:VAL:H	1.99	0.73
1:CA:1175:G:H2'	1:CA:1176:A:C8	2.24	0.73
27:DA:1459:G:H2'	27:DA:1461:G:OP2	1.89	0.73
19:CS:60:VAL:HG21	19:CS:74:PHE:HB3	1.68	0.73
13:AM:57:ARG:NH1	53:B4:60:GLU:HA	2.03	0.73
37:DO:101:PRO:HD2	42:DT:70:VAL:CG2	2.18	0.73
12:AL:10:LYS:HD2	12:AL:10:LYS:N	2.03	0.73
2:CB:147:LYS:HE2	2:CB:148:TYR:CE1	2.22	0.73
47:DY:43:ASN:HD21	47:DY:64:GLU:HG3	1.53	0.73
1:CA:116:A:H2'	1:CA:117:G:C8	2.21	0.73
27:DA:398:G:H2'	27:DA:399:G:H8	1.54	0.73
27:DA:1496:A:H2'	27:DA:1498:C:C4	2.23	0.73
52:B3:8:LEU:HB2	52:B3:28:LEU:HD13	1.69	0.73
1:CA:1296:C:H5'	13:CM:44:ARG:HH22	1.52	0.73
10:AJ:51:ARG:HG2	14:AN:45:ARG:NH1	2.03	0.73
16:AP:2:VAL:HG23	16:AP:22:THR:O	1.89	0.73
38:DP:7:ARG:O	38:DP:10:PRO:CD	2.36	0.73
1:CA:965:A:H4'	1:CA:966:G:OP1	1.88	0.73
51:D2:16:LEU:H	51:D2:67:LYS:NZ	1.87	0.73
48:DZ:39:ASP:HB3	48:DZ:42:GLU:HB2	1.70	0.73
25:AY:65:U:H2'	25:AY:66:A:C8	2.23	0.73
4:AD:149:ALA:HB3	4:AD:152:SER:CB	2.18	0.73
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.24	0.73
27:DA:620:G:H4'	27:DA:621:A:H5''	1.71	0.73
30:DD:153:ALA:C	30:DD:154:LYS:HG2	2.09	0.73
11:CK:123:LYS:HA	11:CK:126:ARG:HG3	1.70	0.73
27:BA:940:G:H2'	27:BA:941:A:O4'	1.87	0.73
41:BS:16:ASN:ND2	41:BS:92:TYR:CE1	2.56	0.73
27:BA:29:U:H2'	27:BA:30:G:H8	1.54	0.73
1:AA:918:A:H2'	1:AA:919:A:C8	2.24	0.73
1:CA:1250:A:C5'	9:CI:67:GLY:HA2	2.17	0.73
28:BB:83:G:H1	28:BB:94:C:H42	1.34	0.73
27:DA:2258:C:H4'	27:DA:2259:G:OP2	1.88	0.73
27:DA:2394:C:C2'	27:DA:2395:C:H5'	2.18	0.73
27:DA:2493:U:C5	27:DA:2494:G:C8	2.76	0.73
31:DE:154:LYS:O	31:DE:156:MET:HG3	1.88	0.73
1:CA:1494:G:H8	26:CZ:3:SER:HB3	1.54	0.73
32:DF:184:TYR:CE2	32:DF:188:ARG:HD2	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1305:C:O2'	27:DA:1306:C:H5'	1.88	0.73
35:BI:77:LEU:CD2	35:BI:78:THR:H	2.01	0.73
36:BN:15:LEU:CD1	36:BN:136:GLU:HG2	2.19	0.73
27:BA:1417:C:H42	27:BA:1581:G:H1	1.35	0.73
27:DA:2560:C:N4	27:DA:2561:A:N6	2.37	0.73
37:DO:97:ARG:O	37:DO:98:VAL:HG12	1.89	0.73
33:BG:47:LYS:HE2	33:BG:81:LYS:HE3	1.70	0.73
1:AA:1492:A:H2'	1:AA:1493:A:C8	2.24	0.73
31:BE:68:ALA:C	31:BE:70:ALA:H	1.91	0.73
33:BG:34:LEU:HA	33:BG:161:THR:HG23	1.71	0.73
34:DH:103:LEU:HD22	34:DH:123:PHE:CD2	2.23	0.73
40:BR:10:LEU:HB3	40:BR:17:ARG:NE	2.03	0.73
4:AD:98:GLU:HG3	4:AD:103:ASN:HD21	1.52	0.73
27:DA:1427:A:H4'	27:DA:1428:C:O5'	1.88	0.73
27:DA:898:C:H2'	27:DA:899:A:H5'	1.71	0.73
1:CA:1086:U:H2'	1:CA:1087:G:O4'	1.88	0.73
1:CA:1457:G:O2'	1:CA:1458:G:H5'	1.89	0.73
12:CL:38:ARG:NH1	12:CL:38:ARG:HB3	2.03	0.73
27:BA:2773:C:H2'	27:BA:2774:C:H6	1.54	0.73
38:BP:50:ARG:HG2	38:BP:50:ARG:HH21	1.53	0.73
4:CD:200:GLU:HG2	4:CD:201:GLN:H	1.51	0.73
30:DD:77:ALA:HB2	30:DD:97:TYR:CE2	2.24	0.73
27:DA:2383:G:H2'	27:DA:2384:G:H8	1.52	0.73
31:DE:91:VAL:O	31:DE:92:THR:HG23	1.88	0.73
47:BY:10:GLY:C	47:BY:27:VAL:HG22	2.09	0.73
8:AH:54:ASP:HB2	8:AH:56:LYS:HE2	1.70	0.73
41:BS:46:VAL:CG1	41:BS:47:THR:H	1.99	0.73
1:AA:1424:C:H2'	1:AA:1425:U:O4'	1.89	0.73
35:DI:5:LEU:HD13	35:DI:17:GLN:HB3	1.70	0.73
20:AT:50:GLU:HG3	20:AT:51:GLU:H	1.54	0.73
27:BA:1509(A):A:H2'	27:BA:1509(B):A:C8	2.23	0.73
1:AA:1187:G:OP1	9:AI:113:LYS:HE2	1.89	0.73
36:BN:17:ASP:HB2	36:BN:55:VAL:CG1	2.19	0.73
11:CK:59:TYR:O	11:CK:62:GLN:HB3	1.88	0.73
51:B2:43:GLN:O	51:B2:44:LEU:HD22	1.89	0.73
4:CD:80:GLU:O	4:CD:84:LYS:HE2	1.89	0.73
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.52	0.73
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.23	0.73
46:DX:57:LEU:HD11	46:DX:78:LYS:HG2	1.71	0.73
30:BD:31:LYS:HD2	30:BD:33:LEU:HD13	1.70	0.73
1:CA:397:A:H5"	1:CA:397:A:N3	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:163:PHE:HA	2:AB:185:ILE:O	1.89	0.73
16:AP:26:ARG:HD2	16:AP:31:LYS:O	1.88	0.73
17:AQ:51:TYR:CE1	17:AQ:73:VAL:HG11	2.24	0.73
3:CC:83:ARG:O	3:CC:86:VAL:HG22	1.88	0.73
13:AM:24:GLY:C	13:AM:25:ILE:HD12	2.09	0.73
1:AA:1139:G:H4'	1:AA:1140:C:O5'	1.89	0.73
27:BA:271(S):G:C2'	27:BA:271(T):C:H5'	2.18	0.73
33:BG:2:PRO:C	33:BG:4:ASP:H	1.92	0.73
32:DF:170:LEU:HD23	32:DF:173:VAL:HG23	1.71	0.73
13:CM:93:ARG:C	13:CM:94:ARG:HD2	2.09	0.73
27:DA:64:A:C5	46:DX:66:LEU:HD13	2.24	0.73
1:CA:254:G:O2'	1:CA:255:G:H5'	1.87	0.73
27:DA:2113:U:HO2'	27:DA:2114:A:H8	1.33	0.73
37:DO:8:LEU:HD22	37:DO:8:LEU:H	1.52	0.73
17:AQ:29:HIS:HE1	17:AQ:31:LEU:HB3	1.54	0.73
9:AI:26:VAL:HG13	9:AI:61:ALA:HB3	1.70	0.73
24:CX:29:G:O2'	24:CX:30:G:H5'	1.89	0.73
27:BA:476:G:H4'	27:BA:502:A:N1	2.04	0.73
31:BE:59:VAL:HG21	31:BE:63:LEU:HG	1.69	0.73
43:BU:42:ALA:O	43:BU:44:ASN:N	2.22	0.73
34:BH:43:VAL:HG12	34:BH:53:GLU:H	1.53	0.73
34:DH:85:LYS:HZ2	34:DH:133:VAL:HG11	1.53	0.73
27:BA:857:C:C5'	49:B0:77:ARG:HH22	1.99	0.73
14:CN:27:CYS:C	14:CN:29:ARG:H	1.91	0.73
27:DA:1639:U:C2'	27:DA:1640:C:H5''	2.19	0.73
35:BI:132:PRO:HD2	35:BI:133:HIS:CD2	2.23	0.73
31:DE:188:VAL:CG2	31:DE:189:PRO:HD2	2.18	0.73
1:CA:940:C:H2'	1:CA:941:G:H8	1.54	0.73
3:CC:9:GLY:HA2	3:CC:12:LEU:HD23	1.70	0.73
1:CA:918:A:H2'	1:CA:919:A:C8	2.23	0.73
1:AA:967:C:H2'	1:AA:968:A:C8	2.24	0.73
10:CJ:40:LEU:CD2	10:CJ:69:ASN:HB3	2.18	0.73
27:DA:2192:G:H2'	27:DA:2193:G:H5''	1.71	0.73
1:CA:832:C:O2'	1:CA:833:U:H5'	1.88	0.73
27:BA:638:G:H2'	27:BA:639:U:O4'	1.89	0.73
42:BT:28:VAL:CG2	42:BT:46:GLU:HA	2.17	0.73
27:DA:917:A:H2'	27:DA:918:A:C8	2.23	0.73
27:DA:2067:G:O2'	27:DA:2068:U:OP1	2.05	0.73
1:AA:153:C:H2'	1:AA:154:C:C6	2.24	0.73
30:BD:117:VAL:HG22	30:BD:129:ASN:OD1	1.88	0.73
30:DD:174:ILE:O	30:DD:175:LEU:HD23	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:31:ARG:HG2	12:AL:32:GLY:H	1.52	0.73
30:BD:182:LEU:H	30:BD:272:ALA:HB3	1.54	0.73
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.24	0.73
35:BI:102:SER:HA	35:BI:107:VAL:H	1.52	0.73
27:BA:574:C:N4	31:BE:145:LYS:HE2	2.04	0.73
27:BA:2306:C:C5	27:BA:2307:G:H1'	2.24	0.73
27:BA:1596:A:H2'	27:BA:1597:A:H5'	1.70	0.73
15:AO:55:GLY:HA2	15:AO:58:MET:CE	2.19	0.73
27:DA:2199:A:H5''	27:DA:2200:C:C5	2.22	0.73
1:CA:16:A:N1	1:CA:919:A:H2	1.86	0.73
4:CD:146:ILE:HD12	4:CD:146:ILE:H	1.54	0.73
31:BE:9:VAL:HG11	31:BE:25:VAL:HG12	1.69	0.73
20:AT:87:LYS:HG3	20:AT:91:LEU:HD11	1.71	0.73
27:BA:576:U:H2'	27:BA:577:G:C8	2.24	0.73
23:CW:30:A:H2'	23:CW:31:U:H5''	1.69	0.73
32:BF:16:GLY:O	32:BF:17:ARG:HG3	1.89	0.72
47:BY:81:LYS:HD3	47:BY:97:ARG:HB3	1.71	0.72
47:BY:81:LYS:NZ	47:BY:97:ARG:HG2	2.04	0.72
13:CM:69:GLU:OE1	13:CM:72:ALA:HB3	1.88	0.72
1:AA:14:U:H2'	1:AA:16:A:OP2	1.88	0.72
49:D0:26:TYR:H	49:D0:29:GLN:NE2	1.77	0.72
27:DA:143:G:H4'	46:DX:35:THR:HG21	1.70	0.72
9:AI:50:LEU:HA	9:AI:53:VAL:HG22	1.71	0.72
8:AH:116:LYS:HD3	8:AH:127:LEU:HD11	1.71	0.72
27:DA:1798:U:H5'	30:DD:259:THR:CG2	2.18	0.72
30:BD:186:HIS:HD2	30:BD:188:GLU:H	0.85	0.72
27:DA:2758:A:C2'	27:DA:2759:G:H5''	2.19	0.72
23:CW:42:G:C3'	23:CW:43:C:H5''	2.19	0.72
37:BO:71:ARG:NH1	42:BT:74:ARG:HH22	1.87	0.72
27:DA:543:C:N4	27:DA:551:G:H1	1.85	0.72
1:CA:922:G:H2'	1:CA:923:A:H8	1.54	0.72
35:DI:72:LEU:HD13	35:DI:75:LEU:HB3	1.71	0.72
35:DI:83:ALA:HB2	35:DI:88:ILE:HA	1.71	0.72
35:DI:83:ALA:HA	35:DI:89:TYR:CD1	2.23	0.72
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.23	0.72
27:BA:200:U:H2'	27:BA:201:C:H5'	1.68	0.72
27:DA:476:G:N2	27:DA:478:A:H3'	2.04	0.72
24:AX:2:G:H2'	24:AX:3:C:C6	2.23	0.72
27:DA:1707:G:H2'	27:DA:1708:C:C6	2.24	0.72
36:DN:125:GLY:HA3	36:DN:126:PRO:O	1.89	0.72
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:96:LEU:HD22	13:AM:97:PRO:HD2	1.70	0.72
27:BA:1286:A:H2'	27:BA:1288:U:OP2	1.89	0.72
18:AR:40:LEU:O	18:AR:43:PHE:N	2.23	0.72
27:DA:1468:C:H2'	27:DA:1469:A:C8	2.23	0.72
13:CM:37:THR:HG21	13:CM:56:LEU:HA	1.70	0.72
16:AP:67:THR:O	16:AP:70:ALA:HB3	1.89	0.72
27:BA:1750:G:O2'	27:BA:1751:C:H5'	1.89	0.72
33:BG:38:VAL:HG13	33:BG:92:VAL:O	1.88	0.72
13:AM:40:ASN:HD21	13:AM:42:ALA:HB3	1.53	0.72
1:CA:57:G:H2'	1:CA:58:C:C6	2.24	0.72
38:BP:84:ASN:HA	38:BP:115:LEU:O	1.89	0.72
38:BP:61:ARG:N	38:BP:61:ARG:HD2	2.03	0.72
1:CA:530:G:O6	22:CV:9:G:H1'	1.89	0.72
27:DA:911:A:H2'	39:DQ:9:TYR:OH	1.90	0.72
38:BP:18:ARG:O	38:BP:18:ARG:NH1	2.22	0.72
44:DV:12:TYR:CZ	44:DV:22:VAL:HG12	2.24	0.72
52:B3:8:LEU:HD13	52:B3:31:LEU:HD23	1.71	0.72
47:DY:27:VAL:CA	47:DY:28:LYS:HZ1	2.00	0.72
55:B6:39:TYR:O	55:B6:46:HIS:HB2	1.88	0.72
9:AI:53:VAL:HG23	9:AI:55:ALA:N	2.03	0.72
2:AB:164:VAL:O	2:AB:186:ALA:HB1	1.90	0.72
42:DT:27:THR:O	42:DT:28:VAL:HG23	1.89	0.72
17:CQ:44:ALA:HA	17:CQ:71:PHE:O	1.89	0.72
27:BA:2848:G:O2'	27:BA:2867:G:N2	2.22	0.72
1:AA:547:A:H4'	1:AA:548:G:O5'	1.89	0.72
27:DA:1665:A:H4'	37:DO:67:LYS:HB2	1.71	0.72
27:DA:1385:G:H4'	27:DA:1386:C:OP1	1.88	0.72
15:AO:61:GLY:O	15:AO:65:ARG:HD3	1.89	0.72
8:CH:109:ILE:CG2	8:CH:137:VAL:HB	2.19	0.72
27:BA:1108:U:H2'	27:BA:1109:C:H5'	1.69	0.72
39:DQ:38:GLU:HG3	39:DQ:127:ILE:CG2	2.19	0.72
18:AR:32:ARG:O	18:AR:69:THR:HG21	1.88	0.72
56:D7:24:THR:HG23	56:D7:27:GLY:H	1.54	0.72
1:CA:365:U:H5'	1:CA:366:C:OP1	1.89	0.72
27:BA:610:G:H2'	27:BA:611:C:H6	1.54	0.72
27:DA:1925:C:C2'	27:DA:1926:U:H5'	2.19	0.72
32:DF:124:LEU:HB3	32:DF:193:VAL:HG22	1.70	0.72
30:DD:85:ASP:HB2	30:DD:92:ILE:HD12	1.70	0.72
30:BD:25:THR:C	30:BD:26:LYS:HD3	2.09	0.72
51:D2:50:ILE:C	51:D2:52:ASP:H	1.93	0.72
46:DX:92:LEU:O	46:DX:94:GLY:N	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1494:A:N3	27:BA:1494:A:H2'	2.04	0.72
30:BD:35:LYS:NZ	30:BD:103:ARG:CA	2.52	0.72
20:CT:89:ARG:NH2	20:CT:104:LEU:HD21	2.04	0.72
28:DB:7:G:C3'	28:DB:8:U:H5''	2.18	0.72
30:BD:226:MET:O	30:BD:234:GLY:HA2	1.90	0.72
1:CA:279:A:H5''	1:CA:281:G:O4'	1.89	0.72
1:CA:743:U:H2'	1:CA:744:C:H6	1.54	0.72
42:DT:3:ARG:C	42:DT:5:ALA:H	1.91	0.72
37:BO:78:ARG:HG3	37:BO:79:PHE:N	2.03	0.72
27:BA:2261:C:OP1	49:B0:17:GLN:NE2	2.20	0.72
34:DH:13:LYS:CE	34:DH:13:LYS:HA	2.20	0.72
27:DA:352:G:O2'	27:DA:353:G:H3'	1.88	0.72
13:AM:74:VAL:HA	13:AM:77:ASN:HB3	1.69	0.72
34:BH:10:PRO:CG	34:BH:50:VAL:H	2.01	0.72
25:CY:18:G:N2	25:CY:55:C:H42	1.87	0.72
27:BA:1860:G:H1	27:BA:1882:C:N4	1.87	0.72
1:AA:598:U:H2'	1:AA:599:C:C6	2.24	0.72
12:AL:66:TYR:O	12:AL:68:PRO:HD3	1.89	0.72
1:CA:1237:C:OP1	1:CA:1238:A:H1'	1.89	0.72
4:AD:2:GLY:O	4:AD:3:ARG:HD3	1.89	0.72
27:BA:469:G:O6	56:B7:39:ARG:CZ	2.37	0.72
1:CA:1129:C:H41	1:CA:1135:U:H3	1.35	0.72
31:BE:100:GLU:O	31:BE:172:VAL:HG23	1.90	0.72
27:BA:1150:C:O2'	27:BA:1151:G:H5'	1.90	0.72
1:AA:1095:U:H5''	1:AA:1109:C:O2	1.89	0.72
46:BX:9:LEU:HA	51:B2:36:ARG:NH2	2.05	0.72
16:AP:18:ARG:NH1	16:AP:35:LYS:HD2	2.02	0.72
8:CH:48:TYR:HD1	8:CH:49:GLU:N	1.87	0.72
34:BH:159:GLU:OE1	34:BH:159:GLU:HA	1.89	0.72
1:CA:718:G:H21	18:CR:49:LYS:HZ3	1.36	0.72
31:BE:128:SER:O	31:BE:130:GLY:N	2.22	0.72
27:BA:2162:G:H4'	27:BA:2172:U:O2'	1.88	0.72
27:DA:2331:G:O2'	49:D0:43:THR:HG22	1.89	0.72
34:DH:92:ILE:HG22	34:DH:93:GLY:H	1.53	0.72
1:AA:1330:U:H4'	13:AM:23:TYR:CE2	2.23	0.72
5:CE:129:ILE:HD12	5:CE:129:ILE:H	1.52	0.72
8:CH:109:ILE:HG22	8:CH:137:VAL:HB	1.72	0.72
10:AJ:63:PHE:HA	14:AN:59:ALA:CB	2.20	0.72
27:BA:17:G:H4'	43:BU:25:TRP:CH2	2.24	0.72
52:D3:7:LYS:HG2	52:D3:8:LEU:N	2.04	0.72
27:BA:1482:G:N2	27:BA:1507:A:H1'	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:95:GLU:CD	10:AJ:96:ILE:H	1.93	0.72
27:DA:66:C:H2'	27:DA:67:U:H6	1.55	0.72
1:AA:1528:U:O2'	1:AA:1529:G:H3'	1.89	0.72
27:DA:2282:G:O2'	27:DA:2283:C:OP2	2.07	0.72
36:BN:55:VAL:HG22	36:BN:126:PRO:HA	1.70	0.72
27:BA:271(I):G:H3'	27:BA:271(J):C:H6	1.54	0.72
46:DX:63:LYS:HB3	46:DX:72:LYS:HG3	1.70	0.72
27:DA:396:G:O4'	50:D1:13:ILE:HD11	1.89	0.72
27:BA:2543:G:H8	27:BA:2543:G:H5'	1.52	0.72
32:BF:199:TRP:O	32:BF:203:GLN:HG3	1.89	0.72
46:DX:48:LYS:HD2	46:DX:48:LYS:N	2.03	0.72
1:CA:1494:G:H4'	27:DA:1913:A:N7	2.05	0.72
31:DE:26:ILE:HG22	31:DE:27:LEU:N	2.02	0.72
6:AF:61:LEU:O	6:AF:62:TRP:HB2	1.89	0.72
6:CF:79:LEU:HD12	6:CF:88:VAL:HG11	1.71	0.72
35:BI:81:VAL:HG21	35:BI:142:VAL:HG13	1.71	0.72
31:BE:145:LYS:O	31:BE:148:GLY:HA3	1.89	0.72
8:CH:109:ILE:HD11	8:CH:120:THR:CG2	2.18	0.72
40:DR:97:VAL:HG22	40:DR:114:VAL:HG22	1.70	0.72
27:DA:1322:A:H2'	27:DA:1323:U:H6	1.54	0.72
1:CA:119:A:H4'	1:CA:120:A:O5'	1.87	0.72
27:BA:1400:G:O2'	27:BA:1401:G:H5'	1.89	0.72
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.71	0.72
1:CA:1278:U:H5''	1:CA:1279:A:O4'	1.89	0.72
27:DA:2531:A:H61	27:DA:2662:A:N6	1.88	0.72
27:DA:1041:C:H2'	27:DA:1042:G:H8	1.54	0.72
27:BA:2791:C:H4'	27:BA:2792:G:O5'	1.89	0.72
27:DA:244:A:O2'	38:DP:73:GLY:HA3	1.88	0.72
1:CA:508:C:H4'	1:CA:509:A:OP1	1.88	0.72
47:BY:50:ARG:HG3	47:BY:58:GLY:HA3	1.71	0.72
44:BV:35:LEU:HB3	44:BV:37:VAL:HG23	1.72	0.72
44:BV:39:LEU:O	44:BV:40:LEU:HB2	1.90	0.72
43:DU:66:ASN:O	43:DU:70:ARG:HG3	1.89	0.72
43:DU:92:ARG:NH1	43:DU:92:ARG:HG2	1.97	0.72
28:BB:94:C:O2'	28:BB:95:C:H5'	1.90	0.72
47:DY:28:LYS:CB	47:DY:38:ILE:H	2.01	0.72
27:DA:2276:G:OP1	39:DQ:84:GLY:HA2	1.90	0.72
27:DA:2757:A:C2	34:DH:67:LEU:HD22	2.23	0.72
17:CQ:59:ILE:HG22	17:CQ:71:PHE:CD1	2.24	0.72
50:B1:7:ILE:N	50:B1:7:ILE:HD12	2.04	0.72
27:BA:2122:U:H2'	27:BA:2123:G:H8	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1311:G:H21	27:DA:1603:A:H62	1.38	0.72
1:AA:490:G:H2'	1:AA:491:G:C8	2.20	0.72
27:DA:662:G:H5'	38:DP:18:ARG:HA	1.72	0.72
27:BA:64:A:H1'	46:BX:66:LEU:HB2	1.69	0.72
1:CA:637:G:H2'	1:CA:638:G:C8	2.25	0.72
27:BA:2443:C:O2'	27:BA:2444:G:H5'	1.90	0.72
27:BA:1924:C:O2'	27:BA:1925:C:H5'	1.89	0.72
28:DB:15:A:H5'	28:DB:16:G:H8	1.54	0.72
4:AD:173:TRP:CD2	4:AD:189:PRO:HB3	2.25	0.72
4:AD:188:LEU:HD22	4:AD:189:PRO:HD2	1.71	0.72
7:CG:20:ASP:HB3	7:CG:23:VAL:HG23	1.70	0.72
27:BA:239:U:O2'	27:BA:240:G:H5'	1.88	0.72
32:BF:3:GLU:HA	32:BF:24:LEU:HG	1.71	0.72
1:CA:546:G:P	4:CD:72:GLU:HB3	2.30	0.72
44:DV:59:ALA:HB2	44:DV:96:ILE:HA	1.71	0.72
27:DA:1490:A:H5'	27:DA:1491:G:OP2	1.88	0.72
27:DA:631:A:P	57:D8:46:ARG:HH21	2.13	0.72
33:DG:28:VAL:O	33:DG:31:VAL:N	2.23	0.72
27:BA:1686:C:H5'	27:BA:1686:C:H6	1.52	0.72
56:B7:8:ASN:ND2	56:B7:8:ASN:C	2.43	0.72
16:AP:6:LEU:HB3	16:AP:17:TYR:HB3	1.70	0.72
42:BT:33:LYS:HE3	42:BT:74:ARG:HH21	1.54	0.72
39:DQ:1:MET:O	39:DQ:2:LEU:HB2	1.90	0.72
27:BA:572:A:H2'	27:BA:573:G:O4'	1.90	0.72
42:BT:92:GLY:C	42:BT:94:ALA:N	2.41	0.72
33:DG:125:PHE:HB2	33:DG:166:ASP:OD2	1.90	0.72
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.72	0.72
1:CA:578:C:N4	1:CA:763:G:H1	1.87	0.72
6:AF:33:TYR:HB2	6:AF:75:LEU:HD12	1.70	0.72
56:B7:37:LYS:HD3	56:B7:39:ARG:NE	2.05	0.72
27:DA:1042:G:H1'	27:DA:1114:G:N2	2.03	0.72
4:AD:59:ARG:NH2	4:AD:66:ARG:HH22	1.88	0.72
45:DW:21:VAL:O	45:DW:21:VAL:HG12	1.90	0.72
38:BP:58:THR:O	38:BP:61:ARG:NE	2.22	0.72
31:BE:54:GLN:O	31:BE:75:VAL:HG22	1.90	0.72
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.25	0.72
27:DA:94(A):G:H2'	27:DA:95:G:C5'	2.16	0.72
33:DG:28:VAL:C	33:DG:30:GLU:N	2.43	0.72
27:DA:1262:A:N3	54:D5:10:LYS:HE3	2.05	0.72
55:B6:20:ASN:HD22	55:B6:21:TYR:N	1.86	0.72
3:AC:186:PHE:HE2	3:AC:188:LEU:HD22	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:24:LEU:HB3	41:BS:85:VAL:CG1	2.18	0.72
27:BA:2755:C:H3'	58:B9:19:ARG:HH21	1.53	0.72
27:BA:744:G:OP1	31:BE:132:HIS:HB3	1.89	0.72
27:BA:2396:G:OP1	50:B1:25:LYS:NZ	2.23	0.72
1:CA:750:G:C2	15:CO:23:GLY:HA3	2.25	0.72
3:AC:114:PRO:HG3	3:AC:185:GLY:HA3	1.71	0.72
30:DD:65:ILE:N	30:DD:65:ILE:HD13	2.04	0.72
7:AG:143:ARG:HD2	25:AY:40:C:O2'	1.90	0.72
5:AE:78:HIS:CE1	5:AE:142:LEU:HD23	2.25	0.72
1:CA:348:G:H2'	1:CA:349:A:C8	2.25	0.72
27:BA:848:G:C4	27:BA:933:A:H8	2.08	0.72
45:DW:23:LEU:O	45:DW:27:LYS:HD2	1.89	0.72
33:BG:124:SER:HB2	33:BG:131:TYR:CE1	2.24	0.72
16:CP:21:VAL:HG12	16:CP:34:GLU:O	1.90	0.72
37:DO:87:ILE:HG23	37:DO:92:GLU:O	1.90	0.72
27:BA:191:A:H2'	27:BA:192:C:H6	1.53	0.72
35:BI:68:LEU:HA	35:BI:71:ILE:CG1	2.19	0.72
27:DA:1722:A:N1	27:DA:1740:G:H8	1.86	0.72
13:CM:15:VAL:O	13:CM:19:LEU:HD22	1.90	0.72
25:CY:32:U:H2'	25:CY:34:U:OP2	1.89	0.72
27:BA:593:G:H1'	57:B8:4:MET:HE1	1.71	0.72
1:CA:983:A:H2'	1:CA:983:A:N3	2.03	0.72
27:BA:2632:A:N3	31:BE:61:ARG:NH1	2.37	0.72
27:BA:27:G:N2	27:BA:512:G:C2'	2.50	0.72
54:D5:4:HIS:CB	54:D5:5:PRO:HD3	2.19	0.72
38:DP:21:ARG:HD3	38:DP:29:LYS:HE3	1.71	0.72
27:DA:549:G:H2'	27:DA:551:G:H5''	1.72	0.72
1:AA:823:G:O2'	1:AA:824:C:H5'	1.90	0.72
3:CC:39:ILE:HG22	3:CC:43:LEU:CD1	2.20	0.72
1:CA:880:C:H2'	1:CA:881:G:H8	1.51	0.72
42:BT:10:VAL:O	42:BT:10:VAL:HG12	1.88	0.72
27:BA:959:A:H5''	27:BA:959:A:H8	1.54	0.72
1:AA:583:A:N6	1:AA:758:G:H1'	2.04	0.72
1:CA:1030:C:C2'	1:CA:1030(A):G:H5'	2.19	0.72
27:DA:2355:C:H4'	49:D0:24:LYS:HG3	1.72	0.72
23:AW:16:C:H4'	23:AW:59:U:O2'	1.89	0.72
27:DA:2515:C:H2'	27:DA:2516:G:H8	1.55	0.72
1:CA:335:C:H2'	1:CA:336:C:C6	2.25	0.72
38:BP:48:PRO:HG2	38:BP:49:ARG:N	2.05	0.72
40:BR:45:ARG:O	40:BR:48:VAL:HG23	1.89	0.72
27:DA:1925:C:O2'	27:DA:1926:U:H5'	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B3:11:SER:HG	52:B3:13:ILE:HD12	1.55	0.72
27:DA:587:C:C4	38:DP:33:ARG:HD3	2.25	0.72
58:D9:11:CYS:SG	58:D9:32:HIS:CE1	2.83	0.72
17:CQ:57:VAL:HG12	17:CQ:76:LEU:CA	2.18	0.72
31:BE:81:ILE:O	31:BE:81:ILE:HG22	1.90	0.72
46:BX:12:VAL:HG12	46:BX:27:THR:OG1	1.89	0.72
37:BO:2:ILE:N	37:BO:2:ILE:HD13	2.04	0.72
37:BO:77:ILE:HD11	42:BT:72:VAL:CG1	2.20	0.72
1:CA:1060:C:O2'	1:CA:1061:G:H5'	1.89	0.72
1:CA:994:A:N7	1:CA:1216:G:H4'	2.05	0.72
35:DI:107:VAL:HG12	35:DI:108:THR:N	2.04	0.72
57:B8:37:SER:O	57:B8:40:GLU:HB2	1.90	0.72
27:DA:930:U:H4'	27:DA:931:G:C4	2.25	0.72
57:B8:51:ALA:C	57:B8:53:PRO:HD2	2.10	0.72
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.70	0.72
27:DA:1449:A:H5'	27:DA:1450:G:OP2	1.89	0.72
45:DW:83:LYS:HA	45:DW:97:LYS:HG2	1.71	0.72
40:BR:101:ALA:O	40:BR:102:GLU:HB2	1.89	0.72
27:DA:363(E):U:H5'	27:DA:363(F):A:C8	2.25	0.72
40:BR:4:LEU:O	40:BR:4:LEU:HD13	1.88	0.72
1:CA:93:G:H2'	1:CA:96:U:H5'	1.71	0.72
7:AG:15:ASP:O	7:AG:19:GLY:HA2	1.90	0.72
34:DH:23:ARG:O	34:DH:24:VAL:HG13	1.89	0.72
1:CA:36:C:H4'	12:CL:119:THR:O	1.90	0.72
27:BA:2320:A:H2'	27:BA:2320:A:N3	2.05	0.72
38:DP:17:LYS:O	38:DP:17:LYS:HG2	1.88	0.72
27:DA:2080:G:OP1	50:D1:35:THR:HG21	1.89	0.72
38:BP:84:ASN:HD22	38:BP:115:LEU:HG	1.53	0.71
47:BY:96:ILE:CG2	47:BY:97:ARG:N	2.52	0.71
57:D8:50:LEU:HD12	57:D8:51:ALA:N	2.04	0.71
31:BE:57:LYS:C	31:BE:59:VAL:H	1.93	0.71
38:DP:146:VAL:HG22	38:DP:147:LEU:N	2.05	0.71
1:CA:377:G:H1	1:CA:386:C:N4	1.86	0.71
8:AH:48:TYR:HA	8:AH:60:ARG:O	1.89	0.71
38:BP:112:LEU:H	38:BP:128:HIS:CD2	2.04	0.71
27:DA:768:G:H2'	27:DA:769:G:C8	2.25	0.71
35:BI:8:PRO:HB3	35:BI:14:ASP:HA	1.70	0.71
1:CA:148:G:H1	1:CA:174:C:N4	1.88	0.71
27:BA:977:G:O2'	27:BA:978:G:H5'	1.90	0.71
27:DA:2080:G:P	50:D1:35:THR:HG21	2.30	0.71
11:AK:86:GLY:N	11:AK:112:THR:OG1	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2637:U:H2'	27:BA:2638:G:H5'	1.71	0.71
12:CL:123:LYS:C	12:CL:125:ALA:H	1.93	0.71
45:BW:10:VAL:HG23	45:BW:101:SER:O	1.90	0.71
31:DE:2:LYS:HE2	31:DE:95:ILE:HG23	1.72	0.71
27:DA:2757:A:N1	34:DH:67:LEU:HD13	2.05	0.71
27:DA:1242:A:N1	38:DP:8:PRO:HG3	2.04	0.71
4:AD:25:ARG:HG2	4:AD:25:ARG:HH11	1.55	0.71
15:AO:28:GLN:O	15:AO:32:LEU:HG	1.88	0.71
48:DZ:150:HIS:HB3	48:DZ:169:THR:CG2	2.16	0.71
1:CA:1068:G:N7	1:CA:1094:G:C8	2.58	0.71
1:CA:1215:G:H2'	1:CA:1216:G:H8	1.55	0.71
12:CL:107:VAL:CG2	12:CL:117:TYR:HB3	2.20	0.71
39:DQ:43:THR:HG22	39:DQ:94:VAL:HG12	1.72	0.71
24:CX:17:C:H3'	24:CX:17(B):U:C5'	2.20	0.71
27:BA:2428:G:H5''	27:BA:2429:G:O5'	1.89	0.71
27:DA:1654:A:P	40:DR:3:HIS:HB2	2.30	0.71
39:BQ:135:ASP:O	39:BQ:137:TYR:N	2.21	0.71
1:CA:839:U:H2'	1:CA:839:U:O2	1.89	0.71
1:AA:1036:G:H5'	1:AA:1037:C:OP2	1.89	0.71
25:AY:71:A:H2'	25:AY:72:G:H8	1.52	0.71
11:CK:96:ARG:HA	11:CK:99:GLN:HG2	1.71	0.71
1:CA:991:U:O2	1:CA:991:U:H2'	1.89	0.71
1:CA:59:A:H5'	1:CA:60:A:H5'	1.71	0.71
49:B0:65:GLY:HA3	49:B0:83:PRO:HA	1.71	0.71
19:AS:64:GLU:O	19:AS:67:VAL:HG22	1.90	0.71
30:BD:168:ARG:O	30:BD:169:GLU:HB2	1.90	0.71
27:BA:1948:G:O2'	27:BA:1949:G:H5'	1.90	0.71
27:DA:1197:G:O2'	27:DA:1198:U:H5'	1.91	0.71
32:BF:28:ILE:O	32:BF:28:ILE:HD12	1.90	0.71
1:AA:246:A:H4'	1:AA:247:G:OP1	1.89	0.71
1:CA:500:G:H2'	1:CA:501:C:C6	2.25	0.71
30:BD:26:LYS:NZ	30:BD:82:ILE:N	2.37	0.71
28:DB:88:C:H2'	28:DB:89:G:C8	2.24	0.71
8:AH:127:LEU:HD12	8:AH:129:VAL:HG13	1.73	0.71
15:CO:56:LEU:O	15:CO:60:VAL:HG23	1.90	0.71
16:AP:6:LEU:HD12	16:AP:6:LEU:N	2.04	0.71
27:DA:172:C:HO2'	27:DA:173:G:H8	1.38	0.71
27:DA:740:U:H2'	27:DA:741:G:C8	2.25	0.71
27:DA:150:C:H2'	27:DA:151:C:C6	2.24	0.71
25:AY:63:C:H2'	25:AY:64:G:C8	2.25	0.71
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:39:ILE:C	3:CC:41:GLY:H	1.94	0.71
3:AC:87:LEU:C	3:AC:89:GLU:N	2.43	0.71
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.71	0.71
33:BG:128:ARG:HB2	33:BG:130:ASN:O	1.91	0.71
7:CG:49:ILE:CG2	7:CG:53:LYS:HD2	2.19	0.71
32:DF:132:VAL:HG13	32:DF:133:ASN:N	2.05	0.71
27:BA:2619:C:O2'	27:BA:2620:C:H5'	1.89	0.71
27:BA:469:G:O2'	27:BA:470:A:H5''	1.90	0.71
1:CA:624:C:O2'	1:CA:625:G:H5'	1.90	0.71
27:BA:2023:G:H5'	27:BA:2617:C:H4'	1.72	0.71
48:DZ:107:PRO:C	48:DZ:109:GLY:H	1.92	0.71
48:DZ:117:GLN:HG2	48:DZ:118:GLU:N	2.05	0.71
13:CM:116:THR:O	13:CM:117:VAL:HB	1.90	0.71
1:CA:792:A:H4'	1:CA:793:U:O5'	1.90	0.71
27:BA:2685:G:H5'	37:BO:68:GLU:OE2	1.90	0.71
27:BA:2808:U:H5'	27:BA:2891:G:O6	1.88	0.71
34:BH:121:ILE:HD11	34:BH:140:LYS:O	1.91	0.71
27:BA:29:U:H2'	27:BA:30:G:C8	2.25	0.71
4:CD:9:CYS:HB2	4:CD:22:LYS:NZ	2.06	0.71
32:DF:125:LEU:HB3	32:DF:196:LEU:CD2	2.21	0.71
1:AA:1080:A:C5'	5:AE:14:ARG:HH21	1.92	0.71
27:DA:94:C:H5'	27:DA:94(A):G:OP2	1.91	0.71
27:DA:2350:C:H41	27:DA:2382:G:N2	1.88	0.71
46:DX:57:LEU:CD1	46:DX:78:LYS:HG2	2.19	0.71
34:BH:46:GLU:HG3	34:BH:51:ARG:HB2	1.73	0.71
2:AB:197:VAL:HB	2:AB:200:ILE:HG12	1.71	0.71
1:AA:532:A:H3'	1:AA:533:A:C5'	2.20	0.71
19:AS:15:LEU:O	19:AS:19:VAL:HG23	1.90	0.71
1:CA:235:C:H1'	17:CQ:61:GLU:OE1	1.90	0.71
14:CN:22:THR:OG1	14:CN:33:VAL:HG21	1.90	0.71
42:BT:102:ILE:HB	42:BT:110:ILE:HD11	1.72	0.71
48:DZ:128:SER:OG	48:DZ:130:ARG:HD3	1.89	0.71
27:DA:2303:G:H1'	33:DG:132:ASN:ND2	2.05	0.71
35:DI:88:ILE:HD11	35:DI:123:LEU:HG	1.72	0.71
27:BA:271(Q):G:H2'	27:BA:271(R):G:H8	1.55	0.71
5:CE:80:ILE:HD13	5:CE:138:ALA:HB1	1.71	0.71
12:CL:3:THR:HG22	12:CL:6:GLN:NE2	2.05	0.71
27:DA:2791:C:H4'	27:DA:2792:G:O5'	1.90	0.71
47:DY:45:VAL:HG13	47:DY:62:GLU:OE2	1.91	0.71
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.55	0.71
27:BA:747:U:C2	54:B5:2:ALA:N	2.58	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:30:A:H2'	23:CW:31:U:C5'	2.21	0.71
27:BA:40:C:H2'	27:BA:41:C:H6	1.54	0.71
29:BC:75:LEU:HD21	29:BC:99:ILE:HD12	1.71	0.71
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.25	0.71
27:DA:224:G:H2'	27:DA:225:A:O4'	1.90	0.71
43:BU:95:LEU:HD22	44:BV:4:ILE:CD1	2.21	0.71
27:DA:297:C:H2'	27:DA:298:G:O4'	1.90	0.71
38:DP:112:LEU:HD22	38:DP:113:LYS:N	2.04	0.71
27:DA:2550:G:H2'	27:DA:2551:C:H5'	1.72	0.71
1:CA:1036:G:H5'	1:CA:1037:C:OP2	1.90	0.71
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.26	0.71
27:DA:288:C:N4	27:DA:353:G:H1	1.87	0.71
1:AA:736:C:H2'	1:AA:737:A:H8	1.55	0.71
35:DI:71:ILE:HG13	35:DI:72:LEU:N	2.04	0.71
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.72	0.71
45:DW:44:ALA:O	45:DW:47:VAL:N	2.22	0.71
27:DA:27:G:N2	27:DA:512:G:H2'	2.05	0.71
3:CC:11:ARG:HH11	3:CC:11:ARG:HG2	1.55	0.71
1:CA:921:U:O2	5:CE:19:MET:HB2	1.89	0.71
5:AE:100:VAL:HG23	5:AE:116:THR:O	1.91	0.71
5:AE:99:GLY:O	5:AE:117:ASP:HA	1.90	0.71
32:DF:143:ALA:O	32:DF:148:LEU:HB2	1.90	0.71
32:BF:175:THR:HG23	32:BF:175:THR:O	1.90	0.71
27:BA:347:A:H2'	27:BA:348:G:H8	1.54	0.71
13:CM:36:LYS:HZ3	13:CM:59:TYR:HE1	1.37	0.71
27:BA:1192:G:O2'	27:BA:1193:G:H5''	1.89	0.71
35:BI:68:LEU:HD23	35:BI:68:LEU:O	1.90	0.71
27:DA:975(A):G:H21	27:DA:976:C:H1'	1.54	0.71
45:BW:85:VAL:HG12	45:BW:86:LEU:N	2.06	0.71
27:BA:183:C:H1'	27:BA:433:C:H1'	1.71	0.71
27:DA:1515:G:C2'	27:DA:1516:C:H5'	2.21	0.71
35:DI:31:LEU:HB2	35:DI:32:PRO:HD3	1.73	0.71
40:BR:67:LEU:HD22	40:BR:76:VAL:HG21	1.71	0.71
27:BA:1963:U:H2'	27:BA:1963:U:O2	1.90	0.71
31:DE:29:GLY:HA2	31:DE:180:ASN:HB3	1.72	0.71
45:BW:64:MET:O	45:BW:65:LEU:HB2	1.90	0.71
3:CC:116:VAL:O	3:CC:119:ARG:HB3	1.90	0.71
27:BA:2832:U:H4'	27:BA:2833:G:C5'	2.19	0.71
27:BA:2787:C:H1'	31:BE:61:ARG:CG	2.13	0.71
27:BA:2808:U:O2'	27:BA:2809:A:H5'	1.89	0.71
11:CK:32:ILE:HD12	11:CK:72:ALA:CB	2.18	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2512:C:H4'	31:DE:122:PHE:CE2	2.25	0.71
10:AJ:49:VAL:CG2	14:AN:41:ARG:HD2	2.21	0.71
1:CA:372:C:H5'	1:CA:373:A:OP1	1.91	0.71
27:BA:1813:G:H4'	30:BD:44:ASN:O	1.90	0.71
33:DG:101:ILE:HD11	33:DG:105:LYS:NZ	2.05	0.71
27:BA:2756:U:OP2	58:B9:19:ARG:NH2	2.21	0.71
45:BW:90:ARG:HB2	45:BW:90:ARG:NH1	2.04	0.71
1:CA:128:G:O2'	1:CA:129:U:H5'	1.89	0.71
27:BA:2263:C:H2'	27:BA:2264:C:C6	2.20	0.71
27:DA:1639:U:O2'	27:DA:1640:C:H5''	1.89	0.71
31:DE:110:GLY:HA2	31:DE:162:ALA:H	1.54	0.71
33:DG:128:ARG:C	33:DG:130:ASN:H	1.94	0.71
33:DG:41:GLN:HE22	33:DG:153:ARG:HG2	1.55	0.71
52:D3:23:LEU:N	52:D3:23:LEU:HD12	2.04	0.71
34:BH:86:GLU:CB	34:BH:132:ARG:HH12	2.03	0.71
27:DA:2884:U:H2'	27:DA:2885:C:H5'	1.71	0.71
27:DA:2468:G:H22	27:DA:2481:G:H2'	1.56	0.71
27:BA:1051:G:O2'	27:BA:1052:C:H6	1.73	0.71
27:DA:482:A:H62	27:DA:506:G:H2'	1.56	0.71
27:BA:1722:A:N1	27:BA:1740:G:H8	1.88	0.71
29:DC:122:ALA:HB1	29:DC:129:ARG:CB	2.21	0.71
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.06	0.71
49:D0:49:LYS:HB2	49:D0:80:HIS:HB3	1.71	0.71
6:CF:50:TYR:CE1	18:CR:77:GLY:HA2	2.24	0.71
51:D2:63:VAL:O	51:D2:66:GLU:HG2	1.91	0.71
1:CA:407:G:H2'	1:CA:408:A:H8	1.55	0.71
30:BD:158:ALA:HB3	30:BD:161:THR:CG2	2.21	0.71
27:BA:1570:A:H2'	27:BA:1571:A:C8	2.25	0.71
27:BA:1956:U:H2'	27:BA:1957:C:H5'	1.71	0.71
27:BA:858:U:H4'	27:BA:859:G:OP1	1.90	0.71
27:BA:863:A:H2'	27:BA:864:G:C8	2.25	0.71
27:DA:1292:U:H2'	27:DA:1293:C:O4'	1.90	0.71
27:BA:592:G:H1	27:BA:665:C:H42	1.36	0.71
31:BE:104:VAL:HG11	31:BE:188:VAL:HG23	1.71	0.71
27:DA:536:A:H2'	27:DA:537:C:C6	2.24	0.71
47:DY:75:ILE:HB	47:DY:80:GLY:H	1.54	0.71
55:D6:40:CYS:CB	55:D6:46:HIS:HB3	2.20	0.71
27:DA:2351:G:H2'	27:DA:2365:G:N2	2.05	0.71
27:DA:1260:G:H2'	27:DA:1261:C:C6	2.26	0.71
30:BD:60:ARG:NE	30:BD:86:PRO:HB2	2.05	0.71
30:BD:60:ARG:CD	30:BD:86:PRO:HB2	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:173:TRP:HA	4:CD:187:ARG:NH1	2.05	0.71
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.72	0.71
8:AH:32:LYS:O	8:AH:35:ILE:HB	1.90	0.71
19:AS:32:LYS:CA	19:AS:50:ALA:HB3	2.20	0.71
27:DA:2756:U:O2'	27:DA:2757:A:H5'	1.90	0.71
27:BA:686:G:N3	56:B7:11:LYS:HE3	2.05	0.71
27:BA:2073:C:O2'	27:BA:2074:U:H5'	1.89	0.71
38:DP:9:ASN:H	38:DP:10:PRO:CD	2.02	0.71
27:BA:2667:C:H1'	34:BH:109:PHE:CD2	2.25	0.71
42:BT:23:ARG:HG2	42:BT:120:ARG:HH12	1.56	0.71
57:B8:32:LEU:N	57:B8:33:ASN:HD22	1.89	0.71
27:BA:2346:A:C8	27:BA:2383:G:C5	2.79	0.71
27:DA:2308:G:O6	27:DA:2310:A:H5'	1.89	0.71
1:AA:262:A:H5'	20:AT:74:LYS:CG	2.20	0.71
48:BZ:101:LEU:HD11	48:BZ:123:ILE:HG22	1.72	0.71
37:DO:24:VAL:HA	37:DO:39:ILE:HG22	1.72	0.71
1:AA:664:G:H22	1:AA:741:G:H1	1.39	0.71
27:DA:1205:U:H4'	27:DA:1206:G:OP2	1.91	0.71
1:CA:707:C:H2'	1:CA:708:C:C6	2.25	0.71
1:CA:627:G:H2'	1:CA:628:G:C8	2.25	0.71
28:DB:111:G:H2'	28:DB:112:U:O4'	1.89	0.71
27:BA:225:A:H2'	27:BA:226:G:H5'	1.71	0.71
4:AD:100:ARG:NH1	4:AD:137:SER:HB3	2.06	0.71
6:AF:75:LEU:HD23	6:AF:75:LEU:C	2.10	0.71
46:DX:64:LYS:HZ3	46:DX:73:ARG:NH2	1.87	0.71
37:DO:2:ILE:HG21	37:DO:8:LEU:HD11	1.71	0.71
7:CG:72:ARG:O	7:CG:73:MET:HG3	1.90	0.71
47:DY:88:LYS:HD3	47:DY:93:GLY:H	1.56	0.71
19:CS:9:VAL:O	19:CS:11:VAL:N	2.24	0.71
1:AA:1132:C:O2'	1:AA:1133:G:H5'	1.90	0.71
1:CA:860:A:H2'	1:CA:861:G:O4'	1.90	0.71
27:DA:1848:A:C2	27:DA:1849:G:H1'	2.26	0.71
27:BA:662:G:OP1	38:BP:18:ARG:HD2	1.89	0.71
44:DV:47:VAL:HG12	44:DV:52:VAL:HB	1.71	0.71
47:DY:86:ARG:NH1	47:DY:95:LYS:HE3	2.05	0.71
31:DE:70:ALA:O	31:DE:72:VAL:N	2.24	0.71
39:DQ:16:ARG:O	39:DQ:17:LEU:HD23	1.89	0.71
55:B6:40:CYS:HA	55:B6:46:HIS:HB2	1.70	0.71
45:BW:5:ALA:C	45:BW:6:ILE:HG13	2.11	0.71
34:BH:43:VAL:CG1	34:BH:52:VAL:HA	2.21	0.71
14:AN:23:ARG:HD2	14:AN:28:GLY:O	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DT:30:VAL:HA	42:DT:44:ASP:HA	1.70	0.71
1:CA:743:U:H2'	1:CA:744:C:C6	2.24	0.71
20:CT:100:ILE:N	20:CT:100:ILE:HD12	2.06	0.71
1:CA:1206:G:H4'	3:CC:192:THR:O	1.90	0.71
55:B6:26:ASN:ND2	55:B6:51:GLU:OE1	2.24	0.71
37:DO:16:ALA:HB2	37:DO:52:VAL:CG1	2.20	0.71
27:DA:662:G:H2'	27:DA:663:G:H8	1.56	0.71
2:AB:178:ARG:NH2	8:AH:68:ARG:NH2	2.38	0.71
27:DA:1922:G:H2'	27:DA:1923:U:C6	2.26	0.71
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.08	0.71
13:CM:50:GLU:O	13:CM:54:VAL:HG23	1.90	0.71
1:CA:59:A:C5'	1:CA:60:A:H5'	2.21	0.71
50:D1:86:SER:O	50:D1:90:ILE:HG13	1.91	0.71
39:BQ:108:GLY:HA3	48:BZ:115:VAL:HG11	1.71	0.71
27:BA:2178:C:H4'	29:BC:46:LYS:HD3	1.72	0.71
27:DA:2491:U:O2'	27:DA:2492:U:H5'	1.90	0.71
27:DA:1772:G:N2	27:DA:1774:C:H5''	2.05	0.71
38:BP:65:ARG:HH22	57:B8:15:LYS:HB2	1.53	0.71
40:BR:100:LEU:CD2	40:BR:113:LEU:HD13	2.13	0.71
2:CB:91:PRO:HG3	2:CB:154:LEU:CB	2.14	0.71
27:DA:1793:C:H2'	27:DA:1794:U:C6	2.25	0.71
31:BE:51:PHE:O	31:BE:74:PRO:HB2	1.89	0.71
32:DF:2:LYS:HG2	32:DF:25:PRO:HB2	1.73	0.71
27:DA:2576:G:H8	27:DA:2581:G:O6	1.74	0.71
27:DA:674:G:P	32:DF:54:ARG:HH22	2.13	0.71
31:DE:2:LYS:O	31:DE:199:ARG:HA	1.91	0.71
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.49	0.71
2:AB:57:PHE:CD2	2:AB:185:ILE:HD11	2.26	0.71
27:DA:2745:C:H2'	27:DA:2746:U:C6	2.26	0.71
27:DA:1910:G:O2'	27:DA:1911:U:H5'	1.89	0.71
37:BO:71:ARG:HH12	42:BT:74:ARG:HH22	1.36	0.71
46:DX:65:ARG:HD3	46:DX:70:LEU:CD1	2.19	0.71
36:DN:15:LEU:HD22	36:DN:16:ILE:H	1.55	0.71
33:BG:45:GLU:OE1	33:BG:45:GLU:HA	1.89	0.71
1:CA:1028:C:H42	1:CA:1034:G:H21	1.36	0.71
34:BH:10:PRO:HG2	34:BH:49:VAL:HB	1.72	0.71
27:DA:2291:U:H2'	27:DA:2292:C:C6	2.26	0.71
34:DH:43:VAL:HG12	34:DH:53:GLU:HG2	1.70	0.71
27:DA:2807:G:H3'	27:DA:2808:U:H5''	1.72	0.71
1:CA:701:C:H1'	1:CA:703:G:C2	2.26	0.71
27:DA:107:C:H2'	27:DA:108:U:C6	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1043:C:H2'	1:AA:1044:A:C8	2.26	0.71
37:DO:2:ILE:CG2	37:DO:8:LEU:HD11	2.21	0.71
27:DA:2362:G:C2'	27:DA:2363:C:H5'	2.21	0.71
42:DT:92:GLY:O	42:DT:93:ARG:HB3	1.89	0.71
27:BA:2712:U:O2'	27:BA:2713:A:H5'	1.90	0.71
39:BQ:141:GLN:OXT	48:BZ:98:TYR:HB2	1.91	0.71
27:BA:1862:G:O2'	27:BA:1863:G:H5'	1.90	0.71
27:BA:2553:G:H3'	27:BA:2554:U:H5''	1.71	0.71
27:BA:2006:C:H5'	27:BA:2006:C:H6	1.56	0.71
48:DZ:149:LEU:HD23	48:DZ:170:ILE:CG1	2.16	0.71
47:BY:46:LYS:CB	47:BY:62:GLU:HG2	2.13	0.71
36:BN:4:TYR:HB2	43:BU:64:ARG:NH1	2.06	0.71
27:DA:422:A:H2'	27:DA:423:A:C8	2.26	0.71
39:DQ:16:ARG:HG2	39:DQ:17:LEU:N	2.02	0.71
27:DA:2579:C:O2'	31:DE:131:ALA:HB3	1.90	0.71
46:DX:56:THR:O	46:DX:57:LEU:HB3	1.90	0.71
38:DP:6:LEU:HG	38:DP:9:ASN:CG	2.10	0.71
27:BA:2305:A:H5''	33:BG:134:GLY:HA3	1.72	0.71
27:DA:2561:A:H4'	37:DO:40:VAL:HG11	1.73	0.71
1:CA:601:C:H2'	1:CA:602:A:C8	2.23	0.71
27:DA:479:A:H4'	27:DA:480:A:C5'	2.21	0.71
39:DQ:101:ARG:HD2	39:DQ:102:VAL:N	2.06	0.71
27:BA:380:U:H2'	27:BA:381:G:C8	2.26	0.71
27:BA:380:U:H2'	27:BA:381:G:H8	1.55	0.71
27:BA:2689:U:H5''	27:BA:2690:C:H5'	1.72	0.71
11:AK:31:THR:HA	11:AK:42:TRP:HA	1.72	0.71
27:DA:612:C:O2'	27:DA:613:G:H5'	1.91	0.71
1:CA:475:G:H2'	1:CA:476:G:H8	1.56	0.71
27:BA:319:C:O2'	27:BA:320:A:H5'	1.91	0.71
1:CA:422:C:H4'	1:CA:423:G:H5''	1.71	0.71
27:BA:2884:U:H3	54:B5:51:TYR:HE1	1.37	0.70
31:BE:8:LYS:HE3	31:BE:188:VAL:CG1	2.20	0.70
46:BX:30:VAL:CG2	46:BX:39:ILE:HD11	2.14	0.70
27:DA:271(D):G:H1	27:DA:271(T):C:H42	1.39	0.70
4:CD:33:MET:HE2	4:CD:37:PRO:HA	1.73	0.70
43:BU:90:VAL:HG12	43:BU:91:ASP:N	2.02	0.70
55:B6:18:ARG:HB2	55:B6:19:ARG:HD2	1.73	0.70
39:BQ:16:ARG:HG2	39:BQ:17:LEU:N	2.04	0.70
42:BT:23:ARG:O	42:BT:25:GLY:N	2.22	0.70
1:CA:1327:C:O2'	1:CA:1328:C:H5'	1.90	0.70
1:CA:1356:G:H1	1:CA:1366:C:N4	1.88	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DZ:96:GLU:HB3	48:DZ:124:LEU:HD11	1.71	0.70
56:D7:5:TRP:CZ2	56:D7:7:PRO:HB3	2.26	0.70
5:AE:141:GLN:HA	5:AE:143:ARG:HH21	1.54	0.70
12:AL:119:THR:HG22	12:AL:120:LYS:N	2.05	0.70
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.21	0.70
27:DA:2683:C:H2'	27:DA:2684:U:H6	1.56	0.70
37:DO:63:VAL:HG23	37:DO:64:ARG:HG3	1.71	0.70
45:DW:83:LYS:HG2	45:DW:97:LYS:HD3	1.72	0.70
1:AA:628:G:O2'	1:AA:629:G:H5'	1.91	0.70
1:CA:320:C:H1'	1:CA:1434:A:H2	1.55	0.70
53:D4:46:ASN:ND2	53:D4:47:VAL:H	1.89	0.70
11:AK:109:VAL:HG12	11:AK:110:ASP:H	1.56	0.70
27:DA:1548:C:H2'	27:DA:1549:C:H6	1.55	0.70
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.73	0.70
27:BA:246:C:H41	57:B8:8:LYS:HG2	1.54	0.70
1:CA:961:U:HO2'	1:CA:962:C:H6	1.39	0.70
4:CD:9:CYS:SG	60:CD:301:ZN:ZN	1.79	0.70
5:AE:41:VAL:CG1	5:AE:113:ALA:HA	2.21	0.70
27:DA:616:G:H4'	32:DF:205:ARG:HD2	1.71	0.70
32:DF:1:MET:SD	32:DF:26:ALA:HA	2.31	0.70
27:DA:39:C:O2'	27:DA:40:C:H5'	1.90	0.70
42:DT:42:ILE:H	42:DT:42:ILE:CD1	1.92	0.70
49:D0:29:GLN:O	49:D0:67:VAL:HG23	1.90	0.70
38:DP:84:ASN:HA	38:DP:115:LEU:O	1.90	0.70
14:AN:26:ARG:CZ	14:AN:47:LEU:HD21	2.21	0.70
58:D9:17:ILE:HG22	58:D9:19:ARG:HG2	1.72	0.70
17:CQ:52:LYS:HG2	17:CQ:55:ASP:OD2	1.91	0.70
34:DH:12:PRO:O	34:DH:13:LYS:HB2	1.90	0.70
38:BP:144:GLU:N	38:BP:145:PRO:HD3	2.06	0.70
45:DW:4:LYS:HG2	45:DW:106:ILE:CG2	2.21	0.70
36:BN:13:TRP:O	36:BN:135:PRO:HD2	1.90	0.70
27:DA:851:U:H4'	52:D3:45:GLY:O	1.91	0.70
1:CA:54:C:N4	1:CA:352:C:H2'	2.06	0.70
27:DA:2562:U:H1'	37:DO:23:ARG:NH1	2.05	0.70
1:CA:637:G:H2'	1:CA:638:G:H8	1.54	0.70
5:CE:80:ILE:HD11	5:CE:91:LEU:HB2	1.73	0.70
27:DA:1287:A:N6	27:DA:1649:G:H1'	2.05	0.70
32:BF:160:ASN:HD21	32:BF:162:LEU:HB2	1.55	0.70
27:DA:226:G:O2'	27:DA:227:A:H8	1.74	0.70
20:AT:87:LYS:O	20:AT:91:LEU:HG	1.90	0.70
27:BA:911:A:H2'	39:BQ:9:TYR:OH	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:70:ILE:HG23	4:AD:71:SER:O	1.90	0.70
2:CB:174:VAL:HG13	2:CB:184:VAL:HG21	1.73	0.70
27:BA:2239:G:H2'	27:BA:2240:C:C6	2.26	0.70
1:CA:1324:A:H4'	1:CA:1362:C:H4'	1.73	0.70
43:BU:90:VAL:HG11	44:BV:40:LEU:HD23	1.71	0.70
1:AA:254:G:H1	1:AA:272:C:H42	1.37	0.70
27:DA:2086:U:H2'	27:DA:2087:G:H8	1.56	0.70
49:D0:17:GLN:O	49:D0:19:LYS:HD3	1.91	0.70
27:DA:1992:G:O2'	27:DA:1993:U:OP2	2.06	0.70
27:DA:90:U:H1'	27:DA:92:A:C8	2.26	0.70
41:DS:92:TYR:CG	41:DS:93:LYS:N	2.54	0.70
1:CA:718:G:H5'	11:CK:117:ASN:OD1	1.91	0.70
30:BD:108:PRO:HG3	30:BD:143:HIS:CE1	2.25	0.70
27:DA:2134:A:N6	27:DA:2157:G:H1'	2.06	0.70
29:DC:68:LEU:HB3	29:DC:70:LYS:HE2	1.74	0.70
58:B9:26:ILE:HD12	58:B9:26:ILE:N	2.06	0.70
8:AH:83:ILE:HB	8:AH:137:VAL:HG13	1.72	0.70
27:BA:2305:A:H61	33:BG:43:LEU:H	1.40	0.70
33:DG:36:LYS:HG2	33:DG:160:VAL:HG21	1.73	0.70
39:BQ:133:ARG:O	39:BQ:134:ARG:HB2	1.91	0.70
37:DO:86:ILE:H	37:DO:86:ILE:HD12	1.56	0.70
33:DG:115:ARG:HH12	33:DG:136:ARG:HH11	1.39	0.70
1:AA:820:U:H4'	1:AA:821:G:OP2	1.90	0.70
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	1.71	0.70
27:BA:1722:A:O2'	27:BA:1739:U:H5''	1.90	0.70
1:CA:9:G:O2'	1:CA:10:A:H8	1.74	0.70
27:BA:1208:C:H5'	27:BA:1209:G:OP2	1.91	0.70
45:BW:38:TYR:OH	54:B5:47:PRO:HG3	1.91	0.70
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.73	0.70
47:BY:7:VAL:HB	47:BY:8:LYS:NZ	2.04	0.70
4:CD:9:CYS:HB2	4:CD:22:LYS:HZ3	1.55	0.70
27:DA:903:C:H2'	27:DA:904:C:C6	2.26	0.70
27:BA:1885:A:H2'	27:BA:1886:C:O4'	1.91	0.70
57:D8:14:VAL:HG21	57:D8:22:VAL:CG1	2.22	0.70
1:CA:186:C:O3'	20:CT:82:SER:HB2	1.91	0.70
47:BY:28:LYS:HB2	47:BY:37:VAL:HB	1.73	0.70
1:CA:276:G:O2'	1:CA:277:C:H5'	1.91	0.70
50:D1:52:ARG:CG	50:D1:53:VAL:H	2.02	0.70
1:CA:966:G:O2'	1:CA:967:C:C6	2.44	0.70
27:DA:373:U:H2'	27:DA:374:A:C8	2.19	0.70
10:AJ:5:ARG:HG3	10:AJ:73:ASP:OD1	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:4:ILE:O	10:AJ:74:ILE:HG12	1.90	0.70
42:BT:51:ARG:CG	42:BT:98:LYS:HG3	2.22	0.70
29:DC:188:ASN:O	29:DC:191:ALA:HB3	1.90	0.70
35:BI:91:SER:O	35:BI:92:VAL:HB	1.91	0.70
27:BA:2562:U:C2'	27:BA:2563:U:H5'	2.22	0.70
5:AE:78:HIS:HE1	5:AE:142:LEU:HA	1.55	0.70
31:DE:13:ARG:HB2	31:DE:21:VAL:O	1.91	0.70
7:CG:145:ALA:O	7:CG:146:GLU:HB2	1.91	0.70
27:BA:143:G:H5''	27:BA:1598:C:O2'	1.91	0.70
2:CB:11:LEU:CD1	2:CB:217:ARG:HH21	2.04	0.70
27:BA:225:A:C2'	27:BA:226:G:H5'	2.21	0.70
38:DP:90:ARG:HB3	38:DP:91:PHE:CD1	2.26	0.70
4:AD:172:PRO:HG2	4:AD:193:ASP:OD1	1.90	0.70
11:CK:103:LEU:HD13	11:CK:104:GLN:H	1.56	0.70
38:BP:92:GLU:HA	38:BP:123:LEU:HD23	1.71	0.70
27:DA:1356:G:H2'	27:DA:1357:U:H6	1.56	0.70
27:DA:811:U:OP2	38:DP:24:GLY:HA2	1.92	0.70
5:AE:40:ARG:HB3	5:AE:66:MET:CE	2.21	0.70
1:CA:1010:G:H2'	1:CA:1011:G:C8	2.26	0.70
44:BV:1:MET:HE3	44:BV:43:GLU:HG2	1.73	0.70
27:DA:2146:C:H5'	27:DA:2147:G:C4	2.27	0.70
1:CA:977:A:N3	1:CA:977:A:H2'	2.05	0.70
5:AE:33:VAL:HG12	5:AE:112:LEU:HD12	1.74	0.70
44:BV:22:VAL:HG21	44:BV:94:LEU:HD11	1.73	0.70
44:DV:38:LEU:HD12	44:DV:56:SER:N	2.06	0.70
30:DD:69:ARG:NH1	30:DD:130:ALA:HB2	2.07	0.70
11:CK:29:ILE:HD12	11:CK:43:SER:O	1.92	0.70
27:DA:2569:G:O2'	27:DA:2570:G:H5'	1.92	0.70
39:BQ:115:MET:HE2	39:BQ:131:ILE:HG21	1.74	0.70
12:CL:15:VAL:HG23	12:CL:16:ARG:N	2.03	0.70
1:CA:232:G:H2'	1:CA:233:C:H6	1.57	0.70
27:DA:2875:C:H4'	42:DT:5:ALA:CB	2.21	0.70
12:AL:80:VAL:HG11	12:AL:104:ALA:HB3	1.74	0.70
31:DE:111:ARG:HD2	31:DE:160:TYR:CD1	2.26	0.70
3:AC:87:LEU:O	3:AC:91:LEU:HG	1.91	0.70
4:AD:54:TYR:CE1	4:AD:209:ARG:HD2	2.26	0.70
38:BP:122:PRO:HB3	38:BP:141:ALA:CB	2.20	0.70
1:AA:52:G:HO2'	1:AA:53:A:H8	1.35	0.70
27:BA:2629:A:N3	27:BA:2629:A:H2'	2.05	0.70
31:BE:105:THR:HG21	31:BE:164:ARG:NH1	2.04	0.70
34:BH:29:PRO:O	34:BH:30:LYS:HE3	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BH:22:GLY:O	34:BH:36:PRO:HA	1.91	0.70
3:CC:123:GLN:O	3:CC:128:PHE:HB2	1.91	0.70
1:AA:257:G:H2'	1:AA:258:G:C8	2.26	0.70
32:DF:25:PRO:CG	32:DF:119:ARG:HB2	2.21	0.70
51:D2:18:PRO:HG2	51:D2:19:VAL:H	1.55	0.70
27:DA:630:G:H1	27:DA:634:C:H42	1.38	0.70
27:BA:2299:G:N1	27:BA:2318:G:C8	2.60	0.70
27:BA:2466:C:O2'	27:BA:2467:C:H5'	1.90	0.70
17:CQ:78:GLU:OE1	17:CQ:81:ARG:HD2	1.92	0.70
2:CB:187:LEU:HB2	2:CB:201:ILE:HB	1.74	0.70
27:BA:1879:C:C2'	27:BA:1880:C:H5''	2.21	0.70
27:BA:965:C:H2'	27:BA:966:G:H8	1.57	0.70
36:DN:46:VAL:O	36:DN:47:ALA:HB3	1.91	0.70
42:DT:13:ARG:CZ	42:DT:13:ARG:HA	2.21	0.70
12:CL:107:VAL:CG1	12:CL:110:ARG:HB2	2.22	0.70
38:BP:105:LEU:N	38:BP:105:LEU:HD23	2.07	0.70
35:BI:83:ALA:HB2	35:BI:88:ILE:HG23	1.73	0.70
7:CG:87:VAL:HG11	7:CG:154:TYR:O	1.91	0.70
1:AA:486:U:H6	1:AA:486:U:H5'	1.56	0.70
13:CM:3:ARG:HG2	13:CM:9:ILE:HG12	1.70	0.70
31:DE:16:ARG:O	31:DE:17:ASP:HB2	1.91	0.70
27:DA:2100:G:H1	27:DA:2189:U:H3	1.38	0.70
27:BA:105:C:O2	27:BA:105:C:H2'	1.90	0.70
27:BA:81:G:H1	27:BA:105:C:H42	1.37	0.70
27:DA:1233:C:H2'	27:DA:1234:U:H6	1.56	0.70
37:BO:11:ALA:O	37:BO:98:VAL:HA	1.91	0.70
27:BA:45:C:OP2	27:BA:215:G:H5''	1.91	0.70
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.26	0.70
27:DA:1162:G:O2'	27:DA:1163:G:H5'	1.92	0.70
27:DA:1799:G:H5'	27:DA:1819:A:N6	2.06	0.70
27:BA:466:A:N3	27:BA:683:C:H1'	2.06	0.70
17:AQ:8:GLY:HA3	17:AQ:22:LEU:O	1.92	0.70
48:DZ:9:ARG:H	48:DZ:36:VAL:HA	1.56	0.70
38:DP:136:GLU:O	38:DP:139:LYS:N	2.25	0.70
27:BA:2732:G:H3'	27:BA:2733:A:C5'	2.21	0.70
44:BV:87:HIS:NE2	44:BV:89:GLN:HG2	2.05	0.70
27:DA:2590:A:O2'	27:DA:2591:C:H5'	1.92	0.70
44:BV:99:ILE:O	44:BV:99:ILE:HG12	1.90	0.70
32:DF:7:TYR:O	32:DF:8:GLN:HB2	1.90	0.70
30:DD:26:LYS:HZ1	30:DD:82:ILE:H	1.39	0.70
15:AO:78:TYR:O	15:AO:82:ILE:HG22	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:9:VAL:HG13	31:DE:25:VAL:HB	1.74	0.70
27:BA:1481:U:O2	27:BA:1481:U:H2'	1.91	0.70
6:AF:9:VAL:HG12	6:AF:86:ARG:HB2	1.72	0.70
1:CA:532:A:H62	3:CC:156:ARG:HH12	1.38	0.70
27:DA:2158:A:H4'	27:DA:2159:G:O5'	1.90	0.70
57:B8:29:LYS:HD3	57:B8:44:LYS:HG2	1.71	0.70
36:BN:115:ARG:O	36:BN:118:LYS:HB2	1.91	0.70
37:DO:53:LYS:N	37:DO:53:LYS:HD2	2.06	0.70
27:DA:1681:G:C8	27:DA:1681:G:OP2	2.42	0.70
27:DA:2304:G:H5''	27:DA:2305:A:OP2	1.92	0.70
1:AA:579:G:H5'	1:AA:728:A:H1'	1.71	0.70
27:DA:2466:C:C2'	27:DA:2467:C:H5'	2.21	0.70
28:BB:7:G:H21	41:BS:38:GLN:HE22	1.40	0.70
38:BP:6:LEU:H	38:BP:6:LEU:HD23	1.56	0.70
37:BO:110:GLY:HA2	37:BO:112:MET:CE	2.20	0.70
1:AA:592:G:C2	1:AA:648:A:C2	2.79	0.70
28:BB:87:G:C3'	28:BB:88:C:H5''	2.22	0.70
27:DA:706:A:OP1	30:DD:7:LYS:HE3	1.91	0.70
1:AA:807:A:O2'	1:AA:808:C:H5'	1.91	0.70
27:DA:2523:G:H5'	27:DA:2523:G:H8	1.57	0.70
41:BS:17:ARG:HA	41:BS:20:ARG:HH11	1.55	0.70
27:DA:1952:A:C2	37:DO:22:ILE:HG23	2.27	0.70
27:DA:2019:A:H61	27:DA:2035:G:H1	1.40	0.70
27:DA:2052:G:N2	27:DA:2618:G:H1'	2.07	0.70
32:DF:89:VAL:HG12	32:DF:90:PHE:H	1.57	0.70
1:AA:1206:G:H2'	1:AA:1207:G:H5'	1.73	0.70
1:CA:1494:G:O6	26:CZ:1:KBE:HAA	1.91	0.70
27:BA:2071:A:C2	27:BA:2441:C:N3	2.57	0.70
31:BE:36:ARG:HH22	31:BE:88:GLY:HA3	1.55	0.70
33:DG:2:PRO:HD2	53:D4:51:TYR:CE2	2.26	0.70
14:CN:26:ARG:NH2	14:CN:47:LEU:HD21	2.07	0.70
10:AJ:6:ILE:HA	10:AJ:97:GLU:O	1.91	0.70
58:B9:29:ASN:HD21	58:B9:32:HIS:CE1	2.09	0.70
34:DH:147:ASN:O	34:DH:150:ALA:HB3	1.92	0.70
27:BA:1591:G:H2'	27:BA:1592:C:H6	1.57	0.70
37:BO:103:ALA:C	37:BO:105:GLU:H	1.94	0.70
27:BA:1400:G:H2'	27:BA:1401:G:C8	2.25	0.70
1:CA:256:U:H2'	1:CA:257:G:C8	2.26	0.70
40:BR:37:THR:OG1	40:BR:39:PRO:HD2	1.92	0.70
42:BT:127:ALA:C	42:BT:129:ARG:H	1.95	0.70
27:BA:1669:A:H2'	27:BA:1670:C:H5'	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:327:G:H2'	27:BA:328:U:C6	2.27	0.70
27:BA:838:C:H2'	27:BA:839:U:H6	1.56	0.70
32:BF:65:TRP:CH2	32:BF:75:HIS:HD2	2.08	0.70
1:CA:457:C:H2'	1:CA:458:C:H6	1.57	0.70
42:BT:31:SER:OG	42:BT:32:TYR:N	2.25	0.70
27:DA:2832:U:H4'	27:DA:2833:G:H5''	1.71	0.70
27:BA:335:C:H2'	27:BA:336:C:H6	1.56	0.70
27:DA:754:C:H2'	27:DA:755:C:H6	1.52	0.70
1:AA:973:G:H3'	1:AA:974:A:H5''	1.73	0.70
17:CQ:21:VAL:O	17:CQ:41:LYS:HA	1.92	0.70
2:CB:200:ILE:HG22	2:CB:202:PRO:HD3	1.74	0.70
3:CC:153:VAL:HG12	3:CC:196:LEU:CD1	2.21	0.70
27:BA:2875:C:C4'	42:BT:5:ALA:HB2	2.21	0.70
40:DR:10:LEU:CD2	40:DR:17:ARG:HD2	2.21	0.70
1:CA:686:U:H3	1:CA:703:G:H21	1.39	0.70
1:AA:509:A:H5'	4:AD:54:TYR:CD2	2.27	0.70
27:BA:158:U:H2'	27:BA:158:U:O2	1.92	0.70
1:CA:913:A:H4'	1:CA:914:A:O5'	1.90	0.70
46:DX:66:LEU:O	46:DX:66:LEU:HD23	1.91	0.70
37:DO:119:PRO:HB2	42:DT:68:TYR:CE1	2.26	0.70
1:AA:6:G:H4'	1:AA:298:A:H4'	1.74	0.70
27:BA:2029:G:H2'	27:BA:2031:A:OP1	1.92	0.70
27:BA:598:G:H5'	38:BP:15:ARG:HG3	1.73	0.70
30:BD:112:GLN:HB2	30:BD:115:GLN:HE21	1.57	0.70
7:CG:40:ALA:HB1	9:CI:41:VAL:HG11	1.74	0.70
27:BA:1718:G:H8	27:BA:1718:G:H5'	1.56	0.70
31:BE:119:ARG:HD2	31:BE:120:TRP:NE1	2.07	0.70
38:DP:59:LEU:CA	38:DP:61:ARG:CZ	2.68	0.70
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.57	0.70
30:BD:35:LYS:HA	30:BD:64:ILE:HG22	1.74	0.70
1:CA:1406:U:H2'	1:CA:1407:C:H6	1.56	0.70
27:BA:2580:U:H5'	31:BE:131:ALA:HB3	1.74	0.70
48:DZ:128:SER:HB3	48:DZ:131:ASN:ND2	2.07	0.70
27:DA:2223:G:C2'	27:DA:2224:G:H5'	2.22	0.70
27:DA:1602:U:H3'	27:DA:1603:A:C5'	2.21	0.70
48:BZ:150:HIS:HB3	48:BZ:169:THR:HA	1.72	0.70
41:DS:78:LEU:HD11	41:DS:103:GLU:HB3	1.72	0.70
42:BT:92:GLY:HA2	42:BT:114:LEU:HD22	1.74	0.70
27:DA:597:U:H2'	27:DA:598:G:C8	2.27	0.70
27:BA:1414:G:H1	27:BA:1588:C:N4	1.87	0.70
43:BU:25:TRP:CD1	43:BU:26:GLY:N	2.60	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:960:U:O2'	1:AA:1223:C:H5'	1.91	0.70
27:DA:286:C:H2'	27:DA:286:C:O2	1.91	0.70
13:CM:90:LEU:HA	13:CM:93:ARG:HB2	1.74	0.70
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.55	0.70
39:BQ:38:GLU:OE2	39:BQ:128:LYS:HG2	1.91	0.70
27:BA:2758:A:H2'	27:BA:2759:G:H5'	1.74	0.70
15:AO:9:GLN:HA	15:AO:12:ILE:HD12	1.73	0.70
3:AC:14:ILE:CD1	3:AC:178:LEU:HB3	2.22	0.70
31:BE:108:SER:O	31:BE:162:ALA:HA	1.92	0.70
1:CA:978:A:O2'	1:CA:1322:C:N3	2.24	0.69
1:AA:472:A:C2	1:AA:473:G:H1'	2.26	0.69
27:DA:2453:A:H4'	27:DA:2572:A:O2'	1.91	0.69
27:DA:1187:G:H5''	44:DV:81:TYR:CE2	2.27	0.69
27:BA:1141:U:OP1	36:BN:25:ARG:NH1	2.25	0.69
1:CA:1104:G:O2'	1:CA:1105:A:H5'	1.92	0.69
1:AA:453:A:H2'	1:AA:454:C:C6	2.27	0.69
39:DQ:27:VAL:CG1	39:DQ:29:PHE:H	2.04	0.69
27:DA:1625:C:H2'	27:DA:1626:G:H5'	1.72	0.69
27:DA:1639:U:H2'	27:DA:1640:C:H5''	1.73	0.69
27:DA:2821:A:H2'	27:DA:2822:G:C8	2.27	0.69
1:AA:35:G:O2'	1:AA:36:C:H5'	1.91	0.69
27:BA:1579:A:H2'	27:BA:1580:A:C8	2.27	0.69
19:AS:63:THR:HG22	19:AS:66:MET:HE3	1.73	0.69
28:BB:7:G:C3'	28:BB:8:U:H5''	2.22	0.69
27:DA:414:C:H1'	27:DA:1864:U:O2'	1.92	0.69
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.57	0.69
1:AA:197:A:H4'	1:AA:198:G:OP1	1.92	0.69
4:AD:114:ARG:O	4:AD:118:ARG:HB2	1.92	0.69
27:BA:703:U:O2'	27:BA:704:G:H5'	1.91	0.69
27:BA:1193:G:H8	27:BA:1193:G:H5'	1.57	0.69
27:BA:469:G:C2'	27:BA:470:A:H5''	2.21	0.69
27:BA:436:C:H2'	27:BA:437:G:H8	1.57	0.69
1:CA:71:C:O2'	1:CA:72:C:H5'	1.92	0.69
27:DA:1887:C:C3'	27:DA:1888:G:H5''	2.22	0.69
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.27	0.69
39:DQ:51:ARG:HB3	39:DQ:51:ARG:HH11	1.55	0.69
24:CX:32:C:H2'	24:CX:33:U:O4'	1.91	0.69
27:DA:1127:A:H2'	27:DA:1128:A:H5''	1.73	0.69
1:CA:979:C:H3'	1:CA:980:C:C5'	2.19	0.69
1:CA:973:G:H1'	10:CJ:55:LYS:HE2	1.72	0.69
27:DA:271(R):G:H2'	27:DA:271(S):G:C8	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1825:A:H2'	27:DA:1826:G:H8	1.57	0.69
44:DV:49:THR:HG22	44:DV:50:PRO:HD2	1.74	0.69
41:DS:85:VAL:H	41:DS:106:ARG:CB	1.99	0.69
46:DX:57:LEU:HD11	46:DX:78:LYS:HD3	1.74	0.69
34:BH:19:VAL:HB	34:BH:44:VAL:HG13	1.73	0.69
27:BA:1495:A:H2'	27:BA:1496:A:C2	2.26	0.69
47:BY:28:LYS:O	47:BY:38:ILE:HB	1.91	0.69
46:BX:64:LYS:HZ2	46:BX:73:ARG:HH21	1.37	0.69
5:AE:57:LYS:HG2	5:AE:61:TYR:HE2	1.57	0.69
32:DF:34:TRP:CE2	38:DP:12:ALA:HB2	2.26	0.69
36:DN:57:ALA:CB	36:DN:124:ALA:HA	2.21	0.69
1:AA:1163:C:H2'	1:AA:1164:G:C8	2.26	0.69
33:DG:133:LEU:HD11	33:DG:157:ILE:HD11	1.74	0.69
53:B4:60:GLU:O	53:B4:61:VAL:HB	1.92	0.69
1:CA:880:C:O2'	1:CA:881:G:H5'	1.92	0.69
27:DA:2482:G:H2'	27:DA:2483:C:H6	1.55	0.69
27:BA:17:G:H4'	43:BU:25:TRP:CZ2	2.26	0.69
32:BF:160:ASN:ND2	32:BF:162:LEU:H	1.90	0.69
34:DH:117:PRO:HB3	34:DH:123:PHE:CE1	2.27	0.69
10:CJ:40:LEU:CG	10:CJ:69:ASN:HB3	2.21	0.69
32:BF:164:ARG:CZ	32:BF:164:ARG:HB2	2.19	0.69
54:B5:2:ALA:O	54:B5:3:LYS:HD2	1.91	0.69
36:BN:58:ASP:O	36:BN:59:LYS:HB2	1.92	0.69
30:DD:267:SER:O	30:DD:268:ARG:HB2	1.91	0.69
4:CD:131:ARG:H	4:CD:131:ARG:HD3	1.57	0.69
1:CA:731:G:O2'	1:CA:732:C:H5'	1.91	0.69
35:BI:4:ILE:HD13	35:BI:47:LEU:HD13	1.74	0.69
11:CK:22:HIS:HB3	11:CK:29:ILE:CG2	2.20	0.69
55:B6:36:LEU:HB3	55:B6:50:ARG:NH1	2.06	0.69
14:AN:6:LEU:HD13	14:AN:23:ARG:NH2	2.07	0.69
16:CP:42:ARG:HB2	16:CP:44:THR:HG23	1.72	0.69
36:DN:133:GLN:CG	36:DN:135:PRO:HD3	2.21	0.69
32:BF:176:LEU:HD12	32:BF:177:ALA:H	1.58	0.69
4:AD:128:VAL:C	4:AD:130:GLY:H	1.96	0.69
27:DA:479:A:H4'	27:DA:480:A:H5'	1.73	0.69
33:BG:15:VAL:HG21	33:BG:176:LEU:HG	1.74	0.69
33:BG:28:VAL:O	33:BG:31:VAL:HG12	1.92	0.69
43:BU:34:LYS:HA	43:BU:34:LYS:HE2	1.73	0.69
36:DN:86:PRO:HG2	36:DN:89:LYS:CG	2.22	0.69
27:BA:2016:U:H2'	27:BA:2017:U:H6	1.56	0.69
27:BA:517:C:O2'	27:BA:518:G:H5'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:23:G:H8	23:AW:23:G:H5'	1.57	0.69
20:AT:89:ARG:NH2	20:AT:104:LEU:HD11	2.07	0.69
1:CA:1275:A:H2'	1:CA:1276:G:C8	2.27	0.69
27:BA:1754:C:H6	42:BT:96:ARG:NH1	1.89	0.69
1:CA:642:A:C5	8:CH:115:SER:HA	2.27	0.69
33:DG:146:TYR:O	33:DG:149:VAL:HG22	1.92	0.69
1:CA:470:C:H5''	1:CA:471:G:OP2	1.92	0.69
1:AA:264:U:H4'	17:AQ:63:ARG:HD3	1.75	0.69
17:AQ:10:VAL:HA	17:AQ:20:THR:O	1.93	0.69
32:DF:3:GLU:HB2	32:DF:19:GLU:HB2	1.74	0.69
44:DV:41:GLY:H	44:DV:45:THR:HB	1.56	0.69
41:DS:87:PHE:HB2	41:DS:106:ARG:NH1	2.07	0.69
9:AI:48:GLU:C	9:AI:50:LEU:H	1.96	0.69
9:AI:83:ARG:O	9:AI:86:VAL:HG12	1.92	0.69
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.72	0.69
58:B9:2:LYS:O	58:B9:2:LYS:HD3	1.91	0.69
1:AA:657:G:O2'	1:AA:658:G:H5'	1.92	0.69
38:BP:107:LYS:C	38:BP:109:GLY:H	1.96	0.69
35:BI:111:PRO:CA	35:BI:114:LEU:HD21	2.22	0.69
42:DT:49:VAL:C	42:DT:50:ILE:HD12	2.13	0.69
1:CA:603:U:H2'	1:CA:604:G:C8	2.25	0.69
30:BD:267:SER:C	30:BD:269:PHE:H	1.92	0.69
2:CB:213:LEU:O	2:CB:217:ARG:HG2	1.93	0.69
30:BD:112:GLN:H	30:BD:115:GLN:NE2	1.91	0.69
2:AB:32:ILE:HG12	2:AB:33:TYR:H	1.58	0.69
48:BZ:60:LEU:HB2	48:BZ:64:GLN:HB2	1.74	0.69
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.75	0.69
3:AC:193:TYR:CD2	3:AC:193:TYR:N	2.59	0.69
35:DI:40:THR:O	35:DI:44:LEU:HB2	1.92	0.69
32:BF:39:TRP:O	32:BF:43:LYS:HG2	1.92	0.69
38:BP:57:THR:OG1	38:BP:59:LEU:HB3	1.93	0.69
10:CJ:50:ILE:HD13	10:CJ:50:ILE:H	1.57	0.69
27:DA:2351:G:O6	57:D8:39:LYS:HG3	1.92	0.69
30:BD:61:LEU:HB3	30:BD:63:ARG:NH1	2.07	0.69
41:DS:28:VAL:O	41:DS:89:ARG:HG2	1.91	0.69
1:AA:104:G:O2'	1:AA:105:G:H5'	1.93	0.69
27:BA:1273:U:H5''	27:BA:1273:U:C6	2.19	0.69
27:DA:2173:A:H2'	27:DA:2174:C:C6	2.27	0.69
27:DA:852:G:H2'	27:DA:853:G:H8	1.56	0.69
27:DA:2683:C:H2'	27:DA:2684:U:C6	2.28	0.69
27:BA:271(P):C:H2'	27:BA:271(Q):G:O4'	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:495:G:H1'	45:DW:57:ASN:HD21	1.58	0.69
33:BG:172:LEU:O	33:BG:176:LEU:HD12	1.92	0.69
2:CB:16:HIS:HB3	2:CB:210:SER:CB	2.21	0.69
1:AA:1112:C:H42	3:AC:177:THR:HA	1.56	0.69
27:BA:527:C:C5	27:BA:2779:U:H2'	2.28	0.69
13:CM:91:ARG:HB2	13:CM:98:VAL:HG13	1.74	0.69
40:BR:10:LEU:HB3	40:BR:17:ARG:CZ	2.23	0.69
27:BA:2118:U:O2'	27:BA:2119:A:H5''	1.93	0.69
13:CM:31:LYS:HA	13:CM:34:LEU:HG	1.74	0.69
13:CM:47:ASP:O	13:CM:48:LEU:HB3	1.91	0.69
27:BA:1710:C:H4'	27:BA:2858:C:O2	1.93	0.69
27:BA:1956:U:C2'	27:BA:1957:C:H5'	2.21	0.69
1:CA:25:C:O2'	1:CA:26:A:H5'	1.92	0.69
1:CA:31:G:H5'	1:CA:306:G:N2	2.07	0.69
1:CA:929:G:H1	1:CA:1388:C:H42	1.36	0.69
29:BC:100:ILE:HG22	29:BC:101:GLN:HG3	1.72	0.69
50:D1:30:VAL:O	50:D1:31:GLY:O	2.10	0.69
17:AQ:27:PHE:HD1	17:AQ:28:PRO:O	1.76	0.69
27:BA:2817:G:H5''	27:BA:2818:G:OP2	1.93	0.69
5:AE:33:VAL:HG21	5:AE:109:ILE:HG12	1.74	0.69
36:BN:4:TYR:CB	43:BU:64:ARG:NH2	2.54	0.69
44:BV:47:VAL:HB	44:BV:50:PRO:O	1.91	0.69
5:AE:12:LEU:HD11	5:AE:14:ARG:HB3	1.74	0.69
32:DF:65:TRP:HE3	32:DF:65:TRP:O	1.75	0.69
1:AA:193:C:O2'	1:AA:194:C:H5'	1.92	0.69
20:AT:80:ARG:O	20:AT:84:LEU:HB2	1.93	0.69
13:CM:14:ARG:O	13:CM:17:VAL:HG23	1.93	0.69
7:AG:49:ILE:HA	7:AG:52:GLU:HB2	1.75	0.69
8:CH:60:ARG:HG3	8:CH:60:ARG:NH1	1.99	0.69
16:AP:82:GLN:H	16:AP:82:GLN:CD	1.96	0.69
49:D0:40:GLN:NE2	49:D0:43:THR:HA	2.07	0.69
27:BA:1406:U:H2'	27:BA:1407:C:C6	2.27	0.69
3:AC:53:ALA:O	3:AC:54:ARG:HB2	1.91	0.69
27:DA:1695:G:H2'	27:DA:1695:G:N3	2.07	0.69
30:BD:11:PRO:O	30:BD:13:ARG:N	2.25	0.69
42:DT:108:ARG:HA	42:DT:111:ARG:NH1	2.07	0.69
27:DA:2009:G:H1'	40:DR:107:ASP:O	1.93	0.69
47:BY:68:HIS:HB3	47:BY:71:LYS:HG3	1.73	0.69
3:AC:180:ALA:HB1	3:AC:203:PHE:HE1	1.57	0.69
1:AA:595:G:N1	1:AA:641:U:H2'	2.08	0.69
1:AA:992:U:H1'	1:AA:993:G:C2	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:57:G:H2'	1:AA:58:C:H6	1.56	0.69
1:CA:1120:G:H2'	1:CA:1121:U:C6	2.28	0.69
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.93	0.69
50:B1:67:ILE:N	50:B1:68:PRO:HD2	2.07	0.69
41:BS:14:VAL:HG12	41:BS:15:ARG:N	2.06	0.69
27:DA:244:A:H2'	27:DA:245:G:O4'	1.92	0.69
13:CM:25:ILE:HD11	13:CM:66:LEU:CD2	2.15	0.69
27:BA:484:C:H2'	27:BA:485:C:H6	1.57	0.69
31:BE:60:ASN:CG	31:BE:62:PRO:HD2	2.13	0.69
27:DA:1431:U:O2'	27:DA:1432:C:H5'	1.91	0.69
55:D6:19:ARG:HG2	55:D6:20:ASN:N	2.07	0.69
36:DN:112:LEU:HD12	36:DN:115:ARG:HB3	1.75	0.69
27:BA:2318:G:O2'	27:BA:2319:G:OP1	2.06	0.69
32:DF:64:ILE:HG23	32:DF:65:TRP:H	1.57	0.69
39:BQ:109:VAL:CG1	39:BQ:113:GLN:HB3	2.23	0.69
27:BA:2609:U:OP1	27:BA:2609:U:H4'	1.92	0.69
1:AA:748:C:H4'	1:AA:749:C:O5'	1.92	0.69
37:BO:22:ILE:HG12	37:BO:41:ALA:CA	2.21	0.69
37:BO:78:ARG:HB2	37:BO:78:ARG:NH1	2.06	0.69
27:BA:1438:U:O2'	27:BA:1439:A:H5'	1.93	0.69
21:CU:21:TYR:O	21:CU:22:ARG:HB2	1.92	0.69
27:DA:2137:C:H2'	27:DA:2138:C:C6	2.27	0.69
41:DS:74:ALA:HB1	41:DS:103:GLU:CB	2.20	0.69
15:AO:37:ASN:N	15:AO:37:ASN:ND2	2.40	0.69
36:BN:15:LEU:HD12	36:BN:136:GLU:CG	2.22	0.69
8:AH:2:LEU:HD13	8:AH:4:ASP:H	1.57	0.69
34:DH:107:VAL:CG2	34:DH:152:ARG:HG2	2.22	0.69
6:CF:10:LEU:HD12	6:CF:10:LEU:N	2.08	0.69
27:DA:2884:U:OP2	54:D5:43:HIS:HE1	1.75	0.69
3:AC:91:LEU:HD11	3:AC:101:LEU:HD12	1.74	0.69
27:DA:267:C:H2'	27:DA:268:C:H6	1.56	0.69
27:DA:2807:G:C3'	27:DA:2808:U:H5''	2.21	0.69
27:DA:481:G:H1'	27:DA:506:G:H21	1.58	0.69
37:BO:13:ASN:ND2	37:BO:96:THR:H	1.91	0.69
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.75	0.69
4:CD:28:SER:O	4:CD:30:LYS:N	2.26	0.69
27:BA:862:G:H2'	27:BA:863:A:O4'	1.93	0.69
30:DD:261:LYS:NZ	30:DD:263:ARG:NH1	2.41	0.69
13:CM:76:ALA:HA	13:CM:79:LYS:HG3	1.75	0.69
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.40	0.69
27:BA:330:A:HO2'	27:BA:331:A:H8	1.38	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DC:58:VAL:HG21	29:DC:166:ASP:H	1.58	0.69
27:DA:126:A:OP2	56:D7:19:ARG:HB2	1.93	0.69
27:BA:699:A:H2'	27:BA:700:G:O4'	1.92	0.69
27:BA:1256:G:O2'	32:BF:82:ILE:HD11	1.91	0.69
32:BF:126:VAL:HG21	32:BF:129:PHE:CZ	2.28	0.69
32:BF:3:GLU:HA	32:BF:24:LEU:CG	2.22	0.69
37:BO:14:THR:CG2	37:BO:86:ILE:HD12	2.13	0.69
13:CM:70:LEU:HD23	13:CM:71:ARG:N	2.06	0.69
32:BF:63:LYS:NZ	32:BF:67:GLN:HB2	2.07	0.69
42:BT:91:ARG:HB3	42:BT:116:ALA:CA	2.16	0.69
43:DU:92:ARG:O	43:DU:93:LYS:HB2	1.93	0.69
27:DA:995:C:H5'	43:DU:54:LYS:HD3	1.75	0.69
30:DD:69:ARG:HH11	30:DD:130:ALA:HB2	1.57	0.69
27:DA:83:G:N1	27:DA:102:G:O2'	2.25	0.69
27:DA:1452:A:N6	27:DA:2702:U:H1'	2.07	0.69
38:DP:58:THR:O	38:DP:61:ARG:NE	2.26	0.69
36:DN:120:LEU:HD11	36:DN:122:VAL:HG23	1.74	0.69
27:DA:1952:A:OP1	37:DO:44:LYS:HE2	1.93	0.69
38:DP:23:PRO:HB2	38:DP:33:ARG:NE	2.08	0.69
1:AA:194:C:H2'	1:AA:195:A:H5''	1.74	0.69
45:BW:6:ILE:HA	45:BW:103:ILE:O	1.93	0.69
31:DE:1:MET:HB2	31:DE:83:ASP:O	1.91	0.69
1:CA:379:C:O2'	1:CA:380:G:H5'	1.92	0.69
1:CA:101:A:O2'	1:CA:102:G:H5'	1.92	0.69
1:CA:197:A:H4'	1:CA:198:G:O5'	1.93	0.69
1:AA:1061:G:C5	1:AA:1062:U:C5	2.81	0.69
48:BZ:76:ASP:HB2	48:BZ:83:GLU:HG3	1.75	0.69
1:CA:397:A:H2'	1:CA:399:G:OP2	1.93	0.69
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.93	0.69
33:DG:135:LEU:HD12	33:DG:135:LEU:H	1.58	0.69
36:DN:11:PRO:HB3	36:DN:51:PHE:CD1	2.28	0.69
27:DA:2647:U:O2'	27:DA:2648:C:H5'	1.93	0.69
27:BA:2199:A:C8	27:BA:2199:A:C5'	2.75	0.69
1:CA:1215:G:H2'	1:CA:1216:G:C8	2.28	0.69
15:CO:82:ILE:C	15:CO:82:ILE:HD13	2.12	0.69
27:BA:2512:C:H2'	27:BA:2513:G:O4'	1.92	0.69
1:CA:643:C:H5'	8:CH:31:PHE:CD1	2.27	0.69
56:D7:9:ARG:HB3	56:D7:48:LYS:HZ2	1.57	0.69
30:DD:35:LYS:HZ1	30:DD:104:TYR:H	1.40	0.69
33:DG:61:ALA:HB2	33:DG:68:PRO:HD3	1.75	0.69
27:BA:764:A:N7	30:BD:209:ALA:HB3	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2189:U:C3'	27:BA:2190:G:H5''	2.22	0.69
31:DE:4:ILE:CG1	31:DE:28:ALA:HB1	2.23	0.69
12:CL:5:ASN:O	12:CL:8:VAL:HB	1.93	0.69
27:DA:2794:C:O2'	27:DA:2795:G:H5''	1.92	0.69
52:D3:7:LYS:CG	52:D3:34:GLU:HG2	2.22	0.69
1:AA:627:G:O2'	1:AA:628:G:H5'	1.92	0.69
27:BA:1028:A:N6	27:BA:1125:G:H2'	2.08	0.69
1:CA:1238:A:N3	1:CA:1238:A:H2'	2.08	0.69
27:DA:557:U:H2'	27:DA:558:G:H8	1.57	0.69
2:CB:107:THR:O	2:CB:110:GLN:HG3	1.93	0.69
27:DA:649:G:H2'	27:DA:650:C:H6	1.56	0.69
10:CJ:12:ASP:OD1	10:CJ:14:LYS:HB2	1.93	0.69
28:DB:20:C:O2'	28:DB:21:G:H5'	1.92	0.69
27:BA:1192:G:H2'	27:BA:1193:G:H5'	1.75	0.69
11:AK:84:VAL:O	11:AK:85:ARG:HG2	1.92	0.69
1:CA:135:C:H2'	1:CA:136:C:H5'	1.74	0.69
27:BA:330:A:O2'	27:BA:331:A:H8	1.76	0.69
42:DT:129:ARG:NE	42:DT:131:ALA:HB3	2.07	0.69
54:B5:11:THR:HG22	54:B5:12:SER:O	1.92	0.69
3:CC:127:ARG:HG2	3:CC:127:ARG:HH11	1.56	0.69
4:AD:150:GLU:N	4:AD:150:GLU:OE1	2.26	0.69
13:AM:52:GLU:HG2	13:AM:55:ARG:HH21	1.58	0.69
2:AB:132:LYS:O	2:AB:135:GLN:HB2	1.93	0.69
33:DG:72:ARG:HH11	33:DG:86:MET:HG2	1.58	0.69
12:AL:124:GLU:O	12:AL:126:ALA:N	2.26	0.69
27:BA:1221:C:H5'	27:BA:1221:C:H6	1.57	0.69
27:BA:245:G:O2'	27:BA:246:C:H5'	1.93	0.69
27:DA:1899:G:N2	27:DA:1902:C:H41	1.91	0.69
33:BG:56:ALA:CB	33:BG:153:ARG:HH21	2.06	0.69
55:D6:33:LYS:CA	55:D6:33:LYS:HE2	2.16	0.69
27:DA:2258:C:H6	27:DA:2426:A:H5'	1.58	0.69
27:DA:1260:G:H2'	27:DA:1261:C:H6	1.57	0.69
41:DS:66:ALA:O	41:DS:69:VAL:HG12	1.93	0.69
31:BE:36:ARG:NH2	31:BE:88:GLY:CA	2.54	0.69
32:BF:84:VAL:HG12	32:BF:85:GLY:N	2.07	0.69
46:DX:12:VAL:CG1	46:DX:17:ALA:HB1	2.23	0.69
20:CT:33:ILE:HD13	20:CT:62:LEU:HB3	1.75	0.69
10:AJ:39:PRO:HB3	10:AJ:70:ARG:CZ	2.22	0.69
47:BY:87:LYS:CG	47:BY:88:LYS:H	2.05	0.69
38:BP:83:VAL:HG21	38:BP:105:LEU:HD12	1.73	0.69
1:CA:646:U:O2'	1:CA:647:C:H5'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BI:133:HIS:CD2	35:BI:133:HIS:H	2.10	0.69
45:DW:4:LYS:HA	45:DW:106:ILE:HG22	1.75	0.69
5:AE:80:ILE:HG22	8:AH:104:ARG:HH12	1.57	0.69
27:DA:271(A):A:H5'	27:DA:271(B):C:OP2	1.93	0.69
27:BA:15:G:H2'	27:BA:16:G:H8	1.58	0.69
27:BA:272(B):G:H1	27:BA:366:C:N4	1.90	0.69
34:DH:106:THR:CG2	34:DH:112:PRO:HB3	2.23	0.69
5:CE:101:ILE:H	5:CE:101:ILE:HD13	1.58	0.69
20:AT:89:ARG:CZ	20:AT:104:LEU:HD21	2.22	0.69
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.28	0.69
11:AK:43:SER:HA	11:AK:47:VAL:HG21	1.74	0.69
27:DA:2110:G:H5''	27:DA:2111:C:OP2	1.93	0.69
27:DA:707:G:H1	27:DA:724:U:H3	1.40	0.69
27:BA:2202:C:H2'	27:BA:2203:U:O4'	1.91	0.69
27:DA:1814:G:H2'	27:DA:1815:A:N7	2.08	0.69
42:BT:42:ILE:O	42:BT:42:ILE:HD12	1.93	0.69
31:BE:16:ARG:HH11	31:BE:16:ARG:HG3	1.57	0.69
44:DV:99:ILE:HD13	44:DV:99:ILE:N	2.08	0.69
38:BP:65:ARG:HH21	57:B8:15:LYS:HB2	1.54	0.69
37:BO:14:THR:HG21	37:BO:86:ILE:CD1	2.13	0.69
57:D8:61:LEU:HD13	57:D8:62:LEU:HG	1.75	0.69
27:DA:271(E):U:H2'	27:DA:271(F):C:C6	2.28	0.69
32:DF:7:TYR:HB3	32:DF:16:GLY:N	1.99	0.69
27:DA:1493:C:O2	27:DA:1493:C:H2'	1.92	0.69
27:DA:862:G:H2'	27:DA:863:A:O4'	1.92	0.69
27:DA:2547:U:H2'	27:DA:2548:G:H8	1.57	0.69
8:AH:60:ARG:NH1	8:AH:60:ARG:HG3	2.01	0.69
8:CH:4:ASP:OD1	8:CH:7:ALA:N	2.26	0.69
48:DZ:38:VAL:HG21	48:DZ:43:PHE:HB2	1.74	0.69
27:BA:2161:C:H2'	27:BA:2162:G:H8	1.57	0.69
48:BZ:149:LEU:CD2	48:BZ:170:ILE:HG13	2.22	0.69
35:BI:13:GLY:O	35:BI:14:ASP:HB2	1.92	0.69
1:AA:935:A:N6	7:AG:3:ARG:HB2	2.08	0.69
25:CY:68:C:C3'	25:CY:69:C:H5''	2.23	0.69
1:CA:602:A:O2'	1:CA:603:U:H5'	1.92	0.69
27:BA:1887:C:C2'	27:BA:1888:G:H5''	2.22	0.69
37:BO:13:ASN:ND2	37:BO:97:ARG:N	2.41	0.69
1:CA:628:G:H2'	1:CA:629:G:C8	2.28	0.69
34:DH:103:LEU:HD23	34:DH:115:VAL:HB	1.74	0.69
27:DA:65:C:O2'	27:DA:66:C:H5'	1.93	0.69
1:CA:1515:C:O2'	1:CA:1516:G:H5'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:922:U:H2'	27:BA:923:C:C6	2.27	0.69
27:DA:1440:G:H2'	27:DA:1441:G:C8	2.28	0.69
46:DX:51:VAL:HG11	46:DX:81:VAL:HB	1.74	0.69
40:DR:30:THR:O	40:DR:30:THR:HG23	1.92	0.69
43:BU:91:ASP:O	43:BU:92:ARG:HD3	1.93	0.68
46:DX:55:ASN:HB2	46:DX:80:ILE:HD13	1.75	0.68
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.75	0.68
42:DT:32:TYR:O	42:DT:41:ARG:O	2.11	0.68
48:DZ:150:HIS:HB2	48:DZ:167:GLU:O	1.93	0.68
1:CA:1093:A:O2'	1:CA:1094:G:H5'	1.93	0.68
3:AC:118:GLN:O	3:AC:122:GLU:HG3	1.93	0.68
27:DA:847:U:H2'	27:DA:848:G:H5''	1.73	0.68
27:DA:2142:C:H2'	27:DA:2143:C:C6	2.29	0.68
37:DO:12:ASP:HA	37:DO:98:VAL:HA	1.75	0.68
27:BA:70:G:HO2'	27:BA:114:U:H5	1.40	0.68
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.93	0.68
39:DQ:34:LEU:N	39:DQ:104:PHE:O	2.24	0.68
4:AD:33:MET:HE2	4:AD:37:PRO:HA	1.75	0.68
28:DB:15:A:H3'	28:DB:16:G:H5'	1.74	0.68
1:CA:115:G:H4'	1:CA:116:A:O5'	1.92	0.68
27:BA:191:A:H2'	27:BA:192:C:C6	2.28	0.68
27:DA:2514:U:O2'	27:DA:2515:C:H5'	1.93	0.68
27:BA:2712:U:H1'	27:BA:2712(A):A:C8	2.29	0.68
12:AL:3:THR:N	12:AL:6:GLN:NE2	2.41	0.68
10:AJ:80:LYS:HE3	10:AJ:80:LYS:O	1.92	0.68
28:DB:26:A:H8	28:DB:26:A:H5''	1.58	0.68
27:DA:2672:G:H3'	27:DA:2673:G:H5''	1.74	0.68
32:BF:134:GLY:HA2	32:BF:166:ALA:HB2	1.75	0.68
27:DA:291:C:H2'	27:DA:292:C:H6	1.56	0.68
1:CA:767:A:H2'	1:CA:768:A:C8	2.27	0.68
27:DA:2322:A:H2'	27:DA:2323:G:O4'	1.92	0.68
28:BB:40:U:C2	28:BB:43:C:H5''	2.28	0.68
32:BF:18:ARG:HG2	32:BF:199:TRP:CZ3	2.28	0.68
42:BT:31:SER:C	42:BT:32:TYR:HD2	1.96	0.68
27:DA:2702:U:H2'	27:DA:2702:U:O2	1.92	0.68
57:D8:32:LEU:O	57:D8:33:ASN:O	2.11	0.68
33:DG:15:VAL:C	33:DG:17:PRO:HD2	2.14	0.68
41:DS:92:TYR:CD1	41:DS:93:LYS:N	2.60	0.68
27:BA:786:C:H4'	27:BA:1780:A:N7	2.09	0.68
30:BD:227:ASN:C	30:BD:234:GLY:HA3	2.13	0.68
2:AB:167:PRO:O	2:AB:171:ALA:N	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:970:C:H41	9:CI:126:SER:HB3	1.56	0.68
1:CA:1307:U:H2'	1:CA:1308:U:H6	1.58	0.68
38:BP:112:LEU:N	38:BP:128:HIS:HD2	1.87	0.68
49:B0:25:ARG:HH11	49:B0:25:ARG:HG2	1.57	0.68
35:BI:82:ARG:HB2	35:BI:82:ARG:NH1	2.08	0.68
35:BI:5:LEU:HD12	35:BI:5:LEU:N	2.08	0.68
35:DI:81:VAL:HG21	35:DI:142:VAL:HG13	1.75	0.68
19:CS:62:ILE:O	19:CS:62:ILE:HG23	1.93	0.68
27:DA:1403:C:H5''	27:DA:1471:A:C1'	2.22	0.68
1:CA:1178:G:OP2	9:CI:97:LYS:HE3	1.94	0.68
27:DA:2012:G:H4'	45:DW:96:ILE:HD11	1.74	0.68
32:BF:160:ASN:HD21	32:BF:162:LEU:CB	2.06	0.68
1:AA:308:C:H2'	1:AA:309:G:C8	2.28	0.68
2:CB:102:LEU:O	2:CB:105:PHE:HB2	1.93	0.68
1:AA:1437:C:H42	1:AA:1464:G:H1	1.38	0.68
27:DA:1356:G:H2'	27:DA:1357:U:C6	2.27	0.68
36:DN:42:TRP:CD1	43:DU:63:VAL:HG11	2.28	0.68
27:DA:2238:G:H4'	27:DA:2239:G:N7	2.08	0.68
23:CW:21:A:H2'	23:CW:22:G:O4'	1.93	0.68
13:CM:118:ALA:HB2	24:CX:28:C:H4'	1.75	0.68
27:BA:2402:C:H2'	27:BA:2403:C:H5'	1.75	0.68
10:CJ:61:GLU:CD	14:CN:58:LYS:HE2	2.14	0.68
37:BO:14:THR:HG22	37:BO:16:ALA:H	1.56	0.68
27:BA:352:G:N3	27:BA:352:G:H2'	2.09	0.68
41:BS:77:ALA:O	41:BS:79:ALA:N	2.27	0.68
27:DA:633:A:C2'	27:DA:634:C:H5'	2.21	0.68
38:DP:96:THR:O	38:DP:100:LEU:HD23	1.94	0.68
38:DP:41:ARG:NE	38:DP:41:ARG:HA	2.08	0.68
42:DT:28:VAL:CG2	42:DT:47:GLY:H	1.98	0.68
30:BD:44:ASN:HB3	30:BD:49:ILE:HA	1.73	0.68
16:AP:19:ILE:HD11	16:AP:73:LEU:HD12	1.73	0.68
1:CA:1460:A:H2'	1:CA:1461:G:O4'	1.93	0.68
1:CA:261:U:O2	1:CA:263:A:C8	2.46	0.68
1:AA:723:U:O2'	1:AA:724:G:H5'	1.92	0.68
51:D2:16:LEU:O	51:D2:20:GLU:HB3	1.94	0.68
30:BD:181:GLU:HA	30:BD:272:ALA:HB3	1.75	0.68
24:CX:17:C:H3'	24:CX:17(B):U:H5'	1.75	0.68
27:DA:857:C:P	49:D0:77:ARG:HH22	2.17	0.68
11:CK:85:ARG:HG2	11:CK:111:ASP:O	1.92	0.68
3:AC:100:ALA:O	3:AC:101:LEU:HB2	1.93	0.68
10:CJ:35:SER:OG	10:CJ:73:ASP:HB2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:939:G:H5''	7:CG:102:ARG:NH2	2.07	0.68
1:CA:685:G:C2	1:CA:686:U:C5	2.81	0.68
35:DI:10:GLU:O	35:DI:12:LEU:HD23	1.93	0.68
47:BY:67:LEU:CD1	47:BY:71:LYS:HE3	2.24	0.68
27:BA:1835:G:N3	27:BA:1835:G:H2'	2.07	0.68
1:AA:1225:A:OP2	1:AA:1226:C:H5	1.76	0.68
27:DA:1332:G:H5'	27:DA:1333:C:OP2	1.92	0.68
27:BA:985:C:H2'	27:BA:986:C:C6	2.28	0.68
42:DT:129:ARG:CD	42:DT:131:ALA:HB3	2.24	0.68
1:AA:567:G:C2	1:AA:568:G:H1'	2.27	0.68
27:BA:275:G:O3'	27:BA:279:C:P	2.52	0.68
27:BA:2853:C:H2'	27:BA:2854:G:C8	2.28	0.68
36:BN:46:VAL:O	36:BN:47:ALA:CB	2.40	0.68
25:AY:18:G:H4'	25:AY:56:G:H22	1.58	0.68
1:AA:792:A:H4'	1:AA:793:U:O5'	1.93	0.68
5:CE:64:ARG:HE	5:CE:64:ARG:HA	1.58	0.68
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	1.92	0.68
32:BF:65:TRP:HB3	32:BF:66:PRO:HD3	1.75	0.68
52:B3:23:LEU:N	52:B3:23:LEU:HD12	2.01	0.68
30:BD:243:GLY:O	30:BD:244:ARG:CB	2.42	0.68
41:DS:52:SER:CB	41:DS:55:ALA:HB3	2.17	0.68
34:DH:137:ASP:OD1	34:DH:138:LYS:N	2.25	0.68
17:CQ:81:ARG:NH1	17:CQ:84:LEU:HD11	2.08	0.68
1:CA:1494:G:C8	26:CZ:3:SER:HB3	2.28	0.68
27:BA:1784:A:H4'	27:BA:1785:A:C5'	2.22	0.68
2:CB:32:ILE:CD1	2:CB:40:HIS:HB3	2.20	0.68
1:AA:460:G:C6	1:AA:470:C:H5''	2.29	0.68
27:BA:382:G:C2'	27:BA:383:U:H5'	2.24	0.68
6:AF:55:ASP:HB2	6:AF:86:ARG:HH22	1.57	0.68
38:BP:97:PRO:O	38:BP:98:GLU:HG3	1.93	0.68
36:DN:17:ASP:OD2	36:DN:56:ASN:HB3	1.92	0.68
1:CA:52:G:H2'	1:CA:53:A:C8	2.26	0.68
12:AL:92:GLY:O	12:AL:94:ARG:HG3	1.94	0.68
5:CE:19:MET:SD	5:CE:24:ARG:HB3	2.33	0.68
27:DA:2000:G:O2'	27:DA:2001:A:H5'	1.93	0.68
29:DC:100:ILE:HD13	29:DC:132:GLY:HA3	1.75	0.68
30:BD:134:ARG:HD3	30:BD:135:PHE:CE1	2.28	0.68
8:CH:86:ILE:HG22	8:CH:87:SER:N	2.08	0.68
56:D7:22:MET:SD	56:D7:31:LEU:HD11	2.34	0.68
47:DY:88:LYS:HE2	47:DY:93:GLY:HA3	1.76	0.68
8:CH:20:TYR:HA	8:CH:65:TYR:HE2	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:568:G:O6	12:AL:2:PRO:HD3	1.93	0.68
27:BA:2296:U:H4'	27:BA:2297:C:OP1	1.93	0.68
44:DV:75:PHE:HE2	44:DV:82:ARG:NE	1.92	0.68
28:BB:105:A:H2'	28:BB:106:G:O4'	1.94	0.68
48:BZ:111:ARG:HH11	48:BZ:111:ARG:HG2	1.58	0.68
27:BA:782:A:H5'	27:BA:783:A:C2	2.29	0.68
30:DD:2:ALA:O	30:DD:3:VAL:HB	1.92	0.68
27:DA:1024:G:H3'	27:DA:1025:G:H5''	1.74	0.68
27:DA:271(R):G:H2'	27:DA:271(S):G:H8	1.58	0.68
13:CM:22:ILE:HG22	13:CM:25:ILE:HD13	1.76	0.68
42:DT:65:LYS:HZ2	42:DT:66:VAL:H	0.73	0.68
27:BA:534:U:H2'	27:BA:535:C:C6	2.29	0.68
19:CS:15:LEU:O	19:CS:19:VAL:HG23	1.94	0.68
30:DD:72:LYS:HD2	30:DD:97:TYR:CD1	2.27	0.68
47:DY:27:VAL:HG12	47:DY:29:GLU:H	1.58	0.68
4:AD:22:LYS:HB2	4:AD:26:CYS:HB2	1.74	0.68
47:DY:15:VAL:HG12	47:DY:17:SER:H	1.58	0.68
34:BH:54:ARG:HG2	34:BH:65:HIS:HD2	1.58	0.68
42:DT:80:SER:CB	42:DT:81:PRO:HD2	2.23	0.68
1:AA:1082:G:O2'	1:AA:1083:U:H5'	1.94	0.68
41:BS:105:ALA:C	41:BS:107:GLU:H	1.96	0.68
27:BA:2331:G:H4'	49:B0:43:THR:N	2.05	0.68
27:BA:1667:G:N3	27:BA:1991:U:C5	2.62	0.68
1:AA:658:G:OP1	15:AO:31:LEU:HD21	1.94	0.68
15:AO:82:ILE:O	15:AO:82:ILE:HD13	1.93	0.68
27:DA:779:U:OP1	30:DD:49:ILE:HG22	1.94	0.68
35:DI:37:VAL:HG12	35:DI:38:LEU:N	2.07	0.68
27:DA:2821:A:H2'	27:DA:2822:G:H8	1.58	0.68
8:AH:86:ILE:HD11	8:AH:136:GLU:HB3	1.75	0.68
7:AG:24:THR:HA	7:AG:27:ILE:CD1	2.24	0.68
27:DA:321:G:OP2	32:DF:135:LYS:HD2	1.93	0.68
50:D1:7:ILE:HB	50:D1:62:VAL:HG23	1.75	0.68
1:AA:979:C:H3'	1:AA:980:C:C5'	2.24	0.68
13:CM:81:LEU:HD22	13:CM:86:CYS:SG	2.34	0.68
31:BE:26:ILE:O	31:BE:181:LEU:HD12	1.94	0.68
35:BI:68:LEU:HA	35:BI:71:ILE:HG13	1.75	0.68
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	1.76	0.68
40:BR:76:VAL:CG1	40:BR:77:ARG:N	2.56	0.68
28:BB:21:G:H2'	28:BB:22:U:H6	1.58	0.68
24:CX:64:G:H2'	24:CX:65:C:C6	2.27	0.68
20:CT:16:HIS:HA	20:CT:19:SER:HB3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1028:C:H42	1:AA:1034:G:N2	1.92	0.68
39:DQ:26:TYR:O	39:DQ:67:ARG:NH1	2.26	0.68
1:CA:445:G:H1	1:CA:489:C:H42	1.42	0.68
1:AA:1456:G:O3'	20:AT:39:LYS:NZ	2.24	0.68
1:CA:1419:G:H2'	1:CA:1420:C:H6	1.59	0.68
32:BF:1:MET:HG2	32:BF:26:ALA:HA	1.73	0.68
27:DA:1142(A):A:O2'	27:DA:1143:A:H2'	1.93	0.68
27:DA:2256:G:N2	27:DA:2275:C:C4	2.62	0.68
55:B6:19:ARG:O	55:B6:20:ASN:O	2.10	0.68
1:CA:403:C:OP1	4:CD:136:PRO:HD2	1.93	0.68
30:DD:218:ARG:CB	30:DD:219:PRO:HD2	2.22	0.68
36:DN:60:ILE:CD1	36:DN:99:LEU:HD23	2.23	0.68
24:CX:19:G:H5'	24:CX:20:U:C5	2.28	0.68
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.74	0.68
28:BB:3:C:N4	28:BB:118:G:H1	1.86	0.68
10:AJ:46:ARG:HA	10:AJ:64:GLU:HB3	1.76	0.68
45:DW:10:VAL:HG23	45:DW:101:SER:O	1.92	0.68
2:CB:107:THR:HG23	2:CB:110:GLN:NE2	2.09	0.68
51:B2:7:ARG:HH11	51:B2:7:ARG:HG2	1.57	0.68
27:BA:2670:A:OP2	27:BA:2670:A:H8	1.76	0.68
1:AA:114:U:H2'	1:AA:115:G:C8	2.29	0.68
27:DA:363:G:H2'	27:DA:363(A):A:H8	1.59	0.68
1:CA:1367:C:OP1	9:CI:114:TYR:HA	1.94	0.68
27:DA:839:U:H2'	27:DA:840:C:C6	2.29	0.68
27:BA:85:G:OP1	47:BY:9:LYS:HA	1.94	0.68
32:BF:18:ARG:HG2	32:BF:199:TRP:HZ3	1.59	0.68
34:BH:85:LYS:HZ3	34:BH:133:VAL:HG21	1.55	0.68
57:D8:61:LEU:CD1	57:D8:62:LEU:H	2.05	0.68
38:DP:46:LYS:NZ	38:DP:51:PHE:CE2	2.62	0.68
30:DD:11:PRO:O	30:DD:13:ARG:N	2.27	0.68
42:BT:81:PRO:O	42:BT:82:LEU:HG	1.94	0.68
8:AH:77:GLU:HG2	8:AH:78:GLN:H	1.59	0.68
38:DP:113:LYS:HA	38:DP:129:ALA:O	1.93	0.68
32:DF:89:VAL:HG12	32:DF:90:PHE:N	2.08	0.68
27:DA:307:G:H21	27:DA:330:A:H62	1.40	0.68
27:BA:857:C:H5'	49:B0:77:ARG:NH2	2.03	0.68
32:DF:41:LEU:HD11	32:DF:184:TYR:CE1	2.29	0.68
31:BE:117:MET:O	31:BE:118:LYS:HB2	1.92	0.68
25:AY:3:G:H1	25:AY:69:C:H42	1.42	0.68
45:DW:4:LYS:HG2	45:DW:106:ILE:HG22	1.75	0.68
1:AA:1442(A):G:H4'	1:AA:1442(B):A:OP2	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DG:76:SER:CA	33:DG:83:ARG:HB2	2.24	0.68
33:DG:44:GLY:N	33:DG:88:ILE:HG12	2.07	0.68
1:CA:841:U:O2'	1:CA:848:C:H5'	1.94	0.68
16:CP:56:ALA:O	16:CP:60:LEU:HG	1.92	0.68
12:CL:5:ASN:HD22	17:CQ:34:LYS:NZ	1.91	0.68
27:DA:324:A:C2	27:DA:325:G:H1'	2.28	0.68
52:D3:7:LYS:CB	52:D3:34:GLU:HG2	2.24	0.68
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	1.74	0.68
40:BR:10:LEU:HD22	40:BR:17:ARG:NH1	2.08	0.68
43:BU:8:VAL:HG11	43:BU:12:ARG:HE	1.58	0.68
27:BA:436:C:H2'	27:BA:437:G:C8	2.29	0.68
27:BA:320:A:OP2	32:BF:137:LYS:HD2	1.94	0.68
27:BA:2758:A:C2'	27:BA:2759:G:H5'	2.24	0.68
10:AJ:84:GLN:O	10:AJ:85:LEU:HD23	1.94	0.68
53:D4:62:CYS:SG	53:D4:64:LYS:HB2	2.33	0.68
49:B0:68:GLU:HG2	49:B0:80:HIS:HB2	1.74	0.68
27:BA:1935:G:H1'	27:BA:1964:G:N2	2.08	0.68
24:AX:64:G:H2'	24:AX:65:C:C6	2.28	0.68
27:BA:1615:C:H2'	27:BA:1617:C:C5	2.28	0.68
41:BS:25:ARG:O	41:BS:39:ILE:HA	1.92	0.68
13:CM:22:ILE:HB	13:CM:25:ILE:HB	1.76	0.68
1:CA:1251:A:H2'	1:CA:1252:A:H8	1.56	0.68
39:BQ:109:VAL:HG13	39:BQ:113:GLN:OE1	1.94	0.68
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.29	0.68
42:DT:31:SER:HB2	42:DT:32:TYR:CE2	2.29	0.68
16:AP:23:ASP:O	16:AP:25:ARG:N	2.27	0.68
27:DA:71:A:H5"	27:DA:73:A:N7	2.09	0.68
1:CA:164:U:H2'	1:CA:165:C:C6	2.29	0.68
35:BI:131:LYS:HG3	35:BI:132:PRO:HD2	1.74	0.68
48:BZ:156:LEU:HB3	48:BZ:160:VAL:HG12	1.75	0.68
27:BA:2562:U:H2'	27:BA:2563:U:H5'	1.74	0.68
27:BA:90:U:H1'	27:BA:92:A:H8	1.57	0.68
13:AM:5:ALA:HB2	13:AM:66:LEU:HD22	1.76	0.68
7:CG:75:VAL:HG12	7:CG:88:PRO:HB3	1.74	0.68
11:CK:67:ASP:O	11:CK:70:LYS:HB3	1.94	0.68
11:CK:21:ILE:CD1	11:CK:82:VAL:HG13	2.24	0.68
2:CB:80:ILE:CD1	2:CB:212:GLN:HA	2.23	0.68
1:AA:1066:C:H2'	1:AA:1067:A:C8	2.29	0.68
51:B2:4:SER:HA	51:B2:7:ARG:NH1	2.09	0.68
1:AA:1128:C:H5'	9:AI:16:ARG:HH12	1.58	0.68
18:AR:31:LEU:HD11	18:AR:62:GLU:HG2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BB:35:U:H2'	28:BB:36:C:C6	2.28	0.68
27:BA:719:C:O2'	27:BA:720:C:H5'	1.94	0.68
57:B8:11:LYS:HG3	57:B8:64:TYR:OH	1.94	0.68
47:BY:84:ARG:HB2	47:BY:95:LYS:O	1.92	0.68
27:DA:197:A:H5'	27:DA:197:A:C8	2.28	0.68
47:BY:49:VAL:O	47:BY:53:PRO:HG3	1.93	0.68
44:DV:62:LEU:N	44:DV:62:LEU:HD22	2.08	0.68
55:D6:16:CYS:SG	55:D6:48:VAL:HG22	2.34	0.68
57:D8:38:GLY:O	57:D8:42:ARG:HB2	1.93	0.68
32:BF:89:VAL:HG12	32:BF:90:PHE:N	2.05	0.68
2:CB:161:ALA:HB1	2:CB:185:ILE:HD12	1.75	0.68
20:CT:30:LYS:NZ	20:CT:80:ARG:NH2	2.42	0.68
42:DT:13:ARG:NE	42:DT:13:ARG:HA	2.08	0.68
38:DP:13:ASN:C	38:DP:13:ASN:ND2	2.43	0.68
27:DA:541:C:H2'	27:DA:542:C:C5	2.28	0.68
27:DA:548:A:O2'	27:DA:549:G:OP1	2.10	0.68
27:BA:623:G:H2'	27:BA:624:C:C6	2.28	0.68
1:AA:1171:G:H2'	1:AA:1172:C:H6	1.59	0.68
42:DT:109:GLU:HA	42:DT:112:ARG:HD3	1.76	0.68
7:CG:137:LYS:O	7:CG:141:VAL:HG23	1.93	0.68
3:AC:150:LYS:HE3	3:AC:167:TRP:HE1	1.58	0.68
9:AI:4:TYR:HD1	9:AI:4:TYR:N	1.92	0.68
28:DB:15:A:H5'	28:DB:16:G:C8	2.29	0.68
27:BA:2111:C:H4'	27:BA:2112:G:OP1	1.94	0.68
1:AA:523:A:C2	12:AL:88:LYS:HB3	2.29	0.68
7:AG:105:VAL:O	7:AG:108:ALA:HB3	1.94	0.68
36:BN:51:PHE:CE1	36:BN:119:ARG:HD3	2.29	0.68
27:BA:2790:A:H2'	27:BA:2790:A:N3	2.08	0.68
31:BE:186:GLY:O	31:BE:188:VAL:N	2.27	0.68
38:DP:48:PRO:HG2	38:DP:49:ARG:N	1.99	0.68
32:DF:18:ARG:HH21	32:DF:20:LEU:HD13	1.59	0.68
27:DA:2086:U:H2'	27:DA:2087:G:C8	2.29	0.68
27:DA:1009:A:H5'	27:DA:1009:A:H8	1.58	0.68
27:DA:437:G:O2'	27:DA:438:G:H5'	1.94	0.68
55:D6:40:CYS:HB2	55:D6:46:HIS:HB3	1.76	0.68
38:DP:115:LEU:HA	38:DP:134:ALA:CB	2.24	0.68
27:BA:2299:G:N1	27:BA:2318:G:H8	1.90	0.68
1:CA:200:G:H2'	1:CA:201:C:C6	2.29	0.68
30:BD:231:HIS:CD2	30:BD:249:PRO:HG3	2.28	0.68
17:AQ:58:GLU:C	17:AQ:59:ILE:HD13	2.14	0.68
27:BA:1274:A:H1'	27:BA:1297:C:H4'	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:48:TYR:CD1	8:CH:49:GLU:N	2.61	0.68
31:DE:25:VAL:O	31:DE:26:ILE:HD13	1.93	0.68
27:DA:1352:U:H3	27:DA:1378:A:H62	1.41	0.68
27:BA:2563:U:O2	27:BA:2565:A:C8	2.40	0.68
7:CG:84:ASN:HD22	7:CG:84:ASN:H	1.38	0.68
1:AA:736:C:H5''	18:AR:72:ARG:NH2	2.09	0.68
38:BP:85:LEU:HD23	38:BP:85:LEU:H	1.59	0.68
27:BA:1577:C:H2'	27:BA:1578:U:H6	1.58	0.68
27:DA:2466:C:H2'	27:DA:2467:C:H5'	1.76	0.68
27:BA:185:U:H2'	27:BA:186:G:H8	1.57	0.68
4:AD:170:VAL:CG1	4:AD:171:GLY:N	2.57	0.68
1:CA:93:G:O2'	1:CA:96:U:H5'	1.94	0.68
27:BA:1615:C:H2'	27:BA:1617:C:H5	1.59	0.68
27:DA:2653:U:H2'	27:DA:2654:A:N7	2.09	0.68
32:DF:99:TYR:CD2	32:DF:99:TYR:O	2.47	0.68
4:AD:57:ARG:HD3	4:AD:205:GLU:HB2	1.76	0.68
27:DA:364:C:O2	27:DA:364:C:H2'	1.93	0.68
8:CH:28:ALA:HA	8:CH:59:LEU:HD11	1.76	0.68
13:CM:23:TYR:CE1	13:CM:71:ARG:HB2	2.28	0.67
13:CM:67:GLU:O	13:CM:69:GLU:N	2.27	0.67
27:BA:673:C:H6	27:BA:673:C:H5''	1.59	0.67
44:BV:47:VAL:HG12	44:BV:52:VAL:HG12	1.75	0.67
28:BB:83:G:H4'	52:B3:52:HIS:CD2	2.28	0.67
47:DY:26:LYS:HG2	47:DY:27:VAL:H	1.59	0.67
27:DA:908:C:O2'	27:DA:909:A:H5'	1.94	0.67
1:CA:376:G:O2'	1:CA:377:G:H5'	1.94	0.67
1:CA:389:A:H2'	1:CA:390:C:O4'	1.94	0.67
27:DA:1033:U:H5''	27:DA:1034:G:OP2	1.95	0.67
49:B0:43:THR:HG23	49:B0:43:THR:O	1.94	0.67
27:DA:1775:U:H2'	27:DA:1776:G:C5'	2.21	0.67
27:BA:1952:A:H5'	37:BO:42:SER:OG	1.94	0.67
38:DP:13:ASN:HD22	38:DP:14:LYS:N	1.91	0.67
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.29	0.67
6:CF:33:TYR:CD2	6:CF:71:ARG:HD2	2.25	0.67
49:B0:38:VAL:HG12	49:B0:40:GLN:HG2	1.74	0.67
27:BA:2282:G:H5''	27:BA:2283:C:O4'	1.93	0.67
33:DG:68:PRO:HB2	33:DG:90:LEU:HD22	1.76	0.67
1:AA:939:G:H5''	7:AG:102:ARG:HH12	1.59	0.67
37:DO:23:ARG:HD2	37:DO:24:VAL:H	1.59	0.67
42:DT:14:TYR:CD1	42:DT:14:TYR:N	2.62	0.67
31:BE:69:LYS:NZ	31:BE:89:ASP:HA	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1771:C:H5''	27:BA:1772:G:OP2	1.93	0.67
37:BO:103:ALA:HB1	37:BO:105:GLU:OE1	1.93	0.67
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.09	0.67
7:CG:14:PRO:HB3	7:CG:19:GLY:C	2.15	0.67
12:CL:73:ASN:HD21	12:CL:105:ALA:HB2	1.59	0.67
27:DA:1401:G:H2'	27:DA:1402:C:C6	2.29	0.67
39:DQ:79:LEU:HD22	39:DQ:80:GLU:N	2.09	0.67
27:BA:610:G:H2'	27:BA:611:C:C6	2.29	0.67
4:AD:59:ARG:HH21	4:AD:66:ARG:HH22	1.41	0.67
9:AI:69:GLY:O	9:AI:73:GLN:HG3	1.93	0.67
1:AA:640:A:C2	8:AH:115:SER:HB3	2.29	0.67
4:CD:165:MET:O	4:CD:166:LYS:C	2.32	0.67
25:AY:12:C:H2'	25:AY:13:A:O4'	1.94	0.67
35:BI:64:GLU:OE1	35:BI:64:GLU:HA	1.94	0.67
23:CW:37:U:H2'	23:CW:38:U:O4'	1.94	0.67
1:CA:1041:A:H2'	1:CA:1042:G:C8	2.28	0.67
47:BY:42:VAL:HB	47:BY:65:ALA:HB3	1.75	0.67
27:BA:1190:G:H5'	38:BP:35:HIS:H	1.58	0.67
38:BP:61:ARG:H	38:BP:61:ARG:HD2	1.60	0.67
1:CA:1363(A):A:C1'	1:CA:1365:G:N7	2.47	0.67
41:BS:19:LYS:O	41:BS:20:ARG:HD3	1.94	0.67
27:DA:1142(A):A:H8	27:DA:1142(A):A:H5'	1.58	0.67
48:DZ:157:PRO:HG2	48:DZ:160:VAL:CG2	2.16	0.67
27:BA:558:G:O2'	27:BA:559:G:H5'	1.94	0.67
27:DA:83:G:O2'	27:DA:84:A:H8	1.77	0.67
42:DT:42:ILE:N	42:DT:42:ILE:HD12	2.00	0.67
57:D8:43:GLN:O	57:D8:44:LYS:HD2	1.94	0.67
1:CA:142:G:H1	1:CA:221:C:H42	1.38	0.67
1:CA:382:A:H2'	1:CA:383:A:C8	2.29	0.67
8:AH:39:LEU:HB2	8:AH:45:ILE:HD11	1.76	0.67
1:CA:1406:U:H2'	1:CA:1407:C:C6	2.29	0.67
1:CA:1148:U:H2'	1:CA:1149:C:O4'	1.94	0.67
30:DD:53:PHE:C	30:DD:218:ARG:HG3	2.15	0.67
27:DA:1625:C:C2'	27:DA:1626:G:H5'	2.25	0.67
55:B6:11:LEU:O	55:B6:24:GLU:N	2.27	0.67
27:DA:1457:A:HO2'	27:DA:1459:G:H8	1.40	0.67
27:BA:2693:A:H2'	27:BA:2694:G:H5'	1.76	0.67
27:DA:1446:C:H42	27:DA:1465:G:H1	1.42	0.67
10:CJ:35:SER:O	10:CJ:36:GLY:O	2.12	0.67
12:AL:68:PRO:HG3	12:AL:96:HIS:HD2	1.59	0.67
12:AL:68:PRO:O	12:AL:99:ARG:HD2	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BF:164:ARG:HG3	32:BF:175:THR:OG1	1.94	0.67
1:AA:434:U:H2'	1:AA:435:C:O4'	1.94	0.67
27:BA:1677:A:H2'	27:BA:1678:G:C8	2.28	0.67
10:AJ:30:SER:OG	10:AJ:81:THR:HG23	1.95	0.67
4:CD:162:LEU:O	4:CD:165:MET:HB2	1.94	0.67
1:AA:859:A:O2'	1:AA:860:A:H5'	1.94	0.67
49:B0:56:ASP:O	49:B0:57:PHE:HB2	1.94	0.67
38:DP:94:GLU:HG3	38:DP:124:LYS:O	1.95	0.67
24:CX:34:C:O2	24:CX:34:C:H2'	1.94	0.67
1:CA:978:A:H5''	1:CA:978:A:C8	2.29	0.67
2:CB:69:LEU:HD22	2:CB:91:PRO:CB	2.17	0.67
41:BS:17:ARG:HA	41:BS:20:ARG:NH1	2.10	0.67
5:AE:128:PRO:O	5:AE:129:ILE:O	2.13	0.67
55:D6:10:LEU:H	55:D6:10:LEU:CD2	2.07	0.67
57:D8:14:VAL:HG23	57:D8:23:VAL:O	1.94	0.67
27:DA:2262:U:H2'	27:DA:2263:C:H6	1.59	0.67
38:DP:102:ARG:HB3	38:DP:102:ARG:CZ	2.23	0.67
55:B6:13:CYS:O	55:B6:21:TYR:HA	1.93	0.67
27:BA:1797:C:H4'	30:BD:257:LEU:O	1.94	0.67
27:BA:753:C:C2'	27:BA:754:C:H5'	2.24	0.67
38:DP:7:ARG:H	38:DP:8:PRO:HD2	1.60	0.67
3:CC:3:ASN:O	3:CC:4:LYS:HB2	1.93	0.67
33:DG:38:VAL:HG22	33:DG:93:THR:HG23	1.76	0.67
5:CE:40:ARG:HB3	5:CE:66:MET:CE	2.24	0.67
34:DH:17:VAL:O	34:DH:45:VAL:HG22	1.93	0.67
33:DG:106:LEU:HD12	33:DG:110:ALA:HB3	1.74	0.67
27:DA:271(A):A:H8	27:DA:271(B):C:C6	2.12	0.67
40:DR:48:VAL:O	40:DR:51:LEU:HD12	1.95	0.67
1:CA:935:A:C2	1:CA:1383:C:N4	2.62	0.67
10:CJ:39:PRO:HB3	10:CJ:70:ARG:NE	2.09	0.67
27:BA:1450:G:O2'	27:BA:1450(A):C:H5'	1.93	0.67
9:AI:106:ALA:O	9:AI:108:VAL:HG22	1.94	0.67
1:CA:556:C:H2'	1:CA:557:G:H8	1.58	0.67
23:AW:4:G:H2'	23:AW:5:G:C4'	2.25	0.67
2:CB:121:LEU:O	2:CB:121:LEU:HD23	1.95	0.67
27:BA:2523:G:H5'	27:BA:2523:G:H8	1.59	0.67
31:BE:170:LEU:HD23	31:BE:184:VAL:HG11	1.74	0.67
27:DA:1962:C:H4'	27:DA:1963:U:OP1	1.93	0.67
44:BV:41:GLY:HA3	44:BV:45:THR:HG1	1.59	0.67
32:DF:110:LEU:O	32:DF:114:VAL:HG23	1.94	0.67
47:BY:28:LYS:CB	47:BY:37:VAL:HB	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:116:LYS:HD3	9:AI:122:ALA:HB2	1.75	0.67
2:CB:17:PHE:HB2	2:CB:42:ILE:CG2	2.25	0.67
2:CB:92:TYR:O	2:CB:93:VAL:HG13	1.94	0.67
27:BA:1667:G:N3	27:BA:1991:U:H5	1.92	0.67
27:DA:2626:C:H2'	27:DA:2627:G:C8	2.29	0.67
46:DX:60:ARG:HH22	56:D7:47:ARG:CZ	2.07	0.67
27:DA:1309:G:O2'	27:DA:1310:G:H5'	1.94	0.67
27:BA:1210:A:H5'	27:BA:1212:G:C5'	2.22	0.67
31:DE:119:ARG:HD2	31:DE:120:TRP:CD1	2.29	0.67
40:DR:14:SER:C	40:DR:16:HIS:H	1.96	0.67
37:DO:52:VAL:C	37:DO:53:LYS:HD2	2.14	0.67
35:DI:75:LEU:HD21	35:DI:105:HIS:HE1	1.57	0.67
30:BD:210:GLY:O	30:BD:211:ARG:CB	2.42	0.67
5:CE:12:LEU:HD22	5:CE:13:ILE:H	1.60	0.67
37:DO:7:TYR:CE1	37:DO:20:MET:HE3	2.30	0.67
8:CH:104:ARG:O	8:CH:105:ARG:C	2.33	0.67
27:BA:1786:A:C2	27:BA:2606:C:H1'	2.29	0.67
2:AB:77:ALA:O	2:AB:81:VAL:HG23	1.95	0.67
9:CI:38:GLN:O	9:CI:40:LEU:HD23	1.95	0.67
27:DA:2113:U:O2'	27:DA:2114:A:C8	2.43	0.67
1:CA:1411:C:O2'	1:CA:1412:C:H5'	1.94	0.67
1:CA:422:C:H1'	1:CA:423:G:N2	2.09	0.67
27:DA:1440:G:H2'	27:DA:1441:G:H8	1.58	0.67
27:BA:2146:C:H4'	27:BA:2147:G:C8	2.30	0.67
35:BI:40:THR:O	35:BI:44:LEU:HB2	1.94	0.67
46:DX:4:ALA:O	46:DX:7:VAL:HG23	1.94	0.67
51:B2:13:ALA:HA	51:B2:16:LEU:HD21	1.76	0.67
16:AP:48:TRP:CE3	16:AP:49:LEU:HB2	2.30	0.67
40:DR:87:TYR:OH	40:DR:116:LEU:HB3	1.94	0.67
1:CA:959:A:N1	1:CA:1222:G:H5'	2.10	0.67
40:BR:18:LEU:HD11	40:BR:22:ARG:CZ	2.24	0.67
43:BU:88:ILE:CG2	44:BV:47:VAL:HG23	2.24	0.67
1:AA:267:C:OP2	17:AQ:67:LYS:HD2	1.95	0.67
42:BT:65:LYS:HZ2	42:BT:66:VAL:N	1.92	0.67
27:DA:560:C:C5'	43:DU:52:ARG:HH22	2.08	0.67
36:DN:2:LYS:HZ3	44:DV:13:ARG:H	1.41	0.67
47:DY:76:CYS:HG	47:DY:77:PRO:HD2	1.60	0.67
33:DG:26:GLN:HB2	33:DG:30:GLU:OE1	1.94	0.67
27:DA:2021:C:O2'	27:DA:2022:U:OP1	2.13	0.67
38:DP:21:ARG:CD	38:DP:29:LYS:HE3	2.24	0.67
30:DD:133:LEU:HD13	30:DD:175:LEU:HD21	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:104:GLN:HE21	43:BU:105:VAL:N	1.93	0.67
38:DP:9:ASN:HD22	38:DP:9:ASN:N	1.93	0.67
42:BT:24:PRO:HA	42:BT:49:VAL:HG13	1.75	0.67
42:BT:53:ARG:HD3	42:BT:60:THR:OG1	1.95	0.67
3:CC:77:ILE:O	3:CC:83:ARG:HB3	1.94	0.67
1:AA:1478:C:O2'	1:AA:1479:C:H5'	1.95	0.67
48:DZ:73:VAL:HG13	48:DZ:85:VAL:HG12	1.75	0.67
27:BA:2175:C:H1'	29:BC:215:THR:H	1.58	0.67
1:CA:1504:G:H4'	1:CA:1505:G:C5'	2.24	0.67
35:BI:109:ILE:HG22	35:BI:111:PRO:HD3	1.77	0.67
27:BA:645:C:H2'	27:BA:645:C:O2	1.93	0.67
27:DA:736:C:O2'	27:DA:737:C:H5'	1.95	0.67
35:DI:88:ILE:CD1	35:DI:123:LEU:HG	2.24	0.67
5:AE:75:THR:OG1	5:AE:76:ILE:N	2.20	0.67
2:AB:178:ARG:HH12	2:AB:196:LEU:HB2	1.59	0.67
35:DI:11:ASN:O	35:DI:12:LEU:HB3	1.93	0.67
2:AB:114:ARG:HH12	2:AB:118:LEU:HD21	1.59	0.67
12:AL:63:VAL:HG21	12:AL:95:TYR:CE1	2.30	0.67
1:CA:571:U:H5''	1:CA:819:A:C2	2.30	0.67
27:BA:1244:G:H4'	38:BP:11:GLY:HA2	1.77	0.67
27:BA:1835:G:H5'	27:BA:1836:C:OP2	1.95	0.67
27:BA:1722:A:C6	27:BA:1740:G:C8	2.83	0.67
27:BA:2103:C:C3'	27:BA:2104:G:H5''	2.25	0.67
48:BZ:142:GLY:C	48:BZ:143:LEU:HD22	2.14	0.67
4:AD:3:ARG:HB3	4:AD:118:ARG:HH11	1.60	0.67
27:BA:529:A:H5''	27:BA:530:G:OP1	1.95	0.67
47:DY:35:TYR:CE2	47:DY:69:ALA:HB3	2.29	0.67
3:AC:35:GLU:O	3:AC:39:ILE:HG13	1.94	0.67
1:CA:1468:A:H2'	1:CA:1469:G:O4'	1.95	0.67
1:AA:714:G:H21	1:AA:777:A:H1'	1.60	0.67
27:BA:670:A:H4'	27:BA:671:C:O5'	1.93	0.67
27:BA:2415:G:H4'	38:BP:66:GLY:CA	2.24	0.67
1:CA:1014:A:H4'	19:CS:14:HIS:CD2	2.29	0.67
1:CA:542:G:H2'	1:CA:543:C:H6	1.60	0.67
4:CD:13:ARG:O	4:CD:15:GLU:N	2.26	0.67
4:CD:198:VAL:CG1	4:CD:199:ASN:N	2.57	0.67
4:CD:31:CYS:C	4:CD:33:MET:H	1.95	0.67
33:BG:36:LYS:HD3	33:BG:95:ARG:NH1	2.09	0.67
41:BS:59:LYS:NZ	41:BS:68:GLN:HE22	1.93	0.67
38:DP:146:VAL:HG13	38:DP:147:LEU:N	2.10	0.67
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:397:A:H5'	1:CA:398:C:OP1	1.93	0.67
42:DT:80:SER:HB3	42:DT:81:PRO:HD2	1.76	0.67
27:DA:90:U:H1'	27:DA:92:A:H8	1.59	0.67
27:BA:686:G:H2'	27:BA:788:A:C2	2.29	0.67
27:DA:71:A:OP2	27:DA:71:A:H3'	1.94	0.67
27:BA:2510:C:H2'	27:BA:2511:U:H6	1.60	0.67
27:BA:2122:U:H2'	27:BA:2123:G:C8	2.29	0.67
29:DC:82:LYS:HG2	29:DC:151:GLU:O	1.94	0.67
33:DG:69:ALA:N	33:DG:91:ARG:O	2.25	0.67
27:BA:2357:U:C2'	27:BA:2358:G:H5''	2.25	0.67
27:DA:1506:C:H2'	27:DA:1506:C:O2	1.93	0.67
5:CE:10:MET:HB2	5:CE:32:VAL:HG22	1.76	0.67
37:DO:66:LYS:HD3	37:DO:80:ASP:HA	1.75	0.67
38:BP:85:LEU:CD2	38:BP:85:LEU:H	2.07	0.67
31:DE:4:ILE:HG23	31:DE:4:ILE:O	1.94	0.67
40:DR:51:LEU:HA	40:DR:54:LEU:HB2	1.75	0.67
31:BE:33:VAL:HG13	31:BE:69:LYS:CE	2.24	0.67
31:BE:68:ALA:O	31:BE:70:ALA:N	2.28	0.67
1:CA:1511:G:H2'	1:CA:1512:U:O4'	1.95	0.67
27:BA:1204:A:H61	27:BA:1240:U:H2'	1.59	0.67
27:DA:415:A:H2'	27:DA:416:C:C6	2.29	0.67
11:CK:73:MET:HG2	11:CK:103:LEU:HD23	1.75	0.67
34:BH:89:ILE:O	34:BH:90:LYS:O	2.13	0.67
1:CA:674:G:H2'	1:CA:675:A:C8	2.28	0.67
27:BA:1640:C:O2	27:BA:1640:C:H2'	1.94	0.67
43:BU:8:VAL:CG1	43:BU:12:ARG:HE	2.07	0.67
1:CA:60:A:H5''	1:CA:331:G:H22	1.60	0.67
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.30	0.67
48:BZ:8:TYR:CE2	48:BZ:34:ARG:HD2	2.29	0.67
1:AA:1457:G:O2'	1:AA:1458:G:H5'	1.94	0.67
15:CO:2:PRO:HG2	15:CO:3:ILE:H	1.59	0.67
37:DO:5:GLN:OE1	37:DO:5:GLN:HA	1.93	0.67
31:BE:14:ILE:HG13	31:BE:15:PHE:N	2.08	0.67
1:CA:596:C:O2'	1:CA:597:G:H5'	1.95	0.67
9:CI:89:ASN:HB3	9:CI:92:TYR:CD1	2.30	0.67
1:AA:637:G:O2'	1:AA:638:G:H5'	1.94	0.67
27:BA:244:A:O2'	38:BP:73:GLY:HA3	1.95	0.67
30:BD:166:GLN:HB3	30:BD:174:ILE:HG22	1.76	0.67
31:BE:74:PRO:O	31:BE:75:VAL:O	2.12	0.67
44:BV:18:LEU:HD22	44:BV:19:LYS:N	2.10	0.67
27:BA:1885:A:H5'	27:BA:1885:A:H8	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DG:15:VAL:HG22	33:DG:175:LEU:HB3	1.77	0.67
27:BA:1266:G:OP2	54:B5:19:ARG:NH1	2.28	0.67
31:DE:39:PRO:HG3	31:DE:45:THR:OG1	1.95	0.67
47:BY:27:VAL:HG12	47:BY:29:GLU:H	1.59	0.67
2:AB:69:LEU:HD12	2:AB:70:PHE:N	2.10	0.67
31:BE:2:LYS:HA	31:BE:84:PHE:CE2	2.30	0.67
2:AB:110:GLN:NE2	2:AB:110:GLN:O	2.27	0.67
32:DF:187:VAL:HG12	38:DP:7:ARG:HH21	1.60	0.67
15:CO:54:ARG:O	15:CO:58:MET:HG3	1.94	0.67
20:CT:72:LEU:O	20:CT:73:HIS:HB2	1.93	0.67
34:BH:107:VAL:O	34:BH:109:PHE:N	2.28	0.67
1:CA:967:C:H2'	1:CA:968:A:C8	2.30	0.67
3:CC:73:PRO:C	3:CC:75:VAL:H	1.97	0.67
3:CC:90:GLU:OE1	3:CC:93:LYS:HD3	1.95	0.67
27:DA:15:G:H2'	27:DA:16:G:H8	1.58	0.67
38:BP:146:VAL:HG13	38:BP:147:LEU:N	2.08	0.67
27:BA:1210:A:C5'	27:BA:1212:G:H5'	2.24	0.67
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.76	0.67
37:DO:16:ALA:HA	37:DO:46:ALA:HB1	1.77	0.67
30:DD:35:LYS:HZ1	30:DD:104:TYR:HB2	1.59	0.67
30:DD:35:LYS:HB2	30:DD:36:PRO:HD3	1.76	0.67
34:DH:93:GLY:O	34:DH:94:TYR:HD1	1.78	0.67
39:BQ:51:ARG:O	39:BQ:51:ARG:HG2	1.94	0.67
5:CE:12:LEU:HD22	5:CE:13:ILE:N	2.10	0.67
27:BA:2090:G:H21	50:B1:45:ASN:ND2	1.92	0.67
3:AC:182:ILE:HD11	3:AC:203:PHE:CD1	2.29	0.67
27:DA:1922:G:H2'	27:DA:1923:U:H6	1.60	0.67
10:CJ:94:VAL:HG12	10:CJ:95:GLU:H	1.60	0.67
4:AD:108:LEU:HD11	4:AD:174:LEU:HB3	1.76	0.67
27:BA:2637:U:C2'	27:BA:2638:G:H5'	2.25	0.67
27:DA:2109:U:H2'	27:DA:2110:G:C8	2.29	0.67
29:DC:58:VAL:CG2	29:DC:166:ASP:H	2.08	0.67
49:D0:82:ARG:O	49:D0:82:ARG:HG3	1.93	0.67
18:AR:74:ARG:HD3	18:AR:81:PHE:CE1	2.30	0.67
1:AA:1517:G:H2'	1:AA:1518:A:C8	2.30	0.67
1:AA:425:G:O2'	1:AA:426:G:H5'	1.95	0.67
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.28	0.67
32:BF:25:PRO:HG3	32:BF:119:ARG:CB	2.25	0.67
47:BY:7:VAL:CG2	47:BY:8:LYS:HZ3	2.07	0.67
13:CM:72:ALA:O	13:CM:75:ALA:HB3	1.94	0.67
42:BT:30:VAL:HG11	42:BT:84:GLN:NE2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.27	0.67
44:DV:19:LYS:NZ	44:DV:20:LEU:H	1.92	0.67
44:DV:38:LEU:C	44:DV:39:LEU:HD13	2.15	0.67
27:DA:2453:A:H2'	27:DA:2454:G:C8	2.30	0.67
27:DA:753:C:O2	27:DA:753:C:H2'	1.95	0.67
27:BA:1021:A:H2'	27:BA:1023:U:H5'	1.77	0.67
24:AX:40:C:H2'	24:AX:41:C:C6	2.30	0.67
8:AH:32:LYS:HA	8:AH:35:ILE:HD12	1.75	0.67
23:AW:36:A:H2'	23:AW:37:U:O4'	1.95	0.67
27:BA:1274:A:N3	27:BA:1297:C:H1'	2.10	0.67
16:AP:82:GLN:O	16:AP:83:GLU:HB2	1.95	0.67
35:BI:114:LEU:HD23	35:BI:130:TYR:CE1	2.29	0.67
35:BI:90:GLY:N	35:BI:121:LYS:HZ2	1.93	0.67
35:BI:131:LYS:HG3	35:BI:132:PRO:CD	2.24	0.67
37:BO:119:PRO:HB2	42:BT:68:TYR:HE1	1.60	0.67
42:DT:98:LYS:HB3	42:DT:100:TYR:CE1	2.30	0.67
42:DT:109:GLU:HA	42:DT:112:ARG:HH11	1.59	0.67
45:DW:68:ARG:HA	45:DW:110:LYS:HD3	1.75	0.67
27:DA:565:C:H5	44:DV:78:LYS:HZ1	1.43	0.67
27:BA:1673:U:H2'	27:BA:1674:G:H5''	1.75	0.67
27:DA:1897:G:O2'	27:DA:1898:U:H5'	1.93	0.67
27:DA:1374:G:H2'	27:DA:1375:C:C6	2.29	0.67
39:DQ:112:GLU:HA	39:DQ:115:MET:HG3	1.76	0.67
2:CB:35:GLU:O	2:CB:35:GLU:HG2	1.94	0.67
29:BC:68:LEU:HB3	29:BC:70:LYS:HE2	1.74	0.67
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.30	0.67
42:BT:89:VAL:HG21	42:BT:91:ARG:NH2	2.08	0.67
43:DU:72:HIS:ND1	43:DU:110:VAL:HG21	2.10	0.67
36:DN:34:LEU:CD1	36:DN:120:LEU:HD23	2.20	0.67
9:AI:102:LEU:O	9:AI:103:THR:OG1	2.11	0.67
43:BU:104:GLN:O	43:BU:107:ALA:HB3	1.94	0.67
15:AO:24:SER:O	15:AO:28:GLN:HG3	1.94	0.67
20:CT:75:ASN:O	20:CT:78:ALA:N	2.28	0.67
30:DD:44:ASN:HB3	30:DD:49:ILE:HA	1.77	0.67
27:BA:1798:U:H5'	30:BD:259:THR:CG2	2.24	0.67
1:AA:503:C:H2'	1:AA:504:C:H6	1.59	0.67
12:AL:116:LYS:O	12:AL:117:TYR:HB2	1.95	0.67
7:CG:84:ASN:H	7:CG:84:ASN:ND2	1.93	0.67
37:DO:14:THR:O	37:DO:52:VAL:HG12	1.94	0.67
1:AA:737:A:H2'	1:AA:738:C:C6	2.29	0.67
5:AE:76:ILE:CG1	5:AE:77:PRO:HD2	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:814:C:H41	38:BP:27:HIS:CD2	2.12	0.67
15:CO:45:VAL:O	15:CO:47:LYS:HG2	1.95	0.67
27:BA:2302:G:H21	33:BG:128:ARG:HG3	1.59	0.67
27:DA:2199:A:C2	27:DA:2200:C:H1'	2.30	0.67
27:BA:327:G:H2'	27:BA:328:U:H6	1.58	0.67
13:CM:76:ALA:HA	13:CM:79:LYS:CG	2.24	0.67
12:AL:3:THR:O	12:AL:6:GLN:HB2	1.95	0.67
27:BA:2147:G:H2'	27:BA:2148:G:O4'	1.95	0.67
34:BH:101:ARG:HB3	34:BH:117:PRO:HG3	1.77	0.67
2:CB:23:ARG:HG2	2:CB:23:ARG:O	1.95	0.67
43:BU:75:ASN:O	43:BU:77:SER:N	2.28	0.67
16:CP:18:ARG:HD3	16:CP:35:LYS:HD2	1.75	0.67
27:BA:1605:C:H2'	27:BA:1606:G:O4'	1.95	0.67
27:DA:552:G:H1'	27:DA:1220:A:C2	2.30	0.67
40:BR:20:LEU:HD12	40:BR:24:GLN:HG3	1.75	0.67
27:BA:2790:A:N3	27:BA:2791:C:H5''	2.10	0.67
32:BF:2:LYS:O	32:BF:24:LEU:HB3	1.95	0.67
4:CD:200:GLU:O	4:CD:203:VAL:HB	1.94	0.67
27:BA:539:G:H2'	27:BA:540:C:C6	2.30	0.67
42:BT:31:SER:HB2	42:BT:32:TYR:CE2	2.30	0.67
32:DF:24:LEU:HB3	32:DF:25:PRO:HD2	1.76	0.67
8:AH:64:LYS:C	8:AH:65:TYR:HD1	1.98	0.67
27:DA:398:G:H2'	27:DA:399:G:C8	2.29	0.67
27:DA:97:C:H2'	27:DA:98:G:H8	1.58	0.67
27:DA:864:G:C5	27:DA:865:C:H5	2.13	0.67
55:D6:51:GLU:O	55:D6:52:VAL:HB	1.95	0.67
38:DP:99:LEU:HA	38:DP:102:ARG:NH1	2.10	0.67
27:DA:2580:U:H4'	31:DE:130:GLY:HA3	1.76	0.67
37:DO:71:ARG:HB3	37:DO:72:PRO:CD	2.25	0.67
1:CA:560:U:H5'	1:CA:566:G:N2	2.10	0.67
7:AG:41:ARG:HH11	7:AG:41:ARG:HG2	1.60	0.67
46:DX:12:VAL:HG12	46:DX:27:THR:HG23	1.77	0.67
27:BA:1665:A:O2'	27:BA:1666:G:H5'	1.95	0.67
27:DA:173:G:H2'	27:DA:174:C:H6	1.60	0.67
27:DA:2136:C:H2'	27:DA:2137:C:H6	1.60	0.67
7:AG:154:TYR:O	7:AG:156:TRP:N	2.27	0.67
27:DA:1754:C:OP1	42:DT:96:ARG:NH1	2.27	0.67
1:AA:1327:C:O2'	1:AA:1328:C:H5'	1.94	0.67
45:DW:27:LYS:O	45:DW:71:VAL:HG23	1.95	0.67
47:DY:61:ILE:O	47:DY:62:GLU:HB2	1.94	0.67
1:AA:609:A:C2'	1:AA:610:G:H5'	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DH:158:HIS:O	34:DH:159:GLU:HB2	1.95	0.67
27:DA:1164:G:H1	27:DA:1185:C:H42	1.41	0.67
13:AM:110:ARG:HH11	13:AM:110:ARG:HG2	1.60	0.67
13:CM:89:GLY:O	13:CM:93:ARG:HD2	1.95	0.67
2:CB:36:ARG:H	2:CB:41:ILE:HD13	1.58	0.67
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD12	1.77	0.67
4:AD:178:VAL:C	4:AD:180:GLY:H	1.99	0.67
21:CU:6:ARG:HD3	21:CU:15:ARG:HH12	1.59	0.67
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.30	0.67
27:BA:2416:C:H6	27:BA:2416:C:O5'	1.78	0.66
33:BG:102:PHE:HA	33:BG:105:LYS:HZ2	1.59	0.66
44:BV:22:VAL:O	44:BV:23:GLU:HB2	1.95	0.66
44:BV:35:LEU:HB2	44:BV:57:VAL:CG1	2.25	0.66
44:BV:40:LEU:H	44:BV:47:VAL:HG13	1.58	0.66
19:CS:16:LEU:O	19:CS:20:LEU:HG	1.96	0.66
27:DA:987:G:O2'	27:DA:1000:A:N3	2.20	0.66
43:DU:47:TYR:HD1	43:DU:50:ARG:HH22	1.44	0.66
41:DS:90:GLY:O	41:DS:92:TYR:N	2.28	0.66
27:BA:2587:A:H2'	27:BA:2588:G:H5'	1.76	0.66
15:CO:74:ASP:OD2	15:CO:76:GLU:HB3	1.95	0.66
27:DA:1339:G:H21	27:DA:1603:A:H1'	1.59	0.66
35:BI:120:ILE:HG22	35:BI:121:LYS:N	2.09	0.66
13:AM:86:CYS:HA	19:AS:73:GLU:O	1.94	0.66
48:BZ:27:MET:HA	48:BZ:87:PHE:O	1.95	0.66
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.26	0.66
32:DF:102:PRO:HB2	32:DF:105:VAL:CG2	2.26	0.66
1:CA:321:A:H4'	1:CA:1436:U:H4'	1.77	0.66
4:AD:146:ILE:H	4:AD:146:ILE:CD1	2.07	0.66
27:BA:1192:G:H2'	27:BA:1193:G:C5'	2.24	0.66
56:D7:25:PRO:HG3	56:D7:28:ARG:HH22	1.60	0.66
27:BA:2542:A:H5'	27:BA:2543:G:OP1	1.94	0.66
45:BW:62:HIS:O	45:BW:64:MET:HG3	1.95	0.66
13:CM:76:ALA:HA	13:CM:79:LYS:HB2	1.76	0.66
27:BA:718:A:H3'	27:BA:719:C:C6	2.29	0.66
23:AW:4:G:H2'	23:AW:5:G:O4'	1.95	0.66
27:BA:2386:C:H2'	27:BA:2387:U:C6	2.30	0.66
35:DI:129:THR:O	35:DI:130:TYR:HB2	1.95	0.66
27:BA:1916:A:H3'	27:BA:1917:U:H6	1.60	0.66
1:CA:1266:G:H2'	1:CA:1268:A:OP2	1.95	0.66
40:DR:117:VAL:O	40:DR:118:GLU:HB2	1.93	0.66
3:CC:71:ALA:HA	3:CC:105:GLU:HG3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:5:VAL:HG23	44:DV:37:VAL:CG2	2.26	0.66
27:DA:2704:C:H2'	27:DA:2705:A:C8	2.30	0.66
47:BY:97:ARG:C	47:BY:98:VAL:HG23	2.14	0.66
37:BO:12:ASP:OD2	37:BO:14:THR:HB	1.95	0.66
27:DA:412:A:C8	27:DA:412:A:H5'	2.29	0.66
42:BT:27:THR:O	42:BT:28:VAL:CG2	2.35	0.66
27:DA:867:C:H2'	27:DA:868:U:C6	2.30	0.66
27:DA:529:A:H5''	27:DA:530:G:OP1	1.96	0.66
30:BD:72:LYS:CD	30:BD:75:ILE:HD12	2.24	0.66
9:AI:96:LEU:HD11	9:AI:102:LEU:HD23	1.75	0.66
8:AH:25:ASP:OD1	8:AH:25:ASP:N	2.28	0.66
27:DA:2755:C:H3'	58:D9:19:ARG:HH21	1.60	0.66
3:CC:73:PRO:HA	3:CC:76:VAL:HG22	1.76	0.66
27:DA:1275:A:C8	40:DR:16:HIS:HD2	2.13	0.66
40:DR:8:ARG:HE	40:DR:8:ARG:HA	1.60	0.66
55:B6:32:ASN:CG	55:B6:33:LYS:H	1.98	0.66
48:DZ:60:LEU:CB	48:DZ:64:GLN:HB2	2.25	0.66
2:CB:178:ARG:HH22	8:CH:68:ARG:NH2	1.93	0.66
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.09	0.66
45:DW:24:ILE:O	45:DW:71:VAL:HG21	1.95	0.66
2:AB:56:ARG:O	2:AB:60:ASP:HB2	1.95	0.66
37:BO:108:GLU:C	37:BO:110:GLY:H	1.99	0.66
16:AP:15:PRO:O	16:AP:16:HIS:ND1	2.28	0.66
36:DN:25:ARG:CG	36:DN:25:ARG:HH11	2.08	0.66
27:BA:2052:G:N3	31:BE:149:ARG:HA	2.10	0.66
1:AA:1146:A:C2'	1:AA:1147:C:H5''	2.25	0.66
49:D0:48:GLY:HA3	49:D0:80:HIS:ND1	2.10	0.66
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.60	0.66
27:DA:714:U:H2'	27:DA:715:G:H5''	1.76	0.66
27:DA:2862:G:O2'	27:DA:2863:C:H5'	1.95	0.66
40:BR:53:HIS:HD2	40:BR:94:TYR:OH	1.78	0.66
27:BA:2183:C:H2'	27:BA:2184:G:H8	1.59	0.66
32:BF:192:LEU:HD23	32:BF:193:VAL:N	2.11	0.66
38:DP:71:VAL:CG1	38:DP:72:PRO:HD3	2.09	0.66
33:DG:15:VAL:HG13	33:DG:175:LEU:HD22	1.76	0.66
23:AW:30:A:C3'	23:AW:31:U:H5''	2.24	0.66
4:AD:8:VAL:HB	4:AD:22:LYS:HZ1	1.60	0.66
30:BD:60:ARG:HE	30:BD:86:PRO:HB2	1.59	0.66
3:CC:113:ALA:HB2	3:CC:202:ILE:HG13	1.78	0.66
2:AB:141:GLU:O	2:AB:145:LEU:HD23	1.95	0.66
32:DF:108:LYS:O	32:DF:112:MET:N	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DF:157:VAL:HB	32:DF:194:MET:CB	2.24	0.66
27:BA:1171:G:H3'	27:BA:1173:G:H4'	1.76	0.66
48:BZ:149:LEU:O	48:BZ:170:ILE:HD11	1.96	0.66
1:AA:619:U:H6	1:AA:619:U:O5'	1.78	0.66
11:AK:48:ILE:CD1	11:AK:64:ALA:HA	2.25	0.66
1:AA:737:A:H2'	1:AA:738:C:H6	1.58	0.66
27:BA:626:U:C5'	27:BA:627:A:H5'	2.25	0.66
45:DW:29:LEU:HD12	45:DW:29:LEU:O	1.95	0.66
33:BG:35:GLU:HB2	33:BG:160:VAL:O	1.94	0.66
27:BA:2037:G:H2'	27:BA:2038:G:H8	1.58	0.66
11:CK:123:LYS:O	11:CK:126:ARG:HB2	1.95	0.66
1:CA:997:U:H2'	1:CA:998:G:C8	2.30	0.66
53:D4:48:ILE:HD12	53:D4:48:ILE:H	1.59	0.66
27:BA:2057:A:H2'	27:BA:2058:A:O4'	1.96	0.66
27:BA:2340:G:O2'	27:BA:2341:G:H5'	1.94	0.66
50:D1:3:LYS:HG3	50:D1:4:VAL:H	1.58	0.66
33:BG:109:VAL:C	33:BG:112:PRO:HD2	2.16	0.66
31:BE:75:VAL:HG12	31:BE:76:ARG:H	1.60	0.66
31:DE:32:PRO:HA	31:DE:90:THR:HA	1.76	0.66
38:DP:144:GLU:H	38:DP:145:PRO:CD	2.07	0.66
38:DP:38:GLN:HG3	38:DP:39:LYS:N	2.10	0.66
58:D9:15:LYS:HE2	58:D9:17:ILE:CD1	2.21	0.66
1:CA:227:G:H2'	1:CA:228:A:H8	1.60	0.66
23:CW:42:G:H3'	23:CW:43:C:C5'	2.24	0.66
10:AJ:5:ARG:HA	10:AJ:73:ASP:OD1	1.95	0.66
1:CA:193:C:C2'	1:CA:194:C:H5'	2.25	0.66
46:BX:31:HIS:CD2	46:BX:33:LYS:H	2.14	0.66
5:CE:12:LEU:HD13	5:CE:12:LEU:C	2.16	0.66
27:DA:1658:C:OP1	31:DE:132:HIS:O	2.13	0.66
8:CH:109:ILE:HD11	8:CH:120:THR:HG21	1.77	0.66
39:BQ:26:TYR:HD1	39:BQ:28:ALA:HB2	1.58	0.66
30:DD:111:LEU:HD13	30:DD:112:GLN:N	2.09	0.66
39:DQ:98:LYS:HB3	39:DQ:99:PRO:CD	2.25	0.66
27:BA:1936:A:H3'	27:BA:1937:A:H5''	1.78	0.66
56:D7:29:LYS:HG2	56:D7:33:ARG:HH21	1.60	0.66
34:BH:32:GLU:O	34:BH:33:LEU:HD23	1.96	0.66
46:BX:92:LEU:O	46:BX:94:GLY:N	2.25	0.66
27:DA:271(U):G:O2'	27:DA:271(V):G:H5'	1.96	0.66
38:BP:17:LYS:CG	38:BP:19:VAL:HG23	2.25	0.66
30:DD:58:HIS:CD2	30:DD:59:LYS:O	2.47	0.66
27:DA:908:C:OP2	39:DQ:22:LYS:HD2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2392:A:OP2	57:D8:31:HIS:HE1	1.78	0.66
27:DA:2575:C:H2'	27:DA:2578:G:O6	1.95	0.66
27:DA:2511:U:O3'	31:DE:123:ALA:HB3	1.96	0.66
1:AA:174:C:H2'	1:AA:175:C:C6	2.30	0.66
36:BN:85:ILE:HG21	36:BN:90:MET:CE	2.25	0.66
1:CA:221:C:O2'	1:CA:222:U:H5'	1.96	0.66
32:DF:187:VAL:C	38:DP:7:ARG:HH22	1.98	0.66
42:DT:118:ARG:HB3	42:DT:122:ASP:OD1	1.95	0.66
34:BH:10:PRO:HG2	34:BH:50:VAL:H	1.58	0.66
25:CY:2:G:H1	25:CY:70:C:N4	1.92	0.66
27:BA:271(P):C:H5'	27:BA:271(P):C:H6	1.61	0.66
39:BQ:65:PHE:HB2	39:BQ:105:GLU:HG2	1.77	0.66
27:DA:1221(A):C:N4	27:DA:1228:G:H1	1.92	0.66
39:DQ:10:ARG:HG3	39:DQ:10:ARG:NH1	2.10	0.66
1:AA:967:C:OP2	1:AA:969:A:H5'	1.95	0.66
24:CX:23:C:H2'	24:CX:24:U:H6	1.60	0.66
47:DY:88:LYS:CE	47:DY:93:GLY:HA3	2.25	0.66
27:BA:922:U:H2'	27:BA:923:C:H6	1.58	0.66
28:BB:105:A:H2'	28:BB:106:G:C5'	2.25	0.66
27:BA:1195:G:O2'	27:BA:1196:C:H5'	1.95	0.66
35:BI:84:GLY:O	35:BI:85:GLU:HB2	1.96	0.66
11:AK:126:ARG:HB3	11:AK:126:ARG:NH1	2.09	0.66
6:AF:49:ALA:HB1	18:AR:80:PRO:HB3	1.76	0.66
9:CI:77:ILE:O	9:CI:81:ILE:HG12	1.95	0.66
10:CJ:53:PRO:HA	14:CN:42:ILE:HD13	1.77	0.66
32:BF:181:LEU:HB3	32:BF:205:ARG:HH12	1.58	0.66
31:BE:21:VAL:O	31:BE:23:VAL:HG13	1.95	0.66
31:DE:51:PHE:CD1	31:DE:52:LEU:N	2.64	0.66
27:DA:2787:C:C1'	31:DE:61:ARG:HG3	2.21	0.66
55:D6:10:LEU:H	55:D6:10:LEU:HD23	1.59	0.66
27:DA:1264:G:H5'	54:D5:11:THR:OG1	1.95	0.66
34:BH:19:VAL:HG21	34:BH:44:VAL:HA	1.76	0.66
47:BY:11:ASP:N	47:BY:27:VAL:HG22	2.11	0.66
12:CL:22:PRO:C	12:CL:24:LEU:H	1.96	0.66
34:DH:58:GLU:O	34:DH:62:LYS:HG3	1.94	0.66
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.24	0.66
32:DF:109:GLY:O	32:DF:113:ALA:N	2.22	0.66
15:AO:81:LEU:HG	15:AO:82:ILE:N	2.10	0.66
1:CA:1065:U:H5''	1:CA:1190:G:N2	2.10	0.66
3:CC:64:VAL:HG22	3:CC:99:VAL:HA	1.77	0.66
27:BA:2419:U:H5'	55:B6:23:THR:HG21	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DO:16:ALA:HB2	37:DO:52:VAL:HG11	1.78	0.66
27:DA:931:G:O2'	52:D3:24:LYS:HD2	1.95	0.66
1:CA:762:C:O2'	1:CA:763:G:H5'	1.96	0.66
11:CK:78:GLN:O	11:CK:103:LEU:HD13	1.95	0.66
1:CA:853:G:O2'	1:CA:854:G:H5'	1.95	0.66
9:AI:70:LYS:O	9:AI:74:ILE:HG13	1.95	0.66
30:BD:158:ALA:HB3	30:BD:161:THR:HG21	1.76	0.66
38:BP:89:ALA:HA	38:BP:121:LYS:CD	2.25	0.66
1:AA:565:U:H3'	1:AA:566:G:H2'	1.78	0.66
27:DA:1895:C:O2'	27:DA:1896:G:H5'	1.96	0.66
27:BA:54:G:O2'	56:B7:35:ARG:HD3	1.95	0.66
27:BA:1346:G:H2'	27:BA:1347:G:H8	1.60	0.66
27:BA:2787:C:O2	27:BA:2787:C:H2'	1.95	0.66
32:DF:24:LEU:O	32:DF:26:ALA:N	2.28	0.66
43:DU:65:ILE:HD11	43:DU:96:ALA:HB3	1.77	0.66
44:DV:2:PHE:O	44:DV:14:VAL:O	2.13	0.66
27:DA:993:G:H1'	44:DV:89:GLN:HG3	1.78	0.66
30:BD:76:PRO:HG2	30:BD:98:VAL:HG21	1.76	0.66
1:CA:187:C:H5'	20:CT:82:SER:HA	1.78	0.66
27:BA:1991:U:H5''	27:BA:1991:U:H6	1.60	0.66
27:BA:1316:U:H2'	27:BA:1317:A:H8	1.59	0.66
48:BZ:149:LEU:HD23	48:BZ:170:ILE:CG1	2.22	0.66
40:DR:14:SER:O	40:DR:16:HIS:N	2.28	0.66
39:BQ:57:HIS:CE1	39:BQ:116:GLU:HG2	2.31	0.66
5:CE:13:ILE:HA	5:CE:29:GLY:O	1.95	0.66
19:CS:61:TYR:O	19:CS:62:ILE:HB	1.95	0.66
33:DG:107:LEU:HD11	33:DG:178:PHE:CE1	2.30	0.66
27:DA:227:A:H61	27:DA:410:G:N2	1.92	0.66
1:AA:1108:G:OP2	3:AC:174:PRO:HA	1.96	0.66
1:AA:1116:C:C2'	1:AA:1117:G:H5'	2.24	0.66
27:BA:2117:A:O2'	27:BA:2118:U:H3'	1.95	0.66
4:AD:146:ILE:HD12	4:AD:146:ILE:N	2.11	0.66
1:CA:831:U:C2'	1:CA:832:C:H5'	2.25	0.66
27:BA:194:G:H2'	27:BA:195:A:O4'	1.95	0.66
1:AA:559:A:H4'	1:AA:560:U:O5'	1.96	0.66
27:DA:896:A:H2	48:DZ:113:GLY:HA3	1.61	0.66
1:AA:1022:G:H2'	1:AA:1023:G:H8	1.60	0.66
47:BY:85:VAL:HG13	47:BY:92:ASN:OD1	1.95	0.66
15:AO:18:PHE:CD1	15:AO:18:PHE:O	2.48	0.66
45:BW:28:SER:OG	45:BW:31:GLU:HB2	1.96	0.66
50:B1:93:GLU:C	50:B1:95:LEU:H	1.99	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:635:C:H2'	27:BA:636:G:C8	2.29	0.66
27:BA:2415:G:H4'	38:BP:67:MET:H	1.61	0.66
19:CS:33:THR:OG1	19:CS:34:TRP:N	2.27	0.66
32:BF:20:LEU:CD1	32:BF:203:GLN:HE22	2.08	0.66
32:BF:3:GLU:CB	32:BF:24:LEU:HG	2.26	0.66
27:BA:2682:U:H6	27:BA:2682:U:H5'	1.60	0.66
27:DA:1138:G:H2'	27:DA:1139:G:O4'	1.95	0.66
48:DZ:156:LEU:HB3	48:DZ:160:VAL:HG12	1.78	0.66
27:BA:673:C:C2'	27:BA:674:G:H5'	2.25	0.66
38:DP:71:VAL:HG13	38:DP:72:PRO:CD	2.11	0.66
1:AA:189(E):U:O2'	1:AA:189(F):U:H5''	1.96	0.66
17:AQ:43:LEU:CD1	17:AQ:68:ARG:HG2	2.24	0.66
27:DA:1496:A:H2'	27:DA:1498:C:N4	2.11	0.66
38:DP:123:LEU:CD1	38:DP:125:VAL:HG12	2.25	0.66
58:D9:18:ARG:O	58:D9:18:ARG:HG3	1.94	0.66
1:AA:109:A:H2'	1:AA:326:G:H21	1.59	0.66
31:BE:46:ALA:CB	31:BE:82:ARG:HA	2.24	0.66
1:AA:1100:C:O2	1:AA:1102:A:H5'	1.96	0.66
31:DE:9:VAL:HG22	31:DE:10:GLY:N	2.10	0.66
15:CO:87:ILE:HG22	15:CO:88:ARG:N	2.07	0.66
47:BY:87:LYS:HG3	47:BY:88:LYS:H	1.58	0.66
29:DC:36:LYS:HD3	29:DC:37:PHE:N	2.10	0.66
56:D7:1:MET:N	56:D7:1:MET:SD	2.64	0.66
27:DA:1314:C:N3	27:DA:1339:G:C2	2.64	0.66
27:DA:1351:C:H2'	27:DA:1352:U:C6	2.31	0.66
27:DA:2822:G:OP2	40:DR:2:ARG:NH1	2.29	0.66
3:AC:114:PRO:HD3	3:AC:184:TYR:O	1.96	0.66
8:AH:6:ILE:HD13	8:AH:85:ARG:HH22	1.59	0.66
27:BA:1588:C:O2	27:BA:1588:C:H2'	1.96	0.66
39:BQ:57:HIS:HE1	39:BQ:116:GLU:HG2	1.61	0.66
27:BA:762:U:H4'	27:BA:763:G:O5'	1.95	0.66
10:CJ:8:LEU:CD2	10:CJ:96:ILE:HG22	2.25	0.66
23:AW:63:C:H2'	23:AW:64:G:H8	1.59	0.66
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.61	0.66
46:DX:64:LYS:HZ2	46:DX:73:ARG:NH1	1.92	0.66
33:BG:91:ARG:C	33:BG:91:ARG:HD2	2.16	0.66
28:BB:105:A:C2'	28:BB:106:G:H5'	2.26	0.66
27:BA:718:A:H3'	27:BA:719:C:H6	1.60	0.66
6:CF:78:GLU:O	6:CF:81:ILE:HG13	1.96	0.66
1:CA:830:G:H1	1:CA:856:C:H42	1.44	0.66
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DH:68:THR:CG2	34:DH:72:ILE:HD11	2.26	0.66
1:AA:76:C:H42	1:AA:93:G:H1	1.41	0.66
1:AA:332:G:O2'	1:AA:333:G:H5'	1.96	0.66
27:DA:1398:C:H5'	27:DA:1398:C:C6	2.30	0.66
32:BF:20:LEU:HD22	32:BF:203:GLN:HE22	1.61	0.66
31:BE:184:VAL:CG1	31:BE:185:LYS:N	2.59	0.66
43:BU:92:ARG:HG2	44:BV:11:GLN:NE2	2.10	0.66
30:DD:25:THR:HG22	30:DD:26:LYS:H	1.61	0.66
33:DG:142:PRO:HG2	33:DG:143:GLU:H	1.61	0.66
14:CN:13:THR:N	14:CN:14:PRO:CD	2.59	0.66
48:DZ:124:LEU:HD12	48:DZ:125:VAL:H	1.61	0.66
38:BP:144:GLU:HG2	38:BP:144:GLU:O	1.96	0.66
40:DR:13:HIS:ND1	40:DR:13:HIS:O	2.29	0.66
39:BQ:58:PHE:O	39:BQ:58:PHE:HD1	1.78	0.66
57:B8:51:ALA:N	57:B8:53:PRO:HD2	2.09	0.66
35:DI:81:VAL:HG21	35:DI:142:VAL:CG1	2.26	0.66
54:D5:41:PRO:HG2	54:D5:44:THR:OG1	1.95	0.66
1:AA:578:C:O2'	1:AA:579:G:H8	1.79	0.66
15:AO:7:GLU:O	15:AO:11:VAL:HG23	1.96	0.66
37:BO:13:ASN:N	37:BO:13:ASN:OD1	2.27	0.66
32:BF:165:ARG:HA	32:BF:168:ARG:CD	2.24	0.66
11:AK:13:GLN:OE1	11:AK:75:TYR:HA	1.95	0.66
27:BA:1286:A:C2'	27:BA:1288:U:OP2	2.44	0.66
1:CA:1134:G:N2	1:CA:1141:C:C2	2.64	0.66
37:DO:101:PRO:HG2	42:DT:67:SER:HB3	1.77	0.66
5:CE:94:ALA:HB3	5:CE:118:ILE:N	2.10	0.66
1:CA:611:A:O2'	1:CA:612:C:H5'	1.96	0.66
48:DZ:13:LYS:N	48:DZ:14:PRO:HD3	2.11	0.66
33:DG:119:GLY:O	33:DG:181:ARG:NE	2.29	0.66
29:BC:19:VAL:HG12	29:BC:20:TYR:HD1	1.61	0.66
30:DD:62:TYR:HA	30:DD:87:ASN:HD21	1.60	0.66
27:BA:1476:C:H2'	27:BA:1477:A:H8	1.59	0.66
1:CA:584:G:H2'	1:CA:585:G:C8	2.31	0.66
30:BD:93:ALA:HB2	30:BD:107:ALA:HB2	1.77	0.66
27:BA:1018:C:H2'	27:BA:1018:C:O2	1.96	0.66
29:BC:193:ILE:O	29:BC:195:ALA:N	2.28	0.66
37:BO:121:VAL:HG12	37:BO:121:VAL:O	1.96	0.66
38:BP:48:PRO:CG	38:BP:49:ARG:H	2.09	0.66
41:BS:88:ASP:OD2	41:BS:89:ARG:N	2.29	0.66
47:BY:99:CYS:SG	59:BY:201:MG:MG	1.79	0.66
27:DA:251:A:H2'	27:DA:252:G:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1827:C:OP2	30:DD:222:ARG:NH1	2.28	0.66
48:DZ:149:LEU:HD22	48:DZ:149:LEU:H	1.59	0.66
36:BN:4:TYR:HB2	43:BU:64:ARG:HH12	1.60	0.66
27:DA:2247:A:H2'	27:DA:2248:C:C6	2.30	0.66
27:DA:582:G:H2'	27:DA:583:G:C8	2.31	0.66
1:CA:197:A:O2'	1:CA:198:G:C8	2.49	0.66
47:BY:31:LEU:HD23	47:BY:36:ALA:O	1.95	0.66
1:AA:1221:G:O2'	1:AA:1222:G:H5'	1.96	0.66
27:BA:1310:G:N2	27:BA:1313:U:C4	2.64	0.66
1:AA:452:A:O2'	1:AA:453:A:H5''	1.95	0.66
27:BA:2200:C:H2'	27:BA:2201:C:C6	2.28	0.66
27:BA:2267:A:N3	27:BA:2267:A:H2'	2.09	0.66
12:AL:38:ARG:NH1	12:AL:54:LYS:NZ	2.44	0.66
39:DQ:1:MET:HE1	39:DQ:44:ALA:HB1	1.77	0.66
48:BZ:150:HIS:CB	48:BZ:169:THR:HA	2.24	0.66
27:DA:598:G:H5'	38:DP:15:ARG:HD2	1.76	0.66
41:BS:48:LEU:N	41:BS:48:LEU:HD12	2.10	0.66
27:DA:1503:U:H2'	27:DA:1504:C:C6	2.28	0.66
42:BT:13:ARG:C	42:BT:15:VAL:H	1.98	0.66
1:CA:862:C:O4'	1:CA:874:G:H4'	1.96	0.66
1:AA:1067:A:H1'	1:AA:1068:G:O4'	1.95	0.66
39:DQ:38:GLU:HG3	39:DQ:127:ILE:HB	1.78	0.66
5:AE:40:ARG:HB3	5:AE:66:MET:HE3	1.76	0.66
27:BA:2732:G:C3'	27:BA:2733:A:H5'	2.25	0.66
27:DA:1050:A:HO2'	27:DA:1051:G:H8	1.44	0.66
4:AD:156:GLU:O	4:AD:160:GLN:HG3	1.97	0.66
27:DA:1174:A:H5''	27:DA:1175:U:H5'	1.77	0.66
24:AX:29:G:O2'	24:AX:30:G:H5'	1.96	0.66
54:B5:57:VAL:O	54:B5:58:LEU:HD23	1.96	0.66
47:BY:96:ILE:HD12	47:BY:99:CYS:CB	2.25	0.65
47:BY:60:PHE:HA	47:BY:62:GLU:OE2	1.96	0.65
31:BE:50:GLY:HA2	31:BE:78:LEU:CB	2.26	0.65
27:DA:38:A:O2'	27:DA:39:C:H5'	1.96	0.65
11:AK:32:ILE:HG12	11:AK:41:THR:O	1.97	0.65
39:BQ:110:THR:HG23	39:BQ:113:GLN:CB	2.18	0.65
27:DA:143:G:O4'	46:DX:37:THR:HG21	1.96	0.65
46:DX:26:TYR:CD2	46:DX:92:LEU:HD12	2.31	0.65
34:DH:85:LYS:HD2	34:DH:141:VAL:HG13	1.77	0.65
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.05	0.65
16:AP:6:LEU:HB3	16:AP:17:TYR:CB	2.26	0.65
31:DE:9:VAL:CG1	31:DE:25:VAL:HB	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:106:SER:HB3	42:BT:110:ILE:HD11	1.76	0.65
10:CJ:48:THR:HA	10:CJ:62:HIS:HB2	1.78	0.65
35:DI:77:LEU:HD23	35:DI:78:THR:N	2.11	0.65
13:AM:15:VAL:HG12	13:AM:45:VAL:CG2	2.26	0.65
12:CL:5:ASN:HA	12:CL:8:VAL:CG2	2.26	0.65
8:CH:112:LEU:HA	8:CH:134:ILE:HG12	1.76	0.65
27:DA:783:A:H2'	27:DA:784:A:O5'	1.95	0.65
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.61	0.65
27:DA:763:G:N3	27:DA:765:G:H1'	2.10	0.65
39:DQ:18:LYS:H	39:DQ:98:LYS:HE2	1.60	0.65
6:AF:24:GLU:HG3	6:AF:25:ILE:N	2.11	0.65
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.76	0.65
28:BB:91:C:H2'	28:BB:92:C:H6	1.61	0.65
8:AH:107:LEU:HD23	8:AH:107:LEU:H	1.61	0.65
39:DQ:38:GLU:OE2	39:DQ:127:ILE:HG22	1.96	0.65
24:CX:73:A:H5'	24:CX:74:C:H5'	1.78	0.65
47:DY:52:SER:O	47:DY:54:LYS:N	2.28	0.65
1:AA:1030(B):C:H2'	1:AA:1030(C):G:H5'	1.78	0.65
27:DA:380:U:H2'	27:DA:381:G:C8	2.31	0.65
1:CA:932:C:O2	1:CA:932:C:H2'	1.95	0.65
27:BA:816:C:H2'	27:BA:817:C:H6	1.61	0.65
1:CA:1220:G:O2'	1:CA:1221:G:H5'	1.96	0.65
32:BF:20:LEU:HB3	32:BF:23:ASP:CG	2.16	0.65
31:BE:57:LYS:CA	31:BE:59:VAL:HG12	2.26	0.65
52:B3:29:ARG:HB2	52:B3:33:GLN:NE2	2.07	0.65
42:BT:66:VAL:HA	42:BT:71:GLY:HA2	1.79	0.65
27:BA:1748:G:H8	27:BA:1748:G:H5'	1.61	0.65
4:CD:134:ASP:OD2	4:CD:135:LEU:HD13	1.96	0.65
47:BY:26:LYS:HG2	47:BY:27:VAL:N	2.06	0.65
42:DT:88:ILE:CG2	42:DT:89:VAL:N	2.56	0.65
32:BF:88:VAL:HG13	32:BF:89:VAL:O	1.95	0.65
31:BE:86:PRO:C	31:BE:88:GLY:H	1.98	0.65
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.78	0.65
46:BX:12:VAL:CG1	46:BX:17:ALA:HB1	2.25	0.65
3:CC:99:VAL:HG23	3:CC:99:VAL:O	1.96	0.65
1:CA:677:U:H2'	1:CA:678:U:C6	2.32	0.65
27:DA:1620:G:O4'	56:D7:1:MET:HA	1.96	0.65
27:DA:1612:C:O3'	56:D7:5:TRP:HD1	1.79	0.65
5:CE:29:GLY:HA2	5:CE:45:PHE:HE1	1.61	0.65
31:DE:171:GLU:OE2	31:DE:173:VAL:HG23	1.96	0.65
3:AC:70:VAL:CG1	3:AC:72:LYS:H	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BF:41:LEU:HD11	32:BF:184:TYR:CE1	2.30	0.65
38:BP:6:LEU:HD12	38:BP:8:PRO:HG2	1.78	0.65
24:CX:53:G:O2'	24:CX:54:U:H5'	1.95	0.65
5:CE:100:VAL:HG22	5:CE:118:ILE:HG22	1.79	0.65
32:BF:45:ARG:NH1	32:BF:97:TYR:CE1	2.64	0.65
44:DV:75:PHE:HD2	44:DV:82:ARG:HG3	1.61	0.65
53:D4:44:CYS:SG	53:D4:64:LYS:HB2	2.37	0.65
57:B8:30:ARG:HE	57:B8:30:ARG:HA	1.61	0.65
27:BA:1404:C:O2	27:BA:1404:C:H2'	1.96	0.65
27:DA:203:C:H3'	27:DA:204:A:H5''	1.78	0.65
32:BF:21:ALA:O	32:BF:23:ASP:N	2.29	0.65
31:BE:200:GLU:HG2	31:BE:201:THR:N	2.12	0.65
42:BT:32:TYR:CG	42:BT:81:PRO:HB2	2.30	0.65
27:DA:2230:G:C1'	50:D1:45:ASN:HB2	2.12	0.65
47:DY:96:ILE:CG1	47:DY:99:CYS:HB2	2.26	0.65
27:BA:2801(A):A:H4'	27:BA:2802:G:C5'	2.20	0.65
41:DS:99:LYS:O	41:DS:101:LEU:N	2.29	0.65
33:BG:56:ALA:HA	33:BG:59:GLU:OE1	1.97	0.65
55:D6:16:CYS:O	55:D6:17:LYS:HB2	1.95	0.65
48:DZ:27:MET:HE2	48:DZ:34:ARG:HB2	1.77	0.65
1:CA:42:G:H2'	1:CA:43:C:C6	2.30	0.65
1:CA:173:U:H1'	1:CA:197:A:C5	2.31	0.65
1:CA:63:C:H5'	1:CA:64:G:OP2	1.96	0.65
1:CA:376:G:H5''	16:CP:5:ARG:HG3	1.77	0.65
31:BE:3:GLY:O	31:BE:4:ILE:HB	1.95	0.65
27:BA:1315:C:O2'	27:BA:1316:U:H5'	1.96	0.65
1:CA:179:A:C4	1:CA:180:U:C5	2.84	0.65
48:DZ:127:VAL:HG21	48:DZ:131:ASN:O	1.97	0.65
49:B0:36:ILE:HD12	49:B0:37:LEU:N	2.11	0.65
35:BI:91:SER:CB	35:BI:119:PRO:HB2	2.26	0.65
27:BA:644:A:H4'	27:BA:645:C:C5	2.30	0.65
1:AA:618:C:H3'	1:AA:619:U:H5''	1.78	0.65
51:B2:48:HIS:ND1	51:B2:49:LYS:N	2.45	0.65
39:BQ:106:VAL:HG21	39:BQ:114:ALA:CB	2.26	0.65
5:AE:78:HIS:HD2	8:AH:104:ARG:CZ	2.09	0.65
1:CA:1442(A):G:H22	42:DT:119:LYS:HB2	1.61	0.65
5:CE:78:HIS:ND1	8:CH:107:LEU:CD1	2.60	0.65
45:DW:23:LEU:CD2	45:DW:39:THR:HG21	2.26	0.65
50:B1:19:GLN:HB2	50:B1:36:GLY:N	2.11	0.65
1:CA:568:G:N2	1:CA:883:C:C2	2.64	0.65
7:AG:137:LYS:O	7:AG:141:VAL:HG23	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:64:ARG:O	18:CR:65:ILE:C	2.33	0.65
27:DA:1946:U:C2	27:DA:1947:C:C5	2.85	0.65
31:DE:103:ASP:CG	31:DE:201:THR:HA	2.17	0.65
27:DA:1042:G:H5''	27:DA:1043:C:C6	2.31	0.65
1:AA:544:G:OP1	4:AD:66:ARG:NH2	2.30	0.65
1:AA:324:G:C8	1:AA:324:G:H3'	2.31	0.65
1:AA:927:G:O2'	1:AA:928:G:H5'	1.96	0.65
24:AX:53:G:H2'	24:AX:54:U:H6	1.62	0.65
22:CV:1:A:H2'	22:CV:2:A:H5'	1.78	0.65
27:BA:1695:G:N2	27:BA:1696:G:C8	2.65	0.65
19:CS:36:ARG:HA	19:CS:71:LEU:HB2	1.77	0.65
27:DA:1024:G:C3'	27:DA:1025:G:H5''	2.27	0.65
47:BY:46:LYS:HG2	47:BY:47:LYS:HE3	1.78	0.65
27:DA:2261:C:O2'	27:DA:2262:U:H5'	1.96	0.65
39:DQ:81:VAL:CG2	39:DQ:82:ARG:N	2.60	0.65
4:CD:173:TRP:O	4:CD:174:LEU:HD23	1.95	0.65
27:DA:1803:A:O2'	30:DD:259:THR:HG21	1.96	0.65
46:BX:64:LYS:NZ	46:BX:73:ARG:NE	2.37	0.65
32:DF:184:TYR:O	32:DF:188:ARG:HB2	1.96	0.65
2:CB:71:VAL:HB	2:CB:164:VAL:HG22	1.77	0.65
1:CA:242:C:H2'	1:CA:243:A:H5'	1.79	0.65
1:CA:133:U:H1'	1:CA:230:G:N2	2.12	0.65
1:CA:964:A:H5''	1:CA:965:A:OP2	1.97	0.65
27:BA:385:C:O2	27:BA:390:A:C2	2.49	0.65
1:CA:1203:C:H2'	1:CA:1204:A:O4'	1.97	0.65
29:DC:66:HIS:ND1	29:DC:68:LEU:HG	2.12	0.65
49:B0:36:ILE:HD12	49:B0:36:ILE:C	2.17	0.65
27:DA:319:C:O2'	27:DA:320:A:H5'	1.96	0.65
39:DQ:42:ILE:HD13	39:DQ:97:VAL:CG2	2.26	0.65
4:AD:149:ALA:O	4:AD:153:ARG:HG3	1.96	0.65
54:D5:42:PRO:O	54:D5:43:HIS:HB2	1.97	0.65
12:CL:4:ILE:HG22	12:CL:5:ASN:N	2.11	0.65
27:DA:222:A:N6	27:DA:232:G:H1'	2.11	0.65
33:BG:2:PRO:O	33:BG:4:ASP:N	2.30	0.65
12:AL:82:ILE:CG2	12:AL:95:TYR:HB3	2.26	0.65
36:DN:28:THR:HG23	36:DN:29:LYS:N	2.11	0.65
27:BA:271(A):A:H5''	27:BA:271(B):C:OP2	1.96	0.65
37:DO:101:PRO:HD2	42:DT:70:VAL:HG23	1.78	0.65
4:AD:57:ARG:HD3	4:AD:205:GLU:CB	2.27	0.65
1:AA:1019:C:O2'	1:AA:1020:U:H5'	1.97	0.65
40:DR:46:GLY:HA2	40:DR:49:ASP:HB2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:415:A:H2'	1:AA:416:G:C8	2.32	0.65
27:DA:2236:C:C2'	27:DA:2237:G:H5'	2.27	0.65
34:DH:149:ARG:HH21	34:DH:154:PRO:HG2	1.60	0.65
4:AD:94:LEU:O	4:AD:97:LEU:HB2	1.97	0.65
47:BY:97:ARG:O	47:BY:97:ARG:HG3	1.97	0.65
38:DP:50:ARG:HB3	57:D8:59:LYS:HD2	1.78	0.65
38:DP:50:ARG:HB3	57:D8:59:LYS:HD3	1.77	0.65
1:CA:413:G:N2	1:CA:428:G:O2'	2.27	0.65
2:CB:207:ALA:O	2:CB:209:ARG:N	2.25	0.65
42:BT:83:ILE:HG13	42:BT:84:GLN:H	1.60	0.65
42:BT:27:THR:OG1	42:BT:28:VAL:N	2.30	0.65
28:BB:94:C:C2'	28:BB:95:C:H5'	2.27	0.65
38:DP:144:GLU:N	38:DP:145:PRO:HD3	2.08	0.65
12:CL:23:ALA:C	12:CL:24:LEU:HD22	2.16	0.65
42:DT:51:ARG:O	42:DT:61:PHE:HA	1.96	0.65
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.79	0.65
27:BA:1643:G:H21	27:BA:1644:C:H1'	1.61	0.65
27:BA:1655:A:H4'	31:BE:115:GLY:H	1.62	0.65
34:BH:147:ASN:O	34:BH:150:ALA:HB3	1.96	0.65
37:BO:35:VAL:HG23	37:BO:65:THR:HG23	1.78	0.65
14:CN:26:ARG:CD	14:CN:43:CYS:SG	2.85	0.65
27:DA:740:U:H2'	27:DA:741:G:H8	1.62	0.65
48:DZ:93:GLU:O	48:DZ:129:PRO:HD3	1.96	0.65
27:DA:1299:G:H2'	27:DA:1639:U:O4	1.96	0.65
27:DA:1340:U:O2'	27:DA:1341:U:OP1	2.13	0.65
30:DD:33:LEU:O	30:DD:34:VAL:HG12	1.95	0.65
35:DI:77:LEU:HD22	35:DI:140:LEU:HD11	1.78	0.65
30:BD:210:GLY:O	30:BD:211:ARG:HB2	1.96	0.65
7:AG:140:ASP:HA	7:AG:143:ARG:NH1	2.11	0.65
1:CA:339:C:H2'	1:CA:340:U:C6	2.32	0.65
30:DD:181:GLU:HA	30:DD:272:ALA:CB	2.26	0.65
45:BW:45:TYR:O	45:BW:48:ALA:HB3	1.97	0.65
15:AO:3:ILE:HG22	15:AO:38:ARG:CZ	2.26	0.65
28:BB:8:U:H5'	28:BB:8:U:H6	1.60	0.65
1:CA:1246:C:H2'	1:CA:1247:U:C6	2.31	0.65
28:DB:24:G:H4'	28:DB:25:A:H5'	1.79	0.65
15:CO:37:ASN:HD22	15:CO:37:ASN:N	1.95	0.65
19:CS:18:LYS:HG2	19:CS:31:ILE:HD12	1.78	0.65
27:BA:1504:C:H2'	27:BA:1505:C:H5''	1.79	0.65
2:AB:238:LEU:O	2:AB:238:LEU:HG	1.97	0.65
27:BA:2455:G:H2'	27:BA:2456:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:955:U:O2'	1:CA:956:U:H5'	1.96	0.65
27:BA:2810:A:H2'	31:BE:61:ARG:NH2	2.12	0.65
38:DP:49:ARG:HD2	57:D8:58:ILE:CG2	2.26	0.65
27:DA:910:A:H62	39:DQ:12:GLN:HA	1.60	0.65
38:BP:17:LYS:HG2	38:BP:19:VAL:HG23	1.79	0.65
31:BE:77:ILE:CG2	31:BE:78:LEU:H	1.96	0.65
27:DA:2206:G:C2	27:DA:2207:G:H5'	2.32	0.65
47:DY:27:VAL:CG1	47:DY:28:LYS:H	2.10	0.65
33:BG:60:LEU:O	33:BG:64:THR:HG22	1.95	0.65
44:DV:76:LYS:HB2	44:DV:81:TYR:HB3	1.78	0.65
30:BD:77:ALA:HB2	30:BD:97:TYR:HA	1.79	0.65
1:AA:101:A:O2'	1:AA:102:G:H5'	1.96	0.65
1:AA:109:A:H4'	1:AA:110:C:OP2	1.93	0.65
1:AA:451:A:H4'	1:AA:452:A:O5'	1.95	0.65
30:DD:43:ARG:NH1	30:DD:44:ASN:HD21	1.90	0.65
1:CA:1053:G:C6	1:CA:1199:U:H2'	2.30	0.65
35:BI:127:VAL:O	35:BI:128:LEU:HD23	1.96	0.65
27:BA:572:A:C2	27:BA:573:G:H1'	2.30	0.65
13:AM:5:ALA:CB	13:AM:66:LEU:HD22	2.27	0.65
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.78	0.65
45:DW:68:ARG:C	45:DW:110:LYS:HD3	2.16	0.65
33:BG:35:GLU:OE1	33:BG:160:VAL:HG12	1.97	0.65
1:AA:1014:A:H4'	19:AS:14:HIS:CD2	2.32	0.65
15:CO:10:LYS:HD2	15:CO:11:VAL:N	2.11	0.65
27:DA:1164:G:H2'	27:DA:1165:U:C6	2.32	0.65
1:CA:1123:A:N3	10:CJ:38:ILE:HG22	2.12	0.65
27:DA:2593:U:H2'	27:DA:2594:C:C5	2.31	0.65
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	1.97	0.65
38:BP:89:ALA:HA	38:BP:121:LYS:HD3	1.77	0.65
27:BA:1754:C:P	42:BT:96:ARG:NH1	2.69	0.65
3:AC:31:HIS:CD2	3:AC:31:HIS:H	2.13	0.65
5:CE:126:ARG:HH11	5:CE:126:ARG:HG3	1.62	0.65
27:DA:1017:G:C2'	27:DA:1018:C:H5'	2.26	0.65
50:B1:58:ILE:HG12	50:B1:58:ILE:O	1.97	0.65
43:BU:59:ARG:O	43:BU:60:LEU:C	2.35	0.65
1:AA:253:U:H6	1:AA:253:U:H5'	1.61	0.65
27:DA:1582:C:O2'	27:DA:1586:A:C8	2.47	0.65
32:BF:52:LYS:HD3	32:BF:57:VAL:HA	1.76	0.65
27:BA:248:G:N7	27:BA:250:G:N3	2.44	0.65
36:DN:36:GLY:O	36:DN:38:HIS:N	2.30	0.65
43:DU:50:ARG:NH2	44:DV:72:VAL:HG12	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:346:G:H5''	42:BT:41:ARG:NE	2.11	0.65
1:AA:471:G:H2'	1:AA:472:A:C8	2.32	0.65
41:DS:97:ARG:NH2	41:DS:98:VAL:CA	2.59	0.65
27:DA:918:A:H3'	27:DA:919:G:H8	1.62	0.65
55:D6:8:LYS:O	55:D6:9:LEU:HB2	1.97	0.65
57:D8:34:TRP:O	57:D8:35:GLN:HB2	1.95	0.65
38:DP:101:VAL:CG1	38:DP:106:LEU:HD23	2.26	0.65
27:DA:459:U:H2'	27:DA:460:A:C8	2.31	0.65
27:DA:1991:U:H2'	27:DA:1992:G:H5'	1.78	0.65
27:DA:2024:G:H2'	27:DA:2025:C:O4'	1.96	0.65
1:CA:1407:C:O2	27:DA:1912:A:H2	1.80	0.65
58:B9:19:ARG:HG3	58:B9:24:TYR:CE1	2.32	0.65
3:CC:47:LEU:CD2	3:CC:68:VAL:HG11	2.27	0.65
6:CF:3:ARG:HB3	6:CF:93:SER:HB2	1.79	0.65
14:CN:23:ARG:CZ	14:CN:30:ALA:HB2	2.27	0.65
35:BI:114:LEU:HA	35:BI:130:TYR:HD1	1.60	0.65
35:BI:92:VAL:HG11	35:BI:120:ILE:HD12	1.79	0.65
27:BA:2290:G:C8	27:BA:2290:G:H5'	2.30	0.65
12:AL:114:ARG:HH22	12:AL:121:LYS:HD3	1.62	0.65
30:BD:68:LYS:NZ	30:BD:70:TRP:NE1	2.41	0.65
27:BA:89:G:H3'	27:BA:90:U:H5''	1.79	0.65
30:DD:35:LYS:HZ1	30:DD:104:TYR:N	1.94	0.65
27:BA:66:C:O2'	27:BA:67:U:H5'	1.95	0.65
42:DT:23:ARG:HH21	42:DT:120:ARG:HD3	1.62	0.65
17:CQ:33:GLY:O	17:CQ:34:LYS:O	2.15	0.65
45:DW:40:ASN:O	45:DW:41:LYS:HG2	1.97	0.65
45:DW:84:ARG:HG3	45:DW:98:LYS:HZ3	1.61	0.65
1:CA:574:A:H5''	1:CA:575:G:OP2	1.97	0.65
2:AB:16:HIS:HB3	2:AB:210:SER:OG	1.96	0.65
46:BX:57:LEU:HD22	46:BX:57:LEU:O	1.97	0.65
4:CD:67:ILE:CD1	4:CD:196:LEU:HD23	2.26	0.65
27:DA:363(E):U:H3'	27:DA:363(F):A:O4'	1.95	0.65
9:AI:16:ARG:O	9:AI:63:ILE:HG23	1.97	0.65
56:D7:24:THR:HG23	56:D7:27:GLY:HA3	1.78	0.65
56:D7:27:GLY:O	56:D7:30:VAL:HG23	1.97	0.65
17:AQ:22:LEU:HD13	17:AQ:41:LYS:HG2	1.79	0.65
34:BH:28:GLY:HA3	34:BH:79:VAL:HB	1.78	0.65
27:BA:1345:C:H2'	27:BA:1346:G:H8	1.61	0.65
1:AA:892:A:H2'	1:AA:893:C:C6	2.31	0.65
29:BC:184:LYS:C	29:BC:186:ALA:H	1.99	0.65
35:BI:72:LEU:O	35:BI:138:ILE:HD13	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1380:U:C5	7:CG:3:ARG:HG3	2.30	0.65
1:CA:1390:U:H2'	1:CA:1391:U:H6	1.59	0.65
10:CJ:47:PHE:HB2	14:CN:34:TYR:HE2	1.62	0.65
41:BS:87:PHE:O	41:BS:88:ASP:HB2	1.96	0.65
4:CD:76:ARG:O	4:CD:79:PHE:HB3	1.97	0.65
43:BU:69:CYS:O	43:BU:74:LEU:HD12	1.96	0.65
44:BV:99:ILE:N	44:BV:99:ILE:HD13	2.12	0.65
27:DA:407:G:H2'	27:DA:408:G:C8	2.32	0.65
27:DA:2394:C:H2'	27:DA:2395:C:H5'	1.78	0.65
27:DA:2401:U:H2'	27:DA:2402:C:H5''	1.78	0.65
1:CA:41:G:H1	1:CA:401:C:H42	1.44	0.65
1:AA:1060:C:C5	3:AC:2:GLY:HA2	2.32	0.65
19:AS:15:LEU:HD12	19:AS:31:ILE:HD11	1.79	0.65
27:BA:382:G:H2'	27:BA:383:U:H5'	1.78	0.65
55:B6:29:ASN:CG	55:B6:30:THR:N	2.48	0.65
51:B2:48:HIS:HA	51:B2:51:ARG:HG2	1.77	0.65
13:AM:22:ILE:CG2	13:AM:25:ILE:HD13	2.27	0.65
54:D5:25:LEU:HD22	54:D5:26:THR:N	2.11	0.65
27:DA:507:A:H4'	27:DA:509:C:C6	2.31	0.65
27:BA:2443:C:H2'	27:BA:2444:G:C8	2.30	0.65
28:DB:28:C:H2'	28:DB:29:A:C8	2.32	0.65
18:AR:57:GLY:C	18:AR:58:LEU:HD12	2.17	0.65
27:DA:1819:A:H5''	30:DD:158:ALA:CB	2.27	0.65
1:AA:279:A:H3'	17:AQ:95:TYR:OH	1.96	0.65
27:DA:1388:G:O2'	27:DA:1389:G:H5'	1.97	0.65
47:DY:49:VAL:O	47:DY:50:ARG:HB2	1.97	0.65
2:CB:236:TYR:HA	2:CB:239:VAL:HG23	1.77	0.65
28:DB:92:C:H2'	28:DB:93:G:H8	1.61	0.65
53:D4:61:VAL:HG13	53:D4:65:CYS:HB2	1.79	0.65
9:CI:53:VAL:HG23	9:CI:54:ASP:H	1.60	0.65
1:CA:963:G:H21	10:CJ:55:LYS:HZ2	1.44	0.65
32:BF:67:GLN:CG	32:BF:67:GLN:O	2.33	0.65
1:AA:864:A:H2'	1:AA:865:A:C8	2.32	0.65
43:DU:65:ILE:HD11	43:DU:96:ALA:CB	2.27	0.65
43:DU:84:LYS:HD2	43:DU:89:GLU:HB3	1.78	0.65
44:DV:38:LEU:HD13	44:DV:55:ALA:HB1	1.78	0.65
27:DA:1422:G:H1'	27:DA:1496:A:H62	1.62	0.65
27:DA:1568:G:OP1	30:DD:61:LEU:HB2	1.96	0.65
34:BH:20:ALA:HB1	34:BH:21:PRO:CD	2.27	0.65
2:CB:164:VAL:O	2:CB:186:ALA:HB1	1.97	0.65
41:BS:82:ILE:HD13	41:BS:82:ILE:N	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2564:A:OP1	27:DA:2648:C:H4'	1.96	0.65
37:BO:66:LYS:H	37:BO:82:ASN:HD21	1.45	0.65
30:DD:43:ARG:HD2	30:DD:44:ASN:OD1	1.96	0.65
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	1.97	0.65
1:CA:1520:G:O2'	1:CA:1521:G:H5'	1.97	0.65
1:AA:1397:C:H3'	1:AA:1398:A:C5'	2.24	0.65
27:BA:2564:A:C2	27:BA:2647:U:H4'	2.32	0.65
1:AA:1238:A:C2	1:AA:1241:G:H1'	2.32	0.65
51:B2:53:LEU:HD13	51:B2:57:ILE:HD11	1.78	0.65
13:AM:8:GLU:OE2	13:AM:22:ILE:HA	1.96	0.65
27:DA:1665:A:H2'	27:DA:1666:G:O4'	1.97	0.65
54:D5:31:VAL:HB	54:D5:32:PRO:CD	2.27	0.65
27:BA:2230:G:O3'	50:B1:43:TYR:HB2	1.97	0.65
27:BA:1931:U:H5'	27:BA:1931:U:H6	1.62	0.65
7:AG:60:LYS:NZ	7:AG:63:LYS:HB3	2.12	0.65
27:BA:1262:A:N3	54:B5:10:LYS:NZ	2.45	0.65
27:BA:2065:C:H2'	27:BA:2066:C:C6	2.30	0.65
2:CB:194:PRO:O	2:CB:196:LEU:N	2.29	0.65
19:CS:9:VAL:HB	19:CS:11:VAL:HG12	1.79	0.65
27:BA:2239:G:H2'	27:BA:2240:C:H6	1.62	0.65
32:DF:38:ARG:HH21	32:DF:99:TYR:HE1	1.45	0.65
35:BI:73:GLU:HB2	35:BI:136:VAL:HG23	1.78	0.65
35:BI:27:ARG:HD2	50:B1:71:TYR:CD1	2.32	0.65
31:DE:11:MET:HB2	31:DE:23:VAL:O	1.97	0.65
32:BF:25:PRO:HG3	32:BF:119:ARG:HB2	1.77	0.65
33:BG:113:ARG:O	33:BG:140:ILE:HG23	1.97	0.65
36:BN:1:MET:O	36:BN:2:LYS:HG3	1.97	0.65
44:BV:2:PHE:HD2	44:BV:42:GLY:HA2	1.62	0.65
27:DA:2406:U:N3	38:DP:72:PRO:HB2	2.12	0.65
29:BC:83:ILE:HA	29:BC:94:VAL:HG21	1.79	0.65
43:DU:42:ALA:O	43:DU:44:ASN:N	2.30	0.65
44:DV:38:LEU:HD12	44:DV:56:SER:CA	2.26	0.65
44:DV:95:LEU:HD13	44:DV:97:LYS:NZ	2.12	0.65
30:BD:31:LYS:CG	30:BD:33:LEU:HD13	2.25	0.65
51:D2:3:LEU:HD22	51:D2:7:ARG:HH12	1.60	0.65
1:AA:676:A:C1'	11:AK:115:PRO:HB3	2.22	0.65
27:DA:2648:C:H2'	27:DA:2649:U:C6	2.32	0.65
1:AA:454:C:H2'	1:AA:455:C:C6	2.32	0.65
46:BX:12:VAL:HG11	46:BX:17:ALA:HB1	1.79	0.65
37:BO:77:ILE:HD11	42:BT:72:VAL:HG11	1.79	0.65
15:CO:75:PRO:O	15:CO:78:TYR:HB3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BI:115:ALA:HB3	35:BI:129:THR:N	2.11	0.65
27:DA:1655:A:H3'	27:DA:1656:C:C6	2.31	0.65
13:AM:68:GLY:CA	13:AM:71:ARG:HH21	2.09	0.65
10:CJ:8:LEU:HD12	10:CJ:20:ALA:HB2	1.78	0.65
38:BP:88:LEU:O	38:BP:90:ARG:N	2.30	0.65
27:DA:2808:U:C2'	27:DA:2809:A:H5'	2.26	0.65
33:BG:2:PRO:HG2	53:B4:51:TYR:CE2	2.32	0.65
27:BA:1175:U:H2'	27:BA:1175:U:O2	1.97	0.65
40:BR:101:ALA:O	40:BR:102:GLU:CB	2.44	0.65
3:CC:52:LEU:CD2	3:CC:52:LEU:H	2.10	0.65
4:AD:101:LEU:O	4:AD:104:VAL:HG12	1.97	0.65
27:DA:107:C:H2'	27:DA:108:U:H6	1.62	0.65
27:DA:1887:C:H3'	27:DA:1888:G:H5''	1.77	0.65
1:AA:123:C:OP1	1:AA:312:C:H5'	1.97	0.65
27:BA:425:G:H2'	27:BA:426:C:H6	1.62	0.65
1:AA:72:C:H2'	1:AA:73:G:C8	2.31	0.65
27:BA:1013:C:O2'	27:BA:1014:U:H5'	1.96	0.65
18:AR:55:ARG:HG3	18:AR:55:ARG:HH11	1.62	0.65
49:D0:5:LYS:HB3	49:D0:5:LYS:NZ	2.11	0.65
23:CW:63:C:H2'	23:CW:64:G:H8	1.61	0.65
44:DV:18:LEU:HD22	44:DV:19:LYS:N	2.05	0.64
54:B5:16:ARG:NH1	54:B5:17:ASP:CG	2.51	0.64
27:DA:920:G:O2'	27:DA:921:G:H5'	1.96	0.64
31:DE:131:ALA:HB3	31:DE:134:ILE:HD11	1.79	0.64
1:AA:942:G:N2	1:AA:943:U:C2	2.64	0.64
27:BA:754:C:H6	27:BA:754:C:H5'	1.62	0.64
27:BA:2331:G:O2'	49:B0:43:THR:HG22	1.96	0.64
27:DA:1747:G:H2'	27:DA:1747(A):G:C8	2.26	0.64
1:CA:261:U:O2	1:CA:263:A:H8	1.81	0.64
48:DZ:150:HIS:HB3	48:DZ:169:THR:HA	1.79	0.64
42:DT:8:LYS:O	42:DT:11:GLU:OE1	2.15	0.64
1:CA:1160:G:O2'	1:CA:1161:C:H5'	1.97	0.64
27:BA:372:G:H3'	50:B1:66:HIS:CE1	2.33	0.64
36:DN:82:LEU:C	36:DN:82:LEU:HD12	2.18	0.64
27:BA:2580:U:H4'	31:BE:131:ALA:H	1.62	0.64
56:D7:9:ARG:HB3	56:D7:48:LYS:HZ3	1.60	0.64
27:BA:2357:U:H2'	27:BA:2358:G:H5''	1.79	0.64
8:AH:108:GLY:HA3	8:AH:138:TRP:HB3	1.79	0.64
38:BP:88:LEU:C	38:BP:90:ARG:H	1.98	0.64
27:DA:2373:G:O2'	27:DA:2374:C:H5'	1.97	0.64
54:B5:41:PRO:HG2	54:B5:44:THR:CG2	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2605:U:H2'	27:DA:2606:C:C6	2.32	0.64
30:DD:168:ARG:N	30:DD:168:ARG:HD3	2.11	0.64
1:CA:1152:A:H5'	10:CJ:13:HIS:HB2	1.79	0.64
42:DT:19:LEU:H	42:DT:19:LEU:HD12	1.62	0.64
36:BN:119:ARG:O	36:BN:120:LEU:HB2	1.97	0.64
1:AA:419:C:H2'	1:AA:420:U:H5'	1.79	0.64
2:CB:189:ASP:HB3	2:CB:203:GLY:O	1.97	0.64
1:AA:1209:C:O2'	1:AA:1210:C:H5'	1.97	0.64
27:DA:377:C:H2'	27:DA:378:C:H6	1.60	0.64
9:AI:21:PRO:HA	9:AI:58:HIS:O	1.96	0.64
30:DD:186:HIS:HD2	30:DD:188:GLU:HB2	1.62	0.64
27:DA:679:C:O2'	27:DA:680:G:H5'	1.96	0.64
27:BA:1517:G:H2'	27:BA:1518:U:O4'	1.97	0.64
48:BZ:29:ASN:O	48:BZ:30:ARG:HB3	1.96	0.64
57:B8:4:MET:HB3	57:B8:61:LEU:HD22	1.79	0.64
19:CS:35:SER:O	19:CS:71:LEU:HD12	1.97	0.64
34:BH:85:LYS:HZ2	34:BH:133:VAL:CB	2.09	0.64
12:AL:43:LYS:HG2	12:AL:44:LYS:N	2.12	0.64
33:BG:101:ILE:HD13	33:BG:102:PHE:N	2.12	0.64
44:BV:46:VAL:HG22	44:BV:47:VAL:N	2.08	0.64
56:D7:40:TRP:HB2	56:D7:41:ARG:NH2	2.12	0.64
45:DW:88:ARG:HB2	45:DW:92:ARG:HB3	1.79	0.64
43:BU:104:GLN:NE2	43:BU:105:VAL:N	2.46	0.64
32:BF:51:THR:HG21	32:BF:92:PRO:HD2	1.80	0.64
31:BE:39:PRO:O	31:BE:43:GLY:HA2	1.98	0.64
27:BA:1337:G:H2'	27:BA:1338:G:H8	1.59	0.64
1:CA:1200:C:O2'	1:CA:1201:A:OP2	2.06	0.64
27:BA:2869:G:H2'	27:BA:2870:C:H6	1.62	0.64
25:AY:65:U:H2'	25:AY:66:A:H8	1.62	0.64
27:DA:1304:C:H42	27:DA:1624:G:H1	1.43	0.64
36:DN:22:THR:HA	36:DN:60:ILE:HG22	1.79	0.64
33:DG:46:ALA:C	33:DG:51:ARG:HG3	2.17	0.64
13:CM:84:ILE:H	19:CS:66:MET:HE1	1.62	0.64
13:AM:75:ALA:O	13:AM:79:LYS:HG3	1.96	0.64
5:CE:48:ALA:HB1	5:CE:49:PRO:CD	2.27	0.64
15:AO:30:ALA:HB2	15:AO:85:LEU:HD11	1.79	0.64
33:BG:47:LYS:HD3	33:BG:82:LEU:HD12	1.79	0.64
7:AG:23:VAL:HG12	7:AG:27:ILE:HD11	1.79	0.64
11:CK:79:SER:HB2	11:CK:106:LYS:CD	2.27	0.64
50:B1:18:ILE:C	50:B1:19:GLN:HE21	2.00	0.64
1:CA:815:A:O2'	1:CA:1527:C:H1'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:14:U:H5'	1:CA:14:U:H6	1.62	0.64
52:D3:6:VAL:HG12	52:D3:56:VAL:HA	1.78	0.64
1:CA:628:G:O2'	1:CA:629:G:H5'	1.97	0.64
13:CM:95:GLY:O	13:CM:96:LEU:CB	2.45	0.64
27:DA:1213:A:H2'	27:DA:1214:A:C8	2.32	0.64
2:CB:41:ILE:HG22	2:CB:41:ILE:O	1.97	0.64
36:BN:17:ASP:HB2	36:BN:55:VAL:HG13	1.78	0.64
17:CQ:29:HIS:CD2	17:CQ:30:PRO:HD2	2.33	0.64
27:BA:1275:A:H4'	27:BA:1276:A:OP1	1.96	0.64
27:DA:335:C:H5''	47:DY:73:ARG:NH2	2.12	0.64
41:DS:21:THR:C	41:DS:23:ARG:H	2.01	0.64
29:DC:168:THR:HA	29:DC:173:ALA:CB	2.28	0.64
23:AW:70:C:O2'	23:AW:71:A:H5'	1.96	0.64
52:B3:8:LEU:HD13	52:B3:31:LEU:HA	1.79	0.64
27:DA:1188:U:O2'	27:DA:1189:A:H5'	1.97	0.64
27:DA:2512:C:H42	27:DA:2574:G:H1	1.44	0.64
27:DA:142:A:H8	27:DA:1595:G:H21	1.38	0.64
27:BA:1490:A:H2	30:BD:75:ILE:HG23	1.62	0.64
50:D1:57:GLU:O	50:D1:58:ILE:HG12	1.96	0.64
31:BE:49:LEU:HD12	31:BE:49:LEU:N	2.13	0.64
31:BE:93:VAL:C	31:BE:95:ILE:H	2.01	0.64
34:BH:94:TYR:C	34:BH:95:ARG:HG2	2.17	0.64
39:DQ:69:PHE:CD1	39:DQ:70:PRO:HD2	2.33	0.64
39:DQ:43:THR:HG22	39:DQ:94:VAL:CG1	2.27	0.64
27:DA:1301:A:H4'	27:DA:1302:A:OP1	1.96	0.64
27:BA:2862:G:H2'	27:BA:2863:C:H6	1.62	0.64
1:AA:403:C:O2'	1:AA:404:U:H5'	1.95	0.64
33:DG:60:LEU:HD12	33:DG:68:PRO:CG	2.27	0.64
48:BZ:123:ILE:HG12	48:BZ:124:LEU:N	2.10	0.64
27:DA:925:C:H2'	27:DA:926:A:H5''	1.79	0.64
33:BG:72:ARG:HD3	33:BG:86:MET:HA	1.80	0.64
5:CE:76:ILE:CG1	5:CE:77:PRO:HD2	2.28	0.64
34:DH:43:VAL:HG11	34:DH:52:VAL:HA	1.77	0.64
27:BA:363(A):A:H5'	27:BA:363(B):G:OP2	1.97	0.64
27:BA:1888:G:H5'	27:BA:1888:G:N3	2.12	0.64
33:BG:125:PHE:CD2	33:BG:131:TYR:HB2	2.32	0.64
48:DZ:102:ARG:HD3	48:DZ:135:PHE:CE1	2.33	0.64
50:B1:19:GLN:CB	50:B1:35:THR:HG23	2.27	0.64
37:BO:122:LEU:HA	42:BT:43:GLN:HE22	1.62	0.64
32:BF:32:LEU:O	32:BF:32:LEU:HD23	1.98	0.64
27:DA:527:C:H5''	27:DA:528:A:OP1	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1948:G:C4	27:DA:1959:G:N2	2.65	0.64
27:BA:542:C:H2'	27:BA:543:C:OP1	1.97	0.64
27:DA:1770:G:H2'	27:DA:1771:C:H6	1.63	0.64
51:B2:13:ALA:O	51:B2:16:LEU:HG	1.97	0.64
27:BA:1363:C:O2'	27:BA:1364:G:H5'	1.97	0.64
5:AE:150:ARG:HA	5:AE:153:LYS:HE2	1.79	0.64
34:DH:38:SER:C	34:DH:40:GLU:H	2.00	0.64
32:BF:143:ALA:HB1	32:BF:148:LEU:HB2	1.79	0.64
42:DT:6:LEU:HD23	42:DT:6:LEU:O	1.97	0.64
27:DA:1682:G:H2'	27:DA:1683:C:C6	2.33	0.64
1:AA:812:C:OP1	1:AA:903:G:H1'	1.97	0.64
2:CB:131:PRO:HG2	2:CB:134:GLU:HB2	1.78	0.64
4:CD:202:LEU:HD23	4:CD:205:GLU:OE2	1.97	0.64
17:AQ:54:GLY:HA3	17:AQ:82:MET:SD	2.37	0.64
1:CA:501:C:H2'	1:CA:502:G:C8	2.32	0.64
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.79	0.64
27:DA:1568:G:H5''	30:DD:61:LEU:CD2	2.20	0.64
47:DY:27:VAL:HG12	47:DY:29:GLU:OE1	1.96	0.64
31:DE:59:VAL:HG13	31:DE:60:ASN:N	2.12	0.64
39:DQ:85:LYS:HG3	49:D0:7:LEU:CD1	2.25	0.64
36:BN:95:PRO:O	36:BN:98:VAL:HG23	1.97	0.64
27:BA:2481:G:O2'	27:BA:2482:G:P	2.55	0.64
30:BD:60:ARG:HD3	30:BD:86:PRO:HB2	1.79	0.64
27:BA:686:G:N2	27:BA:788:A:H61	1.96	0.64
46:DX:12:VAL:HG12	46:DX:27:THR:CG2	2.27	0.64
1:AA:390:C:H4'	16:AP:28:ARG:HH21	1.61	0.64
34:BH:92:ILE:O	34:BH:94:TYR:N	2.24	0.64
27:BA:624:C:H41	38:BP:107:LYS:NZ	1.96	0.64
1:AA:445:G:O2'	1:AA:446:G:H5'	1.97	0.64
27:DA:1131:G:HO2'	27:DA:1132:A:H8	1.45	0.64
33:DG:41:GLN:HG2	33:DG:155:MET:HB3	1.79	0.64
39:BQ:51:ARG:O	39:BQ:55:VAL:HG12	1.97	0.64
52:D3:23:LEU:H	52:D3:23:LEU:HD12	1.63	0.64
13:AM:78:ILE:HA	13:AM:81:LEU:HD13	1.78	0.64
39:BQ:140:ALA:O	48:BZ:52:ILE:HD13	1.96	0.64
23:AW:74:C:H2'	23:AW:75:A:C8	2.32	0.64
27:DA:1743:C:H2'	27:DA:1744:C:O4'	1.97	0.64
19:AS:6:LYS:CD	19:AS:7:LYS:HE3	2.27	0.64
19:AS:6:LYS:HG2	19:AS:7:LYS:CE	2.26	0.64
27:BA:491:G:O2'	27:BA:492:A:H5'	1.97	0.64
45:DW:68:ARG:HB3	45:DW:110:LYS:HB2	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:30:ARG:NH2	41:BS:62:LYS:HD2	2.10	0.64
16:AP:57:ARG:HA	16:AP:60:LEU:HD12	1.79	0.64
27:BA:380:U:H3	27:BA:394:A:N6	1.94	0.64
1:AA:1064:G:H21	1:AA:1190:G:H2'	1.61	0.64
27:DA:2330:G:H21	49:D0:42:GLY:HA2	1.61	0.64
27:DA:1515:G:H2'	27:DA:1516:C:C6	2.32	0.64
53:B4:36:VAL:HB	53:B4:37:PRO:HD2	1.80	0.64
54:D5:37:LYS:HG3	54:D5:38:ALA:H	1.62	0.64
27:DA:2689:U:H5''	27:DA:2690:C:H5'	1.79	0.64
35:BI:117:GLU:HG3	35:BI:118:LYS:H	1.62	0.64
31:DE:127:ASP:HA	31:DE:135:HIS:CE1	2.32	0.64
17:CQ:82:MET:HA	17:CQ:85:VAL:HG23	1.79	0.64
32:DF:159:GLY:O	32:DF:161:GLU:HG3	1.98	0.64
27:DA:2897:U:O2	27:DA:2897:U:H2'	1.95	0.64
27:DA:212:G:O2'	27:DA:213:A:H5'	1.97	0.64
49:D0:75:LEU:HD22	49:D0:78:TYR:OH	1.97	0.64
34:BH:70:THR:OG1	34:BH:71:LEU:N	2.28	0.64
38:BP:48:PRO:O	38:BP:50:ARG:N	2.31	0.64
31:BE:199:ARG:O	31:BE:200:GLU:O	2.15	0.64
53:B4:41:ILE:HG12	53:B4:57:ILE:O	1.97	0.64
42:BT:28:VAL:HG21	42:BT:46:GLU:HG3	1.78	0.64
27:DA:2267:A:H3'	27:DA:2268:A:H5''	1.80	0.64
27:DA:1673:U:C2'	27:DA:1674:G:H5'	2.26	0.64
27:DA:704:G:H1'	27:DA:727:A:N6	2.12	0.64
4:AD:9:CYS:SG	4:AD:22:LYS:HD2	2.37	0.64
34:BH:43:VAL:O	34:BH:43:VAL:HG23	1.98	0.64
37:DO:107:ARG:NH1	42:DT:35:LYS:HB2	2.12	0.64
41:DS:19:LYS:O	41:DS:20:ARG:NH1	2.28	0.64
12:CL:14:LYS:HD3	12:CL:15:VAL:HG22	1.79	0.64
34:BH:113:VAL:HG21	34:BH:151:ILE:CG2	2.25	0.64
27:DA:548:A:O2'	27:DA:549:G:H5'	1.98	0.64
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.78	0.64
55:B6:11:LEU:CD1	55:B6:51:GLU:HG2	2.28	0.64
17:AQ:56:VAL:HG21	17:AQ:78:GLU:HG2	1.78	0.64
27:DA:2667:C:H1'	34:DH:109:PHE:CD2	2.31	0.64
39:BQ:56:ARG:HG2	39:BQ:56:ARG:HH11	1.62	0.64
6:AF:91:VAL:HG13	18:AR:72:ARG:NH2	2.13	0.64
13:AM:89:GLY:O	13:AM:93:ARG:HD2	1.98	0.64
5:AE:139:LEU:HA	5:AE:142:LEU:HD12	1.80	0.64
5:CE:75:THR:OG1	5:CE:76:ILE:N	2.29	0.64
27:DA:1237:A:H2	27:DA:1238:G:N3	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DF:128:ALA:O	32:DF:130:ALA:N	2.31	0.64
39:DQ:130:LYS:HG3	39:DQ:131:ILE:H	1.62	0.64
16:AP:16:HIS:HE1	16:AP:42:ARG:HH21	1.43	0.64
9:AI:4:TYR:H	9:AI:4:TYR:HD1	1.43	0.64
10:CJ:40:LEU:HD21	10:CJ:69:ASN:HB3	1.79	0.64
27:DA:1799:G:H4'	27:DA:1800:C:O5'	1.95	0.64
27:DA:1041:C:H2'	27:DA:1042:G:C8	2.32	0.64
44:DV:5:VAL:HG23	44:DV:37:VAL:HG23	1.79	0.64
11:AK:51:LYS:HB3	11:AK:51:LYS:NZ	2.13	0.64
27:BA:2447:G:H4'	27:BA:2448:A:O5'	1.97	0.64
27:BA:1683:C:H2'	27:BA:1684:C:C6	2.33	0.64
5:AE:8:GLU:HA	5:AE:34:VAL:HA	1.79	0.64
46:BX:54:VAL:HG13	46:BX:81:VAL:HG13	1.80	0.64
27:BA:2681:C:C5	27:BA:2725:A:N6	2.64	0.64
12:AL:43:LYS:CG	12:AL:44:LYS:H	2.10	0.64
4:CD:82:ALA:HB1	4:CD:89:THR:CG2	2.21	0.64
38:BP:16:ARG:O	38:BP:16:ARG:NH1	2.30	0.64
27:DA:2578:G:N2	27:DA:2579:C:C2	2.66	0.64
32:DF:63:LYS:O	32:DF:64:ILE:C	2.35	0.64
32:DF:74:ARG:O	32:DF:75:HIS:CG	2.50	0.64
2:AB:194:PRO:HA	2:AB:200:ILE:HD13	1.79	0.64
40:DR:67:LEU:CD1	40:DR:76:VAL:HG21	2.27	0.64
33:DG:102:PHE:HE2	33:DG:141:PHE:HE1	1.45	0.64
1:CA:740:U:O2'	1:CA:741:G:H5'	1.97	0.64
36:DN:46:VAL:HG13	36:DN:48:MET:HG3	1.80	0.64
27:BA:2223:G:H2'	27:BA:2224:G:H5'	1.80	0.64
3:CC:100:ALA:O	3:CC:101:LEU:HB2	1.96	0.64
1:AA:554:C:O2'	1:AA:555:C:H5'	1.97	0.64
1:CA:538:G:H5''	12:CL:111:LYS:HD3	1.78	0.64
1:CA:194:C:C2'	1:CA:195:A:H5''	2.27	0.64
47:BY:90:LEU:CD1	47:BY:91:GLU:H	2.06	0.64
27:DA:1309:G:C2'	27:DA:1310:G:H5'	2.27	0.64
27:BA:1826:G:H4'	30:BD:242:ARG:NH2	2.12	0.64
37:DO:77:ILE:HD12	42:DT:73:GLU:O	1.97	0.64
4:AD:128:VAL:C	4:AD:130:GLY:N	2.49	0.64
27:BA:271(G):C:H2'	27:BA:271(H):G:H8	1.63	0.64
41:BS:61:ASN:O	41:BS:62:LYS:HG2	1.98	0.64
12:AL:21:VAL:CG1	12:AL:23:ALA:HB2	2.28	0.64
27:DA:665:C:H2'	27:DA:666:G:C8	2.30	0.64
27:DA:1999:C:H4'	27:DA:2723:C:O2	1.98	0.64
24:CX:25:C:H2'	24:CX:26:G:O4'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DB:69:G:H2'	28:DB:70:C:H6	1.62	0.64
1:CA:1301:U:H2'	1:CA:1303:C:C5	2.32	0.64
27:BA:2113:U:H2'	27:BA:2114:A:C8	2.33	0.64
27:BA:582:G:H2'	27:BA:583:G:H8	1.62	0.64
15:AO:5:LYS:HA	15:AO:8:LYS:HB3	1.79	0.64
12:AL:75:GLN:O	12:AL:78:SER:HB2	1.98	0.64
48:BZ:107:PRO:HD3	48:BZ:116:LEU:HB2	1.79	0.64
18:AR:44:LEU:HD22	18:AR:48:GLY:O	1.98	0.64
27:BA:607:U:OP1	32:BF:102:PRO:HA	1.98	0.64
44:BV:19:LYS:HB3	44:BV:94:LEU:O	1.97	0.64
42:BT:89:VAL:CG2	42:BT:91:ARG:HH21	2.08	0.64
28:BB:94:C:H2'	28:BB:95:C:H6	1.61	0.64
27:DA:2555:U:H2'	27:DA:2556:C:C5'	2.25	0.64
27:DA:948:G:H2'	27:DA:949:C:C6	2.33	0.64
45:BW:104:THR:O	45:BW:105:VAL:HG23	1.98	0.64
4:CD:103:ASN:O	4:CD:106:TYR:HB3	1.96	0.64
8:AH:127:LEU:O	8:AH:127:LEU:HD13	1.96	0.64
8:AH:53:VAL:O	8:AH:56:LYS:HG3	1.98	0.64
2:AB:71:VAL:O	2:AB:165:VAL:HG13	1.98	0.64
3:CC:147:LYS:O	3:CC:203:PHE:HD2	1.81	0.64
27:BA:1309:G:OP1	56:B7:9:ARG:HG3	1.97	0.64
33:DG:141:PHE:HB3	33:DG:142:PRO:HD2	1.80	0.64
31:DE:26:ILE:HG13	31:DE:182:LEU:HD23	1.79	0.64
1:CA:177:C:H2'	1:CA:178:C:C6	2.33	0.64
27:DA:48:G:O2'	27:DA:49:A:H5''	1.98	0.64
31:BE:116:VAL:HG21	31:BE:122:PHE:CD2	2.32	0.64
48:DZ:43:PHE:CE2	48:DZ:85:VAL:HG21	2.33	0.64
27:DA:1620:G:C4'	56:D7:1:MET:HA	2.28	0.64
35:BI:115:ALA:CB	35:BI:129:THR:N	2.61	0.64
27:BA:572:A:N3	27:BA:573:G:H1'	2.12	0.64
31:DE:119:ARG:HG2	31:DE:160:TYR:CD2	2.33	0.64
38:DP:18:ARG:HB3	38:DP:18:ARG:CZ	2.28	0.64
5:CE:68:GLU:O	5:CE:70:PRO:HD3	1.97	0.64
39:BQ:85:LYS:HG3	49:B0:7:LEU:HB3	1.79	0.64
1:CA:577:G:C2	1:CA:578:C:C5	2.86	0.64
48:BZ:174:VAL:HB	48:BZ:175:PRO:CD	2.28	0.64
43:BU:27:LEU:H	43:BU:27:LEU:HD23	1.61	0.64
3:AC:172:ARG:HE	3:AC:203:PHE:HE2	1.46	0.64
1:AA:1257:U:H3'	1:AA:1257:U:H6	1.63	0.64
27:BA:176:G:C2'	27:BA:177:G:H5'	2.28	0.64
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1127:G:H5''	9:AI:66:ARG:NH2	2.13	0.64
42:BT:10:VAL:O	42:BT:10:VAL:CG1	2.46	0.64
6:CF:48:LEU:HD13	6:CF:52:ILE:HG12	1.80	0.64
53:D4:42:CYS:HA	53:D4:59:VAL:HB	1.79	0.64
27:BA:99:U:H1'	27:BA:102:G:C4	2.31	0.64
40:DR:84:ALA:HB3	40:DR:85:PRO:HD3	1.80	0.64
49:D0:64:ASP:O	49:D0:84:LEU:HD11	1.98	0.64
50:D1:40:ARG:HD3	50:D1:40:ARG:C	2.18	0.64
24:AX:6:G:O2'	24:AX:7:G:H5'	1.98	0.64
17:CQ:95:TYR:HA	17:CQ:98:LEU:HD13	1.78	0.64
14:CN:35:ARG:HG3	14:CN:36:PHE:N	2.13	0.64
17:AQ:45:HIS:HA	17:AQ:69:LYS:HZ1	1.61	0.64
42:BT:34:VAL:O	42:BT:35:LYS:HB3	1.98	0.64
52:B3:23:LEU:O	52:B3:28:LEU:N	2.29	0.64
55:D6:36:LEU:O	55:D6:37:ARG:HD2	1.97	0.64
55:B6:13:CYS:HA	55:B6:50:ARG:O	1.96	0.64
30:BD:80:ALA:HB3	30:BD:94:LEU:O	1.96	0.64
4:CD:172:PRO:HD2	4:CD:173:TRP:HZ3	1.63	0.64
4:CD:173:TRP:HE1	4:CD:189:PRO:HG3	1.57	0.64
27:BA:685:A:H1'	27:BA:688:U:O4	1.98	0.64
1:CA:279:A:O2'	1:CA:280:C:P	2.56	0.64
33:DG:105:LYS:HE2	53:D4:52:SER:CB	2.24	0.64
27:BA:2225:A:H4'	27:BA:2226:C:H6	1.62	0.64
27:BA:2165:G:H2'	27:BA:2166:G:O4'	1.97	0.64
33:DG:125:PHE:O	33:DG:128:ARG:HG2	1.97	0.64
33:DG:130:ASN:OD1	33:DG:160:VAL:HG13	1.97	0.64
27:DA:136:G:H1	27:DA:143(A):C:N4	1.96	0.64
13:AM:23:TYR:CE1	13:AM:71:ARG:HB2	2.33	0.64
1:CA:1026:G:N3	1:CA:1026:G:H2'	2.13	0.64
27:BA:847:U:H2'	27:BA:848:G:C5'	2.28	0.64
27:DA:2850:A:OP2	27:DA:2866:U:H5	1.80	0.64
37:DO:1:MET:H1	37:DO:1:MET:HE2	1.63	0.64
37:DO:40:VAL:HG12	37:DO:41:ALA:H	1.63	0.64
1:CA:451:A:H1'	1:CA:452:A:C8	2.32	0.64
1:AA:817:C:C2	1:AA:819:A:O4'	2.51	0.64
45:DW:12:ILE:O	45:DW:100:THR:HA	1.97	0.64
45:DW:96:ILE:HG13	45:DW:97:LYS:N	2.12	0.64
1:CA:939:G:H5''	7:CG:102:ARG:NH1	2.12	0.64
52:B3:59:VAL:CG1	52:B3:60:GLU:N	2.60	0.64
13:AM:108:ARG:HH11	13:AM:108:ARG:HA	1.62	0.64
8:CH:87:SER:HB3	8:CH:133:LEU:O	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1847:A:H4'	27:BA:1848:A:OP2	1.98	0.64
1:CA:1480:G:H2'	1:CA:1481:U:H6	1.63	0.64
12:AL:3:THR:H	12:AL:6:GLN:NE2	1.96	0.64
43:DU:60:LEU:HD13	43:DU:60:LEU:O	1.97	0.64
29:BC:68:LEU:HD11	29:BC:180:PHE:N	2.13	0.64
27:BA:2167:U:H2'	27:BA:2168:G:C8	2.32	0.64
18:CR:36:ASN:H	18:CR:36:ASN:ND2	1.96	0.64
27:DA:1804:C:H4'	30:DD:252:TRP:CZ2	2.33	0.64
27:BA:2832:U:C4'	27:BA:2833:G:H5''	2.25	0.64
1:CA:1329:A:OP1	13:CM:28:ALA:HB3	1.98	0.64
27:BA:284:U:H2'	27:BA:285:C:H6	1.63	0.64
27:DA:436:C:H2'	27:DA:437:G:C8	2.33	0.64
33:BG:54:GLU:C	33:BG:56:ALA:H	2.01	0.64
27:DA:860:U:H2'	27:DA:861:A:H8	1.62	0.64
27:DA:921:G:H4'	27:DA:2269:A:C5	2.31	0.64
27:DA:2454:G:O2'	27:DA:2455:G:H5'	1.98	0.64
34:BH:8:PRO:O	34:BH:9:ILE:HB	1.97	0.64
1:AA:1060:C:H2'	1:AA:1061:G:H8	1.63	0.64
2:AB:187:LEU:HD11	2:AB:204:ASN:O	1.98	0.64
1:CA:742:G:H5''	15:CO:58:MET:HE1	1.79	0.64
10:AJ:5:ARG:O	10:AJ:6:ILE:HG23	1.98	0.64
14:CN:13:THR:O	14:CN:15:LYS:N	2.31	0.64
32:BF:176:LEU:HD11	32:BF:180:GLY:CA	2.26	0.64
27:DA:1665:A:O2'	27:DA:1666:G:H5'	1.96	0.64
42:DT:118:ARG:O	42:DT:122:ASP:N	2.29	0.64
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.80	0.64
19:AS:63:THR:HG22	19:AS:66:MET:HE2	1.79	0.64
44:BV:82:ARG:O	44:BV:83:ARG:HG2	1.98	0.64
27:DA:2009:G:OP1	45:DW:41:LYS:HE2	1.98	0.64
1:AA:182:U:H6	1:AA:182:U:H5'	1.62	0.64
27:BA:2065:C:O2'	27:BA:2066:C:H5'	1.98	0.64
6:CF:97:PHE:CD2	18:CR:31:LEU:HD21	2.33	0.64
27:BA:1321:A:H2'	27:BA:1322:A:C8	2.33	0.64
28:BB:87:G:H3'	28:BB:88:C:H5''	1.79	0.64
27:BA:2773:C:O2'	27:BA:2774:C:H5'	1.98	0.64
1:AA:316:G:N7	1:AA:351:G:C6	2.66	0.64
27:BA:596:G:O2'	27:BA:597:U:H5'	1.98	0.64
27:DA:1838:C:O2'	27:DA:1839:G:OP2	2.15	0.64
50:D1:50:ARG:HG2	50:D1:50:ARG:NH1	2.12	0.64
20:AT:14:LYS:HB2	20:AT:17:ARG:NH2	2.13	0.64
27:BA:1162:G:H4'	44:BV:24:LYS:HB2	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:980:C:H5'	1:CA:981:U:H5	1.61	0.64
37:BO:61:VAL:HG12	37:BO:87:ILE:HD11	1.80	0.64
27:DA:1137:G:H22	36:DN:106:MET:HG2	1.63	0.64
27:DA:245:G:O5'	38:DP:73:GLY:HA2	1.98	0.64
27:DA:1791:A:O2'	30:DD:207:GLY:HA2	1.97	0.64
32:DF:25:PRO:HB3	32:DF:119:ARG:HD3	1.79	0.64
42:BT:46:GLU:O	42:BT:65:LYS:HB2	1.97	0.64
42:BT:88:ILE:HG22	42:BT:89:VAL:N	2.09	0.64
47:DY:75:ILE:CD1	47:DY:79:CYS:HA	2.28	0.64
30:DD:30:GLU:OE1	30:DD:63:ARG:NE	2.27	0.64
32:DF:66:PRO:O	32:DF:68:LYS:N	2.31	0.64
1:AA:1320:C:H42	19:AS:36:ARG:HG3	1.63	0.64
2:CB:185:ILE:HG23	2:CB:199:TYR:CB	2.26	0.64
12:CL:109:ASP:O	12:CL:111:LYS:HG3	1.98	0.64
10:AJ:16:LEU:HD11	10:AJ:70:ARG:HB2	1.78	0.64
15:CO:17:ARG:CZ	15:CO:77:ARG:HH12	2.10	0.64
57:B8:43:GLN:O	57:B8:44:LYS:HD2	1.98	0.64
9:CI:58:HIS:HB2	9:CI:59:PHE:CE1	2.33	0.64
5:CE:45:PHE:HD1	5:CE:46:GLY:N	1.96	0.64
37:DO:6:THR:HG22	37:DO:7:TYR:N	2.13	0.64
48:BZ:70:VAL:HG22	48:BZ:87:PHE:CE2	2.33	0.64
1:CA:810:C:C2'	1:CA:811:C:H5'	2.28	0.64
1:AA:1229:A:O2'	1:AA:1230:C:H5'	1.98	0.64
1:AA:965:A:H4'	1:AA:966:G:OP1	1.96	0.64
42:DT:16:ARG:NH1	42:DT:19:LEU:HD21	2.13	0.64
25:CY:63:C:H2'	25:CY:64:G:C8	2.32	0.64
27:BA:1842:G:H2'	27:BA:1843:C:C6	2.33	0.64
1:AA:1372:U:OP1	9:AI:71:SER:HB3	1.98	0.64
1:CA:901:A:C5	1:CA:902:G:H1'	2.33	0.64
28:BB:24:G:H4'	28:BB:25:A:O5'	1.98	0.64
7:AG:70:LYS:HB3	7:AG:96:GLN:HG2	1.80	0.64
27:DA:637:A:H4'	27:DA:638:G:O5'	1.97	0.64
5:CE:150:ARG:HA	5:CE:153:LYS:HE2	1.80	0.64
27:BA:309:G:H4'	47:BY:18:GLY:HA3	1.78	0.64
29:DC:18:LYS:HD3	29:DC:19:VAL:H	1.63	0.64
27:BA:1973:G:H2'	27:BA:1974:C:H6	1.63	0.64
30:BD:79:VAL:O	30:BD:79:VAL:HG12	1.97	0.64
6:CF:43:LEU:H	6:CF:43:LEU:HD12	1.62	0.64
38:BP:40:SER:O	38:BP:41:ARG:HD2	1.98	0.63
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.13	0.63
27:BA:2635:C:OP1	31:BE:77:ILE:HG21	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:19:LEU:HD12	42:BT:19:LEU:N	2.13	0.63
1:CA:1251:A:H5''	9:CI:12:GLU:CD	2.18	0.63
30:DD:61:LEU:CB	30:DD:63:ARG:HH12	2.10	0.63
47:BY:16:ALA:HA	47:BY:21:LYS:HD3	1.79	0.63
46:DX:36:LYS:HE3	46:DX:56:THR:HG23	1.80	0.63
46:DX:57:LEU:HD11	46:DX:78:LYS:CG	2.28	0.63
47:BY:28:LYS:HA	47:BY:39:VAL:H	1.63	0.63
31:BE:49:LEU:HD13	31:BE:81:ILE:HG12	1.78	0.63
27:DA:520:G:H2'	27:DA:521:G:H8	1.60	0.63
41:BS:85:VAL:HG23	41:BS:106:ARG:HB2	1.78	0.63
33:DG:135:LEU:HD22	33:DG:141:PHE:CE2	2.33	0.63
31:DE:203:LYS:HE3	31:DE:203:LYS:O	1.98	0.63
3:CC:92:ALA:HB2	3:CC:99:VAL:HG22	1.79	0.63
30:BD:182:LEU:O	30:BD:271:ILE:CG1	2.46	0.63
3:CC:192:THR:O	3:CC:192:THR:HG22	1.98	0.63
27:BA:2261:C:OP2	49:B0:17:GLN:OE1	2.16	0.63
27:BA:554:U:C2'	27:BA:555:U:H5'	2.28	0.63
39:DQ:45:GLN:O	39:DQ:49:ALA:HB2	1.99	0.63
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.80	0.63
55:B6:29:ASN:ND2	55:B6:30:THR:HG23	2.12	0.63
1:AA:499:A:H4'	1:AA:500:G:OP1	1.98	0.63
33:DG:133:LEU:HD12	33:DG:134:GLY:N	2.13	0.63
35:BI:38:LEU:H	35:BI:38:LEU:CD1	2.08	0.63
42:DT:117:ASP:O	42:DT:120:ARG:HB2	1.97	0.63
21:AU:9:ARG:HH11	21:AU:22:ARG:HG3	1.63	0.63
45:DW:68:ARG:CA	45:DW:110:LYS:HD3	2.28	0.63
35:DI:5:LEU:HD12	35:DI:17:GLN:O	1.97	0.63
27:BA:2488:A:H2'	27:BA:2489:G:C8	2.33	0.63
37:BO:108:GLU:O	37:BO:110:GLY:N	2.31	0.63
8:CH:87:SER:HB2	8:CH:93:VAL:HB	1.79	0.63
1:CA:266:G:H5'	1:CA:268:C:H41	1.63	0.63
27:DA:557:U:H2'	27:DA:558:G:C8	2.33	0.63
27:BA:582:G:H2'	27:BA:583:G:C8	2.33	0.63
27:BA:710:G:O2'	27:BA:711:G:H5'	1.98	0.63
39:DQ:38:GLU:HG3	39:DQ:127:ILE:HG22	1.79	0.63
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.13	0.63
40:BR:18:LEU:HD11	40:BR:22:ARG:NE	2.14	0.63
27:DA:271(T):C:H6	27:DA:271(T):C:H5'	1.62	0.63
1:CA:473:G:H5''	16:CP:81:ARG:HH21	1.63	0.63
1:AA:236:G:H5''	17:AQ:42:TYR:OH	1.97	0.63
31:DE:144:ARG:HH11	31:DE:144:ARG:CG	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2700:C:O2'	27:BA:2701:C:H5'	1.97	0.63
30:DD:69:ARG:HD2	30:DD:130:ALA:HB2	1.79	0.63
30:DD:25:THR:C	30:DD:26:LYS:HD3	2.19	0.63
27:BA:1899:G:N2	27:BA:1902:C:N4	2.30	0.63
1:AA:471:G:H2'	1:AA:472:A:H8	1.62	0.63
39:DQ:4:PRO:O	39:DQ:6:ARG:N	2.31	0.63
27:BA:307:G:N2	27:BA:310:A:OP2	2.32	0.63
30:BD:31:LYS:CD	30:BD:33:LEU:HD13	2.28	0.63
4:CD:102:ASP:OD1	4:CD:103:ASN:N	2.31	0.63
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.13	0.63
14:AN:26:ARG:HG3	14:AN:27:CYS:N	2.13	0.63
42:DT:80:SER:O	42:DT:81:PRO:C	2.36	0.63
39:BQ:12:GLN:CG	39:BQ:73:PRO:HD2	2.28	0.63
17:AQ:59:ILE:N	17:AQ:59:ILE:HD13	2.14	0.63
2:AB:112:VAL:CG2	2:AB:149:LEU:HD13	2.23	0.63
27:BA:1603:A:C8	27:BA:1603:A:C5'	2.79	0.63
15:AO:70:LEU:HD11	15:AO:77:ARG:HG3	1.80	0.63
50:B1:8:SER:HB3	50:B1:66:HIS:CG	2.33	0.63
8:AH:97:VAL:HG13	8:AH:98:LYS:N	2.09	0.63
12:AL:38:ARG:HH22	12:AL:54:LYS:NZ	1.95	0.63
38:BP:97:PRO:C	38:BP:98:GLU:HG3	2.19	0.63
27:DA:2155:G:H2'	27:DA:2156:G:O4'	1.96	0.63
50:B1:46:LEU:N	50:B1:46:LEU:HD22	2.13	0.63
30:DD:32:SER:HA	30:DD:36:PRO:HD2	1.80	0.63
27:DA:2562:U:H1'	37:DO:23:ARG:HH12	1.63	0.63
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.34	0.63
27:BA:2571:C:H5"	27:BA:2572:A:H5"	1.80	0.63
24:AX:72:A:H3'	24:AX:73:A:C8	2.29	0.63
1:CA:737:A:O2'	6:CF:72:VAL:HG13	1.98	0.63
27:BA:1331:A:H2'	27:BA:1333:C:C5	2.33	0.63
27:BA:1607:C:N4	27:BA:1622:G:OP2	2.28	0.63
52:D3:54:VAL:HG12	52:D3:55:ARG:N	2.14	0.63
10:AJ:8:LEU:HD11	10:AJ:23:ILE:HD12	1.80	0.63
1:CA:831:U:H2'	1:CA:832:C:H5'	1.79	0.63
32:DF:99:TYR:HD2	32:DF:99:TYR:O	1.82	0.63
34:DH:61:HIS:HA	34:DH:64:LEU:HD12	1.80	0.63
1:CA:898:G:N2	1:CA:900:A:H3'	2.13	0.63
30:DD:71:ASP:CG	30:DD:103:ARG:HH22	2.01	0.63
1:CA:613:C:H2'	1:CA:614:A:H8	1.63	0.63
1:CA:1431:C:H2'	1:CA:1432:G:O4'	1.99	0.63
36:DN:3:THR:O	36:DN:5:VAL:HG12	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.80	0.63
4:CD:156:GLU:O	4:CD:160:GLN:HG3	1.99	0.63
42:BT:134:GLU:O	42:BT:135:ALA:HB3	1.98	0.63
48:BZ:113:GLY:HA3	48:BZ:176:PRO:HD3	1.80	0.63
25:AY:57:A:H4'	25:AY:58:A:OP1	1.95	0.63
27:BA:2639:A:H2'	27:BA:2640:G:O4'	1.98	0.63
42:DT:115:ARG:HA	42:DT:115:ARG:HE	1.63	0.63
17:CQ:8:GLY:HA3	17:CQ:22:LEU:O	1.98	0.63
57:B8:23:VAL:CG1	57:B8:46:ARG:HB3	2.27	0.63
27:BA:2880:C:O2'	40:BR:90:ARG:NH1	2.32	0.63
32:BF:113:ALA:HB1	32:BF:186:ILE:HG21	1.81	0.63
27:DA:1899:G:N2	27:DA:1902:C:N4	2.46	0.63
4:CD:201:GLN:OE1	4:CD:204:ILE:HG13	1.97	0.63
17:AQ:68:ARG:H	17:AQ:70:ARG:NH1	1.96	0.63
32:DF:9:ILE:HG12	32:DF:14:PRO:HA	1.81	0.63
19:CS:19:VAL:O	19:CS:23:ASN:HB3	1.97	0.63
41:BS:59:LYS:HZ1	41:BS:68:GLN:HE22	1.46	0.63
27:DA:97:C:H4'	51:D2:2:LYS:CB	2.25	0.63
27:DA:95:G:HO2'	51:D2:48:HIS:HD1	1.46	0.63
39:DQ:63:LYS:HG2	39:DQ:64:ILE:N	2.13	0.63
38:DP:123:LEU:HD12	38:DP:125:VAL:CG1	2.27	0.63
33:DG:32:PRO:HB2	33:DG:172:LEU:HD13	1.79	0.63
27:DA:571:A:H1'	27:DA:573:G:C8	2.34	0.63
14:AN:29:ARG:NH1	14:AN:31:ARG:HB2	2.12	0.63
31:DE:15:PHE:CZ	42:DT:80:SER:HB2	2.34	0.63
27:DA:2746:U:H1'	34:DH:139:GLN:HB3	1.80	0.63
17:CQ:17:LYS:HG2	17:CQ:47:PRO:HA	1.80	0.63
27:BA:1820:U:H4'	27:BA:1821:A:OP2	1.98	0.63
17:AQ:5:VAL:HA	17:AQ:59:ILE:O	1.97	0.63
41:BS:82:ILE:CD1	41:BS:82:ILE:H	1.97	0.63
34:BH:154:PRO:HG3	34:BH:162:ILE:O	1.99	0.63
37:BO:2:ILE:HG21	37:BO:8:LEU:HD21	1.80	0.63
27:DA:2476:A:H2'	27:DA:2477:C:H5''	1.79	0.63
1:CA:1053:G:O6	1:CA:1199:U:H2'	1.99	0.63
14:CN:7:ILE:O	14:CN:10:ALA:HB3	1.98	0.63
12:AL:34:CYS:HA	12:AL:55:VAL:HG22	1.80	0.63
33:DG:47:LYS:N	33:DG:51:ARG:HG3	2.14	0.63
9:CI:3:GLN:HG2	9:CI:20:ARG:HH12	1.64	0.63
19:CS:63:THR:HG22	19:CS:66:MET:HG2	1.80	0.63
13:AM:76:ALA:CA	13:AM:79:LYS:HZ2	2.10	0.63
25:CY:65:U:H2'	25:CY:66:A:H8	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:13:ARG:O	42:BT:15:VAL:N	2.27	0.63
50:D1:7:ILE:HD13	50:D1:62:VAL:HB	1.79	0.63
50:D1:67:ILE:N	50:D1:68:PRO:CD	2.62	0.63
1:AA:611:A:H61	1:AA:629:G:H1	1.44	0.63
1:AA:178:C:H2'	1:AA:179:A:C8	2.30	0.63
27:DA:428:A:H3'	27:DA:429:A:C8	2.34	0.63
27:BA:527:C:C4	27:BA:2779:U:H2'	2.33	0.63
1:CA:946:A:C6	1:CA:1236:A:N1	2.67	0.63
17:CQ:67:LYS:O	17:CQ:68:ARG:HB3	1.98	0.63
37:DO:101:PRO:HD3	42:DT:67:SER:O	1.98	0.63
30:DD:67:PHE:CZ	30:DD:157:ARG:NE	2.64	0.63
1:CA:110:C:H2'	1:CA:111:G:O4'	1.99	0.63
27:DA:614(C):A:H4'	27:DA:615:G:OP1	1.97	0.63
27:DA:1388:G:C2'	27:DA:1389:G:H5'	2.27	0.63
2:CB:19:HIS:HD1	2:CB:20:GLU:HG2	1.63	0.63
1:AA:1047:G:HO2'	1:AA:1215:G:HO2'	1.47	0.63
17:CQ:31:LEU:HD23	17:CQ:32:TYR:CZ	2.33	0.63
15:CO:61:GLY:O	15:CO:65:ARG:HD3	1.98	0.63
1:AA:972:C:H4'	10:AJ:57:LYS:HG3	1.80	0.63
32:DF:53:THR:HG23	32:DF:55:GLY:H	1.62	0.63
43:DU:14:HIS:C	43:DU:16:LYS:H	2.02	0.63
2:AB:224:GLN:HE21	2:AB:229:VAL:HG21	1.62	0.63
1:AA:1344:C:O2'	1:AA:1345:U:H5'	1.97	0.63
40:BR:22:ARG:O	40:BR:25:ALA:N	2.32	0.63
2:CB:91:PRO:CG	2:CB:154:LEU:HB2	2.16	0.63
12:AL:89:ASP:O	12:AL:91:PRO:HD3	1.98	0.63
51:B2:42:GLY:O	51:B2:44:LEU:N	2.31	0.63
1:AA:189(E):U:O2	1:AA:189(E):U:H2'	1.98	0.63
27:DA:2262:U:P	49:D0:19:LYS:HZ2	2.22	0.63
28:DB:87:G:H3'	28:DB:88:C:C5'	2.28	0.63
47:BY:26:LYS:HG2	47:BY:27:VAL:HG23	1.80	0.63
27:BA:1658:C:H2'	27:BA:1659:U:H6	1.64	0.63
3:AC:16:ARG:CB	3:AC:16:ARG:HH11	2.07	0.63
1:CA:1038:C:H2'	1:CA:1039:C:C4	2.32	0.63
42:BT:33:LYS:HE3	42:BT:74:ARG:NH2	2.14	0.63
27:BA:1439:A:C2	27:BA:1553:A:C4	2.87	0.63
36:DN:82:LEU:HD12	36:DN:83:LYS:N	2.14	0.63
27:BA:2270:G:H2'	27:BA:2271:G:O4'	1.97	0.63
8:CH:10:LEU:CD2	8:CH:83:ILE:HG12	2.26	0.63
27:BA:2321:G:O2'	27:BA:2322:A:H5'	1.98	0.63
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DD:35:LYS:CB	30:DD:36:PRO:HD3	2.29	0.63
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.34	0.63
27:BA:197:A:C8	27:BA:197:A:H5'	2.26	0.63
27:BA:1412:A:H2'	27:BA:1413:G:H8	1.60	0.63
33:BG:128:ARG:C	33:BG:130:ASN:N	2.48	0.63
27:BA:1241:A:O2'	27:BA:1242:A:H5'	1.98	0.63
32:BF:40:GLN:NE2	32:BF:184:TYR:HB3	2.14	0.63
25:CY:38:U:O2	25:CY:38:U:H3'	1.97	0.63
27:DA:2039:C:OP2	36:DN:109:LYS:HD3	1.97	0.63
42:BT:122:ASP:O	42:BT:124:ASP:N	2.31	0.63
1:AA:595:G:H1	1:AA:641:U:H2'	1.64	0.63
50:D1:80:LEU:HB3	50:D1:82:LEU:HD21	1.78	0.63
27:BA:49:A:H5''	27:BA:51:G:O4'	1.99	0.63
27:DA:55:G:H2'	27:DA:56:A:C8	2.31	0.63
27:BA:2684:U:O2'	37:BO:68:GLU:HG3	1.98	0.63
40:DR:83:ILE:O	40:DR:86:ARG:HG3	1.98	0.63
27:DA:2064:C:H1'	27:DA:2450:A:C6	2.34	0.63
1:CA:297:G:N2	1:CA:300:A:OP2	2.32	0.63
39:BQ:79:LEU:HD12	39:BQ:79:LEU:N	2.12	0.63
27:BA:2228:G:P	30:BD:263:ARG:HH12	2.21	0.63
24:CX:37:A:H3'	24:CX:38:A:H8	1.63	0.63
27:DA:2078:C:O2'	27:DA:2079:U:H5'	1.99	0.63
57:D8:16:ILE:CG2	57:D8:64:TYR:HB3	2.28	0.63
32:BF:70:THR:C	32:BF:72:ARG:H	2.01	0.63
32:DF:21:ALA:O	32:DF:24:LEU:HB2	1.99	0.63
43:DU:83:LEU:HG	43:DU:88:ILE:CD1	2.27	0.63
44:DV:19:LYS:HZ3	44:DV:20:LEU:H	1.45	0.63
27:DA:1497:U:H5'	27:DA:1498:C:C5	2.31	0.63
27:DA:2833:G:C3'	27:DA:2834:G:H5''	2.07	0.63
27:DA:2429:G:OP2	27:DA:2430:A:OP2	2.17	0.63
27:DA:2503:A:H4'	27:DA:2504:U:OP1	1.99	0.63
20:AT:29:LYS:O	20:AT:32:ALA:HB3	1.98	0.63
34:BH:8:PRO:HD2	34:BH:69:ARG:CD	2.24	0.63
47:BY:31:LEU:HD22	47:BY:31:LEU:N	2.14	0.63
42:DT:62:THR:HG22	42:DT:75:ILE:CG1	2.28	0.63
27:DA:1032:A:O3'	58:D9:16:VAL:HG11	1.99	0.63
27:BA:125:G:H21	56:B7:48:LYS:HZ2	1.45	0.63
36:DN:43:THR:HB	36:DN:46:VAL:HG12	1.80	0.63
30:DD:43:ARG:HD2	30:DD:44:ASN:CG	2.18	0.63
37:BO:114:ILE:N	37:BO:114:ILE:HD13	2.13	0.63
3:CC:156:ARG:NH2	3:CC:161:GLU:HG3	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DZ:47:PHE:O	48:DZ:51:SER:N	2.31	0.63
40:DR:4:LEU:O	40:DR:4:LEU:HD13	1.99	0.63
27:BA:1375:C:H2'	27:BA:1376:C:H6	1.64	0.63
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.98	0.63
1:CA:1442(A):G:H5'	1:CA:1442(B):A:OP2	1.99	0.63
34:BH:86:GLU:HG2	34:BH:86:GLU:O	1.98	0.63
7:CG:150:ALA:HB2	11:CK:50:TYR:CZ	2.34	0.63
27:DA:1718:G:H1	27:DA:1744:C:N4	1.92	0.63
27:DA:1273:U:C6	27:DA:1273:U:H5''	2.27	0.63
27:BA:492:A:H2'	27:BA:493:G:O4'	1.98	0.63
32:BF:160:ASN:HD22	32:BF:160:ASN:C	2.02	0.63
3:AC:43:LEU:HB3	3:AC:47:LEU:HD23	1.81	0.63
27:DA:1012:U:O4	36:DN:25:ARG:HA	1.99	0.63
14:AN:15:LYS:O	14:AN:16:PHE:O	2.16	0.63
1:AA:1228:C:H4'	13:AM:116:THR:CA	2.29	0.63
5:AE:81:GLU:HG2	5:AE:90:VAL:HG12	1.80	0.63
27:BA:723:G:O2'	27:BA:724:U:H5'	1.98	0.63
13:AM:14:ARG:HD2	13:AM:42:ALA:O	1.97	0.63
56:D7:24:THR:HG23	56:D7:27:GLY:N	2.13	0.63
11:AK:122:LYS:O	11:AK:126:ARG:HG3	1.99	0.63
4:CD:121:VAL:HG22	4:CD:126:ILE:HG13	1.79	0.63
27:BA:1654:A:OP2	40:BR:3:HIS:HB2	1.98	0.63
27:BA:1945:G:H2'	27:BA:1946:U:C6	2.33	0.63
8:CH:123:GLU:O	8:CH:127:LEU:HB2	1.97	0.63
27:BA:508:G:N3	27:BA:508:G:H2'	2.12	0.63
27:BA:1155:A:OP1	43:BU:55:ARG:HD2	1.98	0.63
20:CT:86:ARG:HH11	20:CT:86:ARG:HG3	1.63	0.63
1:AA:528:C:H41	12:AL:46:ASN:CG	2.02	0.63
30:BD:165:ILE:CD1	30:BD:175:LEU:HD21	2.16	0.63
1:CA:1348:U:H2'	1:CA:1349:A:H8	1.63	0.63
44:BV:99:ILE:H	44:BV:99:ILE:HD13	1.63	0.63
31:DE:33:VAL:HG22	31:DE:69:LYS:HE3	1.80	0.63
27:DA:953:A:OP2	39:DQ:16:ARG:NH2	2.31	0.63
33:DG:11:TYR:HE1	33:DG:172:LEU:HD11	1.63	0.63
33:DG:27:ASN:O	33:DG:28:VAL:HB	1.99	0.63
50:B1:37:ILE:CG2	50:B1:38:SER:H	1.94	0.63
20:CT:104:LEU:HD23	20:CT:105:SER:N	2.13	0.63
48:BZ:18:ARG:NH1	48:BZ:83:GLU:O	2.31	0.63
1:CA:32:A:C2	1:CA:33:A:C4	2.87	0.63
42:DT:33:LYS:HB2	42:DT:41:ARG:HB3	1.80	0.63
27:DA:90:U:H2'	27:DA:90:U:O2	1.96	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1777:U:H2'	27:BA:1778:U:H6	1.63	0.63
6:AF:38:GLU:O	6:AF:39:LYS:HB2	1.99	0.63
27:DA:118:A:H5'	27:DA:119:A:C8	2.33	0.63
27:DA:2180:U:H2'	27:DA:2181:G:C8	2.34	0.63
3:CC:156:ARG:HE	3:CC:161:GLU:HA	1.62	0.63
57:B8:32:LEU:HB3	57:B8:36:LYS:CE	2.28	0.63
30:BD:241:PRO:O	30:BD:242:ARG:CB	2.44	0.63
42:DT:102:ILE:HB	42:DT:110:ILE:HD11	1.81	0.63
42:DT:23:ARG:HE	42:DT:120:ARG:HH11	1.45	0.63
27:BA:2096:U:H2'	27:BA:2097:C:H6	1.62	0.63
27:BA:1175:U:H6	27:BA:1178:C:H42	1.47	0.63
10:CJ:5:ARG:HG3	10:CJ:71:LEU:HD11	1.79	0.63
35:DI:9:LEU:O	35:DI:13:GLY:CA	2.47	0.63
27:BA:218:A:C2	27:BA:235:U:H4'	2.33	0.63
9:AI:4:TYR:CD1	9:AI:4:TYR:N	2.60	0.63
27:BA:1924:C:C2'	27:BA:1925:C:H5'	2.29	0.63
47:DY:4:LYS:HG3	47:DY:5:MET:H	1.63	0.63
1:AA:1308:U:H5'	13:AM:110:ARG:HD2	1.80	0.63
28:DB:30:C:H2'	28:DB:31:C:O4'	1.98	0.63
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.32	0.63
27:BA:1750:G:O2'	27:BA:2860:A:N1	2.32	0.63
27:BA:192:C:H2'	27:BA:193:U:H5'	1.80	0.63
27:DA:975(A):G:O2'	27:DA:976:C:H5'	1.98	0.63
31:BE:119:ARG:HD2	31:BE:120:TRP:CE2	2.34	0.63
27:DA:1838:C:N3	27:DA:1901:A:N6	2.46	0.63
20:AT:98:PRO:C	20:AT:100:ILE:H	2.01	0.63
6:CF:100:ASN:HB3	18:CR:27:GLY:O	1.98	0.63
31:DE:102:VAL:HG13	31:DE:172:VAL:CG2	2.29	0.63
40:BR:111:LEU:N	40:BR:111:LEU:HD22	2.13	0.63
27:BA:304:G:H2'	27:BA:305:U:C6	2.34	0.63
43:DU:5:LYS:HG2	43:DU:7:GLY:H	1.62	0.63
38:BP:29:LYS:HB3	38:BP:34:GLY:H	1.63	0.63
31:BE:184:VAL:CG1	31:BE:185:LYS:H	2.12	0.63
27:DA:1151:G:H5''	43:DU:81:HIS:CE1	2.33	0.63
36:DN:4:TYR:CB	43:DU:64:ARG:HH22	2.12	0.63
43:DU:90:VAL:HG12	43:DU:91:ASP:N	2.08	0.63
47:DY:28:LYS:H	47:DY:28:LYS:HZ2	1.46	0.63
27:DA:2275:C:O2'	39:DQ:85:LYS:N	2.32	0.63
1:AA:190:U:O2'	1:AA:191:G:H5'	1.98	0.63
37:DO:103:ALA:HB1	37:DO:105:GLU:OE1	1.99	0.63
32:DF:117:ARG:HH21	32:DF:187:VAL:HA	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:124:LYS:HB2	11:AK:125:PHE:CD1	2.34	0.63
27:BA:1316:U:O2'	27:BA:1317:A:H5'	1.98	0.63
46:BX:12:VAL:CG1	46:BX:27:THR:HG23	2.29	0.63
46:BX:12:VAL:HG23	46:BX:13:LEU:N	2.13	0.63
34:BH:152:ARG:HB2	34:BH:162:ILE:HG13	1.80	0.63
40:BR:79:LEU:HA	40:BR:83:ILE:CG1	2.22	0.63
3:CC:77:ILE:HG22	3:CC:81:GLY:HA2	1.80	0.63
1:CA:1308:U:OP1	13:CM:97:PRO:HA	1.98	0.63
27:DA:2165:G:H2'	27:DA:2166:G:C8	2.33	0.63
35:BI:113:ARG:O	35:BI:130:TYR:HD1	1.82	0.63
27:BA:96:G:H4'	51:B2:48:HIS:HD2	1.63	0.63
1:CA:1027:C:H2'	1:CA:1028:C:C5	2.33	0.63
13:CM:3:ARG:HG2	13:CM:9:ILE:HG13	1.81	0.63
2:AB:218:ALA:O	2:AB:222:ILE:HG13	1.99	0.63
40:DR:100:LEU:HD21	40:DR:113:LEU:HB2	1.80	0.63
45:DW:83:LYS:HG2	45:DW:97:LYS:CD	2.29	0.63
28:DB:17:C:H2'	28:DB:18:G:H8	1.63	0.63
1:CA:1280:A:H5''	10:CJ:40:LEU:HD12	1.80	0.63
10:AJ:9:ARG:O	10:AJ:94:VAL:HG13	1.99	0.63
27:DA:1819:A:H5''	30:DD:158:ALA:HB2	1.80	0.63
36:BN:56:ASN:HA	36:BN:125:GLY:H	1.63	0.63
9:AI:28:VAL:HA	9:AI:63:ILE:O	1.99	0.63
2:CB:22:LYS:O	2:CB:24:TRP:HD1	1.82	0.63
27:DA:811:U:O2	27:DA:1250:G:H3'	1.98	0.63
1:AA:1030(A):G:H1'	1:AA:1031:G:H22	1.63	0.63
29:DC:47:LEU:H	29:DC:47:LEU:HD23	1.62	0.63
5:CE:88:LYS:HD3	5:CE:123:LEU:HD12	1.79	0.63
1:CA:291:C:O2'	1:CA:292:G:H5'	1.99	0.63
1:CA:980:C:H3'	1:CA:981:U:C6	2.34	0.63
19:CS:33:THR:O	19:CS:57:HIS:HE1	1.81	0.63
27:BA:1290:C:H2'	27:BA:1291:C:C6	2.33	0.63
47:BY:81:LYS:HZ3	47:BY:97:ARG:HG2	1.61	0.63
27:BA:557:U:O2'	27:BA:558:G:H5'	1.98	0.63
44:BV:15:GLU:CB	44:BV:16:PRO:HD2	2.28	0.63
41:BS:68:GLN:HG2	41:BS:71:ARG:NH1	2.14	0.63
30:BD:25:THR:O	30:BD:26:LYS:HD3	1.98	0.63
57:D8:14:VAL:CG2	57:D8:22:VAL:HG13	2.24	0.63
27:DA:2382:G:O2'	27:DA:2383:G:OP2	2.14	0.63
39:BQ:115:MET:CE	39:BQ:131:ILE:HG21	2.28	0.63
1:CA:186:C:H2'	1:CA:187:C:C6	2.33	0.63
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:45:ARG:O	14:AN:45:ARG:HG2	1.99	0.63
1:CA:377:G:H2'	1:CA:378:G:C8	2.34	0.63
1:CA:1492:A:H5'	26:CZ:6:5OH:HP	1.80	0.63
32:DF:155:LEU:HD11	32:DF:176:LEU:HD23	1.80	0.63
48:BZ:68:THR:HA	48:BZ:90:LEU:HD12	1.80	0.63
3:CC:89:GLU:OE2	3:CC:93:LYS:HD2	1.99	0.63
38:BP:144:GLU:N	38:BP:145:PRO:CD	2.62	0.63
48:BZ:157:PRO:O	48:BZ:160:VAL:HB	1.99	0.63
36:BN:133:GLN:C	36:BN:134:ARG:HG3	2.17	0.63
38:DP:16:ARG:NH2	38:DP:18:ARG:HG3	2.13	0.63
39:BQ:58:PHE:CD1	39:BQ:58:PHE:O	2.51	0.63
13:AM:17:VAL:HA	13:AM:20:THR:OG1	1.99	0.63
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.81	0.63
16:CP:74:LEU:O	16:CP:79:VAL:HG23	1.99	0.63
33:DG:112:PRO:C	33:DG:113:ARG:HH11	2.00	0.63
1:AA:762:C:H2'	1:AA:763:G:H8	1.63	0.63
1:AA:853:G:O2'	1:AA:854:G:H5'	1.99	0.63
45:DW:23:LEU:HD21	54:D5:25:LEU:HD13	1.81	0.63
12:AL:25:LYS:O	12:AL:26:GLY:C	2.37	0.63
39:DQ:66:ILE:O	39:DQ:66:ILE:CG1	2.46	0.63
41:DS:82:ILE:HG22	41:DS:83:LYS:N	2.14	0.63
7:CG:50:ILE:HD11	7:CG:121:ALA:HA	1.80	0.63
1:AA:52:G:O2'	1:AA:53:A:H8	1.81	0.63
24:AX:29:G:H2'	24:AX:30:G:H8	1.64	0.63
49:D0:72:ARG:HE	49:D0:75:LEU:HD12	1.63	0.63
2:AB:233:SER:OG	2:AB:234:PRO:HD2	1.98	0.63
27:BA:1252:G:H4'	27:BA:1253:A:OP1	1.99	0.63
1:CA:298:A:H2'	1:CA:299:G:O4'	1.98	0.63
4:CD:49:ARG:HD3	4:CD:50:ARG:N	2.14	0.63
3:AC:143:GLU:C	3:AC:145:GLY:H	2.00	0.63
27:BA:2886:G:O2'	54:B5:32:PRO:HD2	1.99	0.63
27:BA:1804:C:O2'	27:BA:1805:U:H5'	1.98	0.63
32:BF:7:TYR:O	32:BF:15:SER:HB2	1.99	0.63
47:BY:8:LYS:HD2	47:BY:8:LYS:N	2.14	0.63
4:CD:26:CYS:HA	4:CD:31:CYS:HA	1.81	0.63
13:CM:23:TYR:CD1	13:CM:71:ARG:HB2	2.34	0.63
47:BY:50:ARG:HD2	47:BY:56:PRO:O	1.99	0.63
1:CA:472:A:C4'	16:CP:82:GLN:HE22	2.12	0.63
44:BV:62:LEU:N	44:BV:62:LEU:HD22	2.13	0.63
27:DA:272:G:O6	27:DA:421:U:H2'	1.99	0.63
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DY:81:LYS:HD3	47:DY:97:ARG:CB	2.22	0.63
30:DD:26:LYS:HZ1	30:DD:82:ILE:N	1.97	0.63
31:DE:33:VAL:HG23	31:DE:69:LYS:HE3	1.81	0.63
27:DA:940:G:H2'	27:DA:941:A:H5''	1.81	0.63
27:DA:967:C:O2'	27:DA:968:G:H5'	1.99	0.63
20:AT:79:ARG:HH21	20:AT:80:ARG:NH2	1.97	0.63
55:B6:14:THR:O	55:B6:49:HIS:HA	1.98	0.63
27:BA:1686:C:H2'	27:BA:1687:G:O4'	1.99	0.63
1:AA:1073:U:H3	1:AA:1102:A:H61	1.46	0.63
41:BS:105:ALA:C	41:BS:107:GLU:N	2.52	0.63
1:CA:992:U:H3	1:CA:1044:A:H62	1.45	0.63
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.34	0.63
42:BT:108:ARG:HA	42:BT:111:ARG:HG3	1.81	0.63
12:AL:35:THR:OG1	12:AL:36:VAL:HG23	1.99	0.63
39:DQ:33:GLY:HA2	39:DQ:105:GLU:HA	1.80	0.63
27:BA:2158:A:O2'	27:BA:2159:G:H8	1.82	0.63
35:BI:144:VAL:HG23	35:BI:145:VAL:HG23	1.80	0.63
1:AA:503:C:O2'	1:AA:504:C:H5'	1.99	0.63
1:AA:545:C:H5''	4:AD:72:GLU:HG2	1.81	0.63
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	1.81	0.63
38:DP:16:ARG:CZ	38:DP:18:ARG:HG3	2.28	0.63
39:BQ:51:ARG:NH1	39:BQ:52:VAL:HG23	2.14	0.63
37:DO:68:GLU:HA	37:DO:77:ILE:O	1.99	0.63
27:DA:1917:U:H2'	27:DA:1918:A:H8	1.62	0.63
2:CB:76:GLN:O	2:CB:208:ILE:HG12	1.99	0.63
34:BH:88:LEU:CD1	34:BH:130:ARG:HG3	2.29	0.63
27:DA:1909:C:H42	27:DA:1921:G:H1	1.47	0.63
38:DP:90:ARG:HB3	38:DP:91:PHE:HD1	1.63	0.63
27:BA:702:G:O2'	27:BA:703:U:H5'	1.99	0.63
28:DB:26:A:H3'	28:DB:27:C:H5''	1.81	0.63
24:AX:53:G:H2'	24:AX:54:U:C6	2.33	0.63
49:D0:5:LYS:HB3	49:D0:5:LYS:HZ2	1.64	0.63
27:BA:221:A:H4'	27:BA:222:A:O5'	1.98	0.63
1:CA:1423:G:H2'	1:CA:1424:C:H6	1.64	0.63
38:BP:49:ARG:HD2	57:B8:59:LYS:CG	2.28	0.62
31:BE:167:VAL:HG23	31:BE:170:LEU:CD1	2.28	0.62
31:BE:21:VAL:HG23	31:BE:21:VAL:O	1.98	0.62
38:DP:47:ASP:HB3	38:DP:48:PRO:HA	1.79	0.62
27:DA:1973:G:H2'	27:DA:1974:C:H6	1.59	0.62
53:B4:40:ILE:C	53:B4:41:ILE:HD13	2.19	0.62
44:BV:6:LYS:HG2	44:BV:10:LYS:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BC:83:ILE:HD11	29:BC:95:GLY:O	1.98	0.62
27:BA:286:C:O2'	27:BA:287:C:H5'	1.99	0.62
27:DA:2232:U:O2'	27:DA:2233:U:H5'	1.99	0.62
27:DA:999:U:H2'	27:DA:1000:A:C5'	2.27	0.62
36:DN:4:TYR:CD1	36:DN:4:TYR:N	2.67	0.62
43:DU:42:ALA:C	43:DU:44:ASN:H	2.01	0.62
30:DD:208:LYS:HG2	30:DD:210:GLY:O	1.99	0.62
27:DA:61:G:HO2'	27:DA:62:C:H6	1.47	0.62
38:DP:66:GLY:O	38:DP:67:MET:HB3	1.97	0.62
33:DG:25:TYR:CE2	33:DG:31:VAL:HG23	2.34	0.62
27:BA:1023:U:H2'	27:BA:1024:G:C5'	2.28	0.62
1:AA:1375:A:H2'	1:AA:1376:U:O4'	2.00	0.62
34:DH:84:SER:O	34:DH:85:LYS:HB3	1.98	0.62
27:BA:1815:A:OP2	30:BD:54:ARG:NH1	2.31	0.62
1:CA:237:C:H5''	17:CQ:25:ARG:HH11	1.61	0.62
42:DT:3:ARG:O	42:DT:5:ALA:N	2.32	0.62
27:BA:955:C:OP1	39:BQ:87:LYS:HE2	1.98	0.62
48:DZ:93:GLU:HB2	48:DZ:95:VAL:HG23	1.79	0.62
27:BA:2875:C:O2'	42:BT:5:ALA:HB3	1.99	0.62
27:BA:2863:C:C3'	27:BA:2864:G:H5''	2.29	0.62
33:DG:81:LYS:O	33:DG:82:LEU:O	2.16	0.62
1:AA:1239:A:H62	1:AA:1299:A:N6	1.95	0.62
27:BA:71:A:H5''	27:BA:73:A:N7	2.14	0.62
33:DG:39:ILE:HD13	33:DG:157:ILE:CG2	2.29	0.62
1:AA:1136:U:H5''	1:AA:1137:C:C6	2.34	0.62
34:BH:10:PRO:HG3	34:BH:50:VAL:C	2.18	0.62
35:BI:3:VAL:CA	35:BI:39:ALA:HB2	2.28	0.62
27:DA:415:A:H2'	27:DA:416:C:H6	1.63	0.62
11:CK:104:GLN:HG2	11:CK:105:VAL:N	2.14	0.62
27:DA:1336:A:H2'	27:DA:1337:G:C8	2.34	0.62
1:AA:1371:G:H2'	1:AA:1372:U:C6	2.34	0.62
42:DT:93:ARG:HG3	42:DT:93:ARG:HH11	1.63	0.62
42:DT:92:GLY:C	42:DT:94:ALA:H	2.02	0.62
27:BA:2732:G:H3'	27:BA:2733:A:H5'	1.81	0.62
2:AB:32:ILE:HG12	2:AB:33:TYR:N	2.13	0.62
4:CD:158:ILE:HG22	4:CD:162:LEU:HD12	1.81	0.62
27:BA:2181:G:O2'	27:BA:2182:G:H5'	1.99	0.62
1:CA:1445:C:C2'	1:CA:1446:U:H5'	2.29	0.62
27:BA:919:G:O2'	27:BA:920:G:H5'	1.99	0.62
27:BA:2628:C:O2'	27:BA:2781:A:H2'	1.98	0.62
27:BA:1154:G:O5'	27:BA:1154:G:H8	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DD:68:LYS:O	30:DD:68:LYS:HG3	1.99	0.62
1:AA:781:A:H4'	1:AA:1522:U:O2'	1.99	0.62
27:BA:1690:A:H2'	27:BA:1691:C:O4'	1.99	0.62
1:CA:1187:G:H2'	1:CA:1188:A:C8	2.33	0.62
1:CA:956:U:O2'	1:CA:957:U:H5'	1.99	0.62
48:DZ:119:ILE:HB	48:DZ:170:ILE:C	2.20	0.62
1:CA:472:A:H5''	16:CP:80:PHE:HB3	1.81	0.62
27:BA:556:G:H2'	27:BA:557:U:C6	2.34	0.62
36:BN:5:VAL:HG13	36:BN:5:VAL:O	1.98	0.62
1:AA:271:C:H2'	1:AA:272:C:H6	1.60	0.62
29:BC:86:ALA:HB2	29:BC:152:ILE:CB	2.29	0.62
27:BA:2698:U:H2'	27:BA:2699:C:C6	2.34	0.62
27:DA:702:G:H1	27:DA:730:C:H42	1.48	0.62
55:D6:17:LYS:HB3	55:D6:18:ARG:NH1	2.14	0.62
27:DA:2068:U:H3	27:DA:2430:A:H2	1.47	0.62
30:BD:31:LYS:HE3	30:BD:33:LEU:CD2	2.25	0.62
1:CA:402:G:O2'	1:CA:403:C:H5'	1.99	0.62
19:AS:29:ARG:O	19:AS:31:ILE:HG22	1.99	0.62
43:BU:104:GLN:C	43:BU:104:GLN:HE21	2.02	0.62
41:DS:13:ARG:O	41:DS:14:VAL:HB	1.98	0.62
1:CA:1492:A:H3'	26:CZ:6:5OH:HNP	1.64	0.62
27:BA:826:U:H5''	27:BA:826:U:H6	1.62	0.62
58:B9:24:TYR:CE2	58:B9:35:ARG:HD2	2.34	0.62
27:DA:2174:C:O2'	27:DA:2175:C:O4'	2.16	0.62
27:BA:2171:A:H4'	27:BA:2172:U:H5'	1.78	0.62
29:DC:41:VAL:HG12	29:DC:213:TYR:HA	1.81	0.62
35:BI:7:GLU:HG3	35:BI:7:GLU:O	1.99	0.62
27:DA:2560:C:H42	27:DA:2561:A:N6	1.95	0.62
31:BE:69:LYS:C	31:BE:71:GLY:N	2.52	0.62
1:CA:817:C:C1'	1:CA:819:A:H5'	2.28	0.62
27:DA:1629:U:H1'	27:DA:2698:U:H5''	1.79	0.62
37:DO:87:ILE:HG12	37:DO:93:PRO:HA	1.81	0.62
27:BA:1850:G:H2'	27:BA:1851:U:C6	2.34	0.62
1:CA:96:U:H2'	1:CA:97:G:C8	2.33	0.62
7:CG:65:ALA:CB	7:CG:124:LEU:HD23	2.29	0.62
27:BA:2144:U:H4'	27:BA:2145:C:H5	1.64	0.62
27:DA:1329:U:H5'	27:DA:1330:C:H5	1.62	0.62
27:DA:1877:A:H5'	27:DA:1878:G:OP2	1.99	0.62
27:BA:485:C:H2'	27:BA:486:C:H6	1.62	0.62
42:BT:32:TYR:CD2	42:BT:32:TYR:N	2.67	0.62
27:DA:999:U:H5''	27:DA:1154:G:O6	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:868:U:H3	27:DA:912:C:H1'	1.63	0.62
27:DA:908:C:H3'	39:DQ:22:LYS:HZ2	1.60	0.62
27:DA:2416:C:H2'	27:DA:2417:C:H6	1.63	0.62
38:DP:115:LEU:CD2	38:DP:115:LEU:N	2.62	0.62
27:DA:2052:G:H22	27:DA:2618:G:H1'	1.64	0.62
27:DA:579:G:H2'	27:DA:580:C:H6	1.58	0.62
27:DA:941:A:H2'	27:DA:942:G:C8	2.34	0.62
27:BA:1494:A:O2'	27:BA:1495:A:H5''	1.98	0.62
9:AI:115:GLY:C	9:AI:116:LYS:HG2	2.19	0.62
8:AH:25:ASP:HA	8:AH:59:LEU:O	1.99	0.62
12:CL:24:LEU:HG	12:CL:59:SER:OG	2.00	0.62
2:AB:197:VAL:HB	2:AB:200:ILE:CG1	2.29	0.62
1:CA:250:A:H2	1:CA:274:A:H61	1.44	0.62
12:AL:31:ARG:HH21	12:AL:58:THR:HG21	1.64	0.62
27:BA:2271:G:H5'	49:B0:20:ARG:HG2	1.81	0.62
27:DA:2869:G:H2'	27:DA:2870:C:C6	2.34	0.62
33:BG:43:LEU:HB2	33:BG:88:ILE:HD11	1.81	0.62
27:DA:597:U:H2'	27:DA:598:G:H8	1.62	0.62
46:BX:5:TYR:CZ	51:B2:30:ARG:HB2	2.34	0.62
27:BA:1596:A:O2'	27:BA:1597:A:H5'	2.00	0.62
27:DA:848:G:H8	27:DA:848:G:H5'	1.64	0.62
5:AE:80:ILE:CG2	8:AH:104:ARG:HH12	2.11	0.62
27:BA:271(F):C:N4	27:BA:271(R):G:H1	1.93	0.62
18:AR:37:VAL:HG23	18:AR:38:GLU:N	2.14	0.62
1:CA:935:A:H2	1:CA:1383:C:N4	1.95	0.62
1:CA:939:G:C5'	7:CG:102:ARG:HH12	2.12	0.62
1:CA:939:G:C5'	7:CG:102:ARG:HH22	2.11	0.62
32:DF:57:VAL:HG12	32:DF:59:TYR:HD1	1.63	0.62
27:BA:142(A):C:O2'	27:BA:143:G:H5'	1.98	0.62
1:AA:627:G:H2'	1:AA:628:G:C8	2.31	0.62
2:CB:11:LEU:CD1	2:CB:217:ARG:NH2	2.61	0.62
27:BA:1722:A:C6	27:BA:1740:G:H8	2.16	0.62
5:CE:62:ALA:O	5:CE:65:ASN:N	2.30	0.62
27:DA:107:C:O2'	27:DA:108:U:H5'	2.00	0.62
40:BR:9:LYS:C	40:BR:10:LEU:HG	2.18	0.62
27:BA:1848:A:O2'	27:BA:1849:G:H8	1.82	0.62
27:BA:1850:G:H2'	27:BA:1851:U:H6	1.64	0.62
27:BA:1192:G:C2'	27:BA:1193:G:C5'	2.78	0.62
1:CA:1457:G:H2'	1:CA:1458:G:H8	1.65	0.62
31:BE:179:GLU:HB3	31:BE:181:LEU:HD22	1.80	0.62
39:DQ:108:GLY:HA3	48:DZ:115:VAL:HG11	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DB:27:C:H6	28:DB:27:C:H5''	1.64	0.62
27:BA:1346:G:C4	27:BA:1347:G:C8	2.88	0.62
32:DF:158:THR:HB	32:DF:195:ASP:OD2	1.98	0.62
1:AA:1472:U:O2'	1:AA:1473:A:H5'	1.99	0.62
5:AE:26:PHE:CD1	5:AE:26:PHE:N	2.66	0.62
6:AF:5:GLU:HG3	6:AF:93:SER:OG	1.99	0.62
35:BI:28:ASN:N	35:BI:28:ASN:HD22	1.97	0.62
13:CM:112:GLY:O	13:CM:113:PRO:O	2.17	0.62
27:BA:635:C:O2'	27:BA:636:G:H5'	2.00	0.62
33:BG:102:PHE:HA	33:BG:105:LYS:HZ1	1.63	0.62
41:DS:97:ARG:HH12	41:DS:99:LYS:CG	2.11	0.62
31:DE:79:ARG:NH1	31:DE:195:LEU:HD23	2.14	0.62
27:DA:1600:C:O2'	27:DA:1601:G:H5'	1.99	0.62
47:BY:31:LEU:CB	47:BY:32:PRO:CA	2.78	0.62
30:BD:52:ARG:HH12	30:BD:249:PRO:HG2	1.65	0.62
45:BW:90:ARG:NH1	45:BW:90:ARG:CG	2.58	0.62
1:CA:749:C:O2'	1:CA:750:G:H5'	1.99	0.62
55:B6:51:GLU:O	55:B6:52:VAL:HB	2.00	0.62
9:CI:19:LEU:C	9:CI:20:ARG:HD2	2.20	0.62
37:DO:12:ASP:HB3	37:DO:85:VAL:HG22	1.81	0.62
27:BA:1051:G:HO2'	27:BA:1052:C:H6	1.47	0.62
45:DW:18:ARG:HG2	45:DW:18:ARG:HH11	1.63	0.62
27:DA:486:C:H4'	45:DW:60:ASN:OD1	1.99	0.62
31:BE:70:ALA:O	31:BE:71:GLY:C	2.36	0.62
3:CC:12:LEU:O	3:CC:16:ARG:O	2.18	0.62
27:BA:58:G:N2	27:BA:70:G:C4	2.67	0.62
27:BA:216:A:H2'	27:BA:217:G:C8	2.34	0.62
1:CA:814:A:O2'	1:CA:815:A:H5''	1.99	0.62
28:DB:15:A:H1'	28:DB:110:G:C5	2.35	0.62
16:CP:21:VAL:O	16:CP:21:VAL:HG13	1.99	0.62
6:AF:77:ARG:O	6:AF:79:LEU:N	2.33	0.62
27:DA:1688:U:H1'	27:DA:1701:A:N6	2.15	0.62
27:BA:1547:C:H2'	27:BA:1548:C:C6	2.34	0.62
11:AK:96:ARG:O	11:AK:99:GLN:HB2	2.00	0.62
27:DA:1849:G:C2	27:DA:1850:G:C8	2.88	0.62
27:DA:813:U:H3	27:DA:1194:A:H61	1.46	0.62
48:BZ:8:TYR:HE2	48:BZ:34:ARG:HD2	1.62	0.62
27:BA:670:A:C8	27:BA:670:A:O5'	2.52	0.62
27:BA:1605:C:O2'	27:BA:1606:G:H5'	2.00	0.62
45:DW:15:ARG:CZ	54:D5:20:ARG:NH2	2.62	0.62
40:BR:56:LYS:C	40:BR:57:ARG:O	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:297:C:H2'	27:BA:298:G:O4'	2.00	0.62
30:BD:28:GLU:HB2	30:BD:29:PRO:HD3	1.80	0.62
51:D2:10:LEU:HD21	51:D2:59:ARG:HD2	1.81	0.62
6:AF:81:ILE:HG22	6:AF:81:ILE:O	1.99	0.62
27:BA:1947:C:H6	27:BA:1947:C:H5''	1.64	0.62
43:DU:9:VAL:O	43:DU:12:ARG:HB2	1.99	0.62
41:BS:87:PHE:HD2	41:BS:88:ASP:H	1.46	0.62
38:DP:50:ARG:HH21	38:DP:50:ARG:HG2	1.62	0.62
32:DF:116:ASP:O	32:DF:119:ARG:N	2.32	0.62
44:DV:19:LYS:CE	44:DV:20:LEU:H	2.12	0.62
52:B3:8:LEU:CD1	52:B3:31:LEU:HD23	2.28	0.62
27:DA:1452:A:C6	27:DA:2702:U:H1'	2.34	0.62
27:DA:1669:A:H5''	27:DA:2550:G:OP1	1.98	0.62
36:BN:63:THR:HG22	36:BN:64:GLY:N	2.08	0.62
36:BN:68:GLU:OE1	36:BN:68:GLU:HA	1.98	0.62
34:BH:43:VAL:HG11	34:BH:52:VAL:HA	1.80	0.62
27:DA:90:U:O2'	27:DA:92:A:C5'	2.40	0.62
27:DA:601:C:OP1	32:DF:108:LYS:NZ	2.24	0.62
27:DA:51:G:N3	27:DA:119:A:C2	2.68	0.62
1:AA:1423:G:O2'	1:AA:1424:C:H5'	1.99	0.62
48:DZ:91:SER:HB3	48:DZ:93:GLU:HG2	1.79	0.62
35:BI:10:GLU:O	35:BI:11:ASN:CB	2.47	0.62
51:B2:53:LEU:HD22	51:B2:57:ILE:CD1	2.30	0.62
34:DH:92:ILE:O	34:DH:94:TYR:N	2.32	0.62
33:DG:124:SER:HB2	33:DG:131:TYR:CE1	2.35	0.62
1:CA:341:C:H2'	1:CA:342:C:C6	2.34	0.62
30:DD:176:ARG:HG2	30:DD:176:ARG:HH11	1.63	0.62
27:DA:1322:A:O2'	27:DA:1323:U:H5'	2.00	0.62
45:DW:65:LEU:HD22	45:DW:68:ARG:H	1.64	0.62
43:DU:25:TRP:CG	43:DU:26:GLY:N	2.67	0.62
1:AA:179:A:H2'	1:AA:180:U:H6	1.64	0.62
1:AA:959:A:H2'	1:AA:960:U:H4'	1.82	0.62
27:BA:2014:A:H2'	27:BA:2015:A:C8	2.34	0.62
27:BA:339:U:H6	27:BA:339:U:O5'	1.82	0.62
39:BQ:39:PRO:HG3	39:BQ:99:PRO:HD3	1.81	0.62
48:BZ:71:ARG:HG2	48:BZ:88:PHE:HB2	1.81	0.62
27:DA:1854:A:H62	27:DA:1888:G:H8	1.47	0.62
33:DG:85:GLY:C	33:DG:87:PRO:HD2	2.19	0.62
28:BB:35:U:H2'	28:BB:36:C:H6	1.64	0.62
9:CI:28:VAL:HA	9:CI:63:ILE:O	1.99	0.62
1:AA:327:A:HO2'	1:AA:329:A:H8	1.45	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BF:206:ILE:HG13	32:BF:206:ILE:O	1.98	0.62
21:CU:10:ARG:HA	21:CU:13:ILE:HD12	1.82	0.62
27:BA:2039:C:OP2	36:BN:109:LYS:HD3	2.00	0.62
14:AN:51:GLY:O	14:AN:53:LEU:N	2.33	0.62
23:AW:52:G:O2'	23:AW:53:U:H5'	1.99	0.62
2:CB:56:ARG:HH11	2:CB:56:ARG:HG2	1.64	0.62
27:BA:942:G:OP1	38:BP:41:ARG:NH2	2.33	0.62
1:CA:973:G:C1'	10:CJ:55:LYS:HE2	2.28	0.62
27:BA:2680:C:O2'	27:BA:2681:C:H5'	1.99	0.62
32:DF:23:ASP:O	32:DF:24:LEU:HD22	1.99	0.62
30:DD:211:ARG:HA	30:DD:214:TRP:CD2	2.35	0.62
27:DA:2371:G:O2'	55:D6:46:HIS:CE1	2.52	0.62
11:CK:29:ILE:HD13	11:CK:44:SER:HB3	1.81	0.62
27:DA:2509:G:H2'	27:DA:2510:C:C6	2.34	0.62
48:DZ:27:MET:CE	48:DZ:32:LEU:HD11	2.30	0.62
1:CA:102:G:H2'	1:CA:103:C:H6	1.64	0.62
1:AA:1207:G:H2'	1:AA:1208:C:H6	1.62	0.62
40:DR:73:VAL:O	40:DR:76:VAL:HB	2.00	0.62
34:DH:137:ASP:HB3	34:DH:140:LYS:HB3	1.81	0.62
27:BA:1310:G:N2	27:BA:1313:U:C5	2.67	0.62
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.29	0.62
18:AR:53:ARG:HH11	18:AR:53:ARG:HG2	1.65	0.62
1:CA:652:U:O2'	1:CA:653:A:C5'	2.45	0.62
36:DN:16:ILE:HG23	36:DN:54:VAL:CG2	2.29	0.62
33:DG:131:TYR:CE2	33:DG:133:LEU:HD23	2.34	0.62
13:AM:4:ILE:HG12	13:AM:57:ARG:HG3	1.80	0.62
5:CE:86:ALA:HB3	5:CE:130:ASN:HD22	1.65	0.62
8:CH:68:ARG:HG2	8:CH:68:ARG:NH1	2.14	0.62
36:BN:30:ILE:O	36:BN:34:LEU:HD22	2.00	0.62
31:DE:13:ARG:HB3	31:DE:22:PRO:HA	1.82	0.62
25:CY:27:C:N4	25:CY:41:G:H1	1.97	0.62
27:DA:1277:G:O2'	40:DR:24:GLN:HG2	1.99	0.62
18:AR:36:ASN:ND2	18:AR:39:VAL:HG21	2.15	0.62
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.34	0.62
15:AO:39:LEU:HD12	15:AO:56:LEU:HB2	1.82	0.62
37:BO:63:VAL:HB	37:BO:102:VAL:HG12	1.82	0.62
2:CB:76:GLN:O	2:CB:77:ALA:HB2	1.99	0.62
1:CA:1458:G:OP1	20:CT:35:THR:HG21	2.00	0.62
33:DG:72:ARG:NH1	33:DG:86:MET:HG2	2.15	0.62
2:CB:19:HIS:ND1	2:CB:189:ASP:OD2	2.31	0.62
17:CQ:31:LEU:HD23	17:CQ:32:TYR:OH	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DO:13:ASN:C	37:DO:15:GLY:H	2.02	0.62
27:DA:2762:G:H5'	27:DA:2763:G:OP2	1.99	0.62
11:AK:78:GLN:O	11:AK:103:LEU:HD13	1.99	0.62
46:BX:59:VAL:O	46:BX:59:VAL:HG12	1.98	0.62
9:CI:56:LEU:HD23	9:CI:56:LEU:O	1.99	0.62
27:BA:147:U:H2'	27:BA:148:C:C6	2.35	0.62
32:BF:20:LEU:HB3	32:BF:23:ASP:OD2	1.99	0.62
47:BY:96:ILE:CG2	47:BY:97:ARG:H	2.12	0.62
27:DA:1693:U:H4'	27:DA:1694:C:OP2	1.98	0.62
4:CD:36:ARG:O	4:CD:38:TYR:N	2.31	0.62
32:BF:68:LYS:C	32:BF:70:THR:H	2.02	0.62
27:BA:2317:C:O2'	27:BA:2318:G:H5'	1.99	0.62
27:DA:748:G:C5'	45:DW:89:ALA:HB2	2.27	0.62
46:DX:57:LEU:HD11	46:DX:78:LYS:CD	2.29	0.62
27:BA:1686:C:H5'	27:BA:1686:C:C6	2.33	0.62
9:AI:53:VAL:HG11	9:AI:85:LEU:HD22	1.82	0.62
1:AA:942:G:H2'	1:AA:942:G:N3	2.13	0.62
12:CL:86:ARG:HA	12:CL:94:ARG:HA	1.81	0.62
33:DG:63:ILE:HA	33:DG:143:GLU:CG	2.30	0.62
15:CO:35:ARG:NH2	15:CO:59:MET:HE2	2.06	0.62
20:CT:48:LYS:O	20:CT:49:ALA:CB	2.47	0.62
1:AA:1321:C:H5''	1:AA:1322:C:H2'	1.81	0.62
1:CA:527:G:C2'	1:CA:528:C:H5'	2.29	0.62
13:CM:4:ILE:HG22	13:CM:5:ALA:N	2.10	0.62
27:DA:2126:A:H4'	27:DA:2127:G:O5'	1.99	0.62
29:DC:39:GLU:OE2	29:DC:68:LEU:HD22	2.00	0.62
27:DA:125:G:H21	56:D7:48:LYS:CE	2.11	0.62
27:DA:960:A:N7	27:DA:962:G:C4	2.68	0.62
32:BF:108:LYS:O	32:BF:112:MET:HB2	1.99	0.62
7:CG:85:TYR:CD1	7:CG:154:TYR:CE1	2.80	0.62
27:DA:594:U:H3	27:DA:663:G:H1	1.47	0.62
33:DG:125:PHE:HA	33:DG:131:TYR:HA	1.82	0.62
34:BH:10:PRO:HG2	34:BH:10:PRO:O	2.00	0.62
34:BH:99:VAL:O	34:BH:99:VAL:HG12	1.99	0.62
13:AM:84:ILE:HB	19:AS:66:MET:HE1	1.82	0.62
7:CG:102:ARG:O	7:CG:106:GLN:HG2	1.98	0.62
7:AG:27:ILE:HG23	7:AG:39:ALA:O	2.00	0.62
27:BA:2472:G:C5'	27:BA:2473:U:H5''	2.29	0.62
1:AA:232:G:O2'	1:AA:233:C:H5'	2.00	0.62
43:BU:24:TYR:CE1	43:BU:38:THR:HG21	2.34	0.62
27:BA:2533:A:C2'	27:BA:2534:A:H5''	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:40:ASN:ND2	13:AM:42:ALA:HB3	2.14	0.62
1:CA:1275:A:H2'	1:CA:1276:G:H8	1.64	0.62
11:AK:51:LYS:HA	11:AK:55:LYS:HD3	1.81	0.62
30:BD:261:LYS:HE2	30:BD:263:ARG:NH2	2.15	0.62
1:CA:5:U:H2'	4:CD:86:LYS:HE2	1.80	0.62
23:AW:42:G:C3'	23:AW:43:C:H5''	2.30	0.62
3:AC:103:VAL:HG12	3:AC:103:VAL:O	1.99	0.62
38:BP:13:ASN:HD22	38:BP:13:ASN:C	2.03	0.62
32:DF:11:VAL:HG12	32:DF:12:LEU:HG	1.79	0.62
1:CA:419:C:C2'	1:CA:420:U:H5'	2.30	0.62
1:CA:1320:C:C2	19:CS:72:GLY:HA3	2.34	0.62
28:BB:42:C:H5'	33:BG:68:PRO:O	2.00	0.62
41:BS:17:ARG:CZ	41:BS:25:ARG:HH21	2.12	0.62
37:BO:17:ARG:HE	37:BO:47:ILE:HD13	1.65	0.62
1:AA:909:A:C2'	1:AA:910:C:H5'	2.29	0.62
27:DA:246:C:C2'	27:DA:247:G:H5'	2.29	0.62
27:DA:911:A:H2'	39:DQ:9:TYR:CZ	2.34	0.62
27:DA:1825:A:H2'	27:DA:1826:G:C8	2.35	0.62
1:CA:542:G:H2'	1:CA:543:C:C6	2.34	0.62
5:AE:43:LEU:CD2	5:AE:132:ALA:HB1	2.30	0.62
44:DV:2:PHE:CE1	44:DV:13:ARG:NH1	2.68	0.62
1:CA:552:U:H4'	12:CL:83:ARG:HG2	1.80	0.62
42:BT:38:ASN:O	42:BT:38:ASN:ND2	2.33	0.62
36:BN:62:VAL:HG11	36:BN:67:LEU:CD2	2.30	0.62
55:B6:15:GLU:O	55:B6:15:GLU:HG2	2.00	0.62
46:DX:36:LYS:HE2	46:DX:55:ASN:HA	1.80	0.62
2:AB:57:PHE:HD2	2:AB:185:ILE:HD11	1.64	0.62
37:DO:104:ARG:NH2	42:DT:33:LYS:HE2	2.15	0.62
45:BW:90:ARG:HG3	45:BW:90:ARG:NH1	2.14	0.62
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.62	0.62
9:CI:79:LEU:HD21	9:CI:102:LEU:HA	1.81	0.62
9:CI:83:ARG:HH21	9:CI:102:LEU:HD11	1.64	0.62
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.39	0.62
27:BA:2511:U:O2'	27:BA:2512:C:H5'	2.00	0.62
1:AA:36:C:C5'	12:AL:119:THR:O	2.48	0.62
27:DA:930:U:OP1	27:DA:930:U:H3'	1.98	0.62
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.81	0.62
37:DO:97:ARG:HE	37:DO:99:PHE:HE1	1.45	0.62
1:CA:1158:C:H2'	1:CA:1158:C:O2	1.99	0.62
1:AA:664:G:P	18:AR:64:ARG:HH21	2.22	0.62
8:CH:111:ILE:HG22	8:CH:112:LEU:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1236:G:O2'	27:DA:1237:A:OP2	2.15	0.62
24:AX:73:A:H5'	24:AX:74:C:H5'	1.82	0.62
1:CA:940:C:H2'	1:CA:941:G:C8	2.35	0.62
27:BA:1332:G:H22	27:BA:1609:A:C2'	2.12	0.62
27:DA:2123:G:H2'	27:DA:2124:G:H8	1.64	0.62
13:CM:94:ARG:O	13:CM:95:GLY:O	2.17	0.62
27:DA:1782:C:O2'	27:DA:1783:A:H5'	1.99	0.62
1:CA:554:C:H2'	1:CA:555:C:H6	1.64	0.62
27:BA:542:C:N4	27:BA:543:C:H41	1.98	0.62
27:BA:722:A:H5'	27:BA:723:G:OP2	2.00	0.62
30:DD:147:LEU:H	30:DD:154:LYS:HG3	1.65	0.62
1:CA:870:U:H4'	1:CA:871:U:O5'	1.99	0.62
27:BA:529:A:H62	27:BA:2041:U:H3	1.45	0.62
53:D4:46:ASN:ND2	53:D4:47:VAL:N	2.48	0.62
3:AC:14:ILE:HD13	3:AC:178:LEU:HB3	1.80	0.62
27:BA:1754:C:O5'	42:BT:96:ARG:NH1	2.32	0.62
4:AD:199:ASN:HB3	4:AD:202:LEU:HD12	1.81	0.62
27:DA:577:G:H2'	27:DA:578:A:O4'	2.00	0.62
27:DA:157:U:OP1	27:DA:157:U:H6	1.83	0.62
38:BP:23:PRO:CD	38:BP:33:ARG:NE	2.58	0.62
32:BF:21:ALA:C	32:BF:23:ASP:H	2.01	0.62
27:DA:911:A:H2'	39:DQ:9:TYR:CE1	2.34	0.62
1:CA:507:C:H2'	1:CA:508:C:C5	2.30	0.62
1:CA:1350:A:H2'	1:CA:1351:U:O4'	1.99	0.62
27:BA:1462:C:H4'	27:BA:2703:C:H5'	1.80	0.62
42:BT:41:ARG:C	42:BT:41:ARG:HD2	2.19	0.62
49:D0:20:ARG:NH1	49:D0:20:ARG:HG3	2.14	0.62
27:DA:2262:U:P	49:D0:19:LYS:NZ	2.73	0.62
38:DP:82:GLY:HA2	38:DP:113:LYS:O	2.00	0.62
27:DA:2552:U:C2	27:DA:2554:U:H5''	2.34	0.62
30:BD:33:LEU:CD1	30:BD:33:LEU:H	2.13	0.62
47:BY:38:ILE:O	47:BY:39:VAL:HB	2.00	0.62
3:AC:6:HIS:CG	14:AN:49:HIS:HB3	2.34	0.62
27:BA:1777:U:H2'	27:BA:1778:U:C6	2.35	0.62
27:BA:2756:U:H1'	27:BA:2757:A:H5''	1.81	0.62
9:CI:82:ALA:C	9:CI:84:ALA:H	2.02	0.62
35:BI:140:LEU:HD12	35:BI:141:LYS:N	2.15	0.62
27:DA:1484:G:H3'	27:DA:1485:G:C5'	2.29	0.62
11:AK:57:THR:CG2	11:AK:58:PRO:HD2	2.30	0.62
1:AA:632:A:H2'	1:AA:633:G:O4'	2.00	0.62
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1054:A:N3	27:BA:1055:G:N7	2.48	0.62
27:BA:44:G:H5''	27:BA:45:C:OP1	1.98	0.62
27:BA:1621:U:H5''	27:BA:1622:G:OP1	2.00	0.62
27:DA:1005:C:H1'	27:DA:1012:U:N3	2.14	0.62
27:DA:1183:G:O2'	27:DA:1184:G:H5'	2.00	0.62
34:DH:102:ALA:HA	34:DH:117:PRO:HD3	1.80	0.62
27:DA:2586:C:H2'	27:DA:2587:A:H5'	1.81	0.62
27:BA:225:A:O2'	27:BA:257:A:H4'	2.00	0.62
50:D1:80:LEU:O	50:D1:82:LEU:HD22	2.00	0.62
25:AY:30:A:H2'	25:AY:31:U:C6	2.33	0.62
27:DA:113:G:H5''	27:DA:114:U:OP1	2.00	0.62
27:DA:1358:G:O2'	27:DA:1359:A:H5''	1.99	0.62
44:DV:1:MET:HB2	44:DV:99:ILE:HG13	1.80	0.62
27:BA:1934:C:O2'	27:BA:1935:G:H5'	1.99	0.62
27:BA:2387:U:H6	27:BA:2387:U:OP2	1.82	0.62
29:DC:20:TYR:HE1	29:DC:22:ILE:HD13	1.65	0.62
58:B9:18:ARG:HH12	58:B9:21:GLY:HA2	1.63	0.62
20:AT:41:ILE:O	20:AT:44:ALA:HB3	2.00	0.62
27:BA:1844:C:O2'	27:BA:1845:G:H5'	2.00	0.62
30:BD:197:GLY:O	30:BD:198:ASN:HB3	2.00	0.62
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.00	0.62
27:BA:2353:G:H1'	49:B0:34:GLY:HA3	1.79	0.62
27:BA:250:G:H2'	27:BA:251:A:C8	2.33	0.62
27:DA:195:A:N7	27:DA:197:A:OP1	2.33	0.62
13:CM:66:LEU:HD12	13:CM:66:LEU:N	2.15	0.62
31:BE:57:LYS:HA	31:BE:59:VAL:HG12	1.81	0.62
32:BF:63:LYS:HD3	32:BF:67:GLN:HB3	1.82	0.62
43:BU:92:ARG:NH2	44:BV:11:GLN:H	1.97	0.62
32:DF:110:LEU:HD13	32:DF:110:LEU:O	1.99	0.62
43:DU:91:ASP:O	43:DU:92:ARG:HD3	2.00	0.62
1:AA:346:G:N3	1:AA:346:G:C2'	2.62	0.62
39:DQ:16:ARG:CG	39:DQ:17:LEU:H	2.00	0.62
36:BN:85:ILE:HG21	36:BN:90:MET:HE2	1.82	0.62
31:DE:1:MET:H2	31:DE:84:PHE:HB2	1.65	0.62
4:AD:9:CYS:HB2	4:AD:22:LYS:HZ3	1.65	0.62
1:CA:1298:C:H2'	7:CG:114:ARG:HH12	1.64	0.62
58:D9:24:TYR:O	58:D9:25:VAL:HG23	2.00	0.62
1:CA:273:A:O2'	1:CA:274:A:H5'	2.00	0.62
16:AP:82:GLN:NE2	16:AP:82:GLN:H	1.98	0.62
34:BH:154:PRO:O	34:BH:155:SER:O	2.18	0.62
27:BA:1557:C:H5''	27:BA:1558:A:OP2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1799:G:H2'	30:BD:181:GLU:OE2	2.00	0.62
38:BP:97:PRO:HD3	38:BP:126:VAL:O	1.99	0.62
58:B9:11:CYS:SG	58:B9:32:HIS:CE1	2.93	0.62
56:D7:8:ASN:C	56:D7:8:ASN:HD22	2.02	0.62
35:BI:91:SER:O	35:BI:92:VAL:CB	2.47	0.62
27:DA:1655:A:H2	27:DA:2049:G:O3'	1.82	0.62
33:BG:75:LYS:HE3	33:BG:76:SER:H	1.63	0.62
27:BA:92:A:H1'	27:BA:93:G:H8	1.65	0.62
13:AM:3:ARG:NH2	13:AM:7:VAL:HG13	2.15	0.62
9:CI:97:LYS:NZ	9:CI:97:LYS:HB2	2.13	0.62
47:DY:46:LYS:H	47:DY:62:GLU:CD	2.03	0.62
27:BA:1887:C:C3'	27:BA:1888:G:H5''	2.30	0.62
1:CA:763:G:H2'	1:CA:764:C:H6	1.61	0.62
15:CO:7:GLU:O	15:CO:10:LYS:HG3	2.00	0.62
33:BG:6:ALA:O	33:BG:9:ARG:HB2	2.00	0.62
3:CC:24:ALA:CB	3:CC:32:LEU:HD12	2.30	0.62
3:CC:22:TRP:CD1	3:CC:57:ILE:O	2.53	0.62
27:BA:1739:U:O2'	27:BA:1740:G:H5''	1.99	0.62
27:DA:2176:A:H2'	27:DA:2177:C:C6	2.35	0.62
34:DH:98:LEU:HD12	34:DH:102:ALA:O	2.00	0.62
32:BF:164:ARG:CG	32:BF:164:ARG:HH11	2.13	0.62
1:AA:1508:G:O2'	1:AA:1509:C:H5'	2.00	0.62
27:DA:2225:A:H4'	27:DA:2226:C:H6	1.65	0.62
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.00	0.62
11:AK:22:HIS:HB3	11:AK:29:ILE:HG23	1.82	0.62
11:CK:126:ARG:C	11:CK:128:ALA:H	2.03	0.62
27:DA:1816:G:O6	30:DD:37:LEU:HD11	2.00	0.62
1:CA:557:G:C6	1:CA:558:G:C6	2.88	0.62
5:AE:126:ARG:HG3	5:AE:126:ARG:HH11	1.64	0.62
36:DN:3:THR:O	36:DN:5:VAL:N	2.32	0.62
30:BD:261:LYS:HE2	30:BD:263:ARG:HH22	1.65	0.62
27:DA:577:G:O5'	27:DA:577:G:H8	1.83	0.62
7:CG:108:ALA:O	7:CG:111:ARG:HG3	2.00	0.62
49:B0:53:MET:HB2	49:B0:59:LEU:HD23	1.80	0.62
48:DZ:110:VAL:O	48:DZ:110:VAL:HG13	1.99	0.62
4:CD:26:CYS:O	4:CD:31:CYS:HB2	2.00	0.61
13:CM:25:ILE:N	13:CM:25:ILE:HD12	2.15	0.61
42:BT:16:ARG:H	42:BT:79:HIS:HD2	1.46	0.61
19:CS:20:LEU:CA	19:CS:23:ASN:HD22	2.12	0.61
27:DA:2252:G:O2'	27:DA:2253:G:H5'	2.00	0.61
27:DA:631:A:C2'	27:DA:632:A:O5'	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2505:G:O6	27:DA:2576:G:H2'	2.00	0.61
27:DA:314:A:O2'	27:DA:315:G:H5'	1.99	0.61
34:BH:43:VAL:HB	34:BH:52:VAL:HA	1.81	0.61
4:CD:101:LEU:HD23	4:CD:135:LEU:O	2.00	0.61
47:BY:28:LYS:O	47:BY:29:GLU:C	2.39	0.61
12:CL:82:ILE:HG23	12:CL:95:TYR:HB3	1.81	0.61
42:DT:74:ARG:HD3	42:DT:76:PHE:CE2	2.34	0.61
27:BA:2591:C:OP1	30:BD:239:ARG:HG2	1.99	0.61
42:DT:7:ILE:O	42:DT:11:GLU:OE2	2.18	0.61
34:BH:149:ARG:HA	34:BH:162:ILE:HD12	1.82	0.61
30:DD:43:ARG:HH11	30:DD:44:ASN:HD21	1.40	0.61
27:DA:2536:G:H2'	27:DA:2537:U:O4'	1.99	0.61
14:CN:26:ARG:HD3	14:CN:43:CYS:SG	2.40	0.61
27:BA:2392:A:OP2	57:B8:31:HIS:HE1	1.82	0.61
27:DA:1458:C:H4'	27:DA:1459:G:O5'	2.00	0.61
33:DG:39:ILE:HD11	33:DG:155:MET:SD	2.40	0.61
52:D3:23:LEU:H	52:D3:23:LEU:CD1	2.12	0.61
7:AG:145:ALA:O	7:AG:146:GLU:HB2	2.00	0.61
1:CA:1315:U:O2'	1:CA:1316:G:H5'	2.00	0.61
15:AO:35:ARG:CZ	15:AO:35:ARG:HB3	2.30	0.61
25:CY:52:G:H2'	25:CY:53:U:H6	1.65	0.61
5:CE:103:GLY:O	5:CE:105:VAL:N	2.32	0.61
40:DR:54:LEU:HD23	40:DR:66:VAL:HG22	1.81	0.61
8:AH:132:GLU:HG2	8:AH:134:ILE:CD1	2.29	0.61
27:DA:2121:G:H2'	27:DA:2122:U:C6	2.35	0.61
27:DA:108:U:H2'	27:DA:109:G:H8	1.65	0.61
8:CH:84:ARG:HG2	8:CH:86:ILE:HD11	1.82	0.61
18:CR:62:GLU:HA	18:CR:65:ILE:CD1	2.30	0.61
23:CW:56:G:H2'	23:CW:57:A:C5'	2.30	0.61
37:DO:101:PRO:C	37:DO:102:VAL:HG12	2.19	0.61
33:BG:91:ARG:HD2	33:BG:92:VAL:N	2.14	0.61
7:CG:86:GLN:HE22	25:CY:30:A:H2	1.47	0.61
19:AS:40:ILE:HB	19:AS:67:VAL:O	2.00	0.61
33:DG:72:ARG:HD3	33:DG:86:MET:HA	1.82	0.61
44:DV:1:MET:HA	44:DV:1:MET:CE	2.29	0.61
27:DA:292:C:H2'	27:DA:292:C:O2	2.00	0.61
1:AA:711:G:H2'	1:AA:712:A:C8	2.35	0.61
34:DH:68:THR:HG22	34:DH:72:ILE:HD11	1.82	0.61
54:B5:34:PRO:O	54:B5:36:CYS:N	2.32	0.61
28:DB:98:G:H2'	28:DB:99:G:C8	2.35	0.61
27:BA:924:C:H2'	27:BA:925:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:749:C:H4'	27:BA:1271:G:N3	2.15	0.61
43:BU:50:ARG:O	43:BU:54:LYS:NZ	2.29	0.61
27:BA:1433:U:H6	27:BA:1433:U:H5''	1.64	0.61
25:CY:14:A:H3'	25:CY:15:G:C8	2.35	0.61
40:DR:94:TYR:H	40:DR:94:TYR:HD1	1.47	0.61
38:BP:64:LYS:O	38:BP:66:GLY:N	2.34	0.61
1:CA:954:G:H2'	1:CA:955:U:C6	2.35	0.61
27:BA:27:G:O2'	27:BA:28:A:C8	2.53	0.61
33:BG:103:LEU:H	33:BG:103:LEU:HD12	1.66	0.61
33:BG:141:PHE:HB3	33:BG:142:PRO:HD2	1.82	0.61
17:AQ:68:ARG:N	17:AQ:70:ARG:NH1	2.48	0.61
27:DA:999:U:O2	27:DA:999:U:H2'	2.00	0.61
30:DD:69:ARG:NH2	30:DD:192:THR:HG21	2.14	0.61
27:DA:1566:A:O2'	27:DA:1567:A:H5'	2.00	0.61
1:AA:160:A:H1'	1:AA:344:A:C4	2.35	0.61
31:DE:79:ARG:HH12	31:DE:195:LEU:HD23	1.64	0.61
33:DG:29:TRP:HA	33:DG:29:TRP:CE3	2.35	0.61
27:DA:315:G:H2'	27:DA:316:C:C6	2.34	0.61
1:AA:1206:G:C2'	1:AA:1207:G:H5'	2.31	0.61
42:DT:83:ILE:HG13	42:DT:84:GLN:N	2.15	0.61
27:BA:854:G:H2'	27:BA:855:G:H8	1.65	0.61
41:DS:14:VAL:HG22	41:DS:91:PRO:HD3	1.82	0.61
30:BD:46:GLN:OE1	30:BD:46:GLN:N	2.33	0.61
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.29	0.61
1:CA:1283:G:O2'	1:CA:1284:C:H5'	2.00	0.61
48:DZ:18:ARG:HB3	48:DZ:81:ARG:NH2	2.13	0.61
29:DC:68:LEU:HD11	29:DC:179:SER:HA	1.81	0.61
58:B9:11:CYS:SG	58:B9:32:HIS:ND1	2.73	0.61
35:BI:101:LEU:HG	35:BI:107:VAL:HB	1.82	0.61
1:AA:1298:C:C4	7:AG:114:ARG:HD2	2.36	0.61
27:BA:2308:G:H2'	27:BA:2309:A:O5'	2.00	0.61
34:DH:107:VAL:HG21	34:DH:152:ARG:CG	2.29	0.61
5:AE:76:ILE:HD11	5:AE:142:LEU:HD22	1.82	0.61
1:CA:638:G:H2'	1:CA:639:G:H8	1.64	0.61
40:DR:24:GLN:NE2	40:DR:36:THR:HG21	2.14	0.61
32:BF:160:ASN:C	32:BF:162:LEU:H	2.02	0.61
32:DF:170:LEU:HB3	32:DF:173:VAL:HB	1.82	0.61
1:CA:119:A:H5''	1:CA:120:A:H5'	1.82	0.61
27:DA:1473:G:O2'	27:DA:1474:C:H5'	2.00	0.61
34:DH:103:LEU:CD2	34:DH:115:VAL:HB	2.30	0.61
27:DA:64:A:O2'	27:DA:65:C:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BR:4:LEU:C	40:BR:6:SER:H	2.03	0.61
27:BA:709:U:C4	27:BA:710:G:N7	2.68	0.61
1:CA:1279:A:O2'	1:CA:1282:C:N4	2.32	0.61
27:DA:1292:U:H2'	27:DA:1293:C:C6	2.35	0.61
21:CU:6:ARG:HD3	21:CU:15:ARG:NH1	2.14	0.61
27:BA:2855:C:O2'	27:BA:2856:C:H5'	2.00	0.61
27:DA:2027:G:H2'	27:DA:2028:U:O4'	2.00	0.61
34:BH:119:GLU:HG2	34:BH:119:GLU:O	2.00	0.61
38:BP:23:PRO:CD	38:BP:33:ARG:CZ	2.78	0.61
32:BF:200:GLU:HA	32:BF:203:GLN:HB2	1.82	0.61
57:D8:52:LYS:N	57:D8:53:PRO:CD	2.59	0.61
42:BT:28:VAL:HG13	42:BT:46:GLU:HA	1.83	0.61
1:CA:1251:A:H5''	9:CI:12:GLU:OE1	2.01	0.61
30:DD:69:ARG:HH22	30:DD:192:THR:HG21	1.65	0.61
30:DD:26:LYS:HG2	30:DD:26:LYS:O	2.00	0.61
38:DP:146:VAL:HG13	38:DP:147:LEU:H	1.65	0.61
27:DA:1191:G:O2'	27:DA:1192:G:H5'	1.99	0.61
27:DA:2550:G:N2	27:DA:2559:C:H1'	2.12	0.61
27:BA:1021:A:H8	27:BA:1021:A:H3'	1.64	0.61
1:CA:1106:G:H5''	3:CC:172:ARG:CG	2.23	0.61
30:BD:31:LYS:HG3	30:BD:33:LEU:HB2	1.82	0.61
1:CA:34:C:O2'	1:CA:35:G:H5'	2.00	0.61
19:AS:62:ILE:HG23	19:AS:62:ILE:O	1.99	0.61
27:BA:1309:G:O2'	27:BA:1310:G:H5'	1.99	0.61
27:BA:787:U:H5''	27:BA:788:A:H5'	1.81	0.61
1:CA:243:A:O2'	1:CA:244:U:OP2	2.17	0.61
27:BA:1336:A:O2'	27:BA:1337:G:H5'	2.00	0.61
40:DR:38:VAL:CB	40:DR:39:PRO:HD3	2.23	0.61
38:BP:97:PRO:C	38:BP:98:GLU:CG	2.68	0.61
27:BA:2131:G:H5'	27:BA:2133:G:O5'	2.00	0.61
27:DA:2161:C:H2'	27:DA:2162:G:H8	1.59	0.61
30:DD:65:ILE:HG22	30:DD:104:TYR:HB3	1.82	0.61
30:DD:32:SER:O	30:DD:34:VAL:N	2.33	0.61
13:CM:7:VAL:HG21	33:DG:115:ARG:HG2	1.82	0.61
5:CE:76:ILE:HD11	5:CE:142:LEU:CD1	2.30	0.61
19:AS:6:LYS:HG2	19:AS:7:LYS:HE2	1.81	0.61
14:AN:57:ARG:O	14:AN:59:ALA:N	2.33	0.61
2:CB:16:HIS:HB3	2:CB:210:SER:HB3	1.82	0.61
50:B1:84:GLY:O	50:B1:86:SER:N	2.33	0.61
10:AJ:22:LYS:O	10:AJ:22:LYS:HD2	1.99	0.61
53:B4:46:ASN:ND2	53:B4:47:VAL:N	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:946:A:O2'	1:CA:1333:A:N3	2.30	0.61
27:BA:1709:U:H1'	27:BA:2860:A:H1'	1.82	0.61
1:CA:407:G:O2'	1:CA:408:A:H5'	2.00	0.61
27:BA:1677:A:H2'	27:BA:1678:G:H8	1.64	0.61
1:CA:134:A:N6	16:CP:25:ARG:HH12	1.98	0.61
1:CA:27:G:H4'	4:CD:209:ARG:OXT	2.00	0.61
1:AA:243:A:H4'	1:AA:244:U:O5'	2.00	0.61
48:BZ:116:LEU:HD21	48:BZ:171:ALA:HB1	1.83	0.61
39:BQ:78:PRO:HD2	39:BQ:81:VAL:HG11	1.82	0.61
1:AA:318:G:O2'	1:AA:319:G:H5'	2.00	0.61
27:BA:732:C:H2'	27:BA:733:G:O4'	1.99	0.61
27:BA:42:G:H2'	27:BA:43:A:O4'	2.00	0.61
44:DV:71:LEU:CD1	44:DV:84:LYS:HE2	2.31	0.61
27:DA:2360:A:H8	27:DA:2360:A:O5'	1.83	0.61
44:BV:28:GLU:HB3	44:BV:29:PRO:HD2	1.82	0.61
3:CC:181:ASN:OD1	3:CC:204:LEU:HD12	2.00	0.61
31:BE:173:VAL:O	31:BE:174:ASP:O	2.18	0.61
27:BA:2338:G:O2'	27:BA:2339:G:H5'	2.01	0.61
23:CW:10:G:N1	23:CW:25:A:H1'	2.16	0.61
27:DA:1685:C:H2'	27:DA:1686:C:H5''	1.82	0.61
14:CN:37:PHE:CB	14:CN:39:LEU:HG	2.21	0.61
14:CN:57:ARG:HG2	14:CN:58:LYS:N	2.15	0.61
12:AL:43:LYS:HG2	12:AL:44:LYS:H	1.64	0.61
1:AA:189(F):U:O2'	17:AQ:63:ARG:NH2	2.34	0.61
27:DA:1011:G:OP1	43:DU:77:SER:N	2.26	0.61
30:BD:26:LYS:HZ3	30:BD:81:ALA:HB1	1.64	0.61
27:DA:915:C:N4	27:DA:916:G:C6	2.68	0.61
57:D8:37:SER:O	57:D8:40:GLU:HB2	2.01	0.61
27:DA:2067:G:H1	27:DA:2443:C:H42	1.48	0.61
38:DP:115:LEU:HG	38:DP:116:GLY:N	2.15	0.61
38:DP:126:VAL:HA	38:DP:145:PRO:HB2	1.81	0.61
27:DA:2454:G:H2'	27:DA:2455:G:O4'	2.00	0.61
27:DA:139(A):G:N2	46:DX:44:GLU:OE1	2.32	0.61
34:BH:43:VAL:HG11	34:BH:52:VAL:CG1	2.29	0.61
4:CD:173:TRP:HA	4:CD:187:ARG:HH12	1.64	0.61
49:B0:71:ASP:O	49:B0:73:GLY:N	2.34	0.61
27:BA:854:G:H2'	27:BA:855:G:C8	2.34	0.61
17:CQ:77:VAL:O	17:CQ:78:GLU:HB3	2.00	0.61
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.30	0.61
32:DF:32:LEU:O	32:DF:36:VAL:HG23	1.99	0.61
15:CO:35:ARG:O	15:CO:39:LEU:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2733:A:H2	31:DE:203:LYS:HA	1.64	0.61
12:CL:76:GLU:O	12:CL:77:HIS:CB	2.46	0.61
34:BH:154:PRO:HB3	34:BH:163:TYR:CZ	2.35	0.61
1:CA:777:A:O2'	1:CA:778:G:H5'	2.00	0.61
1:CA:750:G:N2	15:CO:23:GLY:HA3	2.15	0.61
57:B8:28:GLY:C	57:B8:32:LEU:HD23	2.20	0.61
27:DA:319:C:H2'	27:DA:320:A:H8	1.64	0.61
37:DO:16:ALA:HA	37:DO:46:ALA:CB	2.31	0.61
17:AQ:56:VAL:CG2	17:AQ:78:GLU:HG2	2.31	0.61
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.03	0.61
57:B8:50:LEU:HA	57:B8:53:PRO:HG3	1.81	0.61
4:AD:153:ARG:NH2	4:AD:181:MET:HB2	2.15	0.61
17:AQ:26:GLN:HE21	17:AQ:37:LYS:HG2	1.65	0.61
1:AA:818:G:O2'	1:AA:819:A:H5''	1.98	0.61
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.40	0.61
54:D5:25:LEU:CD2	54:D5:26:THR:H	2.14	0.61
47:DY:46:LYS:HD3	47:DY:47:LYS:NZ	2.15	0.61
1:CA:578:C:H2'	1:CA:578:C:O2	2.00	0.61
8:CH:12:ARG:HA	8:CH:15:ASN:HD22	1.65	0.61
3:AC:5:ILE:HD12	3:AC:5:ILE:O	2.00	0.61
27:BA:1286:A:O2'	27:BA:1288:U:OP2	2.17	0.61
1:CA:1478:C:H2'	1:CA:1479:C:H6	1.65	0.61
27:BA:181:A:C2	27:BA:182:A:C4	2.89	0.61
44:DV:3:ALA:HB2	44:DV:99:ILE:HG21	1.83	0.61
15:CO:36:ILE:HG22	15:CO:37:ASN:N	2.14	0.61
27:BA:1503:U:H2'	27:BA:1504:C:C6	2.34	0.61
1:CA:564:C:C5	17:CQ:31:LEU:HD11	2.36	0.61
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	1.81	0.61
23:CW:67:C:H2'	23:CW:68:C:C6	2.35	0.61
27:BA:2479:G:OP1	27:BA:2537:U:H1'	2.00	0.61
40:DR:6:SER:O	40:DR:7:GLY:O	2.18	0.61
4:AD:86:LYS:HD3	4:AD:87:GLY:H	1.65	0.61
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.00	0.61
2:AB:98:LEU:O	2:AB:101:MET:HG3	2.01	0.61
41:BS:17:ARG:O	41:BS:18:ILE:CB	2.48	0.61
23:CW:34:U:O2'	23:CW:35:G:H5'	2.00	0.61
27:DA:2405:G:HO2'	27:DA:2406:U:P	2.24	0.61
52:B3:23:LEU:HB3	52:B3:28:LEU:HB2	1.82	0.61
18:CR:82:THR:C	18:CR:83:GLU:HG2	2.20	0.61
46:DX:57:LEU:HD22	46:DX:57:LEU:C	2.21	0.61
31:DE:93:VAL:O	31:DE:95:ILE:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:91:ASP:C	9:AI:93:ARG:H	2.04	0.61
1:AA:1319:A:H4'	1:AA:1320:C:OP1	2.01	0.61
1:AA:531:U:H4'	1:AA:532:A:O5'	2.01	0.61
27:DA:1033:U:O4	58:D9:15:LYS:HE3	1.99	0.61
41:DS:62:LYS:H	41:DS:65:VAL:HG23	1.65	0.61
2:CB:92:TYR:C	2:CB:92:TYR:HD1	2.03	0.61
2:CB:92:TYR:C	2:CB:92:TYR:CD1	2.73	0.61
31:BE:132:HIS:CD2	31:BE:135:HIS:CE1	2.88	0.61
45:BW:90:ARG:HG3	45:BW:90:ARG:HH11	1.65	0.61
37:BO:2:ILE:O	37:BO:32:TYR:HB3	1.99	0.61
9:CI:9:ARG:HG3	9:CI:14:VAL:CG2	2.29	0.61
27:BA:2197:U:H1'	27:BA:2198:A:C8	2.36	0.61
27:DA:50:U:C4'	27:DA:51:G:OP2	2.47	0.61
47:BY:87:LYS:HG3	47:BY:88:LYS:N	2.15	0.61
27:DA:125:G:H1'	56:D7:13:ALA:HB1	1.82	0.61
42:BT:92:GLY:O	42:BT:94:ALA:N	2.34	0.61
27:BA:97:C:H5''	51:B2:2:LYS:HB2	1.83	0.61
34:DH:89:ILE:HG12	34:DH:129:THR:HA	1.82	0.61
27:DA:272(C):G:H1	27:DA:365:C:N4	1.95	0.61
12:CL:3:THR:HG23	12:CL:6:GLN:HB2	1.82	0.61
5:AE:92:LYS:O	5:AE:118:ILE:HD12	1.99	0.61
23:CW:57:A:H3'	23:CW:57:A:OP1	2.00	0.61
27:BA:576:U:O2'	27:BA:577:G:H5'	2.01	0.61
23:CW:28:G:H3'	23:CW:29:G:H8	1.64	0.61
27:DA:2531:A:H61	27:DA:2662:A:H61	1.48	0.61
1:CA:59:A:H1'	1:CA:354:G:N2	2.15	0.61
48:DZ:107:PRO:HG3	48:DZ:116:LEU:HB2	1.82	0.61
38:DP:135:LEU:HD13	38:DP:135:LEU:O	1.99	0.61
27:BA:1755:A:H2'	27:BA:1756:G:H5'	1.83	0.61
1:AA:116:A:H61	1:AA:313:A:H1'	1.66	0.61
27:BA:1345:C:H2'	27:BA:1346:G:C8	2.34	0.61
1:CA:726:C:O2'	1:CA:727:G:H5'	2.00	0.61
48:DZ:7:TYR:CD1	48:DZ:7:TYR:N	2.68	0.61
36:DN:19:GLU:HG3	36:DN:20:GLY:N	2.15	0.61
27:BA:942:G:O2'	27:BA:943:U:H5'	2.00	0.61
27:BA:2415:G:O3'	38:BP:66:GLY:HA3	1.99	0.61
28:BB:42:C:H4'	33:BG:67:LYS:O	2.01	0.61
32:BF:186:ILE:HD13	32:BF:192:LEU:CD1	2.31	0.61
12:CL:45:PRO:CB	22:CV:9:G:H4'	2.29	0.61
27:DA:1933:G:H2'	27:DA:1934:C:C6	2.35	0.61
1:CA:503:C:O2'	1:CA:504:C:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:68:GLY:C	13:CM:71:ARG:HB3	2.20	0.61
1:AA:920:U:O4'	1:AA:1080:A:C2	2.54	0.61
43:DU:92:ARG:NH1	44:DV:11:GLN:HG3	2.16	0.61
44:DV:47:VAL:O	44:DV:48:GLY:C	2.38	0.61
6:AF:43:LEU:CD1	6:AF:43:LEU:H	2.01	0.61
27:BA:910:A:H62	39:BQ:12:GLN:HA	1.64	0.61
58:D9:18:ARG:O	58:D9:18:ARG:CG	2.47	0.61
16:AP:20:VAL:HG21	16:AP:32:TYR:CD1	2.36	0.61
14:CN:24:CYS:CB	14:CN:40:CYS:HB3	2.31	0.61
27:DA:2160:G:H2'	27:DA:2161:C:C6	2.36	0.61
33:DG:36:LYS:HG2	33:DG:160:VAL:CG2	2.29	0.61
27:DA:849:A:N1	52:D3:25:ALA:HB2	2.14	0.61
27:DA:1657:C:H2'	27:DA:1658:C:C6	2.36	0.61
39:DQ:42:ILE:N	39:DQ:42:ILE:HD12	2.14	0.61
27:DA:27:G:H2'	27:DA:512:G:H22	1.63	0.61
1:CA:15:G:H1	1:CA:920:U:H3	1.47	0.61
48:BZ:140:VAL:O	48:BZ:140:VAL:HG22	2.01	0.61
50:B1:75:GLU:O	50:B1:77:ALA:N	2.32	0.61
10:CJ:78:ASN:HD22	10:CJ:80:LYS:H	1.49	0.61
36:BN:57:ALA:H	36:BN:124:ALA:HA	1.65	0.61
27:DA:2192:G:C2'	27:DA:2193:G:H5''	2.30	0.61
27:BA:466:A:H2'	27:BA:467:G:H5'	1.83	0.61
1:CA:60:A:C5'	1:CA:331:G:H22	2.13	0.61
27:DA:1176:G:O2'	27:DA:1177:A:H5'	2.00	0.61
27:DA:376:C:H2'	27:DA:377:C:C6	2.35	0.61
27:DA:2691:C:H42	27:DA:2718:G:H1	1.49	0.61
37:BO:75:SER:O	37:BO:76:ALA:HB2	2.01	0.61
27:DA:1424:G:H2'	27:DA:1425:G:O4'	1.99	0.61
18:CR:35:ARG:O	18:CR:37:VAL:HG13	2.00	0.61
36:BN:29:LYS:O	36:BN:33:LEU:HD12	2.00	0.61
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.64	0.61
1:AA:1233:G:H2'	1:AA:1234:C:C6	2.34	0.61
1:AA:889:A:H4'	1:AA:890:G:OP1	2.01	0.61
38:DP:108:LYS:HD2	38:DP:108:LYS:H	1.64	0.61
42:DT:34:VAL:HG12	42:DT:34:VAL:O	1.99	0.61
25:AY:35:G:H2'	25:AY:36:A:C8	2.36	0.61
17:AQ:3:LYS:HD2	17:AQ:60:ILE:HD11	1.82	0.61
27:BA:663:G:H2'	27:BA:664:C:H6	1.65	0.61
40:BR:98:LEU:CD1	40:BR:113:LEU:HD23	2.28	0.61
31:BE:101:ARG:HH21	31:BE:171:GLU:HB2	1.66	0.61
27:DA:243:U:OP1	57:D8:6:THR:HG21	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:244:A:C2	27:DA:255:A:C4	2.88	0.61
27:BA:661:C:O2'	38:BP:16:ARG:O	2.12	0.61
43:DU:42:ALA:C	43:DU:44:ASN:N	2.51	0.61
33:BG:52:ILE:HG22	33:BG:54:GLU:HG2	1.81	0.61
55:D6:13:CYS:HB3	55:D6:50:ARG:O	2.00	0.61
1:CA:225:C:H2'	1:CA:225:C:O2	2.01	0.61
1:AA:1179:A:H5'	9:AI:102:LEU:HD12	1.83	0.61
10:AJ:53:PRO:HA	14:AN:41:ARG:NH2	2.16	0.61
30:BD:49:ILE:HD11	30:BD:52:ARG:CA	2.24	0.61
2:CB:82:ARG:HG3	2:CB:92:TYR:CE2	2.36	0.61
27:BA:825:C:H2'	27:BA:826:U:O4'	1.99	0.61
27:DA:777:A:O2'	27:DA:778:G:H5'	2.01	0.61
27:DA:2712:U:C2'	27:DA:2712(A):A:O5'	2.48	0.61
27:BA:1502:C:H2'	27:BA:1502:C:O2	2.00	0.61
58:B9:7:VAL:HG13	58:B9:34:GLN:NE2	2.14	0.61
56:D7:8:ASN:ND2	56:D7:11:LYS:N	2.44	0.61
27:DA:2668:G:O2'	27:DA:2669:G:H5'	2.00	0.61
11:AK:50:TYR:CB	11:AK:54:ARG:O	2.48	0.61
45:DW:46:PHE:O	45:DW:50:VAL:HG12	2.01	0.61
31:BE:68:ALA:C	31:BE:70:ALA:N	2.53	0.61
32:BF:160:ASN:O	32:BF:162:LEU:N	2.34	0.61
32:BF:40:GLN:HE22	32:BF:184:TYR:HB3	1.66	0.61
33:BG:170:ARG:HH22	33:BG:182:LYS:HG3	1.64	0.61
27:DA:2178:C:H5''	29:DC:46:LYS:HG2	1.81	0.61
27:BA:2619:C:H4'	31:BE:151:TYR:O	2.01	0.61
23:CW:56:G:H2'	23:CW:57:A:H5'	1.81	0.61
27:DA:2279:G:N2	27:DA:2280:G:H1'	2.15	0.61
43:BU:12:ARG:O	43:BU:15:LYS:HD3	2.01	0.61
27:DA:1702:G:H2'	27:DA:1703:G:O5'	2.00	0.61
39:DQ:38:GLU:HG3	39:DQ:127:ILE:CB	2.31	0.61
56:B7:37:LYS:HD3	56:B7:39:ARG:HE	1.63	0.61
29:BC:45:ALA:O	29:BC:46:LYS:HB2	2.00	0.61
9:CI:15:ALA:HB2	9:CI:65:VAL:HG23	1.83	0.61
27:BA:1670:C:H42	27:BA:1674:G:H5'	1.65	0.61
28:DB:26:A:C3'	28:DB:27:C:H5''	2.31	0.61
36:BN:119:ARG:O	36:BN:120:LEU:CB	2.49	0.61
48:DZ:13:LYS:O	48:DZ:17:LEU:N	2.33	0.61
33:DG:180:PHE:C	33:DG:182:LYS:H	2.04	0.61
18:CR:35:ARG:O	18:CR:37:VAL:N	2.34	0.61
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.64	0.61
27:DA:1518:U:H2'	27:DA:1519:G:O4'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	1.99	0.61
3:AC:19:GLU:O	3:AC:40:ARG:NH2	2.34	0.61
33:DG:71:THR:OG1	33:DG:89:GLY:HA3	2.01	0.61
25:AY:42:G:N2	25:AY:43:C:H1'	2.15	0.61
6:CF:25:ILE:HD13	6:CF:28:ARG:HD2	1.82	0.61
7:AG:115:ARG:HB2	7:AG:118:VAL:HG13	1.82	0.61
27:BA:1790:C:H5''	27:BA:1791:A:OP1	2.01	0.61
27:BA:2432:A:H2'	27:BA:2433:A:H8	1.62	0.61
27:BA:244:A:O2'	38:BP:73:GLY:CA	2.49	0.61
27:BA:996:A:N6	27:BA:1160:G:C6	2.68	0.61
30:DD:27:THR:CG2	30:DD:83:GLU:HG2	2.29	0.61
38:DP:121:LYS:O	38:DP:123:LEU:HG	2.00	0.61
27:DA:1952:A:C6	37:DO:22:ILE:HD12	2.35	0.61
27:DA:746:A:H1'	27:DA:748:G:N2	2.14	0.61
46:DX:44:GLU:O	46:DX:46:ALA:N	2.33	0.61
1:AA:376:G:H4'	16:AP:5:ARG:HD2	1.83	0.61
1:CA:250:A:H1'	1:CA:252:U:C5	2.35	0.61
26:CZ:4:SER:C	26:CZ:5:UAL:H6	2.01	0.61
27:BA:1311:G:C6	56:B7:47:ARG:NH1	2.69	0.61
27:BA:125:G:N2	56:B7:48:LYS:NZ	2.49	0.61
27:BA:1782:C:H1'	27:BA:2609:U:C5'	2.28	0.61
36:DN:10:GLU:OE2	36:DN:11:PRO:HD2	2.00	0.61
27:BA:1603:A:C5'	27:BA:1603:A:H8	2.14	0.61
16:AP:6:LEU:H	16:AP:6:LEU:HD12	1.65	0.61
20:CT:22:ARG:O	20:CT:26:ASN:ND2	2.33	0.61
31:BE:130:GLY:O	31:BE:131:ALA:O	2.19	0.61
32:BF:176:LEU:HD21	32:BF:180:GLY:O	2.01	0.61
27:DA:1299:G:H5''	27:DA:1300:U:OP1	2.01	0.61
35:BI:114:LEU:O	35:BI:115:ALA:HB3	2.01	0.61
1:AA:444:C:H42	1:AA:490:G:H1	1.48	0.61
27:DA:663:G:H2'	27:DA:664:C:C6	2.36	0.61
34:DH:92:ILE:HG22	34:DH:93:GLY:N	2.14	0.61
13:AM:23:TYR:HE1	13:AM:71:ARG:HB2	1.66	0.61
13:AM:70:LEU:O	13:AM:74:VAL:HG23	1.99	0.61
1:CA:339:C:H2'	1:CA:340:U:H6	1.65	0.61
37:DO:11:ALA:O	37:DO:98:VAL:HA	2.01	0.61
1:AA:1139:G:H5'	1:AA:1140:C:OP1	2.01	0.61
8:CH:109:ILE:HG22	8:CH:137:VAL:O	2.00	0.61
27:BA:1050:A:HO2'	27:BA:1051:G:H8	1.43	0.61
47:DY:45:VAL:HA	47:DY:62:GLU:HG2	1.82	0.61
1:CA:284:G:H2'	1:CA:285:G:C8	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:952:U:O2'	1:AA:953:G:H5'	2.01	0.61
27:DA:2197:U:HO2'	27:DA:2198:A:H2'	1.64	0.61
29:BC:196:LEU:C	29:BC:198:ALA:N	2.49	0.61
27:BA:548:A:O2'	27:BA:549:G:OP1	2.18	0.61
53:D4:42:CYS:SG	53:D4:46:ASN:HB3	2.40	0.61
1:CA:928:G:H1	1:CA:1389:C:H42	1.49	0.61
50:B1:64:ALA:HA	50:B1:67:ILE:HG13	1.81	0.61
27:BA:2203:U:H4'	30:BD:151:LYS:HG2	1.82	0.61
1:AA:677:U:H3	1:AA:714:G:H22	1.48	0.61
27:BA:1503:U:H2'	27:BA:1504:C:H6	1.66	0.61
2:CB:134:GLU:HA	2:CB:137:ARG:HB3	1.83	0.61
27:DA:1247:A:O2'	27:DA:1248:G:H5''	2.01	0.61
11:CK:13:GLN:NE2	11:CK:75:TYR:HA	2.15	0.61
27:BA:2815:C:H5'	54:B5:29:THR:HG21	1.82	0.61
1:AA:511:C:HO2'	1:AA:512:U:H6	1.48	0.61
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.20	0.61
27:BA:2828:C:O2'	27:BA:2829:C:H5'	2.01	0.61
27:DA:875:G:H2'	27:DA:876:C:C6	2.36	0.61
17:CQ:27:PHE:CD2	17:CQ:27:PHE:N	2.68	0.61
40:BR:18:LEU:O	40:BR:18:LEU:HD13	2.01	0.61
40:BR:96:ARG:HG2	40:BR:97:VAL:N	2.16	0.61
31:BE:167:VAL:HG13	31:BE:189:PRO:HD3	1.83	0.61
46:BX:26:TYR:CD2	46:BX:92:LEU:HD12	2.35	0.61
30:DD:10:THR:HG23	30:DD:13:ARG:CB	2.29	0.61
4:CD:76:ARG:O	4:CD:79:PHE:N	2.34	0.61
27:BA:480:A:H2	27:BA:499:U:O2	1.83	0.61
44:DV:62:LEU:HD21	44:DV:95:LEU:N	2.15	0.61
30:DD:69:ARG:HH12	30:DD:192:THR:HB	1.65	0.61
47:DY:9:LYS:O	47:DY:11:ASP:N	2.34	0.61
27:DA:859:G:H21	27:DA:916:G:H2'	1.66	0.61
27:DA:2261:C:H5'	27:DA:2388:A:H4'	1.83	0.61
33:DG:16:ARG:N	33:DG:17:PRO:HD2	2.16	0.61
27:DA:671:C:O2'	27:DA:672:C:O5'	2.19	0.61
39:BQ:43:THR:HG22	39:BQ:94:VAL:HG12	1.83	0.61
31:DE:91:VAL:HG12	31:DE:92:THR:H	1.64	0.61
42:DT:62:THR:HG22	42:DT:75:ILE:HG12	1.82	0.61
19:AS:44:MET:O	19:AS:62:ILE:HG12	2.00	0.61
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.63	0.61
27:BA:686:G:H4'	27:BA:687:C:OP2	1.98	0.61
27:DA:2838:G:H1'	40:DR:45:ARG:HH11	1.64	0.61
27:BA:2277:G:OP2	49:B0:12:ASN:OD1	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BD:142:VAL:HG23	30:BD:192:THR:O	2.00	0.61
39:DQ:137:TYR:OH	48:DZ:80:ARG:NH2	2.32	0.61
48:DZ:41:VAL:O	48:DZ:45:LYS:HG3	2.00	0.61
23:AW:6:U:C2'	23:AW:7:A:H5''	2.30	0.61
27:DA:1655:A:H4'	31:DE:114:ALA:CA	2.31	0.61
27:DA:957:A:N6	27:DA:959:A:C2	2.69	0.61
33:DG:51:ARG:CZ	33:DG:51:ARG:HA	2.30	0.61
30:BD:68:LYS:HG3	30:BD:68:LYS:O	2.01	0.61
27:BA:2306:C:H5'	27:BA:2307:G:O4'	2.01	0.61
27:BA:60:G:C5	27:BA:63:U:C4	2.89	0.61
49:B0:21:LEU:HD22	49:B0:39:ARG:HB3	1.83	0.61
5:CE:13:ILE:HG23	5:CE:29:GLY:O	2.01	0.61
27:DA:1649:G:N1	27:DA:2009:G:C6	2.69	0.61
38:BP:10:PRO:O	38:BP:11:GLY:O	2.19	0.61
34:DH:156:ALA:C	34:DH:158:HIS:N	2.52	0.61
16:AP:14:ASN:HA	16:AP:42:ARG:NH2	2.16	0.61
34:DH:104:GLU:HA	34:DH:113:VAL:O	2.01	0.61
27:BA:703:U:H2'	27:BA:704:G:H5'	1.82	0.61
18:AR:66:LEU:HD11	18:AR:70:ILE:HD11	1.82	0.61
39:BQ:39:PRO:HD3	39:BQ:99:PRO:CG	2.30	0.61
1:AA:575:G:H4'	1:AA:576:G:O5'	2.00	0.61
32:BF:136:THR:O	32:BF:140:LEU:HB2	2.00	0.61
24:AX:50:U:H3	24:AX:64:G:H1	1.49	0.61
2:CB:236:TYR:HD2	2:CB:239:VAL:HB	1.65	0.61
27:BA:1445(A):C:H2'	27:BA:1446:C:H6	1.65	0.61
27:BA:892:G:N3	27:BA:892:G:H2'	2.16	0.61
50:D1:46:LEU:C	50:D1:47:GLN:HE21	2.04	0.61
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.36	0.61
27:BA:1344:G:H5'	27:BA:1384:A:N6	2.16	0.61
27:BA:386:G:O2'	27:BA:387:U:OP1	2.16	0.61
1:CA:961:U:O2'	1:CA:962:C:H6	1.83	0.61
27:BA:2809:A:O2'	27:BA:2810:A:H5'	1.99	0.61
27:BA:500:G:N2	27:BA:503:A:C8	2.69	0.61
36:BN:40:PRO:O	43:BU:64:ARG:HD3	2.01	0.61
27:DA:1252:G:C8	27:DA:1252:G:OP1	2.54	0.61
30:DD:69:ARG:NH1	30:DD:192:THR:HB	2.15	0.61
30:BD:27:THR:HG23	30:BD:27:THR:O	1.99	0.61
41:DS:101:LEU:CD1	41:DS:101:LEU:H	2.14	0.61
27:DA:627:A:H4'	27:DA:628:G:OP1	2.00	0.61
14:AN:27:CYS:O	14:AN:27:CYS:SG	2.59	0.61
2:AB:17:PHE:CD2	2:AB:17:PHE:N	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:344:A:O2'	1:CA:345:C:OP1	2.17	0.61
34:DH:135:GLY:HA3	34:DH:141:VAL:HG22	1.83	0.61
27:BA:587:C:O2'	27:BA:588:U:OP2	2.17	0.61
1:CA:276:G:C2'	1:CA:277:C:H5'	2.31	0.61
17:CQ:50:LYS:HE2	17:CQ:51:TYR:CE1	2.36	0.61
27:BA:1996:C:H4'	27:BA:1997:G:O5'	2.00	0.61
46:BX:14:SER:O	46:BX:17:ALA:N	2.33	0.61
42:BT:23:ARG:HA	42:BT:52:ILE:HD12	1.83	0.61
12:AL:38:ARG:HH22	12:AL:54:LYS:HZ3	1.48	0.61
57:B8:32:LEU:HB3	57:B8:36:LYS:HD2	1.83	0.61
31:DE:111:ARG:CA	40:DR:2:ARG:HG3	2.29	0.61
40:DR:11:ASN:HB3	40:DR:12:ARG:HH11	1.64	0.61
27:DA:2306:C:H5'	27:DA:2307:G:O5'	2.01	0.61
1:AA:822:C:O2'	1:AA:823:G:H5'	2.01	0.61
27:BA:97:C:H5''	51:B2:2:LYS:CB	2.30	0.61
39:BQ:134:ARG:NH2	48:BZ:121:ARG:CZ	2.61	0.61
38:BP:85:LEU:HD23	38:BP:85:LEU:N	2.16	0.61
27:DA:744:G:OP1	31:DE:132:HIS:HB3	2.01	0.61
27:DA:2103:C:H3'	27:DA:2104:G:H5''	1.82	0.61
7:AG:26:PHE:CD1	7:AG:101:LEU:HD22	2.35	0.61
48:DZ:54:HIS:NE2	48:DZ:134:GLU:HG3	2.15	0.61
3:AC:150:LYS:HE3	3:AC:167:TRP:NE1	2.14	0.61
3:AC:152:ILE:O	3:AC:198:VAL:HG12	2.00	0.61
1:AA:666:G:O2'	1:AA:667:G:H5'	2.01	0.61
2:CB:80:ILE:HD13	2:CB:211:ILE:HG22	1.83	0.61
16:CP:31:LYS:HG2	16:CP:32:TYR:N	2.16	0.61
36:DN:114:ARG:O	36:DN:117:PHE:HB3	2.01	0.61
27:BA:2533:A:C3'	27:BA:2534:A:H5''	2.31	0.61
27:BA:470:A:H2'	27:BA:471:A:C8	2.36	0.61
27:DA:2362:G:O2'	27:DA:2363:C:H5'	2.01	0.61
28:DB:24:G:N3	28:DB:27:C:N4	2.48	0.61
34:BH:70:THR:O	34:BH:72:ILE:N	2.34	0.61
24:CX:37:A:H3'	24:CX:38:A:C8	2.35	0.61
27:BA:1839:G:H2'	27:BA:1840:G:H8	1.66	0.61
27:DA:733:G:H8	27:DA:733:G:O5'	1.84	0.61
29:BC:77:ILE:O	29:BC:77:ILE:HG23	2.00	0.61
3:CC:27:LYS:HB3	3:CC:27:LYS:NZ	2.16	0.61
6:CF:21:LEU:O	6:CF:24:GLU:HG2	2.00	0.61
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.36	0.61
27:BA:715:G:H2'	27:BA:716:A:C8	2.36	0.61
27:BA:250:G:OP2	57:B8:13:ARG:NH2	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:635:C:H2'	27:BA:636:G:H8	1.66	0.60
27:DA:1962:C:O2'	27:DA:1964:G:OP2	2.17	0.60
44:BV:39:LEU:HA	44:BV:47:VAL:HG11	1.83	0.60
43:DU:112:ARG:O	43:DU:115:ALA:HB3	2.00	0.60
43:DU:68:ALA:O	43:DU:71:GLN:HG3	2.01	0.60
44:DV:58:VAL:HG12	44:DV:59:ALA:N	2.16	0.60
10:CJ:45:ARG:HB3	10:CJ:65:LEU:HB3	1.82	0.60
27:DA:953:A:H2'	27:DA:954:G:H8	1.65	0.60
39:DQ:81:VAL:HG22	39:DQ:82:ARG:N	2.16	0.60
27:DA:2569:G:C2'	27:DA:2570:G:H5'	2.32	0.60
8:AH:42:GLU:OE2	8:AH:120:THR:HG21	2.00	0.60
2:AB:155:LEU:HD12	2:AB:159:PRO:HD3	1.83	0.60
1:AA:533:A:HO2'	1:AA:534:U:H5''	1.65	0.60
27:DA:2758:A:C5	34:DH:67:LEU:HD21	2.35	0.60
1:AA:376:G:H5''	16:AP:5:ARG:CB	2.25	0.60
27:DA:2838:G:C1'	40:DR:45:ARG:NH1	2.59	0.60
1:CA:1459:C:O2'	1:CA:1460:A:H5'	2.00	0.60
27:BA:1799:G:H4'	27:BA:1800:C:O5'	2.01	0.60
1:CA:1286:A:C8	1:CA:1287:A:H4'	2.36	0.60
27:DA:2223:G:H2'	27:DA:2224:G:C5'	2.27	0.60
57:B8:44:LYS:N	57:B8:44:LYS:HD2	2.15	0.60
1:AA:403:C:H5''	4:AD:136:PRO:HD2	1.83	0.60
9:CI:55:ALA:CB	9:CI:59:PHE:HE1	2.14	0.60
42:BT:68:TYR:HD2	42:BT:68:TYR:N	1.99	0.60
5:AE:78:HIS:CE1	5:AE:142:LEU:HA	2.36	0.60
5:CE:33:VAL:HG22	5:CE:43:LEU:CD1	2.31	0.60
23:AW:63:C:H2'	23:AW:64:G:C8	2.35	0.60
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.65	0.60
27:BA:1598:C:O2	27:BA:1598:C:H2'	2.01	0.60
27:BA:1922:G:H2'	27:BA:1923:U:C6	2.36	0.60
27:BA:345:A:N3	27:BA:347:A:N6	2.49	0.60
27:BA:2036:C:H5'	27:BA:2036:C:H6	1.66	0.60
10:CJ:81:THR:O	10:CJ:83:GLU:N	2.32	0.60
27:BA:581:C:O2'	27:BA:582:G:H5'	2.01	0.60
5:CE:101:ILE:HG13	5:CE:119:LEU:HD23	1.81	0.60
48:DZ:140:VAL:HG23	48:DZ:143:LEU:HD23	1.83	0.60
42:BT:129:ARG:O	42:BT:129:ARG:HG3	2.01	0.60
23:CW:63:C:H2'	23:CW:64:G:C8	2.36	0.60
48:BZ:107:PRO:CD	48:BZ:116:LEU:HB2	2.31	0.60
6:CF:43:LEU:O	6:CF:44:GLY:O	2.19	0.60
27:DA:720:C:H2'	27:DA:721:C:H6	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:70:GLN:HA	38:BP:70:GLN:OE1	2.02	0.60
13:AM:102:ARG:HG3	13:AM:102:ARG:NH1	2.15	0.60
1:CA:787:A:H2	1:CA:795:C:H41	1.47	0.60
27:BA:2790:A:C2	27:BA:2791:C:H3'	2.27	0.60
41:BS:15:ARG:C	41:BS:17:ARG:O	2.38	0.60
27:DA:1904:G:O2'	27:DA:1905:C:H5'	2.01	0.60
48:DZ:119:ILE:O	48:DZ:170:ILE:HA	2.02	0.60
44:BV:91:TYR:O	44:BV:92:THR:HG22	2.00	0.60
27:DA:1430:C:H2'	27:DA:1431:U:H6	1.66	0.60
27:DA:632:A:H2'	27:DA:633:A:C8	2.37	0.60
46:DX:26:TYR:CD1	46:DX:89:ILE:HD12	2.35	0.60
1:AA:1054:C:C5	1:AA:1196:U:H2'	2.36	0.60
2:AB:70:PHE:O	2:AB:93:VAL:HG22	2.01	0.60
1:AA:1081:G:O2'	1:AA:1082:G:H5'	2.01	0.60
30:DD:43:ARG:HB2	30:DD:54:ARG:CB	2.32	0.60
27:DA:2715:C:H2'	27:DA:2716:U:C6	2.36	0.60
1:CA:538:G:O2'	1:CA:539:A:H5'	2.01	0.60
48:DZ:75:LEU:HA	48:DZ:82:PRO:HA	1.82	0.60
36:DN:15:LEU:HD12	36:DN:136:GLU:CG	2.29	0.60
1:AA:489:C:H2'	1:AA:490:G:C8	2.36	0.60
27:BA:1971:A:C4	30:BD:241:PRO:HG3	2.36	0.60
55:B6:51:GLU:O	55:B6:52:VAL:CB	2.48	0.60
2:CB:178:ARG:HH22	8:CH:74:PRO:HG3	1.67	0.60
27:DA:324:A:H2'	27:DA:325:G:O4'	2.02	0.60
27:DA:17:G:H1	27:DA:523:C:H42	1.49	0.60
27:BA:1204:A:N6	27:BA:1240:U:H2'	2.16	0.60
1:CA:286:G:O2'	1:CA:287:U:H5'	1.99	0.60
27:DA:1785:A:OP2	27:DA:1982:C:H5'	2.01	0.60
27:BA:2462:U:H3	27:BA:2488:A:N6	1.97	0.60
1:AA:594:G:H2'	1:AA:595:G:H5'	1.81	0.60
30:DD:267:SER:O	30:DD:268:ARG:CB	2.50	0.60
11:AK:126:ARG:C	11:AK:128:ALA:H	2.01	0.60
48:BZ:107:PRO:C	48:BZ:109:GLY:H	2.03	0.60
31:DE:102:VAL:HG22	31:DE:170:LEU:O	2.00	0.60
10:AJ:90:LEU:H	10:AJ:91:PRO:CD	2.14	0.60
27:DA:887:A:C2'	27:DA:888:C:H5''	2.31	0.60
1:CA:181:G:H21	1:CA:183:G:N2	1.98	0.60
19:CS:38:SER:O	19:CS:70:LYS:HB3	2.00	0.60
3:CC:190:ARG:HG2	3:CC:190:ARG:HH11	1.66	0.60
40:BR:12:ARG:HD3	40:BR:16:HIS:CG	2.36	0.60
36:BN:113:GLY:O	36:BN:116:LEU:HB2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BW:73:ALA:HB3	45:BW:106:ILE:HG12	1.81	0.60
27:BA:252:G:H2'	27:BA:253:C:H6	1.66	0.60
47:BY:97:ARG:O	47:BY:98:VAL:HG23	2.01	0.60
34:BH:85:LYS:HD2	34:BH:141:VAL:HG13	1.81	0.60
27:DA:1022:G:O2'	27:DA:1024:G:N7	2.30	0.60
27:DA:1788:C:O2'	27:DA:1789:A:H5'	2.01	0.60
1:CA:500:G:H2'	1:CA:501:C:H6	1.65	0.60
4:CD:33:MET:HE3	4:CD:33:MET:HA	1.83	0.60
4:CD:9:CYS:SG	4:CD:22:LYS:CD	2.78	0.60
1:AA:865:A:H2	1:AA:918:A:H4'	1.66	0.60
27:DA:391:G:O5'	27:DA:391:G:H8	1.83	0.60
27:DA:2087:G:C6	27:DA:2233:U:N3	2.68	0.60
27:DA:372:G:N2	27:DA:400:G:H2'	2.16	0.60
31:DE:128:SER:O	31:DE:129:HIS:HB2	2.00	0.60
3:AC:156:ARG:H	3:AC:163:ALA:HA	1.66	0.60
12:CL:24:LEU:HG	12:CL:59:SER:CB	2.32	0.60
37:DO:103:ALA:HA	37:DO:122:LEU:O	2.02	0.60
19:AS:41:VAL:O	19:AS:44:MET:HB2	2.01	0.60
27:DA:2752:C:C2'	27:DA:2753:A:H8	2.13	0.60
16:AP:23:ASP:O	16:AP:24:ALA:C	2.40	0.60
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.16	0.60
31:BE:35:GLN:HE21	31:BE:37:ARG:HD3	1.66	0.60
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.34	0.60
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.01	0.60
1:CA:1053:G:N7	1:CA:1199:U:H3'	2.16	0.60
3:CC:135:LYS:NZ	5:CE:53:LEU:HD21	2.15	0.60
27:BA:2876:G:H4'	42:BT:3:ARG:HD2	1.81	0.60
41:BS:101:LEU:HD13	41:BS:101:LEU:O	2.01	0.60
27:DA:1569:A:H1'	30:DD:38:LYS:NZ	2.16	0.60
35:BI:82:ARG:CB	35:BI:82:ARG:HH11	2.12	0.60
27:BA:2346:A:H8	27:BA:2383:G:C5	2.17	0.60
1:AA:1001(A):G:C8	1:AA:1002:G:H8	2.20	0.60
27:DA:324:A:O2'	27:DA:325:G:H5'	2.02	0.60
1:CA:862:C:C1'	1:CA:874:G:H4'	2.31	0.60
1:CA:580:U:H2'	1:CA:581:G:C8	2.36	0.60
38:BP:7:ARG:O	38:BP:10:PRO:CD	2.49	0.60
28:BB:57:A:C4	33:BG:29:TRP:HB2	2.37	0.60
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.37	0.60
27:DA:2586:C:O2'	27:DA:2587:A:H5'	2.02	0.60
28:DB:31:C:H2'	28:DB:53:A:H61	1.67	0.60
1:CA:327:A:O2'	1:CA:329:A:H5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:97:PHE:CD2	18:CR:65:ILE:HD13	2.36	0.60
43:BU:8:VAL:HG12	43:BU:9:VAL:N	2.16	0.60
27:BA:707:G:H5'	27:BA:708:C:OP2	2.00	0.60
27:DA:1688:U:H1'	27:DA:1701:A:C6	2.36	0.60
30:DD:147:LEU:O	30:DD:189:CYS:SG	2.53	0.60
1:AA:1452:C:H4'	1:AA:1456:G:C2	2.36	0.60
46:DX:5:TYR:N	46:DX:5:TYR:CD1	2.69	0.60
27:DA:1017:G:O2'	27:DA:1018:C:H5'	2.00	0.60
1:CA:1046:A:H3'	1:CA:1047:G:H8	1.66	0.60
4:AD:141:ARG:N	4:AD:144:ASP:OD2	2.33	0.60
1:CA:406:G:C5'	4:CD:5:ILE:HG21	2.32	0.60
1:CA:963:G:H21	10:CJ:55:LYS:NZ	1.98	0.60
19:CS:32:LYS:HB3	19:CS:57:HIS:CD2	2.36	0.60
27:DA:195:A:OP1	38:DP:46:LYS:HE2	2.01	0.60
33:BG:111:LEU:HD23	33:BG:114:ILE:HD12	1.84	0.60
13:CM:22:ILE:CG2	13:CM:25:ILE:HD13	2.31	0.60
43:BU:83:LEU:HD13	43:BU:113:ALA:HB2	1.82	0.60
47:DY:96:ILE:HG13	47:DY:99:CYS:HB2	1.83	0.60
27:DA:1884:A:H2'	27:DA:1885:A:C5'	2.22	0.60
48:DZ:27:MET:HE3	48:DZ:32:LEU:HD11	1.83	0.60
27:DA:316:C:O5'	27:DA:316:C:H6	1.85	0.60
34:BH:43:VAL:CB	34:BH:52:VAL:HA	2.32	0.60
16:AP:18:ARG:O	16:AP:20:VAL:HG12	2.01	0.60
1:CA:560:U:H4'	1:CA:561:U:OP2	2.01	0.60
27:BA:361:G:H2'	27:BA:362:U:H5''	1.82	0.60
50:B1:5:CYS:HG	50:B1:8:SER:HG	1.49	0.60
3:CC:89:GLU:O	3:CC:93:LYS:HB2	2.02	0.60
27:DA:2525:G:N2	27:DA:2539:C:C2	2.69	0.60
48:DZ:127:VAL:HG22	48:DZ:128:SER:N	2.09	0.60
40:DR:2:ARG:NH2	40:DR:5:LYS:NZ	2.50	0.60
1:AA:823:G:H21	8:AH:1:MET:CE	2.15	0.60
27:DA:662:G:P	38:DP:18:ARG:HD2	2.41	0.60
27:DA:2848:G:H1'	27:DA:2867:G:N2	2.16	0.60
36:BN:16:ILE:O	36:BN:54:VAL:HA	2.02	0.60
36:BN:34:LEU:O	36:BN:49:GLY:HA3	2.00	0.60
5:CE:105:VAL:HB	5:CE:106:PRO:CD	2.31	0.60
34:BH:97:ARG:HG2	34:BH:98:LEU:N	2.15	0.60
37:BO:97:ARG:HB3	37:BO:99:PHE:CE1	2.36	0.60
1:CA:1396:A:H4'	1:CA:1397:C:H5'	1.82	0.60
27:DA:1231:G:O2'	27:DA:1232:G:H5'	2.01	0.60
8:CH:11:THR:HG22	8:CH:15:ASN:HD21	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:885:G:N3	1:CA:914:A:C2	2.69	0.60
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.83	0.60
31:BE:143:ASN:OD1	31:BE:147:PRO:HD2	2.02	0.60
36:DN:18:ALA:HB1	36:DN:21:LYS:CB	2.31	0.60
35:DI:44:LEU:O	35:DI:47:LEU:HB3	2.01	0.60
25:AY:17:G:H22	25:AY:54:U:H1'	1.66	0.60
28:BB:105:A:H2'	28:BB:106:G:H5'	1.83	0.60
1:AA:640:A:H2	8:AH:115:SER:HB3	1.65	0.60
51:B2:15:LYS:O	51:B2:16:LEU:HD23	2.01	0.60
15:CO:37:ASN:ND2	15:CO:37:ASN:H	1.98	0.60
23:CW:18:G:H1'	23:CW:19:U:N3	2.16	0.60
27:BA:2839:G:H2'	27:BA:2840:C:H6	1.66	0.60
35:BI:45:LYS:O	35:BI:48:GLU:HB2	2.01	0.60
19:AS:51:VAL:O	19:AS:58:VAL:HG22	2.02	0.60
30:DD:227:ASN:HB3	30:DD:228:PRO:HD2	1.82	0.60
27:BA:121:G:C8	27:BA:121:G:H5''	2.36	0.60
27:DA:517:C:OP1	54:D5:16:ARG:NH2	2.34	0.60
1:CA:973:G:O4'	10:CJ:55:LYS:HB3	2.00	0.60
13:CM:8:GLU:OE2	13:CM:22:ILE:HA	2.01	0.60
42:BT:28:VAL:O	42:BT:29:ARG:CB	2.48	0.60
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.32	0.60
27:DA:1858:G:HO2'	27:DA:1859:A:H8	1.49	0.60
33:BG:56:ALA:HB2	33:BG:153:ARG:HH21	1.66	0.60
27:DA:675:A:C2'	27:DA:676:A:H5'	2.32	0.60
6:AF:43:LEU:N	6:AF:43:LEU:HD12	2.05	0.60
23:AW:62:U:O2'	27:BA:2482:G:H4'	2.00	0.60
1:CA:223:U:O2'	1:CA:224:C:H5'	2.01	0.60
42:DT:35:LYS:O	42:DT:37:GLY:N	2.33	0.60
19:AS:61:TYR:O	19:AS:62:ILE:HB	2.01	0.60
27:BA:1815:A:P	30:BD:54:ARG:HH12	2.24	0.60
1:AA:1074:G:H2'	1:AA:1075:C:C6	2.37	0.60
37:BO:71:ARG:HB3	37:BO:72:PRO:HD2	1.83	0.60
42:BT:60:THR:HG22	42:BT:77:PRO:HA	1.82	0.60
27:DA:787:U:OP1	27:DA:1780:A:N6	2.34	0.60
1:CA:1056:U:O2'	1:CA:1057:G:H5'	2.02	0.60
12:AL:50:ARG:HG2	12:AL:50:ARG:HH11	1.67	0.60
1:CA:192:U:C1'	20:CT:103:GLY:HA2	2.31	0.60
7:AG:113:GLU:HG3	7:AG:119:ARG:HG2	1.84	0.60
6:CF:12:PRO:HD2	6:CF:86:ARG:NH1	2.16	0.60
13:AM:8:GLU:OE1	13:AM:22:ILE:HG12	2.01	0.60
8:CH:38:ILE:HD13	8:CH:120:THR:HG22	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DW:12:ILE:HG13	45:DW:42:ARG:NH1	2.17	0.60
43:BU:31:SER:C	43:BU:33:ARG:H	2.05	0.60
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.82	0.60
1:AA:232:G:H2'	1:AA:233:C:H6	1.67	0.60
1:CA:882:C:O2'	1:CA:883:C:H5'	2.01	0.60
42:BT:122:ASP:C	42:BT:124:ASP:N	2.54	0.60
9:AI:26:VAL:HB	9:AI:33:PHE:HB2	1.84	0.60
29:DC:58:VAL:HG21	29:DC:166:ASP:N	2.16	0.60
4:CD:158:ILE:O	4:CD:162:LEU:HB2	2.02	0.60
49:B0:41:ARG:O	49:B0:57:PHE:CD2	2.54	0.60
27:DA:639:U:H2'	27:DA:640:C:C6	2.36	0.60
27:DA:2873:A:C2	40:DR:6:SER:HB3	2.36	0.60
13:AM:102:ARG:HG3	13:AM:102:ARG:HH11	1.67	0.60
27:DA:932:G:H4'	27:DA:933:A:O5'	2.01	0.60
6:CF:6:VAL:HG22	6:CF:90:VAL:HG13	1.82	0.60
27:BA:1036:G:O2'	27:BA:1037:G:H5'	2.02	0.60
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.83	0.60
35:DI:84:GLY:O	35:DI:85:GLU:HB2	2.00	0.60
40:BR:33:ARG:NE	40:BR:115:GLU:HB2	2.16	0.60
32:BF:126:VAL:O	32:BF:127:GLU:HB2	2.01	0.60
27:BA:31:C:H42	27:BA:474:G:H1	1.49	0.60
13:CM:23:TYR:CE1	13:CM:70:LEU:HD23	2.36	0.60
5:AE:33:VAL:HG21	5:AE:109:ILE:CG1	2.31	0.60
19:CS:13:ASP:O	19:CS:15:LEU:N	2.35	0.60
42:BT:115:ARG:O	42:BT:116:ALA:HB2	2.01	0.60
27:DA:560:C:C4'	43:DU:52:ARG:HH22	2.13	0.60
27:BA:2699:C:O2'	27:BA:2700:C:H5'	2.01	0.60
27:DA:2357:U:OP1	49:D0:20:ARG:NH1	2.34	0.60
27:DA:1343:G:O2'	27:DA:1344:G:H5'	2.02	0.60
46:DX:57:LEU:HD13	46:DX:78:LYS:O	2.02	0.60
37:DO:105:GLU:CA	37:DO:108:GLU:HG3	2.29	0.60
27:DA:2750:A:H4'	27:DA:2751:G:OP1	2.01	0.60
27:BA:686:G:H2'	27:BA:788:A:N1	2.17	0.60
38:DP:6:LEU:HG	38:DP:9:ASN:ND2	2.16	0.60
39:BQ:16:ARG:HG2	39:BQ:17:LEU:H	1.64	0.60
3:CC:64:VAL:CG2	3:CC:99:VAL:HA	2.31	0.60
27:DA:48:G:H5'	27:DA:52:A:H4'	1.83	0.60
12:AL:74:LEU:HD21	12:AL:104:ALA:CB	2.32	0.60
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.01	0.60
27:DA:151:C:C2'	27:DA:152:G:H5'	2.32	0.60
27:BA:623:G:H2'	27:BA:624:C:H6	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2133:G:H1'	27:BA:2158:A:H61	1.66	0.60
57:B8:52:LYS:N	57:B8:53:PRO:CD	2.65	0.60
1:AA:939:G:H5''	7:AG:102:ARG:CZ	2.31	0.60
27:BA:2695:C:H2'	27:BA:2696:U:C6	2.36	0.60
45:DW:47:VAL:O	45:DW:47:VAL:HG12	2.00	0.60
27:DA:29:U:C4'	43:DU:11:ARG:HH22	2.14	0.60
55:D6:30:THR:HB	55:D6:31:PRO:CD	2.30	0.60
32:DF:167:ALA:CB	32:DF:173:VAL:HG11	2.28	0.60
27:BA:1927:A:O2'	27:BA:1928:A:H5'	2.01	0.60
3:AC:64:VAL:O	3:AC:64:VAL:HG23	2.01	0.60
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.36	0.60
10:AJ:80:LYS:HE3	10:AJ:80:LYS:C	2.22	0.60
54:B5:32:PRO:O	54:B5:33:CYS:HB3	2.01	0.60
1:CA:1445:C:H2'	1:CA:1446:U:H5'	1.84	0.60
20:AT:41:ILE:HG13	20:AT:42:GLN:N	2.13	0.60
40:BR:13:HIS:O	40:BR:14:SER:C	2.39	0.60
27:DA:935:C:H2'	27:DA:936:C:C6	2.36	0.60
1:AA:1484:C:O2'	1:AA:1485:U:H5'	2.02	0.60
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.82	0.60
38:DP:140:ALA:O	38:DP:141:ALA:HB3	2.01	0.60
27:BA:2731:G:O5'	27:BA:2731:G:H8	1.84	0.60
1:AA:1261:A:H2'	1:AA:1262:C:O4'	2.02	0.60
38:BP:84:ASN:HD22	38:BP:115:LEU:CG	2.13	0.60
36:DN:95:PRO:O	36:DN:98:VAL:HG23	2.01	0.60
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.83	0.60
27:DA:1795:C:O2'	27:DA:1796:U:H5'	2.01	0.60
21:CU:2:GLY:C	21:CU:4:GLY:N	2.55	0.60
31:BE:75:VAL:HG12	31:BE:76:ARG:N	2.17	0.60
27:DA:1430:C:H2'	27:DA:1431:U:C6	2.37	0.60
27:DA:2393:A:H5'	38:DP:62:LEU:HD12	1.83	0.60
38:DP:115:LEU:HD23	38:DP:115:LEU:H	1.65	0.60
38:DP:34:GLY:O	38:DP:35:HIS:CB	2.49	0.60
31:DE:93:VAL:C	31:DE:95:ILE:N	2.52	0.60
12:CL:15:VAL:O	12:CL:16:ARG:HB3	2.01	0.60
1:CA:1492:A:H3'	26:CZ:6:5OH:NP	2.16	0.60
27:DA:1775:U:C2'	27:DA:1776:G:H5'	2.25	0.60
27:BA:2667:C:H1'	34:BH:109:PHE:CE2	2.37	0.60
27:DA:58:G:N2	27:DA:70:G:C4	2.70	0.60
1:CA:714:G:O2'	1:CA:715:A:H5'	2.02	0.60
42:BT:98:LYS:HB3	42:BT:100:TYR:CE1	2.37	0.60
38:BP:98:GLU:O	38:BP:101:VAL:HG22	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:652:U:C1'	1:CA:653:A:H2	2.14	0.60
1:CA:748:C:H4'	1:CA:749:C:O5'	2.01	0.60
8:AH:2:LEU:CD1	8:AH:4:ASP:H	2.14	0.60
33:BG:44:GLY:H	33:BG:88:ILE:HD13	1.67	0.60
46:BX:31:HIS:CD2	46:BX:32:PRO:HD2	2.37	0.60
17:AQ:56:VAL:O	17:AQ:76:LEU:HD12	2.01	0.60
27:DA:2667:C:H2'	27:DA:2668:G:H5'	1.83	0.60
28:DB:42:C:O2	33:DG:93:THR:N	2.31	0.60
27:BA:389:G:N1	38:BP:71:VAL:HG12	2.16	0.60
11:CK:50:TYR:CE2	11:CK:54:ARG:HD2	2.36	0.60
27:BA:2607:G:H2'	27:BA:2608:G:O4'	2.02	0.60
1:CA:699:C:H2'	1:CA:700:G:H5'	1.84	0.60
8:CH:9:MET:HB2	8:CH:26:VAL:HG21	1.84	0.60
47:DY:2:ARG:N	47:DY:4:LYS:HG2	2.16	0.60
1:AA:198:G:H2'	1:AA:199:G:H8	1.66	0.60
8:AH:107:LEU:HD23	8:AH:107:LEU:N	2.17	0.60
27:BA:985:C:H2'	27:BA:986:C:H6	1.66	0.60
27:BA:1150:C:C2'	27:BA:1151:G:H5'	2.32	0.60
39:DQ:58:PHE:HB3	39:DQ:113:GLN:HE21	1.66	0.60
27:DA:2362:G:H2'	27:DA:2363:C:H5'	1.82	0.60
35:DI:4:ILE:HD11	35:DI:44:LEU:CD1	2.31	0.60
1:CA:47:C:O2'	1:CA:48:C:OP2	2.17	0.60
27:BA:671:C:C5'	27:BA:671:C:H6	2.14	0.60
15:CO:3:ILE:O	15:CO:3:ILE:HG12	2.02	0.60
27:DA:1018:C:O2	27:DA:1018:C:H2'	2.00	0.60
54:D5:16:ARG:NH1	54:D5:17:ASP:OD1	2.35	0.60
32:DF:164:ARG:NH2	32:DF:177:ALA:HB2	2.17	0.60
1:CA:803:G:O2'	1:CA:804:U:H5'	2.02	0.60
25:CY:71:A:H4'	27:DA:1852:C:H5''	1.83	0.60
1:AA:861:G:O2'	1:AA:862:C:H5'	2.01	0.60
3:CC:60:ALA:HB3	3:CC:63:ASN:OD1	2.02	0.60
27:BA:867:C:H2'	27:BA:868:U:C6	2.37	0.60
35:DI:98:ALA:HB1	35:DI:109:ILE:HD13	1.84	0.60
25:AY:52:G:O2'	25:AY:53:U:H5'	2.02	0.60
1:CA:1321:C:H3'	1:CA:1322:C:C5'	2.27	0.60
47:BY:96:ILE:HG22	47:BY:97:ARG:H	1.64	0.60
27:DA:195:A:H4'	27:DA:251:A:O2'	2.02	0.60
27:DA:271(Q):G:O2'	27:DA:271(R):G:H5'	2.02	0.60
30:DD:61:LEU:O	30:DD:63:ARG:NH1	2.34	0.60
30:DD:83:GLU:HB2	30:DD:92:ILE:HD11	1.84	0.60
31:DE:52:LEU:CD2	31:DE:76:ARG:HB2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2632:A:C2	31:DE:61:ARG:HD3	2.37	0.60
39:DQ:81:VAL:HG23	49:D0:7:LEU:HD11	1.83	0.60
27:DA:802:A:C5	27:DA:803:U:C4	2.89	0.60
38:DP:23:PRO:HG2	38:DP:33:ARG:HE	1.67	0.60
1:CA:1104:G:O5'	2:CB:111:ARG:HD2	2.01	0.60
1:CA:1298:C:H2'	7:CG:114:ARG:NH1	2.16	0.60
46:DX:12:VAL:HG11	46:DX:27:THR:HG23	1.83	0.60
8:CH:48:TYR:O	8:CH:49:GLU:HB3	2.01	0.60
27:DA:2475:C:H5'	27:DA:2476:A:OP2	2.02	0.60
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.35	0.60
14:CN:24:CYS:SG	14:CN:26:ARG:HG3	2.42	0.60
1:AA:1152:A:C4	1:AA:1153:C:C5	2.90	0.60
1:CA:1255:G:H5''	3:CC:26:LYS:NZ	2.16	0.60
6:CF:32:ASN:C	6:CF:34:GLY:H	2.04	0.60
27:BA:524:U:H2'	27:BA:525:U:C6	2.37	0.60
23:AW:6:U:H2'	23:AW:7:A:H5''	1.84	0.60
57:B8:32:LEU:N	57:B8:33:ASN:ND2	2.49	0.60
27:BA:647:G:N2	27:BA:2350:C:O3'	2.35	0.60
40:DR:16:HIS:O	40:DR:18:LEU:N	2.35	0.60
13:AM:2:ALA:O	13:AM:10:PRO:HD2	2.02	0.60
24:CX:19:G:H5'	24:CX:20:U:H5	1.64	0.60
33:DG:45:GLU:O	33:DG:51:ARG:HD3	2.02	0.60
3:AC:113:ALA:HB3	3:AC:114:PRO:CD	2.27	0.60
19:CS:49:ILE:N	19:CS:49:ILE:HD12	2.14	0.60
13:AM:80:ARG:C	13:AM:82:MET:H	2.05	0.60
5:CE:129:ILE:O	5:CE:132:ALA:N	2.34	0.60
27:DA:2685:G:H5'	37:DO:68:GLU:OE1	2.02	0.60
27:DA:2299:G:N1	27:DA:2318:G:C8	2.70	0.60
39:DQ:56:ARG:HA	39:DQ:56:ARG:NH1	2.16	0.60
27:BA:2189:U:H5'	27:BA:2190:G:OP2	2.02	0.60
25:CY:54:U:H2'	25:CY:56:G:OP2	2.01	0.60
40:DR:66:VAL:CG1	40:DR:70:LEU:HD12	2.31	0.60
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.16	0.60
12:AL:15:VAL:CG2	12:AL:16:ARG:N	2.64	0.60
27:BA:45:C:H2'	27:BA:47:C:C6	2.37	0.60
5:AE:101:ILE:H	5:AE:101:ILE:HD13	1.63	0.60
13:AM:108:ARG:N	13:AM:108:ARG:HD2	2.17	0.60
34:DH:106:THR:HG22	34:DH:112:PRO:HB3	1.84	0.60
1:AA:600:C:H2'	1:AA:601:C:C6	2.37	0.60
27:DA:566:U:O4	44:DV:78:LYS:HE2	2.02	0.60
45:BW:64:MET:O	45:BW:65:LEU:CB	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:63:LEU:HB2	8:CH:65:TYR:CE1	2.36	0.60
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.02	0.60
5:CE:69:VAL:O	5:CE:71:LEU:HG	2.02	0.60
27:BA:1181:C:O2'	27:BA:1182:A:H5'	2.01	0.60
34:DH:26:VAL:O	34:DH:26:VAL:HG12	1.99	0.60
29:BC:72:VAL:HG21	29:BC:161:ILE:HA	1.84	0.60
7:CG:11:GLN:HE22	7:CG:21:VAL:HG11	1.66	0.60
1:CA:428:G:O2'	1:CA:429:U:OP2	2.15	0.60
4:CD:92:VAL:O	4:CD:95:GLY:N	2.34	0.60
1:CA:1330:U:H4'	13:CM:23:TYR:CE2	2.36	0.60
13:CM:69:GLU:OE1	13:CM:69:GLU:CA	2.50	0.60
30:DD:18:VAL:CG1	30:DD:211:ARG:HH22	2.12	0.60
55:D6:19:ARG:O	55:D6:20:ASN:O	2.20	0.60
55:D6:39:TYR:O	55:D6:46:HIS:CB	2.45	0.60
27:DA:2571:C:H3'	27:DA:2572:A:C5'	2.32	0.60
36:BN:63:THR:H	36:BN:66:LYS:HD2	1.66	0.60
27:BA:2466:C:H5''	58:B9:6:SER:CB	2.32	0.60
46:DX:35:THR:HG22	46:DX:37:THR:N	2.17	0.60
48:DZ:56:ILE:HG22	48:DZ:57:VAL:H	1.67	0.60
34:BH:8:PRO:HD3	34:BH:65:HIS:CE1	2.37	0.60
4:CD:104:VAL:HG21	4:CD:140:VAL:HG21	1.84	0.60
4:CD:172:PRO:HD2	4:CD:173:TRP:CZ3	2.36	0.60
20:CT:87:LYS:O	20:CT:91:LEU:HG	2.02	0.60
10:AJ:51:ARG:HD2	10:AJ:59:SER:O	2.01	0.60
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.01	0.60
16:AP:5:ARG:HH22	16:AP:26:ARG:HB2	1.65	0.60
31:BE:81:ILE:O	31:BE:82:ARG:O	2.19	0.60
42:DT:8:LYS:HA	42:DT:11:GLU:OE2	2.00	0.60
1:AA:1321:C:H3'	1:AA:1322:C:H6	1.66	0.60
34:BH:156:ALA:HB3	34:BH:159:GLU:CB	2.32	0.60
42:BT:3:ARG:O	42:BT:4:GLY:C	2.40	0.60
1:AA:1397:C:OP2	5:AE:24:ARG:NH2	2.35	0.60
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.13	0.60
36:DN:58:ASP:O	36:DN:60:ILE:HG13	2.02	0.60
27:DA:2308:G:C6	27:DA:2310:A:H5'	2.36	0.60
27:DA:851:U:H3	27:DA:926:A:N6	1.98	0.60
4:AD:154:ASN:C	4:AD:155:LEU:HD23	2.22	0.60
27:BA:271(W):G:H8	27:BA:271(W):G:OP2	1.85	0.60
27:DA:2485:G:O2'	27:DA:2486:G:H5'	2.01	0.60
27:BA:105:C:O2'	47:BY:2:ARG:HB2	2.01	0.60
30:DD:112:GLN:N	30:DD:115:GLN:NE2	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1565:C:OP1	30:BD:4:LYS:NZ	2.34	0.60
27:BA:1722:A:N6	27:BA:1741:A:C2	2.70	0.60
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.83	0.60
38:DP:130:PHE:N	38:DP:130:PHE:CD2	2.69	0.60
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.17	0.60
31:BE:40:GLU:CD	31:BE:40:GLU:H	2.03	0.60
7:CG:65:ALA:O	7:CG:69:VAL:HG23	2.01	0.60
39:DQ:134:ARG:HH21	48:DZ:121:ARG:NH1	2.00	0.60
1:CA:1120:G:H2'	1:CA:1121:U:H6	1.65	0.60
9:CI:52:ALA:CB	9:CI:95:LYS:HE2	2.31	0.60
27:BA:1445:A:H5'	27:BA:1445(A):C:OP2	2.01	0.60
1:AA:369:C:OP2	1:AA:388:G:N2	2.34	0.60
7:CG:76:ARG:HE	7:CG:156:TRP:HZ2	1.48	0.60
25:AY:14:A:N3	25:AY:14:A:H2'	2.17	0.60
15:AO:49:ASP:OD1	15:AO:49:ASP:C	2.40	0.60
34:DH:86:GLU:HA	34:DH:132:ARG:HA	1.84	0.60
27:DA:1031:G:H4'	58:D9:6:SER:OG	2.02	0.60
38:BP:47:ASP:OD1	38:BP:49:ARG:HB2	2.01	0.60
32:BF:126:VAL:HG23	32:BF:127:GLU:N	2.16	0.60
32:BF:9:ILE:HG12	32:BF:14:PRO:HA	1.83	0.60
1:AA:911:U:H2'	1:AA:912:C:C5	2.36	0.60
48:DZ:157:PRO:HB2	48:DZ:158:PRO:HD2	1.83	0.60
2:CB:204:ASN:HD21	2:CB:207:ALA:CB	2.03	0.60
27:BA:557:U:H2'	27:BA:558:G:H8	1.67	0.60
42:BT:16:ARG:HH12	42:BT:19:LEU:HD21	1.67	0.60
44:DV:38:LEU:O	44:DV:52:VAL:HG12	2.01	0.60
38:DP:23:PRO:HD2	38:DP:33:ARG:HH21	1.67	0.60
3:AC:186:PHE:CE2	3:AC:188:LEU:HD22	2.36	0.60
12:CL:82:ILE:CG2	12:CL:95:TYR:HD2	2.15	0.60
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.17	0.60
32:DF:123:LEU:HA	32:DF:192:LEU:O	2.02	0.60
15:CO:35:ARG:HH21	15:CO:59:MET:CE	2.06	0.60
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.23	0.60
46:BX:12:VAL:CG2	46:BX:13:LEU:H	2.01	0.60
42:DT:11:GLU:O	42:DT:13:ARG:N	2.25	0.60
34:BH:109:PHE:CE1	34:BH:152:ARG:CZ	2.85	0.60
1:CA:1326:C:OP1	21:CU:12:LYS:HD2	2.02	0.60
48:DZ:97:MET:O	48:DZ:124:LEU:HA	2.02	0.60
1:CA:653:A:C1'	8:CH:56:LYS:HZ3	2.15	0.60
27:DA:1569:A:H1'	30:DD:38:LYS:HZ3	1.65	0.60
36:DN:103:VAL:O	36:DN:107:LEU:HG	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2350:C:H5''	57:B8:42:ARG:HD3	1.84	0.60
40:DR:12:ARG:HD3	40:DR:16:HIS:ND1	2.17	0.60
30:BD:70:TRP:CZ3	30:BD:146:GLU:CD	2.75	0.60
36:BN:132:ALA:O	36:BN:133:GLN:HB3	2.02	0.60
8:AH:2:LEU:HD13	8:AH:2:LEU:C	2.23	0.60
54:B5:56:LYS:HG3	54:B5:59:GLU:CG	2.32	0.60
27:DA:2684:U:H2'	27:DA:2685:G:O4'	2.01	0.60
2:AB:215:LEU:O	2:AB:219:VAL:HG23	2.02	0.60
25:CY:52:G:H2'	25:CY:53:U:C6	2.37	0.60
23:CW:20:A:H62	23:CW:44:A:C2'	2.12	0.60
50:B1:19:GLN:O	50:B1:35:THR:N	2.34	0.60
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.36	0.60
5:AE:100:VAL:HG22	5:AE:118:ILE:HG22	1.83	0.60
27:DA:2593:U:H2'	27:DA:2594:C:H6	1.65	0.60
1:AA:407:G:N2	1:AA:436:C:C2	2.70	0.60
18:CR:50:ILE:HD11	18:CR:70:ILE:HG21	1.84	0.60
27:BA:1891:G:H2'	27:BA:1892:C:C6	2.37	0.60
4:AD:98:GLU:O	4:AD:100:ARG:N	2.35	0.60
16:AP:67:THR:HB	16:AP:70:ALA:HB2	1.84	0.60
7:AG:15:ASP:OD2	7:AG:44:TYR:OH	2.20	0.60
1:AA:324:G:H8	1:AA:324:G:H3'	1.67	0.60
27:DA:2236:C:H2'	27:DA:2237:G:O4'	2.02	0.60
32:DF:195:ASP:OD2	32:DF:195:ASP:N	2.34	0.60
20:AT:97:ALA:O	20:AT:99:LEU:N	2.34	0.60
9:CI:106:ALA:O	9:CI:108:VAL:HG13	2.02	0.60
27:BA:2231:C:OP1	50:B1:42:GLN:HA	2.01	0.60
45:DW:13:SER:O	45:DW:16:LYS:HB2	2.01	0.60
27:BA:2084:C:H2'	27:BA:2085:C:H6	1.67	0.60
34:BH:125:VAL:HG12	34:BH:125:VAL:O	2.01	0.60
2:CB:198:ASP:OD2	2:CB:198:ASP:N	2.34	0.60
27:BA:875:G:H2'	27:BA:876:C:O4'	2.01	0.60
27:DA:1122:G:O2'	27:DA:1123:C:H5'	2.02	0.60
37:BO:10:VAL:HG21	37:BO:17:ARG:HA	1.84	0.59
33:BG:107:LEU:HD22	33:BG:177:GLY:O	2.01	0.59
1:CA:1346:A:N7	7:CG:10:ARG:NH2	2.50	0.59
43:BU:42:ALA:O	43:BU:45:TYR:N	2.35	0.59
42:BT:16:ARG:NH1	42:BT:19:LEU:HD21	2.17	0.59
27:DA:1490:A:H5'	27:DA:1494:A:N6	2.17	0.59
27:DA:94(A):G:C3'	27:DA:95:G:H5''	2.32	0.59
49:D0:20:ARG:HG2	49:D0:20:ARG:HH11	1.66	0.59
27:DA:2498:C:HO2'	27:DA:2499:C:H5''	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:37:ARG:HB2	31:DE:46:ALA:H	1.66	0.59
1:CA:620:C:H2'	1:CA:621:A:O4'	2.02	0.59
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.33	0.59
42:DT:26:ASP:HB3	42:DT:89:VAL:O	2.02	0.59
27:DA:2748:A:N7	27:DA:2754:U:O4	2.35	0.59
27:BA:2068:U:N3	27:BA:2430:A:H2	1.86	0.59
7:AG:41:ARG:O	7:AG:45:ASP:HB2	2.02	0.59
4:AD:17:VAL:HG11	4:AD:197:PRO:CG	2.27	0.59
27:DA:2527:C:H5'	58:D9:30:PRO:CB	2.31	0.59
32:BF:135:LYS:HB3	32:BF:138:GLU:CD	2.22	0.59
27:DA:172:C:O2'	27:DA:173:G:H8	1.84	0.59
27:DA:962:G:H2'	27:DA:963:U:O4'	2.02	0.59
34:DH:89:ILE:HG22	34:DH:162:ILE:HG23	1.84	0.59
33:DG:41:GLN:HE22	33:DG:153:ARG:CG	2.15	0.59
3:CC:35:GLU:HA	3:CC:38:ARG:HD2	1.84	0.59
13:AM:69:GLU:OE1	13:AM:72:ALA:HB3	2.01	0.59
27:DA:2298:A:H2'	27:DA:2299:G:H8	1.65	0.59
31:DE:14:ILE:HB	42:DT:14:TYR:CE2	2.37	0.59
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.84	0.59
43:BU:34:LYS:CE	43:BU:34:LYS:HA	2.30	0.59
2:CB:81:VAL:HB	2:CB:94:ASN:OD1	2.02	0.59
25:CY:37:U:C2'	25:CY:38:U:H5''	2.32	0.59
24:AX:24:U:O2'	27:BA:1923:U:OP1	2.19	0.59
32:DF:83:PHE:O	32:DF:84:VAL:HB	2.02	0.59
6:AF:75:LEU:CD2	6:AF:79:LEU:HG	2.32	0.59
7:CG:65:ALA:HB3	7:CG:124:LEU:HD23	1.82	0.59
1:AA:1146:A:H2'	1:AA:1147:C:H5''	1.83	0.59
27:DA:2531:A:N6	27:DA:2662:A:H61	2.00	0.59
46:DX:81:VAL:O	46:DX:81:VAL:HG23	2.02	0.59
8:CH:28:ALA:HA	8:CH:59:LEU:CD1	2.32	0.59
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.02	0.59
24:AX:6:G:H2'	24:AX:7:G:O4'	2.02	0.59
1:CA:1168:A:H3'	1:CA:1169:A:H8	1.65	0.59
1:AA:399:G:H2'	1:AA:400:C:C6	2.37	0.59
27:DA:1829:A:N3	30:DD:15:PHE:HZ	2.00	0.59
11:CK:93:GLN:OE1	11:CK:93:GLN:HA	2.01	0.59
40:DR:44:LEU:HD13	40:DR:44:LEU:O	2.02	0.59
54:B5:6:VAL:HG22	54:B5:7:PRO:HD2	1.84	0.59
38:BP:84:ASN:ND2	38:BP:115:LEU:CG	2.65	0.59
28:BB:42:C:O2	33:BG:93:THR:N	2.34	0.59
30:DD:27:THR:HG23	30:DD:27:THR:O	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2611:U:H1'	54:D5:3:LYS:CE	2.30	0.59
27:DA:2576:G:H5''	27:DA:2577:A:OP1	2.02	0.59
20:AT:33:ILE:CD1	20:AT:63:ILE:HA	2.32	0.59
27:BA:2466:C:C2'	27:BA:2467:C:H5'	2.32	0.59
27:DA:328:U:H4'	47:DY:68:HIS:CE1	2.36	0.59
30:BD:30:GLU:CD	30:BD:63:ARG:NH2	2.55	0.59
1:AA:1349:A:OP1	9:AI:121:ARG:N	2.31	0.59
37:DO:36:GLY:O	37:DO:109:LYS:HG3	2.01	0.59
42:DT:61:PHE:CE2	42:DT:76:PHE:HB2	2.37	0.59
27:BA:2589:A:O2'	27:BA:2590:A:H5'	2.02	0.59
27:BA:779:U:P	30:BD:49:ILE:HG22	2.43	0.59
1:AA:389:A:H2'	1:AA:390:C:C5'	2.32	0.59
1:CA:1177:G:N1	1:CA:1181:G:C6	2.70	0.59
18:AR:53:ARG:CZ	18:AR:60:ALA:H	2.15	0.59
1:CA:752:G:H1'	1:CA:754:C:N4	2.18	0.59
24:CX:17:C:C3'	24:CX:17(B):U:H5'	2.31	0.59
48:BZ:152:SER:H	48:BZ:166:PRO:CB	2.14	0.59
57:B8:29:LYS:HG3	57:B8:29:LYS:O	2.02	0.59
1:AA:621:A:H2'	1:AA:622:A:C8	2.37	0.59
1:AA:1238:A:H2	1:AA:1241:G:H1'	1.66	0.59
53:B4:60:GLU:O	53:B4:61:VAL:CB	2.50	0.59
27:DA:1482:G:N2	27:DA:1507:A:H1'	2.16	0.59
7:AG:148:ASN:HD21	25:AY:39:C:H4'	1.66	0.59
42:DT:48:ILE:HG22	42:DT:50:ILE:HD12	1.84	0.59
1:AA:1288:A:O2'	1:AA:1289:A:H5'	2.02	0.59
1:AA:577:G:H4'	1:AA:816:A:O2'	2.02	0.59
15:AO:33:THR:O	15:AO:33:THR:HG22	2.02	0.59
27:DA:2012:G:O3'	45:DW:96:ILE:HD11	2.02	0.59
28:BB:8:U:C5'	28:BB:8:U:H6	2.14	0.59
1:AA:782:A:C2	1:AA:801:U:C2	2.90	0.59
9:CI:40:LEU:C	9:CI:42:ARG:H	2.05	0.59
1:CA:320:C:H1'	1:CA:1434:A:C2	2.35	0.59
56:D7:24:THR:HG23	56:D7:27:GLY:CA	2.32	0.59
27:BA:2636:U:O2'	31:BE:44:TYR:CE1	2.55	0.59
1:AA:1028:C:H2'	1:AA:1029:C:H5'	1.83	0.59
27:BA:2670:A:C2'	27:BA:2671:A:H5'	2.32	0.59
34:DH:70:THR:O	34:DH:72:ILE:N	2.35	0.59
35:BI:136:VAL:O	35:BI:136:VAL:HG13	2.02	0.59
30:DD:93:ALA:HB2	30:DD:107:ALA:HB2	1.83	0.59
30:DD:66:ASP:HB3	30:DD:105:ILE:HD13	1.84	0.59
1:AA:986:A:O2'	1:AA:987:G:H5'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2400:G:H5'	27:BA:2401:U:OP2	2.02	0.59
27:BA:971:C:C2'	27:BA:972:G:H5'	2.32	0.59
1:CA:1368:G:N2	1:CA:1369:C:H1'	2.17	0.59
27:DA:1830:C:H42	27:DA:1975:G:H1	1.50	0.59
1:CA:943:U:H6	1:CA:943:U:O5'	1.84	0.59
43:DU:20:LEU:O	43:DU:20:LEU:HD13	2.02	0.59
6:AF:100:ASN:HD21	18:AR:23:LYS:HG2	1.66	0.59
35:DI:94:ALA:HB1	35:DI:114:LEU:HD11	1.84	0.59
27:BA:2547:U:H2'	27:BA:2548:G:C8	2.37	0.59
27:BA:592:G:N2	27:BA:666:G:C4	2.70	0.59
1:CA:1186:G:N2	1:CA:1187:G:H1'	2.17	0.59
14:CN:39:LEU:CD1	14:CN:44:LEU:HA	2.31	0.59
31:BE:184:VAL:HG12	31:BE:185:LYS:H	1.66	0.59
51:B2:41:ILE:HD11	51:B2:44:LEU:CB	2.31	0.59
31:BE:55:ASN:O	31:BE:57:LYS:N	2.33	0.59
17:AQ:45:HIS:HA	17:AQ:69:LYS:NZ	2.17	0.59
30:DD:83:GLU:O	30:DD:92:ILE:HD13	2.03	0.59
27:DA:2069:G:C2	27:DA:2070:G:C8	2.89	0.59
27:DA:2015:A:H1'	54:D5:2:ALA:HA	1.84	0.59
27:DA:2053:G:O2'	27:DA:2054:A:H5'	2.01	0.59
27:DA:2579:C:H2'	27:DA:2580:U:H6	1.67	0.59
27:DA:827:U:H4'	27:DA:828:U:O2	2.02	0.59
1:CA:384:G:H2'	1:CA:385:C:C6	2.37	0.59
9:AI:48:GLU:O	9:AI:50:LEU:N	2.36	0.59
8:AH:80:ILE:HG22	8:AH:80:ILE:O	2.02	0.59
12:CL:21:VAL:CG1	12:CL:21:VAL:O	2.49	0.59
34:DH:85:LYS:HD3	34:DH:133:VAL:HB	1.85	0.59
56:B7:5:TRP:HH2	56:B7:12:ARG:HH12	1.50	0.59
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.35	0.59
27:DA:1341:U:H2'	27:DA:1397:U:O2'	2.02	0.59
27:DA:857:C:OP2	49:D0:77:ARG:NH2	2.35	0.59
27:DA:1678:G:N2	27:DA:1989:G:H1	2.01	0.59
42:BT:68:TYR:O	42:BT:69:GLY:C	2.40	0.59
52:B3:43:ILE:O	52:B3:47:VAL:HG23	2.01	0.59
1:AA:578:C:HO2'	1:AA:579:G:H8	1.50	0.59
3:AC:90:GLU:OE1	3:AC:93:LYS:HD2	2.03	0.59
27:DA:221:A:OP2	27:DA:221:A:H8	1.85	0.59
48:DZ:58:LEU:O	48:DZ:65:SER:HA	2.01	0.59
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.18	0.59
27:DA:2663:G:O2'	27:DA:2664:G:H5'	2.02	0.59
13:CM:31:LYS:HA	13:CM:34:LEU:CG	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DX:64:LYS:NZ	46:DX:73:ARG:NH2	2.50	0.59
4:AD:59:ARG:HH21	4:AD:66:ARG:NH2	2.00	0.59
7:AG:15:ASP:H	7:AG:20:ASP:N	2.00	0.59
39:DQ:110:THR:HG23	39:DQ:113:GLN:HB2	1.84	0.59
27:DA:1771:C:H1'	27:DA:1786:A:C8	2.37	0.59
36:BN:46:VAL:HG13	36:BN:47:ALA:N	2.18	0.59
44:DV:75:PHE:CD2	44:DV:82:ARG:HG3	2.37	0.59
27:BA:782:A:O5'	27:BA:783:A:N1	2.35	0.59
9:CI:17:VAL:HG21	9:CI:80:GLY:HA3	1.83	0.59
50:D1:44:PRO:HB2	50:D1:46:LEU:HD13	1.83	0.59
27:DA:2073:C:O3'	30:DD:228:PRO:HB3	2.02	0.59
1:CA:1170:A:H2'	1:CA:1171:G:H5'	1.84	0.59
17:CQ:62:SER:CB	17:CQ:72:ARG:HG3	2.32	0.59
20:CT:41:ILE:HG13	20:CT:41:ILE:O	2.01	0.59
6:AF:6:VAL:HG13	6:AF:90:VAL:HG22	1.84	0.59
12:CL:100:GLY:HA2	12:CL:104:ALA:O	2.02	0.59
27:BA:841:A:H2'	27:BA:842:G:H8	1.67	0.59
40:BR:20:LEU:CD1	40:BR:24:GLN:HG3	2.32	0.59
41:BS:17:ARG:O	41:BS:18:ILE:HB	2.02	0.59
41:BS:93:LYS:O	41:BS:94:TYR:C	2.40	0.59
32:BF:25:PRO:HG3	32:BF:119:ARG:HA	1.85	0.59
47:BY:46:LYS:C	47:BY:47:LYS:HG3	2.21	0.59
1:AA:920:U:H5'	1:AA:921:U:OP2	2.02	0.59
27:DA:1014:U:H2'	27:DA:1015:G:H8	1.66	0.59
30:DD:60:ARG:CG	30:DD:86:PRO:HB3	2.30	0.59
47:DY:28:LYS:HB2	47:DY:37:VAL:HB	1.84	0.59
27:DA:630:G:N1	27:DA:634:C:N4	2.47	0.59
33:DG:31:VAL:HG22	33:DG:32:PRO:HD2	1.85	0.59
27:DA:2498:C:O2'	27:DA:2499:C:C5'	2.45	0.59
27:DA:947:G:N2	27:DA:971:C:C2	2.70	0.59
1:CA:1137:C:C4'	1:CA:1138:G:C2	2.79	0.59
47:DY:42:VAL:CB	47:DY:65:ALA:HB3	2.23	0.59
1:CA:392:G:H2'	1:CA:393:A:C8	2.37	0.59
27:DA:2749:A:H1'	34:DH:63:SER:OG	2.02	0.59
41:DS:17:ARG:HA	41:DS:20:ARG:NE	2.17	0.59
2:CB:200:ILE:CG2	2:CB:201:ILE:N	2.65	0.59
4:AD:30:LYS:C	4:AD:32:ALA:H	2.02	0.59
27:DA:173:G:H2'	27:DA:174:C:C6	2.37	0.59
36:DN:57:ALA:O	36:DN:58:ASP:C	2.40	0.59
36:DN:99:LEU:O	36:DN:103:VAL:HG23	2.03	0.59
35:BI:145:VAL:HG12	35:BI:146:ALA:N	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1442(A):G:N1	27:BA:2864:G:OP1	2.33	0.59
3:AC:113:ALA:CB	3:AC:114:PRO:HD3	2.30	0.59
27:DA:660:G:C2	27:DA:661:C:H1'	2.38	0.59
27:BA:1417:C:N4	27:BA:1581:G:H1	2.00	0.59
5:CE:141:GLN:HA	5:CE:143:ARG:NH2	2.18	0.59
1:AA:606:G:H2'	1:AA:631:G:N1	2.16	0.59
27:BA:1175:U:H4'	27:BA:1176:G:H3'	1.83	0.59
1:AA:189(K):U:H2'	1:AA:189(L):G:H8	1.64	0.59
1:AA:495:A:C1'	1:AA:496:A:H5'	2.32	0.59
27:BA:70:G:O2'	27:BA:114:U:H5	1.85	0.59
1:CA:14:U:H5'	1:CA:14:U:C6	2.37	0.59
5:CE:7:GLU:O	5:CE:8:GLU:HB3	2.03	0.59
27:BA:258:G:H2'	27:BA:259:G:H8	1.66	0.59
27:BA:347:A:H2'	27:BA:348:G:C8	2.37	0.59
18:CR:64:ARG:O	18:CR:67:ALA:N	2.35	0.59
1:CA:821:G:H2'	1:CA:822:C:C6	2.34	0.59
27:BA:1710:C:H3'	27:BA:1710:C:H6	1.66	0.59
36:DN:41:ASP:O	36:DN:42:TRP:O	2.21	0.59
27:DA:363:G:H2'	27:DA:363(A):A:C8	2.38	0.59
9:CI:52:ALA:HB3	9:CI:95:LYS:HE2	1.83	0.59
33:DG:119:GLY:O	33:DG:181:ARG:HB2	2.02	0.59
34:DH:38:SER:O	34:DH:40:GLU:N	2.34	0.59
27:BA:875:G:O2'	27:BA:876:C:H5'	2.02	0.59
1:AA:163:C:H2'	1:AA:164:U:H6	1.67	0.59
38:DP:107:LYS:O	38:DP:109:GLY:N	2.36	0.59
27:BA:1762:A:O5'	27:BA:1762:A:H8	1.84	0.59
29:DC:24:GLU:HB3	29:DC:27:ARG:NH2	2.18	0.59
27:DA:651:G:H2'	27:DA:651:G:N3	2.17	0.59
19:CS:58:VAL:HG23	19:CS:58:VAL:O	2.01	0.59
35:BI:23:PRO:O	35:BI:26:ALA:HB3	2.02	0.59
27:BA:592:G:H1	27:BA:665:C:N4	1.99	0.59
38:BP:41:ARG:HG2	38:BP:41:ARG:HH21	1.65	0.59
32:BF:9:ILE:HG23	32:BF:13:SER:O	2.01	0.59
27:DA:200:U:H6	27:DA:200:U:C5'	2.08	0.59
1:CA:503:C:OP2	12:CL:113:SER:OG	2.16	0.59
53:B4:39:ARG:C	53:B4:40:ILE:HD12	2.23	0.59
27:BA:479:A:H4'	27:BA:480:A:OP1	2.02	0.59
43:BU:95:LEU:HD21	44:BV:13:ARG:HB2	1.83	0.59
32:DF:3:GLU:HB3	32:DF:20:LEU:O	2.01	0.59
30:DD:142:VAL:HG23	30:DD:192:THR:O	2.01	0.59
55:D6:19:ARG:CG	55:D6:20:ASN:H	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2443:C:H2'	27:DA:2444:G:C8	2.32	0.59
4:AD:196:LEU:CD1	4:AD:196:LEU:N	2.61	0.59
27:DA:1349:A:N6	27:DA:1598:C:N4	2.51	0.59
34:DH:85:LYS:HG2	34:DH:133:VAL:HB	1.84	0.59
27:BA:2585:U:H4'	27:BA:2586:C:O5'	2.01	0.59
27:BA:1997:G:O2'	27:BA:1998:G:H5'	2.02	0.59
1:CA:965:A:C4'	1:CA:966:G:OP1	2.50	0.59
1:CA:965:A:C2	1:CA:969:A:C2	2.91	0.59
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.56	0.59
27:DA:357:A:H2'	27:DA:358:U:C6	2.38	0.59
27:DA:2826:A:N3	27:DA:2826:A:H2'	2.16	0.59
27:DA:1655:A:C4'	31:DE:114:ALA:HA	2.31	0.59
55:B6:27:LYS:HB3	55:B6:29:ASN:OD1	2.02	0.59
33:DG:46:ALA:C	33:DG:82:LEU:HD11	2.23	0.59
27:DA:662:G:H2'	27:DA:663:G:C8	2.36	0.59
33:DG:60:LEU:HD13	33:DG:60:LEU:C	2.23	0.59
35:DI:79:ILE:HG22	35:DI:81:VAL:HG22	1.83	0.59
1:AA:936:C:H2'	1:AA:937:A:O4'	2.01	0.59
27:DA:2884:U:OP2	54:D5:43:HIS:CE1	2.55	0.59
1:AA:818:G:C2'	1:AA:819:A:H5''	2.32	0.59
27:DA:2469:A:N6	27:DA:2481:G:H1'	2.18	0.59
37:BO:117:LEU:HD23	37:BO:117:LEU:O	2.02	0.59
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.37	0.59
1:CA:107:G:O2'	1:CA:108:G:H5'	2.02	0.59
27:DA:558:G:P	36:DN:111:PRO:HD2	2.42	0.59
27:DA:1702:G:C2'	27:DA:1703:G:O5'	2.51	0.59
1:CA:489:C:O2'	1:CA:490:G:H5'	2.02	0.59
51:B2:13:ALA:HA	51:B2:16:LEU:HD11	1.83	0.59
27:DA:896:A:C2	48:DZ:113:GLY:HA3	2.38	0.59
29:DC:20:TYR:CE1	29:DC:22:ILE:HD13	2.37	0.59
46:DX:31:HIS:ND1	46:DX:32:PRO:HD2	2.18	0.59
37:BO:59:LYS:CD	37:BO:89:ASN:OD1	2.50	0.59
1:AA:1417:G:H22	1:AA:1482:G:H2'	1.67	0.59
48:BZ:130:ARG:HH11	48:BZ:130:ARG:HG2	1.68	0.59
17:CQ:64:PRO:HA	17:CQ:70:ARG:HG2	1.83	0.59
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.38	0.59
3:AC:73:PRO:C	3:AC:75:VAL:H	2.06	0.59
44:DV:32:THR:HG22	44:DV:32:THR:O	2.03	0.59
47:BY:7:VAL:CG2	47:BY:8:LYS:NZ	2.66	0.59
1:AA:910:C:O2'	1:AA:911:U:H5'	2.03	0.59
4:CD:11:LEU:C	4:CD:13:ARG:N	2.55	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:112:ARG:NH2	44:BV:46:VAL:HG11	2.17	0.59
27:DA:2233:U:H2'	27:DA:2234:G:H8	1.68	0.59
42:BT:47:GLY:HA3	42:BT:64:ARG:O	2.01	0.59
42:BT:91:ARG:HA	42:BT:117:ASP:N	2.16	0.59
27:DA:869:G:O2'	27:DA:870:A:H5'	2.03	0.59
27:DA:872:A:H61	27:DA:905:U:H3	1.51	0.59
31:DE:59:VAL:O	31:DE:60:ASN:HB3	2.02	0.59
55:D6:8:LYS:HE3	55:D6:8:LYS:O	2.03	0.59
27:DA:196:A:H61	27:DA:831:G:H21	1.51	0.59
27:DA:2571:C:H5''	27:DA:2572:A:H5'	1.84	0.59
30:BD:35:LYS:HZ3	30:BD:102:LYS:C	2.05	0.59
47:BY:39:VAL:O	47:BY:40:GLU:CG	2.48	0.59
8:AH:100:ILE:HB	8:AH:125:ARG:HH12	1.67	0.59
37:DO:25:LEU:HB2	37:DO:38:VAL:O	2.03	0.59
1:AA:299:G:H2'	1:AA:300:A:H8	1.64	0.59
17:CQ:16:GLN:O	17:CQ:17:LYS:HB2	2.01	0.59
32:DF:157:VAL:HA	32:DF:176:LEU:O	2.03	0.59
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.84	0.59
27:BA:2068:U:H5''	27:BA:2068:U:H6	1.67	0.59
1:AA:479:C:H2'	1:AA:480:U:C6	2.38	0.59
1:CA:1066:C:H2'	1:CA:1067:A:C8	2.36	0.59
12:AL:31:ARG:HG2	12:AL:32:GLY:N	2.17	0.59
10:AJ:4:ILE:HG12	10:AJ:100:THR:HG21	1.84	0.59
27:DA:768:G:O2'	27:DA:1379:A:N6	2.36	0.59
27:BA:2350:C:C5'	57:B8:42:ARG:HD3	2.32	0.59
36:BN:121:LYS:HB3	36:BN:123:TYR:HE1	1.67	0.59
1:AA:939:G:C5'	7:AG:102:ARG:HH12	2.16	0.59
42:BT:68:TYR:N	42:BT:68:TYR:CD2	2.69	0.59
5:AE:139:LEU:HA	5:AE:142:LEU:CD1	2.32	0.59
10:CJ:4:ILE:HD12	10:CJ:74:ILE:CD1	2.33	0.59
47:BY:2:ARG:C	47:BY:4:LYS:H	2.05	0.59
27:DA:479:A:N1	27:DA:506:G:N2	2.51	0.59
32:BF:40:GLN:O	32:BF:44:ARG:HG2	2.02	0.59
9:CI:47:LEU:C	9:CI:49:PRO:HD2	2.21	0.59
1:AA:1228:C:O3'	13:AM:116:THR:HA	2.03	0.59
27:DA:2543:G:H2'	27:DA:2544:G:H8	1.68	0.59
11:CK:103:LEU:HD13	11:CK:104:GLN:N	2.17	0.59
27:DA:2842:G:C2'	27:DA:2843:G:H5'	2.32	0.59
36:BN:58:ASP:C	36:BN:60:ILE:H	2.03	0.59
17:CQ:5:VAL:C	17:CQ:6:LEU:HD12	2.22	0.59
27:DA:2283:C:C2'	27:DA:2284:C:H5'	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:80:ARG:C	6:AF:82:ARG:H	2.05	0.59
36:DN:21:LYS:HD3	36:DN:26:LEU:HD13	1.85	0.59
7:CG:59:LEU:C	7:CG:59:LEU:HD23	2.23	0.59
1:AA:583:A:H61	1:AA:758:G:H1'	1.67	0.59
27:BA:1754:C:C6	42:BT:96:ARG:NH1	2.70	0.59
48:BZ:8:TYR:CE1	48:BZ:60:LEU:HD12	2.38	0.59
1:AA:115:G:O2'	1:AA:116:A:OP2	2.19	0.59
27:BA:2384:G:H2'	27:BA:2386:C:OP1	2.03	0.59
35:DI:113:ARG:O	35:DI:130:TYR:HD1	1.86	0.59
1:CA:855:G:O2'	1:CA:856:C:H5'	2.03	0.59
27:DA:1387:C:H2'	27:DA:1388:G:H8	1.68	0.59
1:AA:929:G:O2'	1:AA:930:C:H5'	2.03	0.59
27:DA:2772:C:H2'	27:DA:2773:C:H6	1.67	0.59
27:BA:1387:C:O5'	27:BA:1387:C:H6	1.85	0.59
27:BA:1594:G:H3'	27:BA:1595:G:H8	1.68	0.59
35:DI:18:VAL:HG12	35:DI:18:VAL:O	2.01	0.59
1:CA:1318:A:O2'	19:CS:37:ARG:HB2	2.03	0.59
1:CA:971:G:H5''	1:CA:972:C:C5'	2.31	0.59
40:BR:21:TYR:HB3	40:BR:47:PHE:CD1	2.37	0.59
27:BA:2680:C:H42	27:BA:2727:G:H1	1.51	0.59
36:DN:87:LEU:O	36:DN:87:LEU:HD23	2.03	0.59
5:AE:43:LEU:HD21	5:AE:132:ALA:HB1	1.83	0.59
43:DU:21:ALA:O	43:DU:24:TYR:CD1	2.56	0.59
43:DU:39:LEU:O	43:DU:40:PHE:C	2.41	0.59
27:DA:993:G:OP1	43:DU:50:ARG:NH2	2.35	0.59
55:D6:15:GLU:CD	55:D6:43:CYS:SG	2.81	0.59
38:DP:99:LEU:HG	38:DP:102:ARG:NH1	2.17	0.59
27:DA:461:C:O2'	27:DA:462:C:H5'	2.03	0.59
27:DA:1668:A:H5'	27:DA:1669:A:C5	2.37	0.59
27:DA:803:U:H6	27:DA:803:U:O5'	1.84	0.59
48:BZ:18:ARG:HH11	48:BZ:81:ARG:NH2	2.01	0.59
27:BA:125:G:N2	56:B7:48:LYS:HZ2	1.99	0.59
31:BE:35:GLN:HG3	31:BE:36:ARG:O	2.02	0.59
32:DF:187:VAL:CB	38:DP:7:ARG:HH21	2.15	0.59
41:BS:85:VAL:H	41:BS:106:ARG:CB	2.10	0.59
15:AO:17:ARG:NH1	15:AO:77:ARG:HH12	2.00	0.59
27:DA:2172:U:C1'	27:DA:2173:A:OP1	2.47	0.59
12:AL:74:LEU:HD21	12:AL:104:ALA:HB2	1.85	0.59
12:AL:35:THR:HG21	12:AL:62:GLU:OE2	2.03	0.59
38:BP:149:GLU:HA	38:BP:149:GLU:OE2	2.03	0.59
1:CA:1498:U:H2'	22:CV:5:U:OP1	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:63:MET:CB	2:AB:225:ALA:HB1	2.29	0.59
1:AA:826:C:H2'	1:AA:827:U:H6	1.67	0.59
51:B2:32:LEU:HB2	51:B2:53:LEU:HD12	1.85	0.59
37:DO:86:ILE:N	37:DO:86:ILE:HD12	2.18	0.59
37:DO:78:ARG:HH21	42:DT:103:ARG:NH2	2.00	0.59
25:CY:66:A:H2'	25:CY:67:C:C6	2.38	0.59
39:DQ:55:VAL:CG1	39:DQ:56:ARG:H	2.13	0.59
2:AB:178:ARG:HH21	8:AH:68:ARG:NH2	2.01	0.59
27:DA:2010:G:H5''	45:DW:42:ARG:HB2	1.83	0.59
27:DA:1203:G:H3'	27:DA:1204:A:H5''	1.85	0.59
47:BY:68:HIS:HB2	47:BY:71:LYS:HE2	1.85	0.59
52:D3:4:LEU:HD23	52:D3:57:GLU:O	2.03	0.59
34:DH:156:ALA:C	34:DH:158:HIS:H	2.05	0.59
27:BA:542:C:C2'	27:BA:543:C:OP1	2.51	0.59
27:DA:1700:A:O2'	27:DA:1701:A:O5'	2.19	0.59
9:AI:13:ALA:HB2	9:AI:68:GLY:HA3	1.84	0.59
11:AK:84:VAL:C	11:AK:85:ARG:HG2	2.23	0.59
44:BV:1:MET:CE	44:BV:43:GLU:HG2	2.32	0.59
28:BB:105:A:O2'	28:BB:106:G:H5'	2.02	0.59
1:AA:288:A:H2'	1:AA:289:G:H4'	1.84	0.59
1:AA:312:C:H2'	1:AA:313:A:H8	1.67	0.59
1:AA:313:A:H2'	1:AA:314:C:C6	2.37	0.59
44:DV:6:LYS:O	44:DV:37:VAL:HG21	2.02	0.59
27:DA:678:C:O2'	27:DA:679:C:H5'	2.02	0.59
27:BA:304:G:H2'	27:BA:305:U:H6	1.65	0.59
8:AH:74:PRO:HG2	8:AH:75:ARG:H	1.67	0.59
1:CA:908:A:O2'	1:CA:909:A:H5'	2.02	0.59
27:DA:1467:C:H5	27:DA:1546:C:H2'	1.68	0.59
14:AN:25:VAL:HB	14:AN:38:GLY:O	2.03	0.59
7:AG:11:GLN:HG3	7:AG:12:LEU:H	1.67	0.59
11:AK:91:ARG:HD2	11:AK:92:GLU:N	2.17	0.59
2:CB:130:ARG:HE	2:CB:130:ARG:HA	1.67	0.59
3:AC:164:ARG:O	3:AC:165:THR:HB	2.03	0.59
27:BA:592:G:N3	57:B8:4:MET:HE2	2.18	0.59
38:BP:48:PRO:CG	38:BP:49:ARG:N	2.65	0.59
40:BR:49:ASP:OD1	40:BR:95:THR:HG22	2.03	0.59
37:BO:16:ALA:CB	37:BO:52:VAL:HG11	2.31	0.59
46:BX:40:LYS:O	46:BX:43:VAL:HB	2.03	0.59
53:B4:48:ILE:HG22	53:B4:50:THR:HG23	1.83	0.59
1:CA:1348:U:OP1	9:CI:109:VAL:HA	2.02	0.59
32:BF:63:LYS:HG2	32:BF:65:TRP:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B3:30:ARG:HD3	52:B3:33:GLN:NE2	2.18	0.59
27:DA:2494:G:H2'	27:DA:2495:G:O5'	2.03	0.59
36:DN:118:LYS:C	36:DN:120:LEU:H	2.05	0.59
27:DA:530:G:N7	27:DA:2022:U:H5''	2.18	0.59
27:DA:969:U:H2'	27:DA:970:C:C6	2.38	0.59
27:DA:675:A:H4'	32:DF:67:GLN:OE1	2.02	0.59
27:DA:2018:G:H21	43:DU:34:LYS:HZ2	1.51	0.59
34:BH:43:VAL:HB	34:BH:51:ARG:O	2.03	0.59
12:CL:98:VAL:HG12	12:CL:101:VAL:HG21	1.83	0.59
42:DT:83:ILE:CG1	42:DT:84:GLN:H	2.12	0.59
34:DH:85:LYS:CD	34:DH:133:VAL:HB	2.32	0.59
32:DF:187:VAL:HG12	38:DP:7:ARG:NH2	2.17	0.59
1:AA:722:A:O2'	1:AA:723:U:H2'	2.03	0.59
37:BO:35:VAL:HA	37:BO:62:VAL:HG12	1.84	0.59
37:BO:7:TYR:CE2	37:BO:44:LYS:HG3	2.37	0.59
1:CA:1060:C:C5'	14:CN:45:ARG:HH22	2.14	0.59
49:B0:17:GLN:OE1	49:B0:17:GLN:N	2.36	0.59
1:CA:1260:C:C6	1:CA:1260:C:H3'	2.38	0.59
38:BP:111:ARG:HA	38:BP:128:HIS:CD2	2.38	0.59
1:CA:923:A:OP1	5:CE:21:ALA:HB2	2.02	0.59
57:B8:32:LEU:HB3	57:B8:36:LYS:NZ	2.16	0.59
27:DA:848:G:O2'	27:DA:849:A:H5'	2.03	0.59
1:AA:932:C:C5	7:AG:3:ARG:HD3	2.37	0.59
27:DA:271(H):G:H1	27:DA:271(P):C:N4	2.00	0.59
31:DE:4:ILE:HG12	31:DE:28:ALA:CB	2.33	0.59
42:DT:104:ASN:O	42:DT:105:LEU:HD23	2.03	0.59
42:DT:109:GLU:HG2	42:DT:112:ARG:NH1	2.17	0.59
15:AO:54:ARG:NH1	15:AO:58:MET:CE	2.65	0.59
27:BA:271(T):C:O2'	27:BA:271(U):G:H5'	2.03	0.59
40:DR:100:LEU:HD21	40:DR:113:LEU:HD22	1.85	0.59
31:BE:72:VAL:O	31:BE:73:GLU:C	2.41	0.59
24:AX:73:A:H5'	24:AX:74:C:OP1	2.01	0.59
4:AD:54:TYR:HE1	4:AD:209:ARG:HD2	1.66	0.59
27:BA:2047:U:O2'	27:BA:2048:G:H5''	2.03	0.59
27:BA:519:U:H2'	27:BA:520:G:H8	1.67	0.59
1:AA:434:U:H2'	1:AA:435:C:C6	2.38	0.59
27:BA:2118:U:O2'	27:BA:2119:A:C5'	2.51	0.59
27:BA:706:A:C2	27:BA:707:G:H1'	2.38	0.59
1:CA:1477:C:O2'	1:CA:1478:C:H5'	2.03	0.59
27:BA:2770:G:H5'	27:BA:2771:C:OP2	2.03	0.59
12:CL:123:LYS:O	12:CL:125:ALA:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DN:42:TRP:HA	36:DN:42:TRP:CE3	2.37	0.59
1:AA:93:G:N3	1:AA:93:G:H2'	2.17	0.59
34:BH:71:LEU:N	34:BH:74:ASN:HD22	2.01	0.59
40:DR:75:LEU:O	40:DR:75:LEU:HD22	2.03	0.59
41:DS:67:ARG:HG2	41:DS:67:ARG:HH11	1.68	0.59
19:CS:52:TYR:HB2	19:CS:57:HIS:CE1	2.38	0.59
4:CD:61:LYS:NZ	4:CD:62:GLN:NE2	2.51	0.59
43:BU:92:ARG:CG	44:BV:11:GLN:NE2	2.65	0.59
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.85	0.59
27:DA:447:A:N7	27:DA:454:A:N6	2.50	0.59
20:AT:26:ASN:ND2	20:AT:26:ASN:N	2.41	0.59
27:BA:1022:G:O2'	27:BA:1024:G:N7	2.35	0.59
9:AI:96:LEU:HD11	9:AI:102:LEU:HB2	1.84	0.59
9:AI:7:THR:H	9:AI:83:ARG:HD2	1.68	0.59
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.85	0.59
1:AA:1363(A):A:H1'	1:AA:1365:G:N7	2.17	0.59
10:AJ:54:PHE:CD1	10:AJ:55:LYS:HE3	2.38	0.59
16:AP:26:ARG:NH1	16:AP:31:LYS:HB3	2.18	0.59
2:AB:140:HIS:HA	2:AB:143:GLU:HG3	1.84	0.59
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.84	0.59
27:BA:1644:C:O2'	27:BA:1645:G:H5'	2.02	0.59
1:AA:410:G:OP2	4:AD:25:ARG:HG3	2.03	0.59
6:AF:86:ARG:O	6:AF:87:ARG:HG2	2.03	0.59
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.38	0.59
27:BA:2262:U:OP2	49:B0:16:SER:HB2	2.03	0.59
27:BA:2577:A:H5''	27:BA:2578:G:H5'	1.84	0.59
27:DA:2870:C:H2'	27:DA:2871:C:C5'	2.27	0.59
27:DA:151:C:O2'	27:DA:152:G:H5'	2.02	0.59
12:AL:114:ARG:HD2	12:AL:119:THR:HG21	1.84	0.59
34:DH:150:ALA:C	34:DH:152:ARG:H	2.06	0.59
27:BA:2515:C:O2'	27:BA:2516:G:H5'	2.03	0.59
37:DO:65:THR:HA	37:DO:82:ASN:HD22	1.67	0.59
34:BH:86:GLU:CB	34:BH:132:ARG:NH1	2.65	0.59
25:CY:18:G:H22	25:CY:55:C:H42	1.49	0.59
25:CY:27:C:H2'	25:CY:28:G:H8	1.68	0.59
10:AJ:48:THR:HG23	10:AJ:62:HIS:HB3	1.84	0.59
27:DA:495:G:H21	45:DW:61:ASN:ND2	2.01	0.59
29:BC:49:ILE:CD1	29:BC:49:ILE:H	2.13	0.59
19:AS:12:ASP:O	19:AS:16:LEU:HD13	2.03	0.59
37:BO:13:ASN:HD21	37:BO:96:THR:CA	2.16	0.59
47:BY:67:LEU:HD12	47:BY:71:LYS:HE3	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:414:C:O2'	27:DA:415:A:H5'	2.02	0.59
25:CY:37:U:H2'	25:CY:38:U:H5''	1.85	0.59
30:BD:131:LEU:N	30:BD:131:LEU:HD12	2.17	0.59
27:BA:1848:A:H2'	27:BA:1849:G:C8	2.38	0.59
27:DA:1042:G:H1'	27:DA:1114:G:H22	1.67	0.59
31:BE:16:ARG:NH1	31:BE:16:ARG:HG3	2.18	0.59
25:AY:18:G:H5'	25:AY:19:U:C5	2.38	0.59
48:BZ:109:GLY:HA3	48:BZ:144:GLU:OE1	2.03	0.59
8:CH:89:PRO:HA	8:CH:92:ARG:HH11	1.67	0.59
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.23	0.59
27:DA:2533:A:O5'	27:DA:2533:A:H8	1.86	0.59
25:CY:42:G:H2'	25:CY:43:C:H5'	1.83	0.59
1:AA:655:A:O2'	1:AA:656:C:H5'	2.03	0.59
1:CA:1441:G:H4'	1:CA:1442:G:C8	2.38	0.59
2:CB:168:THR:HG23	2:CB:192:SER:OG	2.02	0.59
30:DD:223:GLY:O	30:DD:225:ALA:N	2.36	0.59
27:BA:2626:C:O2'	27:BA:2627:G:H5'	2.02	0.59
31:BE:112:GLY:O	31:BE:160:TYR:N	2.36	0.59
48:DZ:120:HIS:C	48:DZ:122:ASP:N	2.55	0.59
3:CC:186:PHE:CZ	3:CC:188:LEU:HD22	2.38	0.59
1:CA:484:G:H4'	1:CA:485:G:O5'	2.02	0.59
6:CF:98:LEU:HD12	6:CF:98:LEU:N	2.16	0.59
31:BE:56:PRO:HD2	31:BE:58:ARG:HG3	1.83	0.59
27:DA:199:A:N1	27:DA:2433:A:H2'	2.17	0.59
38:BP:33:ARG:O	38:BP:34:GLY:C	2.41	0.59
27:BA:1191:G:OP1	38:BP:35:HIS:CE1	2.56	0.59
1:CA:1321:C:C5	1:CA:1322:C:H2'	2.37	0.59
38:BP:16:ARG:HD3	38:BP:18:ARG:N	2.16	0.59
27:BA:2327:A:H2'	27:BA:2328:A:H8	1.60	0.59
27:DA:985:C:O2'	27:DA:986:C:H5'	2.03	0.59
43:DU:55:ARG:CA	43:DU:58:ARG:HB2	2.20	0.59
43:DU:89:GLU:HG3	44:DV:50:PRO:HG3	1.83	0.59
41:BS:77:ALA:O	41:BS:80:LEU:N	2.35	0.59
30:DD:92:ILE:H	30:DD:92:ILE:HD13	1.68	0.59
11:AK:41:THR:HG21	11:AK:71:LYS:HB2	1.84	0.59
27:BA:2317:C:H2'	27:BA:2318:G:C5'	2.24	0.59
27:DA:2551:C:H2'	27:DA:2552:U:C6	2.38	0.59
27:DA:2612:C:C4	27:DA:2613:U:H5	2.20	0.59
31:DE:81:ILE:O	31:DE:82:ARG:HB2	2.03	0.59
40:DR:67:LEU:HD11	40:DR:76:VAL:HG21	1.84	0.59
56:B7:8:ASN:HD21	56:B7:10:ARG:HB3	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BD:231:HIS:HD2	30:BD:249:PRO:HG3	1.67	0.59
46:BX:60:ARG:NH1	56:B7:47:ARG:NH2	2.50	0.59
1:AA:389:A:H2'	1:AA:390:C:H5'	1.84	0.59
1:CA:1002:G:N3	1:CA:1002:G:H2'	2.18	0.59
1:AA:751:U:H4'	15:AO:24:SER:CA	2.27	0.59
14:CN:7:ILE:HG22	14:CN:28:GLY:HA3	1.83	0.59
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.03	0.59
1:CA:1309:G:O6	1:CA:1328:C:N3	2.36	0.59
27:BA:553:G:O2'	27:BA:554:U:H5'	2.03	0.59
27:BA:1484:G:H3'	27:BA:1485:G:C5'	2.27	0.59
39:DQ:1:MET:CE	39:DQ:44:ALA:HB1	2.33	0.59
29:DC:37:PHE:O	29:DC:39:GLU:N	2.35	0.59
45:DW:73:ALA:HB3	45:DW:106:ILE:HD11	1.85	0.59
1:AA:38:G:C2	1:AA:397:A:C2	2.90	0.59
27:BA:88:G:N3	27:BA:88:G:H2'	2.17	0.59
13:AM:3:ARG:O	13:AM:4:ILE:HG13	2.03	0.59
13:AM:65:LYS:HB3	13:AM:70:LEU:HB2	1.85	0.59
27:DA:1504:C:H2'	27:DA:1505:C:C5'	2.28	0.59
7:AG:140:ASP:HA	7:AG:143:ARG:HH12	1.66	0.59
37:DO:35:VAL:HG21	37:DO:69:ILE:HD13	1.83	0.59
25:CY:24:C:H2'	25:CY:25:A:H8	1.68	0.59
45:DW:51:LEU:O	45:DW:54:ALA:N	2.36	0.59
1:CA:874:G:O2'	1:CA:875:C:H6	1.85	0.59
27:BA:1931:U:H2'	27:BA:1932:A:C8	2.38	0.59
24:CX:12:G:H1'	27:DA:1923:U:O2'	2.03	0.59
27:BA:2017:U:O2	54:B5:10:LYS:HB2	2.02	0.59
27:DA:2697:G:H1	27:DA:2710:C:H42	1.49	0.59
1:AA:113:G:H1'	1:AA:354:G:H5'	1.84	0.59
9:CI:114:TYR:CD2	9:CI:114:TYR:N	2.65	0.59
46:DX:5:TYR:N	46:DX:5:TYR:HD1	2.01	0.59
1:AA:1022:G:H2'	1:AA:1023:G:C8	2.38	0.59
1:AA:1030(D):A:H2'	1:AA:1031:G:H5'	1.85	0.59
50:B1:70:VAL:HG12	50:B1:71:TYR:N	2.18	0.59
3:CC:186:PHE:HD1	3:CC:198:VAL:O	1.84	0.59
54:D5:56:LYS:HG3	54:D5:59:GLU:OE1	2.03	0.59
43:BU:85:LYS:HD3	43:BU:117:GLN:HE22	1.67	0.59
27:DA:262:A:H2'	27:DA:263:C:H6	1.67	0.59
43:BU:35:ALA:O	43:BU:39:LEU:HG	2.03	0.59
1:CA:362:G:O5'	1:CA:362:G:H8	1.85	0.59
27:DA:249:C:H2'	27:DA:249:C:O2	2.01	0.59
25:CY:12:C:H2'	25:CY:13:A:O4'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1221:G:H4'	19:CS:53:ASN:O	2.03	0.58
33:BG:112:PRO:C	33:BG:113:ARG:NH1	2.50	0.58
1:AA:257:G:H2'	1:AA:258:G:H8	1.68	0.58
27:DA:1013:C:O2'	27:DA:1014:U:H5'	2.01	0.58
27:DA:42:G:H1	27:DA:436:C:N4	2.01	0.58
1:CA:525:C:H5''	12:CL:88:LYS:NZ	2.18	0.58
51:D2:21:LEU:HD13	51:D2:64:LEU:HA	1.85	0.58
27:DA:863:A:H2'	27:DA:864:G:H8	1.64	0.58
27:DA:902:C:H2'	27:DA:903:C:H6	1.68	0.58
11:AK:38:ASN:HD22	11:AK:38:ASN:N	2.01	0.58
7:CG:109:ASN:HA	7:CG:119:ARG:NH1	2.18	0.58
38:DP:87:ASP:C	38:DP:89:ALA:H	2.07	0.58
27:DA:2015:A:C2	54:D5:6:VAL:HG22	2.37	0.58
1:CA:1302:U:H5	13:CM:17:VAL:HG22	1.67	0.58
30:BD:75:ILE:O	30:BD:118:VAL:HG23	2.03	0.58
1:AA:976:G:P	14:AN:32:SER:H	2.26	0.58
2:AB:17:PHE:CD1	2:AB:44:LEU:HD21	2.37	0.58
40:DR:77:ARG:C	40:DR:79:LEU:N	2.57	0.58
42:DT:30:VAL:HG21	42:DT:83:ILE:HG13	1.84	0.58
19:AS:61:TYR:O	19:AS:62:ILE:CB	2.51	0.58
27:BA:1811:G:O2'	27:BA:1812:A:H5'	2.02	0.58
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.84	0.58
27:BA:1479:G:C4	27:BA:1480:G:C8	2.91	0.58
14:CN:24:CYS:H	14:CN:33:VAL:HG11	1.68	0.58
10:AJ:4:ILE:HG12	10:AJ:100:THR:HG22	1.84	0.58
1:CA:1310:G:H5'	13:CM:77:ASN:ND2	2.17	0.58
48:DZ:75:LEU:HD13	48:DZ:82:PRO:HA	1.85	0.58
29:BC:214:VAL:O	29:BC:215:THR:C	2.40	0.58
35:BI:101:LEU:HD12	35:BI:105:HIS:HB2	1.85	0.58
27:BA:1826:G:H4'	30:BD:242:ARG:CZ	2.33	0.58
33:DG:76:SER:CB	33:DG:83:ARG:HB2	2.33	0.58
32:BF:112:MET:O	32:BF:115:ALA:HB3	2.03	0.58
31:BE:134:ILE:O	31:BE:134:ILE:CG1	2.46	0.58
1:AA:826:C:C2	1:AA:827:U:C5	2.91	0.58
27:DA:2667:C:H1'	34:DH:109:PHE:HD2	1.68	0.58
39:BQ:52:VAL:HA	39:BQ:55:VAL:HG13	1.84	0.58
27:DA:1484:G:H5'	27:DA:1485:G:OP2	2.03	0.58
27:DA:2141:G:O2'	27:DA:2142:C:H5'	2.03	0.58
21:AU:9:ARG:NH1	21:AU:22:ARG:HG3	2.18	0.58
3:AC:84:ILE:HD13	3:AC:88:ARG:NH2	2.17	0.58
27:BA:200:U:H5'	27:BA:200:U:C6	2.30	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DW:23:LEU:HD21	45:DW:39:THR:HG21	1.84	0.58
7:AG:26:PHE:HB2	7:AG:62:PHE:HZ	1.67	0.58
1:CA:147:G:H1	1:CA:175:C:H42	1.49	0.58
27:BA:2778:A:H4'	27:BA:2779:U:OP2	2.03	0.58
27:DA:2092:U:C4	27:DA:2226:C:OP2	2.56	0.58
1:AA:848:C:H2'	1:AA:849:C:H6	1.66	0.58
2:CB:144:ARG:HA	2:CB:147:LYS:HB3	1.83	0.58
1:CA:334:C:O2'	1:CA:335:C:H5'	2.03	0.58
27:BA:2022:U:O2'	27:BA:2617:C:H5'	2.03	0.58
1:CA:793:U:O2	1:CA:1516:G:H4'	2.03	0.58
27:DA:1438:U:H5'	27:DA:1516:C:O2'	2.03	0.58
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.37	0.58
27:DA:1050:A:O2'	27:DA:1051:G:H8	1.85	0.58
54:B5:31:VAL:HB	54:B5:32:PRO:HD2	1.85	0.58
25:AY:51:G:H2'	25:AY:52:G:H8	1.68	0.58
43:BU:20:LEU:HB3	43:BU:39:LEU:HD11	1.84	0.58
27:BA:659:C:O2'	32:BF:101:LEU:HD12	2.03	0.58
1:CA:37:U:H2'	1:CA:38:G:H8	1.68	0.58
27:DA:1810:A:H2'	27:DA:1811:G:O4'	2.03	0.58
2:AB:217:ARG:O	2:AB:221:LEU:HD23	2.03	0.58
27:BA:246:C:N4	57:B8:8:LYS:HG2	2.17	0.58
27:BA:673:C:C6	27:BA:673:C:H5''	2.37	0.58
44:BV:2:PHE:O	44:BV:14:VAL:O	2.22	0.58
42:BT:79:HIS:O	42:BT:81:PRO:CD	2.40	0.58
27:DA:918:A:C2	27:DA:919:G:H1'	2.38	0.58
31:DE:55:ASN:O	31:DE:57:LYS:N	2.35	0.58
27:DA:2403:C:N3	27:DA:2415:G:C2	2.71	0.58
36:BN:62:VAL:HG11	36:BN:67:LEU:CG	2.33	0.58
45:BW:13:SER:O	45:BW:16:LYS:HB2	2.02	0.58
9:AI:96:LEU:CD1	9:AI:102:LEU:HB2	2.33	0.58
1:AA:1060:C:H5'	14:AN:45:ARG:NH2	2.18	0.58
42:DT:60:THR:O	42:DT:61:PHE:HB3	2.01	0.58
19:AS:32:LYS:HB3	19:AS:57:HIS:CE1	2.38	0.58
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.17	0.58
41:DS:17:ARG:HA	41:DS:20:ARG:CZ	2.33	0.58
27:BA:2377:A:H4'	41:BS:107:GLU:HB3	1.84	0.58
15:CO:82:ILE:O	15:CO:82:ILE:HD13	2.03	0.58
47:BY:88:LYS:O	47:BY:90:LEU:HG	2.03	0.58
27:DA:1655:A:H3'	27:DA:1656:C:H6	1.68	0.58
12:AL:119:THR:CG2	12:AL:120:LYS:N	2.65	0.58
3:CC:34:LEU:HD23	3:CC:35:GLU:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:353:A:H5'	1:CA:353:A:H8	1.68	0.58
54:D5:45:VAL:O	54:D5:46:CYS:C	2.41	0.58
27:DA:2830:G:O2'	27:DA:2831:G:H5'	2.03	0.58
1:AA:851:G:H2'	1:AA:852:G:H8	1.68	0.58
32:DF:167:ALA:HB1	32:DF:173:VAL:CG1	2.33	0.58
34:DH:157:TYR:O	34:DH:158:HIS:HB2	2.03	0.58
27:DA:1472:A:H2'	27:DA:1473:G:O4'	2.03	0.58
13:CM:88:ARG:HA	13:CM:98:VAL:HG12	1.84	0.58
12:AL:68:PRO:HG3	12:AL:96:HIS:CD2	2.38	0.58
27:BA:519:U:H2'	27:BA:520:G:C8	2.38	0.58
32:BF:46:ARG:HB3	32:BF:48:THR:CG2	2.34	0.58
27:BA:406:G:H1	27:BA:421:U:H3	1.51	0.58
36:DN:30:ILE:HG23	36:DN:52:VAL:HG11	1.85	0.58
50:B1:64:ALA:HA	50:B1:67:ILE:CD1	2.33	0.58
1:AA:563:A:H2'	1:AA:563:A:N3	2.19	0.58
1:AA:1028:C:H42	1:AA:1034:G:H21	1.50	0.58
53:D4:44:CYS:SG	53:D4:44:CYS:O	2.61	0.58
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.38	0.58
27:DA:1631(A):A:O2'	27:DA:1632:A:H5'	2.03	0.58
1:AA:574:A:N3	1:AA:883:C:H1'	2.18	0.58
24:AX:58:A:H4'	24:AX:59:A:OP1	2.03	0.58
11:CK:125:PHE:H	11:CK:125:PHE:HD1	1.51	0.58
1:AA:1255:G:O3'	1:AA:1258:G:H1'	2.03	0.58
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.37	0.58
45:BW:68:ARG:HH12	45:BW:111:HIS:CD2	2.21	0.58
27:BA:607:U:P	32:BF:103:LYS:HG3	2.42	0.58
38:BP:59:LEU:CA	38:BP:61:ARG:CZ	2.55	0.58
32:BF:20:LEU:HD13	32:BF:203:GLN:NE2	2.16	0.58
47:BY:77:PRO:O	47:BY:78:ALA:HB2	2.02	0.58
30:DD:241:PRO:O	30:DD:242:ARG:C	2.40	0.58
53:B4:40:ILE:HG23	53:B4:59:VAL:HG21	1.85	0.58
47:BY:46:LYS:HE2	47:BY:47:LYS:HE3	1.84	0.58
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.24	0.58
27:DA:399:G:O2'	27:DA:400:G:H5'	2.04	0.58
42:BT:65:LYS:HG3	42:BT:66:VAL:N	2.19	0.58
43:DU:76:TYR:C	43:DU:78:THR:H	2.07	0.58
43:DU:95:LEU:HD13	44:DV:4:ILE:HG23	1.86	0.58
51:D2:49:LYS:O	51:D2:52:ASP:HB2	2.03	0.58
27:DA:862:G:H21	28:DB:101:G:H1'	1.67	0.58
27:DA:627:A:N6	38:DP:84:ASN:HD21	2.00	0.58
27:DA:531:C:C5	27:DA:2035:G:C2	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:530:G:O2'	1:AA:531:U:OP2	2.19	0.58
27:DA:2334:G:O2'	41:DS:18:ILE:HG21	2.03	0.58
1:CA:189(D):C:H2'	1:CA:189(E):U:O4'	2.02	0.58
27:BA:786:C:C4	27:BA:787:U:C5	2.90	0.58
27:BA:2756:U:H5''	58:B9:19:ARG:HB3	1.86	0.58
46:DX:12:VAL:CG2	46:DX:13:LEU:H	1.89	0.58
1:AA:460:G:O6	1:AA:470:C:H5''	2.02	0.58
27:BA:1315:C:C2'	27:BA:1316:U:H5'	2.33	0.58
1:CA:232:G:H2'	1:CA:233:C:C6	2.39	0.58
20:CT:79:ARG:O	20:CT:80:ARG:C	2.42	0.58
1:AA:1424:C:N4	1:AA:1476:G:H1	1.98	0.58
27:BA:2171:A:O2'	27:BA:2172:U:O5'	2.19	0.58
36:DN:16:ILE:HG23	36:DN:54:VAL:HG23	1.86	0.58
56:D7:12:ARG:HD3	56:D7:46:VAL:HG21	1.84	0.58
1:AA:489:C:H2'	1:AA:490:G:H8	1.68	0.58
57:B8:37:SER:OG	57:B8:39:LYS:HB3	2.04	0.58
33:DG:126:ASP:C	33:DG:128:ARG:H	2.06	0.58
1:AA:1330:U:OP1	13:AM:22:ILE:O	2.21	0.58
16:CP:58:TYR:O	16:CP:60:LEU:N	2.37	0.58
3:AC:84:ILE:HA	3:AC:87:LEU:HD12	1.84	0.58
27:DA:220:G:H22	27:DA:427:U:H2'	1.68	0.58
45:DW:43:GLY:O	45:DW:47:VAL:HG23	2.03	0.58
48:DZ:6:ALA:CB	48:DZ:58:LEU:HB3	2.32	0.58
27:DA:1947:C:N4	27:DA:1959:G:H1	1.99	0.58
4:AD:98:GLU:C	4:AD:100:ARG:H	2.05	0.58
27:BA:709:U:N3	27:BA:710:G:N7	2.50	0.58
27:DA:1336:A:H2'	27:DA:1337:G:H8	1.68	0.58
28:BB:91:C:C2'	28:BB:92:C:O5'	2.50	0.58
13:CM:58:GLU:O	13:CM:62:ASN:OD1	2.22	0.58
1:AA:1168:A:H2'	1:AA:1169:A:C8	2.38	0.58
1:CA:1256:A:N6	1:CA:1278:U:O2	2.35	0.58
1:CA:60:A:H5''	1:CA:331:G:N2	2.18	0.58
1:CA:59:A:H4'	1:CA:388:G:OP1	2.04	0.58
48:DZ:117:GLN:HG2	48:DZ:118:GLU:H	1.68	0.58
27:DA:1515:G:H2'	27:DA:1516:C:H5'	1.86	0.58
30:DD:261:LYS:HZ1	30:DD:263:ARG:HH12	1.50	0.58
12:AL:3:THR:N	12:AL:6:GLN:HE21	2.00	0.58
12:AL:3:THR:HG23	12:AL:6:GLN:NE2	2.18	0.58
27:BA:1698:A:O4'	27:BA:1700:A:H4'	2.03	0.58
30:DD:228:PRO:HD3	30:DD:235:GLY:N	2.19	0.58
17:CQ:62:SER:HB2	17:CQ:72:ARG:HG3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.86	0.58
32:BF:154:VAL:HG22	32:BF:191:ARG:HB2	1.85	0.58
23:AW:18:G:H1'	23:AW:19:U:O2	2.03	0.58
2:CB:67:THR:O	2:CB:68:ILE:HD13	2.03	0.58
50:D1:24:ALA:HB3	50:D1:27:GLU:OE2	2.03	0.58
39:BQ:19:GLY:O	39:BQ:20:ALA:HB3	2.04	0.58
1:CA:979:C:C5	1:CA:980:C:H6	2.20	0.58
47:BY:6:HIS:N	47:BY:6:HIS:ND1	2.51	0.58
27:DA:1934:C:H2'	27:DA:1935:G:H8	1.67	0.58
53:B4:42:CYS:SG	53:B4:62:CYS:HB3	2.43	0.58
53:B4:62:CYS:SG	53:B4:64:LYS:HB2	2.43	0.58
41:DS:97:ARG:NH2	41:DS:99:LYS:H	2.00	0.58
27:DA:1614:A:H2'	27:DA:1615:C:H5'	1.85	0.58
38:DP:39:LYS:CA	38:DP:39:LYS:HE2	2.29	0.58
46:DX:25:LYS:HZ1	46:DX:80:ILE:HD11	1.66	0.58
31:DE:37:ARG:HB2	31:DE:46:ALA:N	2.18	0.58
4:CD:68:TYR:O	4:CD:70:ILE:N	2.37	0.58
42:DT:88:ILE:CG2	42:DT:89:VAL:H	1.98	0.58
32:DF:187:VAL:HB	38:DP:7:ARG:HH21	1.68	0.58
32:DF:36:VAL:O	32:DF:39:TRP:HB3	2.04	0.58
6:AF:62:TRP:HH2	6:AF:64:GLN:HB2	1.60	0.58
42:BT:23:ARG:HA	42:BT:52:ILE:CD1	2.33	0.58
9:CI:79:LEU:CD2	9:CI:102:LEU:HA	2.33	0.58
51:D2:16:LEU:H	51:D2:67:LYS:HZ1	1.51	0.58
18:AR:53:ARG:NH1	18:AR:53:ARG:HG2	2.17	0.58
35:DI:107:VAL:CG1	35:DI:108:THR:H	2.12	0.58
35:BI:113:ARG:O	35:BI:130:TYR:HA	2.04	0.58
54:B5:50:GLY:HA3	54:B5:56:LYS:HB3	1.85	0.58
39:BQ:135:ASP:C	39:BQ:137:TYR:N	2.54	0.58
8:CH:37:ARG:O	8:CH:40:ALA:HB3	2.04	0.58
47:BY:2:ARG:CD	47:BY:3:VAL:HG23	2.32	0.58
1:CA:735:C:H2'	1:CA:736:C:C6	2.30	0.58
50:D1:7:ILE:HB	50:D1:62:VAL:CG2	2.34	0.58
52:D3:7:LYS:CG	52:D3:8:LEU:H	2.13	0.58
13:AM:91:ARG:HH22	13:AM:103:THR:CG2	2.16	0.58
11:CK:69:ALA:HB1	11:CK:73:MET:HE2	1.85	0.58
27:DA:2114:A:H2	27:DA:2168:G:O4'	1.86	0.58
27:DA:2111:C:H42	27:DA:2147:G:N2	2.00	0.58
1:AA:806:C:H2'	1:AA:807:A:H8	1.67	0.58
1:AA:312:C:H2'	1:AA:313:A:C8	2.39	0.58
46:DX:10:ALA:O	46:DX:28:PHE:HB3	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CX:56:C:H2'	24:CX:57:A:C8	2.38	0.58
27:BA:1907:G:O2'	27:BA:1908:C:H5'	2.03	0.58
30:DD:89:SER:HB2	30:DD:159:ALA:HB2	1.85	0.58
27:DA:1805:U:H5''	30:DD:250:TRP:CD2	2.37	0.58
5:CE:148:VAL:HG12	5:CE:152:ARG:HE	1.67	0.58
1:AA:144:G:H2'	1:AA:145:G:H8	1.69	0.58
27:BA:812:C:OP1	27:BA:1251:C:H5'	2.03	0.58
27:BA:2431:U:O2	27:BA:2433:A:C8	2.56	0.58
27:BA:608:A:P	32:BF:100:THR:HG21	2.43	0.58
32:BF:123:LEU:HD13	32:BF:192:LEU:HD22	1.84	0.58
31:BE:101:ARG:NH2	31:BE:171:GLU:HB2	2.17	0.58
1:AA:909:A:H2'	1:AA:910:C:H5'	1.84	0.58
52:B3:30:ARG:HD3	52:B3:30:ARG:H	1.68	0.58
43:BU:101:ARG:C	43:BU:102:GLU:HG2	2.23	0.58
1:CA:722:A:N3	1:CA:722:A:H2'	2.17	0.58
27:DA:1252:G:H8	27:DA:1252:G:OP1	1.85	0.58
27:DA:2262:U:H2'	27:DA:2263:C:C6	2.38	0.58
27:DA:635:C:H2'	27:DA:636:G:C8	2.38	0.58
38:DP:83:VAL:HG23	38:DP:87:ASP:OD2	2.02	0.58
31:DE:116:VAL:HG21	31:DE:122:PHE:CD2	2.38	0.58
27:DA:704:G:H1'	27:DA:727:A:H62	1.68	0.58
1:CA:219:C:H2'	1:CA:220:G:O4'	2.04	0.58
1:AA:963:G:H21	10:AJ:55:LYS:NZ	2.01	0.58
27:DA:1244:G:H4'	38:DP:11:GLY:CA	2.30	0.58
41:BS:106:ARG:CZ	41:BS:107:GLU:O	2.52	0.58
1:AA:723:U:O2'	1:AA:724:G:C5'	2.51	0.58
6:AF:53:ALA:HB3	6:AF:86:ARG:CZ	2.33	0.58
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.38	0.58
8:CH:7:ALA:HB2	8:CH:85:ARG:HG3	1.86	0.58
27:DA:2126:A:H5''	29:DC:36:LYS:CE	2.30	0.58
36:DN:22:THR:HA	36:DN:60:ILE:CG2	2.33	0.58
27:BA:2012:G:O3'	45:BW:96:ILE:CD1	2.48	0.58
31:DE:110:GLY:O	40:DR:2:ARG:CZ	2.51	0.58
1:AA:501:C:O2'	1:AA:502:G:H5'	2.03	0.58
37:DO:53:LYS:O	37:DO:55:GLY:N	2.36	0.58
33:DG:57:ALA:HB2	33:DG:90:LEU:HD11	1.84	0.58
27:DA:850:C:H2'	27:DA:851:U:C6	2.38	0.58
27:BA:848:G:H8	27:BA:848:G:H5'	1.69	0.58
1:CA:1116:C:C2'	1:CA:1117:G:H5''	2.33	0.58
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.85	0.58
34:DH:54:ARG:O	34:DH:54:ARG:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1179:C:H2'	27:BA:1180:C:H6	1.69	0.58
1:CA:686:U:H3	1:CA:703:G:N2	2.00	0.58
50:D1:6:GLU:O	50:D1:7:ILE:HD12	2.04	0.58
2:CB:215:LEU:O	2:CB:219:VAL:HG23	2.03	0.58
42:DT:16:ARG:O	42:DT:17:THR:CB	2.50	0.58
1:CA:1246:C:O2'	1:CA:1247:U:H5'	2.03	0.58
51:B2:7:ARG:O	51:B2:11:GLU:HG3	2.04	0.58
5:AE:72:GLN:NE2	5:AE:144:THR:HG22	2.19	0.58
27:BA:1678:G:N2	27:BA:1989:G:H22	2.02	0.58
3:AC:7:PRO:O	3:AC:11:ARG:CG	2.51	0.58
48:BZ:107:PRO:HG3	48:BZ:116:LEU:HB2	1.86	0.58
17:CQ:94:ASN:O	17:CQ:98:LEU:HD12	2.03	0.58
27:BA:146:G:C2'	27:BA:147:U:H5'	2.33	0.58
3:AC:140:ARG:HH11	3:AC:140:ARG:HG3	1.69	0.58
19:CS:32:LYS:CE	19:CS:32:LYS:N	2.65	0.58
34:BH:121:ILE:HD12	34:BH:144:VAL:HG21	1.86	0.58
27:DA:1790:C:H5''	27:DA:1791:A:OP1	2.03	0.58
4:CD:203:VAL:O	4:CD:206:PHE:HB3	2.04	0.58
27:DA:389:G:H8	27:DA:389:G:O5'	1.87	0.58
44:DV:95:LEU:HD22	44:DV:97:LYS:HZ3	1.66	0.58
27:DA:2371:G:H4'	55:D6:45:LYS:CB	2.34	0.58
27:DA:750:A:H2'	27:DA:750:A:N3	2.18	0.58
27:BA:1021:A:C3'	27:BA:1021:A:C8	2.80	0.58
42:DT:31:SER:HB2	42:DT:32:TYR:CD2	2.38	0.58
46:BX:63:LYS:HE3	46:BX:72:LYS:CE	2.24	0.58
20:CT:54:LYS:HA	20:CT:57:ARG:HH22	1.69	0.58
27:DA:2125:G:N2	27:DA:2174:C:N4	2.52	0.58
4:CD:150:GLU:O	4:CD:153:ARG:HG3	2.04	0.58
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.68	0.58
10:AJ:3:LYS:O	10:AJ:100:THR:HG22	2.03	0.58
27:DA:1602:U:H3'	27:DA:1603:A:H5''	1.83	0.58
27:DA:1655:A:H2'	27:DA:1656:C:O4'	2.04	0.58
27:DA:2311:A:H5''	27:DA:2312:U:OP2	2.03	0.58
35:DI:77:LEU:O	35:DI:140:LEU:HD12	2.02	0.58
1:AA:875:C:O2	8:AH:15:ASN:ND2	2.32	0.58
27:BA:1114:G:C2'	27:BA:1115:G:H5''	2.34	0.58
1:CA:739:C:O2	15:CO:42:HIS:HE1	1.87	0.58
6:CF:72:VAL:HG22	6:CF:72:VAL:O	2.02	0.58
1:AA:203:U:H6	1:AA:203:U:OP2	1.87	0.58
50:B1:19:GLN:NE2	50:B1:19:GLN:CA	2.65	0.58
3:AC:47:LEU:O	3:AC:47:LEU:HD12	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:771:G:O2'	1:CA:772:U:H5'	2.03	0.58
28:BB:7:G:N2	41:BS:38:GLN:HE22	2.01	0.58
27:BA:1607:C:C4'	27:BA:1608:A:O5'	2.51	0.58
27:DA:1164:G:H2'	27:DA:1165:U:H6	1.67	0.58
13:AM:100:GLY:C	13:AM:101:GLN:HG3	2.24	0.58
1:AA:642:A:H2'	1:AA:643:C:C6	2.38	0.58
27:BA:518:G:H2'	27:BA:519:U:C5	2.38	0.58
43:BU:13:LYS:O	43:BU:16:LYS:HB3	2.04	0.58
36:BN:125:GLY:HA3	36:BN:126:PRO:O	2.04	0.58
49:B0:31:VAL:HB	49:B0:35:ASN:ND2	2.18	0.58
1:CA:31:G:H22	1:CA:47:C:H4'	1.68	0.58
1:CA:1119:C:O5'	1:CA:1119:C:H6	1.87	0.58
27:DA:350:U:H2'	27:DA:351:G:O4'	2.03	0.58
36:DN:35:ARG:O	36:DN:49:GLY:HA2	2.03	0.58
1:AA:711:G:H2'	1:AA:712:A:H8	1.69	0.58
35:DI:129:THR:O	35:DI:130:TYR:CB	2.52	0.58
27:DA:817:C:H2'	27:DA:818:G:O4'	2.03	0.58
34:DH:27:LYS:HG2	34:DH:32:GLU:HB2	1.84	0.58
27:DA:275:G:O3'	27:DA:279:C:P	2.61	0.58
3:AC:38:ARG:HD3	3:AC:94:LEU:HD22	1.85	0.58
27:DA:1037:G:H1	27:DA:1118:C:H42	1.51	0.58
28:DB:103:G:O2'	28:DB:104:U:H5'	2.03	0.58
27:DA:1317:A:H2'	27:DA:1318:C:C6	2.39	0.58
27:BA:1293:C:H2'	27:BA:1294:U:H6	1.68	0.58
27:BA:2809:A:C2	27:BA:2892:A:N3	2.72	0.58
47:BY:95:LYS:HG2	47:BY:100:ALA:HA	1.85	0.58
4:CD:15:GLU:OE2	4:CD:66:ARG:NH1	2.37	0.58
4:CD:61:LYS:HZ3	4:CD:62:GLN:NE2	2.02	0.58
13:CM:66:LEU:HA	13:CM:70:LEU:HB2	1.85	0.58
31:BE:52:LEU:HG	42:BT:1:MET:HE1	1.84	0.58
19:CS:44:MET:N	19:CS:44:MET:SD	2.77	0.58
1:AA:921:U:O2	5:AE:19:MET:HB2	2.04	0.58
27:DA:996:A:O2'	43:DU:92:ARG:HB3	2.03	0.58
41:DS:87:PHE:HB2	41:DS:106:ARG:HH12	1.67	0.58
55:D6:51:GLU:O	55:D6:52:VAL:CB	2.51	0.58
33:DG:32:PRO:HB3	33:DG:172:LEU:HD22	1.84	0.58
27:DA:531:C:OP1	27:DA:561:G:N1	2.36	0.58
45:DW:92:ARG:O	45:DW:93:ALA:HB3	2.04	0.58
36:BN:93:THR:O	36:BN:94:HIS:HB2	2.04	0.58
1:AA:971:G:N2	1:AA:1363(A):A:OP2	2.34	0.58
1:AA:300:A:H2'	1:AA:301:G:O4'	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DF:32:LEU:CD1	32:DF:112:MET:HE1	2.30	0.58
14:CN:21:TYR:HD2	14:CN:22:THR:O	1.87	0.58
14:CN:47:LEU:HB2	14:CN:53:LEU:HD11	1.86	0.58
8:CH:10:LEU:HD23	8:CH:83:ILE:CG1	2.31	0.58
5:CE:20:GLN:O	5:CE:21:ALA:O	2.21	0.58
1:AA:37:U:H3	1:AA:397:A:H61	1.52	0.58
19:CS:63:THR:HG22	19:CS:66:MET:CE	2.34	0.58
27:DA:848:G:C8	27:DA:848:G:H5'	2.39	0.58
30:BD:209:ALA:O	30:BD:213:ARG:HG2	2.03	0.58
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.06	0.58
1:AA:663:A:O2'	1:AA:664:G:H5'	2.03	0.58
27:DA:2835:A:N6	27:DA:2878:U:H3'	2.18	0.58
27:DA:783:A:H2'	27:DA:784:A:C4'	2.32	0.58
31:BE:71:GLY:O	31:BE:72:VAL:C	2.41	0.58
10:CJ:5:ARG:HD2	10:CJ:7:LYS:HE2	1.84	0.58
15:CO:12:ILE:C	15:CO:14:GLU:H	2.05	0.58
27:BA:154(A):C:N4	27:BA:172:C:H42	1.96	0.58
27:BA:2048:G:H2'	27:BA:2049:G:O4'	2.04	0.58
1:AA:954:G:H21	1:AA:1227:A:N6	2.00	0.58
13:CM:96:LEU:C	13:CM:110:ARG:HD3	2.23	0.58
1:AA:198:G:H2'	1:AA:199:G:C8	2.39	0.58
5:AE:11:ILE:HG21	5:AE:105:VAL:CG2	2.33	0.58
27:BA:2690:C:N4	27:BA:2713:A:O2'	2.36	0.58
11:AK:42:TRP:O	11:AK:43:SER:HB2	2.02	0.58
1:CA:475:G:H2'	1:CA:476:G:C8	2.35	0.58
27:DA:1887:C:H2'	27:DA:1888:G:H5''	1.85	0.58
17:AQ:27:PHE:CD1	17:AQ:28:PRO:O	2.56	0.58
6:AF:50:TYR:OH	18:AR:74:ARG:O	2.14	0.58
1:AA:321:A:C2	1:AA:333:G:C2	2.92	0.58
25:AY:51:G:H2'	25:AY:52:G:C8	2.38	0.58
16:CP:52:ASP:OD1	16:CP:55:ARG:HG2	2.04	0.58
1:CA:904:C:H2'	1:CA:905:U:C6	2.38	0.58
12:AL:40:VAL:HG23	12:AL:41:THR:N	2.17	0.58
13:AM:27:LYS:HE3	13:AM:31:LYS:HE3	1.84	0.58
27:BA:2088:G:C6	27:BA:2089:U:C4	2.92	0.58
29:DC:194:ARG:C	29:DC:196:LEU:H	2.07	0.58
27:DA:696:G:C2	27:DA:767:U:O2	2.56	0.58
57:B8:10:ALA:O	57:B8:12:LYS:N	2.37	0.58
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.37	0.58
1:AA:19:C:H1'	1:AA:864:A:H1'	1.85	0.58
27:DA:1155:A:C5	27:DA:1157:G:N7	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:59:VAL:HG21	31:DE:63:LEU:HG	1.85	0.58
49:D0:20:ARG:NH1	49:D0:20:ARG:CG	2.58	0.58
47:BY:14:LEU:HD12	47:BY:15:VAL:H	1.69	0.58
27:DA:803:U:O2'	27:DA:804:A:H5'	2.04	0.58
55:B6:41:PRO:CD	55:B6:46:HIS:CA	2.82	0.58
55:B6:48:VAL:O	55:B6:49:HIS:HB2	2.03	0.58
27:BA:1499:C:O2	27:BA:1499:C:H2'	2.03	0.58
30:BD:36:PRO:HB2	30:BD:61:LEU:CD1	2.34	0.58
1:AA:1220:G:H2'	1:AA:1221:G:C8	2.34	0.58
14:AN:26:ARG:NH2	14:AN:47:LEU:HD21	2.18	0.58
1:AA:1059:C:O3'	14:AN:45:ARG:NH2	2.36	0.58
12:CL:32:GLY:HA3	12:CL:57:LEU:HD13	1.85	0.58
16:AP:21:VAL:HG21	16:AP:59:TRP:CD2	2.39	0.58
41:DS:90:GLY:C	41:DS:92:TYR:N	2.57	0.58
31:BE:4:ILE:HG22	31:BE:198:VAL:O	2.04	0.58
2:AB:18:GLY:H	2:AB:42:ILE:CG2	2.07	0.58
33:DG:62:LEU:O	33:DG:143:GLU:HG3	2.04	0.58
36:DN:51:PHE:CZ	36:DN:119:ARG:HD2	2.38	0.58
1:AA:457:C:H2'	1:AA:458:C:H6	1.69	0.58
46:BX:27:THR:HB	46:BX:80:ILE:HB	1.85	0.58
1:CA:677:U:H3	1:CA:714:G:N2	1.99	0.58
1:CA:994:A:H2	14:CN:4:LYS:HG3	1.68	0.58
27:BA:2869:G:H2'	27:BA:2870:C:C6	2.39	0.58
8:CH:10:LEU:HD13	8:CH:85:ARG:HG2	1.85	0.58
48:DZ:75:LEU:HD13	48:DZ:82:PRO:CA	2.33	0.58
1:CA:1500:A:OP2	1:CA:1505:G:OP1	2.22	0.58
31:DE:110:GLY:HA2	31:DE:162:ALA:N	2.19	0.58
54:B5:56:LYS:H	54:B5:56:LYS:CD	2.12	0.58
27:DA:662:G:C5'	38:DP:18:ARG:HA	2.32	0.58
27:BA:74:A:H4'	27:BA:75:G:O5'	2.03	0.58
13:AM:83:ASP:C	13:AM:85:GLY:N	2.55	0.58
37:BO:64:ARG:NH1	37:BO:81:ASP:OD2	2.36	0.58
35:BI:31:LEU:HD12	35:BI:31:LEU:N	2.19	0.58
27:BA:2695:C:H2'	27:BA:2696:U:H6	1.68	0.58
33:DG:109:VAL:O	33:DG:112:PRO:HB2	2.02	0.58
3:AC:83:ARG:O	3:AC:87:LEU:HG	2.04	0.58
27:DA:2466:C:OP1	58:D9:4:ARG:HB2	2.03	0.58
6:CF:4:TYR:N	6:CF:65:VAL:O	2.36	0.58
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.39	0.58
19:AS:11:VAL:HG22	19:AS:16:LEU:HD11	1.86	0.58
1:AA:275:G:O2'	1:AA:276:G:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:31:SER:HG	43:BU:34:LYS:H	1.51	0.58
32:DF:143:ALA:O	32:DF:146:ALA:HB3	2.03	0.58
36:DN:89:LYS:HB3	36:DN:89:LYS:NZ	2.17	0.58
27:DA:2725:A:O2'	27:DA:2726:U:O5'	2.22	0.58
4:AD:170:VAL:CG1	4:AD:171:GLY:H	2.16	0.58
1:CA:107:G:C2'	1:CA:108:G:H5'	2.33	0.58
27:BA:1227:G:OP1	43:BU:13:LYS:HE3	2.03	0.58
42:DT:67:SER:O	42:DT:68:TYR:HB2	2.02	0.58
40:BR:76:VAL:HG12	40:BR:77:ARG:H	1.68	0.58
35:BI:16:GLY:HA2	35:BI:47:LEU:HD11	1.86	0.58
1:CA:442:C:C5	1:CA:443:C:H5	2.22	0.58
1:AA:636:U:O2'	1:AA:637:G:H5'	2.03	0.58
27:DA:1876:A:H2'	27:DA:1877:A:C8	2.39	0.58
1:CA:419:C:H42	1:CA:424:G:H1	1.48	0.58
27:BA:2829:C:H2'	27:BA:2830:G:H8	1.69	0.58
1:CA:1046:A:H3'	1:CA:1047:G:C8	2.39	0.58
27:DA:731:C:O2	27:DA:731:C:H2'	2.03	0.58
24:AX:59:A:O2'	24:AX:60:U:O5'	2.21	0.58
30:DD:75:ILE:O	30:DD:76:PRO:O	2.21	0.58
58:B9:20:HIS:N	58:B9:20:HIS:ND1	2.51	0.58
40:BR:8:ARG:NE	40:BR:8:ARG:HA	2.18	0.58
27:DA:693:C:O2'	27:DA:694:U:H5'	2.03	0.58
27:DA:789:A:O3'	27:DA:1781:C:N4	2.37	0.58
38:BP:29:LYS:HD2	38:BP:29:LYS:N	2.19	0.58
27:DA:240:G:H3'	27:DA:241:A:H8	1.69	0.58
4:CD:199:ASN:O	4:CD:200:GLU:C	2.41	0.58
31:BE:78:LEU:CD2	31:BE:78:LEU:N	2.61	0.58
32:BF:68:LYS:O	32:BF:70:THR:N	2.35	0.58
43:BU:69:CYS:O	43:BU:74:LEU:CD1	2.52	0.58
44:BV:19:LYS:HE2	44:BV:19:LYS:HA	1.86	0.58
1:CA:1254:C:H41	10:CJ:43:ARG:NH1	2.01	0.58
41:BS:56:LEU:HD22	41:BS:58:LEU:CD1	2.34	0.58
27:DA:1493:C:O2	27:DA:1493:C:C2'	2.51	0.58
30:DD:69:ARG:HD2	30:DD:130:ALA:CB	2.34	0.58
27:DA:729:G:C8	30:DD:208:LYS:HE2	2.39	0.58
31:DE:89:ASP:O	31:DE:90:THR:HB	2.03	0.58
27:DA:2416:C:H2'	27:DA:2417:C:C6	2.38	0.58
27:DA:1669:A:C2	27:DA:1994:C:H1'	2.39	0.58
10:AJ:50:ILE:HD13	10:AJ:60:ARG:HD3	1.84	0.58
8:AH:58:TYR:O	8:AH:59:LEU:HD23	2.04	0.58
27:BA:2591:C:H2'	27:BA:2592:G:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:19:C:N4	27:DA:521:G:H1	2.01	0.58
2:CB:96:ARG:N	2:CB:96:ARG:HD2	2.06	0.58
36:DN:132:ALA:O	36:DN:133:GLN:HB3	2.04	0.58
34:BH:109:PHE:HE1	34:BH:152:ARG:CZ	2.16	0.58
3:CC:84:ILE:HD11	3:CC:101:LEU:HD22	1.84	0.58
27:DA:2478:A:H5'	58:D9:31:LYS:NZ	2.18	0.58
1:CA:538:G:H4'	12:CL:111:LYS:HD3	1.86	0.58
49:B0:37:LEU:O	49:B0:38:VAL:HG23	2.03	0.58
30:BD:149:PRO:O	30:BD:150:LYS:HB2	2.02	0.58
9:CI:26:VAL:HG13	9:CI:61:ALA:O	2.03	0.58
27:BA:2357:U:O2'	27:BA:2358:G:H5''	2.04	0.58
30:BD:10:THR:HG23	30:BD:13:ARG:HB3	1.84	0.58
27:BA:850:C:O2'	52:B3:46:ASN:ND2	2.37	0.58
1:AA:1004:A:H5''	1:AA:1025:U:N3	2.15	0.58
4:AD:153:ARG:CZ	4:AD:181:MET:HG3	2.34	0.58
50:B1:19:GLN:HA	50:B1:19:GLN:HE21	1.69	0.58
1:CA:873:A:H4'	1:CA:874:G:OP2	2.03	0.58
1:AA:1085:U:C4'	1:AA:1086:U:OP2	2.52	0.58
38:BP:7:ARG:O	38:BP:10:PRO:HD2	2.04	0.58
37:BO:105:GLU:HA	37:BO:108:GLU:OE2	2.03	0.58
27:DA:2001:A:H2'	27:DA:2002:G:C8	2.38	0.58
1:AA:1225:A:H5''	13:AM:103:THR:CG2	2.34	0.58
42:DT:16:ARG:CB	42:DT:19:LEU:HD11	2.34	0.58
36:BN:58:ASP:O	36:BN:59:LYS:CB	2.50	0.58
27:DA:1589:C:O2'	27:DA:1590:U:H5'	2.03	0.58
43:BU:8:VAL:CG1	43:BU:12:ARG:NE	2.65	0.58
11:AK:44:SER:OG	11:AK:47:VAL:HG23	2.04	0.58
27:DA:706:A:H2'	27:DA:707:G:O5'	2.04	0.58
46:DX:5:TYR:CD2	51:D2:30:ARG:HA	2.39	0.58
27:DA:2236:C:O2'	27:DA:2237:G:H5'	2.04	0.58
10:AJ:90:LEU:H	10:AJ:91:PRO:HD3	1.68	0.58
30:DD:70:TRP:O	30:DD:73:VAL:HG22	2.03	0.58
29:BC:169:GLY:O	29:BC:171:ILE:N	2.37	0.58
30:DD:226:MET:HB3	30:DD:230:ASP:HB2	1.84	0.58
13:CM:10:PRO:CG	13:CM:18:ALA:HB1	2.34	0.58
40:DR:23:ASN:HD22	40:DR:23:ASN:N	2.02	0.58
2:AB:83:MET:HA	2:AB:83:MET:CE	2.33	0.58
27:DA:1965:C:H2'	27:DA:1966:A:C8	2.39	0.58
40:BR:99:LYS:HZ1	54:B5:43:HIS:HB3	1.69	0.58
39:DQ:121:ALA:O	39:DQ:125:LEU:HG	2.03	0.58
27:BA:620:G:H4'	27:BA:621:A:OP1	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:23:PRO:CB	38:BP:33:ARG:HG3	2.30	0.58
38:BP:62:LEU:HD23	38:BP:62:LEU:H	1.68	0.58
10:CJ:61:GLU:HG2	14:CN:58:LYS:HZ3	1.69	0.58
32:BF:110:LEU:O	32:BF:110:LEU:HD13	2.03	0.58
27:DA:245:G:C5'	38:DP:69:GLY:HA3	2.34	0.58
13:CM:70:LEU:O	13:CM:73:GLU:HB3	2.03	0.58
27:DA:397:G:O2'	27:DA:398:G:H5'	2.04	0.58
5:AE:12:LEU:HD13	5:AE:12:LEU:C	2.24	0.58
27:DA:2415:G:H2'	27:DA:2416:C:C6	2.38	0.58
47:BY:14:LEU:HD23	47:BY:73:ARG:HD3	1.86	0.58
20:AT:71:THR:CG2	20:AT:72:LEU:H	1.97	0.58
47:DY:14:LEU:HD12	47:DY:15:VAL:H	1.69	0.58
30:BD:118:VAL:CG2	30:BD:119:ALA:H	2.04	0.58
1:CA:104:G:O2'	1:CA:105:G:H5'	2.04	0.58
9:AI:114:TYR:H	9:AI:114:TYR:HD2	1.52	0.58
2:AB:187:LEU:HD13	2:AB:187:LEU:O	2.04	0.58
27:DA:2746:U:H1'	34:DH:139:GLN:CB	2.33	0.58
41:DS:42:ASP:O	41:DS:43:GLU:C	2.41	0.58
27:BA:413:C:O5'	27:BA:413:C:H6	1.87	0.58
27:BA:1296:G:C2'	27:BA:1297:C:H5'	2.34	0.58
33:DG:98:ARG:HA	33:DG:101:ILE:HG23	1.85	0.58
42:DT:1:MET:C	42:DT:3:ARG:H	2.05	0.58
27:DA:2171:A:H4'	27:DA:2172:U:OP1	2.03	0.58
1:CA:1058:G:H2'	1:CA:1059:C:H6	1.66	0.58
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.03	0.58
38:BP:148:LEU:O	38:BP:149:GLU:HB2	2.03	0.58
27:DA:1391:U:H2'	27:DA:1393:A:OP2	2.04	0.58
54:B5:56:LYS:HG3	54:B5:59:GLU:HG3	1.86	0.58
27:DA:1462:C:H2'	27:DA:1463:C:H6	1.69	0.58
38:BP:71:VAL:CG1	38:BP:72:PRO:CD	2.81	0.58
3:AC:129:ALA:HB3	3:AC:132:ARG:CB	2.32	0.58
27:BA:1771:C:O2'	27:BA:1786:A:C8	2.49	0.58
40:BR:101:ALA:HB2	54:B5:44:THR:HB	1.86	0.58
12:AL:25:LYS:CB	12:AL:30:ARG:HH12	2.17	0.58
37:BO:13:ASN:HD21	37:BO:96:THR:N	2.01	0.58
32:BF:40:GLN:OE1	32:BF:182:ASN:HB2	2.04	0.58
27:BA:1891:G:H2'	27:BA:1892:C:H6	1.69	0.58
27:DA:1336:A:OP1	46:DX:64:LYS:HE3	2.04	0.58
27:BA:1321:A:H2'	27:BA:1322:A:H8	1.67	0.58
13:CM:54:VAL:O	13:CM:58:GLU:HG2	2.03	0.58
17:AQ:29:HIS:CE1	17:AQ:32:TYR:H	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1128:C:C5'	9:AI:16:ARG:HH12	2.15	0.58
27:BA:459:U:H2'	27:BA:460:A:H8	1.69	0.58
7:AG:16:LEU:HD13	9:AI:44:VAL:HG23	1.84	0.58
28:BB:73:A:C4	28:BB:105:A:C2	2.92	0.58
1:AA:424:G:H2'	1:AA:425:G:H8	1.69	0.58
33:DG:6:ALA:HB3	33:DG:104:GLU:CD	2.24	0.58
27:DA:2235:G:H2'	27:DA:2236:C:C6	2.39	0.58
29:DC:168:THR:HA	29:DC:173:ALA:HB2	1.86	0.58
36:BN:113:GLY:HA2	36:BN:116:LEU:HD12	1.86	0.58
27:BA:2081:C:O2'	27:BA:2082:A:H5'	2.03	0.58
27:BA:1762:A:C8	27:BA:1762:A:O5'	2.57	0.58
1:AA:1255:G:H5''	3:AC:26:LYS:NZ	2.18	0.58
1:CA:808:C:O2'	1:CA:809:G:H5'	2.04	0.58
2:AB:9:GLU:HA	2:AB:12:GLU:OE1	2.04	0.58
27:DA:1002:G:H8	27:DA:1002:G:O5'	1.87	0.58
35:BI:24:GLY:O	35:BI:25:TYR:C	2.41	0.58
27:BA:2394:C:OP1	38:BP:63:PRO:HD2	2.04	0.57
38:BP:23:PRO:HB2	38:BP:33:ARG:HD2	1.84	0.57
38:BP:62:LEU:HB2	38:BP:63:PRO:HD2	1.86	0.57
1:CA:980:C:O2	1:CA:980:C:H2'	2.02	0.57
41:BS:90:GLY:C	41:BS:92:TYR:H	2.07	0.57
27:BA:2681:C:H5	27:BA:2725:A:N6	2.00	0.57
31:BE:167:VAL:CG2	31:BE:170:LEU:HD11	2.33	0.57
1:CA:509:A:H4'	1:CA:510:A:OP1	2.03	0.57
1:CA:546:G:OP1	4:CD:72:GLU:HB3	2.04	0.57
42:BT:31:SER:C	42:BT:32:TYR:CD2	2.77	0.57
27:DA:1889:A:H1'	27:DA:2087:G:H5'	1.85	0.57
43:DU:102:GLU:OE1	44:DV:2:PHE:HE1	1.87	0.57
44:DV:61:VAL:C	44:DV:62:LEU:HD13	2.23	0.57
12:CL:72:HIS:CD2	12:CL:74:LEU:HB2	2.39	0.57
55:D6:52:VAL:HG12	55:D6:52:VAL:O	2.02	0.57
33:DG:21:ARG:HD3	33:DG:22:ARG:N	2.19	0.57
55:B6:19:ARG:HB2	55:B6:21:TYR:OH	2.04	0.57
1:AA:413:G:N2	1:AA:428:G:H1'	2.19	0.57
16:AP:21:VAL:HG13	16:AP:33:ILE:CB	2.30	0.57
27:BA:1779:U:C5	27:BA:1784:A:N7	2.72	0.57
32:DF:186:ILE:HG23	32:DF:192:LEU:CD1	2.32	0.57
1:CA:279:A:O2'	1:CA:280:C:OP2	2.17	0.57
36:DN:133:GLN:HG2	36:DN:134:ARG:N	2.17	0.57
1:AA:657:G:C2	1:AA:658:G:C8	2.92	0.57
1:CA:177:C:H2'	1:CA:178:C:H6	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1286:A:C2	21:CU:22:ARG:NH2	2.71	0.57
12:AL:38:ARG:CG	12:AL:39:THR:H	2.09	0.57
27:DA:146:G:C6	27:DA:147:U:C4	2.91	0.57
25:AY:64:G:O2'	25:AY:65:U:H5'	2.04	0.57
48:BZ:157:PRO:HG2	48:BZ:160:VAL:CG2	2.31	0.57
27:DA:2850:A:OP2	27:DA:2866:U:C5	2.57	0.57
42:DT:102:ILE:HD12	42:DT:110:ILE:HD11	1.84	0.57
1:AA:728:A:C6	15:AO:54:ARG:HD2	2.38	0.57
27:DA:2103:C:C3'	27:DA:2104:G:H5''	2.33	0.57
27:BA:1051:G:O2'	27:BA:1052:C:C6	2.56	0.57
1:CA:825:G:H22	8:CH:11:THR:HG21	1.69	0.57
27:BA:1926:U:H2'	27:BA:1928:A:OP2	2.03	0.57
29:DC:44:HIS:O	29:DC:210:ARG:HA	2.04	0.57
24:CX:23:C:H2'	24:CX:24:U:C6	2.38	0.57
34:DH:105:LEU:HD23	34:DH:115:VAL:HG21	1.86	0.57
27:DA:2195:C:C2'	27:DA:2196:C:H5'	2.33	0.57
7:AG:86:GLN:HE22	25:AY:30:A:H2	1.49	0.57
27:BA:1848:A:C2'	27:BA:1849:G:H8	2.16	0.57
1:AA:544:G:OP1	4:AD:59:ARG:NH2	2.36	0.57
27:BA:182:A:C2	27:BA:183:C:C2	2.92	0.57
47:DY:88:LYS:NZ	47:DY:93:GLY:HA3	2.19	0.57
39:BQ:141:GLN:HG3	48:BZ:71:ARG:NH1	2.19	0.57
27:DA:612:C:N4	27:DA:615:G:H1	2.02	0.57
36:DN:108:PRO:O	36:DN:113:GLY:HA3	2.04	0.57
47:DY:31:LEU:HB2	47:DY:32:PRO:HA	1.85	0.57
17:CQ:29:HIS:CG	17:CQ:30:PRO:HD2	2.39	0.57
2:CB:132:LYS:HA	2:CB:135:GLN:HB2	1.84	0.57
23:CW:51:G:H1	23:CW:61:C:H42	1.51	0.57
16:CP:45:THR:C	16:CP:47:ASP:H	2.07	0.57
27:BA:1652:A:O2'	27:BA:1653:G:H5'	2.04	0.57
24:AX:17:C:O2	24:AX:17(B):U:H5	1.87	0.57
35:DI:51:ILE:HG22	35:DI:52:ARG:N	2.18	0.57
1:AA:96:U:H2'	1:AA:97:G:H8	1.68	0.57
36:BN:112:LEU:HD12	36:BN:112:LEU:O	2.04	0.57
13:AM:94:ARG:NH1	27:BA:887:A:H5''	2.18	0.57
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.04	0.57
27:DA:1943:U:H4'	27:DA:1944:U:O5'	2.03	0.57
27:BA:2648:C:H2'	27:BA:2649:U:C6	2.39	0.57
27:BA:1711:C:H2'	27:BA:1712:C:C6	2.39	0.57
27:BA:2787:C:O2'	31:BE:61:ARG:HB2	2.04	0.57
41:BS:15:ARG:O	41:BS:18:ILE:HG22	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BX:26:TYR:HB3	46:BX:92:LEU:HD12	1.85	0.57
57:D8:55:ALA:O	57:D8:58:ILE:HB	2.04	0.57
38:BP:17:LYS:HG2	38:BP:17:LYS:O	2.03	0.57
21:CU:2:GLY:O	21:CU:4:GLY:N	2.37	0.57
44:BV:35:LEU:C	44:BV:37:VAL:N	2.55	0.57
44:BV:64:HIS:HA	44:BV:92:THR:HA	1.86	0.57
32:DF:20:LEU:HB3	32:DF:23:ASP:OD1	2.05	0.57
27:DA:1010:A:O2'	27:DA:1011:G:H5'	2.04	0.57
51:D2:50:ILE:O	51:D2:52:ASP:N	2.38	0.57
27:DA:862:G:C2	27:DA:863:A:H1'	2.38	0.57
27:DA:865:C:C2'	27:DA:865:C:O2	2.51	0.57
38:DP:64:LYS:HB3	57:D8:25:MET:HG3	1.85	0.57
27:BA:335:C:H2'	27:BA:336:C:C6	2.37	0.57
27:DA:587:C:H3'	38:DP:33:ARG:HH22	1.68	0.57
27:DA:589:C:H2'	27:DA:590:A:C8	2.39	0.57
1:CA:41:G:O2'	1:CA:42:G:H5'	2.04	0.57
47:BY:32:PRO:C	47:BY:34:LYS:H	2.08	0.57
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.04	0.57
14:AN:24:CYS:HB3	14:AN:27:CYS:O	2.05	0.57
27:DA:2745:C:H5'	34:DH:146:ALA:HB2	1.85	0.57
2:CB:32:ILE:HA	2:CB:42:ILE:HA	1.86	0.57
27:BA:827:U:H2'	27:BA:2068:U:N3	2.18	0.57
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.03	0.57
3:CC:73:PRO:C	3:CC:75:VAL:N	2.57	0.57
27:DA:2536:G:O2'	27:DA:2537:U:H5'	2.04	0.57
27:BA:1556:C:H2'	27:BA:1557:C:H6	1.69	0.57
30:BD:154:LYS:C	30:BD:155:LEU:HD12	2.23	0.57
27:DA:740:U:H6	27:DA:740:U:C5'	2.09	0.57
48:DZ:94:PRO:HB2	48:DZ:126:LYS:HZ2	1.67	0.57
27:DA:1639:U:H2'	27:DA:1640:C:C5'	2.33	0.57
35:BI:77:LEU:HB3	35:BI:140:LEU:CD1	2.32	0.57
27:DA:1275:A:C8	40:DR:16:HIS:CD2	2.92	0.57
35:BI:8:PRO:O	35:BI:9:LEU:HD23	2.04	0.57
1:AA:876:G:H2'	1:AA:877:C:H6	1.68	0.57
28:DB:43:C:H5'	28:DB:44:G:OP2	2.04	0.57
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.03	0.57
42:DT:23:ARG:NH2	42:DT:120:ARG:HD3	2.19	0.57
16:CP:74:LEU:O	16:CP:77:ALA:HB3	2.05	0.57
5:CE:147:ASP:N	5:CE:147:ASP:OD2	2.35	0.57
3:AC:90:GLU:HA	3:AC:93:LYS:HB2	1.86	0.57
3:AC:90:GLU:O	3:AC:93:LYS:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:7:G:H1	27:DA:2896:C:N4	2.01	0.57
27:DA:2468:G:OP1	39:DQ:119:ARG:NH2	2.36	0.57
1:AA:1263:C:C2'	1:AA:1264:C:H5'	2.34	0.57
45:DW:11:ARG:HE	45:DW:11:ARG:C	2.07	0.57
27:DA:482:A:H62	27:DA:506:G:C2'	2.17	0.57
47:DY:47:LYS:HD2	47:DY:47:LYS:N	2.19	0.57
27:DA:2734:A:H62	27:DA:2770:G:N2	2.00	0.57
3:AC:68:VAL:HG12	3:AC:70:VAL:HG23	1.85	0.57
1:AA:1087:G:H2'	1:AA:1088:G:C8	2.39	0.57
3:CC:36:ASP:O	3:CC:40:ARG:NH1	2.37	0.57
27:BA:1029:A:C2'	27:BA:1030:G:H5'	2.33	0.57
27:DA:2520:C:H2'	27:DA:2521:C:C6	2.40	0.57
27:DA:2545:G:N2	27:DA:2546:U:H1'	2.18	0.57
27:DA:2593:U:C2	27:DA:2594:C:C5	2.92	0.57
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.86	0.57
1:CA:1237:C:O2	1:CA:1334:G:O2'	2.14	0.57
27:DA:2840:C:H2'	27:DA:2841:C:C6	2.39	0.57
1:AA:705:U:C5	1:AA:706:A:C5	2.92	0.57
27:BA:1956:U:H2'	27:BA:1957:C:C5'	2.32	0.57
1:CA:47:C:O2'	1:CA:48:C:H5'	2.04	0.57
27:DA:2239:G:H2'	27:DA:2240:C:O4'	2.05	0.57
27:BA:84:A:H5'	47:BY:9:LYS:HB3	1.86	0.57
23:AW:4:G:H2'	23:AW:5:G:H5''	1.85	0.57
29:BC:20:TYR:CG	29:BC:21:THR:N	2.71	0.57
47:DY:49:VAL:O	47:DY:53:PRO:HG3	2.04	0.57
18:AR:44:LEU:HD13	18:AR:48:GLY:O	2.04	0.57
1:AA:528:C:H5'	1:AA:535:A:N1	2.19	0.57
38:DP:108:LYS:HD2	38:DP:108:LYS:N	2.18	0.57
27:DA:2876:G:N2	27:DA:2877:G:H1'	2.19	0.57
27:DA:463:G:N2	27:DA:466:A:OP2	2.34	0.57
35:DI:7:GLU:CG	35:DI:8:PRO:HD2	2.34	0.57
47:DY:19:LYS:HG2	47:DY:19:LYS:O	2.05	0.57
24:AX:39:C:H6	24:AX:39:C:O5'	1.87	0.57
27:BA:2555:U:H2'	27:BA:2556:C:O4'	2.03	0.57
27:BA:2373:G:H2'	27:BA:2374:C:C6	2.39	0.57
57:B8:7:HIS:HB2	57:B8:59:LYS:HB3	1.87	0.57
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.35	0.57
27:DA:1796:U:O2	27:DA:1824:G:C2	2.57	0.57
27:BA:498:G:O2'	27:BA:499:U:H5'	2.04	0.57
27:BA:674:G:OP1	32:BF:76:GLY:HA3	2.05	0.57
42:BT:30:VAL:HG21	42:BT:83:ILE:HG13	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:91:ARG:CA	42:BT:116:ALA:HA	2.34	0.57
27:DA:992:C:O2'	27:DA:993:G:H5'	2.05	0.57
36:DN:33:LEU:HG	36:DN:38:HIS:CE1	2.39	0.57
43:DU:69:CYS:O	43:DU:72:HIS:HB2	2.04	0.57
27:DA:296:C:O2'	27:DA:297:C:H5'	2.03	0.57
1:AA:346:G:H5''	42:BT:41:ARG:HE	1.68	0.57
27:DA:2787:C:O2'	31:DE:61:ARG:HG3	2.05	0.57
27:DA:628:G:C6	27:DA:636:G:C2	2.92	0.57
30:BD:33:LEU:O	30:BD:34:VAL:CG1	2.47	0.57
30:BD:34:VAL:O	30:BD:35:LYS:HD3	2.05	0.57
30:BD:65:ILE:HA	30:BD:104:TYR:HB2	1.85	0.57
23:AW:32:U:H2'	23:AW:34:U:H5	1.68	0.57
2:AB:103:THR:OG1	2:AB:176:GLU:HG3	2.04	0.57
27:BA:1991:U:H2'	27:BA:1992:G:H5''	1.85	0.57
1:AA:373:A:O2'	1:AA:451:A:N7	2.37	0.57
20:CT:63:ILE:HD13	20:CT:80:ARG:CB	2.34	0.57
6:AF:97:PHE:CZ	18:AR:61:LYS:HE2	2.40	0.57
1:CA:1209:C:O2'	1:CA:1210:C:H5'	2.03	0.57
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.18	0.57
8:CH:82:HIS:HE2	8:CH:136:GLU:CD	2.07	0.57
1:CA:648:A:H2'	1:CA:649:G:C8	2.39	0.57
33:BG:53:LEU:N	33:BG:53:LEU:HD22	2.18	0.57
49:D0:40:GLN:OE1	49:D0:45:PHE:HB2	2.04	0.57
17:AQ:57:VAL:HA	17:AQ:77:VAL:HG23	1.86	0.57
13:AM:22:ILE:HG21	13:AM:25:ILE:HD13	1.85	0.57
42:DT:126:ALA:C	42:DT:128:GLU:H	2.07	0.57
27:BA:2099:U:OP2	27:BA:2099:U:H6	1.86	0.57
27:DA:414:C:H2'	27:DA:415:A:C8	2.36	0.57
32:DF:103:LYS:HA	32:DF:106:ARG:HG3	1.85	0.57
1:AA:1293:G:H2'	1:AA:1294:G:H8	1.68	0.57
1:AA:644:G:C2'	1:AA:645:C:H5'	2.33	0.57
9:AI:112:LYS:HA	9:AI:119:ALA:H	1.69	0.57
27:BA:1627:G:C2	27:BA:1628:G:C8	2.91	0.57
27:BA:1640:C:H2'	27:BA:1641:A:H5'	1.86	0.57
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.86	0.57
27:DA:1688:U:H3	27:DA:1700:A:C5'	2.17	0.57
56:D7:25:PRO:HG3	56:D7:28:ARG:NH2	2.19	0.57
1:CA:990:C:H2'	1:CA:991:U:C6	2.38	0.57
1:CA:1409:C:H2'	1:CA:1410:G:C8	2.40	0.57
53:D4:46:ASN:HD22	53:D4:47:VAL:H	1.53	0.57
30:DD:102:LYS:O	30:DD:103:ARG:HG2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:145:GLY:O	3:AC:146:ALA:HB2	2.04	0.57
23:AW:42:G:H2'	23:AW:43:C:H5''	1.85	0.57
27:BA:924:C:O2'	27:BA:925:C:H5'	2.04	0.57
27:DA:701:G:H1	27:DA:731:C:H42	1.53	0.57
27:BA:1459:G:N3	27:BA:1459:G:H2'	2.18	0.57
27:BA:2528:U:H2'	27:BA:2530:A:O5'	2.03	0.57
27:DA:1116:C:H2'	27:DA:1117:G:H8	1.69	0.57
1:AA:537:G:H2'	1:AA:538:G:H8	1.68	0.57
32:DF:28:ILE:O	32:DF:30:PRO:HD3	2.04	0.57
7:CG:32:ARG:O	7:CG:33:ASP:HB2	2.03	0.57
45:BW:79:GLY:C	45:BW:100:THR:HG22	2.24	0.57
1:CA:978:A:H5''	1:CA:978:A:H8	1.68	0.57
14:CN:39:LEU:HD12	14:CN:44:LEU:HA	1.85	0.57
54:B5:52:TYR:O	54:B5:53:ALA:C	2.41	0.57
40:BR:18:LEU:CD1	40:BR:22:ARG:NE	2.67	0.57
27:DA:1929:G:H4'	27:DA:1930:G:OP1	2.04	0.57
33:BG:111:LEU:HD22	33:BG:117:PHE:CE2	2.40	0.57
5:AE:129:ILE:CG2	5:AE:130:ASN:N	2.54	0.57
44:BV:6:LYS:HG3	44:BV:11:GLN:HG2	1.85	0.57
27:DA:1893:C:C2'	27:DA:1894:C:O5'	2.53	0.57
42:BT:28:VAL:O	42:BT:29:ARG:CG	2.53	0.57
27:DA:985:C:H2'	27:DA:986:C:C6	2.39	0.57
27:DA:1490:A:H5'	27:DA:1494:A:H62	1.69	0.57
30:DD:26:LYS:O	30:DD:27:THR:CB	2.51	0.57
11:AK:39:PRO:C	11:AK:40:ILE:HD13	2.25	0.57
38:DP:87:ASP:C	38:DP:89:ALA:N	2.56	0.57
27:DA:141:A:C8	27:DA:1408:C:O2'	2.55	0.57
1:AA:430:A:P	4:AD:8:VAL:H	2.27	0.57
30:BD:72:LYS:HZ3	30:BD:103:ARG:HH12	1.52	0.57
4:CD:102:ASP:HB3	4:CD:136:PRO:HA	1.86	0.57
1:CA:67:C:H2'	1:CA:68:G:H8	1.67	0.57
2:AB:151:GLY:O	2:AB:152:PHE:CB	2.52	0.57
42:DT:29:ARG:HG3	42:DT:30:VAL:HG13	1.85	0.57
26:CZ:3:SER:O	26:CZ:5:UAL:N	2.37	0.57
30:BD:49:ILE:CD1	30:BD:52:ARG:HA	2.26	0.57
2:CB:32:ILE:HD11	2:CB:40:HIS:CB	2.25	0.57
2:CB:82:ARG:HA	2:CB:92:TYR:CE2	2.39	0.57
20:CT:88:VAL:O	20:CT:88:VAL:HG12	2.04	0.57
15:CO:85:LEU:HB3	15:CO:87:ILE:HD11	1.86	0.57
30:BD:66:ASP:OD2	30:BD:69:ARG:HG2	2.04	0.57
8:CH:6:ILE:HG22	8:CH:7:ALA:N	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:443:C:H2'	1:AA:444:C:H6	1.68	0.57
7:AG:148:ASN:ND2	25:AY:39:C:H4'	2.20	0.57
42:DT:123:GLN:O	42:DT:126:ALA:HB3	2.03	0.57
16:CP:71:ARG:O	16:CP:74:LEU:HB2	2.04	0.57
54:D5:31:VAL:O	54:D5:39:MET:HB3	2.04	0.57
27:BA:628:G:O2'	27:BA:629:G:O4'	2.19	0.57
27:BA:110:G:H2'	27:BA:111:A:H8	1.70	0.57
3:AC:134:ILE:HG23	3:AC:151:VAL:HG12	1.86	0.57
14:AN:60:SER:O	14:AN:61:TRP:HB3	2.04	0.57
44:BV:82:ARG:C	44:BV:83:ARG:HG2	2.25	0.57
40:DR:37:THR:OG1	40:DR:40:LYS:HB2	2.04	0.57
33:BG:118:ARG:H	33:BG:181:ARG:NH2	1.97	0.57
27:BA:2311:A:H4'	27:BA:2312:U:OP1	2.04	0.57
12:AL:15:VAL:CG2	12:AL:16:ARG:H	2.16	0.57
50:B1:18:ILE:O	50:B1:19:GLN:NE2	2.35	0.57
27:BA:1204:A:O2'	27:BA:1205:U:OP2	2.17	0.57
1:AA:979:C:H42	14:AN:18:VAL:HG12	1.70	0.57
27:DA:1229:G:O2'	27:DA:1230:C:H5'	2.03	0.57
47:DY:4:LYS:HG3	47:DY:5:MET:N	2.20	0.57
27:BA:2103:C:H42	27:BA:2186:G:H1	1.53	0.57
11:CK:69:ALA:O	11:CK:73:MET:HG3	2.04	0.57
11:CK:65:ALA:HB1	11:CK:98:LEU:CD2	2.34	0.57
7:AG:71:PRO:HA	7:AG:138:LYS:HG3	1.87	0.57
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	2.04	0.57
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.05	0.57
47:DY:43:ASN:ND2	47:DY:64:GLU:HG3	2.19	0.57
27:BA:528:A:O5'	27:BA:528:A:C8	2.57	0.57
9:CI:41:VAL:O	9:CI:41:VAL:HG12	2.04	0.57
15:CO:37:ASN:ND2	15:CO:37:ASN:N	2.53	0.57
27:DA:380:U:H2'	27:DA:381:G:H8	1.69	0.57
2:CB:134:GLU:HA	2:CB:137:ARG:CB	2.34	0.57
27:BA:2227:A:H5'	30:BD:263:ARG:HH11	1.69	0.57
27:DA:2682:U:H5'	27:DA:2682:U:C6	2.40	0.57
1:CA:181:G:H21	1:CA:183:G:H22	1.51	0.57
35:BI:30:LEU:HA	35:BI:35:LEU:HB2	1.87	0.57
27:BA:363(F):A:O2'	27:BA:364:C:C5	2.56	0.57
27:BA:736:C:O2'	27:BA:737:C:H5'	2.04	0.57
11:AK:111:ASP:HA	18:AR:84:LYS:HG3	1.87	0.57
52:B3:26:LEU:O	52:B3:35:ARG:NE	2.34	0.57
30:BD:183:ARG:HG2	30:BD:183:ARG:HH11	1.69	0.57
1:AA:11:G:C5	1:AA:12:U:C5	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:86:GLY:O	11:CK:87:THR:O	2.22	0.57
25:AY:37:U:H2'	25:AY:38:U:C4'	2.34	0.57
41:BS:39:ILE:HG22	41:BS:39:ILE:O	2.05	0.57
32:BF:22:ALA:HA	32:BF:26:ALA:HB2	1.85	0.57
57:D8:6:THR:HG22	57:D8:63:PRO:CG	2.33	0.57
12:CL:43:LYS:CG	12:CL:44:LYS:N	2.61	0.57
1:CA:723:U:O2'	1:CA:724:G:H5'	2.05	0.57
32:DF:125:LEU:HD11	32:DF:199:TRP:CD1	2.39	0.57
29:BC:41:VAL:CA	29:BC:213:TYR:HA	2.16	0.57
41:BS:66:ALA:O	41:BS:69:VAL:CG1	2.53	0.57
30:DD:26:LYS:NZ	30:DD:82:ILE:HB	2.20	0.57
27:DA:861:A:H2'	27:DA:862:G:O4'	2.03	0.57
27:DA:873:G:C2	27:DA:905:U:H1'	2.39	0.57
27:DA:1993:U:H4'	31:DE:128:SER:HB3	1.85	0.57
39:BQ:2:LEU:HG	39:BQ:70:PRO:CG	2.34	0.57
39:BQ:46:GLN:O	39:BQ:47:ILE:C	2.43	0.57
1:CA:197:A:O2'	1:CA:198:G:H8	1.87	0.57
47:BY:13:VAL:HG22	47:BY:28:LYS:HE2	1.85	0.57
30:BD:186:HIS:CD2	30:BD:188:GLU:HG2	2.39	0.57
1:CA:527:G:H2'	1:CA:528:C:H5'	1.85	0.57
38:BP:107:LYS:HG3	38:BP:107:LYS:O	2.04	0.57
27:DA:2159:G:C2'	27:DA:2160:G:H5''	2.34	0.57
27:DA:2126:A:C5'	29:DC:36:LYS:HG2	2.34	0.57
35:BI:133:HIS:O	35:BI:134:PRO:C	2.43	0.57
40:DR:14:SER:HA	40:DR:17:ARG:HH12	1.69	0.57
27:DA:856:C:H4'	27:DA:857:C:OP1	2.03	0.57
27:BA:2307:G:H3'	27:BA:2307:G:N3	2.20	0.57
1:CA:19:C:O2	1:CA:917:G:C2	2.57	0.57
28:DB:44:G:C2	28:DB:48:A:C2	2.92	0.57
57:B8:14:VAL:HG21	57:B8:22:VAL:HG12	1.86	0.57
6:CF:8:ILE:HG22	6:CF:10:LEU:CD1	2.30	0.57
13:AM:15:VAL:HG23	13:AM:16:ASP:N	2.18	0.57
1:AA:743:U:O2'	1:AA:744:C:H5'	2.04	0.57
27:DA:265:A:O2'	27:DA:266:G:O4'	2.23	0.57
40:DR:26:LYS:NZ	40:DR:71:GLN:HB3	2.19	0.57
1:AA:189(I):G:H2'	1:AA:189(J):G:C8	2.40	0.57
5:AE:20:GLN:HE22	5:AE:25:ARG:NH2	2.02	0.57
27:BA:185:U:H2'	27:BA:186:G:C8	2.38	0.57
14:AN:9:LYS:HG3	14:AN:12:ARG:NH1	2.19	0.57
23:CW:70:C:O2'	23:CW:71:A:C8	2.58	0.57
1:CA:115:G:O2'	1:CA:116:A:OP2	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BW:85:VAL:HG12	45:BW:86:LEU:H	1.69	0.57
32:BF:45:ARG:NH1	32:BF:97:TYR:CD1	2.72	0.57
3:CC:127:ARG:NH1	3:CC:127:ARG:HG2	2.20	0.57
27:DA:292:C:C2	27:DA:349:G:N2	2.72	0.57
27:BA:99:U:O4'	27:BA:99:U:O2	2.22	0.57
53:D4:62:CYS:C	53:D4:64:LYS:H	2.06	0.57
1:AA:1414:U:H3	1:AA:1486:G:H1	1.50	0.57
47:DY:54:LYS:O	47:DY:55:TYR:CG	2.57	0.57
27:BA:425:G:O2'	27:BA:426:C:H5'	2.05	0.57
3:AC:40:ARG:HB3	3:AC:44:GLU:OE2	2.04	0.57
1:CA:49:U:O2	1:CA:362:G:H1'	2.05	0.57
27:BA:606:U:H4'	27:BA:658:C:H4'	1.86	0.57
1:AA:730:G:C5	1:AA:731:G:H1'	2.39	0.57
27:BA:2492:U:H2'	27:BA:2493:U:H6	1.70	0.57
41:BS:42:ASP:O	41:BS:43:GLU:HB2	2.04	0.57
31:BE:13:ARG:HD2	31:BE:20:ALA:HB1	1.85	0.57
3:CC:61:ALA:O	3:CC:62:ASP:HB2	2.05	0.57
31:BE:113:PHE:HE2	31:BE:157:ALA:HB1	1.68	0.57
1:CA:986:A:H2'	1:CA:987:G:O4'	2.04	0.57
27:BA:2810:A:C2'	31:BE:61:ARG:NH2	2.68	0.57
34:BH:138:LYS:O	34:BH:141:VAL:HB	2.04	0.57
30:DD:243:GLY:O	30:DD:244:ARG:HB3	2.04	0.57
52:B3:30:ARG:H	52:B3:33:GLN:NE2	2.03	0.57
17:AQ:43:LEU:HD12	17:AQ:68:ARG:CG	2.30	0.57
17:AQ:63:ARG:NH1	17:AQ:63:ARG:HB3	2.18	0.57
29:BC:76:ALA:C	29:BC:78:ALA:H	2.08	0.57
43:DU:97:ASP:HA	43:DU:100:VAL:CG2	2.35	0.57
42:BT:40:THR:O	42:BT:41:ARG:HB2	2.04	0.57
20:CT:91:LEU:C	20:CT:93:GLU:H	2.07	0.57
2:AB:17:PHE:HD2	2:AB:17:PHE:N	2.02	0.57
41:DS:61:ASN:O	41:DS:62:LYS:HG2	2.05	0.57
1:CA:968:A:N6	1:CA:1063:C:H5'	2.19	0.57
42:BT:74:ARG:HD2	42:BT:76:PHE:CZ	2.40	0.57
1:CA:1060:C:H2'	1:CA:1061:G:H8	1.69	0.57
32:BF:132:VAL:CG1	32:BF:133:ASN:H	2.05	0.57
1:AA:1243:C:H2'	1:AA:1244:C:H6	1.69	0.57
1:AA:64:G:C4'	1:AA:65:U:O5'	2.49	0.57
11:AK:28:THR:HG21	11:AK:61:ALA:CB	2.33	0.57
13:AM:82:MET:HG2	13:AM:82:MET:O	2.04	0.57
5:AE:76:ILE:O	5:AE:93:PRO:HB3	2.05	0.57
1:CA:53:A:N1	1:CA:54:C:C2	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2407:G:H2'	27:BA:2408:U:C6	2.39	0.57
27:DA:2896:C:H2'	27:DA:2896:C:O2	2.04	0.57
27:DA:7:G:H5''	36:DN:121:LYS:NZ	2.20	0.57
27:DA:220:G:H2'	27:DA:221:A:N7	2.19	0.57
10:CJ:22:LYS:C	10:CJ:22:LYS:HD2	2.25	0.57
37:BO:103:ALA:C	37:BO:105:GLU:N	2.58	0.57
3:AC:64:VAL:HG22	3:AC:98:ASN:O	2.04	0.57
27:BA:1261:C:C2'	27:BA:1262:A:O5'	2.53	0.57
13:CM:80:ARG:O	13:CM:82:MET:N	2.38	0.57
27:BA:2051:A:H4'	27:BA:2052:G:OP1	2.04	0.57
1:AA:188:C:O4'	20:AT:89:ARG:NH2	2.38	0.57
2:CB:141:GLU:O	2:CB:145:LEU:HB2	2.05	0.57
39:BQ:39:PRO:O	39:BQ:40:ALA:HB2	2.04	0.57
1:AA:49:U:O2'	1:AA:50:A:H2'	2.03	0.57
13:AM:52:GLU:HG2	13:AM:55:ARG:NH2	2.20	0.57
25:AY:54:U:H2'	25:AY:56:G:OP2	2.04	0.57
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.40	0.57
29:DC:18:LYS:O	29:DC:19:VAL:C	2.43	0.57
1:AA:1471:G:H2'	1:AA:1472:U:C6	2.40	0.57
27:DA:1248:G:H3'	27:DA:1249:U:H5'	1.86	0.57
27:DA:720:C:H2'	27:DA:721:C:C6	2.40	0.57
17:CQ:66:SER:OG	17:CQ:69:LYS:HB3	2.05	0.57
27:BA:1859:A:N6	27:BA:1883:G:O2'	2.38	0.57
8:AH:37:ARG:O	8:AH:37:ARG:HG2	2.04	0.57
48:BZ:39:ASP:OD1	48:BZ:41:VAL:HG12	2.04	0.57
40:BR:34:ILE:HG22	40:BR:35:THR:N	2.20	0.57
32:BF:21:ALA:N	32:BF:23:ASP:OD1	2.38	0.57
27:DA:1971:A:C4	30:DD:241:PRO:HG3	2.40	0.57
1:CA:428:G:O4'	1:CA:430:A:C8	2.58	0.57
27:BA:483:A:O2'	47:BY:60:PHE:HZ	1.87	0.57
31:BE:77:ILE:C	31:BE:78:LEU:HD23	2.25	0.57
5:AE:43:LEU:HD12	5:AE:44:GLY:N	2.19	0.57
27:DA:2087:G:O2'	27:DA:2088:G:H5'	2.05	0.57
27:BA:2697:G:H2'	27:BA:2698:U:O4'	2.04	0.57
30:DD:77:ALA:HB3	30:DD:117:VAL:CG2	2.32	0.57
11:AK:18:ARG:NH2	11:AK:35:PRO:O	2.33	0.57
27:DA:2553:G:H2'	27:DA:2554:U:O4'	2.03	0.57
1:CA:619:U:C2	4:CD:135:LEU:HD21	2.39	0.57
4:CD:173:TRP:CD1	4:CD:189:PRO:HG3	2.37	0.57
8:AH:12:ARG:HD2	8:AH:26:VAL:HB	1.87	0.57
8:AH:44:PHE:HE2	8:AH:109:ILE:CG2	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:792:G:H4'	27:BA:793:A:O5'	2.05	0.57
17:AQ:62:SER:OG	17:AQ:72:ARG:HG3	2.05	0.57
2:AB:171:ALA:HA	2:AB:174:VAL:CG2	2.34	0.57
1:CA:895:G:H2'	1:CA:896:C:H6	1.70	0.57
27:BA:1999:C:N3	27:BA:2000:G:C8	2.73	0.57
34:BH:158:HIS:CD2	34:BH:170:ARG:O	2.57	0.57
40:BR:55:ALA:HA	40:BR:80:PHE:CE1	2.40	0.57
27:DA:2183:C:O2'	27:DA:2184:G:H5'	2.05	0.57
39:DQ:69:PHE:O	39:DQ:95:ALA:HB2	2.04	0.57
38:BP:99:LEU:HG	38:BP:102:ARG:HH11	1.69	0.57
29:DC:66:HIS:O	29:DC:68:LEU:N	2.36	0.57
27:BA:6:A:C2	27:BA:7:G:C4	2.92	0.57
40:DR:10:LEU:HB3	40:DR:17:ARG:CZ	2.35	0.57
27:BA:62:C:H2'	27:BA:63:U:H5'	1.85	0.57
27:DA:2303:G:H2'	27:DA:2304:G:H8	1.69	0.57
33:DG:68:PRO:HA	33:DG:92:VAL:HB	1.85	0.57
39:BQ:134:ARG:HH21	48:BZ:121:ARG:NH2	2.03	0.57
30:BD:213:ARG:O	30:BD:216:GLY:N	2.36	0.57
27:DA:1665:A:C4'	37:DO:67:LYS:HB2	2.34	0.57
1:CA:880:C:H2'	1:CA:881:G:C8	2.36	0.57
8:CH:39:LEU:HD12	8:CH:44:PHE:CD2	2.39	0.57
40:DR:48:VAL:O	40:DR:52:ILE:HG12	2.04	0.57
31:BE:69:LYS:C	31:BE:71:GLY:H	2.08	0.57
27:DA:1233:C:H2'	27:DA:1234:U:C6	2.39	0.57
1:CA:738:C:H5'	6:CF:72:VAL:HG11	1.87	0.57
28:BB:7:G:H21	41:BS:38:GLN:NE2	2.01	0.57
2:AB:80:ILE:CD1	2:AB:211:ILE:HG22	2.35	0.57
2:CB:80:ILE:HG12	2:CB:215:LEU:HD12	1.87	0.57
1:AA:1525:G:OP1	11:AK:120:ARG:NH2	2.38	0.57
1:CA:269:C:H2'	1:CA:270:A:H8	1.68	0.57
27:BA:706:A:H2'	27:BA:707:G:O4'	2.04	0.57
27:DA:620:G:H4'	27:DA:621:A:OP1	2.04	0.57
27:BA:181:A:C2	27:BA:435:C:H5	2.23	0.57
40:BR:76:VAL:HG12	40:BR:77:ARG:N	2.20	0.57
1:CA:860:A:H4'	8:CH:75:ARG:NH2	2.19	0.57
1:CA:859:A:C2'	1:CA:860:A:H5'	2.35	0.57
27:DA:1357:U:O2'	27:DA:1358:G:H5'	2.04	0.57
38:DP:25:SER:O	38:DP:27:HIS:N	2.37	0.57
27:DA:2108:C:H2'	27:DA:2109:U:H5'	1.86	0.57
25:AY:18:G:H5'	25:AY:19:U:H5	1.70	0.57
27:DA:378:C:O2'	27:DA:379:G:H5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:419:C:H2'	1:CA:420:U:H5'	1.85	0.57
1:CA:424:G:H8	1:CA:424:G:O5'	1.88	0.57
1:CA:406:G:H5''	4:CD:5:ILE:CG2	2.35	0.57
27:DA:230:U:H2'	27:DA:231:C:H6	1.69	0.57
1:AA:1378:C:C5'	7:AG:94:ARG:HH12	2.17	0.57
27:DA:2003:G:H2'	27:DA:2004:G:O5'	2.04	0.57
37:DO:73:ASP:OD1	37:DO:75:SER:HB3	2.05	0.57
27:DA:1550:C:H2'	27:DA:1551:C:H6	1.67	0.57
32:BF:78:ILE:HD13	32:BF:78:ILE:H	1.70	0.57
57:B8:21:LYS:HD3	57:B8:48:PHE:CZ	2.39	0.57
10:CJ:50:ILE:HG23	10:CJ:60:ARG:NH1	2.20	0.57
32:BF:3:GLU:CB	32:BF:19:GLU:HB2	2.16	0.57
32:BF:2:LYS:HG2	32:BF:25:PRO:CB	2.35	0.57
5:AE:41:VAL:HG11	5:AE:113:ALA:CA	2.34	0.57
29:BC:76:ALA:H	29:BC:94:VAL:HG12	1.69	0.57
27:DA:999:U:O2'	27:DA:1000:A:H5''	2.04	0.57
44:DV:19:LYS:HE2	44:DV:20:LEU:H	1.69	0.57
51:D2:50:ILE:C	51:D2:52:ASP:N	2.56	0.57
47:DY:26:LYS:NZ	47:DY:27:VAL:HG23	2.20	0.57
49:D0:25:ARG:HA	49:D0:29:GLN:NE2	2.20	0.57
27:DA:867:C:C4	27:DA:868:U:O4	2.58	0.57
31:DE:60:ASN:CG	31:DE:62:PRO:HD2	2.25	0.57
27:DA:2061:G:H5''	27:DA:2503:A:C2	2.39	0.57
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.38	0.57
55:B6:19:ARG:N	55:B6:19:ARG:HD2	2.16	0.57
30:BD:71:ASP:HB2	30:BD:103:ARG:NH2	2.17	0.57
30:BD:80:ALA:H	30:BD:95:LEU:HA	1.69	0.57
9:AI:46:ALA:C	9:AI:47:LEU:HD12	2.25	0.57
2:AB:53:ARG:NH2	2:AB:199:TYR:HE2	2.02	0.57
27:DA:88:G:H2'	27:DA:88:G:N3	2.19	0.57
2:CB:82:ARG:HG3	2:CB:92:TYR:HE2	1.70	0.57
41:BS:85:VAL:HG23	41:BS:106:ARG:HB3	1.85	0.57
27:BA:1658:C:H2'	27:BA:1659:U:C6	2.39	0.57
27:BA:1661:G:H2'	27:BA:1662:C:H6	1.69	0.57
15:AO:82:ILE:CD1	15:AO:87:ILE:H	2.15	0.57
6:AF:3:ARG:NH1	6:AF:38:GLU:OE1	2.38	0.57
42:BT:61:PHE:CE2	42:BT:76:PHE:HB2	2.39	0.57
25:AY:7:A:N1	25:AY:48:C:C4	2.73	0.57
57:B8:35:GLN:CG	57:B8:35:GLN:O	2.53	0.57
1:AA:546:G:OP2	4:AD:72:GLU:HB3	2.05	0.57
1:AA:131:C:OP1	1:AA:263:A:H4'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D3:22:ALA:C	52:D3:24:LYS:H	2.08	0.57
27:BA:2692:C:H42	27:BA:2717:G:H1	1.52	0.57
1:AA:1001(A):G:C8	1:AA:1002:G:C8	2.92	0.57
8:CH:39:LEU:HD22	8:CH:39:LEU:N	2.18	0.57
43:BU:26:GLY:C	43:BU:28:ARG:N	2.49	0.57
47:BY:67:LEU:HD12	47:BY:68:HIS:N	2.20	0.57
1:AA:1294:G:O2'	1:AA:1295:G:H5'	2.04	0.57
13:AM:104:ARG:HG2	13:AM:105:THR:H	1.68	0.57
3:AC:92:ALA:HB2	3:AC:99:VAL:CG1	2.34	0.57
50:B1:73:LEU:O	50:B1:75:GLU:N	2.37	0.57
7:AG:31:MET:HG3	7:AG:35:LYS:H	1.69	0.57
28:DB:15:A:H1'	28:DB:110:G:N7	2.20	0.57
32:BF:53:THR:HB	32:BF:56:GLU:CG	2.34	0.57
1:CA:320:C:C1'	1:CA:1434:A:H2	2.17	0.57
10:CJ:12:ASP:HB3	10:CJ:15:THR:OG1	2.04	0.57
1:CA:115:G:H1'	1:CA:116:A:N7	2.20	0.57
1:CA:831:U:O2'	1:CA:832:C:H5'	2.04	0.57
27:BA:271(I):G:H3'	27:BA:271(J):C:C6	2.36	0.57
1:AA:582:U:H2'	1:AA:583:A:H8	1.70	0.57
27:BA:1957:C:O2'	27:BA:1985:G:H1'	2.04	0.57
1:CA:859:A:O2'	1:CA:860:A:H5'	2.05	0.57
27:DA:2243:U:H2'	27:DA:2243:U:O2	2.05	0.57
27:BA:83:G:HO2'	27:BA:84:A:H8	1.51	0.57
49:B0:41:ARG:H	49:B0:41:ARG:HD2	1.69	0.57
1:AA:423:G:C2'	1:AA:424:G:H5'	2.35	0.57
4:AD:178:VAL:O	4:AD:180:GLY:N	2.37	0.57
28:DB:93:G:H2'	28:DB:94:C:H6	1.70	0.57
43:BU:47:TYR:HA	43:BU:50:ARG:NH2	2.19	0.57
23:CW:7:A:H5'	23:CW:8:U:OP2	2.04	0.57
27:BA:1386:C:H2'	27:BA:1387:C:C6	2.40	0.57
7:CG:92:SER:O	7:CG:96:GLN:HB2	2.04	0.57
27:DA:1404:C:O2	27:DA:1404:C:H2'	2.04	0.57
36:DN:32:THR:HG23	36:DN:37:LYS:HG2	1.87	0.57
32:BF:103:LYS:HA	32:BF:106:ARG:HG3	1.87	0.57
27:BA:557:U:H2'	27:BA:558:G:C8	2.39	0.57
27:DA:2406:U:H5''	27:DA:2408:U:OP2	2.05	0.57
42:BT:32:TYR:CD2	42:BT:81:PRO:O	2.58	0.57
44:DV:61:VAL:O	44:DV:62:LEU:HD13	2.04	0.57
47:DY:75:ILE:HG13	47:DY:79:CYS:CA	2.20	0.57
12:CL:87:VAL:HG22	12:CL:96:HIS:CE1	2.38	0.57
27:DA:954:G:O2'	27:DA:2274:A:N1	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2401:U:H2'	27:DA:2401:U:O2	2.04	0.57
33:DG:29:TRP:HA	33:DG:29:TRP:HE3	1.69	0.57
27:DA:2056:G:H22	54:D5:4:HIS:HA	1.69	0.57
27:DA:2571:C:H5'	27:DA:2572:A:H5'	1.87	0.57
46:DX:26:TYR:CZ	46:DX:89:ILE:HB	2.39	0.57
22:AV:8:A:C6	22:AV:9:G:C6	2.93	0.57
27:DA:90:U:HO2'	27:DA:92:A:H5''	1.65	0.57
41:DS:58:LEU:HB3	41:DS:65:VAL:HG13	1.86	0.57
41:DS:89:ARG:CB	41:DS:92:TYR:HB3	2.32	0.57
1:AA:103:C:H2'	1:AA:104:G:O4'	2.04	0.57
1:AA:217:C:O2'	1:AA:470:C:N4	2.38	0.57
20:CT:28:ALA:C	20:CT:30:LYS:H	2.08	0.57
20:CT:31:SER:O	20:CT:32:ALA:C	2.42	0.57
3:CC:79:ARG:C	3:CC:81:GLY:H	2.07	0.57
27:BA:390:A:H4'	27:BA:391:G:O5'	2.05	0.57
1:CA:527:G:O2'	1:CA:528:C:H5'	2.04	0.57
48:DZ:38:VAL:HG23	48:DZ:39:ASP:N	2.20	0.57
29:DC:68:LEU:HD11	29:DC:179:SER:C	2.24	0.57
31:DE:111:ARG:C	40:DR:2:ARG:HG3	2.24	0.57
40:DR:14:SER:HA	40:DR:17:ARG:NH1	2.20	0.57
33:DG:138:GLN:HB3	33:DG:153:ARG:O	2.05	0.57
27:DA:2795:G:N2	27:DA:2799:C:H5'	2.19	0.57
26:AZ:6:5OH:HS	26:AZ:6:5OH:N	2.19	0.57
27:DA:784:A:O2'	27:DA:785:G:H5''	2.05	0.57
24:AX:75:C:H2'	24:AX:76:A:O4'	2.04	0.57
37:BO:11:ALA:HB3	37:BO:85:VAL:HG22	1.86	0.57
36:DN:28:THR:O	36:DN:31:ALA:HB3	2.05	0.57
27:DA:416:C:C4	27:DA:417:C:C4	2.92	0.57
27:DA:1257:C:H4'	32:DF:83:PHE:CD2	2.39	0.57
1:AA:1065:U:C5	1:AA:1190:G:H1'	2.40	0.57
1:CA:114:U:H2'	1:CA:115:G:C8	2.38	0.57
17:AQ:32:TYR:O	17:AQ:34:LYS:N	2.37	0.57
35:DI:4:ILE:HD11	35:DI:44:LEU:HD13	1.86	0.57
10:AJ:80:LYS:O	10:AJ:84:GLN:NE2	2.37	0.57
25:AY:56:G:N3	25:AY:56:G:H2'	2.19	0.57
2:CB:131:PRO:O	2:CB:135:GLN:N	2.34	0.57
48:BZ:172:ALA:O	48:BZ:173:VAL:HG23	2.05	0.57
27:DA:2728:U:O2'	27:DA:2729:G:H5'	2.04	0.57
27:BA:2815:C:C5'	54:B5:29:THR:HG21	2.35	0.57
1:CA:1165:C:O2'	1:CA:1166:G:H5'	2.05	0.57
2:CB:142:LEU:O	2:CB:146:GLN:HB3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2445:G:H2'	27:DA:2446:G:H8	1.69	0.57
27:DA:2460:U:H2'	27:DA:2461:C:H5'	1.87	0.57
27:BA:1766:U:O2'	27:BA:1767:C:H5'	2.04	0.57
1:CA:985:C:O2'	1:CA:986:A:H8	1.87	0.57
57:D8:54:GLU:HA	57:D8:57:ARG:HE	1.70	0.57
1:CA:1305:G:OP1	21:CU:2:GLY:HA3	2.05	0.57
44:BV:62:LEU:HD23	44:BV:93:GLU:HB3	1.87	0.57
1:AA:129(A):G:N2	1:AA:189(E):U:O2'	2.38	0.57
27:DA:815:C:H2'	27:DA:816:C:H6	1.70	0.57
38:DP:57:THR:OG1	38:DP:59:LEU:HB2	2.05	0.57
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.40	0.57
42:DT:31:SER:OG	42:DT:32:TYR:N	2.36	0.57
16:AP:4:ILE:HA	16:AP:20:VAL:O	2.05	0.57
26:CZ:6:5OH:HS	26:CZ:6:5OH:N	2.19	0.57
30:BD:226:MET:HB3	30:BD:230:ASP:CB	2.33	0.57
1:AA:70:G:N2	1:AA:100:C:C2	2.73	0.57
27:BA:1273:U:O2'	27:BA:1274:A:H5''	2.05	0.57
1:CA:178:C:H2'	1:CA:179:A:H8	1.68	0.57
12:AL:80:VAL:HG11	12:AL:104:ALA:CB	2.34	0.57
1:CA:693:G:HO2'	7:CG:82:GLY:HA3	1.67	0.57
42:BT:51:ARG:HG3	42:BT:98:LYS:HG3	1.85	0.57
8:CH:80:ILE:CG2	8:CH:82:HIS:O	2.53	0.57
27:DA:2136:C:H41	27:DA:2156:G:H21	1.53	0.57
27:BA:173:G:H2'	27:BA:173:G:N3	2.20	0.57
40:DR:2:ARG:HH21	40:DR:5:LYS:NZ	2.03	0.57
41:DS:71:ARG:O	41:DS:74:ALA:HB3	2.03	0.57
24:CX:19:G:H1	33:DG:83:ARG:NH2	2.02	0.57
1:AA:826:C:H2'	1:AA:827:U:C6	2.39	0.57
8:AH:84:ARG:HH11	8:AH:84:ARG:CB	2.16	0.57
6:AF:72:VAL:HG13	6:AF:73:ASN:H	1.69	0.57
1:CA:349:A:O2'	1:CA:350:G:H5'	2.03	0.57
7:CG:143:ARG:O	7:CG:145:ALA:O	2.23	0.57
40:DR:51:LEU:HB3	40:DR:66:VAL:HG13	1.87	0.57
1:CA:874:G:HO2'	1:CA:875:C:H6	1.51	0.57
1:CA:770:C:H2'	1:CA:771:G:H8	1.68	0.57
33:BG:161:THR:HG21	33:BG:172:LEU:CD2	2.35	0.57
27:BA:2047:U:H2'	27:BA:2048:G:C5'	2.34	0.57
7:AG:60:LYS:HZ1	7:AG:63:LYS:HB3	1.70	0.57
50:B1:51:VAL:O	50:B1:51:VAL:HG13	2.04	0.57
1:CA:1336:C:O4'	1:CA:1337:G:C2	2.58	0.57
18:AR:40:LEU:O	18:AR:42:ARG:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1410:G:H2'	1:CA:1411:C:H6	1.70	0.57
27:BA:2732:G:C2'	27:BA:2733:A:H5'	2.34	0.57
10:AJ:82:ILE:O	10:AJ:82:ILE:HG22	2.03	0.57
36:BN:46:VAL:O	36:BN:47:ALA:HB2	2.04	0.57
34:BH:103:LEU:HD21	34:BH:105:LEU:CD2	2.35	0.57
37:BO:59:LYS:HD3	37:BO:89:ASN:OD1	2.04	0.57
10:AJ:40:LEU:N	10:AJ:40:LEU:HD23	2.19	0.57
55:D6:22:ALA:O	55:D6:23:THR:OG1	2.21	0.57
28:BB:31:C:N4	41:BS:32:LEU:HD13	2.20	0.57
1:AA:756:C:H2'	1:AA:757:U:O4'	2.04	0.57
28:BB:47:C:C2'	28:BB:48:A:H5'	2.35	0.56
57:D8:11:LYS:HE2	57:D8:64:TYR:CE1	2.38	0.56
32:DF:7:TYR:CB	32:DF:16:GLY:H	2.05	0.56
32:DF:199:TRP:O	32:DF:202:PHE:HB3	2.05	0.56
32:DF:2:LYS:HG2	32:DF:25:PRO:CB	2.34	0.56
42:BT:45:PHE:CZ	42:BT:65:LYS:HB3	2.40	0.56
27:DA:1496:A:H8	27:DA:1577:C:HO2'	1.53	0.56
27:DA:860:U:H2'	27:DA:861:A:C8	2.39	0.56
57:D8:14:VAL:HG22	57:D8:15:LYS:N	2.20	0.56
27:DA:2258:C:C6	27:DA:2426:A:H5'	2.39	0.56
27:DA:2499:C:N4	27:DA:2500:U:N3	2.53	0.56
31:DE:134:ILE:CD1	31:DE:134:ILE:N	2.68	0.56
55:B6:36:LEU:CB	55:B6:50:ARG:NH1	2.68	0.56
45:BW:19:LEU:HB3	54:B5:25:LEU:HD11	1.86	0.56
31:BE:37:ARG:HD2	31:BE:42:ASP:CG	2.25	0.56
1:AA:1082:G:C2'	1:AA:1083:U:H5'	2.35	0.56
2:CB:164:VAL:H	2:CB:186:ALA:HB2	1.70	0.56
2:CB:187:LEU:HD23	2:CB:201:ILE:O	2.06	0.56
27:BA:1339:G:H5''	46:BX:16:LYS:HD3	1.87	0.56
27:DA:777:A:O2'	30:DD:48:ARG:NH2	2.38	0.56
14:CN:26:ARG:HD2	14:CN:43:CYS:SG	2.45	0.56
27:DA:2159:G:H2'	27:DA:2160:G:H5''	1.87	0.56
36:DN:22:THR:HG23	36:DN:61:ARG:O	2.05	0.56
1:AA:1172:C:H2'	1:AA:1173:G:C8	2.40	0.56
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.15	0.56
57:B8:50:LEU:O	57:B8:51:ALA:HB3	2.05	0.56
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.86	0.56
1:AA:1380:U:C5	7:AG:3:ARG:HG3	2.40	0.56
27:DA:1385:G:HO2'	27:DA:1396:U:H6	1.50	0.56
15:AO:54:ARG:NH1	15:AO:58:MET:HE1	2.20	0.56
1:AA:1265:G:H3'	1:AA:1265:G:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:30:G:C6	27:DA:31:C:N3	2.73	0.56
1:CA:976:G:N7	1:CA:1359:C:H1'	2.20	0.56
32:DF:132:VAL:HG22	32:DF:133:ASN:N	2.17	0.56
33:BG:170:ARG:NH2	33:BG:182:LYS:NZ	2.52	0.56
27:DA:2139:C:H2'	27:DA:2140:C:C6	2.40	0.56
8:CH:9:MET:O	8:CH:13:ILE:HD13	2.04	0.56
27:DA:1167:U:H1'	27:DA:1183:G:H22	1.70	0.56
28:DB:15:A:H3'	28:DB:16:G:C5'	2.35	0.56
27:DA:528:A:H2	27:DA:2043:C:H4'	1.66	0.56
1:CA:409:G:OP1	4:CD:24:GLU:HG3	2.05	0.56
48:DZ:114:GLY:HA2	48:DZ:173:VAL:HG12	1.87	0.56
30:BD:112:GLN:N	30:BD:115:GLN:NE2	2.53	0.56
50:D1:50:ARG:HG2	50:D1:50:ARG:HH11	1.69	0.56
54:B5:32:PRO:O	54:B5:33:CYS:CB	2.52	0.56
14:AN:51:GLY:C	14:AN:53:LEU:H	2.09	0.56
27:BA:971:C:H2'	27:BA:972:G:H5'	1.86	0.56
6:AF:100:ASN:HB2	18:AR:28:GLU:HA	1.84	0.56
44:DV:68:LYS:HD3	44:DV:69:LYS:H	1.70	0.56
24:CX:8:U:H2'	24:CX:8:U:O2	2.04	0.56
1:CA:355:C:C4	1:CA:356:A:N7	2.73	0.56
29:DC:52:ARG:NH2	29:DC:53:ARG:HH21	2.03	0.56
27:BA:942:G:C2'	27:BA:943:U:H5'	2.35	0.56
1:CA:984:C:N3	1:CA:1222:G:C2	2.73	0.56
47:BY:81:LYS:NZ	47:BY:97:ARG:CG	2.68	0.56
27:DA:1823:G:C4	27:DA:1824:G:C8	2.93	0.56
44:BV:17:GLY:O	44:BV:18:LEU:HB3	2.04	0.56
9:AI:95:LYS:HG3	9:AI:96:LEU:H	1.71	0.56
27:BA:588:U:H2'	27:BA:589:C:C6	2.40	0.56
1:AA:70:G:N2	1:AA:99:U:O2	2.35	0.56
31:BE:2:LYS:HG2	31:BE:95:ILE:HG23	1.87	0.56
1:CA:310:G:H2'	1:CA:311:C:C6	2.38	0.56
1:AA:750:G:H1'	15:AO:22:THR:OG1	2.04	0.56
27:DA:52:A:HO2'	27:DA:53:A:H8	0.68	0.56
12:AL:80:VAL:HA	12:AL:102:TYR:CD1	2.38	0.56
31:BE:117:MET:O	31:BE:117:MET:HG2	2.05	0.56
23:AW:6:U:H3'	23:AW:7:A:C5'	2.31	0.56
27:BA:600:G:O3'	32:BF:108:LYS:NZ	2.37	0.56
1:AA:876:G:H2'	1:AA:877:C:C6	2.41	0.56
33:DG:126:ASP:HA	33:DG:166:ASP:OD1	2.04	0.56
39:BQ:52:VAL:HA	39:BQ:55:VAL:CG1	2.34	0.56
1:AA:579:G:C5'	1:AA:728:A:H1'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:58:GLU:H	3:AC:65:ALA:CB	2.17	0.56
48:DZ:135:PHE:HE1	48:DZ:137:GLU:HB3	1.69	0.56
32:BF:34:TRP:CZ2	38:BP:12:ALA:HB2	2.40	0.56
36:DN:68:GLU:HG2	36:DN:88:GLU:OE2	2.05	0.56
1:AA:784:C:H2'	1:AA:785:G:O4'	2.05	0.56
27:DA:2094:G:OP1	35:DI:22:LYS:HD2	2.05	0.56
37:DO:2:ILE:O	37:DO:33:ALA:N	2.31	0.56
25:CY:30:A:H2'	25:CY:31:U:H5'	1.86	0.56
34:BH:28:GLY:HA3	34:BH:79:VAL:CB	2.34	0.56
42:BT:127:ALA:O	42:BT:129:ARG:N	2.38	0.56
27:BA:2759:G:N2	27:BA:2760:C:C2	2.73	0.56
48:BZ:144:GLU:CD	48:BZ:145:ILE:H	2.08	0.56
27:DA:2063:C:H2'	27:DA:2064:C:O4'	2.05	0.56
1:CA:1463:C:O2'	1:CA:1464:G:H5'	2.05	0.56
1:CA:1466:C:O2'	1:CA:1467:G:H5'	2.04	0.56
13:CM:63:THR:HG22	13:CM:63:THR:O	2.05	0.56
27:DA:1027:A:N6	27:DA:1126:A:H1'	2.20	0.56
27:DA:214:G:H1'	27:DA:216:A:O2'	2.06	0.56
27:BA:2402:C:C2'	27:BA:2403:C:H5'	2.34	0.56
27:BA:2415:G:H4'	38:BP:67:MET:N	2.21	0.56
19:CS:53:ASN:O	19:CS:77:THR:HG22	2.04	0.56
47:BY:76:CYS:CB	47:BY:96:ILE:HD11	2.36	0.56
27:DA:1025:G:O2'	27:DA:1026:U:P	2.64	0.56
46:BX:28:PHE:O	46:BX:30:VAL:HG12	2.06	0.56
57:D8:8:LYS:O	57:D8:12:LYS:HG3	2.05	0.56
4:CD:18:LYS:HG3	4:CD:31:CYS:SG	2.45	0.56
43:BU:88:ILE:C	43:BU:90:VAL:H	2.06	0.56
44:BV:57:VAL:O	44:BV:57:VAL:HG13	2.06	0.56
32:DF:24:LEU:HB3	32:DF:25:PRO:CD	2.35	0.56
43:DU:85:LYS:C	43:DU:87:GLY:H	2.09	0.56
30:DD:117:VAL:O	30:DD:118:VAL:HB	2.05	0.56
57:D8:43:GLN:O	57:D8:44:LYS:CD	2.54	0.56
27:DA:2428:G:OP1	27:DA:2428:G:H3'	2.06	0.56
27:DA:2494:G:C2'	27:DA:2495:G:O5'	2.53	0.56
57:D8:31:HIS:O	57:D8:32:LEU:O	2.23	0.56
27:DA:582:G:C2	27:DA:1259:G:C2	2.94	0.56
27:DA:142:A:C8	27:DA:1595:G:N2	2.66	0.56
34:BH:43:VAL:O	34:BH:43:VAL:CG2	2.54	0.56
1:CA:66:G:H2'	1:CA:66:G:N3	2.21	0.56
47:BY:32:PRO:C	47:BY:34:LYS:N	2.59	0.56
1:AA:1221:G:H4'	19:AS:77:THR:HG21	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:971:G:H22	1:AA:1363(A):A:P	2.28	0.56
42:DT:35:LYS:HZ1	42:DT:41:ARG:HH21	1.52	0.56
1:AA:530:G:O2'	23:AW:34:U:H4'	2.05	0.56
27:BA:855:G:H2'	27:BA:856:C:C6	2.40	0.56
27:DA:2756:U:H5''	58:D9:19:ARG:HA	1.86	0.56
1:AA:376:G:H2'	1:AA:377:G:H8	1.70	0.56
41:DS:19:LYS:C	41:DS:20:ARG:HD3	2.24	0.56
41:DS:89:ARG:O	41:DS:92:TYR:HB3	2.05	0.56
31:BE:34:VAL:HG23	31:BE:34:VAL:O	2.05	0.56
31:BE:81:ILE:O	31:BE:81:ILE:CG2	2.53	0.56
1:AA:1074:G:O3'	2:AB:103:THR:HG21	2.05	0.56
1:CA:279:A:HO2'	1:CA:280:C:P	2.28	0.56
27:BA:748:G:C2'	27:BA:750:A:N7	2.68	0.56
7:AG:45:ASP:O	7:AG:49:ILE:HG12	2.06	0.56
1:CA:1038:C:H2'	1:CA:1039:C:C2	2.39	0.56
1:CA:966:G:O2'	1:CA:967:C:O5'	2.23	0.56
50:B1:7:ILE:CD1	50:B1:7:ILE:N	2.67	0.56
5:CE:57:LYS:HG2	5:CE:61:TYR:CE2	2.40	0.56
5:CE:57:LYS:HG2	5:CE:61:TYR:HE2	1.68	0.56
1:CA:522:C:H41	12:CL:50:ARG:NH2	2.02	0.56
1:CA:1260:C:C3'	1:CA:1260:C:C6	2.89	0.56
27:BA:2577:A:H2'	27:BA:2614:A:N6	2.20	0.56
48:DZ:97:MET:HE2	48:DZ:98:TYR:O	2.05	0.56
8:CH:29:SER:O	8:CH:32:LYS:HB2	2.05	0.56
27:DA:6:A:O2'	36:DN:130:HIS:HB3	2.06	0.56
27:DA:1310:G:OP2	56:D7:9:ARG:CZ	2.54	0.56
35:BI:114:LEU:HD23	35:BI:130:TYR:HE1	1.68	0.56
35:BI:12:LEU:HD23	35:BI:12:LEU:N	2.21	0.56
7:AG:76:ARG:HB2	7:AG:89:MET:SD	2.45	0.56
1:AA:397:A:H5'	1:AA:398:C:OP1	2.05	0.56
1:AA:498:U:HO2'	1:AA:499:A:P	2.28	0.56
28:DB:47:C:H2'	28:DB:48:A:H5'	1.87	0.56
27:BA:64:A:C5	46:BX:66:LEU:HD12	2.40	0.56
39:BQ:137:TYR:CD2	39:BQ:137:TYR:N	2.73	0.56
30:BD:205:VAL:O	30:BD:206:LEU:C	2.44	0.56
37:BO:81:ASP:C	37:BO:81:ASP:OD2	2.42	0.56
37:DO:65:THR:O	37:DO:79:PHE:HD1	1.88	0.56
27:BA:2694:G:H5'	27:BA:2694:G:C8	2.29	0.56
27:DA:2297:C:N3	27:DA:2320:A:C8	2.74	0.56
27:BA:2096:U:H2'	27:BA:2097:C:C6	2.40	0.56
1:AA:1003:G:N2	1:AA:1039:C:H42	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:728:A:C5	15:AO:54:ARG:HD2	2.40	0.56
33:BG:86:MET:CB	33:BG:87:PRO:HD3	2.35	0.56
5:CE:90:VAL:C	5:CE:91:LEU:HD12	2.26	0.56
3:AC:134:ILE:C	3:AC:136:GLN:H	2.07	0.56
27:DA:1028:A:H2	27:DA:2486:G:N3	2.03	0.56
27:BA:1914:C:H2'	27:BA:1915:U:O4'	2.05	0.56
27:DA:506:G:H5''	27:DA:507:A:OP1	2.05	0.56
1:CA:940:C:O2'	1:CA:941:G:H5'	2.06	0.56
27:BA:2303:G:H5''	33:BG:126:ASP:HB2	1.87	0.56
33:BG:123:ASN:HB3	33:BG:126:ASP:OD2	2.05	0.56
12:AL:86:ARG:HH11	12:AL:86:ARG:HB2	1.70	0.56
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.88	0.56
43:BU:31:SER:O	43:BU:33:ARG:N	2.37	0.56
3:AC:153:VAL:HG22	3:AC:198:VAL:HG13	1.86	0.56
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.69	0.56
1:AA:956:U:H2'	1:AA:957:U:O4'	2.05	0.56
38:DP:127:ALA:HB3	38:DP:130:PHE:CE2	2.40	0.56
29:DC:77:ILE:O	29:DC:77:ILE:HG23	2.03	0.56
1:CA:332:G:H2'	1:CA:333:G:H8	1.70	0.56
8:CH:86:ILE:HB	8:CH:133:LEU:HD22	1.87	0.56
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.09	0.56
27:DA:1400:G:H2'	27:DA:1401:G:C8	2.38	0.56
27:DA:2329:G:H2'	27:DA:2330:G:C8	2.40	0.56
9:AI:33:PHE:O	9:AI:36:TYR:HB3	2.04	0.56
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.40	0.56
27:BA:470:A:H2'	27:BA:471:A:H8	1.70	0.56
27:BA:2685:G:H5'	37:BO:68:GLU:CD	2.26	0.56
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.40	0.56
27:DA:1445:A:H5'	27:DA:1445(A):C:OP2	2.05	0.56
27:BA:1754:C:H2'	27:BA:1755:A:C8	2.39	0.56
27:DA:350:U:O2'	27:DA:351:G:H5'	2.05	0.56
27:BA:1936:A:C3'	27:BA:1937:A:C5'	2.83	0.56
1:CA:296:U:H4'	1:CA:556:C:O2	2.05	0.56
51:D2:31:GLU:O	51:D2:34:GLU:HB3	2.04	0.56
27:DA:1398:C:C5'	27:DA:1398:C:C6	2.89	0.56
27:DA:2235:G:C2	27:DA:2236:C:C2	2.93	0.56
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.21	0.56
27:DA:2091:U:H1'	50:D1:47:GLN:OE1	2.05	0.56
27:BA:1445:A:N3	27:BA:1445:A:H2'	2.19	0.56
19:CS:10:PHE:CE2	19:CS:38:SER:HA	2.40	0.56
25:AY:53:U:H3	25:AY:60:C:H42	1.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:731:G:OP1	1:AA:766:A:H1'	2.06	0.56
1:AA:11:G:H2'	1:AA:12:U:O4'	2.05	0.56
51:D2:65:ASN:O	51:D2:68:ARG:HB2	2.05	0.56
30:DD:79:VAL:HG12	30:DD:113:VAL:HA	1.86	0.56
12:CL:51:LYS:HD2	12:CL:51:LYS:N	2.19	0.56
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.04	0.56
27:BA:1765:C:H42	27:BA:1987:G:H1	1.54	0.56
27:BA:894:C:H2'	27:BA:895:U:H6	1.69	0.56
27:BA:353:G:O2'	27:BA:354:G:H5'	2.05	0.56
27:BA:811:U:H3	27:BA:1250:G:P	2.28	0.56
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.04	0.56
1:AA:1200:C:O2'	1:AA:1201:A:OP2	2.23	0.56
1:CA:1194:U:H4'	5:CE:22:GLY:O	2.06	0.56
1:AA:769:G:O2'	1:AA:770:C:H5'	2.05	0.56
4:CD:46:LYS:O	4:CD:47:ARG:C	2.43	0.56
48:BZ:7:TYR:HB2	48:BZ:37:TYR:CE2	2.41	0.56
27:BA:639:U:H2'	27:BA:640:C:C5	2.40	0.56
38:BP:51:PHE:HB3	38:BP:52:GLU:HG2	1.87	0.56
43:BU:101:ARG:O	43:BU:102:GLU:HG2	2.06	0.56
44:BV:37:VAL:O	44:BV:38:LEU:HB2	2.05	0.56
47:DY:27:VAL:CA	47:DY:28:LYS:NZ	2.64	0.56
27:DA:870:A:C2	27:DA:908:C:N3	2.73	0.56
55:D6:36:LEU:C	55:D6:37:ARG:HD2	2.26	0.56
27:DA:2276:G:O2'	27:DA:2277:G:C8	2.58	0.56
38:DP:144:GLU:HG2	38:DP:144:GLU:O	2.06	0.56
54:D5:4:HIS:CB	54:D5:5:PRO:CD	2.84	0.56
1:AA:192:U:O3'	20:AT:57:ARG:HD2	2.05	0.56
55:B6:36:LEU:C	55:B6:37:ARG:HD2	2.25	0.56
4:AD:8:VAL:C	4:AD:10:ARG:N	2.59	0.56
19:AS:37:ARG:HD3	19:AS:37:ARG:O	2.06	0.56
30:BD:227:ASN:O	30:BD:230:ASP:HB2	2.03	0.56
2:AB:188:ALA:HB1	2:AB:192:SER:HB2	1.87	0.56
32:DF:183:VAL:HA	32:DF:186:ILE:HG13	1.88	0.56
58:B9:24:TYR:CE2	58:B9:35:ARG:CD	2.89	0.56
16:AP:74:LEU:HB3	16:AP:79:VAL:HG21	1.87	0.56
20:CT:75:ASN:N	20:CT:75:ASN:OD1	2.37	0.56
6:AF:10:LEU:CD1	6:AF:10:LEU:N	2.66	0.56
9:CI:8:GLY:O	9:CI:14:VAL:HG13	2.05	0.56
12:AL:80:VAL:CG1	12:AL:104:ALA:HB3	2.34	0.56
1:CA:192:U:H2'	1:CA:193:C:C6	2.41	0.56
27:DA:1313:U:H2'	27:DA:1610:A:C2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:686:G:C2	56:D7:11:LYS:HE3	2.41	0.56
31:DE:110:GLY:CA	31:DE:162:ALA:H	2.17	0.56
27:BA:75:G:H4'	51:B2:55:ARG:NH1	2.21	0.56
51:B2:9:GLN:HE22	51:B2:56:GLN:CG	2.19	0.56
27:BA:764:A:C5	30:BD:209:ALA:CB	2.88	0.56
5:CE:103:GLY:C	5:CE:105:VAL:H	2.09	0.56
27:BA:104:U:H2'	27:BA:105:C:O4'	2.05	0.56
43:DU:26:GLY:O	43:DU:30:LYS:HG2	2.05	0.56
27:BA:897:C:O2	27:BA:897:C:C2'	2.52	0.56
1:AA:979:C:H2'	1:AA:980:C:H5''	1.88	0.56
30:DD:112:GLN:HB2	30:DD:115:GLN:HE21	1.69	0.56
34:DH:105:LEU:HD23	34:DH:115:VAL:CG2	2.35	0.56
36:BN:57:ALA:O	36:BN:58:ASP:OD1	2.24	0.56
37:DO:87:ILE:CG2	37:DO:91:LEU:HA	2.34	0.56
1:AA:279:A:H5''	1:AA:281:G:H5'	1.86	0.56
1:AA:1131:G:H2'	1:AA:1132:C:C5	2.41	0.56
13:AM:49:THR:OG1	13:AM:52:GLU:HG3	2.05	0.56
23:CW:38:U:H2'	23:CW:39:C:H6	1.70	0.56
1:CA:1380:U:C4	7:CG:3:ARG:HG3	2.41	0.56
43:BU:52:ARG:HD2	43:BU:55:ARG:HH21	1.70	0.56
27:BA:2082:A:H2'	27:BA:2083:G:O4'	2.05	0.56
1:AA:655:A:H2'	1:AA:656:C:H6	1.71	0.56
3:AC:42:LEU:O	3:AC:45:LYS:HB2	2.04	0.56
1:CA:1377:A:H2'	7:CG:7:ALA:HB2	1.88	0.56
3:AC:67:THR:HG23	3:AC:102:ASN:HB2	1.86	0.56
25:AY:24:C:O2'	25:AY:25:A:H5'	2.05	0.56
40:BR:41:ALA:O	40:BR:42:LYS:C	2.44	0.56
32:BF:24:LEU:O	32:BF:26:ALA:N	2.39	0.56
27:DA:1140:C:H5''	36:DN:66:LYS:NZ	2.19	0.56
27:DA:1006:C:H1'	36:DN:106:MET:SD	2.46	0.56
27:BA:511:U:C5	27:BA:512:G:C5	2.94	0.56
1:CA:429:U:H1'	1:CA:430:A:H5''	1.87	0.56
5:AE:129:ILE:O	5:AE:130:ASN:C	2.44	0.56
27:BA:535:C:O2'	27:BA:536:A:H5'	2.05	0.56
27:DA:1011:G:C2	27:DA:1151:G:C2	2.94	0.56
27:DA:995:C:O2	36:DN:4:TYR:OH	2.23	0.56
43:DU:103:PRO:O	43:DU:106:PHE:N	2.39	0.56
43:DU:108:GLU:O	43:DU:111:GLU:HB2	2.04	0.56
44:DV:19:LYS:HZ2	44:DV:20:LEU:C	2.09	0.56
1:AA:344:A:H4'	1:AA:345:C:OP2	2.04	0.56
47:DY:8:LYS:H	47:DY:8:LYS:HD2	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:904:C:C2'	27:DA:905:U:H5'	2.30	0.56
38:DP:85:LEU:HD23	38:DP:85:LEU:H	1.69	0.56
39:DQ:17:LEU:HD22	39:DQ:96:VAL:HG13	1.88	0.56
27:DA:2571:C:C3'	27:DA:2572:A:H5'	2.36	0.56
45:DW:87:PRO:O	45:DW:88:ARG:HD2	2.05	0.56
46:DX:44:GLU:HG2	46:DX:49:VAL:O	2.05	0.56
46:DX:89:ILE:HG22	46:DX:89:ILE:O	2.03	0.56
2:AB:204:ASN:ND2	2:AB:205:ASP:N	2.53	0.56
27:DA:1798:U:H5''	30:DD:259:THR:HG22	1.83	0.56
40:DR:77:ARG:C	40:DR:79:LEU:H	2.09	0.56
16:AP:22:THR:OG1	16:AP:23:ASP:N	2.38	0.56
16:AP:58:TYR:O	16:AP:62:VAL:HG22	2.05	0.56
31:BE:93:VAL:O	31:BE:95:ILE:N	2.38	0.56
27:DA:1242:A:C6	38:DP:8:PRO:HB3	2.40	0.56
1:CA:606:G:H3'	1:CA:607:A:H5'	1.86	0.56
27:DA:2645:G:C4'	27:DA:2732:G:O2'	2.50	0.56
16:AP:28:ARG:HG2	16:AP:29:ASP:OD2	2.06	0.56
34:BH:156:ALA:HB3	34:BH:159:GLU:HB3	1.88	0.56
27:DA:58:G:N2	27:DA:70:G:C5	2.73	0.56
27:DA:541:C:H2'	27:DA:542:C:C6	2.40	0.56
27:DA:547:A:N3	27:DA:547:A:H2'	2.21	0.56
42:BT:106:SER:HA	42:BT:110:ILE:HG13	1.88	0.56
27:BA:1485:G:H2'	27:BA:1486:A:C8	2.41	0.56
30:BD:142:VAL:CG2	30:BD:143:HIS:N	2.67	0.56
27:BA:2160:G:H2'	27:BA:2161:C:C5	2.41	0.56
35:BI:127:VAL:HA	35:BI:139:GLN:HA	1.86	0.56
27:DA:1650:G:N2	27:DA:1651:G:H1'	2.21	0.56
27:DA:1762:A:C8	27:DA:1762:A:O5'	2.47	0.56
3:AC:200:ALA:C	3:AC:201:TYR:CD1	2.79	0.56
51:B2:54:LYS:O	51:B2:57:ILE:HB	2.05	0.56
1:AA:262:A:C5'	20:AT:74:LYS:HG3	2.32	0.56
10:CJ:96:ILE:H	10:CJ:96:ILE:HD13	1.70	0.56
1:CA:338:A:H2'	1:CA:339:C:O4'	2.05	0.56
42:DT:117:ASP:OD2	42:DT:120:ARG:HG3	2.05	0.56
31:DE:3:GLY:O	31:DE:4:ILE:HB	2.05	0.56
30:DD:271:ILE:O	30:DD:272:ALA:HB2	2.05	0.56
1:AA:663:A:H2'	1:AA:664:G:O4'	2.04	0.56
33:BG:86:MET:CB	33:BG:87:PRO:CD	2.84	0.56
27:DA:29:U:O2'	27:DA:30:G:H5'	2.06	0.56
27:BA:394:A:H2'	27:BA:395:U:O4'	2.05	0.56
1:CA:1095:U:H5'	1:CA:1109:C:O2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1925:C:O2'	27:BA:1926:U:H5'	2.05	0.56
6:AF:15:ASP:O	6:AF:17:SER:N	2.39	0.56
1:AA:1510:U:H3	1:AA:1525:G:H1	1.54	0.56
4:AD:170:VAL:CG1	4:AD:174:LEU:HB2	2.35	0.56
27:BA:549:G:C2'	27:BA:551:G:H5'	2.35	0.56
27:DA:1819:A:C5'	30:DD:158:ALA:HB2	2.35	0.56
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.06	0.56
1:CA:70:G:O2'	1:CA:71:C:H5'	2.06	0.56
32:BF:47:GLY:HA3	32:BF:95:ARG:O	2.05	0.56
27:BA:330:A:O2'	27:BA:331:A:C8	2.58	0.56
40:DR:118:GLU:OE1	40:DR:118:GLU:HA	2.05	0.56
27:BA:2184:G:C6	27:BA:2185:C:N4	2.73	0.56
27:BA:1788:C:O2'	27:BA:1789:A:H5'	2.05	0.56
34:DH:130:ARG:HD3	34:DH:132:ARG:NH2	2.19	0.56
1:CA:909:A:H2'	1:CA:910:C:O4'	2.06	0.56
25:CY:61:C:H2'	25:CY:62:U:C6	2.41	0.56
39:DQ:74:TYR:H	39:DQ:90:VAL:HG13	1.70	0.56
1:AA:803:G:H2'	1:AA:804:U:C6	2.41	0.56
27:BA:247:G:O6	57:B8:8:LYS:HB3	2.06	0.56
27:BA:1281:G:C2	27:BA:1290:C:N3	2.74	0.56
27:BA:2835:A:H4'	27:BA:2836:U:OP1	2.05	0.56
2:CB:91:PRO:HA	2:CB:151:GLY:O	2.05	0.56
1:AA:913:A:H4'	1:AA:914:A:O5'	2.06	0.56
36:DN:62:VAL:HG22	36:DN:66:LYS:HD2	1.86	0.56
57:D8:61:LEU:HD13	57:D8:62:LEU:H	1.70	0.56
57:D8:50:LEU:O	57:D8:51:ALA:HB3	2.06	0.56
27:DA:1693:U:O2'	30:DD:14:ARG:NH2	2.39	0.56
27:BA:1199:U:H2'	27:BA:1200:C:C6	2.41	0.56
32:BF:65:TRP:CZ3	32:BF:72:ARG:HB3	2.40	0.56
44:BV:52:VAL:HG22	44:BV:52:VAL:O	2.04	0.56
27:DA:1419:A:H2'	27:DA:1421:G:N7	2.20	0.56
12:CL:67:ILE:HD11	12:CL:74:LEU:HD12	1.86	0.56
55:D6:14:THR:O	55:D6:49:HIS:HA	2.05	0.56
38:DP:95:VAL:HG23	38:DP:100:LEU:HD21	1.87	0.56
27:BA:1019:U:H3	27:BA:1142(A):A:H62	1.52	0.56
45:BW:19:LEU:HB3	54:B5:25:LEU:CD1	2.35	0.56
42:DT:27:THR:O	42:DT:28:VAL:CG2	2.53	0.56
27:DA:2747:G:N2	27:DA:2748:A:N6	2.54	0.56
41:BS:85:VAL:C	41:BS:106:ARG:HG3	2.26	0.56
27:BA:828:U:C5	27:BA:829:A:N6	2.74	0.56
27:BA:1316:U:H2'	27:BA:1317:A:C8	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:189(L):G:H2'	1:CA:190:U:C5	2.37	0.56
1:CA:1053:G:C5	1:CA:1199:U:H2'	2.41	0.56
27:BA:2868:A:H2'	27:BA:2869:G:C8	2.41	0.56
39:DQ:27:VAL:N	39:DQ:137:TYR:HD1	2.00	0.56
27:DA:1639:U:H4'	27:DA:2699:C:H4'	1.87	0.56
48:BZ:156:LEU:HD12	48:BZ:156:LEU:N	2.20	0.56
1:AA:1164:G:H2'	1:AA:1165:C:C6	2.40	0.56
1:AA:1241:G:O2'	1:AA:1242:C:C6	2.50	0.56
27:DA:2665:A:O2'	27:DA:2666:C:H5'	2.06	0.56
27:DA:2303:G:H1	27:DA:2313:C:N4	2.04	0.56
1:AA:874:G:H2'	1:AA:875:C:H6	1.69	0.56
5:CE:33:VAL:HG22	5:CE:43:LEU:HD13	1.87	0.56
27:DA:2848:G:N2	27:DA:2867:G:H1'	2.19	0.56
37:DO:1:MET:HG3	37:DO:32:TYR:CG	2.40	0.56
1:AA:1039:C:O2'	1:AA:1040:U:H5'	2.04	0.56
54:D5:40:LYS:HD2	54:D5:40:LYS:C	2.25	0.56
54:D5:51:TYR:HD1	54:D5:52:TYR:CE2	2.23	0.56
27:DA:522:G:O2'	27:DA:523:C:H5'	2.06	0.56
15:CO:4:THR:HG23	15:CO:7:GLU:OE2	2.06	0.56
33:BG:15:VAL:HG22	33:BG:175:LEU:HB3	1.86	0.56
29:BC:196:LEU:O	29:BC:198:ALA:N	2.39	0.56
11:CK:101:SER:C	11:CK:103:LEU:N	2.56	0.56
1:CA:328:C:H2'	1:CA:328:C:O2	2.05	0.56
28:DB:62:C:H2'	28:DB:63:G:O4'	2.05	0.56
13:CM:56:LEU:C	13:CM:56:LEU:HD13	2.26	0.56
12:CL:112:LYS:O	12:CL:114:ARG:N	2.38	0.56
1:CA:1009:G:N2	1:CA:1021:G:H1'	2.20	0.56
27:BA:1612:C:H42	27:BA:1619:G:H1	1.54	0.56
1:AA:419:C:C2'	1:AA:420:U:H5'	2.34	0.56
1:AA:426:G:P	4:AD:36:ARG:HH21	2.28	0.56
34:BH:117:PRO:HB3	34:BH:123:PHE:CE1	2.41	0.56
1:CA:898:G:H22	1:CA:900:A:H3'	1.71	0.56
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.41	0.56
7:AG:127:ALA:O	7:AG:129:GLU:N	2.39	0.56
27:DA:99:U:O2'	27:DA:100:G:P	2.63	0.56
41:BS:29:PHE:O	41:BS:35:ILE:HA	2.05	0.56
11:AK:88:GLY:C	11:AK:90:GLY:H	2.08	0.56
33:BG:144:ILE:O	33:BG:144:ILE:HG23	2.04	0.56
27:BA:873:G:C2	27:BA:905:U:O2	2.59	0.56
27:BA:11:G:O2'	27:BA:12:U:H5'	2.05	0.56
27:DA:2131:G:H5'	27:DA:2133:G:O5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:115:LEU:HA	38:BP:134:ALA:CB	2.35	0.56
40:BR:21:TYR:HB3	40:BR:47:PHE:CE1	2.41	0.56
27:BA:2804:C:H2'	27:BA:2805:G:C8	2.41	0.56
27:BA:2682:U:H5''	31:BE:11:MET:O	2.05	0.56
38:DP:47:ASP:HB3	38:DP:48:PRO:O	2.05	0.56
38:DP:50:ARG:HD3	57:D8:7:HIS:NE2	2.21	0.56
4:CD:60:GLU:OE1	4:CD:199:ASN:N	2.39	0.56
9:CI:118:LYS:O	9:CI:120:ARG:N	2.38	0.56
43:BU:41:ALA:O	43:BU:42:ALA:O	2.24	0.56
32:DF:20:LEU:HD22	32:DF:203:GLN:OE1	2.06	0.56
8:AH:69:ARG:CZ	8:AH:69:ARG:HB2	2.36	0.56
44:DV:4:ILE:O	44:DV:39:LEU:HD22	2.05	0.56
27:BA:1462:C:H2'	27:BA:1463:C:O4'	2.05	0.56
27:DA:1578:U:O2	27:DA:1578:U:H2'	2.05	0.56
37:BO:107:ARG:NH1	42:BT:36:GLU:H	2.04	0.56
49:D0:26:TYR:O	49:D0:29:GLN:HG3	2.06	0.56
27:DA:873:G:H4'	39:DQ:63:LYS:HE2	1.88	0.56
39:DQ:64:ILE:N	48:DZ:177:GLU:OE2	2.37	0.56
55:D6:15:GLU:CG	55:D6:18:ARG:HE	2.17	0.56
27:DA:2050:C:C4	27:DA:2051:A:C2	2.93	0.56
46:DX:57:LEU:CD2	46:DX:78:LYS:HD3	2.35	0.56
34:BH:53:GLU:O	34:BH:54:ARG:HB3	2.06	0.56
27:BA:1491:G:P	27:BA:1494:A:N6	2.79	0.56
27:BA:1499:C:C2'	27:BA:1500:G:H5'	2.34	0.56
27:DA:1032:A:OP1	58:D9:8:LYS:HG2	2.05	0.56
1:AA:1321:C:H3'	1:AA:1322:C:C6	2.41	0.56
27:DA:542:C:N3	27:DA:543:C:N4	2.53	0.56
27:DA:1622:G:O2'	27:DA:1623:G:H5'	2.06	0.56
57:B8:34:TRP:CE2	57:B8:35:GLN:HB3	2.41	0.56
35:BI:10:GLU:O	35:BI:11:ASN:HB2	2.05	0.56
2:AB:63:MET:HB3	2:AB:225:ALA:CB	2.33	0.56
30:BD:146:GLU:OE2	30:BD:152:GLY:N	2.37	0.56
51:B2:9:GLN:HE22	51:B2:56:GLN:CD	2.09	0.56
29:DC:82:LYS:O	29:DC:83:ILE:HD13	2.06	0.56
39:BQ:27:VAL:HG11	39:BQ:134:ARG:HG2	1.87	0.56
1:CA:52:G:C6	1:CA:360:A:C2	2.94	0.56
23:CW:53:U:H4'	39:DQ:52:VAL:CG2	2.35	0.56
27:DA:267:C:H2'	27:DA:268:C:C6	2.39	0.56
15:CO:11:VAL:O	15:CO:14:GLU:HB3	2.06	0.56
29:DC:45:ALA:O	29:DC:46:LYS:HB2	2.06	0.56
1:AA:956:U:O2	1:AA:1225:A:C2	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:74:ALA:C	11:CK:76:GLY:N	2.57	0.56
13:CM:90:LEU:O	13:CM:91:ARG:CB	2.53	0.56
28:DB:109:C:H5'	28:DB:110:G:O5'	2.05	0.56
1:CA:944:G:H21	1:CA:1339:A:H62	1.53	0.56
27:DA:1799:G:H5'	27:DA:1819:A:H61	1.69	0.56
2:CB:21:ARG:HB2	2:CB:38:GLY:O	2.06	0.56
40:BR:77:ARG:O	40:BR:81:ASP:OD2	2.23	0.56
1:CA:1288:A:O2'	1:CA:1289:A:H5'	2.06	0.56
1:CA:929:G:H2'	1:CA:930:C:H6	1.71	0.56
28:DB:26:A:H2'	28:DB:27:C:C6	2.40	0.56
20:CT:10:LEU:O	20:CT:13:LEU:HD23	2.06	0.56
9:AI:105:ASP:OD2	9:AI:107:ARG:HD3	2.06	0.56
43:DU:8:VAL:HG12	43:DU:12:ARG:HE	1.69	0.56
43:DU:9:VAL:CG1	43:DU:13:LYS:HE3	2.35	0.56
27:BA:2082:A:C8	27:BA:2083:G:C8	2.94	0.56
24:CX:67:C:H2'	24:CX:67:C:O2	2.06	0.56
27:BA:834:C:O2'	27:BA:835:A:H5'	2.06	0.56
9:AI:125:TYR:CZ	9:AI:127:LYS:HB2	2.41	0.56
1:CA:1290:G:H3'	1:CA:1291:G:C8	2.41	0.56
7:AG:43:PHE:C	7:AG:43:PHE:CD1	2.78	0.56
27:DA:1611:C:H5'	27:DA:1611:C:H6	1.70	0.56
1:AA:978:A:C8	1:AA:978:A:H5''	2.41	0.56
32:BF:2:LYS:HE2	32:BF:25:PRO:CB	2.31	0.56
57:D8:61:LEU:O	57:D8:63:PRO:O	2.23	0.56
27:BA:30:G:H2'	27:BA:31:C:H6	1.68	0.56
33:BG:114:ILE:O	33:BG:115:ARG:C	2.45	0.56
13:CM:23:TYR:HB3	13:CM:67:GLU:CB	2.34	0.56
27:BA:479:A:O2'	27:BA:481:G:H5'	2.06	0.56
1:CA:1347:G:C2	1:CA:1373:G:H2'	2.39	0.56
27:DA:534:U:O2'	43:DU:49:HIS:HD2	1.89	0.56
42:BT:35:LYS:C	42:BT:37:GLY:H	2.09	0.56
31:DE:67:PHE:HD2	31:DE:69:LYS:CE	2.19	0.56
27:DA:2276:G:O2'	27:DA:2277:G:H8	1.88	0.56
27:DA:2258:C:O2'	27:DA:2426:A:H4'	2.06	0.56
27:DA:631:A:H2'	27:DA:632:A:O5'	2.06	0.56
27:DA:570:G:O6	27:DA:2499:C:OP1	2.24	0.56
27:DA:941:A:O5'	38:DP:35:HIS:HE1	1.89	0.56
20:AT:63:ILE:CD1	20:AT:80:ARG:HB2	2.35	0.56
45:BW:18:ARG:NH1	45:BW:76:VAL:O	2.38	0.56
27:DA:1348:G:H2'	27:DA:1349:A:H5''	1.87	0.56
27:DA:143:G:C1'	46:DX:37:THR:HG21	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:91:VAL:HG12	31:DE:92:THR:N	2.21	0.56
8:AH:100:ILE:HB	8:AH:125:ARG:NH1	2.20	0.56
41:DS:66:ALA:O	41:DS:69:VAL:CG1	2.53	0.56
27:BA:126:A:C6	27:BA:127:A:N1	2.74	0.56
31:BE:47:VAL:HG21	31:BE:86:PRO:HD3	1.87	0.56
46:DX:12:VAL:HG12	46:DX:27:THR:CB	2.36	0.56
16:AP:74:LEU:O	16:AP:79:VAL:HG23	2.06	0.56
45:BW:92:ARG:O	45:BW:93:ALA:HB3	2.05	0.56
27:DA:49:A:H1'	27:DA:51:G:C4	2.41	0.56
27:BA:2274:A:N1	27:BA:2276:G:H1'	2.20	0.56
31:BE:117:MET:HB2	31:BE:122:PHE:O	2.06	0.56
25:AY:67:C:H2'	25:AY:68:C:H6	1.69	0.56
1:CA:1498:U:H1'	1:CA:1499:A:N7	2.19	0.56
1:CA:922:G:C6	1:CA:923:A:C6	2.93	0.56
35:BI:139:GLN:O	35:BI:140:LEU:HB2	2.04	0.56
1:AA:1442:G:C8	1:AA:1442(B):A:C2	2.94	0.56
8:AH:84:ARG:NH1	8:AH:84:ARG:CG	2.61	0.56
42:BT:67:SER:O	42:BT:68:TYR:O	2.22	0.56
27:BA:844:C:H3'	27:BA:845:G:C8	2.40	0.56
1:CA:1315:U:O2'	1:CA:1360:A:H1'	2.06	0.56
40:DR:99:LYS:HZ3	54:D5:43:HIS:HB3	1.71	0.56
27:DA:479:A:O2'	27:DA:481:G:H5'	2.06	0.56
27:BA:2618:G:H21	31:BE:150:VAL:HG21	1.71	0.56
1:AA:26:A:O2'	4:AD:209:ARG:NH2	2.39	0.56
47:BY:67:LEU:C	47:BY:67:LEU:HD12	2.25	0.56
39:DQ:19:GLY:O	39:DQ:98:LYS:HD3	2.05	0.56
37:BO:102:VAL:O	37:BO:122:LEU:O	2.23	0.56
16:AP:14:ASN:OD1	16:AP:42:ARG:NH2	2.35	0.56
27:DA:428:A:H3'	27:DA:429:A:H8	1.70	0.56
34:DH:104:GLU:CD	34:DH:112:PRO:HB2	2.26	0.56
27:DA:2607:G:H2'	27:DA:2608:G:O4'	2.06	0.56
27:BA:226:G:H5''	27:BA:257:A:O2'	2.05	0.56
27:DA:2593:U:C2	27:DA:2594:C:H5	2.23	0.56
1:AA:841:U:H3'	1:AA:848:C:O4'	2.05	0.56
51:B2:7:ARG:HG3	51:B2:8:LYS:N	2.21	0.56
11:AK:104:GLN:HE22	11:AK:106:LYS:HD2	1.70	0.56
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.40	0.56
27:BA:460:A:H3'	27:BA:461:C:H6	1.71	0.56
27:DA:1721:G:H5''	27:DA:1721:G:N3	2.21	0.56
1:CA:929:G:H1	1:CA:1388:C:N4	2.03	0.56
34:BH:103:LEU:HD21	34:BH:105:LEU:HD22	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2455:G:H2'	27:BA:2456:C:H6	1.70	0.56
30:DD:186:HIS:CD2	30:DD:188:GLU:HB2	2.39	0.56
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.06	0.56
27:BA:2083:G:H2'	27:BA:2084:C:C6	2.41	0.56
27:BA:353:G:H2'	27:BA:354:G:H8	1.71	0.56
3:AC:42:LEU:HA	3:AC:45:LYS:HD2	1.86	0.56
42:DT:132:LYS:C	42:DT:134:GLU:H	2.08	0.56
2:AB:236:TYR:HA	2:AB:239:VAL:HG23	1.87	0.56
51:B2:63:VAL:O	51:B2:66:GLU:HG2	2.06	0.56
35:DI:92:VAL:CG1	35:DI:120:ILE:HB	2.35	0.56
27:DA:1763:G:OP1	27:DA:1763:G:H4'	2.06	0.56
3:CC:121:ALA:O	3:CC:125:GLU:HG3	2.06	0.56
27:BA:839:U:O2'	27:BA:840:C:H5'	2.06	0.56
27:BA:1279:G:OP1	40:BR:35:THR:OG1	2.23	0.56
44:BV:19:LYS:HZ1	44:BV:20:LEU:HB2	1.70	0.56
1:AA:129(A):G:N2	1:AA:189(E):U:H1'	2.21	0.56
44:DV:58:VAL:HG12	44:DV:59:ALA:H	1.71	0.56
47:DY:95:LYS:HE2	47:DY:100:ALA:HB2	1.88	0.56
47:DY:95:LYS:HE2	47:DY:100:ALA:CB	2.35	0.56
47:DY:26:LYS:HG2	47:DY:27:VAL:N	2.21	0.56
1:AA:472:A:H2'	1:AA:473:G:O4'	2.05	0.56
57:D8:39:LYS:O	57:D8:42:ARG:HB3	2.06	0.56
27:DA:631:A:OP2	57:D8:46:ARG:NH2	2.37	0.56
27:DA:2443:C:O2'	27:DA:2444:G:H5'	2.06	0.56
27:DA:2612:C:O2'	27:DA:2613:U:C5'	2.52	0.56
32:DF:65:TRP:CZ3	32:DF:73:ALA:O	2.58	0.56
45:BW:10:VAL:O	45:BW:10:VAL:HG12	2.06	0.56
39:BQ:2:LEU:HG	39:BQ:70:PRO:HG3	1.88	0.56
35:DI:133:HIS:CB	35:DI:134:PRO:CD	2.80	0.56
14:AN:22:THR:O	14:AN:23:ARG:HB2	2.05	0.56
1:AA:1060:C:C5'	14:AN:45:ARG:HH22	2.18	0.56
8:AH:9:MET:SD	8:AH:32:LYS:HD3	2.46	0.56
32:DF:187:VAL:HB	38:DP:7:ARG:NH2	2.21	0.56
1:CA:265:G:H4'	17:CQ:65:ILE:C	2.26	0.56
37:BO:78:ARG:CB	37:BO:78:ARG:NH1	2.69	0.56
27:DA:48:G:H5'	27:DA:52:A:C4'	2.35	0.56
48:DZ:127:VAL:HG13	48:DZ:128:SER:N	2.21	0.56
27:BA:2161:C:H2'	27:BA:2162:G:C8	2.40	0.56
2:CB:158:LEU:CD1	2:CB:158:LEU:H	2.03	0.56
46:DX:60:ARG:NH2	56:D7:47:ARG:NH2	2.53	0.56
27:BA:2425:A:H5''	27:BA:2427:C:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DC:78:ALA:CB	29:DC:82:LYS:HB2	2.35	0.56
29:DC:87:GLU:HG2	29:DC:94:VAL:HG22	1.87	0.56
27:DA:1146:C:HO2'	27:DA:1147:C:H5'	1.67	0.56
5:CE:29:GLY:HA2	5:CE:45:PHE:CE1	2.39	0.56
27:DA:1754:C:H5'	42:DT:101:PHE:CE2	2.41	0.56
27:BA:814:C:OP1	44:BV:83:ARG:HA	2.06	0.56
13:AM:91:ARG:CB	13:AM:98:VAL:HG13	2.35	0.56
1:CA:321:A:N6	1:CA:328:C:O2'	2.35	0.56
27:BA:1848:A:H2'	27:BA:1849:G:H8	1.71	0.56
5:AE:149:GLU:O	5:AE:151:LEU:N	2.39	0.56
27:BA:271(K):U:O2'	35:BI:50:ARG:HD3	2.05	0.56
27:BA:863:A:H2	27:BA:914:C:H41	1.54	0.56
27:DA:1771:C:HO2'	27:DA:1786:A:H8	1.52	0.56
42:DT:92:GLY:C	42:DT:94:ALA:N	2.58	0.56
1:AA:563:A:H5'	1:AA:566:G:N2	2.21	0.56
28:DB:26:A:C8	28:DB:26:A:H5''	2.41	0.56
30:DD:2:ALA:O	30:DD:3:VAL:CB	2.53	0.56
27:BA:83:G:N1	27:BA:102:G:O2'	2.37	0.56
9:CI:18:PHE:HD1	9:CI:62:TYR:HD2	1.54	0.56
27:DA:1388:G:H2'	27:DA:1389:G:H5'	1.87	0.56
32:DF:53:THR:HG22	32:DF:56:GLU:HG3	1.87	0.56
31:DE:102:VAL:HG13	31:DE:172:VAL:HG23	1.88	0.56
1:CA:1445:C:O2'	1:CA:1446:U:H5'	2.06	0.56
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.41	0.56
1:AA:538:G:H5''	12:AL:111:LYS:HB2	1.87	0.56
18:AR:86:VAL:HG12	18:AR:87:ARG:CD	2.36	0.56
40:DR:58:GLY:HA2	40:DR:80:PHE:HE1	1.71	0.56
38:BP:84:ASN:HD22	38:BP:115:LEU:CD2	2.18	0.56
19:CS:52:TYR:CE1	19:CS:56:GLN:HA	2.41	0.56
32:BF:25:PRO:HG3	32:BF:119:ARG:CA	2.36	0.56
47:BY:80:GLY:O	47:BY:81:LYS:HB2	2.05	0.56
30:DD:9:TYR:CD2	30:DD:10:THR:HG22	2.41	0.56
4:CD:33:MET:HE2	4:CD:33:MET:HA	1.87	0.56
1:CA:1306:A:N6	1:CA:1331:G:O2'	2.38	0.56
42:BT:30:VAL:HG11	42:BT:84:GLN:HE22	1.71	0.56
42:BT:65:LYS:NZ	42:BT:66:VAL:H	2.04	0.56
1:AA:1402:C:C2'	1:AA:1403:C:H5'	2.35	0.56
31:DE:57:LYS:C	31:DE:59:VAL:H	2.10	0.56
27:DA:2344:U:H4'	27:DA:2345:G:OP1	2.05	0.56
27:DA:2416:C:OP1	38:DP:64:LYS:O	2.24	0.56
27:DA:820:A:C2	27:DA:943:U:H4'	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:587:C:C5	38:DP:33:ARG:NH1	2.74	0.56
27:DA:139(A):G:H22	46:DX:44:GLU:CD	2.09	0.56
27:DA:2745:C:H4'	34:DH:142:GLY:C	2.25	0.56
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.70	0.56
6:AF:40:VAL:HG23	6:AF:63:TYR:CE1	2.41	0.56
27:DA:2525:G:H1	27:DA:2538:C:H42	1.54	0.56
48:DZ:128:SER:C	48:DZ:130:ARG:H	2.09	0.56
1:CA:782:A:H2'	1:CA:783:C:O4'	2.06	0.56
1:AA:875:C:H1'	8:AH:15:ASN:HD21	1.71	0.56
5:CE:48:ALA:HB1	5:CE:49:PRO:HD2	1.86	0.56
42:DT:100:TYR:O	42:DT:103:ARG:HG3	2.06	0.56
8:CH:104:ARG:HB3	8:CH:107:LEU:HB2	1.87	0.56
7:CG:138:LYS:O	7:CG:141:VAL:HB	2.05	0.56
45:DW:24:ILE:HG21	45:DW:36:LEU:HD11	1.87	0.56
8:AH:93:VAL:O	8:AH:132:GLU:HA	2.06	0.56
36:DN:126:PRO:O	36:DN:127:ASP:HB2	2.06	0.56
10:CJ:30:SER:HA	10:CJ:80:LYS:HD3	1.88	0.56
1:CA:76:C:H42	1:CA:93:G:H1	1.54	0.56
27:DA:898:C:C2'	27:DA:899:A:H5'	2.35	0.56
27:BA:271(J):C:H2'	27:BA:271(J):C:O2	2.06	0.56
1:AA:879:C:O2'	1:AA:880:C:H5'	2.06	0.56
27:DA:612:C:H42	27:DA:615:G:H1	1.51	0.56
2:AB:24:TRP:N	2:AB:24:TRP:CD1	2.74	0.56
1:AA:72:C:H2'	1:AA:73:G:H8	1.68	0.56
27:DA:2728:U:H5'	37:DO:70:LYS:NZ	2.21	0.56
1:CA:181:G:N2	1:CA:183:G:H22	2.04	0.56
1:CA:486:U:HO2'	1:CA:487:A:H8	1.51	0.56
27:DA:1632:A:H8	27:DA:1632:A:O5'	1.89	0.56
40:BR:8:ARG:CZ	40:BR:8:ARG:HA	2.36	0.56
10:AJ:40:LEU:HG	10:AJ:69:ASN:HB3	1.88	0.56
27:DA:1434:A:H2'	27:DA:1435:G:C8	2.41	0.56
1:CA:1452:C:O2'	1:CA:1456:G:N2	2.39	0.56
42:DT:22:PHE:N	42:DT:22:PHE:CD2	2.74	0.56
1:CA:773:G:H2'	1:CA:774:G:O4'	2.06	0.56
3:AC:138:VAL:O	3:AC:138:VAL:HG12	2.06	0.56
27:BA:1894:C:O5'	27:BA:1894:C:H6	1.89	0.56
30:DD:45:ASN:OD1	30:DD:46:GLN:N	2.39	0.56
38:BP:50:ARG:NH2	38:BP:50:ARG:HG2	2.21	0.55
1:CA:977:A:O2'	1:CA:978:A:H5'	2.06	0.55
10:CJ:63:PHE:HA	14:CN:59:ALA:CB	2.35	0.55
27:BA:2883:A:C5'	27:BA:2884:U:H5'	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1907:G:C2	27:DA:1924:C:O2	2.58	0.55
30:DD:13:ARG:HA	30:DD:16:MET:HB3	1.89	0.55
1:CA:428:G:HO2'	1:CA:429:U:P	2.27	0.55
31:BE:57:LYS:C	31:BE:59:VAL:N	2.57	0.55
44:DV:46:VAL:HG13	44:DV:47:VAL:N	2.21	0.55
44:DV:46:VAL:HG22	44:DV:47:VAL:H	1.71	0.55
27:DA:436:C:H2'	27:DA:437:G:H8	1.71	0.55
55:D6:14:THR:HA	55:D6:20:ASN:O	2.06	0.55
27:DA:2066:C:C2'	27:DA:2067:G:O5'	2.54	0.55
27:DA:2069:G:C6	27:DA:2443:C:N4	2.74	0.55
55:B6:37:ARG:O	55:B6:48:VAL:O	2.22	0.55
31:DE:37:ARG:N	31:DE:46:ALA:O	2.35	0.55
30:BD:77:ALA:CB	30:BD:97:TYR:HA	2.36	0.55
1:AA:974:A:OP2	14:AN:29:ARG:NH2	2.39	0.55
8:AH:124:ALA:HA	8:AH:129:VAL:HG22	1.87	0.55
12:CL:101:VAL:O	12:CL:102:TYR:HB2	2.04	0.55
12:CL:30:ARG:O	12:CL:81:LEU:HD22	2.05	0.55
49:B0:73:GLY:O	49:B0:75:LEU:N	2.33	0.55
27:BA:752:A:O2'	27:BA:753:C:OP2	2.22	0.55
1:CA:893:C:H2'	1:CA:894:G:H8	1.70	0.55
40:DR:41:ALA:C	40:DR:43:GLU:H	2.08	0.55
1:AA:373:A:H5'	1:AA:373:A:H8	1.67	0.55
27:DA:2712:U:C2'	27:DA:2712(A):A:H8	2.19	0.55
14:CN:26:ARG:HD2	14:CN:43:CYS:HB3	1.88	0.55
29:DC:36:LYS:O	29:DC:37:PHE:C	2.44	0.55
33:BG:46:ALA:HA	33:BG:51:ARG:HB3	1.88	0.55
33:DG:76:SER:HA	33:DG:83:ARG:CB	2.35	0.55
13:CM:83:ASP:HB2	19:CS:66:MET:HE1	1.87	0.55
27:DA:2561:A:O2'	37:DO:40:VAL:HG21	2.05	0.55
42:DT:106:SER:HA	42:DT:110:ILE:HG13	1.88	0.55
5:CE:80:ILE:O	5:CE:90:VAL:HA	2.06	0.55
1:CA:577:G:C4	1:CA:578:C:H5	2.24	0.55
33:BG:170:ARG:HE	33:BG:174:GLU:CD	2.09	0.55
3:AC:150:LYS:HB2	3:AC:173:VAL:HG21	1.89	0.55
1:AA:1513:A:H2'	1:AA:1514:C:H6	1.68	0.55
2:CB:208:ILE:O	2:CB:208:ILE:HG22	2.06	0.55
27:DA:2038:G:H2'	27:DA:2039:C:O4'	2.06	0.55
13:CM:94:ARG:N	13:CM:94:ARG:HD2	2.21	0.55
27:DA:65:C:H2'	27:DA:66:C:H6	1.71	0.55
31:BE:152:LYS:HB3	36:BN:78:TYR:CD2	2.41	0.55
1:AA:407:G:H1	1:AA:435:C:N4	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DX:64:LYS:NZ	46:DX:73:ARG:NH1	2.53	0.55
1:AA:24:U:O2'	1:AA:25:C:H5'	2.05	0.55
47:DY:88:LYS:HD3	47:DY:93:GLY:N	2.21	0.55
1:AA:287:U:O2'	1:AA:288:A:H5'	2.06	0.55
19:CS:24:ALA:O	19:CS:25:LYS:CB	2.53	0.55
18:CR:36:ASN:ND2	18:CR:36:ASN:N	2.53	0.55
27:DA:732:C:N4	27:DA:733:G:C6	2.74	0.55
27:BA:867:C:H2'	27:BA:868:U:H6	1.70	0.55
34:DH:31:GLY:O	34:DH:79:VAL:HG12	2.07	0.55
7:CG:155:ARG:O	7:CG:156:TRP:O	2.24	0.55
27:BA:1593:G:H2'	27:BA:1594:G:C8	2.41	0.55
27:DA:217:G:O6	27:DA:431:U:O2	2.24	0.55
9:AI:23:ASN:HB2	9:AI:60:ASP:OD2	2.05	0.55
27:BA:1759:A:H5''	27:BA:2715:C:H1'	1.87	0.55
32:DF:118:ALA:C	32:DF:120:GLU:H	2.09	0.55
45:BW:23:LEU:O	45:BW:27:LYS:HD2	2.06	0.55
1:AA:1121:U:H6	1:AA:1121:U:O5'	1.89	0.55
27:BA:1876:A:H2'	27:BA:1877:A:C8	2.40	0.55
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.06	0.55
27:BA:696:G:O2'	27:BA:697:C:H5'	2.06	0.55
27:BA:2369:A:O2'	27:BA:2370:G:H5'	2.06	0.55
14:CN:2:ALA:O	14:CN:6:LEU:HD12	2.05	0.55
31:BE:104:VAL:O	31:BE:166:THR:HA	2.06	0.55
5:AE:84:PHE:HB2	5:AE:134:ALA:HB2	1.88	0.55
27:BA:2328:A:H2'	27:BA:2329:G:C8	2.41	0.55
32:DF:22:ALA:C	32:DF:24:LEU:N	2.58	0.55
19:CS:20:LEU:HA	19:CS:23:ASN:HB3	1.87	0.55
42:BT:115:ARG:O	42:BT:116:ALA:CB	2.55	0.55
36:DN:2:LYS:HB3	36:DN:4:TYR:CE2	2.42	0.55
1:CA:1240:U:OP2	7:CG:116:ALA:HB2	2.06	0.55
27:DA:752:A:O2'	27:DA:753:C:OP2	2.23	0.55
27:DA:820:A:N3	27:DA:943:U:H4'	2.20	0.55
1:CA:1104:G:H4'	2:CB:111:ARG:HH11	1.71	0.55
31:DE:1:MET:HG3	31:DE:200:GLU:OE1	2.06	0.55
47:BY:37:VAL:HG23	47:BY:38:ILE:N	2.21	0.55
1:AA:981:U:H2'	1:AA:982:U:C5	2.40	0.55
14:AN:42:ILE:HG22	14:AN:43:CYS:N	2.21	0.55
12:CL:21:VAL:O	12:CL:23:ALA:N	2.37	0.55
12:CL:21:VAL:HG22	12:CL:95:TYR:CZ	2.41	0.55
2:AB:91:PRO:CG	2:AB:155:LEU:HB2	2.36	0.55
34:DH:137:ASP:CB	34:DH:140:LYS:HB3	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:25:ARG:HH12	41:DS:40:ILE:HD12	1.71	0.55
27:BA:743:G:N2	27:BA:755:C:C2	2.75	0.55
39:BQ:17:LEU:HD11	39:BQ:41:TRP:CD1	2.41	0.55
1:CA:1001(A):G:C8	1:CA:1002:G:H8	2.24	0.55
48:DZ:150:HIS:HB3	48:DZ:169:THR:CA	2.37	0.55
34:BH:87:LEU:HD13	34:BH:162:ILE:HG21	1.88	0.55
27:BA:2091:U:O2'	50:B1:47:GLN:HG3	2.06	0.55
27:DA:2538:C:H2'	27:DA:2539:C:H6	1.72	0.55
27:DA:118:A:H5'	27:DA:119:A:H8	1.69	0.55
1:CA:1074:G:H1'	2:CB:104:ASN:HD22	1.71	0.55
31:DE:110:GLY:O	40:DR:2:ARG:NE	2.39	0.55
27:DA:2308:G:O6	27:DA:2310:A:N3	2.39	0.55
1:AA:359:U:H2'	1:AA:360:A:C8	2.41	0.55
1:CA:1027:C:H2'	1:CA:1028:C:C4	2.41	0.55
5:CE:129:ILE:HG22	5:CE:130:ASN:N	2.21	0.55
42:BT:13:ARG:HA	42:BT:13:ARG:NE	2.17	0.55
27:BA:1474:C:H2'	27:BA:1475:G:C8	2.29	0.55
1:CA:13:U:O2'	1:CA:14:U:H5'	2.06	0.55
33:BG:33:ARG:O	33:BG:162:THR:HG22	2.05	0.55
13:CM:93:ARG:HB3	13:CM:94:ARG:HH11	1.72	0.55
50:B1:52:ARG:HG3	50:B1:53:VAL:N	2.19	0.55
27:DA:2594:C:O2'	27:DA:2595:G:H5'	2.07	0.55
1:AA:434:U:H2'	1:AA:435:C:C1'	2.36	0.55
27:BA:2015:A:H1'	54:B5:2:ALA:HA	1.89	0.55
1:AA:849:C:O2'	1:AA:850:U:H5'	2.05	0.55
40:BR:11:ASN:H	40:BR:17:ARG:HD3	1.71	0.55
27:BA:2110:G:OP2	27:BA:2110:G:C8	2.60	0.55
2:CB:114:ARG:HA	2:CB:117:GLU:OE1	2.04	0.55
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.88	0.55
19:CS:9:VAL:C	19:CS:11:VAL:H	2.10	0.55
42:BT:127:ALA:C	42:BT:129:ARG:N	2.60	0.55
7:CG:27:ILE:HD13	7:CG:40:ALA:HA	1.87	0.55
1:CA:72:C:O2'	1:CA:73:G:H5'	2.05	0.55
13:CM:76:ALA:HA	13:CM:79:LYS:CB	2.35	0.55
25:AY:18:G:C4'	25:AY:56:G:H22	2.20	0.55
29:DC:20:TYR:HD1	29:DC:20:TYR:H	1.54	0.55
21:CU:8:THR:OG1	21:CU:11:GLY:HA3	2.05	0.55
35:DI:7:GLU:HG3	35:DI:8:PRO:HD2	1.87	0.55
27:BA:2555:U:C2'	27:BA:2556:C:H5'	2.36	0.55
27:DA:1116:C:H2'	27:DA:1117:G:C8	2.41	0.55
40:DR:55:ALA:HA	40:DR:80:PHE:CZ	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:444:C:O2'	27:BA:445:C:H5'	2.05	0.55
27:DA:1806:C:H2'	27:DA:1807:G:C8	2.42	0.55
27:DA:1806:C:H2'	27:DA:1807:G:H8	1.71	0.55
48:BZ:110:VAL:HG13	48:BZ:110:VAL:O	2.06	0.55
50:D1:59:THR:O	50:D1:91:LYS:NZ	2.34	0.55
27:DA:1961:C:O2'	27:DA:1962:C:H5'	2.07	0.55
47:BY:62:GLU:OE1	47:BY:62:GLU:HA	2.06	0.55
32:BF:65:TRP:CB	32:BF:66:PRO:CD	2.85	0.55
44:BV:46:VAL:HG13	44:BV:47:VAL:N	2.21	0.55
8:AH:67:PRO:C	8:AH:76:PRO:HB3	2.26	0.55
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.06	0.55
27:DA:1158:C:HO2'	27:DA:1159:U:H6	1.50	0.55
27:DA:435:C:O2'	27:DA:436:C:H5'	2.06	0.55
27:DA:97:C:C2	27:DA:98:G:C8	2.94	0.55
27:DA:914:C:N4	27:DA:915:C:C2	2.74	0.55
27:DA:626:U:H3	38:DP:105:LEU:CB	2.19	0.55
27:DA:2581:G:H8	27:DA:2582:G:O6	1.89	0.55
27:DA:2616:C:H2'	27:DA:2617:C:C6	2.41	0.55
27:DA:673:C:O2'	27:DA:674:G:H5'	2.06	0.55
27:BA:1490:A:C2	30:BD:75:ILE:HG23	2.41	0.55
1:AA:1349:A:OP2	9:AI:118:LYS:NZ	2.38	0.55
42:DT:89:VAL:O	42:DT:91:ARG:HG3	2.06	0.55
16:CP:5:ARG:NH1	16:CP:24:ALA:HA	2.17	0.55
27:BA:686:G:C2	56:B7:11:LYS:HE3	2.40	0.55
1:AA:452:A:O2'	1:AA:453:A:H8	1.79	0.55
37:BO:66:LYS:HA	37:BO:79:PHE:O	2.07	0.55
40:BR:79:LEU:O	40:BR:83:ILE:HB	2.06	0.55
27:DA:2539:C:N3	27:DA:2540:C:C5	2.75	0.55
11:CK:115:PRO:C	11:CK:117:ASN:H	2.10	0.55
1:CA:1311:G:C6	1:CA:1312:G:N7	2.75	0.55
27:BA:2127:G:O2'	27:BA:2128:C:C6	2.53	0.55
27:BA:2126:A:N6	27:BA:2163:C:H5'	2.21	0.55
27:DA:319:C:C2	27:DA:320:A:C8	2.94	0.55
38:DP:16:ARG:NH1	38:DP:16:ARG:HB2	2.20	0.55
27:BA:90:U:C2'	27:BA:90:U:O2	2.51	0.55
52:D3:26:LEU:HD21	52:D3:46:ASN:HB2	1.89	0.55
27:DA:2831:G:P	31:DE:58:ARG:HH22	2.29	0.55
27:BA:2230:G:H4'	50:B1:43:TYR:HB2	1.88	0.55
40:DR:28:LEU:HD12	40:DR:48:VAL:HG21	1.88	0.55
45:DW:65:LEU:HD23	45:DW:67:ASP:H	1.71	0.55
27:DA:17:G:H4'	43:DU:25:TRP:CZ3	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B1:20:ARG:HA	50:B1:33:LYS:O	2.05	0.55
1:CA:578:C:O2	1:CA:579:G:C8	2.59	0.55
47:BY:67:LEU:O	47:BY:68:HIS:O	2.24	0.55
34:DH:104:GLU:OE2	34:DH:112:PRO:HB2	2.06	0.55
32:DF:78:ILE:HA	32:DF:83:PHE:CE1	2.41	0.55
46:BX:84:ALA:O	46:BX:87:GLN:HG3	2.06	0.55
1:AA:1510:U:H2'	1:AA:1511:G:H8	1.67	0.55
18:CR:70:ILE:HG22	18:CR:74:ARG:HD2	1.87	0.55
40:BR:11:ASN:OD1	40:BR:11:ASN:O	2.23	0.55
21:CU:24:ARG:O	21:CU:25:LYS:CB	2.53	0.55
27:DA:1702:G:H2'	27:DA:1703:G:O4'	2.06	0.55
27:DA:975(A):G:N2	27:DA:976:C:H1'	2.20	0.55
35:DI:29:TYR:HD2	35:DI:30:LEU:HG	1.71	0.55
1:CA:929:G:H2'	1:CA:930:C:C6	2.41	0.55
42:DT:129:ARG:CZ	42:DT:131:ALA:HB3	2.36	0.55
27:DA:1441:G:H2'	27:DA:1442:G:H8	1.70	0.55
1:AA:113:G:H21	1:AA:353:A:H1'	1.71	0.55
46:DX:5:TYR:HE2	51:D2:30:ARG:HE	1.54	0.55
45:BW:31:GLU:O	45:BW:35:ILE:HG13	2.06	0.55
1:AA:324:G:C8	1:AA:324:G:C3'	2.90	0.55
3:CC:181:ASN:O	3:CC:204:LEU:HB2	2.06	0.55
23:CW:18:G:H4'	23:CW:19:U:O4'	2.07	0.55
8:AH:74:PRO:HG2	8:AH:75:ARG:N	2.22	0.55
11:CK:125:PHE:CD1	11:CK:125:PHE:N	2.74	0.55
27:DA:2377:A:H2'	27:DA:2378:A:C8	2.41	0.55
1:CA:455:C:O2'	1:CA:456:C:H5'	2.06	0.55
1:AA:614:A:C2	1:AA:615:C:C2	2.94	0.55
40:BR:118:GLU:OE1	40:BR:118:GLU:HA	2.05	0.55
22:CV:7:C:H2'	22:CV:8:A:H8	1.71	0.55
37:BO:40:VAL:HG13	37:BO:57:VAL:HG12	1.87	0.55
27:BA:2416:C:C6	27:BA:2416:C:O5'	2.58	0.55
38:BP:50:ARG:HG3	38:BP:51:PHE:N	2.20	0.55
1:CA:1321:C:C6	1:CA:1322:C:H2'	2.41	0.55
40:BR:18:LEU:CD1	40:BR:22:ARG:CZ	2.84	0.55
40:BR:33:ARG:HE	40:BR:115:GLU:HB2	1.72	0.55
1:CA:472:A:H4'	16:CP:82:GLN:NE2	2.20	0.55
27:DA:2405:G:O2'	27:DA:2411:A:N6	2.40	0.55
51:D2:21:LEU:O	51:D2:25:VAL:HG23	2.06	0.55
1:AA:471:G:C2'	1:AA:472:A:H8	2.19	0.55
33:BG:56:ALA:HB2	33:BG:153:ARG:NH2	2.22	0.55
31:DE:69:LYS:O	31:DE:71:GLY:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:946:G:C2	27:DA:947:G:C4	2.95	0.55
34:BH:19:VAL:CB	34:BH:44:VAL:HG13	2.36	0.55
4:CD:187:ARG:HH11	4:CD:187:ARG:HG2	1.71	0.55
1:CA:252:U:C2	1:CA:253:U:C5	2.95	0.55
17:CQ:7:THR:C	17:CQ:23:VAL:HG13	2.27	0.55
1:AA:68:G:C2	1:AA:69:G:H1'	2.42	0.55
32:DF:33:LEU:HD11	32:DF:109:GLY:CA	2.36	0.55
27:BA:2330:G:H21	49:B0:42:GLY:HA2	1.71	0.55
33:DG:98:ARG:HA	33:DG:101:ILE:CG2	2.36	0.55
58:B9:24:TYR:CD2	58:B9:35:ARG:HG3	2.41	0.55
27:BA:1999:C:C2	27:BA:2000:G:C8	2.94	0.55
27:DA:2646:C:H2'	27:DA:2647:U:O4'	2.07	0.55
1:AA:372:C:H4'	1:AA:373:A:OP1	2.06	0.55
1:CA:263:A:OP1	20:CT:79:ARG:HD2	2.05	0.55
20:CT:26:ASN:HD22	20:CT:27:LYS:N	2.04	0.55
27:DA:71:A:H5'	27:DA:71:A:H8	1.72	0.55
30:DD:43:ARG:HB2	30:DD:54:ARG:HB3	1.87	0.55
30:DD:44:ASN:HB2	30:DD:48:ARG:O	2.07	0.55
38:BP:95:VAL:CG2	38:BP:125:VAL:HG12	2.32	0.55
1:CA:750:G:H1'	15:CO:22:THR:OG1	2.05	0.55
27:DA:357:A:H2'	27:DA:358:U:O4'	2.07	0.55
27:DA:1569:A:C2'	30:DD:38:LYS:HZ3	2.18	0.55
27:DA:686:G:H5''	56:D7:11:LYS:HE2	1.87	0.55
35:BI:11:ASN:O	35:BI:12:LEU:HB3	2.05	0.55
27:DA:661:C:H2'	27:DA:662:G:H8	1.70	0.55
41:BS:48:LEU:O	41:BS:49:VAL:CG2	2.52	0.55
13:AM:67:GLU:OE2	13:AM:71:ARG:NH2	2.39	0.55
37:BO:64:ARG:HD2	42:BT:70:VAL:HG11	1.87	0.55
8:AH:81:HIS:HB2	8:AH:138:TRP:CZ3	2.41	0.55
27:DA:2292:C:O2'	27:DA:2293:C:H5'	2.06	0.55
11:CK:48:ILE:HD11	11:CK:64:ALA:HA	1.86	0.55
27:DA:2880:C:HO2'	40:DR:90:ARG:HD3	1.71	0.55
12:CL:3:THR:C	12:CL:7:LEU:HD12	2.27	0.55
27:DA:265:A:N7	27:DA:283:A:N6	2.53	0.55
1:CA:737:A:H2'	1:CA:738:C:C6	2.41	0.55
1:AA:1086:U:H6	1:AA:1086:U:H5'	1.72	0.55
8:AH:87:SER:HB3	8:AH:133:LEU:O	2.06	0.55
27:DA:1162:G:C2'	27:DA:1163:G:H5'	2.36	0.55
1:AA:953:G:H2'	1:AA:954:G:O4'	2.07	0.55
48:BZ:143:LEU:HB3	48:BZ:147:ASP:O	2.06	0.55
1:CA:1338:G:H2'	1:CA:1339:A:H8	1.68	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1525:G:P	11:AK:120:ARG:HH22	2.29	0.55
10:CJ:81:THR:O	10:CJ:85:LEU:HG	2.05	0.55
1:AA:1064:G:O2'	1:AA:1065:U:O5'	2.21	0.55
7:CG:86:GLN:NE2	25:CY:30:A:C2	2.73	0.55
4:CD:130:GLY:O	4:CD:131:ARG:C	2.44	0.55
32:BF:82:ILE:CG1	32:BF:82:ILE:O	2.54	0.55
44:DV:1:MET:HA	44:DV:1:MET:HE2	1.88	0.55
27:BA:782:A:C5'	27:BA:783:A:C2	2.90	0.55
29:BC:68:LEU:O	29:BC:69:GLY:C	2.45	0.55
34:BH:103:LEU:HB3	34:BH:123:PHE:CD2	2.42	0.55
27:BA:1346:G:C5	27:BA:1347:G:N7	2.75	0.55
1:AA:324:G:OP1	20:AT:70:SER:HB2	2.06	0.55
27:DA:2251:G:C8	27:DA:2450:A:H4'	2.41	0.55
1:AA:1155:G:O2'	1:AA:1156:G:H5'	2.06	0.55
35:DI:7:GLU:CD	35:DI:8:PRO:HD2	2.27	0.55
27:BA:1368:G:C2	27:BA:1369:G:C8	2.95	0.55
1:CA:583:A:H1'	1:CA:759:A:N6	2.22	0.55
27:DA:1996:C:H4'	27:DA:1997:G:OP1	2.07	0.55
2:CB:180:LEU:O	2:CB:182:ILE:HG13	2.06	0.55
1:CA:667:G:O2'	15:CO:49:ASP:OD1	2.14	0.55
39:DQ:135:ASP:OD1	39:DQ:135:ASP:N	2.38	0.55
20:CT:8:ARG:HH11	20:CT:8:ARG:HG3	1.71	0.55
1:CA:697:U:H3'	1:CA:698:G:H8	1.71	0.55
27:BA:2393:A:H5'	38:BP:62:LEU:HB3	1.89	0.55
28:BB:45:A:C2	28:BB:46:A:H1'	2.42	0.55
36:BN:4:TYR:HB2	43:BU:64:ARG:CZ	2.37	0.55
43:DU:92:ARG:NH1	43:DU:92:ARG:CG	2.66	0.55
27:DA:1577:C:H2'	27:DA:1578:U:C6	2.42	0.55
30:DD:30:GLU:OE1	30:DD:84:TYR:O	2.24	0.55
47:DY:9:LYS:C	47:DY:11:ASP:H	2.10	0.55
27:DA:2285:C:OP2	55:D6:27:LYS:HD2	2.07	0.55
27:DA:2619:C:H4'	31:DE:150:VAL:HG12	1.87	0.55
27:DA:941:A:P	38:DP:35:HIS:HE1	2.29	0.55
44:DV:77:ALA:O	44:DV:79:VAL:HG12	2.05	0.55
27:BA:1020:A:C4'	27:BA:1021:A:O5'	2.45	0.55
48:DZ:55:VAL:HG12	48:DZ:56:ILE:N	2.20	0.55
2:AB:53:ARG:CZ	2:AB:199:TYR:HE2	2.18	0.55
41:DS:89:ARG:C	41:DS:92:TYR:HB3	2.27	0.55
1:AA:1075:C:H4'	1:AA:1101:A:N6	2.22	0.55
2:CB:70:PHE:CD2	2:CB:163:PHE:HB3	2.42	0.55
1:CA:177:C:O2'	1:CA:178:C:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2107:C:N4	27:DA:2182:G:H1	1.94	0.55
27:BA:2162:G:H4'	27:BA:2172:U:HO2'	1.69	0.55
27:BA:1431:U:O2'	27:BA:1432:C:H5'	2.06	0.55
35:BI:121:LYS:O	35:BI:122:GLU:HB2	2.05	0.55
55:B6:33:LYS:CA	55:B6:33:LYS:HE2	2.34	0.55
48:DZ:60:LEU:CG	48:DZ:64:GLN:HB2	2.37	0.55
51:B2:47:ASN:O	51:B2:50:ILE:HG13	2.06	0.55
1:AA:259:G:H2'	1:AA:260:G:H8	1.70	0.55
27:DA:2302:G:H21	33:DG:128:ARG:HD2	1.72	0.55
52:D3:13:ILE:H	52:D3:13:ILE:HD12	1.71	0.55
35:DI:101:LEU:HD12	35:DI:105:HIS:HB2	1.88	0.55
7:AG:152:ALA:O	7:AG:155:ARG:NH1	2.39	0.55
3:AC:132:ARG:O	3:AC:136:GLN:HB2	2.07	0.55
8:CH:109:ILE:HG12	8:CH:110:ALA:N	2.15	0.55
27:DA:283:A:N1	27:DA:427:U:HI'	2.20	0.55
27:BA:81:G:N2	27:BA:106:C:C2	2.73	0.55
45:DW:20:VAL:C	45:DW:22:ASP:H	2.10	0.55
45:DW:62:HIS:O	45:DW:64:MET:HG3	2.06	0.55
27:DA:1164:G:C6	27:DA:1165:U:C4	2.95	0.55
27:BA:1721:G:C2	27:BA:1739:U:OP2	2.59	0.55
27:DA:2122:U:H2'	27:DA:2123:G:C8	2.41	0.55
43:BU:21:ALA:HB1	43:BU:24:TYR:CD1	2.42	0.55
27:DA:1042:G:H3'	27:DA:1043:C:O4'	2.06	0.55
17:AQ:9:VAL:O	17:AQ:22:LEU:N	2.37	0.55
32:BF:36:VAL:O	32:BF:39:TRP:HB3	2.07	0.55
42:DT:129:ARG:HD2	42:DT:131:ALA:HB3	1.87	0.55
27:BA:2183:C:H2'	27:BA:2184:G:C8	2.38	0.55
57:B8:30:ARG:NE	57:B8:30:ARG:HA	2.21	0.55
34:DH:149:ARG:HH21	34:DH:154:PRO:CG	2.18	0.55
30:DD:71:ASP:CB	30:DD:103:ARG:HH22	2.20	0.55
35:BI:29:TYR:CD1	35:BI:33:ARG:NE	2.75	0.55
27:BA:2292:C:O2'	27:BA:2293:C:H5'	2.06	0.55
27:DA:2084:C:O2'	27:DA:2085:C:H5'	2.06	0.55
48:DZ:19:ARG:C	48:DZ:21:GLY:H	2.08	0.55
10:CJ:28:ARG:NH1	10:CJ:33:GLN:HA	2.22	0.55
1:AA:587:G:O2'	1:AA:588:G:H5'	2.07	0.55
4:CD:185:PHE:HD2	4:CD:185:PHE:O	1.90	0.55
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.07	0.55
44:DV:64:HIS:ND1	44:DV:92:THR:CG2	2.69	0.55
27:BA:956:G:H5''	39:BQ:77:LYS:HD2	1.87	0.55
27:DA:1362:C:O2'	27:DA:1363:C:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AX:25:C:H2'	24:AX:26:G:H8	1.71	0.55
27:DA:2031:A:O2'	27:DA:2032:G:P	2.63	0.55
27:BA:237:C:H2'	27:BA:238:C:H6	1.71	0.55
27:BA:1280:G:C2	27:BA:1281:G:H1'	2.41	0.55
47:BY:95:LYS:NZ	47:BY:99:CYS:O	2.31	0.55
38:DP:47:ASP:OD1	38:DP:49:ARG:HG3	2.06	0.55
38:DP:48:PRO:CG	38:DP:49:ARG:N	2.62	0.55
43:BU:92:ARG:HG2	44:BV:11:GLN:OE1	2.07	0.55
27:DA:392:C:H5''	27:DA:409:C:H5''	1.89	0.55
41:BS:34:HIS:CD2	41:BS:53:SER:HB3	2.42	0.55
27:DA:1497:U:O4'	27:DA:1497:U:OP1	2.25	0.55
12:CL:66:TYR:HD2	12:CL:67:ILE:H	1.54	0.55
51:D2:18:PRO:HG2	51:D2:19:VAL:HG23	1.87	0.55
33:DG:20:ILE:HA	33:DG:25:TYR:HD2	1.70	0.55
31:DE:151:TYR:O	31:DE:153:GLY:N	2.40	0.55
20:AT:28:ALA:O	20:AT:30:LYS:N	2.39	0.55
55:B6:16:CYS:SG	55:B6:48:VAL:CG2	2.95	0.55
31:DE:2:LYS:CE	31:DE:95:ILE:HG23	2.35	0.55
30:BD:129:ASN:O	30:BD:193:VAL:HG12	2.06	0.55
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.88	0.55
2:AB:105:PHE:HZ	2:AB:155:LEU:O	1.90	0.55
27:BA:748:G:H2'	27:BA:750:A:N7	2.22	0.55
15:AO:31:LEU:HG	15:AO:31:LEU:O	2.07	0.55
46:BX:12:VAL:CB	46:BX:17:ALA:HB1	2.37	0.55
12:AL:79:VAL:C	12:AL:80:VAL:HG22	2.27	0.55
56:D7:8:ASN:ND2	56:D7:8:ASN:C	2.59	0.55
27:BA:2307:G:N2	27:BA:2308:G:H5''	2.22	0.55
23:AW:68:C:H2'	23:AW:68:C:O2	2.05	0.55
2:CB:178:ARG:NH2	8:CH:74:PRO:HG3	2.21	0.55
2:AB:178:ARG:NH1	2:AB:178:ARG:HG2	2.21	0.55
1:CA:686:U:O2	1:CA:687:A:N7	2.40	0.55
35:DI:5:LEU:N	35:DI:5:LEU:HD12	2.19	0.55
12:AL:22:PRO:HD2	12:AL:94:ARG:NH2	2.21	0.55
1:CA:818:G:O2'	1:CA:819:A:H5''	2.07	0.55
27:BA:1598:C:H5'	46:BX:36:LYS:CB	2.36	0.55
29:DC:51:PRO:CG	29:DC:204:ALA:HB2	2.35	0.55
27:BA:2048:G:C2'	27:BA:2049:G:O5'	2.54	0.55
27:DA:1659:U:O2'	27:DA:1660:C:H5'	2.07	0.55
11:AK:21:ILE:N	11:AK:21:ILE:HD12	2.21	0.55
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.06	0.55
18:AR:26:LEU:HG	18:AR:42:ARG:NH1	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1848:A:O2'	27:BA:1849:G:O5'	2.24	0.55
1:CA:1142:G:H2'	1:CA:1143:G:C8	2.41	0.55
27:BA:977:G:C2'	27:BA:978:G:H5'	2.37	0.55
33:BG:91:ARG:C	33:BG:91:ARG:CD	2.75	0.55
7:AG:15:ASP:CB	7:AG:20:ASP:H	2.19	0.55
25:AY:18:G:H22	25:AY:55:C:N4	2.05	0.55
20:CT:16:HIS:HA	20:CT:19:SER:CB	2.37	0.55
35:BI:42:SER:C	35:BI:44:LEU:H	2.10	0.55
51:B2:21:LEU:HD13	51:B2:64:LEU:HA	1.87	0.55
20:AT:12:ALA:C	20:AT:14:LYS:N	2.56	0.55
2:AB:87:ARG:NH1	2:AB:220:ASP:OD1	2.37	0.55
40:BR:109:ALA:O	40:BR:111:LEU:HD22	2.06	0.55
27:BA:363(F):A:O2'	27:BA:364:C:H5	1.90	0.55
27:BA:224:G:O6	27:BA:420:C:H5'	2.07	0.55
4:CD:193:ASP:OD1	4:CD:193:ASP:N	2.38	0.55
1:CA:1294:G:H2'	1:CA:1295:G:C8	2.42	0.55
27:BA:414:C:H3'	27:BA:415:A:H8	1.71	0.55
1:CA:1486:G:H2'	1:CA:1487:G:C8	2.42	0.55
28:DB:35:U:O2'	28:DB:36:C:O4'	2.25	0.55
42:DT:86:ILE:O	42:DT:86:ILE:HG23	2.06	0.55
41:DS:12:PHE:O	41:DS:12:PHE:HD1	1.89	0.55
16:CP:76:GLN:O	16:CP:76:GLN:HG2	2.05	0.55
11:AK:114:VAL:HG13	11:AK:114:VAL:O	2.07	0.55
27:DA:74:A:H4'	27:DA:75:G:O5'	2.07	0.55
47:BY:97:ARG:HG3	47:BY:98:VAL:HG23	1.89	0.55
27:DA:1023:U:H2'	27:DA:1024:G:O4'	2.06	0.55
27:DA:239:U:H2'	27:DA:240:G:O4'	2.07	0.55
27:DA:1907:G:O2'	27:DA:1908:C:H5'	2.07	0.55
27:DA:1972:A:C4	27:DA:1973:G:N7	2.75	0.55
48:DZ:170:ILE:O	48:DZ:171:ALA:HB2	2.05	0.55
4:CD:14:ARG:HB2	4:CD:40:PRO:HD3	1.88	0.55
33:BG:137:GLU:HB2	33:BG:140:ILE:HD11	1.88	0.55
44:BV:2:PHE:CZ	44:BV:4:ILE:HG13	2.42	0.55
27:DA:390:A:H1'	27:DA:391:G:N7	2.22	0.55
17:AQ:68:ARG:O	17:AQ:68:ARG:HG3	2.06	0.55
42:BT:28:VAL:O	42:BT:29:ARG:HG2	2.06	0.55
1:AA:1404:C:H2'	1:AA:1405:G:H8	1.72	0.55
28:BB:29:A:H2'	28:BB:30:C:C6	2.42	0.55
28:BB:52:A:N7	41:BS:33:LYS:HE3	2.22	0.55
30:DD:18:VAL:HG13	30:DD:211:ARG:NH2	2.13	0.55
27:BA:494:G:O2'	45:BW:5:ALA:O	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:39:PRO:CG	31:DE:45:THR:OG1	2.55	0.55
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.64	0.55
9:AI:45:ALA:O	9:AI:47:LEU:N	2.35	0.55
1:AA:962:C:H2'	1:AA:963:G:O4'	2.07	0.55
1:AA:675:A:O2'	1:AA:676:A:H5'	2.07	0.55
27:BA:690:G:H2'	27:BA:691:C:C6	2.42	0.55
1:AA:1072:G:O2'	1:AA:1073:U:H5'	2.06	0.55
33:DG:58:GLN:O	33:DG:62:LEU:HD13	2.07	0.55
42:BT:23:ARG:HG2	42:BT:120:ARG:NH1	2.22	0.55
3:CC:92:ALA:HB2	3:CC:99:VAL:HG21	1.87	0.55
3:CC:156:ARG:HH21	3:CC:161:GLU:CG	2.16	0.55
14:CN:27:CYS:O	14:CN:29:ARG:N	2.39	0.55
14:CN:8:GLU:OE2	14:CN:8:GLU:HA	2.07	0.55
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.36	0.55
27:BA:2266:A:N3	27:BA:2272:U:C4	2.75	0.55
1:CA:649:G:H8	1:CA:649:G:O5'	1.90	0.55
29:DC:41:VAL:CB	29:DC:213:TYR:HA	2.36	0.55
7:AG:74:GLU:OE1	7:AG:91:VAL:HG13	2.06	0.55
51:B2:9:GLN:HE22	51:B2:56:GLN:HG2	1.71	0.55
6:AF:2:ARG:CD	6:AF:69:GLU:HB3	2.34	0.55
13:AM:72:ALA:O	13:AM:75:ALA:HB3	2.06	0.55
1:CA:451:A:H1'	1:CA:452:A:N7	2.22	0.55
1:AA:662:G:O2'	1:AA:663:A:H5'	2.06	0.55
25:CY:58:A:H2'	25:CY:59:U:H5'	1.89	0.55
43:BU:25:TRP:O	43:BU:26:GLY:O	2.25	0.55
37:BO:97:ARG:HA	37:BO:117:LEU:CD2	2.36	0.55
32:DF:131:GLY:O	32:DF:132:VAL:O	2.25	0.55
27:DA:1005:C:H1'	27:DA:1012:U:H3	1.69	0.55
27:BA:2047:U:C2'	27:BA:2048:G:C5'	2.85	0.55
27:DA:1999:C:H2'	27:DA:2000:G:C8	2.42	0.55
4:AD:58:LEU:HD13	4:AD:58:LEU:C	2.27	0.55
11:CK:80:VAL:HG23	11:CK:80:VAL:O	2.07	0.55
4:AD:98:GLU:C	4:AD:100:ARG:N	2.57	0.55
27:BA:725:G:H2'	27:BA:726:G:O4'	2.06	0.55
27:BA:958:U:O4	39:BQ:40:ALA:HA	2.06	0.55
1:AA:278:G:OP2	17:AQ:41:LYS:HE2	2.07	0.55
35:DI:28:ASN:C	35:DI:32:PRO:HG2	2.27	0.55
1:AA:1142:G:C8	1:AA:1143:G:C8	2.94	0.55
1:AA:1459:C:H2'	1:AA:1460:A:O4'	2.07	0.55
1:CA:584:G:H2'	1:CA:585:G:H8	1.72	0.55
50:D1:18:ILE:HG21	50:D1:20:ARG:CZ	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DH:40:GLU:O	34:DH:42:ARG:N	2.39	0.55
1:AA:315:A:O2'	1:AA:316:G:OP2	2.21	0.55
27:BA:1943:U:O4'	27:BA:1945:G:H5'	2.07	0.55
1:AA:1483:A:H2'	1:AA:1484:C:O4'	2.07	0.55
27:BA:2082:A:O2'	27:BA:2083:G:H5'	2.07	0.55
1:AA:538:G:O2'	1:AA:539:A:H5'	2.07	0.55
1:AA:10:A:O2'	1:AA:11:G:H5'	2.07	0.55
4:CD:132:ARG:HH11	4:CD:132:ARG:HG2	1.71	0.55
45:DW:74:ALA:O	45:DW:75:TYR:HB3	2.05	0.55
49:D0:50:ASN:C	49:D0:62:LEU:HD12	2.27	0.55
27:BA:664:C:O2'	27:BA:665:C:H5'	2.07	0.55
38:BP:65:ARG:O	38:BP:68:GLN:OE1	2.24	0.55
27:DA:1022:G:O2'	27:DA:1023:U:P	2.64	0.55
38:DP:45:LEU:CD2	38:DP:46:LYS:N	2.55	0.55
13:CM:8:GLU:OE1	13:CM:22:ILE:HG12	2.06	0.55
27:DA:391:G:O2'	27:DA:392:C:H5'	2.07	0.55
32:DF:4:VAL:HG12	32:DF:17:ARG:HD3	1.88	0.55
31:DE:69:LYS:C	31:DE:71:GLY:H	2.09	0.55
55:D6:11:LEU:CD1	55:D6:12:GLU:H	2.17	0.55
57:D8:28:GLY:O	57:D8:32:LEU:HG	2.07	0.55
36:BN:62:VAL:HG21	36:BN:67:LEU:HG	1.89	0.55
27:BA:2482:G:H2'	27:BA:2483:C:H6	1.70	0.55
19:AS:48:THR:HA	19:AS:61:TYR:O	2.06	0.55
2:AB:31:TYR:O	2:AB:42:ILE:HG13	2.07	0.55
41:BS:24:LEU:CB	41:BS:85:VAL:HG12	2.28	0.55
20:CT:50:GLU:CB	20:CT:100:ILE:HG12	2.37	0.55
34:BH:92:ILE:CG2	34:BH:93:GLY:H	2.11	0.55
1:CA:532:A:N6	3:CC:156:ARG:HH12	2.04	0.55
6:CF:75:LEU:CD2	6:CF:79:LEU:HD11	2.37	0.55
48:DZ:94:PRO:HA	48:DZ:127:VAL:O	2.07	0.55
27:BA:2427:C:H5''	27:BA:2429:G:H5'	1.88	0.55
27:DA:2680:C:H4'	31:DE:188:VAL:O	2.07	0.55
27:BA:2344:U:H6	27:BA:2344:U:O5'	1.88	0.55
37:DO:16:ALA:HB2	37:DO:52:VAL:HG13	1.88	0.55
27:BA:92:A:C1'	27:BA:93:G:H8	2.19	0.55
1:AA:359:U:H2'	1:AA:360:A:H8	1.72	0.55
34:DH:147:ASN:N	34:DH:147:ASN:ND2	2.52	0.55
27:DA:2302:G:N2	33:DG:128:ARG:HD2	2.21	0.55
27:BA:846:C:C2	27:BA:930:U:C5	2.95	0.55
24:AX:1:C:N4	24:AX:73:A:C2	2.75	0.55
27:BA:1887:C:H2'	27:BA:1888:G:C5'	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:26:TYR:CE1	39:BQ:28:ALA:HB2	2.42	0.55
27:BA:1565:C:P	30:BD:4:LYS:NZ	2.80	0.55
27:DA:2697:G:H2'	27:DA:2698:U:O4'	2.07	0.55
31:BE:9:VAL:HG13	31:BE:25:VAL:HB	1.87	0.55
12:CL:38:ARG:CZ	12:CL:38:ARG:HB3	2.36	0.55
1:CA:853:G:H2'	1:CA:854:G:H8	1.72	0.55
2:CB:22:LYS:O	2:CB:24:TRP:CD1	2.60	0.55
39:DQ:109:VAL:HG22	39:DQ:113:GLN:OE1	2.07	0.55
42:DT:92:GLY:N	42:DT:116:ALA:HA	2.22	0.55
27:DA:2146:C:H5'	27:DA:2147:G:N3	2.21	0.55
27:BA:2671:A:C2	27:BA:2672:G:C4	2.95	0.55
15:CO:37:ASN:O	15:CO:38:ARG:C	2.44	0.55
9:CI:63:ILE:CG2	9:CI:64:THR:N	2.69	0.55
30:BD:28:GLU:CD	30:BD:28:GLU:N	2.60	0.55
27:DA:2360:A:H2'	27:DA:2361:A:O4'	2.07	0.55
27:BA:2537:U:H2'	27:BA:2538:C:C6	2.42	0.55
1:CA:406:G:H5''	4:CD:5:ILE:HG21	1.89	0.55
40:DR:23:ASN:ND2	40:DR:23:ASN:N	2.55	0.55
45:BW:79:GLY:O	45:BW:100:THR:HG22	2.06	0.55
48:DZ:164:VAL:HG12	48:DZ:165:SER:N	2.21	0.55
27:DA:1426:G:O5'	27:DA:1426:G:H8	1.90	0.55
52:B3:4:LEU:O	52:B3:36:VAL:HA	2.07	0.55
27:BA:2415:G:C4'	38:BP:66:GLY:HA3	2.37	0.55
41:BS:88:ASP:O	41:BS:92:TYR:HB3	2.06	0.55
32:BF:18:ARG:HG3	32:BF:19:GLU:N	2.22	0.55
44:DV:61:VAL:CA	44:DV:94:LEU:HD23	2.36	0.55
1:CA:1254:C:H41	10:CJ:43:ARG:HH12	1.55	0.55
55:D6:17:LYS:O	55:D6:18:ARG:HD3	2.07	0.55
55:D6:11:LEU:HD11	55:D6:52:VAL:C	2.27	0.55
27:DA:2069:G:N2	27:DA:2070:G:C4	2.74	0.55
27:DA:2275:C:O2'	27:DA:2276:G:P	2.64	0.55
38:DP:38:GLN:CG	38:DP:39:LYS:H	2.09	0.55
27:BA:1022:G:N2	27:BA:1142(A):A:C2	2.75	0.55
1:AA:1361:G:H2'	1:AA:1362:C:O4'	2.06	0.55
1:AA:1305:G:O2'	1:AA:1306:A:P	2.65	0.55
27:BA:1821:A:H2'	27:BA:1822:G:H8	1.72	0.55
1:AA:62:U:O2'	1:AA:63:C:H5'	2.07	0.55
31:BE:36:ARG:HG2	31:BE:36:ARG:HH11	1.72	0.55
1:CA:652:U:O2'	1:CA:653:A:N3	2.32	0.55
40:DR:8:ARG:O	40:DR:9:LYS:O	2.25	0.55
27:DA:962:G:C2'	27:DA:963:U:H5'	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B6:51:GLU:O	55:B6:52:VAL:HG23	2.07	0.55
38:BP:25:SER:O	38:BP:30:THR:HG23	2.06	0.55
27:BA:2307:G:OP1	27:BA:2307:G:H4'	2.07	0.55
9:CI:21:PRO:HA	9:CI:58:HIS:O	2.06	0.55
34:DH:150:ALA:O	34:DH:152:ARG:N	2.40	0.55
27:DA:923:C:H2'	27:DA:924:C:C6	2.42	0.55
27:BA:2097:C:H2'	27:BA:2098:U:H6	1.72	0.55
54:D5:31:VAL:HG23	54:D5:40:LYS:HE2	1.89	0.55
11:CK:46:GLY:HA2	11:CK:50:TYR:O	2.07	0.55
27:DA:499:U:H2'	27:DA:500:G:H5'	1.89	0.55
27:BA:1175:U:H6	27:BA:1178:C:N4	2.05	0.55
5:AE:20:GLN:OE1	5:AE:25:ARG:NH1	2.40	0.55
32:DF:170:LEU:HD23	32:DF:173:VAL:CG2	2.35	0.55
1:AA:979:C:C2'	1:AA:980:C:H5''	2.36	0.55
42:BT:55:ASN:O	42:BT:57:PHE:O	2.24	0.55
1:CA:174:C:H2'	1:CA:175:C:C6	2.42	0.55
27:DA:644:A:H2'	27:DA:646:A:C2	2.42	0.55
15:AO:39:LEU:O	15:AO:41:GLU:N	2.40	0.55
12:AL:99:ARG:O	12:AL:101:VAL:HG23	2.06	0.55
27:DA:1722:A:N1	27:DA:1740:G:C8	2.73	0.55
3:AC:34:LEU:HD23	3:AC:35:GLU:N	2.22	0.55
29:BC:38:ASP:O	29:BC:180:PHE:HA	2.07	0.55
1:AA:417:C:H2'	1:AA:418:C:H6	1.72	0.55
1:AA:539:A:H2'	1:AA:540:G:C8	2.42	0.55
25:AY:37:U:H3'	25:AY:38:U:H5''	1.89	0.55
27:BA:271(Y):U:O2'	27:BA:271(Z):C:O5'	2.25	0.55
27:BA:962:G:O2'	27:BA:963:U:H5'	2.07	0.55
27:DA:1563:G:O2'	27:DA:1564:C:H5'	2.07	0.55
33:BG:13:GLU:O	33:BG:14:GLU:HB2	2.06	0.55
13:CM:65:LYS:NZ	13:CM:65:LYS:CB	2.70	0.55
44:BV:31:ALA:O	44:BV:61:VAL:HG12	2.06	0.55
43:BU:92:ARG:NH2	44:BV:11:GLN:N	2.55	0.55
44:BV:15:GLU:HB3	44:BV:16:PRO:CD	2.35	0.55
1:AA:128:G:C5'	17:AQ:2:PRO:HA	2.37	0.55
17:AQ:20:THR:HA	17:AQ:42:TYR:O	2.07	0.55
44:DV:40:LEU:N	44:DV:40:LEU:CD2	2.70	0.55
27:DA:1565:C:O2'	27:DA:1566:A:O5'	2.23	0.55
27:DA:2700:C:O2'	27:DA:2701:C:H5'	2.07	0.55
27:DA:2385:C:O2'	27:DA:2386:C:H5'	2.06	0.55
36:DN:112:LEU:HD11	36:DN:116:LEU:HG	1.89	0.55
48:DZ:68:THR:HA	48:DZ:88:PHE:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BD:77:ALA:HB1	30:BD:96:HIS:O	2.07	0.55
4:CD:101:LEU:CD2	4:CD:138:TYR:HB3	2.37	0.55
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.34	0.55
41:DS:18:ILE:HG22	41:DS:18:ILE:O	2.07	0.55
27:BA:1783:A:C2	27:BA:2588:G:O4'	2.60	0.55
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HB3	1.89	0.55
1:CA:565:U:H2'	1:CA:566:G:C8	2.42	0.55
53:D4:36:VAL:HG13	53:D4:52:SER:O	2.07	0.55
15:AO:74:ASP:O	15:AO:76:GLU:N	2.40	0.55
1:CA:1160:G:O2'	1:CA:1161:C:C5'	2.55	0.55
3:CC:72:LYS:O	3:CC:75:VAL:HG23	2.07	0.55
15:CO:83:GLU:O	15:CO:86:GLY:N	2.38	0.55
27:DA:2827:C:O2	27:DA:2827:C:H2'	2.06	0.55
9:CI:55:ALA:HB1	9:CI:59:PHE:CE1	2.42	0.55
19:CS:66:MET:SD	19:CS:74:PHE:HE1	2.30	0.55
34:DH:89:ILE:HD12	34:DH:90:LYS:O	2.07	0.55
52:D3:23:LEU:N	52:D3:23:LEU:CD1	2.68	0.55
27:DA:852:G:H2'	27:DA:853:G:C8	2.40	0.55
10:CJ:96:ILE:O	10:CJ:97:GLU:HG2	2.06	0.55
5:AE:78:HIS:CD2	8:AH:104:ARG:CZ	2.89	0.55
5:CE:45:PHE:CE1	5:CE:47:LYS:HG3	2.42	0.55
1:AA:1002:G:N3	1:AA:1002:G:H2'	2.21	0.55
1:AA:745:C:H2'	1:AA:746:A:C8	2.42	0.55
5:CE:107:ARG:HG2	5:CE:108:ALA:N	2.21	0.55
31:DE:173:VAL:HG12	31:DE:173:VAL:O	2.06	0.55
38:DP:110:TYR:O	38:DP:111:ARG:C	2.46	0.55
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.89	0.55
11:CK:127:LYS:CE	11:CK:127:LYS:HA	2.33	0.55
47:DY:45:VAL:HA	47:DY:62:GLU:CG	2.37	0.55
27:BA:2313:C:N4	27:BA:2314:C:N4	2.55	0.55
32:DF:128:ALA:O	32:DF:129:PHE:C	2.45	0.55
13:AM:110:ARG:NH1	13:AM:110:ARG:HG2	2.18	0.55
27:BA:2873:A:H4'	27:BA:2874:C:OP1	2.07	0.55
18:CR:44:LEU:HD23	18:CR:50:ILE:HA	1.88	0.55
27:DA:1700:A:H2'	27:DA:1701:A:C8	2.41	0.55
7:AG:15:ASP:H	7:AG:20:ASP:H	1.54	0.55
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.37	0.55
12:CL:121:LYS:HG3	12:CL:122:PRO:HD2	1.88	0.55
1:CA:990:C:H2'	1:CA:991:U:H6	1.72	0.55
27:BA:2552:U:H2'	27:BA:2554:U:H5''	1.89	0.55
27:BA:2220:G:H2'	27:BA:2221:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:59:U:H5'	23:CW:60:C:OP2	2.06	0.55
27:BA:1389:G:H2'	27:BA:1390:U:C6	2.42	0.55
27:BA:2650:U:O2'	27:BA:2651:C:H5'	2.07	0.55
24:CX:59:A:C2'	24:CX:60:U:H5'	2.37	0.55
41:DS:12:PHE:O	41:DS:12:PHE:CD1	2.60	0.55
2:CB:112:VAL:HA	2:CB:115:LEU:HB3	1.89	0.55
20:AT:46:GLU:OE1	20:AT:48:LYS:HE2	2.07	0.55
46:DX:3:THR:HA	46:DX:6:ASP:OD2	2.07	0.55
1:AA:1026:G:H3'	1:AA:1027:C:H5'	1.89	0.55
27:DA:2301:C:H6	27:DA:2301:C:H3'	1.70	0.55
29:BC:121:GLY:HA2	29:BC:145:VAL:HA	1.89	0.55
19:CS:33:THR:O	19:CS:57:HIS:CE1	2.59	0.54
32:BF:11:VAL:HG12	32:BF:12:LEU:N	2.12	0.54
27:BA:2682:U:O4'	31:BE:12:THR:HA	2.07	0.54
34:BH:118:PRO:HG2	34:BH:121:ILE:HB	1.88	0.54
12:AL:42:PRO:CB	12:AL:89:ASP:HB3	2.37	0.54
5:AE:132:ALA:O	5:AE:134:ALA:N	2.40	0.54
30:DD:210:GLY:O	30:DD:211:ARG:HB3	2.07	0.54
27:DA:2267:A:H3'	27:DA:2268:A:C5'	2.36	0.54
27:DA:301:G:H1'	27:DA:302:C:C6	2.42	0.54
47:DY:15:VAL:HG12	47:DY:16:ALA:N	2.22	0.54
1:CA:222:U:H2'	1:CA:223:U:H6	1.71	0.54
1:AA:1204:A:P	14:AN:3:ARG:HH12	2.30	0.54
1:AA:975:A:C4'	1:AA:976:G:H5'	2.31	0.54
14:AN:40:CYS:SG	14:AN:43:CYS:SG	3.02	0.54
12:CL:34:CYS:SG	12:CL:78:SER:HB2	2.48	0.54
2:AB:197:VAL:O	2:AB:200:ILE:HG13	2.07	0.54
2:AB:51:LEU:O	2:AB:55:PHE:HD2	1.90	0.54
37:DO:115:VAL:O	37:DO:118:ALA:HB3	2.06	0.54
28:DB:52:A:N7	41:DS:33:LYS:HE3	2.22	0.54
1:AA:386:C:O2'	1:AA:387:U:H5'	2.06	0.54
1:CA:189(L):G:H2'	1:CA:190:U:H6	1.64	0.54
1:CA:176:C:H2'	1:CA:177:C:H6	1.72	0.54
12:CL:107:VAL:HG12	12:CL:110:ARG:HB2	1.89	0.54
27:BA:2163:C:H2'	27:BA:2164:C:H5'	1.88	0.54
58:B9:26:ILE:N	58:B9:26:ILE:CD1	2.70	0.54
7:AG:73:MET:HG2	7:AG:89:MET:O	2.07	0.54
1:AA:397:A:N7	1:AA:547:A:O2'	2.40	0.54
8:AH:84:ARG:HG2	8:AH:84:ARG:NH1	2.13	0.54
51:B2:53:LEU:C	51:B2:57:ILE:HG12	2.27	0.54
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.21	0.54
39:BQ:137:TYR:N	39:BQ:137:TYR:HD2	2.05	0.54
39:BQ:134:ARG:NH2	48:BZ:118:GLU:OE1	2.36	0.54
11:CK:111:ASP:CA	18:CR:84:LYS:HG3	2.35	0.54
40:DR:89:ASP:O	40:DR:90:ARG:HB2	2.07	0.54
10:CJ:74:ILE:O	10:CJ:74:ILE:HG13	2.07	0.54
27:BA:80:G:C6	27:BA:81:G:C5	2.96	0.54
27:BA:1048:A:C2	27:BA:1048:A:OP2	2.60	0.54
27:BA:1109:C:H5''	27:BA:1110:G:OP2	2.07	0.54
27:DA:325:G:H2'	27:DA:326:G:C8	2.42	0.54
47:DY:45:VAL:HA	47:DY:62:GLU:OE2	2.07	0.54
27:DA:346:A:O2'	27:DA:347:A:H5'	2.07	0.54
34:DH:113:VAL:HG12	34:DH:115:VAL:HG22	1.89	0.54
25:AY:72:G:H2'	25:AY:73:C:C6	2.42	0.54
1:AA:641:U:H5''	1:AA:642:A:OP1	2.06	0.54
1:CA:1151:A:H5''	10:CJ:42:THR:H	1.72	0.54
23:CW:70:C:O2'	23:CW:71:A:O5'	2.25	0.54
11:AK:21:ILE:HG13	11:AK:30:VAL:HB	1.88	0.54
40:BR:17:ARG:HH11	40:BR:17:ARG:HG2	1.72	0.54
27:BA:722:A:N3	27:BA:722:A:H2'	2.22	0.54
11:AK:99:GLN:NE2	11:AK:105:VAL:HG21	2.22	0.54
27:BA:860:U:H2'	27:BA:861:A:H8	1.72	0.54
1:CA:31:G:N7	1:CA:306:G:H1'	2.22	0.54
27:BA:2145:C:H3'	27:BA:2145:C:H6	1.71	0.54
35:BI:73:GLU:HA	35:BI:138:ILE:HG23	1.88	0.54
48:BZ:144:GLU:O	48:BZ:146:GLY:N	2.39	0.54
27:DA:2729:G:H1'	31:DE:187:ALA:HB3	1.89	0.54
29:DC:47:LEU:HB3	29:DC:207:THR:HA	1.89	0.54
30:BD:28:GLU:H	30:BD:29:PRO:HD2	1.72	0.54
45:BW:68:ARG:NH1	45:BW:111:HIS:CD2	2.75	0.54
27:BA:11:G:C2'	27:BA:12:U:H5'	2.37	0.54
27:BA:908:C:O2'	27:BA:909:A:H5'	2.07	0.54
27:BA:1361:G:O2'	27:BA:1362:C:H5'	2.07	0.54
32:DF:61:GLY:O	32:DF:62:ARG:O	2.26	0.54
27:BA:937:U:H2'	27:BA:938:G:H8	1.71	0.54
27:DA:272(G):C:H42	27:DA:363(C):G:H1	1.54	0.54
7:CG:123:GLU:OE2	7:CG:123:GLU:HA	2.07	0.54
1:AA:1134:G:N2	1:AA:1141:C:C2	2.74	0.54
46:DX:50:LYS:O	46:DX:83:VAL:HG12	2.08	0.54
27:DA:2856:C:O2	27:DA:2856:C:H2'	2.05	0.54
5:AE:71:LEU:HD13	5:AE:114:GLY:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2316:C:H2'	27:DA:2316:C:O2	2.06	0.54
37:BO:36:GLY:HA3	37:BO:109:LYS:HG3	1.90	0.54
27:BA:633:A:H2'	27:BA:634:C:C5'	2.37	0.54
10:CJ:49:VAL:CG2	14:CN:41:ARG:HB2	2.37	0.54
41:BS:14:VAL:HG12	41:BS:15:ARG:H	1.72	0.54
27:BA:2680:C:H5'	31:BE:189:PRO:CA	2.19	0.54
47:BY:95:LYS:HZ2	47:BY:99:CYS:C	2.09	0.54
34:BH:85:LYS:HE2	34:BH:145:ALA:CB	2.35	0.54
37:BO:10:VAL:HG11	37:BO:16:ALA:O	2.07	0.54
30:DD:238:GLY:O	30:DD:239:ARG:O	2.25	0.54
1:CA:1305:G:C2	1:CA:1331:G:N3	2.75	0.54
27:DA:977:G:O2'	27:DA:978:G:H5'	2.07	0.54
27:DA:2833:G:C3'	27:DA:2834:G:C5'	2.76	0.54
38:DP:93:GLY:O	38:DP:123:LEU:HB2	2.07	0.54
27:DA:2014:A:H2'	27:DA:2015:A:C8	2.43	0.54
48:DZ:55:VAL:HA	48:DZ:69:LEU:CD2	2.37	0.54
31:DE:95:ILE:HG22	31:DE:96:PHE:CD1	2.42	0.54
27:BA:1494:A:N3	27:BA:1494:A:C2'	2.70	0.54
1:CA:142:G:H2'	1:CA:143:A:H8	1.67	0.54
8:AH:53:VAL:O	8:AH:56:LYS:N	2.25	0.54
26:CZ:3:SER:O	26:CZ:4:SER:HB3	2.07	0.54
27:BA:686:G:H1'	56:B7:6:GLN:O	2.07	0.54
27:BA:684:G:C2	27:BA:794:G:C2	2.95	0.54
38:DP:7:ARG:HA	38:DP:7:ARG:NE	2.21	0.54
1:CA:309:G:C1'	1:CA:608:A:H2	2.11	0.54
33:DG:3:LEU:O	33:DG:4:ASP:HB3	2.07	0.54
46:BX:12:VAL:HB	46:BX:17:ALA:HB1	1.87	0.54
1:CA:1191:A:H5''	3:CC:4:LYS:HZ1	1.70	0.54
27:BA:1556:C:H2'	27:BA:1557:C:C6	2.42	0.54
27:BA:2580:U:H5''	31:BE:131:ALA:HB2	1.89	0.54
35:BI:123:LEU:HD11	35:BI:144:VAL:HG12	1.90	0.54
39:DQ:75:THR:HG21	39:DQ:87:LYS:HG3	1.88	0.54
48:DZ:60:LEU:HG	48:DZ:64:GLN:HB2	1.89	0.54
51:B2:32:LEU:CB	51:B2:53:LEU:HD12	2.37	0.54
27:DA:1680:U:H3'	27:DA:1681:G:C8	2.42	0.54
52:D3:47:VAL:HA	52:D3:50:VAL:HG22	1.90	0.54
13:AM:75:ALA:C	13:AM:79:LYS:HZ2	2.09	0.54
7:AG:153:HIS:CB	11:AK:58:PRO:HG3	2.37	0.54
11:AK:57:THR:HG22	11:AK:58:PRO:HD2	1.89	0.54
15:AO:33:THR:HG23	15:AO:63:ARG:NH1	2.20	0.54
27:DA:221:A:C4'	27:DA:222:A:O5'	2.53	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DW:18:ARG:HG2	45:DW:18:ARG:NH1	2.22	0.54
45:DW:26:GLY:HA2	45:DW:71:VAL:O	2.08	0.54
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.89	0.54
5:AE:20:GLN:NE2	5:AE:25:ARG:CZ	2.66	0.54
1:CA:770:C:H2'	1:CA:771:G:C8	2.42	0.54
16:AP:15:PRO:C	16:AP:16:HIS:ND1	2.60	0.54
6:AF:12:PRO:O	6:AF:14:LEU:N	2.33	0.54
13:CM:90:LEU:O	13:CM:91:ARG:HB2	2.07	0.54
23:CW:70:C:O2'	23:CW:71:A:H8	1.91	0.54
27:DA:67:U:H2'	27:DA:68:G:C8	2.37	0.54
32:BF:53:THR:H	32:BF:56:GLU:HB2	1.72	0.54
27:BA:2110:G:OP2	27:BA:2110:G:H8	1.91	0.54
27:BA:1289:C:H5'	27:BA:1289:C:C6	2.36	0.54
27:BA:406:G:C8	27:BA:406:G:O5'	2.57	0.54
27:DA:813:U:H2'	27:DA:814:C:C6	2.42	0.54
27:DA:2147:G:H2'	27:DA:2148:G:C8	2.42	0.54
27:BA:1676:A:O5'	27:BA:1676:A:H8	1.90	0.54
12:AL:123:LYS:HD2	12:AL:124:GLU:H	1.71	0.54
27:DA:289:A:N3	27:DA:289:A:H2'	2.20	0.54
20:AT:12:ALA:C	20:AT:14:LYS:H	2.09	0.54
2:AB:87:ARG:HD2	2:AB:87:ARG:O	2.07	0.54
6:CF:21:LEU:HD13	6:CF:24:GLU:OE1	2.07	0.54
48:DZ:99:VAL:O	48:DZ:122:ASP:HA	2.07	0.54
28:DB:106:G:H2'	28:DB:107:G:H8	1.70	0.54
27:DA:2460:U:C2'	27:DA:2461:C:H5'	2.37	0.54
20:AT:43:LEU:HB3	20:AT:48:LYS:HG3	1.90	0.54
32:DF:153:SER:OG	32:DF:190:GLU:HG3	2.07	0.54
1:AA:383:A:H2'	1:AA:384:G:H5'	1.89	0.54
1:AA:999:C:H42	1:AA:1042:G:H22	1.55	0.54
1:CA:1417:G:H2'	1:CA:1482:G:N2	2.22	0.54
17:CQ:97:SER:O	17:CQ:99:SER:N	2.38	0.54
27:BA:841:A:H2'	27:BA:842:G:C8	2.42	0.54
32:BF:202:PHE:O	32:BF:205:ARG:CB	2.54	0.54
57:D8:53:PRO:O	57:D8:54:GLU:C	2.45	0.54
30:BD:166:GLN:CB	30:BD:174:ILE:HG22	2.37	0.54
27:DA:1693:U:H2'	30:DD:14:ARG:NH2	2.22	0.54
1:CA:411:A:C6	1:CA:429:U:C5	2.95	0.54
27:DA:391:G:O5'	27:DA:391:G:C8	2.60	0.54
32:DF:127:GLU:HB2	32:DF:196:LEU:HD12	1.89	0.54
32:DF:2:LYS:H	32:DF:2:LYS:HD3	1.70	0.54
30:DD:30:GLU:OE2	30:DD:83:GLU:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BD:24:ILE:O	30:BD:26:LYS:HE3	2.07	0.54
27:BA:1902:C:H4'	30:BD:244:ARG:HA	1.89	0.54
27:DA:872:A:N1	27:DA:905:U:O2	2.40	0.54
55:B6:20:ASN:ND2	55:B6:21:TYR:N	2.51	0.54
1:AA:1366:C:O2'	1:AA:1367:C:H5'	2.06	0.54
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.08	0.54
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.72	0.54
17:CQ:15:MET:HE1	17:CQ:43:LEU:HD13	1.89	0.54
32:DF:188:ARG:N	38:DP:7:ARG:HH22	2.05	0.54
1:CA:606:G:H2'	1:CA:631:G:N2	2.23	0.54
1:CA:129:U:N3	1:CA:131:C:N4	2.53	0.54
1:CA:1064:G:H21	1:CA:1190:G:H2'	1.73	0.54
1:CA:1197:G:O2'	1:CA:1198:G:H5'	2.07	0.54
1:CA:1287:A:H2	1:CA:1353:G:H1'	1.71	0.54
27:BA:2164:C:H3'	27:BA:2165:G:C8	2.42	0.54
29:DC:68:LEU:CB	29:DC:70:LYS:HE2	2.37	0.54
56:D7:10:ARG:O	56:D7:13:ALA:HB3	2.08	0.54
35:BI:140:LEU:HD12	35:BI:141:LYS:H	1.72	0.54
27:BA:2522:U:O2'	27:BA:2647:U:OP1	2.23	0.54
41:DS:59:LYS:HE3	41:DS:68:GLN:HE22	1.72	0.54
27:BA:2287:A:N1	27:BA:2346:A:C2	2.75	0.54
1:AA:620:C:N1	4:AD:135:LEU:HD23	2.22	0.54
27:DA:2312:U:C2'	27:DA:2313:C:H5''	2.36	0.54
5:CE:84:PHE:O	5:CE:86:ALA:N	2.40	0.54
1:AA:1137:C:C4'	1:AA:1138:G:C2	2.87	0.54
27:DA:2884:U:C2'	27:DA:2885:C:H5'	2.37	0.54
42:DT:105:LEU:HD22	42:DT:109:GLU:OE1	2.07	0.54
1:CA:638:G:H2'	1:CA:639:G:C8	2.42	0.54
12:CL:5:ASN:HA	12:CL:8:VAL:HG21	1.90	0.54
8:CH:39:LEU:HD21	8:CH:111:ILE:HD11	1.88	0.54
7:AG:69:VAL:HG12	7:AG:100:ALA:HA	1.89	0.54
27:BA:1331:A:H3'	27:BA:1333:C:H41	1.71	0.54
27:BA:1205:U:H4'	27:BA:1206:G:OP2	2.07	0.54
36:DN:67:LEU:HB3	36:DN:88:GLU:CG	2.37	0.54
27:BA:2048:G:C6	27:BA:2621:A:N1	2.76	0.54
9:CI:99:LEU:HD12	9:CI:101:PHE:CE1	2.42	0.54
29:DC:77:ILE:HD11	29:DC:100:ILE:HG13	1.89	0.54
27:BA:2036:C:O2'	27:BA:2037:G:H8	1.90	0.54
36:BN:17:ASP:C	36:BN:17:ASP:OD2	2.46	0.54
17:AQ:29:HIS:CE1	17:AQ:31:LEU:HB3	2.38	0.54
27:BA:576:U:H4'	27:BA:2502:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1722:A:C6	27:DA:1740:G:C8	2.95	0.54
27:BA:530:G:O6	27:BA:2023:G:OP1	2.26	0.54
27:DA:1195:G:O2'	27:DA:1196:C:H5'	2.08	0.54
27:DA:1897:G:C2	27:DA:1898:U:C2	2.95	0.54
5:CE:125:SER:OG	5:CE:126:ARG:N	2.39	0.54
27:DA:2064:C:H1'	27:DA:2450:A:N1	2.23	0.54
27:DA:1328:G:O2'	27:DA:1329:U:H5''	2.07	0.54
50:D1:46:LEU:O	50:D1:46:LEU:HD23	2.06	0.54
1:CA:1165:C:C2'	1:CA:1166:G:H5'	2.37	0.54
29:DC:24:GLU:HB3	29:DC:27:ARG:HH21	1.71	0.54
27:DA:2445:G:H2'	27:DA:2446:G:C8	2.42	0.54
50:B1:23:LYS:HD3	50:B1:28:GLY:HA3	1.89	0.54
23:AW:27:C:C4	23:AW:28:G:N7	2.75	0.54
27:DA:1170:G:H22	27:DA:1179:C:H42	1.55	0.54
1:CA:755:G:O2'	1:CA:756:C:H5'	2.08	0.54
52:D3:36:VAL:HG23	52:D3:36:VAL:O	2.07	0.54
42:DT:54:ARG:O	42:DT:55:ASN:CB	2.54	0.54
57:B8:61:LEU:HD12	57:B8:61:LEU:N	2.23	0.54
27:BA:247:G:H4'	27:BA:386:G:C5	2.42	0.54
27:BA:940:G:H2'	27:BA:941:A:C4'	2.37	0.54
38:BP:23:PRO:HD2	38:BP:33:ARG:HH21	1.72	0.54
1:CA:981:U:O5'	1:CA:981:U:H6	1.89	0.54
32:BF:110:LEU:C	32:BF:110:LEU:HD13	2.28	0.54
32:BF:20:LEU:CD2	32:BF:203:GLN:HE22	2.20	0.54
32:BF:2:LYS:HG2	32:BF:25:PRO:HG2	1.89	0.54
5:AE:43:LEU:CD2	5:AE:109:ILE:HD11	2.30	0.54
42:BT:65:LYS:HA	42:BT:65:LYS:NZ	2.23	0.54
30:DD:211:ARG:HG3	30:DD:211:ARG:O	2.07	0.54
54:B5:16:ARG:CG	54:B5:17:ASP:H	2.19	0.54
27:DA:627:A:N3	27:DA:636:G:N2	2.53	0.54
27:DA:2394:C:OP1	38:DP:63:PRO:HG2	2.07	0.54
27:DA:2019:A:N6	27:DA:2035:G:H1	2.06	0.54
55:B6:34:LEU:O	55:B6:36:LEU:HD23	2.08	0.54
18:CR:47:THR:HA	18:CR:83:GLU:O	2.08	0.54
1:AA:944:G:N2	1:AA:1338:G:C8	2.76	0.54
17:CQ:12:SER:HA	17:CQ:14:LYS:NZ	2.22	0.54
1:AA:484:G:H4'	1:AA:485:G:O5'	2.07	0.54
46:BX:13:LEU:HD11	51:B2:40:SER:O	2.08	0.54
42:DT:3:ARG:C	42:DT:5:ALA:N	2.59	0.54
9:CI:83:ARG:NH2	9:CI:102:LEU:HD11	2.22	0.54
30:DD:52:ARG:NH1	30:DD:249:PRO:HG2	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2134:A:C2	27:BA:2159:G:H1'	2.42	0.54
49:D0:53:MET:HB3	49:D0:59:LEU:CD2	2.31	0.54
27:BA:1407:C:H5'	27:BA:1408:C:OP2	2.08	0.54
1:AA:402:G:O2'	1:AA:403:C:H5'	2.08	0.54
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.43	0.54
27:DA:852:G:C5	27:DA:853:G:N7	2.75	0.54
6:CF:8:ILE:HD13	6:CF:26:ILE:HD13	1.89	0.54
43:BU:25:TRP:HD1	43:BU:26:GLY:H	1.55	0.54
27:BA:234:C:O2'	27:BA:235:U:H5'	2.07	0.54
27:BA:2047:U:C2'	27:BA:2048:G:H5'	2.37	0.54
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.07	0.54
13:CM:95:GLY:O	13:CM:96:LEU:HD12	2.06	0.54
27:DA:2543:G:O2'	27:DA:2544:G:H5'	2.08	0.54
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.21	0.54
13:CM:82:MET:O	13:CM:82:MET:CG	2.54	0.54
18:AR:51:LEU:HD23	18:AR:52:PRO:HD2	1.89	0.54
27:BA:49:A:C8	27:BA:51:G:C2	2.95	0.54
2:CB:36:ARG:HA	2:CB:36:ARG:CZ	2.37	0.54
39:DQ:134:ARG:HH21	48:DZ:121:ARG:CZ	2.21	0.54
27:BA:1674:G:N2	27:BA:1677:A:N1	2.54	0.54
27:BA:2028:U:H2'	27:BA:2029:G:O4'	2.07	0.54
36:DN:41:ASP:O	36:DN:42:TRP:C	2.46	0.54
27:BA:2111:C:C5	27:BA:2145:C:C4	2.95	0.54
20:CT:16:HIS:C	20:CT:19:SER:HB3	2.28	0.54
50:D1:20:ARG:O	50:D1:21:ARG:HG2	2.08	0.54
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.07	0.54
31:DE:11:MET:HE3	31:DE:186:GLY:HA2	1.89	0.54
27:BA:1790:C:H2'	27:BA:1791:A:C4	2.43	0.54
1:CA:38:G:H4'	1:CA:547:A:N6	2.21	0.54
27:BA:836:G:H2'	27:BA:837:C:C6	2.42	0.54
49:D0:34:GLY:O	49:D0:35:ASN:C	2.45	0.54
28:BB:79:C:H42	28:BB:98:G:H1	1.54	0.54
46:DX:41:ASN:N	46:DX:41:ASN:HD22	2.04	0.54
48:DZ:104:VAL:O	48:DZ:104:VAL:HG13	2.08	0.54
27:BA:1961:C:C2'	27:BA:1962:C:H5'	2.37	0.54
44:DV:43:GLU:O	44:DV:44:LYS:HB2	2.08	0.54
27:BA:2378:A:N7	27:BA:2379:G:H1'	2.22	0.54
1:CA:1226:C:OP1	19:CS:81:ARG:NH1	2.41	0.54
27:BA:1200:C:H2'	27:BA:1201:C:H6	1.73	0.54
33:BG:39:ILE:O	33:BG:39:ILE:HG23	2.07	0.54
55:D6:19:ARG:H	55:D6:19:ARG:HD2	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2430:A:H2'	27:DA:2431:U:H5'	1.90	0.54
27:DA:2067:G:H1	27:DA:2443:C:N4	2.05	0.54
27:DA:2579:C:O3'	31:DE:131:ALA:CB	2.45	0.54
27:DA:950:G:O6	27:DA:967:C:N4	2.40	0.54
39:BQ:107:ALA:O	39:BQ:109:VAL:HG23	2.08	0.54
55:B6:39:TYR:HD2	55:B6:49:HIS:CD2	2.26	0.54
1:CA:202:U:H5''	1:CA:203:U:OP2	2.07	0.54
1:CA:384:G:H2'	1:CA:385:C:H6	1.70	0.54
42:DT:82:LEU:O	42:DT:83:ILE:C	2.45	0.54
30:DD:173:VAL:CG2	30:DD:174:ILE:N	2.70	0.54
27:DA:2755:C:H3'	58:D9:19:ARG:NH2	2.23	0.54
16:AP:22:THR:HG1	16:AP:26:ARG:HG3	1.70	0.54
27:BA:1812:A:C2	27:BA:1813:G:C5	2.95	0.54
7:AG:54:THR:OG1	7:AG:56:GLN:CG	2.47	0.54
20:CT:67:ALA:O	20:CT:73:HIS:CD2	2.61	0.54
42:DT:13:ARG:CA	42:DT:13:ARG:NE	2.70	0.54
38:DP:13:ASN:ND2	38:DP:14:LYS:N	2.55	0.54
3:CC:84:ILE:HA	3:CC:87:LEU:HD12	1.90	0.54
12:AL:73:ASN:H	12:AL:73:ASN:ND2	2.04	0.54
27:DA:526:A:N6	27:DA:2626:C:H4'	2.23	0.54
42:BT:108:ARG:CA	42:BT:111:ARG:HG3	2.37	0.54
47:BY:88:LYS:HB3	47:BY:90:LEU:HD12	1.89	0.54
57:B8:32:LEU:CB	57:B8:36:LYS:HD2	2.38	0.54
40:DR:20:LEU:HG	40:DR:21:TYR:CD2	2.42	0.54
35:BI:13:GLY:O	35:BI:17:GLN:OE1	2.25	0.54
28:DB:45:A:H1'	33:DG:95:ARG:NH1	2.22	0.54
39:BQ:57:HIS:C	39:BQ:57:HIS:CD2	2.81	0.54
27:DA:2867:G:C5	42:DT:23:ARG:NH1	2.75	0.54
42:DT:96:ARG:CG	42:DT:96:ARG:HH11	2.09	0.54
4:AD:152:SER:C	4:AD:154:ASN:H	2.10	0.54
4:AD:152:SER:O	4:AD:155:LEU:HG	2.08	0.54
27:BA:271(U):G:C2'	27:BA:271(V):G:H5'	2.37	0.54
45:DW:11:ARG:N	45:DW:100:THR:OG1	2.39	0.54
45:DW:29:LEU:HD11	45:DW:51:LEU:HD11	1.89	0.54
27:BA:216:A:C8	27:BA:432:A:C6	2.96	0.54
11:CK:52:GLY:O	11:CK:55:LYS:HG3	2.07	0.54
1:CA:61:G:C6	1:CA:107:G:N1	2.75	0.54
27:DA:2092:U:H4'	27:DA:2093:G:O5'	2.07	0.54
1:AA:841:U:O2'	1:AA:848:C:H5'	2.07	0.54
27:BA:542:C:N4	27:BA:543:C:N4	2.55	0.54
27:BA:1527:G:H5''	27:BA:1528:A:OP1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1887:C:C2'	27:DA:1888:G:H5''	2.37	0.54
51:B2:13:ALA:O	51:B2:15:LYS:N	2.39	0.54
56:B7:31:LEU:O	56:B7:35:ARG:HB2	2.08	0.54
31:DE:11:MET:CB	31:DE:24:THR:HA	2.38	0.54
27:BA:1804:C:H4'	30:BD:252:TRP:CZ2	2.43	0.54
27:BA:2080:G:H2'	27:BA:2081:C:H6	1.72	0.54
1:AA:537:G:H2'	1:AA:538:G:C8	2.42	0.54
56:B7:45:ALA:O	56:B7:46:VAL:CG2	2.56	0.54
33:DG:33:ARG:O	33:DG:35:GLU:N	2.40	0.54
27:BA:2851:A:O3'	40:BR:64:ARG:NH2	2.41	0.54
39:DQ:3:MET:O	39:DQ:5:ARG:N	2.41	0.54
1:CA:599:C:H5''	8:CH:96:GLY:HA2	1.89	0.54
1:AA:590:C:OP1	8:AH:30:ARG:HB3	2.08	0.54
1:AA:719:C:C2	18:AR:50:ILE:HG12	2.42	0.54
49:D0:27:GLU:N	49:D0:69:PHE:HE1	2.06	0.54
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.42	0.54
27:BA:636:G:H4'	27:BA:638:G:H4'	1.90	0.54
40:BR:28:LEU:CD1	40:BR:48:VAL:HG11	2.37	0.54
47:BY:95:LYS:HZ2	47:BY:100:ALA:HB2	1.72	0.54
38:DP:47:ASP:HB3	38:DP:48:PRO:C	2.28	0.54
33:BG:142:PRO:HG2	33:BG:143:GLU:OE1	2.07	0.54
42:BT:31:SER:CB	42:BT:32:TYR:CD2	2.90	0.54
27:DA:1152:C:H2'	27:DA:1153:C:H6	1.73	0.54
27:DA:491:G:C2'	27:DA:492:A:O5'	2.56	0.54
27:DA:1491:G:OP2	27:DA:1494:A:N6	2.40	0.54
30:DD:143:HIS:HA	30:DD:156:ALA:CB	2.37	0.54
27:DA:729:G:N7	30:DD:209:ALA:HB3	2.22	0.54
30:DD:30:GLU:HG3	30:DD:63:ARG:NH2	2.22	0.54
41:DS:98:VAL:O	41:DS:98:VAL:HG13	2.08	0.54
38:DP:112:LEU:O	38:DP:112:LEU:HD13	2.08	0.54
33:DG:16:ARG:O	33:DG:20:ILE:HG13	2.08	0.54
44:DV:81:TYR:CE2	44:DV:83:ARG:CZ	2.91	0.54
1:AA:153:C:O2'	1:AA:154:C:H5'	2.08	0.54
27:BA:2483:C:H3'	27:BA:2484:G:C5'	2.26	0.54
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.08	0.54
41:DS:30:ARG:HB3	41:DS:89:ARG:NH2	2.23	0.54
27:BA:965:C:H2'	27:BA:966:G:C8	2.40	0.54
8:CH:60:ARG:CG	8:CH:60:ARG:NH1	2.70	0.54
1:AA:748:C:O2'	1:AA:749:C:OP2	2.23	0.54
27:DA:2712:U:H2'	27:DA:2712(A):A:O5'	2.07	0.54
3:CC:94:LEU:HD12	3:CC:95:THR:N	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2537:U:H2'	27:DA:2538:C:C6	2.42	0.54
14:CN:7:ILE:CG2	14:CN:28:GLY:HA3	2.38	0.54
27:BA:2875:C:O2'	42:BT:5:ALA:HB2	2.08	0.54
48:DZ:4:LEU:CD1	48:DZ:5:LYS:H	2.17	0.54
27:DA:1379:A:H1'	27:DA:1380:G:OP1	2.07	0.54
55:B6:30:THR:HB	55:B6:31:PRO:HD2	1.88	0.54
27:DA:2310:A:N6	33:DG:75:LYS:HE2	2.23	0.54
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.90	0.54
25:CY:58:A:C2'	25:CY:59:U:H5'	2.38	0.54
5:CE:110:LEU:O	5:CE:115:VAL:HG23	2.07	0.54
5:CE:80:ILE:CD1	5:CE:138:ALA:HB1	2.37	0.54
12:CL:4:ILE:O	12:CL:8:VAL:HG23	2.08	0.54
27:BA:200:U:C5'	27:BA:200:U:H6	2.18	0.54
33:BG:120:LEU:O	33:BG:181:ARG:HB3	2.08	0.54
1:AA:189(B):C:O2'	1:AA:189(C):C:H5'	2.08	0.54
19:AS:11:VAL:CG2	19:AS:16:LEU:HD11	2.38	0.54
32:BF:41:LEU:HD21	32:BF:184:TYR:CE1	2.43	0.54
1:AA:1293:G:O2'	1:AA:1294:G:H5'	2.07	0.54
27:DA:2519:U:C4	27:DA:2542:A:C2	2.95	0.54
27:BA:38:A:H1'	32:BF:48:THR:O	2.07	0.54
7:AG:103:TRP:HA	7:AG:106:GLN:HB2	1.89	0.54
1:CA:9:G:OP1	5:CE:122:GLU:HB2	2.08	0.54
1:AA:992:U:HO2'	1:AA:993:G:C5'	2.19	0.54
1:CA:93:G:H2'	1:CA:96:U:C5'	2.35	0.54
27:BA:959:A:H5''	27:BA:959:A:C8	2.39	0.54
27:BA:2023:G:N2	27:BA:2024:G:C4	2.76	0.54
45:BW:85:VAL:CG1	45:BW:86:LEU:N	2.71	0.54
27:DA:706:A:C2'	27:DA:707:G:O5'	2.55	0.54
13:AM:48:LEU:O	13:AM:49:THR:C	2.46	0.54
43:DU:62:ILE:HG22	43:DU:63:VAL:N	2.22	0.54
1:AA:113:G:C2'	1:AA:114:U:O5'	2.56	0.54
34:DH:35:VAL:HG11	34:DH:71:LEU:HG	1.90	0.54
1:AA:1030(B):C:H2'	1:AA:1030(C):G:C5'	2.38	0.54
49:B0:53:MET:HA	49:B0:58:THR:O	2.07	0.54
27:BA:444:C:O4'	32:BF:49:ALA:HB2	2.08	0.54
50:D1:75:GLU:C	50:D1:77:ALA:H	2.11	0.54
1:AA:1393:U:O2'	1:AA:1394:A:H3'	2.08	0.54
23:AW:29:G:C2	23:AW:40:C:N3	2.76	0.54
35:DI:45:LYS:O	35:DI:48:GLU:N	2.39	0.54
2:CB:45:GLN:O	2:CB:48:MET:HB3	2.08	0.54
2:AB:122:PHE:HD1	2:AB:139:LYS:HZ2	1.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DT:38:ASN:ND2	42:DT:38:ASN:O	2.41	0.54
27:DA:76:C:O2'	27:DA:77:C:H5'	2.08	0.54
27:BA:1340:U:H4'	27:BA:1341:U:OP2	2.08	0.54
39:BQ:35:VAL:HG23	39:BQ:100:GLY:O	2.06	0.54
47:BY:95:LYS:HG2	47:BY:99:CYS:O	2.07	0.54
47:BY:96:ILE:HD12	47:BY:99:CYS:HB2	1.90	0.54
1:CA:498:U:O2'	1:CA:499:A:O5'	2.25	0.54
33:BG:101:ILE:HG12	33:BG:105:LYS:CE	2.32	0.54
33:BG:114:ILE:HG12	33:BG:140:ILE:HD13	1.90	0.54
27:BA:995:C:O2	36:BN:4:TYR:OH	2.26	0.54
43:BU:92:ARG:HH21	44:BV:11:GLN:H	1.55	0.54
27:DA:407:G:N2	27:DA:421:U:C2	2.76	0.54
27:DA:1009:A:H5'	27:DA:1009:A:C8	2.42	0.54
1:AA:344:A:H2'	1:AA:346:G:O6	2.07	0.54
27:DA:902:C:H2'	27:DA:903:C:C6	2.42	0.54
57:D8:38:GLY:O	57:D8:42:ARG:CB	2.55	0.54
27:DA:2386:C:H4'	49:D0:55:ARG:O	2.07	0.54
1:AA:175:C:H2'	1:AA:176:C:C6	2.43	0.54
45:BW:12:ILE:O	45:BW:101:SER:OG	2.23	0.54
46:DX:35:THR:HG22	46:DX:37:THR:H	1.73	0.54
4:CD:171:GLY:HA3	4:CD:173:TRP:CZ3	2.43	0.54
9:AI:5:TYR:HA	9:AI:17:VAL:O	2.07	0.54
10:AJ:53:PRO:HA	14:AN:41:ARG:HH21	1.72	0.54
8:AH:34:GLU:O	8:AH:38:ILE:HG13	2.07	0.54
12:CL:25:LYS:C	12:CL:27:ALA:N	2.61	0.54
12:CL:57:LEU:C	12:CL:59:SER:H	2.10	0.54
30:BD:186:HIS:NE2	30:BD:188:GLU:HG2	2.23	0.54
19:AS:18:LYS:HD2	19:AS:22:LEU:CD2	2.37	0.54
27:DA:2747:G:N2	27:DA:2748:A:H62	2.05	0.54
30:BD:227:ASN:O	30:BD:234:GLY:HA3	2.08	0.54
27:DA:599:G:O2'	27:DA:600:G:H5'	2.06	0.54
4:AD:25:ARG:HG2	4:AD:25:ARG:NH1	2.21	0.54
1:CA:1191:A:H5''	3:CC:4:LYS:HZ3	1.70	0.54
14:CN:9:LYS:HA	14:CN:12:ARG:CZ	2.38	0.54
47:BY:88:LYS:NZ	47:BY:93:GLY:CA	2.67	0.54
27:BA:1032:A:OP1	58:B9:8:LYS:HE3	2.08	0.54
27:DA:1301:A:C4'	27:DA:1302:A:OP1	2.55	0.54
48:BZ:164:VAL:HG11	48:BZ:168:GLU:HB2	1.89	0.54
12:AL:114:ARG:HD2	12:AL:119:THR:CG2	2.38	0.54
36:BN:123:TYR:OH	36:BN:130:HIS:CE1	2.61	0.54
30:DD:94:LEU:CD2	30:DD:95:LEU:N	2.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BZ:99:VAL:O	48:BZ:122:ASP:HA	2.08	0.54
13:CM:6:GLY:O	13:CM:7:VAL:CG2	2.56	0.54
17:AQ:26:GLN:NE2	17:AQ:37:LYS:HG2	2.23	0.54
54:D5:25:LEU:CD2	54:D5:26:THR:N	2.70	0.54
1:CA:686:U:C2'	1:CA:686:U:O2	2.55	0.54
12:AL:25:LYS:HE3	12:AL:30:ARG:HH22	1.72	0.54
1:AA:609:A:H2'	1:AA:610:G:H5'	1.87	0.54
16:AP:8:ARG:O	16:AP:9:PHE:CG	2.60	0.54
1:AA:782:A:H2'	1:AA:783:C:H5'	1.90	0.54
27:DA:65:C:H2'	27:DA:66:C:C6	2.43	0.54
11:AK:12:ARG:HG3	11:AK:13:GLN:N	2.23	0.54
34:BH:89:ILE:O	34:BH:90:LYS:C	2.46	0.54
1:AA:1465:C:H2'	1:AA:1466:C:O4'	2.07	0.54
13:CM:48:LEU:HB2	13:CM:52:GLU:HB3	1.89	0.54
27:DA:1042:G:H5''	27:DA:1043:C:C5	2.43	0.54
13:CM:116:THR:O	13:CM:117:VAL:CB	2.56	0.54
27:BA:1963:U:C2'	27:BA:1963:U:O2	2.55	0.54
1:AA:321:A:N1	1:AA:333:G:C2	2.76	0.54
20:AT:13:LEU:C	20:AT:13:LEU:HD12	2.27	0.54
23:CW:10:G:C2	23:CW:25:A:H1'	2.42	0.54
2:AB:100:GLY:O	2:AB:101:MET:C	2.45	0.54
25:AY:14:A:H5''	25:AY:15:G:N7	2.22	0.54
1:AA:163:C:H2'	1:AA:164:U:C6	2.42	0.54
43:BU:114:LYS:O	43:BU:117:GLN:HB2	2.07	0.54
27:BA:2710:C:O2'	27:BA:2711:A:H5'	2.07	0.54
7:CG:127:ALA:O	7:CG:130:GLY:N	2.40	0.54
38:DP:30:THR:HG22	38:DP:31:ALA:H	1.71	0.54
2:AB:75:LYS:HD3	2:AB:78:GLN:HB2	1.90	0.54
2:CB:106:LYS:HG2	2:CB:106:LYS:O	2.08	0.54
1:AA:701:C:H1'	1:AA:703:G:C2	2.43	0.54
1:CA:417:C:O2'	1:CA:418:C:H5'	2.07	0.54
46:BX:8:ILE:O	51:B2:36:ARG:NH2	2.40	0.54
57:D8:6:THR:CG2	57:D8:63:PRO:HG3	2.37	0.54
55:D6:10:LEU:N	55:D6:10:LEU:CD2	2.69	0.54
55:D6:40:CYS:SG	55:D6:45:LYS:NZ	2.70	0.54
27:DA:2023:G:O2'	27:DA:2024:G:C8	2.60	0.54
27:DA:2061:G:C8	27:DA:2501:C:H1'	2.43	0.54
27:DA:2453:A:H2'	27:DA:2454:G:H8	1.71	0.54
27:BA:1138:G:N3	36:BN:106:MET:CE	2.71	0.54
1:CA:1139:G:H4'	1:CA:1140:C:O5'	2.06	0.54
4:CD:100:ARG:O	4:CD:102:ASP:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DI:133:HIS:ND1	35:DI:134:PRO:CD	2.70	0.54
12:CL:33:VAL:O	12:CL:55:VAL:HG13	2.08	0.54
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.90	0.54
39:BQ:12:GLN:HE21	39:BQ:73:PRO:CD	2.21	0.54
27:BA:853:G:O2'	27:BA:854:G:H5'	2.08	0.54
16:AP:3:LYS:HG2	16:AP:65:GLN:O	2.08	0.54
17:CQ:60:ILE:O	17:CQ:71:PHE:CD1	2.60	0.54
27:DA:1911:U:O2'	27:DA:1912:A:H5''	2.08	0.54
27:BA:797:C:OP2	32:BF:62:ARG:HG3	2.08	0.54
31:BE:34:VAL:HG22	31:BE:48:GLN:HE21	1.72	0.54
2:CB:200:ILE:O	2:CB:201:ILE:HD13	2.07	0.54
1:CA:243:A:N6	1:CA:281:G:H1'	2.23	0.54
20:CT:49:ALA:HB1	20:CT:100:ILE:HD13	1.89	0.54
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.07	0.54
1:CA:1049:U:O2'	1:CA:1050:G:OP2	2.25	0.54
10:AJ:17:ASP:OD1	10:AJ:70:ARG:NH1	2.41	0.54
1:CA:590:C:O2'	1:CA:591:U:H5'	2.08	0.54
27:BA:2562:U:O2'	27:BA:2563:U:H5'	2.08	0.54
27:BA:2423:U:H4'	27:BA:2425:A:C8	2.43	0.54
27:BA:397:G:OP1	50:B1:44:PRO:HA	2.08	0.54
27:BA:2310:A:N7	33:BG:75:LYS:HE2	2.23	0.54
27:DA:1679:U:H2'	27:DA:1680:U:C6	2.42	0.54
13:CM:84:ILE:N	19:CS:66:MET:HE1	2.22	0.54
27:BA:729:G:O2'	27:BA:763:G:H4'	2.08	0.54
2:CB:97:TRP:HH2	2:CB:176:GLU:OE1	1.90	0.54
42:DT:101:PHE:O	42:DT:103:ARG:N	2.41	0.54
27:BA:2694:G:H2'	27:BA:2695:C:O5'	2.08	0.54
1:CA:1319:A:OP2	19:CS:5:LEU:HD23	2.07	0.54
1:AA:1285:A:O2'	1:AA:1286:A:OP2	2.24	0.54
21:AU:8:THR:O	21:AU:12:LYS:HB2	2.07	0.54
25:CY:17:G:N2	25:CY:54:U:H1'	2.19	0.54
8:CH:42:GLU:HG3	8:CH:109:ILE:CD1	2.33	0.54
45:DW:84:ARG:HG3	45:DW:98:LYS:NZ	2.23	0.54
27:BA:363(B):G:C2'	27:BA:363(B):G:N3	2.68	0.54
27:BA:1114:G:H2'	27:BA:1115:G:H5''	1.89	0.54
27:BA:216:A:H2'	27:BA:217:G:H8	1.72	0.54
15:CO:10:LYS:HE3	15:CO:11:VAL:HG23	1.90	0.54
30:DD:138:VAL:HG12	30:DD:168:ARG:HE	1.73	0.54
14:AN:13:THR:N	14:AN:14:PRO:CD	2.69	0.54
27:BA:1931:U:H2'	27:BA:1932:A:H8	1.73	0.54
6:AF:18:GLN:O	6:AF:22:GLU:HG2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BZ:143:LEU:HD12	48:BZ:147:ASP:HB3	1.89	0.54
34:DH:125:VAL:HG13	34:DH:131:VAL:HG22	1.90	0.54
50:B1:73:LEU:C	50:B1:75:GLU:N	2.61	0.54
1:AA:184:G:O2'	1:AA:185:A:H5'	2.06	0.54
27:BA:2636:U:O2'	31:BE:44:TYR:HE1	1.91	0.54
27:DA:1515:G:O2'	27:DA:1516:C:H5'	2.07	0.54
27:DA:813:U:C2	27:DA:1195:G:N2	2.76	0.54
24:CX:28:C:H42	24:CX:42:G:H1	1.55	0.54
1:AA:1458:G:O2'	1:AA:1459:C:H5'	2.08	0.54
51:B2:16:LEU:O	51:B2:17:SER:HB3	2.06	0.54
27:BA:425:G:H2'	27:BA:426:C:C6	2.41	0.54
27:BA:971:C:H2'	27:BA:972:G:C5'	2.38	0.54
1:AA:1149:C:H2'	1:AA:1150:U:H6	1.73	0.54
52:D3:1:MET:O	52:D3:2:PRO:O	2.26	0.54
39:BQ:4:PRO:C	39:BQ:5:ARG:HG3	2.28	0.54
27:DA:1711:C:O2'	27:DA:1712:C:H5'	2.08	0.54
44:DV:21:ARG:HB3	44:DV:91:TYR:HB2	1.90	0.54
52:B3:12:PRO:O	52:B3:15:TYR:HB2	2.08	0.54
8:CH:90:GLY:O	8:CH:91:ARG:CB	2.55	0.54
28:BB:111:G:O2'	28:BB:112:U:H5'	2.07	0.54
15:CO:29:VAL:HG12	15:CO:30:ALA:N	2.22	0.54
27:BA:991:C:O2	27:BA:1164:G:C2	2.60	0.54
38:BP:64:LYS:HD2	57:B8:25:MET:SD	2.48	0.54
10:CJ:61:GLU:OE1	14:CN:58:LYS:HE2	2.08	0.54
41:BS:88:ASP:CG	41:BS:89:ARG:N	2.61	0.54
27:BA:27:G:O2'	27:BA:28:A:H8	1.91	0.54
4:CD:79:PHE:HA	4:CD:93:PHE:CE2	2.43	0.54
42:BT:27:THR:HA	42:BT:87:ASP:HB2	1.88	0.54
43:DU:91:ASP:C	43:DU:92:ARG:HD3	2.27	0.54
44:DV:52:VAL:O	44:DV:52:VAL:HG13	2.07	0.54
27:DA:36:G:N3	27:DA:450:G:O2'	2.41	0.54
29:BC:42:GLU:H	29:BC:213:TYR:N	2.02	0.54
30:DD:144:ALA:HB3	30:DD:192:THR:HG23	1.90	0.54
12:CL:83:ARG:N	12:CL:96:HIS:O	2.35	0.54
52:B3:24:LYS:O	52:B3:27:GLY:N	2.40	0.54
27:DA:84:A:C5'	47:DY:9:LYS:HZ1	2.17	0.54
41:DS:96:GLY:O	41:DS:98:VAL:HG12	2.08	0.54
33:BG:66:GLN:HE21	33:BG:98:ARG:HG3	1.72	0.54
27:DA:582:G:H2'	27:DA:583:G:H8	1.71	0.54
27:DA:828:U:H4'	27:DA:831:G:N1	2.23	0.54
27:DA:587:C:C6	38:DP:33:ARG:NH1	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B6:40:CYS:CB	55:B6:46:HIS:HB3	2.38	0.54
31:DE:179:GLU:CB	31:DE:181:LEU:HD13	2.28	0.54
1:CA:62:U:H3	1:CA:105:G:H1	1.55	0.54
12:CL:80:VAL:HG12	12:CL:81:LEU:N	2.18	0.54
2:AB:91:PRO:HA	2:AB:154:LEU:HD12	1.90	0.54
17:CQ:50:LYS:O	17:CQ:52:LYS:HD2	2.08	0.54
27:BA:125:G:C6	56:B7:10:ARG:NE	2.74	0.54
27:BA:752:A:C5	27:BA:1781:C:O4'	2.61	0.54
50:D1:51:VAL:O	50:D1:57:GLU:O	2.25	0.54
2:AB:167:PRO:HG2	2:AB:192:SER:CB	2.37	0.54
1:CA:242:C:C2'	1:CA:243:A:H5'	2.38	0.54
1:AA:372:C:H42	1:AA:389:A:H62	1.54	0.54
34:DH:12:PRO:CG	34:DH:49:VAL:HA	2.28	0.54
47:BY:90:LEU:HD12	47:BY:91:GLU:N	2.13	0.54
1:CA:750:G:H21	15:CO:23:GLY:HA3	1.72	0.54
29:BC:36:LYS:HD3	29:BC:37:PHE:N	2.23	0.54
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.72	0.54
7:AG:153:HIS:CG	11:AK:58:PRO:HG3	2.42	0.54
27:DA:1665:A:C2'	27:DA:1666:G:H5'	2.38	0.54
19:CS:45:VAL:HA	19:CS:62:ILE:HG23	1.88	0.54
27:DA:1446:C:O2'	27:DA:1447:G:H5'	2.08	0.54
1:AA:577:G:O2'	1:AA:578:C:H5'	2.06	0.54
33:BG:86:MET:HB2	33:BG:87:PRO:HD3	1.89	0.54
27:BA:271(G):C:H2'	27:BA:271(H):G:C8	2.41	0.54
3:AC:84:ILE:O	3:AC:88:ARG:HG3	2.08	0.54
58:D9:5:ALA:O	58:D9:36:GLN:HG3	2.08	0.54
27:BA:803:U:O2'	27:BA:804:A:H5'	2.08	0.54
1:CA:919:A:O2'	1:CA:1080:A:N1	2.38	0.54
39:DQ:130:LYS:HG3	39:DQ:131:ILE:N	2.22	0.54
2:CB:16:HIS:HB3	2:CB:210:SER:OG	2.08	0.54
1:CA:1109:C:O2'	1:CA:1110:A:H5'	2.08	0.54
27:DA:1164:G:C2	27:DA:1165:U:C2	2.96	0.54
27:BA:1931:U:C6	27:BA:1931:U:C5'	2.90	0.54
28:DB:110:G:C2'	28:DB:111:G:H5'	2.38	0.54
1:AA:197:A:N6	1:AA:221:C:H5'	2.23	0.54
2:AB:61:LEU:HD23	2:AB:68:ILE:HD11	1.88	0.54
2:CB:105:PHE:C	2:CB:107:THR:H	2.10	0.54
10:CJ:82:ILE:CG2	10:CJ:82:ILE:O	2.56	0.54
13:CM:48:LEU:HG	13:CM:53:VAL:HG23	1.90	0.54
5:CE:94:ALA:HB1	5:CE:98:THR:HB	1.90	0.54
30:DD:158:ALA:O	30:DD:196:VAL:HG11	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:577:G:O2'	27:BA:1254:A:OP1	2.26	0.54
27:BA:1983:C:O2'	27:BA:1984:G:H5'	2.08	0.54
27:BA:2006:C:H2'	27:BA:2007:C:H6	1.73	0.54
51:B2:13:ALA:C	51:B2:15:LYS:H	2.10	0.54
1:AA:1047:G:H1	1:AA:1210:C:H42	1.54	0.54
43:DU:5:LYS:CG	43:DU:7:GLY:H	2.21	0.54
44:BV:28:GLU:HB3	44:BV:29:PRO:CD	2.38	0.54
35:DI:109:ILE:HD12	35:DI:109:ILE:N	2.23	0.54
54:D5:59:GLU:O	54:D5:60:VAL:HG23	2.07	0.54
27:BA:2648:C:H2'	27:BA:2649:U:H6	1.72	0.54
27:DA:2461:C:C5	27:DA:2462:U:C5	2.95	0.54
27:DA:2131:G:OP1	27:DA:2132:U:H3'	2.08	0.54
20:CT:8:ARG:HG3	20:CT:8:ARG:NH1	2.22	0.54
49:D0:32:ARG:H	49:D0:35:ASN:ND2	2.05	0.54
40:DR:33:ARG:HG3	40:DR:115:GLU:HB3	1.90	0.54
27:DA:483:A:N7	27:DA:497:A:H2	2.06	0.54
1:CA:1005:A:H2'	1:CA:1006:C:H5'	1.90	0.54
1:AA:132:C:O2'	1:AA:133:U:H5'	2.08	0.54
1:CA:958:A:C8	19:CS:55:LYS:HD2	2.42	0.54
45:BW:33:ARG:HG3	45:BW:33:ARG:NH1	2.23	0.54
1:AA:524:G:H8	1:AA:524:G:OP1	1.91	0.54
29:BC:87:GLU:HG2	29:BC:92:ASP:O	2.08	0.54
27:BA:608:A:OP1	32:BF:100:THR:CG2	2.51	0.54
10:CJ:63:PHE:HA	14:CN:59:ALA:HB2	1.89	0.54
40:BR:29:LEU:HD11	40:BR:48:VAL:HG12	1.89	0.54
36:DN:27:ALA:HB3	36:DN:106:MET:HE1	1.89	0.54
27:DA:243:U:OP1	57:D8:6:THR:CG2	2.55	0.54
1:CA:544:G:H2'	1:CA:545:C:C6	2.43	0.54
4:CD:76:ARG:O	4:CD:77:ASN:C	2.46	0.54
43:BU:65:ILE:O	43:BU:69:CYS:SG	2.64	0.54
41:DS:101:LEU:HD13	41:DS:101:LEU:H	1.71	0.54
27:DA:861:A:C2	27:DA:862:G:H1'	2.42	0.54
27:DA:919:G:C5'	28:DB:81:G:H1'	2.35	0.54
27:DA:2356:C:H5''	49:D0:20:ARG:HG2	1.89	0.54
33:DG:11:TYR:CE2	33:DG:16:ARG:HG2	2.43	0.54
27:DA:469:G:O2'	27:DA:470:A:H5''	2.08	0.54
36:DN:118:LYS:O	36:DN:120:LEU:N	2.41	0.54
27:DA:965:C:C2'	27:DA:966:G:H5'	2.38	0.54
34:BH:43:VAL:CG1	34:BH:53:GLU:H	2.19	0.54
34:BH:8:PRO:O	34:BH:9:ILE:CB	2.56	0.54
1:CA:106:C:O2	1:CA:379:C:H4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:34:GLU:CB	8:AH:118:VAL:HG21	2.25	0.54
1:CA:563:A:N3	1:CA:563:A:H2'	2.22	0.54
31:BE:45:THR:O	31:BE:46:ALA:HB2	2.08	0.54
27:DA:19:C:H42	27:DA:521:G:H1	1.54	0.54
1:CA:741:G:H2'	1:CA:742:G:C8	2.43	0.54
36:DN:11:PRO:HB3	36:DN:51:PHE:CE1	2.42	0.54
36:DN:11:PRO:HB3	36:DN:51:PHE:HD1	1.71	0.54
20:CT:49:ALA:HB1	20:CT:100:ILE:CD1	2.38	0.54
34:BH:92:ILE:CG2	34:BH:93:GLY:N	2.60	0.54
37:BO:6:THR:O	37:BO:20:MET:HA	2.09	0.54
27:DA:542:C:C2'	27:DA:543:C:OP1	2.55	0.54
27:DA:542:C:H2'	27:DA:543:C:OP1	2.08	0.54
39:DQ:27:VAL:HG23	39:DQ:137:TYR:CE1	2.43	0.54
48:DZ:39:ASP:OD2	48:DZ:42:GLU:HG3	2.07	0.54
29:DC:62:VAL:O	29:DC:64:LEU:N	2.41	0.54
27:DA:1310:G:OP2	56:D7:9:ARG:NE	2.41	0.54
35:BI:120:ILE:O	35:BI:121:LYS:HB3	2.08	0.54
27:BA:2420:C:O5'	27:BA:2420:C:H6	1.91	0.54
27:DA:1655:A:H4'	31:DE:115:GLY:N	2.23	0.54
55:B6:32:ASN:CG	55:B6:33:LYS:N	2.61	0.54
27:BA:1358:G:H8	27:BA:1358:G:O5'	1.90	0.54
36:BN:15:LEU:HB3	36:BN:136:GLU:HG2	1.89	0.54
7:CG:78:ARG:CG	7:CG:79:ARG:N	2.65	0.54
1:AA:1299:A:N3	1:AA:1299:A:H5''	2.23	0.54
9:CI:26:VAL:CG2	9:CI:61:ALA:HB3	2.32	0.54
4:AD:128:VAL:O	4:AD:130:GLY:N	2.41	0.54
27:BA:2187:G:H5'	27:BA:2188:C:OP2	2.08	0.54
54:D5:31:VAL:HB	54:D5:32:PRO:HD3	1.90	0.54
1:AA:818:G:H3'	1:AA:819:A:C5'	2.38	0.54
5:CE:78:HIS:ND1	8:CH:107:LEU:HD13	2.22	0.54
27:DA:495:G:H21	45:DW:61:ASN:CG	2.11	0.54
48:DZ:54:HIS:CE1	48:DZ:134:GLU:HG3	2.43	0.54
15:AO:39:LEU:C	15:AO:41:GLU:N	2.60	0.54
3:CC:28:GLN:O	3:CC:32:LEU:HG	2.07	0.54
13:AM:97:PRO:HB2	13:AM:101:GLN:NE2	2.23	0.54
6:AF:14:LEU:HD22	6:AF:18:GLN:HE21	1.73	0.54
10:AJ:22:LYS:C	10:AJ:22:LYS:HD2	2.28	0.54
27:BA:1627:G:C2	27:BA:1628:G:N7	2.76	0.54
27:BA:1641:A:N6	27:BA:1642:G:C2	2.76	0.54
1:AA:1064:G:H1'	1:AA:1066:C:C5	2.43	0.54
37:DO:88:ASN:HD21	37:DO:92:GLU:HB2	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1043:C:H2'	1:AA:1044:A:H8	1.69	0.54
1:AA:1463:C:O2'	1:AA:1464:G:H5'	2.08	0.54
1:CA:1143:G:H2'	1:CA:1144:G:C8	2.43	0.54
27:DA:1042:G:N3	27:DA:1042:G:H2'	2.23	0.54
1:CA:60:A:OP1	1:CA:111:G:N2	2.38	0.54
1:AA:806:C:O2'	1:AA:807:A:H5'	2.07	0.54
1:CA:1118:C:O2'	1:CA:1119:C:H5'	2.08	0.54
27:DA:291:C:H2'	27:DA:292:C:C6	2.40	0.54
49:B0:41:ARG:H	49:B0:41:ARG:CD	2.21	0.54
46:DX:4:ALA:HB3	46:DX:5:TYR:HD1	1.72	0.54
27:BA:1916:A:H3'	27:BA:1917:U:C6	2.41	0.54
40:BR:53:HIS:CD2	40:BR:94:TYR:OH	2.60	0.54
31:DE:11:MET:HB2	31:DE:24:THR:HA	1.89	0.54
24:CX:1:C:H1'	49:D0:5:LYS:HE2	1.90	0.54
27:DA:2682:U:O4'	31:DE:12:THR:HA	2.08	0.54
27:DA:817:C:H4'	27:DA:932:G:C6	2.43	0.54
1:AA:163:C:O2'	1:AA:164:U:H5'	2.07	0.54
1:AA:803:G:H2'	1:AA:804:U:H6	1.73	0.54
44:DV:64:HIS:ND1	44:DV:92:THR:HG22	2.23	0.54
27:BA:416:C:O2	27:BA:416:C:H2'	2.07	0.54
27:BA:2850:A:C2	27:BA:2851:A:C4	2.96	0.54
23:AW:38:U:H2'	23:AW:39:C:C6	2.43	0.54
1:AA:292:G:N7	1:AA:293:G:H1'	2.22	0.54
4:AD:52:SER:O	4:AD:55:ALA:N	2.41	0.54
27:DA:749:C:O2	27:DA:1618:A:H2'	2.08	0.54
38:BP:130:PHE:CD2	38:BP:130:PHE:N	2.76	0.54
38:BP:61:ARG:HH11	57:B8:13:ARG:HD2	1.74	0.53
19:CS:32:LYS:HG3	19:CS:50:ALA:HB3	1.88	0.53
27:BA:2792:G:HO2'	27:BA:2793:G:H8	0.68	0.53
27:BA:2809:A:C6	27:BA:2892:A:H1'	2.43	0.53
41:BS:95:HIS:CG	41:BS:96:GLY:N	2.75	0.53
12:CL:43:LYS:NZ	12:CL:44:LYS:HE2	2.23	0.53
47:BY:45:VAL:HG12	47:BY:46:LYS:H	1.73	0.53
44:BV:40:LEU:H	44:BV:47:VAL:CG1	2.20	0.53
42:BT:79:HIS:C	42:BT:81:PRO:HD3	2.27	0.53
27:DA:2231:C:O2'	27:DA:2232:U:H5'	2.09	0.53
27:DA:298:G:OP1	47:DY:85:VAL:HG23	2.08	0.53
52:B3:52:HIS:ND1	52:B3:53:LEU:HG	2.24	0.53
31:DE:51:PHE:HE1	31:DE:52:LEU:HD13	1.70	0.53
27:DA:2550:G:O2'	27:DA:2551:C:H5'	2.08	0.53
27:DA:2513:G:N2	31:DE:143:ASN:HD21	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2483:C:H2'	39:BQ:49:ALA:HB1	1.90	0.53
27:BA:1491:G:OP2	27:BA:1494:A:N6	2.38	0.53
8:AH:53:VAL:O	8:AH:54:ASP:C	2.47	0.53
1:AA:107:G:H5''	1:AA:108:G:OP2	2.08	0.53
2:AB:149:LEU:O	2:AB:150:SER:C	2.46	0.53
1:CA:742:G:H5'	15:CO:58:MET:HE1	1.87	0.53
9:CI:79:LEU:HD13	9:CI:79:LEU:O	2.08	0.53
27:DA:49:A:N6	27:DA:177:G:H2'	2.12	0.53
51:D2:13:ALA:O	51:D2:15:LYS:N	2.40	0.53
14:CN:24:CYS:HB2	14:CN:40:CYS:HB3	1.88	0.53
1:CA:1269:A:H5'	21:CU:18:TYR:O	2.07	0.53
27:BA:2510:C:O2'	27:BA:2511:U:H5'	2.08	0.53
58:B9:32:HIS:O	58:B9:34:GLN:HG3	2.09	0.53
40:DR:16:HIS:C	40:DR:18:LEU:N	2.59	0.53
27:BA:1359:A:N6	27:BA:1372:U:H3	2.02	0.53
34:DH:94:TYR:CG	34:DH:107:VAL:HG12	2.42	0.53
1:CA:1032:G:H2'	1:CA:1033:G:H8	1.71	0.53
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.08	0.53
1:AA:1137:C:C4'	1:AA:1138:G:N2	2.68	0.53
27:DA:2290:G:C8	27:DA:2290:G:H5'	2.35	0.53
27:DA:2340:G:H2'	27:DA:2341:G:C8	2.42	0.53
27:BA:1055:G:H2'	27:BA:1108:U:O4'	2.08	0.53
27:BA:16:G:O2'	27:BA:17:G:H5'	2.07	0.53
37:BO:13:ASN:CG	37:BO:97:ARG:HB2	2.29	0.53
29:DC:49:ILE:N	29:DC:49:ILE:HD12	2.20	0.53
1:CA:818:G:C2'	1:CA:819:A:H5''	2.38	0.53
32:BF:40:GLN:NE2	32:BF:184:TYR:CB	2.71	0.53
1:CA:287:U:O2'	1:CA:288:A:H5'	2.07	0.53
33:BG:170:ARG:HH21	33:BG:182:LYS:NZ	2.06	0.53
37:BO:102:VAL:HB	37:BO:106:LEU:HD12	1.90	0.53
47:DY:2:ARG:O	47:DY:3:VAL:CB	2.56	0.53
28:DB:71:C:H2'	28:DB:72:G:H5'	1.90	0.53
27:BA:2655:G:O2'	27:BA:2656:U:P	2.66	0.53
4:CD:30:LYS:C	4:CD:32:ALA:N	2.54	0.53
10:CJ:30:SER:HB3	10:CJ:80:LYS:CE	2.39	0.53
1:CA:116:A:H2'	1:CA:117:G:H8	1.71	0.53
30:DD:67:PHE:HB3	30:DD:153:ALA:HB3	1.89	0.53
1:CA:1085:U:O2'	1:CA:1086:U:OP1	2.23	0.53
9:AI:26:VAL:HG13	9:AI:61:ALA:CB	2.37	0.53
1:CA:1228:C:H4'	13:CM:116:THR:HA	1.90	0.53
27:BA:863:A:O2'	27:BA:864:G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BF:95:ARG:NH2	32:BF:97:TYR:OH	2.41	0.53
23:AW:4:G:H2'	23:AW:5:G:C5'	2.39	0.53
44:DV:5:VAL:HG21	44:DV:35:LEU:HG	1.90	0.53
3:CC:190:ARG:HG2	3:CC:190:ARG:NH1	2.24	0.53
1:CA:666:G:H2'	1:CA:667:G:H8	1.72	0.53
39:BQ:77:LYS:NZ	39:BQ:84:GLY:O	2.25	0.53
27:BA:1165:U:O2'	27:BA:1166:C:H5'	2.08	0.53
4:AD:52:SER:O	4:AD:55:ALA:HB3	2.08	0.53
1:CA:23:C:O2'	1:CA:24:U:H5'	2.08	0.53
27:BA:2445:G:O2'	27:BA:2446:G:H5'	2.09	0.53
27:DA:1377:G:H8	27:DA:1377:G:O5'	1.91	0.53
3:AC:95:THR:O	3:AC:97:LYS:N	2.42	0.53
32:DF:139:PHE:HB2	32:DF:166:ALA:HB1	1.90	0.53
27:BA:638:G:C5	27:BA:639:U:C4	2.97	0.53
38:BP:34:GLY:O	38:BP:35:HIS:HB2	2.08	0.53
47:BY:76:CYS:O	47:BY:77:PRO:C	2.47	0.53
51:B2:42:GLY:C	51:B2:44:LEU:N	2.62	0.53
13:CM:23:TYR:HD1	13:CM:67:GLU:HA	1.73	0.53
43:BU:95:LEU:HD22	44:BV:4:ILE:HD13	1.88	0.53
38:DP:65:ARG:NH2	57:D8:15:LYS:HB2	2.23	0.53
27:DA:966:G:H2'	27:DA:967:C:C6	2.43	0.53
14:AN:24:CYS:HB2	14:AN:40:CYS:HB3	1.90	0.53
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.89	0.53
16:AP:58:TYR:O	16:AP:61:SER:OG	2.22	0.53
27:BA:685:A:OP1	56:B7:11:LYS:NZ	2.41	0.53
1:CA:122:G:O2'	1:CA:123:C:H5'	2.09	0.53
16:AP:74:LEU:HB3	16:AP:79:VAL:CG2	2.38	0.53
27:BA:2683:C:OP1	42:BT:53:ARG:NH2	2.41	0.53
37:BO:66:LYS:O	37:BO:78:ARG:HD3	2.08	0.53
27:DA:176:G:H2'	27:DA:177:G:O4'	2.08	0.53
19:CS:6:LYS:H	19:CS:6:LYS:CE	2.21	0.53
6:CF:33:TYR:CE2	6:CF:74:ASP:HB3	2.43	0.53
48:DZ:97:MET:H	48:DZ:124:LEU:HD12	1.72	0.53
38:BP:106:LEU:O	38:BP:107:LYS:HG2	2.08	0.53
1:AA:492:G:C4	1:AA:493:G:C8	2.97	0.53
15:AO:37:ASN:H	15:AO:37:ASN:ND2	2.00	0.53
51:B2:31:GLU:O	51:B2:35:LEU:HB2	2.08	0.53
30:DD:31:LYS:O	30:DD:32:SER:C	2.46	0.53
33:DG:91:ARG:C	33:DG:91:ARG:HD2	2.28	0.53
39:BQ:58:PHE:O	39:BQ:59:ARG:C	2.47	0.53
27:DA:1146:C:C2'	27:DA:1147:C:H5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:154:ASN:O	4:AD:155:LEU:HD23	2.08	0.53
31:DE:14:ILE:O	31:DE:21:VAL:HG22	2.08	0.53
48:BZ:52:ILE:H	48:BZ:52:ILE:HD12	1.72	0.53
27:BA:231:C:H2'	27:BA:232:G:O4'	2.07	0.53
27:DA:474:G:O2'	27:DA:475:U:OP1	2.24	0.53
27:BA:802:A:C5	27:BA:803:U:C4	2.96	0.53
1:CA:818:G:C3'	1:CA:819:A:H5''	2.38	0.53
1:CA:815:A:H2'	1:CA:1526:G:H21	1.72	0.53
27:DA:2139:C:H2'	27:DA:2140:C:H6	1.73	0.53
24:CX:10:G:H22	24:CX:26:G:H1'	1.70	0.53
1:CA:1301:U:H2'	1:CA:1303:C:H5	1.72	0.53
11:CK:15:ALA:HB1	11:CK:78:GLN:CG	2.38	0.53
38:BP:120:ALA:HB1	38:BP:138:LEU:HD13	1.89	0.53
17:CQ:4:LYS:HG3	17:CQ:6:LEU:CD1	2.39	0.53
1:AA:706:A:H1'	11:AK:29:ILE:HD11	1.89	0.53
23:AW:22:G:C2'	23:AW:23:G:H5'	2.36	0.53
23:AW:23:G:H2'	23:AW:24:C:C6	2.44	0.53
5:CE:97:GLY:N	5:CE:117:ASP:OD1	2.41	0.53
29:BC:99:ILE:O	29:BC:99:ILE:HG22	2.08	0.53
27:BA:1957:C:H2'	27:BA:1958:C:C6	2.44	0.53
42:DT:93:ARG:HG3	42:DT:93:ARG:NH1	2.21	0.53
32:BF:47:GLY:O	32:BF:94:PRO:HA	2.08	0.53
1:CA:1119:C:H2'	1:CA:1120:G:C8	2.42	0.53
1:AA:567:G:N2	1:AA:568:G:H1'	2.23	0.53
10:AJ:29:ARG:HH22	10:AJ:84:GLN:HG2	1.73	0.53
1:AA:1445:C:O2'	1:AA:1446:U:H5'	2.09	0.53
24:AX:64:G:H2'	24:AX:65:C:H6	1.74	0.53
27:DA:204:A:O2'	27:DA:205:G:H4'	2.07	0.53
27:BA:1683:C:H2'	27:BA:1684:C:H6	1.73	0.53
27:DA:638:G:H2'	27:DA:639:U:C6	2.43	0.53
30:BD:79:VAL:CG1	30:BD:79:VAL:O	2.57	0.53
27:BA:2555:U:H2'	27:BA:2556:C:C5'	2.38	0.53
27:BA:2555:U:H2'	27:BA:2556:C:H5'	1.90	0.53
48:BZ:38:VAL:CG2	48:BZ:43:PHE:HB2	2.37	0.53
1:AA:670:G:O2'	1:AA:671:G:H5'	2.09	0.53
1:CA:370:C:O2'	1:CA:371:G:H5'	2.08	0.53
28:DB:12:C:O2'	28:DB:13:A:P	2.66	0.53
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.38	0.53
49:B0:51:VAL:HG23	49:B0:81:VAL:HG23	1.90	0.53
2:CB:223:ILE:HA	2:CB:226:ARG:HB3	1.90	0.53
13:CM:29:ARG:HB3	13:CM:64:TRP:CZ2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:B8:47:LYS:HD2	57:B8:48:PHE:O	2.09	0.53
30:DD:231:HIS:CG	30:DD:232:PRO:HD2	2.40	0.53
27:BA:2880:C:H1'	40:BR:92:GLY:O	2.07	0.53
27:DA:245:G:H5'	38:DP:69:GLY:HA3	1.90	0.53
27:BA:559:G:N2	43:BU:49:HIS:CD2	2.76	0.53
43:BU:61:TRP:CE2	43:BU:94:ASN:HA	2.43	0.53
44:DV:19:LYS:HG3	44:DV:20:LEU:O	2.08	0.53
28:BB:94:C:H2'	28:BB:95:C:C6	2.44	0.53
47:DY:7:VAL:HG21	47:DY:8:LYS:NZ	2.22	0.53
45:DW:7:ALA:O	45:DW:103:ILE:N	2.31	0.53
11:AK:38:ASN:ND2	11:AK:38:ASN:N	2.54	0.53
31:DE:36:ARG:HH22	31:DE:88:GLY:N	2.05	0.53
55:D6:12:GLU:HB2	55:D6:21:TYR:HB3	1.91	0.53
27:DA:587:C:O2'	27:DA:588:U:OP2	2.21	0.53
55:B6:13:CYS:HB2	55:B6:22:ALA:HB3	1.90	0.53
1:CA:1106:G:H4'	3:CC:171:GLY:O	2.08	0.53
27:BA:2484:G:O2'	27:BA:2485:G:H5'	2.09	0.53
30:BD:35:LYS:HZ3	30:BD:103:ARG:N	2.06	0.53
30:BD:30:GLU:CD	30:BD:63:ARG:HH21	2.12	0.53
1:CA:68:G:C6	1:CA:102:G:N1	2.76	0.53
35:DI:133:HIS:CG	35:DI:134:PRO:HD3	2.44	0.53
9:AI:92:TYR:O	9:AI:95:LYS:HG3	2.09	0.53
1:AA:1318:A:O3'	19:AS:10:PHE:CD2	2.61	0.53
27:BA:686:G:O6	56:B7:12:ARG:HG3	2.07	0.53
27:BA:953:A:OP2	39:BQ:16:ARG:NH2	2.41	0.53
27:BA:2001:A:H2'	27:BA:2002:G:C8	2.43	0.53
46:BX:18:TYR:C	46:BX:20:GLY:H	2.11	0.53
48:DZ:150:HIS:CB	48:DZ:169:THR:HA	2.38	0.53
27:DA:2694:G:O2'	27:DA:2695:C:H5'	2.08	0.53
27:DA:2712:U:H1'	27:DA:2712(A):A:C8	2.44	0.53
27:BA:2225:A:H4'	27:BA:2226:C:C6	2.43	0.53
3:CC:83:ARG:HG2	3:CC:83:ARG:HH11	1.73	0.53
27:DA:2476:A:H2'	27:DA:2477:C:C5'	2.37	0.53
18:AR:59:SER:O	18:AR:60:ALA:C	2.45	0.53
3:CC:135:LYS:HZ1	5:CE:53:LEU:HD21	1.74	0.53
42:BT:102:ILE:HG22	42:BT:110:ILE:HG12	1.89	0.53
6:CF:30:LEU:HA	6:CF:75:LEU:HD11	1.90	0.53
8:CH:6:ILE:CG2	8:CH:10:LEU:HD12	2.38	0.53
8:CH:80:ILE:HG22	8:CH:82:HIS:O	2.09	0.53
1:CA:658:G:C2	1:CA:659:U:C2	2.96	0.53
29:DC:59:ARG:N	29:DC:59:ARG:HD3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1268:A:H2'	27:BA:1269:A:C5'	2.38	0.53
41:DS:59:LYS:HE3	41:DS:68:GLN:NE2	2.23	0.53
39:DQ:76:LYS:HA	39:DQ:76:LYS:HE2	1.90	0.53
6:AF:69:GLU:OE1	6:AF:69:GLU:N	2.37	0.53
1:AA:936:C:O2'	1:AA:937:A:H5'	2.09	0.53
42:DT:48:ILE:HG22	42:DT:50:ILE:CD1	2.39	0.53
1:CA:1117:G:O2'	9:CI:104:ARG:HG3	2.08	0.53
1:AA:1285:A:O4'	1:AA:1286:A:H8	1.92	0.53
27:BA:1223:G:N2	27:BA:1226:A:OP2	2.38	0.53
27:BA:363(A):A:C4	27:BA:363(B):G:C8	2.96	0.53
27:DA:477:A:C2	27:DA:478:A:C4	2.97	0.53
27:BA:1179:C:O2'	27:BA:1180:C:H5''	2.07	0.53
1:CA:939:G:C6	1:CA:940:C:N4	2.76	0.53
50:D1:7:ILE:HG22	50:D1:8:SER:N	2.22	0.53
27:DA:1164:G:H1	27:DA:1185:C:N4	2.04	0.53
27:BA:1722:A:N6	27:BA:1741:A:N1	2.56	0.53
6:AF:16:GLN:CD	6:AF:16:GLN:N	2.61	0.53
1:AA:1525:G:H2'	1:AA:1526:G:H8	1.72	0.53
4:AD:188:LEU:CD2	4:AD:189:PRO:HD2	2.37	0.53
3:CC:184:TYR:HA	3:CC:200:ALA:O	2.08	0.53
27:BA:543:C:O3'	27:BA:547:A:P	2.66	0.53
28:DB:20:C:H2'	28:DB:21:G:H5'	1.87	0.53
2:CB:147:LYS:HE2	2:CB:148:TYR:HE1	1.71	0.53
27:BA:577:G:H8	27:BA:577:G:O5'	1.91	0.53
56:D7:19:ARG:HH11	56:D7:19:ARG:HG3	1.73	0.53
1:AA:1029:C:H4'	1:AA:1033:G:H1	1.73	0.53
1:CA:444:C:H2'	1:CA:445:G:H8	1.72	0.53
27:BA:1011:G:OP1	43:BU:77:SER:HB3	2.08	0.53
27:BA:2227:A:H5'	30:BD:263:ARG:NH1	2.23	0.53
20:AT:98:PRO:O	20:AT:100:ILE:N	2.42	0.53
27:DA:2772:C:H2'	27:DA:2773:C:C6	2.43	0.53
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.73	0.53
1:AA:159:G:N2	1:AA:162:A:OP2	2.41	0.53
25:CY:42:G:C2'	25:CY:43:C:H5'	2.38	0.53
3:AC:42:LEU:HD23	3:AC:46:GLU:OE2	2.08	0.53
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.22	0.53
1:AA:1026:G:H3'	1:AA:1027:C:C5'	2.39	0.53
27:DA:2855:C:H2'	27:DA:2856:C:H6	1.73	0.53
49:B0:46:LYS:HB3	49:B0:47:PRO:HD2	1.90	0.53
27:DA:2391:G:N1	27:DA:2424:C:H2'	2.23	0.53
34:BH:169:VAL:O	34:BH:171:LEU:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:210:C:O2'	27:BA:211:A:H5'	2.09	0.53
50:B1:50:ARG:HH11	50:B1:50:ARG:HG2	1.73	0.53
2:CB:124:SER:O	2:CB:126:GLU:N	2.41	0.53
41:BS:12:PHE:CD1	41:BS:12:PHE:O	2.61	0.53
32:BF:2:LYS:O	32:BF:25:PRO:HD2	2.08	0.53
34:BH:85:LYS:HZ2	34:BH:133:VAL:HG21	1.71	0.53
4:CD:36:ARG:C	4:CD:38:TYR:H	2.11	0.53
38:BP:16:ARG:CD	38:BP:18:ARG:H	2.18	0.53
27:BA:556:G:H2'	27:BA:557:U:H6	1.72	0.53
42:BT:89:VAL:CG1	42:BT:91:ARG:HE	2.20	0.53
27:DA:534:U:H5'	43:DU:42:ALA:HB1	1.89	0.53
43:DU:78:THR:O	43:DU:79:PHE:C	2.46	0.53
47:DY:100:ALA:O	47:DY:101:LYS:O	2.26	0.53
27:DA:454:A:O2'	27:DA:455:C:OP1	2.24	0.53
31:DE:34:VAL:O	31:DE:35:GLN:CB	2.55	0.53
38:DP:97:PRO:C	38:DP:99:LEU:H	2.11	0.53
38:DP:97:PRO:HD3	38:DP:126:VAL:HB	1.90	0.53
38:DP:97:PRO:O	38:DP:98:GLU:HB3	2.08	0.53
27:DA:2056:G:N7	27:DA:2577:A:N7	2.55	0.53
27:DA:750:A:OP1	27:DA:1615:C:N4	2.41	0.53
27:DA:802:A:H2'	27:DA:803:U:C6	2.44	0.53
27:DA:950:G:C6	27:DA:968:G:C6	2.96	0.53
2:AB:155:LEU:HG	2:AB:159:PRO:HG3	1.89	0.53
42:DT:80:SER:CB	42:DT:81:PRO:CD	2.86	0.53
41:DS:89:ARG:HD2	41:DS:92:TYR:CA	2.37	0.53
27:BA:790:C:O2'	27:BA:791:C:H5'	2.08	0.53
1:AA:103:C:C4	1:AA:104:G:N7	2.76	0.53
31:BE:28:ALA:HB3	31:BE:93:VAL:HG22	1.89	0.53
27:DA:779:U:P	30:DD:49:ILE:HG22	2.49	0.53
3:CC:101:LEU:HD23	3:CC:102:ASN:N	2.22	0.53
27:BA:385:C:O2	27:BA:390:A:H2	1.91	0.53
29:DC:59:ARG:NH2	29:DC:197:GLU:O	2.37	0.53
8:AH:4:ASP:CG	8:AH:85:ARG:HH12	2.12	0.53
37:DO:10:VAL:HG13	37:DO:17:ARG:O	2.08	0.53
35:DI:75:LEU:HD12	35:DI:76:THR:H	1.73	0.53
13:AM:76:ALA:HB2	13:AM:79:LYS:HZ3	1.72	0.53
37:DO:66:LYS:CD	37:DO:79:PHE:O	2.54	0.53
37:DO:86:ILE:HG21	37:DO:94:ARG:HD2	1.90	0.53
1:AA:1311:G:H1	1:AA:1326:C:H42	1.56	0.53
1:AA:660:G:H2'	1:AA:661:G:H8	1.72	0.53
27:BA:626:U:C5'	27:BA:627:A:C5'	2.85	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2011:U:C2'	27:DA:2012:G:H5'	2.39	0.53
27:BA:1786:A:N1	27:BA:2606:C:O4'	2.41	0.53
7:AG:30:ILE:HB	7:AG:39:ALA:HB1	1.89	0.53
27:BA:184:C:H2'	27:BA:185:U:C6	2.42	0.53
36:DN:67:LEU:HB3	36:DN:88:GLU:OE2	2.09	0.53
27:BA:1925:C:C2'	27:BA:1926:U:O5'	2.56	0.53
1:AA:953:G:C5'	1:AA:965:A:H61	2.21	0.53
13:CM:89:GLY:C	13:CM:93:ARG:HD2	2.28	0.53
27:BA:257:A:C5	27:BA:258:G:C8	2.97	0.53
39:DQ:38:GLU:O	39:DQ:127:ILE:HG21	2.07	0.53
27:BA:207:A:H2'	27:BA:208:C:O4'	2.07	0.53
28:DB:24:G:H1'	28:DB:27:C:H41	1.72	0.53
23:AW:4:G:C3'	23:AW:5:G:H5''	2.38	0.53
1:AA:1517:G:H2'	1:AA:1518:A:H8	1.70	0.53
30:DD:62:TYR:HA	30:DD:87:ASN:ND2	2.23	0.53
4:AD:94:LEU:HD23	4:AD:97:LEU:HD12	1.90	0.53
47:BY:20:TYR:HD2	47:BY:23:ARG:HD3	1.72	0.53
54:B5:33:CYS:O	54:B5:36:CYS:O	2.24	0.53
27:BA:221:A:O2'	27:BA:222:A:OP2	2.20	0.53
11:AK:80:VAL:HG13	11:AK:103:LEU:HD11	1.90	0.53
1:AA:1498:U:C4	22:AV:5:U:H4'	2.44	0.53
3:CC:63:ASN:HA	3:CC:98:ASN:HB3	1.90	0.53
4:CD:190:ASP:N	4:CD:193:ASP:OD2	2.41	0.53
48:DZ:165:SER:H	48:DZ:166:PRO:HA	1.73	0.53
39:DQ:73:PRO:HG3	39:DQ:93:TYR:HE2	1.74	0.53
49:D0:10:THR:HG22	49:D0:12:ASN:H	1.74	0.53
1:AA:1211:U:H4'	1:AA:1212:U:OP1	2.08	0.53
27:DA:2489:G:N7	27:DA:2490:G:C6	2.77	0.53
27:DA:555:U:H2'	27:DA:556:G:C8	2.43	0.53
20:AT:93:GLU:O	20:AT:93:GLU:HG2	2.08	0.53
40:DR:81:ASP:N	40:DR:81:ASP:OD2	2.41	0.53
49:B0:69:PHE:CD1	49:B0:69:PHE:N	2.76	0.53
1:CA:505:G:C6	1:CA:535:A:C2	2.97	0.53
1:CA:971:G:O2'	1:CA:1365:G:O2'	2.24	0.53
46:BX:26:TYR:HB3	46:BX:92:LEU:CD1	2.39	0.53
27:DA:271(T):C:O2'	27:DA:271(U):G:H5'	2.07	0.53
33:BG:96:ARG:O	33:BG:99:MET:N	2.29	0.53
44:BV:35:LEU:CA	44:BV:37:VAL:HG23	2.38	0.53
42:BT:30:VAL:HG21	42:BT:83:ILE:CG1	2.38	0.53
27:DA:398:G:O2'	27:DA:399:G:H5'	2.09	0.53
30:DD:120:GLY:HA2	30:DD:190:TYR:OH	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:D6:9:LEU:HD21	55:D6:11:LEU:HD23	1.90	0.53
27:DA:2420:C:P	57:D8:33:ASN:O	2.66	0.53
55:B6:16:CYS:SG	55:B6:48:VAL:HG23	2.49	0.53
48:DZ:66:LEU:HD23	48:DZ:89:VAL:HG11	1.90	0.53
27:BA:1491:G:P	27:BA:1494:A:H62	2.30	0.53
30:BD:65:ILE:HB	30:BD:104:TYR:HB3	1.90	0.53
1:AA:1060:C:H2'	1:AA:1061:G:C8	2.42	0.53
8:AH:109:ILE:HD11	8:AH:120:THR:HG22	1.91	0.53
12:CL:22:PRO:C	12:CL:24:LEU:N	2.62	0.53
27:DA:2746:U:H2'	27:DA:2747:G:H5'	1.90	0.53
27:BA:855:G:H2'	27:BA:856:C:H6	1.74	0.53
41:DS:53:SER:O	41:DS:58:LEU:HD22	2.07	0.53
1:CA:274:A:O2'	1:CA:275:G:O5'	2.26	0.53
32:DF:33:LEU:O	32:DF:37:VAL:HG23	2.09	0.53
27:BA:1655:A:H3'	27:BA:1656:C:C6	2.44	0.53
1:CA:1459:C:H5'	20:CT:28:ALA:HB2	1.91	0.53
1:CA:178:C:H2'	1:CA:179:A:C8	2.43	0.53
27:DA:2714:G:H2'	27:DA:2715:C:H6	1.72	0.53
3:CC:97:LYS:O	3:CC:99:VAL:N	2.37	0.53
1:CA:1055:A:N6	1:CA:1206:G:C6	2.77	0.53
10:AJ:34:VAL:HG13	10:AJ:73:ASP:C	2.29	0.53
38:BP:124:LYS:HE3	38:BP:145:PRO:HG2	1.89	0.53
24:CX:17:C:C2	24:CX:17(B):U:H5	2.27	0.53
58:B9:12:ASP:OD1	58:B9:13:LYS:N	2.41	0.53
27:DA:1304:C:N4	27:DA:1624:G:H1	2.05	0.53
48:BZ:149:LEU:HD13	48:BZ:149:LEU:N	2.23	0.53
31:DE:119:ARG:CD	31:DE:120:TRP:CD1	2.92	0.53
1:AA:502:G:O2'	1:AA:503:C:H5'	2.09	0.53
32:BF:29:ASN:HB3	32:BF:112:MET:CE	2.34	0.53
8:AH:4:ASP:OD2	8:AH:6:ILE:HD13	2.08	0.53
51:B2:6:VAL:HG13	51:B2:59:ARG:NH1	2.24	0.53
33:DG:130:ASN:OD1	33:DG:160:VAL:CG1	2.56	0.53
27:DA:2293:C:H2'	27:DA:2294:C:H6	1.72	0.53
27:DA:1278:A:H5'	40:DR:24:GLN:HE21	1.73	0.53
48:DZ:102:ARG:HB2	48:DZ:135:PHE:CE1	2.44	0.53
27:BA:114:U:N3	27:BA:115:C:C4	2.76	0.53
32:BF:37:VAL:HG13	32:BF:184:TYR:HD1	1.74	0.53
2:CB:219:VAL:HA	2:CB:222:ILE:CD1	2.38	0.53
1:CA:885:G:C2	1:CA:913:A:C2	2.97	0.53
1:AA:858:G:O6	1:AA:869:G:C8	2.62	0.53
13:AM:111:LYS:O	13:AM:112:GLY:O	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:16:LEU:HD11	10:CJ:70:ARG:HB2	1.91	0.53
1:AA:185:A:H2'	1:AA:186:C:C6	2.43	0.53
38:DP:127:ALA:HB3	38:DP:130:PHE:CZ	2.43	0.53
11:CK:98:LEU:HA	11:CK:101:SER:HB3	1.89	0.53
27:BA:1466:G:H5'	27:BA:1467:C:OP1	2.08	0.53
20:AT:89:ARG:HH21	20:AT:104:LEU:HD11	1.73	0.53
27:DA:898:C:H2'	27:DA:899:A:C5'	2.37	0.53
50:D1:29:GLY:O	50:D1:30:VAL:HG23	2.08	0.53
20:CT:16:HIS:CA	20:CT:19:SER:HB3	2.37	0.53
29:BC:38:ASP:HB2	29:BC:181:PRO:CB	2.38	0.53
27:BA:2183:C:O2'	27:BA:2184:G:H5'	2.08	0.53
27:DA:1173:G:H3'	27:DA:1174:A:C5'	2.39	0.53
50:B1:70:VAL:C	50:B1:72:GLU:H	2.12	0.53
30:DD:71:ASP:HB2	30:DD:103:ARG:HH22	1.72	0.53
27:BA:1790:C:H2'	27:BA:1791:A:C5	2.43	0.53
8:AH:74:PRO:O	8:AH:75:ARG:C	2.46	0.53
27:DA:696:G:C2	27:DA:697:C:C2	2.96	0.53
16:CP:45:THR:O	16:CP:47:ASP:N	2.41	0.53
39:BQ:34:LEU:HD12	39:BQ:130:LYS:O	2.07	0.53
13:CM:29:ARG:HD3	13:CM:64:TRP:CH2	2.44	0.53
24:CX:47:U:H3'	24:CX:48:C:H5'	1.91	0.53
36:BN:22:THR:HA	36:BN:61:ARG:HB2	1.89	0.53
52:D3:44:ARG:O	52:D3:48:GLU:HG2	2.08	0.53
20:CT:96:GLY:O	20:CT:97:ALA:O	2.27	0.53
1:CA:1233:G:N2	1:CA:1234:C:C2	2.76	0.53
41:BS:17:ARG:O	41:BS:18:ILE:HG22	2.09	0.53
32:BF:9:ILE:HB	32:BF:128:ALA:HB2	1.91	0.53
27:BA:2056:G:H2'	27:BA:2056:G:N3	2.24	0.53
27:BA:284:U:H2'	27:BA:285:C:C6	2.43	0.53
42:BT:26:ASP:OD2	42:BT:26:ASP:O	2.27	0.53
42:BT:46:GLU:OE2	42:BT:88:ILE:HD13	2.08	0.53
27:DA:1152:C:H1'	43:DU:77:SER:HB2	1.91	0.53
44:DV:40:LEU:N	44:DV:40:LEU:HD22	2.24	0.53
47:DY:8:LYS:C	47:DY:9:LYS:HG2	2.28	0.53
55:D6:15:GLU:O	55:D6:15:GLU:HG2	2.09	0.53
55:D6:15:GLU:OE1	55:D6:43:CYS:CB	2.56	0.53
36:BN:96:GLU:N	36:BN:96:GLU:OE2	2.40	0.53
45:BW:13:SER:HB3	45:BW:16:LYS:CG	2.39	0.53
45:BW:13:SER:HB3	45:BW:16:LYS:HG3	1.90	0.53
27:DA:143:G:H5''	27:DA:1598:C:O2'	2.09	0.53
46:DX:57:LEU:HD22	46:DX:57:LEU:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:33:GLU:C	8:AH:35:ILE:H	2.12	0.53
2:AB:69:LEU:O	2:AB:162:ILE:HA	2.09	0.53
42:DT:32:TYR:HD1	42:DT:33:LYS:H	1.57	0.53
1:CA:372:C:C5'	1:CA:373:A:OP1	2.57	0.53
1:CA:376:G:OP2	16:CP:67:THR:HG21	2.08	0.53
27:DA:1034:G:O2'	27:DA:1035:U:O5'	2.27	0.53
16:AP:1:MET:SD	16:AP:1:MET:N	2.80	0.53
32:DF:32:LEU:HD22	32:DF:112:MET:CE	2.38	0.53
27:BA:826:U:H5'	27:BA:827:U:OP2	2.07	0.53
27:BA:1274:A:H1'	27:BA:1297:C:C4'	2.39	0.53
1:CA:778:G:O2'	1:CA:779:C:H5'	2.07	0.53
27:BA:2272:U:H5''	27:BA:2273:A:OP1	2.09	0.53
1:CA:1313:U:H2'	1:CA:1314:C:H6	1.73	0.53
21:CU:21:TYR:O	21:CU:22:ARG:CB	2.57	0.53
27:BA:2723:C:OP1	40:BR:5:LYS:NZ	2.40	0.53
15:CO:23:GLY:O	15:CO:24:SER:HB3	2.08	0.53
27:BA:2125:G:N2	27:BA:2174:C:H42	2.07	0.53
27:DA:356:G:H5'	27:DA:357:A:OP2	2.08	0.53
27:DA:1340:U:O2	27:DA:1603:A:H8	1.92	0.53
27:DA:1621:U:H5''	27:DA:1622:G:OP1	2.09	0.53
35:BI:81:VAL:HB	35:BI:143:SER:O	2.08	0.53
45:BW:96:ILE:O	45:BW:96:ILE:HG23	2.09	0.53
31:DE:113:PHE:CD2	31:DE:113:PHE:C	2.80	0.53
40:DR:13:HIS:O	40:DR:15:SER:N	2.42	0.53
8:AH:4:ASP:OD1	8:AH:7:ALA:HB3	2.08	0.53
7:AG:113:GLU:HG3	7:AG:119:ARG:HA	1.90	0.53
27:DA:598:G:O2'	32:DF:31:HIS:CE1	2.61	0.53
35:DI:88:ILE:HG22	35:DI:90:GLY:O	2.08	0.53
27:DA:2143:C:H2'	27:DA:2144:U:O4'	2.09	0.53
1:CA:360:A:O2'	1:CA:361:G:H5'	2.09	0.53
27:BA:849:A:C8	27:BA:850:C:C5	2.97	0.53
48:BZ:26:VAL:HG22	48:BZ:27:MET:N	2.23	0.53
1:AA:1265:G:H2'	1:AA:1266:G:O4'	2.09	0.53
27:DA:266:G:H2'	27:DA:267:C:O5'	2.09	0.53
27:DA:2199:A:H5'	27:DA:2200:C:OP2	2.09	0.53
15:AO:3:ILE:HG22	15:AO:38:ARG:HH12	1.71	0.53
32:BF:184:TYR:O	32:BF:188:ARG:HB3	2.09	0.53
1:CA:283:C:C2	1:CA:284:G:C8	2.97	0.53
39:DQ:20:ALA:O	39:DQ:99:PRO:HD2	2.08	0.53
37:BO:106:LEU:C	37:BO:108:GLU:H	2.12	0.53
29:DC:45:ALA:HA	29:DC:210:ARG:CB	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B1:77:ALA:O	50:B1:80:LEU:HB2	2.09	0.53
10:AJ:8:LEU:CD2	10:AJ:96:ILE:HG22	2.39	0.53
17:CQ:67:LYS:O	17:CQ:68:ARG:CB	2.56	0.53
37:DO:87:ILE:HD13	37:DO:92:GLU:C	2.29	0.53
27:BA:581:C:O5'	27:BA:581:C:H6	1.91	0.53
13:CM:35:GLU:HG3	13:CM:36:LYS:N	2.24	0.53
12:CL:114:ARG:HG3	12:CL:114:ARG:HH11	1.72	0.53
45:BW:62:HIS:O	45:BW:63:ASP:C	2.46	0.53
1:AA:353:A:H5'	1:AA:353:A:H8	1.74	0.53
47:DY:32:PRO:C	47:DY:35:TYR:H	2.10	0.53
27:BA:2105:C:O2'	27:BA:2106:G:H5'	2.08	0.53
27:DA:2063:C:C5	27:DA:2064:C:C5	2.96	0.53
3:AC:142:MET:HE2	3:AC:170:GLN:C	2.28	0.53
31:BE:173:VAL:O	31:BE:174:ASP:C	2.47	0.53
17:AQ:60:ILE:HG12	17:AQ:61:GLU:N	2.22	0.53
27:DA:875:G:H2'	27:DA:876:C:H6	1.74	0.53
41:DS:67:ARG:CG	41:DS:67:ARG:HH11	2.20	0.53
35:DI:92:VAL:HG13	35:DI:120:ILE:HB	1.90	0.53
27:BA:2349:G:C4	27:BA:2369:A:C2	2.97	0.53
27:DA:1363:C:O2'	27:DA:1809:A:N3	2.27	0.53
2:AB:73:THR:O	2:AB:78:GLN:HG3	2.09	0.53
1:AA:616:G:H2'	1:AA:616:G:N3	2.24	0.53
27:BA:593:G:H1'	57:B8:4:MET:CE	2.39	0.53
1:CA:954:G:H2'	1:CA:955:U:H6	1.73	0.53
19:CS:53:ASN:HD22	19:CS:77:THR:HA	1.73	0.53
4:CD:8:VAL:O	4:CD:11:LEU:HG	2.08	0.53
53:B4:41:ILE:H	53:B4:57:ILE:HG22	1.72	0.53
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.49	0.53
1:CA:1344:C:H5'	9:CI:120:ARG:O	2.09	0.53
32:BF:63:LYS:HZ2	32:BF:67:GLN:HB2	1.72	0.53
1:CA:720:C:H2'	1:CA:721:G:N7	2.23	0.53
1:AA:256:U:O2'	1:AA:257:G:H5'	2.08	0.53
32:DF:202:PHE:O	32:DF:203:GLN:C	2.47	0.53
44:DV:19:LYS:NZ	44:DV:20:LEU:N	2.56	0.53
30:DD:132:PRO:HG3	30:DD:190:TYR:CE1	2.44	0.53
27:DA:2392:A:O2'	57:D8:27:THR:HB	2.09	0.53
33:DG:18:GLU:HG3	33:DG:22:ARG:HG3	1.90	0.53
27:BA:2299:G:C2	27:BA:2318:G:H8	2.26	0.53
27:DA:2023:G:H5'	27:DA:2617:C:H4'	1.91	0.53
39:BQ:110:THR:O	39:BQ:113:GLN:N	2.42	0.53
27:DA:307:G:H21	27:DA:330:A:N6	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:390:C:H2'	1:CA:391:G:C8	2.44	0.53
41:DS:53:SER:OG	41:DS:54:LEU:HD22	2.08	0.53
1:CA:276:G:O5'	1:CA:276:G:H8	1.92	0.53
30:BD:227:ASN:HB3	30:BD:228:PRO:HD2	1.90	0.53
1:CA:1162:C:N3	1:CA:1175:G:C2	2.77	0.53
12:CL:107:VAL:HG21	12:CL:117:TYR:HB3	1.90	0.53
27:DA:741:G:O2'	27:DA:742:G:H5'	2.08	0.53
27:BA:2134:A:H2	27:BA:2159:G:H1'	1.74	0.53
27:DA:1651:G:N2	27:DA:1652:A:H1'	2.24	0.53
27:DA:311:A:O2'	27:DA:332:A:H5'	2.07	0.53
7:CG:80:VAL:HG21	7:CG:154:TYR:CE1	2.43	0.53
33:BG:71:THR:N	33:BG:89:GLY:O	2.42	0.53
1:AA:262:A:H5'	20:AT:74:LYS:CB	2.39	0.53
1:AA:937:A:H1'	1:AA:1379:G:N2	2.23	0.53
5:AE:78:HIS:HD2	8:AH:104:ARG:NH1	2.07	0.53
5:CE:41:VAL:O	5:CE:66:MET:HA	2.09	0.53
1:CA:1315:U:C2'	1:CA:1316:G:H5'	2.39	0.53
33:DG:111:LEU:CD2	33:DG:120:LEU:HD21	2.39	0.53
27:DA:1718:G:N2	27:DA:1745:C:C2	2.76	0.53
27:BA:1223:G:H5'	27:BA:1224:C:OP2	2.09	0.53
27:BA:1042:G:N3	27:BA:1042:G:H2'	2.23	0.53
27:DA:1321:A:H2'	27:DA:1322:A:C8	2.43	0.53
45:DW:107:LEU:N	45:DW:107:LEU:CD1	2.72	0.53
37:BO:97:ARG:HB3	37:BO:99:PHE:HE1	1.72	0.53
1:AA:1182:G:O2'	1:AA:1183:A:OP2	2.24	0.53
1:CA:15:G:H8	1:CA:1396:A:HO2'	1.55	0.53
27:BA:1931:U:C5'	27:BA:1931:U:H6	2.20	0.53
27:DA:1998:G:H2'	27:DA:1999:C:C6	2.44	0.53
32:BF:164:ARG:CG	32:BF:164:ARG:NH1	2.70	0.53
27:DA:2225:A:H4'	27:DA:2226:C:C6	2.43	0.53
27:DA:1296:G:O2'	27:DA:1297:C:H5'	2.08	0.53
2:CB:36:ARG:N	2:CB:41:ILE:HD13	2.23	0.53
1:CA:1030(A):G:H3'	1:CA:1030(B):C:H5''	1.90	0.53
27:DA:2108:C:C2'	27:DA:2109:U:H5'	2.38	0.53
15:CO:36:ILE:HG22	15:CO:37:ASN:HD22	1.74	0.53
11:AK:126:ARG:C	11:AK:128:ALA:N	2.61	0.53
19:CS:22:LEU:HD13	19:CS:27:GLU:CB	2.38	0.53
53:D4:60:GLU:O	53:D4:61:VAL:HB	2.09	0.53
5:CE:148:VAL:HG12	5:CE:152:ARG:NE	2.23	0.53
1:AA:144:G:H2'	1:AA:145:G:C8	2.44	0.53
1:AA:726:C:O2'	1:AA:727:G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1940:U:OP1	27:DA:1966:A:C2	2.61	0.53
27:BA:2342:C:O2'	27:BA:2374:C:H5''	2.09	0.53
28:DB:13:A:OP2	49:D0:74:ARG:HG2	2.08	0.53
50:D1:89:GLU:O	50:D1:92:LYS:HB3	2.08	0.53
27:DA:25:U:C5	27:DA:26:G:C5	2.96	0.53
34:BH:80:SER:O	34:BH:81:GLU:HB2	2.07	0.53
1:AA:543:C:O2	1:AA:543:C:H2'	2.09	0.53
51:B2:14:ARG:HH11	51:B2:14:ARG:HG3	1.74	0.53
5:CE:16:THR:O	5:CE:26:PHE:HD2	1.91	0.53
23:CW:4:G:H2'	23:CW:5:G:C8	2.44	0.53
27:BA:592:G:N3	57:B8:4:MET:CE	2.71	0.53
32:BF:202:PHE:HA	32:BF:205:ARG:CB	2.38	0.53
57:D8:16:ILE:HG21	57:D8:64:TYR:HB3	1.90	0.53
30:BD:164:GLN:OE1	30:BD:166:GLN:NE2	2.42	0.53
27:DA:1971:A:H2	30:DD:239:ARG:O	1.92	0.53
31:BE:6:GLY:HA2	31:BE:51:PHE:CZ	2.43	0.53
8:AH:17:THR:C	8:AH:19:VAL:H	2.11	0.53
19:CS:17:GLU:O	19:CS:20:LEU:HB2	2.08	0.53
27:DA:2233:U:H2'	27:DA:2234:G:C8	2.43	0.53
47:DY:81:LYS:O	47:DY:82:PRO:O	2.26	0.53
27:DA:61:G:H5'	51:D2:50:ILE:HD12	1.91	0.53
51:D2:54:LYS:O	51:D2:57:ILE:HB	2.09	0.53
41:DS:101:LEU:CD2	41:DS:104:GLY:H	2.21	0.53
41:DS:97:ARG:O	41:DS:98:VAL:C	2.47	0.53
27:BA:1885:A:C8	27:BA:1885:A:H5'	2.42	0.53
27:DA:2810:A:H2'	31:DE:61:ARG:NH2	2.23	0.53
31:DE:48:GLN:CD	31:DE:78:LEU:HD12	2.29	0.53
57:D8:33:ASN:H	57:D8:33:ASN:ND2	2.05	0.53
56:D7:41:ARG:CB	56:D7:41:ARG:NH1	2.52	0.53
27:DA:2020:A:O2'	27:DA:2021:C:H5'	2.09	0.53
27:DA:2050:C:H2'	27:DA:2051:A:O4'	2.08	0.53
27:BA:1490:A:C5'	27:BA:1491:G:OP2	2.55	0.53
1:CA:218:C:HO2'	1:CA:219:C:H6	1.55	0.53
19:AS:22:LEU:HD13	19:AS:27:GLU:CB	2.39	0.53
17:CQ:45:HIS:O	17:CQ:73:VAL:HG23	2.09	0.53
30:BD:43:ARG:NH1	30:BD:44:ASN:OD1	2.39	0.53
33:DG:105:LYS:HD2	33:DG:143:GLU:OE1	2.08	0.53
31:DE:26:ILE:CG2	31:DE:27:LEU:H	2.07	0.53
9:CI:79:LEU:HD21	9:CI:102:LEU:HD22	1.89	0.53
50:B1:29:GLY:C	50:B1:30:VAL:HG13	2.29	0.53
27:BA:1556:C:O2'	27:BA:1557:C:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:34:CYS:CA	12:AL:55:VAL:HG22	2.39	0.53
1:CA:658:G:C6	1:CA:659:U:C4	2.96	0.53
29:DC:41:VAL:HA	29:DC:213:TYR:HA	1.90	0.53
27:BA:2863:C:OP1	42:BT:93:ARG:NH1	2.41	0.53
1:AA:1240:U:OP2	7:AG:116:ALA:HB2	2.09	0.53
36:DN:76:SER:O	36:DN:78:TYR:HD1	1.92	0.53
17:AQ:87:LYS:CA	17:AQ:87:LYS:HE2	2.35	0.53
30:DD:32:SER:HA	30:DD:36:PRO:CD	2.38	0.53
57:B8:49:VAL:CG2	57:B8:53:PRO:HB3	2.34	0.53
13:AM:3:ARG:HG2	13:AM:9:ILE:CG1	2.39	0.53
1:CA:1028:C:H2'	1:CA:1029:C:H5'	1.90	0.53
1:CA:838:G:H2'	1:CA:839:U:C5'	2.35	0.53
27:BA:2098:U:H2'	27:BA:2099:U:C6	2.44	0.53
21:AU:6:ARG:HG2	21:AU:15:ARG:CZ	2.39	0.53
11:CK:127:LYS:CA	11:CK:127:LYS:HE2	2.36	0.53
45:DW:18:ARG:HG2	45:DW:76:VAL:CG1	2.38	0.53
27:BA:1786:A:H2	27:BA:2606:C:H1'	1.73	0.53
27:BA:186:G:H2'	27:BA:187:G:H8	1.73	0.53
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.44	0.53
3:AC:150:LYS:HA	3:AC:169:ALA:HA	1.91	0.53
3:AC:175:LEU:O	3:AC:177:THR:N	2.41	0.53
1:CA:826:C:H5'	8:CH:12:ARG:NH2	2.24	0.53
1:CA:913:A:H1'	1:CA:914:A:O4'	2.09	0.53
1:AA:593:G:H2'	1:AA:594:G:O4'	2.09	0.53
11:AK:12:ARG:CG	11:AK:13:GLN:N	2.71	0.53
1:CA:254:G:C2'	1:CA:255:G:H5'	2.39	0.53
1:CA:409:G:C2	1:CA:410:G:H1'	2.43	0.53
18:CR:58:LEU:HD23	18:CR:62:GLU:HB3	1.91	0.53
13:CM:58:GLU:HA	13:CM:58:GLU:OE1	2.09	0.53
23:CW:31:U:H6	23:CW:31:U:H5'	1.74	0.53
1:CA:336:C:C2'	1:CA:337:C:H5'	2.38	0.53
39:DQ:58:PHE:CD1	39:DQ:61:GLY:HA3	2.44	0.53
27:BA:205:G:O2'	27:BA:206:U:P	2.66	0.53
27:BA:1119:C:O2'	27:BA:1120:G:H5'	2.08	0.53
27:DA:2772:C:OP1	31:DE:202:LYS:HE2	2.08	0.53
37:DO:15:GLY:HA3	37:DO:50:GLY:HA3	1.89	0.53
27:BA:749:C:H2'	27:BA:749:C:O2	2.08	0.53
36:DN:19:GLU:HB2	36:DN:59:LYS:CB	2.39	0.53
27:BA:874:G:O2'	27:BA:875:G:H5'	2.08	0.53
27:BA:2626:C:H2'	27:BA:2627:G:O4'	2.09	0.53
18:AR:86:VAL:C	18:AR:87:ARG:HD3	2.28	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DD:90:ALA:HB1	30:DD:106:ILE:HG13	1.90	0.53
41:BS:41:ASP:OD2	41:BS:44:LYS:HB3	2.09	0.53
48:DZ:29:ASN:O	48:DZ:30:ARG:CB	2.57	0.53
32:BF:150:GLY:HA2	32:BF:172:TRP:CD2	2.44	0.53
27:DA:182:A:O2'	27:DA:183:C:H5'	2.08	0.53
42:BT:9:LEU:C	42:BT:11:GLU:H	2.10	0.53
1:AA:249:U:O5'	1:AA:249:U:H6	1.92	0.53
39:BQ:10:ARG:HH11	39:BQ:10:ARG:HG3	1.72	0.53
52:D3:58:VAL:O	52:D3:58:VAL:HG12	2.08	0.53
28:BB:55:U:H6	28:BB:55:U:O5'	1.92	0.53
1:AA:349:A:O2'	1:AA:350:G:H5'	2.09	0.53
1:CA:438:G:N2	1:CA:494:U:H3'	2.23	0.53
27:BA:2820:A:C8	31:BE:109:LYS:HE2	2.43	0.53
38:BP:23:PRO:CD	38:BP:33:ARG:NH2	2.72	0.53
38:BP:61:ARG:H	38:BP:61:ARG:CD	2.20	0.53
32:BF:4:VAL:HB	32:BF:17:ARG:HE	1.73	0.53
47:BY:84:ARG:O	47:BY:95:LYS:N	2.29	0.53
53:B4:40:ILE:O	53:B4:41:ILE:HD13	2.08	0.53
27:BA:558:G:OP2	36:BN:111:PRO:HD2	2.09	0.53
8:AH:77:GLU:HG2	8:AH:78:GLN:N	2.22	0.53
27:DA:2231:C:OP1	50:D1:42:GLN:HA	2.07	0.53
27:DA:996:A:H4'	43:DU:92:ARG:NH2	2.24	0.53
44:DV:19:LYS:HB3	44:DV:94:LEU:O	2.09	0.53
12:CL:66:TYR:CD2	12:CL:67:ILE:N	2.70	0.53
33:BG:52:ILE:HG22	33:BG:54:GLU:CG	2.38	0.53
39:DQ:85:LYS:HG3	49:D0:7:LEU:HD22	1.90	0.53
55:D6:15:GLU:OE1	55:D6:43:CYS:SG	2.67	0.53
38:DP:105:LEU:HD23	38:DP:105:LEU:N	2.24	0.53
33:DG:16:ARG:N	33:DG:17:PRO:CD	2.72	0.53
27:DA:1669:A:H2	27:DA:1994:C:H1'	1.72	0.53
27:DA:940:G:C3'	27:DA:941:A:H5''	2.38	0.53
27:DA:727:A:H2'	27:DA:728:G:C8	2.44	0.53
27:DA:1344:G:OP1	27:DA:1345:C:H5	1.91	0.53
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.57	0.53
19:AS:43:GLU:C	19:AS:45:VAL:H	2.12	0.53
27:BA:2074:U:H2'	27:BA:2075:U:C6	2.43	0.53
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.38	0.53
27:BA:748:G:C8	45:BW:89:ALA:CB	2.92	0.53
1:AA:747:C:OP2	1:AA:748:C:N4	2.42	0.53
20:CT:23:ARG:O	20:CT:26:ASN:ND2	2.42	0.53
9:CI:127:LYS:O	9:CI:127:LYS:HG2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1817:G:H2'	27:BA:1818:U:H5'	1.91	0.53
30:BD:270:ILE:HD12	30:BD:271:ILE:N	2.24	0.53
1:CA:1206:G:H4'	3:CC:192:THR:C	2.29	0.53
27:BA:2271:G:C4'	49:B0:20:ARG:NH1	2.67	0.53
6:CF:75:LEU:HD23	6:CF:79:LEU:HD11	1.91	0.53
6:CF:74:ASP:O	6:CF:77:ARG:HB3	2.09	0.53
48:DZ:95:VAL:HG12	48:DZ:96:GLU:N	2.24	0.53
8:CH:7:ALA:CA	8:CH:85:ARG:HG3	2.38	0.53
38:BP:101:VAL:HG13	38:BP:106:LEU:HD23	1.90	0.53
27:BA:152:G:H2'	27:BA:153:C:O4'	2.08	0.53
1:AA:1442(A):G:C4'	1:AA:1442(B):A:OP2	2.55	0.53
27:BA:1358:G:O2'	27:BA:1359:A:H5''	2.09	0.53
1:AA:1239:A:N6	1:AA:1299:A:H62	2.03	0.53
7:AG:113:GLU:O	7:AG:119:ARG:HD3	2.09	0.53
17:AQ:76:LEU:HD12	17:AQ:77:VAL:N	2.23	0.53
1:AA:874:G:H2'	1:AA:875:C:C6	2.44	0.53
5:CE:32:VAL:O	5:CE:43:LEU:HD12	2.08	0.53
42:DT:50:ILE:HG21	42:DT:100:TYR:HA	1.91	0.53
27:BA:2095:C:H2'	27:BA:2096:U:C6	2.44	0.53
1:AA:1263:C:H2'	1:AA:1264:C:H5'	1.91	0.53
32:DF:57:VAL:HG11	32:DF:59:TYR:CD1	2.43	0.53
27:BA:2078:C:O2'	27:BA:2079:U:H5'	2.08	0.53
37:BO:116:SER:OG	37:BO:117:LEU:N	2.42	0.53
50:D1:66:HIS:C	50:D1:68:PRO:HD2	2.30	0.53
24:CX:51:C:H2'	24:CX:52:G:C8	2.34	0.53
24:CX:52:G:O2'	24:CX:53:G:H5'	2.08	0.53
32:DF:141:ALA:O	32:DF:144:LYS:N	2.42	0.53
9:AI:4:TYR:HA	9:AI:88:TYR:CD1	2.44	0.53
11:CK:78:GLN:O	11:CK:103:LEU:CD1	2.56	0.53
1:AA:1257:U:H3'	1:AA:1257:U:C6	2.42	0.53
5:CE:101:ILE:CG1	5:CE:119:LEU:HD23	2.38	0.53
27:BA:466:A:O4'	27:BA:683:C:H4'	2.09	0.53
1:AA:1371:G:H2'	1:AA:1372:U:H6	1.72	0.53
1:AA:280:C:O2	17:AQ:38:ARG:HG3	2.08	0.53
38:BP:92:GLU:HB2	38:BP:121:LYS:NZ	2.24	0.53
27:BA:2758:A:C4	34:BH:67:LEU:HD21	2.44	0.53
2:AB:29:ALA:O	2:AB:32:ILE:HG22	2.08	0.53
6:AF:19:LEU:HD11	6:AF:59:TYR:CE1	2.43	0.53
10:AJ:84:GLN:H	10:AJ:84:GLN:CD	2.13	0.53
27:DA:2075:U:C5	27:DA:2238:G:C5	2.96	0.53
28:BB:21:G:H2'	28:BB:22:U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:79:LEU:O	39:BQ:81:VAL:HG12	2.07	0.53
27:BA:1654:A:P	40:BR:3:HIS:HB2	2.49	0.53
27:DA:2361:A:OP1	57:D8:26:LYS:HD3	2.09	0.53
4:AD:141:ARG:O	4:AD:144:ASP:OD2	2.27	0.53
6:CF:82:ARG:HB2	6:CF:85:VAL:CG2	2.38	0.53
11:AK:88:GLY:O	11:AK:90:GLY:N	2.40	0.53
40:DR:55:ALA:HA	40:DR:80:PHE:CE1	2.43	0.53
29:DC:72:VAL:HG21	29:DC:161:ILE:HA	1.91	0.53
27:DA:2846:G:H2'	27:DA:2847:U:H6	1.74	0.53
49:B0:33:ALA:HB2	49:B0:63:VAL:HA	1.91	0.53
28:BB:109:C:H5'	28:BB:110:G:O5'	2.09	0.53
46:DX:69:TYR:CD1	46:DX:69:TYR:N	2.77	0.53
34:BH:37:VAL:O	34:BH:38:SER:C	2.47	0.53
1:CA:956:U:H2'	1:CA:957:U:O4'	2.09	0.53
40:BR:23:ASN:N	40:BR:23:ASN:HD22	2.06	0.53
27:BA:2882:A:H5'	40:BR:96:ARG:HG3	1.90	0.53
32:BF:110:LEU:HD21	32:BF:181:LEU:HG	1.91	0.53
34:BH:139:GLN:HG3	34:BH:140:LYS:N	2.24	0.53
57:D8:63:PRO:HB2	57:D8:64:TYR:HD1	1.74	0.53
27:DA:194:G:N2	27:DA:251:A:H2	2.07	0.53
1:CA:471:G:O2'	1:CA:472:A:O5'	2.27	0.53
44:BV:64:HIS:HB3	44:BV:91:TYR:O	2.09	0.53
27:DA:298:G:P	47:DY:85:VAL:HG23	2.49	0.53
47:DY:75:ILE:CB	47:DY:80:GLY:H	2.21	0.53
30:DD:77:ALA:HB2	30:DD:97:TYR:CD2	2.44	0.53
11:AK:16:SER:O	11:AK:35:PRO:HD3	2.08	0.53
38:DP:33:ARG:O	38:DP:35:HIS:N	2.42	0.53
20:AT:67:ALA:HA	20:AT:72:LEU:O	2.09	0.53
46:DX:26:TYR:OH	46:DX:89:ILE:N	2.37	0.53
47:DY:17:SER:OG	47:DY:18:GLY:N	2.42	0.53
1:CA:376:G:H1	1:CA:387:U:H3	1.57	0.53
19:AS:45:VAL:C	19:AS:47:HIS:H	2.12	0.53
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.91	0.53
12:CL:41:THR:HG21	26:CZ:6:5OH:HR	1.91	0.53
26:CZ:5:UAL:C	26:CZ:6:5OH:HS	2.39	0.53
56:B7:9:ARG:O	56:B7:10:ARG:C	2.46	0.53
1:AA:1072:G:C2'	1:AA:1073:U:H5'	2.39	0.53
38:DP:9:ASN:H	38:DP:10:PRO:HD2	1.74	0.53
46:BX:25:LYS:HG2	46:BX:80:ILE:HD11	1.91	0.53
37:BO:66:LYS:H	37:BO:82:ASN:ND2	2.06	0.53
27:BA:1819:A:C2'	30:BD:178:PRO:HB2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.47	0.53
14:CN:47:LEU:O	14:CN:50:LYS:N	2.42	0.53
1:AA:1432:G:OP1	42:BT:107:ASP:HB2	2.09	0.53
27:BA:2580:U:C5'	31:BE:131:ALA:H	2.22	0.53
27:BA:1486:A:H2'	27:BA:1487:G:H8	1.74	0.53
47:BY:87:LYS:CG	47:BY:88:LYS:N	2.72	0.53
38:BP:144:GLU:H	38:BP:145:PRO:CD	2.17	0.53
27:BA:2392:A:C2	27:BA:2429:G:C2	2.97	0.53
27:BA:2346:A:C8	27:BA:2383:G:C4	2.97	0.53
33:DG:51:ARG:CA	33:DG:51:ARG:NE	2.70	0.53
1:AA:486:U:O2'	1:AA:487:A:H8	1.74	0.53
39:BQ:57:HIS:CE1	39:BQ:116:GLU:CG	2.92	0.53
30:BD:211:ARG:HD3	30:BD:214:TRP:CZ3	2.44	0.53
34:DH:44:VAL:HG12	34:DH:45:VAL:N	2.16	0.53
27:BA:2097:C:H2'	27:BA:2098:U:C6	2.43	0.53
31:DE:16:ARG:NH1	31:DE:171:GLU:OE2	2.41	0.53
38:DP:80:TYR:HA	38:DP:111:ARG:O	2.09	0.53
3:AC:77:ILE:C	3:AC:83:ARG:HB3	2.30	0.53
12:CL:5:ASN:ND2	17:CQ:34:LYS:NZ	2.56	0.53
27:DA:10:G:N1	27:DA:2629:A:H1'	2.24	0.53
1:AA:1270:C:H2'	1:AA:1271:G:O4'	2.08	0.53
1:AA:1314:C:H5	19:AS:6:LYS:HZ3	1.57	0.53
27:BA:492:A:C2	27:BA:493:G:H1'	2.44	0.53
27:DA:477:A:O2'	27:DA:478:A:C8	2.59	0.53
1:CA:735:C:H6	1:CA:735:C:O5'	1.91	0.53
1:CA:707:C:C2	1:CA:708:C:C5	2.97	0.53
48:DZ:102:ARG:HD3	48:DZ:135:PHE:CZ	2.44	0.53
32:BF:184:TYR:O	32:BF:188:ARG:CB	2.57	0.53
32:BF:184:TYR:CE2	32:BF:188:ARG:HD2	2.43	0.53
1:AA:644:G:H2'	1:AA:645:C:H5'	1.89	0.53
27:BA:747:U:N1	54:B5:2:ALA:N	2.57	0.53
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.09	0.53
7:AG:86:GLN:NE2	25:AY:30:A:H2	2.06	0.53
25:AY:28:G:O2'	25:AY:29:G:H5'	2.09	0.53
43:BU:24:TYR:HB2	43:BU:29:SER:HB3	1.91	0.53
18:AR:63:GLN:OE1	18:AR:63:GLN:HA	2.09	0.53
1:CA:59:A:H2'	1:CA:59:A:N3	2.22	0.53
27:BA:1207:C:H2'	27:BA:1208:C:H6	1.74	0.53
42:DT:129:ARG:HG3	42:DT:129:ARG:O	2.08	0.53
27:BA:83:G:C2'	27:BA:84:A:OP2	2.57	0.53
1:AA:245:C:O2	1:AA:283:C:N3	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1688:U:O2	27:BA:1700:A:H5'	2.09	0.53
27:BA:1388:G:O2'	27:BA:1389:G:H5'	2.08	0.53
3:AC:42:LEU:N	3:AC:45:LYS:HZ3	2.07	0.53
27:DA:2083:G:H2'	27:DA:2084:C:C6	2.44	0.53
24:CX:47:U:H3'	24:CX:48:C:C5'	2.38	0.53
27:DA:2222:G:H5'	30:DD:149:PRO:HG3	1.90	0.53
27:BA:681:G:H2'	27:BA:682:G:H8	1.73	0.53
27:DA:606:U:H4'	27:DA:658:C:H4'	1.90	0.53
2:AB:64:ARG:O	2:AB:64:ARG:HG3	2.08	0.53
27:BA:2360:A:H2'	27:BA:2361:A:O4'	2.09	0.53
27:DA:2601:C:H6	27:DA:2601:C:O5'	1.92	0.53
30:BD:58:HIS:HD2	30:BD:59:LYS:O	1.92	0.53
1:CA:170:U:O2'	1:CA:171:A:H5'	2.09	0.53
57:B8:6:THR:CA	57:B8:61:LEU:HD11	2.35	0.52
1:CA:949:A:H2'	1:CA:950:U:O4'	2.08	0.52
41:BS:95:HIS:CG	41:BS:96:GLY:H	2.26	0.52
32:BF:3:GLU:HA	32:BF:24:LEU:HB3	1.90	0.52
37:BO:10:VAL:CG2	37:BO:17:ARG:HA	2.39	0.52
27:DA:197:A:H8	27:DA:197:A:H5'	1.71	0.52
48:DZ:156:LEU:N	48:DZ:156:LEU:HD12	2.24	0.52
1:CA:429:U:OP2	4:CD:36:ARG:NH1	2.42	0.52
5:AE:33:VAL:HA	5:AE:42:GLY:O	2.08	0.52
43:DU:70:ARG:C	43:DU:72:HIS:H	2.12	0.52
27:DA:1567:A:C2	30:DD:84:TYR:HB3	2.44	0.52
27:DA:859:G:N2	27:DA:916:G:H2'	2.25	0.52
57:D8:28:GLY:O	57:D8:29:LYS:HB3	2.08	0.52
27:DA:635:C:H2'	27:DA:636:G:H8	1.74	0.52
1:CA:186:C:H2'	1:CA:187:C:H6	1.74	0.52
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.24	0.52
14:AN:24:CYS:HB2	14:AN:29:ARG:HB3	1.92	0.52
48:BZ:79:ARG:O	48:BZ:81:ARG:N	2.41	0.52
2:AB:185:ILE:HG12	2:AB:199:TYR:HB2	1.91	0.52
42:DT:81:PRO:O	42:DT:82:LEU:HD12	2.09	0.52
30:BD:52:ARG:NH1	30:BD:249:PRO:HG2	2.23	0.52
1:AA:1072:G:H2'	1:AA:1073:U:O4'	2.08	0.52
39:BQ:17:LEU:HD21	39:BQ:41:TRP:HE1	1.73	0.52
1:CA:742:G:H5'	15:CO:58:MET:CE	2.39	0.52
12:AL:31:ARG:HG3	12:AL:102:TYR:CE1	2.44	0.52
6:AF:7:ASN:C	6:AF:8:ILE:HG13	2.29	0.52
8:CH:7:ALA:HA	8:CH:85:ARG:HG3	1.90	0.52
41:BS:103:GLU:O	41:BS:104:GLY:C	2.47	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:B9:11:CYS:SG	58:B9:32:HIS:CG	3.02	0.52
31:DE:119:ARG:HG3	31:DE:160:TYR:HB2	1.92	0.52
27:BA:2289:G:C2'	27:BA:2290:G:H5''	2.38	0.52
27:BA:1359:A:N7	27:BA:1372:U:O4	2.42	0.52
29:DC:83:ILE:HA	29:DC:94:VAL:CG2	2.36	0.52
6:CF:10:LEU:O	6:CF:11:ASN:C	2.46	0.52
30:BD:10:THR:HG23	30:BD:13:ARG:CB	2.38	0.52
13:AM:76:ALA:HA	13:AM:79:LYS:CD	2.38	0.52
27:DA:2836:U:C4	27:DA:2883:A:N6	2.78	0.52
33:DG:111:LEU:HD22	33:DG:117:PHE:CE1	2.44	0.52
8:CH:36:LEU:O	8:CH:37:ARG:C	2.46	0.52
27:DA:1281:G:C2	27:DA:1290:C:N3	2.76	0.52
27:DA:325:G:H2'	27:DA:326:G:H8	1.74	0.52
27:DA:2199:A:H3'	27:DA:2200:C:C6	2.33	0.52
37:BO:13:ASN:HD21	37:BO:96:THR:H	1.53	0.52
27:BA:394:A:C6	27:BA:395:U:N3	2.77	0.52
52:D3:6:VAL:HB	52:D3:54:VAL:HG11	1.91	0.52
33:BG:11:TYR:O	33:BG:16:ARG:N	2.36	0.52
33:BG:170:ARG:HH21	33:BG:182:LYS:HZ3	1.55	0.52
1:AA:1228:C:H4'	13:AM:116:THR:HA	1.92	0.52
6:AF:24:GLU:CG	6:AF:25:ILE:N	2.71	0.52
10:CJ:40:LEU:HG	10:CJ:69:ASN:CB	2.37	0.52
11:CK:99:GLN:OE1	11:CK:105:VAL:HG21	2.09	0.52
1:CA:9:G:H5'	5:CE:122:GLU:CD	2.28	0.52
27:BA:721:C:H2'	27:BA:722:A:H8	1.73	0.52
27:BA:1444:G:C6	27:BA:1466:G:N1	2.77	0.52
30:DD:158:ALA:HB3	30:DD:161:THR:HG21	1.91	0.52
12:CL:123:LYS:HD2	12:CL:124:GLU:H	1.74	0.52
27:BA:863:A:H2'	27:BA:864:G:H8	1.69	0.52
1:AA:1248:A:H2'	1:AA:1249:C:C5'	2.39	0.52
1:AA:558:G:H2'	1:AA:559:A:H2	1.73	0.52
1:AA:243:A:H4'	1:AA:244:U:C5'	2.39	0.52
27:BA:945:A:C4	27:BA:2448:A:C2	2.96	0.52
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.90	0.52
1:AA:1472:U:C2'	1:AA:1473:A:H5'	2.39	0.52
27:BA:2548:G:H1	27:BA:2560:C:H42	1.55	0.52
27:DA:1941:C:C5	27:DA:1942:C:C5	2.98	0.52
9:AI:127:LYS:O	9:AI:128:ARG:HB3	2.08	0.52
27:BA:2371:G:H4'	55:B6:45:LYS:CB	2.39	0.52
44:DV:21:ARG:HG2	44:DV:91:TYR:CD1	2.43	0.52
49:B0:50:ASN:HA	49:B0:62:LEU:HD12	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:40:ILE:CG2	41:BS:41:ASP:N	2.71	0.52
4:AD:13:ARG:O	4:AD:14:ARG:HB3	2.08	0.52
56:D7:42:LEU:HD23	56:D7:42:LEU:N	2.23	0.52
27:DA:2621:A:O2'	31:DE:159:HIS:HB2	2.10	0.52
27:BA:1508:A:H2'	27:BA:1508:A:N3	2.23	0.52
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.08	0.52
27:BA:1280:G:N2	27:BA:1281:G:H1'	2.24	0.52
48:DZ:149:LEU:HD21	48:DZ:171:ALA:HB3	1.91	0.52
1:CA:1347:G:N2	1:CA:1373:G:C2'	2.58	0.52
1:CA:1349:A:H2'	1:CA:1350:A:C8	2.45	0.52
32:DF:119:ARG:HG2	32:DF:119:ARG:O	2.10	0.52
41:BS:33:LYS:O	41:BS:34:HIS:CG	2.63	0.52
30:DD:211:ARG:HA	30:DD:214:TRP:CG	2.45	0.52
47:DY:27:VAL:HA	47:DY:28:LYS:CE	2.39	0.52
33:BG:138:GLN:HB3	33:BG:153:ARG:O	2.08	0.52
55:D6:15:GLU:HB3	55:D6:18:ARG:HG2	1.91	0.52
27:DA:805:G:O2'	27:DA:806:C:OP1	2.22	0.52
50:B1:37:ILE:O	50:B1:38:SER:CB	2.57	0.52
18:CR:82:THR:O	18:CR:83:GLU:HG2	2.09	0.52
1:AA:1347:G:O2'	1:AA:1348:U:P	2.67	0.52
1:CA:375:U:H2'	1:CA:376:G:C8	2.44	0.52
34:DH:85:LYS:HG3	34:DH:145:ALA:HB2	1.90	0.52
27:BA:857:C:O2	27:BA:857:C:H2'	2.08	0.52
1:CA:250:A:C2	1:CA:274:A:N6	2.77	0.52
30:BD:45:ASN:CG	30:BD:46:GLN:H	2.13	0.52
1:CA:158:G:C2'	1:CA:159:G:H5'	2.39	0.52
3:CC:76:VAL:HG23	3:CC:77:ILE:H	1.75	0.52
1:CA:1209:C:H2'	1:CA:1209:C:O2	2.07	0.52
27:BA:2271:G:OP1	49:B0:18:ALA:HB1	2.09	0.52
27:BA:525:U:H6	27:BA:525:U:OP2	1.91	0.52
35:BI:77:LEU:CD2	35:BI:78:THR:N	2.71	0.52
27:BA:2545:G:H2'	27:BA:2546:U:O4'	2.09	0.52
27:BA:646:A:H2'	27:BA:647:G:O4'	2.10	0.52
27:DA:2313:C:H3'	27:DA:2313:C:H6	1.74	0.52
7:AG:152:ALA:C	7:AG:154:TYR:H	2.11	0.52
42:DT:24:PRO:HA	42:DT:49:VAL:HG13	1.91	0.52
27:BA:196:A:O4'	38:BP:46:LYS:HE3	2.09	0.52
1:CA:1117:G:N2	1:CA:1180:A:H1'	2.25	0.52
1:AA:1327:C:OP1	21:AU:20:LYS:HB3	2.09	0.52
16:CP:57:ARG:NH2	16:CP:79:VAL:O	2.40	0.52
27:DA:2884:U:C2	54:D5:51:TYR:HE1	2.26	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:20:A:H61	23:CW:46:U:H1'	1.70	0.52
27:DA:2466:C:O2'	27:DA:2467:C:H5'	2.09	0.52
27:DA:496:G:H1'	45:DW:61:ASN:ND2	2.24	0.52
27:BA:2607:G:O2'	27:BA:2608:G:H5'	2.10	0.52
27:DA:31:C:H5''	27:DA:1239:G:OP1	2.09	0.52
1:CA:701:C:O2'	1:CA:703:G:C6	2.60	0.52
3:AC:52:LEU:CD2	3:AC:52:LEU:N	2.66	0.52
2:CB:16:HIS:CE1	2:CB:213:LEU:HD13	2.43	0.52
5:CE:7:GLU:O	5:CE:8:GLU:CB	2.57	0.52
1:AA:1247:U:O2	1:AA:1291:G:C2	2.62	0.52
32:DF:83:PHE:O	32:DF:84:VAL:CB	2.57	0.52
27:DA:2520:C:H2'	27:DA:2521:C:H6	1.73	0.52
35:DI:58:LEU:C	35:DI:60:GLU:H	2.12	0.52
31:BE:143:ASN:HB2	31:BE:147:PRO:HD2	1.91	0.52
2:CB:36:ARG:CA	2:CB:36:ARG:NE	2.72	0.52
27:BA:1003:G:N2	27:BA:1153:C:C2	2.78	0.52
9:AI:11:LYS:O	9:AI:13:ALA:N	2.42	0.52
35:BI:40:THR:OG1	35:BI:43:ASN:ND2	2.42	0.52
27:BA:671:C:H5'	27:BA:671:C:H6	1.75	0.52
9:CI:62:TYR:O	9:CI:63:ILE:HG13	2.09	0.52
34:DH:64:LEU:O	34:DH:68:THR:HB	2.09	0.52
1:AA:329:A:C5	1:AA:332:G:C6	2.98	0.52
1:AA:252:U:H2'	1:AA:253:U:H5'	1.91	0.52
39:BQ:79:LEU:N	39:BQ:79:LEU:CD1	2.71	0.52
6:CF:99:ALA:O	6:CF:100:ASN:C	2.48	0.52
27:BA:1830:C:O2'	27:BA:1831:G:H5'	2.08	0.52
1:CA:181:G:N2	1:CA:183:G:H1	2.07	0.52
27:DA:45:C:OP2	27:DA:215:G:H2'	2.09	0.52
27:BA:937:U:C4	27:BA:938:G:N7	2.78	0.52
45:BW:29:LEU:HD21	45:BW:33:ARG:NH2	2.24	0.52
1:CA:505:G:H2'	1:CA:506:G:C8	2.45	0.52
6:CF:2:ARG:O	6:CF:66:GLU:HA	2.09	0.52
28:DB:95:C:H2'	28:DB:96:U:C6	2.44	0.52
5:CE:135:THR:O	5:CE:136:MET:C	2.48	0.52
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.23	0.52
27:BA:584:C:OP2	43:BU:6:THR:HB	2.10	0.52
27:DA:2115:G:C4	27:DA:2117:A:N7	2.77	0.52
44:DV:8:GLY:O	44:DV:10:LYS:HE2	2.10	0.52
1:CA:955:U:H1'	1:CA:1227:A:N6	2.23	0.52
14:CN:44:LEU:O	14:CN:44:LEU:HD12	2.09	0.52
40:BR:28:LEU:HD21	40:BR:114:VAL:HG12	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:17:LYS:HG3	38:BP:19:VAL:HG23	1.91	0.52
1:CA:1343:G:H1'	9:CI:121:ARG:NH1	2.23	0.52
32:BF:70:THR:O	32:BF:72:ARG:N	2.42	0.52
1:AA:130:A:H5'	17:AQ:63:ARG:HE	1.75	0.52
27:DA:998:C:H42	27:DA:1158:C:H42	1.57	0.52
27:DA:1578:U:H2'	27:DA:1579:A:H5''	1.92	0.52
51:D2:46:GLN:HA	51:D2:46:GLN:OE1	2.06	0.52
41:DS:97:ARG:HH22	41:DS:99:LYS:N	2.04	0.52
55:D6:8:LYS:HG3	55:D6:8:LYS:O	2.09	0.52
27:DA:468:G:C6	27:DA:469:G:C4	2.97	0.52
27:DA:2550:G:H2'	27:DA:2551:C:C5'	2.38	0.52
27:DA:819:A:H2'	27:DA:819:A:N3	2.24	0.52
44:DV:77:ALA:O	44:DV:79:VAL:N	2.42	0.52
1:AA:176:C:O2'	1:AA:177:C:H5'	2.10	0.52
31:DE:37:ARG:O	31:DE:45:THR:HA	2.10	0.52
27:DA:301:G:C4	27:DA:302:C:C5	2.98	0.52
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.45	0.52
10:AJ:52:GLY:O	14:AN:41:ARG:NH2	2.42	0.52
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.90	0.52
2:AB:54:THR:CB	2:AB:201:ILE:HD11	2.39	0.52
42:DT:27:THR:O	42:DT:28:VAL:CB	2.57	0.52
27:DA:2757:A:N1	34:DH:67:LEU:HD22	2.25	0.52
41:DS:15:ARG:C	41:DS:17:ARG:O	2.48	0.52
17:CQ:17:LYS:HA	17:CQ:46:ASP:O	2.10	0.52
1:CA:607:A:C2'	1:CA:608:A:H5'	2.39	0.52
27:BA:2336:A:H61	49:B0:43:THR:CG2	2.21	0.52
42:DT:3:ARG:O	42:DT:7:ILE:HG12	2.10	0.52
6:AF:10:LEU:HD13	6:AF:61:LEU:HD13	1.91	0.52
8:AH:48:TYR:O	8:AH:49:GLU:CB	2.57	0.52
14:CN:27:CYS:C	14:CN:29:ARG:N	2.61	0.52
15:CO:70:LEU:HD23	15:CO:78:TYR:HA	1.92	0.52
27:BA:2576:G:H3'	27:BA:2576:G:N3	2.24	0.52
25:AY:6:U:H2'	25:AY:7:A:C8	2.44	0.52
49:B0:24:LYS:HB2	49:B0:36:ILE:HD11	1.90	0.52
35:BI:92:VAL:O	35:BI:92:VAL:HG22	2.09	0.52
27:BA:644:A:C2'	27:BA:645:C:H5''	2.39	0.52
35:BI:11:ASN:HB3	35:BI:12:LEU:HD22	1.91	0.52
27:BA:574:C:N3	31:BE:145:LYS:NZ	2.53	0.52
51:B2:55:ARG:O	51:B2:58:ALA:N	2.41	0.52
27:DA:1458:C:H5'	27:DA:1459:G:C8	2.44	0.52
3:CC:39:ILE:C	3:CC:41:GLY:N	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:923:C:H2'	27:DA:924:C:H6	1.74	0.52
42:DT:25:GLY:O	42:DT:48:ILE:HG23	2.08	0.52
42:DT:50:ILE:HG23	42:DT:99:LEU:HD12	1.92	0.52
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.57	0.52
31:DE:3:GLY:O	31:DE:4:ILE:CB	2.57	0.52
12:CL:5:ASN:HB2	17:CQ:34:LYS:HZ3	1.73	0.52
2:AB:178:ARG:HH11	2:AB:178:ARG:HG2	1.74	0.52
1:CA:738:C:H5''	6:CF:69:GLU:HB2	1.91	0.52
27:BA:1332:G:N2	27:BA:1609:A:HO2'	2.06	0.52
47:BY:67:LEU:HD13	47:BY:71:LYS:HE3	1.89	0.52
36:DN:25:ARG:NH1	36:DN:25:ARG:CG	2.71	0.52
7:CG:15:ASP:O	7:CG:19:GLY:HA2	2.09	0.52
33:DG:129:GLY:O	33:DG:161:THR:HB	2.08	0.52
45:DW:21:VAL:CG1	45:DW:21:VAL:O	2.58	0.52
12:CL:123:LYS:C	12:CL:125:ALA:N	2.61	0.52
6:CF:48:LEU:HD13	6:CF:52:ILE:CG1	2.39	0.52
27:DA:1445:A:H2'	27:DA:1445:A:N3	2.24	0.52
1:CA:1419:G:H2'	1:CA:1420:C:C6	2.41	0.52
4:AD:205:GLU:O	4:AD:207:TYR:N	2.43	0.52
1:CA:1423:G:O2'	1:CA:1424:C:H5'	2.09	0.52
37:DO:13:ASN:C	37:DO:15:GLY:N	2.63	0.52
1:AA:336:C:O2'	1:AA:337:C:H5'	2.09	0.52
9:CI:106:ALA:O	9:CI:108:VAL:N	2.42	0.52
20:CT:41:ILE:HA	20:CT:44:ALA:HB3	1.91	0.52
2:CB:168:THR:HG23	2:CB:192:SER:CB	2.39	0.52
27:BA:738:G:C6	27:BA:739:G:C2	2.98	0.52
3:CC:162:GLN:O	3:CC:164:ARG:HG3	2.09	0.52
1:AA:1494:G:N2	1:AA:1495:U:C2	2.78	0.52
27:BA:2235:G:H2'	27:BA:2236:C:C6	2.45	0.52
27:DA:186:G:O2'	27:DA:187:G:H5'	2.10	0.52
27:BA:1305:C:O2'	27:BA:1306:C:H5'	2.08	0.52
45:DW:34:ASN:O	45:DW:37:ARG:HB3	2.10	0.52
27:BA:651:G:OP1	57:B8:19:SER:HB2	2.09	0.52
40:BR:28:LEU:HA	40:BR:34:ILE:CG1	2.39	0.52
27:DA:1899:G:N2	27:DA:1903:G:C2	2.77	0.52
47:BY:50:ARG:CG	47:BY:58:GLY:HA3	2.38	0.52
31:BE:63:LEU:O	31:BE:63:LEU:HD23	2.09	0.52
1:CA:1347:G:C8	9:CI:107:ARG:HB3	2.45	0.52
1:AA:129(A):G:O2'	1:AA:189(F):U:H2'	2.09	0.52
27:BA:352:G:C8	27:BA:355:G:O6	2.62	0.52
42:BT:28:VAL:HG21	42:BT:46:GLU:CG	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:999:U:O2	27:DA:1000:A:H8	1.92	0.52
27:DA:1884:A:N1	27:DA:1885:A:C5	2.78	0.52
47:DY:76:CYS:O	47:DY:78:ALA:N	2.42	0.52
11:AK:33:THR:HB	11:AK:37:GLY:O	2.10	0.52
55:D6:8:LYS:O	55:D6:9:LEU:CB	2.57	0.52
27:DA:2356:C:H4'	49:D0:20:ARG:HD3	1.90	0.52
27:DA:2580:U:H4'	31:DE:130:GLY:CA	2.40	0.52
27:DA:574:C:N3	31:DE:145:LYS:HE2	2.24	0.52
20:AT:25:ARG:O	20:AT:28:ALA:HB3	2.10	0.52
47:DY:15:VAL:HG12	47:DY:16:ALA:H	1.73	0.52
12:CL:25:LYS:HZ1	12:CL:30:ARG:HH22	1.55	0.52
2:AB:67:THR:OG1	2:AB:155:LEU:HD21	2.08	0.52
46:BX:64:LYS:HE2	46:BX:73:ARG:HG3	1.92	0.52
27:DA:2749:A:H4'	34:DH:62:LYS:CB	2.29	0.52
32:BF:51:THR:HG23	32:BF:92:PRO:HG2	1.90	0.52
17:CQ:45:HIS:CD2	17:CQ:47:PRO:HD3	2.45	0.52
27:BA:1820:U:O2	30:BD:201:HIS:HB3	2.10	0.52
27:BA:795:C:C6	27:BA:796:C:H5	2.27	0.52
27:DA:18:C:C4	27:DA:19:C:C5	2.98	0.52
15:AO:74:ASP:C	15:AO:76:GLU:N	2.62	0.52
34:BH:87:LEU:HD22	34:BH:163:TYR:O	2.09	0.52
13:AM:37:THR:OG1	13:AM:39:ILE:HD12	2.09	0.52
3:CC:76:VAL:HG23	3:CC:77:ILE:N	2.25	0.52
12:AL:36:VAL:HG12	12:AL:38:ARG:H	1.74	0.52
27:BA:562:U:OP1	27:BA:562:U:H6	1.92	0.52
49:D0:40:GLN:HE22	49:D0:45:PHE:H	1.56	0.52
27:BA:2419:U:C5'	55:B6:23:THR:HG21	2.40	0.52
1:AA:621:A:H2'	1:AA:622:A:H8	1.75	0.52
27:DA:660:G:O2'	27:DA:661:C:H5'	2.10	0.52
52:D3:12:PRO:O	52:D3:20:LYS:NZ	2.42	0.52
57:B8:50:LEU:C	57:B8:53:PRO:HD2	2.28	0.52
6:CF:12:PRO:HB3	6:CF:58:GLY:HA2	1.91	0.52
33:DG:110:ALA:O	33:DG:111:LEU:C	2.47	0.52
27:DA:272(D):G:C2	27:DA:365:C:C4	2.98	0.52
7:CG:143:ARG:CB	7:CG:143:ARG:HH11	2.22	0.52
27:BA:1578:U:H2'	27:BA:1579:A:C5'	2.38	0.52
27:BA:1578:U:H2'	27:BA:1578:U:O2	2.09	0.52
26:AZ:3:SER:O	26:AZ:5:UAL:N	2.38	0.52
27:DA:2010:G:C6	27:DA:2011:U:C4	2.97	0.52
1:CA:937:A:N6	1:CA:938:A:C6	2.77	0.52
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:119:A:O2'	1:CA:120:A:OP2	2.27	0.52
47:DY:4:LYS:HG3	47:DY:5:MET:HE3	1.91	0.52
13:AM:116:THR:O	13:AM:117:VAL:HB	2.09	0.52
27:BA:1640:C:N4	27:BA:1641:A:C5	2.78	0.52
20:AT:89:ARG:NH1	20:AT:104:LEU:HD21	2.23	0.52
1:AA:1145:C:O2'	1:AA:1146:A:H5'	2.10	0.52
1:CA:623:C:O2	1:CA:623:C:H2'	2.09	0.52
27:BA:2241:A:C2	27:BA:2242:G:C5	2.98	0.52
27:BA:1345:C:O2'	27:BA:1346:G:H5'	2.10	0.52
34:BH:68:THR:C	34:BH:70:THR:N	2.61	0.52
27:BA:1945:G:C8	27:BA:1945:G:O5'	2.62	0.52
27:BA:988:A:H4'	27:BA:1155:A:C2	2.45	0.52
1:CA:298:A:H8	1:CA:298:A:O5'	1.92	0.52
27:DA:1248:G:OP1	32:DF:92:PRO:HB3	2.08	0.52
1:AA:1416:G:N2	1:AA:1485:U:H1'	2.24	0.52
54:D5:49:CYS:O	54:D5:56:LYS:HB2	2.09	0.52
42:DT:21:GLU:HG3	42:DT:22:PHE:N	2.25	0.52
4:CD:132:ARG:HG2	4:CD:132:ARG:NH1	2.24	0.52
44:DV:21:ARG:HG2	44:DV:91:TYR:CE1	2.44	0.52
27:DA:2489:G:H2'	27:DA:2490:G:O4'	2.10	0.52
27:DA:1455:G:O2'	27:DA:1456:G:H5'	2.09	0.52
1:AA:506:G:C4	1:AA:507:C:C5	2.96	0.52
28:DB:4:C:H2'	28:DB:5:C:C6	2.45	0.52
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.21	0.52
32:BF:127:GLU:OE1	32:BF:196:LEU:HG	2.10	0.52
33:BG:109:VAL:HG13	53:B4:59:VAL:HG11	1.90	0.52
1:CA:1305:G:O2'	1:CA:1306:A:P	2.68	0.52
27:BA:481:G:OP2	47:BY:47:LYS:HG3	2.09	0.52
47:BY:47:LYS:O	47:BY:48:ALA:O	2.26	0.52
44:BV:15:GLU:O	44:BV:16:PRO:C	2.48	0.52
27:DA:2405:G:O2'	27:DA:2406:U:P	2.67	0.52
42:BT:109:GLU:HA	42:BT:112:ARG:HD3	1.91	0.52
43:DU:81:HIS:O	43:DU:85:LYS:HB2	2.09	0.52
27:DA:492:A:C8	27:DA:493:G:C8	2.98	0.52
27:DA:2351:G:H5''	27:DA:2352:A:OP1	2.08	0.52
27:BA:307:G:H8	27:BA:307:G:O5'	1.92	0.52
27:DA:747:U:N3	54:D5:2:ALA:N	2.58	0.52
27:DA:1188:U:C2'	27:DA:1189:A:H5'	2.40	0.52
31:DE:1:MET:H3	31:DE:84:PHE:HB2	1.75	0.52
47:DY:18:GLY:C	47:DY:20:TYR:H	2.13	0.52
27:BA:1686:C:C6	27:BA:1686:C:C5'	2.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:186:C:H2'	1:CA:187:C:C5	2.45	0.52
1:AA:1179:A:C5'	9:AI:102:LEU:HD12	2.39	0.52
1:AA:1338:G:H2'	1:AA:1339:A:O4'	2.10	0.52
42:DT:32:TYR:CD2	42:DT:32:TYR:N	2.76	0.52
19:AS:61:TYR:O	19:AS:62:ILE:HG22	2.10	0.52
58:D9:10:ILE:HD12	58:D9:32:HIS:CD2	2.44	0.52
1:CA:252:U:H2'	1:CA:253:U:C6	2.45	0.52
40:DR:41:ALA:C	40:DR:43:GLU:N	2.62	0.52
37:BO:1:MET:C	37:BO:2:ILE:HD13	2.29	0.52
40:BR:52:ILE:O	40:BR:55:ALA:N	2.43	0.52
27:DA:774:A:H2	27:DA:787:U:O2'	1.90	0.52
27:DA:2529:G:OP2	27:DA:2530:A:H5''	2.09	0.52
27:BA:1799:G:H5''	27:BA:1802:A:O2'	2.09	0.52
1:CA:678:U:O2	1:CA:777:A:H4'	2.09	0.52
27:DA:154(A):C:O2	27:DA:154(A):C:O4'	2.26	0.52
39:DQ:45:GLN:NE2	39:DQ:45:GLN:N	2.49	0.52
39:DQ:132:VAL:HB	39:DQ:137:TYR:OH	2.09	0.52
29:DC:68:LEU:CD1	29:DC:179:SER:HA	2.40	0.52
27:DA:2680:C:OP2	31:DE:111:ARG:NH2	2.43	0.52
40:DR:14:SER:OG	40:DR:15:SER:N	2.40	0.52
27:BA:2285:C:H41	55:B6:25:LYS:HE3	1.75	0.52
32:DF:31:HIS:CD2	32:DF:35:GLU:HG3	2.45	0.52
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.09	0.52
1:AA:939:G:H2'	1:AA:940:C:C6	2.45	0.52
27:BA:2693:A:C2'	27:BA:2694:G:H5'	2.38	0.52
27:BA:1578:U:H2'	27:BA:1579:A:H5'	1.90	0.52
1:AA:1271:G:H5'	1:AA:1314:C:H5'	1.92	0.52
27:DA:2889:C:H3'	27:DA:2891:G:C8	2.44	0.52
47:BY:3:VAL:C	47:BY:5:MET:N	2.60	0.52
27:DA:29:U:H4'	43:DU:11:ARG:HH22	1.72	0.52
39:DQ:35:VAL:HA	39:DQ:102:VAL:HA	1.90	0.52
32:BF:160:ASN:ND2	32:BF:160:ASN:C	2.62	0.52
19:AS:12:ASP:HB3	19:AS:14:HIS:CE1	2.45	0.52
50:B1:18:ILE:HG21	50:B1:20:ARG:CZ	2.39	0.52
50:B1:20:ARG:O	50:B1:21:ARG:HG2	2.09	0.52
33:BG:170:ARG:NH2	33:BG:182:LYS:HG3	2.25	0.52
3:AC:150:LYS:CG	3:AC:169:ALA:HB2	2.38	0.52
27:DA:1473:G:H2'	27:DA:1474:C:C5'	2.37	0.52
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.10	0.52
39:DQ:10:ARG:HG3	39:DQ:10:ARG:O	2.09	0.52
27:BA:1261:C:H2'	27:BA:1262:A:O5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:344:G:N2	27:BA:345:A:N6	2.54	0.52
1:CA:255:G:H2'	1:CA:256:U:C6	2.45	0.52
7:AG:103:TRP:CE3	7:AG:137:LYS:HB3	2.45	0.52
7:AG:15:ASP:OD2	7:AG:16:LEU:N	2.42	0.52
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.92	0.52
4:CD:179:GLU:O	4:CD:181:MET:HG3	2.09	0.52
51:B2:17:SER:H	51:B2:67:LYS:HZ1	1.57	0.52
27:DA:2729:G:O3'	31:DE:185:LYS:NZ	2.43	0.52
17:CQ:27:PHE:HB2	17:CQ:28:PRO:CD	2.40	0.52
1:AA:1426:C:H2'	1:AA:1427:U:H6	1.75	0.52
27:BA:444:C:C4'	32:BF:49:ALA:HB2	2.39	0.52
42:DT:55:ASN:O	42:DT:55:ASN:ND2	2.32	0.52
39:BQ:36:ALA:O	39:BQ:37:LEU:HD22	2.09	0.52
27:DA:25:U:H2'	27:DA:26:G:O4'	2.09	0.52
2:CB:43:ASP:OD2	2:CB:46:LYS:HB2	2.10	0.52
20:CT:45:GLN:C	20:CT:47:GLY:H	2.12	0.52
27:BA:1291:C:C2	27:BA:1292:U:C5	2.98	0.52
41:BS:92:TYR:CG	41:BS:93:LYS:N	2.78	0.52
37:BO:60:ALA:HB2	37:BO:86:ILE:HA	1.92	0.52
37:BO:90:GLN:O	37:BO:91:LEU:HB2	2.09	0.52
1:AA:909:A:O2'	1:AA:910:C:H5'	2.08	0.52
27:BA:1199:U:H2'	27:BA:1200:C:H6	1.74	0.52
42:BT:16:ARG:HH11	42:BT:19:LEU:HD11	1.74	0.52
32:DF:202:PHE:O	32:DF:204:ASN:N	2.43	0.52
32:DF:2:LYS:O	32:DF:25:PRO:CD	2.55	0.52
27:DA:1013:C:N4	27:DA:1149:G:H1	2.07	0.52
27:DA:1252:G:N2	43:DU:33:ARG:HD2	2.24	0.52
43:DU:57:PHE:O	43:DU:58:ARG:C	2.47	0.52
51:D2:52:ASP:O	51:D2:55:ARG:N	2.43	0.52
27:BA:2801(A):A:C4'	27:BA:2802:G:H5'	2.21	0.52
4:AD:64:LEU:HB2	4:AD:198:VAL:CG1	2.40	0.52
27:DA:587:C:C6	38:DP:33:ARG:CZ	2.92	0.52
45:BW:15:ARG:O	45:BW:18:ARG:HB2	2.09	0.52
46:DX:26:TYR:CE2	46:DX:89:ILE:HB	2.43	0.52
31:DE:93:VAL:HG11	31:DE:181:LEU:O	2.09	0.52
34:BH:44:VAL:O	34:BH:46:GLU:CD	2.48	0.52
1:AA:1054:C:C6	1:AA:1196:U:H2'	2.45	0.52
1:AA:1346:A:C5'	9:AI:120:ARG:HH12	2.23	0.52
9:AI:114:TYR:HE1	10:AJ:60:ARG:N	2.08	0.52
58:D9:7:VAL:HG13	58:D9:34:GLN:OE1	2.10	0.52
27:BA:1778:U:H2'	27:BA:1784:A:N6	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:10:LEU:CD1	6:AF:61:LEU:HD13	2.39	0.52
27:DA:58:G:O2'	27:DA:73:A:N1	2.35	0.52
27:BA:372:G:O2'	27:BA:373:U:P	2.67	0.52
14:CN:26:ARG:HH22	14:CN:47:LEU:HD21	1.74	0.52
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.09	0.52
27:BA:2578:G:H2'	27:BA:2579:C:C6	2.44	0.52
27:DA:171:G:H2'	27:DA:172:C:C6	2.44	0.52
8:CH:7:ALA:CB	8:CH:85:ARG:HG3	2.39	0.52
38:BP:144:GLU:O	38:BP:145:PRO:C	2.48	0.52
38:BP:91:PHE:HZ	38:BP:100:LEU:CD1	2.23	0.52
25:AY:62:U:H2'	25:AY:63:C:O4'	2.10	0.52
1:CA:748:C:O2'	1:CA:749:C:OP2	2.25	0.52
27:DA:2126:A:H5''	29:DC:36:LYS:HG2	1.90	0.52
27:DA:2824:C:N4	27:DA:2825:C:N3	2.57	0.52
55:B6:29:ASN:ND2	55:B6:30:THR:H	2.07	0.52
27:BA:2290:G:C2	27:BA:2343:C:O2	2.63	0.52
27:BA:2308:G:C2'	27:BA:2309:A:O5'	2.58	0.52
34:DH:143:GLN:NE2	34:DH:147:ASN:OD1	2.43	0.52
33:DG:128:ARG:C	33:DG:130:ASN:N	2.63	0.52
30:BD:12:SER:C	30:BD:14:ARG:H	2.13	0.52
57:D8:10:ALA:CB	57:D8:60:LEU:HD21	2.34	0.52
5:CE:102:ALA:HB2	5:CE:120:THR:OG1	2.09	0.52
7:CG:135:VAL:O	7:CG:138:LYS:HB3	2.09	0.52
27:DA:2188:C:H2'	27:DA:2189:U:O4'	2.08	0.52
27:DA:2809:A:OP2	27:DA:2891:G:N2	2.40	0.52
40:DR:26:LYS:HZ3	40:DR:71:GLN:HB3	1.74	0.52
27:DA:1280:G:N2	27:DA:1281:G:H1'	2.24	0.52
27:DA:495:G:H21	45:DW:61:ASN:HD21	1.57	0.52
27:BA:2606:C:O2'	27:BA:2607:G:H5'	2.10	0.52
27:BA:1176:G:O2'	27:BA:1177:A:H5'	2.10	0.52
35:DI:12:LEU:HB2	35:DI:19:VAL:HG21	1.92	0.52
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.83	0.52
33:BG:31:VAL:HG22	33:BG:32:PRO:HD2	1.91	0.52
5:AE:99:GLY:O	5:AE:116:THR:O	2.27	0.52
1:CA:882:C:N4	12:CL:2:PRO:HG3	2.24	0.52
28:DB:53:A:H2'	28:DB:53:A:N3	2.24	0.52
27:DA:67:U:C2	27:DA:68:G:C8	2.97	0.52
27:BA:1627:G:N3	27:BA:1628:G:C8	2.78	0.52
27:BA:1710:C:C6	27:BA:1710:C:H3'	2.45	0.52
1:AA:1372:U:OP2	9:AI:11:LYS:HE3	2.09	0.52
9:AI:15:ALA:HB2	9:AI:65:VAL:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:138:LEU:HG	38:DP:142:GLY:HA3	1.92	0.52
19:CS:22:LEU:CD2	19:CS:22:LEU:N	2.72	0.52
27:DA:1683:C:H42	27:DA:1705:G:H1	1.58	0.52
27:DA:211:A:O2'	27:DA:212:G:H5'	2.10	0.52
1:CA:5:U:C2'	4:CD:86:LYS:HE2	2.39	0.52
29:BC:72:VAL:HG21	29:BC:161:ILE:CA	2.40	0.52
27:DA:1810:A:C8	27:DA:1811:G:C8	2.98	0.52
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.10	0.52
30:DD:46:GLN:N	30:DD:46:GLN:OE1	2.43	0.52
1:AA:604:G:C6	1:AA:635:G:C6	2.98	0.52
30:BD:254:THR:O	30:BD:254:THR:OG1	2.23	0.52
27:BA:1015:G:H8	27:BA:1015:G:H5''	1.73	0.52
49:D0:30:VAL:HG12	49:D0:66:VAL:HG22	1.92	0.52
10:AJ:25:GLU:C	10:AJ:27:ALA:H	2.11	0.52
1:CA:1321:C:C4'	13:CM:87:TYR:CE2	2.92	0.52
27:BA:1292:U:C2	27:BA:1293:C:C5	2.98	0.52
40:BR:33:ARG:HA	40:BR:114:VAL:O	2.10	0.52
32:BF:186:ILE:HD13	32:BF:192:LEU:HD12	1.92	0.52
32:BF:3:GLU:HB3	32:BF:20:LEU:O	2.10	0.52
1:AA:885:G:O2'	1:AA:886:G:H5'	2.09	0.52
27:DA:271(S):G:C2'	27:DA:271(T):C:C5'	2.80	0.52
4:CD:60:GLU:O	4:CD:63:LYS:HB2	2.10	0.52
4:CD:93:PHE:CE1	4:CD:97:LEU:HD11	2.44	0.52
38:BP:17:LYS:C	38:BP:19:VAL:H	2.11	0.52
1:CA:461:A:N7	1:CA:471:G:N7	2.58	0.52
44:BV:35:LEU:HD23	44:BV:35:LEU:N	2.24	0.52
17:AQ:45:HIS:N	17:AQ:69:LYS:HE2	2.25	0.52
27:BA:352:G:H8	27:BA:355:G:O6	1.93	0.52
27:DA:1011:G:C2	27:DA:1013:C:C2	2.97	0.52
44:DV:47:VAL:HG12	44:DV:52:VAL:CB	2.38	0.52
30:DD:26:LYS:NZ	30:DD:82:ILE:H	2.07	0.52
27:DA:2271:G:H2'	27:DA:2272:U:H6	1.75	0.52
27:BA:1884:A:H2'	27:BA:1885:A:C5'	2.25	0.52
27:DA:2066:C:OP1	27:DA:2252:G:H4'	2.09	0.52
27:DA:673:C:OP1	32:DF:54:ARG:NH1	2.43	0.52
32:DF:54:ARG:NH2	32:DF:80:ALA:HB2	2.24	0.52
27:DA:943:U:OP2	38:DP:38:GLN:CD	2.48	0.52
39:BQ:46:GLN:O	39:BQ:49:ALA:N	2.43	0.52
27:DA:142:A:H8	27:DA:1408:C:H1'	1.69	0.52
46:DX:36:LYS:CE	46:DX:56:THR:H	2.23	0.52
2:AB:155:LEU:HD13	2:AB:157:ARG:H	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2756:U:O2'	27:DA:2757:A:C5'	2.56	0.52
17:CQ:57:VAL:CG1	17:CQ:76:LEU:HA	2.32	0.52
27:BA:1776:G:C6	27:BA:1777:U:C4	2.98	0.52
2:CB:70:PHE:O	2:CB:92:TYR:HA	2.10	0.52
39:BQ:17:LEU:HD23	39:BQ:17:LEU:N	2.25	0.52
27:BA:1337:G:H2'	27:BA:1338:G:C8	2.43	0.52
1:CA:1064:G:HO2'	1:CA:1065:U:C5'	2.22	0.52
37:BO:35:VAL:HG23	37:BO:65:THR:CG2	2.40	0.52
1:CA:1196:U:OP1	1:CA:1197:G:H5'	2.10	0.52
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.54	0.52
1:AA:1298:C:C5	7:AG:114:ARG:HD2	2.45	0.52
36:DN:75:TYR:HA	36:DN:81:GLY:O	2.10	0.52
33:DG:66:GLN:HB3	33:DG:92:VAL:HG21	1.91	0.52
13:AM:65:LYS:CG	13:AM:70:LEU:HB2	2.40	0.52
1:CA:341:C:O2'	1:CA:342:C:H5'	2.09	0.52
27:DA:743:G:O2'	27:DA:744:G:H5'	2.10	0.52
27:DA:2317:C:O2'	27:DA:2318:G:H5'	2.10	0.52
40:DR:99:LYS:HB2	40:DR:99:LYS:NZ	2.25	0.52
40:DR:37:THR:OG1	40:DR:40:LYS:HE3	2.09	0.52
31:BE:69:LYS:HZ1	31:BE:89:ASP:HA	1.74	0.52
3:AC:50:ALA:O	3:AC:51:GLY:O	2.27	0.52
39:BQ:63:LYS:HD3	39:BQ:65:PHE:CZ	2.45	0.52
39:BQ:26:TYR:O	39:BQ:67:ARG:NH1	2.43	0.52
3:CC:22:TRP:HH2	3:CC:32:LEU:O	1.93	0.52
27:BA:1835:G:C5'	27:BA:1836:C:OP2	2.56	0.52
47:DY:2:ARG:O	47:DY:3:VAL:HG23	2.10	0.52
25:AY:71:A:H2'	25:AY:72:G:O4'	2.10	0.52
48:BZ:13:LYS:O	48:BZ:17:LEU:HD13	2.10	0.52
1:AA:1186:G:N2	1:AA:1187:G:H1'	2.23	0.52
1:CA:691:G:O6	11:CK:55:LYS:HE2	2.10	0.52
10:AJ:96:ILE:N	10:AJ:96:ILE:CD1	2.68	0.52
1:CA:1437:C:H2'	1:CA:1438:G:H8	1.74	0.52
1:CA:255:G:H2'	1:CA:256:U:H6	1.74	0.52
43:BU:24:TYR:CE1	43:BU:38:THR:CG2	2.93	0.52
31:DE:30:PRO:HD3	31:DE:180:ASN:OD1	2.09	0.52
27:DA:1291:C:O2'	27:DA:1292:U:H5'	2.09	0.52
46:DX:54:VAL:HG22	46:DX:81:VAL:HG12	1.90	0.52
20:CT:13:LEU:O	20:CT:16:HIS:HB3	2.09	0.52
27:BA:1451:C:HO2'	27:BA:1457:A:N6	2.08	0.52
27:DA:1173:G:H3'	27:DA:1174:A:H5'	1.92	0.52
27:DA:1174:A:H5''	27:DA:1175:U:C5'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1504:C:C2'	27:BA:1505:C:H5''	2.40	0.52
1:AA:986:A:H2'	1:AA:987:G:C8	2.45	0.52
1:CA:487:A:H2'	1:CA:488:C:O4'	2.09	0.52
12:CL:48:ALA:C	12:CL:49:LEU:HD22	2.30	0.52
40:DR:33:ARG:HG3	40:DR:115:GLU:CB	2.40	0.52
27:DA:1271:G:C2	27:DA:1617:C:H4'	2.45	0.52
1:CA:505:G:H2'	1:CA:506:G:H8	1.73	0.52
27:DA:419:C:O2'	27:DA:420:C:H5'	2.10	0.52
9:CI:22:GLY:HA3	9:CI:60:ASP:OD2	2.09	0.52
27:DA:602:G:O2'	27:DA:604:G:H4'	2.09	0.52
27:BA:2767:C:H2'	27:BA:2768:C:C6	2.44	0.52
27:BA:2594:C:H2'	27:BA:2595:G:C8	2.45	0.52
27:DA:845:G:C5'	27:DA:845:G:H8	2.23	0.52
50:D1:23:LYS:HE2	50:D1:28:GLY:HA3	1.91	0.52
1:AA:1214:C:C6	1:AA:1214:C:OP1	2.63	0.52
7:AG:58:PRO:O	7:AG:61:VAL:HB	2.08	0.52
27:BA:816:C:H2'	27:BA:817:C:C6	2.44	0.52
27:BA:941:A:O2'	38:BP:35:HIS:CE1	2.63	0.52
14:CN:35:ARG:HH11	14:CN:35:ARG:HG2	1.74	0.52
41:BS:92:TYR:N	41:BS:92:TYR:CD1	2.78	0.52
41:BS:87:PHE:HZ	41:BS:97:ARG:HH22	1.57	0.52
27:DA:247:G:O6	57:D8:12:LYS:HE3	2.10	0.52
27:DA:1963:U:O2	27:DA:1963:U:H2'	2.09	0.52
47:BY:53:PRO:HB3	47:BY:56:PRO:HA	1.91	0.52
5:AE:129:ILE:O	5:AE:132:ALA:N	2.24	0.52
44:BV:95:LEU:HD22	44:BV:96:ILE:N	2.25	0.52
27:DA:1493:C:C5	27:DA:2206:G:O2'	2.63	0.52
30:BD:27:THR:CG2	30:BD:83:GLU:HA	2.40	0.52
27:BA:1899:G:H21	27:BA:1902:C:H5	1.58	0.52
27:DA:1991:U:H2'	27:DA:1992:G:C5'	2.38	0.52
1:AA:194:C:O2'	20:AT:68:LYS:HD3	2.08	0.52
1:AA:194:C:C2'	1:AA:195:A:H5''	2.39	0.52
27:BA:1140:C:O3'	36:BN:25:ARG:NH1	2.43	0.52
4:CD:133:VAL:HG11	4:CD:138:TYR:CD1	2.44	0.52
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.24	0.52
1:CA:392:G:H2'	1:CA:393:A:H8	1.75	0.52
34:DH:140:LYS:O	34:DH:144:VAL:HG23	2.10	0.52
34:DH:85:LYS:CG	34:DH:133:VAL:HB	2.40	0.52
27:BA:775:G:C2	27:BA:777:A:N6	2.78	0.52
38:DP:9:ASN:ND2	38:DP:10:PRO:CD	2.61	0.52
27:DA:19:C:OP1	43:DU:22:LYS:CD	2.55	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:41:ARG:HG2	7:AG:41:ARG:NH1	2.25	0.52
1:AA:581:G:O5'	1:AA:581:G:H8	1.93	0.52
20:CT:50:GLU:HA	20:CT:100:ILE:HG21	1.92	0.52
1:CA:1054:C:C5	1:CA:1196:U:C6	2.98	0.52
27:DA:171:G:O2'	27:DA:172:C:H5'	2.10	0.52
48:DZ:23:LEU:HD21	48:DZ:85:VAL:HG13	1.91	0.52
8:CH:29:SER:O	8:CH:32:LYS:N	2.41	0.52
35:BI:89:TYR:C	35:BI:121:LYS:NZ	2.63	0.52
33:BG:53:LEU:N	33:BG:53:LEU:CD2	2.73	0.52
1:AA:503:C:OP1	12:AL:116:LYS:HE3	2.10	0.52
27:DA:319:C:C2	27:DA:333:G:N2	2.78	0.52
1:AA:1298:C:N4	7:AG:114:ARG:HD2	2.25	0.52
51:B2:24:LEU:HD11	51:B2:28:LYS:HE2	1.92	0.52
13:AM:65:LYS:HB3	13:AM:70:LEU:HD12	1.91	0.52
1:AA:1002:G:N2	1:AA:1039:C:O2	2.43	0.52
54:D5:42:PRO:O	54:D5:43:HIS:CB	2.58	0.52
27:BA:1108:U:C2'	27:BA:1109:C:H5'	2.40	0.52
1:CA:12:U:O2'	1:CA:13:U:H5''	2.09	0.52
52:D3:8:LEU:HB3	52:D3:31:LEU:HD23	1.91	0.52
27:DA:1779:U:O4	27:DA:1785:A:C6	2.62	0.52
42:DT:57:PHE:O	42:DT:58:ASN:C	2.47	0.52
27:DA:2001:A:H2'	27:DA:2002:G:O4'	2.10	0.52
46:DX:64:LYS:NZ	46:DX:73:ARG:CZ	2.72	0.52
27:BA:1545:A:H3'	27:BA:1546:C:H6	1.75	0.52
31:BE:26:ILE:HG22	31:BE:27:LEU:N	2.25	0.52
27:DA:1114:G:H3'	27:DA:1115:G:H5''	1.92	0.52
1:CA:624:C:H4'	16:CP:10:GLY:C	2.29	0.52
48:DZ:107:PRO:C	48:DZ:109:GLY:N	2.62	0.52
48:DZ:108:ALA:O	48:DZ:144:GLU:HG2	2.10	0.52
2:CB:174:VAL:HG13	2:CB:184:VAL:CG2	2.38	0.52
50:B1:57:GLU:O	50:B1:58:ILE:HG23	2.09	0.52
53:D4:61:VAL:HG13	53:D4:65:CYS:CB	2.39	0.52
27:BA:2839:G:H2'	27:BA:2840:C:C6	2.43	0.52
38:DP:122:PRO:HA	38:DP:141:ALA:O	2.09	0.52
34:DH:32:GLU:O	34:DH:33:LEU:HD23	2.09	0.52
27:BA:1711:C:H2'	27:BA:1712:C:H6	1.75	0.52
18:AR:86:VAL:HG12	18:AR:87:ARG:HD3	1.91	0.52
27:BA:445:C:N4	27:BA:446:G:C6	2.78	0.52
52:D3:39:ASP:OD2	52:D3:44:ARG:NH2	2.42	0.52
27:DA:2719:G:H5'	27:DA:2847:U:OP1	2.10	0.52
17:AQ:79:SER:OG	17:AQ:80:GLY:N	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:66:VAL:HG12	7:CG:67:GLU:N	2.24	0.52
10:AJ:32:ALA:H	10:AJ:76:ASN:HB3	1.74	0.52
1:AA:120:A:HO2'	1:AA:121:C:P	2.32	0.52
38:BP:38:GLN:HG3	38:BP:39:LYS:H	1.75	0.52
41:DS:56:LEU:O	41:DS:57:LYS:HB2	2.09	0.52
27:BA:251:A:H5''	38:BP:51:PHE:HZ	1.75	0.52
47:BY:84:ARG:O	47:BY:94:LYS:HA	2.09	0.52
37:BO:17:ARG:HE	37:BO:47:ILE:CD1	2.23	0.52
43:BU:61:TRP:O	43:BU:62:ILE:C	2.48	0.52
44:BV:35:LEU:C	44:BV:37:VAL:H	2.13	0.52
1:AA:265:G:H21	1:AA:267:C:H5'	1.75	0.52
41:BS:54:LEU:C	41:BS:56:LEU:H	2.13	0.52
51:D2:5:GLU:O	51:D2:8:LYS:HB2	2.10	0.52
47:DY:39:VAL:CG1	47:DY:40:GLU:H	2.07	0.52
28:DB:79:C:H2'	28:DB:80:U:O4'	2.10	0.52
31:DE:35:GLN:HA	31:DE:67:PHE:CZ	2.45	0.52
27:DA:2350:C:H41	27:DA:2382:G:H22	1.58	0.52
27:DA:2057:A:H2'	27:DA:2058:A:O4'	2.09	0.52
1:AA:1199:U:H4'	10:AJ:54:PHE:CE2	2.45	0.52
8:AH:39:LEU:HB3	8:AH:45:ILE:HG12	1.92	0.52
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.08	0.52
1:CA:386:C:C2'	1:CA:387:U:C5'	2.81	0.52
19:AS:44:MET:SD	19:AS:44:MET:N	2.83	0.52
27:DA:2756:U:C1'	27:DA:2757:A:H5''	2.35	0.52
3:CC:182:ILE:HG23	3:CC:202:ILE:O	2.09	0.52
27:BA:1310:G:N2	27:BA:1313:U:O4	2.43	0.52
27:BA:1311:G:C4	56:B7:47:ARG:NH2	2.78	0.52
1:AA:108:G:C6	20:AT:15:ARG:HD2	2.45	0.52
33:DG:105:LYS:HE3	53:D4:51:TYR:O	2.10	0.52
6:AF:61:LEU:O	6:AF:62:TRP:CB	2.57	0.52
29:DC:214:VAL:C	29:DC:216:THR:N	2.61	0.52
8:AH:60:ARG:CG	8:AH:60:ARG:NH1	2.68	0.52
30:DD:55:GLY:HA3	30:DD:218:ARG:HD3	1.91	0.52
27:BA:2273:A:H2'	27:BA:2274:A:C8	2.45	0.52
1:CA:1310:G:C5'	13:CM:77:ASN:ND2	2.72	0.52
27:BA:2580:U:H4'	31:BE:130:GLY:HA2	1.92	0.52
48:DZ:126:LYS:HD3	48:DZ:161:GLU:OE1	2.10	0.52
32:BF:176:LEU:HD12	32:BF:177:ALA:N	2.23	0.52
1:CA:1404:C:O4'	1:CA:1499:A:C2	2.63	0.52
35:BI:91:SER:HB2	35:BI:119:PRO:HB2	1.90	0.52
35:BI:76:THR:O	35:BI:140:LEU:HA	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1651:G:C2	27:DA:2007:C:N3	2.78	0.52
31:DE:113:PHE:HD2	31:DE:113:PHE:C	2.13	0.52
27:BA:397:G:O2'	27:BA:398:G:H5'	2.09	0.52
1:AA:1243:C:O2'	1:AA:1244:C:H5'	2.09	0.52
30:DD:94:LEU:HD22	30:DD:95:LEU:N	2.25	0.52
1:AA:935:A:H61	7:AG:3:ARG:HB2	1.74	0.52
12:CL:5:ASN:HD22	17:CQ:34:LYS:HZ3	1.58	0.52
27:BA:2302:G:H2'	27:BA:2303:G:H5'	1.92	0.52
12:AL:23:ALA:C	12:AL:24:LEU:HD22	2.30	0.52
50:B1:20:ARG:HA	50:B1:34:THR:HA	1.92	0.52
32:BF:188:ARG:HB2	38:BP:7:ARG:HH22	1.74	0.52
15:AO:39:LEU:C	15:AO:41:GLU:H	2.13	0.52
13:CM:91:ARG:CB	13:CM:98:VAL:HG13	2.40	0.52
1:AA:186:C:H2'	1:AA:187:C:C6	2.45	0.52
1:AA:848:C:H2'	1:AA:849:C:C6	2.44	0.52
1:AA:686:U:HO2'	1:AA:687:A:H8	1.51	0.52
27:BA:26:G:C2'	27:BA:514:A:H61	2.22	0.52
4:AD:68:TYR:HA	4:AD:114:ARG:CD	2.40	0.52
36:DN:26:LEU:HG	36:DN:30:ILE:HD11	1.91	0.52
1:CA:1086:U:H3'	1:CA:1087:G:H8	1.75	0.52
24:CX:29:G:C2'	24:CX:30:G:H5'	2.40	0.52
7:AG:15:ASP:HB3	7:AG:20:ASP:H	1.75	0.52
1:CA:59:A:H5''	1:CA:60:A:C5'	2.40	0.52
53:D4:42:CYS:SG	53:D4:46:ASN:O	2.68	0.52
53:D4:41:ILE:HD13	53:D4:47:VAL:HG13	1.91	0.52
27:BA:1209:G:O2'	27:BA:1237:A:N1	2.31	0.52
31:BE:119:ARG:HD2	31:BE:120:TRP:CD1	2.45	0.52
30:DD:261:LYS:NZ	30:DD:263:ARG:HH12	2.04	0.52
50:B1:64:ALA:HA	50:B1:67:ILE:CG1	2.39	0.52
51:D2:33:MET:O	51:D2:34:GLU:C	2.48	0.52
27:BA:1682:G:C6	27:BA:1683:C:N3	2.78	0.52
20:AT:98:PRO:C	20:AT:100:ILE:N	2.62	0.52
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.24	0.52
30:DD:15:PHE:O	30:DD:17:THR:HG23	2.10	0.52
27:DA:262:A:H2'	27:DA:263:C:C6	2.45	0.52
46:DX:30:VAL:HG23	46:DX:77:LYS:HB3	1.90	0.52
34:DH:27:LYS:HG2	34:DH:32:GLU:CG	2.39	0.52
24:CX:15:G:H2'	24:CX:59:A:N1	2.24	0.52
27:BA:937:U:H2'	27:BA:938:G:C8	2.44	0.52
27:DA:1368:G:O2'	27:DA:1369:G:H5'	2.10	0.52
28:BB:61:G:C2	28:BB:62:C:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BO:25:LEU:O	37:BO:26:LYS:HG3	2.09	0.52
5:AE:53:LEU:N	5:AE:53:LEU:HD12	2.25	0.52
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.73	0.52
27:BA:816:C:O2'	27:BA:817:C:H5'	2.09	0.52
1:CA:963:G:N2	10:CJ:55:LYS:HZ2	2.08	0.52
32:BF:126:VAL:HG21	32:BF:129:PHE:CE1	2.45	0.52
47:BY:95:LYS:HA	47:BY:100:ALA:HA	1.92	0.52
37:BO:14:THR:HG22	37:BO:16:ALA:N	2.25	0.52
57:D8:50:LEU:HD12	57:D8:51:ALA:H	1.72	0.52
27:DA:832:G:O2'	38:DP:52:GLU:HB3	2.10	0.52
27:DA:1792:G:H2'	27:DA:1793:C:C6	2.45	0.52
27:DA:1972:A:H2'	27:DA:1973:G:H8	1.75	0.52
4:CD:10:ARG:HG3	4:CD:40:PRO:HB3	1.92	0.52
5:AE:33:VAL:HG11	5:AE:109:ILE:HG12	1.92	0.52
44:BV:39:LEU:HB3	44:BV:47:VAL:HG11	1.91	0.52
42:BT:82:LEU:O	42:BT:83:ILE:C	2.48	0.52
19:CS:17:GLU:O	19:CS:21:GLU:HG3	2.10	0.52
33:BG:60:LEU:O	33:BG:60:LEU:HD13	2.10	0.52
27:DA:2496:C:OP2	39:DQ:82:ARG:NE	2.42	0.52
27:DA:626:U:H3	38:DP:105:LEU:HB3	1.75	0.52
28:DB:55:U:O3'	33:DG:27:ASN:OD1	2.24	0.52
27:BA:335:C:OP1	27:BA:335:C:H6	1.93	0.52
20:AT:80:ARG:O	20:AT:84:LEU:N	2.41	0.52
27:DA:2636:U:HO2'	31:DE:44:TYR:HH	1.52	0.52
30:BD:94:LEU:HB2	30:BD:104:TYR:HE2	1.75	0.52
1:CA:66:G:N7	1:CA:104:G:N2	2.58	0.52
35:DI:133:HIS:ND1	35:DI:134:PRO:HD3	2.25	0.52
1:AA:1340:A:O2'	1:AA:1341:U:H5'	2.10	0.52
2:AB:69:LEU:HD12	2:AB:69:LEU:C	2.30	0.52
1:AA:532:A:H3'	1:AA:533:A:H5''	1.89	0.52
34:DH:138:LYS:O	34:DH:141:VAL:HB	2.10	0.52
16:AP:58:TYR:CD1	16:AP:58:TYR:C	2.83	0.52
1:CA:189(F):U:H5	17:CQ:3:LYS:HZ3	1.58	0.52
30:BD:44:ASN:ND2	30:BD:47:GLY:O	2.41	0.52
27:BA:2784:C:C1'	31:BE:42:ASP:OD1	2.48	0.52
32:DF:39:TRP:O	32:DF:43:LYS:HG2	2.10	0.52
2:CB:165:VAL:HG23	2:CB:166:ASP:N	2.25	0.52
1:CA:742:G:OP1	15:CO:35:ARG:NH2	2.42	0.52
2:CB:95:GLN:O	2:CB:96:ARG:C	2.48	0.52
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.45	0.52
27:BA:1614:A:H62	45:BW:93:ALA:HB2	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:382:G:H1	27:BA:392:C:H42	1.58	0.52
14:CN:7:ILE:HG13	14:CN:8:GLU:N	2.23	0.52
39:DQ:27:VAL:HG12	39:DQ:28:ALA:N	2.24	0.52
1:CA:645:C:H2'	1:CA:646:U:H6	1.74	0.52
29:BC:36:LYS:O	29:BC:37:PHE:C	2.48	0.52
1:CA:1504:G:H1'	1:CA:1505:G:OP2	2.09	0.52
27:DA:1378:A:C4'	27:DA:1379:A:OP1	2.55	0.52
57:B8:32:LEU:HB3	57:B8:36:LYS:CD	2.40	0.52
27:BA:2420:C:P	57:B8:33:ASN:O	2.68	0.52
1:AA:503:C:H2'	1:AA:504:C:C6	2.42	0.52
27:DA:333:G:C4	27:DA:334:C:C5	2.98	0.52
9:CI:4:TYR:HA	9:CI:88:TYR:CE1	2.45	0.52
51:B2:32:LEU:O	51:B2:35:LEU:HB2	2.10	0.52
57:B8:14:VAL:HG21	57:B8:22:VAL:CG1	2.40	0.52
10:CJ:48:THR:CG2	10:CJ:62:HIS:HB3	2.35	0.52
27:DA:1505:C:C5	27:DA:1506:C:H1'	2.45	0.52
27:DA:2848:G:H3'	42:DT:95:ARG:O	2.10	0.52
1:CA:838:G:N2	1:CA:840:C:H5'	2.24	0.52
19:CS:40:ILE:HB	19:CS:67:VAL:O	2.09	0.52
11:CK:110:ASP:O	18:CR:84:LYS:HG3	2.10	0.52
27:BA:76:C:C2	27:BA:111:A:C2	2.98	0.52
19:AS:6:LYS:HG2	19:AS:7:LYS:HE3	1.92	0.52
27:DA:2882:A:OP1	40:DR:96:ARG:HD3	2.10	0.52
1:AA:189(I):G:H2'	1:AA:189(J):G:H8	1.74	0.52
7:AG:27:ILE:O	7:AG:30:ILE:HG12	2.10	0.52
33:BG:123:ASN:O	33:BG:125:PHE:N	2.42	0.52
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.91	0.52
41:BS:38:GLN:HA	41:BS:50:SER:HA	1.92	0.52
1:AA:1088:G:O2'	1:AA:1089:G:H5'	2.10	0.52
34:BH:126:PRO:O	34:BH:127:GLU:CB	2.54	0.52
27:BA:323:G:H5'	32:BF:169:ASN:HD21	1.75	0.52
32:BF:53:THR:HG22	32:BF:55:GLY:H	1.75	0.52
10:CJ:82:ILE:HD13	10:CJ:85:LEU:HD12	1.90	0.52
1:CA:1474:G:H4'	27:DA:1701:A:N3	2.25	0.52
27:DA:1771:C:C2	27:DA:1772:G:C8	2.97	0.52
1:AA:1028:C:C2'	1:AA:1029:C:H5'	2.40	0.52
27:BA:671:C:C6	27:BA:671:C:H5'	2.44	0.52
27:DA:1374:G:H2'	27:DA:1375:C:H6	1.74	0.52
53:D4:48:ILE:HD12	53:D4:48:ILE:N	2.24	0.52
1:AA:324:G:H21	1:AA:327:A:H8	1.56	0.52
19:CS:18:LYS:O	19:CS:22:LEU:HD23	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BI:69:LYS:O	35:BI:73:GLU:HB3	2.10	0.52
34:BH:73:ALA:O	34:BH:76:VAL:HG23	2.09	0.52
31:DE:167:VAL:CG2	31:DE:170:LEU:HD11	2.40	0.52
58:B9:18:ARG:NH1	58:B9:21:GLY:HA2	2.24	0.52
27:BA:1828:G:H4'	27:BA:1829:A:OP1	2.10	0.52
11:CK:12:ARG:O	11:CK:13:GLN:HG3	2.10	0.52
45:BW:33:ARG:HG3	45:BW:33:ARG:HH11	1.74	0.52
34:BH:40:GLU:O	34:BH:41:MET:HB2	2.10	0.52
1:AA:41:G:O2'	1:AA:42:G:H5'	2.10	0.52
36:BN:18:ALA:HB1	36:BN:21:LYS:HB3	1.92	0.52
2:CB:224:GLN:HG2	2:CB:229:VAL:HG22	1.92	0.52
1:AA:33:A:H2'	1:AA:34:C:C6	2.45	0.52
48:DZ:74:ASN:O	48:DZ:83:GLU:HB2	2.10	0.52
38:BP:63:PRO:O	38:BP:64:LYS:C	2.48	0.51
1:CA:1226:C:C5	13:CM:104:ARG:CA	2.90	0.51
27:BA:1279:G:N2	27:BA:1292:U:C2	2.78	0.51
32:BF:123:LEU:CD1	32:BF:124:LEU:N	2.71	0.51
1:AA:909:A:H2'	1:AA:910:C:C5'	2.40	0.51
1:CA:428:G:O2'	1:CA:429:U:P	2.68	0.51
47:BY:47:LYS:N	47:BY:47:LYS:HD2	2.25	0.51
31:BE:57:LYS:HB3	31:BE:57:LYS:NZ	2.23	0.51
16:CP:81:ARG:HG2	16:CP:83:GLU:OE2	2.10	0.51
27:BA:534:U:H2'	27:BA:535:C:H6	1.75	0.51
44:BV:57:VAL:O	44:BV:57:VAL:CG1	2.59	0.51
1:CA:552:U:H4'	12:CL:83:ARG:CG	2.40	0.51
41:DS:26:LEU:HD12	41:DS:85:VAL:HG21	1.92	0.51
27:DA:870:A:P	39:DQ:6:ARG:HH21	2.32	0.51
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.21	0.51
38:DP:144:GLU:O	38:DP:146:VAL:N	2.44	0.51
38:DP:96:THR:O	38:DP:99:LEU:HB3	2.10	0.51
27:DA:1993:U:C5'	31:DE:128:SER:HB3	2.40	0.51
27:DA:2061:G:H5''	27:DA:2503:A:N1	2.26	0.51
27:DA:2582:G:O2'	27:DA:2583:G:H5'	2.08	0.51
27:DA:747:U:H6	27:DA:747:U:O5'	1.92	0.51
27:BA:1140:C:P	36:BN:66:LYS:HZ1	2.32	0.51
30:BD:35:LYS:NZ	30:BD:103:ARG:N	2.58	0.51
20:CT:104:LEU:HD23	20:CT:105:SER:H	1.75	0.51
1:AA:1363:C:H5'	1:AA:1363(A):A:O5'	2.10	0.51
12:CL:82:ILE:HG21	12:CL:95:TYR:HD2	1.75	0.51
42:DT:28:VAL:CG1	42:DT:46:GLU:HG3	2.39	0.51
30:BD:44:ASN:N	30:BD:44:ASN:OD1	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BE:4:ILE:HG12	31:BE:28:ALA:HB1	1.93	0.51
12:CL:107:VAL:HG11	12:CL:110:ARG:HB2	1.91	0.51
1:CA:1310:G:H5''	13:CM:77:ASN:HD21	1.75	0.51
12:AL:56:ARG:HA	12:AL:62:GLU:HG3	1.93	0.51
27:BA:2576:G:H5'	27:BA:2579:C:H41	1.75	0.51
39:DQ:133:ARG:HH11	39:DQ:133:ARG:HG3	1.75	0.51
27:DA:1267:U:HO2'	27:DA:1268:A:H8	0.69	0.51
13:AM:66:LEU:O	13:AM:69:GLU:O	2.28	0.51
27:DA:2887:U:O2'	27:DA:2888:C:H5'	2.09	0.51
5:CE:10:MET:HB2	5:CE:32:VAL:CG2	2.40	0.51
40:DR:96:ARG:O	40:DR:114:VAL:HA	2.10	0.51
26:AZ:4:SER:H	27:BA:1913:A:HO2'	1.58	0.51
54:D5:25:LEU:HD22	54:D5:26:THR:H	1.70	0.51
45:DW:69:LEU:O	45:DW:110:LYS:NZ	2.42	0.51
1:AA:495:A:C4'	1:AA:496:A:H5''	2.35	0.51
50:D1:82:LEU:C	50:D1:83:GLU:CD	2.68	0.51
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.11	0.51
27:DA:2328:A:H2'	27:DA:2329:G:O4'	2.10	0.51
1:CA:57:G:H2'	1:CA:58:C:H6	1.69	0.51
42:BT:6:LEU:O	42:BT:10:VAL:HG23	2.10	0.51
48:DZ:143:LEU:O	48:DZ:173:VAL:HG21	2.10	0.51
54:B5:47:PRO:O	54:B5:48:GLU:HG3	2.10	0.51
1:CA:929:G:N2	1:CA:1389:C:C2	2.78	0.51
27:DA:290:G:O2'	27:DA:291:C:H5'	2.10	0.51
23:CW:23:G:H2'	23:CW:24:C:C6	2.45	0.51
24:CX:28:C:N4	24:CX:42:G:H1	2.08	0.51
27:BA:1615:C:C6	27:BA:1617:C:C5	2.99	0.51
9:CI:93:ARG:C	9:CI:95:LYS:H	2.13	0.51
33:DG:6:ALA:HB3	33:DG:104:GLU:OE1	2.10	0.51
9:AI:21:PRO:HA	9:AI:59:PHE:HA	1.92	0.51
3:CC:188:LEU:O	3:CC:189:ALA:CB	2.57	0.51
2:CB:109:SER:HA	2:CB:112:VAL:HG23	1.92	0.51
39:BQ:5:ARG:O	39:BQ:6:ARG:HB2	2.08	0.51
48:BZ:73:VAL:HG22	48:BZ:85:VAL:HG12	1.92	0.51
48:DZ:76:ASP:HB2	48:DZ:83:GLU:HG2	1.92	0.51
27:DA:614(A):U:H4'	27:DA:614(B):G:O5'	2.10	0.51
27:BA:431:U:O5'	27:BA:431:U:H6	1.92	0.51
46:BX:41:ASN:O	46:BX:45:THR:HG23	2.11	0.51
4:CD:6:GLY:O	4:CD:7:PRO:C	2.48	0.51
13:CM:105:THR:O	13:CM:106:ASN:HB2	2.10	0.51
27:BA:665:C:O2'	27:BA:666:G:H5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BE:7:VAL:HG23	31:BE:8:LYS:O	2.09	0.51
30:DD:233:HIS:CE1	30:DD:246:PRO:HA	2.44	0.51
4:CD:11:LEU:HD23	4:CD:11:LEU:N	2.24	0.51
4:CD:198:VAL:CG1	4:CD:199:ASN:H	2.21	0.51
4:CD:94:LEU:HA	4:CD:97:LEU:HD12	1.92	0.51
1:CA:1346:A:N6	1:CA:1374:A:H3'	2.17	0.51
44:BV:17:GLY:HA2	44:BV:96:ILE:HB	1.93	0.51
1:AA:267:C:P	17:AQ:67:LYS:HB2	2.50	0.51
27:BA:284:U:O2'	27:BA:285:C:H5'	2.10	0.51
41:BS:66:ALA:O	41:BS:69:VAL:HG12	2.11	0.51
30:BD:24:ILE:O	30:BD:26:LYS:CE	2.58	0.51
27:DA:84:A:OP2	47:DY:9:LYS:NZ	2.44	0.51
27:DA:919:G:H4'	28:DB:81:G:H4'	1.92	0.51
27:DA:2632:A:H2	31:DE:61:ARG:HD3	1.74	0.51
27:DA:2553:G:C6	27:DA:2554:U:O2	2.64	0.51
20:AT:63:ILE:HG22	20:AT:77:ALA:HB1	1.92	0.51
36:BN:62:VAL:HG22	36:BN:63:THR:N	2.25	0.51
1:CA:197:A:H1'	1:CA:198:G:O4'	2.10	0.51
1:AA:1053:G:HO2'	1:AA:1199:U:H5	1.58	0.51
1:AA:1319:A:OP1	19:AS:10:PHE:CZ	2.64	0.51
10:AJ:50:ILE:CD1	10:AJ:60:ARG:HD3	2.40	0.51
37:DO:107:ARG:HG3	37:DO:112:MET:SD	2.50	0.51
12:CL:15:VAL:CG2	12:CL:16:ARG:H	2.05	0.51
27:BA:684:G:C2	27:BA:774:A:C2	2.97	0.51
32:DF:37:VAL:HG12	32:DF:41:LEU:HD12	1.91	0.51
27:BA:1339:G:OP1	46:BX:14:SER:CB	2.57	0.51
37:BO:8:LEU:HD12	37:BO:82:ASN:HB3	1.90	0.51
3:CC:87:LEU:C	3:CC:89:GLU:N	2.62	0.51
1:CA:532:A:O2'	1:CA:533:A:C5'	2.59	0.51
42:BT:108:ARG:HA	42:BT:111:ARG:HD3	1.92	0.51
1:CA:1307:U:C2'	1:CA:1308:U:H6	2.23	0.51
46:DX:65:ARG:HB2	46:DX:70:LEU:HG	1.91	0.51
29:DC:68:LEU:HD11	29:DC:179:SER:CA	2.39	0.51
27:DA:1314:C:H2'	27:DA:1315:C:H6	1.76	0.51
27:DA:1625:C:H2'	27:DA:1626:G:C5'	2.39	0.51
35:BI:132:PRO:HD2	35:BI:133:HIS:HD2	1.72	0.51
1:AA:441:A:H3'	1:AA:442:C:C6	2.38	0.51
27:DA:857:C:H5'	49:D0:77:ARG:NH1	2.21	0.51
3:AC:201:TYR:O	3:AC:202:ILE:HD13	2.10	0.51
27:DA:593:G:O2'	27:DA:594:U:H5'	2.10	0.51
33:DG:150:ASP:OD1	33:DG:153:ARG:NH2	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:106:PRO:O	5:CE:110:LEU:HG	2.10	0.51
5:CE:78:HIS:C	5:CE:93:PRO:HD3	2.29	0.51
40:DR:100:LEU:CD2	40:DR:113:LEU:HB2	2.39	0.51
27:BA:1202:C:C2	27:BA:1244:G:N2	2.78	0.51
1:CA:477:A:C2'	1:CA:479:C:H5'	2.41	0.51
27:BA:1442:G:C2	27:BA:1550:C:O2	2.63	0.51
27:BA:271(B):C:C2'	27:BA:271(C):C:H5'	2.40	0.51
1:AA:1291:G:H4'	9:AI:38:GLN:O	2.10	0.51
1:CA:1280:A:C5'	10:CJ:40:LEU:HD12	2.38	0.51
32:BF:168:ARG:HG2	32:BF:175:THR:HG21	1.90	0.51
27:DA:557:U:O2'	27:DA:558:G:H5'	2.09	0.51
5:AE:79:GLU:HA	5:AE:91:LEU:O	2.10	0.51
13:CM:36:LYS:NZ	13:CM:59:TYR:HE1	2.05	0.51
47:DY:43:ASN:O	47:DY:44:ILE:O	2.28	0.51
3:CC:119:ARG:HH11	3:CC:119:ARG:HG3	1.75	0.51
27:BA:2243:U:O2'	27:BA:2244:U:H5'	2.11	0.51
27:DA:2145:C:H4'	27:DA:2146:C:OP2	2.10	0.51
9:AI:106:ALA:O	9:AI:107:ARG:C	2.48	0.51
35:BI:136:VAL:O	35:BI:138:ILE:HG12	2.10	0.51
39:BQ:81:VAL:HG23	39:BQ:82:ARG:N	2.24	0.51
4:CD:49:ARG:HD3	4:CD:50:ARG:H	1.74	0.51
3:AC:142:MET:HE1	3:AC:171:GLY:HA3	1.91	0.51
27:DA:2033:A:C5	27:DA:2036:C:C4	2.97	0.51
1:AA:1154:G:O2'	1:AA:1155:G:O4'	2.27	0.51
1:AA:161:A:H2'	1:AA:162:A:O4'	2.10	0.51
27:BA:1385:G:O2'	27:BA:1386:C:H6	1.92	0.51
13:AM:28:ALA:O	13:AM:32:GLU:N	2.43	0.51
27:BA:887:A:O2'	27:BA:888:C:H5''	2.10	0.51
7:CG:123:GLU:O	7:CG:127:ALA:HB2	2.11	0.51
52:D3:39:ASP:CG	52:D3:44:ARG:HE	2.13	0.51
51:B2:14:ARG:NH1	51:B2:14:ARG:HG3	2.25	0.51
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.10	0.51
27:BA:2569:G:O2'	27:BA:2570:G:H5'	2.10	0.51
1:AA:1007:C:H2'	1:AA:1008:C:C6	2.45	0.51
27:DA:360:G:O2'	27:DA:361:G:H5'	2.09	0.51
27:BA:1328:G:H2'	27:BA:1330:C:C4	2.45	0.51
27:DA:567:A:H2'	27:DA:568:U:O5'	2.10	0.51
27:DA:668:G:C4	27:DA:670:A:C5	2.99	0.51
27:BA:2192:G:H2'	27:BA:2193:G:H5'	1.91	0.51
27:BA:244:A:C2	27:BA:255:A:C4	2.99	0.51
47:BY:7:VAL:HG21	47:BY:8:LYS:HZ3	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BH:85:LYS:HE2	34:BH:145:ALA:CA	2.40	0.51
34:BH:142:GLY:O	34:BH:145:ALA:HB3	2.09	0.51
27:BA:662:G:H5'	38:BP:17:LYS:O	2.11	0.51
31:BE:75:VAL:CG1	31:BE:76:ARG:H	2.21	0.51
1:CA:473:G:H5''	16:CP:81:ARG:NH2	2.25	0.51
44:DV:49:THR:HG22	44:DV:50:PRO:CD	2.38	0.51
30:DD:131:LEU:HA	30:DD:190:TYR:CE2	2.46	0.51
30:DD:210:GLY:C	30:DD:212:SER:H	2.13	0.51
30:BD:27:THR:HG21	30:BD:83:GLU:HA	1.92	0.51
33:BG:57:ALA:HA	33:BG:90:LEU:HD11	1.93	0.51
27:DA:2367:G:H2'	27:DA:2368:C:H6	1.74	0.51
27:DA:2023:G:O2'	27:DA:2024:G:H8	1.92	0.51
27:DA:2507:C:C2	27:DA:2508:G:C8	2.99	0.51
27:DA:940:G:C2'	27:DA:941:A:H5''	2.40	0.51
31:DE:116:VAL:O	31:DE:116:VAL:HG22	2.09	0.51
32:DF:65:TRP:CH2	32:DF:75:HIS:CD2	2.98	0.51
1:CA:1297:C:H1'	1:CA:1298:C:H5	1.74	0.51
34:BH:44:VAL:O	34:BH:46:GLU:N	2.42	0.51
12:CL:25:LYS:O	12:CL:27:ALA:N	2.43	0.51
37:DO:104:ARG:HH22	42:DT:43:GLN:HE22	1.58	0.51
37:DO:105:GLU:N	37:DO:105:GLU:OE1	2.43	0.51
1:AA:228:A:H2'	1:AA:229:U:O4'	2.11	0.51
12:CL:15:VAL:O	12:CL:16:ARG:CB	2.58	0.51
17:CQ:7:THR:CG2	17:CQ:58:GLU:HG2	2.40	0.51
1:CA:565:U:H2'	1:CA:566:G:H8	1.74	0.51
2:CB:42:ILE:HD11	2:CB:202:PRO:HB2	1.92	0.51
2:CB:17:PHE:HB2	2:CB:42:ILE:HG22	1.92	0.51
23:CW:42:G:O5'	23:CW:42:G:H8	1.92	0.51
27:BA:422:A:H2'	27:BA:423:A:C8	2.45	0.51
1:CA:538:G:C5'	12:CL:111:LYS:HD3	2.40	0.51
27:BA:2507:C:O2'	27:BA:2508:G:H5'	2.09	0.51
51:B2:33:MET:O	51:B2:35:LEU:N	2.43	0.51
48:BZ:101:LEU:HB2	48:BZ:121:ARG:O	2.10	0.51
35:DI:81:VAL:HG12	35:DI:82:ARG:N	2.24	0.51
5:CE:45:PHE:CG	5:CE:47:LYS:HE3	2.45	0.51
2:CB:97:TRP:CZ3	2:CB:98:LEU:O	2.63	0.51
27:BA:927:G:H5'	27:BA:928:G:OP2	2.09	0.51
37:DO:66:LYS:HD2	37:DO:78:ARG:HG3	1.91	0.51
25:CY:48:C:O2'	25:CY:49:G:H8	1.93	0.51
27:BA:2099:U:H3	27:BA:2190:G:H1	1.58	0.51
1:AA:817:C:H4'	1:AA:818:G:OP1	2.06	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:59:U:O2'	25:CY:60:C:H5''	2.09	0.51
1:AA:1314:C:H5	19:AS:6:LYS:NZ	2.08	0.51
24:AX:74:C:C2'	24:AX:75:C:H5'	2.39	0.51
48:BZ:138:VAL:HG12	48:BZ:139:ASP:N	2.20	0.51
52:D3:8:LEU:HD12	52:D3:30:ARG:O	2.10	0.51
33:BG:166:ASP:O	33:BG:169:ALA:N	2.44	0.51
1:CA:885:G:H2'	1:CA:886:G:C8	2.37	0.51
27:BA:721:C:H2'	27:BA:722:A:C8	2.46	0.51
13:CM:53:VAL:HG12	13:CM:54:VAL:N	2.24	0.51
27:BA:2242:G:H2'	27:BA:2243:U:O4'	2.10	0.51
27:DA:292:C:H2'	27:DA:293:U:H5'	1.92	0.51
1:AA:1033:G:C2'	1:AA:1034:G:H5'	2.40	0.51
27:BA:1449:A:H5'	27:BA:1450:G:OP2	2.09	0.51
1:CA:556:C:H2'	1:CA:557:G:C8	2.42	0.51
48:DZ:12:GLU:O	48:DZ:17:LEU:HD13	2.10	0.51
43:BU:52:ARG:HB3	43:BU:52:ARG:CZ	2.39	0.51
54:B5:34:PRO:C	54:B5:36:CYS:H	2.13	0.51
27:BA:1829:A:H2'	27:BA:1830:C:H5'	1.92	0.51
27:DA:1936:A:C8	27:DA:1940:U:O2	2.64	0.51
42:DT:134:GLU:O	42:DT:135:ALA:HB3	2.10	0.51
27:DA:483:A:H1'	47:DY:60:PHE:HZ	1.75	0.51
27:DA:845:G:C8	27:DA:845:G:H5''	2.46	0.51
1:AA:646:U:O2'	1:AA:647:C:H5'	2.11	0.51
35:BI:46:ALA:O	35:BI:49:ALA:HB3	2.10	0.51
35:DI:15:VAL:HG23	35:DI:16:GLY:N	2.24	0.51
27:BA:851:U:O2'	52:B3:45:GLY:HA3	2.10	0.51
28:DB:2:C:H2'	28:DB:3:C:C6	2.45	0.51
27:BA:408:G:O2'	27:BA:409:C:H5'	2.10	0.51
31:DE:175:VAL:HG23	31:DE:177:PRO:HD3	1.91	0.51
27:BA:2362:G:H2'	27:BA:2363:C:H5'	1.92	0.51
27:BA:2008:C:O2'	27:BA:2009:G:H5'	2.10	0.51
57:B8:7:HIS:CE1	57:B8:9:GLY:HA3	2.45	0.51
14:CN:41:ARG:O	14:CN:44:LEU:HB3	2.10	0.51
19:CS:32:LYS:CE	19:CS:32:LYS:H	2.17	0.51
40:BR:41:ALA:O	40:BR:43:GLU:N	2.43	0.51
27:DA:1833:U:H2'	27:DA:1834:U:C6	2.45	0.51
43:BU:61:TRP:O	43:BU:64:ARG:N	2.43	0.51
44:DV:19:LYS:HZ1	44:DV:22:VAL:HG13	1.75	0.51
30:BD:24:ILE:O	30:BD:25:THR:O	2.28	0.51
27:DA:2811:G:C1'	31:DE:61:ARG:HH21	2.23	0.51
55:D6:15:GLU:HB3	55:D6:18:ARG:CG	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:84:ASN:C	38:DP:86:LYS:H	2.12	0.51
45:DW:88:ARG:HB2	45:DW:92:ARG:CB	2.39	0.51
55:B6:48:VAL:O	55:B6:49:HIS:CB	2.58	0.51
46:DX:59:VAL:HG21	46:DX:78:LYS:HD2	1.92	0.51
47:BY:27:VAL:HA	47:BY:28:LYS:HZ1	1.67	0.51
1:AA:981:U:O4	1:AA:1222:G:O6	2.28	0.51
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.10	0.51
12:CL:56:ARG:HG3	12:CL:61:TYR:O	2.10	0.51
27:BA:1811:G:H2'	27:BA:1812:A:H8	1.76	0.51
27:BA:2586:C:H5'	27:BA:2586:C:H6	1.75	0.51
1:AA:102:G:O2'	1:AA:103:C:H5'	2.10	0.51
2:CB:200:ILE:HG22	2:CB:201:ILE:N	2.26	0.51
27:BA:1996:C:H1'	27:BA:1997:G:O4'	2.10	0.51
34:BH:157:TYR:O	34:BH:158:HIS:CD2	2.62	0.51
39:DQ:2:LEU:O	39:DQ:70:PRO:HG2	2.10	0.51
27:DA:1340:U:O2'	27:DA:1602:U:H2'	2.11	0.51
1:AA:36:C:H4'	12:AL:119:THR:O	2.10	0.51
3:AC:201:TYR:CD1	3:AC:201:TYR:N	2.79	0.51
38:BP:24:GLY:O	38:BP:25:SER:CB	2.55	0.51
1:AA:1173:G:H2'	1:AA:1174:G:H8	1.76	0.51
51:B2:6:VAL:HG13	51:B2:59:ARG:HH11	1.74	0.51
27:BA:764:A:C6	30:BD:209:ALA:HB1	2.45	0.51
5:CE:15:ARG:HG3	5:CE:28:PHE:HE2	1.69	0.51
27:BA:271(T):C:C2	27:BA:271(U):G:C8	2.98	0.51
1:AA:631:G:C5'	1:AA:632:A:OP1	2.54	0.51
27:DA:1320:C:H5''	27:DA:1321:A:OP1	2.11	0.51
24:AX:3:C:O2	24:AX:3:C:H2'	2.09	0.51
27:DA:321:G:C2	32:DF:165:ARG:CZ	2.93	0.51
27:BA:380:U:O2	27:BA:381:G:C8	2.63	0.51
1:CA:815:A:O2'	1:CA:1527:C:C1'	2.59	0.51
1:AA:275:G:C2'	1:AA:276:G:H5'	2.41	0.51
33:BG:28:VAL:O	33:BG:31:VAL:CG1	2.58	0.51
27:BA:2048:G:H5'	27:BA:2048:G:C8	2.37	0.51
1:AA:182:U:C6	1:AA:182:U:H5'	2.44	0.51
28:DB:16:G:H1	28:DB:68:C:N4	2.05	0.51
16:CP:22:THR:HB	16:CP:32:TYR:HA	1.93	0.51
9:AI:112:LYS:HA	9:AI:119:ALA:N	2.25	0.51
27:BA:516:C:O2'	27:BA:517:C:H5'	2.11	0.51
4:AD:123:HIS:O	4:AD:125:HIS:CG	2.63	0.51
27:DA:2283:C:H2'	27:DA:2284:C:C5'	2.39	0.51
5:CE:94:ALA:HB1	5:CE:98:THR:CB	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DX:63:LYS:HE3	46:DX:72:LYS:HG3	1.91	0.51
1:CA:1030:C:C3'	1:CA:1030(A):G:H5'	2.40	0.51
27:DA:708:C:H42	27:DA:723:G:H1	1.58	0.51
24:AX:63:G:H2'	24:AX:63:G:N3	2.25	0.51
9:CI:89:ASN:HB3	9:CI:92:TYR:HD1	1.71	0.51
1:AA:994:A:N7	1:AA:1216:G:H4'	2.25	0.51
3:AC:164:ARG:O	3:AC:165:THR:CB	2.59	0.51
3:CC:188:LEU:O	3:CC:189:ALA:HB3	2.11	0.51
30:DD:45:ASN:HB2	30:DD:46:GLN:OE1	2.11	0.51
27:BA:414:C:H5'	27:BA:415:A:OP2	2.11	0.51
1:AA:505:G:H2'	1:AA:506:G:C8	2.45	0.51
48:BZ:6:ALA:O	48:BZ:61:PRO:HD3	2.10	0.51
29:BC:22:ILE:O	29:BC:22:ILE:HG22	2.10	0.51
1:AA:950:U:H2'	1:AA:951:G:C8	2.44	0.51
1:CA:44:G:H2'	1:CA:45:U:O4'	2.11	0.51
28:BB:101:G:H2'	28:BB:102:A:O4'	2.10	0.51
48:BZ:95:VAL:HG12	48:BZ:96:GLU:N	2.26	0.51
27:DA:284:U:O2'	27:DA:285:C:H6	1.92	0.51
13:AM:64:TRP:CD1	13:AM:64:TRP:N	2.77	0.51
27:BA:2817:G:H21	27:BA:2836:U:C1'	2.24	0.51
28:BB:43:C:H3'	28:BB:44:G:H5'	1.92	0.51
28:BB:47:C:O2'	41:BS:93:LYS:HG2	2.11	0.51
34:BH:85:LYS:HZ2	34:BH:133:VAL:CG2	2.23	0.51
27:DA:252:G:H2'	27:DA:253:C:H6	1.75	0.51
44:BV:19:LYS:HB2	44:BV:96:ILE:HG12	1.91	0.51
47:DY:95:LYS:HG2	47:DY:100:ALA:HA	1.93	0.51
30:DD:25:THR:O	30:DD:26:LYS:C	2.49	0.51
51:D2:2:LYS:N	51:D2:5:GLU:OE1	2.43	0.51
27:DA:2402:C:H2'	27:DA:2403:C:O5'	2.11	0.51
38:DP:101:VAL:C	38:DP:103:ALA:H	2.13	0.51
27:DA:2500:U:C2'	27:DA:2504:U:H5	2.24	0.51
20:AT:78:ALA:HA	20:AT:81:LYS:HD3	1.92	0.51
47:DY:20:TYR:CZ	47:DY:42:VAL:HA	2.46	0.51
1:CA:224:C:O2'	1:CA:225:C:H5'	2.11	0.51
12:CL:24:LEU:HD13	12:CL:24:LEU:N	2.25	0.51
58:D9:17:ILE:CG2	58:D9:19:ARG:HG2	2.39	0.51
27:DA:2751:G:H3'	27:DA:2752:C:H5	1.74	0.51
30:BD:238:GLY:O	30:BD:239:ARG:HB3	2.10	0.51
31:BE:36:ARG:HH22	31:BE:88:GLY:CA	2.19	0.51
31:BE:86:PRO:C	31:BE:88:GLY:N	2.64	0.51
1:CA:992:U:H4'	1:CA:993:G:C5'	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:477:A:O2'	1:AA:479:C:H5'	2.10	0.51
40:BR:79:LEU:HA	40:BR:83:ILE:HB	1.92	0.51
3:CC:72:LYS:N	3:CC:73:PRO:CD	2.73	0.51
15:CO:79:ARG:HA	15:CO:82:ILE:CG2	2.41	0.51
27:BA:2271:G:C5	27:BA:2272:U:C5	2.97	0.51
19:CS:6:LYS:HE3	19:CS:6:LYS:N	2.25	0.51
27:BA:2159:G:O2'	27:BA:2160:G:O5'	2.28	0.51
29:BC:36:LYS:HB2	29:BC:36:LYS:NZ	2.24	0.51
24:CX:17:C:H5''	24:CX:17(B):U:H2'	1.92	0.51
1:CA:1398:A:C5'	1:CA:1398:A:C8	2.92	0.51
27:BA:2013:A:H4'	45:BW:96:ILE:HD12	1.91	0.51
1:AA:494:U:O5'	1:AA:494:U:H6	1.94	0.51
2:CB:14:GLY:C	2:CB:15:VAL:HG22	2.31	0.51
27:BA:68:G:N2	27:BA:74:A:O4'	2.43	0.51
20:AT:73:HIS:CG	20:AT:74:LYS:H	2.29	0.51
29:DC:78:ALA:CB	29:DC:82:LYS:HD2	2.40	0.51
34:DH:93:GLY:C	34:DH:94:TYR:HD1	2.14	0.51
1:CA:1026:G:H5'	1:CA:1027:C:OP2	2.11	0.51
37:DO:40:VAL:HG12	37:DO:41:ALA:N	2.26	0.51
1:CA:841:U:H3'	1:CA:848:C:O4'	2.10	0.51
16:CP:58:TYR:C	16:CP:60:LEU:H	2.13	0.51
15:AO:62:GLN:HE21	15:AO:66:LEU:HD13	1.76	0.51
27:BA:628:G:H2'	27:BA:629:G:C8	2.46	0.51
48:BZ:9:ARG:NH2	48:BZ:25:GLY:O	2.44	0.51
38:BP:8:PRO:O	38:BP:9:ASN:HB3	2.10	0.51
27:BA:142(A):C:C2'	27:BA:143:G:H5'	2.40	0.51
3:AC:152:ILE:HG22	3:AC:153:VAL:N	2.25	0.51
1:CA:1095:U:N3	1:CA:1096:C:C4	2.78	0.51
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.78	0.51
13:AM:104:ARG:CG	13:AM:105:THR:N	2.71	0.51
27:DA:2197:U:O2'	27:DA:2198:A:P	2.68	0.51
34:BH:89:ILE:HG12	34:BH:129:THR:HA	1.91	0.51
10:CJ:82:ILE:HA	10:CJ:85:LEU:HD12	1.92	0.51
31:BE:9:VAL:CG1	31:BE:25:VAL:HG12	2.38	0.51
20:AT:90:GLN:O	20:AT:91:LEU:HD23	2.11	0.51
36:BN:17:ASP:HB2	36:BN:55:VAL:HG12	1.89	0.51
36:BN:55:VAL:HG22	36:BN:56:ASN:N	2.26	0.51
39:DQ:110:THR:CG2	39:DQ:113:GLN:HB2	2.40	0.51
42:BT:129:ARG:NH1	42:BT:131:ALA:N	2.58	0.51
27:BA:188:G:C2'	27:BA:189:G:H5'	2.40	0.51
27:DA:1814:G:H2'	27:DA:1815:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:66:ASN:CB	43:BU:76:TYR:HB2	2.40	0.51
4:AD:178:VAL:C	4:AD:180:GLY:N	2.63	0.51
41:DS:22:GLY:O	41:DS:23:ARG:O	2.27	0.51
1:CA:1445:C:H2'	1:CA:1446:U:C5'	2.40	0.51
30:BD:197:GLY:O	30:BD:198:ASN:CB	2.58	0.51
27:DA:2721:A:H2'	27:DA:2722:G:O4'	2.10	0.51
6:CF:6:VAL:HG22	6:CF:90:VAL:CG1	2.40	0.51
1:CA:1368:G:H5''	9:CI:112:LYS:HG2	1.92	0.51
1:CA:1441:G:H5''	1:CA:1442:G:O4'	2.11	0.51
27:DA:1435:G:H2'	27:DA:1436:G:O4'	2.09	0.51
3:CC:142:MET:C	3:CC:144:SER:H	2.14	0.51
27:BA:377:C:H2'	27:BA:378:C:C6	2.45	0.51
27:BA:2208:A:H1'	27:BA:2219:G:C4	2.46	0.51
3:CC:6:HIS:O	3:CC:8:ILE:N	2.43	0.51
35:DI:73:GLU:OE2	35:DI:137:PRO:HD2	2.11	0.51
41:DS:36:TYR:N	41:DS:36:TYR:CD1	2.78	0.51
54:B5:37:LYS:HG3	54:B5:38:ALA:N	2.26	0.51
7:CG:24:THR:C	7:CG:28:ASN:HD22	2.14	0.51
38:BP:63:PRO:O	38:BP:65:ARG:N	2.44	0.51
1:CA:1014:A:H2'	1:CA:1015:A:N9	2.25	0.51
1:CA:985:C:O2'	1:CA:986:A:C8	2.59	0.51
41:BS:96:GLY:O	41:BS:98:VAL:HG12	2.10	0.51
47:BY:7:VAL:CB	47:BY:8:LYS:NZ	2.72	0.51
1:CA:1101:A:C4'	1:CA:1102:A:O5'	2.35	0.51
27:DA:1932:A:C2'	27:DA:1933:G:H5'	2.41	0.51
27:DA:1935:G:C6	27:DA:1962:C:C6	2.99	0.51
1:CA:502:G:OP1	12:CL:115:SER:N	2.44	0.51
53:B4:40:ILE:N	53:B4:40:ILE:HD12	2.26	0.51
27:BA:481:G:C1'	27:BA:506:G:N2	2.72	0.51
1:AA:865:A:H5'	1:AA:1078:U:C4	2.45	0.51
5:AE:127:ASN:O	5:AE:131:ILE:HG12	2.11	0.51
27:BA:536:A:H2'	27:BA:537:C:H6	1.73	0.51
27:DA:536:A:OP1	43:DU:53:ARG:NH1	2.44	0.51
43:DU:49:HIS:CA	43:DU:52:ARG:HB2	2.33	0.51
31:DE:52:LEU:HD23	31:DE:76:ARG:HB2	1.92	0.51
27:DA:2258:C:C4'	27:DA:2259:G:OP2	2.57	0.51
27:DA:2580:U:H5'	27:DA:2581:G:OP2	2.10	0.51
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.43	0.51
9:AI:120:ARG:O	9:AI:121:ARG:C	2.48	0.51
49:B0:45:PHE:CZ	49:B0:77:ARG:NH2	2.79	0.51
1:AA:1305:G:N2	1:AA:1331:G:C2'	2.68	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1492:A:H5'	26:CZ:6:5OH:CB	2.40	0.51
31:BE:81:ILE:HG21	31:BE:84:PHE:CD1	2.45	0.51
2:AB:110:GLN:HA	2:AB:113:HIS:HB2	1.92	0.51
1:CA:237:C:O2'	1:CA:238:G:H5'	2.10	0.51
1:CA:607:A:H2'	1:CA:608:A:H5'	1.93	0.51
39:BQ:41:TRP:C	39:BQ:42:ILE:HD12	2.31	0.51
27:BA:1659:U:O2'	27:BA:1660:C:H5'	2.11	0.51
27:BA:744:G:C6	27:BA:745:G:C4	2.98	0.51
1:CA:741:G:H2'	1:CA:742:G:H8	1.75	0.51
1:CA:1161:C:H42	1:CA:1176:A:H61	1.59	0.51
30:BD:270:ILE:C	30:BD:271:ILE:HG12	2.30	0.51
6:AF:8:ILE:HG12	6:AF:88:VAL:HG22	1.93	0.51
34:DH:12:PRO:HG2	34:DH:49:VAL:CA	2.30	0.51
27:BA:2121:G:H21	29:BC:172:HIS:CB	2.23	0.51
27:BA:2164:C:H2'	27:BA:2165:G:O4'	2.10	0.51
1:CA:1505:G:H4'	1:CA:1506:U:H5'	1.93	0.51
27:DA:1339:G:N2	27:DA:1603:A:H1'	2.25	0.51
48:BZ:152:SER:CB	48:BZ:166:PRO:HB3	2.40	0.51
27:DA:1654:A:OP1	40:DR:3:HIS:HB2	2.09	0.51
1:AA:547:A:H5'	1:AA:548:G:OP1	2.11	0.51
27:BA:2305:A:N6	33:BG:43:LEU:H	2.06	0.51
51:B2:33:MET:C	51:B2:35:LEU:N	2.60	0.51
52:D3:49:LYS:HG2	52:D3:49:LYS:O	2.11	0.51
13:AM:83:ASP:C	13:AM:85:GLY:H	2.13	0.51
5:CE:47:LYS:O	5:CE:48:ALA:HB2	2.10	0.51
36:BN:53:VAL:O	36:BN:54:VAL:C	2.49	0.51
30:DD:176:ARG:HG2	30:DD:177:LEU:N	2.26	0.51
5:CE:79:GLU:HA	5:CE:91:LEU:O	2.10	0.51
3:AC:86:VAL:O	3:AC:90:GLU:HG2	2.11	0.51
47:BY:2:ARG:O	47:BY:4:LYS:N	2.44	0.51
2:AB:16:HIS:CD2	2:AB:210:SER:HA	2.46	0.51
27:DA:2656:U:HO2'	27:DA:2657:A:H8	1.59	0.51
33:BG:33:ARG:O	33:BG:161:THR:HG22	2.10	0.51
27:DA:1980:G:O2'	27:DA:1982:C:OP2	2.27	0.51
1:AA:1245:A:H61	1:AA:1292:U:H3	1.57	0.51
13:AM:91:ARG:HD3	19:AS:81:ARG:HH21	1.76	0.51
27:BA:438:G:H2'	27:BA:440:G:H8	1.76	0.51
4:CD:25:ARG:NH1	4:CD:30:LYS:O	2.44	0.51
10:CJ:87:THR:OG1	10:CJ:88:LEU:N	2.42	0.51
13:CM:12:ASN:OD1	13:CM:46:LYS:HE2	2.10	0.51
12:AL:10:LYS:HD2	12:AL:10:LYS:H	1.71	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1817:G:H2'	27:DA:1818:U:H5'	1.93	0.51
56:B7:37:LYS:HD3	56:B7:39:ARG:CD	2.40	0.51
1:AA:1371:G:O2'	1:AA:1372:U:H5'	2.11	0.51
35:DI:26:ALA:HB1	35:DI:31:LEU:CD1	2.41	0.51
1:CA:859:A:H2'	1:CA:860:A:C5'	2.40	0.51
1:CA:859:A:H2'	1:CA:860:A:H5'	1.91	0.51
27:DA:2672:G:C3'	27:DA:2673:G:H5''	2.41	0.51
7:CG:111:ARG:HB3	7:CG:111:ARG:NH1	2.25	0.51
36:BN:28:THR:HG23	36:BN:29:LYS:N	2.25	0.51
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.10	0.51
10:CJ:33:GLN:OE1	10:CJ:75:ILE:HD11	2.10	0.51
27:DA:272(G):C:N4	27:DA:363(C):G:H1	2.08	0.51
27:DA:76:C:H6	27:DA:76:C:O5'	1.93	0.51
48:BZ:44:ASP:O	48:BZ:45:LYS:C	2.49	0.51
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.10	0.51
1:CA:1440:C:O2	1:CA:1440:C:H2'	2.10	0.51
29:BC:56:GLN:NE2	29:BC:173:ALA:HB1	2.26	0.51
54:D5:57:VAL:HG23	54:D5:58:LEU:N	2.26	0.51
54:D5:8:LYS:O	54:D5:9:LYS:HG2	2.11	0.51
27:DA:363(D):G:H2'	27:DA:363(D):G:N3	2.26	0.51
34:DH:74:ASN:N	34:DH:74:ASN:HD22	2.09	0.51
27:DA:773:U:H4'	30:DD:47:GLY:HA3	1.93	0.51
40:DR:93:GLY:C	40:DR:95:THR:H	2.14	0.51
41:BS:96:GLY:O	41:BS:98:VAL:N	2.44	0.51
30:DD:11:PRO:O	30:DD:12:SER:C	2.49	0.51
4:CD:33:MET:HE1	4:CD:37:PRO:HA	1.93	0.51
4:CD:61:LYS:HZ2	4:CD:62:GLN:HE21	1.59	0.51
4:CD:80:GLU:HA	4:CD:80:GLU:OE2	2.10	0.51
43:BU:92:ARG:HH21	44:BV:11:GLN:N	2.07	0.51
43:DU:113:ALA:C	43:DU:115:ALA:H	2.13	0.51
43:DU:65:ILE:CD1	43:DU:96:ALA:CB	2.89	0.51
43:DU:69:CYS:HG	43:DU:79:PHE:HD1	1.58	0.51
27:DA:1433:U:O2	27:DA:1433:U:H2'	2.09	0.51
41:DS:85:VAL:O	41:DS:106:ARG:HG3	2.10	0.51
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.91	0.51
27:DA:630:G:N2	27:DA:633:A:OP2	2.44	0.51
27:DA:2061:G:N7	27:DA:2501:C:H1'	2.26	0.51
27:DA:966:G:H2'	27:DA:967:C:H6	1.75	0.51
27:DA:671:C:C5	38:DP:36:LYS:HE2	2.45	0.51
27:DA:2019:A:O3'	43:DU:27:LEU:HD12	2.11	0.51
36:BN:93:THR:CG2	36:BN:93:THR:O	2.56	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2481:G:O2'	27:BA:2482:G:OP2	2.28	0.51
27:DA:139:G:H2'	27:DA:139(A):G:H5''	1.92	0.51
46:DX:36:LYS:HG2	46:DX:56:THR:HG23	1.91	0.51
1:CA:63:C:O2'	1:CA:380:G:H4'	2.10	0.51
47:BY:37:VAL:O	47:BY:38:ILE:HG12	2.11	0.51
1:AA:1350:A:OP2	9:AI:118:LYS:HE3	2.11	0.51
8:AH:109:ILE:HD11	8:AH:120:THR:CG2	2.41	0.51
19:AS:19:VAL:HG11	19:AS:44:MET:HG3	1.93	0.51
27:BA:2070:G:N2	27:BA:2071:A:N3	2.59	0.51
27:BA:796:C:H2'	27:BA:797:C:C6	2.45	0.51
2:CB:74:LYS:HD3	2:CB:165:VAL:HG21	1.93	0.51
1:CA:896:C:C2'	1:CA:897:C:H5'	2.40	0.51
46:DX:12:VAL:O	46:DX:13:LEU:HB2	2.10	0.51
1:CA:992:U:C4'	1:CA:993:G:O5'	2.48	0.51
1:CA:229:U:O2'	1:CA:230:G:H5'	2.10	0.51
1:CA:969:A:H2'	1:CA:970:C:O4'	2.11	0.51
1:CA:1074:G:C1'	2:CB:104:ASN:HD22	2.24	0.51
14:CN:22:THR:OG1	14:CN:33:VAL:CG2	2.58	0.51
25:AY:62:U:H2'	25:AY:63:C:C6	2.46	0.51
27:BA:2172:U:C1'	27:BA:2173:A:OP1	2.52	0.51
27:BA:6:A:H2	27:BA:7:G:C4	2.28	0.51
27:BA:150:C:O2'	27:BA:151:C:H5'	2.11	0.51
49:B0:25:ARG:NH1	49:B0:25:ARG:HG2	2.25	0.51
27:DA:857:C:P	49:D0:77:ARG:NH2	2.83	0.51
27:DA:2306:C:H5	27:DA:2307:G:HO2'	1.56	0.51
33:DG:46:ALA:O	33:DG:82:LEU:HD11	2.09	0.51
13:AM:3:ARG:CZ	13:AM:7:VAL:HG13	2.40	0.51
27:DA:2318:G:O2'	27:DA:2319:G:OP1	2.26	0.51
34:DH:45:VAL:HG12	34:DH:45:VAL:O	2.11	0.51
1:AA:815:A:O2'	1:AA:816:A:P	2.69	0.51
7:CG:146:GLU:O	7:CG:149:ARG:HB2	2.10	0.51
12:CL:5:ASN:HA	12:CL:8:VAL:HG23	1.93	0.51
27:BA:2571:C:C5'	27:BA:2572:A:C5'	2.79	0.51
27:BA:813:U:H2'	27:BA:814:C:C6	2.46	0.51
31:BE:69:LYS:O	31:BE:71:GLY:N	2.43	0.51
27:BA:15:G:H2'	27:BA:16:G:C8	2.44	0.51
12:AL:25:LYS:HB2	12:AL:30:ARG:NH1	2.20	0.51
1:CA:571:U:H3'	1:CA:572:A:C5'	2.40	0.51
52:D3:54:VAL:CG1	52:D3:55:ARG:N	2.73	0.51
48:BZ:71:ARG:HE	48:BZ:88:PHE:HD1	1.59	0.51
27:BA:598:G:H2'	27:BA:599:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DZ:13:LYS:N	48:DZ:14:PRO:CD	2.74	0.51
43:BU:47:TYR:CE2	44:BV:74:LYS:NZ	2.79	0.51
27:BA:876:C:H2'	27:BA:877:U:H6	1.76	0.51
2:CB:142:LEU:CD1	2:CB:146:GLN:HB2	2.41	0.51
29:DC:52:ARG:NH2	29:DC:53:ARG:NH2	2.58	0.51
1:CA:1452:C:H1'	1:CA:1456:G:N2	2.25	0.51
27:DA:2314:C:H2'	27:DA:2315:G:C8	2.46	0.51
39:BQ:37:LEU:HD21	39:BQ:130:LYS:HB2	1.92	0.51
7:CG:48:LYS:O	7:CG:52:GLU:HB2	2.10	0.51
27:BA:229:A:C8	27:BA:229:A:OP1	2.64	0.51
28:BB:43:C:H3'	28:BB:44:G:C5'	2.40	0.51
32:BF:10:PRO:HA	32:BF:127:GLU:HB3	1.93	0.51
32:BF:186:ILE:HD13	32:BF:192:LEU:HD11	1.93	0.51
31:BE:167:VAL:CG1	31:BE:189:PRO:HD3	2.41	0.51
27:DA:194:G:N2	27:DA:251:A:C2	2.79	0.51
27:DA:1903:G:N2	27:DA:1904:G:C4	2.78	0.51
1:CA:1349:A:OP2	9:CI:118:LYS:NZ	2.43	0.51
1:AA:266:G:C8	1:AA:266:G:H5'	2.46	0.51
42:BT:112:ARG:O	42:BT:115:ARG:HG2	2.11	0.51
36:DN:2:LYS:NZ	44:DV:13:ARG:N	2.55	0.51
51:D2:5:GLU:O	51:D2:8:LYS:N	2.37	0.51
38:DP:112:LEU:C	38:DP:112:LEU:HD13	2.31	0.51
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	1.93	0.51
36:BN:63:THR:O	36:BN:64:GLY:C	2.49	0.51
10:AJ:49:VAL:CG2	10:AJ:50:ILE:N	2.73	0.51
14:AN:24:CYS:N	14:AN:33:VAL:HG11	2.26	0.51
1:AA:376:G:C5'	16:AP:5:ARG:HB2	2.27	0.51
1:AA:1306:A:H2'	1:AA:1307:U:H6	1.75	0.51
1:CA:277:C:P	17:CQ:41:LYS:HZ2	2.34	0.51
27:BA:2590:A:O2'	27:BA:2591:C:H5'	2.11	0.51
32:DF:41:LEU:HD11	32:DF:184:TYR:HE1	1.74	0.51
1:CA:893:C:H2'	1:CA:894:G:C8	2.44	0.51
27:BA:826:U:C4	27:BA:828:U:H1'	2.46	0.51
15:CO:54:ARG:O	15:CO:54:ARG:HD2	2.10	0.51
27:DA:2650:U:H2'	27:DA:2651:C:H6	1.76	0.51
15:AO:81:LEU:O	15:AO:84:LYS:HD3	2.11	0.51
27:BA:382:G:O2'	27:BA:383:U:H5'	2.10	0.51
27:BA:1439:A:C2	27:BA:1553:A:C5	2.98	0.51
10:AJ:16:LEU:HD11	10:AJ:70:ARG:NE	2.26	0.51
27:BA:2580:U:H5'	31:BE:131:ALA:H	1.74	0.51
55:B6:9:LEU:HD13	55:B6:28:ARG:HG3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2862:G:O2'	27:BA:2863:C:H5'	2.11	0.51
8:AH:86:ILE:CG1	8:AH:135:CYS:HA	2.40	0.51
8:AH:2:LEU:HD22	8:AH:3:THR:H	1.76	0.51
34:DH:108:GLY:O	34:DH:109:PHE:O	2.29	0.51
11:AK:48:ILE:CG1	11:AK:64:ALA:HA	2.41	0.51
33:DG:137:GLU:HA	33:DG:152:LEU:HD11	1.92	0.51
13:AM:3:ARG:HG2	13:AM:9:ILE:HG13	1.92	0.51
34:BH:12:PRO:O	34:BH:13:LYS:HB2	2.09	0.51
38:BP:71:VAL:HG13	38:BP:72:PRO:CD	2.41	0.51
11:CK:110:ASP:O	18:CR:84:LYS:CG	2.59	0.51
27:DA:2470:G:H2'	27:DA:2471:C:H6	1.75	0.51
1:AA:1264:C:C6	1:AA:1264:C:H3'	2.44	0.51
27:BA:104:U:C6	27:BA:105:C:C6	2.99	0.51
47:DY:45:VAL:HG12	47:DY:46:LYS:N	2.24	0.51
1:AA:495:A:HO2'	1:AA:496:A:P	2.33	0.51
1:CA:576:G:H3'	1:CA:577:G:H5''	1.93	0.51
8:AH:94:TYR:HE1	8:AH:132:GLU:HB2	1.76	0.51
1:AA:610:G:O2'	1:AA:611:A:H5'	2.09	0.51
27:DA:226:G:O2'	27:DA:227:A:C8	2.53	0.51
7:AG:63:LYS:NZ	7:AG:67:GLU:HB2	2.24	0.51
27:DA:2841:C:H2'	27:DA:2842:G:C8	2.46	0.51
1:CA:257:G:C2	1:CA:270:A:N1	2.79	0.51
27:BA:2873:A:C2	40:BR:6:SER:CB	2.93	0.51
18:CR:59:SER:H	18:CR:62:GLU:HB2	1.76	0.51
27:BA:1843:C:O2'	30:BD:256:GLY:HA3	2.11	0.51
8:CH:72:PRO:O	8:CH:73:ASP:CB	2.58	0.51
27:BA:703:U:H2'	27:BA:704:G:C5'	2.40	0.51
40:BR:73:VAL:O	40:BR:76:VAL:HG12	2.11	0.51
31:BE:105:THR:HG21	31:BE:164:ARG:HH11	1.76	0.51
31:BE:119:ARG:CD	31:BE:120:TRP:CE2	2.93	0.51
27:DA:126:A:OP2	56:D7:19:ARG:CB	2.58	0.51
27:BA:2853:C:H2'	27:BA:2854:G:H8	1.72	0.51
29:BC:68:LEU:HD11	29:BC:180:PHE:CB	2.40	0.51
50:B1:93:GLU:C	50:B1:95:LEU:N	2.62	0.51
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.45	0.51
19:CS:22:LEU:HD13	19:CS:27:GLU:HB3	1.92	0.51
48:BZ:107:PRO:CG	48:BZ:116:LEU:HB2	2.40	0.51
29:DC:47:LEU:CB	29:DC:207:THR:HA	2.40	0.51
27:DA:1877:A:H3'	27:DA:1878:G:O4'	2.10	0.51
4:CD:3:ARG:HG2	4:CD:118:ARG:CD	2.41	0.51
39:BQ:37:LEU:HD23	39:BQ:129:THR:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1164:G:H2'	27:BA:1165:U:C6	2.46	0.51
48:DZ:29:ASN:O	48:DZ:30:ARG:HB2	2.11	0.51
27:BA:2765:A:H5'	27:BA:2766:G:OP2	2.10	0.51
36:BN:18:ALA:HB1	36:BN:21:LYS:CB	2.40	0.51
27:BA:2362:G:C2'	27:BA:2363:C:H5'	2.40	0.51
27:BA:1625:C:H2'	27:BA:1626:G:H5'	1.92	0.51
1:CA:876:G:O5'	8:CH:14:ARG:NH1	2.43	0.51
27:BA:521:G:H2'	27:BA:522:G:C8	2.45	0.51
12:CL:79:VAL:HB	12:CL:103:ASP:OD1	2.11	0.51
27:BA:663:G:H2'	27:BA:664:C:C6	2.45	0.51
37:BO:87:ILE:HG22	37:BO:88:ASN:N	2.26	0.51
1:CA:544:G:H2'	1:CA:545:C:H6	1.76	0.51
53:B4:62:CYS:SG	53:B4:64:LYS:CG	2.99	0.51
13:CM:68:GLY:O	13:CM:71:ARG:CB	2.53	0.51
27:BA:486:C:H4'	45:BW:60:ASN:OD1	2.11	0.51
16:CP:82:GLN:O	16:CP:83:GLU:CB	2.58	0.51
43:BU:91:ASP:OD2	43:BU:96:ALA:CB	2.54	0.51
44:BV:99:ILE:CD1	44:BV:99:ILE:N	2.74	0.51
32:DF:16:GLY:O	32:DF:17:ARG:CG	2.50	0.51
32:DF:7:TYR:O	32:DF:8:GLN:CB	2.58	0.51
8:AH:20:TYR:CA	8:AH:65:TYR:HE2	2.17	0.51
43:DU:83:LEU:CG	43:DU:88:ILE:HD11	2.33	0.51
4:CD:138:TYR:CD2	4:CD:138:TYR:C	2.85	0.51
4:CD:108:LEU:HD11	4:CD:174:LEU:HB3	1.93	0.51
14:AN:45:ARG:HA	14:AN:48:ALA:HB3	1.93	0.51
1:AA:1221:G:P	19:AS:36:ARG:HD3	2.51	0.51
24:AX:31:G:C2	24:AX:40:C:C2	2.99	0.51
37:DO:104:ARG:NH1	37:DO:104:ARG:HB3	2.26	0.51
37:DO:112:MET:O	37:DO:115:VAL:HB	2.10	0.51
58:D9:11:CYS:SG	58:D9:32:HIS:ND1	2.84	0.51
17:CQ:83:ASP:OD1	17:CQ:84:LEU:HG	2.11	0.51
50:D1:51:VAL:HG22	50:D1:52:ARG:H	1.76	0.51
31:BE:4:ILE:HD13	31:BE:91:VAL:HG12	1.92	0.51
2:CB:82:ARG:HG2	2:CB:86:GLU:CD	2.31	0.51
1:CA:895:G:H2'	1:CA:896:C:C6	2.46	0.51
27:BA:950:G:C6	27:BA:951:C:N3	2.79	0.51
16:CP:42:ARG:C	16:CP:43:LYS:HD2	2.31	0.51
31:DE:182:LEU:HG	31:DE:184:VAL:HG23	1.93	0.51
50:B1:5:CYS:SG	50:B1:8:SER:N	2.81	0.51
3:CC:103:VAL:O	3:CC:103:VAL:HG12	2.11	0.51
3:CC:92:ALA:HA	3:CC:95:THR:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1074:G:O4'	2:CB:104:ASN:ND2	2.44	0.51
1:CA:539:A:OP1	12:CL:111:LYS:HE2	2.11	0.51
10:AJ:3:LYS:HB2	10:AJ:77:PRO:HG3	1.92	0.51
12:AL:54:LYS:HA	12:AL:64:THR:HA	1.93	0.51
27:BA:2870:C:O2'	27:BA:2871:C:H5'	2.10	0.51
27:DA:2134:A:H62	27:DA:2157:G:H1'	1.75	0.51
58:B9:32:HIS:O	58:B9:34:GLN:CG	2.59	0.51
57:B8:31:HIS:C	57:B8:33:ASN:HD22	2.13	0.51
57:B8:34:TRP:CZ2	57:B8:35:GLN:HB3	2.45	0.51
27:BA:1210:A:H5''	27:BA:1211:U:H2'	1.92	0.51
27:DA:2821:A:H2'	27:DA:2822:G:O4'	2.11	0.51
27:BA:142:A:H1'	27:BA:1408:C:C1'	2.41	0.51
32:BF:132:VAL:HG22	32:BF:133:ASN:N	2.26	0.51
51:B2:31:GLU:O	51:B2:35:LEU:HD12	2.11	0.51
27:DA:1131:G:N7	36:DN:75:TYR:CD2	2.79	0.51
33:DG:125:PHE:CD2	33:DG:131:TYR:HB2	2.46	0.51
35:BI:31:LEU:HD21	35:BI:38:LEU:HG	1.93	0.51
21:AU:6:ARG:O	21:AU:12:LYS:HE2	2.11	0.51
27:DA:1385:G:O6	27:DA:1403:C:N4	2.43	0.51
5:CE:110:LEU:HA	5:CE:113:ALA:HB3	1.93	0.51
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.09	0.51
19:AS:6:LYS:O	19:AS:7:LYS:HD3	2.11	0.51
27:DA:2790:A:H2'	27:DA:2791:C:H5''	1.93	0.51
40:DR:26:LYS:NZ	40:DR:71:GLN:CB	2.74	0.51
47:BY:2:ARG:HA	47:BY:2:ARG:HH11	1.76	0.51
27:DA:783:A:C2'	27:DA:784:A:O5'	2.58	0.51
1:CA:939:G:H5''	7:CG:102:ARG:CZ	2.40	0.51
54:B5:40:LYS:HD3	54:B5:41:PRO:O	2.11	0.51
50:B1:19:GLN:CA	50:B1:19:GLN:HE21	2.23	0.51
1:AA:1090:U:O2'	1:AA:1091:U:H5'	2.10	0.51
27:DA:227:A:N6	27:DA:410:G:H21	2.01	0.51
34:BH:88:LEU:HD12	34:BH:130:ARG:HG3	1.93	0.51
3:AC:99:VAL:HG23	3:AC:99:VAL:O	2.11	0.51
10:CJ:30:SER:HB3	10:CJ:80:LYS:HE2	1.93	0.51
27:BA:2109:U:H6	27:BA:2109:U:O5'	1.94	0.51
1:AA:686:U:O2'	1:AA:687:A:H8	1.94	0.51
3:AC:11:ARG:HA	3:AC:14:ILE:CG2	2.41	0.51
4:AD:205:GLU:C	4:AD:207:TYR:N	2.65	0.51
27:BA:1195:G:C2'	27:BA:1196:C:H5'	2.40	0.51
4:AD:94:LEU:O	4:AD:97:LEU:N	2.44	0.51
1:CA:406:G:H5'	4:CD:5:ILE:HG21	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:4:TYR:HD2	4:CD:5:ILE:N	2.08	0.51
27:DA:1550:C:H2'	27:DA:1551:C:C6	2.45	0.51
18:AR:87:ARG:HG2	18:AR:87:ARG:HH11	1.76	0.51
45:BW:99:ARG:HH11	45:BW:99:ARG:HG2	1.76	0.51
30:DD:139:GLY:O	30:DD:140:THR:C	2.49	0.51
27:DA:1558:A:O2'	27:DA:1559:G:P	2.68	0.51
8:CH:97:VAL:HG13	8:CH:98:LYS:N	2.25	0.51
4:AD:145:GLU:O	4:AD:147:ALA:N	2.43	0.51
1:CA:1226:C:C6	13:CM:103:THR:O	2.64	0.51
40:BR:96:ARG:O	40:BR:114:VAL:HA	2.11	0.51
53:B4:44:CYS:SG	53:B4:64:LYS:HB2	2.51	0.51
33:BG:37:VAL:HB	33:BG:99:MET:HG3	1.93	0.51
13:CM:24:GLY:C	13:CM:25:ILE:HD12	2.30	0.51
43:BU:96:ALA:C	43:BU:98:LEU:N	2.64	0.51
27:DA:992:C:OP1	43:DU:47:TYR:OH	2.24	0.51
27:DA:1419:A:H62	27:DA:1578:U:H3	1.59	0.51
27:DA:1567:A:H2'	30:DD:86:PRO:HG3	1.93	0.51
12:CL:52:VAL:HG22	12:CL:66:TYR:CA	2.25	0.51
51:D2:9:GLN:OE1	51:D2:56:GLN:HG2	2.11	0.51
47:DY:28:LYS:NZ	47:DY:28:LYS:N	2.57	0.51
47:DY:28:LYS:O	47:DY:38:ILE:HB	2.11	0.51
31:DE:51:PHE:CG	31:DE:52:LEU:N	2.79	0.51
27:DA:2248:C:H2'	27:DA:2248:C:O2	2.10	0.51
39:BQ:43:THR:O	39:BQ:47:ILE:HG13	2.11	0.51
47:BY:27:VAL:CA	47:BY:28:LYS:NZ	2.67	0.51
8:AH:53:VAL:HB	8:AH:56:LYS:HB2	1.93	0.51
38:DP:9:ASN:O	38:DP:10:PRO:C	2.48	0.51
27:BA:968:G:H2'	27:BA:969:U:C6	2.46	0.51
27:BA:1657:C:O2'	27:BA:1658:C:H5'	2.11	0.51
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.25	0.51
20:CT:26:ASN:HD22	20:CT:27:LYS:H	1.59	0.51
37:BO:24:VAL:HB	37:BO:33:ALA:HB2	1.93	0.51
4:CD:150:GLU:N	4:CD:150:GLU:CD	2.60	0.51
27:BA:1799:G:N1	30:BD:178:PRO:HD2	2.26	0.51
27:DA:543:C:O3'	27:DA:547:A:P	2.70	0.51
27:BA:1487:G:H1	27:BA:1502:C:N4	2.09	0.51
14:CN:16:PHE:O	14:CN:18:VAL:N	2.44	0.51
38:BP:105:LEU:O	38:BP:106:LEU:HB3	2.11	0.51
27:BA:624:C:H41	38:BP:107:LYS:HZ2	1.59	0.51
25:AY:68:C:C3'	25:AY:69:C:H5''	2.40	0.51
1:CA:652:U:C2'	1:CA:653:A:H5''	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DC:41:VAL:HG23	29:DC:178:ALA:CB	2.35	0.51
1:CA:155:C:O5'	1:CA:155:C:H6	1.93	0.51
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.46	0.51
3:CC:41:GLY:O	3:CC:45:LYS:HG3	2.11	0.51
27:DA:849:A:H2'	27:DA:850:C:O4'	2.11	0.51
27:DA:2866:U:H5''	27:DA:2867:G:OP1	2.11	0.51
42:DT:96:ARG:HG2	42:DT:96:ARG:NH1	2.18	0.51
27:DA:2831:G:OP2	31:DE:58:ARG:NH2	2.43	0.51
31:DE:13:ARG:CB	31:DE:22:PRO:HA	2.41	0.51
25:CY:40:C:H2'	25:CY:41:G:C8	2.40	0.51
27:DA:784:A:OP1	27:DA:2588:G:OP1	2.29	0.51
3:CC:14:ILE:HG23	3:CC:15:THR:N	2.26	0.51
32:DF:167:ALA:HB1	32:DF:173:VAL:HG21	1.94	0.51
3:AC:52:LEU:HD23	3:AC:52:LEU:H	1.76	0.51
1:CA:579:G:C6	1:CA:580:U:C4	2.99	0.51
34:DH:170:ARG:HG2	34:DH:171:LEU:N	2.26	0.51
32:DF:144:LYS:C	32:DF:146:ALA:H	2.14	0.51
1:AA:1514:C:H2'	1:AA:1515:C:H6	1.76	0.51
2:AB:48:MET:O	2:AB:50:GLU:N	2.44	0.51
15:AO:39:LEU:O	15:AO:43:LEU:HG	2.11	0.51
27:BA:2048:G:C2	27:BA:2621:A:C2	2.99	0.51
1:AA:784:C:N3	1:AA:799:G:C2	2.79	0.51
27:BA:1549:C:O2'	27:BA:1550:C:H5'	2.10	0.51
1:AA:186:C:H2'	1:AA:187:C:H6	1.75	0.51
4:AD:173:TRP:O	4:AD:174:LEU:HD23	2.11	0.51
27:DA:2043:C:H2'	27:DA:2043:C:O2	2.10	0.51
2:AB:41:ILE:HD12	2:AB:41:ILE:N	2.26	0.51
5:CE:121:LYS:HG3	5:CE:122:GLU:N	2.26	0.51
27:DA:1947:C:O2	27:DA:1947:C:H2'	2.10	0.51
1:AA:687:A:H1'	1:AA:688:G:OP2	2.11	0.51
1:AA:1437:C:N4	1:AA:1464:G:H1	2.07	0.51
2:CB:41:ILE:HD12	2:CB:41:ILE:N	2.26	0.51
27:DA:1799:G:O2'	27:DA:1800:C:OP2	2.28	0.51
1:AA:279:A:C5'	1:AA:281:G:H5'	2.40	0.51
9:CI:15:ALA:HB2	9:CI:65:VAL:CG2	2.41	0.51
27:DA:814:C:H41	38:DP:27:HIS:CD2	2.29	0.51
1:AA:324:G:N2	1:AA:327:A:H8	2.09	0.51
35:BI:73:GLU:CB	35:BI:136:VAL:HG23	2.40	0.51
36:DN:3:THR:HG22	36:DN:5:VAL:HG12	1.93	0.51
25:CY:20:A:O2'	25:CY:21:A:P	2.69	0.51
1:AA:418:C:H1'	1:AA:540:G:O2'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:238:C:H1'	27:BA:609:A:H1'	1.93	0.51
27:DA:77:C:H2'	27:DA:78:A:H8	1.75	0.51
32:DF:163:VAL:O	32:DF:166:ALA:HB3	2.11	0.51
1:AA:616:G:H1'	1:AA:625:G:N2	2.26	0.51
48:BZ:96:GLU:O	48:BZ:97:MET:HB3	2.10	0.51
2:CB:136:VAL:O	2:CB:140:HIS:HB2	2.11	0.51
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.11	0.51
27:DA:272(E):G:H2'	27:DA:272(F):C:C6	2.46	0.51
44:DV:34:GLU:O	44:DV:36:PRO:HD3	2.10	0.51
27:BA:2550:G:C2'	27:BA:2551:C:H5'	2.41	0.51
57:B8:61:LEU:CD1	57:B8:61:LEU:N	2.72	0.50
57:B8:63:PRO:HG2	57:B8:64:TYR:HD1	1.76	0.50
1:CA:984:C:N4	1:CA:1221:G:O6	2.44	0.50
10:CJ:47:PHE:CD1	10:CJ:47:PHE:N	2.79	0.50
1:CA:1188:A:H4'	14:CN:58:LYS:HZ2	1.76	0.50
28:BB:44:G:H1'	28:BB:47:C:N4	2.26	0.50
27:BA:2680:C:H4'	31:BE:8:LYS:HZ2	1.76	0.50
27:DA:194:G:C2	27:DA:202:U:H1'	2.45	0.50
1:CA:426:G:H2'	1:CA:427:U:C6	2.46	0.50
27:BA:2328:A:O2'	27:BA:2329:G:H5'	2.11	0.50
43:DU:33:ARG:C	43:DU:35:ALA:N	2.65	0.50
30:DD:142:VAL:HG22	30:DD:143:HIS:N	2.26	0.50
1:AA:471:G:O2'	1:AA:472:A:H8	1.94	0.50
41:DS:96:GLY:C	41:DS:98:VAL:H	2.15	0.50
27:DA:909:A:H2'	27:DA:912:C:H5	1.76	0.50
27:DA:919:G:H4'	28:DB:81:G:C4'	2.42	0.50
11:AK:18:ARG:O	11:AK:33:THR:N	2.39	0.50
27:DA:2428:G:N2	38:DP:60:MET:CE	2.74	0.50
38:DP:102:ARG:HB3	38:DP:102:ARG:NH2	2.26	0.50
1:AA:169:C:C6	1:AA:170:U:H5	2.28	0.50
36:BN:67:LEU:HA	36:BN:87:LEU:HB3	1.93	0.50
8:AH:44:PHE:HE2	8:AH:109:ILE:HG22	1.76	0.50
12:CL:81:LEU:HB3	12:CL:98:VAL:HB	1.92	0.50
49:B0:70:GLN:HG2	49:B0:71:ASP:H	1.76	0.50
28:DB:7:G:O2'	41:DS:38:GLN:NE2	2.44	0.50
1:CA:741:G:C2	1:CA:742:G:C4	2.99	0.50
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.11	0.50
1:CA:1038:C:H2'	1:CA:1039:C:N3	2.27	0.50
20:CT:51:GLU:O	20:CT:55:ILE:HG12	2.11	0.50
15:AO:81:LEU:C	15:AO:81:LEU:HD12	2.32	0.50
27:DA:691:C:H42	27:DA:771:G:H1	1.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:538:G:O3'	12:CL:111:LYS:NZ	2.41	0.50
42:BT:48:ILE:O	42:BT:50:ILE:HD13	2.11	0.50
15:CO:70:LEU:CD2	15:CO:78:TYR:HA	2.41	0.50
27:BA:2264:C:C4	27:BA:2265:U:C4	2.98	0.50
27:DA:2158:A:HO2'	27:DA:2159:G:H8	1.57	0.50
27:DA:686:G:H21	27:DA:788:A:H61	1.55	0.50
48:BZ:156:LEU:HD21	48:BZ:162:LEU:HD12	1.92	0.50
27:BA:571:A:C8	27:BA:2030:A:N6	2.79	0.50
1:AA:1163:C:H2'	1:AA:1164:G:H8	1.76	0.50
27:BA:2308:G:O6	27:BA:2310:A:H3'	2.11	0.50
13:AM:92:HIS:O	13:AM:93:ARG:C	2.50	0.50
27:BA:2516:G:H2'	27:BA:2517:C:C5'	2.40	0.50
8:AH:108:GLY:CA	8:AH:138:TRP:HB3	2.40	0.50
27:DA:2298:A:H2'	27:DA:2299:G:C8	2.44	0.50
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG22	1.93	0.50
35:DI:10:GLU:OE1	35:DI:11:ASN:HB2	2.11	0.50
1:CA:577:G:N3	1:CA:578:C:C5	2.79	0.50
28:BB:57:A:C8	28:BB:57:A:H5'	2.46	0.50
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.93	0.50
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.46	0.50
1:AA:392:G:H4'	16:AP:13:HIS:CE1	2.47	0.50
34:DH:105:LEU:HD22	34:DH:105:LEU:N	2.26	0.50
20:AT:75:ASN:HD22	20:AT:75:ASN:H	1.53	0.50
27:DA:2195:C:O2'	27:DA:2196:C:H5'	2.11	0.50
27:BA:1303:G:N3	27:BA:1304:C:C6	2.79	0.50
3:CC:150:LYS:CD	3:CC:201:TYR:HD1	2.24	0.50
27:BA:1464:C:HO2'	27:BA:1528:A:H8	1.56	0.50
30:DD:158:ALA:O	30:DD:161:THR:OG1	2.26	0.50
18:AR:62:GLU:O	18:AR:63:GLN:C	2.50	0.50
27:BA:528:A:N7	36:BN:114:ARG:NH1	2.58	0.50
51:B2:64:LEU:O	51:B2:67:LYS:HB2	2.11	0.50
34:BH:103:LEU:HD22	34:BH:123:PHE:HE2	1.75	0.50
35:DI:115:ALA:HB3	35:DI:129:THR:OG1	2.11	0.50
1:AA:332:G:OP2	20:AT:10:LEU:HD13	2.12	0.50
1:AA:1213:A:H2'	1:AA:1215:G:N7	2.26	0.50
2:CB:131:PRO:HG2	2:CB:134:GLU:CG	2.42	0.50
27:BA:2639:A:N6	27:BA:2640:G:C2	2.79	0.50
5:AE:15:ARG:CZ	5:AE:26:PHE:CE2	2.95	0.50
27:BA:924:C:H2'	27:BA:925:C:H6	1.76	0.50
1:AA:1428:A:H2'	1:AA:1429:C:H6	1.76	0.50
27:BA:715:G:H2'	27:BA:716:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:486:U:O2'	1:CA:487:A:H8	1.93	0.50
28:DB:77:U:H4'	48:DZ:83:GLU:OE1	2.11	0.50
1:CA:757:U:H2'	1:CA:758:G:O4'	2.11	0.50
27:DA:1412:A:H8	27:DA:1412:A:O5'	1.94	0.50
14:AN:36:PHE:C	14:AN:36:PHE:CD1	2.84	0.50
11:AK:97:ALA:O	11:AK:100:ALA:O	2.30	0.50
27:BA:251:A:H5''	38:BP:51:PHE:CZ	2.46	0.50
27:BA:1281:G:H2'	27:BA:1281:G:N3	2.27	0.50
27:DA:1823:G:O2'	27:DA:1824:G:H5'	2.11	0.50
27:DA:1794:U:O4'	27:DA:1900:A:C2	2.64	0.50
42:BT:78:LEU:C	42:BT:79:HIS:ND1	2.65	0.50
1:AA:129(A):G:N2	1:AA:189(E):U:HO2'	2.09	0.50
1:AA:128:G:H5'	17:AQ:2:PRO:HA	1.93	0.50
42:BT:28:VAL:HG11	42:BT:46:GLU:HB2	1.94	0.50
42:BT:65:LYS:HZ1	42:BT:66:VAL:HG23	1.74	0.50
1:AA:1403:C:O2'	1:AA:1404:C:H5'	2.11	0.50
47:DY:96:ILE:HG22	47:DY:97:ARG:H	1.76	0.50
38:DP:83:VAL:O	38:DP:115:LEU:HD23	2.12	0.50
36:DN:112:LEU:O	36:DN:115:ARG:HB3	2.11	0.50
27:DA:1348:G:C2'	27:DA:1349:A:H5''	2.41	0.50
31:DE:92:THR:O	31:DE:95:ILE:HB	2.11	0.50
13:CM:14:ARG:N	13:CM:44:ARG:NH1	2.56	0.50
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.24	0.50
27:BA:1810:A:H2'	27:BA:1811:G:H5'	1.93	0.50
17:AQ:74:LEU:O	17:AQ:75:ARG:HB3	2.12	0.50
33:DG:105:LYS:HE2	33:DG:143:GLU:OE2	2.11	0.50
16:AP:74:LEU:HA	16:AP:77:ALA:HB3	1.93	0.50
20:CT:48:LYS:HB3	20:CT:51:GLU:CG	2.42	0.50
1:CA:263:A:H2'	1:CA:264:U:C6	2.46	0.50
1:AA:1151:A:O2'	1:AA:1152:A:C8	2.56	0.50
10:AJ:6:ILE:CG1	10:AJ:72:VAL:O	2.57	0.50
8:CH:82:HIS:O	8:CH:83:ILE:HB	2.11	0.50
27:BA:624:C:O2'	27:BA:625:G:H5'	2.11	0.50
27:DA:356:G:H2'	27:DA:356:G:N3	2.26	0.50
35:BI:129:THR:HA	35:BI:137:PRO:HA	1.92	0.50
28:DB:45:A:C1'	33:DG:95:ARG:NH1	2.74	0.50
1:AA:736:C:H5''	18:AR:72:ARG:HE	1.76	0.50
1:AA:1326:C:OP1	21:AU:12:LYS:HD2	2.11	0.50
15:AO:66:LEU:C	15:AO:68:ARG:H	2.14	0.50
1:AA:1278:U:C6	1:AA:1278:U:H3'	2.45	0.50
40:DR:56:LYS:HD2	40:DR:88:ARG:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DH:65:HIS:ND1	34:DH:65:HIS:O	2.44	0.50
1:AA:836:G:C6	1:AA:851:G:C6	3.00	0.50
27:DA:507:A:H4'	27:DA:509:C:C5	2.46	0.50
27:BA:1175:U:H5''	27:BA:1176:G:H8	1.75	0.50
1:CA:708:C:O2'	1:CA:709:G:H5'	2.11	0.50
27:BA:2302:G:C2'	27:BA:2303:G:H5'	2.41	0.50
27:BA:2313:C:C5	27:BA:2314:C:H5	2.29	0.50
42:BT:57:PHE:CG	42:BT:58:ASN:N	2.80	0.50
1:AA:610:G:H2'	1:AA:611:A:H8	1.75	0.50
27:DA:2140:C:H1'	27:DA:2152:G:N2	2.26	0.50
1:CA:885:G:H1'	1:CA:914:A:N1	2.26	0.50
1:CA:913:A:O2'	1:CA:914:A:OP2	2.30	0.50
34:DH:98:LEU:HG	34:DH:98:LEU:O	2.12	0.50
1:CA:1301:U:OP2	1:CA:1303:C:N4	2.44	0.50
51:B2:4:SER:HA	51:B2:7:ARG:HH11	1.77	0.50
27:DA:1700:A:H2'	27:DA:1701:A:O4'	2.11	0.50
7:CG:26:PHE:CG	7:CG:62:PHE:HE1	2.30	0.50
1:AA:575:G:H4'	1:AA:576:G:C5'	2.41	0.50
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.26	0.50
27:BA:39:C:H2'	27:BA:40:C:C6	2.46	0.50
1:CA:1408:A:O2'	1:CA:1409:C:H5'	2.10	0.50
31:DE:29:GLY:CA	31:DE:180:ASN:HB3	2.41	0.50
7:CG:72:ARG:C	7:CG:73:MET:HG3	2.31	0.50
38:DP:135:LEU:HD13	38:DP:135:LEU:C	2.32	0.50
18:AR:71:LYS:O	18:AR:73:ALA:N	2.45	0.50
42:DT:129:ARG:NH1	42:DT:131:ALA:O	2.44	0.50
10:AJ:30:SER:OG	10:AJ:81:THR:CG2	2.58	0.50
1:AA:424:G:H2'	1:AA:425:G:C8	2.46	0.50
24:AX:6:G:N2	24:AX:68:C:C2	2.79	0.50
29:DC:20:TYR:CG	29:DC:21:THR:N	2.78	0.50
27:BA:303:U:O2'	27:BA:304:G:H5'	2.11	0.50
1:AA:336:C:H1'	1:AA:1468:A:H2	1.77	0.50
3:AC:73:PRO:HG3	3:AC:105:GLU:HG3	1.92	0.50
27:BA:1593:G:H3'	27:BA:1594:G:H8	1.76	0.50
3:CC:189:ALA:O	3:CC:195:VAL:HG12	2.11	0.50
1:CA:37:U:H2'	1:CA:38:G:O4'	2.10	0.50
46:DX:28:PHE:O	46:DX:30:VAL:HG13	2.11	0.50
27:DA:45:C:H2'	27:DA:47:C:H6	1.76	0.50
28:DB:35:U:O2'	28:DB:36:C:O5'	2.17	0.50
34:BH:38:SER:OG	34:BH:40:GLU:HG3	2.11	0.50
27:DA:1455:G:H2'	27:DA:1456:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:224:GLN:CG	2:CB:229:VAL:HG22	2.41	0.50
28:BB:17:C:H2'	28:BB:18:G:O4'	2.11	0.50
27:DA:1055:G:H2'	27:DA:1108:U:C6	2.46	0.50
1:AA:562:C:H41	1:AA:884:U:H2'	1.76	0.50
46:BX:82:GLN:HG3	46:BX:83:VAL:N	2.26	0.50
1:AA:1011:G:O2'	1:AA:1012:U:H5'	2.11	0.50
18:AR:19:LYS:O	18:AR:20:ALA:HB2	2.11	0.50
34:BH:83:TYR:HA	34:BH:135:GLY:H	1.76	0.50
1:CA:293:G:H1	1:CA:304:U:H3	1.59	0.50
1:CA:973:G:C5	1:CA:974:A:N7	2.79	0.50
27:BA:1293:C:H2'	27:BA:1294:U:C6	2.46	0.50
32:BF:21:ALA:C	32:BF:23:ASP:N	2.64	0.50
37:BO:51:ALA:O	37:BO:52:VAL:HB	2.11	0.50
30:DD:253:GLN:HB2	30:DD:257:LEU:HD12	1.93	0.50
4:CD:8:VAL:CG1	4:CD:21:LEU:HD13	2.36	0.50
44:BV:45:THR:O	44:BV:46:VAL:HG12	2.12	0.50
27:DA:1150:C:O2'	27:DA:1151:G:H5'	2.11	0.50
43:DU:65:ILE:HG12	43:DU:96:ALA:HB1	1.93	0.50
47:DY:95:LYS:HD3	47:DY:99:CYS:O	2.11	0.50
1:AA:472:A:H5''	16:AP:80:PHE:HB3	1.93	0.50
27:DA:2261:C:OP1	49:D0:17:GLN:CD	2.50	0.50
27:DA:2425:A:H5''	27:DA:2427:C:H5'	1.91	0.50
47:BY:17:SER:O	47:BY:21:LYS:HB2	2.12	0.50
27:DA:2500:U:H2'	27:DA:2504:U:H5	1.76	0.50
27:DA:944:G:H5''	27:DA:945:A:H5'	1.93	0.50
20:AT:63:ILE:O	20:AT:65:LYS:N	2.44	0.50
27:BA:1006:C:H1'	36:BN:106:MET:CG	2.37	0.50
1:CA:1139:G:H5'	1:CA:1140:C:OP1	2.12	0.50
27:DA:329:G:O2'	27:DA:330:A:OP1	2.25	0.50
1:CA:383:A:H2'	1:CA:384:G:H5'	1.94	0.50
1:AA:1357:A:N7	1:AA:1358:U:C4	2.79	0.50
3:AC:125:GLU:HG2	3:AC:190:ARG:O	2.10	0.50
12:CL:23:ALA:HA	12:CL:95:TYR:HE2	1.76	0.50
2:AB:28:PHE:CD2	2:AB:194:PRO:HD3	2.46	0.50
16:AP:1:MET:HG2	16:AP:2:VAL:N	2.26	0.50
1:CA:274:A:HO2'	1:CA:275:G:C5'	2.23	0.50
27:BA:689:A:O2'	27:BA:690:G:H5'	2.10	0.50
30:BD:230:ASP:O	30:BD:231:HIS:HB2	2.11	0.50
15:CO:53:HIS:O	15:CO:56:LEU:N	2.44	0.50
36:DN:47:ALA:O	36:DN:119:ARG:NH2	2.44	0.50
1:CA:1001(A):G:C8	1:CA:1002:G:C8	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1036:G:H5'	1:CA:1037:C:C5	2.46	0.50
30:DD:43:ARG:HH11	30:DD:44:ASN:CG	2.14	0.50
1:CA:1181:G:H2'	1:CA:1182:G:C5	2.43	0.50
27:BA:1480:G:C5	27:BA:1481:U:C5	3.00	0.50
27:BA:1803:A:O2'	30:BD:259:THR:HG21	2.10	0.50
48:DZ:44:ASP:O	48:DZ:45:LYS:C	2.49	0.50
1:CA:653:A:H1'	8:CH:56:LYS:NZ	2.26	0.50
27:BA:2175:C:H1'	29:BC:215:THR:N	2.26	0.50
29:DC:187:ASP:C	29:DC:189:ILE:H	2.15	0.50
29:DC:36:LYS:HZ2	29:DC:36:LYS:HA	1.77	0.50
29:DC:66:HIS:HB2	29:DC:189:ILE:CB	2.42	0.50
31:DE:111:ARG:HD2	31:DE:160:TYR:HE1	1.71	0.50
31:DE:119:ARG:CG	31:DE:160:TYR:HB2	2.40	0.50
40:DR:14:SER:C	40:DR:16:HIS:N	2.64	0.50
41:DS:59:LYS:NZ	41:DS:68:GLN:NE2	2.58	0.50
27:BA:2287:A:C5	27:BA:2289:G:C5	3.00	0.50
34:DH:147:ASN:ND2	34:DH:147:ASN:H	2.08	0.50
1:AA:486:U:H5'	1:AA:486:U:C6	2.42	0.50
35:DI:72:LEU:CD2	35:DI:75:LEU:HD23	2.41	0.50
1:CA:848:C:O2'	1:CA:849:C:H5'	2.10	0.50
27:DA:2295:C:C2	27:DA:2296:U:H5	2.29	0.50
1:AA:577:G:N3	1:AA:578:C:C5	2.79	0.50
12:CL:5:ASN:HB2	17:CQ:34:LYS:NZ	2.26	0.50
1:AA:605:U:O2'	1:AA:606:G:H5'	2.11	0.50
27:BA:1331:A:HO2'	27:BA:1332:G:H8	1.58	0.50
1:CA:1385:G:C2'	1:CA:1386:G:H5'	2.41	0.50
27:BA:70:G:O2'	27:BA:114:U:C5	2.60	0.50
32:DF:170:LEU:HD21	32:DF:172:TRP:CZ2	2.47	0.50
1:CA:762:C:H2'	1:CA:763:G:H8	1.75	0.50
38:BP:7:ARG:O	38:BP:10:PRO:HD3	2.11	0.50
1:AA:274:A:O2'	1:AA:275:G:H8	1.94	0.50
2:AB:14:GLY:C	2:AB:15:VAL:HG22	2.31	0.50
33:BG:172:LEU:O	33:BG:175:LEU:N	2.43	0.50
41:DS:82:ILE:CG2	41:DS:83:LYS:N	2.74	0.50
1:AA:784:C:H4'	27:BA:1837:C:OP1	2.11	0.50
27:BA:25:U:C2'	27:BA:26:G:O5'	2.59	0.50
31:BE:9:VAL:HG11	31:BE:25:VAL:CG1	2.40	0.50
5:CE:101:ILE:HG12	5:CE:119:LEU:HA	1.92	0.50
27:DA:1818:U:C6	30:DD:157:ARG:NH1	2.79	0.50
27:DA:1818:U:H2'	30:DD:157:ARG:HG3	1.92	0.50
27:BA:271(M):G:O2'	27:BA:271(N):U:H3'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:59:ARG:NH2	4:AD:66:ARG:NH2	2.59	0.50
3:CC:140:ARG:O	3:CC:143:GLU:N	2.45	0.50
30:BD:158:ALA:HB3	30:BD:161:THR:HG23	1.92	0.50
27:BA:1957:C:H2'	27:BA:1958:C:H6	1.76	0.50
8:CH:21:LYS:O	8:CH:65:TYR:OH	2.28	0.50
45:BW:35:ILE:HG23	54:B5:28:PRO:HD2	1.93	0.50
24:AX:51:C:H2'	24:AX:52:G:C8	2.46	0.50
5:CE:126:ARG:NH1	5:CE:126:ARG:HG3	2.25	0.50
27:BA:2228:G:OP1	30:BD:261:LYS:CE	2.60	0.50
23:AW:42:G:H3'	23:AW:43:C:H5''	1.92	0.50
43:BU:48:ALA:O	43:BU:51:LYS:HB2	2.12	0.50
4:CD:3:ARG:HG2	4:CD:118:ARG:NE	2.27	0.50
1:AA:862:C:O2'	1:AA:863:U:H5'	2.10	0.50
3:AC:73:PRO:C	3:AC:75:VAL:N	2.65	0.50
35:BI:29:TYR:O	35:BI:33:ARG:HB2	2.11	0.50
27:BA:2492:U:H2'	27:BA:2493:U:C6	2.46	0.50
27:DA:111:A:H4'	51:D2:69:ARG:HH21	1.76	0.50
11:AK:23:ALA:HB1	11:AK:88:GLY:HA3	1.92	0.50
40:DR:63:ARG:NH1	40:DR:80:PHE:CG	2.79	0.50
27:DA:2315:G:H2'	27:DA:2316:C:C6	2.46	0.50
3:CC:162:GLN:HA	3:CC:162:GLN:OE1	2.10	0.50
30:DD:124:PRO:HG2	30:DD:129:ASN:ND2	2.26	0.50
47:BY:24:VAL:HG12	47:BY:25:GLY:N	2.25	0.50
12:CL:31:ARG:O	12:CL:58:THR:HG23	2.12	0.50
1:AA:139:G:H2'	1:AA:140:A:H8	1.77	0.50
27:BA:399:G:C2	27:BA:400:G:H1'	2.46	0.50
1:CA:1212:U:OP1	1:CA:1212:U:H4'	2.11	0.50
1:AA:450:G:H4'	16:AP:41:PRO:O	2.10	0.50
38:BP:35:HIS:O	38:BP:36:LYS:CB	2.59	0.50
1:CA:986:A:N1	1:CA:1220:G:C2	2.80	0.50
41:BS:16:ASN:O	41:BS:19:LYS:HB3	2.10	0.50
41:BS:95:HIS:O	41:BS:97:ARG:HG3	2.12	0.50
31:BE:11:MET:HB2	31:BE:23:VAL:O	2.12	0.50
57:D8:63:PRO:O	57:D8:64:TYR:O	2.29	0.50
27:DA:1824:G:O2'	27:DA:1825:A:H5'	2.12	0.50
13:CM:20:THR:O	13:CM:22:ILE:N	2.42	0.50
27:BA:482:A:H1'	27:BA:498:G:N2	2.26	0.50
1:CA:1346:A:C5	7:CG:10:ARG:CZ	2.94	0.50
32:BF:70:THR:C	32:BF:72:ARG:N	2.64	0.50
27:BA:523:C:H4'	27:BA:540:C:O2	2.12	0.50
36:BN:4:TYR:HB2	43:BU:64:ARG:NH2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:19:LYS:HG3	44:BV:20:LEU:N	2.27	0.50
1:AA:234:C:O2'	1:AA:235:C:H5'	2.11	0.50
42:BT:91:ARG:HA	42:BT:116:ALA:HA	1.92	0.50
27:DA:870:A:OP1	39:DQ:6:ARG:NE	2.44	0.50
38:DP:58:THR:C	38:DP:60:MET:N	2.64	0.50
38:DP:95:VAL:CG2	38:DP:100:LEU:HD21	2.42	0.50
27:DA:747:U:O2	27:DA:2014:A:H1'	2.12	0.50
20:AT:77:ALA:O	20:AT:81:LYS:HG3	2.11	0.50
36:BN:94:HIS:N	36:BN:95:PRO:CD	2.75	0.50
34:BH:53:GLU:O	34:BH:54:ARG:CB	2.60	0.50
1:CA:101:A:C2'	1:CA:102:G:H5'	2.42	0.50
1:AA:1350:A:H8	1:AA:1350:A:O5'	1.94	0.50
3:AC:155:GLY:CA	3:AC:163:ALA:HB1	2.28	0.50
1:AA:1358:U:OP1	14:AN:35:ARG:HG3	2.12	0.50
37:DO:106:LEU:HB3	37:DO:111:PHE:HB2	1.93	0.50
19:AS:19:VAL:HG13	19:AS:47:HIS:NE2	2.26	0.50
1:CA:273:A:H1'	17:CQ:16:GLN:OE1	2.11	0.50
27:BA:686:G:H21	27:BA:788:A:H61	1.58	0.50
27:DA:2645:G:H3'	27:DA:2646:C:H5'	1.92	0.50
12:AL:31:ARG:HG3	12:AL:102:TYR:HE1	1.75	0.50
6:AF:88:VAL:HG12	6:AF:89:MET:N	2.26	0.50
1:CA:1202:G:O2'	1:CA:1203:C:H5'	2.11	0.50
13:CM:4:ILE:CG2	13:CM:5:ALA:H	2.10	0.50
27:BA:2160:G:H2'	27:BA:2161:C:C6	2.47	0.50
49:D0:53:MET:HE3	49:D0:57:PHE:HD1	1.76	0.50
1:CA:1521:G:C5	1:CA:1522:U:C5	2.99	0.50
46:DX:60:ARG:NH2	56:D7:47:ARG:NE	2.59	0.50
3:AC:184:TYR:CG	3:AC:185:GLY:N	2.79	0.50
27:BA:397:G:H2'	27:BA:398:G:H8	1.76	0.50
29:DC:83:ILE:HD11	29:DC:95:GLY:O	2.12	0.50
39:BQ:137:TYR:O	39:BQ:138:ASP:C	2.48	0.50
27:DA:925:C:H2'	27:DA:926:A:O4'	2.12	0.50
5:CE:11:ILE:HG22	5:CE:12:LEU:N	2.19	0.50
27:DA:2683:C:P	42:DT:53:ARG:NH2	2.77	0.50
27:DA:743:G:C2'	27:DA:744:G:H5'	2.42	0.50
32:BF:160:ASN:C	32:BF:162:LEU:N	2.65	0.50
32:BF:160:ASN:HD22	32:BF:162:LEU:H	1.60	0.50
27:BA:1333:C:H2'	27:BA:1334:G:H8	1.76	0.50
7:CG:49:ILE:O	7:CG:53:LYS:HB2	2.12	0.50
1:CA:769:G:HO2'	1:CA:770:C:H5'	1.76	0.50
15:CO:12:ILE:C	15:CO:14:GLU:N	2.62	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DQ:18:LYS:HB2	39:DQ:98:LYS:NZ	2.27	0.50
27:DA:416:C:H2'	27:DA:416:C:O2	2.11	0.50
36:DN:89:LYS:NZ	36:DN:89:LYS:CB	2.74	0.50
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.46	0.50
8:CH:11:THR:O	8:CH:15:ASN:ND2	2.45	0.50
13:AM:96:LEU:HD23	13:AM:97:PRO:HD2	1.92	0.50
2:AB:181:PHE:HE1	8:AH:70:GLN:HB2	1.76	0.50
1:AA:221:C:C2'	1:AA:222:U:H5'	2.41	0.50
38:BP:140:ALA:O	38:BP:141:ALA:HB3	2.11	0.50
43:BU:24:TYR:CD1	43:BU:38:THR:HG21	2.46	0.50
27:BA:1849:G:H2'	27:BA:1850:G:H8	1.75	0.50
11:AK:79:SER:HB2	11:AK:106:LYS:CE	2.40	0.50
11:CK:59:TYR:OH	11:CK:63:LEU:HD21	2.12	0.50
27:BA:459:U:OP2	56:B7:39:ARG:NH1	2.44	0.50
9:AI:71:SER:O	9:AI:74:ILE:HB	2.10	0.50
27:DA:614(C):A:O2'	27:DA:615:G:C8	2.64	0.50
27:BA:1651:G:OP2	40:BR:40:LYS:HE2	2.11	0.50
34:BH:32:GLU:HG2	34:BH:33:LEU:N	2.27	0.50
27:DA:204:A:H1'	27:DA:206:U:C6	2.46	0.50
3:AC:28:GLN:HA	3:AC:31:HIS:NE2	2.26	0.50
18:AR:55:ARG:HG3	18:AR:55:ARG:NH1	2.24	0.50
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.11	0.50
51:D2:14:ARG:HG3	51:D2:14:ARG:HH11	1.77	0.50
32:DF:177:ALA:HB1	32:DF:178:PRO:CD	2.40	0.50
34:DH:86:GLU:HB3	34:DH:132:ARG:HD3	1.93	0.50
44:DV:68:LYS:HA	44:DV:68:LYS:HZ2	1.77	0.50
27:DA:2853:C:H2'	27:DA:2854:G:C8	2.46	0.50
1:AA:1008:C:H2'	1:AA:1009:G:O4'	2.10	0.50
47:BY:51:VAL:O	47:BY:52:SER:CB	2.60	0.50
7:CG:100:ALA:O	7:CG:101:LEU:C	2.50	0.50
41:DS:49:VAL:HG12	41:DS:50:SER:N	2.26	0.50
1:AA:797:C:O2'	1:AA:798:G:H5'	2.11	0.50
25:AY:10:G:H8	25:AY:10:G:OP1	1.94	0.50
1:AA:339:C:H2'	1:AA:340:U:H6	1.76	0.50
27:BA:1045:A:H4'	27:BA:1047:G:O4'	2.11	0.50
44:BV:22:VAL:O	44:BV:23:GLU:CB	2.57	0.50
44:DV:19:LYS:HZ3	44:DV:20:LEU:N	2.09	0.50
10:CJ:44:VAL:CG1	10:CJ:46:ARG:HG3	2.42	0.50
1:AA:346:G:O2'	1:AA:347:G:O4'	2.30	0.50
52:B3:8:LEU:HA	52:B3:54:VAL:HG22	1.94	0.50
55:D6:43:CYS:O	55:D6:43:CYS:SG	2.70	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1952:A:N6	27:DA:1953:A:N6	2.59	0.50
27:DA:2447:G:C4	27:DA:2501:C:C5	3.00	0.50
27:DA:2636:U:OP1	31:DE:80:GLU:HB2	2.10	0.50
31:DE:84:PHE:HE2	31:DE:86:PRO:HB3	1.76	0.50
30:BD:97:TYR:HB2	30:BD:101:GLU:O	2.11	0.50
20:CT:85:MET:C	20:CT:87:LYS:N	2.64	0.50
20:CT:90:GLN:O	20:CT:91:LEU:HD23	2.11	0.50
1:AA:1316:G:H1'	1:AA:1360:A:C2	2.47	0.50
2:AB:91:PRO:HG2	2:AB:155:LEU:HB2	1.92	0.50
19:AS:29:ARG:HD2	19:AS:29:ARG:C	2.32	0.50
27:DA:1914:C:H2'	27:DA:1915:U:C6	2.46	0.50
27:BA:2586:C:H5'	27:BA:2586:C:C6	2.47	0.50
27:BA:778:G:C6	27:BA:779:U:N3	2.78	0.50
2:AB:95:GLN:HG3	2:AB:148:TYR:HD1	1.77	0.50
33:DG:141:PHE:CB	33:DG:142:PRO:HD2	2.42	0.50
1:CA:1004:A:C5'	1:CA:1025:U:H3	2.24	0.50
27:BA:1339:G:OP1	46:BX:14:SER:HB2	2.10	0.50
3:CC:3:ASN:N	3:CC:3:ASN:OD1	2.44	0.50
13:AM:38:GLY:C	13:AM:39:ILE:HG13	2.32	0.50
50:B1:5:CYS:HA	50:B1:61:ARG:O	2.10	0.50
27:BA:423:A:H8	27:BA:423:A:O5'	1.95	0.50
19:CS:6:LYS:HD3	19:CS:7:LYS:HE2	1.93	0.50
1:CA:192:U:H1'	20:CT:103:GLY:O	2.12	0.50
38:BP:104:GLY:N	38:BP:105:LEU:HD23	2.27	0.50
29:DC:36:LYS:CB	29:DC:36:LYS:HZ3	2.20	0.50
1:CA:1505:G:H4'	1:CA:1506:U:C5'	2.41	0.50
27:DA:1603:A:C2	27:DA:1604:C:C2	3.00	0.50
35:BI:5:LEU:CD2	35:BI:13:GLY:HA2	2.33	0.50
27:BA:2287:A:O2'	27:BA:2288:A:H5''	2.11	0.50
27:BA:61:G:H1	27:BA:94:C:H42	1.58	0.50
1:AA:875:C:H1'	8:AH:15:ASN:OD1	2.12	0.50
8:CH:95:VAL:HG23	8:CH:95:VAL:O	2.12	0.50
12:AL:49:LEU:N	12:AL:49:LEU:HD22	2.27	0.50
33:BG:4:ASP:O	33:BG:4:ASP:OD1	2.29	0.50
27:DA:475:U:O2'	27:DA:476:G:C8	2.53	0.50
1:CA:1125:U:H2'	1:CA:1126:U:OP2	2.12	0.50
32:DF:170:LEU:HD21	32:DF:172:TRP:CE2	2.47	0.50
3:AC:70:VAL:CG1	3:AC:71:ALA:N	2.74	0.50
33:BG:24:GLY:O	33:BG:26:GLN:NE2	2.45	0.50
47:DY:2:ARG:O	47:DY:3:VAL:HB	2.11	0.50
27:DA:2196:C:H2'	27:DA:2197:U:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DB:29:A:OP2	41:DS:32:LEU:HG	2.11	0.50
38:BP:138:LEU:O	38:BP:140:ALA:N	2.43	0.50
4:CD:25:ARG:C	4:CD:27:TYR:N	2.65	0.50
6:AF:99:ALA:HB2	18:AR:31:LEU:HD13	1.93	0.50
34:DH:20:ALA:HB3	34:DH:23:ARG:HB2	1.93	0.50
27:BA:1718:G:C8	27:BA:1718:G:H5'	2.42	0.50
3:AC:11:ARG:O	3:AC:15:THR:N	2.44	0.50
1:CA:930:C:O2'	1:CA:931:C:H5'	2.11	0.50
9:CI:92:TYR:O	9:CI:95:LYS:HG3	2.12	0.50
27:DA:714:U:O2	27:DA:717:G:H8	1.94	0.50
9:CI:27:THR:HG22	9:CI:31:GLN:H	1.75	0.50
34:DH:68:THR:HG23	34:DH:72:ILE:HD11	1.94	0.50
29:BC:19:VAL:HG12	29:BC:20:TYR:CD1	2.45	0.50
40:DR:94:TYR:CD1	40:DR:94:TYR:N	2.79	0.50
27:DA:935:C:H2'	27:DA:936:C:H6	1.76	0.50
35:DI:110:ASP:O	35:DI:112:LYS:N	2.35	0.50
1:CA:37:U:H2'	1:CA:38:G:C8	2.47	0.50
39:BQ:19:GLY:O	39:BQ:20:ALA:CB	2.59	0.50
27:DA:696:G:N2	27:DA:697:C:H1'	2.26	0.50
27:BA:2555:U:O2'	27:BA:2556:C:H5'	2.11	0.50
4:AD:92:VAL:O	4:AD:93:PHE:C	2.50	0.50
27:BA:1986:A:C2'	27:BA:1987:G:H5'	2.42	0.50
40:DR:63:ARG:HG3	40:DR:63:ARG:HH11	1.76	0.50
1:CA:599:C:H5''	8:CH:96:GLY:CA	2.41	0.50
57:B8:17:THR:O	57:B8:19:SER:N	2.41	0.50
16:CP:49:LEU:HD11	16:CP:51:VAL:CG2	2.42	0.50
1:CA:357:G:O2'	1:CA:358:U:H5'	2.11	0.50
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.12	0.50
27:BA:1681:G:H1'	27:BA:1763:G:H5'	1.94	0.50
30:BD:204:ILE:HG13	30:BD:204:ILE:O	2.12	0.50
8:CH:102:ARG:N	8:CH:102:ARG:HE	2.09	0.50
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.46	0.50
57:B8:21:LYS:CD	57:B8:48:PHE:CZ	2.94	0.50
1:CA:1362:C:O2	1:CA:1363:C:C5	2.65	0.50
14:CN:34:TYR:CD1	14:CN:34:TYR:N	2.80	0.50
27:BA:1279:G:C2	27:BA:1292:U:C2	2.99	0.50
32:BF:179:GLU:OE2	32:BF:179:GLU:N	2.38	0.50
31:BE:102:VAL:HG12	31:BE:199:ARG:O	2.10	0.50
57:D8:61:LEU:C	57:D8:63:PRO:HD2	2.32	0.50
22:CV:9:G:N7	22:CV:10:U:C5	2.80	0.50
27:DA:1931:U:O2'	27:DA:1932:A:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1902:C:O2'	30:DD:244:ARG:HB2	2.11	0.50
32:BF:65:TRP:HB3	32:BF:66:PRO:CD	2.40	0.50
44:BV:15:GLU:O	44:BV:17:GLY:N	2.45	0.50
43:BU:95:LEU:HD22	44:BV:4:ILE:HD11	1.93	0.50
44:BV:5:VAL:HG23	44:BV:6:LYS:N	2.26	0.50
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.94	0.50
27:DA:1889:A:H2'	27:DA:1890:A:O4'	2.10	0.50
27:DA:1889:A:C6	27:DA:1890:A:C5	3.00	0.50
41:DS:24:LEU:HB3	41:DS:85:VAL:CG1	2.24	0.50
33:BG:135:LEU:HD13	33:BG:155:MET:HG3	1.94	0.50
11:CK:32:ILE:HG12	11:CK:41:THR:O	2.12	0.50
27:DA:2016:U:O2	54:D5:7:PRO:HG2	2.11	0.50
27:DA:1669:A:O2'	27:DA:2549:G:OP1	2.29	0.50
27:DA:2551:C:H2'	27:DA:2552:U:C5	2.46	0.50
31:DE:117:MET:SD	31:DE:136:ARG:HA	2.51	0.50
30:BD:35:LYS:N	30:BD:36:PRO:CD	2.68	0.50
30:BD:31:LYS:HE2	30:BD:94:LEU:HD11	1.93	0.50
4:CD:70:ILE:HD12	4:CD:100:ARG:CD	2.42	0.50
1:CA:216:G:C5	1:CA:217:C:N4	2.80	0.50
1:AA:1205:U:H4'	3:AC:195:VAL:HG22	1.94	0.50
42:DT:28:VAL:HG11	42:DT:46:GLU:HG3	1.93	0.50
41:DS:31:SER:O	41:DS:33:LYS:N	2.44	0.50
27:BA:2439:A:H1'	27:BA:2587:A:OP1	2.12	0.50
2:CB:164:VAL:HG12	2:CB:166:ASP:H	1.76	0.50
27:BA:1991:U:C5'	27:BA:1991:U:H6	2.24	0.50
16:AP:75:ARG:C	16:AP:77:ALA:H	2.14	0.50
27:BA:1338:G:H2'	27:BA:1339:G:C8	2.46	0.50
37:BO:4:PRO:O	37:BO:5:GLN:CB	2.59	0.50
50:B1:5:CYS:SG	50:B1:8:SER:OG	2.58	0.50
27:BA:2093:G:C6	27:BA:2225:A:C8	3.00	0.50
27:BA:373:U:O2	27:BA:423:A:C2	2.64	0.50
27:BA:1799:G:C2	27:BA:1819:A:N7	2.79	0.50
3:CC:196:LEU:HD12	3:CC:197:GLY:H	1.77	0.50
5:CE:50:GLU:HG3	5:CE:51:VAL:H	1.76	0.50
12:CL:107:VAL:HG23	12:CL:117:TYR:HB3	1.92	0.50
27:BA:524:U:H4'	27:BA:555:U:H4'	1.93	0.50
39:DQ:29:PHE:HB2	39:DQ:105:GLU:OE2	2.11	0.50
38:BP:96:THR:HB	38:BP:97:PRO:CD	2.42	0.50
36:DN:16:ILE:HG23	36:DN:54:VAL:HA	1.94	0.50
27:DA:1275:A:H4'	27:DA:1276:A:OP1	2.12	0.50
27:DA:2824:C:C5	27:DA:2825:C:C4	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:142:A:H1'	27:BA:1408:C:O4'	2.12	0.50
7:CG:77:SER:O	7:CG:78:ARG:HB2	2.11	0.50
27:DA:662:G:H5'	38:DP:18:ARG:CA	2.41	0.50
1:AA:259:G:H2'	1:AA:260:G:C8	2.45	0.50
1:AA:939:G:H5''	7:AG:102:ARG:NH2	2.26	0.50
5:CE:33:VAL:HG12	5:CE:34:VAL:H	1.75	0.50
31:DE:4:ILE:HD11	31:DE:31:CYS:SG	2.52	0.50
30:DD:182:LEU:CB	30:DD:271:ILE:HG13	2.42	0.50
25:CY:18:G:C1'	25:CY:56:G:H22	2.23	0.50
27:BA:271(U):G:C2	27:BA:271(V):G:C8	3.00	0.50
1:AA:1278:U:H5''	1:AA:1279:A:O4'	2.11	0.50
25:CY:27:C:H2'	25:CY:28:G:C8	2.47	0.50
45:DW:18:ARG:C	45:DW:20:VAL:N	2.65	0.50
27:DA:1204:A:N1	27:DA:1241:A:H2	2.08	0.50
27:DA:503:A:C6	27:DA:506:G:C6	2.99	0.50
35:DI:9:LEU:O	35:DI:13:GLY:HA3	2.11	0.50
1:CA:14:U:C6	1:CA:16:A:OP2	2.65	0.50
27:DA:1980:G:H4'	27:DA:1981:A:OP2	2.11	0.50
27:BA:1721:G:C6	27:BA:1739:U:H5'	2.45	0.50
28:DB:29:A:H2'	28:DB:30:C:C6	2.47	0.50
11:AK:21:ILE:HG13	11:AK:30:VAL:CG1	2.42	0.50
18:CR:66:LEU:HD11	18:CR:70:ILE:HD11	1.94	0.50
5:AE:145:LYS:O	5:AE:148:VAL:HB	2.11	0.50
27:BA:1447:G:H2'	27:BA:1448:G:C8	2.41	0.50
27:BA:1466:G:H2'	27:BA:1547:C:N4	2.27	0.50
5:CE:94:ALA:HB3	5:CE:117:ASP:C	2.32	0.50
6:AF:44:GLY:HA2	6:AF:59:TYR:CD2	2.47	0.50
10:AJ:83:GLU:C	10:AJ:85:LEU:H	2.15	0.50
23:CW:38:U:H2'	23:CW:39:C:C6	2.47	0.50
39:DQ:114:ALA:O	39:DQ:115:MET:C	2.50	0.50
30:DD:87:ASN:O	30:DD:88:ARG:HB3	2.11	0.50
23:AW:42:G:C2'	23:AW:43:C:H5''	2.41	0.50
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.10	0.50
1:AA:986:A:H2'	1:AA:987:G:H8	1.77	0.50
35:DI:7:GLU:OE1	35:DI:8:PRO:HD2	2.11	0.50
27:DA:99:U:O2	27:DA:99:U:H3'	2.12	0.50
2:AB:239:VAL:HG12	2:AB:239:VAL:O	2.11	0.50
5:CE:26:PHE:N	5:CE:26:PHE:CD1	2.80	0.50
18:CR:26:LEU:HD21	18:CR:42:ARG:HD2	1.93	0.50
1:CA:801:U:O2'	1:CA:802:A:H5'	2.11	0.50
27:DA:336:C:O2'	27:DA:337:C:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:20:LEU:O	20:CT:21:LYS:C	2.50	0.50
5:AE:48:ALA:HB3	5:AE:54:ALA:HB2	1.94	0.50
2:CB:231:GLU:O	2:CB:231:GLU:HG3	2.11	0.50
27:DA:304:G:O2'	27:DA:305:U:H5'	2.12	0.50
27:BA:942:G:H2'	27:BA:943:U:H5'	1.92	0.50
1:CA:518:C:OP2	1:CA:530:G:H4'	2.11	0.50
27:BA:660:G:O2'	27:BA:661:C:H5'	2.12	0.50
27:DA:2406:U:C4	38:DP:72:PRO:HD2	2.47	0.50
27:DA:560:C:H4'	43:DU:52:ARG:CZ	2.42	0.50
44:DV:59:ALA:HA	44:DV:97:LYS:HG2	1.92	0.50
47:DY:96:ILE:CD1	47:DY:99:CYS:CB	2.89	0.50
30:DD:132:PRO:HD3	30:DD:190:TYR:CZ	2.46	0.50
55:D6:20:ASN:CG	55:D6:21:TYR:N	2.65	0.50
27:DA:2392:A:OP1	57:D8:32:LEU:HD22	2.11	0.50
27:DA:2382:G:H3'	27:DA:2382:G:OP1	2.12	0.50
38:DP:131:SER:O	38:DP:133:SER:N	2.45	0.50
27:DA:2495:G:OP2	39:DQ:82:ARG:NH2	2.45	0.50
33:DG:27:ASN:O	33:DG:29:TRP:N	2.43	0.50
27:BA:1144:G:H2'	27:BA:1145:C:C6	2.46	0.50
36:BN:95:PRO:HG2	36:BN:96:GLU:OE2	2.11	0.50
55:B6:15:GLU:HG2	55:B6:18:ARG:CZ	2.42	0.50
1:AA:1367:C:N3	1:AA:1368:G:C8	2.80	0.50
1:AA:943:U:C4	1:AA:944:G:N7	2.80	0.50
8:AH:26:VAL:HG23	8:AH:27:PRO:HD2	1.94	0.50
1:CA:346:G:H5''	42:DT:41:ARG:HH22	1.77	0.50
1:AA:100:C:H2'	1:AA:101:A:H8	1.67	0.50
1:AA:60:A:C4'	1:AA:61:G:O5'	2.57	0.50
27:BA:1658:C:H42	27:BA:2002:G:H1	1.60	0.50
31:DE:203:LYS:HE3	31:DE:204:ALA:N	2.27	0.50
15:AO:76:GLU:OE2	15:AO:76:GLU:HA	2.12	0.50
30:DD:53:PHE:CE2	30:DD:220:HIS:CD2	3.00	0.50
1:CA:1073:U:OP2	5:CE:57:LYS:HE3	2.11	0.50
48:DZ:50:ALA:O	48:DZ:51:SER:HB3	2.12	0.50
27:BA:2158:A:H4'	27:BA:2159:G:O5'	2.12	0.50
1:CA:163:C:H2'	1:CA:164:U:H6	1.75	0.50
55:B6:8:LYS:O	55:B6:9:LEU:HB3	2.11	0.50
38:DP:16:ARG:HD3	38:DP:16:ARG:C	2.32	0.50
34:DH:143:GLN:NE2	34:DH:147:ASN:HD21	2.10	0.50
33:DG:39:ILE:HD13	33:DG:157:ILE:HG22	1.93	0.50
27:DA:849:A:H8	27:DA:849:A:O5'	1.95	0.50
37:DO:86:ILE:CG2	37:DO:94:ARG:HD2	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:7:ARG:O	21:AU:8:THR:HG22	2.12	0.50
1:CA:452:A:N3	16:CP:72:ARG:NH1	2.59	0.50
1:AA:660:G:H2'	1:AA:661:G:C8	2.47	0.50
11:CK:21:ILE:HG23	11:CK:30:VAL:HG12	1.94	0.50
27:BA:2230:G:H1'	50:B1:45:ASN:ND2	2.27	0.50
10:CJ:4:ILE:HB	10:CJ:74:ILE:CG1	2.41	0.50
47:BY:2:ARG:HD3	47:BY:2:ARG:C	2.32	0.50
33:BG:118:ARG:N	33:BG:181:ARG:HH21	2.00	0.50
5:AE:18:ARG:HG3	5:AE:25:ARG:O	2.12	0.50
52:D3:8:LEU:HD22	52:D3:31:LEU:CD2	2.41	0.50
42:BT:54:ARG:O	42:BT:55:ASN:HB2	2.11	0.50
33:BG:166:ASP:O	33:BG:167:GLU:C	2.50	0.50
33:BG:166:ASP:O	33:BG:169:ALA:HB3	2.12	0.50
27:BA:1565:C:H1'	27:BA:1566:A:H2'	1.93	0.50
27:DA:2140:C:H1'	27:DA:2152:G:H22	1.77	0.50
1:AA:232:G:C4	1:AA:233:C:C6	2.99	0.50
27:BA:1353:A:H4'	30:BD:38:LYS:CE	2.36	0.50
27:DA:81:G:H21	47:DY:2:ARG:CZ	2.24	0.50
32:BF:175:THR:CG2	32:BF:175:THR:O	2.59	0.50
4:AD:119:GLN:NE2	4:AD:123:HIS:NE2	2.58	0.50
32:BF:46:ARG:O	32:BF:48:THR:N	2.45	0.50
2:AB:182:ILE:O	2:AB:183:PRO:C	2.50	0.50
27:BA:1627:G:H2'	27:BA:1628:G:H8	1.77	0.50
36:BN:57:ALA:C	36:BN:58:ASP:O	2.50	0.50
5:AE:91:LEU:CD1	5:AE:120:THR:HG22	2.40	0.50
27:BA:2114:A:O5'	27:BA:2114:A:H8	1.94	0.50
13:CM:49:THR:HG22	13:CM:50:GLU:N	2.27	0.50
27:BA:1526:G:C6	27:BA:1527:G:C2	2.99	0.50
27:BA:460:A:C2	27:BA:461:C:H1'	2.47	0.50
42:DT:92:GLY:H	42:DT:116:ALA:HA	1.76	0.50
35:BI:4:ILE:HG12	35:BI:18:VAL:HG22	1.93	0.50
28:DB:25:A:H2'	28:DB:26:A:C8	2.47	0.50
27:BA:1936:A:H3'	27:BA:1937:A:C5'	2.42	0.50
4:CD:154:ASN:C	4:CD:155:LEU:HD23	2.31	0.50
51:B2:15:LYS:C	51:B2:16:LEU:HD23	2.32	0.50
47:DY:31:LEU:HD23	47:DY:36:ALA:HB3	1.94	0.50
1:AA:712:A:H2'	1:AA:713:G:C8	2.47	0.50
27:DA:1842:G:H2'	27:DA:1843:C:C6	2.47	0.50
27:DA:1582:C:O2'	27:DA:1586:A:H8	1.94	0.50
30:BD:78:LYS:HG2	30:BD:79:VAL:H	1.77	0.50
27:DA:2063:C:C6	27:DA:2064:C:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:890:A:OP1	27:DA:890:A:H4'	2.12	0.50
4:CD:3:ARG:NH2	4:CD:5:ILE:HD11	2.27	0.50
7:CG:76:ARG:HH11	7:CG:76:ARG:HG2	1.76	0.50
1:CA:486:U:H2'	1:CA:487:A:H8	1.77	0.50
1:AA:1255:G:OP1	10:AJ:45:ARG:NH2	2.45	0.50
39:BQ:18:LYS:O	39:BQ:19:GLY:O	2.30	0.50
27:BA:2291:U:H2'	27:BA:2292:C:C6	2.46	0.50
2:AB:73:THR:HG23	2:AB:170:GLU:HG2	1.94	0.50
27:BA:1166:C:H2'	27:BA:1167:U:C6	2.47	0.50
27:DA:603:A:H4'	27:DA:604:G:O5'	2.11	0.50
10:AJ:33:GLN:O	10:AJ:75:ILE:HG23	2.12	0.50
27:BA:1381:G:O2'	27:BA:1382:G:H5'	2.12	0.50
3:CC:173:VAL:HG12	3:CC:175:LEU:HD12	1.93	0.50
27:BA:132:G:H2'	27:BA:133:C:H6	1.77	0.50
34:BH:153:LYS:HD2	34:BH:153:LYS:H	1.77	0.50
31:DE:40:GLU:OE2	31:DE:41:LYS:HG3	2.12	0.50
27:BA:1293:C:C2	27:BA:1294:U:C5	3.00	0.50
40:BR:21:TYR:OH	40:BR:43:GLU:HG2	2.12	0.50
27:BA:2728:U:H2'	27:BA:2729:G:H5'	1.93	0.50
27:DA:910:A:H3'	27:DA:911:A:C8	2.45	0.50
33:BG:99:MET:O	33:BG:103:LEU:HD12	2.12	0.50
36:BN:4:TYR:CG	43:BU:64:ARG:NH2	2.66	0.50
43:BU:91:ASP:CG	43:BU:96:ALA:HB2	2.31	0.50
27:DA:421:U:O2'	27:DA:422:A:OP2	2.27	0.50
1:AA:235:C:H2'	1:AA:236:G:H8	1.77	0.50
1:AA:1402:C:O2'	1:AA:1403:C:H5'	2.12	0.50
27:DA:1566:A:N7	30:DD:214:TRP:CZ3	2.80	0.50
47:DY:8:LYS:HD2	47:DY:8:LYS:N	2.26	0.50
27:DA:861:A:O2'	27:DA:862:G:H5'	2.12	0.50
27:DA:2612:C:HO2'	27:DA:2613:U:H5'	1.76	0.50
27:DA:972:G:H2'	27:DA:973:A:C8	2.47	0.50
27:BA:1141:U:O4	36:BN:64:GLY:HA3	2.12	0.50
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.26	0.50
30:BD:30:GLU:OE2	30:BD:63:ARG:NH2	2.44	0.50
14:AN:27:CYS:HG	14:AN:43:CYS:HG	1.35	0.50
8:AH:33:GLU:C	8:AH:35:ILE:N	2.65	0.50
27:BA:1248:G:H3'	27:BA:1249:U:H5''	1.93	0.50
27:BA:1812:A:C1'	30:BD:46:GLN:HE22	2.25	0.50
1:AA:1076:C:N4	1:AA:1081:G:H1	2.06	0.50
2:AB:107:THR:O	2:AB:110:GLN:HG3	2.12	0.50
2:AB:140:HIS:O	2:AB:144:ARG:HG2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DF:187:VAL:C	38:DP:7:ARG:NH2	2.63	0.50
1:CA:889:A:H1'	1:CA:891:U:C5	2.47	0.50
36:DN:134:ARG:N	36:DN:135:PRO:HD3	2.26	0.50
1:AA:451:A:H61	1:AA:481:G:C5'	2.25	0.50
27:DA:515:A:O2'	27:DA:516:C:H5'	2.12	0.50
20:CT:28:ALA:C	20:CT:30:LYS:N	2.65	0.50
58:D9:13:LYS:HD3	58:D9:28:GLU:HB2	1.94	0.50
18:AR:53:ARG:HH21	18:AR:59:SER:HA	1.76	0.50
1:CA:717:C:C4	1:CA:734:G:N7	2.80	0.50
27:BA:2278:A:H5''	49:B0:12:ASN:HD22	1.77	0.50
27:DA:1311:G:O2'	27:DA:1312:U:H5	1.95	0.50
27:DA:684:G:O2'	27:DA:788:A:N7	2.45	0.50
27:DA:768:G:C6	27:DA:769:G:C6	2.99	0.50
35:BI:93:THR:O	35:BI:94:ALA:C	2.49	0.50
27:DA:2819:G:OP2	40:DR:8:ARG:NH1	2.45	0.50
27:DA:300:A:N3	27:DA:319:C:H1'	2.26	0.50
27:BA:1374:G:H2'	27:BA:1375:C:C6	2.47	0.50
1:AA:737:A:O2'	6:AF:72:VAL:HG11	2.11	0.50
1:CA:1027:C:C2	1:CA:1028:C:N4	2.80	0.50
1:AA:1380:U:H4'	1:AA:1381:U:C5'	2.41	0.50
42:DT:109:GLU:O	42:DT:112:ARG:HB2	2.12	0.50
1:AA:762:C:H2'	1:AA:763:G:C8	2.44	0.50
45:DW:84:ARG:CG	45:DW:98:LYS:HZ3	2.25	0.50
27:DA:1236:G:OP2	27:DA:1236:G:C8	2.65	0.50
27:BA:676:A:N1	27:BA:802:A:N1	2.59	0.50
27:BA:1332:G:H5'	27:BA:1333:C:H5	1.76	0.50
27:BA:114:U:H2'	27:BA:114:U:O2	2.12	0.50
1:CA:810:C:O2'	1:CA:811:C:H5'	2.12	0.50
1:AA:1088:G:C4	1:AA:1089:G:C8	3.00	0.50
27:BA:872:A:N6	27:BA:906:G:C6	2.79	0.50
27:BA:1240:U:O2'	27:BA:1241:A:H5'	2.12	0.50
27:BA:171:G:O2'	27:BA:172:C:C6	2.56	0.50
27:BA:2462:U:H6	27:BA:2462:U:O5'	1.95	0.50
3:CC:21:ARG:C	3:CC:22:TRP:CD1	2.85	0.50
27:BA:1837:C:O2'	27:BA:1927:A:N3	2.36	0.50
27:BA:1260:G:H2'	27:BA:1261:C:C6	2.47	0.50
58:B9:14:CYS:O	58:B9:15:LYS:CB	2.51	0.50
27:DA:980:A:H2'	27:DA:981:A:O4'	2.11	0.50
50:D1:80:LEU:HB3	50:D1:82:LEU:CD2	2.42	0.50
1:AA:1525:G:H2'	1:AA:1526:G:C8	2.46	0.50
27:BA:2036:C:O2'	27:BA:2037:G:C8	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:83:GLU:C	10:CJ:85:LEU:H	2.13	0.50
18:CR:79:LEU:HB3	18:CR:80:PRO:HD2	1.93	0.50
2:CB:193:ASP:O	2:CB:194:PRO:O	2.29	0.50
5:AE:11:ILE:HD13	5:AE:105:VAL:HA	1.94	0.50
30:DD:155:LEU:CD1	30:DD:155:LEU:N	2.74	0.50
23:CW:29:G:H2'	23:CW:30:A:H8	1.76	0.50
50:D1:84:GLY:O	50:D1:86:SER:N	2.45	0.50
42:BT:130:ALA:O	42:BT:131:ALA:C	2.51	0.50
9:CI:16:ARG:HE	9:CI:64:THR:CG2	2.24	0.50
27:DA:1171:G:H3'	27:DA:1173:G:H4'	1.93	0.50
25:AY:47:C:N3	25:AY:58:A:H1'	2.27	0.50
32:DF:164:ARG:HG2	32:DF:164:ARG:HH11	1.76	0.50
27:BA:2088:G:H2'	27:BA:2089:U:C6	2.47	0.50
27:BA:888:C:H3'	27:BA:889:C:C5'	2.41	0.50
2:CB:142:LEU:O	2:CB:146:GLN:N	2.38	0.50
1:CA:598:U:H2'	1:CA:599:C:C6	2.46	0.50
48:DZ:28:TYR:O	48:DZ:29:ASN:HB3	2.12	0.50
27:DA:284:U:O2'	27:DA:285:C:C6	2.64	0.50
1:CA:757:U:O2'	1:CA:758:G:H5'	2.11	0.50
27:BA:1630:G:H2'	27:BA:1631:C:C6	2.47	0.50
25:CY:5:G:O2'	25:CY:6:U:H5'	2.12	0.50
27:DA:23:G:C2	27:DA:24:G:C8	3.00	0.50
1:AA:779:C:N4	1:AA:780:A:C6	2.80	0.50
39:DQ:89:ASN:OD1	39:DQ:89:ASN:N	2.44	0.50
15:CO:34:LEU:O	15:CO:34:LEU:HD12	2.11	0.50
4:AD:138:TYR:HE2	4:AD:140:VAL:HA	1.77	0.50
1:CA:1394:A:O2'	1:CA:1501:C:H1'	2.11	0.50
27:BA:633:A:N3	27:BA:2403:C:H4'	2.27	0.50
1:CA:1363:C:H5'	1:CA:1363(A):A:P	2.52	0.50
27:DA:1140:C:H5''	36:DN:66:LYS:HZ3	1.76	0.50
4:CD:13:ARG:HA	4:CD:33:MET:SD	2.52	0.50
9:CI:105:ASP:OD1	9:CI:107:ARG:HD3	2.12	0.50
5:AE:132:ALA:C	5:AE:134:ALA:N	2.66	0.50
44:BV:20:LEU:N	44:BV:20:LEU:HD12	2.27	0.50
44:BV:95:LEU:HD22	44:BV:95:LEU:C	2.33	0.50
1:CA:720:C:O5'	1:CA:720:C:H6	1.94	0.50
17:AQ:40:LYS:HE2	17:AQ:42:TYR:CZ	2.47	0.50
27:DA:61:G:O2'	27:DA:62:C:H6	1.94	0.50
38:DP:101:VAL:CG2	38:DP:102:ARG:N	2.74	0.50
44:DV:79:VAL:O	44:DV:80:GLN:HB2	2.12	0.50
27:BA:1686:C:C2'	27:BA:1687:G:H5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:230:G:H4'	16:AP:23:ASP:OD2	2.11	0.50
27:BA:2590:A:C2	27:BA:2605:U:O2	2.64	0.50
1:CA:1003:G:H2'	1:CA:1004:A:O4'	2.10	0.50
42:DT:13:ARG:HH12	42:DT:15:VAL:HG11	1.77	0.50
30:DD:218:ARG:CB	30:DD:219:PRO:CD	2.90	0.50
30:BD:270:ILE:C	30:BD:270:ILE:HD12	2.33	0.50
2:CB:58:ILE:N	2:CB:58:ILE:HD13	2.27	0.50
48:BZ:165:SER:HB2	48:BZ:166:PRO:C	2.32	0.50
40:DR:11:ASN:O	40:DR:12:ARG:HB2	2.12	0.50
32:BF:33:LEU:HD13	32:BF:112:MET:HE2	1.93	0.50
37:DO:14:THR:O	37:DO:14:THR:HG22	2.12	0.50
51:B2:53:LEU:O	51:B2:54:LYS:C	2.51	0.50
57:B8:50:LEU:O	57:B8:51:ALA:CB	2.59	0.50
30:BD:17:THR:HG1	30:BD:205:VAL:H	1.59	0.50
5:AE:80:ILE:HD11	5:AE:142:LEU:HD21	1.94	0.50
42:DT:49:VAL:O	42:DT:50:ILE:HD12	2.12	0.50
27:BA:196:A:C4	27:BA:805:G:O6	2.64	0.50
21:AU:9:ARG:O	21:AU:10:ARG:C	2.49	0.50
1:AA:818:G:C3'	1:AA:819:A:C5'	2.90	0.50
1:CA:604:G:C6	1:CA:635:G:C6	3.00	0.50
1:AA:1313:U:OP1	19:AS:6:LYS:HG3	2.12	0.50
27:BA:814:C:N4	38:BP:27:HIS:HD2	1.99	0.50
44:BV:82:ARG:NH1	44:BV:82:ARG:HG2	2.27	0.50
27:BA:1048:A:N6	27:BA:1054:A:C5	2.79	0.50
45:DW:6:ILE:HG21	45:DW:8:ARG:HG3	1.93	0.50
7:AG:23:VAL:HG12	7:AG:24:THR:N	2.27	0.50
27:BA:187:G:N3	27:BA:1365:A:H2	2.10	0.50
15:CO:8:LYS:O	15:CO:11:VAL:HB	2.11	0.50
1:CA:885:G:N3	1:CA:914:A:H2	2.08	0.50
1:AA:800:G:HO2'	1:AA:801:U:H6	1.56	0.50
1:AA:839:U:H5'	1:AA:840:C:C5	2.46	0.50
18:AR:58:LEU:HD12	18:AR:58:LEU:N	2.27	0.50
4:AD:3:ARG:HB3	4:AD:118:ARG:HE	1.77	0.50
30:BD:131:LEU:O	30:BD:190:TYR:HA	2.12	0.50
27:BA:1193:G:C8	27:BA:1193:G:H5'	2.44	0.50
7:CG:117:ALA:O	7:CG:120:ILE:N	2.44	0.50
27:BA:463:G:N2	27:BA:467:G:C5	2.80	0.50
27:BA:458:G:N2	27:BA:469:G:H2'	2.26	0.50
27:DA:2354:G:N2	27:DA:2355:C:C2	2.80	0.50
48:DZ:140:VAL:HG13	48:DZ:140:VAL:O	2.11	0.50
47:DY:90:LEU:HD12	47:DY:91:GLU:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1548:C:H2'	27:DA:1549:C:C6	2.42	0.50
27:DA:2146:C:H4'	27:DA:2147:G:O5'	2.12	0.50
48:DZ:36:VAL:O	48:DZ:37:TYR:HB3	2.11	0.50
38:DP:132:LYS:O	38:DP:136:GLU:HG2	2.12	0.50
48:BZ:32:LEU:HG	48:BZ:33:ASN:N	2.27	0.50
27:BA:2111:C:N3	27:BA:2147:G:N2	2.59	0.50
27:BA:83:G:C2	27:BA:102:G:O2'	2.63	0.50
27:BA:1450:G:H2'	27:BA:1450(A):C:C5'	2.42	0.50
27:DA:553:G:O2'	27:DA:554:U:H5'	2.11	0.50
1:AA:1413:A:C6	1:AA:1414:U:C4	3.00	0.50
27:BA:1695:G:N2	27:BA:1696:G:C5	2.80	0.50
2:AB:220:ASP:O	2:AB:224:GLN:HB2	2.12	0.50
6:CF:5:GLU:OE1	6:CF:62:TRP:HZ2	1.95	0.50
27:BA:1385:G:O3'	27:BA:1396:U:H5	1.94	0.50
2:CB:170:GLU:O	2:CB:173:ALA:HB3	2.12	0.50
3:CC:189:ALA:O	3:CC:195:VAL:CG1	2.60	0.50
1:CA:487:A:O2'	1:CA:488:C:H5'	2.11	0.50
27:DA:1805:U:H5''	30:DD:250:TRP:CG	2.47	0.50
44:DV:21:ARG:N	44:DV:21:ARG:HD3	2.26	0.50
48:BZ:44:ASP:O	48:BZ:46:VAL:N	2.45	0.50
1:AA:1494:G:O6	26:AZ:1:KBE:HAA	2.11	0.50
45:DW:35:ILE:HG23	54:D5:28:PRO:HD2	1.94	0.50
16:CP:6:LEU:HD23	16:CP:17:TYR:CD2	2.47	0.50
27:BA:370:G:H4'	27:BA:371:A:OP2	2.11	0.50
27:DA:1527:G:H5''	27:DA:1528:A:OP1	2.12	0.50
38:BP:86:LYS:HB2	38:BP:117:GLU:O	2.11	0.50
4:AD:90:GLY:HA3	4:AD:201:GLN:NE2	2.26	0.50
4:AD:203:VAL:O	4:AD:204:ILE:C	2.50	0.50
45:DW:25:ARG:HH11	45:DW:25:ARG:CB	2.25	0.50
45:DW:25:ARG:HB2	45:DW:25:ARG:NH1	2.27	0.50
3:CC:178:LEU:H	3:CC:178:LEU:HD22	1.76	0.50
30:DD:184:LYS:HG3	30:DD:269:PHE:HA	1.92	0.50
4:CD:59:ARG:NE	4:CD:59:ARG:HA	2.26	0.50
38:BP:34:GLY:O	38:BP:35:HIS:CB	2.60	0.49
32:BF:3:GLU:HA	32:BF:24:LEU:CB	2.42	0.49
34:BH:138:LYS:N	34:BH:141:VAL:HG23	2.21	0.49
27:DA:242:G:N7	57:D8:5:LYS:HG2	2.27	0.49
27:DA:1823:G:H2'	27:DA:1824:G:H8	1.77	0.49
27:DA:1932:A:O2'	27:DA:1933:G:H5'	2.11	0.49
32:BF:38:ARG:NH1	32:BF:38:ARG:HG3	2.24	0.49
47:BY:49:VAL:O	47:BY:50:ARG:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:997:G:OP1	43:BU:92:ARG:C	2.50	0.49
44:BV:2:PHE:CE1	44:BV:13:ARG:HG3	2.46	0.49
44:BV:38:LEU:HD23	44:BV:39:LEU:N	2.27	0.49
44:DV:47:VAL:O	44:DV:47:VAL:HG23	2.12	0.49
27:DA:869:G:C4	27:DA:870:A:C8	3.01	0.49
11:AK:32:ILE:HD11	11:AK:41:THR:CB	2.33	0.49
31:DE:52:LEU:HD22	31:DE:76:ARG:HB2	1.94	0.49
57:D8:33:ASN:HA	57:D8:36:LYS:HD2	1.94	0.49
27:DA:2259:G:H1'	27:DA:2427:C:C2	2.47	0.49
27:DA:1615:C:C2	45:DW:87:PRO:HG3	2.46	0.49
27:DA:1952:A:C6	27:DA:1953:A:C6	3.00	0.49
31:DE:96:PHE:HE2	31:DE:198:VAL:HG12	1.77	0.49
1:CA:1296:C:H3'	1:CA:1297:C:C6	2.46	0.49
30:BD:105:ILE:O	30:BD:106:ILE:C	2.50	0.49
30:BD:126:GLN:O	30:BD:127:VAL:C	2.50	0.49
1:CA:40:C:O2'	1:CA:41:G:H5'	2.12	0.49
1:CA:103:C:OP1	20:CT:17:ARG:NH1	2.45	0.49
8:AH:119:LEU:HD12	8:AH:124:ALA:HA	1.94	0.49
1:AA:530:G:HO2'	1:AA:531:U:P	2.34	0.49
27:DA:2755:C:H2'	27:DA:2755:C:O2	2.12	0.49
27:BA:2070:G:C2	27:BA:2071:A:C4	2.99	0.49
27:BA:787:U:H5''	27:BA:788:A:C5'	2.42	0.49
33:DG:135:LEU:HD12	33:DG:135:LEU:N	2.25	0.49
15:CO:56:LEU:O	15:CO:57:LEU:C	2.50	0.49
58:D9:27:CYS:SG	58:D9:29:ASN:ND2	2.85	0.49
1:CA:748:C:HO2'	1:CA:749:C:P	2.35	0.49
27:BA:2289:G:H2'	27:BA:2290:G:H5''	1.93	0.49
1:CA:18:C:H2'	1:CA:19:C:O4'	2.12	0.49
27:BA:65:C:O2'	27:BA:66:C:H5'	2.12	0.49
13:AM:57:ARG:NH1	53:B4:60:GLU:HG3	2.27	0.49
1:AA:938:A:O2'	1:AA:939:G:H5'	2.11	0.49
1:AA:1278:U:H5'	1:AA:1279:A:N9	2.26	0.49
27:BA:77:C:C2	27:BA:110:G:N2	2.80	0.49
27:BA:1055:G:C2'	27:BA:1108:U:H5'	2.42	0.49
27:DA:481:G:O2'	27:DA:482:A:P	2.70	0.49
1:CA:1382:C:O2'	1:CA:1383:C:H5'	2.12	0.49
1:CA:936:C:H2'	1:CA:937:A:O4'	2.12	0.49
50:B1:18:ILE:CG2	50:B1:20:ARG:HG3	2.42	0.49
1:AA:1089:G:O2'	1:AA:1090:U:H5'	2.12	0.49
43:BU:31:SER:OG	43:BU:34:LYS:N	2.35	0.49
1:AA:232:G:C5	1:AA:233:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:799:G:C2'	1:AA:800:G:H5'	2.41	0.49
1:AA:799:G:H2'	1:AA:800:G:H5'	1.93	0.49
6:AF:15:ASP:O	6:AF:16:GLN:C	2.50	0.49
12:AL:66:TYR:HB2	12:AL:93:VAL:HG11	1.93	0.49
27:DA:2543:G:C2	27:DA:2544:G:C4	2.99	0.49
1:AA:1377:A:H2'	7:AG:7:ALA:HB2	1.94	0.49
1:AA:848:C:O2'	1:AA:849:C:H5'	2.12	0.49
37:DO:88:ASN:ND2	37:DO:92:GLU:HB2	2.27	0.49
18:AR:56:THR:O	18:AR:58:LEU:HD12	2.12	0.49
4:CD:146:ILE:CD1	4:CD:146:ILE:N	2.71	0.49
31:BE:40:GLU:N	31:BE:40:GLU:CD	2.65	0.49
27:DA:1400:G:O2'	27:DA:1401:G:H5'	2.12	0.49
36:BN:55:VAL:HG22	36:BN:56:ASN:H	1.77	0.49
56:D7:22:MET:SD	56:D7:31:LEU:CD1	3.00	0.49
27:BA:465:G:C6	27:BA:466:A:N6	2.80	0.49
46:DX:71:GLY:C	46:DX:72:LYS:HD2	2.32	0.49
1:AA:758:G:H5''	1:AA:880:C:H1'	1.93	0.49
1:CA:1030:C:C5	1:CA:1031:G:N2	2.79	0.49
1:CA:59:A:H5''	1:CA:60:A:H5'	1.93	0.49
1:AA:277:C:P	17:AQ:41:LYS:HZ1	2.35	0.49
27:DA:1770:G:H2'	27:DA:1771:C:C6	2.46	0.49
27:DA:811:U:H2'	38:DP:24:GLY:O	2.12	0.49
5:AE:40:ARG:HB3	5:AE:66:MET:HE1	1.94	0.49
27:BA:2220:G:H2'	27:BA:2221:G:C8	2.47	0.49
28:DB:25:A:H3'	28:DB:26:A:H5''	1.93	0.49
24:CX:34:C:O2	24:CX:35:A:C8	2.64	0.49
27:BA:1450:G:C2'	27:BA:1450(A):C:H5'	2.41	0.49
9:CI:17:VAL:HG12	9:CI:17:VAL:O	2.11	0.49
48:BZ:106:THR:HB	48:BZ:107:PRO:HD2	1.93	0.49
50:D1:50:ARG:HH11	50:D1:50:ARG:CG	2.23	0.49
27:BA:1973:G:H2'	27:BA:1974:C:C6	2.44	0.49
30:BD:261:LYS:NZ	30:BD:263:ARG:NH2	2.60	0.49
43:BU:52:ARG:O	43:BU:56:ASP:N	2.42	0.49
1:AA:1234:C:H2'	1:AA:1235:U:H6	1.77	0.49
1:AA:1154:G:H2'	1:AA:1155:G:C8	2.46	0.49
27:BA:1789:A:OP1	30:BD:222:ARG:HG3	2.11	0.49
12:CL:49:LEU:O	12:CL:51:LYS:HD2	2.12	0.49
27:BA:1759:A:H1'	27:BA:2711:A:C2	2.47	0.49
1:AA:1149:C:O2'	1:AA:1150:U:H5'	2.12	0.49
2:AB:108:ILE:O	2:AB:111:ARG:HB2	2.12	0.49
30:DD:126:GLN:HG2	30:DD:129:ASN:ND2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:46:GLU:HB3	18:CR:85:LEU:HD13	1.93	0.49
16:CP:59:TRP:O	16:CP:64:ALA:HB3	2.12	0.49
28:BB:37:C:H2'	28:BB:38:C:O4'	2.11	0.49
33:BG:77:ILE:HG22	33:BG:80:PHE:H	1.77	0.49
11:CK:24:SER:OG	11:CK:25:TYR:N	2.42	0.49
27:BA:1582:C:O2'	27:BA:1586:A:C8	2.65	0.49
20:CT:40:ALA:C	20:CT:42:GLN:H	2.15	0.49
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.12	0.49
27:BA:1773:A:C2'	27:BA:1774:C:H5'	2.42	0.49
1:CA:77:G:H2'	1:CA:77:G:N3	2.27	0.49
10:CJ:84:GLN:CD	10:CJ:84:GLN:H	2.14	0.49
4:AD:168:ARG:HH11	4:AD:168:ARG:CG	2.25	0.49
27:BA:601:C:O2'	27:BA:605:C:OP1	2.23	0.49
27:BA:1009:A:H5''	43:BU:63:VAL:CG2	2.43	0.49
8:AH:102:ARG:HD2	8:AH:105:ARG:HH12	1.77	0.49
27:BA:2817:G:H21	27:BA:2836:U:H1'	1.78	0.49
47:BY:96:ILE:CG1	47:BY:99:CYS:HB2	2.43	0.49
34:BH:85:LYS:HB3	34:BH:133:VAL:HG23	1.92	0.49
27:BA:511:U:C5	27:BA:512:G:C4	3.00	0.49
27:BA:486:C:H2'	27:BA:487:C:C6	2.47	0.49
31:BE:75:VAL:O	31:BE:77:ILE:N	2.45	0.49
27:BA:533:G:O2'	43:BU:42:ALA:HA	2.12	0.49
36:BN:1:MET:O	36:BN:2:LYS:CG	2.61	0.49
43:DU:100:VAL:HG12	43:DU:101:ARG:HG3	1.95	0.49
27:DA:434:U:C4'	27:DA:435:C:OP1	2.55	0.49
33:BG:54:GLU:C	33:BG:56:ALA:N	2.64	0.49
27:DA:860:U:O4'	27:DA:2268:A:H5'	2.13	0.49
27:DA:953:A:N3	27:DA:954:G:C8	2.79	0.49
27:DA:1952:A:H62	27:DA:1953:A:N6	2.08	0.49
27:DA:746:A:C1'	27:DA:748:G:N2	2.76	0.49
27:DA:330:A:O2'	27:DA:331:A:H2'	2.12	0.49
4:CD:100:ARG:O	4:CD:101:LEU:C	2.50	0.49
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.12	0.49
51:D2:4:SER:CA	51:D2:7:ARG:HH11	2.07	0.49
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.12	0.49
14:AN:26:ARG:HD2	14:AN:43:CYS:SG	2.52	0.49
8:AH:127:LEU:HD12	8:AH:129:VAL:CG1	2.38	0.49
12:CL:84:GLY:HA2	12:CL:95:TYR:HA	1.92	0.49
1:AA:297:G:N2	1:AA:300:A:OP2	2.39	0.49
27:DA:2747:G:O6	27:DA:2755:C:H5''	2.12	0.49
17:CQ:3:LYS:HD3	17:CQ:61:GLU:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:76:LEU:HD12	17:CQ:76:LEU:C	2.32	0.49
27:BA:125:G:H21	56:B7:48:LYS:HZ3	1.57	0.49
27:DA:18:C:N4	27:DA:19:C:N4	2.60	0.49
27:BA:1602:U:H4'	27:BA:1603:A:OP2	2.13	0.49
27:BA:1338:G:H2'	27:BA:1339:G:H8	1.77	0.49
37:BO:22:ILE:HG12	37:BO:42:SER:N	2.27	0.49
27:DA:2712:U:H5''	27:DA:2714:G:H4'	1.93	0.49
27:DA:2479:G:H5''	27:DA:2537:U:H4'	1.94	0.49
1:CA:718:G:N2	18:CR:49:LYS:HD3	2.27	0.49
5:CE:50:GLU:HB3	5:CE:53:LEU:CD1	2.33	0.49
1:CA:1260:C:H6	1:CA:1260:C:H3'	1.78	0.49
6:CF:34:GLY:HA3	6:CF:71:ARG:HH21	1.77	0.49
38:BP:83:VAL:HG22	38:BP:83:VAL:O	2.12	0.49
38:BP:96:THR:O	38:BP:100:LEU:HD22	2.13	0.49
25:AY:67:C:H2'	25:AY:68:C:C6	2.45	0.49
36:DN:16:ILE:CG2	36:DN:54:VAL:HG23	2.42	0.49
1:CA:925:G:C2	1:CA:927:G:C8	3.00	0.49
27:BA:153:C:OP1	50:B1:92:LYS:HE2	2.11	0.49
27:BA:2287:A:C4	27:BA:2289:G:N7	2.80	0.49
33:DG:48:GLU:O	33:DG:51:ARG:NE	2.45	0.49
33:DG:77:ILE:O	33:DG:81:LYS:O	2.30	0.49
3:AC:200:ALA:C	3:AC:201:TYR:HD1	2.15	0.49
51:B2:32:LEU:HB2	51:B2:53:LEU:CD1	2.42	0.49
36:DN:78:TYR:HB3	36:DN:79:PRO:HD3	1.92	0.49
30:DD:35:LYS:NZ	30:DD:104:TYR:H	2.08	0.49
28:DB:39:A:O2'	28:DB:46:A:N1	2.41	0.49
39:BQ:27:VAL:H	39:BQ:137:TYR:HD1	1.60	0.49
13:AM:22:ILE:HG22	13:AM:25:ILE:HD13	1.92	0.49
1:AA:937:A:N6	1:AA:938:A:C6	2.80	0.49
1:AA:875:C:H1'	8:AH:15:ASN:ND2	2.27	0.49
38:BP:85:LEU:HA	38:BP:88:LEU:HB2	1.94	0.49
21:AU:12:LYS:HB3	21:AU:22:ARG:HD3	1.94	0.49
30:DD:176:ARG:HA	30:DD:181:GLU:O	2.11	0.49
12:CL:5:ASN:CA	12:CL:8:VAL:HG23	2.42	0.49
26:AZ:3:SER:O	26:AZ:4:SER:HB3	2.12	0.49
27:DA:30:G:C5	27:DA:31:C:C4	3.00	0.49
1:CA:937:A:O5'	1:CA:937:A:H8	1.95	0.49
1:CA:709:G:H2'	1:CA:710:G:H8	1.76	0.49
15:AO:38:ARG:HH11	15:AO:38:ARG:CG	2.25	0.49
37:BO:97:ARG:HA	37:BO:117:LEU:HD22	1.94	0.49
27:BA:218:A:H2	27:BA:235:U:H4'	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:80:ILE:HD13	2:AB:211:ILE:HG22	1.92	0.49
16:CP:20:VAL:HG22	16:CP:21:VAL:H	1.76	0.49
49:D0:14:ARG:O	49:D0:15:ASP:HB2	2.11	0.49
27:BA:711:G:N2	27:BA:721:C:C2	2.79	0.49
1:AA:1147:C:O2'	9:AI:16:ARG:HD3	2.12	0.49
27:BA:461:C:O2	27:BA:461:C:H2'	2.12	0.49
27:BA:271(K):U:H3'	27:BA:271(L):U:C5'	2.42	0.49
1:CA:336:C:H2'	1:CA:337:C:H5'	1.94	0.49
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.94	0.49
1:AA:1248:A:C2'	1:AA:1249:C:H5'	2.42	0.49
48:DZ:9:ARG:HD3	48:DZ:11:GLY:HA2	1.93	0.49
1:AA:806:C:H2'	1:AA:807:A:C8	2.47	0.49
51:D2:30:ARG:O	51:D2:31:GLU:C	2.51	0.49
27:DA:205:G:O2'	27:DA:206:U:OP2	2.29	0.49
20:AT:13:LEU:O	20:AT:16:HIS:HB3	2.12	0.49
27:BA:1788:C:H5''	30:BD:225:ALA:HB1	1.92	0.49
27:DA:1545:A:H3'	27:DA:1546:C:C6	2.47	0.49
27:BA:886:C:H2'	27:BA:889:C:H42	1.76	0.49
29:DC:52:ARG:HH21	29:DC:53:ARG:HH21	1.59	0.49
27:BA:903:C:H2'	27:BA:904:C:C6	2.46	0.49
27:DA:2376:A:H2'	27:DA:2377:A:O4'	2.11	0.49
32:BF:150:GLY:HA2	32:BF:172:TRP:CE3	2.46	0.49
6:CF:76:ALA:O	6:CF:80:ARG:HG2	2.12	0.49
27:BA:2887:U:O2'	27:BA:2888:C:H5'	2.12	0.49
27:BA:2450:A:C2	27:BA:2451:A:C4	3.00	0.49
11:CK:83:ILE:HG12	11:CK:109:VAL:HB	1.94	0.49
27:BA:638:G:C6	27:BA:639:U:C4	3.00	0.49
1:CA:1223:C:H5''	1:CA:1224:G:H5''	1.94	0.49
1:CA:949:A:C1'	1:CA:1364:U:H3	2.25	0.49
40:BR:30:THR:HG22	40:BR:31:HIS:N	2.27	0.49
57:D8:16:ILE:HG22	57:D8:64:TYR:HB3	1.94	0.49
57:D8:62:LEU:N	57:D8:63:PRO:HD2	2.28	0.49
38:DP:50:ARG:NH2	38:DP:50:ARG:HG2	2.27	0.49
27:BA:32:C:O2'	27:BA:33:U:H5'	2.11	0.49
43:BU:69:CYS:HB2	43:BU:74:LEU:CD1	2.39	0.49
1:AA:128:G:O2'	1:AA:129:U:H5'	2.12	0.49
43:DU:97:ASP:HA	43:DU:100:VAL:HG23	1.94	0.49
27:DA:534:U:H1'	43:DU:49:HIS:CD2	2.46	0.49
27:DA:907:U:O2'	27:DA:908:C:H5'	2.12	0.49
55:D6:11:LEU:CD1	55:D6:52:VAL:O	2.56	0.49
38:DP:113:LYS:O	38:DP:115:LEU:HD22	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:65:ARG:HH11	57:D8:46:ARG:NH2	2.05	0.49
31:DE:131:ALA:CB	31:DE:134:ILE:HD11	2.42	0.49
43:DU:34:LYS:HE2	43:DU:34:LYS:HA	1.95	0.49
20:AT:20:LEU:O	20:AT:23:ARG:HB3	2.12	0.49
47:DY:67:LEU:O	47:DY:68:HIS:O	2.30	0.49
34:BH:44:VAL:C	34:BH:46:GLU:H	2.15	0.49
30:BD:64:ILE:O	30:BD:64:ILE:CG2	2.58	0.49
9:AI:48:GLU:C	9:AI:50:LEU:N	2.63	0.49
14:AN:27:CYS:HG	14:AN:40:CYS:HG	1.53	0.49
2:AB:67:THR:HG21	2:AB:155:LEU:CD2	2.42	0.49
19:AS:19:VAL:O	19:AS:23:ASN:HB2	2.12	0.49
34:DH:84:SER:O	34:DH:85:LYS:CB	2.60	0.49
28:DB:7:G:H3'	28:DB:8:U:H5''	1.94	0.49
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.43	0.49
1:AA:109:A:C4	1:AA:326:G:C2	3.00	0.49
1:CA:123:C:H2'	1:CA:124:G:O4'	2.11	0.49
1:CA:891:U:O2'	1:CA:892:A:H5'	2.12	0.49
7:AG:52:GLU:C	7:AG:54:THR:H	2.16	0.49
1:AA:455:C:C2'	1:AA:456:C:H5'	2.42	0.49
27:BA:2093:G:C6	27:BA:2225:A:N7	2.81	0.49
3:CC:64:VAL:O	3:CC:100:ALA:HB3	2.13	0.49
6:CF:3:ARG:NH1	6:CF:3:ARG:HG3	2.22	0.49
6:CF:93:SER:C	6:CF:94:GLN:HG3	2.33	0.49
1:CA:1269:A:H5''	1:CA:1270:C:OP2	2.12	0.49
1:CA:1328:C:P	21:CU:21:TYR:OH	2.70	0.49
58:B9:27:CYS:CB	58:B9:32:HIS:HB2	2.42	0.49
35:BI:6:LEU:O	35:BI:7:GLU:C	2.51	0.49
27:DA:2308:G:N7	27:DA:2310:A:H5'	2.26	0.49
1:AA:619:U:H3	4:AD:135:LEU:HD13	1.76	0.49
30:BD:70:TRP:HZ3	30:BD:146:GLU:CD	2.15	0.49
33:DG:125:PHE:HD1	33:DG:125:PHE:H	1.59	0.49
13:AM:23:TYR:HB3	13:AM:67:GLU:HB2	1.94	0.49
37:DO:59:LYS:O	37:DO:86:ILE:HA	2.13	0.49
42:DT:50:ILE:HA	42:DT:99:LEU:HD11	1.93	0.49
27:BA:2657:A:C2'	27:BA:2658:C:H5'	2.42	0.49
27:DA:271(A):A:C5'	27:DA:271(B):C:OP2	2.60	0.49
1:CA:601:C:O5'	1:CA:601:C:H6	1.96	0.49
12:CL:7:LEU:O	12:CL:11:GLY:N	2.45	0.49
27:DA:1289:C:O2'	27:DA:1290:C:C6	2.62	0.49
1:CA:872:A:C8	1:CA:874:G:C8	3.00	0.49
1:CA:814:A:H2'	1:CA:816:A:H5''	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:965:A:H4'	1:AA:966:G:H5''	1.94	0.49
13:AM:116:THR:HG22	13:AM:117:VAL:N	2.27	0.49
27:DA:1767:C:C2'	27:DA:1768:U:H5'	2.41	0.49
7:CG:14:PRO:HB3	7:CG:19:GLY:O	2.12	0.49
38:DP:91:PHE:N	38:DP:91:PHE:HD1	2.07	0.49
1:AA:436:C:H2'	1:AA:437:U:C6	2.47	0.49
27:BA:440:G:N2	32:BF:46:ARG:HH22	2.10	0.49
27:DA:363(E):U:O2	27:DA:363(E):U:C2'	2.59	0.49
7:AG:103:TRP:HZ3	7:AG:138:LYS:HA	1.77	0.49
27:BA:2534:A:H2'	27:BA:2535:G:O5'	2.11	0.49
2:CB:114:ARG:HD3	2:CB:117:GLU:OE1	2.12	0.49
27:BA:1710:C:C6	27:BA:1710:C:C3'	2.95	0.49
39:BQ:38:GLU:HA	39:BQ:99:PRO:HG3	1.93	0.49
9:AI:73:GLN:O	9:AI:76:ALA:HB3	2.12	0.49
48:DZ:107:PRO:O	48:DZ:109:GLY:N	2.45	0.49
27:DA:1291:C:H2'	27:DA:1292:U:C6	2.47	0.49
1:CA:422:C:H4'	1:CA:423:G:OP1	2.11	0.49
38:DP:135:LEU:HD12	38:DP:136:GLU:OE1	2.13	0.49
27:BA:188:G:H2'	27:BA:189:G:H5'	1.93	0.49
36:DN:42:TRP:CD1	43:DU:63:VAL:CG1	2.95	0.49
43:DU:59:ARG:O	43:DU:62:ILE:HB	2.12	0.49
1:CA:296:U:H1'	1:CA:556:C:O2'	2.12	0.49
27:BA:671:C:H5	38:BP:42:SER:HA	1.76	0.49
27:DA:1171:G:H5''	27:DA:1173:G:H5''	1.95	0.49
1:CA:1380:U:H4'	1:CA:1381:U:O5'	2.12	0.49
29:DC:19:VAL:HG12	29:DC:20:TYR:HD1	1.78	0.49
27:BA:2251:G:OP2	39:BQ:82:ARG:NH1	2.46	0.49
27:BA:2039:C:O2'	27:BA:2040:C:H5'	2.12	0.49
1:CA:1112:C:O2	3:CC:179:ARG:HD3	2.12	0.49
27:DA:1684:C:H2'	27:DA:1685:C:C6	2.47	0.49
27:BA:876:C:H2'	27:BA:877:U:C6	2.47	0.49
35:DI:110:ASP:O	35:DI:114:LEU:HD21	2.13	0.49
3:AC:73:PRO:O	3:AC:75:VAL:N	2.44	0.49
48:BZ:37:TYR:CG	48:BZ:37:TYR:O	2.64	0.49
2:AB:235:SER:HG	2:AB:236:TYR:HD1	1.60	0.49
27:BA:451:C:C4	27:BA:453:C:C5	3.01	0.49
27:DA:555:U:O2'	27:DA:556:G:H8	1.95	0.49
27:DA:1557:C:H5''	27:DA:1558:A:OP2	2.12	0.49
34:DH:167:GLU:N	34:DH:167:GLU:OE1	2.45	0.49
27:DA:1324:G:C2	27:DA:1331:A:C2	2.99	0.49
27:DA:20:C:O2'	27:DA:21:A:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:220:G:N3	1:AA:220:G:H2'	2.28	0.49
8:CH:113:SER:O	8:CH:131:GLY:HA3	2.12	0.49
27:BA:1026:U:O2'	27:BA:1027:A:H5'	2.11	0.49
17:AQ:13:ASP:C	17:AQ:15:MET:H	2.15	0.49
2:AB:137:ARG:HD3	2:AB:137:ARG:C	2.33	0.49
1:CA:1320:C:O2	19:CS:36:ARG:NH2	2.46	0.49
1:CA:982:U:C6	1:CA:983:A:N6	2.81	0.49
40:BR:34:ILE:CG2	40:BR:35:THR:N	2.76	0.49
41:BS:88:ASP:O	41:BS:89:ARG:O	2.31	0.49
27:DA:1022:G:OP2	36:DN:69:GLN:OE1	2.30	0.49
46:BX:8:ILE:HD11	46:BX:43:VAL:HA	1.95	0.49
27:BA:662:G:O3'	38:BP:20:GLY:HA2	2.13	0.49
47:BY:50:ARG:HG3	47:BY:58:GLY:CA	2.39	0.49
1:AA:865:A:C2	1:AA:918:A:H4'	2.47	0.49
27:BA:1159:U:OP1	52:B3:30:ARG:NH2	2.46	0.49
42:BT:28:VAL:CG2	42:BT:46:GLU:CA	2.86	0.49
27:DA:1419:A:C8	27:DA:1421:G:C6	3.01	0.49
30:DD:24:ILE:O	30:DD:26:LYS:CE	2.60	0.49
30:DD:30:GLU:OE2	30:DD:83:GLU:OE1	2.29	0.49
51:D2:56:GLN:O	51:D2:58:ALA:N	2.45	0.49
1:AA:471:G:HO2'	1:AA:472:A:H8	1.60	0.49
27:DA:2266:A:H1'	27:DA:2272:U:O4	2.12	0.49
27:DA:2266:A:H1'	27:DA:2272:U:C4	2.48	0.49
31:DE:59:VAL:CG2	31:DE:60:ASN:N	2.69	0.49
31:DE:6:GLY:HA2	31:DE:51:PHE:CE2	2.47	0.49
38:DP:146:VAL:CG2	38:DP:147:LEU:H	2.14	0.49
38:DP:84:ASN:ND2	38:DP:116:GLY:HA3	2.26	0.49
27:DA:947:G:O6	27:DA:970:C:N4	2.40	0.49
1:AA:175:C:H2'	1:AA:176:C:H6	1.77	0.49
27:DA:2779:U:OP1	27:DA:2779:U:H3'	2.12	0.49
1:CA:218:C:O2'	1:CA:219:C:C6	2.64	0.49
1:AA:1221:G:OP1	19:AS:36:ARG:HD3	2.13	0.49
46:BX:64:LYS:HZ2	46:BX:73:ARG:NH2	2.08	0.49
19:AS:19:VAL:HG13	19:AS:47:HIS:CD2	2.47	0.49
17:CQ:10:VAL:HA	17:CQ:20:THR:O	2.12	0.49
27:BA:1777:U:H6	27:BA:1777:U:O5'	1.95	0.49
31:BE:1:MET:CB	31:BE:84:PHE:HB2	2.39	0.49
27:BA:1257:C:O2'	32:BF:83:PHE:O	2.29	0.49
31:DE:9:VAL:CG2	42:DT:8:LYS:HD2	2.42	0.49
27:DA:1776:G:O2'	27:DA:1777:U:H5'	2.13	0.49
1:CA:964:A:H2	1:CA:969:A:O2'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1057:G:H5''	3:CC:154:SER:CB	2.41	0.49
1:CA:538:G:O3'	12:CL:111:LYS:CE	2.61	0.49
10:AJ:7:LYS:HD3	10:AJ:71:LEU:HD13	1.94	0.49
21:CU:12:LYS:HD2	21:CU:17:THR:OG1	2.12	0.49
1:CA:1327:C:OP1	21:CU:20:LYS:N	2.44	0.49
48:DZ:52:ILE:CD1	48:DZ:52:ILE:H	2.14	0.49
48:DZ:18:ARG:CB	48:DZ:81:ARG:HH22	2.17	0.49
47:BY:87:LYS:NZ	47:BY:89:PHE:HE1	2.11	0.49
36:DN:56:ASN:O	36:DN:57:ALA:O	2.30	0.49
57:B8:39:LYS:O	57:B8:43:GLN:HG3	2.13	0.49
55:B6:26:ASN:HB3	55:B6:32:ASN:OD1	2.13	0.49
27:DA:663:G:H2'	27:DA:664:C:H6	1.76	0.49
5:CE:28:PHE:HE1	5:CE:49:PRO:O	1.95	0.49
5:CE:10:MET:CA	5:CE:32:VAL:HG13	2.36	0.49
5:CE:34:VAL:O	5:CE:41:VAL:HA	2.12	0.49
37:DO:7:TYR:CD1	37:DO:20:MET:HE3	2.47	0.49
42:DT:23:ARG:HE	42:DT:120:ARG:NH1	2.08	0.49
27:DA:2291:U:H2'	27:DA:2292:C:C5	2.46	0.49
27:DA:2296:U:O2	27:DA:2333:A:N3	2.45	0.49
9:CI:97:LYS:HB3	9:CI:98:PRO:CD	2.38	0.49
27:DA:2881:C:O2'	27:DA:2882:A:H5'	2.12	0.49
27:DA:2008:C:O2'	27:DA:2009:G:H5'	2.12	0.49
33:BG:128:ARG:N	33:BG:128:ARG:NE	2.61	0.49
2:CB:80:ILE:HG12	2:CB:80:ILE:O	2.11	0.49
27:DA:2726:U:O4'	27:DA:2726:U:O2	2.31	0.49
38:DP:130:PHE:N	38:DP:130:PHE:HD2	2.09	0.49
1:AA:1257:U:C6	1:AA:1257:U:C3'	2.95	0.49
27:DA:1630:G:O2'	27:DA:1631:C:H5'	2.12	0.49
1:AA:1190:G:OP1	3:AC:5:ILE:HG13	2.12	0.49
27:DA:1946:U:H2'	27:DA:1947:C:C6	2.40	0.49
40:BR:81:ASP:N	40:BR:81:ASP:OD2	2.45	0.49
53:D4:40:ILE:HG22	53:D4:41:ILE:N	2.27	0.49
12:AL:3:THR:O	12:AL:6:GLN:N	2.43	0.49
32:BF:136:THR:HG22	32:BF:166:ALA:O	2.13	0.49
36:DN:35:ARG:HB3	36:DN:42:TRP:CH2	2.46	0.49
27:BA:2297:C:O5'	27:BA:2297:C:H6	1.96	0.49
1:AA:353:A:C2'	1:AA:354:G:OP2	2.59	0.49
27:DA:552:G:C1'	27:DA:1220:A:C2	2.95	0.49
29:BC:193:ILE:C	29:BC:195:ALA:N	2.66	0.49
1:AA:994:A:N1	1:AA:1047:G:H4'	2.27	0.49
39:BQ:81:VAL:CG2	39:BQ:82:ARG:N	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:80:VAL:O	11:AK:80:VAL:HG23	2.12	0.49
50:D1:46:LEU:HD22	50:D1:46:LEU:H	1.77	0.49
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.26	0.49
1:CA:438:G:H22	1:CA:494:U:H3'	1.77	0.49
7:CG:47:CYS:SG	7:CG:58:PRO:HB3	2.52	0.49
29:BC:64:LEU:O	29:BC:66:HIS:N	2.39	0.49
27:BA:296:C:N3	27:BA:343:C:O2	2.45	0.49
27:DA:2397:G:H2'	27:DA:2398:U:H6	1.78	0.49
28:BB:78:A:C2	28:BB:100:A:C4	3.00	0.49
6:CF:16:GLN:H	6:CF:16:GLN:CD	2.13	0.49
15:CO:28:GLN:O	15:CO:32:LEU:HG	2.13	0.49
27:BA:2623:G:H4'	27:BA:2825:C:O2	2.12	0.49
1:CA:979:C:C5	1:CA:980:C:C6	3.01	0.49
31:BE:170:LEU:HB3	31:BE:184:VAL:CG1	2.42	0.49
27:DA:1137:G:N2	36:DN:106:MET:HG2	2.26	0.49
36:DN:66:LYS:O	36:DN:70:LYS:HB2	2.13	0.49
27:DA:240:G:C6	27:DA:241:A:N6	2.80	0.49
27:DA:1794:U:H1'	27:DA:1900:A:N3	2.27	0.49
48:DZ:158:PRO:C	48:DZ:160:VAL:H	2.16	0.49
1:CA:509:A:C2	1:CA:510:A:C2	3.00	0.49
13:CM:25:ILE:N	13:CM:25:ILE:CD1	2.75	0.49
27:DA:372:G:H22	27:DA:400:G:H2'	1.76	0.49
27:DA:297:C:O2'	27:DA:298:G:H5'	2.12	0.49
30:DD:118:VAL:CG2	30:DD:119:ALA:N	2.60	0.49
52:B3:31:LEU:O	52:B3:32:GLN:HB2	2.12	0.49
47:DY:9:LYS:O	47:DY:28:LYS:NZ	2.41	0.49
41:DS:96:GLY:O	41:DS:98:VAL:N	2.46	0.49
27:DA:647:G:N2	27:DA:2350:C:H4'	2.14	0.49
27:DA:2425:A:H4'	27:DA:2426:A:O5'	2.13	0.49
38:DP:29:LYS:N	38:DP:29:LYS:HD2	2.28	0.49
39:BQ:2:LEU:HB3	39:BQ:44:ALA:HB1	1.94	0.49
27:DA:1348:G:C3'	27:DA:1349:A:H5''	2.41	0.49
46:DX:36:LYS:HE2	46:DX:56:THR:H	1.78	0.49
30:BD:65:ILE:CG1	30:BD:105:ILE:HA	2.42	0.49
1:CA:217:C:HO2'	1:CA:218:C:H6	1.53	0.49
9:AI:118:LYS:HD3	9:AI:121:ARG:CB	2.43	0.49
19:AS:10:PHE:HZ	19:AS:70:LYS:NZ	1.92	0.49
8:AH:100:ILE:HG22	8:AH:125:ARG:HH22	1.77	0.49
1:CA:398:C:H2'	1:CA:399:G:C8	2.47	0.49
12:CL:98:VAL:CG1	12:CL:101:VAL:HG21	2.42	0.49
1:AA:136:C:H1'	16:AP:1:MET:HG3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:273:A:C2'	1:CA:274:A:H5'	2.43	0.49
50:D1:51:VAL:HG22	50:D1:52:ARG:N	2.27	0.49
31:BE:82:ARG:O	31:BE:83:ASP:C	2.50	0.49
2:AB:95:GLN:NE2	2:AB:147:LYS:HE2	2.26	0.49
1:CA:244:U:C6	1:CA:894:G:N2	2.80	0.49
27:BA:1296:G:HO2'	27:BA:1297:C:H5'	1.75	0.49
36:DN:48:MET:H	36:DN:48:MET:HE2	1.76	0.49
27:DA:2731:G:C6	27:DA:2732:G:O6	2.65	0.49
3:CC:3:ASN:O	3:CC:4:LYS:CB	2.57	0.49
37:BO:69:ILE:HG13	37:BO:77:ILE:HG22	1.93	0.49
8:AH:49:GLU:O	8:AH:51:VAL:HG13	2.12	0.49
27:BA:1818:U:HO2'	30:BD:155:LEU:HA	1.77	0.49
14:CN:24:CYS:HB3	14:CN:29:ARG:HB3	1.94	0.49
15:CO:70:LEU:HD11	15:CO:77:ARG:HE	1.77	0.49
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.12	0.49
27:BA:2724:C:OP1	31:BE:118:LYS:HE3	2.12	0.49
38:BP:111:ARG:NH1	38:BP:149:GLU:HG3	2.27	0.49
1:CA:591:U:C2	1:CA:649:G:N2	2.80	0.49
27:DA:1306:C:O2	27:DA:1623:G:C6	2.65	0.49
27:DA:1569:A:O2'	27:DA:1570:A:H5'	2.12	0.49
35:BI:82:ARG:O	35:BI:88:ILE:HG23	2.13	0.49
27:BA:2565:A:H2'	27:BA:2566:A:O4'	2.12	0.49
1:AA:1158:C:O2'	1:AA:1159:U:H4'	2.12	0.49
55:B6:11:LEU:CG	55:B6:51:GLU:HG2	2.43	0.49
48:DZ:60:LEU:CD2	48:DZ:60:LEU:N	2.76	0.49
30:BD:146:GLU:HG2	30:BD:152:GLY:C	2.32	0.49
33:BG:43:LEU:HB2	33:BG:88:ILE:HD13	1.94	0.49
13:CM:83:ASP:HB2	19:CS:66:MET:CE	2.42	0.49
30:DD:34:VAL:O	30:DD:34:VAL:HG13	2.11	0.49
34:DH:150:ALA:C	34:DH:152:ARG:N	2.66	0.49
27:DA:1697:G:H3'	27:DA:1698:A:C5'	2.42	0.49
1:AA:1330:U:O3'	13:AM:23:TYR:HE2	1.94	0.49
42:BT:67:SER:O	42:BT:68:TYR:HB2	2.10	0.49
27:DA:1754:C:N4	27:DA:1755:A:N6	2.60	0.49
1:AA:1278:U:H5'	1:AA:1279:A:C8	2.47	0.49
25:CY:25:A:C2'	25:CY:26:C:H5'	2.42	0.49
48:BZ:25:GLY:HA2	48:BZ:84:HIS:CD2	2.47	0.49
27:DA:2804:C:O2'	27:DA:2805:G:H5'	2.13	0.49
40:DR:34:ILE:O	40:DR:113:LEU:HD12	2.12	0.49
40:DR:62:ALA:O	40:DR:66:VAL:HG23	2.12	0.49
45:DW:50:VAL:HG21	45:DW:105:VAL:HG23	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:25:LYS:C	12:AL:27:ALA:N	2.61	0.49
1:CA:762:C:H6	1:CA:762:C:O5'	1.94	0.49
38:BP:10:PRO:O	38:BP:11:GLY:C	2.48	0.49
5:CE:59:GLY:O	5:CE:62:ALA:HB3	2.12	0.49
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.58	0.49
1:AA:309:G:H2'	1:AA:310:G:H8	1.78	0.49
1:AA:1524:C:H2'	1:AA:1525:G:O4'	2.13	0.49
10:CJ:85:LEU:C	10:CJ:87:THR:N	2.65	0.49
3:AC:191:THR:HB	3:AC:193:TYR:CE2	2.48	0.49
27:DA:124:G:C5	56:D7:19:ARG:NH2	2.80	0.49
1:CA:443:C:H2'	1:CA:444:C:C6	2.47	0.49
27:BA:2670:A:O2'	27:BA:2671:A:H5'	2.12	0.49
33:DG:104:GLU:HG2	53:D4:50:THR:HG21	1.93	0.49
47:DY:54:LYS:O	47:DY:55:TYR:CD1	2.66	0.49
23:AW:72:G:H4'	23:AW:72:G:OP1	2.12	0.49
27:DA:1865:G:N2	27:DA:1878:G:C5	2.80	0.49
27:DA:1248:G:H3'	27:DA:1249:U:C5'	2.40	0.49
24:AX:48:C:N4	24:AX:59:A:C8	2.80	0.49
27:BA:2378:A:C5	27:BA:2379:G:H1'	2.47	0.49
33:DG:33:ARG:CZ	33:DG:162:THR:HG21	2.43	0.49
27:BA:1165:U:H2'	27:BA:1166:C:C6	2.47	0.49
47:BY:51:VAL:O	47:BY:51:VAL:HG12	2.11	0.49
27:BA:265:A:H1'	27:BA:266:G:O4'	2.12	0.49
27:DA:448:U:H3'	27:DA:449:A:H5'	1.95	0.49
30:DD:28:GLU:H	30:DD:29:PRO:HD2	1.77	0.49
18:CR:51:LEU:HB2	18:CR:56:THR:HG22	1.94	0.49
27:BA:2150:U:H2'	27:BA:2151:G:C8	2.47	0.49
1:CA:491:G:C6	1:CA:492:G:C5	3.00	0.49
25:AY:26:C:O2'	25:AY:27:C:H5'	2.12	0.49
1:CA:405:U:H5''	1:CA:495:A:H2	1.76	0.49
27:DA:1133:U:O2'	27:DA:1135:C:H5''	2.12	0.49
1:CA:1321:C:H4'	13:CM:87:TYR:CZ	2.46	0.49
14:CN:34:TYR:N	14:CN:34:TYR:HD1	2.10	0.49
54:B5:52:TYR:CD1	54:B5:52:TYR:O	2.65	0.49
32:BF:19:GLU:N	32:BF:19:GLU:OE2	2.46	0.49
36:DN:87:LEU:HD21	36:DN:98:VAL:HG11	1.94	0.49
4:CD:79:PHE:HA	4:CD:93:PHE:CD2	2.47	0.49
27:BA:538:G:C2	27:BA:556:G:C6	3.01	0.49
42:BT:78:LEU:HB3	42:BT:79:HIS:CE1	2.47	0.49
41:BS:59:LYS:HE3	41:BS:68:GLN:OE1	2.13	0.49
27:DA:1494:A:H2'	27:DA:1494:A:N3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1578:U:H2'	27:DA:1579:A:C5'	2.43	0.49
30:DD:108:PRO:HG3	30:DD:143:HIS:NE2	2.27	0.49
47:DY:10:GLY:O	47:DY:27:VAL:HG22	2.13	0.49
41:DS:97:ARG:HH12	41:DS:99:LYS:CD	2.25	0.49
27:DA:2067:G:N2	27:DA:2444:G:C4	2.81	0.49
27:DA:2422:A:H4'	27:DA:2423:U:OP1	2.12	0.49
27:DA:627:A:N7	38:DP:84:ASN:ND2	2.60	0.49
27:DA:629:G:C6	27:DA:630:G:C6	3.00	0.49
28:DB:88:C:H2'	28:DB:89:G:H8	1.76	0.49
27:DA:579:G:C2	27:DA:1262:A:C5	3.01	0.49
27:DA:1991:U:C2'	27:DA:1992:G:C5'	2.90	0.49
27:DA:588:U:O2'	27:DA:589:C:C5'	2.60	0.49
30:BD:31:LYS:CE	30:BD:94:LEU:HD11	2.43	0.49
1:CA:619:U:N3	4:CD:135:LEU:HD21	2.27	0.49
1:CA:199:G:O2'	1:CA:200:G:O5'	2.30	0.49
2:AB:70:PHE:CE2	2:AB:163:PHE:HD1	2.31	0.49
41:DS:58:LEU:HD21	41:DS:69:VAL:HB	1.94	0.49
2:AB:166:ASP:OD1	2:AB:169:LYS:HB2	2.11	0.49
27:BA:2331:G:O4'	49:B0:42:GLY:HA3	2.13	0.49
27:BA:2336:A:H61	49:B0:43:THR:HG21	1.77	0.49
20:CT:50:GLU:HG3	20:CT:51:GLU:N	2.28	0.49
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.95	0.49
31:BE:116:VAL:HG21	31:BE:122:PHE:CE2	2.47	0.49
27:DA:174:C:O2	27:DA:174:C:H2'	2.11	0.49
27:BA:2849:U:H1'	27:BA:2866:U:H6	1.77	0.49
27:BA:2875:C:C4	27:BA:2876:G:N7	2.80	0.49
1:CA:653:A:H1'	8:CH:56:LYS:HZ3	1.78	0.49
27:BA:2173:A:H2'	27:BA:2174:C:C6	2.48	0.49
27:DA:2126:A:N1	27:DA:2163:C:H4'	2.27	0.49
27:DA:695:G:C2	27:DA:768:G:C5	3.01	0.49
27:DA:1569:A:C1'	30:DD:38:LYS:HZ3	2.25	0.49
36:DN:22:THR:HG22	36:DN:23:LEU:HD23	1.94	0.49
57:B8:42:ARG:C	57:B8:44:LYS:H	2.15	0.49
41:DS:78:LEU:HD21	41:DS:103:GLU:HB3	1.95	0.49
32:BF:132:VAL:CG1	32:BF:133:ASN:N	2.67	0.49
12:AL:119:THR:CG2	12:AL:120:LYS:H	2.26	0.49
36:BN:133:GLN:C	36:BN:134:ARG:CG	2.81	0.49
8:AH:4:ASP:OD2	8:AH:85:ARG:NH1	2.39	0.49
28:DB:45:A:H2'	28:DB:46:A:H5'	1.93	0.49
13:AM:8:GLU:OE1	13:AM:22:ILE:HG23	2.12	0.49
1:AA:939:G:C6	1:AA:940:C:N4	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DO:7:TYR:HE1	37:DO:20:MET:HE3	1.75	0.49
27:DA:2830:G:O2'	27:DA:2883:A:N1	2.39	0.49
34:DH:41:MET:HG2	34:DH:52:VAL:HG13	1.94	0.49
1:AA:1265:G:C3'	1:AA:1265:G:C8	2.96	0.49
1:AA:1271:G:H2'	1:AA:1272:G:H8	1.76	0.49
27:BA:1049:C:O2'	27:BA:1050:A:C8	2.61	0.49
27:DA:495:G:H1'	45:DW:57:ASN:ND2	2.26	0.49
40:DR:104:ARG:HG3	40:DR:111:LEU:HD21	1.94	0.49
45:DW:62:HIS:O	45:DW:63:ASP:C	2.49	0.49
45:DW:86:LEU:HD23	45:DW:96:ILE:HB	1.95	0.49
18:AR:37:VAL:CG1	18:AR:78:LEU:HB3	2.43	0.49
43:BU:25:TRP:HD1	43:BU:26:GLY:N	2.07	0.49
33:BG:181:ARG:HG2	33:BG:181:ARG:O	2.13	0.49
2:AB:114:ARG:CA	2:AB:117:GLU:HB2	2.41	0.49
12:AL:24:LEU:O	12:AL:26:GLY:N	2.46	0.49
27:DA:2656:U:H2'	27:DA:2657:A:H8	1.77	0.49
36:DN:125:GLY:CA	36:DN:126:PRO:O	2.58	0.49
5:AE:107:ARG:HG3	5:AE:111:GLU:HG3	1.93	0.49
27:DA:1659:U:C4	27:DA:1660:C:C5	3.01	0.49
13:AM:105:THR:O	13:AM:106:ASN:HB2	2.12	0.49
27:DA:2542:A:O2'	27:DA:2543:G:C8	2.61	0.49
42:DT:16:ARG:HH12	42:DT:19:LEU:HD21	1.77	0.49
11:CK:96:ARG:HA	11:CK:99:GLN:CG	2.41	0.49
5:AE:81:GLU:HA	5:AE:89:ILE:O	2.12	0.49
51:B2:7:ARG:CG	51:B2:7:ARG:HH11	2.26	0.49
27:BA:195:A:H61	27:BA:198:C:H3'	1.77	0.49
7:CG:86:GLN:NE2	25:CY:30:A:H2	2.09	0.49
27:DA:2355:C:H1'	49:D0:36:ILE:HD11	1.93	0.49
1:CA:25:C:H5'	1:CA:524:G:O2'	2.13	0.49
27:DA:2396:G:H4'	50:D1:30:VAL:H	1.78	0.49
1:CA:28:G:C2	1:CA:556:C:N3	2.81	0.49
56:B7:31:LEU:HD22	56:B7:42:LEU:HD13	1.94	0.49
30:BD:28:GLU:HB2	30:BD:29:PRO:CD	2.42	0.49
11:AK:80:VAL:HG22	11:AK:103:LEU:HD12	1.94	0.49
1:CA:182:U:OP2	1:CA:183:G:N7	2.46	0.49
38:DP:107:LYS:HG3	38:DP:107:LYS:O	2.12	0.49
34:DH:18:GLU:HB2	34:DH:25:LYS:HG2	1.93	0.49
1:AA:802:A:H2'	1:AA:803:G:O4'	2.13	0.49
30:DD:90:ALA:CB	30:DD:106:ILE:HG13	2.42	0.49
56:D7:34:ARG:HH11	56:D7:42:LEU:HA	1.75	0.49
17:AQ:79:SER:O	17:AQ:80:GLY:C	2.50	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DD:124:PRO:HG2	30:DD:129:ASN:HD21	1.76	0.49
30:DD:183:ARG:HH11	30:DD:183:ARG:HG2	1.78	0.49
27:BA:2323:G:H2'	27:BA:2324:C:O4'	2.12	0.49
27:BA:1409:C:H2'	27:BA:1410:G:C8	2.48	0.49
27:BA:1128:A:H3'	27:BA:1128:A:OP2	2.12	0.49
29:DC:107:TRP:O	29:DC:108:MET:CB	2.61	0.49
57:B8:10:ALA:O	57:B8:13:ARG:N	2.36	0.49
27:BA:817:C:O2'	27:BA:839:U:OP1	2.30	0.49
38:BP:64:LYS:O	38:BP:65:ARG:C	2.48	0.49
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	2.12	0.49
32:BF:127:GLU:HG2	32:BF:196:LEU:CD1	2.42	0.49
47:BY:77:PRO:O	47:BY:99:CYS:SG	2.71	0.49
27:DA:271(C):C:H2'	27:DA:271(D):G:C8	2.48	0.49
27:DA:1934:C:H2'	27:DA:1935:G:C8	2.47	0.49
53:B4:42:CYS:HA	53:B4:59:VAL:HB	1.95	0.49
27:BA:2056:G:H1	54:B5:4:HIS:HD2	1.61	0.49
1:CA:1343:G:C5	1:CA:1344:C:C4	3.01	0.49
1:AA:865:A:H5'	1:AA:1078:U:O4	2.13	0.49
42:BT:31:SER:HB2	42:BT:32:TYR:CD2	2.48	0.49
32:DF:3:GLU:CD	32:DF:3:GLU:H	2.14	0.49
27:DA:1152:C:H2'	27:DA:1153:C:C6	2.47	0.49
1:CA:1254:C:N4	10:CJ:43:ARG:HH12	2.11	0.49
27:DA:1885:A:C8	27:DA:1886:C:C6	3.00	0.49
27:DA:951:C:O2'	27:DA:952:G:H5'	2.12	0.49
31:DE:143:ASN:HB2	31:DE:146:THR:O	2.12	0.49
1:CA:1138:G:N2	1:CA:1140:C:C4	2.81	0.49
47:DY:13:VAL:HG23	47:DY:14:LEU:N	2.28	0.49
51:D2:4:SER:HA	51:D2:7:ARG:HG2	1.94	0.49
1:AA:1373:G:H5''	7:AG:36:LYS:HB2	1.94	0.49
1:CA:346:G:H5'	42:DT:41:ARG:CZ	2.41	0.49
32:DF:32:LEU:C	32:DF:32:LEU:HD23	2.33	0.49
33:DG:4:ASP:HA	33:DG:8:LYS:HD2	1.95	0.49
48:DZ:150:HIS:HA	48:DZ:169:THR:HA	1.94	0.49
34:BH:156:ALA:H	34:BH:158:HIS:H	1.60	0.49
37:BO:6:THR:HG22	37:BO:7:TYR:N	2.28	0.49
1:CA:1060:C:C5'	14:CN:45:ARG:NH2	2.72	0.49
38:BP:107:LYS:C	38:BP:109:GLY:N	2.58	0.49
27:BA:2163:C:OP2	27:BA:2164:C:H5	1.95	0.49
48:BZ:156:LEU:HB3	48:BZ:160:VAL:CG1	2.41	0.49
1:AA:444:C:N4	1:AA:490:G:H1	2.11	0.49
27:BA:2321:G:C2'	27:BA:2321:G:N3	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1164:G:H2'	1:AA:1165:C:H6	1.76	0.49
27:BA:92:A:H1'	27:BA:93:G:C8	2.45	0.49
27:BA:64:A:C1'	46:BX:66:LEU:HB2	2.38	0.49
35:DI:75:LEU:HD21	35:DI:105:HIS:ND1	2.27	0.49
37:DO:35:VAL:HG22	37:DO:65:THR:HG23	1.95	0.49
42:DT:106:SER:HB2	42:DT:110:ILE:HD12	1.95	0.49
34:BH:47:GLU:C	34:BH:49:VAL:H	2.15	0.49
27:DA:2292:C:H42	27:DA:2340:G:H1	1.60	0.49
9:CI:97:LYS:HZ3	9:CI:97:LYS:HB2	1.78	0.49
34:BH:99:VAL:O	34:BH:102:ALA:HB3	2.12	0.49
27:DA:7:G:H2'	27:DA:8:A:C8	2.48	0.49
27:BA:1050:A:O2'	27:BA:1051:G:H8	1.93	0.49
3:CC:11:ARG:O	3:CC:12:LEU:C	2.50	0.49
32:DF:132:VAL:HG13	32:DF:133:ASN:H	1.77	0.49
15:CO:6:GLU:O	15:CO:9:GLN:N	2.46	0.49
27:DA:1982:C:O2'	27:DA:1983:C:H5'	2.12	0.49
3:AC:150:LYS:HE3	3:AC:167:TRP:CD1	2.47	0.49
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.78	0.49
27:DA:1987:G:H5'	27:DA:1988:C:OP2	2.12	0.49
13:CM:88:ARG:HA	13:CM:98:VAL:HG11	1.91	0.49
27:DA:1629:U:O5'	27:DA:1629:U:H6	1.96	0.49
27:BA:707:G:H5'	27:BA:708:C:P	2.53	0.49
1:CA:827:U:H2'	1:CA:870:U:O4	2.13	0.49
34:DH:20:ALA:HB1	34:DH:21:PRO:CD	2.42	0.49
1:CA:30:U:H4'	1:CA:31:G:OP1	2.10	0.49
8:CH:28:ALA:HA	8:CH:59:LEU:CG	2.42	0.49
27:DA:1174:A:OP1	27:DA:1175:U:H5''	2.12	0.49
27:BA:875:G:C2'	27:BA:876:C:H5'	2.43	0.49
27:BA:1458:C:H5'	27:BA:1459:G:C8	2.48	0.49
1:AA:514:C:O2'	1:AA:515:G:H5'	2.12	0.49
1:AA:514:C:O2	1:AA:538:G:N2	2.46	0.49
27:BA:894:C:H2'	27:BA:895:U:C6	2.46	0.49
1:CA:668:G:H2'	1:CA:669:U:C6	2.47	0.49
27:DA:1170:G:H8	27:DA:1170:G:OP2	1.96	0.49
2:AB:75:LYS:HA	2:AB:78:GLN:HB2	1.94	0.49
48:BZ:43:PHE:CE2	48:BZ:85:VAL:HG11	2.48	0.49
24:CX:47:U:C2	24:CX:50:U:OP1	2.66	0.49
10:AJ:32:ALA:H	10:AJ:76:ASN:CB	2.25	0.49
45:DW:25:ARG:NH1	45:DW:25:ARG:CB	2.76	0.49
27:BA:2889:C:O2	27:BA:2889:C:H2'	2.12	0.49
12:AL:87:VAL:HG12	12:AL:90:LEU:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:76:ARG:O	4:AD:77:ASN:C	2.51	0.49
33:DG:50:ALA:O	33:DG:52:ILE:N	2.45	0.49
51:B2:25:VAL:O	51:B2:26:ARG:C	2.50	0.49
33:BG:55:LYS:NZ	33:BG:148:MET:HE3	2.28	0.49
27:BA:510:C:O5'	27:BA:510:C:H6	1.94	0.49
50:D1:71:TYR:HD1	50:D1:71:TYR:H	1.60	0.49
30:DD:40:THR:HG22	30:DD:41:GLY:O	2.13	0.49
46:BX:3:THR:O	46:BX:4:ALA:HB3	2.12	0.49
27:BA:2416:C:H2'	27:BA:2417:C:H6	1.77	0.49
1:CA:1015:A:O2'	1:CA:1219:U:H5'	2.13	0.49
34:BH:85:LYS:HE2	34:BH:141:VAL:O	2.12	0.49
37:BO:90:GLN:HB2	37:BO:92:GLU:OE2	2.12	0.49
27:DA:247:G:O6	57:D8:8:LYS:HB3	2.13	0.49
30:DD:242:ARG:HG2	30:DD:246:PRO:HD3	1.94	0.49
47:BY:48:ALA:HB1	47:BY:50:ARG:H	1.77	0.49
44:BV:2:PHE:CD2	44:BV:42:GLY:HA2	2.45	0.49
27:DA:391:G:C2'	27:DA:392:C:H5'	2.43	0.49
32:DF:119:ARG:HH11	32:DF:119:ARG:HG2	1.77	0.49
42:BT:26:ASP:O	42:BT:27:THR:O	2.30	0.49
27:DA:491:G:H2'	27:DA:492:A:O5'	2.13	0.49
11:AK:32:ILE:CD1	11:AK:41:THR:HB	2.33	0.49
57:D8:38:GLY:O	57:D8:42:ARG:N	2.43	0.49
27:DA:2420:C:OP1	57:D8:33:ASN:O	2.30	0.49
38:DP:100:LEU:HB2	38:DP:106:LEU:HD22	1.95	0.49
38:DP:64:LYS:C	38:DP:66:GLY:N	2.64	0.49
27:DA:459:U:H5''	56:D7:40:TRP:CE3	2.48	0.49
27:DA:588:U:O2'	27:DA:589:C:O5'	2.31	0.49
27:BA:1138:G:N3	36:BN:106:MET:HE2	2.28	0.49
27:BA:2468:G:N2	27:BA:2481:G:O2'	2.45	0.49
27:DA:142:A:H8	27:DA:1595:G:N2	2.09	0.49
48:DZ:3:ARG:HB2	48:DZ:57:VAL:HB	1.94	0.49
34:BH:20:ALA:O	34:BH:21:PRO:C	2.50	0.49
27:BA:1492:G:N2	27:BA:1499:C:C2	2.81	0.49
1:CA:67:C:OP1	1:CA:199:G:H5''	2.12	0.49
27:BA:954:G:C5'	39:BQ:13:GLN:HG2	2.27	0.49
43:BU:106:PHE:O	43:BU:110:VAL:HG23	2.13	0.49
1:CA:189(E):U:OP2	1:CA:189(E):U:H6	1.96	0.49
56:B7:8:ASN:ND2	56:B7:11:LYS:N	2.53	0.49
2:AB:140:HIS:O	2:AB:143:GLU:HB2	2.12	0.49
36:DN:46:VAL:CG1	36:DN:48:MET:HG3	2.42	0.49
27:DA:2645:G:OP2	27:DA:2645:G:H8	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:259:G:H2'	1:CA:260:G:O4'	2.13	0.49
20:CT:75:ASN:O	20:CT:78:ALA:HB3	2.12	0.49
27:BA:1556:C:O2'	27:BA:1557:C:C5'	2.61	0.49
27:BA:2723:C:H2'	27:BA:2724:C:H5'	1.94	0.49
48:DZ:41:VAL:HG13	48:DZ:42:GLU:N	2.28	0.49
38:BP:80:TYR:CZ	38:BP:111:ARG:HD3	2.47	0.49
49:D0:56:ASP:CG	49:D0:58:THR:HG1	2.15	0.49
24:CX:17:C:C2	24:CX:17(B):U:C5	3.01	0.49
29:DC:41:VAL:CG1	29:DC:213:TYR:HA	2.43	0.49
1:AA:492:G:C5	1:AA:493:G:N7	2.81	0.49
35:BI:12:LEU:CD1	35:BI:19:VAL:HG11	2.40	0.49
55:B6:32:ASN:C	55:B6:33:LYS:HG2	2.32	0.49
27:BA:1360:A:C6	27:BA:1372:U:C5	3.01	0.49
33:DG:125:PHE:HB3	33:DG:130:ASN:O	2.13	0.49
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.28	0.49
27:DA:745:G:OP2	31:DE:133:LYS:HE3	2.12	0.49
1:AA:1038:C:H2'	1:AA:1039:C:C5	2.47	0.49
3:AC:36:ASP:OD2	3:AC:57:ILE:HG21	2.13	0.49
34:BH:97:ARG:CG	34:BH:98:LEU:H	2.11	0.49
48:BZ:26:VAL:HG22	48:BZ:27:MET:H	1.78	0.49
27:BA:200:U:C5	27:BA:201:C:C6	3.01	0.49
1:AA:852:G:O2'	1:AA:853:G:H5'	2.13	0.49
27:BA:1591:G:C6	27:BA:1592:C:N4	2.81	0.49
27:DA:324:A:C2	27:DA:325:G:C1'	2.96	0.49
27:BA:2313:C:N4	27:BA:2314:C:H41	2.11	0.49
33:BG:122:PRO:HG2	33:BG:123:ASN:OD1	2.13	0.49
1:AA:1515:C:H2'	1:AA:1515:C:O2	2.13	0.49
27:BA:1569:A:O2'	30:BD:38:LYS:HE2	2.13	0.49
27:BA:2777:G:C5'	27:BA:2778:A:H5''	2.37	0.49
27:DA:80:G:H1'	27:DA:346:A:C6	2.47	0.49
1:AA:1293:G:H2'	1:AA:1294:G:C8	2.47	0.49
11:CK:65:ALA:HB1	11:CK:98:LEU:HD21	1.93	0.49
6:CF:97:PHE:HD2	18:CR:65:ILE:HD13	1.76	0.49
28:DB:61:G:O2'	28:DB:62:C:H5'	2.12	0.49
13:AM:14:ARG:HE	13:AM:42:ALA:HA	1.78	0.49
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.78	0.49
6:AF:44:GLY:C	6:AF:59:TYR:HA	2.33	0.49
36:BN:46:VAL:HG13	36:BN:47:ALA:H	1.77	0.49
1:AA:1452:C:H4'	1:AA:1456:G:N3	2.28	0.49
1:AA:314:C:O5'	1:AA:314:C:H6	1.94	0.49
27:DA:204:A:O2'	27:DA:205:G:C4'	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:8:GLU:HB2	5:AE:34:VAL:HG22	1.95	0.49
3:AC:143:GLU:C	3:AC:145:GLY:N	2.66	0.49
34:DH:86:GLU:CB	34:DH:132:ARG:HH11	2.26	0.49
1:CA:1166:G:N2	1:CA:1170:A:OP2	2.46	0.49
24:CX:8:U:C5	24:CX:15:G:O6	2.65	0.49
27:BA:936:C:O2'	27:BA:937:U:H5'	2.13	0.49
23:AW:39:C:C2	23:AW:40:C:C5	3.01	0.49
27:DA:2845:G:O2'	27:DA:2846:G:H5'	2.12	0.49
19:AS:52:TYR:CE1	19:AS:56:GLN:HA	2.48	0.49
27:BA:2582:G:N2	27:BA:2583:G:H1'	2.28	0.49
1:AA:569:C:H5''	1:AA:570:G:OP1	2.13	0.49
27:BA:760:G:C2	27:BA:761:A:H1'	2.48	0.49
1:CA:7:G:O6	5:CE:92:LYS:HD2	2.13	0.49
27:BA:274:G:N2	27:BA:274:G:OP2	2.40	0.49
27:BA:878:A:H61	27:BA:899:A:H1'	1.78	0.49
27:DA:122:G:O2'	27:DA:123:G:H5'	2.11	0.49
27:BA:2461:C:O2	27:BA:2461:C:H2'	2.12	0.49
36:BN:73:THR:HG22	36:BN:74:ARG:N	2.28	0.49
40:BR:22:ARG:O	40:BR:24:GLN:N	2.46	0.49
4:CD:61:LYS:HE3	4:CD:206:PHE:CE2	2.48	0.49
43:BU:91:ASP:O	43:BU:92:ARG:C	2.51	0.49
42:BT:28:VAL:CG1	42:BT:46:GLU:HB2	2.42	0.49
27:DA:1252:G:C2	43:DU:33:ARG:HD2	2.47	0.49
52:B3:24:LYS:HE3	52:B3:24:LYS:HA	1.95	0.49
51:D2:22:GLU:HG3	51:D2:64:LEU:HD11	1.95	0.49
1:AA:472:A:C4'	16:AP:80:PHE:O	2.58	0.49
49:D0:23:VAL:HB	49:D0:26:TYR:HE2	1.77	0.49
39:DQ:21:THR:HG22	39:DQ:22:LYS:H	1.77	0.49
27:DA:2066:C:H2'	27:DA:2067:G:O5'	2.13	0.49
27:DA:2249:U:N3	27:DA:2253:G:OP2	2.45	0.49
27:DA:635:C:O2'	27:DA:636:G:H5'	2.12	0.49
27:DA:2508:G:H2'	27:DA:2509:G:H8	1.77	0.49
36:BN:85:ILE:HG21	36:BN:90:MET:HE3	1.94	0.49
36:BN:90:MET:HB3	36:BN:98:VAL:HG22	1.94	0.49
39:BQ:118:LEU:O	39:BQ:121:ALA:N	2.46	0.49
27:DA:139:G:H1	27:DA:142(A):C:H42	1.58	0.49
1:AA:1349:A:H62	1:AA:1373:G:H21	1.60	0.49
3:AC:8:ILE:O	3:AC:12:LEU:N	2.45	0.49
1:AA:942:G:H21	9:AI:124:GLN:HE22	1.56	0.49
2:AB:104:ASN:O	2:AB:105:PHE:C	2.51	0.49
30:BD:186:HIS:CD2	30:BD:187:GLY:N	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:390:C:O2'	16:CP:28:ARG:NH2	2.46	0.49
19:AS:49:ILE:HD12	19:AS:49:ILE:N	2.21	0.49
1:AA:376:G:O3'	16:AP:5:ARG:HD2	2.12	0.49
49:D0:41:ARG:HD2	49:D0:41:ARG:N	2.06	0.49
17:CQ:51:TYR:HE2	17:CQ:76:LEU:H	1.60	0.49
1:CA:1407:C:O2	1:CA:1495:U:O2	2.30	0.49
27:BA:794:G:C6	27:BA:795:C:C4	3.01	0.49
5:AE:59:GLY:O	5:AE:62:ALA:HB3	2.11	0.49
33:DG:5:VAL:H	33:DG:8:LYS:HB2	1.78	0.49
20:CT:57:ARG:NH1	20:CT:57:ARG:HB2	2.28	0.49
15:AO:82:ILE:O	15:AO:86:GLY:N	2.44	0.49
6:AF:62:TRP:CD1	18:AR:35:ARG:NH1	2.81	0.49
34:BH:156:ALA:O	34:BH:157:TYR:HB3	2.13	0.49
3:CC:95:THR:O	3:CC:97:LYS:N	2.46	0.49
1:CA:532:A:H2	1:CA:1207:G:O4'	1.96	0.49
1:CA:532:A:O2'	1:CA:533:A:H5''	2.13	0.49
10:AJ:4:ILE:HA	10:AJ:100:THR:HG22	1.94	0.49
21:CU:20:LYS:HG2	21:CU:20:LYS:O	2.12	0.49
25:AY:5:G:H2'	25:AY:6:U:O4'	2.12	0.49
25:AY:4:G:C2	25:AY:69:C:C2	3.00	0.49
27:DA:1352:U:O2	27:DA:1570:A:H2	1.96	0.49
35:BI:133:HIS:CD2	35:BI:133:HIS:N	2.78	0.49
40:DR:12:ARG:HD3	40:DR:16:HIS:CE1	2.47	0.49
41:DS:78:LEU:C	41:DS:80:LEU:H	2.14	0.49
7:AG:153:HIS:O	7:AG:154:TYR:HD2	1.95	0.49
37:BO:119:PRO:HB2	42:BT:68:TYR:CE1	2.44	0.49
1:CA:450:G:H5''	16:CP:41:PRO:O	2.13	0.49
4:AD:162:LEU:O	4:AD:165:MET:HB2	2.12	0.49
33:DG:111:LEU:O	33:DG:112:PRO:C	2.49	0.49
33:DG:120:LEU:HD11	33:DG:179:PRO:HD2	1.95	0.49
5:CE:109:ILE:O	5:CE:113:ALA:HB2	2.13	0.49
30:BD:267:SER:C	30:BD:269:PHE:N	2.59	0.49
28:BB:75:G:C5'	48:BZ:35:LYS:HE2	2.41	0.49
27:DA:2100:G:H2'	27:DA:2101:G:H8	1.68	0.49
10:AJ:46:ARG:HD3	14:AN:61:TRP:CH2	2.48	0.49
27:DA:1322:A:OP1	45:DW:11:ARG:HG3	2.13	0.49
32:DF:57:VAL:CG1	32:DF:58:ALA:N	2.76	0.49
32:BF:160:ASN:ND2	32:BF:162:LEU:CB	2.74	0.49
27:BA:402:A:C2'	27:BA:403:U:H5'	2.43	0.49
1:CA:921:U:O2'	5:CE:19:MET:O	2.20	0.49
52:D3:4:LEU:HD21	52:D3:56:VAL:CG1	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AX:4:G:H1'	24:AX:70:G:N2	2.28	0.49
34:DH:100:GLY:C	34:DH:102:ALA:H	2.15	0.49
27:DA:1782:C:N4	27:DA:2586:C:H42	2.07	0.49
27:DA:2595:G:C2	27:DA:2599:G:C6	3.00	0.49
1:CA:945:G:C2	1:CA:946:A:C8	3.00	0.49
27:BA:440:G:H22	32:BF:46:ARG:HH22	1.60	0.49
6:AF:77:ARG:O	6:AF:78:GLU:C	2.51	0.49
27:BA:2534:A:C5'	27:BA:2534:A:H8	2.25	0.49
48:DZ:109:GLY:O	48:DZ:114:GLY:O	2.31	0.49
49:D0:70:GLN:HG3	49:D0:80:HIS:CD2	2.48	0.49
27:DA:1849:G:C2	27:DA:1850:G:N7	2.80	0.49
27:DA:1771:C:C1'	27:DA:1786:A:C8	2.95	0.49
56:D7:19:ARG:HG3	56:D7:19:ARG:NH1	2.27	0.49
10:AJ:81:THR:O	10:AJ:83:GLU:N	2.46	0.49
1:CA:1041:A:H2'	1:CA:1042:G:H8	1.75	0.49
31:BE:14:ILE:HD12	42:BT:14:TYR:OH	2.13	0.49
1:AA:1434:A:C2'	1:AA:1435:G:H5'	2.43	0.49
23:AW:71:A:H2'	23:AW:72:G:O4'	2.13	0.49
5:AE:34:VAL:HG12	5:AE:35:GLY:N	2.27	0.49
27:BA:658:C:H2'	27:BA:659:C:C6	2.48	0.49
27:BA:1711:C:O2'	27:BA:1712:C:H5'	2.12	0.49
27:BA:833:U:H2'	27:BA:834:C:H6	1.77	0.49
27:DA:77:C:H2'	27:DA:78:A:C8	2.47	0.49
1:AA:506:G:O6	1:AA:525:C:N4	2.45	0.49
5:AE:10:MET:HB2	5:AE:31:LEU:O	2.12	0.49
37:BO:38:VAL:HG12	37:BO:39:ILE:H	1.78	0.49
33:BG:23:PHE:HB2	33:BG:25:TYR:CE2	2.47	0.49
27:DA:1366:A:H2'	27:DA:1367:A:O4'	2.13	0.49
31:DE:97:LYS:O	31:DE:99:GLY:N	2.46	0.49
2:AB:123:ALA:O	2:AB:124:SER:HB2	2.13	0.49
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.77	0.49
27:BA:245:G:O5'	38:BP:73:GLY:HA2	2.13	0.49
1:CA:1363:C:H5'	1:CA:1363(A):A:O5'	2.13	0.49
27:BA:2816:C:O2	27:BA:2831:G:C2	2.66	0.49
40:BR:50:HIS:HD2	40:BR:51:LEU:HD12	1.78	0.49
1:AA:887:G:C2	1:AA:911:U:O2	2.66	0.49
27:BA:511:U:H5	27:BA:512:G:C5	2.31	0.49
4:CD:79:PHE:HD2	4:CD:80:GLU:N	2.10	0.49
27:BA:674:G:P	32:BF:54:ARG:HH22	2.36	0.49
17:AQ:10:VAL:CG2	17:AQ:21:VAL:HG22	2.43	0.49
36:DN:2:LYS:O	36:DN:4:TYR:CZ	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:87:PHE:HZ	41:DS:99:LYS:CG	2.26	0.49
27:DA:904:C:H2'	27:DA:905:U:C5'	2.34	0.49
31:DE:69:LYS:C	31:DE:71:GLY:N	2.66	0.49
31:DE:71:GLY:O	31:DE:72:VAL:HB	2.13	0.49
27:DA:965:C:H2'	27:DA:966:G:H5'	1.94	0.49
32:DF:67:GLN:O	32:DF:68:LYS:HB2	2.13	0.49
2:AB:28:PHE:CZ	2:AB:189:ASP:HA	2.47	0.49
40:DR:77:ARG:O	40:DR:79:LEU:N	2.46	0.49
41:DS:25:ARG:HH12	41:DS:40:ILE:CD1	2.26	0.49
2:CB:37:ASN:O	2:CB:39:ILE:HG13	2.12	0.49
39:BQ:16:ARG:CG	39:BQ:17:LEU:N	2.76	0.49
27:BA:825:C:O2'	38:BP:55:ARG:HD3	2.12	0.49
27:BA:1273:U:C6	27:BA:1273:U:C5'	2.89	0.49
31:BE:132:HIS:HD2	31:BE:135:HIS:CE1	2.30	0.49
1:AA:408:A:H4'	4:AD:112:VAL:HG21	1.94	0.49
27:BA:1558:A:HO2'	27:BA:1559:G:P	2.34	0.49
14:CN:24:CYS:O	14:CN:25:VAL:C	2.52	0.49
33:BG:51:ARG:NH1	33:BG:53:LEU:HD21	2.27	0.49
27:DA:1654:A:OP2	40:DR:3:HIS:CD2	2.66	0.49
41:DS:68:GLN:O	41:DS:71:ARG:HB2	2.13	0.49
33:DG:77:ILE:CG2	33:DG:79:ASN:HB2	2.43	0.49
33:DG:91:ARG:HD2	33:DG:92:VAL:N	2.28	0.49
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.12	0.49
13:AM:7:VAL:O	13:AM:8:GLU:C	2.51	0.49
34:BH:10:PRO:CG	34:BH:50:VAL:N	2.75	0.49
48:BZ:70:VAL:HG22	48:BZ:87:PHE:HE2	1.75	0.49
27:DA:1287:A:C5	27:DA:1288:U:C4	3.01	0.49
1:AA:189(J):G:H2'	1:AA:189(K):U:C6	2.48	0.49
35:DI:13:GLY:O	35:DI:17:GLN:OE1	2.31	0.49
37:BO:106:LEU:C	37:BO:108:GLU:N	2.66	0.49
1:AA:782:A:C2'	1:AA:783:C:H5'	2.42	0.49
13:AM:11:ARG:HB3	13:AM:12:ASN:OD1	2.13	0.49
16:CP:22:THR:OG1	16:CP:23:ASP:N	2.46	0.49
30:BD:131:LEU:HD13	30:BD:136:ILE:HD11	1.95	0.49
46:DX:64:LYS:NZ	46:DX:73:ARG:HH22	2.11	0.49
11:CK:123:LYS:CA	11:CK:126:ARG:HG3	2.42	0.49
1:CA:36:C:OP1	12:CL:120:LYS:NZ	2.36	0.49
3:CC:110:ASN:O	3:CC:111:LEU:HD23	2.13	0.49
27:BA:914:C:H2'	27:BA:915:C:O5'	2.12	0.49
27:BA:2713:A:OP2	27:BA:2713:A:H4'	2.11	0.49
45:BW:38:TYR:HH	54:B5:47:PRO:HG3	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DQ:51:ARG:CB	39:DQ:51:ARG:HH11	2.24	0.49
48:BZ:58:LEU:O	48:BZ:60:LEU:HD23	2.12	0.49
36:DN:42:TRP:HA	36:DN:42:TRP:HE3	1.77	0.49
27:BA:2111:C:C5	27:BA:2145:C:N3	2.81	0.49
46:DX:4:ALA:HB3	46:DX:5:TYR:CD1	2.47	0.49
27:BA:1011:G:OP2	43:BU:66:ASN:OD1	2.31	0.49
27:DA:1175:U:O3'	27:DA:1176:G:H3'	2.13	0.49
2:CB:132:LYS:HA	2:CB:135:GLN:CG	2.42	0.49
27:BA:564:C:O2'	27:BA:565:C:H5'	2.13	0.49
27:DA:2524:G:H2'	27:DA:2741:A:C2	2.48	0.49
5:AE:71:LEU:HD21	5:AE:115:VAL:HG22	1.95	0.49
27:BA:2850:A:N1	27:BA:2851:A:C5	2.81	0.49
49:D0:27:GLU:HB2	49:D0:69:PHE:HD1	1.77	0.49
27:DA:1479:G:H5'	27:DA:1558:A:H2	1.78	0.49
27:BA:374:A:C8	27:BA:375:C:C5	3.01	0.49
43:BU:14:HIS:CD2	43:BU:32:PHE:CB	2.95	0.49
27:BA:757:U:O2'	27:BA:758:C:H5'	2.13	0.49
1:CA:791:G:H8	1:CA:791:G:O5'	1.96	0.49
2:CB:120:ALA:C	2:CB:122:PHE:H	2.15	0.49
3:CC:165:THR:HG22	3:CC:165:THR:O	2.13	0.49
58:D9:26:ILE:N	58:D9:26:ILE:HD12	2.27	0.49
16:AP:44:THR:O	16:AP:45:THR:HB	2.13	0.49
23:AW:1:U:H2'	23:AW:1:U:O2	2.13	0.49
1:CA:1226:C:OP1	19:CS:81:ARG:NH2	2.44	0.48
1:CA:1363(A):A:N3	1:CA:1363(A):A:H2'	2.27	0.48
54:B5:52:TYR:HD1	54:B5:52:TYR:O	1.96	0.48
27:BA:2837:G:C6	27:BA:2838:G:N7	2.80	0.48
4:CD:10:ARG:O	4:CD:13:ARG:HB2	2.13	0.48
16:CP:82:GLN:O	16:CP:83:GLU:HG2	2.12	0.48
43:BU:96:ALA:C	43:BU:98:LEU:H	2.16	0.48
44:BV:35:LEU:CB	44:BV:37:VAL:HG23	2.40	0.48
1:AA:235:C:C5'	17:AQ:70:ARG:HG2	2.44	0.48
42:BT:89:VAL:HB	42:BT:91:ARG:NE	2.06	0.48
1:AA:922:G:H2'	1:AA:923:A:C8	2.48	0.48
43:DU:55:ARG:HA	43:DU:58:ARG:CB	2.23	0.48
44:DV:19:LYS:HB2	44:DV:96:ILE:CG1	2.39	0.48
27:DA:37:C:C2	27:DA:38:A:C8	3.00	0.48
41:BS:54:LEU:C	41:BS:56:LEU:N	2.67	0.48
27:DA:2579:C:O2'	31:DE:131:ALA:CB	2.61	0.48
32:DF:66:PRO:O	32:DF:67:GLN:C	2.52	0.48
20:AT:79:ARG:NH2	20:AT:80:ARG:NH2	2.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:1:MET:O	31:DE:2:LYS:C	2.52	0.48
9:AI:93:ARG:C	9:AI:95:LYS:H	2.16	0.48
14:AN:43:CYS:O	14:AN:47:LEU:HG	2.12	0.48
1:AA:533:A:OP1	1:AA:533:A:H3'	2.13	0.48
16:CP:67:THR:HB	16:CP:70:ALA:H	1.77	0.48
1:AA:376:G:O2'	1:AA:377:G:H5'	2.12	0.48
41:DS:16:ASN:C	41:DS:20:ARG:NH2	2.65	0.48
31:BE:1:MET:HB2	31:BE:83:ASP:O	2.13	0.48
2:AB:144:ARG:HG3	2:AB:145:LEU:H	1.78	0.48
1:CA:742:G:C5'	15:CO:58:MET:CE	2.86	0.48
1:CA:1002:G:H21	1:CA:1003:G:H1'	1.74	0.48
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	2.24	0.48
1:CA:263:A:H2'	1:CA:264:U:H6	1.77	0.48
3:CC:90:GLU:HA	3:CC:93:LYS:HB2	1.93	0.48
27:BA:2270:G:H2'	27:BA:2271:G:C8	2.47	0.48
27:BA:2125:G:N2	27:BA:2174:C:N4	2.61	0.48
49:D0:56:ASP:O	49:D0:57:PHE:HB2	2.13	0.48
58:B9:29:ASN:N	58:B9:29:ASN:ND2	2.44	0.48
27:DA:271(M):G:C2'	27:DA:271(N):U:H5''	2.39	0.48
35:BI:115:ALA:CB	35:BI:129:THR:OG1	2.58	0.48
35:BI:90:GLY:O	35:BI:91:SER:C	2.52	0.48
45:DW:4:LYS:HG2	45:DW:106:ILE:HG21	1.94	0.48
40:DR:4:LEU:C	40:DR:5:LYS:HD2	2.33	0.48
27:DA:2307:G:H3'	27:DA:2308:G:C5'	2.43	0.48
33:BG:71:THR:O	33:BG:89:GLY:HA3	2.12	0.48
27:BA:66:C:C2'	27:BA:67:U:H5'	2.42	0.48
27:BA:764:A:C5	30:BD:209:ALA:HB1	2.47	0.48
37:DO:1:MET:N	37:DO:1:MET:HE2	2.28	0.48
1:CA:1157:A:C6	1:CA:1180:A:C5	3.01	0.48
1:AA:1004:A:C5'	1:AA:1025:U:H3	2.16	0.48
30:DD:176:ARG:O	30:DD:177:LEU:HD23	2.13	0.48
1:AA:818:G:C3'	1:AA:819:A:H5''	2.43	0.48
11:CK:110:ASP:O	18:CR:84:LYS:HB3	2.12	0.48
48:BZ:51:SER:OG	48:BZ:52:ILE:N	2.46	0.48
27:DA:2469:A:N6	27:DA:2470:G:C2	2.81	0.48
27:BA:1225:G:O2'	27:BA:1226:A:H5'	2.12	0.48
27:BA:1043:C:O2'	27:BA:1044:G:C8	2.57	0.48
27:BA:1887:C:H3'	27:BA:1888:G:H5''	1.95	0.48
27:DA:321:G:O2'	27:DA:322:A:OP1	2.23	0.48
27:BA:56:A:C2	27:BA:57:C:C2	3.01	0.48
27:BA:2078:C:H2'	27:BA:2079:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DQ:118:LEU:HD13	39:DQ:131:ILE:HG12	1.94	0.48
16:AP:8:ARG:O	16:AP:9:PHE:CD1	2.66	0.48
27:BA:2776:A:H4'	27:BA:2777:G:O5'	2.13	0.48
27:DA:346:A:C2'	27:DA:347:A:H5'	2.43	0.48
32:BF:53:THR:O	32:BF:56:GLU:N	2.44	0.48
1:CA:270:A:C6	1:CA:271:C:N3	2.80	0.48
27:BA:25:U:H2'	27:BA:26:G:O5'	2.12	0.48
27:BA:709:U:C2	27:BA:710:G:C8	3.00	0.48
36:BN:35:ARG:C	36:BN:37:LYS:H	2.16	0.48
30:DD:67:PHE:CE1	30:DD:157:ARG:NH2	2.81	0.48
1:AA:1145:C:H4'	1:AA:1146:A:C5'	2.43	0.48
1:AA:1146:A:O2'	1:AA:1147:C:H5''	2.13	0.48
27:DA:1721:G:O6	27:DA:1739:U:H5'	2.13	0.48
1:CA:36:C:H5''	12:CL:120:LYS:HD3	1.93	0.48
27:BA:1948:G:C2'	27:BA:1949:G:H5'	2.43	0.48
53:D4:40:ILE:N	53:D4:40:ILE:HD12	2.27	0.48
30:DD:265:PRO:C	30:DD:267:SER:N	2.65	0.48
1:AA:115:G:C2	1:AA:289:G:N7	2.81	0.48
27:BA:1451:C:O2'	27:BA:1457:A:N6	2.45	0.48
37:DO:4:PRO:O	37:DO:5:GLN:CB	2.61	0.48
27:DA:1844:C:H2'	27:DA:1845:G:O4'	2.13	0.48
1:CA:830:G:H1	1:CA:856:C:N4	2.10	0.48
29:BC:195:ALA:O	29:BC:197:GLU:N	2.46	0.48
17:CQ:82:MET:O	17:CQ:86:GLU:HG2	2.13	0.48
34:BH:68:THR:O	34:BH:70:THR:O	2.31	0.48
6:CF:43:LEU:H	6:CF:43:LEU:CD1	2.24	0.48
36:DN:3:THR:O	36:DN:3:THR:HG22	2.13	0.48
1:AA:655:A:H2'	1:AA:656:C:C6	2.47	0.48
1:CA:1292:U:H2'	1:CA:1293:G:H8	1.78	0.48
1:CA:958:A:N7	19:CS:55:LYS:HD2	2.28	0.48
24:CX:4:G:O2'	24:CX:5:G:H5'	2.13	0.48
27:DA:237:C:H6	27:DA:237:C:O5'	1.96	0.48
52:D3:16:PRO:HB2	52:D3:19:GLN:HG3	1.93	0.48
43:BU:89:GLU:H	43:BU:89:GLU:HG2	1.39	0.48
27:DA:1861:G:H1	27:DA:1881:C:H42	1.61	0.48
27:BA:1469:A:C2	27:BA:1524:G:C2	3.01	0.48
57:B8:6:THR:HG22	57:B8:63:PRO:CD	2.43	0.48
27:BA:239:U:O4'	27:BA:621:A:H2	1.95	0.48
27:BA:663:G:C5	27:BA:664:C:C5	3.01	0.48
27:BA:2832:U:O4	27:BA:2884:U:H5''	2.13	0.48
27:DA:1006:C:O2'	27:DA:1007:C:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BX:28:PHE:CE2	46:BX:92:LEU:HD11	2.48	0.48
31:BE:51:PHE:CE1	31:BE:52:LEU:HD13	2.48	0.48
27:DA:407:G:H2'	27:DA:408:G:H8	1.74	0.48
27:DA:1011:G:C6	27:DA:1013:C:C4	3.01	0.48
44:DV:19:LYS:HE2	44:DV:19:LYS:HA	1.95	0.48
27:BA:2476:A:C2	27:BA:2477:C:C6	3.00	0.48
27:BA:2701:C:C2'	27:BA:2702:U:H5''	2.40	0.48
1:CA:1252:A:C2	1:CA:1253:G:C4	3.01	0.48
10:CJ:46:ARG:HG2	10:CJ:64:GLU:HB3	1.94	0.48
27:DA:1491:G:O2'	30:DD:101:GLU:HB2	2.13	0.48
27:DA:1429:G:C8	27:DA:1568:G:C5	3.01	0.48
12:CL:52:VAL:CG1	12:CL:53:ALA:N	2.76	0.48
12:CL:83:ARG:HH21	12:CL:96:HIS:CG	2.31	0.48
47:DY:26:LYS:HG2	47:DY:27:VAL:HG23	1.95	0.48
47:DY:28:LYS:C	47:DY:38:ILE:HB	2.34	0.48
47:DY:39:VAL:O	47:DY:40:GLU:CD	2.52	0.48
27:DA:2065:C:N4	27:DA:2066:C:N4	2.61	0.48
33:DG:175:LEU:HD12	33:DG:175:LEU:H	1.78	0.48
27:DA:819:A:N1	27:DA:820:A:C4	2.81	0.48
27:DA:2580:U:P	31:DE:131:ALA:HB2	2.54	0.48
32:DF:54:ARG:CZ	32:DF:80:ALA:HB2	2.43	0.48
44:DV:80:GLN:HA	44:DV:80:GLN:HE21	1.78	0.48
20:AT:57:ARG:HB2	20:AT:57:ARG:NH1	2.27	0.48
4:CD:70:ILE:HD12	4:CD:100:ARG:HD2	1.94	0.48
4:CD:173:TRP:HB2	4:CD:187:ARG:O	2.13	0.48
9:AI:53:VAL:HG12	9:AI:92:TYR:HD2	1.77	0.48
42:DT:35:LYS:NZ	42:DT:41:ARG:HH21	2.11	0.48
19:AS:29:ARG:O	19:AS:31:ILE:N	2.46	0.48
16:AP:21:VAL:O	16:AP:32:TYR:HB2	2.13	0.48
1:AA:1305:G:O2'	1:AA:1306:A:O5'	2.30	0.48
27:BA:793:A:OP2	27:BA:2072:G:H5'	2.13	0.48
27:BA:2238:G:N3	27:BA:2238:G:H2'	2.28	0.48
1:CA:159:G:H21	1:CA:161:A:H3'	1.77	0.48
20:CT:54:LYS:HA	20:CT:57:ARG:CZ	2.41	0.48
34:BH:94:TYR:CE1	34:BH:108:GLY:N	2.80	0.48
1:CA:189(K):U:O5'	1:CA:189(K):U:H6	1.97	0.48
1:CA:515:G:N2	1:CA:537:G:C4	2.81	0.48
1:CA:532:A:C2'	1:CA:533:A:H5'	2.42	0.48
21:CU:22:ARG:H	21:CU:23:PRO:HD3	1.78	0.48
2:CB:55:PHE:HA	2:CB:58:ILE:CG1	2.31	0.48
27:DA:149:A:H2'	27:DA:150:C:O5'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DR:38:VAL:CB	40:DR:39:PRO:CD	2.91	0.48
27:DA:1309:G:H5''	56:D7:9:ARG:HG3	1.95	0.48
27:DA:1341:U:C5	27:DA:1395:A:H2	2.31	0.48
33:BG:53:LEU:H	33:BG:53:LEU:HD22	1.77	0.48
35:BI:12:LEU:HD12	35:BI:19:VAL:CG1	2.38	0.48
27:DA:1462:C:H2'	27:DA:1463:C:C6	2.47	0.48
27:BA:65:C:H2'	27:BA:66:C:H6	1.79	0.48
13:AM:16:ASP:OD2	13:AM:17:VAL:HG23	2.13	0.48
27:DA:1505:C:O4'	27:DA:1505:C:O2	2.28	0.48
1:AA:939:G:OP1	7:AG:102:ARG:NH2	2.46	0.48
7:AG:154:TYR:C	7:AG:156:TRP:H	2.15	0.48
1:AA:875:C:O2'	8:AH:14:ARG:HD2	2.13	0.48
42:DT:101:PHE:O	42:DT:102:ILE:C	2.51	0.48
34:BH:10:PRO:CG	34:BH:50:VAL:O	2.54	0.48
40:DR:99:LYS:NZ	54:D5:43:HIS:HB3	2.27	0.48
27:BA:271(G):C:C2	27:BA:271(H):G:N7	2.81	0.48
23:AW:74:C:H4'	27:BA:2573:C:N4	2.29	0.48
40:DR:28:LEU:HA	40:DR:34:ILE:CG1	2.43	0.48
27:DA:2012:G:O3'	45:DW:96:ILE:CD1	2.61	0.48
27:DA:1212:G:N3	27:DA:1236:G:C2	2.82	0.48
1:AA:189(I):G:HO2'	1:AA:189(J):G:H8	1.59	0.48
27:BA:154(A):C:O4'	27:BA:154(A):C:O2	2.31	0.48
1:AA:740:U:H4'	15:AO:39:LEU:CD2	2.43	0.48
1:AA:960:U:O2'	1:AA:1223:C:C4'	2.61	0.48
1:AA:1225:A:H5''	13:AM:103:THR:HG21	1.96	0.48
28:BB:11:C:H3'	28:BB:12:C:H6	1.77	0.48
27:DA:1257:C:O2'	32:DF:83:PHE:O	2.31	0.48
50:B1:86:SER:O	50:B1:90:ILE:HG12	2.12	0.48
10:AJ:22:LYS:HZ2	10:AJ:23:ILE:HA	1.79	0.48
1:CA:1267:C:O2	1:CA:1267:C:C2'	2.57	0.48
27:DA:2840:C:H2'	27:DA:2841:C:H6	1.77	0.48
4:CD:25:ARG:O	4:CD:27:TYR:N	2.46	0.48
2:CB:118:LEU:HD11	2:CB:141:GLU:CD	2.33	0.48
30:BD:158:ALA:O	30:BD:196:VAL:HG11	2.13	0.48
8:CH:61:VAL:O	8:CH:63:LEU:HD13	2.12	0.48
27:DA:2111:C:H42	27:DA:2147:G:H22	1.60	0.48
35:BI:4:ILE:HG12	35:BI:18:VAL:CG2	2.43	0.48
12:AL:123:LYS:CD	12:AL:124:GLU:H	2.25	0.48
28:BB:105:A:N7	28:BB:106:G:C8	2.81	0.48
1:AA:115:G:H1'	1:AA:116:A:N7	2.27	0.48
27:DA:1844:C:C2	27:DA:1845:G:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BC:20:TYR:CD2	29:BC:21:THR:N	2.78	0.48
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.13	0.48
3:AC:139:GLN:O	3:AC:143:GLU:CB	2.61	0.48
44:DV:71:LEU:HD11	44:DV:84:LYS:HE2	1.94	0.48
1:AA:511:C:O2'	1:AA:512:U:H6	1.95	0.48
4:CD:2:GLY:C	4:CD:4:TYR:H	2.16	0.48
27:DA:2432:A:N6	27:DA:2433:A:C6	2.81	0.48
27:DA:2461:C:C5	27:DA:2462:U:H5	2.32	0.48
27:DA:2081:C:O2'	27:DA:2082:A:H5'	2.12	0.48
27:BA:680:G:O2'	27:BA:681:G:H5'	2.12	0.48
1:CA:153:C:H2'	1:CA:154:C:C6	2.48	0.48
1:AA:829:G:O2'	1:AA:830:G:H5'	2.14	0.48
40:DR:25:ALA:C	40:DR:27:SER:N	2.65	0.48
44:DV:28:GLU:O	44:DV:29:PRO:O	2.31	0.48
37:DO:9:GLU:O	37:DO:83:ALA:HA	2.13	0.48
27:DA:822:U:O2'	27:DA:823:G:H5'	2.13	0.48
1:CA:933:G:OP1	7:CG:4:ARG:HD2	2.13	0.48
45:DW:31:GLU:HA	45:DW:31:GLU:OE2	2.13	0.48
38:BP:50:ARG:HD3	57:B8:7:HIS:CD2	2.48	0.48
27:BA:251:A:H2'	27:BA:252:G:O4'	2.12	0.48
41:BS:92:TYR:C	41:BS:94:TYR:N	2.66	0.48
34:BH:118:PRO:HG3	34:BH:144:VAL:HG21	1.94	0.48
57:D8:62:LEU:HB2	57:D8:63:PRO:HD3	1.94	0.48
57:D8:53:PRO:O	57:D8:56:GLU:HB2	2.12	0.48
27:DA:194:G:H2'	27:DA:195:A:O4'	2.12	0.48
1:CA:1101:A:H1'	1:CA:1102:A:O4'	2.13	0.48
33:BG:114:ILE:O	33:BG:115:ARG:O	2.31	0.48
1:CA:1305:G:N2	1:CA:1331:G:C2'	2.72	0.48
27:BA:486:C:H2'	27:BA:487:C:H6	1.77	0.48
17:AQ:68:ARG:N	17:AQ:70:ARG:HH12	2.11	0.48
27:BA:356:G:H2'	27:BA:356:G:N3	2.28	0.48
27:DA:1157:G:O2'	27:DA:1158:C:H5'	2.14	0.48
43:DU:101:ARG:C	43:DU:102:GLU:HG2	2.33	0.48
43:DU:90:VAL:O	43:DU:92:ARG:N	2.38	0.48
43:DU:95:LEU:HD12	44:DV:11:GLN:HE21	1.77	0.48
27:DA:1495:A:H2'	27:DA:1496:A:H2	1.76	0.48
52:B3:8:LEU:HD13	52:B3:31:LEU:CD2	2.43	0.48
57:D8:32:LEU:HB3	57:D8:36:LYS:HZ3	1.78	0.48
23:CW:73:C:C2'	23:CW:74:C:H5'	2.25	0.48
27:DA:587:C:C3'	38:DP:33:ARG:NH2	2.74	0.48
36:BN:94:HIS:H	36:BN:95:PRO:HD2	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:428:G:O4'	1:AA:430:A:C8	2.66	0.48
8:AH:50:ARG:HA	8:AH:59:LEU:HD23	1.94	0.48
2:AB:204:ASN:ND2	2:AB:206:ASP:H	2.10	0.48
30:DD:259:THR:O	30:DD:259:THR:HG23	2.13	0.48
39:BQ:12:GLN:HG3	39:BQ:73:PRO:HD2	1.95	0.48
41:DS:43:GLU:O	41:DS:44:LYS:HB2	2.12	0.48
17:CQ:21:VAL:HG12	17:CQ:23:VAL:HG22	1.95	0.48
27:BA:1814:G:C6	27:BA:1815:A:C6	3.02	0.48
27:BA:2075:U:H2'	27:BA:2238:G:N2	2.28	0.48
27:BA:788:A:OP1	27:BA:791:C:N4	2.45	0.48
1:CA:162:A:H8	1:CA:162:A:O5'	1.97	0.48
1:AA:1102:A:H2'	1:AA:1103:C:H6	1.77	0.48
27:BA:2330:G:N2	49:B0:42:GLY:HA2	2.29	0.48
27:BA:2686:G:H2'	27:BA:2687:U:O4'	2.13	0.48
1:AA:451:A:H61	1:AA:481:G:H5'	1.77	0.48
15:AO:26:GLU:CD	15:AO:77:ARG:HD2	2.33	0.48
1:CA:131:C:O2	1:CA:262:A:H2	1.96	0.48
20:CT:25:ARG:HG3	20:CT:25:ARG:HH11	1.78	0.48
14:CN:24:CYS:O	14:CN:27:CYS:O	2.31	0.48
35:DI:38:LEU:HD12	35:DI:38:LEU:N	2.28	0.48
27:DA:464:U:H4'	56:D7:5:TRP:CZ3	2.47	0.48
40:DR:17:ARG:O	40:DR:20:LEU:HB3	2.13	0.48
35:BI:1:MET:C	35:BI:20:ASP:HB2	2.33	0.48
27:DA:957:A:C6	27:DA:2459:A:C8	3.02	0.48
55:B6:28:ARG:NH1	55:B6:28:ARG:HG2	2.28	0.48
1:CA:797:C:O2'	1:CA:798:G:H5'	2.13	0.48
48:BZ:100:PRO:O	48:BZ:101:LEU:HD12	2.13	0.48
27:BA:729:G:C6	30:BD:208:LYS:HB2	2.48	0.48
13:AM:20:THR:O	13:AM:22:ILE:N	2.39	0.48
1:AA:1381:U:H5''	1:AA:1381:U:C6	2.49	0.48
18:AR:64:ARG:HG3	18:AR:64:ARG:HH11	1.78	0.48
7:CG:143:ARG:NH2	25:CY:41:G:H5'	2.28	0.48
34:DH:52:VAL:HG12	34:DH:53:GLU:O	2.14	0.48
10:AJ:63:PHE:N	10:AJ:63:PHE:CD2	2.82	0.48
40:DR:28:LEU:HA	40:DR:34:ILE:HG13	1.95	0.48
10:CJ:22:LYS:HZ2	10:CJ:23:ILE:HG12	1.77	0.48
1:CA:702:A:H4'	1:CA:703:G:OP2	2.12	0.48
39:BQ:62:GLY:O	39:BQ:63:LYS:O	2.30	0.48
52:D3:7:LYS:NZ	52:D3:32:GLN:HE22	2.11	0.48
27:DA:106:C:O2'	27:DA:107:C:H5'	2.12	0.48
3:AC:5:ILE:O	3:AC:5:ILE:CD1	2.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:75:LEU:O	6:AF:77:ARG:N	2.46	0.48
1:CA:1478:C:C2	1:CA:1479:C:C5	3.01	0.48
1:CA:834:C:H2'	1:CA:835:U:O5'	2.12	0.48
1:CA:444:C:H2'	1:CA:445:G:C8	2.48	0.48
27:BA:670:A:H8	27:BA:670:A:O5'	1.93	0.48
27:BA:671:C:C6	27:BA:671:C:C5'	2.96	0.48
27:DA:1897:G:N2	27:DA:1898:U:H1'	2.28	0.48
43:BU:66:ASN:O	43:BU:70:ARG:HB2	2.13	0.48
27:BA:1605:C:C5	27:BA:1606:G:C5	3.01	0.48
50:D1:18:ILE:HG21	50:D1:20:ARG:NH2	2.28	0.48
18:CR:36:ASN:HD22	18:CR:36:ASN:N	2.09	0.48
1:AA:1344:C:C2'	1:AA:1345:U:H5'	2.43	0.48
28:DB:98:G:H2'	28:DB:99:G:H8	1.76	0.48
27:DA:1247:A:OP1	32:DF:95:ARG:NH2	2.46	0.48
50:D1:44:PRO:O	50:D1:46:LEU:HD22	2.13	0.48
39:BQ:20:ALA:O	39:BQ:98:LYS:HB2	2.13	0.48
27:DA:1805:U:C5'	30:DD:250:TRP:CD2	2.96	0.48
27:DA:1764:G:N2	27:DA:1765:C:H1'	2.29	0.48
27:BA:2348:U:H2'	27:BA:2349:G:H5''	1.95	0.48
28:DB:12:C:O2'	28:DB:13:A:OP2	2.31	0.48
49:B0:50:ASN:O	49:B0:81:VAL:HG21	2.13	0.48
27:DA:336:C:H2'	27:DA:337:C:C6	2.48	0.48
33:BG:23:PHE:CD1	33:BG:23:PHE:N	2.81	0.48
27:DA:1366:A:O2'	27:DA:1367:A:H5'	2.13	0.48
50:B1:11:ARG:HB2	50:B1:12:PRO:HD2	1.95	0.48
30:DD:134:ARG:HG3	30:DD:135:PHE:CE2	2.48	0.48
45:BW:22:ASP:HA	45:BW:25:ARG:HH12	1.78	0.48
45:BW:57:ASN:HD22	45:BW:57:ASN:N	2.10	0.48
27:DA:430:G:H8	27:DA:430:G:O5'	1.95	0.48
27:BA:907:U:H5'	39:BQ:23:GLY:HA3	1.95	0.48
2:AB:19:HIS:CG	2:AB:20:GLU:N	2.81	0.48
27:BA:263:C:O2'	27:BA:429:A:N3	2.43	0.48
1:CA:1013:G:H2'	1:CA:1015:A:OP2	2.13	0.48
27:BA:2834:G:H8	27:BA:2834:G:H5''	1.79	0.48
27:BA:2879:C:C4'	27:BA:2880:C:OP1	2.53	0.48
2:CB:69:LEU:O	2:CB:162:ILE:HA	2.13	0.48
32:BF:125:LEU:HD21	32:BF:199:TRP:CD2	2.48	0.48
37:BO:60:ALA:HA	37:BO:87:ILE:HG12	1.96	0.48
57:D8:6:THR:HG22	57:D8:63:PRO:HG3	1.95	0.48
27:DA:833:U:H5''	38:DP:48:PRO:HB3	1.94	0.48
27:DA:271(D):G:H2'	27:DA:271(E):U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1329:A:H4'	13:CM:24:GLY:O	2.13	0.48
47:BY:43:ASN:C	47:BY:44:ILE:HG13	2.34	0.48
1:AA:18:C:H4'	1:AA:1078:U:O2	2.13	0.48
1:AA:916:G:H2'	1:AA:917:G:H8	1.78	0.48
5:AE:43:LEU:HD12	5:AE:44:GLY:H	1.78	0.48
42:BT:28:VAL:O	42:BT:29:ARG:HB2	2.12	0.48
43:DU:47:TYR:HA	43:DU:50:ARG:CZ	2.43	0.48
51:D2:52:ASP:O	51:D2:53:LEU:C	2.52	0.48
31:DE:52:LEU:HA	31:DE:52:LEU:HD12	1.73	0.48
27:DA:2371:G:O2'	55:D6:46:HIS:ND1	2.46	0.48
39:DQ:81:VAL:CG2	39:DQ:82:ARG:H	2.27	0.48
27:BA:336:C:H2'	27:BA:337:C:C6	2.48	0.48
27:DA:831:G:H5''	27:DA:831:G:C8	2.49	0.48
27:DA:704:G:HO2'	27:DA:705:A:P	2.36	0.48
27:DA:704:G:C1'	27:DA:727:A:N6	2.76	0.48
14:AN:23:ARG:HH11	14:AN:30:ALA:HB2	1.79	0.48
48:BZ:76:ASP:OD2	48:BZ:78:ARG:O	2.31	0.48
42:DT:80:SER:OG	42:DT:81:PRO:HD2	2.13	0.48
19:AS:32:LYS:HB3	19:AS:57:HIS:ND1	2.28	0.48
1:CA:559:A:H1'	1:CA:561:U:H2'	1.95	0.48
27:BA:2783:G:C6	27:BA:2784:C:C4	3.02	0.48
31:BE:86:PRO:O	31:BE:88:GLY:N	2.33	0.48
5:AE:56:GLN:O	5:AE:59:GLY:N	2.46	0.48
27:BA:951:C:C4	27:BA:952:G:N7	2.81	0.48
33:DG:96:ARG:O	33:DG:99:MET:HB3	2.13	0.48
36:DN:46:VAL:O	36:DN:47:ALA:CB	2.55	0.48
1:CA:130:A:H1'	1:CA:263:A:O2'	2.13	0.48
42:BT:72:VAL:HG12	42:BT:73:GLU:N	2.27	0.48
3:CC:51:GLY:O	3:CC:70:VAL:HG13	2.13	0.48
12:AL:50:ARG:HG2	12:AL:50:ARG:NH1	2.27	0.48
39:DQ:1:MET:HE3	39:DQ:1:MET:O	2.13	0.48
41:BS:101:LEU:C	41:BS:101:LEU:HD22	2.34	0.48
27:BA:141:A:C8	27:BA:1408:C:O2'	2.59	0.48
36:BN:131:GLN:HE22	36:BN:134:ARG:HD2	1.78	0.48
1:AA:1309:G:O2'	13:AM:77:ASN:ND2	2.46	0.48
1:CA:338:A:N6	1:CA:351:G:H1	2.12	0.48
4:AD:162:LEU:CD1	4:AD:181:MET:SD	3.02	0.48
1:AA:817:C:H6	1:AA:817:C:O5'	1.96	0.48
27:BA:271(T):C:H2'	27:BA:271(U):G:H8	1.78	0.48
23:AW:74:C:H4'	27:BA:2573:C:H42	1.77	0.48
8:CH:39:LEU:CD2	8:CH:39:LEU:H	2.22	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:267:C:C2	27:DA:268:C:C5	3.01	0.48
27:DA:2012:G:C4'	45:DW:96:ILE:HD11	2.43	0.48
24:AX:2:G:H4'	49:B0:7:LEU:O	2.13	0.48
7:AG:69:VAL:HG11	7:AG:104:LEU:HD22	1.95	0.48
33:BG:18:GLU:HB3	33:BG:175:LEU:HD21	1.94	0.48
16:AP:7:ALA:O	16:AP:9:PHE:CD2	2.66	0.48
1:AA:1246:C:O2'	1:AA:1247:U:H5'	2.13	0.48
42:DT:19:LEU:HA	42:DT:20:PRO:HD3	1.69	0.48
1:CA:409:G:OP1	4:CD:23:GLY:O	2.31	0.48
3:CC:184:TYR:HD1	3:CC:201:TYR:CE2	2.31	0.48
17:CQ:4:LYS:HE3	17:CQ:6:LEU:CD1	2.39	0.48
1:AA:1190:G:H5'	3:AC:176:HIS:HE2	1.78	0.48
27:BA:1846:G:N2	27:BA:1895:C:C2	2.81	0.48
1:AA:1145:C:H5'	1:AA:1146:A:OP1	2.12	0.48
27:DA:2192:G:C3'	27:DA:2193:G:H5''	2.42	0.48
45:BW:85:VAL:CG1	45:BW:86:LEU:H	2.25	0.48
1:CA:407:G:H2'	1:CA:408:A:C8	2.41	0.48
4:AD:57:ARG:O	4:AD:206:PHE:HB2	2.13	0.48
1:AA:423:G:H2'	1:AA:424:G:H5'	1.95	0.48
27:BA:1476:C:H2'	27:BA:1477:A:C8	2.45	0.48
27:BA:1017:G:H2'	27:BA:1018:C:H6	1.77	0.48
1:AA:1019:C:H2'	1:AA:1020:U:O4'	2.14	0.48
1:AA:243:A:C2	1:AA:245:C:C2	3.01	0.48
17:CQ:82:MET:HA	17:CQ:85:VAL:CG2	2.42	0.48
48:BZ:116:LEU:HG	48:BZ:172:ALA:O	2.12	0.48
35:BI:28:ASN:N	35:BI:28:ASN:ND2	2.61	0.48
27:DA:876:C:C2'	27:DA:877:U:H5'	2.43	0.48
1:AA:1069:C:H2'	1:AA:1070:U:O5'	2.14	0.48
27:BA:1344:G:H5'	27:BA:1384:A:C6	2.48	0.48
54:D5:16:ARG:HG2	54:D5:16:ARG:HH11	1.78	0.48
7:AG:11:GLN:HG3	7:AG:12:LEU:N	2.29	0.48
11:CK:125:PHE:N	11:CK:125:PHE:HD1	2.11	0.48
35:BI:29:TYR:HD1	35:BI:33:ARG:HE	1.61	0.48
1:CA:1293:G:O2'	1:CA:1294:G:H5'	2.14	0.48
27:DA:1170:G:H1	27:DA:1179:C:H42	1.61	0.48
27:BA:681:G:C4	27:BA:682:G:C8	3.02	0.48
27:BA:2594:C:H2'	27:BA:2595:G:H8	1.76	0.48
18:CR:25:THR:C	18:CR:26:LEU:HD23	2.34	0.48
27:BA:759:G:C2	27:BA:760:G:C8	3.02	0.48
47:BY:101:LYS:HG2	47:BY:102:CYS:N	2.29	0.48
29:BC:58:VAL:HG21	29:BC:166:ASP:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B1:3:LYS:HD2	50:B1:4:VAL:HG12	1.96	0.48
34:BH:16:SER:HB2	34:BH:27:LYS:HB2	1.94	0.48
1:AA:1530:G:O2'	1:AA:1531:A:O5'	2.27	0.48
38:BP:50:ARG:HB3	57:B8:59:LYS:CD	2.37	0.48
1:CA:985:C:N3	1:CA:1221:G:C2	2.82	0.48
28:BB:42:C:H2'	28:BB:43:C:H6	1.78	0.48
28:BB:45:A:C2'	28:BB:46:A:H5'	2.43	0.48
34:BH:137:ASP:O	34:BH:138:LYS:CB	2.61	0.48
27:BA:27:G:O2'	27:BA:28:A:P	2.72	0.48
4:CD:92:VAL:O	4:CD:93:PHE:C	2.52	0.48
38:BP:16:ARG:HG3	38:BP:17:LYS:N	2.28	0.48
27:BA:535:C:C2'	27:BA:536:A:H5'	2.43	0.48
27:BA:558:G:OP1	36:BN:111:PRO:HD2	2.13	0.48
44:BV:13:ARG:NH1	44:BV:13:ARG:HG2	2.23	0.48
44:BV:49:THR:HG22	44:BV:50:PRO:CD	2.39	0.48
27:DA:1893:C:H2'	27:DA:1894:C:O5'	2.13	0.48
32:DF:18:ARG:HG3	32:DF:19:GLU:N	2.29	0.48
27:DA:536:A:H2'	27:DA:537:C:H6	1.75	0.48
27:DA:2206:G:N3	27:DA:2206:G:H5''	2.29	0.48
30:DD:58:HIS:C	30:DD:58:HIS:CD2	2.86	0.48
33:BG:56:ALA:O	33:BG:60:LEU:HB2	2.13	0.48
11:AK:33:THR:HA	11:AK:39:PRO:HA	1.95	0.48
55:D6:11:LEU:O	55:D6:24:GLU:N	2.47	0.48
38:DP:100:LEU:O	38:DP:103:ALA:HB3	2.14	0.48
47:BY:14:LEU:HD12	47:BY:15:VAL:N	2.28	0.48
27:DA:2020:A:OP1	43:DU:27:LEU:HG	2.12	0.48
27:DA:805:G:H22	27:DA:828:U:H5''	1.78	0.48
20:AT:60:GLU:HG3	20:AT:81:LYS:HE3	1.95	0.48
36:BN:70:LYS:HB3	36:BN:87:LEU:HD12	1.95	0.48
23:AW:30:A:H2'	23:AW:31:U:C5'	2.26	0.48
39:BQ:118:LEU:O	39:BQ:119:ARG:C	2.52	0.48
34:BH:61:HIS:O	34:BH:62:LYS:C	2.52	0.48
30:BD:72:LYS:HG3	30:BD:97:TYR:CE2	2.48	0.48
9:AI:53:VAL:CG2	9:AI:54:ASP:N	2.54	0.48
12:CL:98:VAL:HG12	12:CL:101:VAL:CG2	2.43	0.48
2:AB:197:VAL:CB	2:AB:200:ILE:HG12	2.42	0.48
1:CA:344:A:H3'	1:CA:346:G:O6	2.13	0.48
27:BA:464:U:H4'	56:B7:5:TRP:CH2	2.48	0.48
30:BD:238:GLY:O	30:BD:239:ARG:O	2.31	0.48
2:AB:171:ALA:O	2:AB:172:ILE:C	2.51	0.48
1:AA:372:C:N4	1:AA:389:A:H62	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:77:ARG:O	15:AO:81:LEU:HB3	2.13	0.48
20:CT:67:ALA:HA	20:CT:73:HIS:HA	1.95	0.48
1:CA:1053:G:N7	1:CA:1199:U:H2'	2.28	0.48
1:CA:1326:C:H2'	1:CA:1327:C:C6	2.49	0.48
39:DQ:2:LEU:HG	39:DQ:70:PRO:HG3	1.96	0.48
48:BZ:152:SER:N	48:BZ:166:PRO:HB3	2.24	0.48
31:DE:111:ARG:CD	31:DE:160:TYR:CE1	2.91	0.48
40:DR:9:LYS:O	40:DR:10:LEU:HG	2.14	0.48
27:BA:2346:A:C8	27:BA:2383:G:C6	3.01	0.48
48:DZ:8:TYR:HE1	48:DZ:62:ASP:OD2	1.95	0.48
1:AA:1173:G:C4	1:AA:1174:G:C8	3.01	0.48
27:BA:68:G:N2	27:BA:74:A:C4	2.81	0.48
29:DC:82:LYS:C	29:DC:83:ILE:HD13	2.34	0.48
1:AA:486:U:O2'	1:AA:487:A:O5'	2.31	0.48
39:BQ:57:HIS:HE1	39:BQ:116:GLU:CG	2.25	0.48
35:DI:81:VAL:HG11	35:DI:88:ILE:HG21	1.96	0.48
27:BA:764:A:C5	30:BD:209:ALA:HB3	2.49	0.48
1:AA:1381:U:C5	7:AG:156:TRP:HZ3	2.31	0.48
27:DA:2562:U:O2	27:DA:2562:U:C2'	2.52	0.48
37:DO:23:ARG:HD2	37:DO:24:VAL:N	2.27	0.48
42:DT:73:GLU:OE1	42:DT:103:ARG:NE	2.47	0.48
27:DA:2318:G:C2'	27:DA:2319:G:OP1	2.60	0.48
1:CA:1157:A:C4'	1:CA:1158:C:O5'	2.54	0.48
4:AD:152:SER:C	4:AD:154:ASN:N	2.66	0.48
27:DA:271(A):A:N1	27:DA:272(D):G:O2'	2.46	0.48
1:AA:1313:U:O4	19:AS:4:SER:N	2.47	0.48
45:DW:55:ALA:O	45:DW:57:ASN:N	2.37	0.48
27:DA:1916:A:H2'	27:DA:1917:U:O4'	2.14	0.48
27:DA:481:G:H1'	27:DA:506:G:N2	2.25	0.48
11:CK:33:THR:HB	11:CK:37:GLY:O	2.12	0.48
39:DQ:98:LYS:HB3	39:DQ:99:PRO:HD2	1.94	0.48
27:DA:2122:U:H2'	27:DA:2123:G:H8	1.77	0.48
30:BD:130:ALA:C	30:BD:131:LEU:HD12	2.33	0.48
27:BA:1001:A:H2'	27:BA:1002:G:O4'	2.13	0.48
9:AI:11:LYS:C	9:AI:13:ALA:H	2.16	0.48
34:BH:29:PRO:O	34:BH:30:LYS:CE	2.60	0.48
27:BA:2031:A:C6	27:BA:2498:C:H1'	2.48	0.48
6:CF:42:GLU:O	6:CF:44:GLY:N	2.46	0.48
1:CA:613:C:H2'	1:CA:614:A:C8	2.45	0.48
27:BA:2536:G:C6	27:BA:2537:U:C4	3.02	0.48
13:AM:102:ARG:CG	13:AM:102:ARG:HH11	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:875:G:C6	27:BA:876:C:C2	3.02	0.48
27:DA:1764:G:N2	27:DA:1765:C:C2	2.81	0.48
18:AR:87:ARG:HG2	18:AR:87:ARG:NH1	2.28	0.48
27:BA:696:G:H2'	27:BA:697:C:H6	1.79	0.48
41:DS:36:TYR:HD1	41:DS:36:TYR:N	2.11	0.48
27:DA:448:U:H3'	27:DA:449:A:C5'	2.42	0.48
1:CA:1113:C:H6	1:CA:1113:C:O5'	1.96	0.48
27:DA:2440:C:H2'	27:DA:2441:C:O5'	2.13	0.48
15:CO:62:GLN:O	15:CO:66:LEU:HD22	2.14	0.48
11:AK:66:LEU:O	11:AK:69:ALA:N	2.45	0.48
27:BA:785:G:N3	27:BA:785:G:H2'	2.27	0.48
1:AA:142:G:N3	1:AA:142:G:H2'	2.29	0.48
3:CC:206:GLU:O	3:CC:207:VAL:C	2.51	0.48
1:CA:977:A:C8	1:CA:982:U:O4	2.67	0.48
27:BA:2631:G:H1	27:BA:2787:C:H42	1.62	0.48
57:D8:55:ALA:O	57:D8:59:LYS:HG3	2.13	0.48
27:DA:1693:U:O2'	27:DA:1694:C:OP1	2.31	0.48
27:BA:286:C:O2'	27:BA:287:C:C5'	2.61	0.48
27:BA:355:G:C4	27:BA:356:G:C8	3.02	0.48
1:AA:924:C:O2'	1:AA:1502:A:N6	2.47	0.48
27:DA:992:C:H3'	27:DA:992:C:C6	2.48	0.48
27:DA:533:G:H5'	43:DU:24:TYR:CD2	2.49	0.48
30:DD:119:ALA:HB2	30:DD:130:ALA:HB3	1.96	0.48
30:DD:142:VAL:CG2	30:DD:143:HIS:N	2.76	0.48
27:DA:869:G:N3	27:DA:870:A:C8	2.82	0.48
27:DA:458:G:C8	56:D7:37:LYS:NZ	2.81	0.48
27:DA:969:U:P	52:D3:17:LYS:HG2	2.54	0.48
1:AA:191:G:O2'	1:AA:192:U:H5'	2.14	0.48
27:DA:143:G:H1'	46:DX:37:THR:CG2	2.43	0.48
34:BH:43:VAL:HG11	34:BH:52:VAL:CA	2.44	0.48
34:BH:54:ARG:HG2	34:BH:65:HIS:CD2	2.45	0.48
30:BD:118:VAL:N	30:BD:129:ASN:OD1	2.46	0.48
4:CD:98:GLU:OE2	4:CD:103:ASN:ND2	2.44	0.48
1:CA:218:C:O2'	1:CA:219:C:H6	1.97	0.48
48:BZ:75:LEU:HD22	48:BZ:82:PRO:HA	1.95	0.48
8:AH:109:ILE:HG12	8:AH:110:ALA:N	2.28	0.48
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.96	0.48
41:DS:40:ILE:HG22	41:DS:40:ILE:O	2.14	0.48
1:CA:189(D):C:N3	1:CA:189(E):U:C2	2.81	0.48
27:BA:686:G:O6	56:B7:12:ARG:HA	2.14	0.48
27:BA:794:G:C2	27:BA:795:C:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DN:10:GLU:HA	36:DN:11:PRO:HD3	1.75	0.48
1:AA:372:C:H42	1:AA:389:A:N6	2.12	0.48
1:CA:260:G:H2'	1:CA:261:U:H6	1.79	0.48
30:DD:51:VAL:HG11	30:DD:54:ARG:HE	1.78	0.48
27:BA:388:G:H5'	50:B1:25:LYS:HG2	1.95	0.48
12:CL:99:ARG:NH2	12:CL:107:VAL:HG22	2.29	0.48
1:CA:1354:C:H2'	1:CA:1355:G:C8	2.49	0.48
1:CA:923:A:C6	1:CA:924:C:N3	2.81	0.48
35:BI:107:VAL:O	35:BI:109:ILE:HD13	2.13	0.48
40:DR:2:ARG:NH2	40:DR:5:LYS:CE	2.77	0.48
27:BA:1971:A:C5	30:BD:241:PRO:HG3	2.48	0.48
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.96	0.48
12:AL:112:LYS:C	12:AL:114:ARG:H	2.17	0.48
37:DO:10:VAL:O	37:DO:10:VAL:HG22	2.14	0.48
46:BX:5:TYR:CE1	51:B2:30:ARG:HB2	2.48	0.48
51:B2:47:ASN:O	51:B2:50:ILE:N	2.41	0.48
27:BA:2355:C:H1'	49:B0:39:ARG:NH2	2.21	0.48
2:CB:178:ARG:NH2	8:CH:68:ARG:NH2	2.51	0.48
1:AA:1278:U:C6	1:AA:1278:U:C3'	2.95	0.48
8:CH:104:ARG:O	8:CH:106:GLY:N	2.46	0.48
50:D1:12:PRO:HB2	50:D1:41:ARG:HD3	1.96	0.48
3:AC:175:LEU:H	3:AC:175:LEU:HD12	1.77	0.48
27:DA:345:A:C4'	27:DA:346:A:OP1	2.60	0.48
13:AM:13:LYS:C	13:AM:44:ARG:HD2	2.34	0.48
12:AL:76:GLU:O	12:AL:77:HIS:CB	2.55	0.48
10:CJ:94:VAL:CG1	10:CJ:95:GLU:H	2.25	0.48
1:AA:437:U:O2'	4:AD:123:HIS:HD2	1.96	0.48
29:DC:77:ILE:HG21	29:DC:123:VAL:N	2.25	0.48
2:AB:39:ILE:O	2:AB:41:ILE:HD12	2.14	0.48
10:CJ:85:LEU:O	10:CJ:87:THR:N	2.46	0.48
1:AA:706:A:H5''	11:AK:22:HIS:CD2	2.49	0.48
25:CY:31:U:O2'	25:CY:32:U:H5'	2.14	0.48
27:BA:435:C:O2'	27:BA:436:C:H5'	2.13	0.48
44:BV:43:GLU:HA	44:BV:43:GLU:OE1	2.11	0.48
50:D1:29:GLY:O	50:D1:30:VAL:CG2	2.62	0.48
1:AA:115:G:H4'	1:AA:116:A:O5'	2.13	0.48
7:AG:108:ALA:O	7:AG:111:ARG:HB2	2.13	0.48
1:AA:422:C:O2'	1:AA:423:G:OP2	2.29	0.48
11:AK:126:ARG:HH11	11:AK:126:ARG:HB3	1.78	0.48
41:DS:21:THR:O	41:DS:23:ARG:N	2.46	0.48
34:DH:38:SER:C	34:DH:40:GLU:N	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1943:U:C1'	27:BA:1945:G:H5'	2.43	0.48
20:AT:100:ILE:O	20:AT:102:GLY:N	2.47	0.48
1:CA:725:G:H2'	1:CA:726:C:H6	1.79	0.48
6:CF:82:ARG:CB	6:CF:85:VAL:HG23	2.44	0.48
35:BI:33:ARG:O	35:BI:35:LEU:HD23	2.14	0.48
1:CA:876:G:P	8:CH:14:ARG:NH1	2.87	0.48
27:DA:1558:A:HO2'	27:DA:1559:G:P	2.37	0.48
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.13	0.48
9:CI:32:ASP:OD1	9:CI:33:PHE:N	2.47	0.48
27:BA:358:U:O2	27:BA:358:U:H2'	2.12	0.48
27:DA:841:A:H2'	27:DA:842:G:C8	2.49	0.48
1:AA:148:G:H2'	1:AA:149:A:C8	2.48	0.48
4:AD:161:ASN:N	4:AD:161:ASN:OD1	2.46	0.48
2:AB:102:LEU:H	2:AB:102:LEU:HD12	1.78	0.48
11:AK:116:HIS:ND1	11:AK:116:HIS:N	2.61	0.48
27:DA:2765:A:N3	27:DA:2765:A:H3'	2.28	0.48
38:BP:65:ARG:NH2	57:B8:15:LYS:HD2	2.29	0.48
1:CA:960:U:O2'	1:CA:1223:C:H5'	2.13	0.48
1:CA:982:U:H6	1:CA:982:U:OP1	1.97	0.48
27:BA:2832:U:O2	27:BA:2834:G:N1	2.46	0.48
40:BR:24:GLN:O	40:BR:25:ALA:C	2.51	0.48
27:DA:1019:U:O2'	27:DA:1021:A:C2	2.55	0.48
4:CD:15:GLU:OE1	4:CD:15:GLU:N	2.46	0.48
4:CD:9:CYS:SG	4:CD:12:CYS:SG	3.11	0.48
1:CA:473:G:H5''	16:CP:81:ARG:HE	1.77	0.48
43:BU:92:ARG:HE	43:BU:95:LEU:HD12	1.78	0.48
42:BT:28:VAL:HG22	42:BT:46:GLU:C	2.34	0.48
42:BT:65:LYS:NZ	42:BT:66:VAL:N	2.62	0.48
44:DV:40:LEU:CD1	44:DV:46:VAL:HA	2.42	0.48
41:BS:67:ARG:NH2	41:BS:100:ALA:HB3	2.28	0.48
27:DA:870:A:H5''	39:DQ:6:ARG:O	2.14	0.48
27:DA:858:U:C2	27:DA:920:G:N2	2.82	0.48
27:DA:2247:A:C5	27:DA:2248:C:C5	3.02	0.48
27:DA:2347:C:H2'	27:DA:2348:U:C6	2.48	0.48
27:DA:2367:G:H2'	27:DA:2368:C:C6	2.47	0.48
27:DA:1953:A:H2	27:DA:2549:G:N3	2.12	0.48
27:DA:2571:C:H5''	27:DA:2572:A:C5'	2.44	0.48
27:DA:669:G:C2	27:DA:801:G:C6	3.02	0.48
27:DA:952:G:N1	27:DA:966:G:C6	2.82	0.48
27:DA:674:G:C1'	32:DF:74:ARG:HD3	2.44	0.48
38:DP:39:LYS:O	38:DP:41:ARG:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:704:G:O2'	27:DA:705:A:P	2.71	0.48
31:DE:200:GLU:N	31:DE:200:GLU:OE2	2.46	0.48
1:CA:173:U:H1'	1:CA:197:A:C6	2.49	0.48
1:AA:1221:G:H4'	19:AS:77:THR:CG2	2.44	0.48
1:CA:375:U:H2'	1:CA:376:G:H8	1.79	0.48
1:CA:189(E):U:O2'	1:CA:189(F):U:H5''	2.13	0.48
2:AB:95:GLN:HA	2:AB:95:GLN:OE1	2.14	0.48
27:BA:826:U:H5''	27:BA:826:U:C6	2.47	0.48
33:DG:2:PRO:O	33:DG:3:LEU:CB	2.62	0.48
1:AA:1321:C:OP2	1:AA:1322:C:H2'	2.14	0.48
27:DA:2539:C:C2	27:DA:2540:C:C5	3.02	0.48
1:CA:540:G:H2'	1:CA:541:G:H8	1.79	0.48
27:BA:1675:C:O2	31:BE:129:HIS:N	2.46	0.48
1:CA:647:C:C4	1:CA:648:A:N7	2.81	0.48
1:CA:651:C:N4	1:CA:753:A:OP2	2.40	0.48
35:BI:79:ILE:HG23	35:BI:80:PRO:HD2	1.95	0.48
1:AA:442:C:H42	1:AA:492:G:H1	1.62	0.48
30:BD:70:TRP:CH2	30:BD:150:LYS:HA	2.48	0.48
9:CI:19:LEU:HD23	9:CI:61:ALA:HB2	1.95	0.48
39:BQ:27:VAL:HG23	39:BQ:137:TYR:HE1	1.78	0.48
27:DA:851:U:O2'	52:D3:45:GLY:HA3	2.14	0.48
35:DI:78:THR:CG2	35:DI:143:SER:HB2	2.42	0.48
25:CY:68:C:H2'	25:CY:69:C:C5'	2.36	0.48
36:BN:31:ALA:O	36:BN:34:LEU:HB2	2.13	0.48
30:DD:176:ARG:HD2	30:DD:180:GLY:HA2	1.94	0.48
3:AC:89:GLU:HG3	3:AC:90:GLU:N	2.28	0.48
27:BA:232:G:C4'	27:BA:233:A:OP1	2.53	0.48
27:DA:682:G:O2'	27:DA:683:C:H5'	2.13	0.48
45:DW:12:ILE:HD13	45:DW:17:VAL:CG1	2.43	0.48
27:DA:475:U:C5	27:DA:481:G:O6	2.66	0.48
29:BC:49:ILE:HD12	29:BC:49:ILE:N	2.21	0.48
40:BR:101:ALA:HB2	54:B5:44:THR:CB	2.43	0.48
27:BA:185:U:H4'	27:BA:218:A:H4'	1.96	0.48
52:D3:59:VAL:CG1	52:D3:60:GLU:N	2.66	0.48
1:AA:275:G:H4'	17:AQ:14:LYS:O	2.13	0.48
1:CA:1096:C:C2	1:CA:1097:C:C5	3.02	0.48
50:B1:75:GLU:C	50:B1:77:ALA:H	2.16	0.48
32:BF:167:ALA:O	32:BF:169:ASN:N	2.47	0.48
16:CP:31:LYS:CG	16:CP:32:TYR:H	2.24	0.48
27:BA:1303:G:H1'	27:BA:1641:A:N1	2.29	0.48
8:CH:73:ASP:OD2	8:CH:73:ASP:C	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:3:ARG:CB	4:AD:118:ARG:HH11	2.25	0.48
27:BA:1846:G:C5'	27:BA:1847:A:OP2	2.62	0.48
44:BV:36:PRO:HA	44:BV:56:SER:HA	1.95	0.48
27:BA:2534:A:H5'	27:BA:2534:A:H8	1.79	0.48
13:CM:37:THR:OG1	13:CM:39:ILE:HG13	2.14	0.48
20:AT:87:LYS:HG3	20:AT:91:LEU:CD1	2.43	0.48
13:AM:88:ARG:HH21	19:AS:69:HIS:HE1	1.62	0.48
1:CA:434:U:H2'	1:CA:435:C:C6	2.48	0.48
27:BA:2553:G:H2'	27:BA:2554:U:O4'	2.13	0.48
11:AK:44:SER:H	11:AK:47:VAL:CG2	2.26	0.48
2:CB:174:VAL:O	2:CB:174:VAL:HG12	2.14	0.48
38:DP:138:LEU:O	38:DP:139:LYS:C	2.51	0.48
1:AA:1033:G:H2'	1:AA:1034:G:H5'	1.96	0.48
9:CI:27:THR:HG23	9:CI:31:GLN:O	2.14	0.48
2:CB:189:ASP:OD2	2:CB:191:ASP:HB2	2.14	0.48
2:CB:131:PRO:HG2	2:CB:134:GLU:CB	2.44	0.48
30:DD:102:LYS:C	30:DD:103:ARG:HG2	2.34	0.48
1:CA:790:A:OP1	24:CX:38:A:O2'	2.31	0.48
27:BA:2615:U:C2	54:B5:7:PRO:HA	2.49	0.48
27:BA:2706:G:H8	27:BA:2706:G:O5'	1.96	0.48
13:CM:29:ARG:HD3	13:CM:64:TRP:CZ3	2.47	0.48
1:AA:505:G:H2'	1:AA:506:G:H8	1.78	0.48
27:BA:2594:C:O2'	27:BA:2595:G:H5'	2.14	0.48
5:AE:29:GLY:HA2	5:AE:46:GLY:O	2.14	0.48
27:DA:304:G:H2'	27:DA:305:U:C6	2.49	0.48
27:BA:1980:G:H4'	27:BA:1981:A:OP2	2.13	0.48
27:BA:2010:G:H5'	45:BW:42:ARG:HB2	1.95	0.48
27:BA:271(D):G:O2'	27:BA:271(E):U:H5'	2.14	0.48
27:DA:425:G:O2'	27:DA:426:C:H5'	2.13	0.48
48:DZ:174:VAL:HB	48:DZ:175:PRO:HD2	1.95	0.48
27:DA:1644:C:O2	27:DA:1644:C:H2'	2.11	0.48
24:AX:20:U:H3'	24:AX:21:A:H5''	1.96	0.48
27:BA:2600:A:H2'	27:BA:2601:C:C6	2.49	0.48
1:CA:317:G:H2'	1:CA:318:G:C8	2.49	0.48
10:AJ:24:VAL:O	10:AJ:28:ARG:HB2	2.14	0.48
48:DZ:151:ALA:HB3	48:DZ:153:ASP:OD2	2.14	0.48
27:BA:242:G:O5'	57:B8:62:LEU:HD22	2.14	0.48
27:BA:2838:G:H1'	40:BR:45:ARG:NH1	2.28	0.48
41:BS:92:TYR:HD1	41:BS:92:TYR:N	2.10	0.48
32:BF:202:PHE:HA	32:BF:205:ARG:HB2	1.95	0.48
1:CA:1306:A:N6	1:CA:1331:G:HI'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BN:3:THR:HG22	36:BN:5:VAL:H	1.78	0.48
44:BV:18:LEU:O	44:BV:19:LYS:O	2.31	0.48
8:AH:17:THR:HG22	8:AH:65:TYR:CZ	2.49	0.48
1:AA:922:G:H1'	5:AE:19:MET:HB3	1.95	0.48
27:DA:997:G:C2	27:DA:1159:U:N3	2.82	0.48
36:DN:38:HIS:HA	43:DU:67:ALA:HB1	1.96	0.48
27:DA:997:G:OP1	43:DU:93:LYS:HD3	2.13	0.48
36:DN:2:LYS:HE2	43:DU:95:LEU:HD21	1.95	0.48
27:DA:921:G:H4'	27:DA:2269:A:C6	2.49	0.48
27:BA:1747(A):G:H2'	27:BA:1748:G:C5'	2.17	0.48
31:DE:59:VAL:CG2	31:DE:60:ASN:H	2.06	0.48
55:D6:34:LEU:N	55:D6:51:GLU:OE1	2.47	0.48
20:AT:54:LYS:HA	20:AT:57:ARG:NH1	2.28	0.48
20:AT:26:ASN:CB	20:AT:71:THR:HG23	2.44	0.48
1:CA:1104:G:C2'	1:CA:1105:A:H5'	2.43	0.48
4:AD:12:CYS:HA	4:AD:19:LEU:HB2	1.96	0.48
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.96	0.48
4:AD:4:TYR:CG	4:AD:5:ILE:N	2.80	0.48
27:BA:1500:G:C2'	27:BA:1501:C:O5'	2.62	0.48
30:BD:72:LYS:NZ	30:BD:103:ARG:HH12	2.11	0.48
30:BD:35:LYS:O	30:BD:64:ILE:N	2.43	0.48
4:CD:99:SER:O	4:CD:140:VAL:HG23	2.14	0.48
1:AA:963:G:H21	10:AJ:55:LYS:HZ3	1.60	0.48
39:BQ:12:GLN:NE2	39:BQ:73:PRO:HD3	2.29	0.48
2:AB:112:VAL:O	2:AB:115:LEU:HB3	2.13	0.48
42:DT:13:ARG:C	42:DT:15:VAL:H	2.17	0.48
34:BH:159:GLU:OE1	34:BH:159:GLU:CA	2.57	0.48
37:BO:35:VAL:CG2	37:BO:65:THR:HG23	2.44	0.48
27:DA:71:A:C4'	27:DA:72:U:OP2	2.62	0.48
50:B1:47:GLN:N	50:B1:62:VAL:O	2.42	0.48
27:DA:2527:C:C4	27:DA:2528:U:C5	3.01	0.48
3:CC:156:ARG:HH11	3:CC:193:TYR:HB2	1.77	0.48
5:CE:53:LEU:CD1	5:CE:53:LEU:H	2.24	0.48
1:CA:1325:C:O3'	21:CU:17:THR:HG21	2.14	0.48
38:BP:79:ARG:O	38:BP:111:ARG:HB2	2.12	0.48
35:BI:111:PRO:HA	35:BI:114:LEU:CD2	2.34	0.48
35:BI:128:LEU:O	35:BI:137:PRO:HA	2.13	0.48
27:BA:807:U:H2'	27:BA:808:G:O4'	2.13	0.48
1:AA:35:G:C2'	1:AA:36:C:H5'	2.43	0.48
3:AC:202:ILE:O	3:AC:204:LEU:HG	2.13	0.48
27:DA:736:C:C2'	27:DA:737:C:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DB:46:A:C5	28:DB:47:C:C4	3.01	0.48
33:DG:125:PHE:CD1	33:DG:125:PHE:N	2.82	0.48
27:DA:849:A:OP2	27:DA:850:C:C5	2.67	0.48
1:AA:736:C:N4	1:AA:737:A:H62	2.12	0.48
13:AM:9:ILE:HD12	13:AM:9:ILE:N	2.29	0.48
27:DA:2566:A:O2'	27:DA:2567:G:P	2.72	0.48
27:DA:2849:U:O2'	27:DA:2866:U:C6	2.67	0.48
42:DT:96:ARG:CG	42:DT:96:ARG:NH1	2.70	0.48
4:AD:154:ASN:HA	4:AD:159:ARG:NH2	2.28	0.48
27:DA:1385:G:C4	27:DA:1386:C:C5	3.02	0.48
2:AB:214:ILE:HG22	2:AB:215:LEU:N	2.28	0.48
5:CE:67:VAL:CG2	5:CE:68:GLU:N	2.75	0.48
27:DA:2011:U:H2'	27:DA:2012:G:O4'	2.14	0.48
45:DW:105:VAL:HG12	45:DW:107:LEU:HD12	1.95	0.48
45:DW:50:VAL:HG13	45:DW:51:LEU:N	2.23	0.48
27:DA:324:A:N6	27:DA:338:G:O2'	2.37	0.48
1:CA:571:U:H3'	1:CA:572:A:H5''	1.96	0.48
1:CA:571:U:H5''	1:CA:819:A:N3	2.29	0.48
52:D3:31:LEU:C	52:D3:33:GLN:H	2.17	0.48
42:BT:55:ASN:C	42:BT:59:THR:HG22	2.34	0.48
2:AB:15:VAL:N	2:AB:16:HIS:CE1	2.82	0.48
39:DQ:34:LEU:HB2	39:DQ:118:LEU:HD22	1.96	0.48
27:BA:1721:G:O6	27:BA:1739:U:H5'	2.14	0.48
1:AA:960:U:C4	1:AA:1225:A:C4	3.00	0.48
27:DA:2544:G:C4	27:DA:2545:G:C8	3.02	0.48
23:CW:70:C:O2'	23:CW:71:A:C5'	2.62	0.48
1:AA:1508:G:C5	1:AA:1509:C:C5	3.01	0.48
4:AD:123:HIS:O	4:AD:124:GLY:C	2.52	0.48
27:BA:38:A:C2	27:BA:442:G:C2	3.02	0.48
27:BA:709:U:O2'	27:BA:710:G:H5'	2.13	0.48
27:DA:1332:G:N2	27:DA:1609:A:HO2'	2.12	0.48
48:BZ:134:GLU:O	48:BZ:135:PHE:HB3	2.12	0.48
28:DB:21:G:H1	28:DB:62:C:H42	1.61	0.48
36:BN:35:ARG:HB3	36:BN:42:TRP:CH2	2.49	0.48
36:BN:48:MET:H	36:BN:48:MET:HE2	1.77	0.48
44:BV:34:GLU:OE2	44:BV:56:SER:HB2	2.13	0.48
27:DA:2203:U:H1'	30:DD:151:LYS:HE3	1.96	0.48
27:DA:1354:A:H2'	27:DA:1355:G:O4'	2.14	0.48
27:BA:1668:A:N7	27:BA:1674:G:C6	2.81	0.48
27:DA:2653:U:H3'	27:DA:2654:A:H8	1.79	0.48
27:BA:1450:G:H2'	27:BA:1450(A):C:O5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:54:G:OP2	27:BA:54:G:H8	1.97	0.48
30:BD:109:ASP:HB2	30:BD:197:GLY:CA	2.43	0.48
27:BA:1761:C:H3'	27:BA:1762:A:C8	2.49	0.48
48:DZ:120:HIS:C	48:DZ:122:ASP:H	2.17	0.48
27:DA:199:A:C5	27:DA:2434:A:N6	2.81	0.48
27:DA:2003:G:C2'	27:DA:2004:G:O5'	2.62	0.48
27:BA:1987:G:C2	27:BA:1988:C:C4	3.01	0.48
27:BA:269:U:C5	27:BA:271(Y):U:C4	3.02	0.48
49:B0:50:ASN:C	49:B0:62:LEU:HD12	2.34	0.48
27:DA:1479:G:H2'	27:DA:1480:G:H8	1.78	0.48
45:DW:35:ILE:HG23	54:D5:28:PRO:CD	2.43	0.48
12:AL:83:ARG:HB2	12:AL:98:VAL:HG22	1.95	0.48
27:DA:2817:G:C2	27:DA:2818:G:H1'	2.49	0.48
29:BC:187:ASP:O	29:BC:189:ILE:N	2.47	0.48
1:AA:878:G:H8	1:AA:878:G:O5'	1.96	0.48
4:CD:177:ASP:O	4:CD:177:ASP:OD1	2.31	0.48
1:CA:1489:G:O2'	1:CA:1490:C:H5'	2.14	0.48
27:BA:2746:U:H2'	27:BA:2747:G:H5'	1.95	0.48
57:B8:10:ALA:O	57:B8:11:LYS:C	2.52	0.48
27:BA:840:C:H2'	27:BA:841:A:C8	2.49	0.48
40:BR:18:LEU:HD13	40:BR:18:LEU:C	2.33	0.48
40:BR:33:ARG:HD2	40:BR:33:ARG:N	2.29	0.48
37:BO:10:VAL:HG23	37:BO:10:VAL:O	2.14	0.48
37:BO:10:VAL:HG22	37:BO:17:ARG:O	2.13	0.48
27:DA:1022:G:O2'	27:DA:1023:U:OP2	2.32	0.48
4:CD:11:LEU:O	4:CD:12:CYS:C	2.52	0.48
53:B4:62:CYS:SG	53:B4:63:SER:N	2.87	0.48
33:BG:142:PRO:HG2	33:BG:143:GLU:H	1.78	0.48
31:BE:78:LEU:C	31:BE:79:ARG:HD2	2.34	0.48
27:BA:560:C:C2'	27:BA:561:G:O5'	2.62	0.48
42:BT:31:SER:O	42:BT:82:LEU:HA	2.13	0.48
27:DA:397:G:H5''	50:D1:45:ASN:HB3	1.94	0.48
27:DA:2206:G:N2	27:DA:2207:G:H4'	2.28	0.48
30:DD:123:ALA:HB3	30:DD:131:LEU:HG	1.95	0.48
27:DA:1567:A:H4'	30:DD:58:HIS:NE2	2.29	0.48
27:DA:671:C:H5	38:DP:36:LYS:HE2	1.79	0.48
27:DA:807:U:OP2	38:DP:39:LYS:HD2	2.13	0.48
43:DU:34:LYS:HA	43:DU:34:LYS:CE	2.44	0.48
20:AT:58:LYS:O	20:AT:61:SER:HB3	2.13	0.48
39:BQ:43:THR:OG1	39:BQ:46:GLN:NE2	2.47	0.48
34:BH:24:VAL:HG23	34:BH:24:VAL:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:114:ARG:O	4:CD:117:ALA:HB3	2.14	0.48
10:AJ:54:PHE:CG	10:AJ:55:LYS:HE3	2.49	0.48
8:AH:118:VAL:C	8:AH:119:LEU:HD23	2.33	0.48
1:CA:369:C:N3	1:CA:393:A:C2	2.81	0.48
17:CQ:12:SER:HA	17:CQ:14:LYS:HZ1	1.77	0.48
30:BD:44:ASN:CB	30:BD:48:ARG:O	2.59	0.48
32:DF:36:VAL:CG1	32:DF:183:VAL:HG21	2.36	0.48
38:DP:9:ASN:N	38:DP:10:PRO:CD	2.72	0.48
16:AP:72:ARG:O	16:AP:75:ARG:HB3	2.14	0.48
3:CC:83:ARG:NH1	3:CC:83:ARG:HG2	2.28	0.48
1:CA:540:G:C4	1:CA:541:G:C8	3.01	0.48
10:AJ:5:ARG:HG2	10:AJ:6:ILE:N	2.28	0.48
27:BA:2266:A:H4'	27:BA:2267:A:H5'	1.96	0.48
27:BA:552:G:C6	27:BA:553:G:C5	3.02	0.48
27:DA:131:G:C2	27:DA:132:G:C5	3.02	0.48
15:CO:21:ASP:OD2	15:CO:24:SER:HB2	2.12	0.48
56:D7:12:ARG:HD3	56:D7:46:VAL:CG2	2.43	0.48
27:BA:2012:G:C3'	45:BW:96:ILE:HD11	2.43	0.48
27:DA:856:C:H5''	27:DA:856:C:C6	2.49	0.48
33:DG:53:LEU:N	33:DG:53:LEU:HD22	2.28	0.48
7:CG:83:ALA:O	7:CG:85:TYR:N	2.47	0.48
8:AH:85:ARG:HG3	8:AH:85:ARG:HH11	1.78	0.48
33:BG:81:LYS:O	33:BG:82:LEU:O	2.32	0.48
1:CA:600:C:H2'	1:CA:601:C:C6	2.49	0.48
27:DA:2189:U:H5'	27:DA:2190:G:OP2	2.14	0.48
27:DA:783:A:C2	27:DA:785:G:H1'	2.48	0.48
27:DA:1322:A:C5	27:DA:1323:U:C5	3.02	0.48
27:DA:1237:A:H2	27:DA:1238:G:C2	2.31	0.48
27:DA:1230:C:O2'	27:DA:1231:G:H5'	2.13	0.48
14:AN:13:THR:O	14:AN:14:PRO:C	2.51	0.48
3:CC:44:GLU:HG3	3:CC:52:LEU:HD11	1.96	0.48
27:BA:1441:G:H2'	27:BA:1442:G:C8	2.40	0.48
29:DC:129:ARG:C	29:DC:131:LEU:H	2.17	0.48
8:CH:84:ARG:O	8:CH:135:CYS:HB2	2.13	0.48
27:BA:2109:U:N3	27:BA:2110:G:O6	2.46	0.48
6:AF:75:LEU:C	6:AF:77:ARG:N	2.67	0.48
3:AC:133:ALA:O	3:AC:137:ALA:N	2.45	0.48
30:DD:67:PHE:CG	30:DD:153:ALA:HB3	2.49	0.48
1:CA:834:C:C2'	1:CA:835:U:O5'	2.62	0.48
18:AR:63:GLN:OE1	18:AR:66:LEU:HD23	2.14	0.48
12:CL:120:LYS:O	12:CL:121:LYS:C	2.51	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:22:LEU:HA	17:AQ:22:LEU:HD12	1.65	0.48
35:DI:29:TYR:CE2	35:DI:35:LEU:HD12	2.49	0.48
18:CR:75:ILE:C	18:CR:77:GLY:H	2.14	0.48
27:DA:1444:G:N1	27:DA:1548:C:N4	2.62	0.48
15:CO:2:PRO:CG	15:CO:3:ILE:H	2.25	0.48
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.46	0.48
47:DY:53:PRO:HB3	47:DY:56:PRO:O	2.13	0.48
29:BC:184:LYS:C	29:BC:186:ALA:N	2.67	0.48
28:BB:24:G:H4'	28:BB:25:A:C5'	2.44	0.48
24:CX:39:C:O2'	25:CY:33:G:N2	2.46	0.48
43:DU:15:LYS:HG2	43:DU:15:LYS:O	2.13	0.48
27:DA:157:U:O4'	27:DA:157:U:P	2.72	0.48
30:BD:222:ARG:HH21	30:BD:225:ALA:HB2	1.78	0.48
27:DA:887:A:H1'	27:DA:889:C:C4	2.49	0.48
1:AA:145:G:H5'	1:AA:146:G:OP2	2.13	0.48
24:AX:17:C:H2'	24:AX:17(B):U:C6	2.48	0.48
1:CA:1290:G:H3'	1:CA:1291:G:H8	1.78	0.48
9:AI:23:ASN:HB2	9:AI:60:ASP:CG	2.33	0.48
27:BA:415:A:H2'	27:BA:416:C:C6	2.49	0.48
27:BA:1961:C:H2'	27:BA:1962:C:H5'	1.96	0.48
1:AA:1009:G:H2'	1:AA:1009:G:N3	2.28	0.48
39:BQ:89:ASN:HB2	39:BQ:91:GLU:OE2	2.14	0.48
49:B0:66:VAL:N	49:B0:82:ARG:O	2.46	0.48
58:D9:22:ARG:HD3	58:D9:35:ARG:HD2	1.95	0.48
2:CB:9:GLU:O	2:CB:12:GLU:OE1	2.32	0.48
27:BA:2736:G:O2'	27:BA:2737:G:H5'	2.14	0.48
6:CF:19:LEU:HD11	6:CF:59:TYR:CE2	2.48	0.48
31:BE:11:MET:HB3	31:BE:24:THR:HA	1.95	0.48
37:BO:87:ILE:HG21	37:BO:91:LEU:HA	1.95	0.48
4:CD:78:LEU:O	4:CD:79:PHE:C	2.52	0.48
31:BE:60:ASN:OD1	31:BE:62:PRO:HD2	2.14	0.48
1:CA:1346:A:C5	7:CG:10:ARG:NH2	2.82	0.48
1:AA:917:G:C6	1:AA:918:A:C6	3.02	0.48
43:BU:40:PHE:O	43:BU:41:ALA:C	2.52	0.48
27:DA:1152:C:H1'	43:DU:77:SER:CB	2.44	0.48
47:DY:95:LYS:CG	47:DY:100:ALA:HA	2.44	0.48
1:CA:1253:G:H2'	1:CA:1254:C:C6	2.49	0.48
41:DS:87:PHE:CD1	41:DS:106:ARG:NH2	2.81	0.48
27:DA:2271:G:C5	27:DA:2272:U:C5	3.02	0.48
27:DA:859:G:H22	27:DA:916:G:H3'	1.79	0.48
27:DA:920:G:H8	27:DA:920:G:O5'	1.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2787:C:O2	31:DE:61:ARG:NH1	2.46	0.48
57:D8:23:VAL:CG1	57:D8:46:ARG:HB3	2.43	0.48
27:DA:2428:G:H21	38:DP:60:MET:CE	2.27	0.48
27:DA:953:A:C2	27:DA:954:G:C8	3.02	0.48
38:DP:144:GLU:O	38:DP:145:PRO:C	2.53	0.48
27:DA:2556:C:H2'	27:DA:2557:G:O4'	2.14	0.48
27:DA:2508:G:C2	27:DA:2582:G:C6	3.02	0.48
32:DF:89:VAL:CG1	32:DF:90:PHE:H	2.20	0.48
20:AT:77:ALA:C	20:AT:79:ARG:H	2.16	0.48
27:DA:140:G:N2	27:DA:142:A:C2	2.75	0.48
4:CD:98:GLU:OE1	4:CD:194:LEU:HD11	2.14	0.48
20:CT:81:LYS:O	20:CT:85:MET:HG2	2.14	0.48
1:AA:1205:U:H4'	3:AC:195:VAL:CG2	2.44	0.48
2:AB:200:ILE:O	2:AB:201:ILE:HD13	2.14	0.48
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.17	0.48
1:CA:1036:G:H3'	1:CA:1037:C:C6	2.49	0.48
1:CA:132:C:H5'	1:CA:262:A:H1'	1.95	0.48
48:DZ:150:HIS:CD2	48:DZ:169:THR:HG22	2.48	0.48
27:DA:2175:C:H1'	29:DC:215:THR:HA	1.95	0.48
34:BH:147:ASN:O	34:BH:150:ALA:CB	2.61	0.48
34:BH:156:ALA:N	34:BH:158:HIS:H	2.10	0.48
50:B1:7:ILE:HD13	50:B1:62:VAL:HG23	1.96	0.48
27:BA:1556:C:C2'	27:BA:1557:C:H6	2.27	0.48
14:CN:24:CYS:HB3	14:CN:27:CYS:O	2.12	0.48
1:CA:1286:A:H2	21:CU:22:ARG:NH2	2.10	0.48
1:CA:590:C:C4	1:CA:650:G:N1	2.82	0.48
27:DA:2156:G:C5	27:DA:2157:G:N2	2.82	0.48
48:BZ:150:HIS:HA	48:BZ:169:THR:HA	1.96	0.48
1:AA:405:U:O2	1:AA:498:U:C6	2.67	0.48
46:BX:31:HIS:HD2	46:BX:32:PRO:CD	2.27	0.48
1:CA:349:A:C2'	1:CA:350:G:H5'	2.44	0.48
37:DO:35:VAL:HG13	37:DO:62:VAL:HG12	1.96	0.48
27:BA:2716:U:H2'	27:BA:2717:G:C8	2.49	0.48
27:DA:2299:G:C2	27:DA:2318:G:H8	2.32	0.48
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.95	0.48
3:AC:58:GLU:N	3:AC:65:ALA:HB3	2.29	0.48
3:AC:134:ILE:O	3:AC:136:GLN:N	2.47	0.48
40:DR:26:LYS:HE2	40:DR:71:GLN:N	2.27	0.48
27:DA:796:C:H2'	27:DA:797:C:H6	1.71	0.48
45:DW:54:ALA:O	45:DW:57:ASN:HB2	2.14	0.48
53:B4:51:TYR:N	53:B4:51:TYR:CD1	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:935:A:O2'	1:CA:936:C:P	2.72	0.48
3:CC:14:ILE:CG1	3:CC:15:THR:H	2.18	0.48
1:CA:815:A:H5'	1:CA:816:A:C5'	2.44	0.48
2:CB:77:ALA:O	2:CB:81:VAL:HG23	2.14	0.48
27:DA:2177:C:O2'	27:DA:2178:C:H5'	2.14	0.48
13:AM:11:ARG:O	13:AM:13:LYS:N	2.47	0.48
1:AA:1229:A:N6	13:AM:105:THR:HG22	2.28	0.48
8:CH:86:ILE:HB	8:CH:133:LEU:CD2	2.43	0.48
1:AA:839:U:O2	1:AA:839:U:C2'	2.62	0.48
1:CA:10:A:H2'	1:CA:11:G:H8	1.79	0.48
27:DA:1700:A:O2'	27:DA:1701:A:O4'	2.32	0.48
27:BA:192:C:C2'	27:BA:193:U:H5'	2.42	0.48
1:CA:335:C:H2'	1:CA:336:C:H6	1.75	0.48
49:B0:31:VAL:HB	49:B0:35:ASN:HD22	1.78	0.48
19:CS:9:VAL:C	19:CS:11:VAL:N	2.68	0.48
44:DV:75:PHE:CE2	44:DV:82:ARG:NE	2.78	0.48
1:AA:1457:G:P	20:AT:39:LYS:HZ2	2.36	0.48
1:AA:713:G:O2'	1:AA:714:G:H5'	2.14	0.48
1:AA:1030(A):G:H2'	1:AA:1030(B):C:H5''	1.95	0.48
27:BA:424:G:O2'	27:BA:425:G:H5'	2.13	0.48
27:BA:2628:C:H4'	27:BA:2781:A:C6	2.49	0.48
27:BA:42:G:C2	27:BA:43:A:H1'	2.49	0.48
1:CA:794:A:O2'	1:CA:795:C:H5'	2.14	0.48
4:CD:5:ILE:H	4:CD:115:ARG:HH12	1.62	0.48
27:BA:947:G:H2'	27:BA:948:G:H8	1.77	0.48
27:DA:1830:C:N4	27:DA:1975:G:H1	2.11	0.48
39:BQ:76:LYS:HG3	39:BQ:77:LYS:O	2.14	0.48
42:DT:55:ASN:C	42:DT:55:ASN:HD22	2.17	0.48
23:AW:40:C:O2'	23:AW:41:G:H5'	2.14	0.48
11:CK:16:SER:O	11:CK:35:PRO:HG3	2.14	0.48
10:AJ:32:ALA:HB3	10:AJ:75:ILE:CG1	2.44	0.48
47:BY:51:VAL:O	47:BY:52:SER:HB3	2.14	0.48
6:CF:23:LYS:HG2	6:CF:61:LEU:HD21	1.96	0.48
41:DS:10:ARG:O	41:DS:11:LYS:O	2.31	0.48
17:AQ:89:LEU:O	17:AQ:93:GLN:HG3	2.13	0.48
31:DE:176:ILE:HG22	31:DE:176:ILE:O	2.13	0.48
4:CD:110:PHE:HD1	4:CD:110:PHE:H	1.60	0.48
3:CC:122:GLU:O	3:CC:126:ARG:HG3	2.14	0.48
27:BA:242:G:C5'	57:B8:62:LEU:HD22	2.44	0.47
1:CA:1186:G:H21	14:CN:61:TRP:C	2.17	0.47
1:CA:949:A:C2	1:CA:1233:G:N3	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:984:C:O2'	1:CA:985:C:C6	2.65	0.47
27:BA:2884:U:O2	54:B5:51:TYR:CE1	2.66	0.47
27:DA:1025:G:HO2'	27:DA:1026:U:P	2.36	0.47
53:B4:62:CYS:SG	53:B4:64:LYS:CB	3.02	0.47
31:BE:63:LEU:O	31:BE:64:LYS:C	2.52	0.47
1:AA:865:A:H5'	1:AA:1078:U:C5	2.49	0.47
5:AE:109:ILE:O	5:AE:113:ALA:N	2.47	0.47
1:CA:471:G:C2'	1:CA:472:A:H8	2.26	0.47
27:DA:34:C:O2'	27:DA:35:G:C5'	2.52	0.47
30:DD:72:LYS:CE	30:DD:101:GLU:OE2	2.58	0.47
33:BG:60:LEU:C	33:BG:62:LEU:H	2.17	0.47
27:DA:869:G:H5'	39:DQ:6:ARG:NH2	2.28	0.47
31:DE:34:VAL:HG23	31:DE:48:GLN:HG2	1.96	0.47
25:CY:75:A:C2	27:DA:2422:A:C6	3.02	0.47
38:DP:58:THR:O	38:DP:61:ARG:HG3	2.14	0.47
45:BW:14:PRO:O	45:BW:15:ARG:C	2.52	0.47
1:CA:1106:G:OP1	3:CC:172:ARG:HD3	2.14	0.47
48:DZ:2:TYR:O	48:DZ:56:ILE:HA	2.14	0.47
31:DE:84:PHE:C	31:DE:84:PHE:CD2	2.87	0.47
4:CD:101:LEU:HD23	4:CD:138:TYR:HB3	1.96	0.47
4:CD:68:TYR:O	4:CD:69:GLY:C	2.52	0.47
1:CA:197:A:O2'	1:CA:198:G:O4'	2.31	0.47
1:AA:974:A:P	14:AN:29:ARG:HH22	2.37	0.47
1:AA:1054:C:N3	23:AW:33:C:H1'	2.29	0.47
17:CQ:20:THR:HA	17:CQ:43:LEU:CD2	2.44	0.47
56:B7:11:LYS:O	56:B7:12:ARG:C	2.52	0.47
27:BA:1310:G:H2'	27:BA:1311:G:H5'	1.96	0.47
27:BA:1797:C:O2	27:BA:1823:G:C2	2.67	0.47
30:BD:227:ASN:HB3	30:BD:228:PRO:CD	2.44	0.47
17:AQ:58:GLU:O	17:AQ:73:VAL:HA	2.14	0.47
17:AQ:59:ILE:HA	17:AQ:72:ARG:O	2.14	0.47
2:AB:144:ARG:O	2:AB:145:LEU:C	2.52	0.47
32:DF:108:LYS:HB3	32:DF:112:MET:HE2	1.96	0.47
41:BS:85:VAL:O	41:BS:86:ALA:HB2	2.14	0.47
27:BA:1315:C:O2	27:BA:1392:A:H2	1.97	0.47
20:CT:63:ILE:HD13	20:CT:80:ARG:HB3	1.96	0.47
1:CA:1068:G:C8	1:CA:1094:G:C8	3.02	0.47
13:AM:19:LEU:HD11	13:AM:56:LEU:HD11	1.96	0.47
27:BA:2091:U:O4	27:BA:2092:U:C4	2.67	0.47
1:CA:1057:G:H2'	1:CA:1058:G:O5'	2.14	0.47
1:CA:1199:U:H5''	1:CA:1200:C:OP2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:520:A:N1	1:CA:536:C:O2	2.47	0.47
2:CB:100:GLY:O	2:CB:104:ASN:N	2.46	0.47
14:CN:23:ARG:O	14:CN:24:CYS:C	2.51	0.47
1:AA:1281:U:O4	10:AJ:7:LYS:NZ	2.37	0.47
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.14	0.47
48:BZ:150:HIS:CA	48:BZ:169:THR:HA	2.44	0.47
1:AA:1442:G:H1	1:AA:1461:G:H21	1.62	0.47
42:BT:92:GLY:O	42:BT:93:ARG:HB3	2.13	0.47
27:DA:2308:G:C5	27:DA:2310:A:H5'	2.49	0.47
27:BA:2305:A:C2	27:BA:2306:C:H1'	2.49	0.47
51:B2:28:LYS:HB2	51:B2:57:ILE:HD12	1.96	0.47
46:BX:31:HIS:HD2	46:BX:33:LYS:H	1.57	0.47
20:AT:73:HIS:O	20:AT:74:LYS:O	2.31	0.47
33:DG:152:LEU:HG	33:DG:153:ARG:N	2.29	0.47
27:BA:2354:G:H2'	27:BA:2355:C:C6	2.48	0.47
35:DI:68:LEU:C	35:DI:68:LEU:HD23	2.34	0.47
1:CA:1028:C:C2'	1:CA:1029:C:H5'	2.44	0.47
1:CA:338:A:H61	1:CA:351:G:H1	1.62	0.47
27:BA:196:A:C5	27:BA:805:G:C6	3.02	0.47
25:CY:52:G:N2	25:CY:60:C:O2	2.47	0.47
44:BV:81:TYR:CE2	44:BV:83:ARG:HG3	2.49	0.47
27:DA:518:G:H4'	45:DW:18:ARG:NH2	2.29	0.47
33:BG:2:PRO:C	33:BG:4:ASP:N	2.60	0.47
27:DA:27:G:HO2'	27:DA:28:A:H8	1.62	0.47
27:DA:475:U:H2'	27:DA:476:G:C8	2.49	0.47
1:CA:1383:C:O2'	1:CA:1384:C:H5'	2.13	0.47
12:AL:25:LYS:CE	12:AL:30:ARG:HH22	2.27	0.47
12:AL:86:ARG:CA	12:AL:94:ARG:HA	2.44	0.47
35:DI:54:GLN:O	35:DI:58:LEU:HB2	2.14	0.47
1:AA:434:U:C2'	1:AA:435:C:O4'	2.61	0.47
11:CK:15:ALA:HB1	11:CK:78:GLN:HB2	1.95	0.47
27:BA:1303:G:C2	27:BA:1304:C:C6	3.02	0.47
27:BA:340:A:H2'	27:BA:341:G:O4'	2.14	0.47
37:DO:101:PRO:O	37:DO:102:VAL:HG12	2.14	0.47
46:DX:63:LYS:HA	46:DX:72:LYS:HA	1.96	0.47
27:BA:1963:U:OP1	27:BA:1963:U:H3'	2.13	0.47
27:BA:1984:G:O2'	27:BA:1985:G:H5'	2.14	0.47
27:DA:2363:C:H2'	27:DA:2364:C:H6	1.79	0.47
35:DI:43:ASN:O	35:DI:44:LEU:C	2.52	0.47
27:BA:922:U:C2	27:BA:923:C:C5	3.01	0.47
28:BB:105:A:C2'	28:BB:106:G:C5'	2.90	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2653:U:H2'	27:DA:2654:A:C8	2.49	0.47
8:CH:28:ALA:HA	8:CH:59:LEU:HG	1.96	0.47
23:AW:4:G:H3'	23:AW:5:G:H5''	1.96	0.47
51:D2:31:GLU:O	51:D2:34:GLU:N	2.47	0.47
56:B7:35:ARG:HG3	56:B7:42:LEU:HD21	1.96	0.47
15:CO:65:ARG:NH1	15:CO:65:ARG:HG2	2.28	0.47
1:AA:1275:A:H2'	1:AA:1276:G:H8	1.79	0.47
27:DA:1037:G:H1	27:DA:1118:C:N4	2.11	0.47
24:AX:25:C:H2'	24:AX:26:G:C8	2.48	0.47
4:AD:200:GLU:HG2	4:AD:201:GLN:N	2.28	0.47
29:BC:47:LEU:CB	29:BC:207:THR:HA	2.44	0.47
32:DF:152:GLU:HB3	32:DF:191:ARG:HD2	1.96	0.47
30:DD:20:ASP:C	30:DD:20:ASP:OD1	2.52	0.47
27:DA:2439:A:H5'	27:DA:2439:A:C8	2.49	0.47
48:BZ:103:PHE:N	48:BZ:103:PHE:CD1	2.82	0.47
55:B6:42:TRP:CE3	55:B6:42:TRP:HA	2.49	0.47
57:B8:4:MET:O	57:B8:62:LEU:CD1	2.62	0.47
32:BF:22:ALA:CA	32:BF:26:ALA:HB2	2.44	0.47
27:BA:2729:G:H4'	31:BE:185:LYS:O	2.13	0.47
34:BH:85:LYS:NZ	34:BH:133:VAL:CG2	2.73	0.47
38:DP:48:PRO:O	38:DP:50:ARG:N	2.46	0.47
27:DA:1924:C:N4	27:DA:1925:C:N4	2.62	0.47
27:DA:1824:G:N3	30:DD:254:THR:OG1	2.47	0.47
1:CA:545:C:C4	1:CA:546:G:N7	2.82	0.47
33:BG:110:ALA:HB2	33:BG:141:PHE:HA	1.96	0.47
1:CA:942:G:C6	1:CA:1342:C:N3	2.81	0.47
1:CA:472:A:O2'	1:CA:473:G:H5'	2.14	0.47
1:AA:255:G:O6	1:AA:266:G:O6	2.33	0.47
43:DU:111:GLU:O	43:DU:112:ARG:C	2.51	0.47
43:DU:79:PHE:HD2	43:DU:83:LEU:HD13	1.80	0.47
30:DD:206:LEU:HD22	30:DD:211:ARG:HG2	1.96	0.47
41:DS:106:ARG:O	41:DS:107:GLU:CB	2.62	0.47
41:DS:85:VAL:HB	41:DS:86:ALA:H	1.49	0.47
57:D8:40:GLU:C	57:D8:42:ARG:N	2.67	0.47
27:DA:2249:U:H1'	27:DA:2275:C:N4	2.28	0.47
27:DA:2423:U:O3'	27:DA:2425:A:H2'	2.14	0.47
27:BA:2317:C:C3'	27:BA:2318:G:H5'	2.41	0.47
27:DA:529:A:C5'	27:DA:530:G:OP1	2.61	0.47
27:DA:970:C:O2	27:DA:984:A:O2'	2.29	0.47
38:DP:32:THR:O	38:DP:33:ARG:CB	2.62	0.47
46:DX:36:LYS:O	46:DX:39:ILE:HB	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DY:14:LEU:HD12	47:DY:15:VAL:N	2.28	0.47
4:CD:137:SER:O	4:CD:138:TYR:C	2.52	0.47
4:CD:101:LEU:HA	4:CD:140:VAL:CG2	2.44	0.47
3:AC:188:LEU:HD12	3:AC:195:VAL:HG11	1.96	0.47
24:AX:40:C:H2'	24:AX:41:C:H6	1.77	0.47
2:AB:55:PHE:C	2:AB:57:PHE:N	2.67	0.47
42:DT:28:VAL:HG11	42:DT:46:GLU:CD	2.34	0.47
41:DS:69:VAL:O	41:DS:70:GLY:C	2.52	0.47
27:BA:588:U:H1'	32:BF:90:PHE:CG	2.50	0.47
17:CQ:84:LEU:HA	17:CQ:87:LYS:HG2	1.96	0.47
56:B7:8:ASN:CG	56:B7:11:LYS:HB3	2.35	0.47
50:D1:58:ILE:HD12	50:D1:60:PHE:HE2	1.79	0.47
31:BE:49:LEU:CD1	31:BE:49:LEU:N	2.77	0.47
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.14	0.47
34:BH:155:SER:OG	34:BH:156:ALA:N	2.47	0.47
58:D9:29:ASN:H	58:D9:29:ASN:HD22	1.61	0.47
48:DZ:51:SER:OG	48:DZ:52:ILE:N	2.47	0.47
27:DA:768:G:H5'	27:DA:1622:G:H4'	1.97	0.47
27:BA:2427:C:C5'	27:BA:2429:G:H5'	2.44	0.47
55:B6:27:LYS:CB	55:B6:29:ASN:OD1	2.61	0.47
2:CB:10:LEU:O	2:CB:14:GLY:N	2.47	0.47
1:AA:823:G:H2'	1:AA:824:C:O4'	2.14	0.47
1:AA:260:G:H2'	1:AA:261:U:C6	2.48	0.47
27:DA:1416:G:O2'	27:DA:1417:C:C6	2.54	0.47
34:BH:13:LYS:HD3	34:BH:14:GLY:H	1.76	0.47
27:DA:8:A:H2'	27:DA:9:U:C5	2.46	0.47
27:BA:1048:A:O2'	27:BA:1049:C:P	2.71	0.47
45:DW:51:LEU:C	45:DW:51:LEU:HD13	2.34	0.47
45:DW:59:VAL:HG12	45:DW:60:ASN:HD22	1.79	0.47
45:DW:85:VAL:HG13	45:DW:86:LEU:N	2.28	0.47
27:BA:1170:G:N2	27:BA:1180:C:C2	2.82	0.47
28:BB:51:G:OP2	41:BS:61:ASN:O	2.32	0.47
27:BA:2302:G:H21	33:BG:128:ARG:CG	2.26	0.47
12:AL:24:LEU:C	12:AL:26:GLY:N	2.67	0.47
27:BA:381:G:OP1	50:B1:16:ASN:ND2	2.47	0.47
50:D1:8:SER:HB3	50:D1:66:HIS:CD2	2.49	0.47
1:CA:862:C:H1'	1:CA:874:G:H4'	1.95	0.47
1:CA:867:G:H21	1:CA:873:A:H2	1.62	0.47
38:BP:9:ASN:H	38:BP:10:PRO:CD	2.27	0.47
33:BG:9:ARG:O	33:BG:11:TYR:N	2.47	0.47
5:AE:101:ILE:N	5:AE:101:ILE:CD1	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:106:C:O4'	47:DY:2:ARG:HG3	2.15	0.47
1:AA:953:G:H5''	1:AA:965:A:H61	1.78	0.47
3:AC:92:ALA:CB	3:AC:99:VAL:HG11	2.40	0.47
10:CJ:94:VAL:CG1	10:CJ:95:GLU:N	2.77	0.47
27:DA:2473:U:C2'	27:DA:2473:U:O2	2.54	0.47
1:CA:321:A:H8	1:CA:321:A:O5'	1.96	0.47
36:DN:111:PRO:HA	36:DN:114:ARG:NH2	2.28	0.47
43:BU:21:ALA:HB1	43:BU:24:TYR:CE1	2.49	0.47
27:BA:1847:A:C4'	27:BA:1848:A:OP2	2.62	0.47
28:BB:87:G:H3'	28:BB:88:C:C5'	2.44	0.47
1:CA:76:C:N4	1:CA:93:G:H1	2.12	0.47
39:DQ:79:LEU:CD2	39:DQ:80:GLU:N	2.77	0.47
9:AI:28:VAL:HG11	9:AI:36:TYR:CE2	2.50	0.47
1:CA:834:C:H42	1:CA:852:G:H1	1.62	0.47
18:AR:32:ARG:NH1	18:AR:65:ILE:HD13	2.29	0.47
35:DI:25:TYR:HE2	35:DI:29:TYR:CD2	2.32	0.47
1:CA:1020:U:H2'	1:CA:1021:G:H8	1.80	0.47
27:DA:723:G:C2	27:DA:724:U:C2	3.03	0.47
30:BD:112:GLN:HB2	30:BD:115:GLN:NE2	2.24	0.47
27:DA:1127:A:C2'	27:DA:1128:A:H5''	2.43	0.47
42:DT:129:ARG:CZ	42:DT:131:ALA:O	2.62	0.47
1:CA:1367:C:OP1	9:CI:115:GLY:N	2.44	0.47
1:AA:859:A:C2'	1:AA:860:A:H5'	2.44	0.47
46:DX:5:TYR:CE2	51:D2:30:ARG:HB2	2.49	0.47
27:DA:553:G:C2'	27:DA:554:U:H5'	2.44	0.47
1:AA:415:A:H2'	1:AA:416:G:H8	1.77	0.47
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.44	0.47
29:DC:168:THR:HA	29:DC:173:ALA:HB1	1.96	0.47
27:BA:925:C:C2'	27:BA:926:A:O5'	2.62	0.47
20:AT:96:GLY:O	20:AT:97:ALA:O	2.33	0.47
48:BZ:129:PRO:HA	48:BZ:132:ILE:HD11	1.96	0.47
28:DB:104:U:O2'	28:DB:105:A:H5'	2.14	0.47
27:BA:2710:C:OP1	40:BR:15:SER:HB2	2.14	0.47
27:BA:2366:A:H2'	27:BA:2367:G:O4'	2.13	0.47
27:BA:2370:G:H2'	27:BA:2371:G:C8	2.48	0.47
37:BO:38:VAL:O	37:BO:39:ILE:CG2	2.62	0.47
27:BA:1980:G:O2'	27:BA:1982:C:OP2	2.30	0.47
43:BU:18:LEU:O	43:BU:19:LYS:C	2.52	0.47
33:BG:83:ARG:HH11	33:BG:84:LYS:HD2	1.79	0.47
18:AR:46:GLU:HB2	18:AR:85:LEU:HD21	1.96	0.47
1:CA:191:G:O2'	20:CT:102:GLY:O	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BB:1:U:C5	28:BB:2:C:C4	3.01	0.47
27:DA:295:G:H2'	27:DA:295:G:N3	2.29	0.47
27:BA:2458:G:H2'	27:BA:2490:G:H1	1.80	0.47
4:CD:112:VAL:HG12	4:CD:161:ASN:ND2	2.29	0.47
38:BP:61:ARG:HD3	57:B8:13:ARG:HD2	1.95	0.47
14:CN:59:ALA:O	14:CN:60:SER:HB2	2.14	0.47
31:BE:187:ALA:O	31:BE:188:VAL:C	2.50	0.47
47:BY:81:LYS:HZ2	47:BY:97:ARG:CG	2.26	0.47
46:BX:28:PHE:N	46:BX:28:PHE:CD1	2.82	0.47
46:BX:26:TYR:HD2	46:BX:92:LEU:HD12	1.79	0.47
57:D8:52:LYS:O	57:D8:55:ALA:HB3	2.13	0.47
27:DA:1925:C:H2'	27:DA:1926:U:H5'	1.95	0.47
1:CA:499:A:H4'	1:CA:500:G:OP1	2.14	0.47
44:BV:41:GLY:CA	44:BV:45:THR:OG1	2.46	0.47
27:BA:355:G:H2'	27:BA:356:G:C1'	2.44	0.47
43:DU:100:VAL:HG12	43:DU:101:ARG:N	2.28	0.47
36:DN:2:LYS:HZ1	44:DV:13:ARG:H	1.62	0.47
27:DA:35:G:O2'	27:DA:454:A:O4'	2.31	0.47
27:DA:873:G:H4'	39:DQ:63:LYS:CE	2.44	0.47
36:DN:112:LEU:HA	36:DN:115:ARG:HB3	1.95	0.47
27:DA:2018:G:H2'	27:DA:2019:A:O4'	2.14	0.47
27:DA:2509:G:C4	27:DA:2510:C:C5	3.02	0.47
9:AI:45:ALA:O	9:AI:48:GLU:HB2	2.14	0.47
9:AI:95:LYS:CG	9:AI:96:LEU:N	2.77	0.47
47:BY:28:LYS:N	47:BY:28:LYS:HE3	2.29	0.47
1:AA:1340:A:C2'	1:AA:1341:U:H5'	2.44	0.47
14:AN:23:ARG:O	14:AN:24:CYS:C	2.52	0.47
8:AH:9:MET:HE3	8:AH:35:ILE:HG21	1.95	0.47
17:AQ:58:GLU:OE1	17:AQ:75:ARG:NE	2.48	0.47
27:BA:1996:C:C4'	27:BA:1997:G:O5'	2.62	0.47
27:BA:750:A:H2'	27:BA:751:A:H5''	1.96	0.47
9:CI:7:THR:O	9:CI:79:LEU:HD12	2.12	0.47
9:CI:82:ALA:CB	9:CI:96:LEU:HD11	2.33	0.47
27:BA:2092:U:O2	27:BA:2092:U:O4'	2.31	0.47
1:CA:1050:G:H2'	1:CA:1051:C:H6	1.78	0.47
10:CJ:56:HIS:O	10:CJ:58:ASP:N	2.47	0.47
1:CA:538:G:C4'	12:CL:111:LYS:HD3	2.45	0.47
27:BA:2266:A:H5''	27:BA:2267:A:H5''	1.96	0.47
12:AL:55:VAL:O	12:AL:62:GLU:HA	2.14	0.47
38:BP:81:GLN:OE1	38:BP:106:LEU:HA	2.14	0.47
25:AY:69:C:H5'	25:AY:69:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DR:2:ARG:HH21	40:DR:5:LYS:HZ1	1.60	0.47
27:BA:2286:A:H5''	27:BA:2287:A:O5'	2.14	0.47
27:BA:2285:C:O2'	27:BA:2288:A:H2'	2.14	0.47
33:DG:77:ILE:N	33:DG:83:ARG:HB3	2.25	0.47
9:CI:55:ALA:HB2	9:CI:59:PHE:HE1	1.79	0.47
51:B2:28:LYS:O	51:B2:53:LEU:HD11	2.14	0.47
27:BA:69:C:H4'	27:BA:75:G:C5	2.48	0.47
27:DA:2303:G:H2'	27:DA:2304:G:C8	2.48	0.47
27:BA:764:A:C6	30:BD:209:ALA:CB	2.97	0.47
13:AM:76:ALA:O	13:AM:79:LYS:N	2.46	0.47
8:AH:104:ARG:HD3	8:AH:138:TRP:CG	2.48	0.47
27:DA:1754:C:H5''	42:DT:113:LYS:HZ2	1.79	0.47
27:DA:2373:G:C2'	27:DA:2374:C:H5'	2.44	0.47
15:AO:35:ARG:NH1	15:AO:59:MET:SD	2.87	0.47
7:CG:145:ALA:O	7:CG:146:GLU:CB	2.59	0.47
27:DA:266:G:C2'	27:DA:267:C:O5'	2.63	0.47
27:DA:1236:G:OP2	27:DA:1236:G:H8	1.97	0.47
33:BG:130:ASN:HB3	33:BG:160:VAL:HA	1.96	0.47
12:AL:21:VAL:O	12:AL:21:VAL:HG12	2.14	0.47
34:BH:88:LEU:HD13	34:BH:130:ARG:HG3	1.94	0.47
27:BA:1925:C:H2'	27:BA:1926:U:O5'	2.14	0.47
1:AA:1225:A:OP2	1:AA:1226:C:C5	2.63	0.47
34:DH:105:LEU:CD2	34:DH:105:LEU:N	2.77	0.47
50:B1:53:VAL:HG21	50:B1:74:VAL:HG22	1.95	0.47
28:DB:110:G:O2'	28:DB:111:G:H5'	2.13	0.47
27:DA:2520:C:H2'	27:DA:2521:C:O4'	2.15	0.47
13:CM:80:ARG:C	13:CM:82:MET:H	2.17	0.47
10:CJ:80:LYS:HE3	10:CJ:80:LYS:O	2.15	0.47
18:CR:66:LEU:HD12	18:CR:70:ILE:HG12	1.95	0.47
6:CF:49:ALA:HB3	18:CR:79:LEU:O	2.14	0.47
37:DO:100:GLY:O	37:DO:101:PRO:O	2.31	0.47
27:BA:985:C:C2	27:BA:986:C:C5	3.02	0.47
1:CA:831:U:OP1	2:CB:22:LYS:HD2	2.14	0.47
27:DA:2515:C:H2'	27:DA:2516:G:C8	2.44	0.47
12:CL:114:ARG:HB2	12:CL:114:ARG:CZ	2.45	0.47
27:BA:181:A:C4	27:BA:435:C:C6	3.02	0.47
27:DA:2396:G:H1'	50:D1:30:VAL:HG13	1.96	0.47
25:AY:19:U:H2'	25:AY:20:A:H4'	1.94	0.47
27:BA:2670:A:H2'	27:BA:2671:A:H5'	1.96	0.47
27:BA:1935:G:O2'	27:BA:1936:A:H5'	2.13	0.47
1:CA:557:G:H3'	1:CA:558:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1505:C:H3'	27:BA:1506:C:C6	2.49	0.47
2:CB:239:VAL:O	2:CB:241:GLU:N	2.47	0.47
27:DA:639:U:C4	27:DA:640:C:N4	2.82	0.47
27:BA:2352:A:H2'	27:BA:2353:G:H5'	1.94	0.47
10:AJ:88:LEU:HG	10:AJ:88:LEU:O	2.14	0.47
27:DA:1831:G:C6	27:DA:1832:C:C4	3.03	0.47
45:BW:111:HIS:CD2	45:BW:112:GLY:N	2.83	0.47
50:D1:24:ALA:HB3	50:D1:27:GLU:CD	2.34	0.47
30:DD:70:TRP:CZ2	30:DD:150:LYS:HA	2.49	0.47
27:DA:1170:G:H22	27:DA:1179:C:N4	2.11	0.47
44:DV:34:GLU:O	44:DV:36:PRO:CD	2.62	0.47
3:CC:173:VAL:HG12	3:CC:175:LEU:CD1	2.44	0.47
16:CP:17:TYR:N	16:CP:17:TYR:CD1	2.81	0.47
1:CA:495:A:C2	1:CA:496:A:C2	3.03	0.47
2:CB:120:ALA:C	2:CB:122:PHE:N	2.66	0.47
33:BG:73:ALA:O	33:BG:85:GLY:HA2	2.14	0.47
19:AS:79:THR:O	19:AS:80:TYR:HB2	2.15	0.47
27:BA:1909:C:H2'	27:BA:1909:C:O2	2.13	0.47
27:BA:652:C:C6	27:BA:652:C:H5''	2.49	0.47
2:AB:121:LEU:O	2:AB:121:LEU:HD23	2.14	0.47
27:DA:317:G:H2'	27:DA:318:C:O4'	2.13	0.47
27:BA:2416:C:OP1	38:BP:64:LYS:O	2.32	0.47
27:BA:666:G:O2'	27:BA:667:U:H5'	2.15	0.47
27:BA:664:C:H1'	27:BA:940:G:OP1	2.14	0.47
27:BA:943:U:H2'	27:BA:944:G:O4'	2.14	0.47
32:BF:192:LEU:HD23	32:BF:192:LEU:C	2.33	0.47
31:BE:171:GLU:HB3	31:BE:185:LYS:HG2	1.96	0.47
27:DA:1138:G:N2	36:DN:106:MET:SD	2.80	0.47
30:DD:16:MET:HA	30:DD:205:VAL:O	2.15	0.47
44:BV:47:VAL:O	44:BV:49:THR:O	2.32	0.47
32:DF:110:LEU:HD13	32:DF:110:LEU:C	2.34	0.47
27:DA:1159:U:H5''	27:DA:1159:U:H6	1.79	0.47
36:DN:2:LYS:HZ1	44:DV:13:ARG:N	2.12	0.47
27:DA:997:G:OP1	43:DU:93:LYS:HB2	2.14	0.47
27:DA:181:A:H1'	27:DA:435:C:H5''	1.96	0.47
30:DD:61:LEU:CB	30:DD:63:ARG:NH1	2.70	0.47
27:DA:2400:G:O2'	55:D6:19:ARG:HG3	2.14	0.47
27:DA:531:C:OP1	27:DA:561:G:N2	2.47	0.47
31:DE:197:ILE:HG13	31:DE:198:VAL:N	2.26	0.47
27:DA:307:G:N1	27:DA:310:A:OP2	2.45	0.47
1:CA:223:U:H2'	1:CA:224:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:77:ILE:HG22	9:AI:81:ILE:HG12	1.97	0.47
19:AS:28:LYS:HB3	19:AS:29:ARG:H	1.42	0.47
17:CQ:76:LEU:O	17:CQ:76:LEU:HG	2.14	0.47
27:BA:795:C:C2	27:BA:796:C:C5	3.02	0.47
45:BW:88:ARG:HB2	45:BW:92:ARG:CB	2.30	0.47
48:DZ:167:GLU:O	48:DZ:168:GLU:C	2.52	0.47
34:BH:157:TYR:O	34:BH:158:HIS:HD2	1.97	0.47
27:DA:779:U:O4	27:DA:780:G:C6	2.67	0.47
27:DA:2184:G:H2'	27:DA:2185:C:C6	2.49	0.47
35:BI:82:ARG:O	35:BI:88:ILE:CG2	2.62	0.47
45:DW:73:ALA:O	45:DW:106:ILE:CG1	2.53	0.47
27:DA:955:C:H5''	39:DQ:87:LYS:HE2	1.96	0.47
30:DD:94:LEU:HB2	30:DD:104:TYR:CE2	2.49	0.47
42:BT:125:ARG:O	42:BT:128:GLU:CG	2.54	0.47
28:DB:47:C:C2'	28:DB:48:A:H5'	2.44	0.47
33:DG:39:ILE:HG22	33:DG:92:VAL:O	2.14	0.47
39:BQ:135:ASP:HB2	39:BQ:136:ALA:H	1.52	0.47
13:AM:20:THR:C	13:AM:22:ILE:H	2.15	0.47
13:AM:76:ALA:HB2	13:AM:79:LYS:NZ	2.28	0.47
1:CA:1117:G:H21	1:CA:1180:A:H1'	1.79	0.47
15:AO:62:GLN:HA	15:AO:65:ARG:NH1	2.23	0.47
3:AC:24:ALA:HB1	3:AC:29:TYR:HA	1.97	0.47
5:CE:103:GLY:C	5:CE:105:VAL:N	2.68	0.47
11:CK:48:ILE:O	11:CK:50:TYR:N	2.48	0.47
6:AF:1:MET:HE2	6:AF:68:PRO:HA	1.96	0.47
45:DW:59:VAL:HG12	45:DW:60:ASN:N	2.29	0.47
35:DI:1:MET:O	35:DI:20:ASP:HA	2.14	0.47
27:BA:180:G:N2	27:BA:215:G:O6	2.47	0.47
27:BA:215:G:H4'	27:BA:216:A:O5'	2.14	0.47
29:DC:49:ILE:HG22	29:DC:50:ASP:OD1	2.14	0.47
27:BA:1400:G:C6	27:BA:1401:G:C6	3.03	0.47
28:BB:12:C:H6	28:BB:12:C:OP2	1.97	0.47
1:AA:642:A:H2'	1:AA:643:C:H6	1.79	0.47
1:AA:643:C:C2'	1:AA:644:G:H5'	2.43	0.47
27:DA:2542:A:C8	27:DA:2544:G:O6	2.67	0.47
16:CP:4:ILE:HG12	16:CP:21:VAL:CG2	2.40	0.47
1:CA:1336:C:H4'	1:CA:1337:G:N3	2.30	0.47
27:DA:527:C:O4'	27:DA:527:C:O2	2.31	0.47
30:BD:134:ARG:HG2	30:BD:135:PHE:CD1	2.50	0.47
10:CJ:78:ASN:ND2	10:CJ:80:LYS:CB	2.77	0.47
27:BA:2115:G:O5'	27:BA:2115:G:H8	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2050:C:H2'	27:BA:2051:A:C8	2.50	0.47
27:BA:2772:C:N3	27:BA:2773:C:C4	2.83	0.47
23:CW:30:A:H2'	23:CW:31:U:H5'	1.95	0.47
56:D7:28:ARG:O	56:D7:31:LEU:N	2.47	0.47
23:AW:59:U:H5'	23:AW:60:C:OP2	2.14	0.47
27:BA:83:G:O2'	27:BA:84:A:OP2	2.32	0.47
1:AA:328:C:O2	1:AA:328:C:C2'	2.62	0.47
1:CA:584:G:O2'	1:CA:585:G:H5'	2.15	0.47
27:DA:1051:G:H21	27:DA:1052:C:H6	1.60	0.47
48:BZ:30:ARG:HG2	48:BZ:30:ARG:O	2.13	0.47
25:CY:21:A:H8	25:CY:21:A:OP2	1.98	0.47
27:BA:971:C:O2'	27:BA:972:G:H5'	2.15	0.47
30:DD:70:TRP:O	30:DD:73:VAL:CG2	2.63	0.47
30:DD:221:VAL:HG23	30:DD:226:MET:CE	2.44	0.47
2:CB:142:LEU:HD11	2:CB:146:GLN:HB2	1.97	0.47
3:AC:42:LEU:HA	3:AC:45:LYS:CD	2.45	0.47
49:D0:51:VAL:HG23	49:D0:81:VAL:HG23	1.95	0.47
38:DP:30:THR:CG2	38:DP:31:ALA:H	2.27	0.47
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.13	0.47
36:BN:86:PRO:O	36:BN:89:LYS:HB2	2.14	0.47
4:AD:20:TYR:CD2	4:AD:27:TYR:CE2	3.02	0.47
27:DA:1053:C:O2	27:DA:1053:C:C2'	2.62	0.47
27:BA:1714:G:H2'	27:BA:1717:G:O4'	2.13	0.47
27:BA:636:G:OP2	38:BP:131:SER:HA	2.14	0.47
1:CA:1188:A:H4'	14:CN:58:LYS:NZ	2.30	0.47
40:BR:87:TYR:HE1	40:BR:117:VAL:O	1.97	0.47
27:BA:2787:C:O2	27:BA:2787:C:C2'	2.62	0.47
32:BF:1:MET:CG	32:BF:26:ALA:HA	2.44	0.47
27:DA:1140:C:H1'	27:DA:1143:A:N3	2.29	0.47
27:DA:592:G:N3	57:D8:4:MET:HE2	2.30	0.47
13:CM:23:TYR:CE1	13:CM:70:LEU:CD2	2.97	0.47
52:B3:30:ARG:HD3	52:B3:33:GLN:HE21	1.79	0.47
27:BA:286:C:C2	27:BA:356:G:C2	3.03	0.47
27:DA:559:G:O2'	27:DA:560:C:H5'	2.14	0.47
27:DA:998:C:N4	27:DA:1158:C:H42	2.13	0.47
43:DU:79:PHE:CD2	43:DU:83:LEU:HD13	2.50	0.47
43:DU:95:LEU:HD13	44:DV:4:ILE:CG2	2.45	0.47
44:DV:38:LEU:HD12	44:DV:56:SER:C	2.35	0.47
55:D6:33:LYS:O	55:D6:34:LEU:HB2	2.13	0.47
55:D6:40:CYS:HB2	55:D6:46:HIS:CG	2.49	0.47
33:DG:28:VAL:O	33:DG:31:VAL:CG1	2.60	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:829:A:H5'	27:DA:831:G:N7	2.29	0.47
46:DX:78:LYS:HG2	46:DX:78:LYS:O	2.15	0.47
27:DA:301:G:H1	27:DA:316:C:H42	1.63	0.47
9:AI:118:LYS:O	9:AI:120:ARG:N	2.40	0.47
8:AH:124:ALA:HB1	8:AH:129:VAL:HG23	1.97	0.47
12:CL:35:THR:CG2	12:CL:56:ARG:HH12	2.27	0.47
1:CA:372:C:H2'	1:CA:387:U:O4	2.14	0.47
27:DA:2751:G:N3	27:DA:2751:G:C2'	2.78	0.47
17:CQ:60:ILE:C	17:CQ:71:PHE:CD1	2.87	0.47
27:BA:2437:U:C2	27:BA:2438:U:C5	3.02	0.47
27:BA:1822:G:O3'	30:BD:54:ARG:NH2	2.47	0.47
1:AA:60:A:OP2	1:AA:387:U:H4'	2.15	0.47
27:BA:449:A:OP1	32:BF:84:VAL:O	2.32	0.47
27:BA:951:C:H6	27:BA:951:C:O5'	1.97	0.47
16:AP:71:ARG:O	16:AP:75:ARG:N	2.45	0.47
27:BA:1314:C:H2'	27:BA:1315:C:H6	1.79	0.47
34:BH:115:VAL:HG21	34:BH:148:ILE:HD11	1.97	0.47
9:CI:82:ALA:C	9:CI:84:ALA:N	2.67	0.47
3:CC:76:VAL:HG23	3:CC:77:ILE:HG13	1.97	0.47
27:BA:1434:A:H2'	27:BA:1435:G:C8	2.49	0.47
27:DA:49:A:N6	27:DA:177:G:C4	2.82	0.47
1:CA:516:U:O4	1:CA:533:A:OP2	2.32	0.47
5:CE:50:GLU:CB	5:CE:53:LEU:HD13	2.33	0.47
1:CA:1204:A:OP2	14:CN:3:ARG:NH1	2.47	0.47
15:CO:82:ILE:O	15:CO:86:GLY:N	2.47	0.47
30:BD:142:VAL:HG21	30:BD:191:ALA:HB1	1.96	0.47
27:DA:146:G:C2	27:DA:147:U:C2	3.02	0.47
27:BA:7:G:H2'	27:BA:8:A:H8	1.73	0.47
35:BI:89:TYR:C	35:BI:121:LYS:HZ2	2.17	0.47
35:BI:77:LEU:HD13	35:BI:79:ILE:HD11	1.97	0.47
27:DA:319:C:H2'	27:DA:320:A:C8	2.46	0.47
8:AH:84:ARG:NH1	8:AH:84:ARG:CB	2.78	0.47
27:DA:596:G:C6	27:DA:597:U:C4	3.02	0.47
51:B2:9:GLN:NE2	51:B2:56:GLN:HG2	2.29	0.47
28:DB:41:U:C5	33:DG:69:ALA:HB1	2.50	0.47
1:CA:100:C:H2'	1:CA:100:C:O2	2.14	0.47
30:BD:214:TRP:C	30:BD:216:GLY:H	2.16	0.47
13:AM:3:ARG:HB2	53:B4:60:GLU:HG2	1.95	0.47
27:DA:2141:G:C6	27:DA:2151:G:C2	3.02	0.47
27:DA:2848:G:C4'	27:DA:2849:U:OP1	2.61	0.47
25:CY:18:G:H1'	25:CY:56:G:H22	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:75:A:H4'	27:BA:2506:U:O2'	2.15	0.47
27:BA:1222:C:C2	27:BA:1223:G:C8	3.02	0.47
27:BA:80:G:C2'	27:BA:81:G:H5'	2.44	0.47
31:BE:32:PRO:HB3	31:BE:69:LYS:HG2	1.96	0.47
41:BS:30:ARG:HH22	41:BS:62:LYS:CD	2.19	0.47
3:CC:11:ARG:NH1	3:CC:11:ARG:HG2	2.22	0.47
32:BF:182:ASN:ND2	32:BF:185:ASP:OD2	2.44	0.47
27:BA:1835:G:N3	27:BA:1835:G:C2'	2.76	0.47
50:B1:53:VAL:HG22	50:B1:74:VAL:HG13	1.95	0.47
31:BE:203:LYS:CD	31:BE:203:LYS:O	2.58	0.47
7:CG:44:TYR:C	7:CG:46:ALA:N	2.67	0.47
1:AA:198:G:O2'	1:AA:199:G:O4'	2.29	0.47
27:DA:1213:A:C4	27:DA:1214:A:C8	3.03	0.47
38:BP:132:LYS:HG2	38:BP:132:LYS:H	1.48	0.47
7:AG:95:ARG:NH1	7:AG:99:LEU:HD21	2.29	0.47
4:AD:68:TYR:HA	4:AD:114:ARG:HD3	1.96	0.47
39:DQ:58:PHE:HD1	39:DQ:58:PHE:O	1.96	0.47
3:CC:119:ARG:NH1	3:CC:119:ARG:HG3	2.29	0.47
8:CH:65:TYR:CD1	8:CH:65:TYR:N	2.82	0.47
27:DA:2118:U:OP1	27:DA:2148:G:H4'	2.14	0.47
27:BA:717:G:C6	27:BA:718:A:C4	3.02	0.47
9:CI:91:ASP:C	9:CI:93:ARG:H	2.18	0.47
33:DG:181:ARG:O	33:DG:182:LYS:OXT	2.32	0.47
27:BA:1515:G:O2'	27:BA:1516:C:H5'	2.14	0.47
27:DA:380:U:H5'	50:D1:18:ILE:HD12	1.96	0.47
50:B1:70:VAL:C	50:B1:72:GLU:N	2.68	0.47
31:DE:24:THR:HG22	31:DE:24:THR:O	2.15	0.47
27:DA:1683:C:N4	27:DA:1705:G:H1	2.13	0.47
6:CF:44:GLY:O	6:CF:45:LEU:C	2.53	0.47
5:CE:148:VAL:O	5:CE:152:ARG:HG3	2.14	0.47
7:CG:92:SER:OG	7:CG:93:PRO:HD2	2.14	0.47
2:AB:236:TYR:CD1	2:AB:236:TYR:N	2.82	0.47
2:AB:122:PHE:HD1	2:AB:139:LYS:NZ	2.12	0.47
1:CA:1394:A:H2'	1:CA:1501:C:O2'	2.14	0.47
27:DA:237:C:O2'	27:DA:238:C:H5'	2.15	0.47
5:AE:37:ARG:O	5:AE:38:GLN:HG2	2.15	0.47
11:AK:76:GLY:O	11:AK:77:MET:O	2.32	0.47
15:CO:18:PHE:O	15:CO:20:GLY:N	2.48	0.47
31:BE:65:GLY:O	31:BE:66:HIS:C	2.53	0.47
10:CJ:50:ILE:HG21	10:CJ:57:LYS:HA	1.97	0.47
27:BA:2832:U:O4	27:BA:2884:U:C5'	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BY:81:LYS:HA	47:BY:82:PRO:HD3	1.78	0.47
34:BH:85:LYS:HE2	34:BH:145:ALA:N	2.29	0.47
38:DP:46:LYS:HG2	38:DP:52:GLU:CD	2.34	0.47
27:DA:1792:G:H2'	27:DA:1793:C:H6	1.79	0.47
27:DA:1930:G:N2	27:DA:1968:G:H2'	2.30	0.47
27:BA:1213:A:C8	27:BA:1213:A:C5'	2.92	0.47
4:CD:38:TYR:HB2	4:CD:39:PRO:HD2	1.97	0.47
32:BF:35:GLU:O	32:BF:38:ARG:HB3	2.14	0.47
1:AA:864:A:N1	1:AA:917:G:O2'	2.37	0.47
5:AE:130:ASN:C	5:AE:132:ALA:N	2.65	0.47
44:BV:5:VAL:HG11	44:BV:57:VAL:CG1	2.31	0.47
8:AH:67:PRO:O	8:AH:76:PRO:HB3	2.13	0.47
27:BA:352:G:C2'	27:BA:352:G:N3	2.77	0.47
36:DN:40:PRO:O	43:DU:64:ARG:HG2	2.15	0.47
44:DV:12:TYR:CE2	44:DV:22:VAL:HG12	2.48	0.47
43:DU:50:ARG:CZ	44:DV:72:VAL:HG12	2.44	0.47
30:DD:130:ALA:O	30:DD:131:LEU:HD12	2.15	0.47
27:DA:1560:G:H5'	27:DA:1560:G:C8	2.49	0.47
42:BT:34:VAL:HG22	42:BT:39:ARG:HG2	1.96	0.47
33:BG:57:ALA:O	33:BG:60:LEU:HB3	2.14	0.47
27:DA:919:G:C2	27:DA:920:G:C4	3.02	0.47
55:D6:42:TRP:O	55:D6:44:ARG:N	2.46	0.47
47:BY:16:ALA:HA	47:BY:21:LYS:CD	2.45	0.47
27:DA:2016:U:H1'	54:D5:6:VAL:CG1	2.45	0.47
27:DA:2499:C:C4	27:DA:2500:U:N3	2.82	0.47
27:DA:2499:C:N4	27:DA:2500:U:H3	2.13	0.47
27:DA:969:U:P	52:D3:17:LYS:HZ3	2.38	0.47
27:DA:971:C:C2'	27:DA:972:G:H5'	2.44	0.47
27:BA:1141:U:P	36:BN:25:ARG:HH12	2.38	0.47
45:BW:13:SER:O	45:BW:14:PRO:C	2.52	0.47
4:AD:19:LEU:O	4:AD:26:CYS:SG	2.72	0.47
9:AI:114:TYR:N	9:AI:114:TYR:HD2	2.13	0.47
30:BD:147:LEU:O	30:BD:185:VAL:HG13	2.14	0.47
19:AS:27:GLU:O	19:AS:28:LYS:O	2.33	0.47
27:DA:2334:G:H21	41:DS:18:ILE:HD11	1.80	0.47
41:DS:69:VAL:O	41:DS:72:ALA:HB3	2.14	0.47
17:CQ:7:THR:HG23	17:CQ:58:GLU:HG2	1.96	0.47
17:CQ:9:VAL:HG12	17:CQ:55:ASP:O	2.14	0.47
32:DF:109:GLY:CA	32:DF:112:MET:HB3	2.35	0.47
1:AA:458:C:H2'	1:AA:460:G:H8	1.80	0.47
20:CT:30:LYS:HZ1	20:CT:80:ARG:NH2	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:53:ARG:HH21	18:AR:60:ALA:N	2.07	0.47
14:CN:46:GLU:O	14:CN:49:HIS:HB2	2.14	0.47
1:AA:1152:A:H3'	10:AJ:13:HIS:NE2	2.30	0.47
27:BA:2261:C:C2	27:BA:2280:G:C2	3.03	0.47
1:CA:1310:G:C5'	13:CM:77:ASN:HD21	2.28	0.47
27:DA:148:C:H2'	27:DA:149:A:H5'	1.95	0.47
27:BA:6:A:N3	27:BA:6:A:H2'	2.29	0.47
27:DA:1300:U:O2	27:DA:1300:U:O4'	2.32	0.47
27:DA:768:G:C6	27:DA:769:G:C5	3.03	0.47
33:BG:51:ARG:CA	33:BG:51:ARG:NE	2.72	0.47
27:BA:572:A:H8	27:BA:572:A:H5'	1.74	0.47
27:DA:854:G:O2'	27:DA:855:G:H5'	2.15	0.47
35:BI:12:LEU:CD2	35:BI:12:LEU:N	2.78	0.47
35:BI:5:LEU:O	35:BI:6:LEU:HD23	2.14	0.47
36:BN:123:TYR:CD1	36:BN:123:TYR:N	2.82	0.47
33:DG:39:ILE:HD13	33:DG:157:ILE:HG23	1.97	0.47
1:CA:55:A:OP2	1:CA:352:C:N4	2.45	0.47
27:DA:1666:G:O3'	37:DO:6:THR:HG23	2.14	0.47
27:DA:2338:G:O2'	27:DA:2339:G:H5'	2.15	0.47
1:AA:663:A:C2'	1:AA:664:G:H5'	2.44	0.47
5:CE:90:VAL:O	5:CE:91:LEU:HD12	2.14	0.47
1:AA:835:U:O2'	1:AA:836:G:H5'	2.14	0.47
27:BA:1050:A:C4	27:BA:1051:G:N7	2.83	0.47
27:DA:1279:G:H2'	27:DA:1280:G:H8	1.78	0.47
10:CJ:22:LYS:C	10:CJ:24:VAL:H	2.18	0.47
7:AG:23:VAL:O	7:AG:24:THR:C	2.53	0.47
14:AN:14:PRO:O	14:AN:15:LYS:O	2.32	0.47
3:AC:61:ALA:O	3:AC:62:ASP:HB2	2.13	0.47
1:CA:690:G:H2'	1:CA:691:G:C8	2.50	0.47
10:AJ:95:GLU:OE2	10:AJ:95:GLU:HA	2.14	0.47
1:CA:9:G:O2'	1:CA:10:A:O5'	2.33	0.47
11:CK:60:ALA:O	11:CK:61:ALA:C	2.52	0.47
1:CA:853:G:C4	1:CA:854:G:C8	3.03	0.47
27:BA:466:A:C2'	27:BA:467:G:H5'	2.45	0.47
31:BE:179:GLU:O	31:BE:180:ASN:HB2	2.13	0.47
27:BA:271(J):C:H5'	27:BA:271(K):U:OP2	2.15	0.47
9:AI:14:VAL:O	9:AI:65:VAL:HG23	2.14	0.47
27:BA:1949:G:H2'	27:BA:1950:G:C8	2.50	0.47
1:AA:246:A:C4'	1:AA:247:G:OP1	2.62	0.47
27:BA:1380:G:N2	27:BA:1570:A:C2	2.81	0.47
27:BA:859:G:N2	27:BA:917:A:OP2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1849:G:H2'	27:DA:1849:G:N3	2.29	0.47
27:BA:1632:A:C5	27:BA:1633:G:C6	3.02	0.47
10:AJ:83:GLU:HB3	10:AJ:84:GLN:NE2	2.29	0.47
1:CA:855:G:C2'	1:CA:856:C:H5'	2.44	0.47
1:AA:928:G:H2'	1:AA:929:G:C8	2.50	0.47
31:DE:23:VAL:HA	31:DE:186:GLY:H	1.79	0.47
29:DC:56:GLN:C	29:DC:56:GLN:OE1	2.53	0.47
34:BH:68:THR:C	34:BH:70:THR:H	2.18	0.47
36:DN:3:THR:HG22	36:DN:5:VAL:CG1	2.44	0.47
27:BA:1945:G:H8	27:BA:1945:G:O5'	1.98	0.47
23:CW:18:G:H5'	23:CW:59:U:O4	2.14	0.47
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.80	0.47
24:AX:12:G:H4'	27:BA:1908:C:O2	2.14	0.47
13:CM:105:THR:O	13:CM:106:ASN:CB	2.61	0.47
32:DF:152:GLU:CB	32:DF:191:ARG:HD2	2.45	0.47
27:BA:282:A:C4	27:BA:359:A:C2	3.02	0.47
7:CG:104:LEU:H	7:CG:104:LEU:HD22	1.79	0.47
27:DA:2077:A:C4	27:DA:2435:A:C5	3.03	0.47
25:AY:75:A:O2'	27:BA:2394:C:N3	2.40	0.47
27:BA:250:G:H2'	27:BA:251:A:H8	1.78	0.47
27:BA:638:G:O2'	27:BA:639:U:H5'	2.14	0.47
27:BA:2416:C:O2'	27:BA:2417:C:H5'	2.14	0.47
41:BS:93:LYS:O	41:BS:95:HIS:N	2.48	0.47
27:BA:2680:C:H4'	31:BE:188:VAL:O	2.15	0.47
31:BE:102:VAL:N	31:BE:170:LEU:O	2.48	0.47
27:BA:30:G:O2'	27:BA:1214:A:N3	2.44	0.47
31:BE:52:LEU:CD1	42:BT:1:MET:CE	2.93	0.47
27:BA:1159:U:O2'	27:BA:1160:G:H5'	2.15	0.47
43:BU:83:LEU:HD12	43:BU:88:ILE:HD11	1.96	0.47
32:DF:202:PHE:CG	32:DF:203:GLN:N	2.82	0.47
32:DF:18:ARG:NH2	32:DF:20:LEU:HD13	2.26	0.47
27:BA:355:G:H2'	27:BA:356:G:O4'	2.14	0.47
1:AA:1399:C:C2	1:AA:1502:A:N6	2.83	0.47
43:DU:33:ARG:C	43:DU:35:ALA:H	2.18	0.47
30:DD:208:LYS:HG3	30:DD:210:GLY:N	2.29	0.47
30:DD:26:LYS:HZ2	30:DD:82:ILE:HB	1.79	0.47
30:BD:26:LYS:HG2	30:BD:26:LYS:O	2.15	0.47
12:CL:72:HIS:HD2	12:CL:74:LEU:HB2	1.79	0.47
47:DY:26:LYS:NZ	47:DY:27:VAL:CG2	2.77	0.47
47:DY:28:LYS:CB	47:DY:37:VAL:HB	2.43	0.47
33:BG:135:LEU:HD12	33:BG:135:LEU:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:61:ARG:HD2	31:DE:62:PRO:HD3	1.97	0.47
27:DA:2249:U:H4'	27:DA:2250:G:OP2	2.13	0.47
27:DA:2253:G:H2'	27:DA:2254:C:H6	1.80	0.47
38:DP:101:VAL:HG23	38:DP:102:ARG:N	2.30	0.47
39:DQ:16:ARG:CG	39:DQ:17:LEU:N	2.71	0.47
47:BY:14:LEU:O	47:BY:72:VAL:HA	2.15	0.47
27:DA:1952:A:N6	27:DA:1953:A:C6	2.83	0.47
27:DA:588:U:O2'	27:DA:589:C:O4'	2.32	0.47
27:DA:973:A:O4'	27:DA:1188:U:C6	2.67	0.47
31:DE:151:TYR:O	31:DE:154:LYS:N	2.45	0.47
48:DZ:27:MET:HG2	48:DZ:34:ARG:O	2.15	0.47
31:DE:84:PHE:O	31:DE:84:PHE:CG	2.67	0.47
31:DE:179:GLU:CA	31:DE:179:GLU:OE1	2.62	0.47
4:CD:187:ARG:NH1	4:CD:187:ARG:HG2	2.29	0.47
47:BY:26:LYS:HE3	47:BY:27:VAL:HG23	1.97	0.47
9:AI:114:TYR:N	9:AI:114:TYR:CD2	2.83	0.47
48:BZ:18:ARG:NH1	48:BZ:81:ARG:NH2	2.61	0.47
1:AA:1342:C:H1'	9:AI:124:GLN:HG2	1.96	0.47
8:AH:12:ARG:HD3	8:AH:25:ASP:O	2.13	0.47
8:AH:50:ARG:HG2	8:AH:59:LEU:CD2	2.45	0.47
8:AH:53:VAL:HG12	8:AH:56:LYS:HE2	1.96	0.47
1:CA:397:A:C6	1:CA:548:G:N7	2.83	0.47
2:AB:187:LEU:CD2	2:AB:201:ILE:O	2.63	0.47
46:BX:64:LYS:HE3	46:BX:64:LYS:HB2	1.61	0.47
42:DT:35:LYS:HG3	42:DT:36:GLU:N	2.30	0.47
42:DT:51:ARG:CD	42:DT:62:THR:HG23	2.32	0.47
1:CA:391:G:C6	1:CA:392:G:N7	2.83	0.47
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.96	0.47
41:DS:14:VAL:O	41:DS:16:ASN:N	2.47	0.47
27:BA:1249:U:C5'	27:BA:1249:U:H6	2.10	0.47
1:CA:252:U:H2'	1:CA:253:U:H6	1.80	0.47
17:CQ:12:SER:HB3	17:CQ:20:THR:HB	1.96	0.47
27:BA:686:G:C6	56:B7:12:ARG:HA	2.50	0.47
27:BA:684:G:O2'	27:BA:788:A:N7	2.47	0.47
50:D1:57:GLU:O	50:D1:58:ILE:O	2.33	0.47
27:BA:2782:G:N2	27:BA:2783:G:H1'	2.29	0.47
2:CB:71:VAL:HG22	2:CB:93:VAL:HG22	1.96	0.47
2:CB:85:ALA:HB3	2:CB:92:TYR:HD2	1.78	0.47
48:BZ:68:THR:HG22	48:BZ:89:VAL:CA	2.29	0.47
16:AP:6:LEU:HG	16:AP:19:ILE:HD13	1.97	0.47
20:CT:53:LEU:HD12	20:CT:100:ILE:HB	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:76:GLU:C	15:AO:78:TYR:H	2.17	0.47
27:DA:71:A:C8	27:DA:71:A:H5'	2.50	0.47
3:CC:84:ILE:O	3:CC:88:ARG:HG3	2.14	0.47
15:CO:81:LEU:HD11	15:CO:85:LEU:HD12	1.95	0.47
42:BT:3:ARG:C	42:BT:5:ALA:N	2.63	0.47
38:BP:146:VAL:HG13	38:BP:147:LEU:H	1.76	0.47
1:CA:659:U:C4	1:CA:660:G:N7	2.83	0.47
1:CA:1404:C:O2	1:CA:1519:A:O2'	2.32	0.47
36:DN:61:ARG:HG2	36:DN:61:ARG:H	1.54	0.47
35:BI:120:ILE:O	35:BI:121:LYS:CB	2.63	0.47
27:DA:2823:A:OP1	31:DE:113:PHE:HB3	2.15	0.47
27:DA:2822:G:OP2	40:DR:2:ARG:HD3	2.15	0.47
27:BA:1826:G:O2'	30:BD:242:ARG:NH2	2.46	0.47
1:AA:622:A:C8	1:AA:623:C:C5	3.02	0.47
12:AL:114:ARG:HH22	12:AL:121:LYS:CD	2.26	0.47
36:BN:133:GLN:O	36:BN:134:ARG:CG	2.58	0.47
54:B5:49:CYS:O	54:B5:50:GLY:O	2.32	0.47
9:CI:19:LEU:CD2	9:CI:61:ALA:HB2	2.44	0.47
51:B2:49:LYS:O	51:B2:52:ASP:HB2	2.15	0.47
27:BA:2470:G:P	39:BQ:56:ARG:HH21	2.38	0.47
30:BD:10:THR:O	30:BD:11:PRO:O	2.32	0.47
7:AG:146:GLU:C	7:AG:148:ASN:N	2.68	0.47
42:DT:53:ARG:HG2	42:DT:53:ARG:HH11	1.80	0.47
27:BA:847:U:OP2	27:BA:928:G:O6	2.32	0.47
27:DA:2684:U:C4	27:DA:2685:G:N7	2.83	0.47
42:DT:64:ARG:HA	42:DT:72:VAL:O	2.15	0.47
39:DQ:42:ILE:CD1	39:DQ:42:ILE:H	2.23	0.47
19:CS:39:THR:HG22	19:CS:40:ILE:N	2.29	0.47
1:CA:1315:U:H2'	1:CA:1316:G:C5'	2.45	0.47
1:AA:1286:A:C2	21:AU:22:ARG:NH2	2.83	0.47
1:AA:1038:C:O5'	1:AA:1038:C:H6	1.98	0.47
1:AA:816:A:O2'	1:AA:817:C:P	2.73	0.47
5:CE:79:GLU:O	5:CE:80:ILE:HG23	2.15	0.47
31:DE:14:ILE:HG13	31:DE:14:ILE:O	2.15	0.47
7:CG:140:ASP:HA	7:CG:143:ARG:NH2	2.30	0.47
25:CY:29:G:C2	25:CY:40:C:O2	2.67	0.47
10:AJ:63:PHE:HB3	14:AN:58:LYS:CA	2.43	0.47
27:BA:1411:C:N4	27:BA:1412:A:N6	2.62	0.47
27:DA:2803:C:OP1	27:DA:2803:C:H4'	2.13	0.47
27:DA:2891:G:O5'	27:DA:2891:G:H8	1.96	0.47
27:BA:81:G:H1	27:BA:105:C:N4	2.08	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:682:G:H1	27:DA:795:C:H42	1.63	0.47
27:DA:682:G:O6	27:DA:795:C:N4	2.46	0.47
18:AR:37:VAL:O	18:AR:38:GLU:C	2.53	0.47
27:DA:324:A:OP2	27:DA:1205:U:O4	2.33	0.47
24:AX:2:G:N2	24:AX:72:A:H1'	2.30	0.47
27:DA:1209:G:HO2'	27:DA:1237:A:H61	1.61	0.47
27:DA:501:A:H2'	27:DA:502:A:C8	2.49	0.47
27:DA:501:A:H2'	27:DA:502:A:H8	1.79	0.47
29:BC:49:ILE:O	29:BC:51:PRO:CD	2.63	0.47
27:BA:113:G:H8	27:BA:113:G:OP2	1.97	0.47
2:AB:114:ARG:O	2:AB:118:LEU:HG	2.15	0.47
50:D1:6:GLU:OE1	50:D1:61:ARG:N	2.43	0.47
1:CA:814:A:N7	1:CA:816:A:C4	2.83	0.47
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.15	0.47
8:AH:101:PRO:HG2	8:AH:133:LEU:CD1	2.39	0.47
33:BG:18:GLU:O	33:BG:21:ARG:HB3	2.15	0.47
30:BD:4:LYS:HE3	30:BD:21:PHE:HE1	1.80	0.47
3:AC:167:TRP:O	3:AC:168:ALA:HB2	2.13	0.47
37:BO:106:LEU:O	37:BO:108:GLU:N	2.47	0.47
14:AN:9:LYS:HG3	14:AN:12:ARG:CZ	2.45	0.47
27:BA:1904:G:H2'	27:BA:1905:C:O4'	2.15	0.47
27:BA:1722:A:N6	27:BA:1740:G:C8	2.83	0.47
1:AA:1302:U:OP1	13:AM:13:LYS:NZ	2.41	0.47
1:AA:1228:C:H4'	13:AM:116:THR:O	2.15	0.47
32:DF:84:VAL:C	32:DF:86:GLY:N	2.62	0.47
10:AJ:95:GLU:CG	10:AJ:96:ILE:N	2.77	0.47
1:CA:322:C:O2	1:CA:332:G:N2	2.46	0.47
1:CA:321:A:H4'	1:CA:1436:U:C4'	2.44	0.47
27:DA:2839:G:C6	27:DA:2840:C:N3	2.83	0.47
10:CJ:78:ASN:ND2	10:CJ:80:LYS:H	2.13	0.47
6:CF:97:PHE:HD2	18:CR:31:LEU:HD21	1.75	0.47
27:BA:2115:G:N2	27:BA:2119:A:N7	2.63	0.47
4:AD:98:GLU:HA	4:AD:103:ASN:ND2	2.30	0.47
27:BA:1033:U:C5'	27:BA:1034:G:OP1	2.61	0.47
27:BA:405:U:O2'	27:BA:406:G:H5'	2.15	0.47
27:BA:1848:A:C4	27:BA:1849:G:C8	3.03	0.47
1:CA:96:U:H2'	1:CA:97:G:H8	1.77	0.47
27:BA:2771:C:H2'	27:BA:2772:C:H6	1.78	0.47
18:AR:34:TYR:HB3	18:AR:69:THR:HG22	1.96	0.47
27:DA:2661:G:O2'	27:DA:2662:A:H5'	2.15	0.47
19:AS:40:ILE:HG13	19:AS:69:HIS:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:108:GLY:CA	48:BZ:115:VAL:HG11	2.43	0.47
27:BA:2554:U:H5'	27:BA:2554:U:H6	1.79	0.47
54:B5:45:VAL:O	54:B5:47:PRO:HD3	2.14	0.47
27:DA:388:G:OP2	50:D1:25:LYS:HB2	2.14	0.47
27:DA:2396:G:N1	27:DA:2421:G:C6	2.82	0.47
27:BA:1613:G:O2'	56:B7:3:ARG:NE	2.47	0.47
27:DA:1844:C:C4	27:DA:1845:G:N7	2.82	0.47
43:BU:76:TYR:CE1	43:BU:80:ILE:HD11	2.50	0.47
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.78	0.47
56:D7:29:LYS:HG2	56:D7:33:ARG:NH2	2.29	0.47
34:BH:25:LYS:HA	34:BH:33:LEU:O	2.14	0.47
29:BC:197:GLU:O	29:BC:199:HIS:N	2.44	0.47
22:CV:2:A:H2'	22:CV:3:A:H8	1.80	0.47
19:CS:22:LEU:O	19:CS:26:GLY:HA2	2.15	0.47
35:BI:117:GLU:HG3	35:BI:118:LYS:N	2.28	0.47
27:DA:211:A:H2'	27:DA:212:G:H8	1.80	0.47
48:BZ:108:ALA:C	48:BZ:144:GLU:HG2	2.35	0.47
29:DC:19:VAL:HB	29:DC:22:ILE:HG12	1.95	0.47
2:CB:56:ARG:NH1	2:CB:56:ARG:HG2	2.29	0.47
1:CA:665:A:C8	1:CA:725:G:C2	3.03	0.47
7:AG:115:ARG:HB2	7:AG:118:VAL:CG1	2.45	0.47
17:CQ:64:PRO:HB3	17:CQ:70:ARG:HE	1.78	0.47
24:CX:59:A:O2'	24:CX:60:U:H5'	2.15	0.47
3:AC:41:GLY:O	3:AC:45:LYS:HG3	2.15	0.47
42:DT:132:LYS:C	42:DT:134:GLU:N	2.68	0.47
27:DA:1995:U:H2'	27:DA:1996:C:C5	2.49	0.47
27:DA:2083:G:H2'	27:DA:2084:C:H6	1.80	0.47
27:BA:237:C:H2'	27:BA:238:C:C6	2.50	0.47
50:D1:75:GLU:OE2	50:D1:75:GLU:HA	2.15	0.47
39:BQ:3:MET:HB2	39:BQ:4:PRO:HD2	1.96	0.47
27:DA:1368:G:C2	27:DA:1369:G:C8	3.03	0.47
5:AE:53:LEU:H	5:AE:53:LEU:CD1	2.28	0.47
28:BB:15:A:H4'	28:BB:16:G:OP2	2.15	0.47
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.14	0.47
27:DA:209:C:H2'	27:DA:210:C:O4'	2.14	0.47
27:BA:1599:C:H5''	46:BX:35:THR:HG22	1.96	0.47
46:BX:21:PHE:O	46:BX:23:GLU:O	2.32	0.47
57:B8:25:MET:O	57:B8:47:LYS:NZ	2.45	0.47
27:BA:2790:A:H2'	27:BA:2791:C:H5''	1.96	0.47
1:CA:530:G:O2'	23:CW:34:U:H4'	2.14	0.47
27:DA:1833:U:O2'	27:DA:1969:A:N1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B4:41:ILE:O	53:B4:59:VAL:N	2.46	0.47
13:CM:69:GLU:OE1	13:CM:72:ALA:CB	2.60	0.47
43:BU:101:ARG:O	43:BU:102:GLU:CB	2.62	0.47
17:AQ:63:ARG:HG2	17:AQ:64:PRO:CD	2.43	0.47
32:DF:3:GLU:O	32:DF:4:VAL:C	2.53	0.47
27:DA:1011:G:OP1	43:DU:77:SER:CB	2.62	0.47
43:DU:90:VAL:C	43:DU:92:ARG:H	2.18	0.47
28:BB:82:G:H2'	28:BB:83:G:O4'	2.15	0.47
1:CA:1239:A:H4'	1:CA:1240:U:O5'	2.15	0.47
7:CG:116:ALA:O	7:CG:119:ARG:HB2	2.15	0.47
11:CK:29:ILE:CD1	11:CK:44:SER:HB3	2.43	0.47
27:DA:2019:A:C6	27:DA:2020:A:C5	3.03	0.47
27:DA:2055:C:H2'	27:DA:2055:C:O2	2.13	0.47
31:DE:129:HIS:O	31:DE:130:GLY:O	2.32	0.47
46:DX:26:TYR:CE1	46:DX:89:ILE:HD12	2.50	0.47
31:DE:199:ARG:HB3	31:DE:200:GLU:H	1.39	0.47
27:DA:301:G:N2	27:DA:316:C:N3	2.47	0.47
27:BA:1491:G:OP1	27:BA:1494:A:N6	2.48	0.47
30:BD:75:ILE:HG22	30:BD:76:PRO:HD2	1.97	0.47
1:CA:142:G:H1	1:CA:221:C:N4	2.08	0.47
20:CT:87:LYS:C	20:CT:89:ARG:H	2.17	0.47
47:BY:28:LYS:HG3	47:BY:30:VAL:HG23	1.97	0.47
14:AN:27:CYS:C	14:AN:29:ARG:H	2.12	0.47
8:AH:56:LYS:O	8:AH:58:TYR:HD1	1.97	0.47
8:AH:57:PRO:O	8:AH:58:TYR:CD1	2.67	0.47
1:CA:393:A:OP2	16:CP:12:LYS:HE2	2.15	0.47
27:DA:90:U:O2	27:DA:90:U:C2'	2.63	0.47
27:DA:2758:A:C3'	27:DA:2759:G:H5''	2.45	0.47
27:BA:854:G:C2	27:BA:855:G:C5	3.03	0.47
27:BA:2586:C:O2'	27:BA:2587:A:H5'	2.15	0.47
2:AB:96:ARG:O	2:AB:97:TRP:C	2.53	0.47
27:BA:413:C:H4'	27:BA:1880:C:O2'	2.14	0.47
27:BA:969:U:O3'	52:B3:14:GLY:HA2	2.15	0.47
58:B9:2:LYS:O	58:B9:35:ARG:N	2.48	0.47
46:DX:12:VAL:HB	46:DX:17:ALA:CB	2.45	0.47
4:AD:28:SER:HB2	4:AD:30:LYS:HG2	1.97	0.47
1:CA:1063:C:H3'	1:CA:1063:C:H6	1.79	0.47
37:BO:113:LYS:O	37:BO:114:ILE:C	2.50	0.47
27:DA:52:A:N3	27:DA:53:A:C8	2.83	0.47
5:CE:55:VAL:O	5:CE:58:ALA:HB3	2.14	0.47
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DI:37:VAL:CG1	35:DI:38:LEU:N	2.75	0.47
8:CH:29:SER:O	8:CH:30:ARG:C	2.52	0.47
27:DA:1395:A:OP1	27:DA:1603:A:OP1	2.32	0.47
27:BA:2259:G:O4'	27:BA:2427:C:H2'	2.15	0.47
1:AA:1157:A:C4'	1:AA:1158:C:O5'	2.54	0.47
37:DO:16:ALA:CB	37:DO:52:VAL:HG11	2.43	0.47
33:BG:88:ILE:HG13	33:BG:89:GLY:N	2.27	0.47
34:DH:127:GLU:C	34:DH:129:THR:H	2.18	0.47
57:B8:14:VAL:CG2	57:B8:22:VAL:HG12	2.45	0.47
1:CA:975:A:N6	10:CJ:48:THR:HB	2.20	0.47
1:AA:1381:U:H2'	1:AA:1381:U:O2	2.13	0.47
27:DA:1665:A:H1'	37:DO:1:MET:CE	2.45	0.47
37:DO:20:MET:CG	37:DO:21:CYS:N	2.78	0.47
27:BA:2716:U:H2'	27:BA:2717:G:H8	1.79	0.47
25:CY:68:C:H3'	25:CY:69:C:H5''	1.97	0.47
27:DA:2291:U:H5''	27:DA:2380:C:O2'	2.15	0.47
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.80	0.47
27:DA:1385:G:O2'	27:DA:1396:U:H6	1.98	0.47
10:CJ:34:VAL:HG13	10:CJ:73:ASP:O	2.14	0.47
45:DW:105:VAL:HG12	45:DW:107:LEU:CD1	2.45	0.47
45:DW:60:ASN:HD22	45:DW:60:ASN:N	2.12	0.47
7:AG:23:VAL:O	7:AG:27:ILE:HG13	2.15	0.47
27:DA:763:G:C2	27:DA:765:G:H1'	2.50	0.47
42:BT:57:PHE:O	42:BT:58:ASN:C	2.52	0.47
50:D1:69:LYS:HA	50:D1:72:GLU:HB3	1.95	0.47
3:CC:19:GLU:O	3:CC:20:SER:HB2	2.15	0.47
27:DA:2121:G:C2	27:DA:2122:U:C2	3.03	0.47
13:AM:116:THR:O	13:AM:117:VAL:CB	2.63	0.47
27:DA:558:G:H4'	36:DN:44:PRO:O	2.14	0.47
4:CD:23:GLY:O	4:CD:25:ARG:N	2.48	0.47
40:BR:10:LEU:HA	40:BR:17:ARG:CD	2.40	0.47
18:AR:40:LEU:C	18:AR:42:ARG:N	2.67	0.47
1:CA:1480:G:C5	1:CA:1481:U:C5	3.03	0.47
11:AK:95:ILE:O	11:AK:98:LEU:N	2.48	0.47
47:DY:90:LEU:HD12	47:DY:91:GLU:H	1.80	0.47
8:CH:63:LEU:H	8:CH:63:LEU:HD22	1.79	0.47
1:CA:731:G:N2	1:CA:732:C:O2	2.48	0.47
6:AF:44:GLY:O	6:AF:59:TYR:HA	2.15	0.47
27:DA:2674:G:H2'	27:DA:2675:A:C8	2.50	0.47
9:CI:52:ALA:HB3	9:CI:95:LYS:CE	2.44	0.47
9:CI:27:THR:HG23	9:CI:31:GLN:C	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AX:51:C:H2'	24:AX:52:G:H8	1.79	0.47
50:B1:57:GLU:C	50:B1:58:ILE:HG23	2.36	0.47
23:AW:72:G:H5'	23:AW:73:C:OP1	2.13	0.47
31:DE:127:ASP:HA	31:DE:135:HIS:ND1	2.29	0.47
27:DA:1927:A:H8	27:DA:1927:A:OP1	1.98	0.47
27:BA:2228:G:OP1	30:BD:261:LYS:HE3	2.14	0.47
27:DA:2078:C:H2'	27:DA:2079:U:C6	2.50	0.47
35:DI:94:ALA:CB	35:DI:114:LEU:HD11	2.45	0.47
55:D6:22:ALA:C	55:D6:23:THR:HG23	2.35	0.47
48:BZ:36:VAL:HG23	48:BZ:37:TYR:N	2.28	0.47
3:AC:41:GLY:C	3:AC:45:LYS:NZ	2.68	0.47
25:AY:23:G:H2'	25:AY:24:C:C6	2.50	0.47
49:D0:51:VAL:N	49:D0:62:LEU:HD12	2.30	0.47
27:BA:1167:U:C2	27:BA:1183:G:N2	2.83	0.47
24:AX:15:G:N2	24:AX:21:A:N3	2.62	0.47
1:AA:306:G:H2'	1:AA:307:C:C6	2.50	0.47
15:AO:16:ALA:HB1	15:AO:21:ASP:HB3	1.97	0.47
27:DA:271(W):G:H5'	27:DA:271(X):G:OP2	2.15	0.47
1:CA:1272:G:H8	1:CA:1272:G:H5''	1.80	0.47
1:AA:1420:C:H2'	1:AA:1421:G:H8	1.80	0.47
6:AF:65:VAL:HG23	6:AF:66:GLU:N	2.29	0.47
1:AA:30:U:H4'	1:AA:31:G:OP1	2.10	0.47
19:CS:12:ASP:HB3	19:CS:14:HIS:CE1	2.50	0.47
40:BR:20:LEU:C	40:BR:22:ARG:N	2.68	0.47
27:DA:1024:G:OP2	27:DA:1025:G:H3'	2.15	0.47
57:D8:7:HIS:HD1	57:D8:7:HIS:C	2.18	0.47
27:BA:27:G:H1'	27:BA:513:A:H62	1.80	0.47
1:CA:426:G:OP1	4:CD:36:ARG:NE	2.47	0.47
4:CD:91:SER:O	4:CD:94:LEU:N	2.48	0.47
27:BA:660:G:O3'	32:BF:38:ARG:NH2	2.47	0.47
44:BV:47:VAL:HG23	44:BV:47:VAL:O	2.15	0.47
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.79	0.47
41:BS:66:ALA:O	41:BS:69:VAL:HG13	2.14	0.47
57:D8:37:SER:OG	57:D8:40:GLU:N	2.47	0.47
27:DA:459:U:OP1	56:D7:39:ARG:HA	2.13	0.47
36:DN:118:LYS:C	36:DN:120:LEU:N	2.66	0.47
27:DA:587:C:H2'	38:DP:33:ARG:NH2	2.30	0.47
55:B6:15:GLU:OE1	55:B6:41:PRO:HB3	2.15	0.47
9:AI:96:LEU:HG	9:AI:102:LEU:HB2	1.96	0.47
1:AA:1206:G:H2'	1:AA:1207:G:C5'	2.42	0.47
1:AA:976:G:N7	1:AA:1358:U:C2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1060:C:P	14:AN:45:ARG:NH2	2.88	0.47
12:CL:34:CYS:HA	12:CL:55:VAL:HG22	1.95	0.47
2:AB:71:VAL:HB	2:AB:164:VAL:HG22	1.96	0.47
43:BU:106:PHE:O	43:BU:107:ALA:C	2.52	0.47
27:BA:127:A:H5''	27:BA:128:C:C6	2.50	0.47
27:BA:689:A:N3	27:BA:779:U:O2'	2.42	0.47
1:AA:60:A:OP1	1:AA:111:G:N2	2.47	0.47
7:AG:45:ASP:HB3	7:AG:117:ALA:HB1	1.97	0.47
42:DT:11:GLU:H	42:DT:11:GLU:CD	2.16	0.47
5:CE:52:PRO:HD2	5:CE:53:LEU:HD12	1.96	0.47
12:AL:38:ARG:NH2	12:AL:54:LYS:NZ	2.62	0.47
27:BA:2842:G:C2	27:BA:2876:G:C2	3.02	0.47
41:BS:101:LEU:HD22	41:BS:102:ALA:O	2.15	0.47
1:CA:754:C:C2'	1:CA:754:C:O2	2.54	0.47
40:DR:2:ARG:HB2	40:DR:3:HIS:H	1.48	0.47
55:B6:51:GLU:O	55:B6:52:VAL:CG2	2.62	0.47
9:CI:24:GLY:O	9:CI:26:VAL:HG23	2.15	0.47
52:D3:11:SER:HA	52:D3:12:PRO:HD3	1.61	0.47
10:CJ:97:GLU:C	10:CJ:98:ILE:HD12	2.34	0.47
25:CY:67:C:H2'	25:CY:68:C:C6	2.49	0.47
27:DA:1658:C:O5'	27:DA:1658:C:H6	1.96	0.47
54:D5:45:VAL:HG22	54:D5:51:TYR:HD2	1.79	0.47
7:CG:139:GLU:C	7:CG:141:VAL:N	2.64	0.47
27:DA:7:G:H1	27:DA:2896:C:H42	1.62	0.47
27:DA:2468:G:H22	27:DA:2481:G:C2'	2.27	0.47
27:DA:2788:C:O2'	27:DA:2809:A:N3	2.43	0.47
27:DA:682:G:H1	27:DA:795:C:N4	2.12	0.47
27:DA:30:G:O2'	27:DA:31:C:H5'	2.14	0.47
47:DY:46:LYS:HB3	47:DY:47:LYS:H	1.54	0.47
39:DQ:35:VAL:HG23	39:DQ:101:ARG:O	2.15	0.47
27:BA:675:A:C6	27:BA:676:A:C6	3.03	0.47
27:DA:484:C:O5'	27:DA:484:C:H6	1.97	0.47
3:CC:11:ARG:HB3	3:CC:15:THR:HB	1.97	0.47
27:BA:56:A:O2'	27:BA:57:C:C5'	2.59	0.47
1:CA:285:G:N1	1:CA:286:G:C5	2.82	0.47
27:DA:81:G:H21	47:DY:2:ARG:NH2	2.13	0.47
1:AA:1246:C:H2'	1:AA:1246:C:O2	2.14	0.47
13:AM:91:ARG:HB3	13:AM:98:VAL:HG13	1.97	0.47
27:DA:286:C:H2'	27:DA:287:C:C5'	2.45	0.47
46:DX:66:LEU:HD23	46:DX:66:LEU:C	2.35	0.47
1:AA:1500:A:H5''	1:AA:1508:G:H5''	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:119:A:O2'	27:BA:120:U:O5'	2.28	0.47
1:CA:1472:U:H2'	1:CA:1473:A:C8	2.49	0.47
27:DA:1427:A:O2'	27:DA:1428:C:OP2	2.29	0.47
27:BA:577:G:H5'	27:BA:2502:G:C2	2.50	0.47
27:BA:2637:U:H5'	31:BE:44:TYR:CD1	2.49	0.47
17:AQ:22:LEU:CD1	17:AQ:41:LYS:HG2	2.43	0.47
1:CA:624:C:O2'	16:CP:10:GLY:HA2	2.14	0.47
27:DA:1291:C:O2'	27:DA:1292:U:C5'	2.63	0.47
43:DU:59:ARG:O	43:DU:62:ILE:N	2.42	0.47
27:BA:1612:C:N3	27:BA:1620:G:C2	2.82	0.47
4:CD:148:VAL:HG21	4:CD:181:MET:HE2	1.96	0.47
15:CO:2:PRO:O	15:CO:38:ARG:NE	2.44	0.47
27:DA:1842:G:C6	27:DA:1843:C:N3	2.83	0.47
27:DA:203:C:O5'	27:DA:204:A:H5''	2.15	0.47
43:BU:47:TYR:O	43:BU:51:LYS:HG2	2.15	0.47
23:CW:10:G:N2	23:CW:25:A:H1'	2.30	0.47
23:CW:10:G:H1	23:CW:25:A:H1'	1.80	0.47
33:DG:70:VAL:HA	33:DG:89:GLY:O	2.15	0.47
3:CC:59:ARG:HA	3:CC:63:ASN:O	2.15	0.47
27:BA:2087:G:O2'	27:BA:2088:G:H5'	2.15	0.47
30:DD:221:VAL:HG23	30:DD:226:MET:HE2	1.96	0.47
27:BA:1987:G:H2'	27:BA:1988:C:C6	2.49	0.47
3:AC:42:LEU:HA	3:AC:45:LYS:CG	2.45	0.47
27:BA:904:C:H2'	27:BA:905:U:H5'	1.96	0.47
27:DA:1764:G:H21	27:DA:1765:C:H1'	1.80	0.47
27:DA:1170:G:N2	27:DA:1179:C:H42	2.12	0.47
49:B0:51:VAL:HG21	49:B0:79:VAL:O	2.15	0.47
1:CA:153:C:H2'	1:CA:154:C:H6	1.80	0.47
24:CX:5:G:H1	24:CX:68:C:H42	1.63	0.47
27:DA:208:C:O2'	27:DA:209:C:H5'	2.15	0.47
1:AA:370:C:H2'	1:AA:371:G:H8	1.79	0.47
32:DF:50:SER:HB2	32:DF:94:PRO:HG3	1.96	0.47
1:AA:652:U:O2'	1:AA:653:A:O5'	2.33	0.47
31:BE:154:LYS:O	31:BE:156:MET:HG3	2.15	0.47
18:AR:82:THR:HG22	18:AR:83:GLU:N	2.30	0.47
10:CJ:3:LYS:O	10:CJ:100:THR:HA	2.14	0.47
27:DA:1662:C:O2'	27:DA:2687:U:OP1	2.30	0.47
5:AE:133:TYR:CD1	5:AE:133:TYR:N	2.81	0.47
30:DD:193:VAL:HG22	30:DD:194:GLY:N	2.30	0.47
27:BA:2644:G:H2'	27:BA:2645:G:C8	2.50	0.47
38:BP:63:PRO:C	38:BP:65:ARG:N	2.69	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:962:C:H2'	1:CA:963:G:H8	1.79	0.47
1:CA:978:A:C5'	1:CA:978:A:C8	2.98	0.47
1:CA:973:G:OP1	10:CJ:57:LYS:HD3	2.15	0.47
14:CN:36:PHE:HE1	14:CN:37:PHE:CZ	2.33	0.47
27:BA:2834:G:C4	27:BA:2879:C:N4	2.83	0.47
27:BA:614(C):A:H4'	27:BA:615:G:OP1	2.15	0.47
47:BY:79:CYS:O	47:BY:80:GLY:C	2.53	0.47
27:DA:200:U:C5'	27:DA:200:U:C6	2.91	0.47
27:DA:1791:A:O2'	30:DD:207:GLY:CA	2.63	0.47
27:BA:1213:A:C2	27:BA:1214:A:C4	3.02	0.47
4:CD:13:ARG:O	4:CD:16:GLY:N	2.44	0.47
4:CD:64:LEU:O	4:CD:65:ARG:C	2.54	0.47
42:DT:65:LYS:HA	42:DT:65:LYS:NZ	2.30	0.47
5:AE:33:VAL:HG22	5:AE:42:GLY:O	2.15	0.47
27:DA:1155:A:H4'	43:DU:55:ARG:NH1	2.30	0.47
30:BD:24:ILE:O	30:BD:26:LYS:HD3	2.14	0.47
31:DE:88:GLY:O	31:DE:89:ASP:HB2	2.14	0.47
55:D6:10:LEU:HA	55:D6:25:LYS:HA	1.97	0.47
55:D6:40:CYS:HB2	55:D6:46:HIS:CB	2.44	0.47
57:D8:14:VAL:CG2	57:D8:15:LYS:N	2.77	0.47
38:DP:95:VAL:HG22	38:DP:125:VAL:HB	1.96	0.47
33:DG:20:ILE:HA	33:DG:25:TYR:CD2	2.48	0.47
27:DA:1991:U:O2'	27:DA:1992:G:C5'	2.62	0.47
27:DA:2572:A:OP1	31:DE:143:ASN:HB3	2.14	0.47
27:DA:2610:C:H4'	27:DA:2611:U:OP2	2.14	0.47
27:DA:968:G:C2	27:DA:969:U:C2	3.03	0.47
1:AA:169:C:C2'	1:AA:170:U:H5'	2.45	0.47
9:AI:45:ALA:C	9:AI:47:LEU:H	2.16	0.47
1:AA:1202:G:C4	14:AN:42:ILE:HD13	2.50	0.47
12:CL:33:VAL:C	12:CL:55:VAL:HG13	2.35	0.47
41:DS:29:PHE:CD2	41:DS:30:ARG:N	2.83	0.47
1:AA:1305:G:P	21:AU:2:GLY:N	2.87	0.47
1:CA:274:A:O2'	1:CA:275:G:H8	1.96	0.47
27:BA:1310:G:O2'	27:BA:1311:G:H5'	2.15	0.47
1:AA:105:G:C6	1:AA:106:C:N3	2.83	0.47
31:BE:3:GLY:HA3	31:BE:81:ILE:CG2	2.45	0.47
40:DR:43:GLU:C	40:DR:45:ARG:N	2.67	0.47
20:CT:46:GLU:HG2	20:CT:48:LYS:HE2	1.96	0.47
1:AA:749:C:H2'	1:AA:750:G:H8	1.79	0.47
18:AR:33:ASP:OD2	18:AR:35:ARG:N	2.46	0.47
30:DD:43:ARG:CB	30:DD:54:ARG:HB3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2716:U:C2'	27:DA:2717:G:H5'	2.44	0.47
1:CA:1058:G:H2'	1:CA:1059:C:O4'	2.15	0.47
14:CN:24:CYS:CB	14:CN:29:ARG:HB3	2.45	0.47
6:CF:30:LEU:C	6:CF:35:ALA:HB3	2.35	0.47
27:DA:2136:C:H2'	27:DA:2137:C:C6	2.47	0.47
27:BA:2563:U:H2'	27:BA:2564:A:H3'	1.96	0.47
27:BA:140:G:N3	27:BA:142:A:N1	2.63	0.47
1:CA:50:A:H1'	1:CA:52:G:C8	2.49	0.47
27:BA:2692:C:H2'	27:BA:2693:A:C8	2.50	0.47
36:BN:30:ILE:CG2	36:BN:52:VAL:HG11	2.35	0.47
1:AA:1286:A:H2	21:AU:22:ARG:NH2	2.13	0.47
16:CP:74:LEU:O	16:CP:75:ARG:C	2.54	0.47
15:AO:62:GLN:O	15:AO:65:ARG:HB2	2.15	0.47
27:DA:271(A):A:C8	27:DA:271(B):C:C6	2.99	0.47
7:CG:143:ARG:HB2	7:CG:143:ARG:NH1	2.30	0.47
12:CL:5:ASN:CB	17:CQ:34:LYS:HZ3	2.27	0.47
27:DA:2481:G:O2'	27:DA:2482:G:P	2.73	0.47
27:DA:2807:G:C2'	27:DA:2808:U:H5''	2.44	0.47
40:DR:28:LEU:HD23	40:DR:34:ILE:HG12	1.97	0.47
27:DA:792:G:H3'	27:DA:792:G:OP1	2.14	0.47
1:CA:699:C:C2'	1:CA:700:G:H5'	2.44	0.47
27:BA:1332:G:H22	27:BA:1609:A:H2'	1.79	0.47
12:AL:63:VAL:HG21	12:AL:95:TYR:CD1	2.50	0.47
37:BO:97:ARG:C	37:BO:98:VAL:HG12	2.35	0.47
15:CO:9:GLN:O	15:CO:12:ILE:HB	2.15	0.47
27:DA:1982:C:H2'	27:DA:1983:C:C6	2.49	0.47
1:AA:1118:C:O2'	1:AA:1119:C:H5'	2.15	0.47
2:AB:48:MET:O	2:AB:49:GLU:C	2.52	0.47
2:CB:87:ARG:NE	2:CB:233:SER:HB2	2.30	0.47
48:BZ:16:ALA:O	48:BZ:19:ARG:N	2.48	0.47
27:DA:2543:G:H2'	27:DA:2544:G:O4'	2.15	0.47
4:AD:119:GLN:NE2	4:AD:123:HIS:CD2	2.79	0.47
4:AD:187:ARG:HH11	4:AD:187:ARG:HG2	1.80	0.47
27:BA:1912:A:H5'	27:BA:1918:A:N1	2.28	0.47
27:BA:339:U:C2'	27:BA:340:A:H5'	2.45	0.47
21:CU:24:ARG:HG2	21:CU:24:ARG:HH11	1.79	0.47
27:BA:2533:A:H3'	27:BA:2534:A:H5''	1.96	0.47
27:BA:978:G:O4'	27:BA:1001:A:C2	2.68	0.47
27:BA:1465:G:C4	27:BA:1466:G:C8	3.03	0.47
7:CG:26:PHE:CD2	7:CG:62:PHE:HE1	2.33	0.47
27:BA:2642:G:C6	27:BA:2643:G:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2773:C:H2'	27:BA:2774:C:C6	2.43	0.47
31:BE:26:ILE:HB	31:BE:182:LEU:HB3	1.96	0.47
27:DA:1722:A:C2	27:DA:1740:G:H8	2.33	0.47
39:BQ:39:PRO:HD3	39:BQ:99:PRO:HG3	1.96	0.47
39:DQ:109:VAL:CG1	39:DQ:113:GLN:HB3	2.44	0.47
48:DZ:109:GLY:HA3	48:DZ:144:GLU:OE1	2.15	0.47
1:AA:1459:C:O2'	1:AA:1460:A:H5'	2.15	0.47
47:BY:42:VAL:O	47:BY:65:ALA:HB3	2.15	0.47
1:AA:659:U:P	15:AO:8:LYS:HE2	2.54	0.47
7:AG:70:LYS:HB3	7:AG:96:GLN:CG	2.44	0.47
6:CF:99:ALA:HB3	18:CR:29:PHE:CZ	2.50	0.47
25:AY:32:U:O2'	25:AY:35:G:N7	2.39	0.47
1:CA:182:U:H2'	1:CA:182:U:O2	2.14	0.47
9:CI:112:LYS:NZ	9:CI:113:LYS:O	2.48	0.47
8:AH:74:PRO:CG	8:AH:75:ARG:H	2.28	0.47
27:BA:272(E):G:C6	27:BA:364:C:N4	2.83	0.47
1:AA:1026:G:H2'	1:AA:1026:G:N3	2.28	0.47
27:DA:845:G:H5''	27:DA:845:G:H8	1.79	0.47
34:BH:82:GLY:O	34:BH:83:TYR:O	2.32	0.47
27:BA:295:G:N1	27:BA:296:C:C4	2.83	0.47
27:DA:191:A:C2	27:DA:192:C:C2	3.02	0.47
11:AK:93:GLN:HA	11:AK:93:GLN:OE1	2.15	0.47
35:DI:125:GLU:OE1	35:DI:125:GLU:HA	2.14	0.47
27:DA:614:U:O2	27:DA:614:U:O4'	2.31	0.47
7:AG:64:GLN:O	7:AG:68:ASN:HB2	2.15	0.47
37:DO:29:ASN:O	37:DO:30:ALA:C	2.53	0.47
27:BA:2808:U:C5'	27:BA:2891:G:O6	2.61	0.46
32:BF:2:LYS:HG2	32:BF:25:PRO:HB2	1.97	0.46
1:AA:886:G:H2'	1:AA:887:G:O4'	2.15	0.46
48:DZ:157:PRO:HB2	48:DZ:158:PRO:CD	2.46	0.46
4:CD:204:ILE:HG12	4:CD:204:ILE:H	1.47	0.46
53:B4:40:ILE:HG23	53:B4:59:VAL:CG2	2.45	0.46
53:B4:62:CYS:C	53:B4:64:LYS:H	2.18	0.46
38:BP:17:LYS:C	38:BP:19:VAL:N	2.68	0.46
47:BY:46:LYS:C	47:BY:47:LYS:CG	2.83	0.46
47:BY:62:GLU:OE1	47:BY:62:GLU:CA	2.63	0.46
27:BA:559:G:C2'	27:BA:560:C:H5'	2.45	0.46
36:BN:41:ASP:O	43:BU:64:ARG:NE	2.44	0.46
43:BU:65:ILE:O	43:BU:68:ALA:N	2.44	0.46
27:BA:283:A:H4'	27:BA:284:U:OP2	2.14	0.46
27:DA:999:U:O2	27:DA:1000:A:C8	2.67	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DN:38:HIS:HA	43:DU:67:ALA:CB	2.45	0.46
27:DA:1151:G:O2'	43:DU:77:SER:O	2.32	0.46
47:DY:97:ARG:O	47:DY:98:VAL:HB	2.16	0.46
42:BT:36:GLU:HB3	42:BT:38:ASN:OD1	2.16	0.46
47:DY:28:LYS:HG3	47:DY:37:VAL:HB	1.96	0.46
41:DS:99:LYS:O	41:DS:101:LEU:HD12	2.15	0.46
27:DA:2418:A:C2	27:DA:2419:U:C2	3.03	0.46
36:DN:112:LEU:O	36:DN:112:LEU:HD12	2.14	0.46
27:DA:2016:U:H5''	27:DA:2058:A:OP1	2.15	0.46
27:DA:2559:C:O2	27:DA:2559:C:H2'	2.14	0.46
27:DA:2581:G:C8	27:DA:2582:G:O6	2.68	0.46
27:DA:753:C:O2	27:DA:753:C:C2'	2.63	0.46
27:DA:819:A:C4	27:DA:1189:A:C2	3.02	0.46
44:DV:76:LYS:O	44:DV:77:ALA:O	2.33	0.46
20:AT:26:ASN:HB3	20:AT:71:THR:HG23	1.96	0.46
27:BA:1006:C:C2	27:BA:1138:G:N2	2.83	0.46
55:B6:16:CYS:SG	55:B6:16:CYS:O	2.74	0.46
4:AD:9:CYS:HB2	4:AD:22:LYS:NZ	2.29	0.46
1:CA:42:G:H2'	1:CA:43:C:O4'	2.15	0.46
1:CA:68:G:N1	1:CA:102:G:N1	2.63	0.46
1:CA:66:G:O2'	1:CA:173:U:C5	2.53	0.46
1:CA:218:C:O2'	1:CA:219:C:O5'	2.33	0.46
8:AH:38:ILE:HD11	8:AH:118:VAL:HB	1.97	0.46
8:AH:38:ILE:O	8:AH:42:GLU:HG2	2.15	0.46
2:AB:189:ASP:OD1	2:AB:205:ASP:OD1	2.32	0.46
2:AB:28:PHE:HD2	2:AB:194:PRO:HD3	1.78	0.46
1:AA:673:G:C6	1:AA:734:G:C6	3.03	0.46
27:DA:2755:C:C4	58:D9:19:ARG:NH1	2.83	0.46
1:AA:377:G:OP1	16:AP:3:LYS:HD3	2.15	0.46
27:DA:2334:G:O4'	41:DS:15:ARG:HG3	2.15	0.46
1:AA:1331:G:H4'	1:AA:1331:G:OP1	2.15	0.46
17:CQ:76:LEU:CG	17:CQ:76:LEU:O	2.63	0.46
27:BA:1310:G:C2'	27:BA:1311:G:H5'	2.45	0.46
27:BA:1657:C:H2'	27:BA:1658:C:C6	2.51	0.46
1:CA:836:G:H2'	1:CA:837:G:H8	1.80	0.46
36:DN:133:GLN:HG2	36:DN:135:PRO:CD	2.31	0.46
15:AO:81:LEU:CG	15:AO:82:ILE:N	2.78	0.46
1:CA:258:G:H2'	1:CA:259:G:H8	1.79	0.46
20:CT:84:LEU:HD13	20:CT:88:VAL:HG23	1.96	0.46
34:BH:109:PHE:H	34:BH:109:PHE:HD1	1.62	0.46
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.98	0.46
27:BA:1479:G:C5	27:BA:1480:G:C8	3.03	0.46
34:DH:12:PRO:HG3	34:DH:50:VAL:HG23	1.96	0.46
48:DZ:94:PRO:HB2	48:DZ:126:LYS:NZ	2.30	0.46
39:DQ:49:ALA:O	39:DQ:53:ALA:HB2	2.14	0.46
38:BP:124:LYS:HG3	38:BP:143:GLY:HA3	1.97	0.46
27:BA:2162:G:O2'	27:BA:2163:C:H5'	2.15	0.46
27:DA:2160:G:H2'	27:DA:2161:C:C5	2.50	0.46
27:DA:1312:U:C4	27:DA:1603:A:N6	2.83	0.46
35:BI:109:ILE:HG22	35:BI:111:PRO:CD	2.44	0.46
49:D0:40:GLN:HE21	49:D0:43:THR:HA	1.77	0.46
55:B6:32:ASN:O	55:B6:33:LYS:CB	2.63	0.46
1:AA:620:C:H2'	1:AA:621:A:O4'	2.14	0.46
51:B2:55:ARG:O	51:B2:56:GLN:C	2.53	0.46
27:DA:1677:A:H8	27:DA:1677:A:O5'	1.99	0.46
34:DH:89:ILE:HD11	34:DH:129:THR:HG22	1.97	0.46
39:BQ:56:ARG:O	39:BQ:57:HIS:O	2.33	0.46
27:DA:847:U:H2'	27:DA:848:G:C5'	2.42	0.46
30:BD:13:ARG:NH1	30:BD:13:ARG:HG3	2.30	0.46
13:AM:68:GLY:HA2	13:AM:71:ARG:NH2	2.19	0.46
7:AG:153:HIS:HB3	11:AK:58:PRO:HG3	1.98	0.46
5:AE:73:ASN:O	5:AE:75:THR:N	2.42	0.46
27:BA:930:U:H4'	27:BA:931:G:O5'	2.16	0.46
42:DT:110:ILE:HG22	42:DT:111:ARG:N	2.30	0.46
42:DT:125:ARG:O	42:DT:128:GLU:HG2	2.14	0.46
1:CA:838:G:H22	1:CA:840:C:H5'	1.80	0.46
1:AA:1326:C:O2'	1:AA:1327:C:H5'	2.15	0.46
5:CE:91:LEU:HG	5:CE:120:THR:HG21	1.96	0.46
7:CG:139:GLU:O	7:CG:140:ASP:C	2.52	0.46
50:D1:11:ARG:CB	50:D1:12:PRO:HD2	2.28	0.46
34:DH:53:GLU:O	34:DH:65:HIS:HD2	1.98	0.46
19:AS:5:LEU:C	19:AS:6:LYS:HE3	2.36	0.46
27:BA:1049:C:C4	27:BA:1111:A:C2	3.03	0.46
7:AG:69:VAL:HG12	7:AG:69:VAL:O	2.15	0.46
32:DF:132:VAL:CG2	32:DF:133:ASN:H	2.12	0.46
1:CA:570:G:C6	1:CA:873:A:C6	3.02	0.46
48:BZ:174:VAL:HB	48:BZ:175:PRO:HD2	1.97	0.46
6:CF:89:MET:SD	18:CR:76:LEU:CD2	2.96	0.46
2:AB:52:GLU:O	2:AB:56:ARG:HG2	2.15	0.46
2:CB:75:LYS:C	2:CB:77:ALA:H	2.16	0.46
27:DA:1162:G:HO2'	27:DA:1163:G:H5'	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1225:A:H3'	13:AM:103:THR:OG1	2.15	0.46
13:AM:91:ARG:HH22	13:AM:103:THR:HG22	1.80	0.46
28:DB:17:C:H2'	28:DB:18:G:C8	2.48	0.46
27:DA:2543:G:C2	27:DA:2544:G:N3	2.83	0.46
13:AM:54:VAL:O	13:AM:58:GLU:N	2.30	0.46
1:AA:183:G:H2'	1:AA:184:G:H8	1.80	0.46
1:AA:222:U:H2'	1:AA:223:U:C6	2.50	0.46
27:BA:2656:U:O2	27:BA:2656:U:H2'	2.14	0.46
49:D0:11:ARG:O	49:D0:14:ARG:NH2	2.48	0.46
27:DA:1335:U:O2'	27:DA:1336:A:H5'	2.16	0.46
5:AE:144:THR:C	5:AE:146:ALA:N	2.66	0.46
5:AE:144:THR:O	5:AE:145:LYS:C	2.53	0.46
1:CA:1523:G:H2'	1:CA:1524:C:C6	2.50	0.46
1:CA:1256:A:O3'	1:CA:1257:U:H4'	2.15	0.46
48:DZ:144:GLU:OE1	48:DZ:145:ILE:HG23	2.15	0.46
27:DA:811:U:OP2	38:DP:25:SER:N	2.47	0.46
1:CA:47:C:H4'	1:CA:48:C:O5'	2.15	0.46
27:BA:1632:A:H2'	27:BA:1633:G:C8	2.50	0.46
27:BA:1613:G:N1	27:BA:1617:C:C2	2.83	0.46
27:BA:945:A:H5'	27:BA:946:G:OP2	2.15	0.46
27:DA:887:A:H2'	27:DA:888:C:H5''	1.97	0.46
27:DA:1830:C:O2'	27:DA:1831:G:H5'	2.16	0.46
2:CB:168:THR:HA	2:CB:171:ALA:HB2	1.97	0.46
27:DA:249:C:C2'	27:DA:249:C:O2	2.63	0.46
1:AA:1255:G:H5''	3:AC:26:LYS:HZ2	1.79	0.46
16:CP:45:THR:C	16:CP:47:ASP:N	2.68	0.46
35:DI:120:ILE:HG22	35:DI:122:GLU:H	1.80	0.46
27:DA:749:C:H4'	27:DA:1271:G:N3	2.30	0.46
1:CA:189(A):C:H2'	1:CA:189(B):C:H6	1.81	0.46
27:DA:1812:A:H2'	27:DA:1813:G:C8	2.51	0.46
36:DN:90:MET:O	36:DN:92:ALA:N	2.48	0.46
27:BA:839:U:H1'	27:BA:1191:G:H1'	1.96	0.46
1:CA:974:A:OP2	14:CN:41:ARG:NH1	2.48	0.46
1:CA:1115:C:H1'	14:CN:61:TRP:O	2.15	0.46
41:BS:96:GLY:C	41:BS:98:VAL:N	2.68	0.46
27:BA:616:G:C6	27:BA:618:C:C4	3.04	0.46
1:CA:1075:C:P	2:CB:103:THR:HG21	2.55	0.46
48:DZ:157:PRO:CB	48:DZ:158:PRO:CD	2.93	0.46
33:BG:97:ASP:O	33:BG:101:ILE:HG23	2.15	0.46
27:BA:478:A:C6	27:BA:480:A:C6	3.04	0.46
16:CP:82:GLN:O	16:CP:83:GLU:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2406:U:C2	38:DP:72:PRO:HB2	2.49	0.46
1:AA:265:G:C2	1:AA:267:C:O4'	2.68	0.46
27:DA:2230:G:C6	27:DA:2231:C:C4	3.03	0.46
1:AA:920:U:C1'	1:AA:1080:A:C2	2.99	0.46
27:DA:532:A:H4'	27:DA:533:G:C8	2.51	0.46
29:BC:212:VAL:O	29:BC:213:TYR:CB	2.63	0.46
30:BD:26:LYS:O	30:BD:27:THR:HB	2.15	0.46
31:DE:89:ASP:O	31:DE:90:THR:CB	2.63	0.46
27:DA:2276:G:N2	27:DA:2277:G:C5	2.83	0.46
27:DA:2428:G:N2	38:DP:60:MET:HE1	2.30	0.46
27:DA:1669:A:H2'	27:DA:1670:C:H5'	1.96	0.46
27:DA:1952:A:C6	27:DA:1953:A:N1	2.83	0.46
27:DA:2571:C:C3'	27:DA:2572:A:C5'	2.93	0.46
27:DA:971:C:OP1	27:DA:974:G:C8	2.69	0.46
55:B6:18:ARG:HB2	55:B6:19:ARG:H	1.39	0.46
55:B6:35:GLU:OE1	55:B6:36:LEU:N	2.48	0.46
27:DA:307:G:H22	27:DA:309:G:H3'	1.77	0.46
27:DA:314:A:H2'	27:DA:315:G:C8	2.51	0.46
47:BY:27:VAL:HG12	47:BY:29:GLU:OE1	2.15	0.46
1:AA:1206:G:O6	1:AA:1207:G:C6	2.68	0.46
2:AB:164:VAL:HB	2:AB:186:ALA:HB2	1.97	0.46
42:DT:27:THR:HG23	42:DT:28:VAL:N	2.30	0.46
1:AA:295:C:H2'	1:AA:296:U:O4'	2.15	0.46
46:BX:63:LYS:HG3	46:BX:63:LYS:O	2.15	0.46
41:DS:38:GLN:HB3	41:DS:47:THR:HG23	1.96	0.46
3:CC:148:GLY:HA3	3:CC:203:PHE:HB3	1.97	0.46
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.15	0.46
27:BA:2001:A:C2	27:BA:2002:G:C4	3.03	0.46
36:DN:134:ARG:H	36:DN:135:PRO:HD3	1.80	0.46
16:AP:6:LEU:CD1	16:AP:6:LEU:N	2.77	0.46
15:AO:77:ARG:HA	15:AO:80:ALA:HB3	1.97	0.46
46:BX:17:ALA:O	46:BX:20:GLY:N	2.47	0.46
9:CI:125:TYR:HD2	9:CI:126:SER:N	2.12	0.46
50:B1:8:SER:HB3	50:B1:66:HIS:CD2	2.50	0.46
27:BA:1479:G:H5'	27:BA:1558:A:H2	1.80	0.46
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.81	0.46
48:DZ:73:VAL:HG12	48:DZ:75:LEU:HD22	1.98	0.46
38:BP:91:PHE:CD2	38:BP:95:VAL:HG12	2.50	0.46
1:CA:163:C:H2'	1:CA:164:U:C6	2.50	0.46
22:CV:4:A:C2	22:CV:5:U:O2	2.68	0.46
31:BE:134:ILE:H	31:BE:134:ILE:HD13	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2303:G:H1'	33:DG:132:ASN:HD22	1.78	0.46
30:BD:13:ARG:HH11	30:BD:13:ARG:HG3	1.80	0.46
1:AA:940:C:OP1	7:AG:102:ARG:HD3	2.16	0.46
8:AH:14:ARG:C	8:AH:16:ALA:H	2.18	0.46
2:CB:97:TRP:HE3	2:CB:97:TRP:O	1.98	0.46
27:DA:2295:C:O2	27:DA:2338:G:C2	2.68	0.46
54:D5:40:LYS:HB2	54:D5:41:PRO:HD2	1.96	0.46
27:DA:1385:G:O2'	27:DA:1396:U:C6	2.67	0.46
30:DD:270:ILE:C	30:DD:271:ILE:HG12	2.35	0.46
4:CD:57:ARG:NH2	5:CE:107:ARG:CZ	2.78	0.46
27:DA:9:U:H6	27:DA:9:U:O5'	1.98	0.46
27:BA:1411:C:N4	27:BA:1412:A:H62	2.13	0.46
40:DR:51:LEU:CA	40:DR:54:LEU:HB2	2.43	0.46
27:BA:1055:G:H2'	27:BA:1108:U:H5'	1.97	0.46
31:BE:89:ASP:O	31:BE:90:THR:HB	2.16	0.46
27:DA:1210:A:H5'	27:DA:1211:U:H3'	1.96	0.46
27:DA:475:U:C2'	27:DA:476:G:C8	2.98	0.46
39:DQ:35:VAL:HB	39:DQ:102:VAL:HG22	1.97	0.46
1:AA:1192:C:N4	1:AA:1193:G:C4	2.83	0.46
35:DI:19:VAL:HG22	35:DI:20:ASP:N	2.30	0.46
54:B5:40:LYS:HB2	54:B5:41:PRO:HD2	1.97	0.46
1:CA:810:C:H2'	1:CA:811:C:H5'	1.96	0.46
1:AA:250:A:H2	1:AA:274:A:N6	2.12	0.46
1:CA:16:A:N1	1:CA:919:A:C2	2.75	0.46
2:AB:80:ILE:HG21	2:AB:208:ILE:HG23	1.97	0.46
37:BO:108:GLU:C	37:BO:110:GLY:N	2.64	0.46
2:CB:208:ILE:HA	2:CB:211:ILE:HB	1.97	0.46
27:DA:1998:G:H4'	27:DA:2724:C:O2'	2.15	0.46
35:DI:64:GLU:HA	35:DI:64:GLU:OE1	2.14	0.46
27:DA:2093:G:C6	27:DA:2225:A:C8	3.03	0.46
27:BA:2118:U:H5	27:BA:2149:G:H5'	1.79	0.46
20:AT:53:LEU:HA	20:AT:56:MET:HB3	1.97	0.46
27:DA:1722:A:C6	27:DA:1741:A:C6	3.03	0.46
11:AK:105:VAL:HG23	11:AK:105:VAL:O	2.15	0.46
1:CA:624:C:O2'	1:CA:625:G:C5'	2.62	0.46
27:BA:2024:G:O2'	27:BA:2025:C:H5'	2.14	0.46
27:DA:975(A):G:H2'	27:DA:976:C:H6	1.81	0.46
8:CH:69:ARG:HH11	8:CH:77:GLU:N	2.13	0.46
27:BA:319:C:H2'	27:BA:320:A:O4'	2.15	0.46
27:BA:83:G:N2	27:BA:102:G:O2'	2.47	0.46
27:DA:714:U:C2'	27:DA:715:G:H5''	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DZ:13:LYS:HB3	48:DZ:16:ALA:HB3	1.96	0.46
2:CB:19:HIS:ND1	2:CB:20:GLU:HG2	2.28	0.46
2:AB:229:VAL:CG1	2:AB:230:VAL:N	2.78	0.46
13:CM:112:GLY:HA2	13:CM:113:PRO:HD2	1.73	0.46
27:DA:888:C:H3'	27:DA:889:C:H5'	1.96	0.46
18:AR:22:VAL:O	18:AR:24:ALA:N	2.48	0.46
27:BA:2548:G:O5'	27:BA:2548:G:H8	1.99	0.46
32:BF:154:VAL:HG22	32:BF:191:ARG:CB	2.45	0.46
1:CA:152:A:N6	1:CA:170:U:C2	2.84	0.46
2:AB:109:SER:C	2:AB:111:ARG:H	2.18	0.46
27:DA:418:G:H2'	27:DA:419:C:H6	1.81	0.46
53:D4:37:PRO:O	53:D4:55:PRO:HG3	2.15	0.46
1:CA:823:G:O2'	1:CA:824:C:H5'	2.15	0.46
27:BA:107:C:C4	27:BA:108:U:C5	3.03	0.46
27:DA:2458:G:H8	27:DA:2458:G:O5'	1.98	0.46
1:CA:1401:G:O5'	1:CA:1401:G:H8	1.97	0.46
29:BC:141:LYS:O	29:BC:142:ALA:HB2	2.14	0.46
29:DC:182:PRO:O	29:DC:183:GLU:CB	2.61	0.46
27:BA:592:G:H2'	57:B8:4:MET:HE3	1.97	0.46
27:BA:250:G:C6	27:BA:251:A:C6	3.04	0.46
38:BP:114:ILE:HD12	38:BP:115:LEU:H	1.81	0.46
1:CA:977:A:H8	1:CA:982:U:O4	1.99	0.46
27:DA:245:G:O6	57:D8:8:LYS:NZ	2.40	0.46
27:DA:1790:C:H2'	27:DA:1791:A:C5	2.50	0.46
27:BA:512:G:HO2'	27:BA:513:A:H8	1.63	0.46
8:AH:65:TYR:CD1	8:AH:65:TYR:N	2.84	0.46
8:AH:17:THR:CB	8:AH:78:GLN:OE1	2.54	0.46
42:BT:28:VAL:HG13	42:BT:45:PHE:O	2.14	0.46
27:DA:977:G:H1'	27:DA:1000:A:H61	1.81	0.46
27:DA:998:C:H42	27:DA:1158:C:N4	2.14	0.46
44:DV:38:LEU:HD13	44:DV:55:ALA:CB	2.43	0.46
44:DV:72:VAL:HG23	44:DV:85:LYS:HB3	1.97	0.46
27:DA:96:G:N2	27:DA:97:C:C2	2.83	0.46
27:DA:1855:G:C2	27:DA:1856:G:C8	3.02	0.46
47:DY:76:CYS:CB	47:DY:77:PRO:HD2	2.45	0.46
38:DP:86:LYS:N	38:DP:117:GLU:O	2.48	0.46
36:DN:120:LEU:HD13	36:DN:122:VAL:HG23	1.96	0.46
27:DA:2553:G:C6	27:DA:2583:G:O2'	2.69	0.46
27:DA:2618:G:O2'	27:DA:2619:C:H5'	2.16	0.46
27:DA:562:U:O2'	27:DA:572:A:O4'	2.33	0.46
27:BA:1138:G:H2'	27:BA:1139:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1138:G:N3	36:BN:106:MET:HE1	2.31	0.46
27:BA:1022:G:O6	36:BN:66:LYS:HE3	2.16	0.46
45:BW:14:PRO:O	45:BW:16:LYS:N	2.48	0.46
1:CA:1104:G:H2'	1:CA:1105:A:O4'	2.15	0.46
14:AN:40:CYS:HG	14:AN:43:CYS:HG	1.58	0.46
12:CL:94:ARG:C	12:CL:95:TYR:CD1	2.89	0.46
2:AB:194:PRO:HA	2:AB:200:ILE:CD1	2.44	0.46
1:CA:391:G:C6	1:CA:392:G:C5	3.04	0.46
27:DA:2751:G:H2'	27:DA:2751:G:N3	2.30	0.46
27:DA:1242:A:C2	38:DP:8:PRO:HG3	2.50	0.46
41:BS:85:VAL:HB	41:BS:86:ALA:H	1.44	0.46
7:AG:38:LEU:O	7:AG:40:ALA:N	2.48	0.46
20:CT:33:ILE:CD1	20:CT:62:LEU:HB3	2.43	0.46
27:BA:1438:U:C4	27:BA:1552:G:N2	2.83	0.46
27:DA:374:A:H3'	27:DA:375:C:C6	2.51	0.46
1:AA:29:G:H1	1:AA:554:C:H42	1.63	0.46
1:CA:1216:G:H5'	14:CN:5:ALA:HB2	1.98	0.46
1:CA:522:C:O4'	1:CA:536:C:H4'	2.15	0.46
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.50	0.46
39:BQ:75:THR:CB	39:BQ:87:LYS:HZ2	2.27	0.46
21:CU:12:LYS:HD2	21:CU:17:THR:HG1	1.81	0.46
48:DZ:96:GLU:CB	48:DZ:124:LEU:HD11	2.42	0.46
25:AY:69:C:H2'	25:AY:70:C:O4'	2.16	0.46
27:DA:1311:G:O2'	27:DA:1312:U:C5	2.68	0.46
27:DA:319:C:C4	27:DA:320:A:N7	2.84	0.46
31:BE:125:GLY:HA3	31:BE:134:ILE:O	2.15	0.46
8:AH:84:ARG:O	8:AH:135:CYS:HB2	2.16	0.46
37:DO:17:ARG:H	37:DO:46:ALA:HA	1.80	0.46
36:DN:79:PRO:C	36:DN:81:GLY:H	2.17	0.46
33:DG:123:ASN:O	33:DG:126:ASP:CG	2.54	0.46
33:DG:126:ASP:O	33:DG:128:ARG:N	2.41	0.46
39:BQ:58:PHE:O	39:BQ:59:ARG:O	2.34	0.46
52:D3:11:SER:OG	52:D3:12:PRO:HD2	2.15	0.46
30:BD:16:MET:HG3	30:BD:206:LEU:O	2.16	0.46
27:BA:845:G:H8	27:BA:845:G:OP2	1.97	0.46
15:AO:85:LEU:HD23	15:AO:85:LEU:N	2.31	0.46
27:DA:1030:G:H21	58:D9:5:ALA:HB1	1.80	0.46
10:CJ:4:ILE:HD11	10:CJ:77:PRO:HA	1.96	0.46
40:DR:28:LEU:HD23	40:DR:34:ILE:CG1	2.46	0.46
40:DR:51:LEU:HA	40:DR:54:LEU:HD22	1.98	0.46
47:BY:2:ARG:C	47:BY:4:LYS:N	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2019:A:H2'	27:BA:2020:A:O5'	2.15	0.46
1:CA:738:C:H2'	1:CA:739:C:C6	2.50	0.46
12:AL:30:ARG:HA	12:AL:30:ARG:HE	1.80	0.46
3:AC:48:TYR:O	3:AC:50:ALA:N	2.48	0.46
32:BF:34:TRP:HB2	38:BP:10:PRO:HB3	1.98	0.46
52:D3:5:LYS:HE2	52:D3:57:GLU:HB3	1.96	0.46
33:BG:9:ARG:C	33:BG:11:TYR:N	2.67	0.46
43:BU:27:LEU:N	43:BU:27:LEU:CD2	2.69	0.46
50:D1:69:LYS:O	50:D1:72:GLU:HB3	2.15	0.46
14:AN:13:THR:HG23	14:AN:20:ALA:HB2	1.97	0.46
8:CH:24:THR:HG22	8:CH:25:ASP:N	2.22	0.46
27:DA:80:G:O2'	27:DA:81:G:H5'	2.15	0.46
13:AM:116:THR:HG22	13:AM:117:VAL:H	1.79	0.46
27:BA:2033:A:C5	27:BA:2036:C:C4	3.03	0.46
27:DA:1628:G:O2'	27:DA:1629:U:H5'	2.15	0.46
18:CR:74:ARG:HG3	18:CR:79:LEU:HD12	1.95	0.46
19:AS:24:ALA:O	19:AS:25:LYS:CB	2.60	0.46
23:AW:23:G:C8	23:AW:23:G:H5'	2.45	0.46
27:BA:2533:A:H2'	27:BA:2534:A:C5'	2.43	0.46
2:CB:21:ARG:O	2:CB:22:LYS:HB2	2.15	0.46
27:BA:2858:C:H2'	27:BA:2859:G:O4'	2.16	0.46
27:BA:468:G:N7	56:B7:39:ARG:NH2	2.64	0.46
1:CA:71:C:H2'	1:CA:72:C:H6	1.80	0.46
49:B0:41:ARG:N	49:B0:41:ARG:HD2	2.29	0.46
41:DS:21:THR:C	41:DS:23:ARG:N	2.68	0.46
48:BZ:107:PRO:C	48:BZ:109:GLY:N	2.67	0.46
25:AY:42:G:OP2	25:AY:42:G:H8	1.98	0.46
34:DH:132:ARG:HG2	34:DH:132:ARG:HH11	1.81	0.46
7:CG:2:ALA:HB1	7:CG:5:ARG:O	2.14	0.46
5:AE:28:PHE:N	5:AE:28:PHE:CD1	2.83	0.46
32:DF:61:GLY:O	32:DF:62:ARG:C	2.53	0.46
28:DB:11:C:H3'	28:DB:12:C:H6	1.80	0.46
35:BI:49:ALA:O	35:BI:53:ALA:N	2.46	0.46
5:AE:46:GLY:O	5:AE:54:ALA:HB1	2.16	0.46
27:BA:1523:U:O2'	27:BA:1524:G:H5'	2.15	0.46
27:BA:643:A:N7	55:B6:42:TRP:HH2	2.14	0.46
28:BB:1:U:H5	28:BB:2:C:C4	2.34	0.46
3:AC:23:TYR:HA	10:AJ:11:PHE:CE1	2.51	0.46
27:DA:1048:A:C2	27:DA:1109:C:N4	2.81	0.46
39:DQ:11:LYS:NZ	39:DQ:88:GLY:O	2.46	0.46
2:AB:223:ILE:HA	2:AB:226:ARG:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1705:G:H2'	27:BA:1706:U:O4'	2.15	0.46
27:BA:614:U:H5''	27:BA:614(A):U:OP2	2.16	0.46
1:CA:986:A:O2'	1:CA:987:G:H5'	2.15	0.46
27:DA:1021:A:C2	27:DA:1023:U:C2	3.02	0.46
27:DA:1140:C:P	36:DN:66:LYS:HZ3	2.38	0.46
27:DA:1142(A):A:C8	27:DA:1142(A):A:H5'	2.43	0.46
32:BF:38:ARG:CG	32:BF:38:ARG:HH11	2.25	0.46
1:AA:268:C:C5	1:AA:269:C:C5	3.04	0.46
32:DF:124:LEU:HG	32:DF:126:VAL:CG1	2.45	0.46
42:BT:28:VAL:CG1	42:BT:46:GLU:HA	2.45	0.46
42:BT:29:ARG:HA	42:BT:29:ARG:HD3	1.49	0.46
27:DA:1009:A:O2'	27:DA:1010:A:H5'	2.15	0.46
27:DA:992:C:C3'	27:DA:992:C:C6	2.98	0.46
27:DA:1568:G:P	30:DD:61:LEU:HB2	2.55	0.46
30:DD:63:ARG:CD	30:DD:63:ARG:N	2.79	0.46
27:DA:93:G:C2'	27:DA:94:C:O4'	2.58	0.46
47:DY:28:LYS:CA	47:DY:39:VAL:H	2.29	0.46
54:B5:17:ASP:O	54:B5:20:ARG:HB2	2.16	0.46
1:AA:473:G:C4	1:AA:474:G:N7	2.84	0.46
41:DS:97:ARG:NH2	41:DS:99:LYS:N	2.62	0.46
11:AK:38:ASN:ND2	11:AK:38:ASN:H	2.12	0.46
27:DA:2371:G:H4'	55:D6:45:LYS:HB2	1.95	0.46
33:DG:15:VAL:HG13	33:DG:175:LEU:CD2	2.44	0.46
27:DA:302:C:H2'	27:DA:303:U:C6	2.50	0.46
1:CA:402:G:H4'	1:CA:620:C:O2	2.15	0.46
47:BY:10:GLY:HA2	47:BY:27:VAL:CG1	2.34	0.46
2:AB:69:LEU:HD22	2:AB:159:PRO:HG2	1.96	0.46
58:D9:32:HIS:O	58:D9:34:GLN:HG3	2.15	0.46
1:AA:99:U:H2'	1:AA:100:C:C6	2.49	0.46
2:AB:106:LYS:HG2	2:AB:107:THR:N	2.31	0.46
27:DA:600:G:O3'	32:DF:108:LYS:HE3	2.15	0.46
32:DF:109:GLY:HA2	32:DF:112:MET:HE3	1.98	0.46
7:AG:38:LEU:C	7:AG:40:ALA:H	2.18	0.46
1:AA:481:G:H1'	1:AA:483:C:N4	2.29	0.46
34:BH:151:ILE:O	34:BH:152:ARG:HG2	2.15	0.46
27:DA:58:G:O2'	27:DA:59:U:H5'	2.14	0.46
27:DA:691:C:H2'	27:DA:692:C:H6	1.79	0.46
1:CA:1261:A:H5'	1:CA:1283:G:O3'	2.16	0.46
27:BA:2508:G:O2'	27:BA:2509:G:H5'	2.14	0.46
48:DZ:79:ARG:O	48:DZ:81:ARG:N	2.49	0.46
35:DI:37:VAL:HG12	35:DI:38:LEU:CD1	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:146:VAL:CG2	38:BP:147:LEU:H	2.02	0.46
56:D7:13:ALA:O	56:D7:14:LYS:C	2.53	0.46
35:BI:92:VAL:HG12	35:BI:120:ILE:HB	1.97	0.46
27:BA:574:C:H1'	27:BA:2055:C:C6	2.51	0.46
51:B2:3:LEU:HA	51:B2:6:VAL:HG23	1.97	0.46
5:CE:129:ILE:HD12	5:CE:129:ILE:N	2.27	0.46
25:CY:67:C:H2'	25:CY:68:C:H6	1.81	0.46
31:DE:4:ILE:CD1	31:DE:31:CYS:SG	3.04	0.46
38:DP:80:TYR:CD1	38:DP:111:ARG:HB3	2.50	0.46
27:BA:1178:C:C6	27:BA:1179:C:C5	3.04	0.46
2:AB:114:ARG:HD3	2:AB:117:GLU:OE1	2.16	0.46
1:AA:1087:G:H2'	1:AA:1088:G:H8	1.79	0.46
27:BA:906:G:H5'	39:BQ:26:TYR:HH	1.76	0.46
27:BA:906:G:O3'	39:BQ:67:ARG:NH2	2.49	0.46
3:AC:179:ARG:HD2	3:AC:207:VAL:HA	1.97	0.46
1:AA:828:A:H62	1:AA:858:G:H21	1.64	0.46
1:AA:967:C:H2'	1:AA:968:A:N7	2.30	0.46
10:CJ:39:PRO:HB3	10:CJ:70:ARG:HE	1.79	0.46
38:DP:114:ILE:HG23	38:DP:114:ILE:O	2.15	0.46
27:BA:1303:G:H2'	27:BA:1304:C:H6	1.81	0.46
10:CJ:80:LYS:HE3	10:CJ:80:LYS:C	2.36	0.46
6:AF:33:TYR:CB	6:AF:75:LEU:HD12	2.41	0.46
28:BB:91:C:H2'	28:BB:92:C:O5'	2.15	0.46
5:AE:72:GLN:NE2	5:AE:144:THR:CG2	2.78	0.46
27:DA:1701:A:C3'	27:DA:1702:G:H5'	2.46	0.46
27:DA:1772:G:N2	27:DA:1774:C:C5'	2.76	0.46
27:DA:2673:G:O2'	27:DA:2674:G:H5'	2.16	0.46
27:BA:2144:U:H4'	27:BA:2145:C:C5	2.49	0.46
1:AA:1446:U:O2'	1:AA:1447:A:C8	2.66	0.46
1:AA:289:G:N2	1:AA:290:C:C2	2.83	0.46
53:D4:48:ILE:HG22	53:D4:50:THR:HG23	1.96	0.46
4:CD:202:LEU:HA	4:CD:205:GLU:OE2	2.16	0.46
27:BA:2628:C:H4'	27:BA:2781:A:C5	2.51	0.46
43:DU:12:ARG:HA	43:DU:15:LYS:NZ	2.31	0.46
27:DA:2027:G:C5	27:DA:2028:U:C5	3.04	0.46
40:DR:6:SER:C	40:DR:7:GLY:O	2.54	0.46
27:BA:2366:A:H3'	27:BA:2367:G:H8	1.81	0.46
27:DA:363(B):G:H2'	27:DA:363(C):G:C8	2.50	0.46
27:BA:836:G:C5	27:BA:837:C:C4	3.04	0.46
28:BB:79:C:O2'	28:BB:80:U:H5'	2.15	0.46
2:AB:75:LYS:HD3	2:AB:78:GLN:CB	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:23:C:C2'	1:CA:24:U:H5'	2.45	0.46
50:B1:4:VAL:HG22	50:B1:4:VAL:O	2.15	0.46
58:D9:22:ARG:CD	58:D9:35:ARG:HD2	2.46	0.46
1:AA:44:G:H2'	1:AA:45:U:O4'	2.15	0.46
4:AD:38:TYR:HB2	4:AD:44:GLY:O	2.16	0.46
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.81	0.46
27:DA:1956:U:C2'	27:DA:1957:C:H5'	2.45	0.46
27:DA:1224:C:H6	27:DA:1224:C:OP1	1.97	0.46
27:BA:245:G:C2'	27:BA:246:C:H5'	2.45	0.46
1:CA:1225:A:C5'	13:CM:103:THR:OG1	2.63	0.46
2:CB:152:PHE:O	2:CB:154:LEU:N	2.48	0.46
41:BS:20:ARG:HG2	41:BS:20:ARG:HH11	1.81	0.46
32:BF:119:ARG:C	32:BF:121:GLY:N	2.67	0.46
27:BA:2729:G:C1'	31:BE:187:ALA:HB2	2.23	0.46
27:DA:245:G:C6	27:DA:254:G:N2	2.83	0.46
43:BU:62:ILE:O	43:BU:65:ILE:N	2.48	0.46
17:AQ:66:SER:O	17:AQ:67:LYS:C	2.52	0.46
8:AH:20:TYR:HD1	8:AH:65:TYR:HD2	1.63	0.46
27:DA:986:C:O2	27:DA:986:C:H2'	2.15	0.46
29:BC:41:VAL:HG23	29:BC:178:ALA:CB	2.45	0.46
27:DA:84:A:P	47:DY:9:LYS:NZ	2.89	0.46
33:BG:58:GLN:HG3	33:BG:59:GLU:N	2.30	0.46
31:DE:55:ASN:HA	31:DE:55:ASN:HD22	1.50	0.46
31:DE:59:VAL:HG21	31:DE:63:LEU:CG	2.44	0.46
31:DE:59:VAL:HG13	31:DE:60:ASN:H	1.78	0.46
31:DE:61:ARG:HB3	31:DE:62:PRO:CD	2.45	0.46
27:DA:2247:A:C4	27:DA:2248:C:C5	3.04	0.46
27:DA:675:A:OP1	32:DF:63:LYS:NZ	2.40	0.46
27:DA:984:A:O5'	27:DA:984:A:H8	1.99	0.46
31:DE:117:MET:O	31:DE:118:LYS:CB	2.59	0.46
36:BN:91:LEU:HD23	36:BN:98:VAL:HG21	1.97	0.46
27:DA:704:G:O2'	27:DA:705:A:O5'	2.30	0.46
27:DA:727:A:O2'	27:DA:728:G:O4'	2.34	0.46
27:DA:1349:A:N6	27:DA:1598:C:H42	2.12	0.46
46:DX:36:LYS:HG2	46:DX:56:THR:CG2	2.45	0.46
9:AI:53:VAL:CG2	9:AI:55:ALA:H	2.12	0.46
47:BY:27:VAL:O	47:BY:29:GLU:OE1	2.33	0.46
3:AC:154:SER:OG	3:AC:155:GLY:N	2.48	0.46
37:DO:104:ARG:CZ	37:DO:104:ARG:HB3	2.45	0.46
42:DT:62:THR:CA	42:DT:74:ARG:O	2.62	0.46
30:BD:226:MET:HB3	30:BD:230:ASP:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:826:U:H5'	27:BA:827:U:P	2.55	0.46
33:DG:101:ILE:C	33:DG:101:ILE:HD13	2.36	0.46
1:AA:658:G:C6	1:AA:749:C:N4	2.84	0.46
1:CA:260:G:H2'	1:CA:261:U:C6	2.50	0.46
40:BR:79:LEU:HD23	40:BR:83:ILE:HB	1.95	0.46
27:DA:2712:U:H6	27:DA:2712(A):A:C8	2.34	0.46
27:BA:1802:A:C6	27:BA:1803:A:C6	3.03	0.46
1:CA:1049:U:H2'	1:CA:1049:U:O2	2.15	0.46
3:CC:134:ILE:HG22	3:CC:135:LYS:N	2.30	0.46
27:DA:149:A:C2'	27:DA:150:C:O5'	2.63	0.46
29:DC:37:PHE:CD1	29:DC:39:GLU:HG3	2.51	0.46
27:DA:1300:U:O2'	27:DA:1301:A:C5'	2.64	0.46
35:BI:131:LYS:CG	35:BI:132:PRO:CD	2.92	0.46
27:BA:571:A:O2'	27:BA:573:G:O5'	2.23	0.46
27:BA:2350:C:H5'	57:B8:42:ARG:HD3	1.98	0.46
40:DR:11:ASN:O	40:DR:12:ARG:CB	2.63	0.46
31:BE:145:LYS:O	31:BE:148:GLY:CA	2.62	0.46
27:DA:1246:A:P	38:DP:16:ARG:NH2	2.89	0.46
51:B2:5:GLU:O	51:B2:9:GLN:HB2	2.15	0.46
35:DI:66:GLU:C	35:DI:68:LEU:H	2.18	0.46
13:AM:24:GLY:O	13:AM:25:ILE:HD12	2.15	0.46
42:DT:124:ASP:C	42:DT:126:ALA:H	2.19	0.46
27:BA:196:A:OP2	38:BP:46:LYS:NZ	2.44	0.46
27:DA:2290:G:H2'	27:DA:2291:U:O4'	2.15	0.46
5:CE:70:PRO:HB3	5:CE:144:THR:HG23	1.97	0.46
27:BA:489:G:C4	27:BA:1284:A:C6	3.04	0.46
27:BA:1224:C:H6	27:BA:1224:C:OP1	1.98	0.46
27:BA:1042:G:H1	27:BA:1112:G:H22	1.63	0.46
1:CA:935:A:HO2'	1:CA:936:C:P	2.39	0.46
12:AL:22:PRO:O	12:AL:24:LEU:HD22	2.15	0.46
27:DA:2657:A:C2'	27:DA:2658:C:H5'	2.46	0.46
3:AC:175:LEU:C	3:AC:177:THR:H	2.19	0.46
2:CB:84:GLU:OE2	2:CB:216:SER:HA	2.15	0.46
2:CB:76:GLN:O	2:CB:77:ALA:CB	2.64	0.46
1:AA:953:G:O6	1:AA:1228:C:N4	2.42	0.46
27:DA:1920:C:O2'	27:DA:1921:G:H5'	2.15	0.46
50:B1:52:ARG:O	50:B1:56:GLN:O	2.33	0.46
37:DO:87:ILE:HG23	37:DO:92:GLU:N	2.30	0.46
27:DA:1590:U:C2'	27:DA:1591:G:H5''	2.40	0.46
30:DD:154:LYS:HB2	30:DD:155:LEU:HD13	1.97	0.46
1:CA:25:C:C2'	1:CA:26:A:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:2:PRO:HA	12:AL:6:GLN:NE2	2.31	0.46
28:DB:24:G:H4'	28:DB:25:A:C5'	2.44	0.46
36:BN:43:THR:HG22	36:BN:45:ASN:H	1.79	0.46
49:D0:84:LEU:H	49:D0:84:LEU:HD12	1.81	0.46
27:BA:566:U:O4	44:BV:78:LYS:HE3	2.15	0.46
1:CA:725:G:H2'	1:CA:726:C:C6	2.50	0.46
1:CA:1046:A:H2'	1:CA:1047:G:O4'	2.16	0.46
18:AR:22:VAL:O	18:AR:23:LYS:C	2.54	0.46
29:DC:194:ARG:O	29:DC:196:LEU:N	2.48	0.46
2:AB:75:LYS:HE3	2:AB:78:GLN:NE2	2.31	0.46
1:AA:292:G:C5	1:AA:293:G:H1'	2.51	0.46
27:DA:845:G:O2'	27:DA:846:C:C5	2.67	0.46
2:CB:228:GLY:O	2:CB:229:VAL:C	2.53	0.46
27:BA:374:A:C2	27:BA:401:A:C4	3.04	0.46
27:BA:1468:C:C4	27:BA:1525:G:C2	3.04	0.46
41:DS:10:ARG:O	41:DS:11:LYS:C	2.54	0.46
39:DQ:37:LEU:HB2	39:DQ:128:LYS:O	2.16	0.46
1:CA:995:C:O2'	1:CA:996:A:OP2	2.27	0.46
27:DA:608:A:OP1	32:DF:100:THR:HG21	2.15	0.46
39:BQ:103:MET:HB2	39:BQ:104:PHE:CD1	2.50	0.46
47:BY:74:PRO:O	47:BY:75:ILE:HB	2.15	0.46
1:CA:1273:G:H2'	1:CA:1274:G:C8	2.49	0.46
40:DR:69:ASP:OD2	40:DR:69:ASP:N	2.49	0.46
27:DA:1218:C:O2	27:DA:1218:C:H2'	2.15	0.46
10:AJ:21:GLN:O	10:AJ:21:GLN:HG2	2.15	0.46
33:BG:149:VAL:O	33:BG:149:VAL:CG2	2.64	0.46
57:B8:23:VAL:HG13	57:B8:47:LYS:O	2.16	0.46
27:BA:819:A:H2'	27:BA:820:A:O5'	2.16	0.46
1:CA:949:A:H1'	1:CA:1364:U:H3	1.80	0.46
40:BR:30:THR:OG1	40:BR:75:LEU:HD21	2.14	0.46
27:BA:2726:U:O2	27:BA:2726:U:O4'	2.30	0.46
37:BO:17:ARG:NE	37:BO:47:ILE:HD13	2.28	0.46
12:AL:42:PRO:HB3	12:AL:89:ASP:HB3	1.98	0.46
48:DZ:156:LEU:H	48:DZ:156:LEU:HD12	1.80	0.46
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.98	0.46
43:BU:96:ALA:O	43:BU:98:LEU:N	2.49	0.46
8:AH:65:TYR:HD1	8:AH:65:TYR:N	2.13	0.46
1:AA:1392:G:N2	1:AA:1502:A:C8	2.83	0.46
27:DA:560:C:H5''	43:DU:52:ARG:HH22	1.79	0.46
47:DY:95:LYS:CD	47:DY:100:ALA:HA	2.45	0.46
27:DA:96:G:N1	27:DA:97:C:C4	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:906:G:C3'	27:DA:907:U:H5''	2.45	0.46
57:D8:36:LYS:O	57:D8:37:SER:C	2.54	0.46
27:DA:631:A:O2'	27:DA:632:A:H5'	2.15	0.46
27:DA:460:A:H3'	27:DA:461:C:H6	1.81	0.46
27:DA:1263:U:C4	27:DA:1264:G:C6	3.04	0.46
27:DA:2572:A:O3'	27:DA:2574:G:H5''	2.16	0.46
27:DA:675:A:C8	27:DA:804:A:C6	3.03	0.46
27:DA:942:G:H1'	27:DA:1189:A:C2	2.51	0.46
27:DA:1349:A:N3	27:DA:1349:A:H5'	2.30	0.46
27:DA:1599:C:H2'	27:DA:1600:C:C6	2.50	0.46
30:BD:31:LYS:O	30:BD:35:LYS:HB2	2.15	0.46
14:AN:32:SER:OG	14:AN:41:ARG:HG2	2.15	0.46
1:CA:399:G:C6	1:CA:400:C:C4	3.03	0.46
37:DO:71:ARG:HH12	42:DT:74:ARG:NH2	2.07	0.46
42:DT:28:VAL:HG11	42:DT:46:GLU:CG	2.46	0.46
41:DS:19:LYS:O	41:DS:19:LYS:HG2	2.15	0.46
41:DS:61:ASN:O	41:DS:62:LYS:CG	2.63	0.46
1:CA:250:A:H2	1:CA:274:A:N6	2.10	0.46
1:CA:251:G:H4'	1:CA:252:U:O5'	2.16	0.46
1:CA:274:A:O2'	1:CA:275:G:P	2.74	0.46
27:BA:753:C:C2'	27:BA:754:C:C5'	2.93	0.46
27:BA:784:A:C5	30:BD:229:VAL:HG21	2.50	0.46
30:BD:45:ASN:CG	30:BD:46:GLN:N	2.68	0.46
31:BE:45:THR:O	31:BE:46:ALA:CB	2.64	0.46
31:BE:47:VAL:O	31:BE:80:GLU:HA	2.16	0.46
33:DG:97:ASP:O	33:DG:101:ILE:HG22	2.15	0.46
27:BA:2741:A:H2'	27:BA:2742:C:O4'	2.15	0.46
27:DA:2645:G:OP2	27:DA:2645:G:C8	2.69	0.46
1:AA:457:C:N3	1:AA:475:G:C2	2.83	0.46
20:CT:50:GLU:HA	20:CT:100:ILE:CG1	2.30	0.46
1:CA:264:U:C4	1:CA:265:G:C5	3.04	0.46
20:CT:75:ASN:O	20:CT:76:ALA:C	2.54	0.46
31:DE:9:VAL:HG13	31:DE:10:GLY:H	1.80	0.46
1:CA:715:A:H2'	1:CA:716:A:C8	2.51	0.46
1:CA:1057:G:C5	1:CA:1204:A:C2	3.03	0.46
47:BY:87:LYS:NZ	47:BY:89:PHE:CE1	2.83	0.46
47:BY:88:LYS:HB3	47:BY:90:LEU:CD1	2.46	0.46
1:CA:658:G:O2'	1:CA:659:U:H5'	2.15	0.46
27:BA:2171:A:HO2'	27:BA:2172:U:P	2.38	0.46
27:DA:957:A:H2	27:DA:2459:A:OP1	1.98	0.46
55:B6:26:ASN:CB	55:B6:32:ASN:OD1	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:116:ALA:O	7:AG:120:ILE:HG12	2.15	0.46
38:DP:16:ARG:O	38:DP:18:ARG:N	2.48	0.46
27:BA:92:A:O2'	27:BA:93:G:P	2.73	0.46
52:D3:23:LEU:CA	52:D3:26:LEU:HD12	2.37	0.46
7:AG:143:ARG:O	7:AG:145:ALA:O	2.33	0.46
5:AE:80:ILE:CD1	5:AE:142:LEU:HD21	2.46	0.46
27:BA:844:C:H2'	27:BA:845:G:C8	2.50	0.46
8:CH:68:ARG:NH1	8:CH:68:ARG:CG	2.78	0.46
27:BA:628:G:H2'	27:BA:629:G:H8	1.80	0.46
3:AC:59:ARG:O	10:AJ:93:GLY:HA2	2.16	0.46
8:CH:109:ILE:CG1	8:CH:120:THR:HB	2.46	0.46
9:AI:111:ARG:HD2	14:AN:61:TRP:NE1	2.30	0.46
27:BA:489:G:C6	27:BA:491:G:C6	3.04	0.46
13:AM:84:ILE:HG22	19:AS:74:PHE:HD1	1.81	0.46
45:DW:11:ARG:NE	45:DW:11:ARG:C	2.69	0.46
45:DW:6:ILE:CG2	45:DW:8:ARG:HG3	2.45	0.46
27:BA:363(A):A:H5'	27:BA:363(B):G:P	2.56	0.46
27:DA:1205:U:H3'	27:DA:1206:G:H5'	1.98	0.46
27:DA:509:C:O2'	27:DA:510:C:C5'	2.64	0.46
12:AL:84:GLY:HA2	12:AL:95:TYR:HA	1.97	0.46
52:D3:7:LYS:HB2	52:D3:34:GLU:HG2	1.98	0.46
52:D3:8:LEU:HD22	52:D3:31:LEU:HD21	1.97	0.46
1:CA:147:G:H1	1:CA:175:C:N4	2.12	0.46
30:BD:4:LYS:HD2	30:BD:18:VAL:CG2	2.46	0.46
1:AA:1514:C:C4	1:AA:1515:C:C5	3.03	0.46
10:AJ:95:GLU:CD	10:AJ:96:ILE:N	2.67	0.46
27:BA:517:C:C2'	27:BA:518:G:H5'	2.45	0.46
4:AD:173:TRP:CE2	4:AD:189:PRO:HB3	2.50	0.46
27:DA:1628:G:H2'	27:DA:1629:U:C6	2.50	0.46
27:DA:2282:G:H5''	27:DA:2283:C:O4'	2.16	0.46
27:DA:565:C:H2'	27:DA:566:U:O4'	2.15	0.46
1:CA:46:G:H2'	1:CA:366:C:C5	2.51	0.46
27:DA:2515:C:O2'	27:DA:2516:G:H5'	2.16	0.46
27:BA:2005:A:H2'	27:BA:2006:C:H5'	1.98	0.46
48:BZ:111:ARG:NH1	48:BZ:111:ARG:HG2	2.25	0.46
29:DC:56:GLN:HE22	29:DC:173:ALA:HB1	1.81	0.46
6:CF:42:GLU:C	6:CF:44:GLY:N	2.68	0.46
25:AY:47:C:C2	25:AY:58:A:H1'	2.51	0.46
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.31	0.46
27:DA:887:A:O2'	27:DA:888:C:H5''	2.16	0.46
46:DX:31:HIS:CE1	46:DX:32:PRO:HG2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DH:16:SER:HB3	34:DH:18:GLU:HG3	1.98	0.46
1:CA:668:G:H2'	1:CA:669:U:H6	1.81	0.46
24:AX:25:C:C2	24:AX:26:G:C8	3.03	0.46
27:DA:284:U:O2'	27:DA:285:C:O4'	2.33	0.46
1:CA:876:G:P	8:CH:14:ARG:HH11	2.38	0.46
27:BA:1230:C:H2'	27:BA:1231:G:C8	2.51	0.46
49:B0:14:ARG:O	49:B0:15:ASP:HB2	2.14	0.46
50:D1:56:GLN:OE1	50:D1:87:PRO:HD3	2.16	0.46
1:AA:66:G:H5'	1:AA:173:U:O4	2.16	0.46
27:DA:271(Y):U:O2'	27:DA:271(Z):C:OP2	2.34	0.46
1:CA:775:G:O2'	1:CA:776:G:H5'	2.15	0.46
32:DF:179:GLU:H	32:DF:179:GLU:CD	2.19	0.46
3:CC:114:PRO:HA	3:CC:185:GLY:HA3	1.98	0.46
27:BA:1280:G:N3	27:BA:1280:G:H2'	2.30	0.46
27:BA:2882:A:OP1	40:BR:96:ARG:NE	2.48	0.46
31:BE:199:ARG:C	31:BE:200:GLU:O	2.52	0.46
47:BY:86:ARG:NH1	47:BY:95:LYS:HE2	2.31	0.46
47:BY:96:ILE:CD1	47:BY:99:CYS:HB2	2.46	0.46
38:DP:49:ARG:HD2	57:D8:58:ILE:HG21	1.96	0.46
48:DZ:156:LEU:HB3	48:DZ:160:VAL:O	2.16	0.46
4:CD:206:PHE:CE2	4:CD:207:TYR:CE2	3.03	0.46
38:BP:16:ARG:HD3	38:BP:16:ARG:C	2.36	0.46
1:CA:1330:U:O3'	13:CM:23:TYR:HE2	1.99	0.46
5:AE:132:ALA:O	5:AE:135:THR:N	2.49	0.46
27:DA:2411:A:H2'	27:DA:2412:A:H8	1.79	0.46
1:AA:255:G:O3'	17:AQ:17:LYS:NZ	2.49	0.46
42:BT:87:ASP:OD1	42:BT:87:ASP:N	2.49	0.46
27:DA:534:U:H5'	43:DU:42:ALA:CB	2.45	0.46
44:DV:2:PHE:HB3	44:DV:42:GLY:HA2	1.90	0.46
27:DA:84:A:N1	27:DA:98:G:H2'	2.30	0.46
33:BG:59:GLU:OE1	33:BG:153:ARG:NH2	2.49	0.46
33:BG:64:THR:HG23	33:BG:66:GLN:H	1.80	0.46
31:DE:32:PRO:HA	31:DE:90:THR:CA	2.46	0.46
27:DA:2393:A:H2'	27:DA:2394:C:O4'	2.15	0.46
27:DA:1260:G:O2'	27:DA:1261:C:H5'	2.16	0.46
27:DA:2552:U:N3	27:DA:2554:U:C5'	2.78	0.46
27:DA:2611:U:H3'	27:DA:2611:U:OP1	2.16	0.46
27:DA:675:A:C8	27:DA:804:A:N6	2.84	0.46
27:BA:1141:U:P	36:BN:25:ARG:NH1	2.88	0.46
36:BN:67:LEU:O	36:BN:68:GLU:CG	2.57	0.46
31:DE:92:THR:O	31:DE:95:ILE:HD13	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:96:PHE:CE2	31:DE:198:VAL:HG12	2.51	0.46
30:BD:35:LYS:NZ	30:BD:102:LYS:C	2.68	0.46
30:BD:72:LYS:HD3	30:BD:75:ILE:CD1	2.41	0.46
42:DT:28:VAL:HG22	42:DT:46:GLU:HA	1.98	0.46
46:BX:64:LYS:HD3	46:BX:73:ARG:NH2	2.30	0.46
28:DB:7:G:H4'	41:DS:29:PHE:CD1	2.51	0.46
17:CQ:51:TYR:CD2	17:CQ:73:VAL:HG11	2.51	0.46
27:BA:1879:C:H2'	27:BA:1880:C:C5'	2.30	0.46
27:BA:950:G:N2	27:BA:968:G:H1'	2.31	0.46
42:DT:12:SER:O	42:DT:13:ARG:NH2	2.49	0.46
6:AF:61:LEU:HB3	6:AF:62:TRP:H	1.53	0.46
9:CI:96:LEU:HG	9:CI:102:LEU:HB2	1.98	0.46
27:BA:1799:G:H1	30:BD:178:PRO:HD2	1.79	0.46
6:AF:9:VAL:O	6:AF:86:ARG:N	2.49	0.46
14:CN:29:ARG:CG	14:CN:40:CYS:HB2	2.37	0.46
27:BA:2277:G:H5''	39:BQ:87:LYS:HB2	1.98	0.46
49:D0:56:ASP:OD2	49:D0:58:THR:OG1	2.33	0.46
58:B9:13:LYS:HD3	58:B9:28:GLU:CG	2.40	0.46
56:D7:46:VAL:CG1	56:D7:48:LYS:HZ1	2.28	0.46
48:BZ:166:PRO:O	48:BZ:167:GLU:HB2	2.15	0.46
31:DE:188:VAL:HG22	31:DE:189:PRO:CD	2.41	0.46
49:D0:45:PHE:HZ	49:D0:77:ARG:NH1	2.14	0.46
27:DA:2308:G:H2'	27:DA:2309:A:H8	1.76	0.46
33:DG:83:ARG:N	33:DG:83:ARG:HD2	2.31	0.46
48:DZ:60:LEU:HD23	48:DZ:60:LEU:H	1.81	0.46
27:BA:96:G:O2'	27:BA:97:C:H5'	2.15	0.46
27:DA:848:G:H2'	27:DA:849:A:C8	2.51	0.46
13:AM:67:GLU:OE2	13:AM:68:GLY:N	2.49	0.46
1:CA:1442(B):A:H2'	1:CA:1442(B):A:N3	2.31	0.46
42:DT:50:ILE:CG2	42:DT:50:ILE:O	2.63	0.46
38:BP:85:LEU:CD2	38:BP:85:LEU:N	2.74	0.46
33:DG:115:ARG:NH1	33:DG:136:ARG:HD3	2.31	0.46
2:AB:178:ARG:HH12	2:AB:196:LEU:HB3	1.77	0.46
27:DA:2789:C:N3	27:DA:2894:G:O6	2.49	0.46
27:DA:2893:G:H5'	27:DA:2894:G:OP1	2.16	0.46
33:BG:2:PRO:HG2	53:B4:51:TYR:CG	2.49	0.46
27:DA:476:G:HO2'	27:DA:477:A:P	2.38	0.46
1:AA:203:U:H1'	1:AA:216:G:N1	2.30	0.46
27:BA:1365:A:N6	27:BA:1366:A:C6	2.84	0.46
32:DF:130:ALA:O	32:DF:132:VAL:N	2.48	0.46
27:BA:158:U:O3'	27:BA:171:G:C8	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DQ:20:ALA:O	39:DQ:98:LYS:CB	2.59	0.46
36:DN:68:GLU:OE1	36:DN:68:GLU:HA	2.15	0.46
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.98	0.46
13:AM:13:LYS:O	13:AM:44:ARG:HA	2.15	0.46
3:AC:64:VAL:O	3:AC:66:VAL:HG23	2.16	0.46
16:CP:4:ILE:HB	16:CP:66:PRO:HG3	1.97	0.46
27:BA:293:U:O2	27:BA:348:G:C2	2.69	0.46
1:AA:184:G:O4'	1:AA:224:C:H4'	2.16	0.46
42:DT:16:ARG:NH1	42:DT:16:ARG:HG3	2.30	0.46
1:CA:945:G:N1	1:CA:1337:G:C2	2.84	0.46
30:BD:134:ARG:HG2	30:BD:135:PHE:N	2.31	0.46
4:CD:23:GLY:C	4:CD:24:GLU:HG2	2.36	0.46
1:AA:9:G:OP2	5:AE:121:LYS:NZ	2.48	0.46
1:CA:117:G:O2'	1:CA:118:U:H5'	2.16	0.46
27:BA:2642:G:C2	27:BA:2773:C:C2	3.04	0.46
27:BA:1710:C:O2	27:BA:1749:A:C2	2.69	0.46
25:CY:30:A:C2'	25:CY:31:U:H5'	2.46	0.46
39:BQ:39:PRO:HD3	39:BQ:99:PRO:HG2	1.98	0.46
39:DQ:110:THR:O	39:DQ:113:GLN:HB2	2.16	0.46
8:CH:21:LYS:O	8:CH:22:GLU:C	2.53	0.46
50:D1:90:ILE:H	50:D1:90:ILE:HG13	1.46	0.46
27:BA:911:A:N6	39:BQ:9:TYR:HB3	2.30	0.46
34:BH:28:GLY:O	34:BH:30:LYS:N	2.37	0.46
28:BB:35:U:O4	28:BB:50:G:H1'	2.16	0.46
34:BH:103:LEU:HG	34:BH:104:GLU:N	2.31	0.46
9:CI:27:THR:HA	9:CI:31:GLN:O	2.15	0.46
24:CX:71:C:H2'	24:CX:72:A:O4'	2.16	0.46
27:DA:377:C:H2'	27:DA:378:C:C6	2.46	0.46
48:BZ:172:ALA:O	48:BZ:173:VAL:CG2	2.63	0.46
27:BA:565:C:O2'	27:BA:566:U:H5'	2.16	0.46
27:BA:2839:G:C4	27:BA:2840:C:C5	3.03	0.46
27:BA:1385:G:O2'	27:BA:1386:C:C6	2.68	0.46
55:D6:22:ALA:O	55:D6:23:THR:HG23	2.16	0.46
1:AA:756:C:H2'	1:AA:757:U:C6	2.51	0.46
40:DR:58:GLY:HA2	40:DR:80:PHE:CE1	2.51	0.46
27:BA:2371:G:H4'	55:B6:45:LYS:HB2	1.98	0.46
49:D0:32:ARG:H	49:D0:35:ASN:CG	2.19	0.46
27:BA:2375:G:N2	27:BA:2378:A:OP2	2.46	0.46
1:CA:22:G:O2'	1:CA:23:C:H5'	2.16	0.46
1:AA:671:G:O2'	1:AA:672:U:H5'	2.15	0.46
27:BA:2767:C:H2'	27:BA:2768:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1300:U:O2'	27:BA:1301:A:H5'	2.16	0.46
27:DA:2818:G:OP2	40:DR:42:LYS:NZ	2.37	0.46
27:DA:610:G:N2	27:DA:619:G:H1'	2.31	0.46
5:CE:6:PHE:H	5:CE:6:PHE:HD1	1.61	0.46
49:D0:37:LEU:HG	49:D0:60:PHE:HA	1.98	0.46
1:CA:139:G:O2'	1:CA:140:A:H5'	2.16	0.46
57:B8:6:THR:CG2	57:B8:63:PRO:HD3	2.46	0.46
27:BA:819:A:C4	27:BA:1189:A:C2	3.04	0.46
1:CA:1321:C:H5''	1:CA:1322:C:C5'	2.31	0.46
27:BA:1281:G:C6	27:BA:1282:U:C4	3.03	0.46
27:BA:2817:G:O2'	27:BA:2836:U:O2	2.22	0.46
40:BR:48:VAL:O	40:BR:49:ASP:C	2.55	0.46
40:BR:98:LEU:HD12	40:BR:113:LEU:CD2	2.33	0.46
28:BB:40:U:N3	28:BB:43:C:C5'	2.63	0.46
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.81	0.46
57:D8:61:LEU:O	57:D8:62:LEU:C	2.54	0.46
1:AA:129:U:H4'	1:AA:130:A:OP1	2.16	0.46
1:AA:265:G:N2	1:AA:267:C:H5'	2.31	0.46
42:BT:89:VAL:CG1	42:BT:91:ARG:NE	2.79	0.46
44:DV:61:VAL:HA	44:DV:94:LEU:CD2	2.38	0.46
30:DD:63:ARG:N	30:DD:63:ARG:HD3	2.30	0.46
30:BD:26:LYS:HZ1	30:BD:82:ILE:H	1.52	0.46
27:DA:85:G:H1	27:DA:97:C:H42	1.63	0.46
27:DA:865:C:C4'	27:DA:866:A:OP1	2.57	0.46
7:CG:41:ARG:O	7:CG:42:ILE:C	2.54	0.46
49:D0:20:ARG:HH11	49:D0:20:ARG:HG3	1.69	0.46
38:DP:85:LEU:HD23	38:DP:115:LEU:O	2.15	0.46
27:DA:459:U:H4'	56:D7:40:TRP:CH2	2.50	0.46
27:DA:574:C:O3'	27:DA:2055:C:H5	1.99	0.46
27:DA:2507:C:H4'	27:DA:2573:C:N4	2.30	0.46
27:DA:588:U:H2'	27:DA:589:C:C6	2.51	0.46
31:DE:2:LYS:O	31:DE:199:ARG:CA	2.63	0.46
31:DE:37:ARG:HB2	31:DE:46:ALA:HB3	1.97	0.46
27:DA:330:A:O2'	27:DA:331:A:C8	2.57	0.46
9:AI:96:LEU:CG	9:AI:102:LEU:HB2	2.46	0.46
47:BY:28:LYS:C	47:BY:38:ILE:HB	2.34	0.46
1:AA:1360:A:C2'	1:AA:1361:G:H5'	2.45	0.46
48:BZ:79:ARG:O	48:BZ:80:ARG:C	2.53	0.46
16:AP:24:ALA:O	16:AP:26:ARG:N	2.48	0.46
17:CQ:10:VAL:HG11	17:CQ:19:VAL:HB	1.98	0.46
27:BA:2587:A:C2'	27:BA:2588:G:H5'	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1073:U:H3	1:AA:1102:A:N6	2.13	0.46
7:AG:50:ILE:O	7:AG:54:THR:O	2.33	0.46
1:AA:747:C:H2'	1:AA:748:C:O5'	2.15	0.46
27:BA:1314:C:H42	27:BA:1338:G:H1	1.63	0.46
1:CA:230:G:H2'	1:CA:231:G:O4'	2.16	0.46
42:DT:8:LYS:CA	42:DT:11:GLU:OE2	2.64	0.46
30:DD:44:ASN:OD1	30:DD:44:ASN:N	2.49	0.46
4:CD:150:GLU:HA	4:CD:153:ARG:HD2	1.97	0.46
27:DA:118:A:H1'	27:DA:178:G:O4'	2.16	0.46
30:BD:182:LEU:H	30:BD:272:ALA:CB	2.25	0.46
30:BD:182:LEU:HB3	30:BD:271:ILE:HG13	1.97	0.46
1:CA:522:C:H41	12:CL:50:ARG:HH22	1.62	0.46
38:BP:79:ARG:NH2	38:BP:109:GLY:HA3	2.31	0.46
35:BI:114:LEU:O	35:BI:115:ALA:CB	2.63	0.46
27:DA:1650:G:C4	27:DA:1651:G:C8	3.04	0.46
35:BI:5:LEU:HD22	35:BI:13:GLY:CA	2.33	0.46
1:AA:1157:A:O4'	1:AA:1158:C:O2	2.34	0.46
27:BA:2862:G:C5	27:BA:2863:C:C5	3.04	0.46
27:DA:311:A:O2'	27:DA:332:A:C5'	2.63	0.46
1:AA:498:U:O2'	1:AA:499:A:O5'	2.30	0.46
38:DP:18:ARG:HH11	38:DP:18:ARG:HB3	1.77	0.46
27:DA:1697:G:H4'	27:DA:1978:A:H5''	1.98	0.46
52:D3:11:SER:OG	52:D3:13:ILE:HD12	2.16	0.46
27:DA:136:G:H2'	27:DA:137:C:H6	1.80	0.46
30:BD:10:THR:C	30:BD:11:PRO:O	2.54	0.46
34:BH:10:PRO:O	34:BH:10:PRO:CG	2.63	0.46
1:AA:741:G:OP1	15:AO:35:ARG:NH2	2.49	0.46
27:DA:2807:G:H2'	27:DA:2808:U:H5''	1.96	0.46
27:DA:1648:C:N3	27:DA:2010:G:C2	2.84	0.46
45:DW:19:LEU:O	45:DW:23:LEU:HD13	2.16	0.46
45:DW:57:ASN:HD22	45:DW:57:ASN:HA	1.50	0.46
24:AX:74:C:O2'	24:AX:75:C:H5'	2.16	0.46
1:CA:738:C:H2'	1:CA:739:C:H6	1.80	0.46
32:DF:132:VAL:CG1	32:DF:133:ASN:N	2.72	0.46
1:CA:812:C:OP1	1:CA:903:G:H1'	2.15	0.46
3:CC:23:TYR:HB2	10:CJ:10:GLY:HA2	1.98	0.46
39:DQ:10:ARG:CG	39:DQ:10:ARG:NH1	2.75	0.46
27:BA:1741:A:O2'	27:BA:1742:G:P	2.73	0.46
6:AF:16:GLN:HE21	6:AF:16:GLN:H	1.59	0.46
13:CM:90:LEU:O	13:CM:91:ARG:HG2	2.16	0.46
50:B1:53:VAL:HG12	50:B1:54:ALA:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:595:G:C6	1:AA:641:U:H2'	2.50	0.46
4:AD:123:HIS:O	4:AD:125:HIS:N	2.49	0.46
1:CA:107:G:OP1	1:CA:325:A:N6	2.49	0.46
27:DA:1297:C:OP1	27:DA:2710:C:H4'	2.15	0.46
27:BA:706:A:C8	27:BA:707:G:C8	3.04	0.46
13:CM:47:ASP:O	13:CM:48:LEU:CB	2.61	0.46
27:BA:271(K):U:H3'	27:BA:271(L):U:H5'	1.97	0.46
27:BA:2023:G:C5'	27:BA:2617:C:H4'	2.42	0.46
27:DA:2523:G:H1'	27:DA:2764:A:O2'	2.15	0.46
27:BA:2203:U:O2'	27:BA:2205:C:H5'	2.15	0.46
27:DA:2241:A:H2'	27:DA:2242:G:C8	2.51	0.46
1:CA:1419:G:N3	1:CA:1420:C:C6	2.84	0.46
40:DR:86:ARG:HB3	40:DR:118:GLU:OE2	2.15	0.46
42:DT:114:LEU:O	42:DT:115:ARG:O	2.34	0.46
30:BD:261:LYS:CE	30:BD:263:ARG:NH2	2.78	0.46
14:AN:37:PHE:CE1	14:AN:53:LEU:HD13	2.51	0.46
27:DA:1247:A:O2'	27:DA:1248:G:C5'	2.64	0.46
27:DA:719:C:O2'	27:DA:720:C:H5'	2.16	0.46
27:BA:1594:G:H5'	27:BA:1595:G:OP2	2.16	0.46
1:CA:447:G:H2'	1:CA:485:G:N2	2.31	0.46
27:DA:701:G:H4'	27:DA:1631(A):A:H2	1.81	0.46
34:DH:27:LYS:HG2	34:DH:32:GLU:CB	2.46	0.46
30:DD:45:ASN:ND2	30:DD:50:THR:CG2	2.78	0.46
2:AB:78:GLN:HG2	2:AB:94:ASN:HB3	1.98	0.46
1:AA:293:G:C5	1:AA:305:G:N2	2.84	0.46
48:BZ:43:PHE:O	48:BZ:46:VAL:HB	2.16	0.46
27:BA:211:A:H2'	27:BA:212:G:H8	1.80	0.46
52:D3:43:ILE:O	52:D3:44:ARG:C	2.54	0.46
1:AA:1104:G:H4'	2:AB:111:ARG:HD2	1.97	0.46
27:DA:186:G:H2'	27:DA:187:G:H8	1.80	0.46
27:DA:567:A:C2'	27:DA:568:U:O5'	2.64	0.46
1:AA:950:U:H2'	1:AA:951:G:H8	1.81	0.46
27:DA:284:U:O2'	27:DA:285:C:C5'	2.63	0.46
34:DH:74:ASN:HD22	34:DH:74:ASN:H	1.62	0.46
52:D3:19:GLN:NE2	52:D3:52:HIS:HE1	2.13	0.46
44:DV:27:ALA:O	44:DV:28:GLU:C	2.54	0.46
27:DA:2439:A:H8	27:DA:2439:A:C5'	2.29	0.46
39:DQ:60:ARG:HG2	48:DZ:176:PRO:HB2	1.98	0.46
27:BA:766:C:C4	27:BA:767:U:C4	3.04	0.46
28:BB:107:G:O2'	28:BB:108:U:H5'	2.15	0.46
27:DA:2208:A:H1'	27:DA:2219:G:C5	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:689:C:H2'	1:AA:690:G:C8	2.51	0.46
27:DA:2260:C:H6	27:DA:2260:C:O5'	1.98	0.46
1:CA:800:G:O5'	1:CA:800:G:H8	1.98	0.46
40:DR:47:PHE:O	40:DR:47:PHE:CD2	2.68	0.46
16:AP:53:VAL:O	16:AP:54:GLU:C	2.53	0.46
30:BD:173:VAL:O	30:BD:184:LYS:HA	2.16	0.46
27:BA:252:G:OP2	38:BP:50:ARG:NH1	2.48	0.46
1:CA:972:C:H4'	10:CJ:57:LYS:HG3	1.96	0.46
41:BS:97:ARG:NE	41:BS:98:VAL:N	2.58	0.46
47:BY:6:HIS:HB2	47:BY:7:VAL:H	1.54	0.46
57:D8:61:LEU:HD12	57:D8:62:LEU:H	1.79	0.46
57:D8:51:ALA:HA	57:D8:54:GLU:OE2	2.15	0.46
27:BA:34:C:HO2'	27:BA:35:G:H5'	1.78	0.46
53:B4:44:CYS:HB2	53:B4:64:LYS:HD2	1.97	0.46
27:BA:674:G:H1'	32:BF:74:ARG:HD3	1.98	0.46
1:AA:916:G:C2	1:AA:917:G:C8	3.04	0.46
44:BV:19:LYS:NZ	44:BV:20:LEU:HB2	2.31	0.46
27:DA:1893:C:H2'	27:DA:1894:C:H6	1.81	0.46
44:DV:38:LEU:CD1	44:DV:55:ALA:HB1	2.46	0.46
28:BB:28:C:H2'	28:BB:29:A:O4'	2.16	0.46
27:DA:1419:A:H2'	27:DA:1421:G:C5	2.51	0.46
42:BT:35:LYS:C	42:BT:37:GLY:N	2.69	0.46
28:DB:87:G:H1	28:DB:91:C:N4	2.13	0.46
27:BA:310:A:C4	27:BA:312:G:C8	3.04	0.46
27:DA:1674:G:H5'	27:DA:1675:C:OP1	2.16	0.46
27:DA:2582:G:H2'	27:DA:2583:G:O4'	2.15	0.46
34:BH:8:PRO:HD3	34:BH:65:HIS:HE1	1.81	0.46
1:CA:197:A:N6	1:CA:221:C:C5'	2.75	0.46
20:CT:14:LYS:CB	20:CT:17:ARG:HH21	2.16	0.46
9:AI:48:GLU:HB2	9:AI:78:LYS:HZ1	1.80	0.46
2:AB:53:ARG:NH2	2:AB:199:TYR:CE2	2.84	0.46
37:DO:36:GLY:HA2	37:DO:106:LEU:CD2	2.46	0.46
58:D9:17:ILE:HG22	58:D9:19:ARG:H	1.80	0.46
34:DH:135:GLY:HA3	34:DH:141:VAL:CG2	2.46	0.46
1:AA:230:G:H5'	16:AP:23:ASP:OD2	2.16	0.46
41:DS:27:SER:HA	41:DS:88:ASP:HB3	1.98	0.46
41:DS:69:VAL:O	41:DS:72:ALA:N	2.49	0.46
27:BA:1806:C:O2'	27:BA:1807:G:H5'	2.15	0.46
1:CA:563:A:HO2'	1:CA:567:G:H8	1.61	0.46
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.16	0.46
32:DF:187:VAL:CB	38:DP:7:ARG:NH2	2.77	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DG:59:GLU:O	33:DG:62:LEU:HB2	2.16	0.46
33:DG:5:VAL:CG2	33:DG:8:LYS:HG3	2.35	0.46
1:CA:836:G:H2'	1:CA:837:G:C8	2.51	0.46
27:BA:1603:A:H3'	27:BA:1604:C:H6	1.80	0.46
42:DT:2:ASN:O	42:DT:3:ARG:CD	2.63	0.46
6:AF:62:TRP:CD1	18:AR:35:ARG:CZ	2.99	0.46
6:CF:38:GLU:O	6:CF:39:LYS:CB	2.49	0.46
30:BD:271:ILE:O	30:BD:272:ALA:HB2	2.16	0.46
30:BD:182:LEU:N	30:BD:272:ALA:HB3	2.27	0.46
1:CA:718:G:H21	18:CR:49:LYS:HZ2	1.60	0.46
1:CA:1059:C:O2'	1:CA:1060:C:H5'	2.16	0.46
34:DH:13:LYS:CA	34:DH:13:LYS:HE2	2.39	0.46
1:CA:694:A:H2'	1:CA:695:A:O4'	2.15	0.46
39:DQ:29:PHE:O	39:DQ:30:GLY:O	2.34	0.46
38:BP:105:LEU:O	38:BP:106:LEU:CB	2.62	0.46
27:BA:2129:C:N3	27:BA:2160:G:C6	2.84	0.46
48:BZ:150:HIS:O	48:BZ:151:ALA:O	2.34	0.46
40:DR:18:LEU:HD11	40:DR:22:ARG:NH1	2.30	0.46
27:BA:139:G:C4	27:BA:140:G:N7	2.84	0.46
27:BA:807:U:O2'	27:BA:808:G:C5'	2.52	0.46
27:BA:2863:C:O2	27:BA:2863:C:H2'	2.15	0.46
27:BA:2310:A:H62	33:BG:75:LYS:NZ	2.14	0.46
27:BA:93:G:H2'	27:BA:94:C:C6	2.51	0.46
34:DH:126:PRO:O	34:DH:127:GLU:CB	2.54	0.46
27:BA:2358:G:H21	57:B8:52:LYS:HE2	1.80	0.46
13:AM:83:ASP:O	13:AM:85:GLY:N	2.48	0.46
27:BA:845:G:O2'	27:BA:846:C:C6	2.66	0.46
27:DA:2884:U:H2'	27:DA:2885:C:C5'	2.42	0.46
1:AA:578:C:O2'	1:AA:579:G:P	2.74	0.46
27:DA:2791:C:H1'	27:DA:2792:G:C8	2.51	0.46
33:BG:21:ARG:CD	33:BG:21:ARG:C	2.84	0.46
1:AA:1118:C:H5'	1:AA:1118:C:H6	1.81	0.46
13:CM:88:ARG:HG3	13:CM:98:VAL:CG1	2.46	0.46
1:CA:1336:C:H4'	1:CA:1337:G:C4	2.51	0.46
3:CC:150:LYS:HD3	3:CC:201:TYR:CD1	2.40	0.46
43:BU:12:ARG:O	43:BU:13:LYS:C	2.54	0.46
36:BN:32:THR:O	36:BN:35:ARG:O	2.34	0.46
11:CK:60:ALA:O	11:CK:63:LEU:N	2.49	0.46
27:BA:271(I):G:H2'	27:BA:271(J):C:C1'	2.46	0.46
50:B1:64:ALA:HA	50:B1:67:ILE:HD12	1.97	0.46
42:DT:129:ARG:HD2	42:DT:131:ALA:CB	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DB:25:A:H5'	28:DB:25:A:C8	2.51	0.46
28:DB:25:A:C3'	28:DB:26:A:H5''	2.46	0.46
4:CD:155:LEU:HB2	4:CD:158:ILE:HG12	1.98	0.46
49:B0:56:ASP:O	49:B0:57:PHE:CB	2.62	0.46
27:DA:2235:G:N2	27:DA:2236:C:C2	2.84	0.46
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.31	0.46
27:BA:1827:C:N4	27:BA:1828:G:C6	2.84	0.46
24:CX:59:A:H2'	24:CX:60:U:H5'	1.98	0.46
51:D2:65:ASN:HB3	51:D2:69:ARG:HH22	1.81	0.46
1:AA:1200:C:O2'	1:AA:1201:A:P	2.74	0.46
2:AB:236:TYR:HD1	2:AB:236:TYR:N	2.13	0.46
13:CM:29:ARG:HB3	13:CM:64:TRP:CH2	2.51	0.46
34:BH:38:SER:C	34:BH:40:GLU:N	2.69	0.46
1:AA:1494:G:H2'	1:AA:1494:G:N3	2.31	0.46
27:DA:1558:A:H4'	27:DA:1559:G:O5'	2.15	0.46
45:BW:57:ASN:ND2	45:BW:57:ASN:N	2.63	0.46
27:BA:2010:G:C5'	45:BW:42:ARG:HB2	2.46	0.46
28:BB:70:C:H2'	28:BB:71:C:H6	1.81	0.46
30:BD:248:SER:O	30:BD:250:TRP:N	2.49	0.46
1:CA:760:G:H3'	1:CA:761:G:H8	1.81	0.46
7:CG:153:HIS:N	7:CG:153:HIS:ND1	2.64	0.46
34:BH:26:VAL:O	34:BH:26:VAL:HG12	2.16	0.46
27:DA:1882:C:H2'	27:DA:1882:C:O2	2.15	0.46
23:CW:16:C:O5'	23:CW:16:C:H6	1.98	0.46
27:BA:2453:A:H2'	27:BA:2454:G:C8	2.51	0.46
38:BP:114:ILE:O	38:BP:115:LEU:HB3	2.16	0.46
38:BP:59:LEU:CA	38:BP:61:ARG:NH1	2.70	0.46
1:CA:1232:U:C4	1:CA:1233:G:N7	2.84	0.46
12:CL:43:LYS:HD3	12:CL:44:LYS:HG2	1.98	0.46
48:DZ:149:LEU:N	48:DZ:149:LEU:HD13	2.31	0.46
27:BA:996:A:O2'	27:BA:997:G:O5'	2.32	0.46
44:BV:39:LEU:CA	44:BV:47:VAL:HG11	2.45	0.46
32:DF:20:LEU:HB3	32:DF:23:ASP:OD2	2.16	0.46
32:DF:8:GLN:NE2	32:DF:9:ILE:HG13	2.31	0.46
8:AH:65:TYR:HA	8:AH:79:VAL:HG23	1.97	0.46
47:DY:96:ILE:CD1	47:DY:99:CYS:HB2	2.46	0.46
27:DA:84:A:N1	27:DA:98:G:O2'	2.41	0.46
47:DY:7:VAL:HG21	47:DY:8:LYS:HZ3	1.81	0.46
27:DA:2248:C:H5''	27:DA:2249:U:OP2	2.15	0.46
27:DA:631:A:H2	27:DA:2403:C:O2	1.99	0.46
27:DA:969:U:P	52:D3:17:LYS:NZ	2.89	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:674:G:H1'	32:DF:74:ARG:HD3	1.97	0.46
55:B6:41:PRO:HD2	55:B6:46:HIS:N	2.30	0.46
30:BD:31:LYS:NZ	30:BD:102:LYS:HZ3	2.14	0.46
51:D2:4:SER:O	51:D2:7:ARG:HG3	2.16	0.46
30:BD:186:HIS:CD2	30:BD:188:GLU:CG	2.99	0.46
19:AS:47:HIS:O	19:AS:62:ILE:HG21	2.15	0.46
41:DS:30:ARG:NH1	41:DS:34:HIS:O	2.49	0.46
17:CQ:12:SER:HB3	17:CQ:20:THR:CB	2.46	0.46
56:B7:8:ASN:HD22	56:B7:9:ARG:N	2.10	0.46
30:BD:218:ARG:HB3	30:BD:219:PRO:HD2	1.98	0.46
2:CB:187:LEU:C	2:CB:187:LEU:HD22	2.36	0.46
27:BA:828:U:H4'	27:BA:831:G:H1	1.79	0.46
27:BA:745:G:O2'	27:BA:750:A:N6	2.49	0.46
15:AO:74:ASP:OD2	15:AO:77:ARG:N	2.32	0.46
37:BO:4:PRO:O	37:BO:5:GLN:HB2	2.16	0.46
9:CI:8:GLY:O	9:CI:14:VAL:HA	2.16	0.46
27:DA:52:A:C5	27:DA:118:A:C2	3.04	0.46
12:AL:73:ASN:O	12:AL:74:LEU:C	2.54	0.46
1:CA:1049:U:O2'	1:CA:1050:G:P	2.74	0.46
1:CA:1054:C:C5	1:CA:1196:U:H2'	2.50	0.46
27:BA:2844:G:C2'	27:BA:2845:G:H5'	2.46	0.46
27:BA:2848:G:H1'	27:BA:2868:A:N6	2.30	0.46
1:CA:781:A:H4'	1:CA:1522:U:O2'	2.16	0.46
27:BA:2646:C:H2'	27:BA:2647:U:H6	1.80	0.46
1:AA:494:U:C6	1:AA:494:U:O5'	2.69	0.46
36:BN:134:ARG:O	36:BN:135:PRO:C	2.53	0.46
27:BA:1416:G:HO2'	27:BA:1417:C:H6	1.60	0.46
27:DA:1482:G:H22	27:DA:1507:A:H1'	1.80	0.46
35:BI:38:LEU:N	35:BI:38:LEU:HD12	2.17	0.46
27:BA:2692:C:H2'	27:BA:2693:A:H8	1.81	0.46
1:AA:741:G:O2'	1:AA:742:G:H5'	2.16	0.46
1:CA:601:C:C2	1:CA:602:A:C8	3.04	0.46
27:BA:271(O):C:HO2'	27:BA:271(P):C:H5	1.61	0.46
38:DP:110:TYR:HE2	38:DP:111:ARG:HH21	1.64	0.46
48:BZ:47:PHE:CD1	48:BZ:51:SER:HA	2.51	0.46
12:CL:4:ILE:O	12:CL:7:LEU:N	2.49	0.46
27:DA:1718:G:O2'	27:DA:1719:G:H5'	2.15	0.46
27:DA:2189:U:H2'	27:DA:2189:U:O2	2.16	0.46
45:DW:10:VAL:O	45:DW:11:ARG:CB	2.63	0.46
45:DW:65:LEU:HD13	45:DW:68:ARG:CG	2.46	0.46
27:DA:30:G:H4'	27:DA:1215:G:H5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1126:U:C2'	1:CA:1127:G:O5'	2.64	0.46
27:BA:70:G:H2'	27:BA:113:G:O2'	2.15	0.46
1:AA:1183:A:H3'	1:AA:1184:G:H5''	1.98	0.46
1:CA:578:C:O2'	1:CA:579:G:H5'	2.16	0.46
25:CY:38:U:O2	25:CY:38:U:C3'	2.64	0.46
13:AM:96:LEU:HD21	13:AM:111:LYS:HD2	1.98	0.46
35:DI:58:LEU:C	35:DI:60:GLU:N	2.70	0.46
27:BA:340:A:H2'	27:BA:341:G:O5'	2.16	0.46
11:CK:17:GLY:O	11:CK:80:VAL:HA	2.16	0.46
30:BD:132:PRO:HD3	30:BD:190:TYR:CE2	2.51	0.46
27:BA:1322:A:C5	27:BA:1323:U:C5	3.04	0.46
27:DA:620:G:C4'	27:DA:621:A:OP1	2.63	0.46
27:DA:878:A:N6	27:DA:899:A:O2'	2.48	0.46
1:CA:1030(A):G:H3'	1:CA:1030(B):C:C5'	2.46	0.46
7:AG:18:TYR:O	7:AG:19:GLY:C	2.54	0.46
39:DQ:61:GLY:O	39:DQ:62:GLY:O	2.34	0.46
39:DQ:61:GLY:O	39:DQ:62:GLY:C	2.54	0.46
31:BE:120:TRP:CD1	31:BE:155:LYS:HB3	2.51	0.46
30:DD:264:LYS:HA	30:DD:265:PRO:HD3	1.79	0.46
1:CA:134:A:C6	1:CA:135:C:N3	2.84	0.46
27:BA:1632:A:C6	27:BA:1633:G:C6	3.04	0.46
43:DU:60:LEU:HA	43:DU:63:VAL:HG23	1.98	0.46
36:BN:43:THR:HB	36:BN:46:VAL:HG12	1.97	0.46
27:BA:782:A:H4'	27:BA:783:A:O5'	2.17	0.46
20:CT:16:HIS:O	20:CT:19:SER:HB3	2.15	0.46
32:DF:99:TYR:CD2	32:DF:99:TYR:C	2.90	0.46
44:DV:35:LEU:HB2	44:DV:57:VAL:HG13	1.98	0.46
27:BA:2448:A:OP1	27:BA:2499:C:OP1	2.34	0.46
24:CX:38:A:H2'	24:CX:39:C:H6	1.80	0.46
27:BA:1698:A:O4'	27:BA:1700:A:C4'	2.64	0.46
6:CF:17:SER:O	6:CF:21:LEU:HD23	2.16	0.46
38:DP:140:ALA:O	38:DP:141:ALA:CB	2.64	0.46
7:AG:11:GLN:O	7:AG:12:LEU:HG	2.15	0.46
1:CA:1466:C:C2'	1:CA:1467:G:H5'	2.45	0.46
27:BA:893:C:H2'	27:BA:894:C:O4'	2.15	0.46
30:DD:45:ASN:CG	30:DD:46:GLN:H	2.19	0.46
27:BA:2367:G:H2'	27:BA:2368:C:H6	1.81	0.46
27:DA:1170:G:N2	27:DA:1180:C:C4	2.83	0.46
27:DA:483:A:H1'	47:DY:60:PHE:CZ	2.51	0.46
49:B0:50:ASN:HB2	49:B0:81:VAL:HB	1.98	0.46
4:AD:166:LYS:HD3	4:AD:179:GLU:OE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:299:A:C5	27:BA:322:A:C2	3.04	0.46
1:CA:947:G:H4'	13:CM:109:THR:OG1	2.16	0.46
27:BA:2176:A:H2'	27:BA:2177:C:C6	2.51	0.46
27:BA:636:G:P	38:BP:131:SER:HB2	2.55	0.45
27:BA:940:G:N2	27:BA:941:A:C4	2.84	0.45
1:CA:971:G:N2	1:CA:1363(A):A:OP2	2.38	0.45
40:BR:19:ALA:O	40:BR:23:ASN:ND2	2.49	0.45
41:BS:97:ARG:CZ	41:BS:98:VAL:HA	2.38	0.45
32:BF:192:LEU:HD21	32:BF:194:MET:HG2	1.99	0.45
1:CA:460:G:C8	1:CA:460:G:O5'	2.69	0.45
42:BT:82:LEU:N	42:BT:82:LEU:HD12	2.31	0.45
1:AA:920:U:H1'	1:AA:1080:A:N3	2.31	0.45
44:DV:16:PRO:O	44:DV:96:ILE:HB	2.17	0.45
28:BB:29:A:H2'	28:BB:30:C:H6	1.80	0.45
41:BS:74:ALA:O	41:BS:77:ALA:HB3	2.16	0.45
30:DD:190:TYR:O	30:DD:191:ALA:HB2	2.16	0.45
30:DD:69:ARG:HG2	30:DD:69:ARG:O	2.16	0.45
27:DA:2266:A:H5''	27:DA:2267:A:O5'	2.16	0.45
27:DA:2056:G:H1	54:D5:4:HIS:HD2	1.64	0.45
31:DE:116:VAL:CG2	31:DE:122:PHE:CG	2.98	0.45
45:DW:92:ARG:NH1	45:DW:94:ASP:OD2	2.49	0.45
1:AA:172:A:N7	1:AA:174:C:C4	2.84	0.45
27:BA:2484:G:O2'	39:BQ:124:LYS:O	2.34	0.45
2:AB:57:PHE:CE2	2:AB:185:ILE:HD11	2.50	0.45
37:DO:116:SER:C	37:DO:118:ALA:H	2.17	0.45
34:DH:119:GLU:O	34:DH:140:LYS:NZ	2.47	0.45
41:DS:14:VAL:HG12	41:DS:15:ARG:N	2.31	0.45
41:DS:34:HIS:ND1	41:DS:54:LEU:HB2	2.29	0.45
27:BA:1310:G:C2	27:BA:1313:U:O4	2.69	0.45
27:BA:1782:C:C4	27:BA:2587:A:C2	3.04	0.45
27:BA:1783:A:N1	27:BA:2587:A:C4	2.84	0.45
27:BA:2439:A:C5'	27:BA:2439:A:H8	2.24	0.45
27:BA:792:G:O2'	27:BA:2440:C:N3	2.42	0.45
30:BD:201:HIS:C	30:BD:201:HIS:ND1	2.68	0.45
27:DA:18:C:O2'	43:DU:23:GLY:HA2	2.16	0.45
39:BQ:16:ARG:C	39:BQ:17:LEU:HD23	2.36	0.45
33:DG:99:MET:O	33:DG:103:LEU:HD12	2.16	0.45
20:CT:80:ARG:O	20:CT:84:LEU:N	2.49	0.45
31:DE:9:VAL:HG22	42:DT:8:LYS:HD2	1.98	0.45
27:DA:1410:G:H2'	27:DA:1411:C:C5	2.47	0.45
1:CA:965:A:H5''	1:CA:966:G:OP1	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:144:G:N2	1:CA:178:C:O2	2.49	0.45
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.51	0.45
4:AD:17:VAL:CG1	4:AD:197:PRO:HG3	2.31	0.45
27:DA:52:A:N6	27:DA:118:A:C4	2.84	0.45
1:CA:1057:G:C2'	1:CA:1058:G:O5'	2.64	0.45
1:CA:1209:C:C2'	1:CA:1210:C:H5'	2.45	0.45
10:AJ:3:LYS:HB2	10:AJ:77:PRO:CG	2.46	0.45
31:BE:130:GLY:C	31:BE:131:ALA:O	2.55	0.45
1:AA:155:C:O2	1:AA:167:G:C2	2.69	0.45
58:B9:27:CYS:SG	58:B9:32:HIS:CB	3.05	0.45
23:AW:44:A:O2'	23:AW:45:U:OP1	2.29	0.45
37:DO:10:VAL:HG13	37:DO:17:ARG:C	2.36	0.45
19:CS:63:THR:HG22	19:CS:66:MET:HE2	1.98	0.45
35:DI:88:ILE:O	35:DI:89:TYR:C	2.52	0.45
13:AM:66:LEU:O	13:AM:67:GLU:C	2.53	0.45
33:DG:114:ILE:CG2	33:DG:115:ARG:N	2.80	0.45
1:AA:577:G:C2	1:AA:578:C:C5	3.03	0.45
1:AA:814:A:N7	1:AA:816:A:C5	2.84	0.45
5:CE:80:ILE:CD1	5:CE:91:LEU:HB2	2.45	0.45
27:DA:283:A:C2	27:DA:427:U:H1'	2.50	0.45
27:DA:27:G:O2'	27:DA:28:A:H8	1.99	0.45
1:CA:736:C:H2'	1:CA:737:A:C8	2.51	0.45
27:BA:1333:C:H2'	27:BA:1334:G:C8	2.51	0.45
50:B1:19:GLN:N	50:B1:36:GLY:O	2.48	0.45
29:DC:48:GLY:O	29:DC:49:ILE:O	2.34	0.45
1:CA:862:C:H1'	1:CA:874:G:C5'	2.46	0.45
27:DA:763:G:C8	27:DA:763:G:H3'	2.50	0.45
2:AB:81:VAL:O	2:AB:85:ALA:HB2	2.16	0.45
33:BG:167:GLU:O	33:BG:168:GLU:C	2.55	0.45
39:DQ:98:LYS:CB	39:DQ:99:PRO:CD	2.92	0.45
3:AC:182:ILE:CG1	3:AC:203:PHE:HD1	2.29	0.45
16:AP:14:ASN:N	16:AP:15:PRO:CD	2.68	0.45
27:DA:991:C:C2	27:DA:1164:G:C2	3.05	0.45
27:BA:1923:U:H2'	27:BA:1924:C:H6	1.82	0.45
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.16	0.45
27:DA:2197:U:HO2'	27:DA:2198:A:P	2.39	0.45
36:BN:76:SER:O	36:BN:78:TYR:HD1	1.99	0.45
27:BA:2720:U:O4	27:BA:2873:A:N7	2.49	0.45
36:BN:58:ASP:C	36:BN:60:ILE:N	2.70	0.45
1:AA:839:U:O2	1:AA:839:U:H2'	2.16	0.45
8:CH:71:GLY:O	8:CH:73:ASP:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:705:A:C2	27:BA:727:A:H1'	2.51	0.45
1:AA:1145:C:H4'	1:AA:1146:A:OP1	2.15	0.45
1:AA:247:G:O6	1:AA:278:G:C6	2.69	0.45
38:DP:24:GLY:O	38:DP:25:SER:HB3	2.17	0.45
44:BV:87:HIS:C	44:BV:87:HIS:CD2	2.89	0.45
27:BA:1668:A:C8	27:BA:1674:G:C5	3.04	0.45
28:DB:24:G:H1'	28:DB:27:C:N4	2.31	0.45
27:BA:2111:C:OP2	27:BA:2111:C:C6	2.69	0.45
23:AW:4:G:C2'	23:AW:5:G:H5''	2.45	0.45
27:BA:2384:G:OP1	49:B0:55:ARG:NH1	2.49	0.45
9:AI:19:LEU:HB3	9:AI:59:PHE:CD2	2.51	0.45
27:BA:563:G:N1	27:BA:564:C:C4	2.84	0.45
1:CA:1168:A:OP1	1:CA:1168:A:H8	1.99	0.45
25:AY:24:C:H2'	25:AY:25:A:H8	1.80	0.45
27:BA:36:G:N1	27:BA:445:C:C4	2.84	0.45
27:DA:153:C:OP1	50:D1:92:LYS:NZ	2.44	0.45
27:DA:845:G:C8	27:DA:845:G:C5'	2.99	0.45
44:DV:34:GLU:O	44:DV:36:PRO:N	2.49	0.45
1:CA:1016:A:H8	1:CA:1016:A:O5'	2.00	0.45
27:BA:2459:A:H5'	27:BA:2460:U:OP2	2.16	0.45
27:BA:1188:U:H4'	44:BV:79:VAL:HG22	1.97	0.45
27:DA:258:G:H2'	27:DA:259:G:H8	1.81	0.45
17:CQ:53:LEU:HD12	17:CQ:54:GLY:N	2.31	0.45
1:CA:1484:C:H4'	27:DA:1960:A:O2'	2.16	0.45
52:D3:18:ASP:N	52:D3:18:ASP:OD1	2.48	0.45
23:CW:1:U:P	23:CW:1:U:H6	2.39	0.45
50:D1:95:LEU:HD12	50:D1:95:LEU:HA	1.80	0.45
27:BA:1010:A:H8	27:BA:1010:A:O5'	1.98	0.45
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.51	0.45
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.16	0.45
1:CA:978:A:C5'	1:CA:978:A:H8	2.28	0.45
10:CJ:54:PHE:CD1	10:CJ:55:LYS:HE3	2.52	0.45
1:CA:963:G:N2	10:CJ:55:LYS:NZ	2.64	0.45
41:BS:17:ARG:O	41:BS:18:ILE:CG2	2.64	0.45
32:BF:8:GLN:HB3	32:BF:126:VAL:HA	1.98	0.45
27:BA:476:G:N2	27:BA:478:A:H3'	2.32	0.45
27:BA:482:A:H8	27:BA:482:A:O5'	1.98	0.45
42:BT:20:PRO:O	42:BT:21:GLU:C	2.55	0.45
1:AA:129(A):G:O6	1:AA:189(D):C:O2'	2.34	0.45
32:DF:23:ASP:C	32:DF:24:LEU:HD22	2.35	0.45
27:DA:867:C:H2'	27:DA:868:U:C5	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:335:C:C2	27:BA:336:C:C5	3.04	0.45
27:DA:1951:U:O2	27:DA:1953:A:H3'	2.15	0.45
23:CW:74:C:H1'	27:DA:2507:C:O2'	2.16	0.45
38:DP:21:ARG:O	38:DP:23:PRO:HD3	2.15	0.45
46:DX:39:ILE:O	46:DX:40:LYS:C	2.54	0.45
27:DA:2638:G:P	31:DE:82:ARG:NH2	2.89	0.45
4:AD:7:PRO:CB	4:AD:10:ARG:HD2	2.23	0.45
47:BY:26:LYS:CG	47:BY:27:VAL:H	2.04	0.45
1:AA:1363(A):A:C4	1:AA:1365:G:C6	3.04	0.45
1:AA:1376:U:O4	7:AG:10:ARG:NH2	2.46	0.45
1:AA:942:G:C2	1:AA:943:U:C2	3.04	0.45
37:DO:111:PHE:O	37:DO:112:MET:C	2.55	0.45
28:DB:8:U:O2'	41:DS:40:ILE:HD13	2.16	0.45
17:CQ:76:LEU:HD12	17:CQ:76:LEU:O	2.16	0.45
17:CQ:80:GLY:O	17:CQ:81:ARG:HG2	2.15	0.45
27:BA:778:G:C2	27:BA:787:U:C2	3.04	0.45
31:BE:39:PRO:HD3	31:BE:45:THR:OG1	2.17	0.45
32:BF:83:PHE:O	32:BF:84:VAL:CB	2.44	0.45
2:AB:144:ARG:O	2:AB:147:LYS:N	2.49	0.45
2:AB:171:ALA:HA	2:AB:174:VAL:HG23	1.98	0.45
33:DG:4:ASP:O	33:DG:4:ASP:OD1	2.34	0.45
27:BA:748:G:OP1	27:BA:2612:C:N4	2.45	0.45
1:AA:355:C:H5'	1:AA:389:A:OP2	2.16	0.45
1:AA:455:C:H2'	1:AA:456:C:H5'	1.97	0.45
34:BH:149:ARG:HD3	34:BH:164:TYR:CE1	2.51	0.45
27:DA:1409:C:H2'	27:DA:1410:G:C8	2.50	0.45
27:DA:1411:C:O5'	27:DA:1411:C:C6	2.69	0.45
1:CA:176:C:H2'	1:CA:177:C:C6	2.49	0.45
5:CE:58:ALA:O	5:CE:61:TYR:HB2	2.15	0.45
14:CN:4:LYS:O	14:CN:8:GLU:HB2	2.15	0.45
1:CA:1270:C:O3'	1:CA:1314:C:H4'	2.15	0.45
12:AL:34:CYS:HA	12:AL:55:VAL:HA	1.99	0.45
27:BA:2512:C:H4'	31:BE:122:PHE:CE2	2.51	0.45
35:BI:111:PRO:C	35:BI:114:LEU:HD11	2.37	0.45
48:BZ:152:SER:OG	48:BZ:162:LEU:HD11	2.16	0.45
27:BA:2283:C:H2'	27:BA:2284:C:C5'	2.35	0.45
27:BA:140:G:H1'	27:BA:141:A:H2	1.79	0.45
35:BI:5:LEU:N	35:BI:5:LEU:CD1	2.77	0.45
1:AA:404:U:O2'	1:AA:405:U:H5'	2.16	0.45
48:DZ:60:LEU:CD2	48:DZ:60:LEU:H	2.29	0.45
1:AA:262:A:H2'	1:AA:263:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:76:ALA:N	13:AM:79:LYS:NZ	2.60	0.45
13:AM:93:ARG:HE	13:AM:93:ARG:CA	2.30	0.45
37:BO:64:ARG:CZ	42:BT:70:VAL:HG21	2.46	0.45
1:CA:51:A:C6	1:CA:353:A:C2	3.04	0.45
37:DO:66:LYS:H	37:DO:82:ASN:HD21	1.63	0.45
19:CS:39:THR:HG22	19:CS:40:ILE:O	2.16	0.45
33:DG:111:LEU:HD21	33:DG:120:LEU:HD21	1.97	0.45
31:DE:16:ARG:HH11	31:DE:173:VAL:CG2	2.28	0.45
7:CG:143:ARG:HB3	7:CG:143:ARG:HH11	1.81	0.45
48:BZ:25:GLY:O	48:BZ:26:VAL:HB	2.16	0.45
34:DH:43:VAL:CG1	34:DH:53:GLU:H	2.30	0.45
27:DA:481:G:O5'	47:DY:47:LYS:HE2	2.16	0.45
1:CA:711:G:N2	1:CA:712:A:N3	2.64	0.45
27:BA:675:A:H2	27:BA:2443:C:O2	1.99	0.45
48:DZ:54:HIS:CE1	48:DZ:134:GLU:HA	2.50	0.45
34:DH:157:TYR:O	34:DH:158:HIS:CB	2.64	0.45
33:BG:11:TYR:CZ	33:BG:16:ARG:HG2	2.51	0.45
33:BG:169:ALA:O	33:BG:172:LEU:HB3	2.15	0.45
2:CB:75:LYS:HD3	2:CB:78:GLN:HB2	1.97	0.45
27:BA:1835:G:C5	27:BA:1931:U:C4	3.04	0.45
1:AA:1226:C:N4	13:AM:104:ARG:HD3	2.32	0.45
27:DA:1920:C:H2'	27:DA:1920:C:O2	2.16	0.45
28:DB:68:C:O2'	28:DB:69:G:H5'	2.16	0.45
1:AA:641:U:C4'	1:AA:642:A:OP1	2.64	0.45
7:CG:14:PRO:O	7:CG:15:ASP:O	2.34	0.45
4:AD:170:VAL:CG1	4:AD:174:LEU:HD12	2.46	0.45
1:CA:109:A:C8	1:CA:327:A:O4'	2.69	0.45
27:BA:547:A:H8	27:BA:549:G:O6	1.99	0.45
27:DA:1701:A:H2'	27:DA:1702:G:H5'	1.97	0.45
5:CE:101:ILE:N	5:CE:101:ILE:CD1	2.71	0.45
27:BA:2642:G:C2	27:BA:2643:G:C4	3.04	0.45
1:CA:833:U:H3	1:CA:853:G:H1	1.64	0.45
1:AA:1097:C:H1'	1:AA:1170:A:H1'	1.97	0.45
1:AA:1166:G:H2'	1:AA:1169:A:OP2	2.16	0.45
23:AW:16:C:O2	23:AW:16:C:H3'	2.16	0.45
34:DH:19:VAL:HG13	34:DH:24:VAL:CG1	2.45	0.45
1:AA:279:A:O2'	1:AA:280:C:OP2	2.29	0.45
35:DI:4:ILE:O	35:DI:36:ALA:HB1	2.15	0.45
27:DA:2240:C:O2'	27:DA:2241:A:H5'	2.16	0.45
51:B2:13:ALA:HA	51:B2:16:LEU:CD2	2.46	0.45
29:BC:181:PRO:O	29:BC:182:PRO:CB	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BH:101:ARG:CB	34:BH:117:PRO:HG3	2.44	0.45
27:DA:2705:A:O5'	27:DA:2705:A:H8	1.99	0.45
27:BA:1346:G:C4	27:BA:1347:G:N7	2.84	0.45
1:AA:1030(C):G:O2'	1:AA:1030(D):A:H5'	2.16	0.45
1:CA:877:C:H1'	8:CH:3:THR:OG1	2.16	0.45
27:BA:563:G:H1	27:BA:578:A:H61	1.64	0.45
27:BA:715:G:C2	27:BA:716:A:C4	3.04	0.45
3:CC:186:PHE:CD1	3:CC:198:VAL:O	2.68	0.45
54:D5:56:LYS:H	54:D5:56:LYS:HD2	1.81	0.45
27:DA:1763:G:H2'	27:DA:1764:G:H5'	1.98	0.45
27:BA:1759:A:C5'	27:BA:2715:C:H1'	2.47	0.45
45:BW:97:LYS:NZ	45:BW:99:ARG:HH12	2.15	0.45
27:DA:1558:A:O2'	27:DA:1559:G:OP2	2.30	0.45
4:CD:58:LEU:HD12	4:CD:59:ARG:NH1	2.31	0.45
1:CA:523:A:H61	12:CL:89:ASP:HB2	1.81	0.45
20:AT:31:SER:O	20:AT:34:LYS:HB2	2.16	0.45
8:CH:128:GLY:O	8:CH:129:VAL:HG13	2.17	0.45
25:CY:3:G:H8	25:CY:3:G:O5'	1.99	0.45
40:BR:116:LEU:HA	40:BR:116:LEU:HD23	1.77	0.45
57:B8:11:LYS:HE2	57:B8:64:TYR:HE1	1.81	0.45
32:BF:4:VAL:HA	32:BF:19:GLU:HB3	1.99	0.45
37:BO:91:LEU:N	37:BO:91:LEU:HD22	2.31	0.45
57:D8:4:MET:O	57:D8:62:LEU:CD1	2.57	0.45
27:DA:1693:U:C2'	30:DD:14:ARG:NH2	2.79	0.45
1:CA:500:G:C2	1:CA:501:C:C2	3.04	0.45
4:CD:61:LYS:NZ	4:CD:62:GLN:HE21	2.12	0.45
32:DF:2:LYS:CD	32:DF:2:LYS:H	2.30	0.45
29:BC:83:ILE:HD12	29:BC:94:VAL:HB	1.97	0.45
8:AH:76:PRO:O	8:AH:77:GLU:O	2.34	0.45
44:DV:38:LEU:O	44:DV:39:LEU:HD13	2.15	0.45
27:DA:1497:U:C5'	27:DA:1498:C:C5	2.99	0.45
30:DD:27:THR:CG2	30:DD:27:THR:O	2.63	0.45
28:BB:95:C:O2'	28:BB:96:U:H5'	2.16	0.45
27:DA:2256:G:O2'	49:D0:9:SER:HB2	2.16	0.45
27:DA:2016:U:C4	27:DA:2017:U:C4	3.04	0.45
27:DA:580:C:O3'	43:DU:31:SER:OG	2.32	0.45
27:DA:942:G:C6	27:DA:943:U:N3	2.84	0.45
20:AT:26:ASN:HB3	20:AT:71:THR:CG2	2.46	0.45
48:DZ:55:VAL:HA	48:DZ:69:LEU:HD21	1.99	0.45
31:DE:47:VAL:HG21	31:DE:85:ASN:HA	1.98	0.45
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.51	0.45
48:BZ:15:SER:HA	48:BZ:18:ARG:HD2	1.98	0.45
8:AH:53:VAL:O	8:AH:56:LYS:CG	2.63	0.45
2:AB:69:LEU:HB2	2:AB:159:PRO:HB3	1.98	0.45
34:DH:139:GLN:HG3	34:DH:140:LYS:N	2.32	0.45
27:DA:2749:A:O2'	34:DH:59:ARG:HG3	2.15	0.45
16:AP:1:MET:SD	16:AP:3:LYS:HG3	2.57	0.45
3:CC:147:LYS:CB	3:CC:203:PHE:CD2	3.00	0.45
32:BF:89:VAL:CG1	32:BF:90:PHE:H	2.11	0.45
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.49	0.45
1:CA:662:G:O2'	1:CA:836:G:H5''	2.16	0.45
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.16	0.45
37:BO:77:ILE:HD11	42:BT:72:VAL:HG12	1.96	0.45
27:BA:1480:G:H2'	27:BA:1480:G:N3	2.32	0.45
1:CA:192:U:H4'	20:CT:103:GLY:CA	2.40	0.45
27:DA:740:U:C4	27:DA:758:C:O2	2.70	0.45
8:CH:6:ILE:N	8:CH:6:ILE:CD1	2.80	0.45
48:DZ:51:SER:OG	48:DZ:52:ILE:HD12	2.16	0.45
1:CA:751:U:H1'	15:CO:24:SER:HA	1.98	0.45
27:DA:2126:A:H5'	29:DC:36:LYS:HG2	1.99	0.45
27:BA:174:C:O2	27:BA:174:C:H2'	2.15	0.45
49:B0:23:VAL:O	49:B0:24:LYS:HD3	2.16	0.45
27:DA:1341:U:C4	27:DA:1395:A:H2	2.34	0.45
27:DA:955:C:O2'	27:DA:956:G:H5'	2.16	0.45
55:B6:25:LYS:HD2	55:B6:27:LYS:NZ	2.31	0.45
55:B6:27:LYS:O	55:B6:28:ARG:C	2.54	0.45
12:AL:114:ARG:NH2	12:AL:121:LYS:CD	2.80	0.45
48:BZ:124:LEU:HD23	48:BZ:163:ALA:O	2.16	0.45
35:DI:76:THR:O	35:DI:77:LEU:O	2.33	0.45
27:BA:849:A:N6	27:BA:928:G:O2'	2.47	0.45
27:DA:271(J):C:OP2	27:DA:271(J):C:H6	1.98	0.45
1:CA:1319:A:H2'	1:CA:1323:G:N7	2.31	0.45
30:DD:177:LEU:HB3	30:DD:178:PRO:HD2	1.98	0.45
15:AO:58:MET:O	15:AO:59:MET:C	2.54	0.45
27:DA:783:A:H2'	27:DA:784:A:C5'	2.46	0.45
45:DW:24:ILE:HA	45:DW:27:LYS:HD2	1.97	0.45
24:AX:1:C:O2	49:B0:5:LYS:HB3	2.15	0.45
27:BA:56:A:C2	27:BA:115:C:O2	2.69	0.45
50:D1:6:GLU:C	50:D1:7:ILE:HD12	2.36	0.45
36:DN:28:THR:HG23	36:DN:29:LYS:HG3	1.97	0.45
24:AX:69:C:H2'	24:AX:70:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BG:170:ARG:NH2	33:BG:182:LYS:HZ2	2.13	0.45
33:BG:33:ARG:H	33:BG:162:THR:CG2	2.30	0.45
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.16	0.45
27:DA:1012:U:C4	36:DN:25:ARG:HD3	2.51	0.45
39:DQ:10:ARG:O	39:DQ:10:ARG:CG	2.64	0.45
1:AA:966:G:O2'	1:AA:967:C:C5'	2.64	0.45
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.97	0.45
24:CX:10:G:H2'	24:CX:11:A:H8	1.80	0.45
24:CX:25:C:O2'	24:CX:26:G:H5'	2.16	0.45
8:CH:84:ARG:HH11	8:CH:84:ARG:HG2	1.82	0.45
27:DA:557:U:H6	27:DA:557:U:O5'	1.98	0.45
27:DA:2093:G:H2'	27:DA:2094:G:H8	1.81	0.45
2:CB:107:THR:O	2:CB:110:GLN:CG	2.64	0.45
27:BA:1640:C:C2'	27:BA:1640:C:O2	2.60	0.45
27:BA:25:U:O5'	27:BA:25:U:H6	1.98	0.45
28:BB:87:G:C2'	28:BB:88:C:H5''	2.46	0.45
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.81	0.45
27:DA:566:U:H4'	27:DA:809:G:OP2	2.16	0.45
56:D7:24:THR:CG2	56:D7:27:GLY:H	2.26	0.45
48:DZ:143:LEU:N	48:DZ:143:LEU:HD22	2.31	0.45
48:DZ:101:LEU:HB3	48:DZ:103:PHE:CE1	2.51	0.45
27:BA:1453:U:OP1	40:BR:77:ARG:NH1	2.45	0.45
27:DA:1770:G:C5	27:DA:1771:C:C5	3.05	0.45
27:DA:1773:A:C2'	27:DA:1774:C:H5'	2.46	0.45
27:DA:612:C:C2'	27:DA:613:G:H5'	2.47	0.45
31:BE:119:ARG:CD	31:BE:120:TRP:NE1	2.77	0.45
32:BF:43:LYS:C	32:BF:45:ARG:H	2.19	0.45
27:DA:1374:G:C2	27:DA:1375:C:C2	3.04	0.45
25:AY:57:A:C4'	25:AY:58:A:OP1	2.63	0.45
4:CD:49:ARG:O	4:CD:50:ARG:C	2.54	0.45
2:AB:108:ILE:HD13	2:AB:108:ILE:HA	1.78	0.45
27:BA:2323:G:O2'	27:BA:2324:C:H5'	2.16	0.45
27:BA:766:C:C2	27:BA:767:U:C6	3.04	0.45
27:DA:776:G:C4	27:DA:793:A:C2	3.04	0.45
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.81	0.45
27:DA:272(J):C:H3'	27:DA:274:G:H21	1.81	0.45
27:DA:69:C:O2	27:DA:69:C:H2'	2.16	0.45
56:B7:17:GLY:O	56:B7:21:ARG:HG2	2.16	0.45
27:DA:405:U:O2'	27:DA:406:G:OP1	2.34	0.45
27:BA:1290:C:H2'	27:BA:1291:C:H6	1.82	0.45
28:BB:45:A:C2	28:BB:46:A:C1'	2.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:832:G:N3	38:DP:53:GLY:HA2	2.32	0.45
1:CA:508:C:C4'	1:CA:509:A:OP1	2.60	0.45
27:BA:481:G:O2'	27:BA:482:A:OP2	2.22	0.45
27:BA:533:G:C6	27:BA:561:G:N2	2.85	0.45
27:DA:1862:G:H1	27:DA:1880:C:N4	2.04	0.45
29:BC:78:ALA:HB2	29:BC:82:LYS:HD2	1.98	0.45
27:DA:815:C:H2'	27:DA:816:C:C6	2.52	0.45
43:DU:76:TYR:OH	43:DU:93:LYS:HE3	2.17	0.45
12:CL:66:TYR:HB2	12:CL:93:VAL:HG11	1.98	0.45
52:B3:31:LEU:O	52:B3:32:GLN:CB	2.65	0.45
51:D2:56:GLN:O	51:D2:57:ILE:C	2.55	0.45
27:BA:1899:G:N2	27:BA:1902:C:C5	2.85	0.45
27:DA:2702:U:O2	27:DA:2702:U:C2'	2.63	0.45
55:D6:32:ASN:ND2	55:D6:33:LYS:N	2.44	0.45
55:D6:34:LEU:O	55:D6:36:LEU:HG	2.16	0.45
27:DA:2420:C:OP1	57:D8:34:TRP:HA	2.16	0.45
38:DP:125:VAL:O	38:DP:125:VAL:CG2	2.64	0.45
27:DA:573:G:O6	27:DA:2029:G:H2'	2.17	0.45
27:DA:1599:C:OP1	46:DX:35:THR:HA	2.16	0.45
48:DZ:69:LEU:HA	48:DZ:69:LEU:HD23	1.79	0.45
30:BD:34:VAL:O	30:BD:34:VAL:CG1	2.57	0.45
30:BD:65:ILE:HG12	30:BD:104:TYR:C	2.36	0.45
4:CD:138:TYR:C	4:CD:138:TYR:HD2	2.20	0.45
39:BQ:25:ASP:O	48:BZ:80:ARG:NH2	2.48	0.45
27:DA:2746:U:O5'	27:DA:2746:U:H6	2.00	0.45
1:CA:1494:G:N2	1:CA:1495:U:C2	2.85	0.45
30:BD:53:PHE:O	30:BD:218:ARG:HG3	2.15	0.45
30:BD:48:ARG:HG2	30:BD:48:ARG:H	1.33	0.45
1:CA:123:C:H5''	1:CA:311:C:O2'	2.17	0.45
1:CA:237:C:C5'	17:CQ:25:ARG:NH1	2.77	0.45
41:BS:85:VAL:CG2	41:BS:106:ARG:HB2	2.45	0.45
33:DG:7:LEU:HA	33:DG:7:LEU:HD23	1.67	0.45
1:AA:409:G:OP1	4:AD:25:ARG:N	2.43	0.45
34:BH:158:HIS:ND1	34:BH:168:PRO:HB2	2.30	0.45
37:BO:35:VAL:HG21	37:BO:69:ILE:HD13	1.99	0.45
27:DA:691:C:O2'	27:DA:692:C:H5'	2.15	0.45
27:DA:2715:C:H2'	27:DA:2716:U:H6	1.81	0.45
3:CC:196:LEU:HD12	3:CC:197:GLY:N	2.32	0.45
8:AH:97:VAL:HG13	8:AH:98:LYS:HG3	1.98	0.45
1:CA:1286:A:H2'	1:CA:1287:A:H4'	1.98	0.45
6:CF:32:ASN:C	6:CF:34:GLY:N	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DZ:126:LYS:O	48:DZ:126:LYS:HG2	2.17	0.45
27:BA:625:G:O6	38:BP:107:LYS:HD2	2.16	0.45
38:BP:97:PRO:C	38:BP:99:LEU:N	2.70	0.45
29:DC:41:VAL:CA	29:DC:213:TYR:HA	2.46	0.45
36:DN:57:ALA:O	36:DN:58:ASP:O	2.34	0.45
33:BG:51:ARG:HA	33:BG:51:ARG:HE	1.78	0.45
27:DA:1275:A:H2	27:DA:1295:C:O2	1.99	0.45
27:DA:2308:G:N2	27:DA:2309:A:N1	2.65	0.45
7:CG:79:ARG:HA	7:CG:84:ASN:HA	1.98	0.45
27:BA:97:C:H5'	51:B2:2:LYS:HB3	1.99	0.45
27:BA:1587:A:H3'	27:BA:1588:C:H6	1.81	0.45
27:DA:736:C:HO2'	27:DA:737:C:H5'	1.81	0.45
5:CE:40:ARG:HB3	5:CE:66:MET:HE1	1.95	0.45
23:AW:66:A:C5	23:AW:67:C:C4	3.05	0.45
1:CA:638:G:O2'	1:CA:639:G:H5'	2.17	0.45
27:BA:389:G:H1	38:BP:71:VAL:CG1	2.21	0.45
19:AS:6:LYS:CG	19:AS:7:LYS:HE3	2.46	0.45
27:BA:1050:A:O2'	27:BA:1051:G:P	2.75	0.45
45:DW:54:ALA:HB1	45:DW:107:LEU:HD13	1.99	0.45
27:BA:1204:A:HO2'	27:BA:1205:U:P	2.36	0.45
3:CC:36:ASP:OD2	3:CC:57:ILE:HG21	2.16	0.45
1:CA:913:A:C1'	1:CA:914:A:O4'	2.65	0.45
27:BA:2063:C:C5	27:BA:2064:C:C4	3.05	0.45
1:AA:601:C:C2'	1:AA:602:A:H5'	2.45	0.45
1:CA:266:G:H1	1:CA:271:C:H42	1.64	0.45
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.45	0.45
4:AD:100:ARG:CZ	4:AD:137:SER:HB3	2.46	0.45
27:BA:958:U:O2'	27:BA:959:A:OP1	2.26	0.45
1:CA:59:A:C5'	1:CA:60:A:C5'	2.94	0.45
1:CA:789:U:O2	1:CA:792:A:C8	2.69	0.45
35:DI:30:LEU:O	35:DI:31:LEU:C	2.55	0.45
27:DA:1292:U:H2'	27:DA:1293:C:H6	1.79	0.45
20:CT:18:GLN:O	20:CT:19:SER:C	2.54	0.45
1:AA:1444:C:O2'	1:AA:1445:C:H5'	2.17	0.45
27:DA:839:U:H2'	27:DA:840:C:C5	2.52	0.45
4:AD:57:ARG:HD3	4:AD:205:GLU:HB3	1.97	0.45
27:DA:1845:G:C4	27:DA:1896:G:C2	3.04	0.45
43:BU:66:ASN:HB2	43:BU:76:TYR:HB2	1.99	0.45
9:CI:18:PHE:CD1	9:CI:62:TYR:HD2	2.35	0.45
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.98	0.45
1:AA:559:A:O2'	1:AA:560:U:OP2	2.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BH:71:LEU:H	34:BH:74:ASN:HD22	1.64	0.45
29:DC:18:LYS:CD	29:DC:19:VAL:H	2.27	0.45
42:BT:134:GLU:O	42:BT:135:ALA:CB	2.62	0.45
1:AA:781:A:O2'	1:AA:1522:U:O2	2.34	0.45
37:DO:13:ASN:O	37:DO:15:GLY:N	2.49	0.45
44:DV:71:LEU:HD13	44:DV:84:LYS:HE2	1.97	0.45
1:AA:5:U:N3	4:AD:86:LYS:HE2	2.32	0.45
2:AB:83:MET:HA	2:AB:83:MET:HE2	1.97	0.45
25:AY:37:U:H2'	25:AY:38:U:O4'	2.17	0.45
27:BA:873:G:N1	27:BA:905:U:C2	2.85	0.45
1:CA:583:A:H8	1:CA:583:A:O5'	1.99	0.45
20:AT:48:LYS:O	20:AT:49:ALA:HB2	2.16	0.45
49:B0:69:PHE:HD1	49:B0:69:PHE:N	2.14	0.45
32:BF:172:TRP:N	32:BF:172:TRP:CD1	2.85	0.45
30:BD:58:HIS:CD2	30:BD:59:LYS:N	2.84	0.45
2:CB:43:ASP:OD2	2:CB:46:LYS:N	2.49	0.45
29:BC:22:ILE:CG2	29:BC:24:GLU:HB2	2.46	0.45
27:DA:1478:G:N2	27:DA:1558:A:OP1	2.50	0.45
6:CF:23:LYS:HB3	6:CF:23:LYS:HE2	1.78	0.45
27:BA:2735:G:H2'	27:BA:2736:G:H8	1.81	0.45
27:DA:2642:G:H2'	27:DA:2643:G:O4'	2.15	0.45
27:BA:230:U:O5'	27:BA:230:U:H6	1.98	0.45
40:BR:71:GLN:HE21	40:BR:71:GLN:HB2	1.57	0.45
1:AA:997:U:H2'	1:AA:998:G:C8	2.51	0.45
13:CM:99:ARG:HB2	13:CM:101:GLN:NE2	2.31	0.45
27:BA:1692:U:O2'	27:BA:1693:U:H2'	2.16	0.45
57:B8:11:LYS:H	57:B8:60:LEU:HD21	1.82	0.45
27:BA:607:U:OP1	32:BF:103:LYS:HG3	2.17	0.45
1:CA:1232:U:C2'	1:CA:1233:G:O5'	2.64	0.45
1:CA:978:A:H1'	1:CA:1322:C:O2	2.16	0.45
2:CB:91:PRO:HG2	2:CB:155:LEU:HD23	1.98	0.45
41:BS:17:ARG:CA	41:BS:20:ARG:NH1	2.79	0.45
32:BF:3:GLU:C	32:BF:19:GLU:HB3	2.37	0.45
37:BO:87:ILE:HG23	37:BO:92:GLU:O	2.16	0.45
57:D8:63:PRO:HB2	57:D8:64:TYR:CD1	2.51	0.45
27:DA:271(Q):G:OP1	35:DI:42:SER:HB2	2.17	0.45
30:BD:138:VAL:HG23	30:BD:165:ILE:HG22	1.98	0.45
32:BF:67:GLN:O	32:BF:68:LYS:CB	2.54	0.45
42:BT:19:LEU:HA	42:BT:20:PRO:HD3	1.78	0.45
44:DV:18:LEU:CD1	44:DV:18:LEU:N	2.79	0.45
41:BS:66:ALA:O	41:BS:67:ARG:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DD:117:VAL:HG23	30:DD:118:VAL:N	2.31	0.45
1:CA:1239:A:H5'	1:CA:1240:U:OP1	2.17	0.45
27:DA:2392:A:H2'	27:DA:2393:A:O4'	2.16	0.45
33:DG:22:ARG:HH11	33:DG:22:ARG:CB	2.08	0.45
27:DA:1187:G:C8	27:DA:1187:G:O5'	2.56	0.45
38:DP:21:ARG:HG2	38:DP:29:LYS:HE3	1.99	0.45
27:BA:2482:G:H2'	27:BA:2483:C:C6	2.49	0.45
46:DX:57:LEU:CD1	46:DX:78:LYS:HD3	2.43	0.45
1:CA:39:G:O2'	1:CA:40:C:H5'	2.16	0.45
9:AI:50:LEU:O	9:AI:54:ASP:N	2.50	0.45
1:AA:1339:A:N6	1:AA:1340:A:N3	2.64	0.45
19:AS:31:ILE:HG23	19:AS:31:ILE:O	2.16	0.45
1:AA:1306:A:H2'	1:AA:1307:U:C6	2.51	0.45
30:BD:232:PRO:HD2	30:BD:249:PRO:HA	1.97	0.45
1:AA:109:A:C8	1:AA:326:G:H2'	2.51	0.45
31:BE:36:ARG:HG2	31:BE:36:ARG:NH1	2.32	0.45
27:BA:1992:G:C6	27:BA:1997:G:N1	2.84	0.45
27:DA:2649:U:O2'	27:DA:2650:U:H5'	2.17	0.45
6:AF:61:LEU:HD23	6:AF:63:TYR:HE2	1.81	0.45
27:BA:391:G:C6	27:BA:392:C:C4	3.04	0.45
12:AL:73:ASN:O	12:AL:74:LEU:O	2.34	0.45
1:CA:1198:G:C2	1:CA:1199:U:C2	3.05	0.45
1:CA:514:C:O2'	1:CA:515:G:H5'	2.16	0.45
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.99	0.45
1:CA:1255:G:O2'	1:CA:1258:G:H1'	2.15	0.45
1:CA:1311:G:N2	1:CA:1327:C:C2	2.84	0.45
39:DQ:32:TYR:O	39:DQ:106:VAL:HG22	2.17	0.45
48:DZ:43:PHE:HE2	48:DZ:87:PHE:CZ	2.34	0.45
29:DC:59:ARG:CD	29:DC:59:ARG:N	2.78	0.45
58:B9:27:CYS:HB2	58:B9:32:HIS:HB2	1.97	0.45
58:B9:27:CYS:SG	58:B9:32:HIS:HB2	2.57	0.45
1:CA:1499:A:C2	1:CA:1500:A:C8	3.05	0.45
27:BA:642:G:N1	27:BA:645:C:OP2	2.50	0.45
27:BA:142:A:H1'	27:BA:1408:C:H1'	1.98	0.45
1:AA:504:C:C2	1:AA:542:G:N2	2.85	0.45
27:BA:92:A:O2'	27:BA:93:G:OP2	2.26	0.45
1:AA:939:G:P	7:AG:102:ARG:HH12	2.40	0.45
8:AH:104:ARG:NH2	8:AH:138:TRP:CH2	2.84	0.45
5:CE:31:LEU:HD11	5:CE:43:LEU:HD21	1.97	0.45
23:AW:64:G:H5'	23:AW:65:U:OP2	2.17	0.45
42:DT:96:ARG:HG3	42:DT:99:LEU:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:26:GLN:HB3	17:AQ:37:LYS:CG	2.39	0.45
27:DA:8:A:H2'	27:DA:9:U:H6	1.73	0.45
1:AA:1264:C:H6	1:AA:1264:C:H3'	1.79	0.45
1:AA:1270:C:C2'	1:AA:1271:G:H5'	2.46	0.45
47:BY:5:MET:HA	47:BY:5:MET:CE	2.47	0.45
27:DA:1321:A:H2'	27:DA:1322:A:H8	1.80	0.45
27:DA:1216:G:N3	27:DA:1216:G:H2'	2.32	0.45
1:CA:735:C:O2'	1:CA:736:C:H5'	2.16	0.45
1:CA:707:C:O2	11:CK:39:PRO:HD3	2.16	0.45
27:BA:1331:A:H2'	27:BA:1333:C:H5	1.82	0.45
1:CA:818:G:N3	1:CA:820:U:C6	2.84	0.45
32:BF:34:TRP:CE2	38:BP:12:ALA:HB2	2.51	0.45
2:AB:76:GLN:O	2:AB:208:ILE:HG12	2.17	0.45
2:AB:77:ALA:HB2	2:AB:211:ILE:CD1	2.47	0.45
2:CB:213:LEU:O	2:CB:213:LEU:HD23	2.16	0.45
16:AP:8:ARG:NH2	16:AP:15:PRO:HG3	2.32	0.45
13:CM:91:ARG:O	13:CM:96:LEU:O	2.34	0.45
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.17	0.45
27:BA:23:G:H1	27:BA:517:C:H42	1.63	0.45
1:CA:266:G:H5''	1:CA:267:C:C5	2.51	0.45
40:BR:4:LEU:O	40:BR:6:SER:N	2.49	0.45
10:CJ:87:THR:O	10:CJ:88:LEU:C	2.54	0.45
27:BA:1838:C:O2'	27:BA:1898:U:C5	2.69	0.45
27:BA:711:G:C2	27:BA:721:C:C2	3.04	0.45
6:AF:74:ASP:O	6:AF:77:ARG:HB3	2.17	0.45
37:DO:101:PRO:HD2	42:DT:70:VAL:HG21	1.95	0.45
4:CD:88:VAL:HG13	5:CE:97:GLY:HA3	1.98	0.45
27:BA:576:U:H2'	27:BA:577:G:H8	1.75	0.45
18:AR:63:GLN:O	18:AR:66:LEU:HB3	2.16	0.45
1:CA:336:C:O2'	1:CA:337:C:H5'	2.16	0.45
27:BA:182:A:H2'	27:BA:183:C:C6	2.52	0.45
27:DA:2363:C:O2'	27:DA:2364:C:H5'	2.16	0.45
27:DA:614(C):A:C4'	27:DA:615:G:OP1	2.64	0.45
27:BA:2745:C:H42	27:BA:2759:G:H1	1.63	0.45
48:BZ:33:ASN:O	48:BZ:33:ASN:OD1	2.34	0.45
17:AQ:27:PHE:HB2	17:AQ:28:PRO:CD	2.46	0.45
27:DA:2242:G:H2'	27:DA:2243:U:O4'	2.17	0.45
27:BA:1450:G:H2'	27:BA:1450(A):C:H5'	1.99	0.45
27:DA:205:G:O2'	27:DA:206:U:P	2.74	0.45
30:DD:172:TYR:HD1	30:DD:186:HIS:N	2.15	0.45
1:AA:318:G:H1	1:AA:335:C:H42	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1156:G:O5'	1:AA:1156:G:H8	1.99	0.45
27:BA:2082:A:H2'	27:BA:2083:G:H8	1.80	0.45
41:DS:67:ARG:CG	41:DS:67:ARG:NH1	2.77	0.45
27:DA:700:G:H2'	27:DA:701:G:C8	2.51	0.45
35:DI:51:ILE:CG2	35:DI:52:ARG:N	2.79	0.45
7:CG:32:ARG:O	7:CG:33:ASP:CB	2.65	0.45
27:BA:2291:U:OP1	27:BA:2381:C:H5'	2.17	0.45
18:AR:45:SER:OG	18:AR:49:LYS:N	2.49	0.45
27:DA:555:U:C2'	27:DA:556:G:C8	3.00	0.45
1:AA:946:A:O2'	1:AA:1333:A:N3	2.28	0.45
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB2	2.46	0.45
2:CB:140:HIS:O	2:CB:143:GLU:HB2	2.16	0.45
27:BA:2737:G:H2'	27:BA:2738:A:C8	2.52	0.45
46:BX:35:THR:OG1	46:BX:38:GLU:HB2	2.16	0.45
27:DA:271(W):G:C5'	27:DA:271(X):G:OP2	2.64	0.45
5:CE:87:SER:CB	5:CE:131:ILE:HD13	2.47	0.45
1:AA:401:C:OP2	4:AD:73:ARG:NH2	2.50	0.45
4:CD:182:LYS:HB2	4:CD:183:GLY:H	1.41	0.45
1:AA:775:G:O2'	1:AA:776:G:H5'	2.17	0.45
46:DX:88:LYS:HE3	46:DX:90:GLU:OE2	2.16	0.45
38:BP:75:ILE:N	38:BP:75:ILE:HD12	2.32	0.45
48:BZ:131:ASN:ND2	48:BZ:131:ASN:N	2.64	0.45
12:AL:110:ARG:HG2	12:AL:110:ARG:HH11	1.81	0.45
27:DA:1746:G:N3	27:DA:1746:G:H2'	2.31	0.45
27:BA:975(A):G:O2'	27:BA:976:C:H5'	2.16	0.45
7:AG:4:ARG:HD3	7:AG:5:ARG:NH1	2.31	0.45
57:B8:7:HIS:CB	57:B8:59:LYS:HB3	2.46	0.45
27:BA:247:G:H4'	27:BA:386:G:C6	2.50	0.45
14:CN:44:LEU:C	14:CN:44:LEU:HD12	2.36	0.45
2:CB:91:PRO:HG2	2:CB:155:LEU:HG	1.99	0.45
31:BE:170:LEU:HB3	31:BE:184:VAL:HG13	1.99	0.45
34:BH:138:LYS:O	34:BH:142:GLY:N	2.47	0.45
27:DA:200:U:H2'	27:DA:201:C:H5'	1.98	0.45
38:DP:46:LYS:HG2	38:DP:52:GLU:OE2	2.16	0.45
1:CA:498:U:O2'	1:CA:499:A:P	2.75	0.45
1:CA:542:G:O2'	1:CA:543:C:H5'	2.15	0.45
33:BG:97:ASP:O	33:BG:100:TRP:N	2.49	0.45
44:BV:99:ILE:O	44:BV:99:ILE:CG1	2.58	0.45
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.30	0.45
44:DV:39:LEU:HB3	44:DV:47:VAL:HG11	1.99	0.45
27:DA:1560:G:C2	27:DA:1561:G:H1'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D2:38:GLN:O	51:D2:45:SER:HB2	2.17	0.45
1:CA:1240:U:O3'	7:CG:38:LEU:HD21	2.16	0.45
27:DA:2392:A:P	57:D8:31:HIS:HE1	2.39	0.45
27:DA:2060:A:OP1	32:DF:68:LYS:O	2.34	0.45
36:BN:62:VAL:HG22	36:BN:66:LYS:HB2	1.92	0.45
36:BN:94:HIS:N	36:BN:95:PRO:HD2	2.32	0.45
55:B6:41:PRO:CD	55:B6:46:HIS:N	2.80	0.45
48:DZ:55:VAL:HG13	48:DZ:68:THR:O	2.16	0.45
1:AA:413:G:H1'	1:AA:428:G:N2	2.31	0.45
1:AA:428:G:HO2'	1:AA:429:U:P	2.39	0.45
34:BH:64:LEU:O	34:BH:65:HIS:C	2.53	0.45
1:CA:66:G:N2	1:CA:67:C:C1'	2.80	0.45
47:BY:32:PRO:HB2	47:BY:35:TYR:HA	1.99	0.45
51:D2:4:SER:OG	51:D2:7:ARG:HD2	2.16	0.45
16:CP:12:LYS:HD3	16:CP:13:HIS:CD2	2.52	0.45
28:DB:6:C:H2'	28:DB:7:G:O4'	2.16	0.45
41:DS:62:LYS:O	41:DS:65:VAL:N	2.50	0.45
17:CQ:76:LEU:HD12	17:CQ:78:GLU:H	1.81	0.45
1:AA:106:C:H2'	1:AA:107:G:H8	1.82	0.45
38:DP:7:ARG:O	38:DP:10:PRO:HD3	2.16	0.45
1:CA:606:G:H2'	1:CA:631:G:H22	1.81	0.45
27:BA:2742:C:P	58:B9:35:ARG:HH11	2.40	0.45
46:BX:14:SER:C	46:BX:16:LYS:N	2.67	0.45
46:BX:12:VAL:HG12	46:BX:27:THR:HG23	1.98	0.45
20:CT:62:LEU:O	20:CT:65:LYS:HB2	2.16	0.45
42:DT:2:ASN:C	42:DT:3:ARG:HG2	2.37	0.45
4:CD:153:ARG:CB	4:CD:153:ARG:HH11	2.14	0.45
1:CA:538:G:OP1	12:CL:110:ARG:HD2	2.17	0.45
27:BA:2267:A:C2'	27:BA:2267:A:N3	2.77	0.45
27:BA:2722:G:H2'	27:BA:2723:C:C6	2.51	0.45
30:BD:69:ARG:NH2	30:BD:192:THR:HB	2.32	0.45
27:BA:2846:G:H2'	27:BA:2847:U:C6	2.52	0.45
8:CH:6:ILE:O	8:CH:7:ALA:C	2.54	0.45
39:DQ:137:TYR:H	39:DQ:137:TYR:HD2	1.63	0.45
29:DC:67:GLY:O	29:DC:68:LEU:HB2	2.15	0.45
27:BA:2392:A:H1'	38:BP:60:MET:HB3	1.99	0.45
1:AA:823:G:C2'	1:AA:824:C:H5'	2.46	0.45
1:AA:262:A:H5'	20:AT:74:LYS:HB2	1.97	0.45
30:BD:12:SER:O	30:BD:14:ARG:N	2.50	0.45
1:CA:1028:C:H2'	1:CA:1033:G:H22	1.81	0.45
27:DA:1418:G:H8	27:DA:1418:G:O5'	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1754:C:H5''	42:DT:113:LYS:NZ	2.31	0.45
4:AD:127:THR:HA	4:AD:132:ARG:HA	1.98	0.45
16:CP:57:ARG:NH1	16:CP:79:VAL:O	2.49	0.45
1:CA:634:C:H2'	1:CA:635:G:H8	1.82	0.45
3:AC:58:GLU:O	3:AC:59:ARG:HG2	2.17	0.45
23:CW:20:A:N6	23:CW:44:A:C2'	2.79	0.45
27:DA:1286:A:O2'	27:DA:1288:U:OP2	2.19	0.45
45:DW:65:LEU:CD2	45:DW:67:ASP:H	2.29	0.45
10:CJ:22:LYS:CE	10:CJ:23:ILE:HG12	2.46	0.45
6:CF:69:GLU:H	6:CF:69:GLU:CD	2.20	0.45
6:CF:72:VAL:O	6:CF:72:VAL:CG2	2.65	0.45
1:AA:203:U:H4'	1:AA:204:U:OP1	2.17	0.45
32:DF:170:LEU:HD12	32:DF:171:PRO:HD3	1.99	0.45
1:CA:865:A:C6	1:CA:866:C:N3	2.85	0.45
52:D3:8:LEU:HD13	52:D3:31:LEU:HD23	1.98	0.45
1:AA:1112:C:O2	3:AC:179:ARG:HG2	2.16	0.45
1:CA:1110:A:H8	1:CA:1110:A:O5'	1.99	0.45
4:AD:33:MET:HE1	4:AD:37:PRO:HA	1.93	0.45
27:BA:1722:A:O2'	27:BA:1739:U:C5'	2.60	0.45
34:DH:116:GLU:HG2	34:DH:117:PRO:N	2.31	0.45
50:B1:86:SER:O	50:B1:87:PRO:C	2.52	0.45
1:AA:225:C:H2'	1:AA:226:G:C8	2.51	0.45
29:DC:77:ILE:CG2	29:DC:123:VAL:H	2.26	0.45
27:DA:2697:G:H1	27:DA:2710:C:N4	2.14	0.45
27:BA:705:A:C6	27:BA:706:A:C5	3.04	0.45
27:BA:2643:G:H1	27:BA:2771:C:H42	1.65	0.45
27:BA:528:A:C2	27:BA:2042:A:H2'	2.52	0.45
1:CA:1228:C:H2'	1:CA:1229:A:H8	1.82	0.45
27:BA:858:U:O2'	27:BA:2268:A:H1'	2.16	0.45
1:AA:1131:G:C2	1:AA:1132:C:N4	2.85	0.45
27:BA:2552:U:C2	27:BA:2554:U:H5'	2.50	0.45
1:CA:1010:G:N2	1:CA:1020:U:H1'	2.32	0.45
1:CA:1120:G:O2'	1:CA:1121:U:H5'	2.17	0.45
16:AP:48:TRP:O	16:AP:48:TRP:HE3	1.99	0.45
1:AA:636:U:H2'	1:AA:637:G:H8	1.82	0.45
33:DG:6:ALA:HB3	33:DG:104:GLU:OE2	2.17	0.45
9:CI:64:THR:O	9:CI:64:THR:HG23	2.16	0.45
33:DG:181:ARG:O	33:DG:182:LYS:C	2.55	0.45
35:BI:27:ARG:HD2	50:B1:71:TYR:CE1	2.52	0.45
6:CF:43:LEU:HD12	6:CF:43:LEU:N	2.29	0.45
27:DA:2027:G:O6	27:DA:2033:A:C8	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:336:C:H1'	1:AA:1468:A:C2	2.52	0.45
1:CA:725:G:O2'	1:CA:726:C:H5'	2.17	0.45
35:BI:52:ARG:HA	35:BI:55:ALA:HB3	1.99	0.45
1:CA:486:U:C2'	1:CA:487:A:H8	2.29	0.45
43:BU:114:LYS:O	43:BU:117:GLN:O	2.35	0.45
12:CL:48:ALA:O	12:CL:49:LEU:HD22	2.17	0.45
22:CV:7:C:H2'	22:CV:8:A:C8	2.49	0.45
27:BA:2706:G:H2'	27:BA:2707:G:O4'	2.17	0.45
27:BA:2852:G:P	40:BR:64:ARG:HH22	2.40	0.45
27:BA:1167:U:H2'	27:BA:1168:G:C8	2.51	0.45
4:AD:13:ARG:C	4:AD:15:GLU:H	2.19	0.45
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.99	0.45
7:CG:67:GLU:O	7:CG:70:LYS:HB2	2.16	0.45
1:AA:797:C:H2'	1:AA:798:G:H8	1.81	0.45
27:BA:2888:C:H2'	27:BA:2889:C:O4'	2.17	0.45
2:AB:137:ARG:CD	2:AB:137:ARG:C	2.84	0.45
50:B1:3:LYS:C	50:B1:4:VAL:HG12	2.37	0.45
27:DA:2077:A:C5	27:DA:2435:A:C6	3.04	0.45
27:DA:272(I):U:H2'	27:DA:272(J):C:C6	2.52	0.45
50:D1:70:VAL:O	50:D1:73:LEU:N	2.49	0.45
46:DX:8:ILE:HD11	46:DX:42:ALA:CB	2.47	0.45
27:DA:442:G:O2'	27:DA:443:A:OP1	2.32	0.45
27:BA:2059:A:O2'	32:BF:69:HIS:HD2	1.99	0.45
1:CA:683:G:C6	1:CA:684:A:C6	3.05	0.45
42:BT:123:GLN:HG3	42:BT:123:GLN:O	2.15	0.45
27:BA:2402:C:H41	27:BA:2415:G:N2	2.15	0.45
19:CS:51:VAL:HG22	19:CS:71:LEU:HD13	1.99	0.45
40:BR:18:LEU:HA	40:BR:18:LEU:HD22	1.71	0.45
32:BF:3:GLU:O	32:BF:19:GLU:HB3	2.16	0.45
34:BH:121:ILE:CG2	34:BH:122:THR:N	2.80	0.45
27:DA:910:A:C4	39:DQ:13:GLN:NE2	2.85	0.45
1:CA:502:G:C2	1:CA:544:G:C2	3.05	0.45
1:CA:1344:C:O5'	1:CA:1344:C:H6	1.99	0.45
32:BF:64:ILE:HG23	32:BF:65:TRP:N	2.31	0.45
43:BU:65:ILE:O	43:BU:67:ALA:N	2.50	0.45
43:BU:92:ARG:CD	44:BV:11:GLN:NE2	2.80	0.45
1:CA:720:C:N3	1:CA:721:G:C6	2.85	0.45
42:BT:28:VAL:HG13	42:BT:46:GLU:CA	2.45	0.45
1:AA:1406:U:C5	1:AA:1407:C:C5	3.05	0.45
27:DA:1158:C:O2'	27:DA:1159:U:H6	2.00	0.45
27:DA:995:C:C2	43:DU:57:PHE:CD1	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DU:76:TYR:O	43:DU:78:THR:N	2.49	0.45
30:DD:119:ALA:CB	30:DD:130:ALA:HB3	2.47	0.45
52:B3:19:GLN:O	52:B3:23:LEU:CD1	2.64	0.45
51:D2:53:LEU:HA	51:D2:53:LEU:HD23	1.75	0.45
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.47	0.45
31:DE:65:GLY:O	31:DE:67:PHE:N	2.49	0.45
57:D8:32:LEU:O	57:D8:33:ASN:C	2.54	0.45
27:DA:2496:C:OP2	39:DQ:82:ARG:NH2	2.49	0.45
39:DQ:81:VAL:HG23	39:DQ:82:ARG:H	1.81	0.45
11:CK:31:THR:OG1	11:CK:42:TRP:HB3	2.16	0.45
27:DA:461:C:C2'	27:DA:462:C:H5'	2.46	0.45
27:DA:2508:G:H2'	27:DA:2509:G:C8	2.51	0.45
55:B6:16:CYS:SG	55:B6:48:VAL:HG21	2.57	0.45
47:DY:16:ALA:HA	47:DY:21:LYS:CD	2.47	0.45
13:CM:40:ASN:HA	13:CM:41:PRO:HD3	1.76	0.45
1:CA:184:G:H2'	1:CA:185:A:C8	2.40	0.45
9:AI:53:VAL:O	9:AI:54:ASP:CB	2.65	0.45
12:CL:25:LYS:O	12:CL:26:GLY:C	2.55	0.45
42:DT:27:THR:O	42:DT:28:VAL:HB	2.16	0.45
42:DT:33:LYS:HE3	42:DT:74:ARG:NH2	2.31	0.45
42:DT:80:SER:OG	42:DT:81:PRO:CD	2.64	0.45
1:AA:296:U:O2'	1:AA:297:G:H5'	2.15	0.45
19:AS:61:TYR:O	19:AS:62:ILE:CG2	2.65	0.45
27:BA:856:C:H2'	27:BA:857:C:H6	1.81	0.45
1:AA:228:A:H2'	1:AA:229:U:C6	2.52	0.45
3:CC:182:ILE:HG23	3:CC:202:ILE:C	2.37	0.45
17:CQ:51:TYR:HE2	17:CQ:76:LEU:N	2.15	0.45
27:BA:125:G:C5'	27:BA:126:A:OP2	2.60	0.45
27:BA:1779:U:H5	27:BA:1784:A:N7	2.12	0.45
1:CA:280:C:H4'	1:CA:281:G:OP2	2.17	0.45
53:D4:53:THR:O	53:D4:54:LYS:CG	2.59	0.45
27:BA:1171:G:H5''	27:BA:1173:G:OP2	2.16	0.45
1:AA:389:A:C2'	1:AA:390:C:H5'	2.46	0.45
48:DZ:150:HIS:CG	48:DZ:169:THR:HG22	2.52	0.45
6:AF:39:LYS:HG2	6:AF:40:VAL:N	2.32	0.45
9:CI:8:GLY:HA2	9:CI:79:LEU:HB3	1.98	0.45
27:DA:778:G:H2'	27:DA:779:U:O4'	2.16	0.45
27:DA:2714:G:H2'	27:DA:2715:C:C6	2.50	0.45
3:CC:84:ILE:HA	3:CC:87:LEU:CG	2.46	0.45
27:DA:543:C:N4	27:DA:551:G:N1	2.50	0.45
1:CA:681:C:H2'	1:CA:682:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:513:C:N3	1:CA:539:A:C2	2.83	0.45
1:CA:1283:G:H2'	1:CA:1284:C:C6	2.52	0.45
48:DZ:129:PRO:C	48:DZ:130:ARG:HG3	2.36	0.45
48:DZ:38:VAL:CG2	48:DZ:43:PHE:HB2	2.43	0.45
40:DR:16:HIS:O	40:DR:19:ALA:N	2.49	0.45
27:BA:1826:G:OP1	30:BD:224:ALA:HB2	2.16	0.45
1:AA:618:C:H3'	1:AA:619:U:C5'	2.44	0.45
3:AC:115:LEU:O	3:AC:118:GLN:HB2	2.17	0.45
8:AH:7:ALA:HA	8:AH:10:LEU:HD12	1.98	0.45
27:DA:2667:C:H1'	34:DH:109:PHE:CE2	2.51	0.45
57:B8:22:VAL:HB	57:B8:49:VAL:CG2	2.47	0.45
35:DI:126:TYR:O	35:DI:139:GLN:HG3	2.16	0.45
5:AE:76:ILE:HG23	5:AE:93:PRO:HB3	1.99	0.45
8:AH:82:HIS:N	8:AH:138:TRP:O	2.44	0.45
37:DO:6:THR:CG2	37:DO:7:TYR:N	2.78	0.45
34:DH:17:VAL:O	34:DH:17:VAL:HG12	2.17	0.45
2:AB:84:GLU:O	2:AB:219:VAL:HG21	2.16	0.45
40:DR:36:THR:O	40:DR:37:THR:C	2.55	0.45
1:CA:711:G:C2	1:CA:712:A:C4	3.05	0.45
37:BO:98:VAL:HG12	37:BO:117:LEU:HD22	1.97	0.45
33:BG:28:VAL:C	33:BG:30:GLU:H	2.20	0.45
27:BA:1565:C:P	30:BD:4:LYS:HZ2	2.40	0.45
1:AA:1228:C:H4'	13:AM:116:THR:N	2.32	0.45
7:CG:44:TYR:C	7:CG:46:ALA:H	2.19	0.45
27:BA:2036:C:O2'	27:BA:2037:G:O5'	2.35	0.45
27:BA:1627:G:N1	27:BA:1640:C:C5	2.85	0.45
27:BA:1843:C:H5'	30:BD:253:GLN:HE22	1.76	0.45
27:DA:1701:A:C2'	27:DA:1702:G:H5'	2.47	0.45
20:AT:89:ARG:C	20:AT:91:LEU:H	2.18	0.45
27:DA:1817:G:C2'	27:DA:1818:U:H5'	2.46	0.45
30:DD:146:GLU:HB2	30:DD:152:GLY:O	2.17	0.45
4:AD:11:LEU:HD13	4:AD:66:ARG:HD3	1.97	0.45
27:BA:2320:A:C2	27:BA:2333:A:C8	3.04	0.45
1:AA:279:A:H5''	1:AA:281:G:O4'	2.16	0.45
48:DZ:143:LEU:HD12	48:DZ:147:ASP:O	2.17	0.45
3:CC:110:ASN:HA	3:CC:116:VAL:HG22	1.97	0.45
27:BA:1674:G:H1'	27:BA:1676:A:N6	2.32	0.45
27:BA:2745:C:N4	27:BA:2759:G:H1	2.15	0.45
6:AF:19:LEU:HD11	6:AF:59:TYR:CD1	2.51	0.45
33:DG:86:MET:N	33:DG:87:PRO:HD2	2.32	0.45
1:AA:563:A:C2	1:AA:567:G:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:29:ARG:NH2	10:AJ:84:GLN:HG2	2.31	0.45
1:AA:113:G:H2'	1:AA:114:U:O5'	2.16	0.45
24:AX:62:C:H2'	24:AX:63:G:C8	2.51	0.45
49:B0:41:ARG:N	49:B0:41:ARG:CD	2.80	0.45
49:B0:41:ARG:O	49:B0:57:PHE:HD2	1.99	0.45
49:D0:68:GLU:OE2	49:D0:82:ARG:HB3	2.16	0.45
40:DR:84:ALA:N	40:DR:85:PRO:CD	2.79	0.45
29:DC:19:VAL:HG21	29:DC:22:ILE:HD11	1.99	0.45
27:DA:2727:G:C2	27:DA:2728:U:C4	3.04	0.45
27:DA:2524:G:H2'	27:DA:2741:A:H2	1.80	0.45
4:CD:4:TYR:CD2	4:CD:5:ILE:N	2.85	0.45
32:DF:198:ALA:O	32:DF:201:VAL:HG12	2.17	0.45
34:DH:86:GLU:HB2	34:DH:132:ARG:NH1	2.32	0.45
18:AR:86:VAL:HG12	18:AR:87:ARG:HD2	1.98	0.45
27:BA:843:G:C2	27:BA:936:C:C2	3.04	0.45
27:BA:843:G:N2	27:BA:936:C:C2	2.85	0.45
1:AA:1393:U:H6	1:AA:1393:U:H3'	1.82	0.45
39:BQ:35:VAL:CG1	39:BQ:130:LYS:HB3	2.47	0.45
48:BZ:4:LEU:HD22	48:BZ:43:PHE:HA	1.97	0.45
7:CG:99:LEU:O	7:CG:100:ALA:C	2.55	0.45
2:AB:35:GLU:C	2:AB:36:ARG:HE	2.20	0.45
27:DA:2584:U:O2	27:DA:2585:U:C5	2.69	0.45
27:BA:657:U:OP2	27:BA:657:U:H6	1.99	0.45
29:BC:59:ARG:N	29:BC:59:ARG:HD3	2.32	0.45
27:DA:2437:U:H2'	27:DA:2438:U:H6	1.82	0.45
27:BA:819:A:O2'	27:BA:820:A:H5'	2.17	0.45
27:BA:838:C:C4	27:BA:839:U:C5	3.05	0.45
27:BA:2805:G:H2'	27:BA:2807:G:H5''	1.99	0.45
32:BF:3:GLU:HB3	32:BF:24:LEU:HG	1.98	0.45
27:BA:533:G:C5	27:BA:561:G:N2	2.85	0.45
43:BU:98:LEU:HA	43:BU:101:ARG:O	2.16	0.45
44:BV:5:VAL:HG13	44:BV:14:VAL:CG2	2.47	0.45
42:BT:85:LYS:C	42:BT:85:LYS:HZ1	2.19	0.45
42:BT:28:VAL:HB	42:BT:88:ILE:HD12	1.97	0.45
44:DV:19:LYS:HZ3	44:DV:20:LEU:HB2	1.82	0.45
44:DV:45:THR:O	44:DV:46:VAL:HG12	2.16	0.45
47:DY:95:LYS:CE	47:DY:100:ALA:HB2	2.47	0.45
27:DA:1579:A:H2'	27:DA:1580:A:C8	2.52	0.45
47:DY:25:GLY:HA3	47:DY:40:GLU:HG2	1.99	0.45
27:DA:918:A:H1'	28:DB:80:U:O2'	2.17	0.45
31:DE:76:ARG:CG	31:DE:195:LEU:HD13	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:42:ILE:HD13	7:CG:116:ALA:HB1	1.98	0.45
27:DA:2261:C:P	49:D0:17:GLN:OE1	2.75	0.45
27:BA:310:A:OP1	47:BY:17:SER:O	2.35	0.45
39:BQ:118:LEU:HD23	39:BQ:118:LEU:HA	1.74	0.45
18:CR:82:THR:CG2	18:CR:83:GLU:N	2.64	0.45
34:BH:44:VAL:O	34:BH:46:GLU:OE2	2.35	0.45
34:BH:8:PRO:CD	34:BH:65:HIS:HE1	2.29	0.45
9:AI:53:VAL:O	9:AI:54:ASP:HB2	2.17	0.45
9:AI:95:LYS:HG3	9:AI:96:LEU:N	2.32	0.45
47:BY:31:LEU:CD2	47:BY:31:LEU:N	2.78	0.45
1:AA:1058:G:H5'	3:AC:186:PHE:CE1	2.51	0.45
27:DA:1034:G:O2'	27:DA:1035:U:O4'	2.34	0.45
27:BA:1812:A:O2'	30:BD:45:ASN:HB2	2.17	0.45
1:AA:60:A:O2'	1:AA:61:G:OP2	2.29	0.45
33:DG:5:VAL:HG23	33:DG:8:LYS:CG	2.35	0.45
1:CA:663:A:H5'	1:CA:836:G:OP1	2.17	0.45
15:AO:25:THR:O	15:AO:26:GLU:C	2.55	0.45
27:BA:1317:A:C6	27:BA:1336:A:N1	2.85	0.45
20:CT:26:ASN:CB	20:CT:71:THR:HG23	2.28	0.45
27:BA:1665:A:C2'	27:BA:1666:G:H5'	2.45	0.45
40:BR:79:LEU:HA	40:BR:83:ILE:CB	2.47	0.45
27:DA:779:U:C4	27:DA:780:G:C5	3.05	0.45
30:DD:213:ARG:HD3	30:DD:218:ARG:HA	1.98	0.45
30:DD:43:ARG:HB2	30:DD:54:ARG:HB2	1.98	0.45
27:BA:1434:A:N6	27:BA:1558:A:N6	2.47	0.45
27:BA:1818:U:O2'	30:BD:155:LEU:HA	2.17	0.45
1:CA:1061:G:H1'	10:CJ:56:HIS:CE1	2.51	0.45
1:CA:537:G:H8	1:CA:537:G:O5'	1.99	0.45
15:CO:76:GLU:HA	15:CO:76:GLU:OE1	2.16	0.45
25:AY:66:A:C2	25:AY:67:C:C2	3.05	0.45
1:CA:1502:A:C2	1:CA:1505:G:N1	2.57	0.45
27:BA:2420:C:OP1	57:B8:33:ASN:O	2.35	0.45
51:B2:32:LEU:CA	51:B2:53:LEU:HD12	2.47	0.45
28:BB:3:C:C4	28:BB:4:C:C5	3.04	0.45
28:DB:43:C:C4	28:DB:45:A:C6	3.04	0.45
33:DG:131:TYR:O	33:DG:159:VAL:CG1	2.65	0.45
52:D3:23:LEU:HD11	52:D3:50:VAL:HG11	1.99	0.45
35:DI:79:ILE:O	35:DI:143:SER:N	2.39	0.45
42:DT:64:ARG:HG3	42:DT:72:VAL:O	2.17	0.45
54:D5:52:TYR:O	54:D5:53:ALA:C	2.55	0.45
42:DT:109:GLU:HG2	42:DT:112:ARG:HH12	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:62:HIS:CE1	14:AN:61:TRP:CH2	3.05	0.45
13:AM:84:ILE:CG2	19:AS:74:PHE:HD1	2.29	0.45
27:DA:794:G:C6	27:DA:795:C:C4	3.04	0.45
27:DA:1288:U:H4'	27:DA:1289:C:OP2	2.16	0.45
27:DA:1287:A:O4'	40:DR:104:ARG:NH2	2.49	0.45
45:DW:3:ALA:HB2	45:DW:62:HIS:ND1	2.32	0.45
45:DW:44:ALA:O	45:DW:45:TYR:C	2.54	0.45
27:DA:1917:U:H2'	27:DA:1918:A:O4'	2.17	0.45
27:DA:1208:C:C2'	27:DA:1209:G:H5'	2.47	0.45
27:BA:1114:G:H3'	27:BA:1115:G:C5'	2.40	0.45
7:AG:27:ILE:O	7:AG:30:ILE:N	2.33	0.45
7:AG:65:ALA:O	7:AG:69:VAL:HG23	2.17	0.45
11:CK:38:ASN:HA	11:CK:39:PRO:HD3	1.87	0.45
1:AA:1014:A:H3'	1:AA:1015:A:H8	1.82	0.45
12:AL:25:LYS:O	12:AL:27:ALA:N	2.50	0.45
33:BG:176:LEU:HD12	33:BG:176:LEU:N	2.32	0.45
36:DN:67:LEU:H	36:DN:67:LEU:HD12	1.82	0.45
27:DA:2152:G:H2'	27:DA:2153:G:C8	2.34	0.45
27:DA:1141:U:OP1	36:DN:25:ARG:NH1	2.50	0.45
27:BA:1739:U:O4'	27:BA:1739:U:O2	2.35	0.45
5:CE:42:GLY:CA	5:CE:65:ASN:O	2.60	0.45
27:BA:1030:G:C2'	27:BA:1031:G:O5'	2.64	0.45
27:DA:1661:G:C4	27:DA:2000:G:N2	2.85	0.45
1:AA:1308:U:OP1	13:AM:97:PRO:HA	2.17	0.45
3:AC:62:ASP:O	3:AC:98:ASN:HB3	2.17	0.45
4:CD:24:GLU:O	4:CD:27:TYR:HB2	2.16	0.45
7:AG:95:ARG:HG2	7:AG:99:LEU:HD11	1.97	0.45
27:BA:1892:C:H2'	27:BA:1893:C:H5'	1.99	0.45
1:AA:1466:C:O2'	1:AA:1467:G:H5'	2.16	0.45
1:AA:23:C:O2'	1:AA:24:U:H5'	2.17	0.45
7:CG:22:LEU:HD23	7:CG:62:PHE:HE2	1.82	0.45
1:CA:117:G:O5'	1:CA:117:G:H8	1.99	0.45
1:AA:1146:A:O2'	1:AA:1147:C:C5'	2.65	0.45
1:CA:832:C:C2'	1:CA:833:U:H5'	2.47	0.45
23:CW:28:G:O6	23:CW:40:C:N3	2.50	0.45
27:BA:467:G:O2'	27:BA:468:G:H5'	2.17	0.45
27:BA:271(J):C:N3	27:BA:271(M):G:O6	2.50	0.45
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.52	0.45
27:BA:860:U:H2'	27:BA:861:A:C8	2.52	0.45
9:CI:65:VAL:HG13	9:CI:73:GLN:NE2	2.32	0.45
27:BA:1754:C:P	42:BT:96:ARG:HH12	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:96:ARG:HB3	42:BT:96:ARG:HE	1.55	0.45
1:CA:31:G:N2	1:CA:47:C:H4'	2.32	0.45
10:AJ:81:THR:HA	10:AJ:84:GLN:OE1	2.17	0.45
23:CW:22:G:H2'	23:CW:23:G:H8	1.81	0.45
47:BY:42:VAL:C	47:BY:65:ALA:HB3	2.37	0.45
35:BI:42:SER:O	35:BI:44:LEU:N	2.50	0.45
43:BU:66:ASN:HA	43:BU:76:TYR:HB2	1.99	0.45
43:BU:77:SER:OG	43:BU:78:THR:N	2.49	0.45
16:CP:19:ILE:HG22	16:CP:36:ILE:HD11	1.98	0.45
19:CS:25:LYS:HB3	19:CS:27:GLU:OE1	2.16	0.45
27:BA:309:G:N3	27:BA:329:G:O2'	2.47	0.45
27:DA:1876:A:H3'	27:DA:1877:A:H8	1.82	0.45
27:BA:2337:G:C2	27:BA:2338:G:N7	2.85	0.45
23:CW:7:A:C2	23:CW:66:A:C2	3.04	0.45
50:D1:43:TYR:HA	50:D1:44:PRO:HD3	1.78	0.45
27:DA:718:A:H2'	27:DA:719:C:H5'	1.99	0.45
4:CD:3:ARG:HH21	4:CD:5:ILE:HD11	1.82	0.45
1:CA:1165:C:H42	1:CA:1172:C:H42	1.63	0.45
30:DD:105:ILE:HD12	30:DD:105:ILE:HA	1.64	0.45
27:DA:1037:G:N2	27:DA:1119:C:C2	2.85	0.45
2:CB:115:LEU:O	2:CB:115:LEU:HD12	2.16	0.45
49:D0:32:ARG:HB2	49:D0:35:ASN:OD1	2.16	0.45
49:B0:46:LYS:HE3	49:B0:76:GLY:HA3	1.98	0.45
52:D3:39:ASP:OD1	52:D3:44:ARG:NE	2.49	0.45
1:AA:119:A:O2'	1:AA:120:A:OP2	2.25	0.45
21:AU:3:LYS:O	21:AU:11:GLY:HA2	2.17	0.45
33:BG:147:ASP:OD1	33:BG:148:MET:N	2.50	0.45
1:AA:1420:C:O2'	1:AA:1421:G:H5'	2.17	0.45
27:DA:2743:C:H2'	27:DA:2744:G:O5'	2.16	0.45
49:B0:19:LYS:HA	49:B0:19:LYS:HD2	1.88	0.45
1:CA:56:U:H2'	1:CA:56:U:O2	2.16	0.45
43:BU:71:GLN:C	43:BU:72:HIS:CD2	2.90	0.45
27:BA:251:A:C5	27:BA:252:G:H1'	2.52	0.45
27:BA:838:C:H2'	27:BA:839:U:C6	2.45	0.45
27:BA:838:C:C2	27:BA:839:U:C5	3.05	0.45
1:CA:983:A:C2'	1:CA:984:C:H5'	2.47	0.45
37:BO:14:THR:CG2	37:BO:16:ALA:H	2.28	0.45
4:CD:79:PHE:CD2	4:CD:80:GLU:N	2.84	0.45
1:CA:1341:U:O2'	1:CA:1342:C:H5'	2.17	0.45
44:BV:21:ARG:NH1	44:BV:91:TYR:CE2	2.85	0.45
1:AA:264:U:O2'	17:AQ:64:PRO:O	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:995:C:C2	36:DN:4:TYR:OH	2.68	0.45
43:DU:85:LYS:C	43:DU:87:GLY:N	2.69	0.45
44:DV:19:LYS:NZ	44:DV:20:LEU:C	2.70	0.45
27:DA:36:G:N2	27:DA:37:C:H1'	2.32	0.45
41:BS:54:LEU:HD11	41:BS:59:LYS:O	2.17	0.45
30:DD:208:LYS:HE3	30:DD:208:LYS:HB2	1.84	0.45
27:DA:84:A:C2	27:DA:98:G:N3	2.85	0.45
27:DA:864:G:C6	27:DA:865:C:H5	2.34	0.45
27:DA:862:G:N2	28:DB:101:G:H1'	2.32	0.45
38:DP:115:LEU:HB2	38:DP:131:SER:OG	2.17	0.45
27:DA:1130:U:C2	27:DA:2025:C:H5''	2.52	0.45
27:DA:1668:A:C8	27:DA:1674:G:C6	3.05	0.45
27:DA:2447:G:C2	27:DA:2501:C:N4	2.85	0.45
27:DA:675:A:H5'	32:DF:63:LYS:CE	2.47	0.45
44:DV:73:SER:HB2	44:DV:83:ARG:O	2.17	0.45
27:DA:1187:G:H5''	44:DV:81:TYR:CZ	2.52	0.45
20:AT:24:LEU:O	20:AT:27:LYS:N	2.47	0.45
27:DA:1345:C:H2'	27:DA:1346:G:H8	1.81	0.45
46:DX:44:GLU:C	46:DX:46:ALA:H	2.18	0.45
48:DZ:3:ARG:CG	48:DZ:57:VAL:HB	2.47	0.45
4:CD:173:TRP:CA	4:CD:187:ARG:NH1	2.79	0.45
1:CA:198:G:C2	1:CA:199:G:C4	3.05	0.45
1:AA:1205:U:OP1	3:AC:190:ARG:NH2	2.49	0.45
1:CA:35:G:C2	1:CA:550:G:N3	2.85	0.45
42:DT:89:VAL:HB	42:DT:91:ARG:NE	2.32	0.45
46:BX:64:LYS:HZ3	46:BX:73:ARG:NE	1.87	0.45
41:DS:88:ASP:OD2	41:DS:89:ARG:N	2.50	0.45
3:CC:180:ALA:HB1	3:CC:182:ILE:CD1	2.46	0.45
17:CQ:10:VAL:CG1	17:CQ:19:VAL:HB	2.47	0.45
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.52	0.45
1:CA:236:G:O2'	1:CA:237:C:H5'	2.17	0.45
49:B0:43:THR:CG2	49:B0:43:THR:O	2.64	0.45
27:BA:1997:G:OP1	31:BE:123:ALA:HA	2.17	0.45
1:AA:657:G:C2	1:AA:750:G:C5	3.05	0.45
15:AO:74:ASP:O	15:AO:75:PRO:C	2.55	0.45
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.99	0.45
1:CA:511:C:H2'	1:CA:534:U:O2	2.17	0.45
21:CU:18:TYR:HD2	21:CU:22:ARG:HD3	1.81	0.45
27:BA:2580:U:C4'	31:BE:131:ALA:H	2.28	0.45
39:DQ:111:GLU:CD	39:DQ:133:ARG:HH21	2.17	0.45
27:DA:354:G:H2'	27:DA:355:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:D7:8:ASN:ND2	56:D7:10:ARG:N	2.65	0.45
27:DA:1639:U:C2'	27:DA:1640:C:C5'	2.93	0.45
55:B6:52:VAL:HG12	55:B6:52:VAL:O	2.17	0.45
1:AA:502:G:OP1	12:AL:115:SER:N	2.25	0.45
33:DG:55:LYS:O	33:DG:55:LYS:HD3	2.16	0.45
31:BE:144:ARG:HB3	31:BE:145:LYS:H	1.45	0.45
30:BD:146:GLU:CB	30:BD:189:CYS:HB3	2.47	0.45
38:DP:18:ARG:O	38:DP:20:GLY:N	2.50	0.45
17:AQ:81:ARG:O	17:AQ:83:ASP:N	2.50	0.45
30:DD:65:ILE:CD1	30:DD:65:ILE:N	2.74	0.45
33:DG:39:ILE:HD12	33:DG:40:ASN:H	1.82	0.45
8:AH:18:ARG:NH2	8:AH:81:HIS:O	2.49	0.45
27:DA:2343:C:O2'	27:DA:2373:G:H4'	2.17	0.45
27:DA:271(H):G:H1	27:DA:271(P):C:H42	1.63	0.45
31:DE:4:ILE:CG2	31:DE:4:ILE:O	2.63	0.45
1:CA:602:A:N6	1:CA:637:G:C6	2.85	0.45
3:AC:87:LEU:O	3:AC:89:GLU:N	2.50	0.45
3:AC:90:GLU:O	3:AC:93:LYS:CB	2.65	0.45
48:BZ:52:ILE:HG22	48:BZ:70:VAL:O	2.17	0.45
27:DA:2629:A:N3	27:DA:2629:A:C5'	2.76	0.45
27:DA:2483:C:N3	39:DQ:124:LYS:NZ	2.56	0.45
34:DH:65:HIS:O	34:DH:69:ARG:HB2	2.17	0.45
1:AA:1264:C:C6	1:AA:1264:C:C3'	2.99	0.45
27:DA:495:G:N2	45:DW:61:ASN:HD21	2.14	0.45
27:DA:1204:A:C8	27:DA:1206:G:C6	3.05	0.45
27:DA:308:G:C8	27:DA:501:A:H1'	2.52	0.45
27:BA:1179:C:H2'	27:BA:1180:C:C6	2.50	0.45
1:CA:937:A:H62	1:CA:938:A:N6	2.14	0.45
33:BG:123:ASN:O	33:BG:126:ASP:CG	2.55	0.45
15:AO:3:ILE:O	15:AO:3:ILE:HG13	2.16	0.45
1:CA:862:C:N3	1:CA:863:U:C5	2.85	0.45
1:CA:815:A:N6	1:CA:1509:C:H1'	2.32	0.45
27:BA:2488:A:H2'	27:BA:2489:G:H8	1.79	0.45
2:AB:45:GLN:O	2:AB:48:MET:HB3	2.17	0.45
1:AA:667:G:O2'	1:AA:668:G:H5'	2.17	0.45
4:AD:104:VAL:HA	4:AD:107:ARG:HB2	1.99	0.45
4:AD:105:VAL:O	4:AD:105:VAL:HG12	2.17	0.45
1:AA:1225:A:H5''	13:AM:103:THR:OG1	2.17	0.45
13:AM:91:ARG:NH1	13:AM:96:LEU:HD13	2.32	0.45
13:AM:91:ARG:NH1	19:AS:81:ARG:HH22	2.14	0.45
10:CJ:30:SER:CB	10:CJ:80:LYS:HD3	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:85:LEU:C	10:CJ:87:THR:H	2.19	0.45
1:AA:9:G:H5''	5:AE:122:GLU:OE1	2.17	0.45
1:AA:57:G:C8	1:AA:58:C:C5	3.05	0.45
27:DA:2327:A:H2'	27:DA:2328:A:H8	1.76	0.45
51:D2:43:GLN:HG3	51:D2:43:GLN:O	2.16	0.45
12:AL:5:ASN:ND2	17:AQ:34:LYS:HE2	2.31	0.45
27:BA:2857:G:H5''	27:BA:2858:C:OP2	2.16	0.45
27:BA:2543:G:H5'	27:BA:2543:G:C8	2.42	0.45
27:BA:530:G:C5	27:BA:2022:U:H5''	2.52	0.45
27:BA:2041:U:H2'	27:BA:2042:A:O4'	2.16	0.45
48:DZ:114:GLY:HA2	48:DZ:173:VAL:CG1	2.47	0.45
27:BA:863:A:H3'	39:BQ:22:LYS:HD2	1.99	0.45
27:BA:1718:G:C2	27:BA:1745:C:C2	3.04	0.45
37:DO:3:GLN:HB2	37:DO:4:PRO:HD2	1.99	0.45
2:CB:134:GLU:O	2:CB:138:LEU:HG	2.17	0.45
15:AO:5:LYS:HB3	15:AO:5:LYS:HE2	1.84	0.45
6:CF:44:GLY:O	6:CF:45:LEU:O	2.35	0.45
27:BA:146:G:H2'	27:BA:147:U:H5'	1.99	0.45
27:BA:1384:A:H1'	27:BA:1405:U:O4'	2.17	0.45
27:DA:932:G:O2'	27:DA:933:A:OP2	2.29	0.45
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.17	0.45
27:BA:867:C:O2	27:BA:913:U:H5'	2.16	0.45
6:AF:6:VAL:CG1	6:AF:90:VAL:HG22	2.47	0.45
27:DA:431:U:O2'	27:DA:432:A:H5'	2.16	0.45
7:AG:127:ALA:C	7:AG:129:GLU:N	2.68	0.45
2:AB:236:TYR:CG	2:AB:239:VAL:HG21	2.51	0.45
35:DI:92:VAL:HG23	35:DI:96:ASP:HB2	1.98	0.45
39:BQ:5:ARG:O	39:BQ:6:ARG:CB	2.65	0.45
34:BH:82:GLY:O	34:BH:83:TYR:C	2.55	0.45
3:CC:126:ARG:HG2	3:CC:126:ARG:HH11	1.81	0.45
27:BA:107:C:O5'	27:BA:107:C:H6	2.00	0.45
27:BA:1354:A:H2'	27:BA:1355:G:O4'	2.17	0.45
1:CA:806:C:H2'	1:CA:807:A:C8	2.51	0.45
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.52	0.45
27:BA:1298:C:N4	27:BA:1299:G:C6	2.84	0.45
1:CA:301:G:H2'	1:CA:302:G:H8	1.82	0.45
1:CA:593:G:C2	1:CA:594:G:C4	3.05	0.45
27:DA:1256:G:N3	27:DA:1256:G:H2'	2.31	0.45
10:AJ:98:ILE:O	10:AJ:98:ILE:HG22	2.17	0.45
46:BX:47:PHE:CD2	46:BX:89:ILE:HD13	2.52	0.45
27:BA:1427:A:H4'	27:BA:1428:C:O5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:11:VAL:HG11	17:CQ:88:TYR:HD2	1.81	0.45
56:B7:23:ARG:O	56:B7:28:ARG:CZ	2.65	0.45
27:BA:248:G:C2	27:BA:2431:U:H4'	2.52	0.45
27:BA:638:G:C6	27:BA:639:U:N3	2.85	0.45
1:CA:1223:C:H5	1:CA:1224:G:N7	2.15	0.45
27:BA:2803:C:H2'	27:BA:2804:C:C5	2.52	0.45
41:BS:96:GLY:C	41:BS:98:VAL:H	2.20	0.45
32:BF:3:GLU:C	32:BF:19:GLU:CB	2.85	0.45
27:DA:254:G:H22	57:D8:8:LYS:NZ	2.15	0.45
4:CD:22:LYS:HG3	4:CD:26:CYS:SG	2.56	0.45
4:CD:79:PHE:O	4:CD:82:ALA:N	2.40	0.45
31:BE:51:PHE:O	31:BE:52:LEU:HB2	2.17	0.45
31:BE:52:LEU:HD12	31:BE:52:LEU:HA	1.74	0.45
32:BF:64:ILE:HG23	32:BF:65:TRP:CD1	2.52	0.45
43:BU:42:ALA:C	43:BU:44:ASN:N	2.70	0.45
27:DA:1892:C:O2'	27:DA:1893:C:H5'	2.17	0.45
27:DA:815:C:OP1	44:DV:85:LYS:NZ	2.47	0.45
27:DA:1491:G:O4'	30:DD:99:ASP:OD2	2.34	0.45
30:DD:208:LYS:HG2	30:DD:211:ARG:HB3	1.98	0.45
1:CA:525:C:H5''	12:CL:88:LYS:HZ3	1.81	0.45
51:D2:64:LEU:O	51:D2:64:LEU:HD23	2.17	0.45
49:D0:7:LEU:HA	49:D0:7:LEU:HD23	1.70	0.45
27:DA:2261:C:O4'	27:DA:2388:A:H1'	2.17	0.45
27:DA:2069:G:N2	27:DA:2442:C:C2	2.81	0.45
27:DA:468:G:N7	56:D7:39:ARG:NH2	2.58	0.45
27:BA:332:A:C2	27:BA:335:C:C5	3.04	0.45
27:DA:675:A:H2'	27:DA:676:A:H5'	1.99	0.45
32:DF:65:TRP:CH2	32:DF:75:HIS:HD2	2.34	0.45
55:B6:20:ASN:C	55:B6:21:TYR:CG	2.89	0.45
31:DE:199:ARG:HB3	31:DE:200:GLU:OE2	2.16	0.45
34:BH:45:VAL:O	34:BH:45:VAL:CG1	2.59	0.45
27:BA:1490:A:C2'	27:BA:1490:A:N3	2.77	0.45
1:AA:1057:G:N2	1:AA:1204:A:H1'	2.32	0.45
3:AC:155:GLY:O	3:AC:196:LEU:HD13	2.16	0.45
2:AB:155:LEU:HD13	2:AB:156:LYS:N	2.31	0.45
37:DO:116:SER:C	37:DO:118:ALA:N	2.70	0.45
42:DT:28:VAL:O	42:DT:29:ARG:CB	2.54	0.45
42:DT:30:VAL:HG23	42:DT:31:SER:N	2.31	0.45
17:CQ:12:SER:HB3	17:CQ:20:THR:OG1	2.17	0.45
27:BA:1824:G:O3'	30:BD:249:PRO:HD3	2.17	0.45
27:BA:1813:G:O4'	30:BD:45:ASN:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BE:47:VAL:HG12	31:BE:48:GLN:N	2.32	0.45
32:DF:32:LEU:HD22	32:DF:112:MET:HE1	1.99	0.45
38:DP:6:LEU:HD12	38:DP:8:PRO:HG2	1.99	0.45
40:DR:43:GLU:C	40:DR:45:ARG:H	2.20	0.45
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.36	0.45
40:BR:63:ARG:HA	40:BR:80:PHE:CZ	2.51	0.45
27:BA:2199:A:H3'	27:BA:2200:C:H5''	1.98	0.45
58:D9:27:CYS:SG	58:D9:28:GLU:N	2.89	0.45
1:CA:511:C:HO2'	1:CA:512:U:H6	1.62	0.45
48:DZ:97:MET:H	48:DZ:124:LEU:CD1	2.30	0.45
39:DQ:132:VAL:HB	48:DZ:80:ARG:HH22	1.81	0.45
38:BP:96:THR:HG22	38:BP:126:VAL:HB	1.99	0.45
27:DA:1380:G:O2'	27:DA:1569:A:N6	2.50	0.45
35:BI:83:ALA:CB	35:BI:88:ILE:HA	2.47	0.45
35:BI:92:VAL:O	35:BI:93:THR:C	2.55	0.45
27:BA:1406:U:H2'	27:BA:1407:C:H6	1.79	0.45
27:BA:1375:C:H2'	27:BA:1376:C:C6	2.48	0.45
28:DB:43:C:C5	28:DB:45:A:N6	2.85	0.45
13:AM:7:VAL:HG12	13:AM:9:ILE:CD1	2.38	0.45
27:DA:1417:C:H2'	27:DA:1418:G:O4'	2.16	0.45
37:DO:97:ARG:O	37:DO:98:VAL:CG1	2.61	0.45
1:AA:1136:U:H6	1:AA:1136:U:O5'	1.99	0.45
19:CS:62:ILE:CG2	19:CS:62:ILE:O	2.63	0.45
27:BA:2525:G:N3	27:BA:2525:G:H2'	2.32	0.45
42:BT:12:SER:O	42:BT:13:ARG:NH1	2.49	0.45
1:AA:664:G:OP1	18:AR:64:ARG:NH2	2.46	0.45
6:AF:67:MET:CB	6:AF:68:PRO:HD2	2.34	0.45
1:AA:606:G:H2'	1:AA:631:G:H1	1.80	0.45
10:AJ:46:ARG:CG	10:AJ:64:GLU:OE1	2.55	0.45
27:BA:81:G:H2'	27:BA:82:G:O4'	2.17	0.45
27:DA:1323:U:OP1	45:DW:84:ARG:NE	2.50	0.45
45:DW:14:PRO:HG3	45:DW:101:SER:OG	2.16	0.45
27:BA:2302:G:C6	27:BA:2315:G:C6	3.06	0.45
27:BA:2313:C:C4	27:BA:2314:C:C5	3.05	0.45
16:AP:55:ARG:O	16:AP:56:ALA:C	2.55	0.45
6:CF:89:MET:SD	18:CR:76:LEU:HD11	2.57	0.45
5:AE:118:ILE:HG13	5:AE:119:LEU:N	2.31	0.45
3:CC:23:TYR:CD2	3:CC:24:ALA:N	2.85	0.45
1:CA:883:C:N3	1:CA:884:U:C4	2.85	0.45
34:DH:102:ALA:HB1	34:DH:116:GLU:HA	1.99	0.45
1:AA:183:G:H2'	1:AA:184:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:226:G:N3	1:AA:226:G:H2'	2.30	0.45
27:DA:1296:G:H2'	27:DA:1297:C:C6	2.52	0.45
4:AD:100:ARG:NH2	4:AD:118:ARG:NH2	2.65	0.45
27:BA:722:A:N6	27:BA:723:G:C6	2.85	0.45
46:DX:64:LYS:HZ3	46:DX:73:ARG:CZ	2.28	0.45
27:DA:1700:A:C2'	27:DA:1701:A:O4'	2.64	0.45
1:AA:55:A:O2'	1:AA:56:U:H5'	2.17	0.45
20:AT:88:VAL:O	20:AT:91:LEU:HB2	2.17	0.45
27:DA:1799:G:C5'	27:DA:1819:A:N6	2.77	0.45
23:CW:28:G:C2	23:CW:29:G:H1'	2.52	0.45
1:CA:1281:U:H5''	1:CA:1282:C:H5	1.82	0.45
23:AW:59:U:H5''	23:AW:60:C:H5	1.82	0.45
39:DQ:134:ARG:HH12	48:DZ:118:GLU:CD	2.20	0.45
1:CA:436:C:H2'	1:CA:437:U:C6	2.52	0.45
47:DY:87:LYS:HG3	47:DY:88:LYS:H	1.81	0.45
27:DA:1549:C:O2	27:DA:1549:C:H2'	2.17	0.45
27:DA:292:C:C2'	27:DA:293:U:H5'	2.47	0.45
1:AA:714:G:O2'	1:AA:715:A:H5'	2.17	0.45
15:CO:2:PRO:HB2	15:CO:3:ILE:HD13	1.98	0.45
40:DR:83:ILE:O	40:DR:84:ALA:C	2.55	0.45
9:CI:18:PHE:HD1	9:CI:62:TYR:CD2	2.34	0.45
50:D1:16:ASN:HA	50:D1:38:SER:O	2.16	0.45
27:DA:377:C:C4	27:DA:378:C:C5	3.05	0.45
34:DH:26:VAL:O	34:DH:79:VAL:HG11	2.17	0.45
27:BA:1386:C:H2'	27:BA:1387:C:C5	2.52	0.45
27:BA:446:G:OP1	43:BU:3:ARG:NH1	2.48	0.45
49:D0:50:ASN:O	49:D0:51:VAL:HG23	2.16	0.45
20:AT:43:LEU:HB3	20:AT:48:LYS:CG	2.46	0.45
27:BA:2445:G:C2'	27:BA:2446:G:H5'	2.47	0.45
27:DA:2391:G:H1	27:DA:2424:C:H2'	1.82	0.45
27:DA:2201:C:H42	27:DA:2222:G:H1	1.64	0.45
1:CA:152:A:H2'	1:CA:153:C:H5'	1.99	0.45
1:AA:1495:U:H6	1:AA:1495:U:O5'	1.99	0.45
1:AA:506:G:C5	1:AA:507:C:C5	3.05	0.45
27:DA:667:U:H3'	27:DA:668:G:H5''	1.99	0.45
36:BN:73:THR:CG2	36:BN:74:ARG:N	2.80	0.45
24:AX:19:G:H5'	24:AX:20:U:C6	2.51	0.45
27:BA:291:C:H2'	27:BA:292:C:H6	1.82	0.45
3:AC:131:ARG:HH12	3:AC:135:LYS:HE3	1.82	0.45
27:DA:836:G:C5	27:DA:837:C:C4	3.05	0.45
1:AA:1267:C:O2	1:AA:1267:C:H2'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:196:VAL:O	31:DE:196:VAL:CG2	2.64	0.45
31:DE:49:LEU:N	31:DE:49:LEU:HD12	2.32	0.45
27:BA:1702:G:H2'	27:BA:1703:G:O4'	2.16	0.45
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.52	0.44
19:CS:32:LYS:HB3	19:CS:57:HIS:NE2	2.32	0.44
40:BR:87:TYR:CE1	40:BR:117:VAL:O	2.70	0.44
2:CB:91:PRO:HG2	2:CB:155:LEU:CD2	2.47	0.44
2:CB:89:GLY:O	2:CB:154:LEU:HD13	2.17	0.44
41:BS:12:PHE:O	41:BS:14:VAL:HG23	2.18	0.44
32:BF:113:ALA:HB1	32:BF:186:ILE:CG2	2.45	0.44
47:BY:83:THR:O	47:BY:84:ARG:HG3	2.17	0.44
27:DA:1021:A:C6	27:DA:1023:U:C4	3.05	0.44
36:DN:66:LYS:O	36:DN:70:LYS:CB	2.64	0.44
27:DA:271(C):C:H2'	27:DA:271(D):G:H8	1.81	0.44
27:BA:480:A:OP2	47:BY:46:LYS:NZ	2.48	0.44
36:BN:3:THR:HG22	36:BN:4:TYR:H	1.82	0.44
27:DA:2406:U:O4	38:DP:70:GLN:HB3	2.17	0.44
1:AA:270:A:O2'	1:AA:271:C:H5'	2.16	0.44
30:DD:58:HIS:NE2	30:DD:59:LYS:O	2.50	0.44
27:DA:864:G:C6	27:DA:865:C:C5	3.06	0.44
27:DA:2404:C:N4	27:DA:2414:G:O6	2.50	0.44
27:DA:2250:G:C8	27:DA:2496:C:H5''	2.52	0.44
27:DA:630:G:N2	27:DA:634:C:C4	2.85	0.44
33:DG:20:ILE:HG23	33:DG:25:TYR:HB2	1.99	0.44
27:DA:574:C:C1'	27:DA:2055:C:H6	2.25	0.44
27:DA:2552:U:H3	27:DA:2554:U:H5'	1.81	0.44
27:DA:571:A:H1'	27:DA:573:G:H8	1.77	0.44
27:DA:753:C:O2	27:DA:754:C:C6	2.70	0.44
27:DA:671:C:H41	38:DP:42:SER:HA	1.82	0.44
27:BA:1022:G:C6	27:BA:1141:U:C5	3.05	0.44
27:BA:1141:U:H4'	27:BA:1142(A):A:O4'	2.17	0.44
34:BH:44:VAL:HG12	34:BH:45:VAL:HG23	1.98	0.44
27:BA:1495:A:H2'	27:BA:1496:A:N3	2.33	0.44
27:BA:1499:C:C3'	27:BA:1500:G:H5'	2.47	0.44
1:AA:1055:A:H1'	3:AC:156:ARG:NH1	2.31	0.44
12:CL:29:PHE:O	12:CL:30:ARG:HB2	2.17	0.44
39:BQ:12:GLN:NE2	39:BQ:73:PRO:CD	2.80	0.44
16:AP:65:GLN:N	16:AP:65:GLN:OE1	2.50	0.44
41:DS:16:ASN:ND2	41:DS:92:TYR:CE1	2.85	0.44
17:CQ:77:VAL:O	17:CQ:78:GLU:CB	2.62	0.44
27:BA:1787:A:O2'	27:BA:2589:A:H4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:63:C:N4	1:AA:105:G:C6	2.85	0.44
41:BS:24:LEU:HD12	41:BS:82:ILE:CG2	2.47	0.44
33:DG:98:ARG:H	33:DG:98:ARG:CD	2.30	0.44
33:DG:98:ARG:HD3	33:DG:98:ARG:H	1.82	0.44
27:BA:745:G:H2'	27:BA:746:A:H5'	1.99	0.44
3:AC:16:ARG:CZ	3:AC:16:ARG:HB2	2.45	0.44
20:CT:51:GLU:O	20:CT:52:ALA:C	2.54	0.44
15:AO:24:SER:O	15:AO:28:GLN:NE2	2.34	0.44
46:BX:12:VAL:CG2	46:BX:13:LEU:N	2.75	0.44
1:CA:1459:C:C2	1:CA:1460:A:C8	3.05	0.44
27:BA:1555:G:H2'	27:BA:1556:C:C6	2.51	0.44
27:DA:15:G:C4	27:DA:16:G:C8	3.05	0.44
30:BD:270:ILE:O	30:BD:271:ILE:CG2	2.60	0.44
8:AH:97:VAL:O	8:AH:99:GLU:N	2.49	0.44
39:DQ:43:THR:CG2	39:DQ:94:VAL:HG12	2.44	0.44
41:DS:59:LYS:CE	41:DS:68:GLN:NE2	2.80	0.44
27:DA:956:G:N2	27:DA:959:A:C3'	2.75	0.44
55:B6:11:LEU:O	55:B6:23:THR:HA	2.17	0.44
27:DA:320:A:H2'	32:DF:136:THR:HG21	1.99	0.44
27:BA:1359:A:H8	27:BA:1359:A:H5'	1.81	0.44
34:DH:89:ILE:O	34:DH:90:LYS:C	2.55	0.44
1:AA:939:G:C2	1:AA:940:C:N3	2.85	0.44
5:AE:78:HIS:N	5:AE:78:HIS:ND1	2.65	0.44
19:CS:45:VAL:C	19:CS:47:HIS:H	2.21	0.44
15:AO:63:ARG:O	15:AO:66:LEU:HB2	2.16	0.44
1:CA:637:G:C2	1:CA:638:G:C5	3.06	0.44
8:CH:104:ARG:NH2	8:CH:138:TRP:CH2	2.86	0.44
31:DE:19:ARG:O	31:DE:20:ALA:C	2.55	0.44
1:AA:1264:C:O2'	1:AA:1265:G:H5'	2.18	0.44
27:BA:363(A):A:H3'	27:BA:363(B):G:H8	1.82	0.44
27:DA:27:G:H22	27:DA:512:G:H2'	1.77	0.44
27:BA:992:C:C2'	27:BA:993:G:H5'	2.46	0.44
39:DQ:34:LEU:CD1	39:DQ:118:LEU:HD22	2.41	0.44
29:DC:45:ALA:O	29:DC:46:LYS:CB	2.65	0.44
1:AA:952:U:C5	13:AM:104:ARG:NH2	2.83	0.44
1:AA:592:G:C6	1:AA:648:A:N1	2.86	0.44
1:AA:641:U:H4'	1:AA:642:A:OP1	2.17	0.44
28:DB:30:C:N3	28:DB:31:C:H1'	2.32	0.44
1:CA:945:G:C2	1:CA:1337:G:C2	3.05	0.44
6:AF:75:LEU:C	6:AF:75:LEU:CD2	2.82	0.44
27:BA:1007:C:OP1	36:BN:37:LYS:NZ	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:114:ARG:HH12	2:CB:118:LEU:HD21	1.82	0.44
27:DA:1042:G:C1'	27:DA:1114:G:N2	2.78	0.44
27:BA:1380:G:N2	27:BA:1570:A:H2	2.15	0.44
8:CH:20:TYR:CE2	8:CH:75:ARG:HB3	2.53	0.44
29:BC:100:ILE:HG23	29:BC:131:LEU:O	2.17	0.44
27:BA:699:A:C8	27:BA:700:G:C8	3.05	0.44
2:AB:132:LYS:HA	2:AB:135:GLN:HB2	1.98	0.44
23:CW:37:U:O2'	23:CW:38:U:H5'	2.17	0.44
46:DX:5:TYR:HE2	51:D2:30:ARG:NE	2.14	0.44
27:DA:2236:C:H2'	27:DA:2237:G:H5'	1.98	0.44
25:AY:57:A:H3'	25:AY:57:A:P	2.57	0.44
23:CW:52:G:H1	23:CW:60:C:H42	1.65	0.44
6:CF:6:VAL:HA	6:CF:90:VAL:HG13	1.99	0.44
2:CB:168:THR:O	2:CB:169:LYS:C	2.55	0.44
27:DA:45:C:H2'	27:DA:47:C:C6	2.52	0.44
50:D1:49:VAL:O	50:D1:59:THR:HA	2.17	0.44
37:BO:57:VAL:O	37:BO:57:VAL:HG12	2.17	0.44
1:CA:667:G:O2'	1:CA:668:G:H5'	2.16	0.44
48:BZ:38:VAL:HG21	48:BZ:43:PHE:HB2	1.98	0.44
27:BA:1230:C:H2'	27:BA:1231:G:H8	1.82	0.44
48:BZ:55:VAL:HG12	48:BZ:56:ILE:N	2.31	0.44
1:AA:393:A:O2'	1:AA:394:G:H5'	2.17	0.44
27:BA:1853:A:N3	27:BA:2233:U:O2'	2.48	0.44
2:CB:139:LYS:HA	2:CB:139:LYS:HD3	1.77	0.44
39:BQ:69:PHE:C	39:BQ:69:PHE:CD2	2.90	0.44
27:BA:1419:A:H2'	27:BA:1421:G:N7	2.32	0.44
1:AA:624:C:H4'	16:AP:10:GLY:HA2	1.99	0.44
27:DA:1045:A:H4'	27:DA:1047:G:O4'	2.16	0.44
1:CA:1225:A:H5'	13:CM:103:THR:OG1	2.16	0.44
1:CA:982:U:C5'	14:CN:6:LEU:HD11	2.43	0.44
32:BF:19:GLU:O	32:BF:20:LEU:HD12	2.17	0.44
47:BY:76:CYS:HB2	47:BY:96:ILE:HD11	1.99	0.44
37:BO:60:ALA:CB	37:BO:86:ILE:HA	2.47	0.44
27:DA:1827:C:H2'	27:DA:1828:G:O4'	2.17	0.44
27:DA:1963:U:C2'	27:DA:1963:U:O2	2.65	0.44
27:BA:480:A:OP2	47:BY:46:LYS:HE3	2.17	0.44
42:BT:19:LEU:CD1	42:BT:19:LEU:N	2.80	0.44
1:AA:264:U:O2'	1:AA:265:G:H5'	2.18	0.44
32:DF:20:LEU:HB3	32:DF:23:ASP:CG	2.37	0.44
27:DA:1157:G:H2'	27:DA:1158:C:H6	1.74	0.44
43:DU:49:HIS:O	43:DU:53:ARG:N	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DU:52:ARG:HD3	43:DU:55:ARG:HE	1.82	0.44
43:DU:88:ILE:HG22	44:DV:47:VAL:O	2.17	0.44
44:DV:97:LYS:HD3	44:DV:97:LYS:HA	1.85	0.44
27:BA:2701:C:C3'	27:BA:2702:U:C5'	2.67	0.44
29:BC:41:VAL:HG23	29:BC:178:ALA:HB3	1.98	0.44
30:DD:77:ALA:HB2	30:DD:97:TYR:HE2	1.76	0.44
27:DA:1429:G:C2	27:DA:1430:C:C2	3.05	0.44
27:DA:1566:A:C8	30:DD:214:TRP:CZ3	3.06	0.44
42:BT:34:VAL:HA	42:BT:39:ARG:O	2.17	0.44
27:DA:83:G:O2'	27:DA:84:A:C8	2.66	0.44
31:DE:59:VAL:O	31:DE:60:ASN:CB	2.65	0.44
55:D6:14:THR:C	55:D6:16:CYS:H	2.21	0.44
57:D8:41:ILE:HG13	57:D8:41:ILE:H	1.58	0.44
27:DA:2019:A:H5''	43:DU:27:LEU:HD12	1.98	0.44
38:DP:21:ARG:CG	38:DP:29:LYS:HE3	2.47	0.44
1:CA:1138:G:C2	1:CA:1140:C:C4	3.05	0.44
20:CT:91:LEU:C	20:CT:93:GLU:N	2.70	0.44
3:AC:186:PHE:CD2	3:AC:186:PHE:C	2.90	0.44
12:CL:57:LEU:C	12:CL:59:SER:N	2.70	0.44
2:AB:17:PHE:CD2	2:AB:17:PHE:O	2.70	0.44
2:AB:92:TYR:O	2:AB:151:GLY:O	2.35	0.44
1:AA:28:G:O2'	1:AA:296:U:H5''	2.17	0.44
19:AS:46:GLY:H	19:AS:62:ILE:HG23	1.81	0.44
19:AS:61:TYR:C	19:AS:62:ILE:HG22	2.38	0.44
34:DH:85:LYS:O	34:DH:133:VAL:N	2.47	0.44
1:AA:230:G:C4'	16:AP:23:ASP:OD2	2.65	0.44
41:DS:19:LYS:HB3	41:DS:20:ARG:NH1	2.33	0.44
27:BA:1248:G:C3'	27:BA:1249:U:H5''	2.47	0.44
1:CA:129(A):G:N2	1:CA:189(E):U:O2'	2.51	0.44
1:CA:275:G:H5'	17:CQ:14:LYS:HB3	1.99	0.44
32:BF:60:SER:OG	32:BF:61:GLY:N	2.50	0.44
1:AA:1102:A:C5	1:AA:1103:C:C5	3.06	0.44
1:AA:374:A:C4	1:AA:375:U:C5	3.04	0.44
1:AA:409:G:H2'	1:AA:410:G:H5'	1.98	0.44
37:BO:35:VAL:HA	37:BO:62:VAL:CG1	2.47	0.44
27:BA:2266:A:H5'	27:BA:2267:A:N7	2.32	0.44
21:CU:18:TYR:CD2	21:CU:22:ARG:HD3	2.52	0.44
48:DZ:96:GLU:OE2	48:DZ:124:LEU:HD21	2.17	0.44
40:DR:38:VAL:HB	40:DR:39:PRO:CD	2.35	0.44
48:DZ:43:PHE:CD1	48:DZ:43:PHE:C	2.91	0.44
1:CA:658:G:H2'	1:CA:659:U:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2173:A:O2'	27:BA:2174:C:C5'	2.59	0.44
35:BI:83:ALA:HB2	35:BI:88:ILE:HA	1.98	0.44
27:BA:571:A:OP2	27:BA:2030:A:N6	2.50	0.44
33:DG:53:LEU:C	33:DG:55:LYS:N	2.68	0.44
1:AA:500:G:C6	1:AA:546:G:C2	3.05	0.44
3:AC:112:SER:HB3	3:AC:115:LEU:CD1	2.36	0.44
27:BA:2355:C:H2'	27:BA:2356:C:O4'	2.18	0.44
35:DI:82:ARG:HG3	35:DI:82:ARG:NH1	2.31	0.44
13:AM:80:ARG:C	13:AM:82:MET:N	2.71	0.44
33:BG:139:LEU:H	33:BG:139:LEU:HD23	1.82	0.44
42:BT:67:SER:C	42:BT:68:TYR:O	2.55	0.44
27:BA:2516:G:C2'	27:BA:2517:C:C5'	2.85	0.44
35:BI:37:VAL:HG12	35:BI:38:LEU:HD12	2.00	0.44
27:DA:2290:G:C6	27:DA:2291:U:C4	3.05	0.44
44:DV:66:ARG:O	44:DV:67:GLY:O	2.35	0.44
54:D5:31:VAL:CG1	54:D5:42:PRO:HB3	2.48	0.44
54:D5:41:PRO:HA	54:D5:42:PRO:HD2	1.88	0.44
15:AO:58:MET:O	15:AO:61:GLY:N	2.51	0.44
27:BA:1579:A:H2'	27:BA:1580:A:H8	1.79	0.44
39:DQ:116:GLU:O	39:DQ:119:ARG:N	2.50	0.44
45:DW:29:LEU:O	45:DW:33:ARG:HG3	2.18	0.44
15:CO:43:LEU:C	15:CO:45:VAL:N	2.69	0.44
5:AE:20:GLN:O	5:AE:23:GLY:O	2.36	0.44
1:CA:1386:G:C2	1:CA:1387:G:C8	3.04	0.44
1:CA:1513:A:C6	1:CA:1514:C:N4	2.85	0.44
3:AC:182:ILE:HD11	3:AC:203:PHE:HD1	1.77	0.44
5:CE:63:ARG:C	5:CE:65:ASN:H	2.21	0.44
27:DA:1986:A:H2'	27:DA:1986:A:N3	2.32	0.44
27:DA:2587:A:N6	27:DA:2608:G:O2'	2.46	0.44
50:B1:53:VAL:CG1	50:B1:54:ALA:N	2.80	0.44
1:CA:946:A:C2	1:CA:1236:A:C2	3.04	0.44
1:AA:407:G:H1	1:AA:435:C:H42	1.65	0.44
27:BA:119:A:O2'	27:BA:120:U:P	2.75	0.44
27:DA:2283:C:C2	27:DA:2389:G:C2	3.05	0.44
27:BA:1007:C:C5	27:BA:1008:C:H2'	2.53	0.44
30:DD:148:GLU:HB2	30:DD:151:LYS:HD2	1.98	0.44
9:AI:42:ARG:O	9:AI:43:ALA:C	2.55	0.44
39:DQ:58:PHE:CD1	39:DQ:58:PHE:O	2.71	0.44
1:AA:1142:G:C8	1:AA:1143:G:N7	2.86	0.44
27:DA:2145:C:HO2'	27:DA:2146:C:P	2.40	0.44
34:BH:29:PRO:O	34:BH:30:LYS:CD	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:48:LEU:O	13:AM:49:THR:O	2.36	0.44
1:AA:568:G:N3	1:AA:568:G:H2'	2.32	0.44
4:CD:209:ARG:HG2	4:CD:209:ARG:OXT	2.17	0.44
1:AA:423:G:O2'	1:AA:424:G:H5'	2.17	0.44
2:CB:132:LYS:HG2	2:CB:132:LYS:O	2.17	0.44
27:DA:1839:G:C8	27:DA:1927:A:H1'	2.51	0.44
43:DU:14:HIS:C	43:DU:16:LYS:N	2.70	0.44
23:CW:8:U:O4	23:CW:13:A:H2'	2.17	0.44
10:AJ:88:LEU:HD11	10:AJ:90:LEU:CD1	2.48	0.44
27:DA:751:A:O4'	45:DW:90:ARG:HD3	2.17	0.44
27:DA:1765:C:O5'	27:DA:1765:C:H6	2.00	0.44
45:BW:97:LYS:HE3	45:BW:99:ARG:CZ	2.47	0.44
41:DS:49:VAL:HG21	41:DS:76:LYS:O	2.17	0.44
27:DA:823:G:H2'	27:DA:824:A:C8	2.52	0.44
29:BC:58:VAL:CG2	29:BC:166:ASP:H	2.30	0.44
1:AA:1092:A:H5''	7:AG:4:ARG:NH2	2.31	0.44
1:AA:895:G:H2'	1:AA:896:C:C6	2.52	0.44
36:BN:23:LEU:CD1	36:BN:99:LEU:HA	2.47	0.44
8:AH:21:LYS:O	8:AH:22:GLU:C	2.55	0.44
33:BG:7:LEU:HA	33:BG:10:LYS:HB2	2.00	0.44
57:B8:63:PRO:HB2	57:B8:64:TYR:CD1	2.52	0.44
1:CA:1324:A:C4'	1:CA:1362:C:H4'	2.46	0.44
40:BR:27:SER:C	40:BR:34:ILE:HD11	2.37	0.44
34:BH:85:LYS:CE	34:BH:141:VAL:O	2.65	0.44
48:DZ:162:LEU:H	48:DZ:162:LEU:HD12	1.83	0.44
1:CA:507:C:C2'	1:CA:508:C:H5	2.22	0.44
27:BA:481:G:O2'	27:BA:482:A:P	2.76	0.44
1:CA:1349:A:C2	1:CA:1350:A:C4	3.06	0.44
1:CA:721:G:C4'	1:CA:722:A:O5'	2.42	0.44
17:AQ:63:ARG:HH11	17:AQ:63:ARG:HB3	1.80	0.44
1:AA:1080:A:H5''	5:AE:16:THR:HG21	1.99	0.44
1:CA:1250:A:O2'	1:CA:1251:A:H5'	2.17	0.44
27:DA:1432:C:C4	27:DA:1433:U:C5	3.05	0.44
27:BA:335:C:H5''	47:BY:73:ARG:CZ	2.48	0.44
32:DF:65:TRP:O	32:DF:67:GLN:N	2.51	0.44
27:DA:587:C:C5	38:DP:33:ARG:HD3	2.51	0.44
55:B6:19:ARG:H	55:B6:19:ARG:CD	2.21	0.44
1:CA:1105:A:C2	1:CA:1106:G:C5	3.05	0.44
27:BA:2481:G:HO2'	27:BA:2482:G:P	2.38	0.44
27:DA:310:A:C6	27:DA:330:A:C6	3.05	0.44
30:BD:60:ARG:HG2	30:BD:61:LEU:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.81	0.44
51:D2:7:ARG:O	51:D2:11:GLU:HG3	2.17	0.44
1:AA:1054:C:P	1:AA:1197:G:OP2	2.75	0.44
1:AA:1346:A:H5'	9:AI:120:ARG:HH12	1.82	0.44
10:AJ:49:VAL:O	10:AJ:60:ARG:HB3	2.17	0.44
2:AB:204:ASN:ND2	2:AB:206:ASP:N	2.65	0.44
37:DO:71:ARG:NE	37:DO:105:GLU:OE2	2.39	0.44
42:DT:74:ARG:HD3	42:DT:76:PHE:CZ	2.51	0.44
58:D9:25:VAL:HG21	58:D9:34:GLN:OE1	2.17	0.44
34:DH:139:GLN:HG3	34:DH:140:LYS:H	1.83	0.44
32:BF:51:THR:CG2	32:BF:92:PRO:HD2	2.46	0.44
8:CH:48:TYR:CD1	8:CH:48:TYR:C	2.90	0.44
36:DN:11:PRO:O	36:DN:13:TRP:N	2.50	0.44
36:DN:131:GLN:HE22	36:DN:134:ARG:HD2	1.82	0.44
1:CA:227:G:H2'	1:CA:228:A:C8	2.45	0.44
31:DE:26:ILE:CB	31:DE:182:LEU:HB3	2.42	0.44
9:CI:8:GLY:HA3	9:CI:76:ALA:O	2.18	0.44
27:DA:777:A:C2'	27:DA:778:G:H5'	2.48	0.44
1:CA:1177:G:H22	1:CA:1181:G:H1	1.64	0.44
12:AL:37:VAL:HG11	12:AL:74:LEU:O	2.17	0.44
27:BA:1799:G:N1	27:BA:1819:A:N7	2.65	0.44
1:CA:1054:C:H5	1:CA:1196:U:C6	2.34	0.44
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD23	2.00	0.44
49:B0:17:GLN:O	49:B0:18:ALA:O	2.35	0.44
27:DA:154:G:C5	27:DA:154(A):C:N3	2.86	0.44
39:DQ:70:PRO:HA	39:DQ:94:VAL:O	2.18	0.44
29:DC:189:ILE:C	29:DC:191:ALA:N	2.71	0.44
29:DC:39:GLU:HG2	29:DC:180:PHE:CB	2.48	0.44
5:CE:20:GLN:O	5:CE:21:ALA:C	2.55	0.44
27:DA:125:G:N2	56:D7:48:LYS:HE3	2.18	0.44
31:DE:110:GLY:HA2	31:DE:161:GLY:HA3	1.98	0.44
2:CB:14:GLY:O	2:CB:15:VAL:CG1	2.54	0.44
50:B1:44:PRO:O	50:B1:46:LEU:HD13	2.17	0.44
39:BQ:114:ALA:O	39:BQ:116:GLU:N	2.50	0.44
39:BQ:56:ARG:CG	39:BQ:56:ARG:HH11	2.26	0.44
52:D3:47:VAL:HA	52:D3:50:VAL:CG2	2.47	0.44
27:DA:1485:G:H8	27:DA:1485:G:H5'	1.83	0.44
27:DA:2297:C:H2'	27:DA:2298:A:C8	2.52	0.44
27:DA:271(J):C:C3'	27:DA:271(K):U:H5''	2.47	0.44
27:DA:2815:C:O2'	54:D5:43:HIS:CD2	2.71	0.44
33:BG:72:ARG:HG2	33:BG:86:MET:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DE:13:ARG:HD2	31:DE:20:ALA:HB1	1.99	0.44
12:CL:5:ASN:O	12:CL:8:VAL:CB	2.65	0.44
34:DH:54:ARG:NH2	34:DH:57:ASP:OD1	2.50	0.44
27:DA:2187:G:C5	27:DA:2188:C:C4	3.06	0.44
27:DA:1322:A:C8	27:DA:1323:U:H5	2.35	0.44
27:BA:2302:G:C6	27:BA:2303:G:C5	3.05	0.44
38:BP:9:ASN:O	38:BP:10:PRO:C	2.55	0.44
8:CH:9:MET:HB2	8:CH:26:VAL:CG2	2.48	0.44
27:BA:1924:C:H2'	27:BA:1925:C:H5'	1.99	0.44
27:BA:1440:G:H2'	27:BA:1441:G:O4'	2.18	0.44
1:AA:959:A:C2'	1:AA:960:U:H4'	2.46	0.44
7:CG:15:ASP:CG	7:CG:16:LEU:H	2.21	0.44
28:DB:30:C:C2	28:DB:31:C:H1'	2.53	0.44
27:BA:519:U:H6	27:BA:519:U:O5'	1.99	0.44
27:BA:2611:U:H5'	27:BA:2611:U:C6	2.41	0.44
27:BA:2654:A:C4'	27:BA:2655:G:OP1	2.62	0.44
27:BA:26:G:H1'	27:BA:514:A:N6	2.32	0.44
30:DD:157:ARG:HG3	30:DD:157:ARG:HH11	1.82	0.44
30:DD:158:ALA:HB3	30:DD:161:THR:CG2	2.48	0.44
39:DQ:40:ALA:HB3	39:DQ:127:ILE:HD13	1.99	0.44
27:BA:271(L):U:H4'	27:BA:271(M):G:C5	2.53	0.44
46:DX:72:LYS:CD	46:DX:72:LYS:N	2.81	0.44
1:CA:1278:U:H5''	1:CA:1279:A:H5'	2.00	0.44
27:DA:1114:G:C3'	27:DA:1115:G:H5''	2.47	0.44
50:D1:19:GLN:O	50:D1:35:THR:N	2.47	0.44
11:AK:98:LEU:HA	11:AK:101:SER:HB3	1.98	0.44
27:BA:528:A:H2	27:BA:2043:C:H5'	1.81	0.44
48:BZ:8:TYR:OH	48:BZ:34:ARG:HG3	2.17	0.44
35:DI:39:ALA:O	35:DI:40:THR:O	2.36	0.44
40:DR:30:THR:O	40:DR:30:THR:CG2	2.63	0.44
27:BA:102:G:OP1	27:BA:102:G:H4'	2.16	0.44
27:DA:1896:G:C6	27:DA:1897:G:N7	2.86	0.44
15:AO:18:PHE:O	15:AO:19:PRO:C	2.55	0.44
24:AX:29:G:H2'	24:AX:30:G:C8	2.47	0.44
27:BA:1013:C:C2'	27:BA:1014:U:H5'	2.48	0.44
27:DA:376:C:H2'	27:DA:377:C:H6	1.81	0.44
27:DA:677:A:H2'	27:DA:678:C:C6	2.52	0.44
27:DA:1705:G:H2'	27:DA:1706:U:O4'	2.18	0.44
27:DA:1852:C:H6	27:DA:1852:C:H3'	1.83	0.44
38:DP:79:ARG:NH2	38:DP:109:GLY:CA	2.80	0.44
48:BZ:128:SER:C	48:BZ:130:ARG:H	2.19	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2534:A:N6	27:DA:2535:G:C5	2.85	0.44
27:BA:887:A:C2'	27:BA:888:C:H5''	2.48	0.44
27:DA:2462:U:H2'	27:DA:2463:C:O4'	2.17	0.44
1:AA:978:A:H8	1:AA:978:A:H5''	1.82	0.44
27:BA:36:G:H4'	27:BA:451:C:C2	2.51	0.44
1:AA:588:G:C6	1:AA:753:A:C8	3.05	0.44
4:CD:185:PHE:CD2	4:CD:185:PHE:O	2.70	0.44
27:BA:237:C:O2'	27:BA:238:C:H5'	2.17	0.44
1:CA:416:G:H2'	1:CA:417:C:C6	2.53	0.44
48:BZ:4:LEU:HD11	48:BZ:42:GLU:HB3	2.00	0.44
2:CB:124:SER:C	2:CB:126:GLU:H	2.21	0.44
4:AD:13:ARG:O	4:AD:15:GLU:N	2.47	0.44
6:CF:1:MET:HE1	6:CF:68:PRO:HD3	1.99	0.44
4:AD:38:TYR:O	4:AD:39:PRO:O	2.35	0.44
27:DA:2437:U:H2'	27:DA:2438:U:C6	2.52	0.44
27:DA:1450(A):C:H6	27:DA:1450(A):C:O5'	2.00	0.44
49:B0:29:GLN:O	49:B0:67:VAL:HG23	2.18	0.44
23:AW:56:G:H2'	23:AW:57:A:H5'	1.99	0.44
27:DA:386:G:O2'	27:DA:387:U:OP1	2.31	0.44
36:BN:82:LEU:HD12	36:BN:82:LEU:HA	1.73	0.44
27:DA:2089:U:H6	27:DA:2089:U:H5''	1.83	0.44
9:CI:25:LYS:HG3	9:CI:25:LYS:O	2.16	0.44
2:AB:127:ILE:O	2:AB:127:ILE:HG22	2.17	0.44
2:CB:127:ILE:O	2:CB:128:GLU:C	2.54	0.44
29:BC:90:GLY:O	29:BC:91:ALA:HB2	2.17	0.44
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.17	0.44
1:CA:979:C:C3'	1:CA:980:C:C5'	2.87	0.44
41:BS:88:ASP:CG	41:BS:89:ARG:H	2.18	0.44
27:BA:615:G:H2'	27:BA:616:G:O4'	2.17	0.44
32:BF:2:LYS:HG2	32:BF:25:PRO:CG	2.47	0.44
34:BH:121:ILE:HG23	34:BH:133:VAL:HG12	1.99	0.44
36:DN:97:ARG:O	36:DN:100:GLU:N	2.50	0.44
46:BX:11:PRO:HA	46:BX:28:PHE:HA	1.99	0.44
27:DA:245:G:H2'	27:DA:246:C:H6	1.82	0.44
27:DA:1907:G:C2'	27:DA:1908:C:H5'	2.48	0.44
27:DA:1932:A:H2'	27:DA:1933:G:C5'	2.47	0.44
27:DA:1970:A:H4'	27:DA:1971:A:OP1	2.16	0.44
27:BA:662:G:OP1	38:BP:18:ARG:NH1	2.50	0.44
32:DF:8:GLN:O	32:DF:9:ILE:C	2.56	0.44
1:AA:1400:C:C4	24:AX:34:C:C2	3.06	0.44
43:DU:66:ASN:ND2	43:DU:70:ARG:HE	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:54:LEU:HD13	41:BS:58:LEU:HB2	1.98	0.44
27:DA:1429:G:N2	27:DA:1430:C:C2	2.85	0.44
27:DA:907:U:H6	27:DA:907:U:H5'	1.82	0.44
57:D8:29:LYS:HE2	57:D8:44:LYS:HB3	1.99	0.44
27:DA:2423:U:C2	27:DA:2425:A:C2	3.05	0.44
27:DA:2426:A:H3'	27:DA:2427:C:H5'	1.97	0.44
28:DB:54:G:H21	33:DG:29:TRP:HE1	1.65	0.44
20:AT:28:ALA:C	20:AT:30:LYS:N	2.71	0.44
20:AT:30:LYS:HD3	20:AT:30:LYS:C	2.38	0.44
27:BA:1140:C:P	36:BN:66:LYS:NZ	2.90	0.44
55:B6:15:GLU:OE1	55:B6:41:PRO:CB	2.66	0.44
46:DX:47:PHE:O	46:DX:49:VAL:HG13	2.17	0.44
27:DA:313:C:O2'	27:DA:314:A:O4'	2.36	0.44
47:DY:68:HIS:HB3	47:DY:71:LYS:CG	2.47	0.44
4:CD:122:ARG:HA	4:CD:134:ASP:O	2.18	0.44
42:DT:27:THR:OG1	42:DT:28:VAL:N	2.44	0.44
12:CL:41:THR:HG21	26:CZ:6:5OH:OS	2.18	0.44
1:CA:122:G:H2'	1:CA:123:C:O4'	2.18	0.44
27:BA:1991:U:C2'	27:BA:1992:G:H5''	2.47	0.44
1:CA:742:G:P	15:CO:35:ARG:NH2	2.90	0.44
36:DN:12:ARG:O	36:DN:13:TRP:C	2.54	0.44
1:CA:1004:A:H5'	1:CA:1025:U:H3	1.82	0.44
18:AR:33:ASP:C	18:AR:33:ASP:OD2	2.55	0.44
27:BA:391:G:C8	27:BA:391:G:H5''	2.53	0.44
42:BT:48:ILE:O	42:BT:50:ILE:CD1	2.66	0.44
38:BP:99:LEU:HA	38:BP:102:ARG:NH1	2.32	0.44
38:BP:106:LEU:O	38:BP:107:LYS:CG	2.65	0.44
27:BA:2121:G:H2'	27:BA:2122:U:O4'	2.17	0.44
27:BA:2174:C:O2'	27:BA:2175:C:C6	2.71	0.44
27:DA:2162:G:C2	27:DA:2163:C:C2	3.05	0.44
36:DN:128:HIS:N	36:DN:128:HIS:ND1	2.65	0.44
27:BA:149:A:C2	27:BA:150:C:C2	3.05	0.44
49:B0:24:LYS:O	49:B0:25:ARG:HD3	2.18	0.44
27:DA:1624:G:H2'	27:DA:1625:C:H6	1.83	0.44
35:BI:133:HIS:O	35:BI:135:GLU:N	2.51	0.44
48:BZ:150:HIS:HB2	48:BZ:167:GLU:O	2.17	0.44
27:BA:1408:C:O2	27:BA:1408:C:H2'	2.16	0.44
27:DA:962:G:H2'	27:DA:963:U:H6	1.82	0.44
36:BN:121:LYS:HB3	36:BN:123:TYR:CE1	2.48	0.44
50:B1:46:LEU:H	50:B1:46:LEU:HD22	1.79	0.44
27:DA:660:G:C2'	27:DA:661:C:H5'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1679:U:H2'	27:DA:1680:U:O4'	2.17	0.44
35:DI:77:LEU:HD12	35:DI:101:LEU:HD22	1.98	0.44
13:AM:3:ARG:HH21	33:BG:139:LEU:HD11	1.83	0.44
13:AM:4:ILE:CG2	13:AM:5:ALA:N	2.79	0.44
27:DA:1505:C:H2'	27:DA:1506:C:O5'	2.18	0.44
25:CY:7:A:N6	25:CY:48:C:C5	2.85	0.44
3:AC:57:ILE:HA	3:AC:65:ALA:HB3	1.98	0.44
5:CE:147:ASP:O	5:CE:151:LEU:HG	2.18	0.44
3:AC:82:GLU:O	3:AC:86:VAL:HG13	2.16	0.44
2:AB:196:LEU:HG	2:AB:196:LEU:H	1.41	0.44
8:CH:44:PHE:HD1	8:CH:79:VAL:HG12	1.83	0.44
31:BE:33:VAL:HG22	31:BE:33:VAL:O	2.17	0.44
27:DA:477:A:O2'	27:DA:478:A:O4'	2.34	0.44
33:BG:119:GLY:HA3	33:BG:181:ARG:HB2	1.99	0.44
32:BF:41:LEU:CD1	32:BF:184:TYR:HE1	2.22	0.44
1:AA:667:G:N2	1:AA:740:U:H1'	2.32	0.44
1:AA:232:G:H2'	1:AA:233:C:C6	2.49	0.44
14:AN:9:LYS:HA	14:AN:12:ARG:NH1	2.32	0.44
27:BA:1739:U:O2'	27:BA:1740:G:C5'	2.63	0.44
1:AA:956:U:O2'	1:AA:957:U:H5'	2.18	0.44
1:AA:1226:C:O2'	13:AM:103:THR:O	2.24	0.44
48:BZ:142:GLY:O	48:BZ:143:LEU:HD22	2.17	0.44
34:DH:111:HIS:HA	34:DH:112:PRO:HD2	1.78	0.44
34:DH:97:ARG:HB3	34:DH:98:LEU:H	1.54	0.44
50:B1:53:VAL:O	50:B1:54:ALA:C	2.55	0.44
27:BA:258:G:C4	27:BA:259:G:C8	3.06	0.44
1:AA:225:C:H2'	1:AA:226:G:H8	1.83	0.44
1:CA:999:C:C2'	1:CA:1000:U:H5'	2.47	0.44
27:BA:1286:A:C2	27:BA:1289:C:C6	3.05	0.44
23:AW:23:G:H2'	23:AW:24:C:H6	1.81	0.44
27:BA:2534:A:C2	27:BA:2535:G:H1'	2.53	0.44
27:DA:621:A:H3'	27:DA:622:G:H8	1.82	0.44
27:DA:2355:C:C1'	49:D0:36:ILE:HD11	2.48	0.44
49:B0:35:ASN:O	49:B0:60:PHE:HB2	2.16	0.44
39:DQ:58:PHE:HB3	39:DQ:113:GLN:NE2	2.31	0.44
27:DA:1771:C:O2'	27:DA:1786:A:H8	2.01	0.44
1:AA:52:G:O2'	1:AA:53:A:O5'	2.36	0.44
27:BA:2760:C:H6	27:BA:2760:C:O5'	2.01	0.44
27:BA:2203:U:O2	27:BA:2221:G:C2	2.70	0.44
28:DB:27:C:H6	28:DB:27:C:C5'	2.30	0.44
28:BB:20:C:C2'	28:BB:21:G:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:640:A:N3	8:AH:115:SER:HB2	2.32	0.44
4:CD:166:LYS:HG3	4:CD:178:VAL:HG11	1.99	0.44
27:BA:1695:G:N2	27:BA:1696:G:N7	2.65	0.44
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.82	0.44
50:D1:40:ARG:HD3	50:D1:40:ARG:O	2.17	0.44
2:AB:224:GLN:HE21	2:AB:229:VAL:CG2	2.30	0.44
1:AA:528:C:H41	12:AL:46:ASN:ND2	2.14	0.44
31:DE:170:LEU:HD23	31:DE:185:LYS:O	2.18	0.44
27:BA:1689:A:O2'	27:BA:1690:A:H5'	2.17	0.44
25:CY:45:U:H5''	25:CY:46:U:OP1	2.18	0.44
11:CK:12:ARG:HG2	11:CK:13:GLN:N	2.32	0.44
50:D1:46:LEU:HA	50:D1:63:ALA:HA	1.98	0.44
25:CY:71:A:O2'	25:CY:72:G:H5'	2.17	0.44
8:AH:74:PRO:CG	8:AH:75:ARG:N	2.80	0.44
2:CB:168:THR:O	2:CB:170:GLU:N	2.50	0.44
49:D0:47:PRO:HA	49:D0:51:VAL:HG12	1.98	0.44
27:DA:2315:G:H2'	27:DA:2316:C:H6	1.82	0.44
1:AA:384:G:H2'	1:AA:385:C:C6	2.53	0.44
27:DA:2846:G:H2'	27:DA:2847:U:C6	2.52	0.44
27:BA:374:A:H61	27:BA:400:G:C2'	2.31	0.44
33:BG:77:ILE:O	33:BG:77:ILE:HG22	2.17	0.44
1:AA:200:G:N2	1:AA:218:C:N3	2.65	0.44
36:BN:73:THR:HA	36:BN:83:LYS:O	2.18	0.44
27:BA:758:C:O2	27:BA:1981:A:H2	2.00	0.44
1:CA:806:C:H2'	1:CA:807:A:H8	1.82	0.44
27:BA:1391:U:O2	27:BA:1393:A:H8	1.99	0.44
27:BA:692:C:N3	27:BA:771:G:C2	2.86	0.44
4:CD:175:SER:HB3	4:CD:186:LEU:HD11	1.99	0.44
27:BA:2895:U:H5	27:BA:2896:C:N3	2.16	0.44
42:BT:22:PHE:CD2	42:BT:22:PHE:N	2.86	0.44
57:B8:41:ILE:HG13	57:B8:41:ILE:H	1.34	0.44
42:BT:133:GLU:OE2	42:BT:137:LYS:HB2	2.17	0.44
27:BA:2256:G:N2	27:BA:2275:C:C4	2.85	0.44
15:CO:33:THR:HG23	15:CO:63:ARG:NH1	2.32	0.44
27:DA:2220:G:N2	27:DA:2221:G:H1'	2.33	0.44
27:BA:608:A:C2	27:BA:621:A:C4	3.05	0.44
1:CA:962:C:H2'	1:CA:963:G:C8	2.52	0.44
1:CA:980:C:C2'	1:CA:980:C:O2	2.64	0.44
14:CN:39:LEU:HD13	14:CN:44:LEU:HA	1.99	0.44
41:BS:89:ARG:HB3	41:BS:92:TYR:HB3	2.00	0.44
32:BF:18:ARG:CG	32:BF:199:TRP:HZ3	2.29	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BE:188:VAL:O	31:BE:188:VAL:HG13	2.16	0.44
36:DN:100:GLU:O	36:DN:104:LYS:HB2	2.17	0.44
46:BX:9:LEU:CA	51:B2:36:ARG:HH21	2.16	0.44
1:CA:1305:G:O2'	1:CA:1306:A:OP2	2.29	0.44
5:AE:33:VAL:HG21	5:AE:109:ILE:CD1	2.47	0.44
32:DF:20:LEU:HD22	32:DF:203:GLN:HE22	1.83	0.44
27:DA:1000:A:H3'	27:DA:1001:A:C8	2.53	0.44
47:DY:85:VAL:HG12	47:DY:86:ARG:H	1.82	0.44
27:DA:864:G:H2'	27:DA:865:C:H6	1.82	0.44
57:D8:40:GLU:O	57:D8:42:ARG:N	2.50	0.44
27:DA:2054:A:C2	27:DA:2616:C:C2	3.06	0.44
1:AA:322:C:H2'	1:AA:323:U:C6	2.36	0.44
1:CA:1138:G:N2	1:CA:1140:C:N4	2.65	0.44
55:B6:48:VAL:C	55:B6:49:HIS:ND1	2.71	0.44
47:BY:38:ILE:O	47:BY:39:VAL:CB	2.65	0.44
1:AA:1316:G:H1'	1:AA:1360:A:H2	1.82	0.44
19:AS:39:THR:HG23	19:AS:70:LYS:HE2	1.98	0.44
8:AH:54:ASP:HB2	8:AH:56:LYS:CE	2.45	0.44
19:AS:18:LYS:HD2	19:AS:22:LEU:HD21	1.99	0.44
27:BA:754:C:C2	27:BA:755:C:C5	3.05	0.44
2:CB:39:ILE:HG22	2:CB:40:HIS:N	2.32	0.44
27:BA:828:U:H4'	27:BA:831:G:C6	2.52	0.44
58:B9:19:ARG:HG3	58:B9:24:TYR:HE1	1.81	0.44
1:AA:580:U:C2'	1:AA:581:G:O4'	2.60	0.44
1:CA:1001(A):G:O2'	1:CA:1002:G:H5'	2.18	0.44
20:CT:33:ILE:HD12	20:CT:63:ILE:HG12	1.99	0.44
1:CA:1190:G:OP1	3:CC:5:ILE:HG13	2.17	0.44
1:CA:1149:C:OP1	9:CI:14:VAL:HG21	2.16	0.44
3:CC:76:VAL:HG21	3:CC:103:VAL:HG11	1.98	0.44
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.99	0.44
39:DQ:137:TYR:O	39:DQ:138:ASP:C	2.55	0.44
1:CA:648:A:C6	1:CA:649:G:C6	3.06	0.44
27:DA:2130:U:C2	27:DA:2159:G:O6	2.71	0.44
1:CA:926:G:H8	1:CA:926:G:O5'	2.01	0.44
40:DR:16:HIS:C	40:DR:18:LEU:H	2.20	0.44
3:AC:114:PRO:HG3	3:AC:185:GLY:CA	2.45	0.44
27:BA:1357:U:H2'	27:BA:1358:G:C8	2.52	0.44
24:AX:56:C:H1'	33:BG:76:SER:HB3	2.00	0.44
36:DN:78:TYR:HB3	36:DN:79:PRO:HD2	1.98	0.44
1:AA:1380:U:O2'	1:AA:1381:U:OP2	2.33	0.44
27:BA:845:G:C8	27:BA:845:G:OP2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:7:A:C2	25:CY:66:A:C2	3.06	0.44
1:CA:450:G:H2'	1:CA:451:A:OP1	2.17	0.44
27:DA:2836:U:O5'	27:DA:2836:U:H6	2.01	0.44
1:AA:742:G:O2'	1:AA:743:U:H5'	2.17	0.44
3:AC:63:ASN:OD1	3:AC:63:ASN:N	2.50	0.44
5:CE:67:VAL:HG22	5:CE:68:GLU:N	2.31	0.44
23:CW:44:A:H2'	23:CW:46:U:H6	1.82	0.44
48:BZ:24:PRO:O	48:BZ:84:HIS:HA	2.17	0.44
27:BA:491:G:C2'	27:BA:492:A:O5'	2.65	0.44
27:DA:2881:C:C2'	27:DA:2882:A:H5'	2.48	0.44
27:DA:1287:A:C2'	27:DA:1288:U:O5'	2.65	0.44
35:DI:5:LEU:CD1	35:DI:17:GLN:HB3	2.42	0.44
35:DI:12:LEU:CB	35:DI:19:VAL:HG21	2.47	0.44
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.53	0.44
27:BA:2078:C:H2'	27:BA:2079:U:H6	1.83	0.44
1:AA:599:C:H4'	8:AH:130:GLY:C	2.37	0.44
2:CB:217:ARG:O	2:CB:221:LEU:HD23	2.18	0.44
27:DA:227:A:C2	27:DA:2407:G:H1'	2.52	0.44
1:AA:392:G:H5'	16:AP:13:HIS:CE1	2.52	0.44
27:BA:2778:A:C4'	27:BA:2779:U:OP2	2.64	0.44
13:AM:11:ARG:HB3	13:AM:12:ASN:CG	2.37	0.44
27:DA:286:C:H2'	27:DA:287:C:H5'	1.98	0.44
13:CM:81:LEU:HB3	13:CM:89:GLY:CA	2.47	0.44
10:CJ:9:ARG:O	10:CJ:94:VAL:HG13	2.17	0.44
1:CA:1304:G:N2	1:CA:1332:A:N7	2.65	0.44
4:AD:193:ASP:C	4:AD:194:LEU:HD22	2.38	0.44
1:CA:324:G:N2	1:CA:327:A:C8	2.86	0.44
38:BP:136:GLU:O	38:BP:139:LYS:HB3	2.17	0.44
27:BA:2119:A:O2'	27:BA:2120:G:H5''	2.17	0.44
27:DA:1592:C:H2'	27:DA:1593:G:O4'	2.18	0.44
27:BA:176:G:H2'	27:BA:177:G:O4'	2.17	0.44
1:AA:992:U:H3	1:AA:1044:A:N6	2.08	0.44
36:BN:35:ARG:O	36:BN:37:LYS:N	2.50	0.44
27:BA:1464:C:O2'	27:BA:1528:A:C8	2.70	0.44
1:AA:277:C:OP1	17:AQ:41:LYS:HE3	2.18	0.44
27:BA:528:A:C2	27:BA:2043:C:H5'	2.53	0.44
27:BA:2553:G:H3'	27:BA:2554:U:C5'	2.44	0.44
1:CA:135:C:H2'	1:CA:136:C:C5'	2.45	0.44
9:CI:93:ARG:HD2	9:CI:93:ARG:HA	1.85	0.44
9:CI:27:THR:HG22	9:CI:28:VAL:N	2.33	0.44
27:BA:2748:A:OP1	34:BH:70:THR:HG21	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:33:ASP:HB3	18:CR:36:ASN:HD21	1.81	0.44
1:AA:316:G:H2'	1:AA:317:G:H8	1.83	0.44
25:CY:20:A:C8	25:CY:47:C:N4	2.85	0.44
35:DI:110:ASP:HA	35:DI:111:PRO:HD2	1.82	0.44
28:DB:11:C:H3'	28:DB:12:C:C6	2.53	0.44
7:CG:24:THR:O	7:CG:28:ASN:ND2	2.46	0.44
27:BA:1300:U:C2'	27:BA:1301:A:OP2	2.66	0.44
27:BA:2151:G:O2'	27:BA:2152:G:H5'	2.18	0.44
1:AA:43:C:H2'	1:AA:44:G:O5'	2.18	0.44
27:BA:270:A:O2'	27:BA:271:A:H5'	2.18	0.44
27:DA:1663:C:O2'	27:DA:1664:A:H5'	2.18	0.44
48:BZ:126:LYS:HD3	48:BZ:161:GLU:OE1	2.18	0.44
30:BD:268:ARG:HB3	30:BD:268:ARG:NH1	2.33	0.44
27:BA:840:C:N3	27:BA:939:G:C6	2.85	0.44
27:BA:2415:G:C3'	38:BP:66:GLY:HA3	2.47	0.44
41:BS:12:PHE:HD1	41:BS:14:VAL:HG23	1.81	0.44
41:BS:89:ARG:HB3	41:BS:92:TYR:CB	2.47	0.44
27:DA:246:C:N3	27:DA:247:G:C8	2.86	0.44
57:D8:54:GLU:HA	57:D8:57:ARG:NE	2.32	0.44
47:BY:45:VAL:HG12	47:BY:46:LYS:N	2.32	0.44
27:DA:422:A:C6	27:DA:423:A:C6	3.06	0.44
42:BT:81:PRO:HD2	42:BT:82:LEU:HD11	1.98	0.44
43:DU:38:THR:O	43:DU:41:ALA:HB3	2.17	0.44
27:DA:1491:G:N1	27:DA:1492:G:C5	2.86	0.44
33:BG:138:GLN:HB2	33:BG:155:MET:CE	2.48	0.44
57:D8:32:LEU:HB3	57:D8:36:LYS:NZ	2.33	0.44
27:DA:2066:C:O2'	27:DA:2067:G:H5'	2.17	0.44
27:DA:2253:G:H2'	27:DA:2254:C:C6	2.52	0.44
27:DA:2344:U:C4'	27:DA:2345:G:OP1	2.65	0.44
27:DA:627:A:N6	38:DP:116:GLY:HA2	2.33	0.44
11:CK:41:THR:HG23	11:CK:42:TRP:N	2.32	0.44
27:DA:459:U:H5''	56:D7:40:TRP:CD2	2.52	0.44
27:DA:470:A:O2'	27:DA:471:A:H5'	2.17	0.44
27:DA:1614:A:H62	45:DW:93:ALA:CB	2.16	0.44
27:DA:2581:G:N3	27:DA:2581:G:H2'	2.33	0.44
27:DA:531:C:OP1	27:DA:561:G:C2	2.70	0.44
27:DA:750:A:C2	27:DA:753:C:C6	3.05	0.44
27:BA:1024:G:HO2'	27:BA:1144:G:HO2'	1.62	0.44
55:B6:48:VAL:HG22	55:B6:48:VAL:H	1.40	0.44
27:BA:1265:A:H4'	27:BA:1266:G:OP1	2.18	0.44
47:DY:13:VAL:O	47:DY:24:VAL:HG13	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:363:A:H8	12:CL:30:ARG:HH21	1.64	0.44
23:AW:34:U:H2'	23:AW:35:G:O5'	2.17	0.44
16:CP:12:LYS:O	16:CP:13:HIS:HB2	2.17	0.44
3:CC:147:LYS:HB3	3:CC:203:PHE:CD2	2.52	0.44
27:BA:1311:G:C5	56:B7:47:ARG:NH2	2.86	0.44
27:BA:2074:U:O2'	27:BA:2075:U:H5'	2.17	0.44
30:BD:201:HIS:C	30:BD:201:HIS:HD1	2.21	0.44
38:DP:10:PRO:O	38:DP:11:GLY:C	2.56	0.44
1:CA:243:A:C2	1:CA:245:C:C2	3.06	0.44
1:CA:894:G:C6	1:CA:895:G:C5	3.05	0.44
15:AO:74:ASP:C	15:AO:76:GLU:H	2.20	0.44
1:CA:133:U:C1'	1:CA:230:G:N2	2.79	0.44
6:CF:93:SER:O	6:CF:94:GLN:HG3	2.18	0.44
1:CA:1049:U:C5	1:CA:1201:A:O4'	2.70	0.44
27:BA:2127:G:C2	27:BA:2128:C:C2	3.06	0.44
27:DA:1300:U:O2'	27:DA:1301:A:P	2.75	0.44
55:B6:32:ASN:O	55:B6:33:LYS:HB2	2.17	0.44
27:BA:2286:A:H4'	27:BA:2287:A:OP2	2.17	0.44
3:AC:114:PRO:O	3:AC:118:GLN:HG3	2.17	0.44
36:BN:134:ARG:O	36:BN:136:GLU:N	2.51	0.44
38:DP:16:ARG:CZ	38:DP:18:ARG:CG	2.94	0.44
28:DB:40:U:H1'	28:DB:45:A:H61	1.82	0.44
28:DB:43:C:H1'	33:DG:93:THR:HB	1.99	0.44
30:BD:205:VAL:O	30:BD:207:GLY:N	2.50	0.44
13:AM:76:ALA:C	13:AM:78:ILE:N	2.71	0.44
13:AM:76:ALA:HA	13:AM:79:LYS:CB	2.47	0.44
13:AM:82:MET:CG	13:AM:82:MET:O	2.66	0.44
1:AA:935:A:C2	1:AA:936:C:C2	3.05	0.44
27:DA:2141:G:H2'	27:DA:2142:C:C6	2.52	0.44
27:DA:2848:G:H21	27:DA:2867:G:H1'	1.83	0.44
19:CS:61:TYR:CG	19:CS:62:ILE:N	2.86	0.44
27:BA:2525:G:C2	27:BA:2526:G:C8	3.06	0.44
21:AU:13:ILE:HG12	21:AU:22:ARG:HE	1.83	0.44
13:CM:6:GLY:O	13:CM:7:VAL:HG23	2.17	0.44
6:AF:28:ARG:O	6:AF:32:ASN:CG	2.56	0.44
27:BA:1284:A:H2	45:BW:45:TYR:OH	2.00	0.44
40:DR:48:VAL:HA	40:DR:51:LEU:CD1	2.47	0.44
45:DW:20:VAL:HG11	45:DW:47:VAL:HG21	1.98	0.44
47:DY:45:VAL:CA	47:DY:62:GLU:HG2	2.47	0.44
1:AA:189(C):C:H6	1:AA:189(C):C:O5'	2.00	0.44
35:DI:10:GLU:HG2	35:DI:11:ASN:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:321:G:O2'	27:DA:340:A:O2'	2.28	0.44
27:DA:2801:A:H1'	27:DA:2801(A):A:N7	2.33	0.44
34:DH:158:HIS:NE2	34:DH:170:ARG:O	2.50	0.44
30:BD:2:ALA:O	30:BD:3:VAL:O	2.35	0.44
27:BA:1565:C:P	30:BD:4:LYS:HZ1	2.41	0.44
9:CI:48:GLU:HG3	9:CI:101:PHE:CZ	2.52	0.44
27:BA:1442:G:H2'	27:BA:1443:G:C8	2.52	0.44
27:BA:1443:G:O5'	27:BA:1443:G:H8	2.00	0.44
27:BA:2017:U:H4'	54:B5:9:LYS:HE2	1.98	0.44
27:DA:1985:G:N2	27:DA:1986:A:H1'	2.32	0.44
32:BF:32:LEU:CD2	32:BF:105:VAL:HG13	2.40	0.44
28:DB:71:C:H2'	28:DB:72:G:C5'	2.47	0.44
42:DT:16:ARG:HB3	42:DT:19:LEU:CD1	2.42	0.44
4:AD:194:LEU:N	4:AD:194:LEU:HD22	2.33	0.44
11:AK:12:ARG:HG3	11:AK:13:GLN:H	1.81	0.44
1:CA:1436:U:H2'	1:CA:1437:C:O4'	2.18	0.44
7:AG:98:SER:O	7:AG:99:LEU:C	2.55	0.44
10:CJ:78:ASN:HD21	10:CJ:80:LYS:HB3	1.82	0.44
27:BA:272:G:O6	27:BA:421:U:H2'	2.18	0.44
1:AA:1147:C:H2'	1:AA:1148:U:O4'	2.17	0.44
1:AA:246:A:C2	1:AA:279:A:N1	2.85	0.44
1:CA:793:U:O4	1:CA:1517:G:H5"	2.18	0.44
27:BA:41:C:O2	27:BA:41:C:H2'	2.17	0.44
27:BA:1453:U:H4'	27:BA:1455:G:OP1	2.18	0.44
3:CC:139:GLN:O	3:CC:143:GLU:HB2	2.18	0.44
27:DA:1847:A:H5'	27:DA:1848:A:OP2	2.18	0.44
27:BA:911:A:C6	39:BQ:9:TYR:CG	3.06	0.44
27:DA:2146:C:O4'	27:DA:2147:G:C5	2.71	0.44
27:BA:2027:G:C6	27:BA:2028:U:C4	3.06	0.44
50:B1:67:ILE:N	50:B1:68:PRO:CD	2.75	0.44
36:BN:43:THR:HB	36:BN:46:VAL:CG1	2.48	0.44
44:DV:82:ARG:HD2	44:DV:82:ARG:N	2.33	0.44
27:DA:1896:G:O2'	27:DA:1897:G:H5'	2.18	0.44
43:BU:66:ASN:CA	43:BU:76:TYR:HB2	2.48	0.44
29:BC:195:ALA:C	29:BC:197:GLU:H	2.21	0.44
47:DY:54:LYS:CE	47:DY:55:TYR:HE2	2.31	0.44
1:AA:928:G:C2	1:AA:1390:U:O2	2.71	0.44
2:CB:236:TYR:HD2	2:CB:239:VAL:CB	2.28	0.44
54:B5:31:VAL:HG11	54:B5:42:PRO:HB3	2.00	0.44
4:CD:3:ARG:O	4:CD:4:TYR:CB	2.65	0.44
3:AC:165:THR:CG2	3:AC:166:GLU:N	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:463:G:N2	27:DA:467:G:C5	2.86	0.44
35:DI:6:LEU:O	35:DI:7:GLU:C	2.55	0.44
27:DA:214:G:H2'	27:DA:215:G:OP2	2.18	0.44
25:AY:23:G:H2'	25:AY:24:C:H6	1.83	0.44
28:BB:16:G:H2'	28:BB:17:C:H6	1.83	0.44
1:CA:1099:G:H5'	1:CA:1100:C:OP2	2.18	0.44
27:BA:1773:A:H2'	27:BA:1774:C:O4'	2.18	0.44
1:CA:1399:C:N3	1:CA:1401:G:C2	2.85	0.44
1:AA:43:C:C2'	1:AA:44:G:O5'	2.65	0.44
43:BU:71:GLN:HB2	43:BU:72:HIS:CD2	2.52	0.44
28:DB:85:G:H2'	28:DB:86:G:C8	2.53	0.44
2:AB:126:GLU:C	2:AB:128:GLU:H	2.17	0.44
27:BA:2486:G:H8	27:BA:2486:G:O5'	2.00	0.44
27:BA:941:A:C6	27:BA:942:G:C6	3.05	0.44
1:CA:1231:G:O2'	1:CA:1232:U:H5'	2.18	0.44
40:BR:22:ARG:O	40:BR:23:ASN:C	2.55	0.44
40:BR:27:SER:HA	40:BR:30:THR:HB	2.00	0.44
38:DP:48:PRO:O	38:DP:49:ARG:C	2.54	0.44
30:BD:138:VAL:HG22	30:BD:139:GLY:N	2.32	0.44
27:DA:1826:G:C4	27:DA:1827:C:C5	3.05	0.44
27:DA:1932:A:H2'	27:DA:1933:G:H5'	2.00	0.44
27:BA:1200:C:C2	27:BA:1201:C:C5	3.05	0.44
13:CM:8:GLU:CD	13:CM:22:ILE:HG12	2.38	0.44
36:BN:2:LYS:NZ	43:BU:95:LEU:CG	2.76	0.44
1:CA:723:U:OP1	1:CA:723:U:C6	2.71	0.44
27:DA:997:G:C2	27:DA:998:C:C4	3.06	0.44
43:DU:81:HIS:O	43:DU:85:LYS:CB	2.65	0.44
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.17	0.44
27:DA:84:A:N1	27:DA:98:G:C2'	2.80	0.44
27:DA:634:C:O2'	27:DA:635:C:O5'	2.36	0.44
27:DA:2511:U:O4	27:DA:2575:C:N3	2.51	0.44
36:BN:87:LEU:HD21	36:BN:98:VAL:CG1	2.42	0.44
27:BA:1266:G:O4'	45:BW:15:ARG:NH2	2.51	0.44
27:DA:139:G:H2'	27:DA:140:G:N7	2.33	0.44
34:BH:54:ARG:HG3	34:BH:54:ARG:O	2.18	0.44
30:BD:76:PRO:HG2	30:BD:98:VAL:CG2	2.46	0.44
8:AH:39:LEU:CB	8:AH:45:ILE:HD11	2.45	0.44
12:CL:82:ILE:HG21	12:CL:95:TYR:CD2	2.52	0.44
2:AB:53:ARG:CZ	2:AB:199:TYR:CE2	3.00	0.44
40:DR:65:LEU:O	40:DR:67:LEU:N	2.51	0.44
37:DO:110:GLY:C	37:DO:112:MET:H	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1663:C:O2'	27:BA:2686:G:H4'	2.17	0.44
7:AG:38:LEU:C	7:AG:40:ALA:N	2.72	0.44
27:BA:1337:G:C4	27:BA:1338:G:C8	3.06	0.44
34:BH:94:TYR:CD2	34:BH:107:VAL:HG12	2.52	0.44
3:CC:86:VAL:O	3:CC:90:GLU:HG2	2.18	0.44
1:CA:1053:G:C6	1:CA:1199:U:C2	3.06	0.44
27:BA:2279:G:N2	27:BA:2280:G:H1'	2.32	0.44
1:CA:1284:C:H3'	1:CA:1285:A:H8	1.83	0.44
21:CU:18:TYR:CE2	21:CU:22:ARG:NH1	2.86	0.44
6:CF:29:ALA:O	6:CF:32:ASN:HB2	2.17	0.44
8:CH:83:ILE:O	8:CH:83:ILE:HG23	2.18	0.44
1:CA:658:G:C2	1:CA:749:C:N3	2.86	0.44
35:BI:91:SER:O	35:BI:92:VAL:HG12	2.18	0.44
27:BA:2388:A:H2'	27:BA:2389:G:H5'	2.00	0.44
27:BA:2286:A:N6	55:B6:24:GLU:OE2	2.51	0.44
52:D3:46:ASN:O	52:D3:49:LYS:N	2.51	0.44
6:CF:9:VAL:C	6:CF:10:LEU:HD12	2.38	0.44
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	2.00	0.44
27:BA:1473:G:O2'	27:BA:1474:C:H5'	2.18	0.44
27:DA:10:G:C6	27:DA:2629:A:C8	3.06	0.44
27:DA:2466:C:N4	27:DA:2485:G:C6	2.86	0.44
27:DA:2808:U:H3'	27:DA:2891:G:H1	1.83	0.44
27:DA:1278:A:O2'	27:DA:1279:G:H5'	2.17	0.44
45:DW:47:VAL:HA	45:DW:50:VAL:CG1	2.48	0.44
43:BU:25:TRP:C	43:BU:28:ARG:HB2	2.38	0.44
35:DI:11:ASN:O	35:DI:12:LEU:CB	2.62	0.44
1:AA:1014:A:H3'	1:AA:1015:A:C8	2.53	0.44
12:AL:21:VAL:HG13	12:AL:95:TYR:HE2	1.82	0.44
39:BQ:63:LYS:HD2	48:BZ:174:VAL:HG21	1.99	0.44
1:AA:979:C:C3'	1:AA:980:C:C5'	2.88	0.44
36:DN:28:THR:CG2	36:DN:29:LYS:H	2.21	0.44
27:DA:644:A:H4'	27:DA:645:C:H5	1.76	0.44
36:DN:55:VAL:HG13	36:DN:126:PRO:HB3	1.99	0.44
5:AE:101:ILE:CG1	5:AE:119:LEU:HD23	2.48	0.44
4:AD:101:LEU:HD12	4:AD:105:VAL:HG23	2.00	0.44
27:DA:1660:C:O2'	27:DA:1661:G:H5'	2.17	0.44
13:AM:91:ARG:HB2	13:AM:98:VAL:CG1	2.48	0.44
50:B1:86:SER:CB	50:B1:89:GLU:HB2	2.43	0.44
10:CJ:9:ARG:O	10:CJ:16:LEU:HG	2.18	0.44
18:AR:40:LEU:O	18:AR:41:LYS:C	2.56	0.44
27:BA:702:G:N2	27:BA:703:U:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:992:U:O2	1:AA:992:U:H2'	2.18	0.44
36:BN:56:ASN:HD22	36:BN:56:ASN:HA	1.62	0.44
27:DA:1721:G:N1	27:DA:1739:U:OP2	2.51	0.44
1:CA:407:G:H1	1:CA:435:C:H42	1.64	0.44
1:AA:1133:G:H22	1:AA:1143:G:H1'	1.81	0.44
27:BA:318:C:O2'	27:BA:319:C:H5'	2.17	0.44
27:DA:811:U:C2	27:DA:1251:C:C5	3.06	0.44
6:AF:19:LEU:O	6:AF:23:LYS:HG3	2.18	0.44
6:AF:23:LYS:HB3	6:AF:23:LYS:HE2	1.76	0.44
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.21	0.44
51:B2:15:LYS:O	51:B2:15:LYS:HG3	2.17	0.44
16:AP:43:LYS:HA	16:AP:48:TRP:CD1	2.52	0.44
1:AA:713:G:N2	1:AA:714:G:C2	2.86	0.44
27:BA:2753:A:O2'	27:BA:2754:U:H5'	2.17	0.44
30:BD:28:GLU:OE1	30:BD:29:PRO:HD2	2.17	0.44
27:DA:888:C:C3'	27:DA:889:C:H5'	2.47	0.44
1:AA:1261:A:C8	1:AA:1275:A:C6	3.06	0.44
1:CA:1170:A:H2'	1:CA:1171:G:C5'	2.48	0.44
27:DA:651:G:OP1	57:D8:19:SER:OG	2.34	0.44
32:BF:122:LYS:O	32:BF:191:ARG:NH1	2.50	0.44
13:AM:94:ARG:NH2	27:BA:887:A:O5'	2.50	0.44
2:CB:142:LEU:HD11	2:CB:146:GLN:HE21	1.82	0.44
4:CD:142:PRO:HA	4:CD:185:PHE:O	2.17	0.44
27:DA:2853:C:O2'	27:DA:2854:G:H5'	2.18	0.44
4:AD:52:SER:O	4:AD:53:ASP:C	2.55	0.44
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.32	0.44
30:DD:137:PRO:HB2	30:DD:140:THR:CG2	2.48	0.44
4:AD:96:LEU:HG	4:AD:139:ARG:NH1	2.33	0.44
27:DA:2397:G:N2	27:DA:2398:U:H1'	2.31	0.44
45:DW:48:ALA:O	45:DW:49:LYS:C	2.56	0.44
27:BA:852:G:O2'	52:B3:41:PRO:HB3	2.18	0.44
27:BA:772:C:H2'	27:BA:773:U:H6	1.83	0.44
27:BA:324:A:H2'	27:BA:325:G:O4'	2.17	0.44
6:AF:45:LEU:HD11	6:AF:57:GLN:OE1	2.17	0.44
27:BA:1975:G:C2'	27:BA:1976:U:H5'	2.48	0.44
30:DD:122:ASP:OD1	30:DD:122:ASP:C	2.56	0.44
1:CA:978:A:H3'	1:CA:979:C:C5	2.52	0.44
1:AA:912:C:O3'	12:AL:43:LYS:NZ	2.51	0.44
51:B2:38:GLN:HB3	51:B2:44:LEU:O	2.18	0.44
27:DA:245:G:C4	27:DA:246:C:C5	3.05	0.44
27:DA:1906:G:C2	27:DA:1925:C:O2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:16:ARG:CG	38:BP:17:LYS:N	2.80	0.44
31:BE:59:VAL:O	31:BE:60:ASN:HB3	2.17	0.44
43:BU:83:LEU:CD1	43:BU:113:ALA:HB2	2.47	0.44
44:BV:46:VAL:CG2	44:BV:47:VAL:H	2.12	0.44
32:DF:18:ARG:O	32:DF:19:GLU:HB3	2.18	0.44
32:DF:3:GLU:CB	32:DF:24:LEU:HG	2.48	0.44
1:AA:920:U:O2	1:AA:920:U:H2'	2.16	0.44
43:DU:24:TYR:HD1	43:DU:28:ARG:O	2.01	0.44
43:DU:87:GLY:O	44:DV:50:PRO:CD	2.56	0.44
43:DU:83:LEU:O	43:DU:88:ILE:N	2.51	0.44
41:BS:77:ALA:O	41:BS:78:LEU:C	2.55	0.44
30:DD:206:LEU:HD22	30:DD:211:ARG:CG	2.48	0.44
51:D2:21:LEU:O	51:D2:22:GLU:C	2.56	0.44
27:DA:1858:G:O2'	27:DA:1859:A:H8	2.01	0.44
31:DE:77:ILE:C	31:DE:78:LEU:HD23	2.38	0.44
57:D8:13:ARG:O	57:D8:14:VAL:HB	2.18	0.44
27:BA:310:A:H1'	27:BA:311:A:H2'	2.00	0.44
27:DA:941:A:O2'	27:DA:1190:G:H4'	2.18	0.44
32:DF:68:LYS:HG3	32:DF:69:HIS:CE1	2.53	0.44
55:B6:13:CYS:HB2	55:B6:22:ALA:CB	2.47	0.44
27:DA:2637:U:H1'	27:DA:2782:G:N2	2.33	0.44
27:DA:312:G:C4	27:DA:313:C:C5	3.06	0.44
30:BD:32:SER:HA	30:BD:36:PRO:HG3	2.00	0.44
1:CA:380:G:N2	1:CA:384:G:C5	2.86	0.44
2:AB:155:LEU:HA	2:AB:155:LEU:HD22	1.63	0.44
37:DO:38:VAL:HG22	37:DO:111:PHE:HZ	1.83	0.44
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.50	0.44
1:AA:230:G:C5'	16:AP:23:ASP:OD2	2.66	0.44
3:CC:182:ILE:HD11	3:CC:203:PHE:CD1	2.51	0.44
27:BA:1248:G:OP1	32:BF:92:PRO:HB3	2.18	0.44
1:CA:1493:A:OP2	26:CZ:6:5OH:NP	2.50	0.44
27:BA:1780:A:H3'	27:BA:1781:C:H2'	2.00	0.44
27:BA:781:A:H2	27:BA:1776:G:N3	2.16	0.44
2:AB:168:THR:HG23	2:AB:192:SER:HA	2.00	0.44
33:DG:101:ILE:CD1	33:DG:105:LYS:NZ	2.79	0.44
27:BA:1999:C:H1'	27:BA:2687:U:O2'	2.18	0.44
27:BA:1658:C:OP1	31:BE:132:HIS:CE1	2.71	0.44
1:CA:133:U:OP1	20:CT:74:LYS:HE2	2.17	0.44
31:DE:25:VAL:C	31:DE:26:ILE:HD13	2.38	0.44
42:DT:11:GLU:C	42:DT:13:ARG:H	2.17	0.44
27:BA:740:U:H6	27:BA:740:U:C5'	2.12	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BO:3:GLN:HE21	37:BO:32:TYR:HD1	1.66	0.44
27:DA:2714:G:C5	27:DA:2715:C:C5	3.06	0.44
27:DA:2528:U:C5'	58:D9:31:LYS:HE2	2.48	0.44
6:CF:93:SER:O	6:CF:94:GLN:CG	2.66	0.44
1:CA:529:G:H4'	1:CA:533:A:C2	2.53	0.44
10:AJ:3:LYS:N	10:AJ:77:PRO:HG3	2.33	0.44
1:CA:1255:G:N2	1:CA:1259:C:O2	2.50	0.44
27:DA:154:G:C6	27:DA:173:G:C6	3.06	0.44
27:BA:1486:A:H2'	27:BA:1487:G:C8	2.52	0.44
27:BA:2875:C:N3	27:BA:2876:G:N7	2.65	0.44
27:DA:150:C:H2'	27:DA:151:C:H6	1.81	0.44
38:BP:81:GLN:CG	38:BP:82:GLY:N	2.80	0.44
38:BP:99:LEU:O	38:BP:99:LEU:HD23	2.18	0.44
1:CA:748:C:O2'	1:CA:749:C:P	2.76	0.44
27:DA:1303:G:N2	27:DA:1304:C:C2	2.86	0.44
27:DA:1624:G:H2'	27:DA:1625:C:C6	2.52	0.44
27:DA:1625:C:O2'	27:DA:1626:G:H5'	2.18	0.44
1:AA:442:C:O2	1:AA:442:C:H2'	2.17	0.44
27:BA:2388:A:C2'	27:BA:2389:G:H5'	2.48	0.44
27:BA:644:A:O2'	27:BA:645:C:H5''	2.18	0.44
1:AA:402:G:H4'	1:AA:620:C:O2	2.18	0.44
27:BA:72:U:H3	51:B2:62:THR:HG1	1.66	0.44
27:DA:1460:A:O2'	27:DA:1461:G:OP1	2.32	0.44
34:DH:143:GLN:NE2	34:DH:147:ASN:ND2	2.65	0.44
7:AG:88:PRO:HG3	7:AG:149:ARG:HA	1.99	0.44
23:AW:67:C:O2'	23:AW:68:C:H5'	2.18	0.44
27:DA:1658:C:OP1	31:DE:132:HIS:CE1	2.71	0.44
15:AO:66:LEU:C	15:AO:68:ARG:N	2.70	0.44
5:CE:140:ARG:O	5:CE:143:ARG:NH2	2.51	0.44
7:CG:151:TYR:OH	11:CK:54:ARG:HD3	2.18	0.44
27:BA:2505:G:C2'	27:BA:2506:U:H5'	2.47	0.44
34:DH:54:ARG:O	34:DH:54:ARG:CG	2.65	0.44
27:BA:1048:A:OP2	27:BA:1110:G:N2	2.38	0.44
7:AG:62:PHE:O	7:AG:65:ALA:HB3	2.18	0.44
33:BG:35:GLU:CB	33:BG:160:VAL:O	2.63	0.44
50:D1:5:CYS:SG	50:D1:62:VAL:HG23	2.58	0.44
27:BA:157:U:H2'	27:BA:158:U:OP2	2.17	0.44
27:DA:2657:A:H2'	27:DA:2658:C:O4'	2.17	0.44
33:BG:32:PRO:O	33:BG:33:ARG:HG3	2.17	0.44
27:DA:2605:U:H2'	27:DA:2606:C:C5	2.51	0.44
36:DN:125:GLY:HA3	36:DN:126:PRO:C	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:173:VAL:HG12	3:AC:175:LEU:CD1	2.48	0.44
9:AI:4:TYR:CA	9:AI:88:TYR:CE1	2.95	0.44
24:CX:10:G:H2'	24:CX:11:A:C8	2.52	0.44
7:CG:43:PHE:O	7:CG:46:ALA:HB3	2.18	0.44
1:AA:224:C:H2'	1:AA:225:C:C6	2.52	0.44
29:DC:77:ILE:CG2	29:DC:123:VAL:N	2.81	0.44
27:BA:441:U:O2	32:BF:46:ARG:NH2	2.50	0.44
8:CH:133:LEU:HD23	8:CH:133:LEU:C	2.37	0.44
4:AD:3:ARG:HG2	4:AD:3:ARG:HH21	1.82	0.44
33:DG:129:GLY:O	33:DG:161:THR:N	2.51	0.44
27:DA:1332:G:C4'	27:DA:1333:C:OP2	2.66	0.44
20:AT:89:ARG:CD	20:AT:104:LEU:HD11	2.44	0.44
30:DD:146:GLU:CB	30:DD:152:GLY:O	2.65	0.44
31:BE:100:GLU:O	31:BE:172:VAL:CG2	2.64	0.44
27:BA:861:A:C2	27:BA:917:A:C4	3.06	0.44
2:AB:32:ILE:CG1	2:AB:33:TYR:H	2.29	0.44
42:BT:42:ILE:CD1	42:BT:42:ILE:O	2.65	0.44
28:BB:105:A:H2'	28:BB:106:G:C4'	2.48	0.44
1:AA:1443:G:C6	1:AA:1460:A:C2	3.06	0.44
51:B2:12:GLU:O	51:B2:16:LEU:HD21	2.17	0.44
34:BH:103:LEU:HD22	34:BH:123:PHE:CE2	2.52	0.44
34:DH:64:LEU:C	34:DH:66:GLY:H	2.20	0.44
17:CQ:64:PRO:HA	17:CQ:70:ARG:CG	2.47	0.44
27:DA:766:C:O2'	27:DA:767:U:H5'	2.17	0.44
44:DV:68:LYS:NZ	44:DV:68:LYS:HA	2.32	0.44
27:BA:353:G:N3	27:BA:354:G:C8	2.86	0.44
39:DQ:73:PRO:HA	39:DQ:93:TYR:CD2	2.53	0.44
8:CH:90:GLY:O	8:CH:91:ARG:HB2	2.17	0.44
51:B2:23:LYS:O	51:B2:26:ARG:HB2	2.18	0.44
2:CB:9:GLU:HA	2:CB:12:GLU:OE1	2.17	0.44
1:CA:582:U:C2	1:CA:760:G:C6	3.06	0.44
8:CH:129:VAL:HB	8:CH:130:GLY:H	1.72	0.44
5:CE:127:ASN:O	5:CE:131:ILE:HG12	2.17	0.44
43:BU:72:HIS:N	43:BU:72:HIS:CD2	2.85	0.44
28:DB:14:U:O3'	28:DB:108:U:O2'	2.32	0.44
27:DA:2768:C:N4	27:DA:2769:C:N4	2.66	0.44
38:BP:49:ARG:O	57:B8:55:ALA:HB1	2.18	0.44
14:CN:41:ARG:HG2	14:CN:41:ARG:HH11	1.82	0.44
27:BA:1278:A:N1	27:BA:1279:G:C5	2.86	0.44
27:BA:2804:C:C2'	27:BA:2805:G:C8	3.01	0.44
27:BA:2727:G:C2	27:BA:2728:U:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BY:77:PRO:O	47:BY:78:ALA:CB	2.64	0.44
13:CM:66:LEU:CD1	13:CM:66:LEU:N	2.81	0.44
31:BE:76:ARG:O	31:BE:77:ILE:O	2.36	0.44
31:BE:52:LEU:CD1	42:BT:1:MET:HE1	2.48	0.44
5:AE:109:ILE:HD13	5:AE:136:MET:SD	2.57	0.44
44:BV:17:GLY:HA2	44:BV:96:ILE:O	2.18	0.44
27:DA:370:G:HO2'	27:DA:371:A:P	2.41	0.44
42:BT:28:VAL:CG2	42:BT:47:GLY:N	2.62	0.44
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.33	0.44
27:DA:1010:A:O2'	27:DA:1011:G:C5'	2.66	0.44
27:BA:2476:A:C3'	27:BA:2477:C:H5''	2.48	0.44
27:BA:2702:U:H1'	27:BA:2703:C:C5	2.53	0.44
30:DD:143:HIS:HA	30:DD:156:ALA:HB1	2.00	0.44
51:D2:64:LEU:C	51:D2:64:LEU:HD23	2.38	0.44
27:DA:2832:U:O2'	27:DA:2833:G:OP2	2.33	0.44
55:D6:35:GLU:HB3	55:D6:51:GLU:HG2	1.99	0.44
27:DA:2263:C:N4	27:DA:2278:A:N6	2.66	0.44
27:DA:2365:G:HO2'	27:DA:2366:A:H8	1.62	0.44
27:DA:2428:G:H4'	27:DA:2429:G:C5	2.53	0.44
38:DP:85:LEU:N	38:DP:115:LEU:O	2.51	0.44
27:DA:675:A:H4'	32:DF:67:GLN:CD	2.38	0.44
34:BH:20:ALA:O	34:BH:21:PRO:O	2.35	0.44
1:AA:984:C:N3	1:AA:1222:G:C2	2.86	0.44
1:AA:1305:G:O2'	1:AA:1306:A:C8	2.70	0.44
1:CA:1492:A:H5'	26:CZ:6:5OH:NP	2.32	0.44
32:DF:117:ARG:CZ	38:DP:5:ASP:N	2.81	0.44
32:DF:187:VAL:CG1	38:DP:7:ARG:NH2	2.74	0.44
27:BA:953:A:C2	27:BA:965:C:O2	2.71	0.44
33:DG:96:ARG:O	33:DG:97:ASP:C	2.55	0.44
27:DA:781:A:H2	27:DA:1776:G:N3	2.16	0.44
1:CA:1092:A:H2'	1:CA:1093:A:C8	2.53	0.44
54:D5:23:HIS:O	54:D5:24:ALA:C	2.55	0.44
14:CN:47:LEU:O	14:CN:48:ALA:C	2.56	0.44
1:CA:192:U:C1'	20:CT:103:GLY:CA	2.95	0.44
48:DZ:124:LEU:HD12	48:DZ:125:VAL:N	2.30	0.44
47:BY:88:LYS:HZ3	47:BY:93:GLY:CA	2.17	0.44
29:DC:36:LYS:CB	29:DC:36:LYS:NZ	2.79	0.44
27:DA:1394:U:C4	27:DA:1395:A:C6	3.06	0.44
27:DA:1620:G:C6	27:DA:1621:U:C4	3.05	0.44
35:BI:77:LEU:HD22	35:BI:78:THR:N	2.33	0.44
35:BI:94:ALA:O	35:BI:97:ILE:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BZ:152:SER:HB2	48:BZ:166:PRO:HB3	1.98	0.44
55:B6:9:LEU:C	55:B6:9:LEU:HD23	2.37	0.44
17:AQ:56:VAL:O	17:AQ:77:VAL:HG23	2.18	0.44
34:DH:127:GLU:O	34:DH:129:THR:N	2.51	0.44
33:DG:167:GLU:HA	33:DG:170:ARG:HB3	1.99	0.44
33:DG:41:GLN:HG2	33:DG:155:MET:CB	2.48	0.44
1:CA:1033:G:H2'	1:CA:1034:G:O4'	2.18	0.44
5:CE:12:LEU:HD13	5:CE:13:ILE:N	2.33	0.44
27:DA:2340:G:O2'	27:DA:2341:G:H5'	2.18	0.44
33:DG:111:LEU:HD21	33:DG:120:LEU:CD2	2.48	0.44
7:CG:146:GLU:HA	7:CG:149:ARG:HB2	1.99	0.44
27:BA:1472:A:O2'	27:BA:1473:G:H5'	2.18	0.44
27:DA:7:G:H5''	36:DN:121:LYS:HZ3	1.82	0.44
45:DW:83:LYS:CA	45:DW:97:LYS:HG2	2.43	0.44
27:DA:481:G:N2	27:DA:507:A:C8	2.86	0.44
1:AA:203:U:C6	1:AA:203:U:OP2	2.69	0.44
12:AL:22:PRO:C	12:AL:24:LEU:H	2.16	0.44
1:CA:815:A:H5'	1:CA:816:A:O5'	2.18	0.44
1:AA:609:A:O2'	1:AA:610:G:H5'	2.16	0.44
2:AB:16:HIS:HD2	2:AB:210:SER:HA	1.81	0.44
30:BD:3:VAL:HG13	30:BD:4:LYS:O	2.17	0.44
37:BO:105:GLU:O	37:BO:108:GLU:HB2	2.18	0.44
1:CA:568:G:N2	1:CA:883:C:N1	2.66	0.44
27:BA:1399:C:O2'	27:BA:1400:G:H5'	2.18	0.44
27:DA:1998:G:O2'	27:DA:1999:C:H5'	2.18	0.44
1:AA:1291:G:O2'	9:AI:38:GLN:HB3	2.18	0.44
27:DA:2043:C:N3	27:DA:2044:C:C5	2.86	0.44
8:CH:86:ILE:O	8:CH:87:SER:C	2.54	0.44
6:CF:97:PHE:O	18:CR:31:LEU:CD2	2.66	0.44
27:BA:1892:C:C2'	27:BA:1893:C:H5'	2.47	0.44
17:CQ:6:LEU:HD12	17:CQ:6:LEU:N	2.33	0.44
25:AY:29:G:H2'	25:AY:30:A:H8	1.83	0.44
27:BA:1448:G:H1'	27:BA:1528:A:H62	1.82	0.44
27:BA:1465:G:N2	27:BA:1466:G:H1'	2.32	0.44
5:CE:95:ALA:O	5:CE:96:PRO:C	2.56	0.44
20:AT:53:LEU:HD22	20:AT:56:MET:CE	2.48	0.44
23:CW:31:U:H2'	23:CW:32:U:H6	1.83	0.44
1:AA:758:G:H4'	1:AA:880:C:H4'	2.00	0.44
48:DZ:101:LEU:N	48:DZ:121:ARG:O	2.51	0.44
35:DI:30:LEU:HD23	35:DI:35:LEU:HD12	1.99	0.44
19:CS:11:VAL:HG13	19:CS:11:VAL:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1547:C:O2'	27:DA:1548:C:H5'	2.17	0.44
1:AA:640:A:N3	8:AH:115:SER:CB	2.81	0.44
6:AF:50:TYR:CZ	18:AR:77:GLY:HA2	2.53	0.44
27:BA:1018:C:C2'	27:BA:1018:C:O2	2.63	0.44
27:BA:1018:C:O3'	27:BA:1120:G:N2	2.51	0.44
2:CB:132:LYS:HA	2:CB:135:GLN:CB	2.48	0.44
34:BH:72:ILE:O	34:BH:76:VAL:HG23	2.18	0.44
27:BA:2639:A:C2'	27:BA:2640:G:H5'	2.48	0.44
27:BA:919:G:C2'	27:BA:920:G:H5'	2.48	0.44
27:BA:1433:U:C6	27:BA:1433:U:H5''	2.50	0.44
1:AA:1520:G:H2'	1:AA:1521:G:H8	1.82	0.44
27:BA:2615:U:N1	54:B5:7:PRO:HA	2.33	0.44
38:DP:107:LYS:C	38:DP:109:GLY:H	2.21	0.44
40:BR:99:LYS:NZ	54:B5:43:HIS:HB3	2.32	0.44
27:BA:887:A:N3	27:BA:887:A:H2'	2.32	0.44
51:D2:65:ASN:O	51:D2:68:ARG:N	2.49	0.44
2:AB:236:TYR:O	2:AB:237:ALA:C	2.56	0.44
4:AD:138:TYR:CE2	4:AD:139:ARG:O	2.71	0.44
27:BA:643:A:N7	55:B6:42:TRP:CH2	2.86	0.44
1:CA:1273:G:H3'	1:CA:1274:G:C8	2.53	0.44
28:BB:14:U:OP2	28:BB:70:C:O2'	2.23	0.44
27:DA:258:G:O2'	27:DA:259:G:H5'	2.18	0.44
40:BR:103:ARG:HH11	45:BW:40:ASN:ND2	2.15	0.44
27:DA:188:G:H2'	27:DA:189:G:O4'	2.18	0.44
1:AA:1231:G:H2'	1:AA:1232:U:O4'	2.18	0.44
3:AC:120:VAL:HA	3:AC:123:GLN:HG3	2.00	0.44
1:CA:319:G:H2'	1:CA:319:G:N3	2.33	0.44
27:BA:2539:C:C4	27:BA:2540:C:C5	3.06	0.44
9:AI:27:THR:HG23	9:AI:31:GLN:O	2.17	0.44
36:BN:75:TYR:HA	36:BN:81:GLY:O	2.18	0.44
38:BP:115:LEU:HD23	38:BP:115:LEU:N	2.33	0.43
40:BR:87:TYR:HB3	40:BR:90:ARG:HB3	2.01	0.43
27:DA:910:A:H2'	27:DA:911:A:C8	2.53	0.43
1:CA:426:G:H2'	1:CA:427:U:H6	1.80	0.43
33:BG:111:LEU:N	33:BG:112:PRO:CD	2.80	0.43
38:BP:16:ARG:CZ	38:BP:18:ARG:CG	2.84	0.43
47:BY:46:LYS:HB3	47:BY:47:LYS:H	1.69	0.43
1:CA:472:A:H4'	16:CP:80:PHE:O	2.18	0.43
44:BV:38:LEU:C	44:BV:38:LEU:CD2	2.77	0.43
44:BV:39:LEU:HD13	44:BV:39:LEU:N	2.33	0.43
17:AQ:18:THR:CG2	17:AQ:69:LYS:HE3	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BC:85:GLU:O	29:BC:152:ILE:O	2.36	0.43
27:DA:985:C:C2'	27:DA:986:C:H5'	2.48	0.43
27:DA:986:C:C2	27:DA:987:G:C8	3.06	0.43
27:DA:35:G:O4'	27:DA:454:A:H1'	2.17	0.43
41:BS:71:ARG:O	41:BS:74:ALA:HB3	2.18	0.43
51:D2:53:LEU:O	51:D2:54:LYS:C	2.55	0.43
27:DA:866:A:C6	27:DA:914:C:C6	3.06	0.43
27:DA:867:C:O5'	27:DA:867:C:H6	2.00	0.43
27:DA:869:G:N1	27:DA:909:A:C6	2.86	0.43
55:D6:9:LEU:HD23	55:D6:10:LEU:N	2.33	0.43
27:DA:2274:A:C5	27:DA:2276:G:C8	3.06	0.43
27:DA:800:A:H4'	27:DA:801:G:O5'	2.17	0.43
55:B6:40:CYS:HA	55:B6:41:PRO:HD3	1.74	0.43
46:DX:25:LYS:HZ2	46:DX:80:ILE:HD11	1.76	0.43
48:DZ:68:THR:HG22	48:DZ:89:VAL:HA	1.99	0.43
4:AD:10:ARG:HH11	4:AD:10:ARG:CG	2.30	0.43
27:DA:303:U:H6	27:DA:303:U:O5'	2.00	0.43
4:CD:135:LEU:HA	4:CD:136:PRO:HD3	1.87	0.43
1:AA:1349:A:O2'	1:AA:1350:A:H5'	2.18	0.43
2:AB:187:LEU:HD23	2:AB:201:ILE:O	2.18	0.43
2:AB:204:ASN:HD21	2:AB:206:ASP:N	2.16	0.43
27:DA:1033:U:OP1	58:D9:16:VAL:HG21	2.18	0.43
16:AP:26:ARG:HH12	16:AP:31:LYS:HD3	1.83	0.43
27:BA:1310:G:H2'	27:BA:1311:G:C5'	2.48	0.43
27:BA:2436:G:H2'	27:BA:2437:U:C6	2.53	0.43
1:AA:1073:U:OP2	5:AE:57:LYS:NZ	2.50	0.43
2:CB:31:TYR:O	2:CB:32:ILE:HB	2.18	0.43
1:CA:631:G:H5''	1:CA:632:A:OP1	2.16	0.43
27:BA:2000:G:O2'	27:BA:2001:A:H5'	2.18	0.43
1:CA:1002:G:H5''	1:CA:1003:G:OP2	2.18	0.43
20:CT:100:ILE:H	20:CT:100:ILE:HD12	1.79	0.43
1:AA:408:A:C2	1:AA:409:G:C4	3.05	0.43
46:BX:12:VAL:CG1	46:BX:27:THR:OG1	2.62	0.43
1:CA:232:G:C4	1:CA:233:C:C5	3.06	0.43
29:DC:214:VAL:O	29:DC:215:THR:C	2.56	0.43
1:CA:1068:G:C8	1:CA:1094:G:H8	2.35	0.43
42:BT:52:ILE:HA	42:BT:61:PHE:HA	2.00	0.43
27:DA:71:A:C5'	27:DA:71:A:H8	2.31	0.43
3:CC:92:ALA:CA	3:CC:99:VAL:HG11	2.48	0.43
18:AR:59:SER:O	18:AR:61:LYS:N	2.50	0.43
1:AA:1151:A:O2'	1:AA:1152:A:O5'	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2511:U:C2'	27:BA:2512:C:H5'	2.47	0.43
48:DZ:47:PHE:O	48:DZ:48:ARG:C	2.56	0.43
27:DA:271(M):G:H2'	27:DA:271(N):U:C5'	2.43	0.43
27:DA:1392:A:C6	27:DA:1393:A:N1	2.86	0.43
27:DA:464:U:C4	27:DA:465:G:C6	3.05	0.43
35:BI:92:VAL:O	35:BI:92:VAL:HG13	2.16	0.43
27:BA:2282:G:H4'	27:BA:2283:C:O5'	2.18	0.43
31:DE:111:ARG:CD	31:DE:160:TYR:HE1	2.31	0.43
48:DZ:8:TYR:CZ	48:DZ:60:LEU:HD12	2.53	0.43
8:AH:2:LEU:HD22	8:AH:3:THR:N	2.32	0.43
7:AG:116:ALA:HA	7:AG:119:ARG:NE	2.25	0.43
7:AG:116:ALA:HB2	7:AG:119:ARG:HH21	1.83	0.43
27:BA:2306:C:C6	27:BA:2307:G:H1'	2.53	0.43
51:B2:55:ARG:C	51:B2:57:ILE:N	2.68	0.43
30:DD:35:LYS:NZ	30:DD:104:TYR:HB2	2.31	0.43
27:DA:2666:C:H42	34:DH:109:PHE:HA	1.82	0.43
33:DG:38:VAL:HG13	33:DG:93:THR:HA	1.99	0.43
57:B8:51:ALA:C	57:B8:53:PRO:CD	2.83	0.43
27:DA:1504:C:C3'	27:DA:1505:C:H5''	2.44	0.43
27:DA:1485:G:N2	27:DA:1505:C:N3	2.57	0.43
35:BI:31:LEU:N	35:BI:31:LEU:CD1	2.81	0.43
5:CE:28:PHE:CE1	5:CE:49:PRO:O	2.71	0.43
27:DA:2321:G:C2'	27:DA:2321:G:N3	2.80	0.43
1:CA:1316:G:H2'	1:CA:1317:C:H5''	2.00	0.43
11:CK:48:ILE:HD11	11:CK:67:ASP:HB2	2.00	0.43
1:AA:606:G:O2'	1:AA:631:G:N2	2.51	0.43
45:DW:11:ARG:HE	45:DW:11:ARG:CA	2.31	0.43
27:DA:1210:A:P	27:DA:1212:G:H5'	2.58	0.43
27:DA:481:G:HO2'	27:DA:482:A:P	2.39	0.43
47:DY:46:LYS:HD3	47:DY:47:LYS:HZ1	1.81	0.43
39:DQ:35:VAL:HG23	39:DQ:100:GLY:O	2.18	0.43
27:DA:522:G:C5	27:DA:523:C:C5	3.06	0.43
52:D3:7:LYS:CG	52:D3:8:LEU:N	2.70	0.43
52:D3:8:LEU:HB3	52:D3:31:LEU:HA	2.00	0.43
1:CA:147:G:H2'	1:CA:148:G:C8	2.52	0.43
27:DA:1165:U:H3	27:DA:1184:G:H1	1.65	0.43
27:DA:1184:G:C6	27:DA:1185:C:N4	2.86	0.43
27:BA:1549:C:H4'	27:BA:1742:G:H21	1.82	0.43
47:DY:3:VAL:O	47:DY:4:LYS:C	2.55	0.43
1:AA:1245:A:O2'	1:AA:1246:C:H5'	2.17	0.43
9:CI:40:LEU:O	9:CI:42:ARG:N	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:120:ARG:HA	11:AK:121:PRO:HD3	1.84	0.43
27:DA:473:G:H5''	27:DA:508:G:H22	1.81	0.43
27:DA:2114:A:C2	27:DA:2168:G:O4'	2.68	0.43
18:CR:67:ALA:C	18:CR:69:THR:H	2.20	0.43
1:AA:992:U:HO2'	1:AA:993:G:H5''	1.82	0.43
23:AW:10:G:H22	23:AW:25:A:H1'	1.81	0.43
1:AA:1408:A:C2'	1:AA:1409:C:H5'	2.47	0.43
53:B4:54:LYS:C	53:B4:56:GLU:H	2.22	0.43
27:DA:1401:G:H2'	27:DA:1402:C:H6	1.81	0.43
30:DD:146:GLU:HB3	30:DD:153:ALA:HA	2.00	0.43
1:CA:1086:U:O2'	1:CA:1087:G:H5'	2.18	0.43
27:BA:458:G:H1'	27:BA:459:U:H5	1.82	0.43
42:BT:7:ILE:O	42:BT:10:VAL:N	2.51	0.43
34:DH:19:VAL:HA	34:DH:24:VAL:HG12	2.00	0.43
29:BC:45:ALA:O	29:BC:46:LYS:CB	2.65	0.43
38:DP:136:GLU:O	38:DP:139:LYS:HB2	2.18	0.43
15:AO:12:ILE:C	15:AO:14:GLU:H	2.20	0.43
44:DV:99:ILE:CD1	44:DV:99:ILE:N	2.77	0.43
28:BB:105:A:C8	28:BB:106:G:C8	3.06	0.43
47:DY:30:VAL:HG12	47:DY:31:LEU:N	2.32	0.43
27:BA:2105:C:C2'	27:BA:2106:G:H5'	2.47	0.43
22:CV:1:A:C2'	22:CV:2:A:H5'	2.47	0.43
27:BA:1506:C:O2	27:BA:1506:C:H2'	2.16	0.43
27:BA:2748:A:H8	27:BA:2754:U:O4	2.01	0.43
23:CW:8:U:H3'	23:CW:13:A:N6	2.33	0.43
22:AV:4:A:H2'	22:AV:5:U:O4'	2.17	0.43
27:BA:1387:C:H2'	27:BA:1388:G:H8	1.83	0.43
1:AA:573:A:C2	1:AA:574:A:C2	3.06	0.43
1:AA:573:A:N3	1:AA:883:C:O2'	2.43	0.43
27:DA:751:A:H2'	27:DA:789:A:C2	2.52	0.43
51:D2:65:ASN:HB3	51:D2:69:ARG:HH12	1.83	0.43
3:AC:42:LEU:O	3:AC:45:LYS:N	2.50	0.43
2:AB:235:SER:OG	2:AB:236:TYR:HD1	2.01	0.43
27:DA:1562:A:H2'	27:DA:1563:G:C8	2.53	0.43
27:BA:1328:G:O2'	27:BA:1329:U:H2'	2.18	0.43
27:DA:1324:G:C2	27:DA:1331:A:N1	2.86	0.43
7:AG:4:ARG:HH11	7:AG:5:ARG:HH12	1.64	0.43
1:CA:301:G:H2'	1:CA:302:G:C8	2.53	0.43
5:CE:9:LYS:HB3	5:CE:112:LEU:HD11	2.00	0.43
35:DI:102:SER:C	35:DI:103:ARG:HG3	2.39	0.43
27:DA:2325:G:H8	27:DA:2325:G:P	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:504:U:O5'	27:DA:504:U:C6	2.71	0.43
1:AA:589:C:H6	1:AA:589:C:O5'	2.00	0.43
27:DA:1044:G:H1'	27:DA:1111:A:N1	2.31	0.43
57:B8:61:LEU:O	57:B8:63:PRO:O	2.36	0.43
27:BA:817:C:O2'	27:BA:839:U:H5''	2.18	0.43
27:BA:941:A:HO2'	38:BP:35:HIS:CE1	2.36	0.43
41:BS:17:ARG:C	41:BS:19:LYS:H	2.20	0.43
32:BF:157:VAL:HG13	32:BF:178:PRO:HA	1.99	0.43
32:BF:192:LEU:HD21	32:BF:194:MET:CE	2.48	0.43
32:BF:202:PHE:O	32:BF:205:ARG:N	2.51	0.43
47:BY:7:VAL:HG12	47:BY:83:THR:HG21	2.00	0.43
47:BY:84:ARG:HH11	47:BY:97:ARG:HA	1.83	0.43
46:BX:40:LYS:HG3	46:BX:51:VAL:HB	1.99	0.43
1:CA:545:C:OP1	4:CD:61:LYS:NZ	2.51	0.43
44:BV:4:ILE:HB	44:BV:39:LEU:O	2.17	0.43
50:D1:45:ASN:CG	50:D1:45:ASN:O	2.56	0.43
27:DA:1000:A:C5	27:DA:1155:A:C5	3.06	0.43
27:DA:977:G:C2	27:DA:978:G:C8	3.06	0.43
27:DA:534:U:O2'	43:DU:46:ALA:HA	2.18	0.43
27:BA:2476:A:C2	27:BA:2477:C:H6	2.36	0.43
27:DA:35:G:C6	27:DA:36:G:N7	2.85	0.43
41:BS:67:ARG:HG2	41:BS:67:ARG:HH11	1.82	0.43
27:DA:1423:G:N2	27:DA:1576:U:O2	2.50	0.43
30:DD:123:ALA:CB	30:DD:131:LEU:HD11	2.48	0.43
30:DD:141:VAL:HG23	30:DD:142:VAL:N	2.32	0.43
30:DD:25:THR:O	30:DD:27:THR:HG22	2.18	0.43
27:DA:1567:A:C5'	30:DD:58:HIS:CD2	2.98	0.43
27:BA:1158:C:H4'	52:B3:31:LEU:O	2.18	0.43
55:D6:8:LYS:CG	55:D6:8:LYS:O	2.66	0.43
27:DA:630:G:N2	27:DA:634:C:N3	2.66	0.43
38:DP:58:THR:C	38:DP:60:MET:H	2.22	0.43
33:DG:9:ARG:O	33:DG:11:TYR:N	2.51	0.43
27:DA:826:U:C5	27:DA:828:U:H1'	2.53	0.43
27:DA:968:G:C6	27:DA:969:U:C4	3.05	0.43
1:AA:411:A:N6	1:AA:429:U:C5	2.86	0.43
4:AD:22:LYS:HB2	4:AD:26:CYS:CB	2.45	0.43
47:DY:16:ALA:HA	47:DY:21:LYS:HD3	1.99	0.43
1:CA:101:A:H2'	1:CA:102:G:C5'	2.48	0.43
12:CL:23:ALA:O	12:CL:24:LEU:HD22	2.18	0.43
39:BQ:12:GLN:HE21	39:BQ:73:PRO:HD2	1.82	0.43
27:DA:1911:U:C2'	27:DA:1912:A:H5''	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:685:A:C8	27:BA:774:A:C6	3.05	0.43
1:CA:560:U:C5'	1:CA:566:G:N2	2.81	0.43
1:AA:103:C:C5	1:AA:104:G:N7	2.86	0.43
1:CA:1459:C:H4'	20:CT:24:LEU:HD21	2.00	0.43
1:CA:1064:G:O2'	1:CA:1065:U:O5'	2.25	0.43
27:DA:51:G:N3	27:DA:119:A:H2	2.15	0.43
1:CA:1057:G:O2'	1:CA:1058:G:H5'	2.18	0.43
42:BT:108:ARG:C	42:BT:111:ARG:HG3	2.38	0.43
27:BA:2262:U:N3	27:BA:2279:G:C2	2.86	0.43
12:AL:38:ARG:HG2	12:AL:39:THR:N	2.15	0.43
27:DA:147:U:O2'	27:DA:148:C:H5'	2.17	0.43
27:DA:1311:G:C4	56:D7:47:ARG:NH2	2.86	0.43
57:B8:36:LYS:HE3	57:B8:40:GLU:OE2	2.18	0.43
48:BZ:149:LEU:O	48:BZ:170:ILE:CD1	2.65	0.43
12:AL:112:LYS:O	12:AL:114:ARG:N	2.48	0.43
27:BA:1373:A:C2'	27:BA:1374:G:H5'	2.48	0.43
27:DA:1679:U:H1'	27:DA:1989:G:N2	2.33	0.43
29:DC:86:ALA:HB3	29:DC:94:VAL:HG11	2.00	0.43
34:DH:107:VAL:O	34:DH:109:PHE:N	2.44	0.43
39:BQ:116:GLU:O	39:BQ:120:ILE:HG12	2.18	0.43
27:DA:850:C:O2'	52:D3:46:ASN:ND2	2.51	0.43
35:DI:76:THR:HG22	35:DI:139:GLN:HB3	2.00	0.43
1:CA:338:A:H2'	1:CA:339:C:C6	2.52	0.43
27:BA:933:A:C2	27:BA:934:G:N7	2.86	0.43
27:DA:2848:G:N3	27:DA:2867:G:C2	2.86	0.43
37:DO:64:ARG:O	37:DO:82:ASN:HA	2.18	0.43
1:CA:1117:G:H4'	9:CI:104:ARG:NH1	2.33	0.43
1:CA:1116:C:C3'	1:CA:1117:G:H5''	2.48	0.43
54:D5:45:VAL:HG22	54:D5:51:TYR:CD2	2.53	0.43
13:CM:7:VAL:HG12	13:CM:7:VAL:O	2.17	0.43
30:DD:182:LEU:HB2	30:DD:271:ILE:HG13	1.99	0.43
1:AA:741:G:O2'	15:AO:55:GLY:HA3	2.18	0.43
25:CY:54:U:C6	25:CY:57:A:N7	2.86	0.43
27:BA:2138:C:O2'	27:BA:2139:C:H5'	2.17	0.43
48:BZ:26:VAL:HG23	48:BZ:35:LYS:HA	1.99	0.43
27:DA:2470:G:C4	27:DA:2471:C:C5	3.06	0.43
8:CH:109:ILE:CG1	8:CH:110:ALA:H	2.22	0.43
27:BA:1412:A:H2'	27:BA:1413:G:O4'	2.17	0.43
27:DA:2803:C:H2'	27:DA:2804:C:C6	2.53	0.43
27:DA:1204:A:C5	27:DA:1206:G:N1	2.86	0.43
6:CF:91:VAL:O	6:CF:92:LYS:C	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:55:G:C2	27:BA:56:A:N7	2.85	0.43
1:AA:1016:A:H2'	1:AA:1017:G:C5'	2.48	0.43
42:BT:56:GLY:O	42:BT:59:THR:CG2	2.66	0.43
39:DQ:18:LYS:HB2	39:DQ:98:LYS:HZ1	1.83	0.43
3:AC:173:VAL:HG12	3:AC:173:VAL:O	2.17	0.43
2:CB:77:ALA:CB	2:CB:211:ILE:HG21	2.48	0.43
1:CA:628:G:C2'	1:CA:629:G:H5'	2.48	0.43
27:BA:1441:G:N2	27:BA:1551:C:C2	2.86	0.43
27:BA:527:C:C5	27:BA:2779:U:C2'	3.01	0.43
27:DA:108:U:C2	27:DA:109:G:C8	3.06	0.43
6:AF:18:GLN:CA	6:AF:21:LEU:HB2	2.43	0.43
48:BZ:140:VAL:CG2	48:BZ:143:LEU:HD23	2.41	0.43
27:DA:1257:C:H4'	32:DF:83:PHE:CE2	2.53	0.43
16:CP:21:VAL:O	16:CP:21:VAL:CG1	2.65	0.43
1:AA:1508:G:C4	1:AA:1509:C:C6	3.05	0.43
27:DA:1741:A:O2'	27:DA:1742:G:O4'	2.36	0.43
32:BF:28:ILE:O	32:BF:28:ILE:CD1	2.64	0.43
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.36	0.43
39:BQ:141:GLN:OE1	48:BZ:71:ARG:O	2.36	0.43
27:DA:2522:U:H2'	27:DA:2523:G:H5'	2.00	0.43
27:BA:2221:G:H2'	27:BA:2221:G:N3	2.33	0.43
10:AJ:26:ALA:HA	10:AJ:29:ARG:HH21	1.83	0.43
10:AJ:81:THR:O	10:AJ:85:LEU:HG	2.18	0.43
27:DA:2653:U:H3'	27:DA:2654:A:C8	2.53	0.43
4:AD:205:GLU:O	4:AD:206:PHE:C	2.57	0.43
27:BA:329:G:H1	47:BY:19:LYS:HZ1	1.64	0.43
27:BA:1654:A:OP2	40:BR:3:HIS:CD2	2.72	0.43
6:CF:22:GLU:OE1	6:CF:82:ARG:NH2	2.51	0.43
27:DA:1829:A:N3	30:DD:15:PHE:CZ	2.85	0.43
2:CB:171:ALA:C	2:CB:173:ALA:N	2.70	0.43
27:DA:693:C:H2'	27:DA:694:U:O4'	2.18	0.43
1:CA:1466:C:C5	1:CA:1467:G:N7	2.87	0.43
1:CA:1193:G:C5	1:CA:1194:U:C5	3.06	0.43
44:DV:64:HIS:ND1	44:DV:92:THR:HG23	2.33	0.43
27:BA:415:A:H3'	27:BA:416:C:H6	1.81	0.43
1:CA:948:C:C5	13:CM:106:ASN:ND2	2.87	0.43
29:BC:24:GLU:CD	29:BC:24:GLU:H	2.22	0.43
27:BA:1216:G:O2'	27:BA:1217:C:H5'	2.18	0.43
2:AB:22:LYS:HG2	2:AB:35:GLU:OE1	2.17	0.43
39:BQ:74:TYR:HB3	39:BQ:92:GLY:O	2.18	0.43
32:DF:96:ASP:OD2	32:DF:98:SER:OG	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:99:LYS:H	41:BS:99:LYS:HG2	1.61	0.43
7:CG:57:GLU:O	7:CG:57:GLU:HG3	2.17	0.43
37:BO:23:ARG:HA	37:BO:23:ARG:HD3	1.81	0.43
29:BC:200:LYS:O	29:BC:202:GLU:N	2.51	0.43
1:CA:1185:G:C4	1:CA:1186:G:C8	3.07	0.43
10:CJ:54:PHE:CE1	10:CJ:55:LYS:HE3	2.53	0.43
27:BA:2805:G:C2	27:BA:2807:G:C5	3.06	0.43
32:BF:110:LEU:CD1	32:BF:110:LEU:C	2.87	0.43
51:B2:36:ARG:C	51:B2:38:GLN:H	2.21	0.43
57:D8:50:LEU:O	57:D8:51:ALA:CB	2.66	0.43
27:DA:271(F):C:O5'	27:DA:271(F):C:H6	2.01	0.43
27:DA:1924:C:O2'	27:DA:1925:C:H5'	2.17	0.43
1:CA:501:C:H2'	1:CA:502:G:H8	1.80	0.43
4:CD:73:ARG:HG3	4:CD:77:ASN:OD1	2.18	0.43
42:DT:65:LYS:NZ	42:DT:66:VAL:N	2.31	0.43
44:BV:19:LYS:NZ	44:BV:20:LEU:H	2.16	0.43
44:BV:47:VAL:CB	44:BV:49:THR:O	2.63	0.43
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.36	0.43
19:CS:20:LEU:CA	19:CS:23:ASN:HB3	2.49	0.43
1:AA:1403:C:H2'	1:AA:1404:C:C6	2.53	0.43
44:DV:49:THR:O	44:DV:50:PRO:C	2.56	0.43
27:DA:1857:G:O2'	27:DA:1885:A:N6	2.51	0.43
54:B5:16:ARG:NH1	54:B5:17:ASP:OD1	2.51	0.43
57:D8:23:VAL:HG12	57:D8:46:ARG:HB3	2.00	0.43
38:DP:23:PRO:CB	38:DP:33:ARG:NE	2.80	0.43
45:BW:15:ARG:O	45:BW:19:LEU:HD22	2.19	0.43
46:DX:57:LEU:HD13	46:DX:78:LYS:HG2	1.96	0.43
27:DA:2776:A:C5'	27:DA:2778:A:OP1	2.67	0.43
34:BH:23:ARG:N	34:BH:23:ARG:HD3	2.33	0.43
1:AA:944:G:H1'	1:AA:1340:A:H2	1.82	0.43
10:AJ:51:ARG:HG3	10:AJ:60:ARG:C	2.38	0.43
48:BZ:15:SER:O	48:BZ:18:ARG:HB2	2.18	0.43
8:AH:124:ALA:CA	8:AH:129:VAL:HG22	2.48	0.43
12:CL:81:LEU:O	12:CL:97:ILE:HA	2.17	0.43
2:AB:152:PHE:C	2:AB:154:LEU:N	2.69	0.43
1:CA:346:G:C5'	42:DT:41:ARG:NH2	2.82	0.43
22:AV:9:G:N2	23:AW:34:U:N3	2.66	0.43
49:B0:71:ASP:HA	49:B0:77:ARG:HA	2.00	0.43
27:BA:2439:A:C5'	27:BA:2439:A:C8	2.94	0.43
31:BE:39:PRO:HG3	31:BE:45:THR:OG1	2.18	0.43
7:AG:52:GLU:O	7:AG:54:THR:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:374:A:H2'	1:AA:375:U:C6	2.54	0.43
20:CT:50:GLU:O	20:CT:54:LYS:CB	2.66	0.43
37:BO:7:TYR:O	37:BO:8:LEU:HD13	2.18	0.43
27:DA:2472:G:H1	27:DA:2477:C:P	2.40	0.43
27:DA:2528:U:H2'	27:DA:2530:A:O5'	2.18	0.43
27:BA:1556:C:HO2'	27:BA:1557:C:H6	1.66	0.43
1:CA:519:C:H2'	1:CA:520:A:O4'	2.18	0.43
10:AJ:13:HIS:O	10:AJ:17:ASP:HB2	2.18	0.43
27:BA:2580:U:C5	27:BA:2581:G:C6	3.06	0.43
27:DA:133:C:N3	27:DA:146:G:N2	2.49	0.43
27:BA:2171:A:O2'	27:BA:2172:U:H6	2.01	0.43
27:DA:358:U:H6	27:DA:358:U:OP2	2.00	0.43
27:DA:1301:A:C4	27:DA:1303:G:N7	2.87	0.43
40:DR:20:LEU:HG	40:DR:21:TYR:N	2.32	0.43
33:DG:75:LYS:HB3	33:DG:76:SER:H	1.57	0.43
1:AA:877:C:H5''	8:AH:88:LYS:HD3	2.00	0.43
46:BX:32:PRO:HA	46:BX:77:LYS:CB	2.48	0.43
29:DC:82:LYS:O	29:DC:86:ALA:HB3	2.18	0.43
1:AA:448:A:C2	1:AA:449:C:C4	3.07	0.43
27:BA:728:G:H4'	30:BD:13:ARG:CD	2.48	0.43
13:AM:81:LEU:H	13:AM:81:LEU:HD12	1.84	0.43
13:AM:81:LEU:HD12	13:AM:81:LEU:N	2.33	0.43
1:AA:937:A:C2	1:AA:1379:G:C6	3.06	0.43
5:CE:33:VAL:HA	5:CE:43:LEU:HD12	1.98	0.43
37:DO:66:LYS:HD3	37:DO:79:PHE:C	2.38	0.43
37:DO:77:ILE:HD11	42:DT:72:VAL:HG13	1.99	0.43
27:BA:2692:C:O2'	27:BA:2693:A:H5'	2.19	0.43
27:BA:2716:U:O2'	27:BA:2717:G:H5'	2.18	0.43
1:CA:841:U:H3'	1:CA:848:C:C6	2.53	0.43
27:DA:2294:C:O2	27:DA:2294:C:H2'	2.18	0.43
27:DA:2374:C:H2'	27:DA:2375:G:O4'	2.18	0.43
27:DA:271(I):G:H2'	27:DA:271(J):C:H1'	2.00	0.43
19:CS:61:TYR:O	19:CS:62:ILE:CB	2.65	0.43
21:AU:13:ILE:CG1	21:AU:22:ARG:HE	2.30	0.43
5:CE:105:VAL:CB	5:CE:106:PRO:CD	2.96	0.43
25:CY:27:C:H42	25:CY:41:G:H1	1.64	0.43
19:AS:4:SER:O	19:AS:5:LEU:CB	2.60	0.43
27:BA:1050:A:O2'	27:BA:1051:G:C8	2.61	0.43
27:BA:1178:C:C6	27:BA:1179:C:H5	2.34	0.43
12:AL:15:VAL:O	12:AL:16:ARG:HB3	2.18	0.43
1:CA:577:G:C4	1:CA:578:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:7:GLU:O	15:CO:10:LYS:HE3	2.19	0.43
52:D3:7:LYS:HG3	52:D3:34:GLU:CG	2.41	0.43
35:BI:3:VAL:HA	35:BI:39:ALA:CB	2.42	0.43
1:AA:392:G:H5'	16:AP:13:HIS:NE2	2.32	0.43
27:BA:2047:U:C2'	27:BA:2048:G:H5''	2.48	0.43
27:DA:2681:C:C5	27:DA:2724:C:N4	2.87	0.43
13:AM:12:ASN:HB3	13:AM:46:LYS:HE2	1.99	0.43
1:CA:1238:A:N7	1:CA:1303:C:O4'	2.52	0.43
1:AA:1509:C:O2'	1:AA:1510:U:H5'	2.18	0.43
1:CA:61:G:C6	1:CA:107:G:C2	3.07	0.43
1:CA:1246:C:H6	1:CA:1246:C:O5'	2.01	0.43
4:CD:25:ARG:C	4:CD:27:TYR:H	2.21	0.43
10:CJ:85:LEU:O	10:CJ:87:THR:O	2.36	0.43
1:CA:1418:A:H1'	27:DA:1959:G:H4'	2.00	0.43
27:BA:118:A:N3	27:BA:178:G:H1'	2.33	0.43
27:BA:1007:C:OP1	36:BN:35:ARG:NH1	2.50	0.43
28:BB:87:G:H2'	28:BB:88:C:H5''	2.00	0.43
27:BA:463:G:N2	27:BA:467:G:C4	2.86	0.43
1:AA:576:G:C2	1:AA:881:G:H4'	2.53	0.43
23:AW:16:C:H5'	23:AW:58:A:N1	2.32	0.43
9:AI:76:ALA:O	9:AI:79:LEU:HB3	2.19	0.43
1:CA:623:C:N3	1:CA:624:C:C5	2.86	0.43
6:CF:50:TYR:CE2	6:CF:52:ILE:HD11	2.53	0.43
1:CA:1288:A:H2'	1:CA:1289:A:O4'	2.17	0.43
27:BA:2759:G:C2	27:BA:2760:C:C2	3.05	0.43
12:AL:2:PRO:HA	12:AL:6:GLN:HE21	1.83	0.43
43:DU:62:ILE:O	43:DU:63:VAL:C	2.55	0.43
27:BA:2145:C:H4'	27:BA:2146:C:OP2	2.18	0.43
27:DA:552:G:H2'	27:DA:553:G:H5'	1.98	0.43
1:AA:1010:G:N2	1:AA:1020:U:H1'	2.33	0.43
1:AA:1047:G:O2'	1:AA:1048:G:H5'	2.18	0.43
8:CH:127:LEU:HD22	8:CH:127:LEU:HA	1.79	0.43
3:CC:179:ARG:O	3:CC:181:ASN:N	2.52	0.43
8:AH:75:ARG:HE	8:AH:75:ARG:HB2	1.50	0.43
10:AJ:45:ARG:HH11	10:AJ:45:ARG:HG3	1.83	0.43
2:AB:9:GLU:O	2:AB:11:LEU:N	2.51	0.43
1:AA:417:C:O2'	1:AA:418:C:H5'	2.18	0.43
7:AG:92:SER:HB2	7:AG:94:ARG:HH21	1.83	0.43
52:B3:4:LEU:HA	52:B3:4:LEU:HD23	1.86	0.43
46:DX:41:ASN:N	46:DX:41:ASN:ND2	2.67	0.43
38:DP:30:THR:HG22	38:DP:31:ALA:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:73:THR:O	2:AB:74:LYS:C	2.56	0.43
27:BA:1167:U:H2'	27:BA:1168:G:H8	1.83	0.43
50:D1:23:LYS:HE2	50:D1:28:GLY:CA	2.49	0.43
28:BB:23:G:N2	28:BB:61:G:C4	2.86	0.43
27:BA:2192:G:C2	27:BA:2193:G:C8	3.06	0.43
4:AD:138:TYR:CD2	4:AD:138:TYR:C	2.91	0.43
8:AH:102:ARG:HD2	8:AH:105:ARG:NH1	2.33	0.43
30:DD:28:GLU:HB2	30:DD:29:PRO:HD3	2.00	0.43
27:BA:1468:C:O2	27:BA:1468:C:H2'	2.17	0.43
27:BA:1523:U:H2'	27:BA:1524:G:O4'	2.19	0.43
27:DA:1274:A:H2	27:DA:1644:C:O2	2.00	0.43
1:CA:775:G:H2'	1:CA:776:G:O4'	2.18	0.43
27:BA:1391:U:O2	27:BA:1393:A:C8	2.71	0.43
37:BO:23:ARG:CG	37:BO:23:ARG:HH11	2.31	0.43
37:BO:23:ARG:HG2	37:BO:23:ARG:NH1	2.33	0.43
27:BA:2761:G:N2	27:BA:2762:G:H1'	2.34	0.43
11:AK:62:GLN:O	11:AK:63:LEU:C	2.57	0.43
1:AA:695:A:H2'	1:AA:696:A:C8	2.53	0.43
51:B2:10:LEU:HA	51:B2:10:LEU:HD23	1.88	0.43
27:BA:1955:U:H2'	27:BA:1955:U:O2	2.19	0.43
27:BA:2788:C:H4'	27:BA:2810:A:O4'	2.18	0.43
27:DA:1006:C:O2	36:DN:106:MET:HG2	2.17	0.43
27:DA:1019:U:N3	27:DA:1142(A):A:N6	2.55	0.43
57:D8:64:TYR:N	57:D8:64:TYR:CD1	2.86	0.43
27:DA:1826:G:C6	27:DA:1827:C:C4	3.06	0.43
4:CD:8:VAL:C	4:CD:10:ARG:H	2.18	0.43
13:CM:69:GLU:HA	13:CM:72:ALA:H	1.80	0.43
27:BA:481:G:HO2'	27:BA:482:A:P	2.38	0.43
27:BA:2056:G:H1	54:B5:4:HIS:CD2	2.36	0.43
1:AA:18:C:H2'	1:AA:19:C:O4'	2.18	0.43
36:BN:40:PRO:HB3	43:BU:68:ALA:HB2	1.99	0.43
1:AA:1405:G:C2'	1:AA:1406:U:O5'	2.67	0.43
47:DY:80:GLY:O	47:DY:81:LYS:O	2.37	0.43
27:DA:1429:G:H1'	27:DA:1568:G:N3	2.33	0.43
30:DD:39:LYS:HD2	30:DD:60:ARG:HD2	1.99	0.43
51:D2:18:PRO:CG	51:D2:19:VAL:H	2.28	0.43
31:DE:61:ARG:CB	31:DE:62:PRO:CD	2.97	0.43
27:DA:2263:C:O2'	27:DA:2264:C:H5'	2.18	0.43
27:DA:2393:A:O3'	38:DP:63:PRO:HD2	2.18	0.43
28:DB:87:G:N1	28:DB:91:C:N4	2.65	0.43
11:CK:32:ILE:HG13	11:CK:40:ILE:HB	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DG:9:ARG:O	33:DG:10:LYS:C	2.56	0.43
27:DA:469:G:C6	56:D7:39:ARG:NH1	2.87	0.43
27:DA:2056:G:C2'	27:DA:2057:A:H5'	2.49	0.43
27:DA:674:G:H5''	32:DF:76:GLY:N	2.33	0.43
1:AA:176:C:C2	1:AA:177:C:C5	3.05	0.43
27:DA:142(A):C:O2'	27:DA:143:G:H5'	2.19	0.43
27:BA:1686:C:H2'	27:BA:1687:G:H5'	2.00	0.43
30:BD:60:ARG:CD	30:BD:86:PRO:CG	2.84	0.43
4:CD:113:SER:O	4:CD:114:ARG:C	2.57	0.43
1:CA:103:C:P	20:CT:17:ARG:HH12	2.41	0.43
1:CA:185:A:C6	1:CA:186:C:C4	3.07	0.43
1:AA:1060:C:C5'	14:AN:45:ARG:NH2	2.78	0.43
12:CL:32:GLY:HA3	12:CL:57:LEU:CD1	2.47	0.43
42:DT:27:THR:HA	42:DT:87:ASP:HB2	2.00	0.43
1:CA:1494:G:OP2	1:CA:1494:G:C8	2.72	0.43
27:DA:1914:C:H2'	27:DA:1915:U:H6	1.83	0.43
27:BA:2072:G:C5	27:BA:2073:C:C5	3.07	0.43
27:BA:2591:C:H2'	27:BA:2592:G:H8	1.83	0.43
31:BE:35:GLN:NE2	31:BE:37:ARG:NH1	2.66	0.43
2:AB:166:ASP:O	2:AB:167:PRO:C	2.56	0.43
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.18	0.43
8:CH:49:GLU:OE1	8:CH:62:TYR:OH	2.35	0.43
1:AA:355:C:H2'	1:AA:356:A:O5'	2.18	0.43
1:CA:1038:C:H2'	1:CA:1039:C:C5	2.53	0.43
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.52	0.43
20:CT:65:LYS:C	20:CT:67:ALA:H	2.22	0.43
31:DE:25:VAL:HG12	31:DE:26:ILE:N	2.33	0.43
40:BR:62:ALA:O	40:BR:63:ARG:C	2.56	0.43
50:B1:6:GLU:C	50:B1:7:ILE:HD12	2.38	0.43
3:CC:79:ARG:C	3:CC:81:GLY:N	2.71	0.43
3:CC:84:ILE:HA	3:CC:87:LEU:CD1	2.48	0.43
42:BT:106:SER:C	42:BT:107:ASP:CG	2.76	0.43
27:BA:2264:C:N4	27:BA:2265:U:O4	2.51	0.43
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.53	0.43
27:BA:2842:G:C4	27:BA:2876:G:N2	2.86	0.43
8:CH:30:ARG:O	8:CH:33:GLU:N	2.52	0.43
27:BA:2163:C:C2'	27:BA:2164:C:H5'	2.48	0.43
23:AW:8:U:HO2'	23:AW:44:A:H2	1.65	0.43
27:DA:1300:U:C6	27:DA:1626:G:C6	3.06	0.43
36:DN:17:ASP:O	36:DN:17:ASP:CG	2.55	0.43
48:BZ:165:SER:CB	48:BZ:166:PRO:C	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2308:G:C2'	27:DA:2309:A:C8	2.97	0.43
7:AG:120:ILE:O	7:AG:124:LEU:HG	2.18	0.43
13:AM:93:ARG:HA	13:AM:93:ARG:HE	1.83	0.43
1:AA:1380:U:O4	7:AG:3:ARG:HA	2.18	0.43
35:BI:37:VAL:HG12	35:BI:38:LEU:CD1	2.48	0.43
23:AW:65:U:O2'	23:AW:66:A:H5'	2.18	0.43
1:CA:353:A:H5'	1:CA:353:A:C8	2.52	0.43
27:BA:846:C:C2	27:BA:930:U:C4	3.06	0.43
37:DO:85:VAL:HG21	37:DO:98:VAL:HG23	2.00	0.43
27:DA:1754:C:OP1	42:DT:95:ARG:HB2	2.19	0.43
42:DT:96:ARG:HB3	42:DT:96:ARG:CZ	2.48	0.43
38:BP:85:LEU:HA	38:BP:88:LEU:HD22	2.01	0.43
27:DA:2297:C:C2	27:DA:2321:G:N2	2.81	0.43
27:DA:2320:A:N3	27:DA:2320:A:H2'	2.32	0.43
42:BT:13:ARG:O	42:BT:15:VAL:HG12	2.18	0.43
16:CP:58:TYR:C	16:CP:60:LEU:N	2.72	0.43
3:AC:29:TYR:HE2	3:AC:33:LEU:HD13	1.83	0.43
11:CK:67:ASP:O	11:CK:68:ALA:C	2.57	0.43
1:CA:880:C:C6	12:CL:6:GLN:OE1	2.71	0.43
8:CH:44:PHE:HA	8:CH:79:VAL:HG11	2.00	0.43
45:DW:41:LYS:O	45:DW:42:ARG:C	2.56	0.43
27:DA:1208:C:N3	27:DA:1239:G:C2	2.86	0.43
1:CA:1126:U:O2'	1:CA:1127:G:H5'	2.18	0.43
10:CJ:71:LEU:O	10:CJ:72:VAL:HG23	2.18	0.43
32:DF:135:LYS:HE3	32:DF:137:LYS:HG3	2.00	0.43
27:BA:1598:C:H5'	46:BX:36:LYS:HG3	1.99	0.43
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.18	0.43
3:AC:172:ARG:HB3	3:AC:174:PRO:HD3	1.99	0.43
25:CY:37:U:H2'	25:CY:38:U:C4'	2.48	0.43
3:AC:60:ALA:O	3:AC:61:ALA:HB2	2.18	0.43
1:AA:600:C:N3	1:AA:639:G:C2	2.86	0.43
50:D1:82:LEU:HD22	50:D1:82:LEU:N	2.34	0.43
1:CA:320:C:O2'	1:CA:1435:G:H1'	2.18	0.43
1:CA:327:A:O3'	1:CA:328:C:C4'	2.66	0.43
2:AB:21:ARG:C	2:AB:23:ARG:H	2.21	0.43
1:AA:1066:C:H5''	1:AA:1066:C:C6	2.53	0.43
7:AG:86:GLN:NE2	25:AY:30:A:C2	2.85	0.43
6:AF:80:ARG:C	6:AF:82:ARG:N	2.71	0.43
13:CM:16:ASP:CB	13:CM:31:LYS:HE2	2.48	0.43
27:DA:1469:A:H2'	27:DA:1470:G:C8	2.54	0.43
27:BA:2772:C:H5'	31:BE:168:MET:HE2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:30:A:C2'	23:CW:31:U:C5'	2.95	0.43
27:DA:2523:G:H5'	27:DA:2523:G:C8	2.46	0.43
13:AM:48:LEU:N	13:AM:48:LEU:HD23	2.33	0.43
1:CA:1419:G:C4	1:CA:1420:C:C5	3.07	0.43
1:AA:859:A:H2'	1:AA:860:A:H8	1.84	0.43
40:DR:83:ILE:C	40:DR:85:PRO:HD2	2.38	0.43
1:AA:1047:G:H1	1:AA:1210:C:N4	2.16	0.43
27:DA:2063:C:O2'	27:DA:2064:C:H5'	2.18	0.43
27:BA:2353:G:C5	27:BA:2365:G:N2	2.85	0.43
40:DR:92:GLY:N	40:DR:94:TYR:CE1	2.86	0.43
1:AA:335:C:O2'	1:AA:336:C:H5'	2.18	0.43
27:DA:1247:A:C5	27:DA:1249:U:C5	3.06	0.43
6:CF:22:GLU:HA	6:CF:22:GLU:OE2	2.18	0.43
25:AY:14:A:H1'	25:AY:21:A:N1	2.33	0.43
17:CQ:64:PRO:CA	17:CQ:70:ARG:HG2	2.48	0.43
3:AC:166:GLU:OE2	3:AC:166:GLU:HA	2.18	0.43
54:D5:55:ARG:HD2	54:D5:56:LYS:H	1.84	0.43
27:BA:2088:G:H2'	27:BA:2089:U:H6	1.81	0.43
48:BZ:23:LEU:O	48:BZ:37:TYR:HA	2.17	0.43
27:DA:1169:G:O5'	27:DA:1169:G:H8	2.02	0.43
1:AA:1495:U:H2'	1:AA:1496:C:H6	1.84	0.43
27:BA:2766:G:C2	27:BA:2767:C:C6	3.06	0.43
27:DA:1525:G:H2'	27:DA:1526:G:H8	1.83	0.43
27:BA:2460:U:C4	27:BA:2461:C:C5	3.06	0.43
27:DA:1053:C:O2	27:DA:1053:C:H2'	2.19	0.43
1:CA:995:C:O2'	1:CA:996:A:P	2.77	0.43
27:BA:1703:G:N2	27:BA:1704:G:C4	2.87	0.43
27:BA:2673:G:O2'	27:BA:2674:G:H5'	2.18	0.43
1:CA:1375:A:H4'	7:CG:29:LYS:NZ	2.34	0.43
27:DA:2597:G:C6	27:DA:2598:A:N6	2.86	0.43
4:CD:144:ASP:OD1	4:CD:144:ASP:N	2.51	0.43
28:DB:66:A:O2'	28:DB:67:G:OP2	2.33	0.43
27:DA:127:A:H5''	27:DA:128:C:C6	2.53	0.43
57:B8:10:ALA:C	57:B8:12:LYS:N	2.71	0.43
1:CA:961:U:O2'	1:CA:962:C:O5'	2.37	0.43
27:BA:1281:G:H5'	27:BA:1282:U:OP2	2.19	0.43
57:D8:52:LYS:H	57:D8:53:PRO:HD2	1.78	0.43
27:DA:195:A:H61	27:DA:198:C:H3'	1.84	0.43
27:DA:1833:U:C4	27:DA:1834:U:C4	3.07	0.43
4:CD:11:LEU:O	4:CD:13:ARG:N	2.51	0.43
33:BG:102:PHE:O	33:BG:105:LYS:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2811:G:OP1	31:BE:60:ASN:HB2	2.18	0.43
31:BE:51:PHE:C	31:BE:74:PRO:HB2	2.39	0.43
5:AE:33:VAL:HG23	5:AE:43:LEU:CD1	2.26	0.43
1:AA:268:C:C5	1:AA:269:C:H5	2.37	0.43
17:AQ:19:VAL:O	17:AQ:43:LEU:HA	2.18	0.43
8:AH:23:SER:HA	8:AH:63:LEU:HD22	2.00	0.43
42:BT:109:GLU:O	42:BT:112:ARG:N	2.51	0.43
1:AA:16:A:N1	1:AA:920:U:C2	2.86	0.43
27:DA:1157:G:O2'	27:DA:1158:C:C5'	2.67	0.43
27:DA:534:U:O2'	27:DA:535:C:H5'	2.18	0.43
27:DA:815:C:C2	27:DA:816:C:C5	3.07	0.43
52:B3:24:LYS:O	52:B3:27:GLY:HA2	2.18	0.43
27:DA:95:G:H4'	51:D2:46:GLN:OE1	2.18	0.43
27:DA:2070:G:C4	27:DA:2071:A:C8	3.06	0.43
27:DA:2287:A:O2'	27:DA:2288:A:O5'	2.36	0.43
27:DA:2382:G:O2'	27:DA:2383:G:P	2.77	0.43
33:DG:18:GLU:HB3	33:DG:175:LEU:CD2	2.48	0.43
27:DA:1191:G:C2	27:DA:1192:G:C8	3.06	0.43
27:DA:1192:G:O2'	27:DA:1193:G:H5'	2.19	0.43
27:DA:2016:U:O2'	27:DA:2017:U:H5'	2.18	0.43
27:DA:971:C:H2'	27:DA:972:G:O4'	2.19	0.43
36:BN:95:PRO:O	36:BN:96:GLU:C	2.57	0.43
1:CA:200:G:H2'	1:CA:201:C:H6	1.81	0.43
9:AI:95:LYS:HD3	9:AI:96:LEU:N	2.33	0.43
1:AA:1053:G:O2'	1:AA:1054:C:P	2.77	0.43
8:AH:100:ILE:CD1	8:AH:124:ALA:HB3	2.48	0.43
42:DT:35:LYS:C	42:DT:37:GLY:H	2.22	0.43
27:DA:2756:U:H1'	27:DA:2757:A:C5'	2.40	0.43
27:BA:1813:G:H2'	27:BA:1814:G:H5'	1.99	0.43
27:BA:2439:A:H4'	27:BA:2440:C:H3'	2.00	0.43
27:BA:775:G:O2'	27:BA:794:G:N7	2.43	0.43
1:AA:106:C:H2'	1:AA:107:G:C8	2.53	0.43
1:AA:61:G:H2'	1:AA:62:U:C6	2.53	0.43
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.54	0.43
32:DF:32:LEU:HD22	32:DF:112:MET:HE3	1.99	0.43
48:BZ:68:THR:CA	48:BZ:90:LEU:HD12	2.46	0.43
1:AA:457:C:H2'	1:AA:458:C:C6	2.52	0.43
4:AD:28:SER:HB2	4:AD:30:LYS:CG	2.48	0.43
1:CA:260:G:C4	1:CA:261:U:C5	3.07	0.43
20:CT:74:LYS:HB3	20:CT:75:ASN:H	1.50	0.43
27:DA:2125:G:H21	27:DA:2174:C:N4	2.14	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:179:A:C4	1:CA:180:U:H5	2.35	0.43
40:BR:55:ALA:CB	40:BR:79:LEU:HD22	2.48	0.43
1:CA:1175:G:C2	1:CA:1176:A:C5	3.06	0.43
27:BA:2199:A:N1	27:BA:2226:C:N4	2.55	0.43
27:BA:2093:G:O6	27:BA:2225:A:C8	2.72	0.43
27:DA:524:U:C2	27:DA:525:U:C5	3.06	0.43
6:CF:3:ARG:HG2	6:CF:93:SER:OG	2.18	0.43
1:CA:1050:G:N2	1:CA:1209:C:H1'	2.33	0.43
3:CC:192:THR:O	3:CC:192:THR:CG2	2.65	0.43
27:DA:2134:A:C8	27:DA:2158:A:C2	3.06	0.43
27:DA:2159:G:C3'	27:DA:2160:G:H5''	2.48	0.43
58:B9:26:ILE:HG22	58:B9:27:CYS:N	2.33	0.43
27:DA:353:G:N2	27:DA:354:G:C4	2.86	0.43
27:DA:1304:C:C4	27:DA:1305:C:C5	3.07	0.43
35:BI:123:LEU:HD11	35:BI:144:VAL:CG1	2.48	0.43
27:BA:2283:C:C2	27:BA:2389:G:C2	3.07	0.43
55:B6:28:ARG:HG2	55:B6:28:ARG:HH11	1.83	0.43
3:AC:183:ASP:O	3:AC:201:TYR:HA	2.19	0.43
3:AC:55:VAL:HG12	3:AC:55:VAL:O	2.18	0.43
17:AQ:81:ARG:C	17:AQ:83:ASP:H	2.21	0.43
1:CA:17:U:H2'	1:CA:18:C:H6	1.75	0.43
20:AT:86:ARG:HH11	20:AT:86:ARG:HG3	1.83	0.43
35:DI:82:ARG:HH11	35:DI:82:ARG:HG3	1.84	0.43
35:DI:88:ILE:CG2	35:DI:90:GLY:O	2.66	0.43
27:DA:2141:G:H2'	27:DA:2142:C:O4'	2.18	0.43
1:CA:838:G:O2'	1:CA:839:U:H5''	2.19	0.43
16:CP:75:ARG:O	16:CP:77:ALA:N	2.51	0.43
4:AD:153:ARG:HH21	4:AD:181:MET:HB2	1.83	0.43
54:D5:31:VAL:CG2	54:D5:40:LYS:HE2	2.48	0.43
13:CM:6:GLY:C	13:CM:7:VAL:HG23	2.39	0.43
27:DA:1385:G:C4'	27:DA:1386:C:OP1	2.63	0.43
3:AC:24:ALA:HB3	3:AC:29:TYR:CD1	2.53	0.43
7:CG:149:ARG:O	7:CG:150:ALA:C	2.57	0.43
25:CY:25:A:H2'	25:CY:26:C:H5'	2.00	0.43
40:DR:88:ARG:HD2	40:DR:89:ASP:CG	2.39	0.43
54:D5:25:LEU:HD23	54:D5:26:THR:H	1.83	0.43
39:BQ:80:GLU:HB2	49:B0:5:LYS:HE3	2.00	0.43
33:BG:125:PHE:O	33:BG:126:ASP:O	2.35	0.43
27:BA:1204:A:C2	27:BA:1241:A:N1	2.87	0.43
33:BG:166:ASP:O	33:BG:170:ARG:N	2.43	0.43
2:CB:7:VAL:O	2:CB:11:LEU:HG	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1296:C:H4'	1:AA:1302:U:C5	2.54	0.43
1:AA:1296:C:H5''	1:AA:1297:C:OP2	2.19	0.43
50:B1:51:VAL:O	50:B1:52:ARG:C	2.57	0.43
28:DB:16:G:C6	28:DB:17:C:C4	3.07	0.43
38:DP:114:ILE:O	38:DP:130:PHE:HA	2.17	0.43
38:BP:139:LYS:O	38:BP:141:ALA:N	2.42	0.43
2:CB:105:PHE:C	2:CB:107:THR:N	2.71	0.43
27:BA:2115:G:C2	27:BA:2117:A:N7	2.86	0.43
27:BA:580:C:H2'	27:BA:581:C:C6	2.54	0.43
6:AF:77:ARG:O	6:AF:80:ARG:N	2.51	0.43
23:AW:24:C:H2'	23:AW:25:A:H5'	2.01	0.43
5:AE:148:VAL:CG2	8:AH:107:LEU:HD13	2.48	0.43
1:AA:20:U:H2'	1:AA:21:G:H5'	2.00	0.43
7:CG:120:ILE:HG22	7:CG:124:LEU:CD1	2.46	0.43
27:DA:565:C:O2'	27:DA:566:U:H5'	2.18	0.43
39:DQ:126:PRO:O	39:DQ:127:ILE:HG23	2.17	0.43
35:DI:25:TYR:CE2	35:DI:29:TYR:CD2	3.06	0.43
40:BR:67:LEU:HD22	40:BR:76:VAL:CG2	2.46	0.43
40:BR:73:VAL:O	40:BR:76:VAL:HB	2.19	0.43
27:BA:1956:U:O2'	27:BA:1957:C:H5'	2.17	0.43
27:BA:2732:G:C3'	27:BA:2733:A:C5'	2.88	0.43
48:BZ:8:TYR:HE2	48:BZ:34:ARG:CD	2.30	0.43
35:DI:39:ALA:O	35:DI:44:LEU:HD22	2.19	0.43
27:BA:1936:A:H4'	27:BA:1937:A:H5'	2.01	0.43
31:BE:14:ILE:HD12	42:BT:14:TYR:CZ	2.53	0.43
16:CP:9:PHE:HE2	16:CP:18:ARG:HB3	1.83	0.43
27:BA:2182:G:H2'	27:BA:2183:C:C6	2.53	0.43
29:DC:56:GLN:NE2	29:DC:173:ALA:CB	2.82	0.43
6:CF:100:ASN:HD22	18:CR:23:LYS:HE3	1.82	0.43
27:DA:2721:A:C2	27:DA:2873:A:C4	3.06	0.43
3:CC:27:LYS:HZ3	3:CC:27:LYS:HB3	1.83	0.43
24:AX:8:U:H5'	24:AX:48:C:O2'	2.18	0.43
1:CA:355:C:C4	1:CA:356:A:C5	3.07	0.43
1:AA:1049:U:O2'	1:AA:1050:G:P	2.76	0.43
1:AA:1494:G:N7	26:AZ:1:KBE:HAA	2.33	0.43
38:BP:38:GLN:CG	38:BP:39:LYS:H	2.29	0.43
3:CC:6:HIS:HD2	3:CC:8:ILE:H	1.65	0.43
35:DI:128:LEU:O	35:DI:137:PRO:HA	2.19	0.43
30:DD:139:GLY:O	30:DD:164:GLN:HG3	2.19	0.43
27:DA:1479:G:H5'	27:DA:1558:A:C2	2.52	0.43
4:AD:204:ILE:H	4:AD:204:ILE:HG12	1.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:19:HIS:CG	2:AB:20:GLU:H	2.37	0.43
28:BB:69:G:O2'	28:BB:70:C:H5'	2.18	0.43
27:BA:321:G:O2'	27:BA:322:A:OP1	2.26	0.43
1:CA:947:G:H4'	13:CM:109:THR:HG1	1.83	0.43
50:D1:70:VAL:O	50:D1:73:LEU:HB2	2.19	0.43
27:BA:770:G:C6	27:BA:771:G:N7	2.87	0.43
32:DF:46:ARG:HB3	32:DF:48:THR:HG23	1.99	0.43
1:CA:367:U:OP1	1:CA:395:C:H1'	2.18	0.43
27:BA:447:A:C8	27:BA:473:G:C6	3.07	0.43
20:CT:34:LYS:O	20:CT:37:SER:HB2	2.19	0.43
27:BA:1855:G:O2'	27:BA:1856:G:H5'	2.19	0.43
28:BB:66:A:O2'	28:BB:67:G:OP2	2.31	0.43
1:CA:857:C:H2'	1:CA:858:G:O4'	2.19	0.43
16:CP:15:PRO:O	16:CP:16:HIS:ND1	2.52	0.43
38:BP:58:THR:O	38:BP:61:ARG:CZ	2.66	0.43
40:BR:48:VAL:O	40:BR:50:HIS:N	2.51	0.43
41:BS:93:LYS:O	41:BS:93:LYS:HG3	2.18	0.43
32:BF:11:VAL:CG1	32:BF:12:LEU:N	2.79	0.43
51:B2:42:GLY:C	51:B2:44:LEU:H	2.20	0.43
27:DA:1906:G:N2	27:DA:1925:C:O2	2.51	0.43
4:CD:207:TYR:HD2	4:CD:207:TYR:HA	1.61	0.43
27:BA:287:C:C2	27:BA:288:C:C6	3.07	0.43
27:BA:287:C:H2'	27:BA:288:C:H6	1.83	0.43
42:BT:65:LYS:HA	42:BT:65:LYS:HZ3	1.83	0.43
41:BS:33:LYS:O	41:BS:34:HIS:CD2	2.72	0.43
30:DD:143:HIS:HA	30:DD:156:ALA:HB3	2.00	0.43
30:BD:24:ILE:CG1	30:BD:25:THR:H	2.24	0.43
1:AA:345:C:H5'	42:BT:36:GLU:HG3	2.00	0.43
42:BT:35:LYS:O	42:BT:37:GLY:N	2.52	0.43
27:DA:97:C:C5'	51:D2:2:LYS:HB2	2.48	0.43
27:DA:1883:G:O2'	27:DA:1884:A:H8	2.01	0.43
27:DA:921:G:N2	49:D0:26:TYR:CD1	2.86	0.43
27:DA:2261:C:OP2	49:D0:17:GLN:HG2	2.19	0.43
38:DP:146:VAL:CG1	38:DP:147:LEU:H	2.26	0.43
27:DA:1190:G:H2'	27:DA:1191:G:H8	1.84	0.43
27:DA:966:G:C6	27:DA:967:C:N4	2.86	0.43
27:DA:972:G:N1	27:DA:973:A:N6	2.67	0.43
48:DZ:27:MET:HE1	48:DZ:32:LEU:HD11	1.99	0.43
30:BD:117:VAL:HG13	30:BD:118:VAL:N	2.33	0.43
4:CD:98:GLU:HG2	4:CD:189:PRO:HG2	2.00	0.43
9:AI:5:TYR:CG	9:AI:6:GLY:N	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1343:G:H1'	9:AI:121:ARG:NH1	2.33	0.43
3:AC:12:LEU:HD12	3:AC:18:TRP:CZ2	2.53	0.43
1:AA:973:G:H4'	10:AJ:54:PHE:O	2.19	0.43
2:AB:71:VAL:HA	2:AB:93:VAL:HG23	2.00	0.43
1:AA:674:G:C6	1:AA:675:A:N6	2.87	0.43
1:CA:390:C:H4'	16:CP:28:ARG:NH2	2.33	0.43
1:AA:1305:G:OP2	21:AU:2:GLY:N	2.51	0.43
38:DP:11:GLY:O	38:DP:12:ALA:C	2.55	0.43
38:DP:6:LEU:H	38:DP:6:LEU:HD23	1.83	0.43
17:CQ:25:ARG:HB3	17:CQ:38:ARG:O	2.19	0.43
27:BA:1999:C:O2'	27:BA:2000:G:H5'	2.18	0.43
27:BA:1658:C:O2	27:BA:2003:G:C2	2.72	0.43
8:CH:48:TYR:O	8:CH:49:GLU:CB	2.67	0.43
20:CT:57:ARG:HH11	20:CT:57:ARG:HB2	1.83	0.43
1:CA:228:A:H2'	1:CA:229:U:C6	2.52	0.43
42:DT:1:MET:C	42:DT:3:ARG:N	2.71	0.43
58:D9:29:ASN:HB2	58:D9:30:PRO:HD2	2.00	0.43
27:DA:374:A:H3'	27:DA:375:C:H6	1.82	0.43
18:AR:53:ARG:CZ	18:AR:60:ALA:N	2.80	0.43
11:CK:116:HIS:O	11:CK:117:ASN:HB2	2.19	0.43
27:DA:154:G:H2'	27:DA:154(A):C:O2	2.18	0.43
1:CA:693:G:O2'	1:CA:694:A:H5'	2.18	0.43
8:CH:6:ILE:HD11	8:CH:31:PHE:CD2	2.53	0.43
25:AY:48:C:N4	25:AY:64:G:H1	2.17	0.43
35:BI:130:TYR:O	35:BI:131:LYS:O	2.35	0.43
48:BZ:150:HIS:HB2	48:BZ:168:GLU:C	2.39	0.43
27:DA:2007:C:H5'	27:DA:2824:C:O4'	2.18	0.43
49:D0:43:THR:O	49:D0:43:THR:HG23	2.19	0.43
27:DA:332:A:H4'	27:DA:333:G:OP1	2.17	0.43
48:DZ:62:ASP:C	48:DZ:64:GLN:H	2.22	0.43
36:BN:118:LYS:O	36:BN:121:LYS:HE3	2.18	0.43
51:B2:3:LEU:O	51:B2:6:VAL:HG23	2.19	0.43
46:BX:31:HIS:CD2	46:BX:32:PRO:CD	3.01	0.43
27:BA:71:A:C2	46:BX:31:HIS:CE1	2.94	0.43
29:DC:99:ILE:HA	29:DC:103:ILE:CB	2.49	0.43
27:DA:1695:G:O2'	27:DA:1696:G:P	2.77	0.43
33:DG:125:PHE:CZ	33:DG:170:ARG:HA	2.53	0.43
33:DG:36:LYS:O	33:DG:160:VAL:HG23	2.19	0.43
39:BQ:55:VAL:O	39:BQ:59:ARG:HA	2.18	0.43
52:D3:50:VAL:HB	52:D3:53:LEU:HD12	2.00	0.43
6:AF:91:VAL:HG13	18:AR:72:ARG:CZ	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BD:14:ARG:HG3	30:BD:15:PHE:CE1	2.54	0.43
13:AM:80:ARG:O	13:AM:83:ASP:N	2.48	0.43
1:CA:338:A:O2'	1:CA:339:C:H5'	2.19	0.43
27:BA:2525:G:N1	27:BA:2526:G:C5	2.86	0.43
15:AO:30:ALA:HA	15:AO:33:THR:HB	2.00	0.43
27:BA:271(R):G:H2'	27:BA:271(S):G:H8	1.83	0.43
5:CE:105:VAL:O	5:CE:108:ALA:CB	2.62	0.43
5:CE:139:LEU:HD22	5:CE:142:LEU:HD11	2.00	0.43
7:CG:143:ARG:CB	7:CG:143:ARG:NH1	2.81	0.43
25:CY:25:A:O2'	25:CY:26:C:H5'	2.18	0.43
3:AC:89:GLU:HG3	3:AC:90:GLU:OE1	2.19	0.43
27:DA:1028:A:H2'	27:DA:1029:A:C8	2.54	0.43
27:DA:2466:C:H2'	27:DA:2467:C:C5'	2.47	0.43
8:CH:38:ILE:O	8:CH:41:ARG:HG2	2.18	0.43
44:BV:82:ARG:CG	44:BV:82:ARG:HH11	2.31	0.43
40:DR:48:VAL:HA	40:DR:51:LEU:HD11	2.00	0.43
27:BA:105:C:O2'	47:BY:2:ARG:CB	2.65	0.43
27:DA:1286:A:P	40:DR:105:ARG:HH11	2.42	0.43
1:CA:737:A:O2'	6:CF:72:VAL:CG1	2.64	0.43
7:AG:23:VAL:O	7:AG:26:PHE:N	2.51	0.43
1:CA:16:A:C2	1:CA:920:U:C2	3.06	0.43
5:AE:101:ILE:HG12	5:AE:119:LEU:HD23	2.00	0.43
27:BA:2048:G:C6	27:BA:2621:A:C2	3.06	0.43
27:BA:1741:A:O2'	27:BA:1742:G:O4'	2.37	0.43
34:DH:102:ALA:CB	34:DH:116:GLU:HA	2.49	0.43
13:CM:86:CYS:HA	19:CS:73:GLU:O	2.18	0.43
27:BA:2619:C:OP1	31:BE:152:LYS:HE3	2.18	0.43
27:DA:1405:U:H2'	27:DA:1406:U:C6	2.53	0.43
1:CA:784:C:C4	1:CA:799:G:N1	2.87	0.43
1:CA:1428:A:C6	1:CA:1429:C:N4	2.87	0.43
1:CA:256:U:C2	1:CA:257:G:C8	3.06	0.43
18:CR:66:LEU:O	18:CR:70:ILE:N	2.51	0.43
27:DA:1332:G:C5'	27:DA:1333:C:OP2	2.63	0.43
13:CM:45:VAL:C	13:CM:47:ASP:H	2.21	0.43
27:DA:622:G:O2'	27:DA:623:G:H5'	2.19	0.43
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.18	0.43
17:AQ:9:VAL:HA	17:AQ:55:ASP:O	2.18	0.43
42:DT:92:GLY:O	42:DT:94:ALA:N	2.43	0.43
1:CA:422:C:H5'	1:CA:423:G:OP1	2.18	0.43
27:DA:2228:G:P	30:DD:263:ARG:HH12	2.41	0.43
1:CA:1400:C:O4'	22:CV:6:G:C6	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1895:C:H2'	27:DA:1896:G:O4'	2.18	0.43
1:AA:1434:A:H2'	1:AA:1435:G:H5'	2.00	0.43
27:BA:1477:A:C4	27:BA:1515:G:N2	2.87	0.43
2:CB:19:HIS:CE1	2:CB:205:ASP:OD1	2.71	0.43
29:DC:56:GLN:NE2	29:DC:173:ALA:HB1	2.34	0.43
27:BA:2748:A:C8	27:BA:2754:U:O4	2.72	0.43
34:BH:71:LEU:H	34:BH:74:ASN:ND2	2.15	0.43
27:BA:563:G:C2	27:BA:564:C:C4	3.07	0.43
27:DA:2027:G:C4	27:DA:2028:U:C6	3.07	0.43
27:DA:2036:C:C6	27:DA:2036:C:H5'	2.54	0.43
1:CA:787:A:O2'	1:CA:788:U:H5'	2.19	0.43
40:BR:13:HIS:O	40:BR:16:HIS:N	2.43	0.43
27:BA:2731:G:O5'	27:BA:2731:G:C8	2.69	0.43
25:AY:14:A:C8	25:AY:21:A:N6	2.87	0.43
43:BU:85:LYS:HD3	43:BU:117:GLN:NE2	2.32	0.43
28:DB:103:G:C2'	28:DB:104:U:H5'	2.49	0.43
1:CA:1465:C:O2'	1:CA:1466:C:H5'	2.19	0.43
27:BA:1300:U:H1'	27:BA:1626:G:C2	2.54	0.43
27:DA:1525:G:O2'	27:DA:1526:G:H5'	2.18	0.43
20:CT:42:GLN:HG3	20:CT:43:LEU:HD23	2.01	0.43
50:B1:3:LYS:HG3	50:B1:4:VAL:HG12	2.00	0.43
27:DA:776:G:H1'	27:DA:793:A:C2	2.54	0.43
27:DA:1450(A):C:H2'	27:DA:1451:C:C6	2.54	0.43
27:BA:769:G:O2'	27:BA:770:G:H5'	2.18	0.43
1:AA:1106:G:H2'	1:AA:1107:C:H6	1.83	0.43
9:AI:10:ARG:HD3	9:AI:75:ASP:HB3	2.00	0.43
27:BA:2405:G:O2'	27:BA:2411:A:N6	2.51	0.43
1:CA:125:U:H2'	1:CA:126:G:C8	2.52	0.43
27:DA:1835:G:C5'	27:DA:1836:C:OP2	2.66	0.43
13:AM:114:ARG:HG2	13:AM:114:ARG:HH11	1.83	0.43
17:AQ:86:GLU:OE1	17:AQ:86:GLU:HA	2.19	0.43
1:AA:1051:C:H6	1:AA:1051:C:O5'	2.01	0.43
15:AO:44:LYS:HB2	15:AO:44:LYS:HE3	1.79	0.43
45:BW:2:GLU:HA	45:BW:107:LEU:O	2.19	0.43
27:BA:2393:A:C2'	27:BA:2394:C:H5'	2.48	0.43
27:BA:252:G:H2'	27:BA:253:C:C6	2.52	0.43
27:BA:819:A:H2	27:BA:943:U:O4'	2.02	0.43
38:BP:47:ASP:CB	38:BP:48:PRO:CA	2.88	0.43
40:BR:44:LEU:HD13	40:BR:44:LEU:C	2.38	0.43
28:BB:43:C:C4	28:BB:45:A:N6	2.86	0.43
27:BA:2294:C:OP1	41:BS:92:TYR:HE1	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BF:7:TYR:HB3	32:BF:16:GLY:H	1.84	0.43
37:BO:88:ASN:ND2	37:BO:90:GLN:OE1	2.51	0.43
36:DN:97:ARG:HA	36:DN:100:GLU:HG3	2.01	0.43
27:DA:195:A:C8	27:DA:197:A:OP1	2.71	0.43
13:CM:23:TYR:HE1	13:CM:71:ARG:CA	2.31	0.43
31:BE:57:LYS:C	31:BE:59:VAL:HG12	2.39	0.43
31:BE:59:VAL:CG2	31:BE:60:ASN:N	2.52	0.43
27:BA:538:G:H5'	36:BN:5:VAL:HG21	2.00	0.43
27:DA:413:C:O2'	27:DA:1880:C:H1'	2.18	0.43
17:AQ:67:LYS:O	17:AQ:68:ARG:HB3	2.19	0.43
8:AH:17:THR:C	8:AH:20:TYR:H	2.20	0.43
27:DA:985:C:C6	27:DA:986:C:H5	2.36	0.43
47:DY:28:LYS:CA	47:DY:38:ILE:HB	2.48	0.43
27:DA:2428:G:H4'	27:DA:2429:G:C8	2.53	0.43
27:DA:626:U:H5'	27:DA:627:A:C5'	2.49	0.43
27:BA:2467:C:H2'	27:BA:2468:G:O4'	2.18	0.43
46:DX:47:PHE:C	46:DX:48:LYS:HD2	2.38	0.43
13:CM:14:ARG:HB2	13:CM:41:PRO:O	2.19	0.43
30:BD:101:GLU:OE1	30:BD:103:ARG:CD	2.57	0.43
47:BY:11:ASP:O	47:BY:27:VAL:N	2.51	0.43
47:BY:30:VAL:HG22	47:BY:37:VAL:HG12	2.00	0.43
1:AA:976:G:OP1	14:AN:32:SER:N	2.51	0.43
48:BZ:75:LEU:HA	48:BZ:75:LEU:HD22	1.79	0.43
1:CA:397:A:C2'	1:CA:399:G:OP2	2.64	0.43
1:AA:297:G:C5	1:AA:299:G:OP2	2.72	0.43
27:BA:910:A:C6	39:BQ:13:GLN:NE2	2.86	0.43
41:DS:40:ILE:O	41:DS:42:ASP:OD1	2.36	0.43
27:BA:587:C:C6	27:BA:587:C:O5'	2.57	0.43
2:AB:97:TRP:CZ2	2:AB:173:ALA:HA	2.54	0.43
1:AA:1073:U:OP2	5:AE:57:LYS:HE3	2.18	0.43
27:BA:951:C:N4	27:BA:952:G:O6	2.52	0.43
46:BX:18:TYR:C	46:BX:20:GLY:N	2.72	0.43
31:DE:9:VAL:CG2	31:DE:10:GLY:N	2.81	0.43
1:CA:965:A:C5'	1:CA:966:G:OP1	2.66	0.43
27:DA:2693:A:H2'	27:DA:2694:G:H8	1.84	0.43
27:BA:2197:U:C4	27:BA:2224:G:C2	3.06	0.43
27:BA:1801:G:OP2	30:BD:154:LYS:HE2	2.18	0.43
27:DA:543:C:N3	27:DA:551:G:C2	2.86	0.43
1:CA:533:A:C6	1:CA:536:C:C4	3.07	0.43
1:CA:1354:C:H2'	1:CA:1355:G:H8	1.83	0.43
48:DZ:94:PRO:CB	48:DZ:126:LYS:NZ	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DQ:29:PHE:HB3	39:DQ:30:GLY:H	1.43	0.43
48:DZ:78:ARG:H	48:DZ:78:ARG:HD2	1.82	0.43
38:BP:91:PHE:N	38:BP:91:PHE:CD1	2.86	0.43
38:BP:97:PRO:C	38:BP:99:LEU:H	2.12	0.43
27:DA:1623:G:O2'	27:DA:1624:G:H5'	2.19	0.43
1:AA:1158:C:O3'	2:AB:133:LYS:NZ	2.52	0.43
32:BF:130:ALA:O	32:BF:132:VAL:N	2.52	0.43
36:BN:130:HIS:O	36:BN:132:ALA:N	2.51	0.43
51:B2:9:GLN:OE1	51:B2:56:GLN:HG2	2.19	0.43
51:B2:28:LYS:CB	51:B2:57:ILE:HD12	2.48	0.43
27:BA:92:A:O2'	27:BA:93:G:H8	2.01	0.43
13:CM:83:ASP:OD2	13:CM:83:ASP:N	2.50	0.43
39:BQ:31:ASP:N	39:BQ:106:VAL:O	2.49	0.43
48:BZ:99:VAL:O	48:BZ:101:LEU:HD13	2.19	0.43
35:DI:100:ALA:O	35:DI:101:LEU:HB2	2.18	0.43
2:CB:97:TRP:CE3	2:CB:97:TRP:O	2.71	0.43
27:BA:2694:G:C2'	27:BA:2695:C:O5'	2.66	0.43
36:BN:30:ILE:HD13	36:BN:54:VAL:CG2	2.49	0.43
19:CS:4:SER:O	19:CS:5:LEU:HB3	2.17	0.43
1:AA:1285:A:C5'	1:AA:1286:A:C8	2.99	0.43
1:AA:1286:A:H2	21:AU:22:ARG:HH21	1.65	0.43
1:CA:453:A:C6	1:CA:454:C:C4	3.07	0.43
15:AO:62:GLN:NE2	15:AO:66:LEU:CD1	2.82	0.43
31:DE:173:VAL:O	31:DE:174:ASP:O	2.37	0.43
23:CW:20:A:C2	23:CW:47:C:C2	3.06	0.43
27:DA:2469:A:N6	27:DA:2481:G:C1'	2.82	0.43
27:BA:1109:C:H5	27:BA:1110:G:C5	2.36	0.43
26:AZ:5:UAL:C	26:AZ:6:5OH:HS	2.49	0.43
27:DA:1648:C:C2	27:DA:2010:G:N2	2.86	0.43
27:DA:1237:A:C2	27:DA:1238:G:N3	2.82	0.43
47:DY:46:LYS:N	47:DY:62:GLU:CD	2.72	0.43
1:AA:189(B):C:N4	1:AA:189(I):G:H1	2.17	0.43
33:BG:26:GLN:O	33:BG:28:VAL:N	2.49	0.43
32:DF:141:ALA:O	32:DF:144:LYS:CB	2.61	0.43
1:CA:1097:C:H2'	1:CA:1097:C:O2	2.18	0.43
1:CA:629:G:N2	1:CA:630:G:N3	2.67	0.43
27:BA:1722:A:N1	27:BA:1740:G:C8	2.77	0.43
50:B1:52:ARG:CG	50:B1:53:VAL:N	2.81	0.43
1:CA:328:C:C2'	1:CA:328:C:O2	2.66	0.43
2:AB:161:ALA:HA	2:AB:182:ILE:HG22	2.01	0.43
27:BA:341:G:N1	27:BA:342:G:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:705:U:H5	1:AA:706:A:C5	2.36	0.43
27:BA:1750:G:N2	27:BA:1751:C:C2	2.87	0.43
18:AR:32:ARG:HH11	18:AR:65:ILE:HD13	1.84	0.43
1:AA:1097:C:O2	1:AA:1169:A:H2	2.01	0.43
13:CM:115:LYS:O	13:CM:117:VAL:HG23	2.18	0.43
40:BR:76:VAL:HG13	40:BR:77:ARG:N	2.34	0.43
1:CA:1288:A:C6	1:CA:1289:A:C5	3.07	0.43
1:AA:1248:A:C2'	1:AA:1249:C:C5'	2.97	0.43
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.18	0.43
1:CA:445:G:H1	1:CA:489:C:N4	2.13	0.43
46:DX:5:TYR:HD1	46:DX:5:TYR:H	1.66	0.43
47:DY:6:HIS:CD2	47:DY:35:TYR:CE1	3.07	0.43
1:AA:321:A:N7	1:AA:328:C:O2'	2.48	0.43
1:CA:878:G:H1'	8:CH:3:THR:HG21	2.01	0.43
27:BA:302:C:H2'	27:BA:303:U:H6	1.82	0.43
27:BA:563:G:C6	27:BA:564:C:N4	2.87	0.43
27:BA:564:C:O2	27:BA:1253:A:H2	2.01	0.43
54:B5:33:CYS:O	54:B5:34:PRO:C	2.57	0.43
36:DN:19:GLU:HB2	36:DN:59:LYS:HB3	2.00	0.43
35:BI:45:LYS:HA	35:BI:48:GLU:HG3	2.01	0.43
6:CF:5:GLU:O	6:CF:90:VAL:HA	2.19	0.43
25:CY:71:A:H2'	25:CY:72:G:O4'	2.19	0.43
29:BC:72:VAL:HG11	29:BC:161:ILE:HA	2.00	0.43
34:DH:86:GLU:HB2	34:DH:132:ARG:HH11	1.84	0.43
1:AA:159:G:H21	1:AA:161:A:H3'	1.84	0.43
48:BZ:127:VAL:HG22	48:BZ:128:SER:N	2.34	0.43
27:DA:2432:A:C5	27:DA:2433:A:C5	3.07	0.43
27:BA:224:G:N7	27:BA:420:C:H4'	2.34	0.43
49:D0:65:GLY:HA3	49:D0:81:VAL:HG12	2.01	0.43
28:DB:12:C:H6	28:DB:12:C:OP2	2.01	0.43
27:BA:1015:G:H5''	27:BA:1015:G:C8	2.51	0.43
27:DA:280:C:N4	27:DA:361:G:C6	2.85	0.43
27:BA:1231:G:H2'	27:BA:1232:G:C8	2.54	0.43
6:CF:80:ARG:H	6:CF:80:ARG:HG2	1.63	0.43
33:BG:145:THR:OG1	33:BG:147:ASP:CG	2.57	0.43
27:BA:2460:U:C2'	27:BA:2461:C:H5'	2.49	0.43
27:DA:1223:G:H5'	27:DA:1224:C:OP2	2.18	0.43
27:DA:882:G:H2'	27:DA:883:G:C8	2.54	0.43
5:CE:72:GLN:O	5:CE:73:ASN:HB3	2.18	0.43
17:CQ:40:LYS:HD3	17:CQ:42:TYR:CE2	2.54	0.43
27:DA:190:A:C4	27:DA:207:A:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AX:43:A:C2	24:AX:44:A:C2	3.06	0.43
57:B8:8:LYS:HG3	57:B8:12:LYS:HE3	2.01	0.43
27:BA:2833:G:HO2'	27:BA:2834:G:P	2.42	0.43
40:BR:87:TYR:O	40:BR:88:ARG:C	2.56	0.43
32:BF:113:ALA:O	32:BF:116:ASP:HB3	2.18	0.43
32:BF:124:LEU:O	32:BF:193:VAL:HA	2.19	0.43
27:BA:615:G:O2'	32:BF:205:ARG:NH2	2.51	0.43
47:BY:95:LYS:HG2	47:BY:100:ALA:CA	2.47	0.43
37:BO:14:THR:HG22	37:BO:15:GLY:N	2.33	0.43
1:CA:502:G:N1	1:CA:544:G:C2	2.87	0.43
4:CD:60:GLU:O	4:CD:63:LYS:N	2.52	0.43
13:CM:25:ILE:HD11	13:CM:66:LEU:HB3	1.99	0.43
43:BU:90:VAL:HG11	44:BV:40:LEU:CD2	2.43	0.43
44:BV:18:LEU:CD1	44:BV:18:LEU:N	2.82	0.43
44:BV:52:VAL:HG22	44:BV:55:ALA:CB	2.49	0.43
42:BT:16:ARG:H	42:BT:79:HIS:CD2	2.31	0.43
42:BT:109:GLU:O	42:BT:112:ARG:HB2	2.19	0.43
43:DU:95:LEU:HA	43:DU:95:LEU:HD23	1.80	0.43
43:DU:98:LEU:HD21	44:DV:2:PHE:CZ	2.54	0.43
51:D2:45:SER:O	51:D2:46:GLN:NE2	2.52	0.43
27:DA:1858:G:C2	27:DA:1883:G:C2	3.07	0.43
38:DP:64:LYS:HB3	57:D8:25:MET:CG	2.48	0.43
27:DA:2287:A:O2'	27:DA:2288:A:P	2.77	0.43
33:DG:18:GLU:O	33:DG:22:ARG:HG3	2.18	0.43
27:BA:2298:A:N3	27:BA:2299:G:H1'	2.33	0.43
27:DA:2056:G:C5	27:DA:2577:A:C8	3.06	0.43
27:DA:2022:U:O2'	27:DA:2617:C:H5'	2.19	0.43
27:DA:1673:U:O4	31:DE:129:HIS:HD2	2.02	0.43
31:DE:150:VAL:O	31:DE:152:LYS:N	2.52	0.43
1:AA:154:C:C2	1:AA:168:G:N2	2.87	0.43
20:AT:32:ALA:O	20:AT:33:ILE:C	2.57	0.43
39:BQ:109:VAL:HG12	39:BQ:110:THR:N	2.33	0.43
34:BH:54:ARG:HD2	34:BH:56:SER:O	2.18	0.43
1:CA:198:G:O2'	1:CA:199:G:H5'	2.19	0.43
1:AA:1358:U:C5	1:AA:1359:C:C4	3.06	0.43
14:AN:40:CYS:O	14:AN:42:ILE:N	2.52	0.43
19:AS:32:LYS:HB2	19:AS:32:LYS:HE3	1.88	0.43
19:AS:49:ILE:HG22	19:AS:50:ALA:N	2.34	0.43
1:CA:250:A:C1'	1:CA:252:U:C6	3.02	0.43
1:CA:276:G:H2'	1:CA:277:C:H5'	2.01	0.43
17:CQ:56:VAL:HB	17:CQ:78:GLU:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BD:44:ASN:HB2	30:BD:45:ASN:H	1.68	0.43
2:AB:113:HIS:C	2:AB:115:LEU:H	2.22	0.43
1:CA:741:G:H2'	1:CA:742:G:O4'	2.18	0.43
2:CB:96:ARG:N	2:CB:96:ARG:CD	2.74	0.43
34:BH:156:ALA:CB	34:BH:159:GLU:HB3	2.48	0.43
27:BA:372:G:H5'	50:B1:66:HIS:NE2	2.34	0.43
1:CA:718:G:N2	18:CR:49:LYS:NZ	2.54	0.43
1:CA:1057:G:C6	1:CA:1204:A:C2	3.06	0.43
5:CE:53:LEU:HD12	5:CE:53:LEU:N	2.26	0.43
15:CO:79:ARG:C	15:CO:81:LEU:N	2.72	0.43
8:CH:6:ILE:HG23	8:CH:10:LEU:HD12	2.00	0.43
25:AY:63:C:H2'	25:AY:64:G:H8	1.78	0.43
1:CA:648:A:N1	1:CA:649:G:C6	2.86	0.43
27:BA:2544:G:C4	27:BA:2545:G:C8	3.07	0.43
27:BA:2646:C:C4	27:BA:2647:U:C5	3.07	0.43
31:DE:111:ARG:O	31:DE:112:GLY:O	2.36	0.43
40:DR:11:ASN:OD1	40:DR:12:ARG:N	2.52	0.43
27:DA:856:C:H6	27:DA:856:C:H5''	1.84	0.43
55:B6:9:LEU:HD21	55:B6:11:LEU:HD23	2.00	0.43
12:AL:116:LYS:O	12:AL:117:TYR:CB	2.63	0.43
33:DG:46:ALA:CA	33:DG:51:ARG:HG3	2.49	0.43
1:AA:619:U:O2	4:AD:133:VAL:HA	2.18	0.43
31:BE:144:ARG:O	31:BE:148:GLY:HA2	2.19	0.43
30:BD:146:GLU:HA	30:BD:152:GLY:O	2.18	0.43
7:CG:77:SER:O	7:CG:78:ARG:CB	2.66	0.43
1:AA:824:C:O2'	1:AA:825:G:H5'	2.19	0.43
37:DO:53:LYS:O	37:DO:54:GLU:C	2.57	0.43
51:B2:28:LYS:O	51:B2:29:LYS:C	2.57	0.43
27:DA:760:G:C2'	27:DA:761:A:H5'	2.48	0.43
27:BA:1596:A:C3'	27:BA:1597:A:H5'	2.48	0.43
27:DA:2302:G:C6	27:DA:2303:G:C5	3.07	0.43
28:DB:45:A:H2'	28:DB:46:A:C5'	2.49	0.43
33:DG:126:ASP:C	33:DG:128:ARG:N	2.71	0.43
39:BQ:27:VAL:HG23	39:BQ:137:TYR:CE1	2.53	0.43
27:BA:2355:C:O5'	27:BA:2355:C:H6	2.01	0.43
27:BA:729:G:H8	27:BA:764:A:OP1	2.02	0.43
1:CA:340:U:H2'	1:CA:341:C:C6	2.54	0.43
37:DO:11:ALA:CB	37:DO:64:ARG:HH21	2.30	0.43
27:BA:2717:G:H2'	27:BA:2718:G:O4'	2.18	0.43
27:BA:2657:A:C4	27:BA:2665:A:C6	3.07	0.43
27:BA:1222:C:H2'	27:BA:1223:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DR:71:GLN:HE21	40:DR:71:GLN:HB2	1.63	0.43
45:DW:26:GLY:N	45:DW:71:VAL:HB	2.25	0.43
27:DA:1216:G:N1	27:DA:1234:U:C2	2.87	0.43
24:AX:2:G:C4	24:AX:3:C:C5	3.07	0.43
1:CA:737:A:OP1	6:CF:91:VAL:HG13	2.19	0.43
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.18	0.43
32:BF:160:ASN:ND2	32:BF:162:LEU:HB2	2.29	0.43
27:BA:116:C:C2'	27:BA:117:G:O5'	2.67	0.43
32:DF:132:VAL:O	32:DF:133:ASN:O	2.37	0.43
1:CA:862:C:O2'	1:CA:874:G:H5''	2.18	0.43
34:DH:158:HIS:HE2	34:DH:170:ARG:C	2.22	0.43
36:DN:85:ILE:HG12	36:DN:89:LYS:HB3	2.00	0.43
13:CM:88:ARG:O	13:CM:98:VAL:HG11	2.19	0.43
27:DA:2542:A:H8	27:DA:2544:G:O6	2.02	0.43
10:AJ:8:LEU:HD21	10:AJ:96:ILE:HG22	1.99	0.43
1:AA:768:A:N3	1:AA:1512:U:O2'	2.49	0.43
4:AD:173:TRP:HB3	4:AD:187:ARG:NH1	2.33	0.43
38:BP:138:LEU:O	38:BP:139:LYS:C	2.57	0.43
1:CA:409:G:H2'	1:CA:410:G:O4'	2.19	0.43
27:BA:2720:U:H5'	27:BA:2721:A:OP2	2.18	0.43
36:BN:36:GLY:N	36:BN:42:TRP:HZ3	2.17	0.43
13:CM:36:LYS:C	13:CM:38:GLY:N	2.70	0.43
7:CG:26:PHE:CD2	7:CG:62:PHE:CE1	3.07	0.43
12:CL:114:ARG:HH21	12:CL:121:LYS:N	2.17	0.43
27:BA:319:C:H2'	27:BA:320:A:C8	2.54	0.43
38:BP:123:LEU:O	38:BP:123:LEU:HD12	2.18	0.43
30:DD:265:PRO:C	30:DD:267:SER:H	2.22	0.43
27:DA:1815:A:HO2'	27:DA:1816:G:C5'	2.32	0.43
20:CT:16:HIS:CG	20:CT:16:HIS:O	2.71	0.43
27:BA:1450(A):C:H2'	27:BA:1451:C:H6	1.83	0.43
1:CA:1147:C:HO2'	9:CI:5:TYR:HH	1.67	0.43
9:CI:17:VAL:CG1	9:CI:81:ILE:HD13	2.49	0.43
27:DA:1049:C:O2'	27:DA:1050:A:C8	2.65	0.43
29:DC:56:GLN:OE1	29:DC:56:GLN:O	2.37	0.43
43:DU:5:LYS:HG2	43:DU:7:GLY:N	2.31	0.43
37:BO:75:SER:O	37:BO:76:ALA:CB	2.67	0.43
27:BA:121:G:C8	27:BA:121:G:C5'	3.01	0.43
37:BO:59:LYS:NZ	37:BO:89:ASN:HD21	2.17	0.43
56:B7:45:ALA:C	56:B7:46:VAL:HG23	2.39	0.43
39:BQ:36:ALA:C	39:BQ:37:LEU:HD22	2.38	0.43
27:DA:272(E):G:C2	27:DA:272(F):C:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:219:C:H2'	1:AA:220:G:O4'	2.19	0.43
2:CB:119:GLU:O	2:CB:122:PHE:HB3	2.18	0.43
1:AA:148:G:H2'	1:AA:149:A:H8	1.83	0.43
1:CA:431:A:H3'	1:CA:432:A:H8	1.83	0.43
39:DQ:47:ILE:HG22	39:DQ:48:GLU:N	2.34	0.43
51:B2:45:SER:O	51:B2:46:GLN:NE2	2.51	0.43
5:AE:69:VAL:HA	5:AE:70:PRO:HD3	1.80	0.43
17:CQ:92:ARG:O	17:CQ:93:GLN:C	2.56	0.43
27:BA:2823:A:O2'	27:BA:2824:C:H5'	2.19	0.43
1:AA:905:U:C5	1:AA:906:G:C5	3.07	0.43
27:BA:2294:C:OP1	41:BS:92:TYR:CE1	2.71	0.43
1:CA:1075:C:H4'	1:CA:1101:A:N6	2.34	0.43
27:DA:1967:C:H2'	27:DA:1968:G:H5'	2.00	0.43
31:BE:75:VAL:O	31:BE:76:ARG:C	2.57	0.43
43:BU:91:ASP:C	43:BU:91:ASP:OD2	2.57	0.43
43:BU:90:VAL:CG1	43:BU:91:ASP:N	2.73	0.43
27:DA:400:G:O5'	27:DA:400:G:H8	2.01	0.43
43:DU:52:ARG:HD3	43:DU:55:ARG:NE	2.33	0.43
43:DU:94:ASN:C	43:DU:94:ASN:OD1	2.57	0.43
44:DV:19:LYS:HG2	44:DV:94:LEU:O	2.19	0.43
1:CA:525:C:H5''	12:CL:88:LYS:HZ1	1.83	0.43
11:AK:32:ILE:O	11:AK:40:ILE:HG12	2.18	0.43
27:DA:2787:C:H2'	27:DA:2787:C:O2	2.18	0.43
27:DA:2253:G:O2'	27:DA:2254:C:H5'	2.18	0.43
27:DA:2346:A:C5	27:DA:2383:G:C6	3.07	0.43
27:DA:2611:U:O2	54:D5:3:LYS:HE3	2.18	0.43
27:DA:1191:G:N3	27:DA:1192:G:C8	2.87	0.43
27:DA:529:A:C5	27:DA:2042:A:C2	3.07	0.43
27:DA:2548:G:C2'	27:DA:2549:G:O5'	2.67	0.43
27:DA:2582:G:H2'	27:DA:2583:G:H8	1.83	0.43
27:DA:746:A:C8	27:DA:2612:C:OP1	2.72	0.43
27:DA:2616:C:H2'	27:DA:2617:C:H6	1.84	0.43
31:DE:116:VAL:CG2	31:DE:122:PHE:HB2	2.48	0.43
31:DE:116:VAL:HG23	31:DE:122:PHE:CG	2.53	0.43
36:BN:91:LEU:CD2	36:BN:98:VAL:HG21	2.49	0.43
45:BW:7:ALA:O	45:BW:102:HIS:HA	2.19	0.43
27:DA:2778:A:H4'	27:DA:2779:U:OP2	2.19	0.43
47:DY:18:GLY:O	47:DY:20:TYR:N	2.51	0.43
4:CD:133:VAL:HG21	4:CD:138:TYR:CE1	2.54	0.43
20:CT:87:LYS:C	20:CT:89:ARG:N	2.72	0.43
9:AI:49:PRO:HG2	9:AI:81:ILE:HG21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D2:4:SER:HA	51:D2:7:ARG:NH1	2.05	0.43
51:D2:4:SER:O	51:D2:7:ARG:CG	2.67	0.43
1:AA:1055:A:C5	1:AA:1206:G:C2	3.07	0.43
1:AA:975:A:H5''	1:AA:1365:G:H22	1.82	0.43
1:AA:1375:A:C5	1:AA:1376:U:C4	3.07	0.43
14:AN:44:LEU:HG	14:AN:45:ARG:N	2.34	0.43
8:AH:127:LEU:HD13	8:AH:127:LEU:C	2.39	0.43
1:CA:549:C:H2'	1:CA:550:G:O4'	2.19	0.43
19:AS:28:LYS:HD3	19:AS:28:LYS:HA	1.66	0.43
27:DA:2759:G:N2	34:DH:139:GLN:OE1	2.51	0.43
1:AA:1306:A:N6	1:AA:1331:G:O2'	2.51	0.43
27:BA:1785:A:N7	27:BA:1787:A:C5	2.87	0.43
27:BA:775:G:C4	27:BA:794:G:C8	3.06	0.43
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	2.01	0.43
27:BA:745:G:C2'	27:BA:746:A:H5'	2.49	0.43
1:AA:452:A:H4'	16:AP:72:ARG:NH2	2.34	0.43
46:BX:18:TYR:O	46:BX:20:GLY:N	2.52	0.43
20:CT:67:ALA:O	20:CT:73:HIS:CG	2.72	0.43
1:CA:1063:C:C5	1:CA:1064:G:C4	3.06	0.43
1:CA:716:A:H1'	11:CK:117:ASN:O	2.19	0.43
1:CA:1055:A:N1	1:CA:1056:U:C2	2.87	0.43
1:AA:1432:G:OP2	42:BT:108:ARG:NH1	2.52	0.43
15:CO:74:ASP:O	15:CO:75:PRO:C	2.57	0.43
56:D7:47:ARG:O	56:D7:48:LYS:HD3	2.18	0.43
27:DA:1619:G:H2'	27:DA:1620:G:H8	1.84	0.43
33:BG:45:GLU:HB3	33:BG:53:LEU:HG	1.99	0.43
27:BA:1268:A:H2'	27:BA:1269:A:O4'	2.19	0.43
27:DA:1650:G:C2	27:DA:1651:G:N9	2.87	0.43
27:DA:1651:G:H21	27:DA:1652:A:H1'	1.84	0.43
27:DA:1651:G:H1	27:DA:2006:C:H42	1.67	0.43
30:BD:241:PRO:O	30:BD:242:ARG:HD3	2.18	0.43
24:CX:19:G:C5'	24:CX:20:U:C5	3.00	0.43
1:AA:824:C:H2'	1:AA:825:G:C8	2.53	0.43
54:B5:49:CYS:C	54:B5:50:GLY:O	2.57	0.43
27:DA:1246:A:OP1	38:DP:18:ARG:HD3	2.19	0.43
34:DH:94:TYR:CD2	34:DH:107:VAL:HG12	2.53	0.43
30:BD:213:ARG:O	30:BD:214:TRP:C	2.56	0.43
7:AG:155:ARG:O	7:AG:156:TRP:CD1	2.72	0.43
11:AK:54:ARG:NH1	25:AY:39:C:OP1	2.52	0.43
8:AH:14:ARG:HG3	8:AH:18:ARG:HH11	1.84	0.43
27:DA:743:G:H2'	27:DA:744:G:H5'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2657:A:C6	27:BA:2665:A:C8	3.07	0.43
1:CA:1315:U:HO2'	1:CA:1360:A:H1'	1.82	0.43
27:DA:2816:C:O2	27:DA:2883:A:O2'	2.36	0.43
1:AA:660:G:C2	1:AA:746:A:C2	3.06	0.43
15:AO:62:GLN:HE21	15:AO:66:LEU:CD1	2.31	0.43
27:BA:2406:U:C4	38:BP:72:PRO:HD2	2.54	0.43
1:AA:1264:C:O2	1:AA:1271:G:N2	2.49	0.43
27:DA:784:A:C8	27:DA:792:G:C5	3.07	0.43
27:DA:1649:G:N2	27:DA:2009:G:C4	2.87	0.43
18:AR:36:ASN:HB2	18:AR:39:VAL:HG23	2.01	0.43
27:DA:28:A:H2'	27:DA:29:U:H5'	2.01	0.43
1:CA:671:G:N2	1:CA:736:C:C2	2.87	0.43
1:AA:681:C:N3	1:AA:710:G:C6	2.87	0.43
1:CA:811:C:H5	1:CA:812:C:C4	2.37	0.43
27:DA:2657:A:O2'	34:DH:160:LYS:HE3	2.19	0.43
27:DA:345:A:O2'	27:DA:347:A:N7	2.51	0.43
13:AM:96:LEU:HD21	13:AM:111:LYS:CD	2.49	0.43
27:BA:2449:U:O5'	27:BA:2449:U:H6	2.02	0.43
1:CA:1151:A:H5'	10:CJ:41:PRO:HA	2.01	0.43
32:BF:167:ALA:O	32:BF:168:ARG:C	2.57	0.43
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.81	0.43
28:DB:28:C:N4	28:DB:29:A:N6	2.67	0.43
1:AA:197:A:N6	1:AA:221:C:C5'	2.81	0.43
1:CA:945:G:H2'	1:CA:945:G:N3	2.33	0.43
38:DP:88:LEU:HD13	38:DP:114:ILE:HD11	2.00	0.43
8:CH:86:ILE:CG2	8:CH:87:SER:N	2.79	0.43
38:BP:122:PRO:HA	38:BP:141:ALA:O	2.19	0.43
5:AE:91:LEU:HA	5:AE:91:LEU:HD12	1.80	0.43
1:CA:9:G:O2'	1:CA:10:A:O4'	2.37	0.43
27:BA:340:A:C2'	27:BA:341:G:O5'	2.66	0.43
4:AD:68:TYR:O	4:AD:69:GLY:C	2.57	0.43
27:BA:1848:A:C2'	27:BA:1849:G:C8	2.98	0.43
27:BA:1321:A:C8	27:BA:1321:A:H5''	2.54	0.43
13:CM:48:LEU:HB2	13:CM:52:GLU:CB	2.48	0.43
12:AL:7:LEU:HB3	17:AQ:32:TYR:CE1	2.54	0.43
1:CA:1409:C:H2'	1:CA:1410:G:H8	1.84	0.43
27:BA:1453:U:P	40:BR:77:ARG:HH11	2.42	0.43
27:BA:864:G:H1'	27:BA:914:C:N4	2.33	0.43
27:DA:1816:G:C6	30:DD:37:LEU:HD11	2.53	0.43
32:BF:170:LEU:HA	32:BF:171:PRO:HD3	1.69	0.43
27:DA:289:A:H5''	27:DA:290:G:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:792:A:H1'	1:AA:794:A:N7	2.34	0.43
51:B2:17:SER:H	51:B2:67:LYS:NZ	2.17	0.43
33:DG:104:GLU:HG2	53:D4:50:THR:CG2	2.49	0.43
1:AA:321:A:C6	1:AA:333:G:N1	2.86	0.43
19:CS:27:GLU:HB3	19:CS:28:LYS:H	1.45	0.43
2:CB:131:PRO:C	2:CB:135:GLN:HG3	2.39	0.43
27:DA:211:A:H2'	27:DA:212:G:C8	2.54	0.43
27:BA:147:U:H2'	27:BA:148:C:H6	1.82	0.43
7:CG:156:TRP:CG	7:CG:156:TRP:OXT	2.69	0.43
1:CA:1171:G:O2'	1:CA:1172:C:H5'	2.19	0.43
1:CA:362:G:C8	1:CA:362:G:H3'	2.54	0.43
7:AG:22:LEU:HD13	7:AG:97:GLN:HE21	1.82	0.43
27:DA:1362:C:C2'	27:DA:1363:C:H5'	2.49	0.43
2:CB:112:VAL:CG1	2:CB:153:ARG:HG2	2.48	0.43
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.18	0.43
27:BA:2192:G:C6	27:BA:2193:G:N7	2.87	0.43
27:BA:299:A:C4	27:BA:322:A:C2	3.07	0.43
50:D1:94:LEU:HA	50:D1:94:LEU:HD23	1.68	0.43
1:AA:678:U:H2'	1:AA:679:C:C6	2.53	0.43
27:DA:2774:C:H2'	27:DA:2775:A:O4'	2.19	0.43
34:DH:169:VAL:O	34:DH:169:VAL:HG13	2.18	0.43
9:CI:23:ASN:N	9:CI:23:ASN:HD22	2.16	0.43
48:DZ:138:VAL:HG12	48:DZ:139:ASP:N	2.34	0.43
32:DF:160:ASN:C	32:DF:162:LEU:H	2.22	0.43
27:BA:2822:G:OP2	31:BE:110:GLY:HA3	2.18	0.43
10:CJ:53:PRO:HG2	10:CJ:54:PHE:H	1.84	0.43
14:CN:57:ARG:HG2	14:CN:58:LYS:H	1.81	0.43
27:BA:2838:G:C1'	40:BR:45:ARG:NH1	2.82	0.43
40:BR:21:TYR:CZ	40:BR:43:GLU:HG2	2.54	0.43
40:BR:87:TYR:O	40:BR:90:ARG:N	2.52	0.43
32:BF:8:GLN:HB2	32:BF:124:LEU:HD11	2.00	0.43
32:BF:21:ALA:O	32:BF:24:LEU:N	2.49	0.43
31:BE:24:THR:HG21	31:BE:188:VAL:HB	2.01	0.43
27:DA:1022:G:O2'	27:DA:1023:U:O5'	2.36	0.43
36:DN:98:VAL:O	36:DN:102:ALA:HB2	2.18	0.43
27:DA:1827:C:H5'	27:DA:1972:A:OP2	2.19	0.43
27:DA:1926:U:O2'	27:DA:1928:A:N7	2.37	0.43
27:DA:1968:G:H2'	27:DA:1969:A:H5''	1.98	0.43
13:CM:60:VAL:HG12	13:CM:66:LEU:HD21	2.01	0.43
27:BA:477:A:H2'	27:BA:478:A:O4'	2.19	0.43
1:CA:1348:U:H2'	1:CA:1349:A:C8	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.84	0.43
1:CA:473:G:C5'	16:CP:81:ARG:HE	2.32	0.43
43:BU:88:ILE:C	43:BU:90:VAL:N	2.73	0.43
1:AA:236:G:O2'	1:AA:237:C:H5'	2.19	0.43
5:AE:16:THR:OG1	5:AE:17:ALA:N	2.51	0.43
43:DU:65:ILE:O	43:DU:68:ALA:HB3	2.19	0.43
27:BA:2704:C:H2'	27:BA:2705:A:O4'	2.19	0.43
30:DD:130:ALA:C	30:DD:131:LEU:HD12	2.39	0.43
52:B3:53:LEU:O	52:B3:54:VAL:HG23	2.19	0.43
51:D2:23:LYS:O	51:D2:25:VAL:N	2.52	0.43
33:BG:138:GLN:HB2	33:BG:155:MET:HE2	2.01	0.43
27:DA:860:U:C2	27:DA:2268:A:C8	3.07	0.43
31:DE:65:GLY:O	31:DE:67:PHE:O	2.37	0.43
27:DA:2417:C:H2'	27:DA:2418:A:H8	1.84	0.43
38:DP:105:LEU:O	38:DP:106:LEU:CB	2.54	0.43
33:DG:27:ASN:C	33:DG:29:TRP:H	2.21	0.43
27:DA:1668:A:H2	27:DA:1670:C:N3	2.17	0.43
27:DA:948:G:H2'	27:DA:949:C:H6	1.81	0.43
30:BD:31:LYS:O	30:BD:32:SER:C	2.57	0.43
4:CD:111:ALA:HA	4:CD:116:GLN:OE1	2.19	0.43
4:CD:170:VAL:CG1	4:CD:174:LEU:HB2	2.49	0.43
9:AI:81:ILE:C	9:AI:83:ARG:H	2.22	0.43
9:AI:6:GLY:HA2	9:AI:83:ARG:HG2	2.01	0.43
1:AA:1054:C:OP1	1:AA:1198:G:OP2	2.36	0.43
8:AH:44:PHE:HB3	8:AH:80:ILE:HG12	1.99	0.43
1:CA:363:A:O2'	1:CA:364:A:H5'	2.19	0.43
1:CA:33:A:N3	12:CL:29:PHE:HE2	2.17	0.43
2:AB:47:THR:O	2:AB:51:LEU:HG	2.18	0.43
32:BF:89:VAL:CG1	32:BF:90:PHE:N	2.77	0.43
1:CA:563:A:C2'	1:CA:567:G:C8	3.02	0.43
27:BA:1645:G:H4'	27:BA:1646:C:C6	2.53	0.43
27:BA:2742:C:P	58:B9:35:ARG:NH1	2.92	0.43
27:BA:751:A:C4'	45:BW:90:ARG:HG2	2.48	0.43
1:AA:483:C:OP2	1:AA:484:G:H3'	2.18	0.43
1:AA:751:U:C4'	15:AO:24:SER:CA	2.92	0.43
1:CA:232:G:HO2'	1:CA:263:A:H2	1.67	0.43
20:CT:63:ILE:HD13	20:CT:80:ARG:HB2	2.01	0.43
42:BT:23:ARG:NH2	42:BT:120:ARG:HD3	2.33	0.43
40:BR:79:LEU:CA	40:BR:83:ILE:HG13	2.32	0.43
30:DD:52:ARG:HB2	30:DD:53:PHE:CE2	2.54	0.43
11:CK:120:ARG:HE	11:CK:120:ARG:HB2	1.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1053:G:C2	1:CA:1199:U:C4	3.07	0.43
48:DZ:95:VAL:CG1	48:DZ:96:GLU:N	2.82	0.43
27:BA:624:C:H41	38:BP:107:LYS:HZ3	1.66	0.43
38:BP:126:VAL:HG12	38:BP:148:LEU:HD11	2.00	0.43
1:CA:747:C:C5	1:CA:748:C:N3	2.87	0.43
8:CH:29:SER:HB3	8:CH:32:LYS:CG	2.46	0.43
1:CA:754:C:O4'	15:CO:69:TYR:CD1	2.72	0.43
56:D7:46:VAL:CG1	56:D7:48:LYS:NZ	2.82	0.43
1:AA:443:C:C2	1:AA:492:G:C2	3.07	0.43
1:AA:1157:A:O4'	1:AA:1158:C:C2	2.72	0.43
1:AA:876:G:C4	1:AA:877:C:C5	3.07	0.43
27:DA:663:G:C6	27:DA:664:C:C4	3.07	0.43
33:DG:166:ASP:O	33:DG:170:ARG:N	2.50	0.43
27:DA:1484:G:N2	27:DA:1505:C:N4	2.67	0.43
7:AG:152:ALA:HB1	7:AG:155:ARG:HH12	1.84	0.43
5:CE:45:PHE:C	5:CE:45:PHE:CD1	2.92	0.43
42:DT:125:ARG:O	42:DT:128:GLU:CG	2.67	0.43
27:DA:2340:G:H2'	27:DA:2341:G:H8	1.82	0.43
1:AA:816:A:HO2'	1:AA:817:C:P	2.41	0.43
1:AA:818:G:H3'	1:AA:819:A:H5'	1.99	0.43
31:DE:16:ARG:O	31:DE:18:ASP:N	2.43	0.43
12:CL:3:THR:O	12:CL:4:ILE:C	2.57	0.43
27:DA:1210:A:OP1	27:DA:1212:G:H5'	2.18	0.43
30:BD:4:LYS:HE3	30:BD:21:PHE:CE1	2.54	0.43
27:BA:2462:U:H2'	27:BA:2463:C:C6	2.54	0.43
15:AO:34:LEU:C	15:AO:36:ILE:N	2.72	0.43
25:CY:37:U:H2'	25:CY:38:U:C5'	2.48	0.43
1:AA:828:A:H61	1:AA:858:G:H2'	1.84	0.43
27:DA:1984:G:O2'	27:DA:1985:G:C5'	2.62	0.43
28:DB:70:C:O2'	28:DB:71:C:H5'	2.18	0.43
27:DA:456:C:O2'	27:DA:457:A:OP2	2.32	0.43
23:CW:17:G:H1'	23:CW:56:G:N2	2.34	0.43
23:CW:56:G:C2'	23:CW:57:A:C5'	2.96	0.43
1:AA:1067:A:O3'	1:AA:1094:G:OP1	2.37	0.43
27:BA:52:A:C5	27:BA:118:A:C2	3.07	0.43
4:AD:98:GLU:HA	4:AD:103:ASN:HD22	1.84	0.43
43:BU:12:ARG:HB3	43:BU:15:LYS:NZ	2.33	0.43
27:DA:55:G:N3	27:DA:56:A:C8	2.87	0.43
27:DA:1333:C:O2'	27:DA:1334:G:H5'	2.19	0.43
31:BE:146:THR:HA	31:BE:147:PRO:C	2.39	0.43
28:DB:20:C:H2'	28:DB:21:G:C5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:151:LEU:HD21	8:AH:66:GLY:HA2	2.00	0.43
27:BA:1467:C:C4	27:BA:1546:C:O2	2.72	0.43
12:CL:38:ARG:CZ	12:CL:38:ARG:CB	2.96	0.43
1:CA:989:C:H2'	1:CA:990:C:H6	1.83	0.43
27:BA:528:A:O5'	27:BA:528:A:H8	2.01	0.43
27:DA:2363:C:C2	27:DA:2364:C:C5	3.07	0.43
27:BA:1207:C:H2'	27:BA:1208:C:C6	2.53	0.43
27:BA:10:G:O6	27:BA:2629:A:H8	2.02	0.43
32:BF:82:ILE:O	32:BF:82:ILE:HG12	2.18	0.43
1:CA:442:C:H3'	1:CA:442:C:H6	1.84	0.43
1:CA:27:G:C4'	4:CD:209:ARG:OXT	2.67	0.43
44:DV:5:VAL:HG23	44:DV:37:VAL:HG21	1.97	0.43
34:DH:64:LEU:O	34:DH:68:THR:CB	2.67	0.43
2:CB:189:ASP:N	2:CB:189:ASP:OD1	2.51	0.43
54:D5:37:LYS:HG3	54:D5:38:ALA:N	2.33	0.43
20:AT:14:LYS:HA	20:AT:17:ARG:NE	2.33	0.43
1:CA:878:G:C6	1:CA:879:C:C4	3.07	0.43
17:CQ:22:LEU:HD11	17:CQ:39:SER:OG	2.19	0.43
27:BA:1654:A:OP2	40:BR:3:HIS:CB	2.65	0.43
25:CY:14:A:H1'	25:CY:21:A:N1	2.33	0.43
6:CF:41:GLU:HB2	6:CF:62:TRP:CE3	2.54	0.43
6:CF:22:GLU:OE1	6:CF:84:ASN:HB2	2.19	0.43
27:BA:947:G:N2	27:BA:971:C:C2	2.87	0.43
25:CY:42:G:H8	25:CY:42:G:OP2	2.01	0.43
27:BA:833:U:H2'	27:BA:834:C:C6	2.52	0.43
27:DA:1611:C:H5'	27:DA:1611:C:C6	2.52	0.43
27:DA:2301:C:C6	27:DA:2301:C:H3'	2.52	0.43
10:AJ:32:ALA:CB	10:AJ:75:ILE:HD11	2.49	0.43
10:CJ:89:ASP:C	10:CJ:90:LEU:HD12	2.40	0.43
1:CA:876:G:OP1	8:CH:14:ARG:NH1	2.52	0.43
45:DW:35:ILE:O	54:D5:28:PRO:HG3	2.18	0.43
20:CT:40:ALA:C	20:CT:42:GLN:N	2.72	0.43
33:BG:55:LYS:HZ3	33:BG:148:MET:C	2.23	0.43
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	2.00	0.43
19:AS:79:THR:O	19:AS:80:TYR:CB	2.67	0.43
27:BA:2245:U:H5'	27:BA:2246:G:H5'	2.00	0.43
27:BA:1221(A):C:C2	27:BA:1229:G:N2	2.87	0.43
58:D9:9:ARG:HG3	58:D9:9:ARG:H	1.44	0.43
45:DW:70:TYR:C	45:DW:70:TYR:CD2	2.92	0.43
51:D2:39:ALA:O	51:D2:42:GLY:N	2.45	0.43
9:AI:37:PHE:HB3	9:AI:40:LEU:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:42:ILE:H	14:CN:42:ILE:HG12	1.54	0.42
27:BA:2831:G:H1'	27:BA:2883:A:H2'	2.00	0.42
57:D8:7:HIS:ND1	57:D8:7:HIS:C	2.72	0.42
48:DZ:156:LEU:HD22	48:DZ:162:LEU:HD12	2.01	0.42
43:BU:92:ARG:CZ	44:BV:11:GLN:HB2	2.48	0.42
27:DA:223:A:H2	27:DA:407:G:N3	2.17	0.42
42:BT:16:ARG:HH22	42:BT:82:LEU:CD1	2.32	0.42
1:AA:266:G:O2'	1:AA:267:C:OP2	2.31	0.42
27:DA:992:C:H6	27:DA:992:C:H3'	1.84	0.42
47:DY:76:CYS:C	47:DY:78:ALA:N	2.72	0.42
57:D8:37:SER:OG	57:D8:39:LYS:HB3	2.19	0.42
39:DQ:85:LYS:HG3	49:D0:7:LEU:CG	2.49	0.42
33:DG:172:LEU:O	33:DG:176:LEU:HG	2.19	0.42
27:DA:2454:G:C2'	27:DA:2455:G:H5'	2.49	0.42
27:DA:2570:G:H2'	27:DA:2571:C:O4'	2.18	0.42
31:DE:179:GLU:OE1	31:DE:179:GLU:HA	2.19	0.42
27:DA:2637:U:H4'	31:DE:44:TYR:CD1	2.54	0.42
30:BD:31:LYS:HB3	30:BD:35:LYS:CG	2.45	0.42
1:AA:1346:A:C5	7:AG:10:ARG:CZ	3.02	0.42
12:CL:25:LYS:C	12:CL:27:ALA:H	2.23	0.42
27:DA:2746:U:O4'	34:DH:139:GLN:HA	2.19	0.42
28:DB:51:G:H5'	28:DB:52:A:OP2	2.19	0.42
27:BA:1249:U:C5'	27:BA:1249:U:C6	2.90	0.42
1:CA:252:U:C4	1:CA:253:U:O4	2.72	0.42
17:CQ:83:ASP:O	17:CQ:87:LYS:HG2	2.19	0.42
27:BA:1822:G:N1	27:BA:1823:G:C5	2.87	0.42
27:BA:2590:A:H2'	27:BA:2591:C:C6	2.54	0.42
27:BA:687:C:C2	27:BA:788:A:H5'	2.54	0.42
1:CA:161:A:O2'	1:CA:162:A:H5'	2.19	0.42
2:CB:57:PHE:O	2:CB:61:LEU:N	2.42	0.42
1:CA:122:G:O3'	1:CA:312:C:H4'	2.19	0.42
1:AA:390:C:O5'	1:AA:390:C:H6	2.01	0.42
1:CA:1038:C:H6	1:CA:1038:C:O5'	2.02	0.42
46:BX:12:VAL:HG11	46:BX:27:THR:HG23	2.01	0.42
27:DA:2536:G:H2'	27:DA:2537:U:C6	2.53	0.42
27:BA:1555:G:C2	27:BA:1556:C:C4	3.07	0.42
27:DA:13:A:C4	27:DA:15:G:O6	2.72	0.42
27:DA:14:A:C6	27:DA:526:A:C2	3.06	0.42
14:CN:26:ARG:HG3	14:CN:27:CYS:H	1.84	0.42
14:CN:26:ARG:CZ	14:CN:47:LEU:HD21	2.49	0.42
8:AH:97:VAL:C	8:AH:99:GLU:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:34:VAL:CG1	10:AJ:73:ASP:O	2.66	0.42
15:CO:87:ILE:CG2	15:CO:88:ARG:H	2.12	0.42
8:CH:83:ILE:O	8:CH:83:ILE:HG12	2.18	0.42
27:DA:151:C:H2'	27:DA:152:G:H5'	1.98	0.42
38:BP:82:GLY:HA2	38:BP:113:LYS:O	2.19	0.42
29:DC:36:LYS:NZ	29:DC:36:LYS:HA	2.34	0.42
49:B0:37:LEU:HD11	49:B0:61:ALA:N	2.34	0.42
33:BG:51:ARG:HA	33:BG:53:LEU:HD23	2.01	0.42
27:BA:2283:C:C3'	27:BA:2284:C:H5'	2.47	0.42
1:AA:402:G:C2'	1:AA:403:C:H5'	2.48	0.42
10:CJ:32:ALA:CB	10:CJ:76:ASN:CB	2.92	0.42
30:BD:68:LYS:CE	30:BD:70:TRP:NE1	2.82	0.42
1:AA:1240:U:H3'	1:AA:1241:G:C5'	2.48	0.42
1:AA:1239:A:H1'	1:AA:1241:G:C5	2.53	0.42
27:DA:593:G:C6	27:DA:594:U:C4	3.07	0.42
27:BA:73:A:O2'	27:BA:74:A:P	2.77	0.42
17:AQ:56:VAL:CG2	17:AQ:81:ARG:HG3	2.49	0.42
52:D3:47:VAL:O	52:D3:50:VAL:HG22	2.18	0.42
13:AM:15:VAL:C	13:AM:17:VAL:H	2.22	0.42
27:DA:2850:A:C4	27:DA:2851:A:C8	3.07	0.42
37:DO:12:ASP:OD1	37:DO:86:ILE:CD1	2.67	0.42
25:CY:7:A:N6	25:CY:48:C:C4	2.82	0.42
27:BA:2657:A:H2'	27:BA:2658:C:H5'	2.01	0.42
1:CA:453:A:C5	1:CA:454:C:C5	3.07	0.42
34:BH:100:GLY:C	34:BH:102:ALA:H	2.21	0.42
27:DA:2879:C:H4'	27:DA:2880:C:C5	2.54	0.42
12:CL:3:THR:CG2	12:CL:6:GLN:HB2	2.47	0.42
45:DW:17:VAL:O	45:DW:18:ARG:C	2.56	0.42
45:DW:17:VAL:O	45:DW:20:VAL:HB	2.18	0.42
45:DW:84:ARG:N	45:DW:96:ILE:O	2.39	0.42
18:AR:37:VAL:HG12	18:AR:78:LEU:HB3	2.01	0.42
6:CF:36:ARG:O	6:CF:65:VAL:HB	2.19	0.42
7:AG:24:THR:O	7:AG:27:ILE:N	2.51	0.42
41:BS:61:ASN:OD1	41:BS:64:GLU:CB	2.67	0.42
1:CA:686:U:N3	1:CA:703:G:N2	2.64	0.42
27:DA:484:C:O2'	27:DA:485:C:H5'	2.19	0.42
27:DA:2199:A:C6	27:DA:2200:C:C2	3.06	0.42
1:AA:495:A:O2'	1:AA:496:A:O5'	2.35	0.42
1:AA:1015:A:N3	1:AA:1218:C:O2'	2.50	0.42
1:AA:1084:G:OP1	1:AA:1086:U:N3	2.52	0.42
1:AA:1087:G:C2	1:AA:1088:G:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BF:37:VAL:HG12	32:BF:41:LEU:HD12	2.01	0.42
27:BA:143:G:H1'	46:BX:37:THR:CG2	2.43	0.42
10:CJ:16:LEU:HD13	10:CJ:70:ARG:NE	2.33	0.42
27:BA:693:C:C2'	27:BA:694:U:H5'	2.49	0.42
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.54	0.42
1:CA:1429:C:O2'	1:CA:1430:C:H5'	2.19	0.42
8:CH:86:ILE:CG2	8:CH:87:SER:H	2.26	0.42
27:DA:2839:G:C5	27:DA:2840:C:C4	3.07	0.42
18:CR:32:ARG:CA	18:CR:69:THR:HG21	2.45	0.42
27:BA:19:C:O5'	27:BA:19:C:H6	2.01	0.42
37:DO:101:PRO:CG	42:DT:67:SER:HB3	2.48	0.42
1:AA:758:G:C5'	1:AA:880:C:H1'	2.49	0.42
9:AI:70:LYS:HA	9:AI:73:GLN:HE21	1.83	0.42
1:CA:407:G:C4	1:CA:408:A:C8	3.06	0.42
12:AL:2:PRO:C	12:AL:6:GLN:HE21	2.21	0.42
36:DN:35:ARG:NH2	36:DN:108:PRO:HG2	2.34	0.42
43:DU:60:LEU:HD13	43:DU:60:LEU:C	2.39	0.42
1:AA:420:U:C2	1:AA:422:C:N3	2.87	0.42
27:DA:1897:G:N1	27:DA:1898:U:C2	2.87	0.42
16:CP:18:ARG:HG3	16:CP:35:LYS:HE3	2.01	0.42
16:CP:18:ARG:O	16:CP:19:ILE:C	2.57	0.42
1:AA:1413:A:C2	1:AA:1488:G:C2	3.07	0.42
5:AE:126:ARG:CG	5:AE:126:ARG:HH11	2.29	0.42
29:BC:193:ILE:O	29:BC:194:ARG:C	2.57	0.42
27:DA:203:C:C3'	27:DA:204:A:H5''	2.45	0.42
2:CB:236:TYR:CD2	2:CB:239:VAL:HG21	2.54	0.42
27:DA:678:C:H2'	27:DA:679:C:C6	2.54	0.42
36:DN:3:THR:C	36:DN:5:VAL:N	2.72	0.42
20:AT:100:ILE:HD12	20:AT:100:ILE:N	2.34	0.42
27:BA:1689:A:H62	27:BA:1698:A:H2	1.66	0.42
27:DA:732:C:C4	27:DA:733:G:C6	3.07	0.42
32:DF:178:PRO:HB3	32:DF:201:VAL:HG11	2.01	0.42
27:BA:2371:G:C4'	55:B6:45:LYS:HB3	2.49	0.42
27:BA:271(Y):U:O2'	27:BA:271(Z):C:P	2.77	0.42
28:DB:4:C:C2	28:DB:118:G:C2	3.07	0.42
10:AJ:25:GLU:H	10:AJ:25:GLU:HG2	1.67	0.42
27:BA:266:G:C2'	27:BA:267:C:O5'	2.67	0.42
27:DA:2439:A:C8	27:DA:2439:A:C5'	3.02	0.42
17:CQ:11:VAL:HG11	17:CQ:88:TYR:CD2	2.54	0.42
28:BB:66:A:C2'	28:BB:67:G:OP2	2.67	0.42
27:DA:1499:C:C2'	27:DA:1500:G:H5'	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.19	0.42
2:AB:130:ARG:HA	2:AB:131:PRO:HD2	1.86	0.42
27:BA:1113:U:H2'	27:BA:1113:U:O2	2.18	0.42
1:CA:972:C:O2'	1:CA:973:G:H5'	2.19	0.42
40:BR:28:LEU:CD2	40:BR:114:VAL:HG12	2.48	0.42
30:DD:245:PRO:O	30:DD:246:PRO:C	2.56	0.42
27:BA:31:C:C2'	27:BA:32:C:H5'	2.49	0.42
4:CD:79:PHE:CD2	4:CD:79:PHE:C	2.92	0.42
1:CA:1305:G:HO2'	1:CA:1306:A:P	2.41	0.42
1:CA:1331:G:OP2	13:CM:23:TYR:CD2	2.72	0.42
32:BF:63:LYS:HG3	32:BF:75:HIS:O	2.19	0.42
1:AA:917:G:C2	1:AA:918:A:C4	3.07	0.42
27:DA:411:G:H4'	27:DA:412:A:O5'	2.19	0.42
32:DF:202:PHE:O	32:DF:205:ARG:N	2.37	0.42
27:DA:2231:C:H2'	27:DA:2232:U:C6	2.54	0.42
27:DA:533:G:H5'	43:DU:24:TYR:HD2	1.84	0.42
43:DU:65:ILE:HG23	43:DU:106:PHE:HZ	1.85	0.42
43:DU:98:LEU:O	43:DU:101:ARG:O	2.37	0.42
41:BS:54:LEU:HD13	41:BS:58:LEU:CB	2.49	0.42
30:DD:144:ALA:HB3	30:DD:192:THR:CG2	2.48	0.42
27:DA:1429:G:C4	27:DA:1568:G:C2	3.06	0.42
12:CL:87:VAL:O	12:CL:88:LYS:C	2.56	0.42
27:BA:1158:C:H1'	52:B3:32:GLN:HG3	2.01	0.42
27:DA:909:A:N1	27:DA:912:C:H1'	2.34	0.42
55:D6:17:LYS:HD3	55:D6:17:LYS:HA	1.66	0.42
27:DA:2351:G:O2'	27:DA:2366:A:N6	2.52	0.42
27:DA:2016:U:H1'	54:D5:6:VAL:HG13	2.00	0.42
27:DA:530:G:C5	27:DA:2022:U:H5''	2.54	0.42
27:DA:2060:A:O2'	27:DA:2061:G:P	2.77	0.42
44:DV:79:VAL:HG22	44:DV:79:VAL:O	2.19	0.42
1:CA:1137:C:C4'	1:CA:1138:G:N2	2.73	0.42
45:BW:12:ILE:CD1	45:BW:17:VAL:HG12	2.48	0.42
4:AD:9:CYS:N	4:AD:22:LYS:NZ	2.57	0.42
30:BD:31:LYS:O	30:BD:33:LEU:N	2.53	0.42
1:CA:102:G:C4	1:CA:103:C:C5	3.07	0.42
1:CA:184:G:C4'	1:CA:224:C:H4'	2.49	0.42
1:AA:1343:G:H1'	9:AI:121:ARG:HH12	1.84	0.42
14:AN:24:CYS:N	14:AN:33:VAL:CG1	2.82	0.42
16:AP:31:LYS:HG2	16:AP:32:TYR:N	2.34	0.42
41:DS:61:ASN:O	41:DS:62:LYS:CB	2.68	0.42
1:CA:157:G:H2'	1:CA:158:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1645:G:O3'	27:BA:1646:C:H6	2.01	0.42
27:DA:2647:U:H2'	27:DA:2648:C:H6	1.84	0.42
9:CI:125:TYR:C	9:CI:125:TYR:CD2	2.93	0.42
1:CA:144:G:H2'	1:CA:145:G:O4'	2.20	0.42
3:CC:73:PRO:O	3:CC:75:VAL:N	2.51	0.42
27:BA:1558:A:O2'	27:BA:1559:G:OP2	2.30	0.42
6:CF:3:ARG:NH1	6:CF:38:GLU:OE1	2.52	0.42
27:DA:541:C:C4	27:DA:542:C:N4	2.87	0.42
1:CA:1310:G:C2	1:CA:1328:C:N3	2.86	0.42
1:CA:1311:G:N1	1:CA:1312:G:C5	2.87	0.42
27:BA:2842:G:H2'	27:BA:2843:G:O4'	2.20	0.42
39:DQ:111:GLU:OE2	39:DQ:133:ARG:NH2	2.52	0.42
38:BP:105:LEU:N	38:BP:105:LEU:CD2	2.77	0.42
1:CA:922:G:N3	1:CA:1398:A:H2	2.17	0.42
27:DA:355:G:H2'	27:DA:356:G:O4'	2.19	0.42
27:DA:1394:U:C4	27:DA:1395:A:C5	3.07	0.42
27:BA:1268:A:C2	27:BA:2013:A:C4	3.07	0.42
27:BA:642:G:H21	27:BA:646:A:H2	1.66	0.42
31:DE:119:ARG:HG2	31:DE:160:TYR:CG	2.54	0.42
1:AA:1157:A:H1'	1:AA:1181:G:H21	1.84	0.42
11:CK:124:LYS:HE3	11:CK:124:LYS:HB2	1.54	0.42
3:AC:113:ALA:O	3:AC:116:VAL:N	2.52	0.42
10:CJ:32:ALA:H	10:CJ:76:ASN:HD22	1.67	0.42
19:CS:49:ILE:O	19:CS:60:VAL:HG12	2.19	0.42
34:DH:107:VAL:HG23	34:DH:107:VAL:O	2.19	0.42
33:DG:122:PRO:HG2	33:DG:123:ASN:OD1	2.19	0.42
52:D3:46:ASN:O	52:D3:47:VAL:C	2.58	0.42
35:DI:123:LEU:HD23	35:DI:142:VAL:HG12	2.01	0.42
13:AM:17:VAL:O	13:AM:21:TYR:HD1	2.01	0.42
1:AA:939:G:C5'	7:AG:102:ARG:NH1	2.77	0.42
1:CA:54:C:N4	1:CA:353:A:OP2	2.52	0.42
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.18	0.42
16:CP:68:ASP:HA	16:CP:71:ARG:CD	2.49	0.42
30:DD:176:ARG:CG	30:DD:177:LEU:N	2.82	0.42
8:CH:114:THR:N	8:CH:117:GLY:O	2.51	0.42
10:AJ:63:PHE:HA	14:AN:59:ALA:H	1.82	0.42
27:BA:1049:C:N4	27:BA:1111:A:C2	2.87	0.42
27:DA:494:G:H4'	45:DW:6:ILE:HG22	2.00	0.42
27:DA:1206:G:O2'	27:DA:1207:C:C5'	2.67	0.42
27:BA:2018:G:H2'	27:BA:2019:A:C8	2.54	0.42
27:BA:235:U:H2'	27:BA:236:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1242:A:N1	38:BP:8:PRO:HG3	2.35	0.42
52:D3:7:LYS:CE	52:D3:32:GLN:NE2	2.82	0.42
33:BG:172:LEU:O	33:BG:173:LEU:C	2.56	0.42
33:BG:16:ARG:CB	33:BG:17:PRO:CD	2.97	0.42
36:DN:86:PRO:HG2	36:DN:89:LYS:HB2	2.01	0.42
50:B1:90:ILE:HD13	50:B1:90:ILE:HA	1.82	0.42
27:DA:2520:C:N3	27:DA:2521:C:C4	2.87	0.42
9:AI:113:LYS:H	9:AI:119:ALA:HA	1.84	0.42
27:DA:2696:U:H2'	27:DA:2697:G:C8	2.54	0.42
27:DA:2113:U:O2'	27:DA:2114:A:P	2.77	0.42
3:CC:184:TYR:HD1	3:CC:201:TYR:HE2	1.67	0.42
27:BA:723:G:C6	27:BA:724:U:C4	3.06	0.42
6:AF:82:ARG:HD2	6:AF:82:ARG:HA	1.91	0.42
28:BB:88:C:C4	28:BB:89:G:C6	3.08	0.42
1:AA:20:U:C2'	1:AA:21:G:H5'	2.49	0.42
1:AA:1125:U:C2'	1:AA:1126:U:OP2	2.67	0.42
3:CC:140:ARG:HG3	3:CC:140:ARG:HH11	1.83	0.42
11:AK:44:SER:H	11:AK:47:VAL:HB	1.84	0.42
40:BR:37:THR:HA	40:BR:110:PRO:O	2.19	0.42
35:DI:4:ILE:HD11	35:DI:44:LEU:HD12	2.00	0.42
27:DA:1441:G:O2'	27:DA:1442:G:H5'	2.18	0.42
12:AL:2:PRO:O	12:AL:3:THR:C	2.58	0.42
24:CX:63:G:O2'	24:CX:64:G:H5'	2.19	0.42
27:BA:1612:C:H2'	27:BA:1613:G:O5'	2.19	0.42
27:BA:1404:C:O2	27:BA:1404:C:C2'	2.62	0.42
19:CS:22:LEU:O	19:CS:26:GLY:CA	2.67	0.42
35:BI:69:LYS:O	35:BI:73:GLU:CB	2.67	0.42
27:DA:2772:C:C2	27:DA:2773:C:C5	3.07	0.42
27:DA:1327:C:H2'	27:DA:1328:G:C8	2.55	0.42
27:DA:2432:A:H2'	27:DA:2433:A:C8	2.54	0.42
34:DH:16:SER:HB2	34:DH:27:LYS:HB2	2.01	0.42
27:DA:697:C:N4	27:DA:698:C:N4	2.67	0.42
2:AB:8:LYS:O	2:AB:11:LEU:HB2	2.19	0.42
1:CA:1462:G:O2'	1:CA:1463:C:H5'	2.19	0.42
27:BA:445:C:C4	27:BA:446:G:C6	3.07	0.42
27:BA:415:A:H2'	27:BA:415:A:N3	2.35	0.42
27:BA:962:G:H2'	27:BA:963:U:H6	1.84	0.42
27:DA:614(A):U:H5''	27:DA:614(B):G:OP1	2.19	0.42
27:DA:280:C:C5	27:DA:281:G:N7	2.86	0.42
10:CJ:84:GLN:CD	10:CJ:84:GLN:N	2.73	0.42
32:DF:47:GLY:O	32:DF:94:PRO:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DF:46:ARG:O	32:DF:48:THR:N	2.46	0.42
24:CX:62:C:H2'	24:CX:62:C:O2	2.17	0.42
32:BF:187:VAL:O	32:BF:189:THR:N	2.52	0.42
19:CS:79:THR:O	19:CS:80:TYR:CB	2.67	0.42
27:DA:1381:G:C2'	27:DA:1382:G:H5'	2.49	0.42
27:BA:2785:C:H2'	27:BA:2786:U:O4'	2.19	0.42
58:B9:3:VAL:O	58:B9:4:ARG:HB3	2.19	0.42
27:DA:1787:A:N3	27:DA:1787:A:H2'	2.34	0.42
15:CO:67:LEU:HA	15:CO:67:LEU:HD23	1.81	0.42
15:AO:42:HIS:O	15:AO:42:HIS:CG	2.72	0.42
56:B7:29:LYS:O	56:B7:33:ARG:N	2.46	0.42
30:BD:85:ASP:CB	30:BD:92:ILE:HG23	2.49	0.42
27:DA:134:C:H2'	27:DA:135:G:O4'	2.18	0.42
57:B8:11:LYS:N	57:B8:60:LEU:HD21	2.34	0.42
27:BA:817:C:HO2'	27:BA:818:G:H5'	1.83	0.42
38:BP:59:LEU:CA	38:BP:61:ARG:NH2	2.77	0.42
1:CA:983:A:C2'	1:CA:983:A:N3	2.79	0.42
10:CJ:51:ARG:NE	10:CJ:60:ARG:O	2.52	0.42
40:BR:33:ARG:HE	40:BR:115:GLU:CB	2.32	0.42
27:BA:2631:G:C6	27:BA:2632:A:N7	2.88	0.42
32:BF:128:ALA:O	32:BF:129:PHE:C	2.58	0.42
32:BF:178:PRO:HG2	32:BF:179:GLU:CD	2.39	0.42
31:BE:23:VAL:HA	31:BE:184:VAL:O	2.19	0.42
27:DA:1138:G:O2'	36:DN:102:ALA:O	2.38	0.42
38:DP:50:ARG:HD3	57:D8:7:HIS:CD2	2.54	0.42
27:DA:1932:A:H2'	27:DA:1933:G:O4'	2.18	0.42
1:CA:428:G:H4'	1:CA:429:U:O5'	2.18	0.42
4:CD:17:VAL:HG13	4:CD:18:LYS:N	2.34	0.42
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.78	0.42
4:CD:39:PRO:HB2	4:CD:44:GLY:HA2	2.01	0.42
4:CD:72:GLU:O	4:CD:73:ARG:C	2.57	0.42
53:B4:40:ILE:HA	53:B4:57:ILE:HG21	1.99	0.42
38:BP:16:ARG:HG3	38:BP:17:LYS:H	1.84	0.42
31:BE:55:ASN:HA	31:BE:55:ASN:HD22	1.54	0.42
27:BA:996:A:HO2'	27:BA:997:G:P	2.42	0.42
44:BV:62:LEU:HD11	44:BV:95:LEU:HB2	2.02	0.42
8:AH:69:ARG:HH12	8:AH:76:PRO:CA	2.24	0.42
42:BT:65:LYS:CG	42:BT:66:VAL:N	2.80	0.42
44:DV:18:LEU:O	44:DV:19:LYS:HB3	2.18	0.42
44:DV:58:VAL:O	44:DV:59:ALA:HB2	2.20	0.42
44:DV:62:LEU:CD2	44:DV:94:LEU:HA	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1491:G:H5'	30:DD:99:ASP:OD1	2.19	0.42
33:BG:135:LEU:HB2	33:BG:155:MET:HG3	2.01	0.42
33:BG:58:GLN:O	33:BG:62:LEU:HD12	2.19	0.42
31:DE:54:GLN:HA	31:DE:72:VAL:CG1	2.48	0.42
55:D6:34:LEU:HD23	55:D6:34:LEU:HA	1.84	0.42
27:DA:2255:G:O2'	27:DA:2256:G:H5'	2.18	0.42
27:DA:2399:G:C2	27:DA:2418:A:C2	3.06	0.42
27:DA:2420:C:OP2	57:D8:33:ASN:O	2.36	0.42
38:DP:125:VAL:O	38:DP:125:VAL:HG23	2.20	0.42
36:DN:34:LEU:HD11	36:DN:120:LEU:CD2	2.27	0.42
27:DA:1669:A:C2'	27:DA:1670:C:H5'	2.49	0.42
27:DA:1953:A:C2	27:DA:2549:G:N3	2.87	0.42
27:DA:574:C:HO2'	27:DA:2055:C:H5	1.65	0.42
27:DA:746:A:C1'	27:DA:748:G:H21	2.32	0.42
36:BN:93:THR:O	36:BN:94:HIS:CB	2.68	0.42
27:BA:2345:G:OP2	55:B6:39:TYR:HD1	2.02	0.42
45:BW:15:ARG:HA	45:BW:18:ARG:HB2	2.01	0.42
31:DE:44:TYR:O	31:DE:45:THR:C	2.57	0.42
1:AA:406:G:H5'	4:AD:5:ILE:HD13	2.01	0.42
47:DY:67:LEU:HG	47:DY:67:LEU:O	2.19	0.42
27:BA:1491:G:C5	27:BA:1500:G:N2	2.88	0.42
30:BD:72:LYS:CB	30:BD:97:TYR:CE2	3.02	0.42
1:AA:1320:C:H41	19:AS:37:ARG:HB3	1.84	0.42
1:AA:1359:C:O2'	1:AA:1361:G:N7	2.52	0.42
8:AH:26:VAL:CG2	8:AH:27:PRO:N	2.82	0.42
8:AH:56:LYS:HB3	8:AH:58:TYR:HE1	1.84	0.42
23:AW:35:G:C6	23:AW:36:A:C5	3.08	0.42
27:DA:2748:A:H62	27:DA:2754:U:H3	1.65	0.42
27:DA:2749:A:C1'	34:DH:63:SER:OG	2.68	0.42
16:AP:58:TYR:CD1	16:AP:59:TRP:N	2.87	0.42
17:CQ:60:ILE:HG23	17:CQ:61:GLU:O	2.19	0.42
27:BA:2248:C:H3'	27:BA:2249:U:H6	1.85	0.42
45:BW:90:ARG:CB	45:BW:90:ARG:NH1	2.68	0.42
27:BA:1171:G:C5'	27:BA:1173:G:OP2	2.67	0.42
27:DA:2650:U:H2'	27:DA:2651:C:C6	2.53	0.42
45:BW:92:ARG:O	45:BW:93:ALA:CB	2.67	0.42
31:DE:7:VAL:O	31:DE:26:ILE:HA	2.18	0.42
37:BO:3:GLN:HB2	37:BO:4:PRO:HD2	2.02	0.42
42:BT:23:ARG:HB2	42:BT:24:PRO:HD2	1.99	0.42
1:CA:1182:G:H5'	1:CA:1184:G:H5''	2.01	0.42
27:BA:2092:U:HO2'	27:BA:2093:G:P	2.41	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1558:A:N3	27:BA:1558:A:O4'	2.53	0.42
12:AL:74:LEU:CD2	12:AL:104:ALA:HB2	2.49	0.42
27:DA:542:C:H2'	27:DA:542:C:O2	2.18	0.42
1:CA:1198:G:H2'	1:CA:1199:U:O4'	2.19	0.42
1:CA:1216:G:N2	1:CA:1217:C:N3	2.67	0.42
15:CO:78:TYR:O	15:CO:81:LEU:HB3	2.20	0.42
15:CO:83:GLU:C	15:CO:86:GLY:H	2.20	0.42
1:CA:643:C:H2'	1:CA:644:G:H8	1.85	0.42
8:CH:10:LEU:HD13	8:CH:85:ARG:CG	2.48	0.42
29:DC:68:LEU:HD21	29:DC:180:PHE:CB	2.49	0.42
23:AW:6:U:C3'	23:AW:7:A:C5'	2.91	0.42
35:BI:129:THR:O	35:BI:130:TYR:HB2	2.18	0.42
35:BI:98:ALA:O	35:BI:102:SER:N	2.45	0.42
1:AA:443:C:N3	1:AA:491:G:O6	2.52	0.42
27:DA:957:A:N1	27:DA:2459:A:C8	2.87	0.42
27:DA:962:G:H21	39:DQ:83:MET:HE1	1.85	0.42
3:AC:119:ARG:O	3:AC:119:ARG:HG2	2.18	0.42
33:BG:71:THR:O	33:BG:88:ILE:O	2.37	0.42
27:DA:596:G:C2	27:DA:597:U:C2	3.07	0.42
51:B2:2:LYS:O	51:B2:6:VAL:HG23	2.19	0.42
27:BA:1418:G:OP1	27:BA:1588:C:O2'	2.37	0.42
30:BD:13:ARG:HA	30:BD:16:MET:HE3	2.01	0.42
35:BI:37:VAL:HG12	35:BI:38:LEU:H	1.85	0.42
5:CE:40:ARG:NH1	5:CE:40:ARG:HG2	2.34	0.42
23:AW:67:C:H2'	23:AW:68:C:H6	1.83	0.42
1:CA:342:C:H2'	1:CA:343:U:C6	2.54	0.42
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.54	0.42
1:AA:1279:A:H4'	1:AA:1280:A:OP1	2.19	0.42
12:CL:8:VAL:HG11	17:CQ:36:ILE:HG21	2.01	0.42
27:DA:2468:G:N2	27:DA:2481:G:C2'	2.83	0.42
27:DA:2793:G:O2'	27:DA:2794:C:P	2.78	0.42
27:DA:1286:A:C2'	27:DA:1288:U:OP2	2.68	0.42
27:DA:486:C:O2	27:DA:495:G:C2	2.73	0.42
27:DA:1215:G:H1	27:DA:1235:G:H1'	1.84	0.42
27:DA:475:U:O4'	27:DA:509:C:C2	2.73	0.42
47:DY:47:LYS:CD	47:DY:47:LYS:N	2.80	0.42
27:BA:1179:C:O2'	27:BA:1180:C:C5'	2.66	0.42
27:BA:675:A:C6	27:BA:676:A:N6	2.87	0.42
1:CA:577:G:C4	1:CA:816:A:C2	3.06	0.42
27:BA:1204:A:N1	27:BA:1241:A:C2	2.86	0.42
27:BA:1509(B):A:H2'	27:BA:1510:G:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AX:23:C:O2'	24:AX:24:U:H5'	2.19	0.42
27:BA:527:C:O2	27:BA:527:C:O4'	2.36	0.42
27:BA:1028:A:H2'	27:BA:1029:A:C8	2.53	0.42
1:AA:1245:A:C6	1:AA:1293:G:N1	2.87	0.42
1:AA:965:A:O2'	1:AA:966:G:O5'	2.34	0.42
27:DA:2195:C:O2	27:DA:2195:C:H2'	2.19	0.42
28:DB:71:C:C2'	28:DB:72:G:H5'	2.49	0.42
18:CR:65:ILE:O	18:CR:66:LEU:C	2.58	0.42
1:AA:992:U:H1'	1:AA:993:G:N3	2.33	0.42
27:DA:1688:U:O2	27:DA:1700:A:H5'	2.19	0.42
4:CD:88:VAL:HG12	4:CD:90:GLY:H	1.83	0.42
27:BA:2642:G:C2	27:BA:2773:C:N3	2.87	0.42
1:AA:279:A:O2'	1:AA:280:C:P	2.77	0.42
39:DQ:109:VAL:HG13	39:DQ:113:GLN:CB	2.49	0.42
49:D0:49:LYS:CB	49:D0:80:HIS:HB3	2.46	0.42
27:DA:1773:A:O2'	27:DA:1774:C:H5'	2.20	0.42
3:AC:11:ARG:HA	3:AC:14:ILE:HG23	2.01	0.42
28:BB:50:G:OP1	41:BS:63:THR:HG23	2.19	0.42
49:B0:55:ARG:HG3	49:B0:55:ARG:H	1.57	0.42
1:AA:1030(A):G:H1'	1:AA:1031:G:N2	2.33	0.42
27:BA:1654:A:OP2	40:BR:3:HIS:CG	2.72	0.42
6:AF:92:LYS:O	6:AF:93:SER:C	2.58	0.42
27:DA:1685:C:C2'	27:DA:1686:C:H5''	2.47	0.42
1:CA:1402:C:O5'	1:CA:1402:C:H6	2.03	0.42
27:BA:1829:A:H2'	27:BA:1830:C:C5'	2.49	0.42
27:BA:1385:G:O3'	27:BA:1396:U:C5	2.72	0.42
24:CX:66:C:H2'	24:CX:67:C:O4'	2.19	0.42
35:DI:121:LYS:HG3	35:DI:121:LYS:O	2.19	0.42
27:BA:1367:A:C5	27:BA:1368:G:H1'	2.54	0.42
48:DZ:19:ARG:C	48:DZ:21:GLY:N	2.72	0.42
1:AA:293:G:N3	1:AA:293:G:H2'	2.35	0.42
1:CA:22:G:H2'	1:CA:23:C:C6	2.55	0.42
1:CA:153:C:N3	1:CA:169:C:N4	2.67	0.42
1:AA:506:G:H2'	1:AA:507:C:H6	1.84	0.42
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.34	0.42
1:AA:34:C:H6	1:AA:34:C:O5'	2.02	0.42
27:BA:1328:G:H2'	27:BA:1330:C:N4	2.34	0.42
33:BG:145:THR:HG1	33:BG:147:ASP:CG	2.21	0.42
58:D9:22:ARG:HB3	58:D9:23:VAL:H	1.61	0.42
1:CA:189(C):C:N3	1:CA:189(I):G:C2	2.88	0.42
43:DU:117:GLN:O	43:DU:118:GLY:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1554:A:C2	27:BA:1634:A:N6	2.87	0.42
7:AG:109:ASN:HD22	7:AG:109:ASN:N	2.17	0.42
30:DD:198:ASN:CG	30:DD:198:ASN:O	2.58	0.42
55:B6:44:ARG:HA	55:B6:44:ARG:HD3	1.75	0.42
4:CD:120:LEU:HA	4:CD:120:LEU:HD23	1.83	0.42
9:CI:2:GLU:O	9:CI:2:GLU:CD	2.58	0.42
4:AD:121:VAL:HG12	4:AD:134:ASP:HA	2.01	0.42
30:BD:174:ILE:O	30:BD:174:ILE:HG22	2.17	0.42
1:CA:426:G:H4'	4:CD:41:GLY:O	2.19	0.42
42:DT:65:LYS:HZ2	42:DT:65:LYS:HA	1.83	0.42
31:BE:52:LEU:HA	31:BE:53:PRO:HD3	1.85	0.42
31:BE:52:LEU:HD11	42:BT:1:MET:CE	2.48	0.42
1:CA:1372:U:O2'	1:CA:1373:G:H5'	2.19	0.42
1:AA:18:C:H2'	1:AA:19:C:C6	2.54	0.42
43:BU:112:ARG:HG2	43:BU:112:ARG:HH11	1.85	0.42
44:DV:19:LYS:HG3	44:DV:20:LEU:N	2.34	0.42
47:DY:74:PRO:O	47:DY:80:GLY:HA2	2.19	0.42
51:D2:47:ASN:O	51:D2:48:HIS:C	2.56	0.42
51:D2:57:ILE:HD13	51:D2:57:ILE:HA	1.74	0.42
27:DA:873:G:N2	27:DA:905:U:C1'	2.77	0.42
31:DE:72:VAL:O	31:DE:73:GLU:C	2.57	0.42
55:D6:19:ARG:HH11	55:D6:43:CYS:HB2	1.85	0.42
27:DA:2403:C:H2'	27:DA:2404:C:H6	1.83	0.42
27:DA:754:C:H2'	27:DA:755:C:C5	2.54	0.42
27:DA:753:C:O2'	27:DA:754:C:H5'	2.19	0.42
31:DE:82:ARG:HB3	31:DE:83:ASP:H	1.55	0.42
1:CA:102:G:O2'	1:CA:103:C:H5'	2.19	0.42
35:DI:133:HIS:ND1	35:DI:134:PRO:HD2	2.34	0.42
1:AA:1320:C:O2	19:AS:72:GLY:HA3	2.20	0.42
1:AA:1338:G:C6	1:AA:1339:A:C6	3.07	0.42
8:AH:44:PHE:CE2	8:AH:109:ILE:HG22	2.52	0.42
1:AA:27:G:H2'	1:AA:28:G:H8	1.85	0.42
1:AA:227:G:O2'	1:AA:228:A:H5'	2.19	0.42
27:BA:2073:C:H42	27:BA:2436:G:H1	1.68	0.42
1:CA:662:G:C2	1:CA:744:C:C2	3.07	0.42
20:CT:50:GLU:O	20:CT:54:LYS:HB2	2.19	0.42
37:BO:78:ARG:CB	37:BO:78:ARG:HH11	2.16	0.42
40:BR:61:HIS:O	40:BR:65:LEU:HD13	2.19	0.42
1:CA:1059:C:O2'	14:CN:45:ARG:NH2	2.52	0.42
1:CA:1055:A:O2'	3:CC:161:GLU:HG3	2.19	0.42
1:CA:1056:U:H4'	3:CC:163:ALA:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:108:ARG:O	42:BT:108:ARG:HG3	2.19	0.42
1:CA:695:A:H2'	1:CA:696:A:C8	2.54	0.42
27:BA:2870:C:C2'	27:BA:2871:C:C5'	2.85	0.42
27:DA:130:C:C2'	27:DA:131:G:O5'	2.67	0.42
48:DZ:47:PHE:O	48:DZ:48:ARG:O	2.37	0.42
27:BA:2158:A:O2'	27:BA:2159:G:C8	2.68	0.42
27:DA:2126:A:N1	27:DA:2163:C:C4'	2.82	0.42
27:DA:1391:U:O2	27:DA:1394:U:C4	2.71	0.42
27:DA:1612:C:O3'	56:D7:5:TRP:CD1	2.66	0.42
1:AA:445:G:N1	1:AA:446:G:C5	2.87	0.42
27:DA:2335:A:O3'	27:DA:2336:A:H8	2.01	0.42
27:DA:957:A:OP1	39:DQ:76:LYS:NZ	2.43	0.42
1:AA:403:C:HO2'	1:AA:404:U:H5'	1.83	0.42
32:BF:114:VAL:O	32:BF:115:ALA:C	2.58	0.42
8:AH:4:ASP:OD1	8:AH:7:ALA:CB	2.67	0.42
37:DO:52:VAL:O	37:DO:52:VAL:HG13	2.19	0.42
27:BA:89:G:H3'	27:BA:90:U:C5'	2.46	0.42
30:DD:94:LEU:HD23	30:DD:95:LEU:H	1.83	0.42
3:CC:34:LEU:HD23	3:CC:34:LEU:C	2.40	0.42
27:BA:65:C:P	46:BX:71:GLY:HA3	2.59	0.42
6:AF:2:ARG:HB2	6:AF:4:TYR:CE2	2.54	0.42
30:BD:16:MET:O	30:BD:17:THR:HG23	2.19	0.42
27:DA:1666:G:H2'	27:DA:1667:G:O4'	2.19	0.42
42:DT:126:ALA:C	42:DT:128:GLU:N	2.72	0.42
1:CA:1315:U:H2'	1:CA:1316:G:C4'	2.50	0.42
1:AA:1288:A:H1'	1:AA:1352:C:O2'	2.19	0.42
27:DA:1449:A:C6	27:DA:1450:G:C4	3.07	0.42
1:CA:452:A:H1'	16:CP:72:ARG:NH1	2.34	0.42
27:BA:271(V):G:C2	27:BA:271(W):G:H1'	2.54	0.42
27:BA:389:G:O6	38:BP:71:VAL:HB	2.19	0.42
5:CE:105:VAL:HB	5:CE:106:PRO:HD3	1.98	0.42
6:AF:32:ASN:C	6:AF:34:GLY:H	2.23	0.42
27:BA:1044:G:O2'	27:BA:1111:A:N6	2.52	0.42
27:BA:1109:C:C5'	27:BA:1110:G:OP2	2.67	0.42
27:DA:797:C:O5'	27:DA:797:C:H6	2.02	0.42
27:DA:494:G:H4'	45:DW:6:ILE:CG2	2.49	0.42
31:BE:69:LYS:HZ2	31:BE:89:ASP:HA	1.83	0.42
33:BG:119:GLY:C	33:BG:181:ARG:HB2	2.39	0.42
1:CA:671:G:O2'	1:CA:672:U:H5'	2.18	0.42
1:CA:737:A:C2	1:CA:738:C:C2	3.08	0.42
1:CA:874:G:O2'	1:CA:875:C:O5'	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.49	0.42
2:CB:76:GLN:O	2:CB:208:ILE:CG1	2.67	0.42
27:BA:2048:G:H2'	27:BA:2049:G:O5'	2.19	0.42
27:DA:2122:U:H2'	27:DA:2123:G:O4'	2.19	0.42
27:DA:80:G:C2'	27:DA:81:G:H5'	2.49	0.42
1:AA:1226:C:OP1	19:AS:81:ARG:NH1	2.53	0.42
1:AA:592:G:C2	1:AA:593:G:C8	3.07	0.42
27:BA:2873:A:N3	40:BR:6:SER:HB2	2.34	0.42
27:BA:704:G:O2'	27:BA:726:G:N2	2.32	0.42
27:BA:1447:G:C2	27:BA:1465:G:C4	3.07	0.42
27:BA:1465:G:H5'	27:BA:1528:A:H1'	2.01	0.42
27:BA:1466:G:H2'	27:BA:1547:C:C4	2.54	0.42
27:BA:1466:G:N2	27:BA:1547:C:N3	2.67	0.42
12:AL:9:ARG:HB2	12:AL:10:LYS:H	1.57	0.42
30:DD:148:GLU:C	30:DD:189:CYS:SG	2.98	0.42
1:CA:852:G:O2'	1:CA:853:G:H5'	2.20	0.42
2:CB:26:PRO:O	2:CB:28:PHE:N	2.52	0.42
9:AI:69:GLY:C	9:AI:73:GLN:HG3	2.40	0.42
27:BA:495:G:C6	27:BA:496:G:C5	3.08	0.42
29:BC:45:ALA:HA	29:BC:210:ARG:HA	2.01	0.42
10:AJ:26:ALA:CA	10:AJ:29:ARG:HH21	2.32	0.42
25:AY:18:G:C6	27:BA:2112:G:N7	2.87	0.42
27:BA:2145:C:H3'	27:BA:2145:C:C6	2.54	0.42
43:BU:76:TYR:O	43:BU:80:ILE:HG12	2.18	0.42
9:CI:5:TYR:HA	9:CI:17:VAL:O	2.20	0.42
27:BA:268:C:H42	27:BA:424:G:H1	1.66	0.42
31:DE:167:VAL:O	31:DE:168:MET:HG2	2.19	0.42
25:CY:14:A:H2'	25:CY:15:G:O4'	2.19	0.42
27:DA:2873:A:N3	40:DR:6:SER:HB3	2.34	0.42
25:AY:42:G:C2	25:AY:43:C:H1'	2.54	0.42
25:AY:43:C:OP2	25:AY:44:U:O4	2.37	0.42
23:CW:18:G:H1'	23:CW:19:U:C4	2.54	0.42
38:DP:107:LYS:C	38:DP:109:GLY:N	2.72	0.42
39:DQ:122:GLY:HA2	39:DQ:125:LEU:HD12	2.01	0.42
27:DA:2864:G:O2'	27:DA:2865:U:H5'	2.19	0.42
1:CA:1417:G:H2'	1:CA:1482:G:H22	1.84	0.42
28:BB:60:C:H2'	28:BB:61:G:H8	1.84	0.42
27:BA:2008:C:H2'	27:BA:2009:G:H8	1.84	0.42
28:BB:15:A:H5'	28:BB:16:G:C8	2.55	0.42
41:DS:49:VAL:CG1	41:DS:50:SER:N	2.83	0.42
27:BA:1469:A:N6	27:BA:1470:G:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:102:LEU:N	2:AB:102:LEU:HD12	2.34	0.42
6:CF:19:LEU:HG	6:CF:19:LEU:O	2.19	0.42
17:AQ:93:GLN:HB3	17:AQ:93:GLN:HE21	1.63	0.42
1:CA:1399:C:O2	1:CA:1401:G:C6	2.71	0.42
32:BF:117:ARG:NH1	32:BF:189:THR:O	2.51	0.42
27:DA:2358:G:O2'	27:DA:2359:C:H5'	2.20	0.42
46:BX:10:ALA:HA	51:B2:37:PHE:CE1	2.54	0.42
36:BN:38:HIS:ND1	36:BN:39:ARG:HG3	2.34	0.42
48:BZ:104:VAL:O	48:BZ:104:VAL:HG22	2.19	0.42
11:AK:117:ASN:HD22	11:AK:117:ASN:HA	1.68	0.42
43:BU:5:LYS:HB2	43:BU:5:LYS:HE3	1.84	0.42
29:BC:128:GLY:O	29:BC:130:ILE:N	2.43	0.42
27:BA:593:G:O4'	57:B8:4:MET:HE3	2.19	0.42
27:BA:817:C:HO2'	27:BA:839:U:H5''	1.85	0.42
27:BA:838:C:N3	27:BA:839:U:C5	2.87	0.42
10:CJ:47:PHE:CZ	14:CN:37:PHE:HE2	2.37	0.42
32:BF:4:VAL:HG23	32:BF:4:VAL:O	2.20	0.42
30:BD:165:ILE:HG22	30:BD:166:GLN:N	2.35	0.42
27:DA:1792:G:H5''	30:DD:205:VAL:HG13	2.00	0.42
27:DA:1973:G:H2'	27:DA:1974:C:C5	2.53	0.42
1:CA:507:C:O5'	1:CA:508:C:H3'	2.19	0.42
43:BU:111:GLU:OE2	43:BU:111:GLU:HA	2.18	0.42
43:BU:92:ARG:NH2	44:BV:11:GLN:HG3	2.35	0.42
27:DA:408:G:O2'	27:DA:409:C:H5'	2.20	0.42
37:BO:80:ASP:OD2	42:BT:64:ARG:NH2	2.52	0.42
43:DU:105:VAL:O	43:DU:108:GLU:HB2	2.19	0.42
43:DU:33:ARG:O	43:DU:35:ALA:N	2.52	0.42
43:DU:92:ARG:O	43:DU:94:ASN:N	2.50	0.42
44:DV:59:ALA:CB	44:DV:96:ILE:HA	2.44	0.42
12:CL:71:GLY:O	12:CL:72:HIS:HB3	2.19	0.42
47:DY:27:VAL:CG1	47:DY:29:GLU:OE1	2.67	0.42
27:BA:1899:G:C2	27:BA:1903:G:C6	3.07	0.42
11:AK:19:ALA:HA	11:AK:32:ILE:HA	2.01	0.42
11:AK:38:ASN:HA	11:AK:39:PRO:HD3	1.86	0.42
27:BA:1885:A:H3'	27:BA:1886:C:C6	2.54	0.42
55:D6:48:VAL:CG2	55:D6:49:HIS:N	2.82	0.42
27:DA:2366:A:C6	27:DA:2367:G:C4	3.07	0.42
27:DA:632:A:O2'	27:DA:633:A:H5'	2.20	0.42
27:DA:2510:C:O2	27:DA:2510:C:H2'	2.18	0.42
27:DA:2052:G:N2	31:DE:149:ARG:HA	2.17	0.42
36:BN:62:VAL:HG22	36:BN:63:THR:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:229:A:H3'	27:DA:229:A:C8	2.55	0.42
39:BQ:1:MET:SD	39:BQ:2:LEU:N	2.92	0.42
48:DZ:88:PHE:O	48:DZ:90:LEU:CD1	2.68	0.42
30:BD:105:ILE:HD12	30:BD:106:ILE:HG23	2.02	0.42
30:BD:105:ILE:HD12	30:BD:106:ILE:N	2.35	0.42
9:AI:5:TYR:CD2	9:AI:6:GLY:N	2.87	0.42
47:BY:39:VAL:O	47:BY:40:GLU:CB	2.68	0.42
9:AI:115:GLY:HA2	10:AJ:58:ASP:OD1	2.19	0.42
24:AX:31:G:C2	24:AX:40:C:N3	2.87	0.42
1:CA:563:A:O2'	1:CA:567:G:C8	2.71	0.42
7:AG:41:ARG:O	7:AG:45:ASP:N	2.40	0.42
36:DN:132:ALA:O	36:DN:133:GLN:CB	2.66	0.42
27:DA:2733:A:C2	31:DE:203:LYS:HA	2.51	0.42
16:AP:82:GLN:N	16:AP:82:GLN:CD	2.67	0.42
42:BT:76:PHE:HA	42:BT:77:PRO:HD3	1.76	0.42
9:CI:79:LEU:CD2	9:CI:102:LEU:HD22	2.49	0.42
38:DP:13:ASN:ND2	38:DP:14:LYS:HG3	2.34	0.42
12:AL:31:ARG:HE	12:AL:31:ARG:HB3	1.56	0.42
1:AA:555:C:H2'	1:AA:556:C:C6	2.54	0.42
1:CA:1287:A:C2	1:CA:1353:G:H1'	2.53	0.42
31:BE:116:VAL:CG2	31:BE:122:PHE:CD2	3.01	0.42
8:CH:6:ILE:HG22	8:CH:10:LEU:HD12	2.00	0.42
35:BI:102:SER:O	35:BI:106:GLY:HA2	2.19	0.42
35:BI:131:LYS:HD2	35:BI:132:PRO:HD3	2.02	0.42
27:BA:562:U:C2	27:BA:572:A:N7	2.88	0.42
1:AA:498:U:O2'	1:AA:499:A:H8	2.02	0.42
50:B1:63:ALA:C	50:B1:65:SER:N	2.72	0.42
7:AG:120:ILE:HG22	7:AG:124:LEU:CD1	2.48	0.42
37:DO:53:LYS:N	37:DO:53:LYS:CD	2.80	0.42
27:DA:849:A:OP2	27:DA:850:C:H5	2.01	0.42
1:AA:736:C:C5'	18:AR:72:ARG:HE	2.32	0.42
30:BD:210:GLY:HA2	30:BD:213:ARG:CG	2.49	0.42
1:CA:1028:C:H42	1:CA:1034:G:N2	2.09	0.42
1:AA:1138:G:C2	1:AA:1140:C:C4	3.07	0.42
39:DQ:52:VAL:O	39:DQ:55:VAL:HG12	2.20	0.42
4:AD:149:ALA:HB3	4:AD:152:SER:OG	2.18	0.42
27:BA:76:C:H42	27:BA:110:G:H1	1.67	0.42
3:AC:132:ARG:O	3:AC:136:GLN:CB	2.67	0.42
27:BA:491:G:O2'	27:BA:492:A:C5'	2.67	0.42
27:DA:2792:G:O2'	27:DA:2793:G:C8	2.69	0.42
27:DA:2805:G:C2	27:DA:2807:G:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1223:G:C5'	27:BA:1224:C:OP2	2.67	0.42
40:DR:51:LEU:O	40:DR:54:LEU:HB2	2.20	0.42
1:CA:1126:U:H6	1:CA:1126:U:OP1	2.02	0.42
48:BZ:139:ASP:OD2	48:BZ:139:ASP:N	2.52	0.42
29:BC:51:PRO:O	29:BC:52:ARG:C	2.57	0.42
1:CA:811:C:C5	1:CA:812:C:C4	3.08	0.42
5:AE:110:LEU:O	5:AE:111:GLU:C	2.58	0.42
37:BO:103:ALA:O	37:BO:105:GLU:N	2.52	0.42
29:DC:51:PRO:HG3	29:DC:204:ALA:CB	2.42	0.42
50:D1:72:GLU:OE1	50:D1:76:ARG:HD3	2.20	0.42
14:AN:14:PRO:O	14:AN:15:LYS:C	2.56	0.42
4:AD:110:PHE:CE2	4:AD:148:VAL:HG23	2.53	0.42
27:DA:1167:U:H2'	27:DA:1168:G:C8	2.55	0.42
57:D8:21:LYS:HD3	57:D8:48:PHE:CE1	2.54	0.42
27:DA:2544:G:N3	27:DA:2545:G:C8	2.88	0.42
11:CK:53:SER:O	11:CK:55:LYS:N	2.52	0.42
32:BF:56:GLU:OE2	32:BF:93:LYS:NZ	2.42	0.42
38:DP:88:LEU:C	38:DP:90:ARG:H	2.21	0.42
11:CK:15:ALA:HB1	11:CK:78:GLN:HG3	2.01	0.42
1:CA:324:G:OP1	20:CT:70:SER:HB2	2.19	0.42
37:BO:31:LYS:HD3	37:BO:31:LYS:HA	1.91	0.42
27:DA:1629:U:H2'	27:DA:1630:G:C8	2.54	0.42
6:AF:75:LEU:HD23	6:AF:76:ALA:N	2.34	0.42
28:BB:86:G:O2'	28:BB:87:G:H5'	2.19	0.42
3:AC:137:ALA:O	3:AC:141:VAL:HG23	2.20	0.42
11:CK:123:LYS:HA	11:CK:126:ARG:CG	2.47	0.42
11:AK:95:ILE:O	11:AK:96:ARG:C	2.57	0.42
27:BA:1130:U:O2	27:BA:2025:C:H5''	2.20	0.42
48:DZ:107:PRO:CG	48:DZ:116:LEU:HB2	2.50	0.42
27:BA:181:A:C2	27:BA:182:A:N3	2.87	0.42
27:BA:181:A:C2	27:BA:435:C:C5	3.05	0.42
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.19	0.42
1:AA:50:A:H1'	1:AA:52:G:C8	2.54	0.42
27:BA:2144:U:HO2'	27:BA:2145:C:H6	1.65	0.42
1:AA:353:A:H2'	1:AA:354:G:OP2	2.18	0.42
24:AX:63:G:C2	24:AX:64:G:C8	3.08	0.42
51:D2:30:ARG:O	51:D2:33:MET:N	2.53	0.42
47:DY:31:LEU:CB	47:DY:32:PRO:HA	2.49	0.42
9:CI:27:THR:O	9:CI:63:ILE:HB	2.20	0.42
27:BA:1347:G:N3	27:BA:1347:G:H2'	2.34	0.42
24:AX:52:G:O2'	24:AX:53:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BZ:116:LEU:HA	48:BZ:172:ALA:O	2.20	0.42
2:AB:230:VAL:HB	2:AB:231:GLU:H	1.66	0.42
30:BD:263:ARG:CZ	30:BD:263:ARG:HB2	2.49	0.42
27:BA:146:G:C5	27:BA:147:U:C5	3.08	0.42
25:AY:43:C:H2'	25:AY:43:C:O2	2.20	0.42
1:CA:1168:A:H2'	1:CA:1169:A:C8	2.54	0.42
48:BZ:130:ARG:NH1	48:BZ:130:ARG:HG2	2.35	0.42
35:DI:120:ILE:O	35:DI:121:LYS:HB3	2.20	0.42
11:AK:107:SER:OG	18:AR:86:VAL:CG1	2.67	0.42
28:DB:11:C:P	28:DB:12:C:H5	2.43	0.42
1:AA:1007:C:H2'	1:AA:1008:C:H6	1.84	0.42
40:DR:93:GLY:C	40:DR:95:THR:N	2.73	0.42
27:BA:521:G:H2'	27:BA:522:G:H8	1.82	0.42
27:DA:1478:G:OP1	27:DA:1478:G:H4'	2.18	0.42
27:BA:370:G:O2'	27:BA:371:A:OP1	2.28	0.42
32:DF:152:GLU:O	32:DF:154:VAL:HG23	2.18	0.42
18:AR:47:THR:HA	18:AR:83:GLU:O	2.19	0.42
27:BA:2644:G:H2'	27:BA:2645:G:O4'	2.19	0.42
27:BA:290:G:O2'	27:BA:291:C:H5'	2.19	0.42
27:BA:2232:U:O2'	27:BA:2233:U:H5'	2.20	0.42
6:AF:45:LEU:O	6:AF:46:ARG:HG2	2.18	0.42
45:BW:69:LEU:HD22	45:BW:107:LEU:HB3	2.01	0.42
3:CC:151:VAL:HG12	3:CC:152:ILE:N	2.34	0.42
1:AA:1030:C:C5	1:AA:1032:G:N2	2.88	0.42
5:AE:67:VAL:HG22	5:AE:68:GLU:N	2.34	0.42
38:DP:75:ILE:CG2	38:DP:76:LYS:N	2.81	0.42
1:CA:248:C:O2	1:CA:248:C:H2'	2.20	0.42
27:BA:251:A:H2'	27:BA:252:G:C4'	2.49	0.42
10:CJ:51:ARG:HG3	10:CJ:60:ARG:HA	2.01	0.42
10:CJ:63:PHE:CD2	10:CJ:63:PHE:N	2.88	0.42
41:BS:14:VAL:CG1	41:BS:15:ARG:H	2.25	0.42
30:BD:166:GLN:HB3	30:BD:174:ILE:CG2	2.48	0.42
27:DA:1796:U:O2'	27:DA:1797:C:H5'	2.20	0.42
1:CA:507:C:C2'	1:CA:508:C:C5	3.00	0.42
4:CD:77:ASN:O	4:CD:78:LEU:C	2.56	0.42
33:BG:95:ARG:O	33:BG:96:ARG:O	2.37	0.42
38:BP:18:ARG:HB3	38:BP:18:ARG:NH1	2.34	0.42
27:BA:479:A:H4'	27:BA:480:A:H5'	2.01	0.42
27:BA:500:G:N2	27:BA:502:A:H3'	2.34	0.42
47:BY:60:PHE:CA	47:BY:62:GLU:OE2	2.67	0.42
32:BF:66:PRO:HD2	32:BF:70:THR:CG2	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:132:ALA:C	5:AE:134:ALA:H	2.23	0.42
27:BA:355:G:C5	27:BA:356:G:N7	2.88	0.42
42:BT:89:VAL:HG11	42:BT:91:ARG:NE	2.35	0.42
44:DV:12:TYR:O	44:DV:14:VAL:HG13	2.19	0.42
52:B3:11:SER:HA	52:B3:31:LEU:HD21	2.01	0.42
27:DA:94:C:O2	27:DA:94:C:H2'	2.18	0.42
27:DA:868:U:H2'	27:DA:869:G:O4'	2.20	0.42
27:DA:907:U:H6	27:DA:907:U:C5'	2.33	0.42
31:DE:54:GLN:HB2	31:DE:55:ASN:H	1.48	0.42
55:D6:27:LYS:HB3	55:D6:29:ASN:OD1	2.20	0.42
27:DA:2069:G:C2'	27:DA:2070:G:H5'	2.49	0.42
39:DQ:85:LYS:HG3	49:D0:7:LEU:HB3	2.01	0.42
27:DA:669:G:H2'	27:DA:669:G:N3	2.35	0.42
27:DA:942:G:H5''	38:DP:36:LYS:O	2.19	0.42
55:B6:15:GLU:CD	55:B6:18:ARG:HG3	2.40	0.42
1:CA:1069:C:H42	1:CA:1106:G:H1	1.67	0.42
30:BD:31:LYS:CE	30:BD:33:LEU:HD22	2.33	0.42
1:CA:383:A:H2'	1:CA:384:G:C5'	2.49	0.42
42:DT:35:LYS:CE	42:DT:41:ARG:HE	2.32	0.42
1:CA:373:A:N3	1:CA:374:A:C8	2.88	0.42
1:CA:252:U:C2	1:CA:253:U:H5	2.37	0.42
27:BA:2070:G:C2	27:BA:2071:A:N3	2.87	0.42
30:BD:43:ARG:HB2	30:BD:54:ARG:HB2	2.02	0.42
1:AA:110:C:H2'	1:AA:111:G:H5'	2.02	0.42
38:DP:9:ASN:H	38:DP:10:PRO:HD3	1.84	0.42
27:BA:1603:A:H3'	27:BA:1604:C:C6	2.54	0.42
20:CT:30:LYS:O	20:CT:31:SER:C	2.57	0.42
27:DA:1777:U:C2'	27:DA:1778:U:O5'	2.67	0.42
27:DA:691:C:H1'	30:DD:43:ARG:CZ	2.50	0.42
37:BO:114:ILE:O	37:BO:115:VAL:C	2.57	0.42
12:AL:31:ARG:O	12:AL:57:LEU:HD12	2.19	0.42
1:CA:1206:G:C4'	3:CC:192:THR:O	2.64	0.42
39:DQ:132:VAL:CG1	48:DZ:80:ARG:NH2	2.83	0.42
29:DC:64:LEU:C	29:DC:66:HIS:H	2.23	0.42
1:CA:922:G:C5	1:CA:923:A:C5	3.07	0.42
23:AW:7:A:O2'	23:AW:8:U:P	2.77	0.42
36:DN:57:ALA:C	36:DN:58:ASP:OD1	2.57	0.42
27:BA:2562:U:H2'	27:BA:2563:U:C5'	2.47	0.42
27:BA:2420:C:OP1	57:B8:34:TRP:HB2	2.20	0.42
27:DA:2824:C:C4	27:DA:2825:C:C2	3.08	0.42
1:AA:38:G:H4'	1:AA:547:A:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:80:VAL:HG11	7:CG:154:TYR:CZ	2.54	0.42
50:B1:46:LEU:N	50:B1:46:LEU:CD2	2.82	0.42
37:DO:43:VAL:O	37:DO:54:GLU:HA	2.20	0.42
27:DA:1695:G:C2'	27:DA:1695:G:N3	2.80	0.42
27:DA:2683:C:O2'	27:DA:2684:U:H5'	2.20	0.42
37:DO:67:LYS:O	37:DO:68:GLU:C	2.57	0.42
1:AA:818:G:HO2'	1:AA:820:U:H6	1.64	0.42
27:DA:272(B):G:O2'	27:DA:272(C):G:P	2.78	0.42
7:CG:103:TRP:HB3	7:CG:134:ALA:HB1	2.01	0.42
7:CG:75:VAL:HA	7:CG:88:PRO:HA	2.01	0.42
10:CJ:4:ILE:CG1	10:CJ:77:PRO:HG3	2.50	0.42
27:DA:220:G:N2	27:DA:427:U:H2'	2.34	0.42
27:DA:2808:U:HO2'	27:DA:2809:A:H5'	1.78	0.42
40:DR:28:LEU:HD21	40:DR:114:VAL:HG12	2.01	0.42
27:BA:106:C:O5'	27:BA:106:C:H6	2.02	0.42
27:DA:682:G:N2	27:DA:796:C:C2	2.88	0.42
45:DW:29:LEU:HD23	45:DW:69:LEU:HD12	2.01	0.42
27:DA:1210:A:C6	27:DA:1237:A:N7	2.88	0.42
29:BC:49:ILE:O	29:BC:51:PRO:N	2.52	0.42
39:BQ:63:LYS:NZ	48:BZ:174:VAL:HG21	2.34	0.42
8:AH:87:SER:HA	8:AH:93:VAL:HG23	2.01	0.42
1:AA:740:U:H4'	15:AO:39:LEU:HD23	2.02	0.42
29:DC:51:PRO:HB3	29:DC:203:GLY:C	2.39	0.42
5:CE:8:GLU:OE2	5:CE:63:ARG:NH2	2.53	0.42
32:DF:101:LEU:O	32:DF:106:ARG:NH1	2.50	0.42
27:DA:2681:C:H5	27:DA:2725:A:N6	2.06	0.42
27:DA:81:G:C2	27:DA:106:C:N3	2.88	0.42
7:CG:15:ASP:CG	7:CG:44:TYR:HH	2.22	0.42
1:CA:1303:C:H2'	1:CA:1304:G:O4'	2.19	0.42
1:AA:840:C:C4'	1:AA:841:U:OP1	2.68	0.42
27:BA:49:A:N6	27:BA:118:A:C8	2.87	0.42
27:BA:18:C:H2'	27:BA:19:C:C6	2.54	0.42
1:AA:56:U:O2'	1:AA:57:G:H5'	2.20	0.42
16:AP:68:ASP:C	16:AP:70:ALA:N	2.73	0.42
39:DQ:38:GLU:CG	39:DQ:127:ILE:HG22	2.46	0.42
27:BA:463:G:C2	27:BA:467:G:C6	3.08	0.42
31:BE:175:VAL:HG12	31:BE:182:LEU:HD12	2.01	0.42
35:BI:68:LEU:HA	35:BI:71:ILE:CD1	2.50	0.42
1:AA:758:G:H2'	1:AA:759:A:OP2	2.20	0.42
34:DH:20:ALA:HB1	34:DH:21:PRO:HD2	2.02	0.42
27:BA:1673:U:C2'	27:BA:1674:G:H5''	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.35	0.42
2:AB:32:ILE:CG1	2:AB:33:TYR:N	2.81	0.42
1:CA:135:C:C2'	1:CA:136:C:H5'	2.46	0.42
10:AJ:30:SER:CB	10:AJ:81:THR:HG23	2.49	0.42
51:D2:31:GLU:O	51:D2:32:LEU:C	2.58	0.42
51:B2:21:LEU:CD1	51:B2:64:LEU:HA	2.48	0.42
47:DY:32:PRO:O	47:DY:35:TYR:N	2.53	0.42
1:CA:898:G:N2	1:CA:901:A:C8	2.87	0.42
27:DA:638:G:H2'	27:DA:639:U:O4'	2.20	0.42
5:AE:26:PHE:HD1	5:AE:26:PHE:H	1.67	0.42
7:CG:108:ALA:C	7:CG:110:GLN:H	2.22	0.42
1:CA:1111:A:N1	3:CC:177:THR:HG23	2.35	0.42
25:AY:34:U:O2'	25:AY:35:G:H5'	2.20	0.42
17:CQ:27:PHE:N	17:CQ:27:PHE:HD2	2.17	0.42
1:AA:1498:U:H5''	1:AA:1499:A:OP1	2.19	0.42
27:BA:866:A:C8	27:BA:866:A:O5'	2.73	0.42
1:AA:158:G:C6	1:AA:159:G:N7	2.88	0.42
1:CA:486:U:H2'	1:CA:487:A:C8	2.54	0.42
27:DA:2463:C:O2	27:DA:2488:A:C2	2.73	0.42
55:D6:22:ALA:O	55:D6:23:THR:CB	2.67	0.42
39:DQ:3:MET:HB2	39:DQ:93:TYR:CE1	2.54	0.42
27:DA:182:A:N3	27:DA:433:C:O2'	2.43	0.42
1:AA:1333:A:C2'	1:AA:1334:G:O5'	2.67	0.42
27:DA:845:G:C8	27:DA:845:G:OP2	2.72	0.42
5:AE:53:LEU:CD1	5:AE:53:LEU:N	2.83	0.42
2:CB:228:GLY:O	2:CB:230:VAL:HG13	2.19	0.42
30:DD:134:ARG:HG3	30:DD:135:PHE:CD2	2.55	0.42
1:AA:690:G:C6	1:AA:691:G:C6	3.07	0.42
27:BA:1421:G:C2	27:BA:1422:G:C8	3.08	0.42
29:DC:128:GLY:C	29:DC:130:ILE:H	2.22	0.42
35:DI:97:ILE:O	35:DI:97:ILE:HG22	2.19	0.42
27:BA:1238:G:H2'	27:BA:1239:G:O4'	2.20	0.42
23:AW:12:C:H6	23:AW:12:C:OP2	2.03	0.42
1:AA:1124:G:H5'	10:AJ:35:SER:HB2	2.01	0.42
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.54	0.42
1:CA:979:C:C2'	1:CA:980:C:H5''	2.49	0.42
54:B5:51:TYR:HB3	54:B5:52:TYR:H	1.44	0.42
28:BB:43:C:H5'	28:BB:44:G:OP2	2.19	0.42
32:BF:124:LEU:O	32:BF:125:LEU:HD12	2.19	0.42
1:AA:913:A:O2'	1:AA:914:A:OP2	2.24	0.42
51:B2:41:ILE:O	51:B2:42:GLY:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:592:G:H21	57:D8:4:MET:HE1	1.84	0.42
30:DD:254:THR:OG1	30:DD:254:THR:O	2.37	0.42
33:BG:96:ARG:O	33:BG:97:ASP:C	2.57	0.42
44:BV:10:LYS:HD2	44:BV:12:TYR:OH	2.19	0.42
42:BT:29:ARG:HH21	42:BT:88:ILE:HD11	1.85	0.42
1:AA:1401:G:H2'	1:AA:1402:C:O4'	2.20	0.42
27:DA:995:C:H5''	43:DU:54:LYS:HE3	2.02	0.42
43:DU:102:GLU:HA	43:DU:103:PRO:HD2	1.88	0.42
41:BS:67:ARG:HG2	41:BS:67:ARG:NH1	2.35	0.42
27:DA:864:G:O5'	27:DA:864:G:H8	2.03	0.42
27:DA:872:A:C2	27:DA:906:G:C4	3.08	0.42
27:DA:858:U:N3	27:DA:920:G:N2	2.67	0.42
57:D8:33:ASN:HA	57:D8:36:LYS:CD	2.50	0.42
27:DA:2347:C:H6	27:DA:2347:C:H5''	1.85	0.42
27:DA:469:G:O6	56:D7:37:LYS:NZ	2.40	0.42
20:AT:57:ARG:HH11	20:AT:57:ARG:HB2	1.84	0.42
45:BW:18:ARG:HG2	45:BW:18:ARG:HH11	1.85	0.42
27:BA:2483:C:C2'	39:BQ:49:ALA:HB1	2.49	0.42
1:AA:1340:A:C2	1:AA:1341:U:O2	2.73	0.42
14:AN:19:ARG:O	14:AN:21:TYR:CD1	2.72	0.42
37:DO:104:ARG:NH1	37:DO:121:VAL:HG12	2.34	0.42
1:CA:189(F):U:H5	17:CQ:3:LYS:NZ	2.17	0.42
27:BA:2436:G:C6	27:BA:2437:U:C4	3.07	0.42
1:AA:108:G:O6	20:AT:15:ARG:HD2	2.20	0.42
27:BA:950:G:C2	27:BA:968:G:N3	2.88	0.42
39:BQ:42:ILE:N	39:BQ:42:ILE:HD12	2.34	0.42
33:DG:5:VAL:C	33:DG:7:LEU:H	2.23	0.42
7:AG:51:GLN:O	7:AG:54:THR:O	2.36	0.42
27:DA:2645:G:H4'	27:DA:2646:C:OP2	2.19	0.42
1:CA:227:G:C4	1:CA:228:A:C8	3.08	0.42
34:BH:150:ALA:C	34:BH:152:ARG:H	2.23	0.42
40:BR:62:ALA:O	40:BR:65:LEU:HB2	2.20	0.42
27:DA:2693:A:H2'	27:DA:2694:G:C8	2.55	0.42
1:CA:1060:C:H4'	10:CJ:52:GLY:N	2.35	0.42
10:AJ:42:THR:HG23	10:AJ:68:HIS:HA	2.00	0.42
27:DA:154:G:C6	27:DA:154(A):C:C4	3.08	0.42
27:DA:171:G:C5	27:DA:172:C:N4	2.88	0.42
1:CA:650:G:O2'	1:CA:651:C:H5'	2.20	0.42
1:CA:652:U:C5	1:CA:752:G:C5	3.08	0.42
1:CA:749:C:O2'	1:CA:750:G:C5'	2.66	0.42
35:BI:79:ILE:HG12	35:BI:140:LEU:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2424:C:O2'	27:BA:2425:A:OP1	2.37	0.42
33:DG:81:LYS:O	33:DG:82:LEU:C	2.57	0.42
33:DG:42:GLY:O	33:DG:88:ILE:HG13	2.20	0.42
27:DA:660:G:N1	27:DA:661:C:C2	2.87	0.42
51:B2:53:LEU:HA	51:B2:53:LEU:HD23	1.83	0.42
27:BA:94:C:H5'	27:BA:94(A):G:OP2	2.20	0.42
30:DD:33:LEU:CD1	30:DD:33:LEU:H	2.32	0.42
33:DG:128:ARG:HB2	33:DG:130:ASN:O	2.20	0.42
48:BZ:124:LEU:HG	48:BZ:163:ALA:CB	2.50	0.42
35:DI:83:ALA:HA	35:DI:89:TYR:HD1	1.82	0.42
27:DA:1484:G:N1	27:DA:1506:C:C2	2.88	0.42
7:AG:151:TYR:CD1	7:AG:151:TYR:N	2.87	0.42
5:AE:76:ILE:CG1	5:AE:77:PRO:CD	2.95	0.42
1:CA:53:A:C6	1:CA:54:C:C2	3.08	0.42
27:DA:2291:U:O2'	27:DA:2374:C:H1'	2.20	0.42
1:AA:1278:U:H5'	1:AA:1279:A:C4	2.55	0.42
5:CE:107:ARG:CG	5:CE:108:ALA:N	2.82	0.42
7:CG:137:LYS:O	7:CG:138:LYS:C	2.58	0.42
3:AC:130:VAL:O	3:AC:134:ILE:HG12	2.20	0.42
3:AC:134:ILE:HD12	3:AC:151:VAL:CG1	2.49	0.42
27:DA:185:U:H4'	27:DA:218:A:H4'	2.01	0.42
1:AA:520:A:OP2	12:AL:48:ALA:HB1	2.19	0.42
27:DA:1649:G:C6	27:DA:2009:G:C6	3.08	0.42
45:DW:100:THR:OG1	45:DW:101:SER:N	2.52	0.42
12:AL:25:LYS:HG3	12:AL:30:ARG:HH12	1.85	0.42
1:AA:1084:G:C5	1:AA:1085:U:C4	3.07	0.42
15:CO:9:GLN:HB3	15:CO:13:GLN:NE2	2.34	0.42
1:CA:119:A:H5''	1:CA:120:A:C5'	2.47	0.42
33:BG:29:TRP:HA	33:BG:33:ARG:NH1	2.34	0.42
1:AA:1123:A:O3'	10:AJ:36:GLY:HA3	2.19	0.42
15:AO:41:GLU:C	15:AO:43:LEU:N	2.72	0.42
3:CC:20:SER:OG	3:CC:57:ILE:HB	2.20	0.42
27:BA:1922:G:H2'	27:BA:1923:U:H6	1.84	0.42
47:DY:2:ARG:O	47:DY:3:VAL:CG2	2.68	0.42
6:AF:17:SER:O	6:AF:21:LEU:HD23	2.19	0.42
27:DA:2520:C:C2	27:DA:2521:C:C6	3.08	0.42
10:AJ:22:LYS:HZ2	10:AJ:23:ILE:HG12	1.85	0.42
1:CA:1427:U:H2'	1:CA:1428:A:H8	1.79	0.42
27:BA:2654:A:OP1	27:BA:2654:A:H8	2.02	0.42
7:AG:95:ARG:HG3	7:AG:95:ARG:HH11	1.85	0.42
27:BA:1303:G:C2	27:BA:1304:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:687:A:O2'	1:AA:688:G:OP2	2.31	0.42
30:BD:123:ALA:HB3	30:BD:131:LEU:HG	2.02	0.42
31:BE:143:ASN:OD1	31:BE:147:PRO:CD	2.67	0.42
5:AE:149:GLU:C	5:AE:151:LEU:N	2.73	0.42
57:B8:2:PRO:O	57:B8:3:LYS:C	2.58	0.42
56:D7:27:GLY:O	56:D7:28:ARG:C	2.58	0.42
27:BA:959:A:C6	27:BA:960:A:C6	3.08	0.42
27:BA:40:C:H2'	27:BA:41:C:C6	2.43	0.42
45:BW:64:MET:HB3	45:BW:109:GLU:CD	2.39	0.42
8:CH:75:ARG:HA	8:CH:76:PRO:HD2	1.80	0.42
27:DA:2110:G:C6	27:DA:2120:G:N7	2.87	0.42
29:BC:98:GLU:C	29:BC:100:ILE:H	2.21	0.42
27:BA:699:A:C2'	27:BA:700:G:H5'	2.50	0.42
1:CA:768:A:H8	1:CA:768:A:O5'	2.02	0.42
1:AA:113:G:O2'	1:AA:114:U:P	2.78	0.42
4:CD:178:VAL:O	4:CD:179:GLU:C	2.57	0.42
1:AA:859:A:H2'	1:AA:860:A:O4'	2.18	0.42
24:CX:34:C:O2	24:CX:34:C:C2'	2.62	0.42
27:BA:2386:C:H2'	27:BA:2387:U:H6	1.82	0.42
11:AK:126:ARG:HB3	11:AK:126:ARG:CZ	2.50	0.42
9:CI:27:THR:CG2	9:CI:31:GLN:N	2.82	0.42
27:DA:2450:A:H2'	27:DA:2451:A:H8	1.84	0.42
27:BA:2080:G:C4	27:BA:2081:C:C5	3.07	0.42
27:BA:2082:A:H2'	27:BA:2083:G:C8	2.54	0.42
27:DA:1831:G:C5	27:DA:1975:G:C2	3.08	0.42
45:DW:90:ARG:NH1	45:DW:90:ARG:HG3	2.35	0.42
27:BA:451:C:C4	27:BA:453:C:C6	3.08	0.42
29:BC:121:GLY:CA	29:BC:145:VAL:HA	2.48	0.42
27:BA:843:G:C2	27:BA:936:C:N3	2.87	0.42
52:D3:39:ASP:OD2	52:D3:44:ARG:NE	2.53	0.42
27:BA:2568:C:H2'	27:BA:2569:G:O4'	2.19	0.42
29:BC:47:LEU:HB3	29:BC:207:THR:HA	2.02	0.42
1:CA:431:A:H2'	1:CA:432:A:C8	2.55	0.42
27:DA:2448:A:O2'	27:DA:2449:U:H5	2.02	0.42
29:BC:155:GLU:O	29:BC:156:ILE:CB	2.67	0.42
20:AT:35:THR:O	20:AT:38:LYS:HB2	2.20	0.42
27:BA:1649:G:O2'	27:BA:1650:G:H5'	2.20	0.42
27:BA:1745(A):C:H5''	27:BA:1746:G:OP2	2.19	0.42
1:AA:684:A:C6	1:AA:685:G:C6	3.07	0.42
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.20	0.42
1:CA:1045:C:H2'	1:CA:1045:C:O2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:234:C:H6	27:DA:234:C:O5'	2.02	0.42
7:CG:6:ARG:HG2	7:CG:6:ARG:O	2.18	0.42
27:BA:1146:C:C4	27:BA:1147:C:C5	3.08	0.42
27:BA:2518:A:H8	27:BA:2518:A:H5'	1.85	0.42
27:BA:227:A:H5'	27:BA:228:A:C2	2.55	0.42
48:DZ:132:ILE:HA	48:DZ:133:PRO:HD2	1.75	0.42
1:CA:960:U:C2	1:CA:1225:A:N7	2.88	0.42
32:BF:113:ALA:CB	32:BF:186:ILE:HG21	2.48	0.42
27:DA:243:U:C2'	27:DA:244:A:H5'	2.50	0.42
27:DA:1906:G:N2	27:DA:1907:G:C4	2.88	0.42
27:BA:483:A:H2'	27:BA:484:C:C5'	2.50	0.42
27:BA:485:C:O2'	27:BA:486:C:H5'	2.19	0.42
31:BE:63:LEU:C	31:BE:63:LEU:HD23	2.40	0.42
5:AE:136:MET:O	5:AE:140:ARG:HB2	2.19	0.42
1:AA:129(A):G:C2	1:AA:189(H):G:N7	2.88	0.42
1:AA:254:G:H1	1:AA:272:C:N4	2.11	0.42
32:DF:115:ALA:O	32:DF:116:ASP:C	2.58	0.42
19:CS:42:PRO:O	19:CS:44:MET:SD	2.77	0.42
1:AA:923:A:C2	1:AA:924:C:C2	3.08	0.42
27:DA:1159:U:H2'	27:DA:1160:G:O4'	2.20	0.42
27:DA:40:C:H42	27:DA:438:G:H1	1.67	0.42
51:D2:8:LYS:O	51:D2:9:GLN:C	2.58	0.42
27:DA:1858:G:H2'	27:DA:1883:G:H22	1.83	0.42
27:DA:2287:A:H62	27:DA:2344:U:H3	1.68	0.42
36:DN:34:LEU:O	36:DN:116:LEU:HD22	2.19	0.42
27:DA:1669:A:H2'	27:DA:1669:A:N3	2.35	0.42
27:DA:2053:G:C2'	27:DA:2054:A:H5'	2.50	0.42
27:DA:2499:C:C4	27:DA:2500:U:C2	3.08	0.42
27:DA:2611:U:HO2'	27:DA:2612:C:P	2.42	0.42
27:DA:2579:C:H4'	31:DE:134:ILE:HD12	2.01	0.42
45:BW:7:ALA:O	45:BW:10:VAL:CG2	2.67	0.42
39:BQ:118:LEU:HD12	39:BQ:131:ILE:CG2	2.50	0.42
27:DA:310:A:C4	27:DA:312:G:N7	2.88	0.42
30:BD:31:LYS:HD2	30:BD:33:LEU:CD1	2.46	0.42
30:BD:32:SER:O	30:BD:34:VAL:N	2.40	0.42
4:CD:70:ILE:HD12	4:CD:100:ARG:NE	2.35	0.42
1:CA:62:U:H2'	1:CA:63:C:H6	1.85	0.42
47:BY:30:VAL:HG13	47:BY:31:LEU:N	2.35	0.42
10:AJ:54:PHE:CE1	10:AJ:55:LYS:HE3	2.55	0.42
2:AB:185:ILE:HG23	2:AB:199:TYR:O	2.20	0.42
30:BD:147:LEU:HD12	30:BD:147:LEU:HA	1.74	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:530:G:O2'	1:AA:531:U:P	2.76	0.42
22:AV:9:G:N2	23:AW:34:U:C2	2.88	0.42
16:AP:26:ARG:HH11	16:AP:31:LYS:HB3	1.81	0.42
41:DS:31:SER:O	41:DS:34:HIS:N	2.36	0.42
27:BA:1776:G:N3	27:BA:1776:G:H2'	2.35	0.42
27:BA:2438:U:O2	27:BA:2441:C:C4	2.72	0.42
1:CA:243:A:C5	1:CA:281:G:N2	2.87	0.42
16:CP:27:LYS:H	16:CP:27:LYS:HG2	1.42	0.42
27:BA:1662:C:H2'	27:BA:1663:C:C6	2.55	0.42
1:AA:454:C:N4	1:AA:479:C:N3	2.67	0.42
1:CA:128:G:H5'	17:CQ:2:PRO:O	2.20	0.42
34:BH:156:ALA:HB3	34:BH:159:GLU:HB2	2.02	0.42
34:BH:158:HIS:CE1	34:BH:168:PRO:C	2.93	0.42
37:BO:24:VAL:HG22	37:BO:24:VAL:O	2.20	0.42
27:DA:775:G:P	27:DA:777:A:HI'	2.60	0.42
27:BA:1553:A:C8	27:BA:1555:G:C6	3.08	0.42
27:BA:1437:C:H42	27:BA:1555:G:H1	1.68	0.42
27:DA:13:A:C2	27:DA:526:A:C5	3.08	0.42
1:CA:1210:C:H4'	1:CA:1214:C:C5	2.54	0.42
8:AH:97:VAL:C	8:AH:99:GLU:N	2.72	0.42
1:AA:1152:A:O2'	1:AA:1153:C:OP2	2.36	0.42
10:AJ:38:ILE:HA	10:AJ:39:PRO:HD3	1.67	0.42
42:BT:101:PHE:O	42:BT:102:ILE:C	2.58	0.42
1:CA:1258:G:O2'	1:CA:1259:C:C5'	2.68	0.42
1:CA:1270:C:C2'	1:CA:1271:G:H5'	2.50	0.42
1:CA:1286:A:H2'	1:CA:1287:A:O3'	2.19	0.42
12:AL:39:THR:HA	12:AL:50:ARG:O	2.20	0.42
12:AL:56:ARG:HD3	12:AL:62:GLU:OE1	2.19	0.42
36:DN:128:HIS:HA	36:DN:129:PRO:HD2	1.88	0.42
1:CA:1521:G:H2'	1:CA:1522:U:H6	1.83	0.42
27:DA:1309:G:C5'	56:D7:9:ARG:HG3	2.49	0.42
57:B8:40:GLU:O	57:B8:43:GLN:N	2.47	0.42
27:DA:2048:G:H4'	27:DA:2823:A:C2	2.55	0.42
41:DS:78:LEU:CD1	41:DS:103:GLU:HB3	2.44	0.42
55:B6:11:LEU:CD1	55:B6:12:GLU:H	2.33	0.42
1:AA:546:G:H5'	1:AA:549:C:OP1	2.20	0.42
1:AA:825:G:H2'	1:AA:826:C:H6	1.84	0.42
1:AA:1242:C:O2'	1:AA:1243:C:H5'	2.19	0.42
27:BA:61:G:O2'	27:BA:62:C:O5'	2.36	0.42
36:DN:79:PRO:C	36:DN:81:GLY:N	2.73	0.42
27:DA:1695:G:O2'	27:DA:1696:G:O5'	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:87:ARG:HG2	6:CF:87:ARG:HH11	1.85	0.42
7:AG:151:TYR:OH	11:AK:54:ARG:HD3	2.19	0.42
5:CE:31:LEU:HD21	5:CE:43:LEU:HG	2.00	0.42
52:B3:46:ASN:O	52:B3:47:VAL:C	2.58	0.42
1:AA:1138:G:H2'	1:AA:1140:C:C6	2.55	0.42
25:CY:49:G:HO2'	25:CY:50:A:P	2.43	0.42
34:BH:10:PRO:HG3	34:BH:50:VAL:N	2.34	0.42
1:AA:1285:A:O4'	1:AA:1286:A:C8	2.71	0.42
27:DA:1449:A:N3	27:DA:1449:A:H2'	2.35	0.42
27:BA:111:A:C5	27:BA:112:U:C5	3.07	0.42
8:CH:109:ILE:HG13	8:CH:122:ARG:HH12	1.85	0.42
10:AJ:46:ARG:NH1	14:AN:61:TRP:CZ2	2.88	0.42
27:DA:784:A:C6	27:DA:792:G:O4'	2.73	0.42
27:DA:510:C:OP1	27:DA:511:U:OP2	2.38	0.42
6:CF:91:VAL:HG12	6:CF:92:LYS:O	2.19	0.42
33:BG:123:ASN:OD1	33:BG:123:ASN:N	2.53	0.42
11:CK:33:THR:HB	11:CK:37:GLY:C	2.40	0.42
1:AA:988:G:H21	1:AA:1015:A:H2	1.68	0.42
12:AL:27:ALA:HA	12:AL:28:PRO:HD3	1.75	0.42
1:AA:1183:A:H3'	1:AA:1184:G:C5'	2.49	0.42
1:CA:818:G:H3'	1:CA:819:A:C5'	2.49	0.42
32:BF:37:VAL:HG13	32:BF:184:TYR:CD1	2.54	0.42
30:DD:111:LEU:C	30:DD:111:LEU:HD13	2.40	0.42
1:CA:147:G:H2'	1:CA:148:G:H8	1.83	0.42
1:CA:282:A:H2'	1:CA:283:C:H6	1.85	0.42
30:BD:21:PHE:CD1	30:BD:21:PHE:N	2.86	0.42
1:CA:914:A:H2'	1:CA:915:A:H8	1.85	0.42
27:DA:2723:C:OP2	31:DE:109:LYS:NZ	2.49	0.42
1:AA:961:U:OP2	1:AA:1223:C:C1'	2.68	0.42
34:DH:102:ALA:CA	34:DH:117:PRO:HD3	2.47	0.42
27:BA:258:G:N3	27:BA:259:G:C8	2.88	0.42
11:CK:52:GLY:O	11:CK:55:LYS:HB2	2.20	0.42
7:CG:50:ILE:O	7:CG:54:THR:HG23	2.20	0.42
27:BA:747:U:OP2	54:B5:3:LYS:HD3	2.19	0.42
1:AA:840:C:H4'	1:AA:841:U:OP1	2.18	0.42
1:CA:10:A:O2'	1:CA:11:G:H5'	2.20	0.42
1:AA:1065:U:C4	1:AA:1190:G:H1'	2.55	0.42
30:BD:136:ILE:O	30:BD:137:PRO:C	2.57	0.42
27:BA:1322:A:C4	27:BA:1323:U:C5	3.08	0.42
17:AQ:29:HIS:ND1	17:AQ:29:HIS:C	2.73	0.42
1:CA:831:U:H2'	1:CA:832:C:C5'	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:20:ASP:HB3	7:CG:23:VAL:CG2	2.44	0.42
1:CA:1229:A:C2	1:CA:1230:C:C2	3.08	0.42
1:CA:435:C:C2	1:CA:436:C:C5	3.08	0.42
7:CG:73:MET:HA	7:CG:91:VAL:HG23	2.02	0.42
47:DY:87:LYS:NZ	47:DY:89:PHE:CE1	2.88	0.42
1:CA:422:C:C4'	1:CA:423:G:OP1	2.68	0.42
27:BA:1668:A:C8	27:BA:1674:G:C6	3.07	0.42
15:AO:14:GLU:HA	15:AO:14:GLU:OE1	2.19	0.42
27:BA:782:A:OP1	27:BA:783:A:N1	2.53	0.42
15:CO:2:PRO:HG2	15:CO:3:ILE:HD13	2.00	0.42
24:CX:72:A:H5'	24:CX:73:A:OP2	2.19	0.42
1:AA:253:U:H5'	1:AA:253:U:C6	2.50	0.42
28:BB:24:G:H1'	28:BB:27:C:N4	2.35	0.42
47:BY:18:GLY:O	47:BY:20:TYR:N	2.52	0.42
31:DE:167:VAL:HG21	31:DE:170:LEU:HD11	2.02	0.42
27:DA:817:C:O2'	27:DA:818:G:H5'	2.20	0.42
50:B1:13:ILE:CG1	50:B1:42:GLN:HB2	2.50	0.42
24:AX:16:C:O2'	24:AX:60:U:H4'	2.20	0.42
24:AX:11:A:C6	24:AX:12:G:C6	3.07	0.42
45:DW:90:ARG:HH11	45:DW:90:ARG:HG3	1.85	0.42
27:DA:214:G:H21	27:DA:216:A:H1'	1.85	0.42
1:AA:701:C:O2'	1:AA:703:G:C5	2.64	0.42
36:BN:18:ALA:HB3	36:BN:26:LEU:HD22	2.00	0.42
27:BA:761:A:H8	27:BA:761:A:O5'	2.03	0.42
11:AK:65:ALA:O	11:AK:68:ALA:HB3	2.20	0.42
4:AD:20:TYR:CE2	4:AD:27:TYR:HE2	2.37	0.42
39:BQ:97:VAL:HG11	39:BQ:103:MET:HE3	2.02	0.42
27:BA:769:G:H2'	27:BA:770:G:O5'	2.20	0.42
27:BA:770:G:H8	27:BA:770:G:O5'	2.03	0.42
28:DB:85:G:H2'	28:DB:86:G:H8	1.85	0.42
3:CC:138:VAL:CG2	3:CC:151:VAL:HG23	2.49	0.42
35:DI:116:LEU:O	35:DI:117:GLU:O	2.36	0.42
45:BW:36:LEU:HD11	45:BW:47:VAL:HG12	2.02	0.42
32:BF:139:PHE:O	32:BF:142:TRP:HB3	2.18	0.42
32:DF:70:THR:OG1	32:DF:71:GLY:N	2.52	0.42
43:DU:109:LEU:HA	43:DU:109:LEU:HD23	1.84	0.42
9:AI:56:LEU:HD23	9:AI:56:LEU:O	2.19	0.42
27:BA:1664:A:H2'	27:BA:1664:A:N3	2.34	0.42
1:CA:1421:G:C6	1:CA:1422:G:C5	3.08	0.42
19:CS:52:TYR:HE1	19:CS:56:GLN:HA	1.83	0.42
28:BB:47:C:O2'	28:BB:48:A:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:90:GLY:O	41:BS:92:TYR:HD1	2.03	0.42
32:BF:157:VAL:HB	32:BF:194:MET:HB3	2.01	0.42
32:BF:116:ASP:OD2	38:BP:5:ASP:HB2	2.20	0.42
27:BA:2725:A:O2'	27:BA:2726:U:O5'	2.36	0.42
36:DN:87:LEU:HD23	36:DN:87:LEU:C	2.40	0.42
57:D8:63:PRO:O	57:D8:64:TYR:C	2.58	0.42
53:B4:40:ILE:HA	53:B4:57:ILE:CG2	2.49	0.42
13:CM:70:LEU:HD23	13:CM:71:ARG:H	1.80	0.42
5:AE:33:VAL:HG21	5:AE:109:ILE:HD11	2.01	0.42
44:BV:91:TYR:O	44:BV:92:THR:CG2	2.66	0.42
32:DF:22:ALA:O	32:DF:24:LEU:O	2.37	0.42
1:AA:14:U:O2	1:AA:16:A:H3'	2.20	0.42
27:DA:534:U:O2'	43:DU:49:HIS:CD2	2.71	0.42
44:DV:12:TYR:CE2	44:DV:22:VAL:CG1	3.03	0.42
52:B3:23:LEU:O	52:B3:27:GLY:N	2.52	0.42
47:DY:27:VAL:C	47:DY:28:LYS:HD3	2.40	0.42
47:DY:28:LYS:HA	47:DY:38:ILE:HB	2.02	0.42
27:BA:1899:G:N2	27:BA:1903:G:C5	2.87	0.42
27:BA:1884:A:C3'	27:BA:1885:A:H5''	2.48	0.42
27:DA:2399:G:C6	27:DA:2418:A:C6	3.08	0.42
27:DA:636:G:OP2	38:DP:113:LYS:NZ	2.34	0.42
4:AD:195:ALA:O	4:AD:196:LEU:C	2.58	0.42
27:DA:1261:C:C2'	27:DA:1262:A:O5'	2.68	0.42
27:DA:574:C:O3'	27:DA:2055:C:C5	2.73	0.42
20:AT:61:SER:O	20:AT:65:LYS:HB2	2.20	0.42
13:CM:14:ARG:NH2	13:CM:42:ALA:HA	2.35	0.42
1:AA:673:G:N2	1:AA:674:G:C2	2.88	0.42
30:DD:173:VAL:HG23	30:DD:174:ILE:N	2.35	0.42
27:BA:1783:A:C2	27:BA:2587:A:C5	3.08	0.42
31:BE:3:GLY:O	31:BE:4:ILE:CB	2.64	0.42
1:AA:1081:G:C2	1:AA:1082:G:C8	3.08	0.42
2:AB:188:ALA:O	2:AB:203:GLY:N	2.44	0.42
1:CA:309:G:O2'	1:CA:310:G:H5'	2.20	0.42
1:CA:891:U:H2'	1:CA:892:A:H8	1.85	0.42
41:BS:106:ARG:NE	41:BS:107:GLU:O	2.53	0.42
27:BA:1296:G:N2	27:BA:1645:G:C4	2.88	0.42
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.19	0.42
1:AA:389:A:H2'	1:AA:390:C:O4'	2.20	0.42
1:AA:456:C:H2'	1:AA:457:C:C6	2.55	0.42
42:DT:11:GLU:C	42:DT:13:ARG:N	2.73	0.42
41:BS:46:VAL:HG12	41:BS:47:THR:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2711:A:N6	27:DA:2714:G:C5	2.88	0.42
27:DA:175:G:C5	27:DA:176:G:N7	2.88	0.42
1:CA:679:C:O2'	1:CA:680:C:H5'	2.20	0.42
14:CN:26:ARG:HD2	14:CN:43:CYS:CB	2.49	0.42
1:CA:1260:C:OP1	1:CA:1284:C:H4'	2.19	0.42
1:CA:1283:G:H2'	1:CA:1284:C:H6	1.85	0.42
1:CA:1308:U:O3'	13:CM:92:HIS:HE1	2.03	0.42
2:CB:59:GLU:O	2:CB:62:ALA:HB3	2.19	0.42
40:DR:38:VAL:HG12	40:DR:39:PRO:N	2.34	0.42
1:CA:750:G:H21	15:CO:23:GLY:CA	2.33	0.42
29:BC:214:VAL:O	29:BC:216:THR:N	2.53	0.42
27:DA:1200:C:H2'	27:DA:1201:C:C6	2.55	0.42
27:BA:644:A:H4'	27:BA:645:C:H5	1.81	0.42
27:DA:1652:A:C2	27:DA:2006:C:N3	2.88	0.42
27:DA:857:C:C5'	49:D0:77:ARG:HH22	2.32	0.42
27:DA:300:A:N6	27:DA:334:C:H5'	2.35	0.42
33:DG:45:GLU:C	33:DG:47:LYS:H	2.22	0.42
1:AA:825:G:N1	1:AA:876:G:C6	2.88	0.42
51:B2:50:ILE:C	51:B2:52:ASP:N	2.73	0.42
29:DC:99:ILE:HG23	29:DC:110:PHE:CB	2.50	0.42
27:DA:847:U:N3	27:DA:934:G:N2	2.68	0.42
35:DI:138:ILE:HG13	35:DI:139:GLN:N	2.24	0.42
6:CF:12:PRO:HB3	6:CF:58:GLY:CA	2.50	0.42
13:AM:15:VAL:CG2	13:AM:16:ASP:N	2.83	0.42
8:AH:14:ARG:C	8:AH:16:ALA:N	2.73	0.42
27:DA:2850:A:H2'	27:DA:2851:A:H8	1.84	0.42
27:DA:2850:A:H2'	27:DA:2851:A:C8	2.55	0.42
37:DO:78:ARG:NE	42:DT:73:GLU:OE2	2.53	0.42
1:AA:1268:A:H4'	21:AU:20:LYS:N	2.35	0.42
27:BA:2406:U:H4'	27:BA:2407:G:O5'	2.20	0.42
11:CK:20:TYR:C	11:CK:21:ILE:HD12	2.40	0.42
8:CH:111:ILE:CG2	8:CH:112:LEU:H	2.24	0.42
27:DA:2189:U:H3'	27:DA:2190:G:H5''	2.02	0.42
10:AJ:63:PHE:HB3	14:AN:59:ALA:H	1.85	0.42
27:DA:1210:A:H1'	27:DA:1212:G:C4	2.54	0.42
27:BA:1175:U:P	27:BA:1176:G:H5'	2.59	0.42
1:CA:1508:G:H2'	1:CA:1509:C:C6	2.55	0.42
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.20	0.42
18:CR:76:LEU:N	18:CR:76:LEU:HD22	2.35	0.42
52:D3:33:GLN:C	52:D3:34:GLU:HG3	2.40	0.42
5:AE:102:ALA:O	5:AE:107:ARG:NH1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:9:MET:O	8:CH:12:ARG:HB3	2.20	0.42
1:CA:884:U:H4'	1:CA:885:G:H5''	2.01	0.42
1:CA:1152:A:H5'	10:CJ:70:ARG:HH22	1.84	0.42
1:CA:705:U:C5	1:CA:706:A:C5	3.08	0.42
11:CK:52:GLY:N	11:CK:55:LYS:HG3	2.35	0.42
23:CW:2:G:C2	23:CW:71:A:C2	3.08	0.42
27:DA:2709:G:H2'	27:DA:2710:C:O4'	2.20	0.42
27:BA:706:A:C5	27:BA:707:G:C8	3.08	0.42
1:CA:1478:C:H2'	1:CA:1479:C:C6	2.50	0.42
30:DD:147:LEU:CD2	30:DD:155:LEU:HD11	2.50	0.42
27:BA:1750:G:C2	27:BA:1751:C:C2	3.08	0.42
27:BA:193:U:O2'	27:BA:194:G:H5'	2.20	0.42
23:AW:60:C:H2'	23:AW:61:C:C6	2.55	0.42
9:AI:14:VAL:HG12	9:AI:15:ALA:N	2.35	0.42
1:CA:860:A:C8	1:CA:861:G:C8	3.07	0.42
27:DA:1847:A:P	27:DA:1847:A:O4'	2.78	0.42
27:DA:811:U:OP2	38:DP:24:GLY:CA	2.67	0.42
39:DQ:51:ARG:CG	39:DQ:51:ARG:HH11	2.33	0.42
27:DA:1815:A:O2'	27:DA:1816:G:O5'	2.35	0.42
10:AJ:79:ARG:O	10:AJ:80:LYS:C	2.57	0.42
27:BA:1451:C:H2'	27:BA:1451:C:O2	2.19	0.42
1:AA:321:A:H4'	1:AA:1435:G:O2'	2.20	0.42
47:DY:54:LYS:HZ3	47:DY:55:TYR:HE2	1.65	0.42
27:BA:1505:C:HO2'	27:BA:1506:C:P	2.43	0.42
2:CB:131:PRO:O	2:CB:135:GLN:HG3	2.20	0.42
27:BA:2447:G:O2'	27:BA:2500:U:OP2	2.24	0.42
15:CO:65:ARG:HH11	15:CO:65:ARG:HG2	1.85	0.42
27:BA:2337:G:C2	27:BA:2338:G:C5	3.08	0.42
50:B1:13:ILE:HD11	50:B1:42:GLN:OE1	2.20	0.42
37:BO:59:LYS:HZ3	37:BO:89:ASN:HD21	1.68	0.42
17:CQ:64:PRO:HG3	17:CQ:70:ARG:HG2	2.02	0.42
1:AA:730:G:C6	1:AA:731:G:H1'	2.55	0.42
35:BI:25:TYR:CD1	35:BI:30:LEU:HD11	2.55	0.42
27:BA:2371:G:H4'	55:B6:45:LYS:HB3	2.02	0.42
42:BT:9:LEU:C	42:BT:11:GLU:N	2.74	0.42
1:CA:151:A:H2'	1:CA:152:A:O4'	2.20	0.42
50:D1:23:LYS:HE2	50:D1:28:GLY:N	2.35	0.42
45:BW:97:LYS:HE3	45:BW:99:ARG:NH1	2.34	0.42
1:CA:1098:C:C4	1:CA:1099:G:C8	3.08	0.42
34:DH:166:GLY:C	34:DH:167:GLU:OE1	2.58	0.42
27:BA:1524:G:N2	27:BA:1525:G:H1'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BG:84:LYS:HB3	33:BG:85:GLY:H	1.62	0.42
27:DA:1109:C:H5''	27:DA:1110:G:OP2	2.20	0.42
1:CA:1273:G:C5	1:CA:1274:G:C5	3.08	0.42
50:D1:56:GLN:NE2	50:D1:56:GLN:HA	2.34	0.42
27:BA:321:G:O3'	27:BA:322:A:H8	2.03	0.42
1:CA:126:G:H5'	1:CA:633:G:N2	2.35	0.42
27:BA:2246:G:H1'	27:BA:2426:A:C2	2.55	0.42
45:BW:41:LYS:C	45:BW:43:GLY:N	2.72	0.42
27:BA:1900:A:H1'	27:BA:1970:A:H2'	2.01	0.42
1:AA:995:C:H6	1:AA:995:C:O5'	2.03	0.42
27:BA:2471:C:H2'	27:BA:2471:C:O2	2.19	0.42
27:BA:13:A:C2	27:BA:526:A:N7	2.88	0.42
19:AS:33:THR:OG1	19:AS:34:TRP:N	2.53	0.42
1:CA:974:A:C8	1:CA:974:A:OP1	2.73	0.42
1:CA:961:U:C4	1:CA:983:A:N6	2.87	0.42
19:CS:33:THR:HG23	19:CS:51:VAL:HA	2.02	0.42
40:BR:44:LEU:HD13	40:BR:48:VAL:CG2	2.50	0.42
27:BA:2807:G:H1	27:BA:2892:A:H62	1.68	0.42
32:BF:183:VAL:HA	32:BF:186:ILE:HB	2.02	0.42
1:AA:911:U:C2	1:AA:912:C:C5	3.08	0.42
27:DA:1140:C:H1'	27:DA:1143:A:C2	2.55	0.42
27:DA:254:G:H22	57:D8:8:LYS:HZ1	1.67	0.42
27:DA:271(D):G:C6	27:DA:271(E):U:C4	3.08	0.42
27:DA:1793:C:C2	27:DA:1794:U:C5	3.08	0.42
30:DD:247:ALA:HA	30:DD:254:THR:HG22	2.01	0.42
27:BA:31:C:O2'	27:BA:32:C:H5'	2.19	0.42
48:DZ:119:ILE:O	48:DZ:170:ILE:CA	2.65	0.42
4:CD:14:ARG:C	4:CD:16:GLY:H	2.23	0.42
32:BF:64:ILE:HG23	32:BF:65:TRP:CG	2.54	0.42
1:CA:472:A:H1'	16:CP:82:GLN:OE1	2.20	0.42
44:BV:92:THR:OG1	44:BV:92:THR:O	2.38	0.42
27:DA:412:A:N6	27:DA:2412:A:O4'	2.53	0.42
32:DF:203:GLN:O	32:DF:206:ILE:HG13	2.20	0.42
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.55	0.42
27:DA:999:U:O2	27:DA:999:U:C2'	2.67	0.42
43:DU:80:ILE:HG22	43:DU:81:HIS:N	2.34	0.42
41:BS:53:SER:O	41:BS:55:ALA:N	2.53	0.42
41:BS:65:VAL:HG12	41:BS:66:ALA:N	2.34	0.42
27:DA:1495:A:C8	27:DA:1495:A:OP1	2.73	0.42
30:DD:72:LYS:HE2	30:DD:101:GLU:CD	2.40	0.42
27:DA:1568:G:C5'	30:DD:61:LEU:HB2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DY:11:ASP:HB2	47:DY:12:THR:H	1.64	0.42
27:DA:2349:G:OP2	57:D8:42:ARG:NH2	2.49	0.42
27:DA:2413:G:H2'	27:DA:2414:G:H8	1.85	0.42
38:DP:99:LEU:HG	38:DP:102:ARG:HH11	1.84	0.42
27:DA:2554:U:C6	27:DA:2555:U:C5	2.94	0.42
27:DA:2615:U:H6	27:DA:2615:U:O5'	2.03	0.42
27:DA:590:A:H2'	27:DA:591:C:C6	2.54	0.42
31:DE:151:TYR:O	31:DE:152:LYS:C	2.58	0.42
20:AT:54:LYS:HA	20:AT:57:ARG:CZ	2.50	0.42
30:BD:126:GLN:HG2	30:BD:129:ASN:ND2	2.34	0.42
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.20	0.42
1:CA:548:G:O2'	1:CA:549:C:H5'	2.20	0.42
42:DT:27:THR:C	42:DT:28:VAL:HG23	2.40	0.42
58:D9:24:TYR:HB3	58:D9:25:VAL:H	1.66	0.42
1:AA:451:A:O4'	1:AA:452:A:N7	2.52	0.42
46:BX:12:VAL:HG12	46:BX:27:THR:CG2	2.50	0.42
20:CT:25:ARG:HG2	20:CT:29:LYS:HE3	2.01	0.42
48:DZ:150:HIS:HB3	48:DZ:169:THR:CB	2.50	0.42
1:CA:1066:C:H2'	1:CA:1067:A:H8	1.83	0.42
42:BT:53:ARG:HG2	42:BT:53:ARG:HH11	1.85	0.42
40:BR:83:ILE:O	40:BR:86:ARG:HG3	2.19	0.42
1:CA:1159:U:C4	1:CA:1182:G:C5	3.08	0.42
27:BA:2206:G:N3	27:BA:2206:G:H3'	2.35	0.42
1:CA:1072:G:C5	1:CA:1073:U:C4	3.08	0.42
5:CE:50:GLU:O	5:CE:54:ALA:HB2	2.20	0.42
31:BE:116:VAL:O	31:BE:117:MET:CB	2.56	0.42
48:DZ:96:GLU:O	48:DZ:97:MET:HB3	2.20	0.42
27:DA:1338:G:C6	27:DA:1339:G:N7	2.88	0.42
27:DA:695:G:C4	27:DA:768:G:C6	3.08	0.42
27:DA:1268:A:C2'	27:DA:1269:A:H5'	2.50	0.42
27:BA:1212:G:C2	27:BA:1236:G:C5	3.08	0.42
1:AA:1240:U:H3'	1:AA:1241:G:H5'	2.01	0.42
27:BA:92:A:O2'	27:BA:93:G:C8	2.73	0.42
36:DN:75:TYR:CD1	36:DN:81:GLY:O	2.73	0.42
1:AA:261:U:H2'	1:AA:263:A:C8	2.55	0.42
30:DD:35:LYS:HA	30:DD:35:LYS:HD3	1.75	0.42
27:DA:2652:C:H42	27:DA:2668:G:H1	1.67	0.42
34:DH:127:GLU:C	34:DH:129:THR:N	2.72	0.42
6:AF:2:ARG:HD3	6:AF:4:TYR:OH	2.20	0.42
6:CF:8:ILE:CG2	6:CF:10:LEU:HD11	2.39	0.42
10:CJ:8:LEU:HD23	10:CJ:8:LEU:HA	1.74	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DO:20:MET:O	37:DO:41:ALA:HA	2.20	0.42
42:DT:23:ARG:HB2	42:DT:120:ARG:NH1	2.35	0.42
34:BH:12:PRO:HD2	34:BH:49:VAL:HG12	2.02	0.42
27:DA:2297:C:H2'	27:DA:2298:A:H8	1.83	0.42
1:AA:1284:C:H3'	1:AA:1285:A:H8	1.83	0.42
33:DG:178:PHE:HA	33:DG:179:PRO:HD3	1.68	0.42
1:AA:578:C:O2'	1:AA:579:G:O5'	2.37	0.42
1:AA:728:A:C8	15:AO:54:ARG:NE	2.87	0.42
31:DE:14:ILE:HD11	31:DE:173:VAL:HG11	2.00	0.42
31:DE:16:ARG:C	31:DE:18:ASP:N	2.72	0.42
25:CY:24:C:H2'	25:CY:25:A:C8	2.53	0.42
34:DH:43:VAL:HG23	34:DH:43:VAL:O	2.20	0.42
27:BA:1042:G:H3'	27:BA:1043:C:O4'	2.20	0.42
45:DW:1:MET:HB3	45:DW:64:MET:HE3	2.01	0.42
45:DW:50:VAL:HG22	45:DW:51:LEU:N	2.35	0.42
7:AG:27:ILE:HG22	7:AG:39:ALA:CB	2.49	0.42
27:BA:675:A:C5	27:BA:676:A:C6	3.08	0.42
15:AO:4:THR:O	15:AO:7:GLU:HB2	2.20	0.42
15:AO:38:ARG:NH1	15:AO:38:ARG:CG	2.81	0.42
27:DA:17:G:H1	27:DA:523:C:N4	2.15	0.42
27:DA:522:G:C4	27:DA:523:C:C6	3.08	0.42
37:BO:97:ARG:HA	37:BO:117:LEU:HD21	2.01	0.42
3:AC:51:GLY:C	3:AC:52:LEU:HD23	2.40	0.42
1:CA:862:C:C2	1:CA:863:U:C5	3.07	0.42
30:BD:4:LYS:HD2	30:BD:18:VAL:HG23	2.02	0.42
1:CA:913:A:H1'	1:CA:914:A:C1'	2.50	0.42
27:BA:1398:C:C2'	27:BA:1399:C:H5'	2.50	0.42
34:DH:97:ARG:O	34:DH:125:VAL:HG21	2.20	0.42
50:B1:51:VAL:O	50:B1:51:VAL:CG1	2.68	0.42
1:AA:643:C:C2	1:AA:644:G:C8	3.08	0.42
32:BF:161:GLU:O	32:BF:165:ARG:HG3	2.20	0.42
9:CI:40:LEU:C	9:CI:42:ARG:N	2.71	0.42
1:AA:137:C:C2'	1:AA:138:G:H5'	2.50	0.42
40:BR:4:LEU:C	40:BR:6:SER:N	2.71	0.42
17:CQ:5:VAL:HG12	17:CQ:5:VAL:O	2.19	0.42
27:DA:1334:G:C6	27:DA:1335:U:C4	3.08	0.42
5:AE:148:VAL:HG12	5:AE:149:GLU:N	2.34	0.42
13:CM:37:THR:O	13:CM:55:ARG:NH2	2.52	0.42
1:AA:1147:C:O2'	1:AA:1148:U:H5'	2.19	0.42
24:CX:30:G:C6	24:CX:31:G:N7	2.88	0.42
27:DA:1042:G:H5''	27:DA:1043:C:H6	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2320:A:C2'	27:BA:2320:A:N3	2.81	0.42
1:CA:1009:G:H22	1:CA:1021:G:H1'	1.85	0.42
40:BR:39:PRO:O	40:BR:40:LYS:C	2.58	0.42
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.54	0.42
13:AM:49:THR:HG1	13:AM:52:GLU:HG3	1.84	0.42
13:AM:52:GLU:HA	13:AM:55:ARG:HH21	1.83	0.42
33:DG:73:ALA:HB3	33:DG:85:GLY:O	2.20	0.42
1:AA:113:G:C1'	1:AA:354:G:H5'	2.49	0.42
27:DA:552:G:C2'	27:DA:553:G:H5'	2.50	0.42
1:AA:92:C:H2'	1:AA:93:G:H8	1.84	0.42
33:DG:180:PHE:C	33:DG:182:LYS:N	2.72	0.42
4:CD:105:VAL:HG21	4:CD:126:ILE:HG13	2.01	0.42
3:AC:142:MET:HG3	3:AC:170:GLN:NE2	2.34	0.42
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.20	0.42
27:DA:2741:A:N6	27:DA:2763:G:O2'	2.47	0.42
27:BA:1761:C:H3'	27:BA:1762:A:H8	1.83	0.42
48:DZ:120:HIS:O	48:DZ:122:ASP:N	2.53	0.42
18:AR:87:ARG:O	18:AR:87:ARG:HG2	2.20	0.42
1:AA:383:A:H2'	1:AA:384:G:C5'	2.50	0.42
27:DA:1180:C:H2'	27:DA:1181:C:H5'	2.02	0.42
44:DV:21:ARG:H	44:DV:21:ARG:HD3	1.83	0.42
52:D3:39:ASP:CG	52:D3:44:ARG:NE	2.73	0.42
27:BA:431:U:O5'	27:BA:431:U:C6	2.72	0.42
30:DD:183:ARG:HG2	30:DD:184:LYS:O	2.20	0.42
28:BB:13:A:N1	28:BB:69:G:O2'	2.44	0.42
27:BA:2453:A:H2'	27:BA:2454:G:H8	1.85	0.42
27:BA:2245:U:C5'	27:BA:2246:G:H5'	2.50	0.42
35:DI:117:GLU:O	35:DI:118:LYS:C	2.59	0.42
27:BA:2662:A:H2'	27:BA:2663:G:O4'	2.20	0.42
27:BA:2676:C:H2'	27:BA:2677:G:H8	1.85	0.42
27:DA:1750:G:O2'	27:DA:1751:C:H5'	2.20	0.42
29:DC:38:ASP:HB2	29:DC:181:PRO:CB	2.50	0.42
34:BH:111:HIS:HA	34:BH:112:PRO:HD2	1.68	0.42
27:DA:1709:U:H2'	27:DA:1710:C:C6	2.55	0.42
41:BS:37:ALA:O	41:BS:73:LEU:HD11	2.20	0.42
1:CA:323:U:C6	1:CA:323:U:H3'	2.55	0.42
14:AN:17:LYS:HG3	14:AN:17:LYS:O	2.20	0.42
24:CX:44:A:O2'	24:CX:45:G:H5'	2.19	0.42
38:BP:35:HIS:O	38:BP:36:LYS:HB2	2.20	0.41
27:BA:2404:C:O2	38:BP:67:MET:HE1	2.19	0.41
1:CA:1219:U:H2'	1:CA:1220:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1278:A:C2	27:BA:1279:G:C4	3.08	0.41
41:BS:89:ARG:O	41:BS:90:GLY:O	2.38	0.41
32:BF:158:THR:C	32:BF:178:PRO:HD3	2.40	0.41
27:DA:241:A:O4'	27:DA:243:U:C6	2.73	0.41
12:CL:45:PRO:HB3	22:CV:9:G:H4'	2.00	0.41
27:DA:2591:C:P	30:DD:239:ARG:HB3	2.60	0.41
30:DD:8:PRO:O	30:DD:10:THR:N	2.53	0.41
4:CD:14:ARG:C	4:CD:16:GLY:N	2.73	0.41
13:CM:69:GLU:OE1	13:CM:72:ALA:N	2.53	0.41
27:BA:497:A:N6	27:BA:498:G:C6	2.88	0.41
31:BE:59:VAL:HG21	31:BE:63:LEU:CG	2.44	0.41
31:BE:52:LEU:CG	42:BT:1:MET:HE1	2.49	0.41
1:CA:1349:A:OP1	9:CI:118:LYS:O	2.38	0.41
36:BN:3:THR:HA	36:BN:4:TYR:CE1	2.54	0.41
43:BU:95:LEU:HD13	44:BV:4:ILE:HG23	2.01	0.41
32:DF:114:VAL:HG21	32:DF:202:PHE:CZ	2.55	0.41
43:DU:74:LEU:HD21	43:DU:110:VAL:HG13	2.02	0.41
47:DY:95:LYS:HD3	47:DY:100:ALA:HA	2.02	0.41
47:DY:96:ILE:CG2	47:DY:97:ARG:H	2.30	0.41
41:BS:75:GLU:C	41:BS:77:ALA:N	2.73	0.41
42:BT:38:ASN:O	42:BT:39:ARG:C	2.59	0.41
27:DA:2428:G:H4'	27:DA:2429:G:N7	2.35	0.41
33:DG:14:GLU:O	33:DG:17:PRO:HG2	2.20	0.41
47:BY:14:LEU:N	47:BY:73:ARG:O	2.53	0.41
27:BA:2299:G:C6	27:BA:2318:G:C8	3.07	0.41
27:DA:974:G:OP1	44:DV:76:LYS:HE3	2.19	0.41
27:DA:141:A:H8	27:DA:1408:C:HO2'	1.51	0.41
27:DA:2784:C:O2	31:DE:37:ARG:NH2	2.52	0.41
4:CD:106:TYR:CG	4:CD:114:ARG:HG2	2.54	0.41
9:AI:91:ASP:C	9:AI:93:ARG:N	2.69	0.41
1:AA:1221:G:H2'	1:AA:1222:G:H8	1.85	0.41
12:CL:61:TYR:HB3	12:CL:62:GLU:H	1.50	0.41
30:BD:186:HIS:CD2	30:BD:188:GLU:N	2.59	0.41
12:CL:14:LYS:O	12:CL:15:VAL:C	2.58	0.41
27:BA:794:G:C5	27:BA:795:C:C4	3.07	0.41
1:AA:62:U:H2'	1:AA:63:C:C6	2.54	0.41
1:AA:67:C:H2'	1:AA:68:G:C8	2.54	0.41
31:BE:46:ALA:HB1	31:BE:82:ARG:N	2.34	0.41
27:BA:1655:A:H3'	27:BA:1656:C:H6	1.85	0.41
16:CP:48:TRP:N	16:CP:48:TRP:CD1	2.85	0.41
46:DX:13:LEU:HA	46:DX:13:LEU:HD23	1.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2648:C:H2'	27:DA:2649:U:H6	1.81	0.41
27:DA:2171:A:C4'	27:DA:2172:U:OP1	2.68	0.41
30:BD:176:ARG:HA	30:BD:182:LEU:HD23	2.02	0.41
1:CA:512:U:H2'	1:CA:513:C:C6	2.55	0.41
1:CA:515:G:H2'	1:CA:516:U:O4'	2.19	0.41
42:BT:111:ARG:HE	42:BT:111:ARG:HB3	1.69	0.41
1:CA:1286:A:C2	21:CU:18:TYR:OH	2.71	0.41
2:CB:55:PHE:O	2:CB:59:GLU:HB3	2.20	0.41
1:AA:155:C:O2	1:AA:167:G:N2	2.53	0.41
27:BA:2848:G:H3'	42:BT:95:ARG:O	2.20	0.41
48:DZ:18:ARG:HA	48:DZ:22:LYS:O	2.20	0.41
1:CA:645:C:H2'	1:CA:646:U:C6	2.53	0.41
27:BA:2126:A:OP2	27:BA:2126:A:H8	2.03	0.41
36:DN:136:GLU:OE1	36:DN:137:LYS:N	2.50	0.41
36:DN:54:VAL:O	36:DN:54:VAL:HG12	2.19	0.41
58:B9:28:GLU:HB3	58:B9:29:ASN:H	1.70	0.41
1:CA:925:G:H1'	1:CA:1502:A:N9	2.35	0.41
35:BI:77:LEU:HD22	35:BI:78:THR:H	1.81	0.41
35:BI:9:LEU:HB2	35:BI:12:LEU:O	2.20	0.41
27:DA:957:A:N1	27:DA:2459:A:H8	2.18	0.41
27:BA:2864:G:H5'	27:BA:2864:G:H8	1.84	0.41
33:DG:77:ILE:HG22	33:DG:80:PHE:H	1.85	0.41
12:AL:114:ARG:NH2	12:AL:121:LYS:HD3	2.32	0.41
27:DA:1677:A:H2'	27:DA:1678:G:C8	2.54	0.41
27:DA:1131:G:O2'	27:DA:1132:A:H8	2.00	0.41
33:DG:131:TYR:O	33:DG:159:VAL:HG13	2.20	0.41
33:DG:170:ARG:HD2	33:DG:170:ARG:O	2.19	0.41
33:DG:64:THR:HG23	33:DG:66:GLN:N	2.34	0.41
27:DA:143(A):C:O2'	27:DA:144:C:H5'	2.20	0.41
35:DI:68:LEU:HA	35:DI:71:ILE:HG12	2.02	0.41
5:CE:11:ILE:HD11	5:CE:33:VAL:CG2	2.50	0.41
27:BA:932:G:H4'	27:BA:933:A:O5'	2.20	0.41
27:BA:2524:G:C5'	27:BA:2525:G:OP2	2.57	0.41
3:AC:134:ILE:C	3:AC:136:GLN:N	2.72	0.41
27:DA:2465:C:O2'	27:DA:2466:C:H5'	2.20	0.41
8:CH:38:ILE:HD12	8:CH:111:ILE:HG23	2.02	0.41
27:DA:221:A:N7	27:DA:266:G:O6	2.53	0.41
27:DA:2790:A:O2'	27:DA:2893:G:N3	2.46	0.41
27:BA:1222:C:H2'	27:BA:1223:G:H8	1.84	0.41
27:DA:782:A:H5'	27:DA:783:A:C2	2.55	0.41
27:DA:1278:A:C5'	40:DR:36:THR:HG22	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DW:12:ILE:HG13	45:DW:42:ARG:HH12	1.84	0.41
24:AX:72:A:C6	24:AX:73:A:C6	3.08	0.41
27:DA:321:G:C2	27:DA:341:G:H4'	2.55	0.41
1:CA:818:G:C3'	1:CA:819:A:C5'	2.98	0.41
1:CA:864:A:H2'	1:CA:865:A:O4'	2.20	0.41
38:BP:7:ARG:O	38:BP:7:ARG:HD3	2.20	0.41
38:BP:9:ASN:H	38:BP:10:PRO:HD2	1.85	0.41
1:CA:284:G:C4	1:CA:285:G:C8	3.07	0.41
2:AB:80:ILE:O	2:AB:81:VAL:C	2.58	0.41
8:CH:13:ILE:HD12	8:CH:13:ILE:N	2.35	0.41
7:AG:59:LEU:HD23	7:AG:60:LYS:N	2.35	0.41
24:CX:10:G:C2	24:CX:26:G:H1'	2.54	0.41
9:CI:40:LEU:HD23	9:CI:40:LEU:N	2.35	0.41
1:CA:1435:G:H2'	1:CA:1436:U:H6	1.85	0.41
1:CA:322:C:H6	1:CA:322:C:O5'	2.03	0.41
1:AA:8:A:N7	4:AD:208:SER:CB	2.79	0.41
1:AA:687:A:C2	1:AA:704:A:C6	3.08	0.41
43:BU:8:VAL:HG11	43:BU:12:ARG:CZ	2.49	0.41
27:DA:1336:A:O2'	27:DA:1337:G:H5'	2.19	0.41
20:AT:89:ARG:CZ	20:AT:104:LEU:HD11	2.50	0.41
1:AA:1126:U:O2'	1:AA:1127:G:C5'	2.67	0.41
1:AA:1145:C:C4'	1:AA:1146:A:OP1	2.68	0.41
31:BE:181:LEU:HD21	42:BT:7:ILE:HD12	2.02	0.41
27:BA:271(M):G:O2'	27:BA:271(N):U:H5''	2.19	0.41
27:DA:2355:C:H4'	49:D0:24:LYS:CG	2.47	0.41
1:AA:278:G:OP2	17:AQ:41:LYS:NZ	2.53	0.41
42:BT:129:ARG:CG	42:BT:129:ARG:O	2.64	0.41
1:CA:732:C:H3'	1:CA:732:C:C6	2.55	0.41
27:DA:363(A):A:H2'	27:DA:363(A):A:N3	2.34	0.41
9:AI:106:ALA:O	9:AI:108:VAL:N	2.52	0.41
27:DA:1387:C:H2'	27:DA:1388:G:C8	2.51	0.41
47:DY:54:LYS:NZ	47:DY:55:TYR:HE2	2.18	0.41
27:DA:1016:G:N1	27:DA:1017:G:C5	2.88	0.41
28:DB:92:C:O2'	28:DB:93:G:H5'	2.20	0.41
20:AT:13:LEU:CD1	20:AT:17:ARG:HH21	2.33	0.41
47:BY:19:LYS:NZ	47:BY:19:LYS:HB2	2.35	0.41
27:DA:2772:C:H6	27:DA:2772:C:O5'	2.03	0.41
3:AC:139:GLN:O	3:AC:143:GLU:HB3	2.20	0.41
1:CA:419:C:C3'	1:CA:420:U:H5'	2.50	0.41
25:CY:46:U:O2'	25:CY:47:C:OP1	2.33	0.41
27:DA:888:C:H3'	27:DA:889:C:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:888:C:H2'	27:DA:889:C:H5'	2.02	0.41
35:BI:51:ILE:O	35:BI:55:ALA:HB2	2.20	0.41
2:AB:12:GLU:HG3	2:AB:12:GLU:H	1.63	0.41
30:BD:183:ARG:CG	30:BD:183:ARG:HH11	2.33	0.41
11:AK:107:SER:OG	18:AR:86:VAL:HG13	2.19	0.41
27:DA:359:A:H2'	27:DA:360:G:O4'	2.20	0.41
1:CA:495:A:H4'	1:CA:496:A:O5'	2.20	0.41
27:BA:429:A:C6	27:BA:430:G:N1	2.88	0.41
24:AX:19:G:H5'	24:AX:20:U:C5	2.56	0.41
27:BA:1714:G:H8	27:BA:1714:G:O5'	2.02	0.41
40:DR:47:PHE:C	40:DR:47:PHE:CD2	2.94	0.41
56:B7:20:ALA:O	56:B7:21:ARG:C	2.58	0.41
27:BA:1419:A:HO2'	27:BA:1420:U:H6	1.68	0.41
29:BC:128:GLY:C	29:BC:130:ILE:H	2.22	0.41
48:BZ:21:GLY:O	48:BZ:40:LEU:HB2	2.20	0.41
32:BF:80:ALA:O	32:BF:86:GLY:HA3	2.20	0.41
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.54	0.41
42:BT:113:LYS:HA	42:BT:113:LYS:HD2	1.78	0.41
27:BA:631:A:OP1	38:BP:64:LYS:HE3	2.20	0.41
1:CA:1014:A:C5	1:CA:1015:A:C6	3.08	0.41
1:CA:1186:G:N2	14:CN:61:TRP:C	2.73	0.41
1:CA:1222:G:H2'	1:CA:1223:C:O4'	2.19	0.41
27:BA:2809:A:N3	27:BA:2892:A:N3	2.68	0.41
34:BH:137:ASP:HB3	34:BH:138:LYS:H	1.63	0.41
1:AA:914:A:H2'	1:AA:915:A:H8	1.85	0.41
51:B2:42:GLY:O	51:B2:43:GLN:C	2.58	0.41
27:DA:241:A:H2	27:DA:242:G:N2	2.18	0.41
1:CA:1102:A:C6	1:CA:1103:C:N4	2.87	0.41
27:DA:1933:G:H2'	27:DA:1934:C:H6	1.82	0.41
33:BG:99:MET:O	33:BG:102:PHE:HB3	2.19	0.41
27:BA:1246:A:P	38:BP:18:ARG:HG3	2.59	0.41
44:BV:62:LEU:HD23	44:BV:93:GLU:CB	2.48	0.41
44:BV:91:TYR:C	44:BV:92:THR:CG2	2.89	0.41
42:BT:20:PRO:HG2	42:BT:85:LYS:O	2.20	0.41
42:BT:30:VAL:HG12	42:BT:44:ASP:OD2	2.20	0.41
29:BC:76:ALA:O	29:BC:78:ALA:N	2.53	0.41
27:DA:371:A:O3'	27:DA:372:G:H4'	2.20	0.41
27:DA:397:G:C6	27:DA:398:G:N7	2.88	0.41
27:DA:1151:G:C6	27:DA:1152:C:C4	3.07	0.41
27:DA:1859:A:N6	27:DA:1860:G:C2	2.88	0.41
27:DA:918:A:H3'	27:DA:919:G:C8	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2635:C:H4'	31:DE:78:LEU:O	2.20	0.41
57:D8:40:GLU:O	57:D8:41:ILE:C	2.58	0.41
27:DA:634:C:O2'	27:DA:635:C:C6	2.70	0.41
38:DP:87:ASP:N	38:DP:87:ASP:OD1	2.53	0.41
56:D7:41:ARG:N	56:D7:41:ARG:NH1	2.68	0.41
27:DA:2581:G:H22	27:DA:2610:C:H2'	1.85	0.41
27:DA:2611:U:C6	54:D5:4:HIS:HE1	2.38	0.41
27:DA:573:G:O2'	27:DA:574:C:H3'	2.20	0.41
27:DA:588:U:C2	32:DF:90:PHE:CD1	3.08	0.41
39:BQ:43:THR:OG1	39:BQ:46:GLN:HG3	2.20	0.41
4:CD:113:SER:O	4:CD:116:GLN:N	2.53	0.41
1:CA:221:C:HO2'	1:CA:222:U:H5'	1.84	0.41
37:DO:107:ARG:NH1	42:DT:36:GLU:H	2.18	0.41
19:AS:15:LEU:HA	19:AS:15:LEU:HD13	1.87	0.41
39:BQ:12:GLN:HE21	39:BQ:73:PRO:HD3	1.85	0.41
58:D9:17:ILE:O	58:D9:24:TYR:N	2.40	0.41
46:BX:63:LYS:HA	46:BX:72:LYS:HA	2.02	0.41
41:DS:17:ARG:O	41:DS:18:ILE:CB	2.48	0.41
49:D0:41:ARG:CD	49:D0:41:ARG:N	2.66	0.41
27:BA:1307:A:C2	27:BA:1308:A:C4	3.08	0.41
27:BA:1308:A:H2'	27:BA:1309:G:O4'	2.20	0.41
30:BD:228:PRO:O	30:BD:229:VAL:C	2.58	0.41
32:BF:77:ASP:N	32:BF:77:ASP:OD1	2.52	0.41
2:AB:95:GLN:O	2:AB:97:TRP:N	2.53	0.41
1:CA:312:C:H2'	1:CA:313:A:C8	2.55	0.41
27:BA:1656:C:H5''	31:BE:136:ARG:HB2	2.02	0.41
1:CA:1043:C:H2'	1:CA:1044:A:C8	2.54	0.41
27:DA:2645:G:H3'	27:DA:2646:C:C5'	2.50	0.41
20:CT:54:LYS:HB2	20:CT:54:LYS:HE3	1.79	0.41
45:BW:92:ARG:HH11	45:BW:92:ARG:HB3	1.84	0.41
1:CA:968:A:H4'	1:CA:969:A:OP2	2.20	0.41
50:B1:6:GLU:HG3	50:B1:61:ARG:O	2.19	0.41
10:AJ:7:LYS:CD	10:AJ:71:LEU:HD13	2.50	0.41
1:CA:653:A:C4'	8:CH:56:LYS:HZ3	2.32	0.41
36:DN:15:LEU:HD22	36:DN:16:ILE:N	2.28	0.41
58:B9:29:ASN:ND2	58:B9:32:HIS:ND1	2.64	0.41
1:CA:923:A:C6	1:CA:924:C:C4	3.09	0.41
1:CA:926:G:C6	1:CA:1505:G:C6	3.08	0.41
35:BI:81:VAL:HG12	35:BI:82:ARG:H	1.85	0.41
49:D0:45:PHE:CZ	49:D0:77:ARG:NH1	2.88	0.41
27:DA:959:A:O2'	27:DA:960:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1442:G:H2'	1:AA:1442(A):G:H5''	2.01	0.41
27:DA:2306:C:H5	27:DA:2307:G:O2'	2.02	0.41
33:DG:51:ARG:NH1	33:DG:53:LEU:HD21	2.35	0.41
1:AA:36:C:C4'	12:AL:119:THR:O	2.68	0.41
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.82	0.41
51:B2:9:GLN:NE2	51:B2:56:GLN:CD	2.73	0.41
51:B2:59:ARG:O	51:B2:62:THR:HB	2.20	0.41
27:DA:1680:U:H2'	27:DA:1681:G:O4'	2.20	0.41
27:BA:1417:C:H2'	27:BA:1418:G:O4'	2.19	0.41
33:DG:64:THR:CG2	33:DG:65:GLY:N	2.83	0.41
39:BQ:56:ARG:CG	39:BQ:56:ARG:NH1	2.82	0.41
5:CE:45:PHE:C	5:CE:45:PHE:HD1	2.22	0.41
27:BA:846:C:C1'	27:BA:847:U:C5	3.03	0.41
27:DA:2848:G:C2	27:DA:2867:G:C4	3.08	0.41
27:BA:2694:G:C6	27:BA:2695:C:C4	3.09	0.41
4:AD:163:GLU:C	4:AD:165:MET:H	2.23	0.41
1:AA:728:A:C5	15:AO:54:ARG:CD	3.04	0.41
1:AA:661:G:H1	1:AA:744:C:H42	1.66	0.41
3:AC:33:LEU:O	3:AC:36:ASP:HB2	2.20	0.41
1:AA:1314:C:OP2	19:AS:6:LYS:HD3	2.20	0.41
14:AN:58:LYS:O	14:AN:59:ALA:O	2.38	0.41
40:DR:111:LEU:HA	40:DR:111:LEU:HD13	1.84	0.41
27:DA:1208:C:H2'	27:DA:1209:G:H5'	2.01	0.41
27:DA:479:A:H4'	27:DA:480:A:O5'	2.20	0.41
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.19	0.41
1:CA:938:A:N6	1:CA:939:G:C6	2.89	0.41
1:CA:701:C:O2'	1:CA:703:G:C5	2.71	0.41
12:AL:24:LEU:C	12:AL:26:GLY:H	2.23	0.41
28:BB:7:G:H3'	28:BB:8:U:C5'	2.41	0.41
32:BF:184:TYR:HE2	32:BF:188:ARG:HD2	1.82	0.41
32:BF:188:ARG:HB2	38:BP:7:ARG:NH2	2.34	0.41
27:BA:1509(B):A:C4	27:BA:1510:G:C8	3.08	0.41
52:D3:56:VAL:HG12	52:D3:57:GLU:N	2.35	0.41
1:CA:172:A:N7	1:CA:174:C:C4	2.88	0.41
2:AB:207:ALA:O	2:AB:209:ARG:N	2.54	0.41
24:CX:52:G:H2'	24:CX:53:G:H8	1.85	0.41
1:AA:740:U:OP2	15:AO:2:PRO:HG3	2.20	0.41
27:BA:1836:C:H2'	27:BA:1837:C:H5'	2.01	0.41
4:AD:33:MET:HE3	4:AD:33:MET:HA	2.02	0.41
27:BA:1722:A:C6	27:BA:1741:A:N1	2.89	0.41
13:CM:90:LEU:O	13:CM:91:ARG:CG	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:38:ILE:HA	10:CJ:39:PRO:HD3	1.82	0.41
10:CJ:30:SER:CA	10:CJ:80:LYS:HD3	2.50	0.41
23:AW:10:G:C2	23:AW:25:A:H1'	2.54	0.41
5:CE:101:ILE:HD11	5:CE:118:ILE:O	2.21	0.41
18:AR:62:GLU:O	18:AR:65:ILE:N	2.53	0.41
12:CL:112:LYS:O	12:CL:114:ARG:HG3	2.20	0.41
27:BA:528:A:C2	27:BA:2043:C:H4'	2.55	0.41
47:DY:88:LYS:HB3	47:DY:90:LEU:HD12	2.02	0.41
27:BA:2240:C:C2	27:BA:2241:A:C8	3.08	0.41
27:BA:1668:A:N7	27:BA:1674:G:C5	2.88	0.41
10:AJ:84:GLN:C	10:AJ:85:LEU:HD23	2.41	0.41
32:BF:140:LEU:HD21	32:BF:170:LEU:HD11	2.02	0.41
43:DU:60:LEU:HA	43:DU:60:LEU:HD22	1.64	0.41
25:AY:11:C:H2'	25:AY:12:C:C6	2.55	0.41
1:AA:637:G:C2'	1:AA:638:G:H5'	2.50	0.41
33:DG:119:GLY:O	33:DG:181:ARG:CZ	2.69	0.41
4:AD:94:LEU:HA	4:AD:97:LEU:HD12	2.01	0.41
49:D0:72:ARG:HB3	49:D0:75:LEU:HB3	2.02	0.41
1:AA:528:C:H5'	1:AA:535:A:C6	2.54	0.41
40:BR:109:ALA:O	40:BR:111:LEU:CD2	2.69	0.41
27:DA:1866:C:H2'	27:DA:1876:A:O4'	2.19	0.41
51:D2:10:LEU:O	51:D2:14:ARG:CG	2.68	0.41
1:AA:1233:G:H2'	1:AA:1234:C:H6	1.80	0.41
32:BF:152:GLU:O	32:BF:154:VAL:HG23	2.20	0.41
30:DD:76:PRO:HG2	30:DD:98:VAL:HG21	2.02	0.41
37:DO:73:ASP:C	37:DO:73:ASP:OD1	2.58	0.41
27:DA:1764:G:N2	27:DA:1765:C:C1'	2.83	0.41
2:CB:153:ARG:HG3	2:CB:153:ARG:H	1.49	0.41
27:BA:2446:G:C2	27:BA:2501:C:C5	3.09	0.41
27:BA:211:A:H2'	27:BA:212:G:C8	2.54	0.41
6:CF:1:MET:HB3	6:CF:66:GLU:OE2	2.19	0.41
52:D3:19:GLN:NE2	52:D3:52:HIS:CE1	2.88	0.41
46:BX:34:ALA:O	46:BX:35:THR:HG23	2.19	0.41
30:BD:133:LEU:HD13	30:BD:173:VAL:HG11	2.01	0.41
27:BA:299:A:H62	27:BA:300:A:N6	2.18	0.41
21:AU:24:ARG:O	21:AU:25:LYS:CB	2.68	0.41
48:BZ:2:TYR:O	48:BZ:3:ARG:HB2	2.19	0.41
1:AA:381:C:H2'	1:AA:382:A:O4'	2.20	0.41
4:CD:96:LEU:HG	4:CD:139:ARG:NH1	2.35	0.41
4:AD:122:ARG:HD3	4:AD:122:ARG:O	2.20	0.41
34:BH:106:THR:O	34:BH:106:THR:OG1	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:620:G:C4'	27:BA:621:A:OP1	2.68	0.41
27:BA:840:C:C2	27:BA:939:G:N1	2.88	0.41
27:BA:2791:C:H5'	27:BA:2792:G:OP1	2.20	0.41
47:BY:7:VAL:CA	47:BY:8:LYS:HD2	2.50	0.41
27:DA:1797:C:O2	27:DA:1797:C:H2'	2.19	0.41
27:DA:1905:C:N4	27:DA:1930:G:N1	2.68	0.41
27:BA:482:A:H5''	47:BY:47:LYS:HG2	2.03	0.41
27:BA:533:G:H2'	27:BA:534:U:O4'	2.21	0.41
27:DA:391:G:H1'	27:DA:411:G:O4'	2.20	0.41
32:DF:3:GLU:HG2	32:DF:4:VAL:H	1.84	0.41
44:DV:62:LEU:N	44:DV:62:LEU:CD2	2.81	0.41
30:DD:123:ALA:HB3	30:DD:131:LEU:HD11	2.03	0.41
30:BD:24:ILE:HD12	30:BD:27:THR:HG23	2.02	0.41
51:D2:47:ASN:C	51:D2:49:LYS:N	2.74	0.41
45:DW:7:ALA:CB	45:DW:103:ILE:HB	2.23	0.41
27:DA:913:U:O5'	27:DA:913:U:H6	2.04	0.41
27:DA:2550:G:N7	27:DA:2551:C:C5	2.88	0.41
27:DA:2620:C:OP1	31:DE:152:LYS:O	2.38	0.41
32:DF:63:LYS:HZ2	32:DF:67:GLN:HB3	1.85	0.41
27:DA:1188:U:C4'	44:DV:79:VAL:CG2	2.92	0.41
20:AT:24:LEU:O	20:AT:25:ARG:C	2.58	0.41
27:BA:1139:G:C2'	27:BA:1140:C:O5'	2.68	0.41
23:AW:30:A:H3'	23:AW:31:U:H5''	2.01	0.41
45:BW:6:ILE:HA	45:BW:104:THR:HA	2.02	0.41
27:DA:143:G:H1'	46:DX:37:THR:HG21	1.99	0.41
46:DX:92:LEU:C	46:DX:94:GLY:H	2.15	0.41
34:BH:55:PRO:HG2	34:BH:61:HIS:CE1	2.54	0.41
4:CD:102:ASP:O	4:CD:117:ALA:HB1	2.19	0.41
47:BY:38:ILE:HA	47:BY:38:ILE:HD13	1.79	0.41
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.58	0.41
8:AH:100:ILE:CB	8:AH:125:ARG:HH12	2.32	0.41
12:CL:35:THR:HG22	12:CL:56:ARG:HH12	1.85	0.41
12:CL:35:THR:CG2	12:CL:56:ARG:NH1	2.83	0.41
42:DT:30:VAL:HG21	42:DT:83:ILE:CG1	2.50	0.41
42:DT:61:PHE:O	42:DT:61:PHE:CG	2.73	0.41
34:DH:58:GLU:C	34:DH:60:ARG:N	2.73	0.41
27:BA:1815:A:H4'	27:BA:1816:G:OP1	2.18	0.41
1:AA:61:G:C6	1:AA:62:U:O4	2.73	0.41
1:AA:1074:G:H1	1:AA:1083:U:H3	1.68	0.41
5:AE:56:GLN:O	5:AE:57:LYS:C	2.58	0.41
38:DP:9:ASN:ND2	38:DP:9:ASN:N	2.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D4:36:VAL:HG21	53:D4:53:THR:HA	2.02	0.41
58:B9:2:LYS:C	58:B9:2:LYS:HD3	2.40	0.41
7:AG:50:ILE:O	7:AG:54:THR:CG2	2.68	0.41
42:DT:13:ARG:NH1	42:DT:15:VAL:HG11	2.35	0.41
34:BH:148:ILE:HA	34:BH:148:ILE:HD13	1.90	0.41
9:CI:125:TYR:C	9:CI:125:TYR:HD2	2.23	0.41
30:DD:52:ARG:C	30:DD:53:PHE:CG	2.92	0.41
30:DD:49:ILE:HD11	30:DD:52:ARG:HA	2.02	0.41
27:BA:2223:G:C2'	27:BA:2224:G:H5'	2.49	0.41
3:CC:84:ILE:HA	3:CC:87:LEU:HG	2.02	0.41
3:CC:99:VAL:CG2	3:CC:99:VAL:O	2.68	0.41
42:BT:106:SER:O	42:BT:107:ASP:OD1	2.39	0.41
48:DZ:127:VAL:CG2	48:DZ:131:ASN:HB2	2.50	0.41
30:BD:69:ARG:NH2	30:BD:128:GLY:O	2.53	0.41
27:BA:2844:G:H2'	27:BA:2845:G:H5'	2.02	0.41
27:BA:2846:G:H2'	27:BA:2847:U:O4'	2.20	0.41
27:BA:2848:G:HO2'	27:BA:2867:G:H22	1.68	0.41
41:BS:102:ALA:O	41:BS:103:GLU:C	2.59	0.41
48:DZ:86:ASP:O	48:DZ:87:PHE:CD2	2.73	0.41
1:AA:492:G:C5	1:AA:493:G:C8	3.09	0.41
40:DR:4:LEU:C	40:DR:4:LEU:HD22	2.39	0.41
35:BI:11:ASN:HB3	35:BI:12:LEU:CD2	2.51	0.41
1:AA:825:G:C6	1:AA:876:G:C6	3.09	0.41
8:AH:1:MET:SD	8:AH:2:LEU:N	2.92	0.41
7:AG:120:ILE:HG22	7:AG:124:LEU:HD11	2.02	0.41
1:AA:261:U:H3'	1:AA:263:A:OP2	2.20	0.41
6:CF:10:LEU:N	6:CF:10:LEU:CD1	2.79	0.41
13:AM:5:ALA:HB1	13:AM:66:LEU:HD22	2.01	0.41
13:AM:65:LYS:CB	13:AM:70:LEU:HB2	2.49	0.41
52:B3:22:ALA:HA	52:B3:46:ASN:HD22	1.85	0.41
16:CP:57:ARG:O	16:CP:58:TYR:C	2.58	0.41
4:AD:162:LEU:HD12	4:AD:181:MET:SD	2.61	0.41
1:AA:1278:U:H3'	1:AA:1278:U:H6	1.84	0.41
8:CH:104:ARG:HD2	8:CH:104:ARG:HA	1.74	0.41
27:DA:1719:G:O2'	27:DA:1720:U:H5'	2.19	0.41
27:BA:81:G:C2	27:BA:106:C:C2	3.08	0.41
27:DA:2008:C:H2'	27:DA:2009:G:H8	1.86	0.41
45:DW:107:LEU:N	45:DW:107:LEU:HD12	2.35	0.41
47:DY:46:LYS:HD3	47:DY:47:LYS:HZ2	1.84	0.41
39:BQ:67:ARG:HD2	39:BQ:105:GLU:OE1	2.19	0.41
2:AB:15:VAL:H	2:AB:16:HIS:CE1	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BG:11:TYR:O	33:BG:16:ARG:HB2	2.20	0.41
43:BU:31:SER:C	43:BU:33:ARG:N	2.72	0.41
32:DF:140:LEU:O	32:DF:143:ALA:HB3	2.21	0.41
1:AA:782:A:N1	1:AA:801:U:C2	2.88	0.41
27:BA:1926:U:O2	27:BA:1928:A:C8	2.73	0.41
32:DF:101:LEU:O	32:DF:102:PRO:C	2.58	0.41
27:DA:108:U:H2'	27:DA:109:G:C8	2.51	0.41
47:DY:2:ARG:C	47:DY:3:VAL:HG23	2.41	0.41
1:CA:1335:C:H5''	1:CA:1336:C:O5'	2.21	0.41
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.55	0.41
7:AG:71:PRO:HG3	7:AG:99:LEU:HD12	2.02	0.41
27:BA:1627:G:O2'	27:BA:1628:G:H5'	2.21	0.41
18:CR:70:ILE:HG22	18:CR:71:LYS:N	2.34	0.41
27:DA:1945:G:O2'	27:DA:1946:U:O5'	2.38	0.41
27:BA:51:G:H4'	27:BA:52:A:H5'	2.02	0.41
27:BA:459:U:C2	27:BA:460:A:C8	3.08	0.41
1:CA:59:A:H1'	1:CA:354:G:C2	2.55	0.41
1:AA:279:A:O5'	1:AA:281:G:H5'	2.20	0.41
1:CA:622:A:C8	1:CA:623:C:C6	3.07	0.41
1:CA:1229:A:O2'	1:CA:1230:C:O4'	2.34	0.41
27:BA:1452:A:O2'	27:BA:1453:U:H6	2.03	0.41
27:BA:495:G:O2'	45:BW:62:HIS:HE1	2.03	0.41
27:BA:861:A:C6	27:BA:917:A:C8	3.08	0.41
8:CH:69:ARG:HD3	8:CH:76:PRO:HA	2.02	0.41
27:BA:2027:G:C2'	27:BA:2028:U:H5'	2.50	0.41
50:D1:25:LYS:HD3	50:D1:31:GLY:H	1.84	0.41
7:AG:108:ALA:C	7:AG:110:GLN:N	2.74	0.41
4:CD:154:ASN:O	4:CD:155:LEU:HD23	2.20	0.41
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.50	0.41
17:CQ:85:VAL:O	17:CQ:89:LEU:HB2	2.21	0.41
20:AT:13:LEU:HD12	20:AT:14:LYS:N	2.35	0.41
4:CD:121:VAL:HG22	4:CD:126:ILE:CG1	2.50	0.41
36:BN:27:ALA:O	36:BN:28:THR:C	2.58	0.41
1:CA:943:U:H1'	9:CI:124:GLN:HE22	1.85	0.41
27:BA:1762:A:H8	27:BA:1762:A:P	2.43	0.41
1:AA:573:A:C6	1:AA:574:A:N1	2.88	0.41
45:BW:68:ARG:HD3	45:BW:110:LYS:HB3	2.02	0.41
35:DI:8:PRO:HA	35:DI:14:ASP:H	1.84	0.41
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.83	0.41
27:BA:452:G:C6	27:BA:453:C:C5	3.08	0.41
2:CB:177:ALA:HB1	2:CB:182:ILE:HB	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1026:G:C3'	1:AA:1027:C:H5'	2.48	0.41
27:DA:2854:G:H2'	27:DA:2855:C:C6	2.55	0.41
56:B7:45:ALA:O	56:B7:46:VAL:HG23	2.18	0.41
34:BH:169:VAL:O	34:BH:169:VAL:HG13	2.20	0.41
10:AJ:32:ALA:HB3	10:AJ:75:ILE:HD11	2.02	0.41
27:BA:1624:G:N2	27:BA:1625:C:H1'	2.35	0.41
27:DA:272(E):G:C6	27:DA:272(F):C:N3	2.88	0.41
16:CP:49:LEU:HG	16:CP:49:LEU:O	2.20	0.41
16:CP:33:ILE:HG21	16:CP:59:TRP:CH2	2.55	0.41
8:AH:105:ARG:HD3	8:AH:105:ARG:HA	1.70	0.41
1:AA:690:G:H2'	1:AA:691:G:O4'	2.20	0.41
27:DA:2074:U:H4'	27:DA:2598:A:O4'	2.20	0.41
45:BW:54:ALA:HB1	45:BW:107:LEU:HD22	2.01	0.41
27:DA:1381:G:H1'	27:DA:1571:A:N1	2.34	0.41
1:CA:481:G:O2'	1:CA:483:C:N4	2.53	0.41
7:AG:72:ARG:HA	7:AG:72:ARG:HD2	1.93	0.41
27:BA:272(H):C:O2	27:BA:272(H):C:H2'	2.20	0.41
1:AA:900:A:H2'	1:AA:901:A:O4'	2.20	0.41
27:BA:636:G:H2'	38:BP:115:LEU:HD12	2.02	0.41
1:CA:949:A:C6	1:CA:950:U:N3	2.89	0.41
10:CJ:61:GLU:HG2	14:CN:58:LYS:NZ	2.35	0.41
10:CJ:49:VAL:HG21	14:CN:41:ARG:HB2	2.01	0.41
40:BR:44:LEU:O	40:BR:47:PHE:HB3	2.21	0.41
41:BS:92:TYR:CD1	41:BS:93:LYS:N	2.82	0.41
1:AA:912:C:O2'	1:AA:913:A:H5'	2.20	0.41
57:D8:6:THR:CG2	57:D8:63:PRO:CG	2.97	0.41
27:DA:240:G:O2'	27:DA:257:A:N6	2.46	0.41
27:BA:29:U:C2	27:BA:30:G:C8	3.08	0.41
53:B4:40:ILE:HD13	53:B4:48:ILE:O	2.20	0.41
33:BG:110:ALA:N	33:BG:112:PRO:HD2	2.35	0.41
1:CA:1346:A:C4	1:CA:1348:U:C4	3.08	0.41
5:AE:84:PHE:O	5:AE:86:ALA:N	2.53	0.41
1:CA:460:G:H1	1:CA:470:C:H5''	1.85	0.41
27:BA:995:C:OP1	43:BU:53:ARG:CZ	2.68	0.41
44:BV:47:VAL:O	44:BV:48:GLY:C	2.57	0.41
42:BT:78:LEU:HB3	42:BT:79:HIS:ND1	2.34	0.41
47:DY:97:ARG:HA	47:DY:97:ARG:HD2	1.87	0.41
27:DA:1433:U:H1'	27:DA:1561:G:N2	2.36	0.41
1:AA:472:A:C6	1:AA:473:G:N3	2.88	0.41
27:DA:632:A:C6	27:DA:633:A:N6	2.89	0.41
38:DP:58:THR:C	38:DP:61:ARG:NE	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:458:G:O2'	27:DA:459:U:P	2.79	0.41
27:DA:587:C:N3	38:DP:33:ARG:HG2	2.35	0.41
27:DA:748:G:C6	27:DA:750:A:C2	3.08	0.41
32:DF:65:TRP:CE3	32:DF:65:TRP:O	2.65	0.41
1:AA:171:A:N6	1:AA:172:A:C6	2.89	0.41
27:BA:2468:G:O2'	27:BA:2469:A:P	2.78	0.41
34:BH:19:VAL:HG22	34:BH:24:VAL:HG12	2.01	0.41
1:CA:35:G:N2	1:CA:550:G:N3	2.69	0.41
42:DT:29:ARG:HD3	42:DT:29:ARG:HA	1.75	0.41
27:DA:88:G:OP1	27:DA:90:U:C4	2.74	0.41
1:AA:376:G:C4'	16:AP:5:ARG:HD2	2.49	0.41
41:DS:16:ASN:O	41:DS:20:ARG:NH2	2.53	0.41
1:CA:276:G:O5'	1:CA:276:G:C8	2.71	0.41
17:CQ:55:ASP:OD1	17:CQ:79:SER:HA	2.20	0.41
17:CQ:21:VAL:HG21	17:CQ:59:ILE:HD11	2.01	0.41
27:BA:2074:U:H2'	27:BA:2075:U:H6	1.82	0.41
2:AB:173:ALA:O	2:AB:174:VAL:C	2.58	0.41
1:CA:663:A:O2'	1:CA:664:G:H5'	2.20	0.41
20:CT:51:GLU:H	20:CT:51:GLU:HG2	1.59	0.41
15:AO:24:SER:OG	15:AO:25:THR:N	2.54	0.41
15:AO:76:GLU:C	15:AO:78:TYR:N	2.72	0.41
34:BH:158:HIS:HE1	34:BH:168:PRO:C	2.24	0.41
1:CA:970:C:H41	9:CI:126:SER:CB	2.30	0.41
37:BO:7:TYR:HE2	37:BO:44:LYS:HG3	1.84	0.41
1:CA:178:C:O2'	1:CA:179:A:H5'	2.20	0.41
27:DA:2694:G:C5	27:DA:2695:C:C5	3.09	0.41
27:DA:2478:A:N6	27:DA:2479:G:C2	2.88	0.41
27:BA:1439:A:H61	27:BA:1552:G:H1'	1.86	0.41
27:DA:524:U:H2'	27:DA:525:U:C6	2.55	0.41
1:CA:678:U:H1'	1:CA:777:A:O3'	2.21	0.41
1:CA:779:C:H4'	11:CK:120:ARG:O	2.20	0.41
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.55	0.41
1:CA:515:G:O2'	1:CA:516:U:H5'	2.20	0.41
1:CA:533:A:O2'	1:CA:534:U:H3'	2.20	0.41
48:DZ:22:LYS:HG3	48:DZ:38:VAL:O	2.20	0.41
1:CA:751:U:C1'	15:CO:24:SER:HA	2.51	0.41
27:DA:464:U:H2'	27:DA:465:G:O4'	2.20	0.41
35:BI:112:LYS:N	35:BI:114:LEU:HD11	2.35	0.41
35:BI:122:GLU:OE2	35:BI:123:LEU:N	2.53	0.41
3:AC:201:TYR:N	3:AC:201:TYR:HD1	2.16	0.41
27:BA:1373:A:H2'	27:BA:1374:G:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B1:63:ALA:O	50:B1:65:SER:N	2.52	0.41
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.84	0.41
28:DB:43:C:H3'	28:DB:44:G:H5'	2.01	0.41
39:BQ:133:ARG:O	39:BQ:134:ARG:CB	2.66	0.41
27:BA:2356:C:N4	27:BA:2357:U:H3	2.18	0.41
13:AM:71:ARG:HE	13:AM:71:ARG:HB3	1.65	0.41
27:DA:2866:U:C6	27:DA:2868:A:H1'	2.55	0.41
37:DO:40:VAL:O	37:DO:41:ALA:HB2	2.20	0.41
42:DT:120:ARG:O	42:DT:123:GLN:HG2	2.20	0.41
38:BP:85:LEU:O	38:BP:88:LEU:N	2.54	0.41
34:BH:10:PRO:HG3	34:BH:50:VAL:H	1.84	0.41
27:DA:2293:C:C2	27:DA:2340:G:N2	2.88	0.41
1:CA:1316:G:N1	1:CA:1319:A:OP2	2.53	0.41
30:BD:246:PRO:CG	30:BD:255:LYS:HG3	2.40	0.41
2:AB:213:LEU:O	2:AB:214:ILE:C	2.59	0.41
1:CA:602:A:HO2'	1:CA:603:U:H5'	1.85	0.41
25:CY:26:C:N3	25:CY:27:C:N4	2.68	0.41
38:DP:111:ARG:NH1	38:DP:149:GLU:HG3	2.36	0.41
1:AA:632:A:C8	1:AA:633:G:C8	3.08	0.41
27:BA:2230:G:C4'	50:B1:43:TYR:HB2	2.50	0.41
27:BA:813:U:O2'	27:BA:1225:G:H1'	2.19	0.41
45:DW:64:MET:O	45:DW:65:LEU:CB	2.68	0.41
1:AA:1192:C:O2	5:AE:25:ARG:NH2	2.47	0.41
5:AE:106:PRO:HG2	5:AE:107:ARG:H	1.86	0.41
13:AM:91:ARG:HB2	13:AM:98:VAL:HG13	2.01	0.41
48:BZ:143:LEU:CD1	48:BZ:147:ASP:HB3	2.50	0.41
13:CM:81:LEU:HB3	13:CM:86:CYS:SG	2.61	0.41
50:B1:73:LEU:C	50:B1:75:GLU:H	2.22	0.41
50:B1:73:LEU:O	50:B1:74:VAL:C	2.58	0.41
32:BF:164:ARG:CG	32:BF:175:THR:OG1	2.66	0.41
42:DT:16:ARG:H	42:DT:79:HIS:HD2	1.67	0.41
38:BP:132:LYS:O	38:BP:136:GLU:HG2	2.21	0.41
7:AG:80:VAL:HG21	7:AG:85:TYR:CE1	2.56	0.41
36:BN:60:ILE:H	36:BN:60:ILE:HG13	1.52	0.41
1:AA:1066:C:O2'	1:AA:1067:A:C5'	2.68	0.41
13:CM:16:ASP:HB2	13:CM:31:LYS:CE	2.51	0.41
13:CM:38:GLY:O	13:CM:55:ARG:NH2	2.54	0.41
11:AK:104:GLN:NE2	11:AK:106:LYS:HD2	2.35	0.41
27:BA:1464:C:C4	27:BA:1465:G:N7	2.88	0.41
27:BA:1545:A:H3'	27:BA:1546:C:C6	2.54	0.41
17:AQ:29:HIS:O	17:AQ:33:GLY:HA2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:463:G:N2	27:BA:466:A:OP2	2.51	0.41
31:BE:172:VAL:HG13	31:BE:182:LEU:HD11	2.01	0.41
11:AK:84:VAL:HG12	11:AK:95:ILE:HD11	2.02	0.41
27:DA:1355:G:C6	27:DA:1356:G:N7	2.89	0.41
1:AA:773:G:H1	1:AA:806:C:H42	1.68	0.41
1:CA:72:C:C2'	1:CA:73:G:H5'	2.51	0.41
24:CX:32:C:C2'	24:CX:33:U:H5'	2.50	0.41
51:B2:13:ALA:CA	51:B2:16:LEU:HD21	2.46	0.41
1:AA:680:C:C2	1:AA:711:G:N2	2.88	0.41
4:AD:176:LEU:HG	4:AD:178:VAL:CG2	2.51	0.41
27:DA:1016:G:C6	27:DA:1017:G:N7	2.89	0.41
50:B1:57:GLU:C	50:B1:58:ILE:CG2	2.89	0.41
2:CB:236:TYR:HA	2:CB:239:VAL:CG2	2.47	0.41
28:DB:93:G:H2'	28:DB:94:C:C6	2.54	0.41
30:DD:186:HIS:HD2	30:DD:188:GLU:H	1.68	0.41
31:DE:167:VAL:HG22	31:DE:170:LEU:HD11	2.03	0.41
3:AC:143:GLU:O	3:AC:145:GLY:N	2.53	0.41
27:DA:1227:G:OP1	43:DU:13:LYS:HE2	2.20	0.41
27:BA:1789:A:H2'	27:BA:1790:C:O4'	2.20	0.41
1:CA:795:C:H5	1:CA:796:C:C4	2.37	0.41
25:CY:1:U:O4	25:CY:71:A:N1	2.53	0.41
9:CI:106:ALA:O	9:CI:108:VAL:HG22	2.19	0.41
1:CA:1165:C:H2'	1:CA:1166:G:H5'	2.01	0.41
13:AM:31:LYS:O	13:AM:32:GLU:C	2.58	0.41
30:DD:75:ILE:HA	30:DD:76:PRO:HD2	1.76	0.41
27:DA:2082:A:H2'	27:DA:2083:G:O4'	2.19	0.41
33:DG:34:LEU:O	33:DG:35:GLU:C	2.58	0.41
27:BA:2850:A:C6	27:BA:2851:A:C5	3.09	0.41
1:CA:505:G:H8	1:CA:505:G:O5'	2.04	0.41
1:AA:616:G:C2	1:AA:617:G:C8	3.08	0.41
27:DA:2201:C:O2'	27:DA:2202:C:H5'	2.21	0.41
31:DE:175:VAL:O	31:DE:177:PRO:HD3	2.20	0.41
27:BA:2208:A:N3	27:BA:2219:G:C2	2.89	0.41
27:BA:1625:C:C2'	27:BA:1626:G:H5'	2.50	0.41
4:CD:58:LEU:CD1	4:CD:59:ARG:NH1	2.84	0.41
1:CA:404:U:O2'	1:CA:405:U:H5'	2.19	0.41
27:DA:1109:C:C5	27:DA:1110:G:C4	3.08	0.41
1:CA:1375:A:H2'	1:CA:1376:U:C6	2.55	0.41
1:CA:745:C:H5'	1:CA:851:G:H21	1.84	0.41
31:BE:94:GLU:H	31:BE:94:GLU:HG2	1.59	0.41
4:AD:192:GLU:OE2	4:AD:192:GLU:HA	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1596:A:C2	27:DA:1597:A:C4	3.08	0.41
38:BP:65:ARG:HH21	57:B8:15:LYS:HD2	1.84	0.41
28:BB:42:C:C5	28:BB:43:C:C5	3.08	0.41
34:BH:142:GLY:O	34:BH:143:GLN:C	2.57	0.41
36:DN:104:LYS:C	36:DN:106:MET:H	2.23	0.41
38:DP:49:ARG:HD2	57:D8:58:ILE:HG22	2.00	0.41
27:DA:2591:C:OP1	30:DD:239:ARG:NH2	2.54	0.41
27:BA:27:G:H1'	27:BA:513:A:N6	2.34	0.41
4:CD:8:VAL:HG11	4:CD:21:LEU:CB	2.51	0.41
52:B3:29:ARG:HB2	52:B3:30:ARG:CD	2.50	0.41
27:BA:538:G:C6	27:BA:539:G:N7	2.88	0.41
43:BU:111:GLU:O	43:BU:112:ARG:C	2.58	0.41
44:BV:47:VAL:O	44:BV:49:THR:N	2.53	0.41
44:BV:64:HIS:ND1	44:BV:92:THR:HB	2.36	0.41
32:DF:3:GLU:HB3	32:DF:24:LEU:HG	2.03	0.41
43:DU:35:ALA:O	43:DU:38:THR:HB	2.20	0.41
36:DN:2:LYS:CE	44:DV:13:ARG:HB3	2.49	0.41
43:DU:90:VAL:HG21	44:DV:47:VAL:HG21	2.03	0.41
27:DA:1578:U:C2'	27:DA:1579:A:H5''	2.49	0.41
12:CL:53:ALA:O	12:CL:65:ALA:N	2.34	0.41
52:B3:54:VAL:HG12	52:B3:56:VAL:HG22	2.03	0.41
47:DY:26:LYS:HZ2	47:DY:27:VAL:HG23	1.86	0.41
41:DS:102:ALA:O	41:DS:104:GLY:N	2.54	0.41
27:DA:870:A:C2	27:DA:871:U:C2	3.08	0.41
11:AK:18:ARG:O	11:AK:32:ILE:HA	2.21	0.41
27:DA:2811:G:OP2	27:DA:2811:G:H8	2.04	0.41
27:DA:2255:G:C6	27:DA:2256:G:C5	3.08	0.41
28:DB:91:C:OP1	39:DQ:16:ARG:HG3	2.20	0.41
27:DA:2509:G:N2	27:DA:2580:U:C2	2.89	0.41
1:AA:169:C:C5	1:AA:170:U:H5	2.39	0.41
46:DX:35:THR:CG2	46:DX:37:THR:HB	2.50	0.41
14:AN:21:TYR:HD2	14:AN:22:THR:O	2.03	0.41
42:DT:74:ARG:HD3	42:DT:76:PHE:HE2	1.82	0.41
42:DT:83:ILE:CG1	42:DT:84:GLN:N	2.80	0.41
27:DA:2748:A:O2'	34:DH:63:SER:HA	2.20	0.41
1:CA:129(A):G:C2	1:CA:189(H):G:C8	3.08	0.41
27:BA:1797:C:C5'	30:BD:257:LEU:O	2.68	0.41
30:BD:226:MET:SD	30:BD:230:ASP:HB3	2.59	0.41
1:AA:69:G:N2	1:AA:101:A:C2	2.89	0.41
31:BE:3:GLY:HA3	31:BE:81:ILE:HG21	2.01	0.41
27:BA:1866:C:H6	27:BA:1866:C:O5'	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:23:GLY:C	15:AO:24:SER:O	2.58	0.41
20:CT:25:ARG:CZ	20:CT:25:ARG:HB2	2.51	0.41
1:CA:1191:A:C5'	3:CC:4:LYS:HZ1	2.32	0.41
37:BO:77:ILE:CD1	42:BT:74:ARG:HG2	2.51	0.41
37:BO:77:ILE:HG13	37:BO:78:ARG:N	2.36	0.41
1:CA:1058:G:O2'	1:CA:1059:C:H5'	2.21	0.41
14:CN:45:ARG:O	14:CN:46:GLU:C	2.59	0.41
27:BA:2261:C:C2	27:BA:2280:G:N2	2.89	0.41
1:CA:643:C:H5'	8:CH:31:PHE:CG	2.55	0.41
1:CA:590:C:OP1	8:CH:30:ARG:N	2.49	0.41
29:BC:36:LYS:HZ3	29:BC:36:LYS:HB2	1.86	0.41
29:DC:59:ARG:HB2	29:DC:62:VAL:HG22	2.03	0.41
1:CA:1518:A:H2'	1:CA:1519:A:O4'	2.20	0.41
1:AA:443:C:C2	1:AA:444:C:C5	3.08	0.41
57:B8:28:GLY:O	57:B8:32:LEU:CD2	2.61	0.41
27:DA:662:G:H5''	38:DP:18:ARG:C	2.39	0.41
51:B2:24:LEU:CD1	51:B2:28:LYS:HE2	2.50	0.41
20:AT:74:LYS:C	20:AT:76:ALA:H	2.22	0.41
34:DH:152:ARG:HB2	34:DH:162:ILE:HD11	2.03	0.41
52:D3:47:VAL:CA	52:D3:50:VAL:HG22	2.51	0.41
6:CF:10:LEU:HD21	6:CF:26:ILE:HD11	2.02	0.41
27:DA:1482:G:H2'	27:DA:1484:G:O4'	2.20	0.41
27:BA:847:U:O4	27:BA:933:A:N6	2.54	0.41
1:CA:1316:G:N2	1:CA:1319:A:OP2	2.53	0.41
5:CE:143:ARG:O	5:CE:144:THR:O	2.38	0.41
5:CE:78:HIS:HB2	5:CE:79:GLU:H	1.69	0.41
6:AF:34:GLY:O	6:AF:67:MET:HB2	2.20	0.41
50:B1:45:ASN:HD22	50:B1:45:ASN:HA	1.64	0.41
27:BA:489:G:C2	27:BA:491:G:C4	3.09	0.41
27:DA:494:G:H2'	27:DA:495:G:C8	2.56	0.41
45:DW:51:LEU:O	45:DW:54:ALA:HB3	2.20	0.41
27:DA:480:A:P	47:DY:46:LYS:HE2	2.60	0.41
1:CA:736:C:H4'	6:CF:91:VAL:HG22	2.01	0.41
5:AE:18:ARG:CG	5:AE:25:ARG:O	2.68	0.41
27:BA:2079:U:O3'	50:B1:35:THR:OG1	2.26	0.41
39:BQ:65:PHE:HB2	39:BQ:105:GLU:CG	2.46	0.41
52:D3:6:VAL:O	52:D3:34:GLU:HB3	2.20	0.41
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.53	0.41
27:DA:1999:C:H2'	27:DA:2000:G:H8	1.85	0.41
50:B1:83:GLU:O	50:B1:84:GLY:O	2.39	0.41
1:CA:1132:C:HO2'	1:CA:1133:G:H5'	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DB:31:C:C5'	28:DB:32:C:OP2	2.69	0.41
1:CA:9:G:OP1	5:CE:122:GLU:CB	2.68	0.41
1:AA:1064:G:O2'	1:AA:1065:U:P	2.79	0.41
40:BR:10:LEU:CA	40:BR:17:ARG:HD2	2.44	0.41
36:BN:36:GLY:H	36:BN:48:MET:HE3	1.85	0.41
13:CM:58:GLU:O	13:CM:59:TYR:C	2.59	0.41
20:AT:87:LYS:O	20:AT:91:LEU:CG	2.66	0.41
20:AT:56:MET:SD	20:AT:88:VAL:HG21	2.60	0.41
56:D7:30:VAL:O	56:D7:31:LEU:C	2.58	0.41
1:AA:758:G:C2'	1:AA:759:A:OP2	2.68	0.41
27:BA:2025:C:H2'	27:BA:2026:C:C6	2.55	0.41
1:CA:860:A:H4'	8:CH:75:ARG:HH22	1.86	0.41
1:AA:1178:G:N7	9:AI:97:LYS:HE3	2.36	0.41
29:BC:19:VAL:CG1	29:BC:20:TYR:HD1	2.30	0.41
47:DY:54:LYS:C	47:DY:55:TYR:CG	2.94	0.41
27:DA:381:G:OP1	50:D1:16:ASN:HB2	2.20	0.41
19:CS:22:LEU:HD13	19:CS:27:GLU:HB2	2.01	0.41
27:DA:1838:C:H6	27:DA:1838:C:H2'	1.64	0.41
29:DC:20:TYR:N	29:DC:20:TYR:CD1	2.88	0.41
24:CX:37:A:H2'	24:CX:38:A:O4'	2.20	0.41
27:DA:1424:G:C6	27:DA:1425:G:C4	3.08	0.41
7:AG:118:VAL:O	7:AG:121:ALA:HB3	2.21	0.41
1:AA:1258:G:H2'	1:AA:1259:C:H6	1.85	0.41
27:BA:2649:U:O2'	27:BA:2650:U:H5'	2.19	0.41
27:DA:2301:C:C3'	27:DA:2301:C:C6	3.04	0.41
27:DA:555:U:C2'	27:DA:556:G:H8	2.33	0.41
1:AA:40:C:H2'	1:AA:41:G:O4'	2.20	0.41
31:DE:175:VAL:O	31:DE:175:VAL:CG2	2.68	0.41
27:BA:1218:C:H42	27:BA:1231:G:H1	1.68	0.41
1:AA:66:G:O4'	1:AA:173:U:C4	2.73	0.41
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.21	0.41
27:DA:1111:A:O2'	27:DA:1112:G:H4'	2.21	0.41
10:AJ:43:ARG:HB2	10:AJ:67:THR:HG23	2.02	0.41
45:BW:52:GLU:O	45:BW:55:ALA:HB3	2.20	0.41
27:BA:2416:C:H2'	27:BA:2417:C:C6	2.55	0.41
38:BP:41:ARG:HE	38:BP:45:LEU:HD12	1.86	0.41
1:CA:961:U:C4	1:CA:983:A:C6	3.09	0.41
27:BA:1278:A:HO2'	27:BA:1279:G:H5'	1.85	0.41
41:BS:15:ARG:O	41:BS:17:ARG:O	2.38	0.41
41:BS:87:PHE:CD2	41:BS:88:ASP:N	2.65	0.41
32:BF:202:PHE:HA	32:BF:205:ARG:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D8:62:LEU:N	57:D8:63:PRO:CD	2.82	0.41
27:DA:1797:C:H4'	30:DD:257:LEU:O	2.20	0.41
27:DA:1971:A:C2	30:DD:239:ARG:O	2.73	0.41
4:CD:19:LEU:O	4:CD:26:CYS:SG	2.78	0.41
47:BY:46:LYS:CG	47:BY:47:LYS:HE3	2.49	0.41
31:BE:64:LYS:HG2	31:BE:64:LYS:O	2.20	0.41
44:BV:91:TYR:C	44:BV:91:TYR:CD1	2.94	0.41
27:DA:1862:G:C2	27:DA:1863:G:C5	3.09	0.41
27:DA:995:C:O2'	27:DA:996:A:OP2	2.38	0.41
43:DU:103:PRO:O	43:DU:104:GLN:C	2.57	0.41
43:DU:21:ALA:HA	43:DU:24:TYR:CE1	2.55	0.41
43:DU:35:ALA:O	43:DU:39:LEU:HG	2.21	0.41
27:BA:2476:A:N1	27:BA:2477:C:C6	2.88	0.41
27:DA:1495:A:H8	27:DA:1495:A:OP1	2.03	0.41
27:DA:1578:U:O2	27:DA:1578:U:C2'	2.69	0.41
30:DD:208:LYS:HG2	30:DD:210:GLY:C	2.40	0.41
1:AA:344:A:C2'	1:AA:346:G:O6	2.67	0.41
42:BT:35:LYS:HG3	42:BT:36:GLU:HB2	2.03	0.41
27:DA:2832:U:C4'	27:DA:2833:G:H5''	2.45	0.41
1:AA:461:A:C5	1:AA:471:G:C5	3.09	0.41
27:DA:873:G:O2'	27:DA:874:G:H5'	2.20	0.41
1:AA:683:G:H21	11:AK:38:ASN:HA	1.86	0.41
7:CG:115:ARG:O	7:CG:116:ALA:C	2.58	0.41
27:DA:2344:U:OP1	55:D6:38:LYS:HD2	2.20	0.41
27:DA:958:U:H3	39:DQ:17:LEU:HD11	1.85	0.41
27:DA:747:U:C4	54:D5:2:ALA:N	2.88	0.41
27:DA:2507:C:C4	27:DA:2583:G:N1	2.89	0.41
31:DE:150:VAL:O	31:DE:151:TYR:C	2.58	0.41
27:DA:2050:C:H1'	31:DE:156:MET:CE	2.51	0.41
44:DV:81:TYR:HE2	44:DV:83:ARG:CZ	2.32	0.41
36:BN:94:HIS:O	36:BN:95:PRO:C	2.57	0.41
55:B6:19:ARG:CG	55:B6:20:ASN:N	2.76	0.41
27:DA:1348:G:C5	27:DA:1349:A:C2	3.08	0.41
27:DA:1408:C:C2	27:DA:1595:G:N2	2.88	0.41
47:BY:28:LYS:CB	47:BY:38:ILE:H	2.33	0.41
12:CL:59:SER:C	12:CL:61:TYR:H	2.23	0.41
12:CL:61:TYR:O	12:CL:62:GLU:HB2	2.20	0.41
40:DR:74:LYS:O	40:DR:76:VAL:N	2.53	0.41
42:DT:32:TYR:O	42:DT:33:LYS:HB2	2.21	0.41
22:AV:7:C:N3	23:AW:36:A:C2	2.88	0.41
1:AA:299:G:C5	1:AA:300:A:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:136:C:H42	1:AA:227:G:H1	1.68	0.41
1:CA:189(D):C:H2'	1:CA:189(E):U:C1'	2.51	0.41
17:CQ:78:GLU:CD	17:CQ:81:ARG:HD2	2.39	0.41
27:BA:1816:G:H2'	30:BD:62:TYR:CE2	2.55	0.41
30:BD:257:LEU:HA	30:BD:257:LEU:HD23	1.82	0.41
2:CB:85:ALA:CB	2:CB:92:TYR:HD2	2.33	0.41
27:BA:952:G:C6	27:BA:966:G:C6	3.08	0.41
40:DR:41:ALA:O	40:DR:43:GLU:N	2.53	0.41
27:BA:829:A:N7	27:BA:2248:C:H5'	2.35	0.41
1:AA:355:C:C2'	1:AA:356:A:O5'	2.69	0.41
4:AD:28:SER:C	4:AD:30:LYS:H	2.23	0.41
1:AA:1321:C:H5'	1:AA:1322:C:H5'	1.99	0.41
34:BH:115:VAL:HG21	34:BH:148:ILE:CD1	2.50	0.41
27:DA:771:G:H2'	27:DA:772:C:H6	1.86	0.41
27:BA:2224:G:O2'	27:BA:2225:A:O4'	2.39	0.41
4:AD:16:GLY:O	4:AD:17:VAL:C	2.59	0.41
27:BA:382:G:H2'	27:BA:383:U:C5'	2.48	0.41
27:BA:385:C:O2'	27:BA:388:G:N2	2.54	0.41
27:DA:175:G:O2'	27:DA:176:G:H5'	2.21	0.41
27:DA:52:A:C2	27:DA:53:A:C5	3.09	0.41
1:CA:678:U:N3	1:CA:713:G:N2	2.69	0.41
6:AF:9:VAL:CG2	6:AF:60:PHE:CE2	3.04	0.41
6:AF:89:MET:SD	18:AR:76:LEU:CD2	3.06	0.41
42:BT:106:SER:HB3	42:BT:110:ILE:HD12	1.98	0.41
15:CO:83:GLU:C	15:CO:85:LEU:N	2.73	0.41
1:CA:1255:G:C5	1:CA:1283:G:N2	2.89	0.41
27:DA:2156:G:C6	27:DA:2157:G:N2	2.89	0.41
35:BI:101:LEU:HD23	35:BI:109:ILE:HD11	2.03	0.41
27:DA:1267:U:O2'	27:DA:1268:A:O5'	2.38	0.41
27:DA:963:U:H2'	27:DA:964:C:C6	2.55	0.41
1:AA:619:U:C4	4:AD:135:LEU:HD11	2.55	0.41
38:BP:30:THR:CG2	38:BP:31:ALA:H	2.14	0.41
24:AX:56:C:H1'	33:BG:76:SER:CB	2.51	0.41
27:DA:661:C:H2'	27:DA:662:G:C8	2.54	0.41
39:BQ:56:ARG:O	39:BQ:57:HIS:C	2.56	0.41
30:BD:12:SER:OG	30:BD:13:ARG:N	2.53	0.41
13:AM:70:LEU:O	13:AM:73:GLU:HB3	2.20	0.41
8:AH:14:ARG:O	8:AH:16:ALA:N	2.54	0.41
37:DO:35:VAL:HA	37:DO:62:VAL:CG1	2.50	0.41
27:DA:745:G:OP1	31:DE:133:LYS:NZ	2.44	0.41
33:DG:111:LEU:HD23	33:DG:114:ILE:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BZ:117:GLN:HG2	48:BZ:119:ILE:HG13	2.02	0.41
1:AA:577:G:O2'	1:AA:578:C:C5'	2.68	0.41
27:DA:2526:G:N3	58:D9:2:LYS:HE2	2.35	0.41
5:CE:110:LEU:HD21	5:CE:139:LEU:HD11	2.02	0.41
7:CG:146:GLU:CA	7:CG:149:ARG:HB2	2.51	0.41
10:CJ:35:SER:O	10:CJ:36:GLY:C	2.59	0.41
8:CH:109:ILE:HG23	8:CH:110:ALA:N	2.35	0.41
8:CH:38:ILE:C	8:CH:40:ALA:N	2.74	0.41
1:AA:1271:G:H2'	1:AA:1272:G:C8	2.54	0.41
19:AS:6:LYS:HD2	19:AS:7:LYS:HE3	2.02	0.41
27:DA:2102:U:H5'	27:DA:2103:C:P	2.61	0.41
27:DA:2790:A:C2	27:DA:2791:C:H3'	2.55	0.41
27:BA:1111:A:C2'	27:BA:1112:G:H4'	2.49	0.41
1:AA:1492:A:H3'	26:AZ:6:5OH:HNP	1.86	0.41
27:DA:797:C:OP1	32:DF:60:SER:OG	2.31	0.41
18:AR:37:VAL:O	18:AR:39:VAL:N	2.54	0.41
27:DA:499:U:H3'	27:DA:499:U:H6	1.86	0.41
27:BA:1175:U:C2'	27:BA:1175:U:O2	2.67	0.41
1:CA:1509:C:O2'	1:CA:1510:U:H5'	2.21	0.41
5:CE:7:GLU:HB2	5:CE:35:GLY:O	2.21	0.41
3:AC:64:VAL:CG2	3:AC:99:VAL:HA	2.51	0.41
27:BA:257:A:H2'	27:BA:258:G:C5'	2.50	0.41
46:BX:50:LYS:HE3	46:BX:84:ALA:HB2	2.02	0.41
37:BO:19:ILE:CG2	37:BO:43:VAL:HG13	2.41	0.41
27:DA:2840:C:O2'	40:DR:91:GLN:HG2	2.20	0.41
27:BA:2653:U:OP2	27:BA:2654:A:H3'	2.20	0.41
1:AA:704:A:C2	1:AA:705:U:C2	3.08	0.41
27:DA:1591:G:O2'	27:DA:1592:C:H5'	2.21	0.41
27:DA:1334:G:O2'	27:DA:1335:U:H5'	2.20	0.41
31:BE:38:THR:HB	31:BE:40:GLU:CD	2.41	0.41
27:BA:978:G:O4'	27:BA:1001:A:H2	2.03	0.41
27:BA:1464:C:O2'	27:BA:1465:G:H5'	2.21	0.41
1:CA:1281:U:H5'	1:CA:1282:C:OP2	2.21	0.41
49:B0:31:VAL:HG22	49:B0:65:GLY:O	2.20	0.41
39:DQ:108:GLY:O	39:DQ:109:VAL:HB	2.21	0.41
48:DZ:115:VAL:O	48:DZ:116:LEU:C	2.59	0.41
1:CA:1275:A:H2'	1:CA:1276:G:O4'	2.20	0.41
35:DI:43:ASN:O	35:DI:46:ALA:HB3	2.21	0.41
1:CA:31:G:N2	1:CA:47:C:O5'	2.53	0.41
1:CA:47:C:O2'	1:CA:48:C:P	2.78	0.41
10:AJ:78:ASN:ND2	10:AJ:81:THR:H	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BC:182:PRO:O	29:BC:183:GLU:CB	2.69	0.41
11:AK:123:LYS:O	11:AK:126:ARG:HB2	2.21	0.41
27:DA:1586:A:C2	27:DA:1587:A:C5	3.09	0.41
1:AA:244:U:O4	1:AA:893:C:N3	2.52	0.41
27:BA:1518:U:O4	27:BA:1519:G:C6	2.73	0.41
27:BA:2752:C:H5'	27:BA:2753:A:OP2	2.21	0.41
15:CO:61:GLY:O	15:CO:65:ARG:CD	2.67	0.41
27:BA:508:G:C5'	27:BA:509:C:OP1	2.69	0.41
20:CT:86:ARG:NH1	20:CT:86:ARG:HG3	2.31	0.41
21:CU:9:ARG:C	21:CU:11:GLY:H	2.23	0.41
3:CC:177:THR:HG22	3:CC:179:ARG:HG2	2.01	0.41
27:DA:1684:C:N3	27:DA:1704:G:O6	2.54	0.41
6:CF:25:ILE:HD13	6:CF:25:ILE:HA	1.91	0.41
32:DF:164:ARG:HG2	32:DF:164:ARG:NH1	2.36	0.41
35:BI:22:LYS:O	35:BI:23:PRO:C	2.59	0.41
1:AA:1258:G:C5	1:AA:1259:C:H5	2.38	0.41
27:DA:1941:C:C4	27:DA:1965:C:C6	3.09	0.41
2:AB:8:LYS:N	2:AB:8:LYS:HD3	2.36	0.41
27:DA:216:A:C2	27:DA:217:G:C4	3.09	0.41
1:CA:1194:U:N3	1:CA:1195:C:C4	2.89	0.41
27:BA:1877:A:H5''	27:BA:1878:G:OP2	2.21	0.41
27:DA:74:A:H2'	27:DA:74:A:N3	2.36	0.41
27:DA:1562:A:C2	27:DA:1563:G:C4	3.09	0.41
37:BO:36:GLY:CA	37:BO:109:LYS:HG3	2.50	0.41
42:DT:54:ARG:O	42:DT:55:ASN:HB2	2.20	0.41
27:DA:773:U:C4'	30:DD:47:GLY:HA3	2.50	0.41
1:CA:758:G:H8	1:CA:758:G:O5'	2.03	0.41
27:DA:21:A:C2	27:DA:22:C:O2	2.74	0.41
1:AA:652:U:O2'	1:AA:653:A:C5'	2.69	0.41
1:CA:1483:A:H3'	1:CA:1484:C:H6	1.86	0.41
45:BW:47:VAL:O	45:BW:50:VAL:CG1	2.69	0.41
15:CO:71:GLN:HE21	15:CO:71:GLN:HB3	1.70	0.41
30:BD:202:LYS:HG3	30:BD:203:ASN:OD1	2.20	0.41
29:DC:61:THR:HA	29:DC:164:ARG:HA	2.01	0.41
27:BA:2725:A:O2'	27:BA:2726:U:C2	2.73	0.41
47:BY:97:ARG:O	47:BY:98:VAL:CB	2.68	0.41
36:DN:27:ALA:CB	36:DN:106:MET:HE1	2.49	0.41
27:DA:592:G:H21	57:D8:4:MET:CE	2.33	0.41
4:CD:64:LEU:CD2	4:CD:93:PHE:HE1	2.34	0.41
43:BU:65:ILE:C	43:BU:67:ALA:N	2.73	0.41
44:BV:2:PHE:HE1	44:BV:13:ARG:HG3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:21:ARG:HD3	44:BV:21:ARG:H	1.86	0.41
44:BV:62:LEU:H	44:BV:62:LEU:CD2	2.21	0.41
1:AA:255:G:N2	1:AA:272:C:C2	2.88	0.41
1:AA:128:G:H5''	17:AQ:2:PRO:HA	2.03	0.41
29:BC:78:ALA:CB	29:BC:82:LYS:HB2	2.51	0.41
29:BC:82:LYS:O	29:BC:86:ALA:HB3	2.20	0.41
27:BA:286:C:C3'	27:BA:287:C:H5'	2.48	0.41
1:AA:1404:C:O2'	1:AA:1405:G:H5'	2.21	0.41
44:DV:19:LYS:HG2	44:DV:94:LEU:HB2	2.03	0.41
27:DA:1567:A:H5''	30:DD:58:HIS:NE2	2.36	0.41
51:D2:25:VAL:O	51:D2:29:LYS:HG2	2.20	0.41
27:DA:2810:A:C8	27:DA:2811:G:C8	3.08	0.41
27:DA:2277:G:C2'	27:DA:2278:A:H5'	2.51	0.41
38:DP:67:MET:HG3	38:DP:67:MET:O	2.21	0.41
27:DA:458:G:H3'	56:D7:38:GLY:O	2.21	0.41
47:BY:15:VAL:HG12	47:BY:17:SER:H	1.86	0.41
27:DA:574:C:H1'	27:DA:2055:C:C5	2.53	0.41
27:DA:971:C:H2'	27:DA:972:G:H5'	2.02	0.41
1:AA:322:C:O2'	1:AA:323:U:H5'	2.20	0.41
20:AT:29:LYS:HA	20:AT:32:ALA:HB3	2.03	0.41
20:AT:57:ARG:O	20:AT:58:LYS:C	2.59	0.41
20:AT:63:ILE:C	20:AT:65:LYS:N	2.74	0.41
27:BA:2468:G:OP1	39:BQ:119:ARG:NH1	2.45	0.41
46:DX:47:PHE:HD2	46:DX:89:ILE:HG12	1.85	0.41
4:AD:4:TYR:HE2	4:AD:7:PRO:O	2.03	0.41
27:DA:312:G:C5	27:DA:313:C:C5	3.09	0.41
30:BD:65:ILE:HG13	30:BD:105:ILE:HA	2.02	0.41
4:CD:101:LEU:HD22	4:CD:138:TYR:HB3	2.02	0.41
9:AI:53:VAL:HG12	9:AI:92:TYR:CD2	2.55	0.41
1:AA:1055:A:C6	1:AA:1206:G:C5	3.08	0.41
1:AA:1053:G:O2'	1:AA:1199:U:H5	2.03	0.41
14:AN:45:ARG:O	14:AN:49:HIS:HD2	2.03	0.41
12:CL:56:ARG:HA	12:CL:62:GLU:HA	2.03	0.41
1:AA:301:G:H5''	1:AA:301:G:H8	1.86	0.41
27:BA:1796:U:H2'	27:BA:1797:C:C6	2.55	0.41
27:BA:2437:U:H2'	27:BA:2438:U:C6	2.56	0.41
27:BA:754:C:H6	27:BA:754:C:C5'	2.33	0.41
30:BD:54:ARG:O	30:BD:218:ARG:HG3	2.21	0.41
27:BA:781:A:OP1	30:BD:218:ARG:NH2	2.54	0.41
1:AA:70:G:C6	1:AA:71:C:C4	3.09	0.41
31:BE:1:MET:CB	31:BE:83:ASP:O	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BE:93:VAL:C	31:BE:95:ILE:N	2.68	0.41
27:BA:2248:C:H2'	27:BA:2249:U:O4'	2.21	0.41
27:BA:1315:C:H2'	27:BA:1316:U:H5'	2.01	0.41
42:DT:11:GLU:CD	42:DT:11:GLU:N	2.74	0.41
34:BH:157:TYR:O	34:BH:158:HIS:HB2	2.20	0.41
27:BA:1666:G:O3'	37:BO:6:THR:HG23	2.20	0.41
27:BA:382:G:H1	27:BA:392:C:N4	2.18	0.41
27:BA:383:U:H5	27:BA:385:C:H3'	1.86	0.41
1:AA:1422:G:H2'	1:AA:1423:G:C8	2.55	0.41
27:BA:1800:C:P	30:BD:266:SER:HG	2.44	0.41
1:CA:532:A:O2'	1:CA:533:A:H5'	2.21	0.41
10:AJ:5:ARG:HG3	10:AJ:71:LEU:HD11	2.03	0.41
27:BA:2276:G:O2'	27:BA:2277:G:H5'	2.21	0.41
12:AL:38:ARG:NH2	12:AL:54:LYS:HZ3	2.17	0.41
30:BD:143:HIS:N	30:BD:143:HIS:ND1	2.68	0.41
39:DQ:94:VAL:HG23	39:DQ:95:ALA:N	2.35	0.41
27:BA:2842:G:C6	27:BA:2876:G:C6	3.09	0.41
58:B9:8:LYS:O	58:B9:34:GLN:OE1	2.38	0.41
1:CA:922:G:H4'	5:CE:20:GLN:HA	2.03	0.41
27:DA:2048:G:C2'	27:DA:2049:G:O5'	2.69	0.41
27:BA:2287:A:C4	27:BA:2289:G:C8	3.08	0.41
42:BT:93:ARG:O	42:BT:94:ALA:C	2.57	0.41
1:AA:522:C:H5''	12:AL:117:TYR:OH	2.21	0.41
32:BF:33:LEU:HD13	32:BF:112:MET:CE	2.49	0.41
19:CS:66:MET:O	19:CS:66:MET:HG3	2.20	0.41
29:DC:95:GLY:HA3	29:DC:99:ILE:HD12	2.02	0.41
34:DH:92:ILE:CG2	34:DH:93:GLY:H	2.22	0.41
39:BQ:58:PHE:CE1	39:BQ:61:GLY:HA3	2.56	0.41
27:BA:2358:G:C5	27:BA:2359:C:C5	3.09	0.41
35:DI:126:TYR:O	35:DI:139:GLN:HA	2.20	0.41
5:CE:33:VAL:HG12	5:CE:34:VAL:N	2.35	0.41
37:DO:97:ARG:NE	37:DO:99:PHE:HE1	2.16	0.41
2:CB:178:ARG:HH21	8:CH:68:ARG:HH12	1.69	0.41
27:DA:2293:C:N3	27:DA:2340:G:C2	2.89	0.41
33:DG:173:LEU:HD22	33:DG:178:PHE:CE1	2.55	0.41
27:DA:2467:C:C4	27:DA:2468:G:C2	3.09	0.41
27:BA:1048:A:O2'	27:BA:1049:C:O5'	2.36	0.41
26:AZ:4:SER:O	27:BA:1914:C:OP2	2.39	0.41
45:DW:29:LEU:CD1	45:DW:51:LEU:HD11	2.50	0.41
27:DA:308:G:N2	27:DA:477:A:C8	2.89	0.41
27:BA:2019:A:C2'	27:BA:2020:A:O5'	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1125:U:H2'	1:CA:1125:U:O2	2.19	0.41
15:CO:45:VAL:HG12	15:CO:46:HIS:N	2.36	0.41
7:AG:23:VAL:CG1	7:AG:27:ILE:HD11	2.48	0.41
33:BG:125:PHE:CG	33:BG:131:TYR:HD1	2.38	0.41
12:AL:21:VAL:HG11	12:AL:23:ALA:HB2	2.00	0.41
1:CA:575:G:H4'	1:CA:576:G:O5'	2.20	0.41
1:CA:15:G:N7	1:CA:1396:A:C4	2.88	0.41
27:DA:416:C:C2	27:DA:417:C:C6	3.09	0.41
1:CA:414:A:C2	1:CA:415:A:H1'	2.56	0.41
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.83	0.41
27:DA:81:G:H21	47:DY:2:ARG:NH1	2.18	0.41
1:AA:955:U:O2'	1:AA:956:U:H5'	2.21	0.41
6:AF:21:LEU:HA	6:AF:21:LEU:HD13	1.90	0.41
42:DT:16:ARG:HH11	42:DT:16:ARG:HG3	1.84	0.41
8:CH:78:GLN:O	8:CH:81:HIS:CE1	2.74	0.41
27:DA:2092:U:O2'	27:DA:2093:G:OP2	2.30	0.41
27:BA:1891:G:C4	27:BA:1892:C:C5	3.08	0.41
17:CQ:4:LYS:HG3	17:CQ:6:LEU:HD11	2.01	0.41
27:DA:1336:A:C2	27:DA:1337:G:C5	3.08	0.41
31:BE:9:VAL:CG1	31:BE:25:VAL:O	2.65	0.41
2:CB:114:ARG:NH1	2:CB:118:LEU:HD21	2.35	0.41
27:DA:1427:A:HO2'	27:DA:1428:C:P	2.42	0.41
2:CB:26:PRO:C	2:CB:28:PHE:H	2.23	0.41
1:AA:759:A:H4'	1:AA:881:G:OP1	2.21	0.41
12:CL:114:ARG:NH2	12:CL:121:LYS:HB2	2.34	0.41
31:BE:105:THR:HG21	31:BE:164:ARG:HH12	1.82	0.41
42:BT:129:ARG:HH11	42:BT:131:ALA:N	2.19	0.41
48:BZ:63:GLY:O	48:BZ:64:GLN:O	2.38	0.41
2:AB:132:LYS:HA	2:AB:135:GLN:CG	2.50	0.41
10:AJ:78:ASN:HD22	10:AJ:80:LYS:CB	2.34	0.41
47:DY:31:LEU:HA	47:DY:31:LEU:HD13	1.69	0.41
15:CO:36:ILE:O	15:CO:40:SER:N	2.43	0.41
27:DA:1844:C:H2'	27:DA:1845:G:H8	1.84	0.41
3:AC:28:GLN:HE21	3:AC:28:GLN:HB3	1.56	0.41
50:B1:58:ILE:HD11	50:B1:60:PHE:CZ	2.55	0.41
28:DB:94:C:O2	28:DB:94:C:H2'	2.20	0.41
29:DC:56:GLN:OE1	29:DC:168:THR:CB	2.69	0.41
11:AK:52:GLY:H	11:AK:55:LYS:HG3	1.86	0.41
27:BA:2228:G:H2'	27:BA:2229:C:C6	2.56	0.41
30:BD:261:LYS:CE	30:BD:263:ARG:HH22	2.32	0.41
43:BU:52:ARG:HH11	43:BU:52:ARG:CG	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2729:G:H2'	27:DA:2730:C:H6	1.85	0.41
48:BZ:127:VAL:HG11	48:BZ:132:ILE:HG12	2.02	0.41
43:BU:85:LYS:CD	43:BU:117:GLN:HE22	2.33	0.41
27:DA:230:U:H2'	27:DA:231:C:C6	2.53	0.41
27:DA:2314:C:H2'	27:DA:2315:G:H8	1.84	0.41
49:D0:30:VAL:CG1	49:D0:66:VAL:HG22	2.50	0.41
4:AD:201:GLN:OE1	4:AD:204:ILE:HG13	2.21	0.41
27:BA:1773:A:H2'	27:BA:1774:C:H5'	2.03	0.41
4:CD:147:ALA:HB2	4:CD:182:LYS:HB3	2.02	0.41
36:BN:99:LEU:O	36:BN:102:ALA:HB3	2.21	0.41
56:B7:29:LYS:NZ	56:B7:32:LYS:NZ	2.68	0.41
4:CD:128:VAL:CG1	4:CD:129:ASN:ND2	2.84	0.41
4:CD:128:VAL:HG13	4:CD:129:ASN:ND2	2.36	0.41
27:DA:1502:C:H2'	27:DA:1502:C:O2	2.19	0.41
43:BU:22:LYS:HD3	43:BU:22:LYS:HA	1.92	0.41
1:AA:767:A:H8	1:AA:767:A:O5'	2.04	0.41
31:BE:176:ILE:N	31:BE:176:ILE:HD12	2.36	0.41
3:CC:37:GLN:OE1	3:CC:37:GLN:HA	2.19	0.41
30:BD:212:SER:O	30:BD:217:ARG:HB2	2.21	0.41
27:BA:2788:C:H4'	27:BA:2810:A:C4'	2.51	0.41
32:BF:157:VAL:HG21	32:BF:181:LEU:HD13	2.02	0.41
31:BE:102:VAL:HG12	31:BE:200:GLU:HA	2.03	0.41
30:BD:165:ILE:O	30:BD:166:GLN:NE2	2.54	0.41
27:DA:1788:C:C2'	27:DA:1789:A:H5'	2.50	0.41
27:DA:1792:G:H8	27:DA:1792:G:O5'	2.03	0.41
27:DA:1899:G:H21	27:DA:1902:C:N4	2.18	0.41
27:DA:1906:G:C2	27:DA:1907:G:C5	3.09	0.41
27:DA:1902:C:OP1	30:DD:242:ARG:HD3	2.21	0.41
4:CD:11:LEU:HD23	4:CD:11:LEU:H	1.85	0.41
4:CD:8:VAL:O	4:CD:10:ARG:N	2.43	0.41
4:CD:91:SER:O	4:CD:92:VAL:C	2.59	0.41
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.55	0.41
36:BN:4:TYR:HE2	43:BU:61:TRP:HE1	1.65	0.41
44:BV:35:LEU:N	44:BV:35:LEU:CD2	2.83	0.41
17:AQ:68:ARG:H	17:AQ:70:ARG:HH12	1.67	0.41
32:DF:156:LEU:HD12	32:DF:156:LEU:HA	1.79	0.41
32:DF:2:LYS:CD	32:DF:2:LYS:N	2.69	0.41
27:DA:370:G:O2'	27:DA:371:A:OP1	2.31	0.41
42:BT:28:VAL:HG12	42:BT:29:ARG:NE	2.36	0.41
27:DA:1152:C:C1'	43:DU:77:SER:HB2	2.50	0.41
27:DA:1157:G:H2'	27:DA:1158:C:C5	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2703:C:H2'	27:BA:2704:C:H6	1.85	0.41
41:BS:68:GLN:O	41:BS:71:ARG:HB2	2.21	0.41
27:DA:1494:A:HO2'	27:DA:1495:A:H5''	1.77	0.41
51:D2:29:LYS:CD	51:D2:57:ILE:HD12	2.51	0.41
27:DA:61:G:O5'	27:DA:61:G:H8	2.02	0.41
31:DE:57:LYS:C	31:DE:59:VAL:N	2.73	0.41
31:DE:52:LEU:CD2	31:DE:76:ARG:HD3	2.50	0.41
55:D6:18:ARG:HB2	55:D6:19:ARG:H	1.78	0.41
55:D6:42:TRP:HA	55:D6:42:TRP:CE3	2.55	0.41
27:DA:1615:C:O2'	27:DA:1616:A:P	2.79	0.41
27:DA:2569:G:H2'	27:DA:2570:G:H5'	2.02	0.41
27:DA:583:G:C5	27:DA:584:C:C5	3.09	0.41
47:DY:18:GLY:C	47:DY:20:TYR:N	2.74	0.41
34:BH:23:ARG:O	34:BH:24:VAL:HG13	2.21	0.41
30:BD:106:ILE:CD1	30:BD:157:ARG:HA	2.51	0.41
4:CD:114:ARG:O	4:CD:117:ALA:N	2.53	0.41
1:CA:217:C:O2'	1:CA:218:C:P	2.79	0.41
1:AA:1339:A:H1'	24:AX:41:C:H1'	2.03	0.41
14:AN:40:CYS:C	14:AN:42:ILE:H	2.24	0.41
12:CL:30:ARG:HE	12:CL:30:ARG:HA	1.84	0.41
41:DS:25:ARG:NH1	41:DS:40:ILE:HB	2.35	0.41
1:CA:1407:C:O2	27:DA:1912:A:C2	2.68	0.41
1:CA:1494:G:H8	1:CA:1494:G:OP2	2.02	0.41
26:CZ:6:5OH:CS	26:CZ:6:5OH:N	2.83	0.41
2:CB:57:PHE:CE2	2:CB:185:ILE:HD11	2.56	0.41
1:CA:894:G:C6	1:CA:895:G:C6	3.09	0.41
48:BZ:67:PRO:O	48:BZ:68:THR:HG23	2.21	0.41
1:AA:373:A:C2	1:AA:374:A:C8	3.09	0.41
16:AP:19:ILE:CD1	16:AP:73:LEU:HD12	2.48	0.41
46:BX:14:SER:O	46:BX:15:GLU:C	2.59	0.41
1:CA:133:U:H1'	1:CA:230:G:H21	1.84	0.41
20:CT:30:LYS:HZ2	20:CT:80:ARG:NH2	2.16	0.41
42:DT:13:ARG:NH1	42:DT:13:ARG:HA	2.36	0.41
3:CC:68:VAL:HG12	3:CC:70:VAL:CG2	2.51	0.41
3:CC:90:GLU:O	3:CC:93:LYS:HB3	2.21	0.41
3:CC:91:LEU:O	3:CC:94:LEU:HD12	2.21	0.41
1:CA:1058:G:C5	1:CA:1059:C:C4	3.09	0.41
14:CN:40:CYS:SG	14:CN:43:CYS:SG	3.09	0.41
27:BA:2843:G:C5	27:BA:2844:G:C8	3.09	0.41
48:DZ:51:SER:HB3	48:DZ:53:HIS:HD2	1.86	0.41
38:BP:101:VAL:CG1	38:BP:106:LEU:HD23	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:658:G:H2'	1:CA:659:U:C6	2.55	0.41
27:BA:2171:A:H4'	27:BA:2172:U:C5'	2.47	0.41
27:DA:1294:U:H5''	27:DA:1295:C:OP2	2.21	0.41
27:DA:2826:A:H3'	27:DA:2827:C:H6	1.85	0.41
40:DR:12:ARG:O	40:DR:17:ARG:NH2	2.54	0.41
27:DA:2335:A:O2'	27:DA:2336:A:H5''	2.20	0.41
27:BA:1826:G:OP1	30:BD:224:ALA:N	2.47	0.41
55:B6:9:LEU:HD21	55:B6:26:ASN:HD22	1.85	0.41
27:DA:319:C:H2'	27:DA:320:A:O4'	2.20	0.41
3:AC:184:TYR:HA	3:AC:200:ALA:O	2.20	0.41
33:BG:71:THR:OG1	33:BG:89:GLY:HA3	2.20	0.41
33:DG:130:ASN:HB3	33:DG:160:VAL:HA	2.02	0.41
33:DG:39:ILE:HG23	33:DG:92:VAL:CG1	2.40	0.41
39:BQ:31:ASP:O	39:BQ:133:ARG:O	2.38	0.41
27:DA:930:U:H4'	27:DA:931:G:N3	2.35	0.41
27:BA:729:G:C4	27:BA:1775:U:O2	2.74	0.41
13:AM:45:VAL:C	13:AM:47:ASP:H	2.23	0.41
37:DO:86:ILE:H	37:DO:86:ILE:CD1	2.28	0.41
42:DT:50:ILE:CG2	42:DT:100:TYR:HA	2.49	0.41
27:DA:2321:G:N3	27:DA:2321:G:H2'	2.34	0.41
1:CA:1316:G:O6	19:CS:5:LEU:HD22	2.20	0.41
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.55	0.41
5:CE:146:ALA:O	5:CE:147:ASP:C	2.58	0.41
7:CG:134:ALA:O	7:CG:137:LYS:N	2.54	0.41
27:DA:2835:A:C6	27:DA:2879:C:C6	3.09	0.41
27:DA:2468:G:HO2'	27:DA:2469:A:P	2.44	0.41
27:BA:105:C:C2'	27:BA:105:C:O2	2.60	0.41
27:DA:1285:G:O3'	40:DR:105:ARG:NH1	2.54	0.41
45:DW:12:ILE:CG1	45:DW:42:ARG:NH1	2.84	0.41
18:AR:37:VAL:CG2	18:AR:38:GLU:H	2.22	0.41
27:DA:1236:G:O2'	27:DA:1237:A:P	2.78	0.41
1:AA:189(I):G:C2'	1:AA:189(J):G:H8	2.34	0.41
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.55	0.41
7:AG:27:ILE:HG22	7:AG:39:ALA:HB1	2.02	0.41
35:DI:9:LEU:O	35:DI:12:LEU:O	2.39	0.41
33:BG:121:ASN:HA	33:BG:122:PRO:HD2	1.79	0.41
12:AL:25:LYS:HE2	12:AL:30:ARG:NH2	2.36	0.41
1:CA:865:A:C2	1:CA:866:C:O2	2.74	0.41
1:AA:1088:G:C5	1:AA:1089:G:N7	2.89	0.41
2:AB:210:SER:O	2:AB:211:ILE:C	2.59	0.41
37:BO:122:LEU:HD23	42:BT:43:GLN:NE2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DC:51:PRO:HB3	29:DC:203:GLY:O	2.20	0.41
36:DN:89:LYS:HA	36:DN:89:LYS:HD2	1.77	0.41
2:CB:87:ARG:HE	2:CB:233:SER:HB2	1.86	0.41
27:BA:1905:C:H1'	27:BA:1928:A:H2	1.85	0.41
27:BA:1028:A:H61	27:BA:1125:G:H2'	1.81	0.41
7:AG:63:LYS:HZ1	7:AG:67:GLU:HB2	1.86	0.41
6:AF:24:GLU:CG	6:AF:25:ILE:H	2.33	0.41
27:BA:2065:C:H1'	27:BA:2449:U:O2	2.20	0.41
27:BA:258:G:H2'	27:BA:259:G:C8	2.52	0.41
7:CG:15:ASP:OD2	7:CG:16:LEU:N	2.47	0.41
1:AA:223:U:H2'	1:AA:224:C:O4'	2.20	0.41
1:AA:1508:G:C4	1:AA:1509:C:C5	3.08	0.41
27:DA:2840:C:O2'	27:DA:2841:C:H5'	2.21	0.41
1:AA:1064:G:H1'	1:AA:1066:C:C6	2.56	0.41
27:DA:1946:U:C2'	27:DA:1947:C:H6	2.27	0.41
33:DG:129:GLY:O	33:DG:161:THR:CB	2.68	0.41
27:BA:18:C:H5''	43:BU:24:TYR:O	2.20	0.41
27:BA:1846:G:H5''	27:BA:1847:A:OP2	2.20	0.41
37:DO:101:PRO:CG	42:DT:67:SER:OG	2.65	0.41
1:CA:854:G:H3'	1:CA:871:U:O4	2.21	0.41
13:AM:40:ASN:C	13:AM:42:ALA:H	2.24	0.41
11:AK:85:ARG:O	11:AK:86:GLY:O	2.39	0.41
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.79	0.41
1:CA:407:G:N2	1:CA:436:C:C2	2.89	0.41
27:BA:914:C:C2'	27:BA:915:C:O5'	2.68	0.41
29:BC:100:ILE:HG22	29:BC:101:GLN:CG	2.46	0.41
1:AA:123:C:N3	1:AA:238:G:N2	2.62	0.41
27:BA:1936:A:C3'	27:BA:1937:A:H5''	2.43	0.41
12:AL:88:LYS:HB2	12:AL:88:LYS:HE2	1.79	0.41
27:DA:1843:C:H6	27:DA:1843:C:O5'	2.04	0.41
1:CA:932:C:C2'	1:CA:932:C:O2	2.66	0.41
1:AA:927:G:C2'	1:AA:928:G:H5'	2.50	0.41
27:DA:2691:C:C6	27:DA:2691:C:H5'	2.56	0.41
7:AG:115:ARG:O	7:AG:118:VAL:HG22	2.21	0.41
27:DA:1031:G:C4'	58:D9:6:SER:OG	2.66	0.41
27:BA:970:C:H2'	27:BA:971:C:C6	2.56	0.41
28:DB:105:A:H2'	28:DB:106:G:O4'	2.20	0.41
7:AG:94:ARG:O	7:AG:97:GLN:N	2.53	0.41
27:BA:237:C:N3	27:BA:261:G:C2	2.89	0.41
35:DI:45:LYS:O	35:DI:48:GLU:CB	2.69	0.41
48:BZ:46:VAL:HG12	48:BZ:50:ALA:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DI:69:LYS:O	35:DI:73:GLU:CB	2.69	0.41
27:BA:2010:G:H5''	45:BW:42:ARG:HB3	2.02	0.41
5:CE:6:PHE:N	5:CE:6:PHE:CD1	2.88	0.41
1:CA:594:G:C2'	1:CA:595:G:H5'	2.51	0.41
1:CA:1076:C:H2'	1:CA:1077:G:H8	1.86	0.41
28:BB:58:A:C5	28:BB:59:A:C8	3.09	0.41
27:DA:2244:U:O5'	27:DA:2244:U:H6	2.04	0.41
48:DZ:71:ARG:HD3	48:DZ:71:ARG:HA	1.62	0.41
33:DG:165:THR:OG1	33:DG:168:GLU:HB2	2.20	0.41
25:AY:75:A:H1'	27:BA:2421:G:N2	2.36	0.41
27:BA:607:U:C5	27:BA:620:G:C5	3.09	0.41
14:CN:57:ARG:CG	14:CN:58:LYS:N	2.82	0.41
40:BR:22:ARG:C	40:BR:24:GLN:N	2.74	0.41
40:BR:45:ARG:O	40:BR:47:PHE:N	2.54	0.41
28:BB:40:U:O2	28:BB:43:C:H5''	2.21	0.41
28:BB:40:U:H1'	28:BB:45:A:H61	1.85	0.41
31:BE:200:GLU:HG2	31:BE:201:THR:H	1.85	0.41
47:BY:84:ARG:NH1	47:BY:97:ARG:HA	2.35	0.41
47:BY:98:VAL:O	47:BY:98:VAL:HG12	2.20	0.41
34:BH:137:ASP:O	34:BH:138:LYS:HB2	2.20	0.41
36:DN:70:LYS:HG2	36:DN:87:LEU:CD1	2.19	0.41
12:AL:43:LYS:N	12:AL:89:ASP:O	2.53	0.41
57:D8:53:PRO:O	57:D8:55:ALA:N	2.53	0.41
27:DA:250:G:H2'	27:DA:251:A:C8	2.56	0.41
38:DP:46:LYS:O	38:DP:47:ASP:HB2	2.20	0.41
27:DA:271(T):C:H2'	27:DA:271(U):G:O4'	2.20	0.41
1:CA:504:C:N3	1:CA:542:G:C2	2.89	0.41
4:CD:80:GLU:C	4:CD:84:LYS:HE2	2.40	0.41
33:BG:105:LYS:C	33:BG:107:LEU:N	2.74	0.41
27:BA:501:A:H2'	27:BA:502:A:C8	2.55	0.41
31:BE:54:GLN:HB2	31:BE:55:ASN:H	1.53	0.41
1:AA:19:C:H5''	5:AE:86:ALA:HB3	2.03	0.41
1:AA:864:A:H3'	1:AA:865:A:C8	2.56	0.41
27:BA:523:C:H6	27:BA:523:C:O5'	2.03	0.41
44:BV:38:LEU:C	44:BV:39:LEU:HD13	2.41	0.41
27:BA:557:U:O2'	27:BA:558:G:C5'	2.68	0.41
44:BV:18:LEU:CG	44:BV:19:LYS:H	2.33	0.41
43:BU:95:LEU:HD13	44:BV:4:ILE:CG2	2.51	0.41
27:DA:412:A:OP1	27:DA:413:C:H5	2.04	0.41
1:AA:255:G:C4	1:AA:256:U:C5	3.09	0.41
17:AQ:16:GLN:O	17:AQ:18:THR:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DF:110:LEU:C	32:DF:110:LEU:CD1	2.90	0.41
32:DF:156:LEU:HD12	32:DF:193:VAL:O	2.20	0.41
19:CS:41:VAL:HA	19:CS:42:PRO:HD3	1.77	0.41
42:BT:28:VAL:O	42:BT:86:ILE:O	2.39	0.41
1:AA:1077:G:C8	1:AA:1077:G:H3'	2.56	0.41
1:AA:1399:C:C2	1:AA:1401:G:C6	3.09	0.41
27:BA:2476:A:N1	27:BA:2477:C:C5	2.89	0.41
30:DD:57:GLY:HA2	30:DD:214:TRP:O	2.20	0.41
30:BD:27:THR:HG21	30:BD:83:GLU:CA	2.51	0.41
51:D2:19:VAL:C	51:D2:21:LEU:N	2.74	0.41
47:DY:26:LYS:CG	47:DY:27:VAL:N	2.83	0.41
47:DY:39:VAL:CG1	47:DY:40:GLU:N	2.63	0.41
27:DA:859:G:H21	27:DA:916:G:C2'	2.33	0.41
27:DA:921:G:C6	27:DA:922:U:C4	3.09	0.41
31:DE:54:GLN:HA	31:DE:72:VAL:HG12	2.02	0.41
55:D6:16:CYS:O	55:D6:18:ARG:NH2	2.54	0.41
27:DA:2415:G:H2'	27:DA:2416:C:H6	1.81	0.41
38:DP:58:THR:O	38:DP:61:ARG:CD	2.69	0.41
31:DE:154:LYS:HA	31:DE:154:LYS:HE3	2.01	0.41
27:BA:1139:G:N3	27:BA:1143:A:H2	2.19	0.41
38:DP:23:PRO:CG	38:DP:33:ARG:NE	2.84	0.41
55:B6:19:ARG:CG	55:B6:20:ASN:H	2.22	0.41
55:B6:41:PRO:CD	55:B6:46:HIS:HB3	2.46	0.41
55:B6:47:THR:HB	55:B6:48:VAL:H	1.59	0.41
27:BA:2468:G:H22	27:BA:2481:G:C2'	2.34	0.41
39:BQ:70:PRO:HA	39:BQ:94:VAL:C	2.41	0.41
31:DE:37:ARG:HB2	31:DE:46:ALA:CA	2.50	0.41
27:BA:1685:C:C3'	27:BA:1686:C:H5''	2.51	0.41
13:CM:14:ARG:N	13:CM:44:ARG:HH11	2.18	0.41
34:BH:19:VAL:CG2	34:BH:44:VAL:HG13	2.51	0.41
34:BH:54:ARG:CG	34:BH:54:ARG:O	2.69	0.41
30:BD:33:LEU:HD12	30:BD:33:LEU:N	2.25	0.41
1:CA:188:C:O4'	20:CT:89:ARG:NH2	2.53	0.41
1:AA:1365:G:O2'	1:AA:1366:C:C5'	2.69	0.41
14:AN:40:CYS:C	14:AN:42:ILE:N	2.74	0.41
19:AS:38:SER:O	19:AS:70:LYS:HD2	2.21	0.41
14:AN:26:ARG:CG	14:AN:27:CYS:H	2.17	0.41
1:CA:548:G:H5''	1:CA:548:G:H8	1.86	0.41
1:AA:295:C:C4	1:AA:296:U:C5	3.08	0.41
27:DA:1034:G:C5'	58:D9:18:ARG:HD2	2.36	0.41
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:35:ILE:O	41:DS:53:SER:HB2	2.20	0.41
3:CC:113:ALA:O	3:CC:115:LEU:N	2.53	0.41
27:BA:1806:C:C2'	27:BA:1807:G:H5'	2.50	0.41
27:BA:778:G:C5	27:BA:779:U:C4	3.09	0.41
1:CA:563:A:C8	1:CA:567:G:O4'	2.74	0.41
31:BE:34:VAL:CG2	31:BE:34:VAL:O	2.69	0.41
1:CA:608:A:H2'	1:CA:609:A:O4'	2.20	0.41
1:CA:607:A:O2'	1:CA:608:A:H5'	2.21	0.41
39:BQ:16:ARG:CG	39:BQ:17:LEU:H	2.32	0.41
33:DG:105:LYS:HD2	33:DG:142:PRO:HG3	2.03	0.41
27:BA:1992:G:C4	27:BA:1997:G:C6	3.09	0.41
27:BA:1658:C:N4	27:BA:2002:G:H1	2.19	0.41
15:CO:58:MET:HB3	15:CO:58:MET:HE3	1.90	0.41
7:AG:40:ALA:O	7:AG:41:ARG:C	2.59	0.41
46:DX:11:PRO:O	46:DX:12:VAL:C	2.59	0.41
1:AA:460:G:N1	1:AA:470:C:H5''	2.34	0.41
1:AA:453:A:C6	1:AA:454:C:N4	2.88	0.41
20:CT:50:GLU:N	20:CT:100:ILE:HG12	2.34	0.41
1:AA:747:C:C2'	1:AA:748:C:O5'	2.68	0.41
31:DE:9:VAL:O	31:DE:192:ASN:ND2	2.54	0.41
1:AA:721:G:H4'	1:AA:722:A:C5'	2.48	0.41
1:CA:1065:U:C5	1:CA:1190:G:H1'	2.55	0.41
1:CA:1190:G:OP1	3:CC:4:LYS:HA	2.21	0.41
37:BO:3:GLN:O	37:BO:4:PRO:C	2.58	0.41
27:BA:1665:A:N6	27:BA:1666:G:C6	2.88	0.41
3:CC:50:ALA:HB2	3:CC:75:VAL:HG11	2.03	0.41
27:DA:2478:A:C5'	58:D9:31:LYS:NZ	2.82	0.41
27:DA:2476:A:N1	27:DA:2477:C:C5	2.89	0.41
27:DA:118:A:O2'	27:DA:178:G:H5'	2.20	0.41
51:D2:16:LEU:O	51:D2:17:SER:O	2.39	0.41
27:DA:524:U:O2'	27:DA:525:U:H5'	2.21	0.41
8:AH:97:VAL:HG22	8:AH:98:LYS:N	2.36	0.41
1:AA:1152:A:H3'	10:AJ:13:HIS:CD2	2.56	0.41
1:CA:1061:G:C6	1:CA:1197:G:C6	3.09	0.41
12:CL:99:ARG:HE	12:CL:99:ARG:HB3	1.54	0.41
1:AA:1152:A:O2'	1:AA:1153:C:P	2.79	0.41
1:CA:1353:G:O2'	1:CA:1354:C:H5'	2.20	0.41
31:BE:128:SER:OG	31:BE:129:HIS:ND1	2.45	0.41
27:BA:2848:G:O2'	27:BA:2849:U:H5'	2.21	0.41
32:BF:177:ALA:O	32:BF:180:GLY:N	2.43	0.41
38:BP:83:VAL:CG1	38:BP:112:LEU:HD21	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DQ:27:VAL:HB	39:DQ:137:TYR:CD1	2.56	0.41
48:DZ:44:ASP:CG	48:DZ:48:ARG:HG2	2.42	0.41
25:AY:8:U:H5'	25:AY:48:C:OP2	2.21	0.41
1:CA:1498:U:H5''	1:CA:1499:A:OP1	2.20	0.41
1:CA:926:G:C6	1:CA:1505:G:C5	3.08	0.41
27:DA:1313:U:H3'	27:DA:1314:C:H5'	2.03	0.41
27:DA:1341:U:H3'	27:DA:1397:U:O2	2.20	0.41
27:DA:1300:U:C4	27:DA:1626:G:N7	2.88	0.41
27:DA:1301:A:H62	27:DA:1641:A:N6	2.18	0.41
35:BI:88:ILE:O	35:BI:89:TYR:CD2	2.74	0.41
33:BG:51:ARG:CA	33:BG:51:ARG:HE	2.34	0.41
27:BA:2425:A:O4'	27:BA:2427:C:C2	2.74	0.41
40:DR:10:LEU:HD23	40:DR:17:ARG:HD2	2.02	0.41
40:DR:20:LEU:HD12	40:DR:20:LEU:C	2.41	0.41
30:BD:240:ALA:HA	30:BD:241:PRO:HD3	1.48	0.41
35:BI:19:VAL:HG22	35:BI:20:ASP:N	2.36	0.41
27:BA:1407:C:O2	27:BA:1407:C:H2'	2.20	0.41
55:B6:25:LYS:HD2	55:B6:27:LYS:HZ3	1.84	0.41
55:B6:9:LEU:HD13	55:B6:28:ARG:CG	2.51	0.41
55:B6:11:LEU:HD12	55:B6:12:GLU:N	2.35	0.41
27:DA:323:G:C6	27:DA:333:G:C5	3.09	0.41
3:AC:54:ARG:O	3:AC:55:VAL:HG23	2.21	0.41
27:BA:397:G:H2'	27:BA:398:G:C8	2.56	0.41
8:AH:2:LEU:HD13	8:AH:3:THR:N	2.36	0.41
8:AH:84:ARG:HG3	8:AH:85:ARG:N	2.35	0.41
1:AA:1239:A:N3	1:AA:1241:G:N1	2.69	0.41
27:DA:1457:A:O2'	27:DA:1459:G:H8	2.02	0.41
30:DD:33:LEU:O	30:DD:34:VAL:CG1	2.66	0.41
27:DA:2668:G:C2'	27:DA:2669:G:H5'	2.51	0.41
27:DA:1696:G:H2'	27:DA:1697:G:O4'	2.21	0.41
33:DG:154:GLY:O	33:DG:155:MET:HB3	2.21	0.41
28:DB:42:C:H4'	33:DG:67:LYS:O	2.20	0.41
13:AM:3:ARG:HA	13:AM:8:GLU:O	2.20	0.41
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HA	2.02	0.41
5:CE:40:ARG:HH11	5:CE:40:ARG:HG2	1.85	0.41
5:CE:129:ILE:O	5:CE:132:ALA:HB3	2.21	0.41
42:DT:118:ARG:O	42:DT:119:LYS:C	2.59	0.41
1:CA:342:C:H2'	1:CA:343:U:O4'	2.21	0.41
27:BA:2694:G:C5'	27:BA:2694:G:H8	2.23	0.41
21:AU:9:ARG:HD3	21:AU:22:ARG:HD2	2.02	0.41
1:CA:452:A:C6	1:CA:453:A:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:579:G:N1	1:AA:763:G:C6	2.89	0.41
27:BA:627:A:H8	27:BA:627:A:OP1	2.04	0.41
3:AC:33:LEU:O	3:AC:36:ASP:CB	2.68	0.41
7:CG:75:VAL:HG11	7:CG:144:MET:HB3	2.02	0.41
2:AB:178:ARG:C	2:AB:180:LEU:N	2.73	0.41
34:DH:54:ARG:HA	34:DH:55:PRO:HD2	1.86	0.41
8:CH:44:PHE:HD1	8:CH:79:VAL:CG1	2.34	0.41
1:AA:852:G:C2'	1:AA:853:G:O5'	2.69	0.41
1:CA:707:C:O2'	1:CA:708:C:H5'	2.21	0.41
1:CA:710:G:N1	1:CA:711:G:C5	2.89	0.41
32:DF:58:ALA:O	32:DF:59:TYR:O	2.39	0.41
1:CA:687:A:N1	1:CA:700:G:O2'	2.49	0.41
27:BA:115:C:C4	27:BA:116:C:H5	2.39	0.41
1:AA:1217:C:O2'	1:AA:1218:C:H5'	2.21	0.41
12:AL:24:LEU:HD22	12:AL:24:LEU:N	2.35	0.41
37:BO:98:VAL:HG13	37:BO:118:ALA:HA	2.03	0.41
37:BO:97:ARG:CA	37:BO:117:LEU:HD22	2.51	0.41
50:D1:7:ILE:HD13	50:D1:62:VAL:CB	2.49	0.41
27:BA:1204:A:H2	27:BA:1241:A:N1	2.18	0.41
52:D3:31:LEU:HA	52:D3:31:LEU:HD23	1.84	0.41
24:AX:4:G:C5	24:AX:70:G:C6	3.09	0.41
33:BG:11:TYR:HE2	33:BG:12:TYR:CE2	2.39	0.41
1:CA:119:A:N7	1:CA:288:A:C2	2.89	0.41
1:CA:288:A:H2'	1:CA:289:G:H4'	2.03	0.41
27:DA:1779:U:H5	27:DA:1784:A:C8	2.39	0.41
27:BA:2487:G:O2'	27:BA:2488:A:H5'	2.21	0.41
27:DA:1231:G:N1	27:DA:1232:G:C6	2.89	0.41
34:BH:127:GLU:OE2	34:BH:130:ARG:NH2	2.54	0.41
41:DS:82:ILE:CG2	41:DS:83:LYS:H	2.33	0.41
1:CA:913:A:O2'	1:CA:914:A:P	2.79	0.41
1:AA:782:A:N1	1:AA:801:U:N1	2.68	0.41
27:BA:1905:C:N4	27:BA:1930:G:C2	2.88	0.41
1:AA:969:A:C2	1:AA:970:C:C2	3.08	0.41
13:AM:108:ARG:NH1	13:AM:111:LYS:O	2.54	0.41
13:AM:117:VAL:HG12	13:AM:118:ALA:O	2.21	0.41
28:BB:11:C:P	49:B0:72:ARG:HD2	2.61	0.41
3:AC:62:ASP:O	3:AC:98:ASN:CB	2.68	0.41
34:DH:113:VAL:HG12	34:DH:115:VAL:CG2	2.51	0.41
27:DA:2545:G:N3	27:DA:2545:G:H2'	2.35	0.41
1:CA:689:C:H4'	1:CA:705:U:H1'	2.02	0.41
11:CK:52:GLY:H	11:CK:55:LYS:NZ	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:64:A:C6	46:DX:66:LEU:HD13	2.56	0.41
37:DO:37:ASP:O	37:DO:61:VAL:HG23	2.21	0.41
50:D1:80:LEU:HD22	50:D1:82:LEU:CD1	2.50	0.41
42:DT:19:LEU:N	42:DT:19:LEU:HD12	2.33	0.41
32:BF:53:THR:HG22	32:BF:55:GLY:N	2.34	0.41
29:DC:100:ILE:CD1	29:DC:132:GLY:HA3	2.45	0.41
1:AA:1256:A:C5'	1:AA:1257:U:OP1	2.62	0.41
27:BA:2720:U:C4	27:BA:2873:A:N7	2.89	0.41
1:AA:837:G:C2	1:AA:850:U:O2	2.74	0.41
37:DO:91:LEU:HD13	37:DO:91:LEU:HA	1.88	0.41
27:BA:2109:U:C4	27:BA:2110:G:O6	2.74	0.41
27:BA:1283:G:N2	27:BA:1286:A:C8	2.88	0.41
4:AD:3:ARG:HB3	4:AD:118:ARG:NH1	2.33	0.41
27:DA:2280:G:N7	49:D0:14:ARG:NH1	2.69	0.41
27:BA:722:A:N1	27:BA:723:G:C4	2.88	0.41
27:BA:723:G:C6	27:BA:724:U:N3	2.89	0.41
27:BA:726:G:O2'	27:BA:727:A:P	2.78	0.41
27:DA:2281:C:O2'	27:DA:2282:G:H5'	2.21	0.41
1:AA:1045:C:C6	1:AA:1045:C:C3'	3.04	0.41
13:CM:31:LYS:HA	13:CM:34:LEU:HB2	2.03	0.41
1:AA:22:G:O2'	1:AA:23:C:H5'	2.21	0.41
1:CA:1473:A:H2'	1:CA:1474:G:C8	2.55	0.41
27:BA:1465:G:C5'	27:BA:1528:A:H1'	2.51	0.41
27:BA:1465:G:H4'	27:BA:1528:A:H1'	2.02	0.41
1:CA:1480:G:C4	1:CA:1481:U:C6	3.09	0.41
2:CB:144:ARG:HG3	2:CB:145:LEU:N	2.36	0.41
27:BA:2641:G:N1	27:BA:2774:C:C4	2.89	0.41
11:CK:57:THR:HG22	11:CK:60:ALA:H	1.85	0.41
1:CA:834:C:N4	1:CA:853:G:C6	2.89	0.41
27:DA:1721:G:H2'	27:DA:1741:A:H62	1.86	0.41
27:BA:193:U:C2'	27:BA:194:G:H5'	2.51	0.41
35:BI:68:LEU:HA	35:BI:71:ILE:HD11	2.03	0.41
12:CL:114:ARG:CG	12:CL:114:ARG:HH11	2.33	0.41
27:DA:1197:G:O2'	27:DA:1198:U:C5'	2.64	0.41
27:BA:2007:C:H2'	27:BA:2007:C:O2	2.21	0.41
53:D4:40:ILE:O	53:D4:41:ILE:HD13	2.20	0.41
27:BA:2029:G:O6	27:BA:2032:G:H3'	2.20	0.41
1:CA:71:C:C2'	1:CA:72:C:H5'	2.51	0.41
27:DA:2228:G:C6	27:DA:2229:C:C4	3.09	0.41
27:BA:700:G:C2	27:BA:701:G:C4	3.08	0.41
10:AJ:78:ASN:ND2	10:AJ:81:THR:OG1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DB:24:G:O2'	28:DB:25:A:P	2.78	0.41
27:DA:2241:A:O2'	27:DA:2242:G:H5'	2.20	0.41
24:CX:7:G:C6	24:CX:49:G:N7	2.89	0.41
1:AA:289:G:C2	1:AA:312:C:O2	2.73	0.41
27:BA:1613:G:C6	27:BA:1619:G:C6	3.09	0.41
4:CD:162:LEU:HA	4:CD:162:LEU:HD23	1.88	0.41
27:BA:1450:G:C2'	27:BA:1450(A):C:C5'	2.98	0.41
1:CA:27:G:C6	1:CA:28:G:C5	3.09	0.41
27:BA:1450:G:C2'	27:BA:1450(A):C:O5'	2.68	0.41
27:DA:1897:G:H2'	27:DA:1898:U:O4'	2.21	0.41
43:BU:76:TYR:O	43:BU:77:SER:C	2.58	0.41
1:AA:92:C:H2'	1:AA:93:G:C8	2.56	0.41
54:B5:57:VAL:C	54:B5:58:LEU:HD23	2.41	0.41
27:DA:1017:G:H2'	27:DA:1018:C:H5'	2.00	0.41
23:CW:48:C:H42	23:CW:64:G:H1	1.68	0.41
54:D5:37:LYS:O	54:D5:38:ALA:O	2.38	0.41
11:AK:51:LYS:HB3	11:AK:51:LYS:HZ3	1.86	0.41
5:AE:34:VAL:CG1	5:AE:35:GLY:N	2.83	0.41
27:BA:2228:G:P	30:BD:261:LYS:HZ1	2.43	0.41
27:BA:301:G:O2'	27:BA:302:C:P	2.78	0.41
54:B5:33:CYS:SG	54:B5:33:CYS:O	2.78	0.41
32:BF:111:ALA:HB2	32:BF:206:ILE:HG21	2.02	0.41
20:AT:92:LEU:HD23	20:AT:92:LEU:HA	1.67	0.41
1:AA:336:C:C1'	1:AA:1468:A:H2	2.34	0.41
27:BA:732:C:O2'	27:BA:733:G:H5'	2.20	0.41
27:BA:2536:G:C5	27:BA:2537:U:C5	3.08	0.41
23:CW:66:A:C6	23:CW:67:C:N4	2.88	0.41
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.80	0.41
19:CS:38:SER:O	19:CS:70:LYS:HA	2.20	0.41
1:AA:1499:A:C1'	1:AA:1520:G:H5'	2.49	0.41
1:AA:162:A:OP2	1:AA:163:C:C4	2.74	0.41
27:BA:1593:G:C3'	27:BA:1594:G:H8	2.33	0.41
48:DZ:99:VAL:HA	48:DZ:100:PRO:HD3	1.90	0.41
1:CA:485:G:O2'	1:CA:486:U:P	2.79	0.41
27:DA:700:G:H2'	27:DA:701:G:O4'	2.21	0.41
10:AJ:45:ARG:HB3	10:AJ:47:PHE:CZ	2.56	0.41
27:DA:698:C:OP1	27:DA:1634:A:N6	2.40	0.41
29:BC:169:GLY:O	29:BC:170:ALA:C	2.59	0.41
35:BI:29:TYR:O	35:BI:33:ARG:HD2	2.21	0.41
27:BA:888:C:C3'	27:BA:889:C:C5'	2.99	0.41
11:CK:86:GLY:C	11:CK:87:THR:O	2.57	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BB:31:C:H41	41:BS:32:LEU:HD13	1.84	0.41
1:AA:755:G:C6	1:AA:756:C:C4	3.09	0.41
27:BA:1765:C:N4	27:BA:1987:G:H1	2.19	0.41
27:BA:873:G:H1	27:BA:904:C:H42	1.69	0.41
48:DZ:19:ARG:O	48:DZ:21:GLY:N	2.54	0.41
27:DA:2031:A:O2'	27:DA:2032:G:OP2	2.36	0.41
27:DA:1169:G:H1	27:DA:1180:C:H42	1.69	0.41
48:BZ:43:PHE:CD1	48:BZ:44:ASP:N	2.88	0.41
48:BZ:38:VAL:HG23	48:BZ:43:PHE:HB2	2.01	0.41
48:BZ:44:ASP:C	48:BZ:46:VAL:N	2.73	0.41
34:BH:80:SER:O	34:BH:81:GLU:CB	2.68	0.41
27:DA:418:G:H2'	27:DA:419:C:C6	2.56	0.41
28:BB:61:G:N2	28:BB:62:C:C2	2.88	0.41
5:AE:53:LEU:H	5:AE:53:LEU:HD12	1.85	0.41
18:CR:22:VAL:O	18:CR:26:LEU:HG	2.20	0.41
27:BA:604:G:C6	27:BA:605:C:C4	3.08	0.41
27:BA:603:A:H4'	27:BA:604:G:OP1	2.21	0.41
50:D1:71:TYR:CD1	50:D1:71:TYR:N	2.89	0.41
16:AP:44:THR:O	16:AP:45:THR:CB	2.69	0.41
52:D3:19:GLN:HE22	52:D3:52:HIS:CE1	2.39	0.41
18:AR:85:LEU:HA	18:AR:85:LEU:HD12	1.75	0.41
27:BA:766:C:H2'	27:BA:767:U:H6	1.86	0.41
28:BB:70:C:H42	28:BB:107:G:H1	1.69	0.41
33:BG:7:LEU:HD23	33:BG:10:LYS:HB2	2.02	0.41
27:BA:1975:G:H2'	27:BA:1976:U:H5'	2.03	0.41
50:D1:94:LEU:O	50:D1:96:LYS:N	2.54	0.41
10:AJ:67:THR:O	10:AJ:67:THR:HG23	2.20	0.41
3:CC:130:VAL:HG21	3:CC:157:ILE:HG23	2.03	0.41
51:B2:19:VAL:HG12	51:B2:20:GLU:N	2.35	0.41
28:BB:64:C:C4	28:BB:65:C:C5	3.08	0.41
27:BA:2136:C:N4	27:BA:2155:G:H1	2.18	0.41
1:CA:610:G:O5'	1:CA:610:G:C8	2.74	0.41
32:BF:149:ASP:OD2	32:BF:149:ASP:N	2.54	0.41
7:CG:142:GLU:OE2	7:CG:142:GLU:HA	2.21	0.41
45:BW:34:ASN:HA	45:BW:34:ASN:HD22	1.70	0.41
11:CK:27:ASN:CG	11:CK:28:THR:N	2.74	0.41
20:CT:60:GLU:O	20:CT:64:ASP:HB2	2.21	0.41
1:AA:1191:A:OP2	3:AC:3:ASN:ND2	2.54	0.41
48:BZ:69:LEU:HD23	48:BZ:69:LEU:HA	1.88	0.41
18:CR:55:ARG:HH11	18:CR:55:ARG:HG3	1.84	0.41
11:AK:24:SER:HB3	11:AK:25:TYR:H	1.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:592:G:O2'	57:B8:4:MET:HB2	2.21	0.41
27:BA:942:G:H2'	27:BA:943:U:C5'	2.50	0.41
38:BP:21:ARG:O	38:BP:23:PRO:HD3	2.20	0.41
27:BA:2792:G:C8	27:BA:2893:G:O6	2.74	0.41
47:BY:8:LYS:N	47:BY:8:LYS:CD	2.82	0.41
27:DA:242:G:C8	57:D8:5:LYS:HG2	2.56	0.41
27:DA:271(D):G:H2'	27:DA:271(E):U:H6	1.85	0.41
27:BA:1200:C:C2	27:BA:1246:A:C2	3.08	0.41
27:BA:662:G:P	38:BP:18:ARG:HD2	2.61	0.41
13:CM:8:GLU:OE2	13:CM:22:ILE:HG23	2.21	0.41
1:CA:722:A:O2'	1:CA:723:U:H2'	2.21	0.41
27:DA:385:C:O2	27:DA:390:A:C2	2.74	0.41
42:BT:81:PRO:HD2	42:BT:82:LEU:CD1	2.51	0.41
32:DF:9:ILE:CG1	32:DF:14:PRO:HA	2.49	0.41
29:BC:83:ILE:HA	29:BC:94:VAL:CG2	2.47	0.41
42:BT:109:GLU:HA	42:BT:112:ARG:CD	2.50	0.41
27:DA:994:C:OP1	43:DU:53:ARG:NH2	2.54	0.41
12:CL:53:ALA:O	12:CL:64:THR:HA	2.21	0.41
33:BG:154:GLY:C	33:BG:155:MET:HG2	2.41	0.41
11:AK:33:THR:C	11:AK:40:ILE:HD11	2.42	0.41
31:DE:59:VAL:HG21	31:DE:63:LEU:CD1	2.51	0.41
55:D6:17:LYS:CB	55:D6:18:ARG:NH1	2.81	0.41
27:DA:2249:U:O2'	27:DA:2250:G:OP1	2.33	0.41
27:DA:2070:G:C6	27:DA:2442:C:C4	3.09	0.41
38:DP:106:LEU:HD12	38:DP:106:LEU:HA	1.96	0.41
33:DG:31:VAL:CG2	33:DG:32:PRO:HD2	2.50	0.41
27:DA:1191:G:H21	27:DA:1192:G:H1'	1.86	0.41
27:DA:2555:U:O4	27:DA:2556:C:O2	2.38	0.41
27:DA:530:G:C2	27:DA:2021:C:O2'	2.68	0.41
1:CA:619:U:O4	4:CD:135:LEU:HD11	2.21	0.41
1:CA:201:C:N4	1:CA:203:U:N3	2.69	0.41
9:AI:99:LEU:HB3	9:AI:101:PHE:HE1	1.80	0.41
1:AA:1363(A):A:OP1	1:AA:1363(A):A:C8	2.74	0.41
1:AA:973:G:C3'	1:AA:974:A:H5''	2.47	0.41
1:AA:977:A:H1'	1:AA:982:U:O4	2.21	0.41
1:CA:344:A:C3'	1:CA:346:G:O6	2.69	0.41
42:DT:74:ARG:O	42:DT:75:ILE:HG13	2.21	0.41
27:DA:2747:G:H21	27:DA:2748:A:N6	2.18	0.41
16:AP:23:ASP:OD1	16:AP:23:ASP:C	2.59	0.41
32:BF:51:THR:HB	32:BF:88:VAL:HG11	2.03	0.41
27:BA:781:A:C2	27:BA:1776:G:N3	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BF:61:GLY:O	32:BF:62:ARG:O	2.38	0.41
1:AA:60:A:H8	1:AA:60:A:P	2.44	0.41
1:CA:892:A:C2	1:CA:893:C:C2	3.09	0.41
1:AA:374:A:H2'	1:AA:375:U:H6	1.86	0.41
27:DA:513:A:C2	27:DA:514:A:N9	2.89	0.41
27:DA:775:G:N1	27:DA:787:U:C4	2.89	0.41
12:AL:57:LEU:N	12:AL:57:LEU:HD22	2.36	0.41
27:BA:1798:U:O2	27:BA:1802:A:H2	2.03	0.41
27:BA:2265:U:O2	27:BA:2276:G:C2	2.74	0.41
1:CA:1311:G:C2	1:CA:1327:C:N3	2.89	0.41
48:DZ:94:PRO:O	48:DZ:95:VAL:O	2.39	0.41
30:BD:142:VAL:HG23	30:BD:143:HIS:N	2.36	0.41
1:CA:752:G:O2'	1:CA:753:A:H5'	2.21	0.41
49:D0:53:MET:CE	49:D0:57:PHE:HD1	2.33	0.41
29:DC:39:GLU:HA	29:DC:179:SER:O	2.21	0.41
58:B9:29:ASN:OD1	58:B9:31:LYS:HB3	2.21	0.41
5:CE:20:GLN:O	5:CE:23:GLY:O	2.39	0.41
27:BA:173:G:C2	27:BA:174:C:C2	3.09	0.41
1:AA:15:G:C4'	5:AE:24:ARG:HH12	2.17	0.41
27:DA:686:G:C8	56:D7:7:PRO:HA	2.55	0.41
27:DA:695:G:C4	27:DA:768:G:N1	2.89	0.41
35:BI:91:SER:O	35:BI:92:VAL:CG1	2.68	0.41
35:BI:95:LYS:O	35:BI:98:ALA:HB3	2.21	0.41
27:BA:2544:G:H2'	27:BA:2545:G:H8	1.86	0.41
55:B6:30:THR:O	55:B6:31:PRO:C	2.59	0.41
3:AC:54:ARG:HG2	3:AC:54:ARG:HH11	1.86	0.41
27:BA:60:G:C8	27:BA:63:U:C5	3.09	0.41
27:BA:88:G:N2	27:BA:89:G:C4	2.89	0.41
27:DA:1678:G:H21	27:DA:1989:G:H1	1.67	0.41
27:DA:1458:C:C4'	27:DA:1459:G:O5'	2.67	0.41
30:BD:211:ARG:HA	30:BD:214:TRP:CD2	2.56	0.41
8:AH:14:ARG:HG3	8:AH:18:ARG:NH1	2.36	0.41
27:DA:2566:A:O2'	27:DA:2567:G:OP2	2.31	0.41
37:DO:79:PHE:N	37:DO:79:PHE:CD1	2.89	0.41
34:DH:44:VAL:C	34:DH:46:GLU:H	2.25	0.41
16:CP:68:ASP:HA	16:CP:71:ARG:HD3	2.03	0.41
33:DG:115:ARG:HH12	33:DG:136:ARG:HD3	1.86	0.41
1:AA:813:U:OP2	1:AA:816:A:N6	2.54	0.41
27:BA:491:G:H2'	27:BA:492:A:O5'	2.20	0.41
40:DR:26:LYS:HG2	40:DR:70:LEU:HD23	2.02	0.41
27:DA:489:G:N3	27:DA:1284:A:C6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1209:G:O2'	27:DA:1237:A:N6	2.40	0.41
47:DY:45:VAL:CG1	47:DY:46:LYS:N	2.84	0.41
27:DA:2770:G:C5'	27:DA:2771:C:OP2	2.69	0.41
1:CA:709:G:H2'	1:CA:710:G:C8	2.56	0.41
27:BA:675:A:N6	27:BA:676:A:N6	2.69	0.41
12:AL:24:LEU:HD13	12:AL:24:LEU:N	2.35	0.41
27:DA:2801:A:O2'	27:DA:2895:U:H4'	2.21	0.41
39:BQ:26:TYR:O	39:BQ:26:TYR:CD1	2.74	0.41
38:BP:6:LEU:N	38:BP:6:LEU:HD23	2.31	0.41
2:AB:80:ILE:HD13	2:AB:211:ILE:CG2	2.51	0.41
33:BG:176:LEU:HD12	33:BG:176:LEU:H	1.86	0.41
30:DD:138:VAL:HG12	30:DD:168:ARG:NE	2.35	0.41
27:DA:1167:U:H1'	27:DA:1183:G:N2	2.34	0.41
27:BA:1836:C:C2'	27:BA:1837:C:H5'	2.51	0.41
27:BA:1740:G:O2'	27:BA:1741:A:H5'	2.21	0.41
24:CX:24:U:O2'	27:DA:1923:U:H5''	2.20	0.41
50:B1:53:VAL:CG2	50:B1:74:VAL:HG22	2.51	0.41
1:CA:690:G:H2'	1:CA:691:G:N9	2.36	0.41
1:AA:137:C:H2'	1:AA:138:G:H5'	2.03	0.41
1:CA:271:C:H2'	1:CA:272:C:C6	2.56	0.41
18:CR:65:ILE:H	18:CR:65:ILE:HG13	1.74	0.41
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.21	0.41
27:DA:620:G:H5'	27:DA:621:A:OP1	2.21	0.41
1:CA:832:C:H2'	1:CA:833:U:O4'	2.21	0.41
39:DQ:108:GLY:CA	48:DZ:115:VAL:HG11	2.47	0.41
47:DY:87:LYS:HG3	47:DY:88:LYS:N	2.36	0.41
1:CA:1009:G:C6	1:CA:1021:G:C5	3.09	0.41
35:DI:39:ALA:O	35:DI:40:THR:C	2.59	0.41
12:AL:124:GLU:O	12:AL:125:ALA:C	2.59	0.41
27:DA:2673:G:H2'	27:DA:2674:G:H8	1.85	0.41
51:B2:13:ALA:HA	51:B2:16:LEU:CD1	2.51	0.41
9:CI:63:ILE:HD13	9:CI:77:ILE:HG23	2.02	0.41
34:DH:70:THR:HB	34:DH:71:LEU:H	1.57	0.41
28:BB:25:A:N3	28:BB:25:A:H2'	2.35	0.41
27:DA:2682:U:O4	27:DA:2728:U:H1'	2.21	0.41
27:BA:301:G:O6	27:BA:316:C:N4	2.55	0.41
6:CF:27:GLN:O	6:CF:28:ARG:C	2.59	0.41
35:BI:48:GLU:O	35:BI:52:ARG:HG2	2.21	0.41
27:DA:1037:G:H2'	27:DA:1038:C:O4'	2.21	0.41
27:DA:1941:C:C2	27:DA:1965:C:C2	3.08	0.41
27:DA:463:G:N2	27:DA:467:G:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DR:63:ARG:NH1	40:DR:63:ARG:HG3	2.36	0.41
27:DA:2855:C:H2'	27:DA:2856:C:C6	2.53	0.41
27:BA:681:G:H2'	27:BA:682:G:O4'	2.21	0.41
8:CH:97:VAL:HA	8:CH:100:ILE:CD1	2.51	0.41
27:DA:1526:G:C6	27:DA:1527:G:C2	3.09	0.41
1:AA:219:C:C4	1:AA:220:G:C8	3.10	0.41
1:CA:189(B):C:H2'	1:CA:189(C):C:C6	2.55	0.41
27:DA:1954:G:H1'	27:DA:1956:U:O4	2.21	0.41
30:BD:84:TYR:CD2	30:BD:85:ASP:N	2.89	0.41
2:CB:167:PRO:CD	2:CB:188:ALA:HB2	2.51	0.41
1:AA:787:A:C5	1:AA:788:U:C5	3.09	0.41
1:AA:366:C:O2'	1:AA:367:U:H5''	2.21	0.41
27:BA:819:A:OP2	27:BA:1187:G:N2	2.38	0.40
32:BF:13:SER:HA	32:BF:14:PRO:HD3	1.73	0.40
27:DA:1024:G:OP2	27:DA:1026:U:OP1	2.39	0.40
27:DA:1905:C:H4'	27:DA:1928:A:C2	2.56	0.40
27:DA:1789:A:OP1	30:DD:222:ARG:HG3	2.21	0.40
1:CA:507:C:P	1:CA:508:C:H3'	2.62	0.40
31:BE:77:ILE:CG2	31:BE:78:LEU:HD23	2.51	0.40
52:B3:29:ARG:H	52:B3:33:GLN:NE2	2.18	0.40
1:CA:719:C:H6	1:CA:720:C:C5	2.39	0.40
27:DA:389:G:N1	38:DP:71:VAL:CG1	2.76	0.40
42:BT:85:LYS:NZ	42:BT:85:LYS:CB	2.82	0.40
1:AA:129(A):G:H22	1:AA:189(E):U:H1'	1.85	0.40
27:DA:1889:A:C2	27:DA:1890:A:C4	3.08	0.40
27:DA:2232:U:HO2'	27:DA:2233:U:H5'	1.86	0.40
36:DN:4:TYR:HB2	43:DU:64:ARG:CZ	2.51	0.40
27:DA:453:C:O2'	27:DA:472:A:N6	2.55	0.40
30:DD:24:ILE:O	30:DD:26:LYS:HD3	2.21	0.40
28:BB:83:G:H4'	52:B3:52:HIS:HD2	1.83	0.40
55:D6:15:GLU:CD	55:D6:18:ARG:HG3	2.42	0.40
55:D6:20:ASN:CG	55:D6:21:TYR:H	2.24	0.40
27:DA:2069:G:N2	27:DA:2070:G:N9	2.69	0.40
25:CY:75:A:O2'	27:DA:2395:C:C2	2.73	0.40
38:DP:95:VAL:HB	38:DP:100:LEU:HD21	2.03	0.40
33:DG:11:TYR:HD2	33:DG:12:TYR:CD2	2.39	0.40
4:AD:196:LEU:O	4:AD:198:VAL:N	2.53	0.40
27:DA:2548:G:H2'	27:DA:2549:G:O5'	2.21	0.40
27:DA:2552:U:O2	27:DA:2554:U:H5''	2.20	0.40
27:DA:942:G:N1	27:DA:943:U:C2	2.89	0.40
31:DE:141:ILE:O	31:DE:150:VAL:HG22	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:177:C:OP1	20:AT:65:LYS:NZ	2.51	0.40
1:AA:323:U:H2'	1:AA:323:U:O2	2.21	0.40
1:CA:1136:U:H5''	1:CA:1137:C:C5	2.56	0.40
55:B6:15:GLU:OE2	55:B6:18:ARG:CD	2.69	0.40
46:DX:43:VAL:O	46:DX:44:GLU:O	2.38	0.40
1:CA:187:C:O4'	20:CT:85:MET:HG3	2.21	0.40
20:CT:14:LYS:HA	20:CT:17:ARG:HE	1.85	0.40
1:AA:1058:G:C5	1:AA:1059:C:C4	3.09	0.40
1:AA:1346:A:C8	1:AA:1348:U:C2	3.09	0.40
3:AC:30:ARG:CZ	14:AN:35:ARG:O	2.69	0.40
9:AI:116:LYS:O	9:AI:118:LYS:N	2.54	0.40
8:AH:12:ARG:NH1	8:AH:26:VAL:HA	2.36	0.40
12:CL:27:ALA:HA	12:CL:28:PRO:HD3	1.89	0.40
12:CL:55:VAL:O	12:CL:57:LEU:HD22	2.21	0.40
30:BD:185:VAL:HG12	30:BD:186:HIS:N	2.36	0.40
50:D1:51:VAL:HG13	50:D1:53:VAL:HG23	2.02	0.40
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	2.04	0.40
1:CA:243:A:H4'	1:CA:244:U:O5'	2.22	0.40
1:CA:310:G:OP2	16:CP:27:LYS:NZ	2.50	0.40
1:CA:244:U:C6	1:CA:894:G:C2	3.09	0.40
1:CA:664:G:N2	1:CA:741:G:H1	2.04	0.40
42:DT:2:ASN:O	42:DT:3:ARG:HG2	2.21	0.40
1:CA:144:G:C2	1:CA:179:A:C2	3.10	0.40
27:DA:775:G:C2	27:DA:777:A:N6	2.89	0.40
1:CA:716:A:H2'	1:CA:717:C:O4'	2.21	0.40
3:CC:159:GLY:HA3	3:CC:193:TYR:CE2	2.55	0.40
27:DA:154(A):C:N4	27:DA:172:C:N4	2.53	0.40
25:AY:4:G:N2	25:AY:69:C:C2	2.89	0.40
24:CX:17:C:C2'	24:CX:17(B):U:H5'	2.51	0.40
27:DA:1309:G:H2'	27:DA:1310:G:H5'	2.02	0.40
27:BA:2545:G:N3	27:BA:2565:A:H2	2.18	0.40
27:BA:2259:G:N2	27:BA:2282:G:C6	2.89	0.40
27:DA:955:C:C2'	27:DA:956:G:H5'	2.50	0.40
55:B6:11:LEU:HD12	55:B6:12:GLU:O	2.21	0.40
1:AA:541:G:O2'	1:AA:542:G:H5'	2.20	0.40
1:AA:545:C:O2'	1:AA:549:C:OP1	2.38	0.40
1:AA:619:U:O4	4:AD:135:LEU:HD11	2.20	0.40
1:AA:1243:C:H2'	1:AA:1244:C:C6	2.51	0.40
51:B2:24:LEU:HD11	51:B2:28:LYS:CE	2.51	0.40
51:B2:32:LEU:O	51:B2:35:LEU:CB	2.68	0.40
27:BA:68:G:C6	27:BA:69:C:C4	3.08	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:1459:G:H2'	27:DA:1459:G:N3	2.36	0.40
27:DA:1416:G:O2'	27:DA:1417:C:O4'	2.38	0.40
7:AG:151:TYR:HA	7:AG:153:HIS:HE1	1.80	0.40
52:B3:22:ALA:CB	52:B3:46:ASN:HD22	2.34	0.40
37:DO:11:ALA:CB	37:DO:64:ARG:NH2	2.84	0.40
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.56	0.40
4:AD:162:LEU:HA	4:AD:165:MET:HG2	2.02	0.40
3:AC:24:ALA:CB	3:AC:32:LEU:HD12	2.51	0.40
5:CE:144:THR:O	5:CE:147:ASP:OD2	2.39	0.40
7:CG:137:LYS:O	7:CG:141:VAL:CG2	2.65	0.40
2:AB:178:ARG:CG	2:AB:178:ARG:HH11	2.32	0.40
27:DA:7:G:H5''	36:DN:121:LYS:HZ1	1.86	0.40
27:BA:1049:C:N4	27:BA:1111:A:N1	2.69	0.40
26:AZ:3:SER:HB2	27:BA:1913:A:O2'	2.19	0.40
27:DA:2588:G:H2'	27:DA:2589:A:C8	2.56	0.40
27:BA:14:A:H2'	27:BA:15:G:O4'	2.21	0.40
6:CF:69:GLU:HG2	6:CF:70:ASP:N	2.36	0.40
6:CF:4:TYR:CD1	6:CF:92:LYS:HA	2.55	0.40
32:BF:160:ASN:ND2	32:BF:162:LEU:N	2.65	0.40
29:DC:54:SER:HB2	29:DC:55:ASP:H	1.74	0.40
2:AB:80:ILE:HD12	2:AB:212:GLN:HA	2.02	0.40
36:DN:126:PRO:HB2	36:DN:127:ASP:H	1.76	0.40
27:DA:1228:G:O2'	27:DA:1229:G:H5'	2.22	0.40
15:AO:51:HIS:ND1	15:AO:51:HIS:N	2.69	0.40
27:BA:2064:C:H2'	27:BA:2065:C:C6	2.56	0.40
27:DA:2595:G:N2	27:DA:2599:G:C5	2.89	0.40
1:AA:138:G:N2	1:AA:226:G:C4	2.89	0.40
27:BA:2611:U:O2	54:B5:3:LYS:HE3	2.20	0.40
1:AA:841:U:H2'	1:AA:848:C:O4'	2.21	0.40
27:BA:177:G:O2'	27:BA:178:G:OP1	2.36	0.40
13:CM:35:GLU:CG	13:CM:36:LYS:N	2.84	0.40
11:AK:79:SER:HB2	11:AK:106:LYS:CD	2.51	0.40
27:BA:1448:G:N3	27:BA:1528(A):A:H2	2.19	0.40
20:AT:104:LEU:HD23	20:AT:105:SER:N	2.36	0.40
11:CK:57:THR:HB	11:CK:60:ALA:CB	2.51	0.40
1:CA:832:C:HO2'	1:CA:833:U:H5'	1.84	0.40
27:BA:610:G:O2'	27:BA:611:C:H5'	2.21	0.40
1:CA:334:C:O5'	1:CA:334:C:H6	2.04	0.40
1:CA:991:U:O2	1:CA:991:U:C2'	2.61	0.40
1:CA:134:A:H61	16:CP:25:ARG:NH1	2.14	0.40
27:DA:2241:A:C6	27:DA:2242:G:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1458:G:C2'	1:AA:1459:C:H5'	2.51	0.40
24:AX:49:G:H1	24:AX:65:C:H42	1.67	0.40
7:AG:108:ALA:C	7:AG:110:GLN:H	2.25	0.40
4:CD:152:SER:O	4:CD:158:ILE:HG13	2.21	0.40
4:CD:154:ASN:N	4:CD:154:ASN:OD1	2.54	0.40
35:BI:42:SER:C	35:BI:44:LEU:N	2.74	0.40
1:AA:414:A:H2'	1:AA:415:A:O4'	2.21	0.40
1:AA:528:C:O2'	1:AA:529:G:H5'	2.21	0.40
14:AN:51:GLY:C	14:AN:53:LEU:N	2.71	0.40
27:DA:2360:A:C2	27:DA:2361:A:H1'	2.56	0.40
2:CB:129:GLU:O	2:CB:130:ARG:HB2	2.21	0.40
1:AA:1049:U:HO2'	1:AA:1050:G:P	2.44	0.40
1:AA:1049:U:O2	1:AA:1201:A:C4	2.74	0.40
35:DI:120:ILE:HG22	35:DI:121:LYS:N	2.36	0.40
40:BR:118:GLU:HG3	40:BR:118:GLU:OXT	2.19	0.40
4:CD:127:THR:HG22	4:CD:132:ARG:CB	2.51	0.40
27:BA:2706:G:O2'	40:BR:64:ARG:HD3	2.20	0.40
39:BQ:3:MET:O	39:BQ:5:ARG:N	2.54	0.40
29:DC:72:VAL:HG21	29:DC:161:ILE:CA	2.50	0.40
1:AA:1104:G:H4'	2:AB:111:ARG:HH11	1.85	0.40
1:CA:1439:C:H2'	1:CA:1440:C:O4'	2.21	0.40
28:BB:16:G:N3	28:BB:17:C:C6	2.89	0.40
27:BA:281:G:N2	27:BA:358:U:C5	2.90	0.40
39:BQ:68:ILE:HD13	39:BQ:103:MET:CE	2.51	0.40
7:CG:29:LYS:O	7:CG:105:VAL:HG21	2.21	0.40
8:AH:72:PRO:O	8:AH:73:ASP:C	2.60	0.40
27:DA:382:G:C2	27:DA:393:C:C2	3.09	0.40
28:DB:114:C:H2'	28:DB:115:G:C8	2.56	0.40
42:DT:77:PRO:O	42:DT:78:LEU:HB3	2.21	0.40
14:CN:41:ARG:NH1	14:CN:41:ARG:HG2	2.36	0.40
40:BR:23:ASN:H	40:BR:23:ASN:ND2	2.13	0.40
41:BS:26:LEU:HA	41:BS:39:ILE:HG12	2.02	0.40
27:DA:242:G:C5'	57:D8:62:LEU:HD13	2.22	0.40
27:DA:242:G:O2'	27:DA:243:U:P	2.79	0.40
30:DD:242:ARG:HG2	30:DD:246:PRO:HG3	2.03	0.40
48:DZ:157:PRO:O	48:DZ:160:VAL:HB	2.21	0.40
1:CA:543:C:O2'	1:CA:544:G:H5'	2.21	0.40
27:DA:389:G:O5'	27:DA:389:G:C8	2.71	0.40
32:DF:196:LEU:HA	32:DF:196:LEU:HD23	1.81	0.40
43:DU:39:LEU:O	43:DU:42:ALA:N	2.54	0.40
27:DA:1565:C:H3'	30:DD:21:PHE:CZ	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:344:A:C3'	1:AA:346:G:O6	2.69	0.40
41:DS:97:ARG:CZ	41:DS:97:ARG:C	2.90	0.40
27:DA:2352:A:C6	27:DA:2366:A:C4	3.09	0.40
1:AA:192:U:H2'	1:AA:193:C:H6	1.86	0.40
39:BQ:109:VAL:CG1	39:BQ:110:THR:N	2.84	0.40
27:DA:142(A):C:C2'	27:DA:143:G:H5'	2.51	0.40
48:DZ:3:ARG:HA	48:DZ:57:VAL:H	1.86	0.40
31:DE:81:ILE:HG21	31:DE:84:PHE:HD1	1.86	0.40
1:AA:1061:G:H1'	10:AJ:56:HIS:CE1	2.57	0.40
14:AN:32:SER:O	14:AN:40:CYS:HA	2.21	0.40
1:AA:533:A:H1'	1:AA:534:U:OP1	2.21	0.40
27:BA:126:A:C5	27:BA:127:A:C6	3.09	0.40
27:BA:2070:G:N1	27:BA:2071:A:C2	2.90	0.40
27:BA:754:C:C2'	27:BA:755:C:O5'	2.70	0.40
1:AA:62:U:C2	1:AA:63:C:C5	3.10	0.40
2:AB:188:ALA:O	2:AB:202:PRO:HA	2.21	0.40
2:CB:17:PHE:N	2:CB:17:PHE:CD2	2.89	0.40
1:CA:238:G:O2'	1:CA:239:U:H5'	2.21	0.40
27:BA:1998:G:H2'	27:BA:1999:C:H6	1.85	0.40
1:AA:454:C:H2'	1:AA:455:C:C5	2.55	0.40
1:CA:145:G:C2	1:CA:146:G:H1'	2.56	0.40
27:BA:2197:U:O2'	27:BA:2198:A:OP2	2.32	0.40
27:BA:2199:A:H8	27:BA:2199:A:C5'	2.30	0.40
27:BA:372:G:HO2'	27:BA:373:U:P	2.44	0.40
27:DA:2536:G:H2'	27:DA:2537:U:H6	1.85	0.40
6:AF:8:ILE:HG23	6:AF:87:ARG:O	2.21	0.40
14:CN:24:CYS:H	14:CN:33:VAL:CG1	2.33	0.40
27:BA:2261:C:P	49:B0:17:GLN:OE1	2.79	0.40
27:BA:552:G:C6	27:BA:553:G:N7	2.89	0.40
39:DQ:32:TYR:O	39:DQ:105:GLU:HA	2.21	0.40
27:BA:2126:A:C5'	29:BC:36:LYS:HG2	2.52	0.40
27:DA:1352:U:H3	27:DA:1378:A:N6	2.12	0.40
27:DA:1340:U:C2	27:DA:1603:A:H8	2.39	0.40
27:BA:2259:G:O5'	27:BA:2259:G:H8	2.03	0.40
31:DE:112:GLY:O	31:DE:114:ALA:N	2.55	0.40
41:DS:78:LEU:C	41:DS:80:LEU:N	2.74	0.40
27:BA:2861:G:H2'	27:BA:2862:G:H8	1.85	0.40
1:AA:36:C:N4	1:AA:37:U:C4	2.89	0.40
27:DA:596:G:H2'	27:DA:597:U:C6	2.56	0.40
9:CI:3:GLN:HA	9:CI:20:ARG:HH12	1.86	0.40
20:AT:74:LYS:C	20:AT:76:ALA:N	2.73	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BZ:99:VAL:HA	48:BZ:100:PRO:HD3	1.90	0.40
52:D3:22:ALA:HB3	52:D3:23:LEU:HD12	2.03	0.40
27:BA:729:G:OP2	30:BD:13:ARG:HD2	2.21	0.40
13:AM:76:ALA:CA	13:AM:79:LYS:NZ	2.84	0.40
42:DT:120:ARG:O	42:DT:124:ASP:OD1	2.39	0.40
1:CA:1315:U:C4	1:CA:1316:G:C4	3.09	0.40
27:BA:2187:G:C6	27:BA:2188:C:N3	2.90	0.40
27:DA:1447:G:C6	27:DA:1448:G:C6	3.09	0.40
1:AA:1002:G:H3'	1:AA:1003:G:C8	2.56	0.40
4:AD:162:LEU:HD12	4:AD:181:MET:CE	2.51	0.40
54:D5:45:VAL:HG12	54:D5:45:VAL:O	2.20	0.40
1:AA:577:G:H4'	1:AA:816:A:HO2'	1.85	0.40
25:CY:58:A:O2'	25:CY:59:U:H5'	2.21	0.40
27:BA:271(P):C:C6	27:BA:271(P):C:H5'	2.49	0.40
1:AA:1279:A:C4'	1:AA:1280:A:OP1	2.69	0.40
31:DE:14:ILE:HD12	42:DT:14:TYR:CE2	2.56	0.40
7:CG:143:ARG:O	7:CG:144:MET:C	2.60	0.40
48:BZ:52:ILE:HG22	48:BZ:70:VAL:HB	1.95	0.40
27:DA:9:U:O4	27:DA:2629:A:N7	2.55	0.40
8:CH:112:LEU:HD12	8:CH:114:THR:CG2	2.51	0.40
1:AA:870:U:H4'	1:AA:871:U:O5'	2.21	0.40
27:BA:1591:G:C4	27:BA:1592:C:C5	3.10	0.40
45:DW:20:VAL:C	45:DW:22:ASP:N	2.74	0.40
24:AX:74:C:H2'	24:AX:75:C:H5'	2.03	0.40
1:CA:937:A:H1'	1:CA:1379:G:N2	2.36	0.40
5:AE:20:GLN:O	5:AE:21:ALA:O	2.39	0.40
12:AL:27:ALA:CB	12:AL:30:ARG:NH2	2.84	0.40
1:AA:681:C:O2	1:AA:710:G:C2	2.73	0.40
37:BO:97:ARG:CB	37:BO:99:PHE:CE1	3.03	0.40
27:BA:45:C:H2'	27:BA:47:C:H6	1.83	0.40
1:CA:570:G:C2	1:CA:571:U:C5	3.09	0.40
1:CA:578:C:O2	1:CA:579:G:N9	2.54	0.40
1:CA:764:C:C2	1:CA:765:G:C8	3.09	0.40
18:CR:76:LEU:H	18:CR:76:LEU:HD22	1.86	0.40
2:AB:77:ALA:CB	2:AB:211:ILE:HD13	2.50	0.40
27:DA:1229:G:C2	27:DA:1230:C:C2	3.10	0.40
3:AC:173:VAL:N	3:AC:174:PRO:CD	2.85	0.40
1:AA:1117:G:H2'	1:AA:1118:C:H5'	2.04	0.40
36:DN:85:ILE:CG2	36:DN:85:ILE:O	2.69	0.40
1:AA:966:G:O2'	1:AA:967:C:O5'	2.39	0.40
34:DH:113:VAL:HG21	34:DH:151:ILE:HG21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2517:C:H2'	27:DA:2542:A:C2	2.55	0.40
10:AJ:22:LYS:C	10:AJ:22:LYS:CD	2.89	0.40
27:BA:2652:C:H5'	27:BA:2653:U:OP2	2.20	0.40
1:CA:9:G:OP2	5:CE:121:LYS:HD2	2.21	0.40
27:BA:2110:G:C5	27:BA:2120:G:C8	3.10	0.40
27:BA:2534:A:C2'	27:BA:2535:G:O5'	2.69	0.40
16:AP:67:THR:H	16:AP:70:ALA:CB	2.34	0.40
1:CA:1278:U:H5	10:CJ:99:LYS:HZ3	1.70	0.40
19:AS:64:GLU:O	19:AS:65:ASN:C	2.60	0.40
27:BA:1452:A:O3'	40:BR:77:ARG:NH1	2.54	0.40
27:BA:1861:G:C2	27:BA:1862:G:C8	3.09	0.40
27:DA:1355:G:C6	27:DA:1356:G:C5	3.09	0.40
35:DI:2:LYS:O	35:DI:39:ALA:HB2	2.21	0.40
13:AM:48:LEU:HG	13:AM:53:VAL:HG23	2.03	0.40
27:BA:2203:U:H2'	27:BA:2205:C:C6	2.56	0.40
43:DU:60:LEU:HA	43:DU:63:VAL:CG2	2.51	0.40
1:CA:557:G:H3'	1:CA:558:G:H8	1.86	0.40
27:DA:1845:G:OP1	30:DD:258:LYS:HD2	2.21	0.40
27:BA:2106:G:C2	27:BA:2184:G:C2	3.09	0.40
1:AA:796:C:OP1	11:AK:123:LYS:NZ	2.50	0.40
27:BA:1119:C:H6	27:BA:1119:C:O5'	2.04	0.40
27:DA:1171:G:C6	27:DA:1173:G:O2'	2.74	0.40
31:DE:168:MET:CE	31:DE:202:LYS:HE2	2.51	0.40
27:BA:731:C:O2'	27:BA:732:C:H5'	2.20	0.40
6:CF:27:GLN:HB3	6:CF:27:GLN:HE21	1.61	0.40
30:DD:228:PRO:HD3	30:DD:235:GLY:CA	2.51	0.40
27:BA:606:U:OP1	32:BF:104:LYS:HD2	2.22	0.40
24:AX:59:A:O2'	24:AX:60:U:C5'	2.70	0.40
1:AA:1258:G:C4	1:AA:1259:C:C5	3.10	0.40
1:AA:1378:C:H5''	7:AG:94:ARG:HH12	1.85	0.40
27:DA:2445:G:C2'	27:DA:2446:G:O5'	2.69	0.40
7:CG:5:ARG:C	7:CG:7:ALA:H	2.25	0.40
27:BA:2292:C:C2'	27:BA:2293:C:H5'	2.52	0.40
27:DA:2601:C:C2'	27:DA:2602:A:OP2	2.69	0.40
1:AA:1332:A:O2'	1:AA:1333:A:H5'	2.22	0.40
1:AA:1494:G:C6	26:AZ:1:KBE:HAA	2.56	0.40
46:BX:41:ASN:H	46:BX:41:ASN:HD22	1.69	0.40
27:BA:2193:G:H2'	27:BA:2194:G:H8	1.87	0.40
27:BA:2813:A:C2	27:BA:2888:C:O2	2.74	0.40
33:BG:148:MET:HA	33:BG:148:MET:HE3	2.03	0.40
33:BG:148:MET:HG3	33:BG:148:MET:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1420:C:H2'	1:AA:1421:G:C8	2.56	0.40
27:DA:191:A:O2'	27:DA:192:C:H5'	2.20	0.40
12:CL:42:PRO:HB2	12:CL:89:ASP:OD2	2.21	0.40
27:BA:1567:A:OP2	30:BD:84:TYR:OH	2.29	0.40
1:CA:482:A:H2'	1:CA:483:C:O4'	2.21	0.40
27:BA:921:G:H4'	27:BA:2269:A:C5	2.56	0.40
28:DB:57:A:H8	28:DB:57:A:O5'	2.04	0.40
48:BZ:11:GLY:C	48:BZ:12:GLU:CD	2.80	0.40
3:AC:10:PHE:CD1	3:AC:10:PHE:O	2.74	0.40
7:CG:94:ARG:HB2	7:CG:94:ARG:HE	1.51	0.40
46:DX:14:SER:O	46:DX:15:GLU:C	2.59	0.40
27:DA:403:U:H4'	27:DA:404:C:H5'	2.03	0.40
29:BC:147:PHE:O	29:BC:148:ASN:CB	2.69	0.40
27:BA:241:A:O3'	27:BA:242:G:H4'	2.22	0.40
32:BF:106:ARG:O	32:BF:107:LYS:C	2.59	0.40
38:BP:57:THR:HG1	38:BP:59:LEU:HB3	1.87	0.40
34:BH:137:ASP:CG	34:BH:140:LYS:HB3	2.42	0.40
1:AA:885:G:N2	1:AA:886:G:C4	2.89	0.40
36:DN:100:GLU:O	36:DN:104:LYS:CB	2.70	0.40
1:CA:504:C:O4'	1:CA:510:A:C6	2.74	0.40
32:BF:68:LYS:C	32:BF:70:THR:N	2.71	0.40
27:BA:560:C:H2'	27:BA:561:G:O5'	2.21	0.40
44:BV:14:VAL:O	44:BV:15:GLU:HG3	2.21	0.40
1:AA:1502:A:H2	1:AA:1505:G:H1	1.70	0.40
43:DU:33:ARG:O	43:DU:36:ARG:N	2.52	0.40
27:DA:451:C:H41	27:DA:453:C:H3'	1.86	0.40
27:DA:729:G:H5'	27:DA:730:C:H5''	2.02	0.40
51:D2:19:VAL:O	51:D2:21:LEU:N	2.54	0.40
55:D6:27:LYS:O	55:D6:29:ASN:OD1	2.39	0.40
55:D6:43:CYS:O	55:D6:44:ARG:O	2.40	0.40
57:D8:28:GLY:HA2	57:D8:32:LEU:HD21	2.03	0.40
27:DA:2347:C:H4'	55:D6:39:TYR:HE1	1.87	0.40
38:DP:65:ARG:O	38:DP:68:GLN:OE1	2.39	0.40
11:CK:29:ILE:HD11	11:CK:42:TRP:CE3	2.57	0.40
27:DA:1951:U:O2	27:DA:1953:A:H8	2.04	0.40
27:DA:2016:U:H2'	27:DA:2017:U:H6	1.86	0.40
20:AT:30:LYS:C	20:AT:32:ALA:N	2.75	0.40
55:B6:17:LYS:HB3	55:B6:18:ARG:NH1	2.36	0.40
34:BH:17:VAL:O	34:BH:45:VAL:HG22	2.20	0.40
34:BH:54:ARG:HA	34:BH:55:PRO:HD2	1.79	0.40
34:BH:61:HIS:O	34:BH:64:LEU:N	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BD:35:LYS:HA	30:BD:64:ILE:CG2	2.48	0.40
1:CA:225:C:O2	1:CA:225:C:C2'	2.64	0.40
9:AI:50:LEU:CA	9:AI:53:VAL:HG22	2.48	0.40
48:BZ:81:ARG:CZ	48:BZ:82:PRO:O	2.69	0.40
8:AH:35:ILE:O	8:AH:38:ILE:HB	2.21	0.40
37:DO:110:GLY:O	37:DO:112:MET:N	2.55	0.40
1:CA:392:G:C2	1:CA:393:A:C4	3.09	0.40
43:BU:107:ALA:O	43:BU:110:VAL:HB	2.22	0.40
3:CC:148:GLY:CA	3:CC:203:PHE:HB3	2.51	0.40
26:CZ:4:SER:O	27:DA:1914:C:OP2	2.40	0.40
27:BA:1806:C:N4	27:BA:1812:A:C6	2.90	0.40
2:AB:113:HIS:C	2:AB:115:LEU:N	2.75	0.40
27:DA:599:G:N2	27:DA:659:C:C2	2.89	0.40
2:CB:85:ALA:HB3	2:CB:92:TYR:CD2	2.55	0.40
1:CA:606:G:H3'	1:CA:607:A:C5'	2.50	0.40
33:DG:105:LYS:HB3	33:DG:142:PRO:HG3	2.03	0.40
58:B9:24:TYR:CZ	58:B9:35:ARG:HD2	2.55	0.40
4:AD:23:GLY:HA3	4:AD:112:VAL:O	2.20	0.40
6:AF:39:LYS:CG	6:AF:40:VAL:N	2.85	0.40
4:AD:17:VAL:HG12	4:AD:18:LYS:O	2.21	0.40
27:DA:52:A:N6	27:DA:118:A:N3	2.69	0.40
1:AA:556:C:H2'	1:AA:557:G:H8	1.86	0.40
31:BE:117:MET:O	31:BE:117:MET:CG	2.69	0.40
39:DQ:132:VAL:HB	48:DZ:80:ARG:NH2	2.37	0.40
1:CA:781:A:H5'	1:CA:782:A:OP2	2.21	0.40
27:DA:1200:C:H2'	27:DA:1201:C:H6	1.85	0.40
27:BA:807:U:H2'	27:BA:808:G:O5'	2.21	0.40
3:AC:119:ARG:HA	3:AC:122:GLU:CD	2.41	0.40
32:BF:33:LEU:HA	32:BF:33:LEU:HD12	1.86	0.40
8:AH:83:ILE:CB	8:AH:137:VAL:HG13	2.45	0.40
1:AA:1238:A:OP1	1:AA:1335:C:H1'	2.21	0.40
27:BA:61:G:N7	51:B2:51:ARG:NH2	2.68	0.40
51:B2:28:LYS:O	51:B2:53:LEU:CD1	2.69	0.40
27:BA:74:A:HO2'	27:BA:88:G:H8	1.69	0.40
27:DA:2641:G:H4'	36:DN:76:SER:HB3	2.03	0.40
1:AA:259:G:C4	1:AA:260:G:C8	3.09	0.40
30:DD:31:LYS:HD3	30:DD:94:LEU:HD11	2.03	0.40
27:DA:2313:C:C3'	27:DA:2313:C:C6	3.04	0.40
52:D3:22:ALA:O	52:D3:26:LEU:HG	2.21	0.40
35:DI:88:ILE:HD11	35:DI:123:LEU:N	2.36	0.40
35:DI:139:GLN:HG3	35:DI:140:LEU:H	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DI:72:LEU:HD21	35:DI:75:LEU:HD23	2.03	0.40
1:CA:1442(A):G:H2'	1:CA:1442(A):G:N3	2.36	0.40
42:DT:106:SER:HA	42:DT:110:ILE:CG1	2.50	0.40
2:CB:178:ARG:NH2	8:CH:74:PRO:HB3	2.36	0.40
16:CP:71:ARG:O	16:CP:72:ARG:C	2.58	0.40
27:BA:271(O):C:O2'	27:BA:271(P):C:C5	2.71	0.40
5:CE:78:HIS:HD2	5:CE:79:GLU:O	2.03	0.40
27:DA:2467:C:N4	27:DA:2468:G:N1	2.68	0.40
27:DA:2470:G:O2'	27:DA:2471:C:H5'	2.21	0.40
47:BY:3:VAL:C	47:BY:5:MET:H	2.23	0.40
1:AA:189(J):G:C2	1:AA:189(K):U:C2	3.09	0.40
15:CO:42:HIS:CE1	15:CO:46:HIS:ND1	2.89	0.40
27:BA:2303:G:N2	27:BA:2314:C:C2	2.89	0.40
1:AA:203:U:H5'	1:AA:204:U:OP1	2.21	0.40
27:BA:217:G:C6	27:BA:218:A:C5	3.10	0.40
38:BP:6:LEU:CD1	38:BP:8:PRO:HG2	2.50	0.40
1:CA:918:A:C4	1:CA:919:A:C8	3.09	0.40
36:DN:24:GLY:O	36:DN:28:THR:HG22	2.21	0.40
52:D3:7:LYS:NZ	52:D3:32:GLN:NE2	2.68	0.40
27:DA:645:C:O2	27:DA:645:C:H2'	2.20	0.40
2:AB:46:LYS:C	2:AB:48:MET:N	2.74	0.40
8:CH:25:ASP:O	8:CH:26:VAL:HB	2.22	0.40
27:BA:1443:G:N2	27:BA:1549:C:C2	2.88	0.40
13:AM:116:THR:CG2	13:AM:117:VAL:H	2.34	0.40
27:DA:1986:A:N3	27:DA:1987:G:C8	2.90	0.40
50:B1:52:ARG:CG	50:B1:53:VAL:H	2.14	0.40
27:DA:2517:C:C6	27:DA:2542:A:C2	3.09	0.40
1:CA:690:G:H3'	1:CA:691:G:C8	2.55	0.40
9:CI:42:ARG:O	9:CI:74:ILE:HD13	2.21	0.40
1:AA:222:U:H2'	1:AA:222:U:O2	2.22	0.40
7:AG:137:LYS:O	7:AG:141:VAL:CG2	2.66	0.40
7:AG:71:PRO:HG3	7:AG:99:LEU:CD1	2.52	0.40
27:DA:1945:G:O2'	27:DA:1946:U:C5'	2.69	0.40
21:CU:24:ARG:NH1	21:CU:24:ARG:HG2	2.37	0.40
27:BA:1002:G:C2	27:BA:1003:G:H1'	2.57	0.40
27:BA:2642:G:O2'	27:BA:2643:G:H5'	2.20	0.40
1:AA:1127:G:O6	1:AA:1145:C:N4	2.54	0.40
27:BA:530:G:C2	27:BA:2022:U:OP1	2.75	0.40
1:CA:1410:G:C2	1:CA:1491:G:C2	3.10	0.40
40:BR:81:ASP:O	40:BR:82:GLU:HB2	2.20	0.40
27:DA:1443:G:C6	27:DA:1444:G:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:15:ALA:HB2	9:CI:65:VAL:HB	2.03	0.40
27:DA:1887:C:H3'	27:DA:1888:G:C5'	2.46	0.40
30:DD:263:ARG:O	30:DD:264:LYS:C	2.60	0.40
1:AA:1452:C:O2'	1:AA:1456:G:N2	2.55	0.40
27:BA:2671:A:C2	27:BA:2672:G:N3	2.90	0.40
1:CA:28:G:O2'	1:CA:296:U:OP1	2.40	0.40
35:BI:41:GLU:O	35:BI:44:LEU:CB	2.70	0.40
51:B2:13:ALA:HA	51:B2:16:LEU:CG	2.51	0.40
4:AD:176:LEU:HD12	4:AD:182:LYS:O	2.22	0.40
29:BC:195:ALA:C	29:BC:197:GLU:N	2.74	0.40
19:CS:22:LEU:CD1	19:CS:27:GLU:HB3	2.50	0.40
32:BF:57:VAL:HG13	32:BF:59:TYR:H	1.86	0.40
35:BI:116:LEU:HD12	35:BI:117:GLU:N	2.35	0.40
2:AB:228:GLY:O	2:AB:229:VAL:C	2.60	0.40
2:AB:87:ARG:HE	2:AB:233:SER:HB2	1.86	0.40
3:AC:142:MET:HA	3:AC:146:ALA:HB3	2.02	0.40
27:BA:42:G:C6	27:BA:43:A:C4	3.09	0.40
27:DA:889:C:O2'	27:DA:890:A:P	2.79	0.40
1:AA:1483:A:C8	1:AA:1484:C:C6	3.08	0.40
27:BA:1594:G:C2	27:BA:1595:G:C4	3.10	0.40
27:DA:2533:A:H2'	27:DA:2534:A:O4'	2.20	0.40
2:AB:217:ARG:HA	2:AB:217:ARG:HD3	1.74	0.40
7:AG:127:ALA:C	7:AG:129:GLU:H	2.25	0.40
27:BA:2368:C:O2	27:BA:2369:A:C8	2.74	0.40
4:AD:52:SER:O	4:AD:55:ALA:CB	2.69	0.40
27:DA:555:U:HO2'	27:DA:556:G:H8	1.68	0.40
1:AA:1333:A:H2'	1:AA:1334:G:O5'	2.21	0.40
6:CF:2:ARG:O	6:CF:66:GLU:HG3	2.21	0.40
1:AA:119:A:C8	1:AA:240:C:N4	2.89	0.40
46:BX:41:ASN:O	46:BX:42:ALA:C	2.59	0.40
4:AD:76:ARG:O	4:AD:79:PHE:N	2.55	0.40
30:DD:134:ARG:HD3	30:DD:135:PHE:CZ	2.57	0.40
27:BA:2746:U:C2'	27:BA:2747:G:H5'	2.50	0.40
3:AC:131:ARG:NH1	3:AC:135:LYS:HE3	2.35	0.40
27:BA:1794:U:H2'	27:BA:1795:C:C6	2.56	0.40
27:DA:2074:U:O2	27:DA:2436:G:C2	2.74	0.40
1:CA:1076:C:H2'	1:CA:1077:G:C8	2.56	0.40
1:AA:241:C:C2	1:AA:286:G:C2	3.09	0.40
27:DA:2844:G:C2	27:DA:2874:C:N3	2.89	0.40
27:DA:2046:G:C2	27:DA:2047:U:C6	3.09	0.40
5:CE:82:VAL:O	5:CE:89:ILE:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:14:A:H1'	23:AW:21:A:C6	2.57	0.40
27:DA:444:C:H4'	32:DF:49:ALA:HB2	2.03	0.40
27:DA:54:G:H1'	56:D7:35:ARG:HH11	1.86	0.40
35:BI:124:GLY:O	35:BI:125:GLU:OE1	2.40	0.40
27:DA:1553:A:C8	27:DA:1555:G:C6	3.10	0.40
49:D0:21:LEU:HD23	49:D0:39:ARG:HB3	2.02	0.40
44:BV:80:GLN:NE2	44:BV:80:GLN:HA	2.37	0.40
30:BD:233:HIS:CD2	30:BD:233:HIS:N	2.90	0.40
27:BA:86:C:H2'	27:BA:86:C:O2	2.21	0.40
43:DU:6:THR:HG21	43:DU:10:ARG:HE	1.86	0.40
27:BA:2402:C:C3'	27:BA:2403:C:H5'	2.51	0.40
27:BA:240:G:C6	27:BA:241:A:N6	2.90	0.40
25:AY:75:A:N6	27:BA:2422:A:O4'	2.55	0.40
27:BA:251:A:C5'	38:BP:51:PHE:HZ	2.34	0.40
32:BF:127:GLU:HG2	32:BF:196:LEU:HD12	2.04	0.40
47:BY:79:CYS:SG	47:BY:80:GLY:N	2.94	0.40
27:DA:1790:C:H2'	27:DA:1791:A:C4	2.56	0.40
1:CA:1305:G:C8	1:CA:1305:G:OP2	2.75	0.40
13:CM:23:TYR:HE1	13:CM:71:ARG:HA	1.87	0.40
1:AA:268:C:H2'	1:AA:269:C:H6	1.86	0.40
42:BT:46:GLU:HG3	42:BT:47:GLY:N	2.36	0.40
1:AA:1401:G:O2'	1:AA:1402:C:H5'	2.21	0.40
27:DA:1158:C:O2'	27:DA:1159:U:C5'	2.61	0.40
43:DU:104:GLN:O	43:DU:105:VAL:C	2.60	0.40
43:DU:67:ALA:HA	43:DU:70:ARG:HB2	2.04	0.40
43:DU:80:ILE:HA	43:DU:83:LEU:HB2	2.03	0.40
44:DV:2:PHE:CB	44:DV:42:GLY:CA	2.91	0.40
47:DY:84:ARG:HB3	47:DY:85:VAL:H	1.74	0.40
1:CA:1253:G:H5'	10:CJ:44:VAL:O	2.21	0.40
27:DA:1576:U:H2'	27:DA:1577:C:H6	1.87	0.40
27:DA:1560:G:H5'	27:DA:1560:G:H8	1.86	0.40
27:DA:1855:G:O2'	27:DA:1856:G:H5'	2.21	0.40
27:DA:1856:G:C2	27:DA:1857:G:H1'	2.57	0.40
54:B5:18:ALA:C	54:B5:20:ARG:N	2.69	0.40
33:BG:63:ILE:HG12	33:BG:63:ILE:H	1.66	0.40
27:DA:864:G:C4	27:DA:865:C:H5	2.39	0.40
27:DA:869:G:C4	27:DA:870:A:N7	2.90	0.40
49:D0:19:LYS:O	49:D0:20:ARG:C	2.59	0.40
57:D8:17:THR:HG23	57:D8:23:VAL:CG2	2.51	0.40
27:DA:2258:C:C2'	27:DA:2426:A:H4'	2.52	0.40
27:DA:2495:G:C2	27:DA:2496:C:C2	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DA:2554:U:H2'	27:DA:2555:U:H6	1.87	0.40
27:DA:675:A:O2'	32:DF:67:GLN:NE2	2.55	0.40
27:DA:969:U:OP1	52:D3:17:LYS:CG	2.58	0.40
27:DA:581:C:OP1	43:DU:31:SER:OG	2.40	0.40
1:AA:169:C:H2'	1:AA:170:U:H6	1.85	0.40
20:AT:59:ALA:C	20:AT:61:SER:N	2.74	0.40
31:DE:81:ILE:O	31:DE:82:ARG:CB	2.66	0.40
47:DY:17:SER:HB2	47:DY:71:LYS:HB3	2.02	0.40
4:CD:108:LEU:CD1	4:CD:174:LEU:HD13	2.51	0.40
1:AA:1316:G:N2	1:AA:1319:A:OP2	2.53	0.40
1:AA:1060:C:C4	3:AC:2:GLY:HA2	2.57	0.40
19:AS:37:ARG:C	19:AS:37:ARG:HD3	2.41	0.40
8:AH:34:GLU:OE1	8:AH:34:GLU:HA	2.21	0.40
12:CL:82:ILE:HD13	12:CL:82:ILE:HA	1.85	0.40
2:AB:44:LEU:O	2:AB:47:THR:HB	2.20	0.40
31:DE:15:PHE:CZ	42:DT:80:SER:CB	3.04	0.40
42:DT:62:THR:HG22	42:DT:75:ILE:HG13	2.03	0.40
19:AS:41:VAL:HA	19:AS:42:PRO:HD3	1.88	0.40
30:DD:174:ILE:C	30:DD:175:LEU:HD23	2.40	0.40
27:BA:2072:G:C6	27:BA:2073:C:C4	3.09	0.40
27:BA:791:C:H4'	27:BA:792:G:OP1	2.21	0.40
31:BE:47:VAL:HB	31:BE:49:LEU:HD11	2.02	0.40
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.75	0.40
1:CA:238:G:P	17:CQ:25:ARG:HH22	2.43	0.40
41:BS:106:ARG:O	41:BS:106:ARG:HG2	2.21	0.40
1:CA:1066:C:C5'	1:CA:1066:C:C6	2.88	0.40
37:BO:2:ILE:HG12	37:BO:33:ALA:O	2.21	0.40
37:BO:22:ILE:CG1	37:BO:41:ALA:HA	2.35	0.40
27:BA:1481:U:C2'	27:BA:1481:U:O2	2.62	0.40
1:CA:1198:G:C6	1:CA:1199:U:C4	3.10	0.40
14:CN:21:TYR:CD2	14:CN:22:THR:O	2.72	0.40
36:DN:74:ARG:O	36:DN:82:LEU:HA	2.21	0.40
1:CA:1328:C:P	21:CU:21:TYR:HH	2.44	0.40
1:CA:1308:U:O3'	13:CM:92:HIS:CE1	2.74	0.40
40:BR:5:LYS:HD2	40:BR:5:LYS:N	2.37	0.40
14:CN:15:LYS:HB3	14:CN:16:PHE:CD2	2.57	0.40
27:BA:2842:G:C6	27:BA:2876:G:N1	2.89	0.40
41:BS:103:GLU:CD	41:BS:103:GLU:N	2.74	0.40
38:BP:81:GLN:OE1	38:BP:106:LEU:CA	2.70	0.40
29:DC:62:VAL:O	29:DC:63:SER:C	2.60	0.40
56:D7:14:LYS:HG2	56:D7:14:LYS:H	1.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:807:U:C2'	27:BA:808:G:C5'	2.99	0.40
30:BD:146:GLU:HB3	30:BD:189:CYS:HB3	2.04	0.40
1:AA:1173:G:C5	1:AA:1174:G:N7	2.89	0.40
37:DO:16:ALA:HB1	37:DO:43:VAL:CG1	2.52	0.40
27:DA:660:G:C6	27:DA:661:C:C2	3.10	0.40
46:BX:5:TYR:HD1	51:B2:29:LYS:HB2	1.87	0.40
34:DH:147:ASN:H	34:DH:147:ASN:HD22	1.57	0.40
27:DA:2302:G:N3	27:DA:2302:G:H2'	2.36	0.40
39:BQ:52:VAL:HG13	39:BQ:56:ARG:HG3	2.03	0.40
1:AA:1330:U:OP1	13:AM:25:ILE:O	2.40	0.40
27:DA:2561:A:C2	27:DA:2562:U:C6	3.10	0.40
27:DA:2848:G:O2'	27:DA:2867:G:N1	2.35	0.40
42:DT:118:ARG:C	42:DT:120:ARG:N	2.70	0.40
39:DQ:55:VAL:O	39:DQ:56:ARG:C	2.59	0.40
1:AA:577:G:C6	1:AA:765:G:C2	3.09	0.40
1:CA:600:C:N3	1:CA:639:G:C2	2.90	0.40
27:BA:271(R):G:H2'	27:BA:271(S):G:C8	2.57	0.40
38:BP:71:VAL:HG13	38:BP:72:PRO:N	2.37	0.40
23:CW:47:C:C2	23:CW:58:A:H1'	2.56	0.40
10:CJ:4:ILE:HB	10:CJ:74:ILE:HG13	2.02	0.40
40:DR:59:ASP:O	40:DR:62:ALA:HB3	2.21	0.40
45:DW:20:VAL:O	45:DW:23:LEU:HB2	2.21	0.40
27:BA:363(B):G:H5'	27:BA:363(C):G:OP2	2.22	0.40
48:DZ:102:ARG:HD3	48:DZ:135:PHE:CD1	2.57	0.40
1:CA:866:C:C5	1:CA:867:G:H1'	2.55	0.40
34:DH:160:LYS:HG3	34:DH:160:LYS:H	1.70	0.40
43:BU:31:SER:HG	43:BU:34:LYS:N	2.17	0.40
52:B3:3:ARG:HB3	52:B3:59:VAL:HB	2.03	0.40
36:DN:89:LYS:C	36:DN:89:LYS:HZ3	2.25	0.40
27:BA:1905:C:H1'	27:BA:1928:A:C2	2.57	0.40
1:AA:1295:G:C6	1:AA:1296:C:C4	3.09	0.40
1:AA:953:G:O6	13:AM:104:ARG:HD2	2.21	0.40
1:AA:592:G:C2	1:AA:593:G:N7	2.90	0.40
10:CJ:13:HIS:HB3	10:CJ:68:HIS:NE2	2.36	0.40
13:CM:80:ARG:C	13:CM:82:MET:N	2.75	0.40
1:CA:109:A:H2'	1:CA:326:G:H21	1.87	0.40
1:CA:321:A:O2'	1:CA:322:C:C5'	2.64	0.40
1:CA:332:G:C4	1:CA:333:G:C8	3.09	0.40
1:CA:270:A:C6	1:CA:271:C:C4	3.09	0.40
27:DA:1629:U:O2'	27:DA:2698:U:OP1	2.39	0.40
1:AA:9:G:H5'	5:AE:122:GLU:CD	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BN:35:ARG:C	36:BN:37:LYS:N	2.74	0.40
1:CA:1523:G:C5	1:CA:1524:C:C4	3.10	0.40
27:DA:1819:A:C5'	30:DD:158:ALA:CB	2.95	0.40
23:AW:58:A:H2'	23:AW:59:U:O4'	2.21	0.40
1:CA:112:G:HO2'	1:CA:354:G:HO2'	1.66	0.40
49:B0:65:GLY:CA	49:B0:83:PRO:HA	2.46	0.40
48:DZ:144:GLU:HB3	48:DZ:145:ILE:H	1.52	0.40
3:CC:119:ARG:HE	3:CC:140:ARG:NE	2.19	0.40
53:D4:43:GLY:H	53:D4:59:VAL:HG12	1.86	0.40
31:BE:120:TRP:CG	31:BE:155:LYS:HB3	2.56	0.40
27:BA:206:U:O2'	27:BA:207:A:H5'	2.22	0.40
4:CD:165:MET:SD	4:CD:168:ARG:HD3	2.61	0.40
9:CI:29:ASN:OD1	9:CI:64:THR:HA	2.21	0.40
27:BA:1346:G:N3	27:BA:1347:G:C8	2.88	0.40
47:DY:50:ARG:NH2	47:DY:55:TYR:HE1	2.19	0.40
27:BA:1505:C:H3'	27:BA:1506:C:C5	2.56	0.40
1:AA:1047:G:O2'	1:AA:1215:G:O2'	2.25	0.40
35:BI:116:LEU:HD12	35:BI:117:GLU:H	1.86	0.40
15:AO:5:LYS:HA	15:AO:8:LYS:CB	2.50	0.40
17:CQ:31:LEU:HD23	17:CQ:32:TYR:CE2	2.56	0.40
27:BA:2228:G:C5	27:BA:2229:C:C4	3.09	0.40
20:AT:44:ALA:O	20:AT:92:LEU:HD23	2.21	0.40
50:D1:47:GLN:HE21	50:D1:47:GLN:CA	2.34	0.40
27:BA:866:A:O2'	27:BA:867:C:H5'	2.21	0.40
45:BW:68:ARG:O	45:BW:110:LYS:N	2.54	0.40
32:BF:191:ARG:HH11	32:BF:191:ARG:HG2	1.86	0.40
3:AC:42:LEU:HA	3:AC:45:LYS:HG3	2.03	0.40
11:AK:88:GLY:C	11:AK:90:GLY:N	2.74	0.40
27:DA:2854:G:C2	27:DA:2864:G:C2	3.10	0.40
27:BA:681:G:H2'	27:BA:682:G:C8	2.54	0.40
1:AA:506:G:H2'	1:AA:507:C:C6	2.56	0.40
27:DA:1525:G:H2'	27:DA:1526:G:C8	2.56	0.40
18:CR:46:GLU:HA	18:CR:46:GLU:OE2	2.22	0.40
1:AA:218:C:H2'	1:AA:219:C:O4'	2.21	0.40
30:DD:40:THR:O	30:DD:41:GLY:C	2.56	0.40
37:BO:38:VAL:C	37:BO:39:ILE:HG23	2.42	0.40
27:DA:405:U:HO2'	27:DA:406:G:P	2.45	0.40
27:DA:1836:C:H2'	27:DA:1836:C:O2	2.21	0.40
24:CX:61:C:O2'	24:CX:62:C:P	2.79	0.40
27:DA:1750:G:H2'	27:DA:1751:C:C6	2.57	0.40
27:DA:1752:C:H2'	27:DA:1753:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:569:U:H2'	27:BA:570:G:O4'	2.21	0.40
5:AE:32:VAL:CG2	5:AE:58:ALA:HB3	2.52	0.40
40:DR:103:ARG:HB3	40:DR:109:ALA:O	2.21	0.40
27:BA:1707:G:C8	27:BA:1707:G:OP2	2.73	0.40
34:DH:122:THR:HB	34:DH:134:SER:HB2	2.04	0.40
29:BC:134:ARG:O	29:BC:136:LEU:N	2.42	0.40
1:CA:1188:A:H2'	1:CA:1189:C:H5'	2.02	0.40
27:DA:245:G:C5	27:DA:246:C:C5	3.09	0.40
27:DA:1793:C:O2	27:DA:1970:A:C2	2.75	0.40
27:BA:30:G:C6	27:BA:31:C:N4	2.89	0.40
1:CA:509:A:N3	1:CA:543:C:O2'	2.43	0.40
4:CD:77:ASN:O	4:CD:80:GLU:HB2	2.22	0.40
33:BG:140:ILE:H	33:BG:140:ILE:HG13	1.69	0.40
47:BY:46:LYS:HE2	47:BY:47:LYS:CE	2.49	0.40
47:BY:61:ILE:O	47:BY:62:GLU:O	2.39	0.40
44:BV:21:ARG:HG3	44:BV:93:GLU:HG3	2.02	0.40
27:DA:389:G:N1	38:DP:70:GLN:HG3	2.37	0.40
42:BT:82:LEU:O	42:BT:83:ILE:O	2.40	0.40
32:DF:107:LYS:HD3	32:DF:205:ARG:O	2.22	0.40
30:DD:57:GLY:N	30:DD:216:GLY:HA2	2.36	0.40
27:DA:2255:G:H2'	27:DA:2256:G:C8	2.57	0.40
27:DA:2348:U:OP2	57:D8:38:GLY:HA3	2.22	0.40
27:DA:2369:A:H2'	27:DA:2370:G:H8	1.86	0.40
27:DA:2393:A:H5'	38:DP:62:LEU:HB2	2.03	0.40
38:DP:61:ARG:HH11	57:D8:13:ARG:HD2	1.86	0.40
27:DA:460:A:H3'	27:DA:461:C:C6	2.56	0.40
27:DA:529:A:H62	27:DA:2041:U:H3	1.69	0.40
27:DA:831:G:H5'	27:DA:944:G:H22	1.87	0.40
20:AT:22:ARG:O	20:AT:23:ARG:C	2.60	0.40
45:BW:12:ILE:HG12	45:BW:13:SER:N	2.37	0.40
45:BW:13:SER:HA	45:BW:14:PRO:HD3	2.00	0.40
1:CA:401:C:O2'	1:CA:402:G:H5'	2.22	0.40
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.22	0.40
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.86	0.40
1:AA:1347:G:HO2'	1:AA:1348:U:P	2.41	0.40
1:AA:1199:U:C4'	10:AJ:54:PHE:CE2	3.05	0.40
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	2.37	0.40
8:AH:32:LYS:HA	8:AH:35:ILE:CD1	2.47	0.40
16:CP:11:SER:HB2	16:CP:12:LYS:H	1.60	0.40
1:CA:275:G:H2'	1:CA:276:G:C8	2.56	0.40
52:B3:17:LYS:O	52:B3:20:LYS:N	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:744:G:P	31:BE:132:HIS:HB3	2.60	0.40
3:CC:89:GLU:OE2	3:CC:89:GLU:O	2.39	0.40
27:DA:2182:G:C2	27:DA:2183:C:N3	2.89	0.40
1:CA:681:C:H2'	1:CA:682:G:C8	2.56	0.40
1:CA:528:C:O2'	1:CA:529:G:H5'	2.21	0.40
49:B0:17:GLN:O	49:B0:18:ALA:C	2.59	0.40
27:BA:2271:G:OP1	49:B0:20:ARG:HA	2.22	0.40
12:AL:55:VAL:CG1	12:AL:56:ARG:N	2.85	0.40
27:BA:2579:C:H2'	27:BA:2580:U:O4'	2.22	0.40
48:DZ:43:PHE:CZ	48:DZ:85:VAL:HG11	2.57	0.40
48:DZ:78:ARG:O	48:DZ:79:ARG:HB2	2.21	0.40
38:BP:100:LEU:O	38:BP:105:LEU:O	2.40	0.40
38:BP:111:ARG:CZ	38:BP:149:GLU:HG3	2.51	0.40
1:CA:751:U:O4	1:CA:752:G:C2	2.74	0.40
27:DA:2158:A:H1'	27:DA:2159:G:C8	2.56	0.40
27:DA:2163:C:OP1	27:DA:2165:G:O6	2.40	0.40
27:BA:173:G:N2	27:BA:174:C:C2	2.89	0.40
35:BI:110:ASP:HA	35:BI:111:PRO:HD2	1.87	0.40
35:BI:79:ILE:HG22	35:BI:81:VAL:HG22	2.03	0.40
1:AA:441:A:N6	1:AA:494:U:C6	2.89	0.40
27:DA:960:A:C8	27:DA:962:G:C8	3.10	0.40
27:DA:311:A:N9	27:DA:332:A:N7	2.70	0.40
3:AC:122:GLU:O	3:AC:126:ARG:HG3	2.22	0.40
30:BD:68:LYS:HB2	30:BD:68:LYS:HE3	1.79	0.40
30:BD:68:LYS:HE3	30:BD:70:TRP:NE1	2.37	0.40
1:AA:1164:G:N1	1:AA:1173:G:C6	2.90	0.40
8:AH:6:ILE:HB	8:AH:85:ARG:NH2	2.36	0.40
28:DB:45:A:O4'	33:DG:95:ARG:NH1	2.55	0.40
3:CC:39:ILE:HG22	3:CC:43:LEU:HD11	1.99	0.40
52:D3:20:LYS:C	52:D3:22:ALA:H	2.24	0.40
1:AA:738:C:H5'	6:AF:72:VAL:HG11	2.02	0.40
13:AM:89:GLY:C	13:AM:90:LEU:O	2.55	0.40
5:CE:86:ALA:CB	5:CE:130:ASN:HD22	2.32	0.40
27:DA:2561:A:C4	27:DA:2562:U:C6	3.10	0.40
27:DA:2683:C:C6	27:DA:2684:U:C5	3.09	0.40
38:BP:90:ARG:HB2	38:BP:90:ARG:HE	1.57	0.40
27:BA:2525:G:N2	27:BA:2526:G:C4	2.89	0.40
27:BA:2188:C:H2'	27:BA:2189:U:O4'	2.20	0.40
1:AA:1351:U:H2'	1:AA:1352:C:H6	1.87	0.40
54:D5:46:CYS:HA	54:D5:47:PRO:HD2	1.93	0.40
33:DG:106:LEU:HA	33:DG:110:ALA:HB3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DG:111:LEU:HD11	33:DG:120:LEU:CD2	2.39	0.40
15:AO:35:ARG:HH12	15:AO:59:MET:CE	2.34	0.40
1:AA:1279:A:N3	1:AA:1279:A:H3'	2.36	0.40
1:CA:1154:G:O2'	1:CA:1155:G:O5'	2.39	0.40
5:CE:139:LEU:C	5:CE:141:GLN:H	2.24	0.40
7:CG:144:MET:O	7:CG:147:ALA:HB3	2.21	0.40
27:DA:219:G:H2'	27:DA:220:G:C8	2.56	0.40
45:DW:17:VAL:HG23	45:DW:18:ARG:N	2.37	0.40
27:DA:500:G:N1	27:DA:503:A:OP2	2.54	0.40
35:DI:11:ASN:O	35:DI:12:LEU:HD22	2.20	0.40
3:CC:14:ILE:O	3:CC:15:THR:C	2.60	0.40
27:BA:56:A:H2'	27:BA:57:C:C6	2.56	0.40
32:DF:170:LEU:HA	32:DF:170:LEU:HD12	1.88	0.40
2:AB:209:ARG:O	2:AB:210:SER:C	2.59	0.40
36:DN:86:PRO:HG2	36:DN:89:LYS:CB	2.50	0.40
27:BA:2048:G:N1	27:BA:2621:A:C2	2.89	0.40
27:DA:287:C:C5'	27:DA:287:C:H6	2.27	0.40
27:DA:68:G:H2'	27:DA:68:G:N3	2.36	0.40
1:CA:321:A:C2	1:CA:333:G:C2	3.09	0.40
27:DA:1629:U:O2'	27:DA:1630:G:H5'	2.21	0.40
27:DA:2280:G:O2'	27:DA:2281:C:H5'	2.22	0.40
5:AE:146:ALA:O	5:AE:147:ASP:C	2.60	0.40
13:CM:46:LYS:HG2	13:CM:47:ASP:OD1	2.20	0.40
51:D2:43:GLN:O	51:D2:44:LEU:CB	2.61	0.40
27:DA:1041:C:H5'	27:DA:1042:G:OP2	2.22	0.40
27:DA:1444:G:H2'	27:DA:1445(A):C:C5	2.56	0.40
9:CI:65:VAL:CG1	9:CI:73:GLN:NE2	2.85	0.40
24:CX:32:C:O2'	24:CX:33:U:H5'	2.22	0.40
48:BZ:33:ASN:O	48:BZ:34:ARG:C	2.60	0.40
1:CA:929:G:H8	1:CA:929:G:O5'	2.05	0.40
1:CA:134:A:N6	16:CP:25:ARG:NH1	2.66	0.40
12:AL:2:PRO:CA	12:AL:6:GLN:HE21	2.34	0.40
1:CA:1400:C:N4	24:CX:34:C:C6	2.89	0.40
9:CI:89:ASN:HA	9:CI:90:PRO:HD2	1.91	0.40
1:AA:930:C:O2'	1:AA:931:C:H5'	2.21	0.40
49:D0:5:LYS:O	49:D0:6:GLY:C	2.60	0.40
2:CB:134:GLU:HA	2:CB:137:ARG:HB2	2.04	0.40
54:B5:31:VAL:HB	54:B5:32:PRO:CD	2.50	0.40
27:BA:2353:G:C6	27:BA:2365:G:N2	2.89	0.40
7:AG:115:ARG:CB	7:AG:118:VAL:HG13	2.51	0.40
7:CG:155:ARG:O	7:CG:156:TRP:C	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1168:A:H3'	1:CA:1169:A:C8	2.49	0.40
1:CA:1168:A:C3'	1:CA:1169:A:H8	2.32	0.40
27:DA:1170:G:H1	27:DA:1179:C:N4	2.19	0.40
24:CX:47:U:H2'	24:CX:50:U:OP1	2.21	0.40
27:DA:2600:A:C6	27:DA:2601:C:N4	2.90	0.40
27:BA:2765:A:C3'	27:BA:2766:G:H5'	2.52	0.40
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	2.20	0.40
30:DD:29:PRO:O	30:DD:29:PRO:HG2	2.20	0.40
5:AE:31:LEU:HD23	5:AE:31:LEU:HA	1.87	0.40
11:AK:65:ALA:O	11:AK:66:LEU:C	2.59	0.40
27:BA:107:C:C4	27:BA:108:U:H5	2.39	0.40
28:DB:66:A:C2'	28:DB:67:G:OP2	2.69	0.40
51:D2:41:ILE:HG13	51:D2:42:GLY:O	2.22	0.40
30:BD:85:ASP:OD2	30:BD:92:ILE:HG21	2.21	0.40
55:B6:4:GLU:O	55:B6:5:VAL:C	2.60	0.40
8:CH:45:ILE:C	8:CH:47:GLY:N	2.74	0.40
45:DW:111:HIS:CG	45:DW:112:GLY:H	2.39	0.40
56:D7:16:HIS:O	56:D7:44:PRO:HD2	2.21	0.40
1:AA:996:A:C2	1:AA:1046:A:H4'	2.56	0.40
58:B9:17:ILE:HD13	58:B9:17:ILE:HA	1.93	0.40
27:DA:2218:U:H3'	27:DA:2218:U:H6	1.87	0.40
27:BA:1424:G:H2'	27:BA:1425:G:O4'	2.21	0.40
15:CO:41:GLU:O	15:CO:44:LYS:HB3	2.22	0.40
52:D3:40:THR:C	52:D3:42:ALA:N	2.74	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	233/256 (91%)	126 (54%)	73 (31%)	34 (15%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	CB	233/256 (91%)	151 (65%)	50 (22%)	32 (14%)	0	1
3	AC	205/239 (86%)	123 (60%)	54 (26%)	28 (14%)	0	1
3	CC	205/239 (86%)	121 (59%)	59 (29%)	25 (12%)	0	2
4	AD	206/209 (99%)	129 (63%)	52 (25%)	25 (12%)	0	2
4	CD	206/209 (99%)	126 (61%)	51 (25%)	29 (14%)	0	1
5	AE	149/162 (92%)	94 (63%)	38 (26%)	17 (11%)	0	2
5	CE	149/162 (92%)	103 (69%)	27 (18%)	19 (13%)	0	1
6	AF	99/101 (98%)	71 (72%)	18 (18%)	10 (10%)	1	3
6	CF	99/101 (98%)	76 (77%)	16 (16%)	7 (7%)	1	7
7	AG	153/156 (98%)	101 (66%)	39 (26%)	13 (8%)	1	5
7	CG	153/156 (98%)	102 (67%)	38 (25%)	13 (8%)	1	5
8	AH	136/138 (99%)	98 (72%)	27 (20%)	11 (8%)	1	5
8	CH	136/138 (99%)	81 (60%)	38 (28%)	17 (12%)	0	1
9	AI	125/128 (98%)	83 (66%)	29 (23%)	13 (10%)	1	3
9	CI	125/128 (98%)	82 (66%)	26 (21%)	17 (14%)	0	1
10	AJ	97/105 (92%)	64 (66%)	26 (27%)	7 (7%)	1	7
10	CJ	97/105 (92%)	55 (57%)	28 (29%)	14 (14%)	0	1
11	AK	117/129 (91%)	70 (60%)	34 (29%)	13 (11%)	0	2
11	CK	117/129 (91%)	87 (74%)	22 (19%)	8 (7%)	1	7
12	AL	123/132 (93%)	75 (61%)	25 (20%)	23 (19%)	0	0
12	CL	123/132 (93%)	76 (62%)	24 (20%)	23 (19%)	0	0
13	AM	118/126 (94%)	64 (54%)	33 (28%)	21 (18%)	0	1
13	CM	117/126 (93%)	64 (55%)	29 (25%)	24 (20%)	0	0
14	AN	58/61 (95%)	29 (50%)	19 (33%)	10 (17%)	0	1
14	CN	58/61 (95%)	35 (60%)	12 (21%)	11 (19%)	0	0
15	AO	86/89 (97%)	56 (65%)	19 (22%)	11 (13%)	0	1
15	CO	86/89 (97%)	49 (57%)	28 (33%)	9 (10%)	1	3
16	AP	82/88 (93%)	49 (60%)	21 (26%)	12 (15%)	0	1
16	CP	82/88 (93%)	45 (55%)	28 (34%)	9 (11%)	0	2
17	AQ	98/105 (93%)	73 (74%)	15 (15%)	10 (10%)	1	3
17	CQ	98/105 (93%)	70 (71%)	22 (22%)	6 (6%)	2	11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	AR	68/88 (77%)	35 (52%)	21 (31%)	12 (18%)	0	1
18	CR	68/88 (77%)	41 (60%)	16 (24%)	11 (16%)	0	1
19	AS	77/93 (83%)	51 (66%)	15 (20%)	11 (14%)	0	1
19	CS	77/93 (83%)	46 (60%)	18 (23%)	13 (17%)	0	1
20	AT	97/106 (92%)	59 (61%)	20 (21%)	18 (19%)	0	0
20	CT	97/106 (92%)	52 (54%)	36 (37%)	9 (9%)	1	4
21	AU	23/27 (85%)	16 (70%)	4 (17%)	3 (13%)	0	1
21	CU	23/27 (85%)	14 (61%)	5 (22%)	4 (17%)	0	1
26	AZ	2/6 (33%)	1 (50%)	1 (50%)	0	100	100
26	CZ	2/6 (33%)	1 (50%)	1 (50%)	0	100	100
29	BC	183/229 (80%)	69 (38%)	49 (27%)	65 (36%)	0	0
29	DC	183/229 (80%)	69 (38%)	59 (32%)	55 (30%)	0	0
30	BD	270/276 (98%)	172 (64%)	66 (24%)	32 (12%)	0	2
30	DD	270/276 (98%)	180 (67%)	57 (21%)	33 (12%)	0	2
31	BE	203/206 (98%)	130 (64%)	38 (19%)	35 (17%)	0	1
31	DE	203/206 (98%)	125 (62%)	34 (17%)	44 (22%)	0	0
32	BF	206/210 (98%)	137 (66%)	31 (15%)	38 (18%)	0	0
32	DF	206/210 (98%)	125 (61%)	40 (19%)	41 (20%)	0	0
33	BG	179/182 (98%)	107 (60%)	47 (26%)	25 (14%)	0	1
33	DG	179/182 (98%)	109 (61%)	42 (24%)	28 (16%)	0	1
34	BH	162/180 (90%)	87 (54%)	43 (26%)	32 (20%)	0	0
34	DH	158/180 (88%)	88 (56%)	35 (22%)	35 (22%)	0	0
35	BI	144/148 (97%)	73 (51%)	33 (23%)	38 (26%)	0	0
35	DI	144/148 (97%)	80 (56%)	41 (28%)	23 (16%)	0	1
36	BN	137/140 (98%)	91 (66%)	27 (20%)	19 (14%)	0	1
36	DN	137/140 (98%)	82 (60%)	28 (20%)	27 (20%)	0	0
37	BO	120/122 (98%)	84 (70%)	25 (21%)	11 (9%)	1	4
37	DO	120/122 (98%)	80 (67%)	23 (19%)	17 (14%)	0	1
38	BP	144/150 (96%)	71 (49%)	42 (29%)	31 (22%)	0	0
38	DP	144/150 (96%)	72 (50%)	36 (25%)	36 (25%)	0	0
39	BQ	139/141 (99%)	98 (70%)	21 (15%)	20 (14%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	DQ	137/141 (97%)	88 (64%)	29 (21%)	20 (15%)	0	1
40	BR	115/118 (98%)	75 (65%)	25 (22%)	15 (13%)	0	1
40	DR	115/118 (98%)	66 (57%)	31 (27%)	18 (16%)	0	1
41	BS	97/112 (87%)	45 (46%)	24 (25%)	28 (29%)	0	0
41	DS	99/112 (88%)	51 (52%)	14 (14%)	34 (34%)	0	0
42	BT	136/146 (93%)	78 (57%)	26 (19%)	32 (24%)	0	0
42	DT	136/146 (93%)	68 (50%)	32 (24%)	36 (26%)	0	0
43	BU	115/118 (98%)	70 (61%)	27 (24%)	18 (16%)	0	1
43	DU	115/118 (98%)	69 (60%)	30 (26%)	16 (14%)	0	1
44	BV	99/101 (98%)	61 (62%)	24 (24%)	14 (14%)	0	1
44	DV	99/101 (98%)	61 (62%)	19 (19%)	19 (19%)	0	0
45	BW	111/113 (98%)	77 (69%)	23 (21%)	11 (10%)	1	3
45	DW	111/113 (98%)	71 (64%)	29 (26%)	11 (10%)	1	3
46	BX	91/96 (95%)	67 (74%)	16 (18%)	8 (9%)	1	4
46	DX	91/96 (95%)	60 (66%)	17 (19%)	14 (15%)	0	1
47	BY	99/110 (90%)	42 (42%)	22 (22%)	35 (35%)	0	0
47	DY	99/110 (90%)	37 (37%)	29 (29%)	33 (33%)	0	0
48	BZ	175/206 (85%)	99 (57%)	49 (28%)	27 (15%)	0	1
48	DZ	175/206 (85%)	97 (55%)	51 (29%)	27 (15%)	0	1
49	B0	82/85 (96%)	62 (76%)	12 (15%)	8 (10%)	1	3
49	D0	82/85 (96%)	61 (74%)	14 (17%)	7 (8%)	1	5
50	B1	92/98 (94%)	60 (65%)	20 (22%)	12 (13%)	0	1
50	D1	92/98 (94%)	65 (71%)	16 (17%)	11 (12%)	0	2
51	B2	69/72 (96%)	46 (67%)	14 (20%)	9 (13%)	0	1
51	D2	69/72 (96%)	37 (54%)	20 (29%)	12 (17%)	0	1
52	B3	58/60 (97%)	49 (84%)	7 (12%)	2 (3%)	5	25
52	D3	58/60 (97%)	46 (79%)	10 (17%)	2 (3%)	5	25
53	B4	29/71 (41%)	18 (62%)	6 (21%)	5 (17%)	0	1
53	D4	29/71 (41%)	17 (59%)	9 (31%)	3 (10%)	1	3
54	B5	57/60 (95%)	34 (60%)	13 (23%)	10 (18%)	0	1
54	D5	57/60 (95%)	33 (58%)	14 (25%)	10 (18%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
55	B6	49/54 (91%)	17 (35%)	14 (29%)	18 (37%)	0	0
55	D6	44/54 (82%)	16 (36%)	11 (25%)	17 (39%)	0	0
56	B7	47/49 (96%)	35 (74%)	8 (17%)	4 (8%)	1	5
56	D7	47/49 (96%)	30 (64%)	13 (28%)	4 (8%)	1	5
57	B8	62/65 (95%)	34 (55%)	19 (31%)	9 (14%)	0	1
57	D8	62/65 (95%)	32 (52%)	15 (24%)	15 (24%)	0	0
58	B9	34/37 (92%)	25 (74%)	8 (24%)	1 (3%)	6	29
58	D9	34/37 (92%)	18 (53%)	13 (38%)	3 (9%)	1	4
All	All	11702/12598 (93%)	7090 (61%)	2747 (24%)	1865 (16%)	0	1

All (1865) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	9	GLU
2	AB	15	VAL
2	AB	20	GLU
2	AB	96	ARG
2	AB	101	MET
2	AB	194	PRO
2	AB	229	VAL
3	AC	51	GLY
3	AC	61	ALA
3	AC	101	LEU
3	AC	113	ALA
3	AC	127	ARG
3	AC	135	LYS
3	AC	165	THR
4	AD	146	ILE
4	AD	179	GLU
5	AE	21	ALA
5	AE	129	ILE
5	AE	130	ASN
5	AE	141	GLN
6	AF	13	ASN
6	AF	16	GLN
6	AF	62	TRP
7	AG	7	ALA
7	AG	52	GLU
7	AG	53	LYS

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Mol	Chain	Res	Type
7	AG	58	PRO
7	AG	155	ARG
8	AH	6	ILE
8	AH	49	GLU
8	AH	77	GLU
8	AH	91	ARG
8	AH	97	VAL
9	AI	12	GLU
9	AI	23	ASN
9	AI	54	ASP
9	AI	61	ALA
9	AI	107	ARG
10	AJ	32	ALA
11	AK	24	SER
11	AK	48	ILE
11	AK	77	MET
11	AK	86	GLY
11	AK	89	ALA
12	AL	38	ARG
12	AL	44	LYS
12	AL	74	LEU
12	AL	86	ARG
12	AL	125	ALA
13	AM	12	ASN
13	AM	95	GLY
13	AM	117	VAL
14	AN	14	PRO
14	AN	15	LYS
14	AN	16	PHE
14	AN	28	GLY
14	AN	52	GLN
14	AN	59	ALA
15	AO	29	VAL
16	AP	24	ALA
16	AP	25	ARG
16	AP	45	THR
17	AQ	33	GLY
18	AR	20	ALA
18	AR	37	VAL
18	AR	87	ARG
19	AS	6	LYS
19	AS	10	PHE

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Mol	Chain	Res	Type
19	AS	25	LYS
19	AS	28	LYS
19	AS	30	LEU
19	AS	61	TYR
19	AS	62	ILE
19	AS	80	TYR
20	AT	28	ALA
20	AT	49	ALA
20	AT	63	ILE
20	AT	74	LYS
29	BC	38	ASP
29	BC	46	LYS
29	BC	52	ARG
29	BC	55	ASP
29	BC	140	PRO
29	BC	142	ALA
29	BC	148	ASN
29	BC	153	ILE
29	BC	156	ILE
29	BC	162	GLU
29	BC	166	ASP
29	BC	167	LYS
29	BC	170	ALA
29	BC	173	ALA
29	BC	174	PRO
29	BC	182	PRO
29	BC	193	ILE
29	BC	194	ARG
29	BC	195	ALA
29	BC	211	SER
29	BC	216	THR
29	BC	220	PRO
29	BC	222	VAL
30	BD	3	VAL
30	BD	25	THR
30	BD	33	LEU
30	BD	118	VAL
30	BD	169	GLU
30	BD	198	ASN
30	BD	211	ARG
30	BD	242	ARG
30	BD	268	ARG

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Mol	Chain	Res	Type
30	BD	271	ILE
31	BE	4	ILE
31	BE	18	ASP
31	BE	46	ALA
31	BE	53	PRO
31	BE	54	GLN
31	BE	55	ASN
31	BE	72	VAL
31	BE	75	VAL
31	BE	77	ILE
31	BE	82	ARG
31	BE	94	GLU
31	BE	118	LYS
31	BE	129	HIS
31	BE	131	ALA
31	BE	174	ASP
31	BE	187	ALA
31	BE	200	GLU
32	BF	4	VAL
32	BF	5	ALA
32	BF	22	ALA
32	BF	25	PRO
32	BF	62	ARG
32	BF	65	TRP
32	BF	68	LYS
32	BF	69	HIS
32	BF	74	ARG
32	BF	84	VAL
32	BF	90	PHE
32	BF	123	LEU
32	BF	127	GLU
32	BF	132	VAL
32	BF	160	ASN
33	BG	27	ASN
33	BG	47	LYS
33	BG	81	LYS
33	BG	82	LEU
33	BG	87	PRO
33	BG	96	ARG
33	BG	97	ASP
33	BG	115	ARG
33	BG	124	SER

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Mol	Chain	Res	Type
33	BG	126	ASP
33	BG	179	PRO
34	BH	9	ILE
34	BH	10	PRO
34	BH	12	PRO
34	BH	13	LYS
34	BH	21	PRO
34	BH	45	VAL
34	BH	54	ARG
34	BH	71	LEU
34	BH	83	TYR
34	BH	90	LYS
34	BH	92	ILE
34	BH	99	VAL
34	BH	108	GLY
34	BH	127	GLU
34	BH	138	LYS
34	BH	155	SER
34	BH	156	ALA
34	BH	158	HIS
34	BH	159	GLU
34	BH	165	ALA
34	BH	169	VAL
34	BH	170	ARG
35	BI	42	SER
35	BI	68	LEU
35	BI	83	ALA
35	BI	87	LYS
35	BI	91	SER
35	BI	92	VAL
35	BI	120	ILE
36	BN	47	ALA
36	BN	58	ASP
36	BN	68	GLU
36	BN	77	GLY
36	BN	94	HIS
36	BN	120	LEU
37	BO	58	VAL
37	BO	98	VAL
37	BO	109	LYS
38	BP	9	ASN
38	BP	11	GLY

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Mol	Chain	Res	Type
38	BP	14	LYS
38	BP	25	SER
38	BP	31	ALA
38	BP	47	ASP
38	BP	89	ALA
38	BP	106	LEU
38	BP	108	LYS
39	BQ	6	ARG
39	BQ	19	GLY
39	BQ	20	ALA
39	BQ	47	ILE
39	BQ	57	HIS
39	BQ	63	LYS
39	BQ	115	MET
39	BQ	134	ARG
39	BQ	136	ALA
40	BR	8	ARG
40	BR	14	SER
40	BR	102	GLU
41	BS	18	ILE
41	BS	23	ARG
41	BS	35	ILE
41	BS	53	SER
41	BS	58	LEU
41	BS	62	LYS
41	BS	78	LEU
41	BS	82	ILE
41	BS	88	ASP
41	BS	94	TYR
41	BS	96	GLY
41	BS	102	ALA
42	BT	14	TYR
42	BT	27	THR
42	BT	28	VAL
42	BT	30	VAL
42	BT	33	LYS
42	BT	35	LYS
42	BT	39	ARG
42	BT	41	ARG
42	BT	55	ASN
42	BT	69	GLY
42	BT	80	SER

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Mol	Chain	Res	Type
42	BT	81	PRO
42	BT	83	ILE
42	BT	94	ALA
42	BT	107	ASP
42	BT	116	ALA
43	BU	9	VAL
43	BU	26	GLY
43	BU	32	PHE
43	BU	42	ALA
43	BU	43	GLY
43	BU	74	LEU
43	BU	76	TYR
43	BU	90	VAL
43	BU	91	ASP
43	BU	93	LYS
44	BV	3	ALA
44	BV	16	PRO
44	BV	19	LYS
44	BV	29	PRO
44	BV	46	VAL
44	BV	49	THR
44	BV	50	PRO
45	BW	14	PRO
45	BW	44	ALA
45	BW	65	LEU
46	BX	12	VAL
46	BX	34	ALA
46	BX	93	GLU
47	BY	3	VAL
47	BY	5	MET
47	BY	31	LEU
47	BY	38	ILE
47	BY	40	GLU
47	BY	48	ALA
47	BY	50	ARG
47	BY	52	SER
47	BY	53	PRO
47	BY	56	PRO
47	BY	62	GLU
47	BY	64	GLU
47	BY	66	PRO
47	BY	68	HIS

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Mol	Chain	Res	Type
47	BY	75	ILE
47	BY	77	PRO
47	BY	78	ALA
47	BY	87	LYS
47	BY	88	LYS
47	BY	98	VAL
48	BZ	29	ASN
48	BZ	34	ARG
48	BZ	64	GLN
48	BZ	80	ARG
48	BZ	104	VAL
48	BZ	120	HIS
48	BZ	145	ILE
48	BZ	150	HIS
48	BZ	151	ALA
48	BZ	167	GLU
49	B0	18	ALA
49	B0	55	ARG
50	B1	4	VAL
50	B1	30	VAL
50	B1	38	SER
50	B1	52	ARG
50	B1	53	VAL
50	B1	76	ARG
51	B2	43	GLN
51	B2	47	ASN
52	B3	2	PRO
53	B4	61	VAL
54	B5	4	HIS
54	B5	32	PRO
54	B5	33	CYS
54	B5	35	GLU
55	B6	5	VAL
55	B6	7	ILE
55	B6	16	CYS
55	B6	17	LYS
55	B6	20	ASN
55	B6	29	ASN
55	B6	34	LEU
55	B6	46	HIS
55	B6	48	VAL
55	B6	52	VAL

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Mol	Chain	Res	Type
57	B8	18	ALA
57	B8	34	TRP
57	B8	61	LEU
58	B9	15	LYS
2	CB	9	GLU
2	CB	15	VAL
2	CB	77	ALA
2	CB	159	PRO
2	CB	189	ASP
2	CB	194	PRO
2	CB	195	ASP
2	CB	208	ILE
3	CC	7	PRO
3	CC	12	LEU
3	CC	15	THR
3	CC	60	ALA
3	CC	134	ILE
3	CC	154	SER
3	CC	156	ARG
3	CC	180	ALA
3	CC	207	VAL
4	CD	14	ARG
4	CD	30	LYS
4	CD	39	PRO
4	CD	101	LEU
5	CE	7	GLU
5	CE	21	ALA
5	CE	129	ILE
5	CE	144	THR
5	CE	146	ALA
5	CE	147	ASP
6	CF	39	LYS
6	CF	44	GLY
6	CF	45	LEU
7	CG	15	ASP
7	CG	58	PRO
7	CG	77	SER
7	CG	78	ARG
7	CG	84	ASN
8	CH	2	LEU
8	CH	22	GLU
8	CH	83	ILE

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Mol	Chain	Res	Type
8	CH	91	ARG
9	CI	54	ASP
9	CI	107	ARG
10	CJ	32	ALA
10	CJ	36	GLY
10	CJ	57	LYS
10	CJ	82	ILE
10	CJ	92	THR
11	CK	87	THR
12	CL	4	ILE
12	CL	15	VAL
12	CL	44	LYS
12	CL	61	TYR
12	CL	74	LEU
12	CL	112	LYS
12	CL	113	SER
13	CM	7	VAL
13	CM	48	LEU
13	CM	60	VAL
13	CM	67	GLU
13	CM	83	ASP
13	CM	95	GLY
13	CM	96	LEU
13	CM	113	PRO
14	CN	14	PRO
14	CN	16	PHE
14	CN	24	CYS
15	CO	13	GLN
16	CP	16	HIS
16	CP	77	ALA
17	CQ	34	LYS
17	CQ	78	GLU
18	CR	20	ALA
18	CR	54	ARG
18	CR	64	ARG
18	CR	65	ILE
18	CR	83	GLU
18	CR	87	ARG
19	CS	10	PHE
19	CS	25	LYS
19	CS	28	LYS
19	CS	31	ILE

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Mol	Chain	Res	Type
19	CS	61	TYR
19	CS	62	ILE
20	CT	48	LYS
20	CT	49	ALA
20	CT	71	THR
20	CT	97	ALA
21	CU	9	ARG
21	CU	22	ARG
21	CU	25	LYS
29	DC	38	ASP
29	DC	46	LYS
29	DC	49	ILE
29	DC	63	SER
29	DC	108	MET
29	DC	122	ALA
29	DC	133	PRO
29	DC	148	ASN
29	DC	151	GLU
29	DC	153	ILE
29	DC	156	ILE
29	DC	166	ASP
29	DC	167	LYS
29	DC	173	ALA
29	DC	174	PRO
29	DC	182	PRO
29	DC	183	GLU
29	DC	209	LEU
29	DC	211	SER
29	DC	217	THR
29	DC	220	PRO
29	DC	222	VAL
30	DD	12	SER
30	DD	24	ILE
30	DD	27	THR
30	DD	33	LEU
30	DD	45	ASN
30	DD	76	PRO
30	DD	118	VAL
30	DD	224	ALA
30	DD	242	ARG
30	DD	245	PRO
30	DD	246	PRO

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Mol	Chain	Res	Type
30	DD	271	ILE
31	DE	4	ILE
31	DE	18	ASP
31	DE	20	ALA
31	DE	30	PRO
31	DE	35	GLN
31	DE	45	THR
31	DE	54	GLN
31	DE	55	ASN
31	DE	59	VAL
31	DE	60	ASN
31	DE	71	GLY
31	DE	75	VAL
31	DE	77	ILE
31	DE	117	MET
31	DE	131	ALA
31	DE	174	ASP
31	DE	185	LYS
32	DF	4	VAL
32	DF	8	GLN
32	DF	11	VAL
32	DF	25	PRO
32	DF	59	TYR
32	DF	62	ARG
32	DF	64	ILE
32	DF	66	PRO
32	DF	67	GLN
32	DF	68	LYS
32	DF	89	VAL
32	DF	116	ASP
32	DF	129	PHE
32	DF	132	VAL
32	DF	133	ASN
32	DF	168	ARG
32	DF	202	PHE
32	DF	203	GLN
33	DG	34	LEU
33	DG	47	LYS
33	DG	51	ARG
33	DG	52	ILE
33	DG	82	LEU
33	DG	87	PRO

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Mol	Chain	Res	Type
33	DG	96	ARG
33	DG	97	ASP
33	DG	117	PHE
33	DG	126	ASP
33	DG	142	PRO
34	DH	24	VAL
34	DH	54	ARG
34	DH	55	PRO
34	DH	71	LEU
34	DH	83	TYR
34	DH	90	LYS
34	DH	92	ILE
34	DH	93	GLY
34	DH	109	PHE
34	DH	127	GLU
34	DH	155	SER
34	DH	156	ALA
34	DH	159	GLU
34	DH	160	LYS
35	DI	12	LEU
35	DI	40	THR
35	DI	42	SER
35	DI	77	LEU
35	DI	101	LEU
35	DI	117	GLU
35	DI	120	ILE
35	DI	130	TYR
35	DI	132	PRO
36	DN	4	TYR
36	DN	37	LYS
36	DN	42	TRP
36	DN	57	ALA
36	DN	59	LYS
36	DN	60	ILE
36	DN	77	GLY
36	DN	129	PRO
37	DO	6	THR
37	DO	48	PRO
37	DO	54	GLU
37	DO	101	PRO
38	DP	9	ASN
38	DP	11	GLY

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Mol	Chain	Res	Type
38	DP	17	LYS
38	DP	19	VAL
38	DP	31	ALA
38	DP	33	ARG
38	DP	35	HIS
38	DP	47	ASP
38	DP	65	ARG
38	DP	69	GLY
38	DP	106	LEU
38	DP	107	LYS
38	DP	108	LYS
38	DP	122	PRO
39	DQ	2	LEU
39	DQ	5	ARG
39	DQ	62	GLY
39	DQ	83	MET
39	DQ	109	VAL
39	DQ	138	ASP
40	DR	9	LYS
40	DR	15	SER
40	DR	20	LEU
40	DR	45	ARG
40	DR	58	GLY
40	DR	102	GLU
41	DS	10	ARG
41	DS	11	LYS
41	DS	15	ARG
41	DS	19	LYS
41	DS	23	ARG
41	DS	32	LEU
41	DS	35	ILE
41	DS	44	LYS
41	DS	57	LYS
41	DS	58	LEU
41	DS	59	LYS
41	DS	62	LYS
41	DS	83	LYS
41	DS	92	TYR
41	DS	97	ARG
41	DS	100	ALA
41	DS	103	GLU
42	DT	17	THR

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Mol	Chain	Res	Type
42	DT	24	PRO
42	DT	28	VAL
42	DT	30	VAL
42	DT	36	GLU
42	DT	39	ARG
42	DT	40	THR
42	DT	55	ASN
42	DT	81	PRO
42	DT	82	LEU
42	DT	83	ILE
42	DT	115	ARG
42	DT	136	GLN
43	DU	25	TRP
43	DU	79	PHE
43	DU	100	VAL
44	DV	3	ALA
44	DV	18	LEU
44	DV	29	PRO
44	DV	46	VAL
44	DV	77	ALA
44	DV	78	LYS
44	DV	79	VAL
46	DX	12	VAL
46	DX	44	GLU
46	DX	45	THR
46	DX	57	LEU
46	DX	91	ALA
46	DX	93	GLU
47	DY	3	VAL
47	DY	5	MET
47	DY	30	VAL
47	DY	44	ILE
47	DY	53	PRO
47	DY	56	PRO
47	DY	68	HIS
47	DY	77	PRO
47	DY	78	ALA
47	DY	82	PRO
47	DY	90	LEU
47	DY	101	LYS
48	DZ	29	ASN
48	DZ	30	ARG

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Mol	Chain	Res	Type
48	DZ	48	ARG
48	DZ	64	GLN
48	DZ	80	ARG
48	DZ	95	VAL
48	DZ	104	VAL
48	DZ	110	VAL
48	DZ	144	GLU
48	DZ	157	PRO
48	DZ	171	ALA
50	D1	31	GLY
50	D1	58	ILE
51	D2	44	LEU
51	D2	47	ASN
51	D2	48	HIS
51	D2	70	GLN
52	D3	2	PRO
53	D4	52	SER
54	D5	4	HIS
54	D5	12	SER
54	D5	38	ALA
54	D5	57	VAL
55	D6	9	LEU
55	D6	16	CYS
55	D6	17	LYS
55	D6	20	ASN
55	D6	23	THR
55	D6	29	ASN
55	D6	46	HIS
55	D6	52	VAL
56	D7	13	ALA
56	D7	15	THR
57	D8	32	LEU
57	D8	33	ASN
57	D8	35	GLN
57	D8	64	TYR
2	AB	10	LEU
2	AB	29	ALA
2	AB	30	ARG
2	AB	65	GLY
2	AB	88	ALA
2	AB	152	PHE
2	AB	157	ARG

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Mol	Chain	Res	Type
2	AB	174	VAL
2	AB	208	ILE
2	AB	214	ILE
2	AB	227	GLY
3	AC	3	ASN
3	AC	41	GLY
3	AC	49	SER
3	AC	81	GLY
3	AC	160	ALA
3	AC	176	HIS
4	AD	5	ILE
4	AD	124	GLY
5	AE	7	GLU
5	AE	16	THR
5	AE	74	GLY
5	AE	103	GLY
5	AE	150	ARG
6	AF	39	LYS
6	AF	78	GLU
7	AG	14	PRO
7	AG	23	VAL
7	AG	128	ALA
8	AH	2	LEU
9	AI	38	GLN
9	AI	41	VAL
9	AI	46	ALA
9	AI	117	HIS
10	AJ	6	ILE
10	AJ	82	ILE
11	AK	124	LYS
12	AL	4	ILE
12	AL	9	ARG
12	AL	24	LEU
12	AL	43	LYS
12	AL	59	SER
12	AL	113	SER
12	AL	114	ARG
12	AL	118	GLY
13	AM	8	GLU
13	AM	15	VAL
13	AM	21	TYR
13	AM	49	THR

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Mol	Chain	Res	Type
13	AM	70	LEU
13	AM	83	ASP
13	AM	90	LEU
13	AM	91	ARG
13	AM	100	GLY
13	AM	104	ARG
13	AM	105	THR
13	AM	112	GLY
14	AN	23	ARG
14	AN	29	ARG
14	AN	58	LYS
15	AO	86	GLY
16	AP	63	GLY
17	AQ	79	SER
17	AQ	80	GLY
17	AQ	82	MET
18	AR	23	LYS
18	AR	41	LYS
18	AR	57	GLY
18	AR	61	LYS
18	AR	72	ARG
20	AT	29	LYS
20	AT	48	LYS
20	AT	64	ASP
20	AT	71	THR
20	AT	97	ALA
20	AT	99	LEU
21	AU	7	ARG
29	BC	20	TYR
29	BC	48	GLY
29	BC	49	ILE
29	BC	69	GLY
29	BC	76	ALA
29	BC	77	ILE
29	BC	91	ALA
29	BC	109	ASP
29	BC	129	ARG
29	BC	133	PRO
29	BC	151	GLU
29	BC	164	ARG
29	BC	183	GLU
29	BC	201	PRO

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Mol	Chain	Res	Type
30	BD	13	ARG
30	BD	27	THR
30	BD	34	VAL
30	BD	35	LYS
30	BD	267	SER
31	BE	35	GLN
31	BE	59	VAL
31	BE	60	ASN
31	BE	69	LYS
31	BE	76	ARG
31	BE	88	GLY
31	BE	157	ALA
32	BF	7	TYR
32	BF	14	PRO
32	BF	21	ALA
32	BF	57	VAL
32	BF	129	PHE
32	BF	134	GLY
32	BF	146	ALA
32	BF	161	GLU
32	BF	168	ARG
32	BF	188	ARG
33	BG	3	LEU
33	BG	14	GLU
33	BG	86	MET
33	BG	153	ARG
33	BG	154	GLY
34	BH	24	VAL
34	BH	91	GLY
34	BH	93	GLY
34	BH	154	PRO
35	BI	15	VAL
35	BI	26	ALA
35	BI	43	ASN
35	BI	49	ALA
35	BI	85	GLU
35	BI	94	ALA
35	BI	111	PRO
35	BI	121	LYS
35	BI	122	GLU
35	BI	131	LYS
35	BI	135	GLU

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Mol	Chain	Res	Type
35	BI	139	GLN
35	BI	140	LEU
35	BI	145	VAL
36	BN	37	LYS
36	BN	42	TRP
36	BN	64	GLY
37	BO	52	VAL
37	BO	115	VAL
38	BP	23	PRO
38	BP	30	THR
38	BP	34	GLY
38	BP	65	ARG
38	BP	139	LYS
39	BQ	4	PRO
39	BQ	13	GLN
39	BQ	59	ARG
39	BQ	108	GLY
40	BR	5	LYS
40	BR	23	ASN
40	BR	42	LYS
40	BR	45	ARG
40	BR	82	GLU
41	BS	24	LEU
41	BS	57	LYS
41	BS	85	VAL
41	BS	86	ALA
41	BS	87	PHE
41	BS	89	ARG
41	BS	90	GLY
41	BS	97	ARG
41	BS	104	GLY
42	BT	24	PRO
42	BT	26	ASP
42	BT	29	ARG
42	BT	88	ILE
42	BT	128	GLU
42	BT	132	LYS
43	BU	62	ILE
43	BU	66	ASN
44	BV	18	LEU
44	BV	51	VAL
44	BV	55	ALA

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Mol	Chain	Res	Type
44	BV	79	VAL
45	BW	15	ARG
45	BW	45	TYR
45	BW	63	ASP
45	BW	110	LYS
46	BX	68	ARG
47	BY	17	SER
47	BY	41	GLY
47	BY	44	ILE
47	BY	47	LYS
47	BY	49	VAL
48	BZ	26	VAL
48	BZ	110	VAL
48	BZ	165	SER
49	B0	72	ARG
49	B0	73	GLY
50	B1	45	ASN
50	B1	58	ILE
50	B1	85	LEU
53	B4	52	SER
53	B4	65	CYS
54	B5	51	TYR
54	B5	57	VAL
55	B6	49	HIS
56	B7	12	ARG
57	B8	11	LYS
57	B8	41	ILE
57	B8	51	ALA
2	CB	32	ILE
2	CB	38	GLY
2	CB	88	ALA
2	CB	150	SER
2	CB	153	ARG
2	CB	240	GLN
3	CC	20	SER
3	CC	101	LEU
3	CC	145	GLY
3	CC	189	ALA
4	CD	4	TYR
4	CD	9	CYS
4	CD	47	ARG
4	CD	69	GLY

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Mol	Chain	Res	Type
4	CD	76	ARG
4	CD	85	LYS
4	CD	88	VAL
4	CD	110	PHE
4	CD	166	LYS
4	CD	171	GLY
5	CE	12	LEU
5	CE	70	PRO
5	CE	85	GLY
5	CE	104	ALA
6	CF	34	GLY
7	CG	116	ALA
8	CH	72	PRO
8	CH	76	PRO
8	CH	121	ASP
8	CH	129	VAL
9	CI	41	VAL
9	CI	61	ALA
9	CI	67	GLY
9	CI	94	ALA
9	CI	100	GLY
9	CI	119	ALA
9	CI	126	SER
10	CJ	23	ILE
10	CJ	59	SER
10	CJ	88	LEU
11	CK	49	GLY
12	CL	16	ARG
12	CL	62	GLU
12	CL	77	HIS
12	CL	118	GLY
12	CL	124	GLU
13	CM	58	GLU
13	CM	71	ARG
13	CM	81	LEU
13	CM	91	ARG
13	CM	100	GLY
13	CM	106	ASN
13	CM	117	VAL
14	CN	17	LYS
14	CN	23	ARG
14	CN	41	ARG

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Mol	Chain	Res	Type
14	CN	46	GLU
15	CO	26	GLU
15	CO	86	GLY
16	CP	59	TRP
16	CP	83	GLU
18	CR	27	GLY
19	CS	14	HIS
19	CS	29	ARG
19	CS	70	LYS
19	CS	80	TYR
20	CT	73	HIS
21	CU	3	LYS
29	DC	19	VAL
29	DC	22	ILE
29	DC	43	VAL
29	DC	52	ARG
29	DC	120	MET
29	DC	144	THR
29	DC	149	ILE
29	DC	152	ILE
29	DC	195	ALA
29	DC	210	ARG
30	DD	3	VAL
30	DD	16	MET
30	DD	57	GLY
30	DD	147	LEU
30	DD	191	ALA
30	DD	236	GLY
30	DD	239	ARG
30	DD	268	ARG
30	DD	272	ALA
31	DE	40	GLU
31	DE	53	PRO
31	DE	66	HIS
31	DE	70	ALA
31	DE	72	VAL
31	DE	82	ARG
31	DE	84	PHE
31	DE	94	GLU
31	DE	98	PRO
31	DE	102	VAL
31	DE	112	GLY

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Mol	Chain	Res	Type
31	DE	113	PHE
31	DE	118	LYS
31	DE	129	HIS
31	DE	130	GLY
31	DE	152	LYS
31	DE	162	ALA
31	DE	169	ASN
32	DF	5	ALA
32	DF	14	PRO
32	DF	21	ALA
32	DF	26	ALA
32	DF	69	HIS
32	DF	78	ILE
32	DF	81	PRO
32	DF	127	GLU
32	DF	134	GLY
32	DF	160	ASN
33	DG	110	ALA
33	DG	112	PRO
33	DG	123	ASN
33	DG	143	GLU
34	DH	21	PRO
34	DH	29	PRO
34	DH	41	MET
34	DH	84	SER
34	DH	98	LEU
34	DH	151	ILE
34	DH	158	HIS
34	DH	170	ARG
35	DI	21	VAL
35	DI	111	PRO
36	DN	47	ALA
36	DN	49	GLY
36	DN	58	ASP
36	DN	91	LEU
36	DN	105	GLY
36	DN	119	ARG
37	DO	7	TYR
37	DO	26	LYS
37	DO	68	GLU
37	DO	80	ASP
37	DO	98	VAL

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Mol	Chain	Res	Type
37	DO	111	PHE
37	DO	120	GLU
38	DP	26	GLY
38	DP	34	GLY
38	DP	48	PRO
38	DP	57	THR
38	DP	74	GLU
38	DP	110	TYR
38	DP	132	LYS
38	DP	141	ALA
38	DP	147	LEU
39	DQ	13	GLN
39	DQ	30	GLY
39	DQ	108	GLY
39	DQ	134	ARG
39	DQ	137	TYR
40	DR	7	GLY
40	DR	14	SER
40	DR	17	ARG
41	DS	14	VAL
41	DS	53	SER
41	DS	74	ALA
41	DS	90	GLY
41	DS	96	GLY
41	DS	98	VAL
41	DS	102	ALA
42	DT	10	VAL
42	DT	12	SER
42	DT	27	THR
42	DT	54	ARG
42	DT	58	ASN
42	DT	80	SER
42	DT	87	ASP
42	DT	94	ALA
42	DT	107	ASP
43	DU	7	GLY
43	DU	9	VAL
43	DU	26	GLY
43	DU	32	PHE
43	DU	54	LYS
43	DU	77	SER
43	DU	90	VAL

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Mol	Chain	Res	Type
44	DV	23	GLU
44	DV	40	LEU
44	DV	48	GLY
44	DV	50	PRO
44	DV	67	GLY
45	DW	11	ARG
45	DW	21	VAL
45	DW	56	ALA
45	DW	63	ASP
45	DW	111	HIS
46	DX	4	ALA
46	DX	11	PRO
46	DX	40	LYS
47	DY	9	LYS
47	DY	19	LYS
47	DY	41	GLY
47	DY	47	LYS
47	DY	81	LYS
47	DY	99	CYS
48	DZ	20	ALA
48	DZ	108	ALA
48	DZ	116	LEU
48	DZ	135	PHE
48	DZ	164	VAL
48	DZ	168	GLU
49	D0	33	ALA
49	D0	55	ARG
49	D0	83	PRO
51	D2	14	ARG
51	D2	18	PRO
51	D2	51	ARG
51	D2	57	ILE
52	D3	45	GLY
55	D6	15	GLU
55	D6	31	PRO
55	D6	41	PRO
57	D8	34	TRP
57	D8	40	GLU
57	D8	61	LEU
2	AB	48	MET
2	AB	49	GLU
2	AB	74	LYS

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Mol	Chain	Res	Type
2	AB	97	TRP
2	AB	130	ARG
2	AB	183	PRO
2	AB	195	ASP
3	AC	62	ASP
3	AC	144	SER
3	AC	146	ALA
3	AC	168	ALA
3	AC	181	ASN
4	AD	39	PRO
4	AD	63	LYS
4	AD	68	TYR
4	AD	99	SER
4	AD	149	ALA
4	AD	191	ARG
4	AD	193	ASP
5	AE	73	ASN
5	AE	98	THR
5	AE	108	ALA
5	AE	146	ALA
5	AE	154	GLY
6	AF	76	ALA
6	AF	93	SER
7	AG	39	ALA
8	AH	98	LYS
10	AJ	90	LEU
10	AJ	93	GLY
11	AK	87	THR
12	AL	45	PRO
12	AL	72	HIS
12	AL	77	HIS
12	AL	80	VAL
12	AL	102	TYR
13	AM	5	ALA
13	AM	7	VAL
14	AN	44	LEU
15	AO	18	PHE
15	AO	80	ALA
16	AP	31	LYS
16	AP	34	GLU
16	AP	68	ASP
16	AP	70	ALA

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Mol	Chain	Res	Type
16	AP	71	ARG
17	AQ	49	GLU
17	AQ	75	ARG
19	AS	5	LEU
19	AS	29	ARG
20	AT	42	GLN
21	AU	25	LYS
29	BC	37	PHE
29	BC	57	ASN
29	BC	89	ALA
29	BC	122	ALA
29	BC	130	ILE
29	BC	188	ASN
29	BC	196	LEU
29	BC	197	GLU
29	BC	213	TYR
30	BD	202	LYS
30	BD	239	ARG
30	BD	241	PRO
30	BD	244	ARG
31	BE	71	GLY
31	BE	83	ASP
31	BE	84	PHE
31	BE	108	SER
31	BE	151	TYR
32	BF	26	ALA
32	BF	158	THR
33	BG	112	PRO
33	BG	172	LEU
34	BH	27	LYS
34	BH	29	PRO
34	BH	62	LYS
35	BI	8	PRO
35	BI	11	ASN
35	BI	14	ASP
35	BI	24	GLY
35	BI	86	THR
35	BI	88	ILE
35	BI	133	HIS
36	BN	7	LYS
36	BN	40	PRO
36	BN	93	THR

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Mol	Chain	Res	Type
36	BN	110	GLY
37	BO	76	ALA
37	BO	89	ASN
38	BP	35	HIS
38	BP	36	LYS
38	BP	64	LYS
38	BP	111	ARG
38	BP	140	ALA
38	BP	144	GLU
38	BP	147	LEU
39	BQ	5	ARG
39	BQ	15	GLY
39	BQ	40	ALA
39	BQ	80	GLU
40	BR	46	GLY
40	BR	72	ASP
40	BR	73	VAL
41	BS	61	ASN
41	BS	83	LYS
42	BT	68	TYR
42	BT	82	LEU
42	BT	97	ALA
42	BT	123	GLN
43	BU	97	ASP
45	BW	6	ILE
46	BX	19	ALA
46	BX	23	GLU
47	BY	19	LYS
47	BY	82	PRO
48	BZ	113	GLY
48	BZ	133	PRO
49	B0	57	PHE
50	B1	74	VAL
50	B1	84	GLY
51	B2	14	ARG
51	B2	15	LYS
51	B2	37	PHE
51	B2	44	LEU
51	B2	48	HIS
51	B2	54	LYS
54	B5	34	PRO
54	B5	47	PRO

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Mol	Chain	Res	Type
54	B5	56	LYS
55	B6	8	LYS
55	B6	15	GLU
55	B6	28	ARG
55	B6	31	PRO
56	B7	11	LYS
56	B7	23	ARG
57	B8	33	ASN
2	CB	19	HIS
2	CB	27	LYS
2	CB	125	PRO
2	CB	128	GLU
2	CB	196	LEU
2	CB	229	VAL
2	CB	238	LEU
3	CC	4	LYS
3	CC	14	ILE
3	CC	55	VAL
3	CC	62	ASP
4	CD	3	ARG
4	CD	7	PRO
4	CD	26	CYS
4	CD	37	PRO
4	CD	92	VAL
4	CD	131	ARG
4	CD	138	TYR
4	CD	159	ARG
4	CD	165	MET
5	CE	16	THR
5	CE	37	ARG
5	CE	105	VAL
5	CE	108	ALA
5	CE	153	LYS
5	CE	154	GLY
7	CG	42	ILE
8	CH	49	GLU
8	CH	105	ARG
9	CI	11	LYS
9	CI	39	GLY
9	CI	53	VAL
9	CI	111	ARG
10	CJ	52	GLY

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Mol	Chain	Res	Type
11	CK	12	ARG
11	CK	77	MET
12	CL	25	LYS
12	CL	88	LYS
12	CL	102	TYR
13	CM	61	GLU
13	CM	109	THR
14	CN	25	VAL
14	CN	60	SER
15	CO	21	ASP
15	CO	27	VAL
15	CO	76	GLU
16	CP	54	GLU
16	CP	63	GLY
17	CQ	33	GLY
17	CQ	49	GLU
19	CS	27	GLU
20	CT	54	LYS
20	CT	95	ALA
29	DC	67	GLY
29	DC	130	ILE
29	DC	132	GLY
29	DC	154	ARG
29	DC	158	ALA
29	DC	170	ALA
29	DC	172	HIS
30	DD	134	ARG
30	DD	140	THR
30	DD	150	LYS
30	DD	225	ALA
31	DE	2	LYS
31	DE	27	LEU
31	DE	56	PRO
31	DE	90	THR
31	DE	122	PHE
31	DE	151	TYR
32	DF	117	ARG
32	DF	140	LEU
32	DF	150	GLY
32	DF	171	PRO
33	DG	3	LEU
33	DG	4	ASP

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Mol	Chain	Res	Type
33	DG	10	LYS
33	DG	172	LEU
34	DH	108	GLY
35	DI	14	ASP
35	DI	85	GLU
35	DI	145	VAL
36	DN	11	PRO
36	DN	12	ARG
36	DN	35	ARG
36	DN	40	PRO
36	DN	133	GLN
36	DN	135	PRO
38	DP	14	LYS
38	DP	30	THR
38	DP	42	SER
38	DP	55	ARG
38	DP	56	SER
38	DP	111	ARG
38	DP	145	PRO
38	DP	146	VAL
39	DQ	4	PRO
39	DQ	16	ARG
39	DQ	56	ARG
39	DQ	85	LYS
39	DQ	117	ALA
40	DR	94	TYR
40	DR	107	ASP
41	DS	24	LEU
41	DS	42	ASP
41	DS	78	LEU
41	DS	89	ARG
41	DS	93	LYS
41	DS	107	GLU
42	DT	29	ARG
42	DT	31	SER
42	DT	61	PHE
42	DT	68	TYR
43	DU	43	GLY
43	DU	63	VAL
44	DV	16	PRO
45	DW	9	TYR
45	DW	40	ASN

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Mol	Chain	Res	Type
45	DW	80	PRO
45	DW	109	GLU
46	DX	13	LEU
46	DX	60	ARG
47	DY	10	GLY
47	DY	62	GLU
47	DY	67	LEU
47	DY	100	ALA
48	DZ	107	PRO
48	DZ	163	ALA
48	DZ	165	SER
50	D1	56	GLN
50	D1	95	LEU
51	D2	17	SER
51	D2	23	LYS
51	D2	24	LEU
51	D2	43	GLN
54	D5	10	LYS
54	D5	32	PRO
55	D6	18	ARG
55	D6	28	ARG
55	D6	33	LYS
55	D6	43	CYS
55	D6	44	ARG
56	D7	14	LYS
57	D8	53	PRO
58	D9	31	LYS
2	AB	78	GLN
2	AB	237	ALA
3	AC	20	SER
3	AC	107	GLN
3	AC	119	ARG
4	AD	4	TYR
4	AD	42	GLN
4	AD	66	ARG
4	AD	85	LYS
4	AD	91	SER
4	AD	206	PHE
5	AE	85	GLY
5	AE	133	TYR
6	AF	17	SER
6	AF	84	ASN

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Mol	Chain	Res	Type
7	AG	6	ARG
8	AH	15	ASN
8	AH	20	TYR
9	AI	49	PRO
9	AI	103	THR
11	AK	40	ILE
11	AK	43	SER
11	AK	62	GLN
11	AK	106	LYS
11	AK	125	PHE
12	AL	88	LYS
13	AM	48	LEU
15	AO	33	THR
15	AO	40	SER
15	AO	73	GLU
15	AO	76	GLU
15	AO	88	ARG
17	AQ	14	LYS
18	AR	60	ALA
20	AT	12	ALA
20	AT	25	ARG
20	AT	65	LYS
20	AT	84	LEU
20	AT	98	PRO
29	BC	35	ALA
29	BC	54	SER
29	BC	66	HIS
30	BD	11	PRO
30	BD	12	SER
30	BD	28	GLU
30	BD	30	GLU
30	BD	32	SER
30	BD	80	ALA
30	BD	108	PRO
30	BD	127	VAL
30	BD	206	LEU
30	BD	238	GLY
30	BD	262	ARG
31	BE	117	MET
32	BF	71	GLY
32	BF	131	GLY
33	BG	46	ALA

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Mol	Chain	Res	Type
33	BG	120	LEU
34	BH	40	GLU
34	BH	41	MET
35	BI	12	LEU
35	BI	40	THR
35	BI	119	PRO
35	BI	130	TYR
35	BI	132	PRO
36	BN	126	PRO
37	BO	120	GLU
38	BP	48	PRO
38	BP	49	ARG
38	BP	56	SER
38	BP	98	GLU
38	BP	110	TYR
38	BP	149	GLU
39	BQ	133	ARG
40	BR	41	ALA
40	BR	49	ASP
41	BS	14	VAL
41	BS	46	VAL
41	BS	103	GLU
42	BT	20	PRO
42	BT	101	PHE
43	BU	60	LEU
45	BW	37	ARG
45	BW	105	VAL
46	BX	40	LYS
47	BY	11	ASP
48	BZ	45	LYS
48	BZ	107	PRO
48	BZ	171	ALA
48	BZ	172	ALA
49	B0	35	ASN
49	B0	71	ASP
51	B2	34	GLU
53	B4	54	LYS
55	B6	18	ARG
55	B6	44	ARG
57	B8	31	HIS
57	B8	40	GLU
2	CB	91	PRO

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Mol	Chain	Res	Type
2	CB	106	LYS
2	CB	130	ARG
2	CB	167	PRO
3	CC	46	GLU
3	CC	77	ILE
3	CC	98	ASN
3	CC	195	VAL
4	CD	13	ARG
4	CD	24	GLU
4	CD	80	GLU
4	CD	179	GLU
5	CE	130	ASN
6	CF	43	LEU
7	CG	7	ALA
8	CH	6	ILE
8	CH	73	ASP
9	CI	35	GLU
9	CI	117	HIS
10	CJ	41	PRO
10	CJ	86	MET
11	CK	50	TYR
11	CK	117	ASN
12	CL	48	ALA
12	CL	72	HIS
12	CL	78	SER
13	CM	59	TYR
13	CM	104	ARG
14	CN	19	ARG
15	CO	12	ILE
15	CO	19	PRO
17	CQ	64	PRO
18	CR	68	LYS
19	CS	12	ASP
29	DC	64	LEU
29	DC	125	SER
29	DC	145	VAL
29	DC	161	ILE
29	DC	168	THR
29	DC	213	TYR
30	DD	244	ARG
31	DE	204	ALA
32	DF	108	LYS

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Mol	Chain	Res	Type
32	DF	158	THR
33	DG	49	ASP
33	DG	153	ARG
33	DG	179	PRO
34	DH	13	LYS
34	DH	47	GLU
34	DH	53	GLU
34	DH	68	THR
34	DH	97	ARG
35	DI	30	LEU
35	DI	83	ALA
35	DI	89	TYR
36	DN	134	ARG
37	DO	5	GLN
39	DQ	29	PHE
39	DQ	67	ARG
40	DR	106	GLY
41	DS	18	ILE
41	DS	85	VAL
41	DS	91	PRO
42	DT	4	GLY
42	DT	20	PRO
42	DT	57	PHE
42	DT	88	ILE
42	DT	97	ALA
43	DU	45	TYR
43	DU	111	GLU
44	DV	24	LYS
44	DV	30	GLY
45	DW	75	TYR
46	DX	85	PRO
47	DY	31	LEU
47	DY	39	VAL
47	DY	50	ARG
47	DY	55	TYR
47	DY	66	PRO
48	DZ	46	VAL
48	DZ	65	SER
49	D0	35	ASN
50	D1	6	GLU
50	D1	45	ASN
50	D1	53	VAL

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Mol	Chain	Res	Type
53	D4	61	VAL
54	D5	11	THR
54	D5	24	ALA
54	D5	33	CYS
55	D6	49	HIS
57	D8	29	LYS
57	D8	37	SER
57	D8	54	GLU
58	D9	35	ARG
2	AB	159	PRO
2	AB	191	ASP
2	AB	192	SER
3	AC	54	ARG
4	AD	65	ARG
5	AE	27	ARG
7	AG	41	ARG
7	AG	100	ALA
9	AI	82	ALA
11	AK	39	PRO
12	AL	25	LYS
13	AM	81	LEU
15	AO	13	GLN
15	AO	87	ILE
17	AQ	78	GLU
18	AR	54	ARG
18	AR	55	ARG
21	AU	9	ARG
29	BC	64	LEU
29	BC	78	ALA
29	BC	152	ILE
29	BC	200	LYS
29	BC	215	THR
30	BD	23	GLU
31	BE	70	ALA
32	BF	102	PRO
33	BG	142	PRO
34	BH	55	PRO
35	BI	17	GLN
35	BI	101	LEU
36	BN	57	ALA
36	BN	127	ASP
39	BQ	28	ALA

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Mol	Chain	Res	Type
39	BQ	119	ARG
41	BS	21	THR
42	BT	32	TYR
43	BU	92	ARG
44	BV	53	GLU
45	BW	93	ALA
47	BY	57	GLN
47	BY	67	LEU
47	BY	81	LYS
48	BZ	163	ALA
48	BZ	173	VAL
49	B0	74	ARG
50	B1	37	ILE
52	B3	41	PRO
56	B7	46	VAL
2	CB	96	ARG
2	CB	169	LYS
3	CC	22	TRP
4	CD	5	ILE
5	CE	8	GLU
7	CG	33	ASP
8	CH	30	ARG
8	CH	68	ARG
8	CH	87	SER
8	CH	107	LEU
10	CJ	27	ALA
12	CL	73	ASN
13	CM	36	LYS
13	CM	116	THR
14	CN	59	ALA
15	CO	46	HIS
16	CP	28	ARG
16	CP	46	PRO
18	CR	36	ASN
18	CR	71	LYS
29	DC	54	SER
29	DC	57	ASN
29	DC	71	GLN
29	DC	78	ALA
29	DC	175	VAL
30	DD	11	PRO
30	DD	35	LYS

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Mol	Chain	Res	Type
30	DD	44	ASN
32	DF	9	ILE
32	DF	70	THR
32	DF	84	VAL
32	DF	161	GLU
32	DF	178	PRO
33	DG	86	MET
34	DH	45	VAL
34	DH	85	LYS
34	DH	154	PRO
35	DI	71	ILE
35	DI	87	LYS
35	DI	133	HIS
36	DN	5	VAL
36	DN	94	HIS
37	DO	14	THR
37	DO	93	PRO
37	DO	112	MET
38	DP	25	SER
38	DP	40	SER
40	DR	10	LEU
40	DR	90	ARG
40	DR	93	GLY
41	DS	22	GLY
42	DT	3	ARG
42	DT	35	LYS
42	DT	102	ILE
43	DU	65	ILE
44	DV	22	VAL
44	DV	35	LEU
44	DV	38	LEU
47	DY	17	SER
47	DY	27	VAL
47	DY	57	GLN
47	DY	96	ILE
48	DZ	38	VAL
50	D1	27	GLU
50	D1	52	ARG
53	D4	54	LYS
57	D8	18	ALA
57	D8	51	ALA
2	AB	143	GLU

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Mol	Chain	Res	Type
3	AC	96	GLY
4	AD	88	VAL
4	AD	129	ASN
4	AD	164	ALA
4	AD	196	LEU
9	AI	97	LYS
12	AL	11	GLY
12	AL	16	ARG
16	AP	28	ARG
17	AQ	17	LYS
17	AQ	66	SER
19	AS	26	GLY
20	AT	78	ALA
20	AT	96	GLY
29	BC	44	HIS
29	BC	50	ASP
29	BC	203	GLY
31	BE	45	THR
31	BE	66	HIS
32	BF	89	VAL
32	BF	178	PRO
33	BG	144	ILE
35	BI	89	TYR
37	BO	26	LYS
37	BO	48	PRO
37	BO	107	ARG
40	BR	39	PRO
40	BR	92	GLY
42	BT	56	GLY
42	BT	135	ALA
43	BU	25	TRP
47	BY	55	TYR
48	BZ	135	PHE
48	BZ	164	VAL
54	B5	50	GLY
2	CB	183	PRO
2	CB	237	ALA
3	CC	72	LYS
3	CC	197	GLY
5	CE	22	GLY
6	CF	33	TYR
7	CG	100	ALA

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Mol	Chain	Res	Type
7	CG	112	PRO
8	CH	53	VAL
9	CI	123	PRO
11	CK	54	ARG
11	CK	90	GLY
12	CL	9	ARG
12	CL	24	LEU
19	CS	17	GLU
20	CT	23	ARG
29	DC	200	LYS
30	DD	200	ASP
33	DG	14	GLU
35	DI	15	VAL
35	DI	37	VAL
36	DN	81	GLY
37	DO	102	VAL
38	DP	115	LEU
38	DP	144	GLU
40	DR	85	PRO
42	DT	92	GLY
43	DU	15	LYS
46	DX	94	GLY
49	D0	30	VAL
50	D1	30	VAL
50	D1	76	ARG
56	D7	32	LYS
57	D8	3	LYS
57	D8	14	VAL
58	D9	30	PRO
2	AB	167	PRO
3	AC	141	VAL
3	AC	207	VAL
7	AG	34	GLY
8	AH	75	ARG
8	AH	129	VAL
10	AJ	23	ILE
16	AP	78	GLY
29	BC	43	VAL
29	BC	161	ILE
29	BC	175	VAL
31	BE	29	GLY
32	BF	9	ILE

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Mol	Chain	Res	Type
32	BF	66	PRO
32	BF	171	PRO
35	BI	134	PRO
38	BP	146	VAL
43	BU	65	ILE
46	BX	94	GLY
47	BY	37	VAL
2	CB	80	ILE
4	CD	29	PRO
7	CG	81	GLY
18	CR	70	ILE
20	CT	33	ILE
29	DC	74	VAL
29	DC	140	PRO
29	DC	212	VAL
30	DD	108	PRO
30	DD	232	PRO
31	DE	39	PRO
34	DH	66	GLY
39	DQ	100	GLY
44	DV	47	VAL
45	DW	91	GLY
47	DY	98	VAL
48	DZ	158	PRO
49	D0	47	PRO
4	AD	69	GLY
18	AR	22	VAL
29	BC	58	VAL
29	BC	145	VAL
31	BE	52	LEU
32	BF	126	VAL
36	BN	135	PRO
44	BV	99	ILE
48	BZ	21	GLY
48	BZ	138	VAL
6	CF	11	ASN
9	CI	21	PRO
10	CJ	24	VAL
10	CJ	75	ILE
12	CL	22	PRO
12	CL	84	GLY
31	DE	9	VAL

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Mol	Chain	Res	Type
33	DG	109	VAL
33	DG	159	VAL
37	DO	52	VAL
38	DP	7	ARG
46	DX	39	ILE
47	DY	38	ILE
49	D0	6	GLY
54	D5	31	VAL
2	AB	172	ILE
3	AC	74	GLY
6	AF	40	VAL
12	AL	91	PRO
13	AM	38	GLY
13	AM	41	PRO
16	AP	62	VAL
29	BC	65	PRO
29	BC	90	GLY
33	BG	140	ILE
35	BI	84	GLY
36	BN	54	VAL
38	BP	116	GLY
43	BU	102	GLU
44	BV	48	GLY
47	BY	27	VAL
48	BZ	36	VAL
48	BZ	157	PRO
53	B4	55	PRO
3	CC	141	VAL
7	CG	88	PRO
16	CP	33	ILE
17	CQ	28	PRO
32	DF	102	PRO
32	DF	131	GLY
33	DG	122	PRO
34	DH	17	VAL
36	DN	16	ILE
39	DQ	126	PRO
40	DR	66	VAL
48	DZ	173	VAL
3	AC	55	VAL
3	AC	114	PRO
4	AD	92	VAL

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Mol	Chain	Res	Type
32	BF	64	ILE
32	BF	207	GLY
33	BG	70	VAL
38	BP	97	PRO
42	BT	25	GLY
47	BY	39	VAL
55	B6	41	PRO
2	CB	93	VAL
13	CM	85	GLY
29	DC	65	PRO
30	DD	127	VAL
33	DG	127	GLY
36	DN	78	TYR
40	DR	38	VAL
42	DT	42	ILE
48	DZ	115	VAL
2	AB	202	PRO
4	AD	204	ILE
10	AJ	36	GLY
29	BC	171	ILE
33	BG	63	ILE
36	BN	36	GLY
38	BP	63	PRO
41	BS	98	VAL
2	CB	72	GLY
13	CM	4	ILE
13	CM	6	GLY
34	DH	39	PRO
34	DH	44	VAL
35	DI	7	GLU
48	DZ	160	VAL
36	DN	126	PRO
30	BD	245	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	202/220 (92%)	169 (84%)	33 (16%)	3	14
2	CB	202/220 (92%)	174 (86%)	28 (14%)	4	19
3	AC	160/188 (85%)	129 (81%)	31 (19%)	2	9
3	CC	160/188 (85%)	140 (88%)	20 (12%)	6	24
4	AD	180/181 (99%)	147 (82%)	33 (18%)	2	11
4	CD	180/181 (99%)	147 (82%)	33 (18%)	2	11
5	AE	115/123 (94%)	101 (88%)	14 (12%)	6	25
5	CE	115/123 (94%)	96 (84%)	19 (16%)	3	13
6	AF	90/90 (100%)	80 (89%)	10 (11%)	8	29
6	CF	90/90 (100%)	78 (87%)	12 (13%)	5	21
7	AG	126/127 (99%)	106 (84%)	20 (16%)	3	15
7	CG	126/127 (99%)	106 (84%)	20 (16%)	3	15
8	AH	119/119 (100%)	96 (81%)	23 (19%)	2	9
8	CH	119/119 (100%)	105 (88%)	14 (12%)	6	26
9	AI	97/99 (98%)	80 (82%)	17 (18%)	2	12
9	CI	97/99 (98%)	85 (88%)	12 (12%)	6	24
10	AJ	88/92 (96%)	68 (77%)	20 (23%)	1	5
10	CJ	88/92 (96%)	74 (84%)	14 (16%)	3	15
11	AK	90/99 (91%)	74 (82%)	16 (18%)	2	11
11	CK	90/99 (91%)	78 (87%)	12 (13%)	5	21
12	AL	104/109 (95%)	87 (84%)	17 (16%)	3	14
12	CL	104/109 (95%)	90 (86%)	14 (14%)	5	20
13	AM	94/101 (93%)	75 (80%)	19 (20%)	1	8
13	CM	88/101 (87%)	69 (78%)	19 (22%)	1	6
14	AN	49/50 (98%)	39 (80%)	10 (20%)	1	7
14	CN	49/50 (98%)	37 (76%)	12 (24%)	1	4
15	AO	79/80 (99%)	63 (80%)	16 (20%)	1	7
15	CO	79/80 (99%)	65 (82%)	14 (18%)	2	11
16	AP	72/74 (97%)	63 (88%)	9 (12%)	6	24
16	CP	72/74 (97%)	60 (83%)	12 (17%)	3	13
17	AQ	94/97 (97%)	80 (85%)	14 (15%)	4	17
17	CQ	94/97 (97%)	84 (89%)	10 (11%)	8	31

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	AR	61/77 (79%)	53 (87%)	8 (13%)	5	22
18	CR	61/77 (79%)	55 (90%)	6 (10%)	10	36
19	AS	69/80 (86%)	53 (77%)	16 (23%)	1	5
19	CS	69/80 (86%)	51 (74%)	18 (26%)	0	3
20	AT	76/82 (93%)	63 (83%)	13 (17%)	2	12
20	CT	76/82 (93%)	65 (86%)	11 (14%)	4	18
21	AU	19/22 (86%)	16 (84%)	3 (16%)	3	15
21	CU	19/22 (86%)	18 (95%)	1 (5%)	28	67
26	AZ	2/2 (100%)	2 (100%)	0	100	100
26	CZ	2/2 (100%)	2 (100%)	0	100	100
29	BC	61/181 (34%)	56 (92%)	5 (8%)	14	46
29	DC	61/181 (34%)	51 (84%)	10 (16%)	3	14
30	BD	213/218 (98%)	162 (76%)	51 (24%)	1	4
30	DD	213/218 (98%)	173 (81%)	40 (19%)	2	10
31	BE	165/166 (99%)	127 (77%)	38 (23%)	1	5
31	DE	165/166 (99%)	121 (73%)	44 (27%)	0	3
32	BF	165/166 (99%)	136 (82%)	29 (18%)	2	12
32	DF	165/166 (99%)	138 (84%)	27 (16%)	3	14
33	BG	155/156 (99%)	117 (76%)	38 (24%)	1	4
33	DG	155/156 (99%)	125 (81%)	30 (19%)	2	9
34	BH	136/148 (92%)	111 (82%)	25 (18%)	2	10
34	DH	132/148 (89%)	111 (84%)	21 (16%)	3	15
35	BI	102/124 (82%)	79 (78%)	23 (22%)	1	5
35	DI	103/124 (83%)	85 (82%)	18 (18%)	2	12
36	BN	117/119 (98%)	88 (75%)	29 (25%)	1	3
36	DN	117/119 (98%)	92 (79%)	25 (21%)	1	6
37	BO	100/100 (100%)	81 (81%)	19 (19%)	2	10
37	DO	100/100 (100%)	75 (75%)	25 (25%)	1	3
38	BP	112/116 (97%)	76 (68%)	36 (32%)	0	1
38	DP	112/116 (97%)	79 (70%)	33 (30%)	0	2
39	BQ	111/111 (100%)	85 (77%)	26 (23%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	DQ	110/111 (99%)	91 (83%)	19 (17%)	2	12
40	BR	100/101 (99%)	77 (77%)	23 (23%)	1	5
40	DR	100/101 (99%)	67 (67%)	33 (33%)	0	1
41	BS	77/88 (88%)	60 (78%)	17 (22%)	1	5
41	DS	76/88 (86%)	62 (82%)	14 (18%)	2	10
42	BT	120/127 (94%)	81 (68%)	39 (32%)	0	1
42	DT	120/127 (94%)	88 (73%)	32 (27%)	0	3
43	BU	92/94 (98%)	71 (77%)	21 (23%)	1	5
43	DU	92/94 (98%)	81 (88%)	11 (12%)	6	26
44	BV	82/82 (100%)	59 (72%)	23 (28%)	0	2
44	DV	82/82 (100%)	60 (73%)	22 (27%)	0	3
45	BW	91/92 (99%)	74 (81%)	17 (19%)	2	10
45	DW	91/92 (99%)	72 (79%)	19 (21%)	1	7
46	BX	74/78 (95%)	60 (81%)	14 (19%)	2	10
46	DX	74/78 (95%)	58 (78%)	16 (22%)	1	6
47	BY	84/91 (92%)	62 (74%)	22 (26%)	0	3
47	DY	84/91 (92%)	63 (75%)	21 (25%)	1	3
48	BZ	155/179 (87%)	127 (82%)	28 (18%)	2	11
48	DZ	155/179 (87%)	135 (87%)	20 (13%)	5	23
49	B0	66/67 (98%)	53 (80%)	13 (20%)	1	9
49	D0	66/67 (98%)	58 (88%)	8 (12%)	6	25
50	B1	74/83 (89%)	56 (76%)	18 (24%)	1	4
50	D1	78/83 (94%)	63 (81%)	15 (19%)	2	10
51	B2	66/67 (98%)	50 (76%)	16 (24%)	1	4
51	D2	66/67 (98%)	53 (80%)	13 (20%)	1	9
52	B3	51/52 (98%)	42 (82%)	9 (18%)	2	12
52	D3	51/52 (98%)	44 (86%)	7 (14%)	4	20
53	B4	27/63 (43%)	23 (85%)	4 (15%)	4	17
53	D4	27/63 (43%)	25 (93%)	2 (7%)	17	52
54	B5	51/52 (98%)	39 (76%)	12 (24%)	1	4
54	D5	51/52 (98%)	42 (82%)	9 (18%)	2	12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
55	B6	43/52 (83%)	30 (70%)	13 (30%)	0	2
55	D6	44/52 (85%)	28 (64%)	16 (36%)	0	1
56	B7	41/42 (98%)	34 (83%)	7 (17%)	2	12
56	D7	41/42 (98%)	36 (88%)	5 (12%)	6	25
57	B8	53/55 (96%)	44 (83%)	9 (17%)	2	13
57	D8	53/55 (96%)	39 (74%)	14 (26%)	0	3
58	B9	33/34 (97%)	24 (73%)	9 (27%)	0	2
58	D9	33/34 (97%)	28 (85%)	5 (15%)	3	16
All	All	9600/10432 (92%)	7750 (81%)	1850 (19%)	2	9

All (1850) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	8	LYS
2	AB	15	VAL
2	AB	16	HIS
2	AB	17	PHE
2	AB	36	ARG
2	AB	44	LEU
2	AB	45	GLN
2	AB	53	ARG
2	AB	61	LEU
2	AB	64	ARG
2	AB	69	LEU
2	AB	74	LYS
2	AB	78	GLN
2	AB	80	ILE
2	AB	110	GLN
2	AB	113	HIS
2	AB	130	ARG
2	AB	137	ARG
2	AB	153	ARG
2	AB	155	LEU
2	AB	165	VAL
2	AB	175	ARG
2	AB	178	ARG
2	AB	183	PRO
2	AB	189	ASP
2	AB	196	LEU

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Mol	Chain	Res	Type
2	AB	198	ASP
2	AB	204	ASN
2	AB	206	ASP
2	AB	212	GLN
2	AB	213	LEU
2	AB	215	LEU
2	AB	238	LEU
3	AC	3	ASN
3	AC	5	ILE
3	AC	10	PHE
3	AC	11	ARG
3	AC	12	LEU
3	AC	16	ARG
3	AC	17	ASP
3	AC	21	ARG
3	AC	28	GLN
3	AC	29	TYR
3	AC	31	HIS
3	AC	36	ASP
3	AC	47	LEU
3	AC	52	LEU
3	AC	62	ASP
3	AC	63	ASN
3	AC	76	VAL
3	AC	77	ILE
3	AC	79	ARG
3	AC	94	LEU
3	AC	124	ILE
3	AC	151	VAL
3	AC	154	SER
3	AC	165	THR
3	AC	178	LEU
3	AC	192	THR
3	AC	193	TYR
3	AC	195	VAL
3	AC	198	VAL
3	AC	201	TYR
3	AC	204	LEU
4	AD	3	ARG
4	AD	9	CYS
4	AD	10	ARG
4	AD	11	LEU

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Mol	Chain	Res	Type
4	AD	12	CYS
4	AD	15	GLU
4	AD	25	ARG
4	AD	26	CYS
4	AD	28	SER
4	AD	31	CYS
4	AD	42	GLN
4	AD	50	ARG
4	AD	58	LEU
4	AD	72	GLU
4	AD	86	LYS
4	AD	92	VAL
4	AD	96	LEU
4	AD	98	GLU
4	AD	101	LEU
4	AD	118	ARG
4	AD	120	LEU
4	AD	122	ARG
4	AD	131	ARG
4	AD	135	LEU
4	AD	139	ARG
4	AD	146	ILE
4	AD	150	GLU
4	AD	161	ASN
4	AD	168	ARG
4	AD	188	LEU
4	AD	196	LEU
4	AD	208	SER
4	AD	209	ARG
5	AE	5	ASP
5	AE	10	MET
5	AE	16	THR
5	AE	20	GLN
5	AE	31	LEU
5	AE	43	LEU
5	AE	64	ARG
5	AE	73	ASN
5	AE	75	THR
5	AE	91	LEU
5	AE	101	ILE
5	AE	133	TYR
5	AE	141	GLN

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Mol	Chain	Res	Type
5	AE	147	ASP
6	AF	6	VAL
6	AF	10	LEU
6	AF	15	ASP
6	AF	16	GLN
6	AF	43	LEU
6	AF	55	ASP
6	AF	64	GLN
6	AF	80	ARG
6	AF	94	GLN
6	AF	98	LEU
7	AG	5	ARG
7	AG	21	VAL
7	AG	45	ASP
7	AG	57	GLU
7	AG	59	LEU
7	AG	61	VAL
7	AG	68	ASN
7	AG	78	ARG
7	AG	79	ARG
7	AG	89	MET
7	AG	92	SER
7	AG	104	LEU
7	AG	109	ASN
7	AG	114	ARG
7	AG	118	VAL
7	AG	141	VAL
7	AG	142	GLU
7	AG	143	ARG
7	AG	151	TYR
7	AG	156	TRP
8	AH	1	MET
8	AH	4	ASP
8	AH	19	VAL
8	AH	25	ASP
8	AH	26	VAL
8	AH	30	ARG
8	AH	41	ARG
8	AH	52	ASP
8	AH	63	LEU
8	AH	65	TYR
8	AH	75	ARG

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Mol	Chain	Res	Type
8	AH	78	GLN
8	AH	84	ARG
8	AH	85	ARG
8	AH	87	SER
8	AH	91	ARG
8	AH	103	VAL
8	AH	104	ARG
8	AH	107	LEU
8	AH	112	LEU
8	AH	118	VAL
8	AH	119	LEU
8	AH	133	LEU
9	AI	4	TYR
9	AI	10	ARG
9	AI	38	GLN
9	AI	41	VAL
9	AI	54	ASP
9	AI	62	TYR
9	AI	66	ARG
9	AI	78	LYS
9	AI	85	LEU
9	AI	91	ASP
9	AI	95	LYS
9	AI	102	LEU
9	AI	108	VAL
9	AI	114	TYR
9	AI	118	LYS
9	AI	121	ARG
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	17	ASP
10	AJ	22	LYS
10	AJ	25	GLU
10	AJ	35	SER
10	AJ	40	LEU
10	AJ	49	VAL
10	AJ	54	PHE
10	AJ	55	LYS
10	AJ	57	LYS
10	AJ	59	SER
10	AJ	62	HIS
10	AJ	63	PHE

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Mol	Chain	Res	Type
10	AJ	67	THR
10	AJ	70	ARG
10	AJ	74	ILE
10	AJ	80	LYS
10	AJ	81	THR
10	AJ	90	LEU
10	AJ	96	ILE
11	AK	18	ARG
11	AK	24	SER
11	AK	26	ASN
11	AK	29	ILE
11	AK	30	VAL
11	AK	32	ILE
11	AK	38	ASN
11	AK	40	ILE
11	AK	51	LYS
11	AK	63	LEU
11	AK	92	GLU
11	AK	103	LEU
11	AK	116	HIS
11	AK	117	ASN
11	AK	125	PHE
11	AK	127	LYS
12	AL	10	LYS
12	AL	18	LYS
12	AL	24	LEU
12	AL	30	ARG
12	AL	33	VAL
12	AL	34	CYS
12	AL	35	THR
12	AL	40	VAL
12	AL	50	ARG
12	AL	64	THR
12	AL	70	GLU
12	AL	73	ASN
12	AL	78	SER
12	AL	80	VAL
12	AL	81	LEU
12	AL	86	ARG
12	AL	109	ASP
13	AM	12	ASN
13	AM	47	ASP

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Mol	Chain	Res	Type
13	AM	48	LEU
13	AM	50	GLU
13	AM	56	LEU
13	AM	58	GLU
13	AM	64	TRP
13	AM	65	LYS
13	AM	67	GLU
13	AM	69	GLU
13	AM	82	MET
13	AM	91	ARG
13	AM	93	ARG
13	AM	98	VAL
13	AM	102	ARG
13	AM	104	ARG
13	AM	108	ARG
13	AM	109	THR
13	AM	115	LYS
14	AN	12	ARG
14	AN	14	PRO
14	AN	16	PHE
14	AN	25	VAL
14	AN	33	VAL
14	AN	35	ARG
14	AN	41	ARG
14	AN	45	ARG
14	AN	53	LEU
14	AN	60	SER
15	AO	10	LYS
15	AO	24	SER
15	AO	26	GLU
15	AO	34	LEU
15	AO	35	ARG
15	AO	37	ASN
15	AO	38	ARG
15	AO	39	LEU
15	AO	41	GLU
15	AO	47	LYS
15	AO	49	ASP
15	AO	56	LEU
15	AO	65	ARG
15	AO	71	GLN
15	AO	82	ILE

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Mol	Chain	Res	Type
15	AO	83	GLU
16	AP	1	MET
16	AP	26	ARG
16	AP	27	LYS
16	AP	32	TYR
16	AP	62	VAL
16	AP	65	GLN
16	AP	69	THR
16	AP	71	ARG
16	AP	82	GLN
17	AQ	9	VAL
17	AQ	11	VAL
17	AQ	26	GLN
17	AQ	48	GLU
17	AQ	50	LYS
17	AQ	52	LYS
17	AQ	59	ILE
17	AQ	60	ILE
17	AQ	66	SER
17	AQ	77	VAL
17	AQ	78	GLU
17	AQ	81	ARG
17	AQ	94	ASN
17	AQ	98	LEU
18	AR	25	THR
18	AR	31	LEU
18	AR	32	ARG
18	AR	40	LEU
18	AR	53	ARG
18	AR	69	THR
18	AR	74	ARG
18	AR	87	ARG
19	AS	4	SER
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	13	ASP
19	AS	16	LEU
19	AS	22	LEU
19	AS	27	GLU
19	AS	29	ARG
19	AS	37	ARG

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Mol	Chain	Res	Type
19	AS	39	THR
19	AS	41	VAL
19	AS	44	MET
19	AS	49	ILE
19	AS	67	VAL
19	AS	79	THR
20	AT	18	GLN
20	AT	19	SER
20	AT	26	ASN
20	AT	35	THR
20	AT	36	LEU
20	AT	41	ILE
20	AT	64	ASP
20	AT	72	LEU
20	AT	75	ASN
20	AT	82	SER
20	AT	84	LEU
20	AT	86	ARG
20	AT	93	GLU
21	AU	8	THR
21	AU	12	LYS
21	AU	25	LYS
29	BC	24	GLU
29	BC	36	LYS
29	BC	64	LEU
29	BC	77	ILE
29	BC	94	VAL
30	BD	7	LYS
30	BD	10	THR
30	BD	13	ARG
30	BD	14	ARG
30	BD	15	PHE
30	BD	20	ASP
30	BD	21	PHE
30	BD	24	ILE
30	BD	26	LYS
30	BD	36	PRO
30	BD	44	ASN
30	BD	46	GLN
30	BD	48	ARG
30	BD	49	ILE
30	BD	50	THR

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Mol	Chain	Res	Type
30	BD	52	ARG
30	BD	61	LEU
30	BD	65	ILE
30	BD	69	ARG
30	BD	73	VAL
30	BD	75	ILE
30	BD	76	PRO
30	BD	94	LEU
30	BD	106	ILE
30	BD	111	LEU
30	BD	112	GLN
30	BD	113	VAL
30	BD	117	VAL
30	BD	122	ASP
30	BD	127	VAL
30	BD	131	LEU
30	BD	142	VAL
30	BD	146	GLU
30	BD	166	GLN
30	BD	192	THR
30	BD	198	ASN
30	BD	201	HIS
30	BD	211	ARG
30	BD	212	SER
30	BD	213	ARG
30	BD	218	ARG
30	BD	219	PRO
30	BD	220	HIS
30	BD	221	VAL
30	BD	229	VAL
30	BD	232	PRO
30	BD	252	TRP
30	BD	254	THR
30	BD	259	THR
30	BD	260	ARG
30	BD	271	ILE
31	BE	7	VAL
31	BE	14	ILE
31	BE	19	ARG
31	BE	24	THR
31	BE	33	VAL
31	BE	36	ARG

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Mol	Chain	Res	Type
31	BE	40	GLU
31	BE	52	LEU
31	BE	55	ASN
31	BE	61	ARG
31	BE	78	LEU
31	BE	79	ARG
31	BE	82	ARG
31	BE	86	PRO
31	BE	89	ASP
31	BE	92	THR
31	BE	94	GLU
31	BE	95	ILE
31	BE	102	VAL
31	BE	107	THR
31	BE	113	PHE
31	BE	118	LYS
31	BE	119	ARG
31	BE	134	ILE
31	BE	140	SER
31	BE	144	ARG
31	BE	146	THR
31	BE	150	VAL
31	BE	154	LYS
31	BE	164	ARG
31	BE	167	VAL
31	BE	173	VAL
31	BE	179	GLU
31	BE	181	LEU
31	BE	189	PRO
31	BE	197	ILE
31	BE	202	LYS
31	BE	203	LYS
32	BF	2	LYS
32	BF	3	GLU
32	BF	20	LEU
32	BF	25	PRO
32	BF	35	GLU
32	BF	38	ARG
32	BF	44	ARG
32	BF	57	VAL
32	BF	67	GLN
32	BF	78	ILE

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Mol	Chain	Res	Type
32	BF	82	ILE
32	BF	84	VAL
32	BF	88	VAL
32	BF	100	THR
32	BF	102	PRO
32	BF	106	ARG
32	BF	107	LYS
32	BF	108	LYS
32	BF	117	ARG
32	BF	125	LEU
32	BF	140	LEU
32	BF	151	SER
32	BF	160	ASN
32	BF	164	ARG
32	BF	183	VAL
32	BF	186	ILE
32	BF	194	MET
32	BF	202	PHE
32	BF	203	GLN
33	BG	3	LEU
33	BG	4	ASP
33	BG	8	LYS
33	BG	16	ARG
33	BG	21	ARG
33	BG	26	GLN
33	BG	40	ASN
33	BG	52	ILE
33	BG	53	LEU
33	BG	62	LEU
33	BG	63	ILE
33	BG	64	THR
33	BG	70	VAL
33	BG	87	PRO
33	BG	88	ILE
33	BG	90	LEU
33	BG	93	THR
33	BG	101	ILE
33	BG	103	LEU
33	BG	104	GLU
33	BG	105	LYS
33	BG	111	LEU
33	BG	113	ARG

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Mol	Chain	Res	Type
33	BG	114	ILE
33	BG	116	ASP
33	BG	123	ASN
33	BG	130	ASN
33	BG	136	ARG
33	BG	139	LEU
33	BG	149	VAL
33	BG	150	ASP
33	BG	153	ARG
33	BG	157	ILE
33	BG	159	VAL
33	BG	161	THR
33	BG	162	THR
33	BG	170	ARG
33	BG	175	LEU
34	BH	10	PRO
34	BH	12	PRO
34	BH	13	LYS
34	BH	17	VAL
34	BH	21	PRO
34	BH	25	LYS
34	BH	34	GLU
34	BH	41	MET
34	BH	46	GLU
34	BH	54	ARG
34	BH	61	HIS
34	BH	68	THR
34	BH	76	VAL
34	BH	84	SER
34	BH	85	LYS
34	BH	88	LEU
34	BH	103	LEU
34	BH	116	GLU
34	BH	133	VAL
34	BH	139	GLN
34	BH	151	ILE
34	BH	153	LYS
34	BH	157	TYR
34	BH	159	GLU
34	BH	170	ARG
35	BI	7	GLU
35	BI	14	ASP

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Mol	Chain	Res	Type
35	BI	23	PRO
35	BI	28	ASN
35	BI	37	VAL
35	BI	38	LEU
35	BI	43	ASN
35	BI	47	LEU
35	BI	60	GLU
35	BI	72	LEU
35	BI	77	LEU
35	BI	82	ARG
35	BI	89	TYR
35	BI	93	THR
35	BI	96	ASP
35	BI	99	GLU
35	BI	114	LEU
35	BI	121	LYS
35	BI	122	GLU
35	BI	130	TYR
35	BI	134	PRO
35	BI	138	ILE
35	BI	143	SER
36	BN	4	TYR
36	BN	8	GLN
36	BN	9	VAL
36	BN	12	ARG
36	BN	15	LEU
36	BN	17	ASP
36	BN	23	LEU
36	BN	32	THR
36	BN	34	LEU
36	BN	38	HIS
36	BN	39	ARG
36	BN	48	MET
36	BN	56	ASN
36	BN	60	ILE
36	BN	65	LYS
36	BN	67	LEU
36	BN	68	GLU
36	BN	87	LEU
36	BN	98	VAL
36	BN	99	LEU
36	BN	106	MET

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Mol	Chain	Res	Type
36	BN	112	LEU
36	BN	115	ARG
36	BN	120	LEU
36	BN	121	LYS
36	BN	127	ASP
36	BN	134	ARG
36	BN	135	PRO
36	BN	136	GLU
37	BO	1	MET
37	BO	2	ILE
37	BO	3	GLN
37	BO	8	LEU
37	BO	14	THR
37	BO	17	ARG
37	BO	23	ARG
37	BO	24	VAL
37	BO	25	LEU
37	BO	31	LYS
37	BO	32	TYR
37	BO	48	PRO
37	BO	52	VAL
37	BO	68	GLU
37	BO	73	ASP
37	BO	78	ARG
37	BO	92	GLU
37	BO	99	PHE
37	BO	117	LEU
38	BP	9	ASN
38	BP	10	PRO
38	BP	13	ASN
38	BP	15	ARG
38	BP	16	ARG
38	BP	19	VAL
38	BP	21	ARG
38	BP	32	THR
38	BP	38	GLN
38	BP	39	LYS
38	BP	41	ARG
38	BP	42	SER
38	BP	45	LEU
38	BP	49	ARG
38	BP	59	LEU

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Mol	Chain	Res	Type
38	BP	61	ARG
38	BP	63	PRO
38	BP	64	LYS
38	BP	65	ARG
38	BP	67	MET
38	BP	68	GLN
38	BP	83	VAL
38	BP	85	LEU
38	BP	88	LEU
38	BP	91	PHE
38	BP	98	GLU
38	BP	100	LEU
38	BP	105	LEU
38	BP	108	LYS
38	BP	110	TYR
38	BP	114	ILE
38	BP	117	GLU
38	BP	119	GLU
38	BP	123	LEU
38	BP	130	PHE
38	BP	132	LYS
39	BQ	1	MET
39	BQ	5	ARG
39	BQ	6	ARG
39	BQ	11	LYS
39	BQ	13	GLN
39	BQ	21	THR
39	BQ	25	ASP
39	BQ	51	ARG
39	BQ	52	VAL
39	BQ	55	VAL
39	BQ	58	PHE
39	BQ	76	LYS
39	BQ	81	VAL
39	BQ	103	MET
39	BQ	110	THR
39	BQ	111	GLU
39	BQ	112	GLU
39	BQ	113	GLN
39	BQ	115	MET
39	BQ	116	GLU
39	BQ	125	LEU

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Mol	Chain	Res	Type
39	BQ	133	ARG
39	BQ	134	ARG
39	BQ	135	ASP
39	BQ	137	TYR
39	BQ	139	GLU
40	BR	2	ARG
40	BR	4	LEU
40	BR	5	LYS
40	BR	6	SER
40	BR	8	ARG
40	BR	14	SER
40	BR	16	HIS
40	BR	18	LEU
40	BR	27	SER
40	BR	35	THR
40	BR	48	VAL
40	BR	49	ASP
40	BR	51	LEU
40	BR	54	LEU
40	BR	56	LYS
40	BR	60	LEU
40	BR	67	LEU
40	BR	71	GLN
40	BR	75	LEU
40	BR	76	VAL
40	BR	79	LEU
40	BR	81	ASP
40	BR	103	ARG
41	BS	11	LYS
41	BS	18	ILE
41	BS	20	ARG
41	BS	21	THR
41	BS	24	LEU
41	BS	26	LEU
41	BS	42	ASP
41	BS	65	VAL
41	BS	82	ILE
41	BS	85	VAL
41	BS	89	ARG
41	BS	92	TYR
41	BS	97	ARG
41	BS	99	LYS

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Mol	Chain	Res	Type
41	BS	101	LEU
41	BS	103	GLU
41	BS	106	ARG
42	BT	3	ARG
42	BT	6	LEU
42	BT	11	GLU
42	BT	13	ARG
42	BT	14	TYR
42	BT	16	ARG
42	BT	17	THR
42	BT	29	ARG
42	BT	31	SER
42	BT	32	TYR
42	BT	41	ARG
42	BT	44	ASP
42	BT	49	VAL
42	BT	51	ARG
42	BT	53	ARG
42	BT	59	THR
42	BT	62	THR
42	BT	65	LYS
42	BT	66	VAL
42	BT	68	TYR
42	BT	74	ARG
42	BT	78	LEU
42	BT	82	LEU
42	BT	84	GLN
42	BT	85	LYS
42	BT	90	GLN
42	BT	91	ARG
42	BT	106	SER
42	BT	107	ASP
42	BT	108	ARG
42	BT	110	ILE
42	BT	111	ARG
42	BT	114	LEU
42	BT	121	ILE
42	BT	122	ASP
42	BT	124	ASP
42	BT	125	ARG
42	BT	128	GLU
42	BT	132	LYS

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Mol	Chain	Res	Type
43	BU	5	LYS
43	BU	9	VAL
43	BU	15	LYS
43	BU	16	LYS
43	BU	19	LYS
43	BU	20	LEU
43	BU	27	LEU
43	BU	31	SER
43	BU	33	ARG
43	BU	49	HIS
43	BU	52	ARG
43	BU	60	LEU
43	BU	69	CYS
43	BU	70	ARG
43	BU	72	HIS
43	BU	74	LEU
43	BU	78	THR
43	BU	89	GLU
43	BU	92	ARG
43	BU	97	ASP
43	BU	104	GLN
44	BV	2	PHE
44	BV	14	VAL
44	BV	16	PRO
44	BV	18	LEU
44	BV	19	LYS
44	BV	35	LEU
44	BV	37	VAL
44	BV	39	LEU
44	BV	43	GLU
44	BV	49	THR
44	BV	52	VAL
44	BV	62	LEU
44	BV	64	HIS
44	BV	66	ARG
44	BV	69	LYS
44	BV	79	VAL
44	BV	82	ARG
44	BV	88	ARG
44	BV	91	TYR
44	BV	92	THR
44	BV	95	LEU

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Mol	Chain	Res	Type
44	BV	99	ILE
44	BV	100	ARG
45	BW	6	ILE
45	BW	11	ARG
45	BW	13	SER
45	BW	19	LEU
45	BW	33	ARG
45	BW	34	ASN
45	BW	36	LEU
45	BW	39	THR
45	BW	51	LEU
45	BW	60	ASN
45	BW	66	GLU
45	BW	67	ASP
45	BW	83	LYS
45	BW	90	ARG
45	BW	92	ARG
45	BW	106	ILE
45	BW	107	LEU
46	BX	11	PRO
46	BX	13	LEU
46	BX	27	THR
46	BX	28	PHE
46	BX	30	VAL
46	BX	38	GLU
46	BX	48	LYS
46	BX	57	LEU
46	BX	66	LEU
46	BX	68	ARG
46	BX	70	LEU
46	BX	76	ARG
46	BX	80	ILE
46	BX	81	VAL
47	BY	2	ARG
47	BY	6	HIS
47	BY	7	VAL
47	BY	8	LYS
47	BY	21	LYS
47	BY	28	LYS
47	BY	29	GLU
47	BY	32	PRO
47	BY	47	LYS

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Mol	Chain	Res	Type
47	BY	53	PRO
47	BY	56	PRO
47	BY	62	GLU
47	BY	66	PRO
47	BY	67	LEU
47	BY	70	SER
47	BY	73	ARG
47	BY	76	CYS
47	BY	77	PRO
47	BY	79	CYS
47	BY	89	PHE
47	BY	90	LEU
47	BY	97	ARG
48	BZ	5	LYS
48	BZ	22	LYS
48	BZ	30	ARG
48	BZ	38	VAL
48	BZ	40	LEU
48	BZ	49	GLN
48	BZ	52	ILE
48	BZ	66	LEU
48	BZ	71	ARG
48	BZ	75	LEU
48	BZ	78	ARG
48	BZ	79	ARG
48	BZ	80	ARG
48	BZ	81	ARG
48	BZ	85	VAL
48	BZ	88	PHE
48	BZ	101	LEU
48	BZ	103	PHE
48	BZ	123	ILE
48	BZ	131	ASN
48	BZ	137	GLU
48	BZ	144	GLU
48	BZ	147	ASP
48	BZ	149	LEU
48	BZ	153	ASP
48	BZ	154	LEU
48	BZ	167	GLU
48	BZ	170	ILE
49	B0	7	LEU

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Mol	Chain	Res	Type
49	B0	12	ASN
49	B0	14	ARG
49	B0	30	VAL
49	B0	36	ILE
49	B0	37	LEU
49	B0	40	GLN
49	B0	41	ARG
49	B0	53	MET
49	B0	55	ARG
49	B0	69	PHE
49	B0	75	LEU
49	B0	84	LEU
50	B1	5	CYS
50	B1	14	VAL
50	B1	16	ASN
50	B1	18	ILE
50	B1	30	VAL
50	B1	35	THR
50	B1	40	ARG
50	B1	41	ARG
50	B1	45	ASN
50	B1	46	LEU
50	B1	48	LYS
50	B1	58	ILE
50	B1	61	ARG
50	B1	65	SER
50	B1	72	GLU
50	B1	83	GLU
50	B1	94	LEU
50	B1	95	LEU
51	B2	7	ARG
51	B2	9	GLN
51	B2	14	ARG
51	B2	16	LEU
51	B2	17	SER
51	B2	30	ARG
51	B2	32	LEU
51	B2	35	LEU
51	B2	43	GLN
51	B2	44	LEU
51	B2	48	HIS
51	B2	52	ASP

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Mol	Chain	Res	Type
51	B2	53	LEU
51	B2	62	THR
51	B2	64	LEU
51	B2	71	ASN
52	B3	6	VAL
52	B3	8	LEU
52	B3	17	LYS
52	B3	18	ASP
52	B3	23	LEU
52	B3	24	LYS
52	B3	30	ARG
52	B3	35	ARG
52	B3	37	LEU
53	B4	44	CYS
53	B4	46	ASN
53	B4	51	TYR
53	B4	56	GLU
54	B5	3	LYS
54	B5	4	HIS
54	B5	6	VAL
54	B5	16	ARG
54	B5	29	THR
54	B5	30	LEU
54	B5	32	PRO
54	B5	40	LYS
54	B5	52	TYR
54	B5	56	LYS
54	B5	57	VAL
54	B5	60	VAL
55	B6	9	LEU
55	B6	10	LEU
55	B6	11	LEU
55	B6	17	LYS
55	B6	18	ARG
55	B6	19	ARG
55	B6	20	ASN
55	B6	36	LEU
55	B6	42	TRP
55	B6	47	THR
55	B6	48	VAL
55	B6	49	HIS
55	B6	51	GLU

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Mol	Chain	Res	Type
56	B7	1	MET
56	B7	4	THR
56	B7	8	ASN
56	B7	9	ARG
56	B7	10	ARG
56	B7	16	HIS
56	B7	24	THR
57	B8	8	LYS
57	B8	13	ARG
57	B8	30	ARG
57	B8	31	HIS
57	B8	33	ASN
57	B8	34	TRP
57	B8	35	GLN
57	B8	44	LYS
57	B8	61	LEU
58	B9	2	LYS
58	B9	11	CYS
58	B9	17	ILE
58	B9	20	HIS
58	B9	23	VAL
58	B9	27	CYS
58	B9	28	GLU
58	B9	29	ASN
58	B9	34	GLN
2	CB	15	VAL
2	CB	16	HIS
2	CB	17	PHE
2	CB	20	GLU
2	CB	36	ARG
2	CB	44	LEU
2	CB	69	LEU
2	CB	73	THR
2	CB	74	LYS
2	CB	80	ILE
2	CB	90	MET
2	CB	92	TYR
2	CB	110	GLN
2	CB	111	ARG
2	CB	112	VAL
2	CB	115	LEU
2	CB	137	ARG

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Mol	Chain	Res	Type
2	CB	145	LEU
2	CB	155	LEU
2	CB	158	LEU
2	CB	172	ILE
2	CB	187	LEU
2	CB	190	THR
2	CB	196	LEU
2	CB	198	ASP
2	CB	210	SER
2	CB	233	SER
2	CB	238	LEU
3	CC	12	LEU
3	CC	20	SER
3	CC	21	ARG
3	CC	29	TYR
3	CC	30	ARG
3	CC	34	LEU
3	CC	42	LEU
3	CC	52	LEU
3	CC	55	VAL
3	CC	94	LEU
3	CC	104	GLN
3	CC	127	ARG
3	CC	128	PHE
3	CC	131	ARG
3	CC	156	ARG
3	CC	165	THR
3	CC	188	LEU
3	CC	193	TYR
3	CC	196	LEU
3	CC	202	ILE
4	CD	3	ARG
4	CD	7	PRO
4	CD	9	CYS
4	CD	10	ARG
4	CD	11	LEU
4	CD	24	GLU
4	CD	26	CYS
4	CD	28	SER
4	CD	31	CYS
4	CD	33	MET
4	CD	49	ARG

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Mol	Chain	Res	Type
4	CD	53	ASP
4	CD	78	LEU
4	CD	96	LEU
4	CD	119	GLN
4	CD	120	LEU
4	CD	131	ARG
4	CD	135	LEU
4	CD	138	TYR
4	CD	140	VAL
4	CD	144	ASP
4	CD	146	ILE
4	CD	153	ARG
4	CD	163	GLU
4	CD	173	TRP
4	CD	175	SER
4	CD	177	ASP
4	CD	182	LYS
4	CD	185	PHE
4	CD	192	GLU
4	CD	193	ASP
4	CD	194	LEU
4	CD	204	ILE
5	CE	10	MET
5	CE	20	GLN
5	CE	41	VAL
5	CE	45	PHE
5	CE	64	ARG
5	CE	68	GLU
5	CE	73	ASN
5	CE	76	ILE
5	CE	79	GLU
5	CE	80	ILE
5	CE	87	SER
5	CE	101	ILE
5	CE	115	VAL
5	CE	116	THR
5	CE	125	SER
5	CE	126	ARG
5	CE	128	PRO
5	CE	147	ASP
5	CE	148	VAL
6	CF	10	LEU

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Mol	Chain	Res	Type
6	CF	16	GLN
6	CF	19	LEU
6	CF	21	LEU
6	CF	27	GLN
6	CF	69	GLU
6	CF	73	ASN
6	CF	80	ARG
6	CF	83	ASP
6	CF	90	VAL
6	CF	93	SER
6	CF	100	ASN
7	CG	4	ARG
7	CG	12	LEU
7	CG	17	VAL
7	CG	24	THR
7	CG	30	ILE
7	CG	32	ARG
7	CG	38	LEU
7	CG	45	ASP
7	CG	52	GLU
7	CG	58	PRO
7	CG	60	LYS
7	CG	77	SER
7	CG	79	ARG
7	CG	84	ASN
7	CG	88	PRO
7	CG	92	SER
7	CG	114	ARG
7	CG	124	LEU
7	CG	131	LYS
7	CG	142	GLU
8	CH	1	MET
8	CH	4	ASP
8	CH	8	ASP
8	CH	10	LEU
8	CH	52	ASP
8	CH	63	LEU
8	CH	65	TYR
8	CH	85	ARG
8	CH	102	ARG
8	CH	104	ARG
8	CH	105	ARG

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Mol	Chain	Res	Type
8	CH	119	LEU
8	CH	127	LEU
8	CH	129	VAL
9	CI	10	ARG
9	CI	40	LEU
9	CI	53	VAL
9	CI	95	LYS
9	CI	99	LEU
9	CI	103	THR
9	CI	104	ARG
9	CI	112	LYS
9	CI	114	TYR
9	CI	121	ARG
9	CI	125	TYR
9	CI	128	ARG
10	CJ	6	ILE
10	CJ	16	LEU
10	CJ	22	LYS
10	CJ	40	LEU
10	CJ	45	ARG
10	CJ	47	PHE
10	CJ	50	ILE
10	CJ	62	HIS
10	CJ	63	PHE
10	CJ	67	THR
10	CJ	80	LYS
10	CJ	86	MET
10	CJ	92	THR
10	CJ	96	ILE
11	CK	18	ARG
11	CK	33	THR
11	CK	50	TYR
11	CK	51	LYS
11	CK	87	THR
11	CK	103	LEU
11	CK	109	VAL
11	CK	114	VAL
11	CK	119	CYS
11	CK	124	LYS
11	CK	125	PHE
11	CK	129	SER
12	CL	18	LYS

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Mol	Chain	Res	Type
12	CL	24	LEU
12	CL	30	ARG
12	CL	39	THR
12	CL	41	THR
12	CL	50	ARG
12	CL	66	TYR
12	CL	70	GLU
12	CL	73	ASN
12	CL	77	HIS
12	CL	81	LEU
12	CL	86	ARG
12	CL	89	ASP
12	CL	124	GLU
13	CM	12	ASN
13	CM	14	ARG
13	CM	32	GLU
13	CM	47	ASP
13	CM	48	LEU
13	CM	50	GLU
13	CM	64	TRP
13	CM	65	LYS
13	CM	66	LEU
13	CM	67	GLU
13	CM	69	GLU
13	CM	70	LEU
13	CM	71	ARG
13	CM	82	MET
13	CM	84	ILE
13	CM	92	HIS
13	CM	93	ARG
13	CM	98	VAL
13	CM	110	ARG
14	CN	8	GLU
14	CN	12	ARG
14	CN	14	PRO
14	CN	18	VAL
14	CN	23	ARG
14	CN	26	ARG
14	CN	27	CYS
14	CN	33	VAL
14	CN	34	TYR
14	CN	35	ARG

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Mol	Chain	Res	Type
14	CN	42	ILE
14	CN	44	LEU
15	CO	3	ILE
15	CO	10	LYS
15	CO	22	THR
15	CO	37	ASN
15	CO	39	LEU
15	CO	47	LYS
15	CO	51	HIS
15	CO	54	ARG
15	CO	62	GLN
15	CO	65	ARG
15	CO	66	LEU
15	CO	71	GLN
15	CO	82	ILE
15	CO	83	GLU
16	CP	1	MET
16	CP	11	SER
16	CP	12	LYS
16	CP	16	HIS
16	CP	26	ARG
16	CP	27	LYS
16	CP	53	VAL
16	CP	61	SER
16	CP	65	GLN
16	CP	67	THR
16	CP	69	THR
16	CP	82	GLN
17	CQ	5	VAL
17	CQ	9	VAL
17	CQ	10	VAL
17	CQ	14	LYS
17	CQ	23	VAL
17	CQ	52	LYS
17	CQ	56	VAL
17	CQ	83	ASP
17	CQ	89	LEU
17	CQ	97	SER
18	CR	19	LYS
18	CR	26	LEU
18	CR	36	ASN
18	CR	38	GLU

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Mol	Chain	Res	Type
18	CR	69	THR
18	CR	87	ARG
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	11	VAL
19	CS	13	ASP
19	CS	22	LEU
19	CS	23	ASN
19	CS	27	GLU
19	CS	28	LYS
19	CS	29	ARG
19	CS	32	LYS
19	CS	37	ARG
19	CS	43	GLU
19	CS	44	MET
19	CS	49	ILE
19	CS	64	GLU
19	CS	65	ASN
19	CS	79	THR
20	CT	14	LYS
20	CT	26	ASN
20	CT	36	LEU
20	CT	41	ILE
20	CT	62	LEU
20	CT	64	ASP
20	CT	75	ASN
20	CT	82	SER
20	CT	90	GLN
20	CT	93	GLU
20	CT	104	LEU
21	CU	12	LYS
29	DC	20	TYR
29	DC	24	GLU
29	DC	36	LYS
29	DC	47	LEU
29	DC	55	ASP
29	DC	56	GLN
29	DC	58	VAL
29	DC	64	LEU
29	DC	77	ILE
29	DC	93	TYR

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Mol	Chain	Res	Type
30	DD	10	THR
30	DD	13	ARG
30	DD	18	VAL
30	DD	20	ASP
30	DD	26	LYS
30	DD	29	PRO
30	DD	37	LEU
30	DD	43	ARG
30	DD	58	HIS
30	DD	61	LEU
30	DD	65	ILE
30	DD	73	VAL
30	DD	86	PRO
30	DD	92	ILE
30	DD	94	LEU
30	DD	98	VAL
30	DD	104	TYR
30	DD	105	ILE
30	DD	140	THR
30	DD	147	LEU
30	DD	154	LYS
30	DD	155	LEU
30	DD	165	ILE
30	DD	168	ARG
30	DD	173	VAL
30	DD	178	PRO
30	DD	192	THR
30	DD	202	LYS
30	DD	204	ILE
30	DD	208	LYS
30	DD	218	ARG
30	DD	228	PRO
30	DD	230	ASP
30	DD	231	HIS
30	DD	239	ARG
30	DD	242	ARG
30	DD	246	PRO
30	DD	254	THR
30	DD	259	THR
30	DD	260	ARG
31	DE	1	MET
31	DE	4	ILE

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Mol	Chain	Res	Type
31	DE	7	VAL
31	DE	9	VAL
31	DE	16	ARG
31	DE	18	ASP
31	DE	22	PRO
31	DE	23	VAL
31	DE	24	THR
31	DE	30	PRO
31	DE	40	GLU
31	DE	52	LEU
31	DE	55	ASN
31	DE	57	LYS
31	DE	76	ARG
31	DE	78	LEU
31	DE	79	ARG
31	DE	82	ARG
31	DE	84	PHE
31	DE	86	PRO
31	DE	89	ASP
31	DE	92	THR
31	DE	101	ARG
31	DE	105	THR
31	DE	107	THR
31	DE	113	PHE
31	DE	116	VAL
31	DE	118	LYS
31	DE	119	ARG
31	DE	121	ASN
31	DE	127	ASP
31	DE	128	SER
31	DE	134	ILE
31	DE	144	ARG
31	DE	150	VAL
31	DE	154	LYS
31	DE	159	HIS
31	DE	166	THR
31	DE	168	MET
31	DE	179	GLU
31	DE	185	LYS
31	DE	197	ILE
31	DE	202	LYS
31	DE	203	LYS

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Mol	Chain	Res	Type
32	DF	2	LYS
32	DF	4	VAL
32	DF	25	PRO
32	DF	28	ILE
32	DF	38	ARG
32	DF	46	ARG
32	DF	53	THR
32	DF	65	TRP
32	DF	66	PRO
32	DF	67	GLN
32	DF	78	ILE
32	DF	81	PRO
32	DF	88	VAL
32	DF	99	TYR
32	DF	100	THR
32	DF	102	PRO
32	DF	112	MET
32	DF	125	LEU
32	DF	136	THR
32	DF	149	ASP
32	DF	158	THR
32	DF	175	THR
32	DF	183	VAL
32	DF	186	ILE
32	DF	190	GLU
32	DF	195	ASP
32	DF	201	VAL
33	DG	4	ASP
33	DG	5	VAL
33	DG	14	GLU
33	DG	16	ARG
33	DG	21	ARG
33	DG	22	ARG
33	DG	29	TRP
33	DG	35	GLU
33	DG	80	PHE
33	DG	83	ARG
33	DG	87	PRO
33	DG	92	VAL
33	DG	98	ARG
33	DG	101	ILE
33	DG	112	PRO

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Mol	Chain	Res	Type
33	DG	113	ARG
33	DG	114	ILE
33	DG	116	ASP
33	DG	117	PHE
33	DG	125	PHE
33	DG	130	ASN
33	DG	131	TYR
33	DG	132	ASN
33	DG	139	LEU
33	DG	143	GLU
33	DG	147	ASP
33	DG	153	ARG
33	DG	157	ILE
33	DG	162	THR
33	DG	166	ASP
34	DH	13	LYS
34	DH	24	VAL
34	DH	25	LYS
34	DH	41	MET
34	DH	46	GLU
34	DH	50	VAL
34	DH	54	ARG
34	DH	70	THR
34	DH	72	ILE
34	DH	74	ASN
34	DH	86	GLU
34	DH	88	LEU
34	DH	95	ARG
34	DH	103	LEU
34	DH	106	THR
34	DH	111	HIS
34	DH	147	ASN
34	DH	152	ARG
34	DH	153	LYS
34	DH	157	TYR
34	DH	170	ARG
35	DI	2	LYS
35	DI	5	LEU
35	DI	6	LEU
35	DI	12	LEU
35	DI	43	ASN
35	DI	47	LEU

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Mol	Chain	Res	Type
35	DI	51	ILE
35	DI	68	LEU
35	DI	72	LEU
35	DI	77	LEU
35	DI	86	THR
35	DI	102	SER
35	DI	109	ILE
35	DI	114	LEU
35	DI	122	GLU
35	DI	133	HIS
35	DI	138	ILE
35	DI	143	SER
36	DN	4	TYR
36	DN	23	LEU
36	DN	25	ARG
36	DN	28	THR
36	DN	34	LEU
36	DN	39	ARG
36	DN	41	ASP
36	DN	48	MET
36	DN	50	ASP
36	DN	54	VAL
36	DN	55	VAL
36	DN	56	ASN
36	DN	61	ARG
36	DN	63	THR
36	DN	73	THR
36	DN	88	GLU
36	DN	89	LYS
36	DN	98	VAL
36	DN	99	LEU
36	DN	119	ARG
36	DN	121	LYS
36	DN	127	ASP
36	DN	130	HIS
36	DN	134	ARG
36	DN	136	GLU
37	DO	1	MET
37	DO	7	TYR
37	DO	8	LEU
37	DO	9	GLU
37	DO	10	VAL

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Mol	Chain	Res	Type
37	DO	18	LYS
37	DO	19	ILE
37	DO	22	ILE
37	DO	35	VAL
37	DO	38	VAL
37	DO	42	SER
37	DO	45	GLU
37	DO	48	PRO
37	DO	49	ARG
37	DO	58	VAL
37	DO	59	LYS
37	DO	69	ILE
37	DO	75	SER
37	DO	79	PHE
37	DO	81	ASP
37	DO	87	ILE
37	DO	97	ARG
37	DO	98	VAL
37	DO	102	VAL
37	DO	117	LEU
38	DP	5	ASP
38	DP	6	LEU
38	DP	9	ASN
38	DP	13	ASN
38	DP	16	ARG
38	DP	18	ARG
38	DP	19	VAL
38	DP	21	ARG
38	DP	27	HIS
38	DP	30	THR
38	DP	39	LYS
38	DP	41	ARG
38	DP	47	ASP
38	DP	50	ARG
38	DP	51	PHE
38	DP	58	THR
38	DP	59	LEU
38	DP	61	ARG
38	DP	64	LYS
38	DP	68	GLN
38	DP	71	VAL
38	DP	83	VAL

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Mol	Chain	Res	Type
38	DP	85	LEU
38	DP	87	ASP
38	DP	91	PHE
38	DP	95	VAL
38	DP	98	GLU
38	DP	105	LEU
38	DP	108	LYS
38	DP	112	LEU
38	DP	122	PRO
38	DP	125	VAL
38	DP	130	PHE
39	DQ	17	LEU
39	DQ	27	VAL
39	DQ	29	PHE
39	DQ	45	GLN
39	DQ	51	ARG
39	DQ	52	VAL
39	DQ	59	ARG
39	DQ	63	LYS
39	DQ	66	ILE
39	DQ	76	LYS
39	DQ	79	LEU
39	DQ	81	VAL
39	DQ	82	ARG
39	DQ	89	ASN
39	DQ	106	VAL
39	DQ	112	GLU
39	DQ	129	THR
39	DQ	134	ARG
39	DQ	135	ASP
40	DR	2	ARG
40	DR	4	LEU
40	DR	5	LYS
40	DR	8	ARG
40	DR	15	SER
40	DR	17	ARG
40	DR	27	SER
40	DR	28	LEU
40	DR	29	LEU
40	DR	30	THR
40	DR	33	ARG
40	DR	51	LEU

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Mol	Chain	Res	Type
40	DR	54	LEU
40	DR	56	LYS
40	DR	57	ARG
40	DR	60	LEU
40	DR	67	LEU
40	DR	69	ASP
40	DR	71	GLN
40	DR	75	LEU
40	DR	79	LEU
40	DR	80	PHE
40	DR	81	ASP
40	DR	85	PRO
40	DR	88	ARG
40	DR	91	GLN
40	DR	94	TYR
40	DR	95	THR
40	DR	100	LEU
40	DR	103	ARG
40	DR	104	ARG
40	DR	111	LEU
40	DR	118	GLU
41	DS	12	PHE
41	DS	36	TYR
41	DS	58	LEU
41	DS	63	THR
41	DS	67	ARG
41	DS	73	LEU
41	DS	85	VAL
41	DS	87	PHE
41	DS	89	ARG
41	DS	92	TYR
41	DS	93	LYS
41	DS	97	ARG
41	DS	101	LEU
41	DS	106	ARG
42	DT	9	LEU
42	DT	11	GLU
42	DT	13	ARG
42	DT	14	TYR
42	DT	19	LEU
42	DT	22	PHE
42	DT	24	PRO

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Mol	Chain	Res	Type
42	DT	29	ARG
42	DT	30	VAL
42	DT	38	ASN
42	DT	41	ARG
42	DT	42	ILE
42	DT	46	GLU
42	DT	51	ARG
42	DT	55	ASN
42	DT	78	LEU
42	DT	80	SER
42	DT	81	PRO
42	DT	82	LEU
42	DT	84	GLN
42	DT	85	LYS
42	DT	86	ILE
42	DT	95	ARG
42	DT	96	ARG
42	DT	99	LEU
42	DT	100	TYR
42	DT	110	ILE
42	DT	113	LYS
42	DT	115	ARG
42	DT	119	LYS
42	DT	128	GLU
42	DT	132	LYS
43	DU	5	LYS
43	DU	15	LYS
43	DU	29	SER
43	DU	34	LYS
43	DU	52	ARG
43	DU	60	LEU
43	DU	63	VAL
43	DU	84	LYS
43	DU	92	ARG
43	DU	104	GLN
43	DU	105	VAL
44	DV	5	VAL
44	DV	18	LEU
44	DV	19	LYS
44	DV	21	ARG
44	DV	29	PRO
44	DV	32	THR

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Mol	Chain	Res	Type
44	DV	33	VAL
44	DV	38	LEU
44	DV	39	LEU
44	DV	40	LEU
44	DV	46	VAL
44	DV	49	THR
44	DV	56	SER
44	DV	61	VAL
44	DV	62	LEU
44	DV	68	LYS
44	DV	69	LYS
44	DV	71	LEU
44	DV	78	LYS
44	DV	89	GLN
44	DV	92	THR
44	DV	99	ILE
45	DW	6	ILE
45	DW	8	ARG
45	DW	11	ARG
45	DW	13	SER
45	DW	19	LEU
45	DW	23	LEU
45	DW	27	LYS
45	DW	50	VAL
45	DW	52	GLU
45	DW	57	ASN
45	DW	60	ASN
45	DW	63	ASP
45	DW	67	ASP
45	DW	70	TYR
45	DW	85	VAL
45	DW	86	LEU
45	DW	90	ARG
45	DW	96	ILE
45	DW	107	LEU
46	DX	5	TYR
46	DX	7	VAL
46	DX	8	ILE
46	DX	15	GLU
46	DX	27	THR
46	DX	51	VAL
46	DX	52	VAL

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Mol	Chain	Res	Type
46	DX	53	LYS
46	DX	57	LEU
46	DX	60	ARG
46	DX	68	ARG
46	DX	70	LEU
46	DX	76	ARG
46	DX	78	LYS
46	DX	80	ILE
46	DX	83	VAL
47	DY	6	HIS
47	DY	7	VAL
47	DY	8	LYS
47	DY	19	LYS
47	DY	28	LYS
47	DY	29	GLU
47	DY	32	PRO
47	DY	42	VAL
47	DY	47	LYS
47	DY	53	PRO
47	DY	55	TYR
47	DY	56	PRO
47	DY	60	PHE
47	DY	67	LEU
47	DY	71	LYS
47	DY	72	VAL
47	DY	76	CYS
47	DY	77	PRO
47	DY	79	CYS
47	DY	89	PHE
47	DY	90	LEU
48	DZ	7	TYR
48	DZ	18	ARG
48	DZ	22	LYS
48	DZ	31	HIS
48	DZ	40	LEU
48	DZ	52	ILE
48	DZ	60	LEU
48	DZ	72	GLN
48	DZ	78	ARG
48	DZ	79	ARG
48	DZ	90	LEU
48	DZ	92	ASP

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Mol	Chain	Res	Type
48	DZ	103	PHE
48	DZ	118	GLU
48	DZ	128	SER
48	DZ	130	ARG
48	DZ	131	ASN
48	DZ	144	GLU
48	DZ	147	ASP
48	DZ	149	LEU
49	D0	5	LYS
49	D0	20	ARG
49	D0	30	VAL
49	D0	41	ARG
49	D0	64	ASP
49	D0	70	GLN
49	D0	75	LEU
49	D0	84	LEU
50	D1	21	ARG
50	D1	30	VAL
50	D1	38	SER
50	D1	40	ARG
50	D1	45	ASN
50	D1	46	LEU
50	D1	47	GLN
50	D1	50	ARG
50	D1	58	ILE
50	D1	59	THR
50	D1	61	ARG
50	D1	80	LEU
50	D1	82	LEU
50	D1	90	ILE
50	D1	95	LEU
51	D2	2	LYS
51	D2	3	LEU
51	D2	4	SER
51	D2	5	GLU
51	D2	17	SER
51	D2	20	GLU
51	D2	32	LEU
51	D2	44	LEU
51	D2	53	LEU
51	D2	57	ILE
51	D2	60	LEU

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Mol	Chain	Res	Type
51	D2	63	VAL
51	D2	69	ARG
52	D3	4	LEU
52	D3	6	VAL
52	D3	8	LEU
52	D3	18	ASP
52	D3	23	LEU
52	D3	38	GLU
52	D3	52	HIS
53	D4	36	VAL
53	D4	56	GLU
54	D5	11	THR
54	D5	23	HIS
54	D5	25	LEU
54	D5	33	CYS
54	D5	36	CYS
54	D5	37	LYS
54	D5	40	LYS
54	D5	49	CYS
54	D5	56	LYS
55	D6	8	LYS
55	D6	10	LEU
55	D6	11	LEU
55	D6	13	CYS
55	D6	18	ARG
55	D6	19	ARG
55	D6	31	PRO
55	D6	32	ASN
55	D6	33	LYS
55	D6	36	LEU
55	D6	37	ARG
55	D6	40	CYS
55	D6	41	PRO
55	D6	42	TRP
55	D6	43	CYS
55	D6	47	THR
56	D7	1	MET
56	D7	4	THR
56	D7	8	ASN
56	D7	41	ARG
56	D7	42	LEU
57	D8	8	LYS

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Mol	Chain	Res	Type
57	D8	16	ILE
57	D8	19	SER
57	D8	30	ARG
57	D8	32	LEU
57	D8	33	ASN
57	D8	34	TRP
57	D8	42	ARG
57	D8	44	LYS
57	D8	52	LYS
57	D8	54	GLU
57	D8	56	GLU
57	D8	61	LEU
57	D8	63	PRO
58	D9	2	LYS
58	D9	9	ARG
58	D9	18	ARG
58	D9	28	GLU
58	D9	29	ASN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (293) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	45	GLN
2	AB	78	GLN
2	AB	104	ASN
2	AB	110	GLN
2	AB	204	ASN
2	AB	224	GLN
3	AC	6	HIS
3	AC	28	GLN
3	AC	170	GLN
4	AD	119	GLN
4	AD	123	HIS
4	AD	125	HIS
4	AD	201	GLN
5	AE	72	GLN
5	AE	73	ASN
5	AE	78	HIS
6	AF	16	GLN
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN

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Mol	Chain	Res	Type
6	AF	64	GLN
6	AF	73	ASN
6	AF	94	GLN
6	AF	100	ASN
7	AG	13	GLN
7	AG	96	GLN
7	AG	97	GLN
7	AG	148	ASN
9	AI	23	ASN
9	AI	31	GLN
9	AI	73	GLN
9	AI	89	ASN
9	AI	124	GLN
10	AJ	56	HIS
10	AJ	62	HIS
11	AK	22	HIS
11	AK	38	ASN
11	AK	99	GLN
11	AK	117	ASN
12	AL	5	ASN
12	AL	6	GLN
12	AL	46	ASN
12	AL	73	ASN
12	AL	96	HIS
13	AM	40	ASN
13	AM	77	ASN
13	AM	101	GLN
15	AO	37	ASN
15	AO	62	GLN
16	AP	76	GLN
16	AP	82	GLN
17	AQ	16	GLN
17	AQ	26	GLN
17	AQ	93	GLN
20	AT	18	GLN
20	AT	26	ASN
20	AT	75	ASN
30	BD	58	HIS
30	BD	96	HIS
30	BD	115	GLN
30	BD	166	GLN
30	BD	186	HIS

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Mol	Chain	Res	Type
30	BD	198	ASN
30	BD	220	HIS
30	BD	227	ASN
30	BD	253	GLN
31	BE	35	GLN
31	BE	54	GLN
31	BE	55	ASN
31	BE	66	HIS
31	BE	121	ASN
31	BE	132	HIS
32	BF	69	HIS
32	BF	75	HIS
32	BF	160	ASN
32	BF	169	ASN
32	BF	203	GLN
32	BF	204	ASN
33	BG	26	GLN
33	BG	66	GLN
33	BG	108	ASN
34	BH	65	HIS
34	BH	147	ASN
34	BH	158	HIS
35	BI	17	GLN
35	BI	28	ASN
35	BI	43	ASN
35	BI	54	GLN
35	BI	105	HIS
35	BI	133	HIS
36	BN	56	ASN
36	BN	69	GLN
36	BN	94	HIS
36	BN	130	HIS
36	BN	131	GLN
37	BO	3	GLN
37	BO	13	ASN
37	BO	82	ASN
38	BP	9	ASN
38	BP	27	HIS
38	BP	38	GLN
38	BP	68	GLN
38	BP	84	ASN
38	BP	128	HIS

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Mol	Chain	Res	Type
39	BQ	12	GLN
39	BQ	46	GLN
39	BQ	57	HIS
39	BQ	123	HIS
40	BR	3	HIS
40	BR	16	HIS
40	BR	23	ASN
40	BR	24	GLN
40	BR	50	HIS
40	BR	53	HIS
40	BR	71	GLN
41	BS	68	GLN
42	BT	90	GLN
43	BU	49	HIS
43	BU	72	HIS
43	BU	104	GLN
43	BU	117	GLN
44	BV	11	GLN
45	BW	34	ASN
45	BW	40	ASN
45	BW	57	ASN
45	BW	61	ASN
45	BW	62	HIS
45	BW	102	HIS
45	BW	111	HIS
46	BX	31	HIS
46	BX	41	ASN
46	BX	55	ASN
48	BZ	33	ASN
48	BZ	54	HIS
48	BZ	117	GLN
48	BZ	131	ASN
49	B0	29	GLN
50	B1	19	GLN
50	B1	45	ASN
51	B2	9	GLN
51	B2	43	GLN
51	B2	46	GLN
52	B3	19	GLN
52	B3	33	GLN
52	B3	46	ASN
53	B4	46	ASN

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Mol	Chain	Res	Type
54	B5	4	HIS
54	B5	43	HIS
55	B6	20	ASN
55	B6	26	ASN
56	B7	6	GLN
56	B7	8	ASN
57	B8	31	HIS
57	B8	33	ASN
57	B8	35	GLN
57	B8	43	GLN
58	B9	29	ASN
58	B9	34	GLN
2	CB	16	HIS
2	CB	40	HIS
2	CB	110	GLN
2	CB	135	GLN
2	CB	146	GLN
3	CC	6	HIS
3	CC	28	GLN
3	CC	69	HIS
3	CC	123	GLN
3	CC	170	GLN
4	CD	62	GLN
4	CD	160	GLN
4	CD	161	ASN
5	CE	73	ASN
6	CF	7	ASN
6	CF	18	GLN
6	CF	27	GLN
6	CF	32	ASN
6	CF	94	GLN
6	CF	100	ASN
7	CG	11	GLN
7	CG	28	ASN
7	CG	84	ASN
7	CG	96	GLN
7	CG	97	GLN
8	CH	15	ASN
9	CI	23	ASN
9	CI	73	GLN
10	CJ	13	HIS
10	CJ	78	ASN

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Mol	Chain	Res	Type
11	CK	13	GLN
11	CK	38	ASN
12	CL	5	ASN
12	CL	72	HIS
13	CM	77	ASN
13	CM	92	HIS
13	CM	101	GLN
13	CM	106	ASN
15	CO	9	GLN
15	CO	13	GLN
15	CO	37	ASN
15	CO	50	HIS
15	CO	71	GLN
16	CP	82	GLN
17	CQ	93	GLN
18	CR	36	ASN
19	CS	14	HIS
19	CS	23	ASN
19	CS	47	HIS
19	CS	53	ASN
19	CS	57	HIS
20	CT	26	ASN
30	DD	87	ASN
30	DD	115	GLN
30	DD	186	HIS
30	DD	220	HIS
30	DD	253	GLN
31	DE	54	GLN
31	DE	55	ASN
31	DE	66	HIS
31	DE	129	HIS
31	DE	192	ASN
32	DF	8	GLN
32	DF	31	HIS
32	DF	75	HIS
33	DG	41	GLN
33	DG	132	ASN
34	DH	61	HIS
34	DH	74	ASN
34	DH	143	GLN
34	DH	147	ASN
35	DI	17	GLN

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Mol	Chain	Res	Type
35	DI	105	HIS
36	DN	38	HIS
36	DN	56	ASN
36	DN	69	GLN
36	DN	131	GLN
37	DO	5	GLN
37	DO	82	ASN
38	DP	9	ASN
38	DP	13	ASN
38	DP	27	HIS
38	DP	35	HIS
38	DP	38	GLN
38	DP	68	GLN
38	DP	84	ASN
38	DP	128	HIS
39	DQ	12	GLN
39	DQ	45	GLN
40	DR	16	HIS
40	DR	23	ASN
40	DR	24	GLN
40	DR	31	HIS
40	DR	53	HIS
40	DR	71	GLN
41	DS	16	ASN
41	DS	34	HIS
41	DS	68	GLN
42	DT	43	GLN
42	DT	90	GLN
42	DT	123	GLN
43	DU	49	HIS
43	DU	81	HIS
44	DV	11	GLN
44	DV	80	GLN
45	DW	34	ASN
45	DW	57	ASN
45	DW	102	HIS
46	DX	41	ASN
46	DX	58	HIS
47	DY	43	ASN
48	DZ	53	HIS
48	DZ	72	GLN
48	DZ	74	ASN

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Mol	Chain	Res	Type
48	DZ	117	GLN
48	DZ	120	HIS
48	DZ	131	ASN
49	D0	29	GLN
49	D0	70	GLN
50	D1	45	ASN
51	D2	43	GLN
51	D2	47	ASN
52	D3	19	GLN
52	D3	32	GLN
52	D3	46	ASN
52	D3	52	HIS
53	D4	46	ASN
54	D5	4	HIS
54	D5	43	HIS
55	D6	32	ASN
56	D7	8	ASN
56	D7	36	GLN
57	D8	31	HIS
57	D8	33	ASN
58	D9	29	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1493/1509 (98%)	351 (23%)	136 (9%)
1	CA	1493/1509 (98%)	365 (24%)	120 (8%)
22	AV	9/30 (30%)	0	0
22	CV	9/30 (30%)	0	0
23	AW	74/75 (98%)	17 (22%)	2 (2%)
23	CW	74/75 (98%)	16 (21%)	4 (5%)
24	AX	76/77 (98%)	19 (25%)	1 (1%)
24	CX	76/77 (98%)	19 (25%)	0
25	AY	74/75 (98%)	23 (31%)	1 (1%)
25	CY	74/75 (98%)	22 (29%)	1 (1%)
27	BA	2792/2915 (95%)	798 (28%)	220 (7%)
27	DA	2793/2915 (95%)	905 (32%)	280 (10%)
28	BB	116/122 (95%)	26 (22%)	5 (4%)
28	DB	116/122 (95%)	28 (24%)	8 (6%)
All	All	9269/9606 (96%)	2589 (27%)	778 (8%)

All (2589) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	8	A
1	AA	9	G
1	AA	13	U
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	41	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	52	G
1	AA	53	A
1	AA	61	G
1	AA	64	G
1	AA	65	U
1	AA	107	G
1	AA	110	C
1	AA	114	U
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	129(A)	G
1	AA	131	C
1	AA	132	C
1	AA	137	C
1	AA	143	A
1	AA	146	G
1	AA	170	U
1	AA	174	C
1	AA	181	G
1	AA	182	U
1	AA	183	G
1	AA	189(F)	U
1	AA	189(H)	G
1	AA	189(I)	G
1	AA	195	A
1	AA	198	G
1	AA	199	G
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	220	G
1	AA	237	C

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Mol	Chain	Res	Type
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	253	U
1	AA	258	G
1	AA	262	A
1	AA	266	G
1	AA	267	C
1	AA	274	A
1	AA	275	G
1	AA	279	A
1	AA	280	C
1	AA	281	G
1	AA	287	U
1	AA	289	G
1	AA	306	G
1	AA	316	G
1	AA	328	C
1	AA	330	C
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	358	U
1	AA	367	U
1	AA	369	C
1	AA	373	A
1	AA	374	A
1	AA	389	A
1	AA	390	C
1	AA	397	A
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C

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Mol	Chain	Res	Type
1	AA	423	G
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	435	C
1	AA	439	A
1	AA	442	C
1	AA	451	A
1	AA	452	A
1	AA	453	A
1	AA	454	C
1	AA	455	C
1	AA	461	A
1	AA	470	C
1	AA	471	G
1	AA	472	A
1	AA	482	A
1	AA	484	G
1	AA	485	G
1	AA	486	U
1	AA	487	A
1	AA	495	A
1	AA	496	A
1	AA	498	U
1	AA	499	A
1	AA	508	C
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	521	G
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	535	A
1	AA	548	G
1	AA	559	A
1	AA	560	U
1	AA	562	C
1	AA	566	G

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Mol	Chain	Res	Type
1	AA	569	C
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	578	C
1	AA	579	G
1	AA	595	G
1	AA	596	C
1	AA	607	A
1	AA	623	C
1	AA	632	A
1	AA	642	A
1	AA	653	A
1	AA	665	A
1	AA	666	G
1	AA	687	A
1	AA	688	G
1	AA	693	G
1	AA	699	C
1	AA	701	C
1	AA	702	A
1	AA	703	G
1	AA	717	C
1	AA	718	G
1	AA	721	G
1	AA	722	A
1	AA	724	G
1	AA	731	G
1	AA	733	A
1	AA	748	C
1	AA	749	C
1	AA	752	G
1	AA	753	A
1	AA	755	G
1	AA	759	A
1	AA	767	A
1	AA	773	G
1	AA	777	A
1	AA	790	A
1	AA	793	U

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Mol	Chain	Res	Type
1	AA	801	U
1	AA	815	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	819	A
1	AA	821	G
1	AA	828	A
1	AA	839	U
1	AA	841	U
1	AA	848	C
1	AA	853	G
1	AA	855	G
1	AA	859	A
1	AA	871	U
1	AA	884	U
1	AA	885	G
1	AA	890	G
1	AA	902	G
1	AA	914	A
1	AA	922	G
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	954	G
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	981	U
1	AA	982	U
1	AA	983	A
1	AA	984	C

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Mol	Chain	Res	Type
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1001(A)	G
1	AA	1005	A
1	AA	1006	C
1	AA	1009	G
1	AA	1016	A
1	AA	1017	G
1	AA	1027	C
1	AA	1030	C
1	AA	1030(A)	G
1	AA	1030(B)	C
1	AA	1030(C)	G
1	AA	1045	C
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1062	U
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1070	U
1	AA	1085	U
1	AA	1086	U
1	AA	1087	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G
1	AA	1118	C
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1130	A
1	AA	1136	U
1	AA	1137	C
1	AA	1139	G
1	AA	1140	C

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Mol	Chain	Res	Type
1	AA	1141	C
1	AA	1142	G
1	AA	1146	A
1	AA	1147	C
1	AA	1148	U
1	AA	1153	C
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1181	G
1	AA	1183	A
1	AA	1184	G
1	AA	1190	G
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1201	A
1	AA	1202	G
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G
1	AA	1242	C
1	AA	1249	C
1	AA	1253	G
1	AA	1256	A
1	AA	1257	U
1	AA	1262	C
1	AA	1267	C
1	AA	1273	G
1	AA	1278	U
1	AA	1279	A
1	AA	1280	A
1	AA	1281	U
1	AA	1285	A

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Mol	Chain	Res	Type
1	AA	1286	A
1	AA	1287	A
1	AA	1296	C
1	AA	1297	C
1	AA	1298	C
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1306	A
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1325	C
1	AA	1331	G
1	AA	1335	C
1	AA	1336	C
1	AA	1337	G
1	AA	1347	G
1	AA	1353	G
1	AA	1363(A)	A
1	AA	1364	U
1	AA	1365	G
1	AA	1370	G
1	AA	1379	G
1	AA	1381	U
1	AA	1382	C
1	AA	1395	C
1	AA	1397	C
1	AA	1398	A
1	AA	1399	C
1	AA	1400	C
1	AA	1419	G
1	AA	1425	U
1	AA	1438	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A

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Mol	Chain	Res	Type
1	AA	1452	C
1	AA	1456	G
1	AA	1487	G
1	AA	1492	A
1	AA	1498	U
1	AA	1499	A
1	AA	1504	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1531	A
23	AW	2	G
23	AW	5	G
23	AW	7	A
23	AW	8	U
23	AW	12	C
23	AW	16	C
23	AW	17	G
23	AW	18	G
23	AW	20	A
23	AW	23	G
23	AW	31	U
23	AW	43	C
23	AW	45	U
23	AW	48	C
23	AW	72	G
23	AW	73	C
23	AW	74	C
24	AX	3	C
24	AX	8	U
24	AX	13	C
24	AX	17	C
24	AX	17(B)	U
24	AX	18	G
24	AX	19	G
24	AX	20	U
24	AX	21	A
24	AX	47	U
24	AX	48	C

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Mol	Chain	Res	Type
24	AX	49	G
24	AX	59	A
24	AX	60	U
24	AX	63	G
24	AX	65	C
24	AX	73	A
24	AX	74	C
24	AX	75	C
25	AY	8	U
25	AY	11	C
25	AY	15	G
25	AY	16	C
25	AY	17	G
25	AY	18	G
25	AY	20	A
25	AY	21	A
25	AY	36	A
25	AY	38	U
25	AY	39	C
25	AY	42	G
25	AY	44	U
25	AY	45	U
25	AY	46	U
25	AY	48	C
25	AY	50	A
25	AY	57	A
25	AY	58	A
25	AY	60	C
25	AY	61	C
25	AY	69	C
25	AY	73	C
27	BA	13	A
27	BA	26	G
27	BA	28	A
27	BA	33	U
27	BA	34	C
27	BA	45	C
27	BA	49	A
27	BA	50	U
27	BA	55	G
27	BA	62	C
27	BA	64	A

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Mol	Chain	Res	Type
27	BA	69	C
27	BA	71	A
27	BA	72	U
27	BA	74	A
27	BA	75	G
27	BA	84	A
27	BA	85	G
27	BA	88	G
27	BA	90	U
27	BA	92	A
27	BA	93	G
27	BA	94	C
27	BA	99	U
27	BA	100	G
27	BA	102	G
27	BA	113	G
27	BA	117	G
27	BA	118	A
27	BA	119	A
27	BA	120	U
27	BA	121	G
27	BA	122	G
27	BA	125	G
27	BA	126	A
27	BA	128	C
27	BA	129	C
27	BA	131	G
27	BA	139(A)	G
27	BA	141	A
27	BA	148	C
27	BA	154	G
27	BA	154(A)	C
27	BA	157	U
27	BA	158	U
27	BA	174	C
27	BA	175	G
27	BA	178	G
27	BA	182	A
27	BA	196	A
27	BA	197	A
27	BA	199	A
27	BA	200	U

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Mol	Chain	Res	Type
27	BA	201	C
27	BA	204	A
27	BA	205	G
27	BA	206	U
27	BA	215	G
27	BA	216	A
27	BA	221	A
27	BA	222	A
27	BA	226	G
27	BA	227	A
27	BA	228	A
27	BA	229	A
27	BA	230	U
27	BA	232	G
27	BA	233	A
27	BA	239	U
27	BA	248	G
27	BA	261	G
27	BA	264	C
27	BA	266	G
27	BA	271(A)	A
27	BA	271(G)	C
27	BA	271(H)	G
27	BA	271(J)	C
27	BA	271(K)	U
27	BA	271(L)	U
27	BA	271(P)	C
27	BA	271(T)	C
27	BA	271(W)	G
27	BA	271(Y)	U
27	BA	271(Z)	C
27	BA	272	G
27	BA	272(H)	C
27	BA	272(J)	C
27	BA	275	G
27	BA	283	A
27	BA	284	U
27	BA	286	C
27	BA	287	C
27	BA	295	G
27	BA	301	G
27	BA	302	C

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Mol	Chain	Res	Type
27	BA	305	U
27	BA	310	A
27	BA	311	A
27	BA	316	C
27	BA	322	A
27	BA	323	G
27	BA	329	G
27	BA	330	A
27	BA	335	C
27	BA	341	G
27	BA	346	A
27	BA	352	G
27	BA	356	G
27	BA	358	U
27	BA	362	U
27	BA	363(B)	G
27	BA	363(E)	U
27	BA	363(F)	A
27	BA	365	C
27	BA	371	A
27	BA	372	G
27	BA	386	G
27	BA	387	U
27	BA	391	G
27	BA	392	C
27	BA	394	A
27	BA	396	G
27	BA	398	G
27	BA	400	G
27	BA	402	A
27	BA	405	U
27	BA	406	G
27	BA	411	G
27	BA	412	A
27	BA	416	C
27	BA	421	U
27	BA	422	A
27	BA	428	A
27	BA	434	U
27	BA	435	C
27	BA	441	U
27	BA	443	A

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Mol	Chain	Res	Type
27	BA	448	U
27	BA	455	C
27	BA	456	C
27	BA	457	A
27	BA	470	A
27	BA	471	A
27	BA	473	G
27	BA	475	U
27	BA	479	A
27	BA	480	A
27	BA	481	G
27	BA	482	A
27	BA	494	G
27	BA	503	A
27	BA	504	U
27	BA	505	A
27	BA	508	G
27	BA	509	C
27	BA	510	C
27	BA	512	G
27	BA	525	U
27	BA	528	A
27	BA	530	G
27	BA	531	C
27	BA	532	A
27	BA	543	C
27	BA	548	A
27	BA	549	G
27	BA	551	G
27	BA	556	G
27	BA	561	G
27	BA	562	U
27	BA	563	G
27	BA	571	A
27	BA	572	A
27	BA	573	G
27	BA	574	C
27	BA	575	A
27	BA	588	U
27	BA	603	A
27	BA	604	G
27	BA	607	U

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Mol	Chain	Res	Type
27	BA	610	G
27	BA	614	U
27	BA	614(B)	G
27	BA	615	G
27	BA	620	G
27	BA	621	A
27	BA	622	G
27	BA	627	A
27	BA	628	G
27	BA	634	C
27	BA	637	A
27	BA	638	G
27	BA	645	C
27	BA	646	A
27	BA	652	C
27	BA	657	U
27	BA	668	G
27	BA	669	G
27	BA	670	A
27	BA	671	C
27	BA	686	G
27	BA	708	C
27	BA	717	G
27	BA	721	C
27	BA	722	A
27	BA	726	G
27	BA	729	G
27	BA	730	C
27	BA	740	U
27	BA	747	U
27	BA	748	G
27	BA	753	C
27	BA	754	C
27	BA	755	C
27	BA	762	U
27	BA	763	G
27	BA	764	A
27	BA	776	G
27	BA	779	U
27	BA	782	A
27	BA	784	A
27	BA	785	G

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Mol	Chain	Res	Type
27	BA	790	C
27	BA	791	C
27	BA	792	G
27	BA	793	A
27	BA	805	G
27	BA	806	C
27	BA	812	C
27	BA	819	A
27	BA	826	U
27	BA	827	U
27	BA	828	U
27	BA	830	G
27	BA	841	A
27	BA	845	G
27	BA	846	C
27	BA	848	G
27	BA	857	C
27	BA	859	G
27	BA	866	A
27	BA	888	C
27	BA	890	A
27	BA	896	A
27	BA	897	C
27	BA	900	A
27	BA	904	C
27	BA	907	U
27	BA	910	A
27	BA	914	C
27	BA	917	A
27	BA	932	G
27	BA	933	A
27	BA	941	A
27	BA	946	G
27	BA	952	G
27	BA	958	U
27	BA	959	A
27	BA	961	C
27	BA	964	C
27	BA	974	G
27	BA	975	C
27	BA	983	A
27	BA	985	C

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Mol	Chain	Res	Type
27	BA	990	A
27	BA	991	C
27	BA	994	C
27	BA	996	A
27	BA	997	G
27	BA	1005	C
27	BA	1008	C
27	BA	1009	A
27	BA	1012	U
27	BA	1013	C
27	BA	1017	G
27	BA	1020	A
27	BA	1021	A
27	BA	1022	G
27	BA	1023	U
27	BA	1024	G
27	BA	1025	G
27	BA	1026	U
27	BA	1031	G
27	BA	1033	U
27	BA	1034	G
27	BA	1035	U
27	BA	1042	G
27	BA	1043	C
27	BA	1044	G
27	BA	1045	A
27	BA	1046	A
27	BA	1047	G
27	BA	1049	C
27	BA	1050	A
27	BA	1051	G
27	BA	1052	C
27	BA	1053	C
27	BA	1054	A
27	BA	1110	G
27	BA	1111	A
27	BA	1112	G
27	BA	1113	U
27	BA	1115	G
27	BA	1122	G
27	BA	1126	A
27	BA	1127	A

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Mol	Chain	Res	Type
27	BA	1128	A
27	BA	1129	A
27	BA	1130	U
27	BA	1131	G
27	BA	1132	A
27	BA	1135	C
27	BA	1136	G
27	BA	1140	C
27	BA	1141	U
27	BA	1142	U
27	BA	1142(A)	A
27	BA	1143	A
27	BA	1155	A
27	BA	1170	G
27	BA	1171	G
27	BA	1173	G
27	BA	1174	A
27	BA	1175	U
27	BA	1176	G
27	BA	1177	A
27	BA	1178	C
27	BA	1179	C
27	BA	1180	C
27	BA	1186	G
27	BA	1190	G
27	BA	1193	G
27	BA	1195	G
27	BA	1204	A
27	BA	1205	U
27	BA	1211	U
27	BA	1212	G
27	BA	1213	A
27	BA	1214	A
27	BA	1220	A
27	BA	1221	C
27	BA	1224	C
27	BA	1226	A
27	BA	1230	C
27	BA	1233	C
27	BA	1236	G
27	BA	1237	A
27	BA	1248	G

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Mol	Chain	Res	Type
27	BA	1249	U
27	BA	1250	G
27	BA	1251	C
27	BA	1253	A
27	BA	1256	G
27	BA	1265	A
27	BA	1271	G
27	BA	1272	A
27	BA	1273	U
27	BA	1274	A
27	BA	1276	A
27	BA	1281	G
27	BA	1287	A
27	BA	1289	C
27	BA	1294	U
27	BA	1300	U
27	BA	1301	A
27	BA	1314	C
27	BA	1319	G
27	BA	1320	C
27	BA	1321	A
27	BA	1322	A
27	BA	1328	G
27	BA	1332	G
27	BA	1338	G
27	BA	1341	U
27	BA	1349	A
27	BA	1352	U
27	BA	1354	A
27	BA	1359	A
27	BA	1360	A
27	BA	1365	A
27	BA	1368	G
27	BA	1379	A
27	BA	1380	G
27	BA	1384	A
27	BA	1386	C
27	BA	1406	U
27	BA	1407	C
27	BA	1415	U
27	BA	1416	G
27	BA	1419	A

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Mol	Chain	Res	Type
27	BA	1420	U
27	BA	1427	A
27	BA	1428	C
27	BA	1429	G
27	BA	1430	C
27	BA	1437	C
27	BA	1445	A
27	BA	1445(A)	C
27	BA	1449	A
27	BA	1450	G
27	BA	1455	G
27	BA	1459	G
27	BA	1460	A
27	BA	1461	G
27	BA	1467	C
27	BA	1471	A
27	BA	1482	G
27	BA	1485	G
27	BA	1490	A
27	BA	1491	G
27	BA	1493	C
27	BA	1494	A
27	BA	1495	A
27	BA	1497	U
27	BA	1498	C
27	BA	1500	G
27	BA	1501	C
27	BA	1502	C
27	BA	1505	C
27	BA	1506	C
27	BA	1509	C
27	BA	1509(A)	A
27	BA	1518	U
27	BA	1525	G
27	BA	1547	C
27	BA	1554	A
27	BA	1558	A
27	BA	1559	G
27	BA	1566	A
27	BA	1568	G
27	BA	1569	A
27	BA	1578	U

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Mol	Chain	Res	Type
27	BA	1579	A
27	BA	1584	C
27	BA	1586	A
27	BA	1588	C
27	BA	1594	G
27	BA	1595	G
27	BA	1597	A
27	BA	1598	C
27	BA	1603	A
27	BA	1604	C
27	BA	1608	A
27	BA	1609	A
27	BA	1610	A
27	BA	1615	C
27	BA	1616	A
27	BA	1617	C
27	BA	1618	A
27	BA	1622	G
27	BA	1635	G
27	BA	1636	C
27	BA	1640	C
27	BA	1648	C
27	BA	1651	G
27	BA	1670	C
27	BA	1674	G
27	BA	1675	C
27	BA	1681	G
27	BA	1682	G
27	BA	1686	C
27	BA	1699	G
27	BA	1700	A
27	BA	1703	G
27	BA	1707	G
27	BA	1717	G
27	BA	1718	G
27	BA	1721	G
27	BA	1722	A
27	BA	1739	U
27	BA	1740	G
27	BA	1742	G
27	BA	1745(A)	C
27	BA	1748	G

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Mol	Chain	Res	Type
27	BA	1754	C
27	BA	1758	G
27	BA	1759	A
27	BA	1763	G
27	BA	1764	G
27	BA	1771	C
27	BA	1773	A
27	BA	1776	G
27	BA	1780	A
27	BA	1781	C
27	BA	1785	A
27	BA	1788	C
27	BA	1791	A
27	BA	1799	G
27	BA	1800	C
27	BA	1802	A
27	BA	1815	A
27	BA	1816	G
27	BA	1820	U
27	BA	1829	A
27	BA	1835	G
27	BA	1838	C
27	BA	1839	G
27	BA	1840	G
27	BA	1847	A
27	BA	1848	A
27	BA	1858	G
27	BA	1865	G
27	BA	1877	A
27	BA	1878	G
27	BA	1880	C
27	BA	1882	C
27	BA	1885	A
27	BA	1888	G
27	BA	1889	A
27	BA	1892	C
27	BA	1900	A
27	BA	1905	C
27	BA	1906	G
27	BA	1912	A
27	BA	1913	A
27	BA	1915	U

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Mol	Chain	Res	Type
27	BA	1919	A
27	BA	1926	U
27	BA	1930	G
27	BA	1931	U
27	BA	1936	A
27	BA	1937	A
27	BA	1938	A
27	BA	1940	U
27	BA	1946	U
27	BA	1954	G
27	BA	1955	U
27	BA	1963	U
27	BA	1964	G
27	BA	1965	C
27	BA	1967	C
27	BA	1969	A
27	BA	1970	A
27	BA	1971	A
27	BA	1972	A
27	BA	1981	A
27	BA	1982	C
27	BA	1991	U
27	BA	1993	U
27	BA	1996	C
27	BA	1997	G
27	BA	2006	C
27	BA	2019	A
27	BA	2020	A
27	BA	2021	C
27	BA	2022	U
27	BA	2023	G
27	BA	2026	C
27	BA	2030	A
27	BA	2031	A
27	BA	2032	G
27	BA	2033	A
27	BA	2036	C
27	BA	2037	G
27	BA	2041	U
27	BA	2043	C
27	BA	2048	G
27	BA	2049	G

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Mol	Chain	Res	Type
27	BA	2051	A
27	BA	2052	G
27	BA	2055	C
27	BA	2056	G
27	BA	2058	A
27	BA	2059	A
27	BA	2060	A
27	BA	2061	G
27	BA	2062	A
27	BA	2068	U
27	BA	2069	G
27	BA	2092	U
27	BA	2093	G
27	BA	2099	U
27	BA	2100	G
27	BA	2101	G
27	BA	2103	C
27	BA	2104	G
27	BA	2110	G
27	BA	2111	C
27	BA	2112	G
27	BA	2113	U
27	BA	2116	G
27	BA	2117	A
27	BA	2118	U
27	BA	2119	A
27	BA	2120	G
27	BA	2121	G
27	BA	2126	A
27	BA	2127	G
27	BA	2128	C
27	BA	2131	G
27	BA	2132	U
27	BA	2133	G
27	BA	2136	C
27	BA	2146	C
27	BA	2147	G
27	BA	2157	G
27	BA	2159	G
27	BA	2160	G
27	BA	2172	U
27	BA	2173	A

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Mol	Chain	Res	Type
27	BA	2174	C
27	BA	2175	C
27	BA	2178	C
27	BA	2185	C
27	BA	2187	G
27	BA	2190	G
27	BA	2192	G
27	BA	2193	G
27	BA	2198	A
27	BA	2199	A
27	BA	2200	C
27	BA	2201	C
27	BA	2207	G
27	BA	2208	A
27	BA	2218	U
27	BA	2219	G
27	BA	2226	C
27	BA	2238	G
27	BA	2239	G
27	BA	2240	C
27	BA	2250	G
27	BA	2251	G
27	BA	2252	G
27	BA	2266	A
27	BA	2267	A
27	BA	2268	A
27	BA	2273	A
27	BA	2275	C
27	BA	2283	C
27	BA	2287	A
27	BA	2288	A
27	BA	2290	G
27	BA	2293	C
27	BA	2297	C
27	BA	2305	A
27	BA	2306	C
27	BA	2307	G
27	BA	2308	G
27	BA	2309	A
27	BA	2310	A
27	BA	2311	A
27	BA	2312	U

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Mol	Chain	Res	Type
27	BA	2314	C
27	BA	2318	G
27	BA	2319	G
27	BA	2320	A
27	BA	2321	G
27	BA	2325	G
27	BA	2326	C
27	BA	2327	A
27	BA	2329	G
27	BA	2334	G
27	BA	2335	A
27	BA	2336	A
27	BA	2342	C
27	BA	2345	G
27	BA	2347	C
27	BA	2349	G
27	BA	2350	C
27	BA	2358	G
27	BA	2383	G
27	BA	2384	G
27	BA	2385	C
27	BA	2387	U
27	BA	2388	A
27	BA	2391	G
27	BA	2392	A
27	BA	2399	G
27	BA	2400	G
27	BA	2402	C
27	BA	2407	G
27	BA	2411	A
27	BA	2414	G
27	BA	2424	C
27	BA	2425	A
27	BA	2427	C
27	BA	2429	G
27	BA	2430	A
27	BA	2435	A
27	BA	2439	A
27	BA	2440	C
27	BA	2441	C
27	BA	2448	A
27	BA	2459	A

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Mol	Chain	Res	Type
27	BA	2469	A
27	BA	2470	G
27	BA	2474	C
27	BA	2476	A
27	BA	2477	C
27	BA	2478	A
27	BA	2482	G
27	BA	2484	G
27	BA	2486	G
27	BA	2487	G
27	BA	2491	U
27	BA	2495	G
27	BA	2502	G
27	BA	2503	A
27	BA	2504	U
27	BA	2505	G
27	BA	2506	U
27	BA	2513	G
27	BA	2518	A
27	BA	2520	C
27	BA	2523	G
27	BA	2525	G
27	BA	2529	G
27	BA	2534	A
27	BA	2535	G
27	BA	2543	G
27	BA	2546	U
27	BA	2550	G
27	BA	2554	U
27	BA	2559	C
27	BA	2566	A
27	BA	2567	G
27	BA	2573	C
27	BA	2577	A
27	BA	2582	G
27	BA	2586	C
27	BA	2602	A
27	BA	2610	C
27	BA	2611	U
27	BA	2612	C
27	BA	2614	A
27	BA	2615	U

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Mol	Chain	Res	Type
27	BA	2630	G
27	BA	2639	A
27	BA	2646	C
27	BA	2654	A
27	BA	2655	G
27	BA	2656	U
27	BA	2670	A
27	BA	2682	U
27	BA	2690	C
27	BA	2691	C
27	BA	2694	G
27	BA	2702	U
27	BA	2703	C
27	BA	2707	G
27	BA	2712	U
27	BA	2712(A)	A
27	BA	2713	A
27	BA	2725	A
27	BA	2726	U
27	BA	2727	G
27	BA	2729	G
27	BA	2732	G
27	BA	2733	A
27	BA	2739	U
27	BA	2744	G
27	BA	2751	G
27	BA	2752	C
27	BA	2757	A
27	BA	2761	G
27	BA	2764	A
27	BA	2765	A
27	BA	2777	G
27	BA	2778	A
27	BA	2779	U
27	BA	2789	C
27	BA	2790	A
27	BA	2791	C
27	BA	2792	G
27	BA	2793	G
27	BA	2794	C
27	BA	2796	U
27	BA	2799	C

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Mol	Chain	Res	Type
27	BA	2801	A
27	BA	2801(A)	A
27	BA	2802	G
27	BA	2803	C
27	BA	2804	C
27	BA	2807	G
27	BA	2808	U
27	BA	2813	A
27	BA	2817	G
27	BA	2818	G
27	BA	2820	A
27	BA	2821	A
27	BA	2833	G
27	BA	2834	G
27	BA	2835	A
27	BA	2836	U
27	BA	2848	G
27	BA	2849	U
27	BA	2857	G
27	BA	2864	G
27	BA	2868	A
27	BA	2872	G
27	BA	2874	C
27	BA	2875	C
27	BA	2876	G
27	BA	2877	G
27	BA	2879	C
27	BA	2880	C
27	BA	2893	G
27	BA	2894	G
27	BA	2895	U
28	BB	2	C
28	BB	8	U
28	BB	12	C
28	BB	13	A
28	BB	14	U
28	BB	15	A
28	BB	24	G
28	BB	25	A
28	BB	26	A
28	BB	32	C
28	BB	35	U

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Mol	Chain	Res	Type
28	BB	42	C
28	BB	45	A
28	BB	47	C
28	BB	52	A
28	BB	53	A
28	BB	58	A
28	BB	67	G
28	BB	73	A
28	BB	86	G
28	BB	88	C
28	BB	91	C
28	BB	92	C
28	BB	95	C
28	BB	110	G
28	BB	113	G
1	CA	8	A
1	CA	9	G
1	CA	10	A
1	CA	14	U
1	CA	22	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	60	A
1	CA	61	G
1	CA	64	G
1	CA	65	U
1	CA	66	G
1	CA	101	A
1	CA	109	A
1	CA	110	C
1	CA	116	A
1	CA	120	A
1	CA	121	C
1	CA	129(A)	G
1	CA	130	A
1	CA	131	C
1	CA	132	C
1	CA	137	C

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Mol	Chain	Res	Type
1	CA	144	G
1	CA	146	G
1	CA	173	U
1	CA	174	C
1	CA	182	U
1	CA	189(E)	U
1	CA	194	C
1	CA	195	A
1	CA	198	G
1	CA	200	G
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	217	C
1	CA	218	C
1	CA	219	C
1	CA	220	G
1	CA	231	G
1	CA	241	C
1	CA	244	U
1	CA	246	A
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	275	G
1	CA	279	A
1	CA	280	C
1	CA	289	G
1	CA	305	G
1	CA	306	G
1	CA	316	G
1	CA	321	A
1	CA	328	C
1	CA	330	C
1	CA	332	G
1	CA	342	C
1	CA	344	A
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	348	G

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Mol	Chain	Res	Type
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	366	C
1	CA	367	U
1	CA	373	A
1	CA	389	A
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	421	U
1	CA	422	C
1	CA	423	G
1	CA	424	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	431	A
1	CA	435	C
1	CA	438	G
1	CA	439	A
1	CA	442	C
1	CA	444	C
1	CA	451	A
1	CA	452	A
1	CA	453	A
1	CA	454	C
1	CA	455	C
1	CA	461	A
1	CA	471	G
1	CA	472	A
1	CA	481	G
1	CA	482	A
1	CA	484	G
1	CA	485	G
1	CA	494	U
1	CA	495	A

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Mol	Chain	Res	Type
1	CA	496	A
1	CA	498	U
1	CA	499	A
1	CA	508	C
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	512	U
1	CA	517	G
1	CA	518	C
1	CA	527	G
1	CA	529	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	547	A
1	CA	548	G
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	563	A
1	CA	564	C
1	CA	566	G
1	CA	567	G
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	577	G
1	CA	587	G
1	CA	596	C
1	CA	598	U
1	CA	629	G
1	CA	630	G
1	CA	632	A
1	CA	641	U
1	CA	642	A
1	CA	643	C
1	CA	653	A
1	CA	654	G
1	CA	665	A

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Mol	Chain	Res	Type
1	CA	666	G
1	CA	687	A
1	CA	688	G
1	CA	701	C
1	CA	702	A
1	CA	703	G
1	CA	720	C
1	CA	721	G
1	CA	722	A
1	CA	729	A
1	CA	731	G
1	CA	748	C
1	CA	749	C
1	CA	754	C
1	CA	755	G
1	CA	774	G
1	CA	777	A
1	CA	793	U
1	CA	794	A
1	CA	811	C
1	CA	813	U
1	CA	815	A
1	CA	816	A
1	CA	817	C
1	CA	818	G
1	CA	819	A
1	CA	821	G
1	CA	827	U
1	CA	828	A
1	CA	835	U
1	CA	839	U
1	CA	841	U
1	CA	848	C
1	CA	851	G
1	CA	859	A
1	CA	871	U
1	CA	874	G
1	CA	875	C
1	CA	884	U
1	CA	885	G
1	CA	889	A
1	CA	890	G

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Mol	Chain	Res	Type
1	CA	902	G
1	CA	914	A
1	CA	916	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	936	C
1	CA	960	U
1	CA	962	C
1	CA	965	A
1	CA	966	G
1	CA	967	C
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	981	U
1	CA	983	A
1	CA	984	C
1	CA	985	C
1	CA	986	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	995	C
1	CA	996	A
1	CA	1001(A)	G
1	CA	1004	A
1	CA	1006	C
1	CA	1016	A
1	CA	1024	G
1	CA	1027	C
1	CA	1030	C
1	CA	1030(A)	G
1	CA	1030(C)	G

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Mol	Chain	Res	Type
1	CA	1031	G
1	CA	1042	G
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1058	G
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1085	U
1	CA	1086	U
1	CA	1094	G
1	CA	1099	G
1	CA	1101	A
1	CA	1102	A
1	CA	1105	A
1	CA	1108	G
1	CA	1117	G
1	CA	1118	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1127	G
1	CA	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1137	C
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1145	C
1	CA	1146	A
1	CA	1155	G
1	CA	1157	A
1	CA	1158	C
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1162	C
1	CA	1171	G

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Mol	Chain	Res	Type
1	CA	1182	G
1	CA	1183	A
1	CA	1184	G
1	CA	1195	C
1	CA	1196	U
1	CA	1197	G
1	CA	1200	C
1	CA	1201	A
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1216	G
1	CA	1224	G
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1232	U
1	CA	1238	A
1	CA	1239	A
1	CA	1240	U
1	CA	1241	G
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1260	C
1	CA	1263	C
1	CA	1273	G
1	CA	1280	A
1	CA	1281	U
1	CA	1285	A
1	CA	1286	A
1	CA	1287	A
1	CA	1297	C
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1306	A
1	CA	1317	C
1	CA	1319	A
1	CA	1320	C

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Mol	Chain	Res	Type
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1334	G
1	CA	1336	C
1	CA	1338	G
1	CA	1347	G
1	CA	1363(A)	A
1	CA	1364	U
1	CA	1365	G
1	CA	1370	G
1	CA	1378	C
1	CA	1381	U
1	CA	1394	A
1	CA	1395	C
1	CA	1397	C
1	CA	1398	A
1	CA	1419	G
1	CA	1429	C
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1444	C
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1492	A
1	CA	1498	U
1	CA	1499	A
1	CA	1502	A
1	CA	1503	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1521	G
1	CA	1525	G
1	CA	1528	U

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Mol	Chain	Res	Type
1	CA	1529	G
1	CA	1530	G
23	CW	8	U
23	CW	9	C
23	CW	16	C
23	CW	17	G
23	CW	20	A
23	CW	31	U
23	CW	36	A
23	CW	43	C
23	CW	45	U
23	CW	48	C
23	CW	53	U
23	CW	60	C
23	CW	71	A
23	CW	72	G
23	CW	73	C
23	CW	74	C
24	CX	8	U
24	CX	13	C
24	CX	17	C
24	CX	17(B)	U
24	CX	19	G
24	CX	20	U
24	CX	21	A
24	CX	47	U
24	CX	48	C
24	CX	49	G
24	CX	51	C
24	CX	61	C
24	CX	62	C
24	CX	63	G
24	CX	65	C
24	CX	68	C
24	CX	73	A
24	CX	74	C
24	CX	75	C
25	CY	8	U
25	CY	9	C
25	CY	11	C
25	CY	12	C
25	CY	16	C

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Mol	Chain	Res	Type
25	CY	17	G
25	CY	18	G
25	CY	20	A
25	CY	21	A
25	CY	36	A
25	CY	38	U
25	CY	42	G
25	CY	46	U
25	CY	47	C
25	CY	49	G
25	CY	50	A
25	CY	55	C
25	CY	57	A
25	CY	58	A
25	CY	60	C
25	CY	69	C
25	CY	73	C
27	DA	19	C
27	DA	33	U
27	DA	34	C
27	DA	35	G
27	DA	45	C
27	DA	49	A
27	DA	50	U
27	DA	51	G
27	DA	53	A
27	DA	61	G
27	DA	62	C
27	DA	64	A
27	DA	69	C
27	DA	71	A
27	DA	72	U
27	DA	73	A
27	DA	74	A
27	DA	75	G
27	DA	83	G
27	DA	84	A
27	DA	88	G
27	DA	90	U
27	DA	92	A
27	DA	93	G
27	DA	94	C

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Mol	Chain	Res	Type
27	DA	95	G
27	DA	99	U
27	DA	100	G
27	DA	102	G
27	DA	113	G
27	DA	118	A
27	DA	119	A
27	DA	120	U
27	DA	126	A
27	DA	129	C
27	DA	139(A)	G
27	DA	140	G
27	DA	141	A
27	DA	146	G
27	DA	149	A
27	DA	150	C
27	DA	154	G
27	DA	157	U
27	DA	158	U
27	DA	172	C
27	DA	173	G
27	DA	175	G
27	DA	177	G
27	DA	181	A
27	DA	182	A
27	DA	196	A
27	DA	197	A
27	DA	199	A
27	DA	200	U
27	DA	201	C
27	DA	204	A
27	DA	205	G
27	DA	214	G
27	DA	216	A
27	DA	217	G
27	DA	221	A
27	DA	222	A
27	DA	224	G
27	DA	227	A
27	DA	228	A
27	DA	232	G
27	DA	233	A

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Mol	Chain	Res	Type
27	DA	241	A
27	DA	242	G
27	DA	248	G
27	DA	249	C
27	DA	250	G
27	DA	252	G
27	DA	256	A
27	DA	261	G
27	DA	266	G
27	DA	267	C
27	DA	271(J)	C
27	DA	271(K)	U
27	DA	271(M)	G
27	DA	271(O)	C
27	DA	271(P)	C
27	DA	271(T)	C
27	DA	271(Y)	U
27	DA	271(Z)	C
27	DA	272	G
27	DA	272(C)	G
27	DA	272(H)	C
27	DA	272(J)	C
27	DA	274	G
27	DA	275	G
27	DA	283	A
27	DA	284	U
27	DA	285	C
27	DA	287	C
27	DA	288	C
27	DA	289	A
27	DA	301	G
27	DA	302	C
27	DA	310	A
27	DA	311	A
27	DA	313	C
27	DA	314	A
27	DA	316	C
27	DA	322	A
27	DA	323	G
27	DA	324	A
27	DA	329	G
27	DA	330	A

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Mol	Chain	Res	Type
27	DA	332	A
27	DA	333	G
27	DA	334	C
27	DA	338	G
27	DA	345	A
27	DA	346	A
27	DA	352	G
27	DA	353	G
27	DA	356	G
27	DA	358	U
27	DA	362	U
27	DA	363(B)	G
27	DA	363(E)	U
27	DA	363(F)	A
27	DA	364	C
27	DA	371	A
27	DA	372	G
27	DA	374	A
27	DA	387	U
27	DA	395	U
27	DA	396	G
27	DA	404	C
27	DA	405	U
27	DA	406	G
27	DA	411	G
27	DA	412	A
27	DA	413	C
27	DA	416	C
27	DA	422	A
27	DA	423	A
27	DA	428	A
27	DA	435	C
27	DA	443	A
27	DA	444	C
27	DA	445	C
27	DA	446	G
27	DA	447	A
27	DA	448	U
27	DA	449	A
27	DA	455	C
27	DA	456	C
27	DA	457	A

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Mol	Chain	Res	Type
27	DA	458	G
27	DA	460	A
27	DA	467	G
27	DA	470	A
27	DA	473	G
27	DA	475	U
27	DA	476	G
27	DA	478	A
27	DA	479	A
27	DA	480	A
27	DA	481	G
27	DA	482	A
27	DA	483	A
27	DA	492	A
27	DA	503	A
27	DA	504	U
27	DA	505	A
27	DA	506	G
27	DA	507	A
27	DA	509	C
27	DA	510	C
27	DA	512	G
27	DA	515	A
27	DA	527	C
27	DA	528	A
27	DA	530	G
27	DA	531	C
27	DA	532	A
27	DA	533	G
27	DA	542	C
27	DA	543	C
27	DA	548	A
27	DA	549	G
27	DA	551	G
27	DA	555	U
27	DA	561	G
27	DA	563	G
27	DA	568	U
27	DA	571	A
27	DA	572	A
27	DA	573	G
27	DA	575	A

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Mol	Chain	Res	Type
27	DA	583	G
27	DA	587	C
27	DA	588	U
27	DA	594	U
27	DA	602	G
27	DA	604	G
27	DA	607	U
27	DA	614(B)	G
27	DA	614(C)	A
27	DA	615	G
27	DA	620	G
27	DA	621	A
27	DA	622	G
27	DA	623	G
27	DA	627	A
27	DA	628	G
27	DA	629	G
27	DA	631	A
27	DA	632	A
27	DA	634	C
27	DA	635	C
27	DA	638	G
27	DA	645	C
27	DA	646	A
27	DA	657	U
27	DA	668	G
27	DA	669	G
27	DA	676	A
27	DA	686	G
27	DA	702	G
27	DA	705	A
27	DA	707	G
27	DA	708	C
27	DA	715	G
27	DA	720	C
27	DA	722	A
27	DA	726	G
27	DA	727	A
27	DA	728	G
27	DA	730	C
27	DA	740	U
27	DA	741	G

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Mol	Chain	Res	Type
27	DA	747	U
27	DA	748	G
27	DA	753	C
27	DA	762	U
27	DA	763	G
27	DA	764	A
27	DA	765	G
27	DA	776	G
27	DA	782	A
27	DA	784	A
27	DA	785	G
27	DA	792	G
27	DA	794	G
27	DA	795	C
27	DA	800	A
27	DA	801	G
27	DA	805	G
27	DA	806	C
27	DA	812	C
27	DA	817	C
27	DA	819	A
27	DA	822	U
27	DA	827	U
27	DA	828	U
27	DA	830	G
27	DA	831	G
27	DA	848	G
27	DA	856	C
27	DA	857	C
27	DA	859	G
27	DA	863	A
27	DA	865	C
27	DA	866	A
27	DA	867	C
27	DA	872	A
27	DA	888	C
27	DA	890	A
27	DA	896	A
27	DA	897	C
27	DA	900	A
27	DA	904	C
27	DA	907	U

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Mol	Chain	Res	Type
27	DA	910	A
27	DA	917	A
27	DA	926	A
27	DA	927	G
27	DA	928	G
27	DA	932	G
27	DA	933	A
27	DA	941	A
27	DA	945	A
27	DA	946	G
27	DA	955	C
27	DA	957	A
27	DA	958	U
27	DA	959	A
27	DA	960	A
27	DA	961	C
27	DA	965	C
27	DA	966	G
27	DA	970	C
27	DA	974	G
27	DA	975	C
27	DA	980	A
27	DA	983	A
27	DA	986	C
27	DA	989	G
27	DA	990	A
27	DA	991	C
27	DA	996	A
27	DA	997	G
27	DA	999	U
27	DA	1000	A
27	DA	1004	C
27	DA	1005	C
27	DA	1008	C
27	DA	1009	A
27	DA	1010	A
27	DA	1011	G
27	DA	1012	U
27	DA	1013	C
27	DA	1015	G
27	DA	1020	A
27	DA	1021	A

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Mol	Chain	Res	Type
27	DA	1022	G
27	DA	1023	U
27	DA	1025	G
27	DA	1026	U
27	DA	1027	A
27	DA	1031	G
27	DA	1033	U
27	DA	1034	G
27	DA	1035	U
27	DA	1036	G
27	DA	1039	G
27	DA	1040	C
27	DA	1044	G
27	DA	1045	A
27	DA	1047	G
27	DA	1049	C
27	DA	1050	A
27	DA	1051	G
27	DA	1053	C
27	DA	1054	A
27	DA	1055	G
27	DA	1110	G
27	DA	1111	A
27	DA	1112	G
27	DA	1115	G
27	DA	1126	A
27	DA	1127	A
27	DA	1128	A
27	DA	1130	U
27	DA	1132	A
27	DA	1133	U
27	DA	1135	C
27	DA	1136	G
27	DA	1142	U
27	DA	1142(A)	A
27	DA	1143	A
27	DA	1144	G
27	DA	1155	A
27	DA	1157	G
27	DA	1158	C
27	DA	1159	U
27	DA	1171	G

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Mol	Chain	Res	Type
27	DA	1173	G
27	DA	1174	A
27	DA	1175	U
27	DA	1176	G
27	DA	1177	A
27	DA	1179	C
27	DA	1180	C
27	DA	1186	G
27	DA	1195	G
27	DA	1204	A
27	DA	1205	U
27	DA	1206	G
27	DA	1207	C
27	DA	1208	C
27	DA	1210	A
27	DA	1211	U
27	DA	1216	G
27	DA	1220	A
27	DA	1221	C
27	DA	1236	G
27	DA	1237	A
27	DA	1238	G
27	DA	1243	G
27	DA	1247	A
27	DA	1248	G
27	DA	1251	C
27	DA	1252	G
27	DA	1253	A
27	DA	1255	U
27	DA	1256	G
27	DA	1265	A
27	DA	1267	U
27	DA	1268	A
27	DA	1271	G
27	DA	1272	A
27	DA	1273	U
27	DA	1276	A
27	DA	1281	G
27	DA	1285	G
27	DA	1288	U
27	DA	1289	C
27	DA	1290	C

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Mol	Chain	Res	Type
27	DA	1294	U
27	DA	1300	U
27	DA	1301	A
27	DA	1302	A
27	DA	1311	G
27	DA	1312	U
27	DA	1314	C
27	DA	1319	G
27	DA	1320	C
27	DA	1321	A
27	DA	1322	A
27	DA	1325	G
27	DA	1329	U
27	DA	1332	G
27	DA	1333	C
27	DA	1341	U
27	DA	1345	C
27	DA	1349	A
27	DA	1352	U
27	DA	1354	A
27	DA	1355	G
27	DA	1359	A
27	DA	1365	A
27	DA	1368	G
27	DA	1379	A
27	DA	1380	G
27	DA	1384	A
27	DA	1386	C
27	DA	1387	C
27	DA	1393	A
27	DA	1395	A
27	DA	1396	U
27	DA	1397	U
27	DA	1398	C
27	DA	1399	C
27	DA	1407	C
27	DA	1416	G
27	DA	1419	A
27	DA	1420	U
27	DA	1421	G
27	DA	1427	A
27	DA	1428	C

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Mol	Chain	Res	Type
27	DA	1437	C
27	DA	1445	A
27	DA	1445(A)	C
27	DA	1448	G
27	DA	1449	A
27	DA	1452	A
27	DA	1453	U
27	DA	1455	G
27	DA	1459	G
27	DA	1460	A
27	DA	1461	G
27	DA	1467	C
27	DA	1471	A
27	DA	1478	G
27	DA	1481	U
27	DA	1482	G
27	DA	1484	G
27	DA	1485	G
27	DA	1490	A
27	DA	1493	C
27	DA	1494	A
27	DA	1495	A
27	DA	1496	A
27	DA	1497	U
27	DA	1498	C
27	DA	1502	C
27	DA	1505	C
27	DA	1507	A
27	DA	1509	C
27	DA	1509(A)	A
27	DA	1516	C
27	DA	1519	G
27	DA	1520	G
27	DA	1523	U
27	DA	1546	C
27	DA	1547	C
27	DA	1549	C
27	DA	1554	A
27	DA	1555	G
27	DA	1558	A
27	DA	1559	G
27	DA	1560	G

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Mol	Chain	Res	Type
27	DA	1566	A
27	DA	1569	A
27	DA	1575	C
27	DA	1578	U
27	DA	1579	A
27	DA	1580	A
27	DA	1581	G
27	DA	1584	C
27	DA	1586	A
27	DA	1588	C
27	DA	1591	G
27	DA	1602	U
27	DA	1603	A
27	DA	1604	C
27	DA	1607	C
27	DA	1608	A
27	DA	1609	A
27	DA	1610	A
27	DA	1611	C
27	DA	1615	C
27	DA	1616	A
27	DA	1617	C
27	DA	1618	A
27	DA	1622	G
27	DA	1625	C
27	DA	1631(A)	A
27	DA	1634	A
27	DA	1635	G
27	DA	1640	C
27	DA	1648	C
27	DA	1654	A
27	DA	1674	G
27	DA	1675	C
27	DA	1681	G
27	DA	1682	G
27	DA	1686	C
27	DA	1688	U
27	DA	1694	C
27	DA	1695	G
27	DA	1696	G
27	DA	1699	G
27	DA	1700	A

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Mol	Chain	Res	Type
27	DA	1701	A
27	DA	1702	G
27	DA	1703	G
27	DA	1718	G
27	DA	1721	G
27	DA	1722	A
27	DA	1739	U
27	DA	1740	G
27	DA	1741	A
27	DA	1742	G
27	DA	1744	C
27	DA	1745(A)	C
27	DA	1748	G
27	DA	1753	G
27	DA	1754	C
27	DA	1756	G
27	DA	1758	G
27	DA	1759	A
27	DA	1763	G
27	DA	1764	G
27	DA	1773	A
27	DA	1778	U
27	DA	1780	A
27	DA	1782	C
27	DA	1783	A
27	DA	1785	A
27	DA	1787	A
27	DA	1791	A
27	DA	1799	G
27	DA	1800	C
27	DA	1801	G
27	DA	1803	A
27	DA	1815	A
27	DA	1816	G
27	DA	1819	A
27	DA	1820	U
27	DA	1827	C
27	DA	1828	G
27	DA	1829	A
27	DA	1838	C
27	DA	1839	G
27	DA	1847	A

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Mol	Chain	Res	Type
27	DA	1848	A
27	DA	1858	G
27	DA	1865	G
27	DA	1877	A
27	DA	1878	G
27	DA	1882	C
27	DA	1885	A
27	DA	1888	G
27	DA	1889	A
27	DA	1894	C
27	DA	1900	A
27	DA	1901	A
27	DA	1906	G
27	DA	1908	C
27	DA	1912	A
27	DA	1913	A
27	DA	1926	U
27	DA	1929	G
27	DA	1930	G
27	DA	1937	A
27	DA	1938	A
27	DA	1943	U
27	DA	1944	U
27	DA	1945	G
27	DA	1954	G
27	DA	1955	U
27	DA	1956	U
27	DA	1957	C
27	DA	1962	C
27	DA	1963	U
27	DA	1965	C
27	DA	1966	A
27	DA	1967	C
27	DA	1969	A
27	DA	1970	A
27	DA	1971	A
27	DA	1972	A
27	DA	1982	C
27	DA	1987	G
27	DA	1993	U
27	DA	1996	C
27	DA	1997	G

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Mol	Chain	Res	Type
27	DA	2004	G
27	DA	2019	A
27	DA	2021	C
27	DA	2022	U
27	DA	2023	G
27	DA	2024	G
27	DA	2025	C
27	DA	2030	A
27	DA	2031	A
27	DA	2032	G
27	DA	2033	A
27	DA	2034	U
27	DA	2035	G
27	DA	2036	C
27	DA	2037	G
27	DA	2039	C
27	DA	2043	C
27	DA	2052	G
27	DA	2055	C
27	DA	2056	G
27	DA	2060	A
27	DA	2061	G
27	DA	2062	A
27	DA	2063	C
27	DA	2066	C
27	DA	2067	G
27	DA	2068	U
27	DA	2069	G
27	DA	2090	G
27	DA	2092	U
27	DA	2093	G
27	DA	2098	U
27	DA	2099	U
27	DA	2103	C
27	DA	2104	G
27	DA	2111	C
27	DA	2113	U
27	DA	2114	A
27	DA	2116	G
27	DA	2117	A
27	DA	2118	U
27	DA	2119	A

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Mol	Chain	Res	Type
27	DA	2120	G
27	DA	2121	G
27	DA	2126	A
27	DA	2127	G
27	DA	2128	C
27	DA	2131	G
27	DA	2133	G
27	DA	2136	C
27	DA	2144	U
27	DA	2146	C
27	DA	2147	G
27	DA	2148	G
27	DA	2157	G
27	DA	2159	G
27	DA	2160	G
27	DA	2172	U
27	DA	2173	A
27	DA	2174	C
27	DA	2175	C
27	DA	2176	A
27	DA	2179	C
27	DA	2187	G
27	DA	2189	U
27	DA	2190	G
27	DA	2192	G
27	DA	2193	G
27	DA	2196	C
27	DA	2197	U
27	DA	2198	A
27	DA	2199	A
27	DA	2200	C
27	DA	2207	G
27	DA	2208	A
27	DA	2218	U
27	DA	2219	G
27	DA	2222	G
27	DA	2225	A
27	DA	2226	C
27	DA	2227	A
27	DA	2234	G
27	DA	2238	G
27	DA	2239	G

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Mol	Chain	Res	Type
27	DA	2246	G
27	DA	2250	G
27	DA	2251	G
27	DA	2255	G
27	DA	2259	G
27	DA	2266	A
27	DA	2267	A
27	DA	2268	A
27	DA	2275	C
27	DA	2276	G
27	DA	2277	G
27	DA	2283	C
27	DA	2286	A
27	DA	2287	A
27	DA	2288	A
27	DA	2289	G
27	DA	2290	G
27	DA	2296	U
27	DA	2297	C
27	DA	2304	G
27	DA	2305	A
27	DA	2307	G
27	DA	2308	G
27	DA	2309	A
27	DA	2310	A
27	DA	2311	A
27	DA	2312	U
27	DA	2313	C
27	DA	2316	C
27	DA	2319	G
27	DA	2320	A
27	DA	2321	G
27	DA	2322	A
27	DA	2325	G
27	DA	2327	A
27	DA	2330	G
27	DA	2334	G
27	DA	2335	A
27	DA	2336	A
27	DA	2338	G
27	DA	2345	G
27	DA	2346	A

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Mol	Chain	Res	Type
27	DA	2347	C
27	DA	2349	G
27	DA	2355	C
27	DA	2383	G
27	DA	2384	G
27	DA	2385	C
27	DA	2387	U
27	DA	2392	A
27	DA	2395	C
27	DA	2398	U
27	DA	2399	G
27	DA	2400	G
27	DA	2402	C
27	DA	2403	C
27	DA	2406	U
27	DA	2422	A
27	DA	2423	U
27	DA	2424	C
27	DA	2425	A
27	DA	2427	C
27	DA	2428	G
27	DA	2429	G
27	DA	2430	A
27	DA	2431	U
27	DA	2434	A
27	DA	2439	A
27	DA	2440	C
27	DA	2441	C
27	DA	2447	G
27	DA	2448	A
27	DA	2452	C
27	DA	2458	G
27	DA	2459	A
27	DA	2460	U
27	DA	2469	A
27	DA	2470	G
27	DA	2476	A
27	DA	2477	C
27	DA	2482	G
27	DA	2483	C
27	DA	2484	G
27	DA	2490	G

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Mol	Chain	Res	Type
27	DA	2491	U
27	DA	2495	G
27	DA	2498	C
27	DA	2499	C
27	DA	2502	G
27	DA	2505	G
27	DA	2518	A
27	DA	2520	C
27	DA	2522	U
27	DA	2523	G
27	DA	2527	C
27	DA	2529	G
27	DA	2534	A
27	DA	2538	C
27	DA	2543	G
27	DA	2546	U
27	DA	2547	U
27	DA	2553	G
27	DA	2554	U
27	DA	2566	A
27	DA	2567	G
27	DA	2569	G
27	DA	2572	A
27	DA	2573	C
27	DA	2577	A
27	DA	2579	C
27	DA	2580	U
27	DA	2581	G
27	DA	2585	U
27	DA	2586	C
27	DA	2587	A
27	DA	2598	A
27	DA	2599	G
27	DA	2602	A
27	DA	2603	G
27	DA	2608	G
27	DA	2609	U
27	DA	2610	C
27	DA	2611	U
27	DA	2612	C
27	DA	2613	U
27	DA	2629	A

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Mol	Chain	Res	Type
27	DA	2630	G
27	DA	2632	A
27	DA	2636	U
27	DA	2639	A
27	DA	2645	G
27	DA	2646	C
27	DA	2654	A
27	DA	2655	G
27	DA	2656	U
27	DA	2657	A
27	DA	2673	G
27	DA	2682	U
27	DA	2683	C
27	DA	2686	G
27	DA	2690	C
27	DA	2691	C
27	DA	2702	U
27	DA	2703	C
27	DA	2707	G
27	DA	2712	U
27	DA	2712(A)	A
27	DA	2713	A
27	DA	2714	G
27	DA	2715	C
27	DA	2726	U
27	DA	2727	G
27	DA	2730	C
27	DA	2732	G
27	DA	2733	A
27	DA	2739	U
27	DA	2748	A
27	DA	2750	A
27	DA	2751	G
27	DA	2752	C
27	DA	2754	U
27	DA	2756	U
27	DA	2757	A
27	DA	2758	A
27	DA	2759	G
27	DA	2762	G
27	DA	2763	G
27	DA	2764	A

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Mol	Chain	Res	Type
27	DA	2765	A
27	DA	2777	G
27	DA	2778	A
27	DA	2780	G
27	DA	2789	C
27	DA	2791	C
27	DA	2792	G
27	DA	2794	C
27	DA	2795	G
27	DA	2796	U
27	DA	2799	C
27	DA	2801(A)	A
27	DA	2802	G
27	DA	2803	C
27	DA	2804	C
27	DA	2805	G
27	DA	2807	G
27	DA	2808	U
27	DA	2818	G
27	DA	2820	A
27	DA	2821	A
27	DA	2827	C
27	DA	2833	G
27	DA	2834	G
27	DA	2835	A
27	DA	2849	U
27	DA	2861	G
27	DA	2866	U
27	DA	2867	G
27	DA	2872	G
27	DA	2874	C
27	DA	2875	C
27	DA	2879	C
27	DA	2880	C
27	DA	2883	A
27	DA	2889	C
27	DA	2893	G
27	DA	2894	G
27	DA	2895	U
27	DA	2896	C
28	DB	2	C
28	DB	8	U

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Mol	Chain	Res	Type
28	DB	12	C
28	DB	13	A
28	DB	15	A
28	DB	25	A
28	DB	26	A
28	DB	27	C
28	DB	28	C
28	DB	34	U
28	DB	35	U
28	DB	36	C
28	DB	40	U
28	DB	42	C
28	DB	45	A
28	DB	46	A
28	DB	52	A
28	DB	53	A
28	DB	60	C
28	DB	63	G
28	DB	67	G
28	DB	73	A
28	DB	77	U
28	DB	88	C
28	DB	90	A
28	DB	91	C
28	DB	110	G
28	DB	113	G

All (778) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	13	U
1	AA	30	U
1	AA	52	G
1	AA	60	A
1	AA	63	C
1	AA	64	G
1	AA	109	A
1	AA	113	G
1	AA	115	G
1	AA	119	A
1	AA	129(A)	G

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Mol	Chain	Res	Type
1	AA	131	C
1	AA	173	U
1	AA	181	G
1	AA	182	U
1	AA	189(H)	G
1	AA	189(I)	G
1	AA	197	A
1	AA	198	G
1	AA	203	U
1	AA	204	U
1	AA	243	A
1	AA	246	A
1	AA	250	A
1	AA	266	G
1	AA	274	A
1	AA	279	A
1	AA	305	G
1	AA	306	G
1	AA	315	A
1	AA	327	A
1	AA	344	A
1	AA	346	G
1	AA	353	A
1	AA	366	C
1	AA	368	U
1	AA	372	C
1	AA	373	A
1	AA	412	A
1	AA	414	A
1	AA	422	C
1	AA	423	G
1	AA	428	G
1	AA	429	U
1	AA	438	G
1	AA	451	A
1	AA	453	A
1	AA	454	C
1	AA	461	A
1	AA	471	G
1	AA	484	G
1	AA	486	U
1	AA	495	A

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Mol	Chain	Res	Type
1	AA	498	U
1	AA	508	C
1	AA	530	G
1	AA	531	U
1	AA	533	A
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	577	G
1	AA	578	C
1	AA	595	G
1	AA	641	U
1	AA	653	A
1	AA	686	U
1	AA	687	A
1	AA	702	A
1	AA	717	C
1	AA	721	G
1	AA	722	A
1	AA	723	U
1	AA	748	C
1	AA	752	G
1	AA	758	G
1	AA	792	A
1	AA	815	A
1	AA	817	C
1	AA	819	A
1	AA	820	U
1	AA	840	C
1	AA	870	U
1	AA	884	U
1	AA	889	A
1	AA	913	A
1	AA	934	C
1	AA	960	U
1	AA	965	A
1	AA	968	A
1	AA	974	A
1	AA	977	A
1	AA	978	A
1	AA	983	A
1	AA	992	U

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Mol	Chain	Res	Type
1	AA	1049	U
1	AA	1053	G
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1085	U
1	AA	1086	U
1	AA	1101	A
1	AA	1125	U
1	AA	1126	U
1	AA	1139	G
1	AA	1145	C
1	AA	1146	A
1	AA	1147	C
1	AA	1151	A
1	AA	1154	G
1	AA	1157	A
1	AA	1158	C
1	AA	1182	G
1	AA	1196	U
1	AA	1200	C
1	AA	1201	A
1	AA	1211	U
1	AA	1224	G
1	AA	1239	A
1	AA	1279	A
1	AA	1285	A
1	AA	1297	C
1	AA	1299	A
1	AA	1305	G
1	AA	1319	A
1	AA	1336	C
1	AA	1337	G
1	AA	1380	U
1	AA	1381	U
1	AA	1394	A
1	AA	1399	C
1	AA	1442(A)	G
1	AA	1498	U
1	AA	1528	U
23	AW	7	A
23	AW	44	A

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Mol	Chain	Res	Type
24	AX	58	A
25	AY	57	A
27	BA	25	U
27	BA	27	G
27	BA	33	U
27	BA	49	A
27	BA	60	G
27	BA	61	G
27	BA	63	U
27	BA	71	A
27	BA	83	G
27	BA	99	U
27	BA	119	A
27	BA	121	G
27	BA	125	G
27	BA	140	G
27	BA	157	U
27	BA	177	G
27	BA	199	A
27	BA	204	A
27	BA	215	G
27	BA	221	A
27	BA	232	G
27	BA	271(Y)	U
27	BA	283	A
27	BA	301	G
27	BA	310	A
27	BA	311	A
27	BA	321	G
27	BA	329	G
27	BA	345	A
27	BA	370	G
27	BA	386	G
27	BA	390	A
27	BA	391	G
27	BA	411	G
27	BA	421	U
27	BA	434	U
27	BA	442	G
27	BA	454	A
27	BA	474	G
27	BA	479	A

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Mol	Chain	Res	Type
27	BA	481	G
27	BA	503	A
27	BA	530	G
27	BA	542	C
27	BA	571	A
27	BA	572	A
27	BA	587	C
27	BA	603	A
27	BA	614(A)	U
27	BA	614(B)	G
27	BA	614(C)	A
27	BA	620	G
27	BA	627	A
27	BA	637	A
27	BA	670	A
27	BA	685	A
27	BA	728	G
27	BA	729	G
27	BA	740	U
27	BA	752	A
27	BA	762	U
27	BA	790	C
27	BA	805	G
27	BA	827	U
27	BA	845	G
27	BA	856	C
27	BA	858	U
27	BA	945	A
27	BA	959	A
27	BA	974	G
27	BA	989	G
27	BA	995	C
27	BA	996	A
27	BA	1008	C
27	BA	1020	A
27	BA	1022	G
27	BA	1033	U
27	BA	1048	A
27	BA	1049	C
27	BA	1126	A
27	BA	1128	A
27	BA	1129	A

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Mol	Chain	Res	Type
27	BA	1132	A
27	BA	1141	U
27	BA	1142(A)	A
27	BA	1176	G
27	BA	1179	C
27	BA	1204	A
27	BA	1210	A
27	BA	1213	A
27	BA	1220	A
27	BA	1236	G
27	BA	1249	U
27	BA	1272	A
27	BA	1273	U
27	BA	1275	A
27	BA	1286	A
27	BA	1300	U
27	BA	1320	C
27	BA	1321	A
27	BA	1332	G
27	BA	1378	A
27	BA	1385	G
27	BA	1395	A
27	BA	1427	A
27	BA	1429	G
27	BA	1445	A
27	BA	1458	C
27	BA	1459	G
27	BA	1461	G
27	BA	1490	A
27	BA	1491	G
27	BA	1493	C
27	BA	1494	A
27	BA	1495	A
27	BA	1558	A
27	BA	1602	U
27	BA	1603	A
27	BA	1607	C
27	BA	1609	A
27	BA	1615	C
27	BA	1634	A
27	BA	1674	G
27	BA	1681	G

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Mol	Chain	Res	Type
27	BA	1686	C
27	BA	1722	A
27	BA	1758	G
27	BA	1780	A
27	BA	1784	A
27	BA	1799	G
27	BA	1815	A
27	BA	1819	A
27	BA	1838	C
27	BA	1839	G
27	BA	1847	A
27	BA	1912	A
27	BA	1913	A
27	BA	1929	G
27	BA	1931	U
27	BA	1945	G
27	BA	1962	C
27	BA	1992	G
27	BA	1996	C
27	BA	2021	C
27	BA	2035	G
27	BA	2036	C
27	BA	2048	G
27	BA	2068	U
27	BA	2092	U
27	BA	2111	C
27	BA	2116	G
27	BA	2120	G
27	BA	2126	A
27	BA	2128	C
27	BA	2145	C
27	BA	2158	A
27	BA	2159	G
27	BA	2160	G
27	BA	2171	A
27	BA	2172	U
27	BA	2173	A
27	BA	2174	C
27	BA	2197	U
27	BA	2199	A
27	BA	2200	C
27	BA	2225	A

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Mol	Chain	Res	Type
27	BA	2238	G
27	BA	2249	U
27	BA	2266	A
27	BA	2267	A
27	BA	2282	G
27	BA	2286	A
27	BA	2290	G
27	BA	2296	U
27	BA	2308	G
27	BA	2311	A
27	BA	2318	G
27	BA	2321	G
27	BA	2326	C
27	BA	2334	G
27	BA	2335	A
27	BA	2344	U
27	BA	2391	G
27	BA	2423	U
27	BA	2424	C
27	BA	2438	U
27	BA	2439	A
27	BA	2458	G
27	BA	2468	G
27	BA	2481	G
27	BA	2490	G
27	BA	2503	A
27	BA	2572	A
27	BA	2581	G
27	BA	2585	U
27	BA	2602	A
27	BA	2611	U
27	BA	2613	U
27	BA	2645	G
27	BA	2654	A
27	BA	2655	G
27	BA	2682	U
27	BA	2689	U
27	BA	2712	U
27	BA	2726	U
27	BA	2732	G
27	BA	2750	A
27	BA	2756	U

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Mol	Chain	Res	Type
27	BA	2776	A
27	BA	2778	A
27	BA	2791	C
27	BA	2792	G
27	BA	2803	C
27	BA	2804	C
27	BA	2820	A
27	BA	2832	U
27	BA	2835	A
27	BA	2848	G
27	BA	2873	A
27	BA	2879	C
28	BB	12	C
28	BB	24	G
28	BB	25	A
28	BB	34	U
28	BB	66	A
1	CA	7	G
1	CA	30	U
1	CA	47	C
1	CA	60	A
1	CA	64	G
1	CA	109	A
1	CA	115	G
1	CA	119	A
1	CA	129(A)	G
1	CA	131	C
1	CA	173	U
1	CA	181	G
1	CA	189(E)	U
1	CA	197	A
1	CA	199	G
1	CA	202	U
1	CA	204	U
1	CA	218	C
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	274	A
1	CA	279	A
1	CA	327	A
1	CA	344	A

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Mol	Chain	Res	Type
1	CA	347	G
1	CA	351	G
1	CA	352	C
1	CA	366	C
1	CA	372	C
1	CA	389	A
1	CA	422	C
1	CA	423	G
1	CA	428	G
1	CA	429	U
1	CA	451	A
1	CA	470	C
1	CA	481	G
1	CA	484	G
1	CA	486	U
1	CA	495	A
1	CA	508	C
1	CA	509	A
1	CA	511	C
1	CA	517	G
1	CA	533	A
1	CA	547	A
1	CA	548	G
1	CA	559	A
1	CA	560	U
1	CA	566	G
1	CA	595	G
1	CA	641	U
1	CA	687	A
1	CA	702	A
1	CA	721	G
1	CA	748	C
1	CA	753	A
1	CA	792	A
1	CA	815	A
1	CA	817	C
1	CA	870	U
1	CA	873	A
1	CA	874	G
1	CA	884	U
1	CA	889	A
1	CA	913	A

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Mol	Chain	Res	Type
1	CA	934	C
1	CA	960	U
1	CA	965	A
1	CA	967	C
1	CA	971	G
1	CA	978	A
1	CA	982	U
1	CA	983	A
1	CA	984	C
1	CA	992	U
1	CA	994	A
1	CA	1049	U
1	CA	1053	G
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1067	A
1	CA	1085	U
1	CA	1086	U
1	CA	1101	A
1	CA	1139	G
1	CA	1145	C
1	CA	1154	G
1	CA	1157	A
1	CA	1160	G
1	CA	1161	C
1	CA	1182	G
1	CA	1196	U
1	CA	1200	C
1	CA	1201	A
1	CA	1211	U
1	CA	1224	G
1	CA	1225	A
1	CA	1239	A
1	CA	1285	A
1	CA	1297	C
1	CA	1299	A
1	CA	1305	G
1	CA	1335	C
1	CA	1345	U
1	CA	1363(A)	A

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Mol	Chain	Res	Type
1	CA	1380	U
1	CA	1394	A
1	CA	1397	C
1	CA	1398	A
1	CA	1442(A)	G
1	CA	1443	G
1	CA	1498	U
1	CA	1502	A
1	CA	1504	G
1	CA	1505	G
1	CA	1528	U
23	CW	7	A
23	CW	16	C
23	CW	44	A
23	CW	70	C
25	CY	46	U
27	DA	33	U
27	DA	49	A
27	DA	50	U
27	DA	60	G
27	DA	63	U
27	DA	71	A
27	DA	73	A
27	DA	92	A
27	DA	99	U
27	DA	119	A
27	DA	125	G
27	DA	140	G
27	DA	142	A
27	DA	171	G
27	DA	172	C
27	DA	177	G
27	DA	196	A
27	DA	197	A
27	DA	199	A
27	DA	200	U
27	DA	216	A
27	DA	221	A
27	DA	226	G
27	DA	232	G
27	DA	241	A
27	DA	249	C

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Mol	Chain	Res	Type
27	DA	265	A
27	DA	271(N)	U
27	DA	271(Y)	U
27	DA	283	A
27	DA	284	U
27	DA	301	G
27	DA	313	C
27	DA	321	G
27	DA	324	A
27	DA	329	G
27	DA	331	A
27	DA	332	A
27	DA	333	G
27	DA	334	C
27	DA	345	A
27	DA	363(F)	A
27	DA	370	G
27	DA	386	G
27	DA	395	U
27	DA	403	U
27	DA	411	G
27	DA	412	A
27	DA	421	U
27	DA	434	U
27	DA	435	C
27	DA	442	G
27	DA	446	G
27	DA	454	A
27	DA	455	C
27	DA	474	G
27	DA	477	A
27	DA	479	A
27	DA	481	G
27	DA	503	A
27	DA	504	U
27	DA	506	G
27	DA	507	A
27	DA	509	C
27	DA	527	C
27	DA	529	A
27	DA	542	C
27	DA	562	U

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Mol	Chain	Res	Type
27	DA	571	A
27	DA	587	C
27	DA	588	U
27	DA	603	A
27	DA	614(A)	U
27	DA	614(C)	A
27	DA	620	G
27	DA	627	A
27	DA	628	G
27	DA	634	C
27	DA	637	A
27	DA	669	G
27	DA	704	G
27	DA	726	G
27	DA	727	A
27	DA	740	U
27	DA	752	A
27	DA	762	U
27	DA	800	A
27	DA	805	G
27	DA	829	A
27	DA	830	G
27	DA	845	G
27	DA	856	C
27	DA	858	U
27	DA	865	C
27	DA	866	A
27	DA	932	G
27	DA	945	A
27	DA	959	A
27	DA	973	A
27	DA	1008	C
27	DA	1009	A
27	DA	1010	A
27	DA	1020	A
27	DA	1022	G
27	DA	1025	G
27	DA	1034	G
27	DA	1048	A
27	DA	1052	C
27	DA	1053	C
27	DA	1126	A

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Mol	Chain	Res	Type
27	DA	1128	A
27	DA	1132	A
27	DA	1142	U
27	DA	1142(A)	A
27	DA	1143	A
27	DA	1156	A
27	DA	1157	G
27	DA	1158	C
27	DA	1176	G
27	DA	1179	C
27	DA	1204	A
27	DA	1206	G
27	DA	1210	A
27	DA	1220	A
27	DA	1236	G
27	DA	1247	A
27	DA	1250	G
27	DA	1254	A
27	DA	1273	U
27	DA	1275	A
27	DA	1286	A
27	DA	1288	U
27	DA	1289	C
27	DA	1290	C
27	DA	1300	U
27	DA	1301	A
27	DA	1311	G
27	DA	1320	C
27	DA	1321	A
27	DA	1332	G
27	DA	1340	U
27	DA	1378	A
27	DA	1379	A
27	DA	1385	G
27	DA	1386	C
27	DA	1396	U
27	DA	1398	C
27	DA	1419	A
27	DA	1427	A
27	DA	1452	A
27	DA	1458	C
27	DA	1459	G

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Mol	Chain	Res	Type
27	DA	1460	A
27	DA	1495	A
27	DA	1554	A
27	DA	1558	A
27	DA	1565	C
27	DA	1602	U
27	DA	1603	A
27	DA	1607	C
27	DA	1615	C
27	DA	1634	A
27	DA	1653	G
27	DA	1674	G
27	DA	1681	G
27	DA	1693	U
27	DA	1695	G
27	DA	1696	G
27	DA	1700	A
27	DA	1706	U
27	DA	1722	A
27	DA	1741	A
27	DA	1758	G
27	DA	1780	A
27	DA	1782	C
27	DA	1784	A
27	DA	1799	G
27	DA	1815	A
27	DA	1819	A
27	DA	1828	G
27	DA	1847	A
27	DA	1893	C
27	DA	1900	A
27	DA	1929	G
27	DA	1936	A
27	DA	1939	U
27	DA	1943	U
27	DA	1945	G
27	DA	1953	A
27	DA	1962	C
27	DA	1992	G
27	DA	1996	C
27	DA	2021	C
27	DA	2022	U

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Mol	Chain	Res	Type
27	DA	2031	A
27	DA	2034	U
27	DA	2035	G
27	DA	2036	C
27	DA	2051	A
27	DA	2060	A
27	DA	2062	A
27	DA	2066	C
27	DA	2067	G
27	DA	2068	U
27	DA	2092	U
27	DA	2110	G
27	DA	2112	G
27	DA	2113	U
27	DA	2116	G
27	DA	2120	G
27	DA	2126	A
27	DA	2127	G
27	DA	2128	C
27	DA	2145	C
27	DA	2147	G
27	DA	2158	A
27	DA	2159	G
27	DA	2160	G
27	DA	2171	A
27	DA	2172	U
27	DA	2173	A
27	DA	2197	U
27	DA	2225	A
27	DA	2249	U
27	DA	2258	C
27	DA	2266	A
27	DA	2275	C
27	DA	2282	G
27	DA	2286	A
27	DA	2296	U
27	DA	2311	A
27	DA	2318	G
27	DA	2321	G
27	DA	2334	G
27	DA	2344	U
27	DA	2347	C

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Mol	Chain	Res	Type
27	DA	2382	G
27	DA	2383	G
27	DA	2391	G
27	DA	2402	C
27	DA	2405	G
27	DA	2422	A
27	DA	2424	C
27	DA	2427	C
27	DA	2458	G
27	DA	2468	G
27	DA	2481	G
27	DA	2482	G
27	DA	2490	G
27	DA	2497	A
27	DA	2498	C
27	DA	2517	C
27	DA	2566	A
27	DA	2585	U
27	DA	2610	C
27	DA	2612	C
27	DA	2629	A
27	DA	2638	G
27	DA	2645	G
27	DA	2654	A
27	DA	2656	U
27	DA	2681	C
27	DA	2682	U
27	DA	2689	U
27	DA	2712	U
27	DA	2726	U
27	DA	2750	A
27	DA	2756	U
27	DA	2757	A
27	DA	2777	G
27	DA	2791	C
27	DA	2803	C
27	DA	2805	G
27	DA	2832	U
27	DA	2834	G
27	DA	2848	G
27	DA	2866	U
27	DA	2873	A

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Mol	Chain	Res	Type
27	DA	2874	C
27	DA	2879	C
28	DB	12	C
28	DB	24	G
28	DB	25	A
28	DB	26	A
28	DB	27	C
28	DB	34	U
28	DB	35	U
28	DB	66	A

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

8 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	$\# Z > 2$
26	KBE	AZ	1	26	8,8,9	0.53	0	7,8,10	1.25	1 (14%)
26	DPP	AZ	2	26	3,5,6	0.37	0	1,5,7	0.86	0
26	UAL	AZ	5	26	7,8,9	2.50	2 (28%)	4,9,11	1.18	1 (25%)
26	5OH	AZ	6	26	7,12,13	0.49	0	7,16,18	0.93	0
26	KBE	CZ	1	26	8,8,9	0.56	0	7,8,10	0.73	0
26	DPP	CZ	2	26	3,5,6	0.80	0	1,5,7	1.68	0
26	UAL	CZ	5	26	7,8,9	2.85	2 (28%)	4,9,11	3.89	3 (75%)
26	5OH	CZ	6	26	7,12,13	0.67	0	7,16,18	0.98	1 (14%)

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
26	KBE	AZ	1	26	-	0/7/7/8	0/0/0/0
26	DPP	AZ	2	26	-	0/1/4/6	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
26	UAL	AZ	5	26	-	0/3/7/9	0/0/0/0
26	5OH	AZ	6	26	-	0/1/18/20	0/1/1/1
26	KBE	CZ	1	26	-	0/7/7/8	0/0/0/0
26	DPP	CZ	2	26	-	0/1/4/6	0/0/0/0
26	UAL	CZ	5	26	-	0/3/7/9	0/0/0/0
26	5OH	CZ	6	26	-	0/1/18/20	0/1/1/1

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	CZ	5	UAL	C1-N1	-6.05	1.29	1.40
26	AZ	5	UAL	C1-N1	-2.82	1.35	1.40
26	CZ	5	UAL	C-CA	4.02	1.51	1.45
26	AZ	5	UAL	C-CA	5.55	1.53	1.45

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	CZ	5	UAL	O2-C1-N2	-6.64	111.92	123.30
26	AZ	5	UAL	O-C-CA	-2.00	122.45	125.40
26	CZ	6	5OH	O-C-CA	-2.00	120.15	125.44
26	AZ	1	KBE	CB-CA-C	2.54	116.35	112.32
26	CZ	5	UAL	O2-C1-N1	2.56	126.51	120.16
26	CZ	5	UAL	N2-C1-N1	2.78	121.55	115.57

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

6 monomers are involved in 23 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
26	AZ	1	KBE	3	0
26	AZ	5	UAL	3	0
26	AZ	6	5OH	3	0
26	CZ	1	KBE	1	0
26	CZ	5	UAL	4	0
26	CZ	6	5OH	11	0

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 973 ligands modelled in this entry, 973 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1495/1509 (99%)	-0.08	33 (2%) 65 35	48, 83, 149, 196	0
1	CA	1495/1509 (99%)	-0.01	33 (2%) 65 35	59, 91, 155, 196	0
2	AB	235/256 (91%)	0.21	16 (6%) 20 7	80, 114, 144, 161	0
2	CB	235/256 (91%)	0.10	14 (5%) 25 9	81, 118, 152, 171	0
3	AC	207/239 (86%)	-0.06	4 (1%) 70 41	76, 101, 140, 153	0
3	CC	207/239 (86%)	0.05	11 (5%) 30 12	89, 109, 136, 147	0
4	AD	208/209 (99%)	-0.05	10 (4%) 34 14	65, 84, 101, 114	0
4	CD	208/209 (99%)	-0.24	3 (1%) 78 51	55, 77, 98, 107	0
5	AE	151/162 (93%)	-0.14	2 (1%) 79 53	59, 81, 107, 122	0
5	CE	151/162 (93%)	-0.00	0 100 100	72, 88, 109, 145	0
6	AF	101/101 (100%)	-0.28	2 (1%) 68 39	63, 84, 93, 110	0
6	CF	101/101 (100%)	-0.22	0 100 100	76, 88, 101, 134	0
7	AG	155/156 (99%)	-0.04	9 (5%) 26 10	74, 94, 129, 151	0
7	CG	155/156 (99%)	-0.09	7 (4%) 37 15	84, 103, 128, 140	0
8	AH	138/138 (100%)	-0.31	1 (0%) 89 70	69, 84, 96, 107	0
8	CH	138/138 (100%)	-0.16	2 (1%) 78 51	74, 91, 102, 117	0
9	AI	127/128 (99%)	0.38	10 (7%) 15 5	76, 115, 136, 144	0
9	CI	127/128 (99%)	0.23	9 (7%) 19 7	89, 121, 139, 143	0
10	AJ	99/105 (94%)	0.86	18 (18%) 2 1	80, 127, 152, 164	0
10	CJ	99/105 (94%)	0.83	12 (12%) 6 2	88, 125, 148, 154	0
11	AK	119/129 (92%)	0.33	12 (10%) 9 3	55, 79, 107, 127	0
11	CK	119/129 (92%)	0.17	10 (8%) 14 5	69, 88, 108, 124	0
12	AL	125/132 (94%)	-0.13	0 100 100	55, 69, 91, 126	0
12	CL	125/132 (94%)	0.20	7 (5%) 28 11	66, 82, 98, 129	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	120/126 (95%)	-0.24	5 (4%) 40 16	58, 86, 98, 107	0
13	CM	119/126 (94%)	-0.13	5 (4%) 40 16	80, 108, 125, 136	0
14	AN	60/61 (98%)	0.01	1 (1%) 73 45	76, 92, 110, 122	0
14	CN	60/61 (98%)	0.33	2 (3%) 50 22	90, 105, 120, 123	0
15	AO	88/89 (98%)	-0.03	5 (5%) 27 10	64, 76, 99, 114	0
15	CO	88/89 (98%)	0.18	2 (2%) 64 33	71, 84, 106, 117	0
16	AP	84/88 (95%)	0.03	5 (5%) 25 9	68, 86, 108, 124	0
16	CP	84/88 (95%)	0.15	1 (1%) 81 55	71, 81, 105, 136	0
17	AQ	100/105 (95%)	0.19	2 (2%) 68 39	62, 79, 95, 99	0
17	CQ	100/105 (95%)	-0.21	0 100 100	64, 85, 100, 103	0
18	AR	70/88 (79%)	-0.10	2 (2%) 55 26	67, 83, 106, 134	0
18	CR	70/88 (79%)	-0.05	0 100 100	73, 86, 107, 134	0
19	AS	79/93 (84%)	0.69	11 (13%) 4 1	87, 105, 127, 134	0
19	CS	79/93 (84%)	0.75	11 (13%) 4 1	101, 122, 143, 154	0
20	AT	99/106 (93%)	0.09	8 (8%) 15 5	71, 89, 118, 130	0
20	CT	99/106 (93%)	0.06	7 (7%) 19 7	74, 90, 114, 125	0
21	AU	25/27 (92%)	2.08	13 (52%) 0 0	86, 92, 100, 118	0
21	CU	25/27 (92%)	2.42	13 (52%) 0 0	89, 104, 117, 119	0
22	AV	10/30 (33%)	0.50	1 (10%) 9 4	63, 73, 124, 133	0
22	CV	10/30 (33%)	-0.00	0 100 100	68, 85, 125, 130	0
23	AW	75/75 (100%)	0.78	16 (21%) 1 1	46, 119, 161, 185	0
23	CW	75/75 (100%)	0.54	10 (13%) 4 1	79, 141, 174, 184	0
24	AX	77/77 (100%)	0.08	4 (5%) 31 12	48, 89, 121, 130	0
24	CX	77/77 (100%)	0.10	3 (3%) 43 18	69, 98, 125, 132	0
25	AY	75/75 (100%)	1.32	25 (33%) 0 0	51, 157, 193, 194	0
25	CY	75/75 (100%)	1.38	23 (30%) 1 0	67, 167, 194, 194	0
26	AZ	2/6 (33%)	0.44	0 100 100	85, 85, 85, 88	0
26	CZ	2/6 (33%)	0.79	0 100 100	99, 99, 99, 100	0
27	BA	2800/2915 (96%)	-0.10	52 (1%) 70 41	30, 56, 157, 198	0
27	DA	2800/2915 (96%)	0.01	77 (2%) 56 27	49, 77, 168, 197	0
28	BB	118/122 (96%)	-0.20	2 (1%) 73 45	47, 76, 119, 164	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DB	118/122 (96%)	0.02	4 (3%) 49 21	80, 104, 136, 162	0
29	BC	191/229 (83%)	1.71	76 (39%) 0 0	130, 167, 187, 195	0
29	DC	191/229 (83%)	2.15	76 (39%) 0 0	122, 173, 188, 191	0
30	BD	272/276 (98%)	-0.37	2 (0%) 89 70	32, 52, 68, 79	0
30	DD	272/276 (98%)	-0.31	0 100 100	46, 61, 78, 92	0
31	BE	205/206 (99%)	-0.22	2 (0%) 84 60	33, 58, 93, 104	0
31	DE	205/206 (99%)	0.04	5 (2%) 62 32	57, 84, 112, 121	0
32	BF	208/210 (99%)	-0.32	3 (1%) 78 51	29, 60, 125, 149	0
32	DF	208/210 (99%)	-0.01	6 (2%) 55 26	54, 86, 132, 152	0
33	BG	181/182 (99%)	0.01	9 (4%) 32 13	64, 83, 116, 146	0
33	DG	181/182 (99%)	0.38	15 (8%) 14 5	79, 106, 132, 153	0
34	BH	164/180 (91%)	0.08	8 (4%) 33 13	68, 97, 124, 142	0
34	DH	160/180 (88%)	0.92	25 (15%) 3 1	110, 139, 159, 163	0
35	BI	146/148 (98%)	-0.20	0 100 100	62, 119, 140, 144	0
35	DI	146/148 (98%)	-0.01	3 (2%) 67 36	67, 105, 128, 136	0
36	BN	139/140 (99%)	-0.42	0 100 100	42, 57, 86, 104	0
36	DN	139/140 (99%)	-0.24	2 (1%) 78 51	65, 91, 115, 124	0
37	BO	122/122 (100%)	-0.52	1 (0%) 87 67	38, 57, 75, 88	0
37	DO	122/122 (100%)	-0.35	0 100 100	60, 77, 93, 100	0
38	BP	146/150 (97%)	0.16	5 (3%) 49 21	37, 69, 102, 156	0
38	DP	146/150 (97%)	0.31	4 (2%) 58 28	61, 93, 122, 148	0
39	BQ	141/141 (100%)	-0.16	2 (1%) 78 51	42, 60, 92, 118	0
39	DQ	139/141 (98%)	-0.16	2 (1%) 78 51	68, 90, 120, 134	0
40	BR	117/118 (99%)	-0.34	0 100 100	35, 52, 69, 82	0
40	DR	117/118 (99%)	-0.10	0 100 100	58, 71, 83, 96	0
41	BS	99/112 (88%)	-0.17	0 100 100	48, 76, 94, 105	0
41	DS	101/112 (90%)	0.34	10 (9%) 9 4	69, 100, 117, 122	0
42	BT	138/146 (94%)	-0.10	7 (5%) 32 12	51, 70, 126, 152	0
42	DT	138/146 (94%)	0.16	15 (10%) 7 3	61, 90, 149, 175	0
43	BU	117/118 (99%)	-0.20	2 (1%) 73 45	37, 49, 73, 95	0
43	DU	117/118 (99%)	0.35	14 (11%) 6 2	60, 91, 111, 124	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BV	101/101 (100%)	-0.45	1 (0%) 84 60	35, 65, 90, 116	0
44	DV	101/101 (100%)	0.33	9 (8%) 12 4	59, 106, 121, 129	0
45	BW	113/113 (100%)	-0.29	2 (1%) 71 43	32, 46, 76, 136	0
45	DW	113/113 (100%)	-0.34	1 (0%) 85 64	43, 64, 95, 130	0
46	BX	93/96 (96%)	-0.30	1 (1%) 82 58	43, 53, 70, 91	0
46	DX	93/96 (96%)	-0.26	0 100 100	56, 71, 89, 95	0
47	BY	101/110 (91%)	-0.02	3 (2%) 54 25	58, 78, 145, 163	0
47	DY	101/110 (91%)	0.29	10 (9%) 9 4	73, 94, 149, 156	0
48	BZ	177/206 (85%)	0.61	25 (14%) 4 1	65, 107, 169, 177	0
48	DZ	177/206 (85%)	1.33	42 (23%) 1 1	104, 130, 177, 191	0
49	B0	84/85 (98%)	-0.13	4 (4%) 34 14	43, 56, 83, 103	0
49	D0	84/85 (98%)	0.52	10 (11%) 6 2	71, 83, 100, 118	0
50	B1	94/98 (95%)	-0.19	3 (3%) 51 23	44, 61, 92, 109	0
50	D1	94/98 (95%)	0.09	3 (3%) 51 23	54, 70, 94, 110	0
51	B2	71/72 (98%)	-0.36	3 (4%) 40 16	46, 66, 86, 117	0
51	D2	71/72 (98%)	-0.28	0 100 100	65, 86, 103, 107	0
52	B3	60/60 (100%)	-0.23	2 (3%) 50 22	43, 58, 85, 110	0
52	D3	60/60 (100%)	0.18	2 (3%) 50 22	75, 90, 112, 116	0
53	B4	31/71 (43%)	-0.42	0 100 100	92, 107, 120, 126	0
53	D4	31/71 (43%)	-0.11	0 100 100	108, 119, 128, 135	0
54	B5	59/60 (98%)	-0.21	3 (5%) 32 12	33, 51, 115, 135	0
54	D5	59/60 (98%)	0.01	4 (6%) 20 7	60, 71, 143, 177	0
55	B6	51/54 (94%)	0.20	3 (5%) 26 10	59, 83, 106, 112	0
55	D6	46/54 (85%)	0.85	9 (19%) 1 1	56, 103, 116, 117	0
56	B7	49/49 (100%)	-0.14	0 100 100	28, 44, 84, 115	0
56	D7	49/49 (100%)	0.53	4 (8%) 14 5	46, 59, 90, 101	0
57	B8	64/65 (98%)	-0.16	1 (1%) 74 47	40, 56, 73, 97	0
57	D8	64/65 (98%)	0.14	2 (3%) 52 24	60, 74, 87, 118	0
58	B9	36/37 (97%)	0.35	0 100 100	46, 63, 80, 93	0
58	D9	36/37 (97%)	1.13	10 (27%) 1 0	88, 122, 133, 137	0
All	All	21214/22204 (95%)	0.05	986 (4%) 36 14	28, 83, 154, 198	0

All (986) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
27	BA	2802	G	16.1
48	DZ	111	ARG	16.0
48	DZ	175	PRO	14.9
27	DA	2802	G	13.5
29	DC	165	ASN	13.2
29	DC	133	PRO	12.9
29	DC	139	ASN	12.6
7	AG	84	ASN	11.5
33	DG	2	PRO	11.4
29	DC	149	ILE	11.4
29	DC	178	ALA	11.3
29	DC	179	SER	11.3
29	DC	150	GLY	10.7
48	DZ	112	ALA	10.7
39	BQ	140	ALA	9.8
27	BA	2801	A	9.5
29	BC	120	MET	9.3
47	BY	51	VAL	9.0
29	BC	179	SER	8.9
34	DH	171	LEU	8.8
29	DC	41	VAL	8.7
48	DZ	106	THR	8.7
27	DA	2795	G	8.6
27	BA	2795	G	8.6
29	DC	176	GLY	8.5
29	BC	178	ALA	8.4
25	AY	59	U	8.2
34	BH	171	LEU	8.0
29	DC	91	ALA	8.0
27	DA	2799	C	8.0
10	CJ	86	MET	7.9
1	AA	1027	C	7.9
27	DA	896	A	7.8
27	DA	2801(A)	A	7.6
39	BQ	141	GLN	7.6
28	DB	88	C	7.6
48	DZ	176	PRO	7.6
27	DA	2796	U	7.4
7	AG	83	ALA	7.4
25	CY	57	A	7.3
34	DH	43	VAL	7.2
29	DC	166	ASP	7.2

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Mol	Chain	Res	Type	RSRZ
27	BA	2799	C	7.2
29	DC	135	GLY	7.1
29	DC	77	ILE	7.1
29	BC	91	ALA	7.1
29	BC	176	GLY	7.0
43	BU	118	GLY	7.0
48	BZ	175	PRO	6.9
21	AU	17	THR	6.9
29	BC	92	ASP	6.9
29	BC	121	GLY	6.8
21	AU	19	GLY	6.8
48	BZ	176	PRO	6.7
55	B6	42	TRP	6.7
29	BC	77	ILE	6.6
47	BY	52	SER	6.6
42	BT	138	ALA	6.6
27	DA	2169	A	6.5
29	BC	43	VAL	6.5
48	DZ	174	VAL	6.5
29	BC	132	GLY	6.4
21	CU	18	TYR	6.3
29	DC	153	ILE	6.3
34	DH	170	ARG	6.2
41	DS	37	ALA	6.2
1	CA	1030(B)	C	6.2
11	AK	129	SER	6.2
25	AY	19	U	6.2
29	BC	84	LYS	6.1
1	CA	1030(A)	G	6.1
34	DH	96	ALA	6.1
29	DC	95	GLY	6.1
20	CT	104	LEU	6.1
21	CU	17	THR	6.1
48	DZ	110	VAL	6.0
7	AG	82	GLY	6.0
19	CS	36	ARG	6.0
1	CA	1027	C	6.0
25	AY	17	G	6.0
29	DC	163	PHE	6.0
55	D6	42	TRP	5.9
25	CY	33	G	5.9
54	D5	2	ALA	5.9

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Mol	Chain	Res	Type	RSRZ
27	DA	2794	C	5.9
27	DA	2125	G	5.8
27	DA	2893	G	5.8
34	DH	52	VAL	5.7
29	DC	57	ASN	5.7
19	AS	81	ARG	5.7
52	D3	1	MET	5.7
27	DA	2894	G	5.7
10	CJ	10	GLY	5.6
25	AY	60	C	5.6
19	CS	81	ARG	5.5
21	CU	24	ARG	5.5
34	DH	169	VAL	5.5
29	DC	96	GLY	5.5
29	DC	148	ASN	5.5
29	DC	140	PRO	5.4
29	DC	72	VAL	5.4
23	AW	15	G	5.4
27	DA	2803	C	5.4
31	BE	205	ALA	5.4
33	DG	89	GLY	5.4
48	BZ	174	VAL	5.4
27	DA	1044	G	5.3
29	DC	37	PHE	5.3
48	BZ	169	THR	5.3
29	BC	110	PHE	5.3
42	DT	116	ALA	5.3
48	DZ	96	GLU	5.3
25	CY	48	C	5.2
25	CY	55	C	5.2
27	BA	2801(A)	A	5.2
29	BC	74	VAL	5.1
25	CY	32	U	5.1
55	B6	20	ASN	5.1
48	BZ	143	LEU	5.1
48	DZ	114	GLY	5.1
47	DY	51	VAL	5.1
25	AY	58	A	5.1
29	BC	76	ALA	5.1
1	CA	1030(C)	G	5.0
29	DC	35	ALA	5.0
25	CY	54	U	5.0

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Mol	Chain	Res	Type	RSRZ
52	B3	1	MET	5.0
29	DC	76	ALA	5.0
29	DC	70	LYS	5.0
1	CA	1001(A)	G	5.0
25	CY	58	A	5.0
29	BC	119	VAL	5.0
16	CP	84	ALA	4.9
27	BA	2173	A	4.9
29	BC	89	ALA	4.9
19	CS	34	TRP	4.9
42	DT	117	ASP	4.9
25	AY	35	G	4.9
1	AA	1036	G	4.9
12	CL	126	ALA	4.9
11	CK	42	TRP	4.8
29	DC	79	LYS	4.8
25	CY	34	U	4.8
9	AI	4	TYR	4.8
27	BA	2796	U	4.8
48	BZ	96	GLU	4.8
7	CG	78	ARG	4.8
29	DC	151	GLU	4.8
27	BA	896	A	4.8
27	DA	2173	A	4.8
42	DT	2	ASN	4.8
23	AW	13	A	4.8
31	BE	204	ALA	4.8
7	CG	82	GLY	4.8
29	BC	52	ARG	4.8
10	AJ	71	LEU	4.7
23	AW	49	G	4.7
2	CB	133	LYS	4.7
48	BZ	178	ASP	4.7
49	D0	12	ASN	4.7
29	DC	217	THR	4.7
34	DH	134	SER	4.7
19	CS	82	GLY	4.7
49	D0	13	GLY	4.7
25	AY	7	A	4.7
1	AA	1028	C	4.6
25	CY	7	A	4.6
38	BP	149	GLU	4.6

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Mol	Chain	Res	Type	RSRZ
19	CS	37	ARG	4.6
15	CO	89	GLY	4.6
1	AA	1026	G	4.6
29	BC	72	VAL	4.6
29	BC	139	ASN	4.5
11	CK	11	LYS	4.5
1	CA	1024	G	4.5
48	BZ	111	ARG	4.5
29	DC	93	TYR	4.5
9	AI	7	THR	4.5
27	DA	883	G	4.5
24	AX	1	C	4.5
27	DA	2155	G	4.5
29	BC	88	GLU	4.5
27	DA	2801	A	4.5
29	DC	87	GLU	4.5
29	DC	92	ASP	4.5
27	BA	2116	G	4.4
25	AY	48	C	4.4
28	BB	88	C	4.4
29	BC	79	LYS	4.4
21	CU	22	ARG	4.4
29	BC	109	ASP	4.4
43	DU	89	GLU	4.4
23	AW	45	U	4.4
9	CI	4	TYR	4.4
38	DP	150	ALA	4.4
48	DZ	126	LYS	4.4
29	DC	182	PRO	4.3
29	DC	136	LEU	4.3
1	CA	1026	G	4.3
29	BC	78	ALA	4.3
23	AW	14	A	4.3
25	AY	20	A	4.3
4	AD	134	ASP	4.3
27	BA	2793	G	4.3
33	DG	41	GLN	4.3
25	AY	46	U	4.3
25	AY	47	C	4.3
48	DZ	143	LEU	4.3
10	AJ	10	GLY	4.2
20	AT	103	GLY	4.2

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Mol	Chain	Res	Type	RSRZ
27	DA	2174	C	4.2
19	CS	12	ASP	4.2
25	CY	46	U	4.2
29	DC	78	ALA	4.2
1	CA	1442(A)	G	4.2
11	CK	32	ILE	4.2
29	DC	177	LYS	4.2
27	BA	2151	G	4.2
48	DZ	95	VAL	4.1
22	AV	1	A	4.1
10	AJ	86	MET	4.1
3	CC	155	GLY	4.1
25	CY	47	C	4.1
27	BA	884	C	4.1
54	B5	60	VAL	4.1
9	CI	19	LEU	4.1
47	DY	50	ARG	4.1
25	AY	57	A	4.1
27	BA	2174	C	4.1
47	DY	52	SER	4.1
25	CY	17	G	4.1
54	D5	59	GLU	4.1
1	CA	1036	G	4.1
11	CK	89	ALA	4.1
23	CW	49	G	4.1
25	CY	18	G	4.1
2	AB	7	VAL	4.0
33	DG	74	LYS	4.0
49	D0	14	ARG	4.0
10	CJ	75	ILE	4.0
29	DC	80	GLY	4.0
29	BC	93	TYR	4.0
29	DC	90	GLY	4.0
48	BZ	106	THR	4.0
48	DZ	113	GLY	4.0
27	DA	888	C	4.0
29	DC	34	THR	4.0
27	BA	2803	C	4.0
29	BC	133	PRO	4.0
29	DC	69	GLY	4.0
42	BT	39	ARG	3.9
44	DV	38	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
19	AS	33	THR	3.9
43	DU	90	VAL	3.9
2	CB	222	ILE	3.9
27	DA	2892	A	3.9
42	BT	137	LYS	3.9
27	BA	652	C	3.9
41	DS	36	TYR	3.9
34	DH	34	GLU	3.9
29	DC	40	THR	3.9
42	BT	1	MET	3.9
2	AB	133	LYS	3.9
10	CJ	72	VAL	3.8
27	DA	11	G	3.8
43	DU	91	ASP	3.8
29	DC	119	VAL	3.8
58	D9	5	ALA	3.8
1	AA	91	C	3.8
3	CC	189	ALA	3.8
25	AY	49	G	3.8
15	AO	89	GLY	3.8
12	CL	65	ALA	3.8
29	BC	40	THR	3.8
48	DZ	117	GLN	3.8
1	AA	1005	A	3.8
23	CW	48	C	3.8
49	D0	11	ARG	3.8
48	DZ	161	GLU	3.8
9	AI	6	GLY	3.8
58	D9	24	TYR	3.8
25	AY	33	G	3.7
33	BG	2	PRO	3.7
11	CK	22	HIS	3.7
33	BG	71	THR	3.7
34	DH	40	GLU	3.7
27	DA	1055	G	3.7
1	CA	1043	C	3.7
29	BC	38	ASP	3.7
51	B2	71	ASN	3.7
23	CW	16	C	3.7
20	CT	103	GLY	3.7
3	CC	60	ALA	3.7
25	CY	49	G	3.7

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Mol	Chain	Res	Type	RSRZ
10	AJ	98	ILE	3.7
54	D5	60	VAL	3.7
1	AA	1030(C)	G	3.7
27	BA	2894	G	3.7
29	BC	81	GLU	3.6
14	CN	2	ALA	3.6
2	AB	40	HIS	3.6
29	DC	62	VAL	3.6
48	DZ	26	VAL	3.6
51	B2	72	ALA	3.6
48	DZ	97	MET	3.6
58	D9	37	GLY	3.6
27	DA	1047	G	3.6
29	BC	83	ILE	3.6
29	DC	99	ILE	3.6
29	DC	180	PHE	3.6
48	DZ	87	PHE	3.6
42	DT	137	LYS	3.6
34	DH	44	VAL	3.6
25	CY	59	U	3.6
27	DA	2793	G	3.6
42	BT	93	ARG	3.6
29	DC	58	VAL	3.6
1	AA	1031	G	3.5
34	DH	19	VAL	3.5
42	DT	115	ARG	3.5
12	CL	53	ALA	3.5
29	BC	108	MET	3.5
27	BA	2156	G	3.5
29	BC	148	ASN	3.5
27	BA	897	C	3.5
27	BA	2804	C	3.5
25	CY	20	A	3.5
29	BC	86	ALA	3.5
27	BA	2794	C	3.5
29	BC	53	ARG	3.5
19	AS	52	TYR	3.5
48	DZ	107	PRO	3.5
55	B6	21	TYR	3.5
13	CM	101	GLN	3.5
29	DC	71	GLN	3.5
13	AM	6	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
21	CU	25	LYS	3.4
27	BA	878	A	3.4
11	CK	13	GLN	3.4
32	DF	1	MET	3.4
33	DG	75	LYS	3.4
48	DZ	71	ARG	3.4
48	DZ	93	GLU	3.4
43	DU	117	GLN	3.4
16	AP	13	HIS	3.4
29	BC	180	PHE	3.4
27	DA	2154	G	3.4
11	CK	129	SER	3.4
7	CG	84	ASN	3.4
31	DE	35	GLN	3.4
52	D3	29	ARG	3.4
3	CC	2	GLY	3.4
29	BC	141	LYS	3.4
49	B0	8	GLY	3.4
49	D0	41	ARG	3.4
29	DC	84	LYS	3.4
29	DC	74	VAL	3.4
48	BZ	112	ALA	3.4
32	BF	2	LYS	3.4
1	CA	1025	U	3.4
1	CA	1034	G	3.3
2	CB	32	ILE	3.3
23	AW	46	U	3.3
27	BA	1048	A	3.3
29	BC	42	GLU	3.3
42	DT	122	ASP	3.3
25	CY	60	C	3.3
1	AA	1025	U	3.3
27	DA	2310	A	3.3
27	DA	2156	G	3.3
29	BC	154	ARG	3.3
7	CG	86	GLN	3.3
13	AM	102	ARG	3.3
27	BA	2896	C	3.3
10	CJ	39	PRO	3.3
16	AP	12	LYS	3.3
2	CB	233	SER	3.3
29	BC	37	PHE	3.3

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Mol	Chain	Res	Type	RSRZ
29	DC	164	ARG	3.3
2	CB	215	LEU	3.3
1	AA	1030(D)	A	3.3
42	DT	138	ALA	3.3
42	DT	119	LYS	3.3
35	DI	23	PRO	3.3
19	AS	56	GLN	3.3
50	D1	81	LYS	3.3
7	CG	4	ARG	3.2
23	AW	9	C	3.2
2	AB	20	GLU	3.2
19	CS	69	HIS	3.2
19	AS	82	GLY	3.2
14	CN	4	LYS	3.2
29	DC	134	ARG	3.2
19	CS	38	SER	3.2
55	D6	39	TYR	3.2
27	BA	2126	A	3.2
27	BA	1044	G	3.2
32	DF	11	VAL	3.2
27	DA	275	G	3.2
27	DA	2127	G	3.2
21	AU	5	ASP	3.2
9	AI	9	ARG	3.2
21	CU	23	PRO	3.2
48	BZ	97	MET	3.2
27	BA	2136	C	3.2
29	DC	38	ASP	3.2
29	DC	154	ARG	3.2
34	DH	123	PHE	3.2
29	DC	66	HIS	3.2
29	BC	134	ARG	3.2
25	AY	15	G	3.2
20	AT	83	ARG	3.2
29	BC	94	VAL	3.2
1	CA	91	C	3.2
29	BC	65	PRO	3.2
1	CA	1094	G	3.2
2	AB	11	LEU	3.2
7	CG	3	ARG	3.2
28	DB	87	G	3.2
48	BZ	172	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
48	DZ	77	LYS	3.2
1	AA	1024	G	3.2
1	AA	76	C	3.1
4	CD	209	ARG	3.1
27	BA	275	G	3.1
21	AU	18	TYR	3.1
27	BA	2141	G	3.1
27	DA	2124	G	3.1
12	CL	125	ALA	3.1
23	CW	10	G	3.1
27	DA	1046	A	3.1
33	BG	88	ILE	3.1
1	CA	1005	A	3.1
54	D5	58	LEU	3.1
27	DA	2791	C	3.1
29	DC	61	THR	3.1
7	AG	4	ARG	3.1
21	AU	21	TYR	3.1
42	DT	40	THR	3.1
48	DZ	146	GLY	3.1
48	BZ	168	GLU	3.1
54	B5	2	ALA	3.1
23	AW	16	C	3.1
48	DZ	140	VAL	3.1
48	DZ	173	VAL	3.1
29	BC	174	PRO	3.1
55	D6	40	CYS	3.1
27	BA	2127	G	3.1
29	BC	44	HIS	3.1
11	AK	95	ILE	3.1
21	AU	2	GLY	3.1
49	D0	10	THR	3.0
7	AG	79	ARG	3.0
23	CW	50	A	3.0
15	AO	87	ILE	3.0
27	DA	2152	G	3.0
29	DC	181	PRO	3.0
29	BC	216	THR	3.0
15	AO	88	ARG	3.0
44	DV	5	VAL	3.0
11	AK	14	VAL	3.0
13	CM	84	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
29	DC	159	GLY	3.0
29	BC	87	GLU	3.0
4	AD	7	PRO	3.0
29	DC	73	ARG	3.0
10	AJ	85	LEU	3.0
1	CA	1031	G	3.0
1	CA	1117	G	3.0
58	D9	25	VAL	3.0
29	DC	97	GLU	3.0
27	DA	897	C	3.0
9	CI	62	TYR	3.0
23	AW	50	A	3.0
1	AA	1129	C	3.0
1	AA	104	G	3.0
9	AI	18	PHE	3.0
10	CJ	85	LEU	3.0
8	CH	55	GLY	3.0
29	DC	187	ASP	3.0
27	DA	2792	G	3.0
34	DH	23	ARG	3.0
16	AP	11	SER	3.0
29	BC	131	LEU	3.0
27	BA	2138	C	3.0
38	DP	118	GLY	3.0
48	BZ	148	SER	2.9
56	D7	23	ARG	2.9
25	AY	18	G	2.9
1	AA	1286	A	2.9
1	CA	1225	A	2.9
42	DT	36	GLU	2.9
58	D9	34	GLN	2.9
42	DT	92	GLY	2.9
11	AK	28	THR	2.9
29	DC	192	PHE	2.9
47	DY	55	TYR	2.9
23	AW	8	U	2.9
43	DU	118	GLY	2.9
41	DS	47	THR	2.9
5	AE	91	LEU	2.9
15	AO	67	LEU	2.9
58	D9	26	ILE	2.9
25	AY	16	C	2.9

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Mol	Chain	Res	Type	RSRZ
7	AG	85	TYR	2.9
33	DG	43	LEU	2.9
41	DS	30	ARG	2.9
27	BA	2150	U	2.9
1	CA	1003	G	2.9
4	AD	209	ARG	2.9
23	AW	48	C	2.9
28	DB	6	C	2.9
34	BH	136	ILE	2.9
29	BC	107	TRP	2.9
27	DA	2137	C	2.9
9	CI	18	PHE	2.9
50	B1	82	LEU	2.9
1	AA	1030(A)	G	2.9
25	AY	64	G	2.9
29	BC	177	LYS	2.9
33	DG	182	LYS	2.9
57	D8	65	GLU	2.9
1	CA	1030	C	2.9
27	DA	2138	C	2.9
30	BD	244	ARG	2.9
48	DZ	11	GLY	2.9
48	DZ	105	GLY	2.9
29	DC	147	PHE	2.8
55	D6	41	PRO	2.8
27	DA	271(A)	A	2.8
47	DY	59	GLY	2.8
27	BA	2155	G	2.8
31	DE	205	ALA	2.8
2	AB	136	VAL	2.8
27	BA	2402	C	2.8
43	DU	88	ILE	2.8
18	AR	31	LEU	2.8
27	DA	2139	C	2.8
29	DC	161	ILE	2.8
44	BV	48	GLY	2.8
27	BA	352	G	2.8
12	CL	67	ILE	2.8
19	AS	71	LEU	2.8
27	DA	2348	U	2.8
42	BT	115	ARG	2.8
10	AJ	23	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
43	DU	79	PHE	2.8
29	DC	88	GLU	2.8
27	DA	1045	A	2.8
27	DA	1048	A	2.8
10	AJ	69	ASN	2.8
55	D6	20	ASN	2.8
33	DG	4	ASP	2.8
19	CS	35	SER	2.8
29	BC	106	GLY	2.8
34	DH	56	SER	2.8
56	D7	29	LYS	2.8
48	BZ	177	GLU	2.8
19	AS	77	THR	2.8
29	BC	18	LYS	2.8
27	DA	1108	U	2.8
27	BA	2131	G	2.8
27	DA	1052	C	2.8
33	BG	178	PHE	2.8
27	BA	2130	U	2.8
49	B0	7	LEU	2.8
25	AY	63	C	2.8
44	DV	36	PRO	2.7
31	DE	204	ALA	2.7
8	CH	1	MET	2.7
9	AI	102	LEU	2.7
43	DU	69	CYS	2.7
20	CT	102	GLY	2.7
21	CU	13	ILE	2.7
27	DA	1049	C	2.7
11	CK	90	GLY	2.7
21	AU	25	LYS	2.7
48	BZ	87	PHE	2.7
4	AD	3	ARG	2.7
2	CB	203	GLY	2.7
29	BC	75	LEU	2.7
38	DP	51	PHE	2.7
56	D7	18	PHE	2.7
38	BP	150	ALA	2.7
38	BP	15	ARG	2.7
33	DG	40	ASN	2.7
11	AK	81	ASP	2.7
23	AW	10	G	2.7

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Mol	Chain	Res	Type	RSRZ
27	BA	1176	G	2.7
34	DH	105	LEU	2.7
28	BB	87	G	2.7
21	CU	9	ARG	2.7
35	DI	24	GLY	2.7
2	AB	163	PHE	2.7
27	DA	271(G)	C	2.7
29	DC	132	GLY	2.6
2	CB	232	PRO	2.6
48	DZ	115	VAL	2.6
33	BG	182	LYS	2.6
1	CA	993	G	2.6
1	CA	1042	G	2.6
3	CC	196	LEU	2.6
25	CY	56	G	2.6
29	BC	73	ARG	2.6
29	DC	43	VAL	2.6
29	BC	95	GLY	2.6
32	DF	10	PRO	2.6
27	DA	1053	C	2.6
27	DA	2123	G	2.6
48	DZ	142	GLY	2.6
11	AK	29	ILE	2.6
27	BA	2137	C	2.6
2	AB	214	ILE	2.6
1	AA	70	G	2.6
17	AQ	71	PHE	2.6
29	DC	39	GLU	2.6
31	DE	186	GLY	2.6
50	D1	33	LYS	2.6
2	AB	232	PRO	2.6
48	DZ	132	ILE	2.6
20	AT	80	ARG	2.6
34	DH	41	MET	2.6
57	B8	65	GLU	2.6
1	AA	841	U	2.6
25	CY	31	U	2.6
55	D6	21	TYR	2.6
33	BG	86	MET	2.6
10	CJ	74	ILE	2.6
29	BC	190	ARG	2.6
48	DZ	108	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
1	AA	1447	A	2.6
1	CA	69	G	2.6
1	CA	1286	A	2.6
48	DZ	94	PRO	2.6
21	CU	12	LYS	2.6
1	AA	1030(B)	C	2.6
19	AS	57	HIS	2.6
2	CB	41	ILE	2.6
29	DC	89	ALA	2.6
10	AJ	72	VAL	2.6
34	DH	24	VAL	2.6
20	CT	60	GLU	2.6
33	DG	137	GLU	2.6
9	CI	20	ARG	2.6
3	CC	197	GLY	2.6
27	BA	2125	G	2.6
41	DS	39	ILE	2.6
11	CK	31	THR	2.6
32	DF	169	ASN	2.5
3	AC	182	ILE	2.5
1	AA	77	G	2.5
29	BC	19	VAL	2.5
1	CA	1029	C	2.5
2	CB	106	LYS	2.5
9	AI	15	ALA	2.5
21	AU	22	ARG	2.5
29	BC	155	GLU	2.5
34	BH	169	VAL	2.5
44	DV	33	VAL	2.5
47	DY	53	PRO	2.5
1	AA	68	G	2.5
27	BA	1109	C	2.5
21	CU	5	ASP	2.5
27	DA	157	U	2.5
48	DZ	55	VAL	2.5
19	AS	76	PRO	2.5
21	AU	23	PRO	2.5
48	DZ	169	THR	2.5
11	AK	42	TRP	2.5
29	BC	149	ILE	2.5
1	AA	1001(A)	G	2.5
24	CX	49	G	2.5

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Mol	Chain	Res	Type	RSRZ
27	DA	2131	G	2.5
29	BC	41	VAL	2.5
34	DH	124	GLU	2.5
38	BP	108	LYS	2.5
48	BZ	114	GLY	2.5
10	CJ	28	ARG	2.5
1	AA	152	A	2.5
9	AI	17	VAL	2.5
38	DP	117	GLU	2.5
1	AA	1030	C	2.5
33	BG	43	LEU	2.5
27	DA	10	G	2.5
3	CC	64	VAL	2.5
54	B5	59	GLU	2.5
44	DV	94	LEU	2.5
27	DA	899	A	2.5
27	BA	2175	C	2.5
20	AT	99	LEU	2.5
25	CY	51	G	2.5
27	BA	883	G	2.5
55	D6	24	GLU	2.5
38	BP	51	PHE	2.5
58	D9	16	VAL	2.5
43	DU	83	LEU	2.5
17	AQ	45	HIS	2.5
47	DY	102	CYS	2.5
58	D9	35	ARG	2.5
48	BZ	146	GLY	2.5
2	AB	215	LEU	2.5
10	AJ	40	LEU	2.5
25	AY	36	A	2.5
25	AY	50	A	2.5
27	DA	2170	A	2.5
23	AW	47	C	2.5
41	DS	52	SER	2.5
48	BZ	120	HIS	2.5
11	AK	84	VAL	2.5
25	AY	34	U	2.5
29	BC	166	ASP	2.5
29	DC	172	HIS	2.5
2	CB	221	LEU	2.5
7	AG	86	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
10	AJ	70	ARG	2.4
45	BW	63	ASP	2.4
2	CB	37	ASN	2.4
43	DU	76	TYR	2.4
49	D0	22	GLY	2.4
29	DC	216	THR	2.4
34	DH	37	VAL	2.4
23	CW	13	A	2.4
13	AM	101	GLN	2.4
42	DT	93	ARG	2.4
44	DV	12	TYR	2.4
18	AR	88	LYS	2.4
44	DV	96	ILE	2.4
21	AU	6	ARG	2.4
24	CX	21	A	2.4
43	BU	117	GLN	2.4
57	D8	64	TYR	2.4
2	AB	213	LEU	2.4
11	AK	30	VAL	2.4
48	DZ	90	LEU	2.4
25	CY	6	U	2.4
37	BO	28	SER	2.4
10	AJ	27	ALA	2.4
48	DZ	82	PRO	2.4
35	DI	72	LEU	2.4
44	DV	39	LEU	2.4
23	CW	15	G	2.4
27	DA	919	G	2.4
14	AN	32	SER	2.4
29	BC	165	ASN	2.4
29	BC	102	LYS	2.4
9	CI	60	ASP	2.4
2	CB	231	GLU	2.4
36	DN	133	GLN	2.4
49	B0	3	HIS	2.4
4	AD	4	TYR	2.4
16	AP	39	TYR	2.4
27	DA	894	C	2.4
34	DH	35	VAL	2.4
58	D9	22	ARG	2.4
45	BW	60	ASN	2.4
29	DC	158	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
24	AX	67	C	2.4
20	CT	106	ALA	2.4
25	AY	52	G	2.4
48	DZ	162	LEU	2.4
5	AE	9	LYS	2.4
12	CL	13	GLU	2.4
27	BA	1547	C	2.4
27	DA	2895	U	2.4
21	CU	16	GLY	2.4
29	BC	80	GLY	2.4
29	DC	42	GLU	2.4
43	DU	74	LEU	2.4
48	DZ	69	LEU	2.4
48	DZ	127	VAL	2.4
47	DY	46	LYS	2.3
21	CU	2	GLY	2.3
4	AD	126	ILE	2.3
9	AI	19	LEU	2.3
33	DG	90	LEU	2.3
23	CW	7	A	2.3
27	DA	1174	A	2.3
19	AS	39	THR	2.3
27	DA	1112	G	2.3
27	BA	2897	U	2.3
1	CA	153	C	2.3
34	BH	101	ARG	2.3
2	AB	38	GLY	2.3
34	DH	129	THR	2.3
47	DY	56	PRO	2.3
2	CB	42	ILE	2.3
3	CC	111	LEU	2.3
27	DA	2153	G	2.3
27	DA	181	A	2.3
4	CD	134	ASP	2.3
10	CJ	20	ALA	2.3
27	DA	1470	G	2.3
29	BC	136	LEU	2.3
33	BG	90	LEU	2.3
41	DS	51	ALA	2.3
2	AB	87	ARG	2.3
9	CI	17	VAL	2.3
13	CM	7	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
41	DS	49	VAL	2.3
29	DC	56	GLN	2.3
34	BH	103	LEU	2.3
34	DH	128	PRO	2.3
27	DA	2151	G	2.3
21	AU	11	GLY	2.3
23	AW	24	C	2.3
24	CX	7	G	2.3
32	BF	12	LEU	2.3
4	AD	133	VAL	2.3
10	CJ	34	VAL	2.3
12	CL	36	VAL	2.3
19	CS	45	VAL	2.3
47	DY	48	ALA	2.3
25	CY	44	U	2.3
41	DS	64	GLU	2.3
48	BZ	98	TYR	2.3
33	BG	89	GLY	2.3
29	DC	100	ILE	2.3
32	DF	133	ASN	2.3
23	CW	11	C	2.3
44	DV	22	VAL	2.3
1	AA	69	G	2.3
25	CY	52	G	2.3
27	DA	2141	G	2.3
47	BY	55	TYR	2.3
2	AB	190	THR	2.3
51	B2	51	ARG	2.3
23	CW	45	U	2.3
16	AP	41	PRO	2.2
29	BC	25	ALA	2.2
1	AA	64	G	2.2
27	DA	352	G	2.2
20	AT	64	ASP	2.2
29	BC	213	TYR	2.2
1	CA	92	C	2.2
32	DF	167	ALA	2.2
1	CA	1447	A	2.2
27	BA	2310	A	2.2
30	BD	33	LEU	2.2
29	BC	189	ILE	2.2
29	BC	35	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
34	DH	81	GLU	2.2
3	AC	87	LEU	2.2
3	AC	88	ARG	2.2
33	DG	152	LEU	2.2
7	AG	81	GLY	2.2
27	DA	884	C	2.2
33	DG	42	GLY	2.2
49	B0	12	ASN	2.2
1	CA	1001	A	2.2
27	DA	330	A	2.2
27	DA	878	A	2.2
1	CA	1033	G	2.2
10	AJ	6	ILE	2.2
48	BZ	140	VAL	2.2
27	BA	888	C	2.2
28	DB	5	C	2.2
34	BH	102	ALA	2.2
49	D0	44	ARG	2.2
20	AT	102	GLY	2.2
19	CS	70	LYS	2.2
29	DC	103	ILE	2.2
1	AA	391	G	2.2
29	BC	142	ALA	2.2
55	D6	50	ARG	2.2
25	AY	55	C	2.2
27	BA	2139	C	2.2
27	DA	2142	C	2.2
48	BZ	142	GLY	2.2
49	D0	7	LEU	2.2
10	AJ	99	LYS	2.2
27	BA	1054	A	2.2
29	BC	182	PRO	2.2
1	CA	1129	C	2.2
1	CA	1442	G	2.2
3	AC	76	VAL	2.2
10	CJ	82	ILE	2.2
11	CK	30	VAL	2.2
33	DG	86	MET	2.2
13	CM	103	THR	2.2
50	B1	93	GLU	2.2
27	BA	2805	G	2.2
27	DA	1042	G	2.2

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Mol	Chain	Res	Type	RSRZ
27	DA	2157	G	2.2
41	DS	50	SER	2.2
20	CT	101	GLY	2.2
27	DA	887	A	2.1
42	DT	135	ALA	2.1
36	DN	77	GLY	2.1
56	D7	28	ARG	2.1
42	DT	38	ASN	2.1
4	AD	38	TYR	2.1
25	AY	8	U	2.1
21	AU	24	ARG	2.1
11	AK	43	SER	2.1
11	AK	21	ILE	2.1
23	AW	12	C	2.1
20	CT	99	LEU	2.1
9	CI	3	GLN	2.1
49	D0	85	ALA	2.1
20	AT	68	LYS	2.1
42	BT	36	GLU	2.1
43	DU	110	VAL	2.1
48	BZ	132	ILE	2.1
15	CO	22	THR	2.1
29	BC	215	THR	2.1
48	DZ	4	LEU	2.1
3	CC	158	GLY	2.1
10	AJ	7	LYS	2.1
39	DQ	85	LYS	2.1
1	AA	1033	G	2.1
27	DA	508	G	2.1
42	DT	42	ILE	2.1
2	AB	209	ARG	2.1
55	D6	46	HIS	2.1
33	DG	159	VAL	2.1
52	B3	44	ARG	2.1
13	AM	87	TYR	2.1
46	BX	92	LEU	2.1
45	DW	94	ASP	2.1
48	BZ	113	GLY	2.1
1	AA	96	U	2.1
11	AK	11	LYS	2.1
43	DU	109	LEU	2.1
58	D9	33	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
34	DH	31	GLY	2.1
31	DE	48	GLN	2.1
50	D1	21	ARG	2.1
24	AX	61	C	2.1
24	AX	62	C	2.1
43	DU	85	LYS	2.1
27	DA	1026	U	2.1
7	AG	80	VAL	2.1
19	AS	36	ARG	2.1
29	BC	103	ILE	2.1
1	AA	1502	A	2.1
27	BA	1055	G	2.1
48	DZ	88	PHE	2.1
4	CD	156	GLU	2.1
10	CJ	66	ARG	2.1
29	BC	85	GLU	2.1
29	BC	96	GLY	2.1
9	CI	63	ILE	2.1
4	AD	125	HIS	2.1
8	AH	55	GLY	2.1
15	AO	86	GLY	2.1
1	AA	204	U	2.1
27	DA	1043	C	2.1
29	BC	100	ILE	2.1
34	DH	89	ILE	2.1
13	CM	105	THR	2.1
2	CB	21	ARG	2.1
6	AF	37	VAL	2.1
13	AM	7	VAL	2.1
2	AB	39	ILE	2.0
32	BF	23	ASP	2.0
27	DA	1114	G	2.0
39	DQ	139	GLU	2.0
10	AJ	39	PRO	2.0
29	DC	94	VAL	2.0
3	CC	153	VAL	2.0
48	BZ	173	VAL	2.0
1	CA	1002	G	2.0
29	BC	99	ILE	2.0
10	AJ	43	ARG	2.0
50	B1	85	LEU	2.0
7	CG	80	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
10	AJ	5	ARG	2.0
23	AW	21	A	2.0
29	BC	70	LYS	2.0
29	DC	126	LYS	2.0
1	AA	1034	G	2.0
48	DZ	91	SER	2.0
3	CC	193	TYR	2.0
6	AF	36	ARG	2.0
9	AI	10	ARG	2.0
20	AT	106	ALA	2.0
34	BH	60	ARG	2.0
10	AJ	8	LEU	2.0
27	BA	2135	A	2.0
27	DA	2896	C	2.0
4	AD	13	ARG	2.0
21	AU	9	ARG	2.0
21	CU	14	TRP	2.0
27	BA	1173	G	2.0
27	DA	892	G	2.0
34	BH	105	LEU	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
26	DPP	CZ	2	6/7	0.83	0.15	-	94,96,97,97	0
26	UAL	AZ	5	9/10	0.81	0.20	-	81,82,83,84	0
26	DPP	AZ	2	6/7	0.93	0.16	-	79,82,82,84	0
26	UAL	CZ	5	9/10	0.78	0.27	-	97,99,99,99	0
26	5OH	AZ	6	12/13	0.87	0.18	-	84,89,92,94	0
26	KBE	AZ	1	9/10	0.85	0.34	-	78,79,82,82	0
26	5OH	CZ	6	12/13	0.89	0.27	-	99,101,102,102	0
26	KBE	CZ	1	9/10	0.79	0.36	-	89,91,93,94	0

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
59	MG	BA	3056	1/1	0.92	0.66	34.54	59,59,59,59	0
59	MG	BA	3134	1/1	0.70	0.57	31.90	39,39,39,39	0
59	MG	DA	3082	1/1	0.91	0.47	24.31	37,37,37,37	0
59	MG	CA	1615	1/1	0.92	0.62	22.75	51,51,51,51	0
59	MG	AA	1603	1/1	0.89	0.51	22.09	58,58,58,58	0
59	MG	BA	3295	1/1	0.89	0.42	21.25	47,47,47,47	0
59	MG	BA	3188	1/1	0.97	0.42	20.02	22,22,22,22	0
59	MG	DA	3177	1/1	0.98	0.42	18.86	29,29,29,29	0
59	MG	DA	3152	1/1	0.82	0.40	17.18	54,54,54,54	0
59	MG	BA	3088	1/1	0.97	0.34	17.00	22,22,22,22	0
59	MG	CA	1606	1/1	0.96	0.66	16.88	52,52,52,52	0
59	MG	DE	302	1/1	0.93	0.65	14.66	65,65,65,65	0
59	MG	DA	3249	1/1	0.95	0.40	14.55	54,54,54,54	0
59	MG	DA	3097	1/1	0.88	0.37	14.14	65,65,65,65	0
59	MG	AX	105	1/1	0.69	0.39	13.94	82,82,82,82	0
59	MG	BA	3216	1/1	0.85	0.41	13.82	42,42,42,42	0
59	MG	DA	3164	1/1	0.90	0.38	13.81	51,51,51,51	0
59	MG	CA	1620	1/1	0.95	0.40	12.33	40,40,40,40	0
59	MG	BA	3154	1/1	0.79	0.30	11.68	44,44,44,44	0
59	MG	DA	3035	1/1	0.92	0.64	11.62	63,63,63,63	0
59	MG	AA	1619	1/1	0.94	0.55	11.33	47,47,47,47	0
59	MG	BA	3194	1/1	0.97	0.31	11.27	33,33,33,33	0
59	MG	DA	3257	1/1	0.90	0.49	10.74	40,40,40,40	0
59	MG	BA	3337	1/1	0.83	0.36	10.51	61,61,61,61	0
59	MG	DA	3007	1/1	0.82	0.32	10.50	42,42,42,42	0
59	MG	BA	3213	1/1	0.95	0.54	10.30	54,54,54,54	0
59	MG	BA	3161	1/1	0.99	0.44	10.01	16,16,16,16	0
59	MG	BA	3128	1/1	0.92	0.43	9.99	34,34,34,34	0
59	MG	AA	1640	1/1	0.90	0.36	9.31	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3010	1/1	0.80	0.32	9.12	29,29,29,29	0
59	MG	BA	3251	1/1	0.96	0.27	8.97	34,34,34,34	0
59	MG	DA	3216	1/1	0.95	0.30	8.79	35,35,35,35	0
59	MG	DA	3061	1/1	0.89	0.31	8.76	28,28,28,28	0
59	MG	BA	3341	1/1	0.91	0.28	8.63	86,86,86,86	0
59	MG	DA	3108	1/1	0.68	0.34	8.41	51,51,51,51	0
59	MG	AA	1677	1/1	0.97	0.38	8.28	75,75,75,75	0
59	MG	BA	3023	1/1	0.98	0.25	8.11	23,23,23,23	0
59	MG	DD	301	1/1	0.13	0.57	7.97	110,110,110,110	0
59	MG	DA	3005	1/1	0.86	0.25	7.71	50,50,50,50	0
59	MG	DA	3147	1/1	0.98	0.40	7.29	44,44,44,44	0
59	MG	CA	1639	1/1	0.89	0.31	7.05	74,74,74,74	0
59	MG	BA	3115	1/1	0.97	0.27	6.87	22,22,22,22	0
59	MG	BA	3018	1/1	0.98	0.25	6.84	23,23,23,23	0
59	MG	DA	3003	1/1	0.93	0.22	6.64	36,36,36,36	0
59	MG	CA	1610	1/1	0.96	0.34	6.53	27,27,27,27	0
59	MG	BA	3192	1/1	0.98	0.25	6.44	29,29,29,29	0
59	MG	BA	3081	1/1	0.98	0.33	6.30	6,6,6,6	0
59	MG	AA	1637	1/1	0.85	0.21	6.26	40,40,40,40	0
59	MG	BA	3183	1/1	0.92	0.23	5.95	37,37,37,37	0
59	MG	DA	3079	1/1	0.92	0.28	5.89	16,16,16,16	0
59	MG	AA	1665	1/1	0.81	0.27	5.83	49,49,49,49	0
59	MG	BA	3193	1/1	0.95	0.36	5.82	58,58,58,58	0
59	MG	BA	3095	1/1	0.95	0.25	5.64	30,30,30,30	0
59	MG	DA	3015	1/1	0.97	0.42	5.54	37,37,37,37	0
59	MG	BU	201	1/1	0.94	0.27	5.18	22,22,22,22	0
59	MG	BA	3345	1/1	0.96	0.24	4.96	31,31,31,31	0
59	MG	DA	3243	1/1	0.92	0.38	4.90	35,35,35,35	0
59	MG	BA	3066	1/1	0.97	0.29	4.80	20,20,20,20	0
59	MG	DA	3112	1/1	0.80	0.22	4.73	70,70,70,70	0
59	MG	BA	3050	1/1	0.97	0.28	4.57	4,4,4,4	0
59	MG	BA	3223	1/1	0.94	0.24	4.47	46,46,46,46	0
59	MG	BA	3012	1/1	0.98	0.29	4.23	31,31,31,31	0
59	MG	DA	3039	1/1	0.94	0.32	4.13	58,58,58,58	0
59	MG	CA	1616	1/1	0.96	0.24	4.07	46,46,46,46	0
59	MG	DA	3077	1/1	0.73	0.32	4.03	73,73,73,73	0
59	MG	BA	3047	1/1	0.96	0.22	3.97	30,30,30,30	0
59	MG	BA	3189	1/1	0.94	0.31	3.96	18,18,18,18	0
59	MG	DA	3130	1/1	0.99	0.31	3.94	27,27,27,27	0
59	MG	CA	1642	1/1	0.91	0.24	3.81	29,29,29,29	0
59	MG	AA	1622	1/1	0.95	0.29	3.72	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3106	1/1	0.95	0.30	3.62	29,29,29,29	0
59	MG	BA	3021	1/1	0.98	0.25	3.58	3,3,3,3	0
59	MG	BA	3336	1/1	0.94	0.31	3.57	23,23,23,23	0
59	MG	DA	3241	1/1	0.94	0.29	3.47	42,42,42,42	0
59	MG	CA	1633	1/1	0.98	0.22	3.37	38,38,38,38	0
59	MG	DA	3002	1/1	0.94	0.24	3.34	31,31,31,31	0
59	MG	DA	3099	1/1	0.79	0.30	3.28	45,45,45,45	0
59	MG	DA	3043	1/1	0.85	0.33	2.99	48,48,48,48	0
59	MG	BA	3381	1/1	0.90	0.16	2.98	43,43,43,43	0
59	MG	BA	3199	1/1	0.95	0.25	2.90	54,54,54,54	0
59	MG	CA	1629	1/1	0.95	0.29	2.68	52,52,52,52	0
59	MG	BA	3024	1/1	0.95	0.18	2.61	22,22,22,22	0
59	MG	BA	3091	1/1	0.94	0.23	2.43	34,34,34,34	0
59	MG	BA	3120	1/1	0.88	0.29	2.42	49,49,49,49	0
59	MG	CA	1663	1/1	0.98	0.20	2.40	50,50,50,50	0
59	MG	BA	3014	1/1	0.96	0.24	2.40	63,63,63,63	0
59	MG	AA	1697	1/1	0.95	0.34	2.34	73,73,73,73	0
59	MG	BA	3151	1/1	0.95	0.29	2.30	22,22,22,22	0
59	MG	DA	3010	1/1	0.98	0.26	2.20	39,39,39,39	0
59	MG	BA	3020	1/1	0.94	0.23	2.09	22,22,22,22	0
59	MG	AA	1614	1/1	0.95	0.20	1.82	45,45,45,45	0
59	MG	AA	1656	1/1	0.89	0.21	1.68	42,42,42,42	0
59	MG	CA	1656	1/1	0.96	0.22	1.64	51,51,51,51	0
59	MG	D5	102	1/1	0.95	0.22	1.53	91,91,91,91	0
59	MG	BA	3053	1/1	0.90	0.22	1.52	11,11,11,11	0
59	MG	AA	1717	1/1	0.84	0.18	1.47	50,50,50,50	0
59	MG	DA	3192	1/1	0.90	0.22	1.45	39,39,39,39	0
59	MG	DA	3205	1/1	0.99	0.25	1.44	27,27,27,27	0
59	MG	DA	3012	1/1	0.96	0.25	1.42	33,33,33,33	0
59	MG	CA	1638	1/1	0.85	0.20	1.40	46,46,46,46	0
59	MG	AA	1690	1/1	0.98	0.21	1.26	40,40,40,40	0
59	MG	BA	3116	1/1	0.84	0.21	1.25	54,54,54,54	0
59	MG	DA	3153	1/1	0.93	0.18	1.23	28,28,28,28	0
59	MG	BA	3001	1/1	0.96	0.18	1.11	72,72,72,72	0
59	MG	BA	3142	1/1	0.95	0.26	1.11	18,18,18,18	0
59	MG	DA	3081	1/1	0.96	0.20	1.06	48,48,48,48	0
59	MG	DA	3096	1/1	0.98	0.19	0.93	38,38,38,38	0
59	MG	AA	1673	1/1	0.97	0.20	0.91	35,35,35,35	0
59	MG	B0	101	1/1	0.87	0.25	0.91	58,58,58,58	0
59	MG	DA	3106	1/1	0.97	0.21	0.88	51,51,51,51	0
59	MG	AA	1641	1/1	0.78	0.20	0.87	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	CA	1669	1/1	0.89	0.17	0.87	36,36,36,36	0
59	MG	DA	3048	1/1	0.98	0.18	0.86	48,48,48,48	0
59	MG	BA	3257	1/1	0.90	0.21	0.77	21,21,21,21	0
59	MG	DA	3206	1/1	0.99	0.26	0.71	27,27,27,27	0
59	MG	DA	3090	1/1	0.98	0.19	0.54	24,24,24,24	0
59	MG	DA	3131	1/1	0.96	0.17	0.52	38,38,38,38	0
59	MG	BA	3167	1/1	0.89	0.20	0.52	31,31,31,31	0
59	MG	DA	3037	1/1	0.96	0.17	0.46	26,26,26,26	0
59	MG	BA	3334	1/1	0.89	0.18	0.45	32,32,32,32	0
59	MG	BA	3087	1/1	0.83	0.21	0.39	39,39,39,39	0
60	ZN	D4	101	1/1	0.94	0.17	0.35	147,147,147,147	0
59	MG	CX	103	1/1	0.96	0.21	0.30	50,50,50,50	0
59	MG	BA	3217	1/1	0.97	0.17	0.03	11,11,11,11	0
59	MG	DA	3091	1/1	0.92	0.18	0.02	67,67,67,67	0
59	MG	DA	3182	1/1	0.98	0.16	-0.06	33,33,33,33	0
59	MG	DA	3098	1/1	0.86	0.17	-0.09	37,37,37,37	0
60	ZN	CD	301	1/1	0.97	0.25	-0.10	61,61,61,61	0
59	MG	DA	3017	1/1	0.92	0.22	-0.17	16,16,16,16	0
59	MG	BF	302	1/1	0.89	0.18	-0.17	26,26,26,26	0
59	MG	AA	1657	1/1	0.97	0.16	-0.41	53,53,53,53	0
59	MG	AA	1611	1/1	0.95	0.16	-0.48	52,52,52,52	0
59	MG	BA	3137	1/1	0.95	0.17	-0.54	34,34,34,34	0
59	MG	BA	3203	1/1	0.97	0.16	-0.55	38,38,38,38	0
59	MG	AA	1602	1/1	0.98	0.16	-0.57	44,44,44,44	0
59	MG	BA	3123	1/1	0.95	0.17	-0.62	45,45,45,45	0
60	ZN	AD	302	1/1	0.95	0.24	-0.63	67,67,67,67	0
59	MG	CA	1658	1/1	0.97	0.14	-0.67	40,40,40,40	0
59	MG	CA	1678	1/1	0.97	0.17	-0.69	45,45,45,45	0
59	MG	BY	201	1/1	0.99	0.16	-0.71	32,32,32,32	0
59	MG	BA	3124	1/1	0.98	0.15	-0.72	27,27,27,27	0
59	MG	BA	3090	1/1	0.97	0.14	-0.76	32,32,32,32	0
59	MG	CA	1614	1/1	0.94	0.16	-0.78	49,49,49,49	0
59	MG	BA	3083	1/1	0.95	0.17	-0.78	6,6,6,6	0
59	MG	BA	3288	1/1	0.90	0.16	-0.80	33,33,33,33	0
59	MG	AX	103	1/1	0.94	0.14	-0.83	32,32,32,32	0
59	MG	BA	3121	1/1	0.96	0.16	-0.90	38,38,38,38	0
59	MG	BA	3238	1/1	0.95	0.14	-0.91	26,26,26,26	0
59	MG	BA	3107	1/1	0.97	0.16	-0.93	13,13,13,13	0
59	MG	BA	3387	1/1	0.99	0.13	-0.95	46,46,46,46	0
59	MG	DA	3155	1/1	0.94	0.17	-1.04	56,56,56,56	0
59	MG	AA	1669	1/1	0.96	0.15	-1.04	36,36,36,36	0
59	MG	BA	3022	1/1	0.96	0.16	-1.04	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	AA	1720	1/1	0.96	0.16	-1.05	52,52,52,52	0
59	MG	DA	3128	1/1	0.93	0.14	-1.06	26,26,26,26	0
59	MG	BA	3212	1/1	0.99	0.14	-1.08	25,25,25,25	0
59	MG	BA	3279	1/1	0.98	0.16	-1.09	62,62,62,62	0
59	MG	BA	3093	1/1	0.94	0.15	-1.11	10,10,10,10	0
59	MG	DA	3150	1/1	0.96	0.18	-1.12	43,43,43,43	0
59	MG	CQ	201	1/1	0.82	0.12	-1.14	94,94,94,94	0
59	MG	BA	3150	1/1	0.95	0.14	-1.17	33,33,33,33	0
59	MG	DA	3101	1/1	0.92	0.09	-1.17	28,28,28,28	0
59	MG	DA	3190	1/1	0.76	0.14	-1.22	33,33,33,33	0
59	MG	DE	303	1/1	0.89	0.11	-1.24	32,32,32,32	0
59	MG	DA	3009	1/1	0.93	0.15	-1.24	20,20,20,20	0
59	MG	AA	1661	1/1	0.94	0.14	-1.26	34,34,34,34	0
59	MG	BA	3144	1/1	0.92	0.14	-1.32	37,37,37,37	0
59	MG	BA	3157	1/1	0.93	0.13	-1.36	42,42,42,42	0
59	MG	DA	3202	1/1	0.95	0.11	-1.42	34,34,34,34	0
59	MG	AA	1681	1/1	0.96	0.08	-1.46	30,30,30,30	0
59	MG	AA	1684	1/1	0.89	0.08	-1.48	42,42,42,42	0
60	ZN	B5	102	1/1	0.92	0.07	-1.49	75,75,75,75	0
59	MG	DA	3246	1/1	0.99	0.14	-1.50	23,23,23,23	0
59	MG	BA	3258	1/1	0.96	0.13	-1.50	26,26,26,26	0
59	MG	BA	3306	1/1	0.93	0.15	-1.52	29,29,29,29	0
59	MG	BA	3202	1/1	0.95	0.12	-1.54	28,28,28,28	0
59	MG	BA	3065	1/1	0.98	0.10	-1.62	13,13,13,13	0
59	MG	BA	3073	1/1	0.93	0.16	-1.63	10,10,10,10	0
60	ZN	B9	101	1/1	0.98	0.06	-1.65	64,64,64,64	0
59	MG	BA	3181	1/1	0.93	0.10	-1.69	46,46,46,46	0
59	MG	DA	3052	1/1	0.90	0.15	-1.70	30,30,30,30	0
59	MG	DA	3070	1/1	0.97	0.14	-1.71	10,10,10,10	0
59	MG	CA	1660	1/1	0.95	0.11	-1.73	45,45,45,45	0
59	MG	BA	3385	1/1	0.96	0.11	-1.74	32,32,32,32	0
59	MG	BA	3168	1/1	0.96	0.15	-1.74	37,37,37,37	0
59	MG	AA	1629	1/1	0.94	0.14	-1.76	78,78,78,78	0
59	MG	CA	1640	1/1	0.96	0.10	-1.80	47,47,47,47	0
59	MG	DA	3044	1/1	0.95	0.13	-1.85	22,22,22,22	0
59	MG	DA	3137	1/1	0.85	0.12	-1.85	28,28,28,28	0
59	MG	DA	3063	1/1	0.97	0.15	-1.87	53,53,53,53	0
59	MG	BA	3062	1/1	0.99	0.14	-1.95	14,14,14,14	0
59	MG	BF	301	1/1	0.92	0.15	-1.97	37,37,37,37	0
60	ZN	B4	101	1/1	0.92	0.06	-2.02	117,117,117,117	0
59	MG	DA	3001	1/1	0.98	0.09	-2.02	25,25,25,25	0
59	MG	CA	1604	1/1	0.96	0.11	-2.03	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3079	1/1	0.92	0.15	-2.03	23,23,23,23	0
59	MG	AA	1687	1/1	0.95	0.06	-2.06	27,27,27,27	0
59	MG	DF	301	1/1	0.94	0.09	-2.07	31,31,31,31	0
59	MG	DA	3107	1/1	0.96	0.11	-2.08	32,32,32,32	0
59	MG	CA	1624	1/1	0.97	0.15	-2.09	24,24,24,24	0
59	MG	DA	3124	1/1	0.94	0.05	-2.20	43,43,43,43	0
59	MG	BQ	201	1/1	0.95	0.14	-2.28	48,48,48,48	0
59	MG	BA	3011	1/1	0.96	0.13	-2.33	31,31,31,31	0
59	MG	DA	3075	1/1	0.99	0.13	-2.35	32,32,32,32	0
60	ZN	D9	101	1/1	0.95	0.02	-2.35	109,109,109,109	0
59	MG	BA	3233	1/1	0.92	0.13	-2.41	32,32,32,32	0
59	MG	BA	3049	1/1	0.91	0.11	-2.42	12,12,12,12	0
59	MG	BA	3218	1/1	0.95	0.12	-2.45	21,21,21,21	0
59	MG	BA	3112	1/1	0.85	0.13	-2.46	52,52,52,52	0
60	ZN	D5	103	1/1	0.88	0.05	-2.47	92,92,92,92	0
59	MG	DA	3054	1/1	0.96	0.11	-2.48	42,42,42,42	0
59	MG	DA	3165	1/1	0.95	0.07	-2.51	49,49,49,49	0
59	MG	BA	3169	1/1	0.98	0.12	-2.60	51,51,51,51	0
59	MG	DA	3110	1/1	0.96	0.09	-2.97	38,38,38,38	0
59	MG	BA	3082	1/1	0.95	0.12	-2.99	15,15,15,15	0
59	MG	AA	1664	1/1	0.96	0.10	-3.00	20,20,20,20	0
59	MG	DA	3262	1/1	0.92	0.08	-3.07	58,58,58,58	0
59	MG	AA	1683	1/1	0.96	0.10	-3.07	31,31,31,31	0
59	MG	AA	1709	1/1	0.99	0.11	-3.12	44,44,44,44	0
59	MG	AA	1633	1/1	0.92	0.08	-3.15	37,37,37,37	0
59	MG	DA	3103	1/1	0.92	0.07	-3.39	38,38,38,38	0
59	MG	DA	3237	1/1	0.95	0.09	-3.49	39,39,39,39	0
59	MG	BA	3155	1/1	0.98	0.08	-3.50	9,9,9,9	0
59	MG	BA	3054	1/1	0.93	0.12	-3.55	22,22,22,22	0
59	MG	BA	3057	1/1	0.91	0.15	-3.67	23,23,23,23	0
59	MG	BA	3005	1/1	0.97	0.08	-3.70	17,17,17,17	0
59	MG	AA	1616	1/1	0.98	0.08	-3.74	16,16,16,16	0
59	MG	AA	1631	1/1	0.99	0.10	-3.77	25,25,25,25	0
59	MG	BA	3173	1/1	0.94	0.11	-3.82	17,17,17,17	0
59	MG	DA	3045	1/1	0.90	0.13	-3.96	41,41,41,41	0
59	MG	DA	3139	1/1	0.96	0.08	-3.97	18,18,18,18	0
59	MG	CA	1637	1/1	0.95	0.07	-3.97	29,29,29,29	0
59	MG	DA	3057	1/1	0.92	0.11	-4.05	21,21,21,21	0
59	MG	BA	3255	1/1	0.93	0.12	-4.09	22,22,22,22	0
59	MG	AA	1679	1/1	0.99	0.04	-4.09	27,27,27,27	0
59	MG	BA	3101	1/1	0.97	0.11	-4.27	25,25,25,25	0
59	MG	DA	3116	1/1	0.95	0.13	-4.36	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3301	1/1	0.94	0.11	-4.47	21,21,21,21	0
59	MG	BA	3130	1/1	0.97	0.08	-4.60	13,13,13,13	0
59	MG	CA	1685	1/1	0.97	0.08	-4.89	36,36,36,36	0
59	MG	BA	3040	1/1	0.98	0.05	-5.02	9,9,9,9	0
59	MG	BA	3368	1/1	0.97	0.10	-5.03	24,24,24,24	0
59	MG	BA	3077	1/1	0.98	0.07	-5.25	23,23,23,23	0
59	MG	BA	3361	1/1	0.95	0.11	-5.47	25,25,25,25	0
59	MG	CA	1634	1/1	0.98	0.04	-5.72	17,17,17,17	0
59	MG	DA	3008	1/1	0.99	0.05	-5.78	39,39,39,39	0
59	MG	BA	3204	1/1	0.96	0.10	-5.89	2,2,2,2	0
59	MG	DA	3023	1/1	0.99	0.05	-5.96	33,33,33,33	0
59	MG	DA	3256	1/1	0.94	0.12	-6.06	27,27,27,27	0
59	MG	BA	3344	1/1	0.89	0.10	-6.75	37,37,37,37	0
59	MG	DA	3114	1/1	0.98	0.08	-8.17	42,42,42,42	0
59	MG	D6	101	1/1	0.95	0.30	-	37,37,37,37	0
59	MG	DA	3041	1/1	0.97	0.29	-	7,7,7,7	0
59	MG	BA	3360	1/1	0.82	0.40	-	68,68,68,68	0
59	MG	CA	1631	1/1	0.87	0.47	-	45,45,45,45	0
59	MG	AA	1731	1/1	0.91	0.17	-	22,22,22,22	0
59	MG	CA	1652	1/1	0.85	0.37	-	86,86,86,86	0
59	MG	DA	3184	1/1	0.92	0.11	-	50,50,50,50	0
59	MG	AA	1663	1/1	0.94	0.44	-	53,53,53,53	0
59	MG	DA	3236	1/1	0.87	1.01	-	91,91,91,91	0
59	MG	CA	1655	1/1	0.99	0.29	-	41,41,41,41	0
59	MG	DA	3250	1/1	0.82	0.41	-	61,61,61,61	0
59	MG	DA	3158	1/1	0.95	0.33	-	38,38,38,38	0
59	MG	BA	3355	1/1	0.97	0.17	-	33,33,33,33	0
59	MG	DA	3069	1/1	0.45	0.83	-	78,78,78,78	0
59	MG	AA	1644	1/1	0.95	0.24	-	48,48,48,48	0
59	MG	DA	3266	1/1	0.98	0.38	-	72,72,72,72	0
59	MG	CA	1686	1/1	0.77	0.30	-	64,64,64,64	0
59	MG	DD	303	1/1	0.82	0.51	-	95,95,95,95	0
59	MG	AA	1713	1/1	0.98	0.16	-	57,57,57,57	0
59	MG	BA	3156	1/1	0.85	0.29	-	25,25,25,25	0
59	MG	DA	3209	1/1	0.91	0.44	-	69,69,69,69	0
59	MG	CA	1630	1/1	0.63	0.37	-	55,55,55,55	0
59	MG	AA	1685	1/1	0.91	0.55	-	50,50,50,50	0
59	MG	DA	3083	1/1	0.96	0.31	-	35,35,35,35	0
59	MG	BA	3133	1/1	0.89	0.17	-	20,20,20,20	0
59	MG	CX	101	1/1	0.90	0.12	-	42,42,42,42	0
59	MG	DA	3196	1/1	0.89	0.40	-	48,48,48,48	0
59	MG	BA	3186	1/1	0.96	0.21	-	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3296	1/1	0.72	0.27	-	61,61,61,61	0
59	MG	BA	3215	1/1	0.97	0.15	-	12,12,12,12	0
59	MG	DA	3233	1/1	0.98	0.35	-	58,58,58,58	0
59	MG	AA	1678	1/1	0.85	0.21	-	52,52,52,52	0
59	MG	BA	3250	1/1	0.98	0.13	-	21,21,21,21	0
59	MG	BA	3384	1/1	0.94	0.10	-	39,39,39,39	0
59	MG	AA	1627	1/1	0.76	0.40	-	55,55,55,55	0
59	MG	BA	3221	1/1	0.96	0.24	-	25,25,25,25	0
59	MG	BA	3206	1/1	0.95	0.17	-	36,36,36,36	0
59	MG	DA	3092	1/1	0.98	0.36	-	51,51,51,51	0
59	MG	CA	1687	1/1	0.92	0.14	-	56,56,56,56	0
59	MG	CA	1623	1/1	0.76	0.21	-	91,91,91,91	0
59	MG	BA	3129	1/1	0.99	0.12	-	27,27,27,27	0
59	MG	AA	1703	1/1	0.94	0.08	-	41,41,41,41	0
59	MG	CA	1673	1/1	0.96	0.32	-	71,71,71,71	0
59	MG	BA	3274	1/1	0.90	0.15	-	36,36,36,36	0
59	MG	DA	3132	1/1	0.81	0.22	-	60,60,60,60	0
59	MG	CA	1677	1/1	0.85	0.15	-	53,53,53,53	0
59	MG	BA	3386	1/1	0.88	0.18	-	20,20,20,20	0
59	MG	AA	1649	1/1	0.92	0.36	-	71,71,71,71	0
59	MG	CA	1646	1/1	0.96	0.32	-	40,40,40,40	0
59	MG	BA	3015	1/1	0.98	0.38	-	25,25,25,25	0
59	MG	BA	3109	1/1	0.93	0.14	-	34,34,34,34	0
59	MG	AA	1676	1/1	0.68	0.19	-	77,77,77,77	0
59	MG	AA	1721	1/1	0.93	0.14	-	54,54,54,54	0
59	MG	BA	3224	1/1	0.74	0.28	-	63,63,63,63	0
59	MG	BA	3017	1/1	0.98	0.19	-	14,14,14,14	0
59	MG	DA	3232	1/1	0.92	0.29	-	80,80,80,80	0
59	MG	DA	3261	1/1	0.91	0.32	-	50,50,50,50	0
59	MG	AW	105	1/1	0.87	0.21	-	41,41,41,41	0
59	MG	DA	3033	1/1	0.97	0.12	-	10,10,10,10	0
59	MG	DA	3208	1/1	0.94	0.40	-	62,62,62,62	0
59	MG	BN	201	1/1	0.83	0.35	-	67,67,67,67	0
59	MG	AW	102	1/1	0.81	0.12	-	53,53,53,53	0
59	MG	BA	3209	1/1	0.95	0.11	-	27,27,27,27	0
59	MG	AA	1726	1/1	0.95	0.29	-	32,32,32,32	0
59	MG	DA	3258	1/1	0.97	0.19	-	29,29,29,29	0
59	MG	DA	3230	1/1	0.93	0.51	-	46,46,46,46	0
59	MG	AT	202	1/1	0.90	0.42	-	70,70,70,70	0
59	MG	BA	3317	1/1	0.79	0.41	-	50,50,50,50	0
59	MG	AA	1674	1/1	0.95	0.05	-	42,42,42,42	0
59	MG	CA	1607	1/1	0.88	0.41	-	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3346	1/1	0.79	0.33	-	35,35,35,35	0
59	MG	AA	1630	1/1	0.96	0.07	-	26,26,26,26	0
59	MG	DZ	301	1/1	0.90	0.21	-	55,55,55,55	0
59	MG	BA	3316	1/1	0.88	0.43	-	68,68,68,68	0
59	MG	BA	3359	1/1	0.91	0.32	-	51,51,51,51	0
59	MG	BR	201	1/1	0.84	0.44	-	41,41,41,41	0
59	MG	BA	3269	1/1	0.77	0.95	-	83,83,83,83	0
59	MG	BA	3205	1/1	0.85	0.28	-	86,86,86,86	0
59	MG	CA	1625	1/1	0.90	0.55	-	54,54,54,54	0
59	MG	AA	1716	1/1	0.92	0.23	-	44,44,44,44	0
59	MG	AA	1634	1/1	0.83	0.12	-	72,72,72,72	0
59	MG	BA	3100	1/1	0.97	0.21	-	22,22,22,22	0
59	MG	BA	3105	1/1	0.97	0.22	-	14,14,14,14	0
59	MG	AA	1680	1/1	0.95	0.41	-	63,63,63,63	0
59	MG	BA	3201	1/1	0.95	0.17	-	111,111,111,111	0
59	MG	BE	301	1/1	0.97	0.23	-	12,12,12,12	0
59	MG	BA	3063	1/1	0.99	0.23	-	19,19,19,19	0
59	MG	CA	1674	1/1	0.92	0.33	-	63,63,63,63	0
59	MG	BA	3260	1/1	0.88	0.17	-	58,58,58,58	0
59	MG	CA	1627	1/1	0.94	0.15	-	62,62,62,62	0
59	MG	DA	3167	1/1	0.90	0.15	-	42,42,42,42	0
59	MG	AX	101	1/1	0.90	0.41	-	57,57,57,57	0
59	MG	DA	3185	1/1	0.97	0.08	-	42,42,42,42	0
59	MG	BA	3267	1/1	0.96	0.12	-	31,31,31,31	0
59	MG	BA	3311	1/1	0.95	0.86	-	54,54,54,54	0
59	MG	DB	201	1/1	0.85	0.15	-	44,44,44,44	0
59	MG	AY	102	1/1	0.81	0.52	-	96,96,96,96	0
59	MG	DA	3056	1/1	0.98	0.21	-	31,31,31,31	0
59	MG	BA	3030	1/1	0.96	0.13	-	18,18,18,18	0
59	MG	AA	1732	1/1	0.92	0.16	-	32,32,32,32	0
59	MG	AA	1612	1/1	0.98	0.04	-	32,32,32,32	0
59	MG	AA	1714	1/1	0.87	0.37	-	66,66,66,66	0
59	MG	AA	1646	1/1	0.80	0.30	-	61,61,61,61	0
59	MG	BA	3178	1/1	0.97	0.37	-	11,11,11,11	0
59	MG	BA	3353	1/1	0.97	0.38	-	50,50,50,50	0
59	MG	CA	1684	1/1	0.95	0.51	-	49,49,49,49	0
59	MG	CA	1659	1/1	0.87	0.10	-	64,64,64,64	0
59	MG	BA	3191	1/1	0.88	0.19	-	31,31,31,31	0
59	MG	DA	3200	1/1	0.88	0.31	-	46,46,46,46	0
59	MG	BA	3214	1/1	0.88	0.33	-	87,87,87,87	0
59	MG	BZ	301	1/1	0.84	0.15	-	42,42,42,42	0
59	MG	AA	1698	1/1	0.91	0.19	-	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	AA	1626	1/1	0.96	0.11	-	48,48,48,48	0
59	MG	BA	3147	1/1	0.86	0.25	-	33,33,33,33	0
59	MG	BA	3035	1/1	0.95	0.17	-	22,22,22,22	0
59	MG	AA	1727	1/1	0.72	0.54	-	71,71,71,71	0
59	MG	AW	104	1/1	0.87	0.14	-	57,57,57,57	0
59	MG	BA	3135	1/1	0.93	0.26	-	38,38,38,38	0
59	MG	BA	3025	1/1	0.97	0.17	-	20,20,20,20	0
59	MG	BA	3245	1/1	0.89	0.67	-	48,48,48,48	0
59	MG	AW	103	1/1	0.82	0.40	-	73,73,73,73	0
59	MG	BA	3356	1/1	0.98	0.17	-	41,41,41,41	0
59	MG	DA	3215	1/1	0.90	0.56	-	63,63,63,63	0
59	MG	DA	3028	1/1	0.95	0.33	-	35,35,35,35	0
59	MG	BA	3285	1/1	0.96	0.20	-	28,28,28,28	0
59	MG	BA	3266	1/1	0.93	0.31	-	27,27,27,27	0
59	MG	BA	3281	1/1	0.91	0.21	-	41,41,41,41	0
59	MG	BA	3297	1/1	0.48	0.69	-	95,95,95,95	0
59	MG	BA	3377	1/1	0.96	0.36	-	43,43,43,43	0
59	MG	DA	3203	1/1	0.49	0.90	-	97,97,97,97	0
59	MG	DA	3166	1/1	0.74	0.12	-	41,41,41,41	0
59	MG	BA	3126	1/1	0.87	0.33	-	52,52,52,52	0
59	MG	AA	1725	1/1	0.83	0.26	-	84,84,84,84	0
59	MG	DA	3239	1/1	0.93	1.00	-	78,78,78,78	0
59	MG	BA	3248	1/1	0.94	0.27	-	37,37,37,37	0
59	MG	DA	3244	1/1	0.92	0.20	-	33,33,33,33	0
59	MG	BA	3379	1/1	0.92	0.51	-	52,52,52,52	0
59	MG	BA	3357	1/1	0.83	0.23	-	54,54,54,54	0
59	MG	BA	3045	1/1	0.98	0.14	-	23,23,23,23	0
59	MG	DA	3174	1/1	0.98	0.05	-	47,47,47,47	0
59	MG	D5	101	1/1	0.95	0.14	-	28,28,28,28	0
59	MG	DA	3225	1/1	0.96	0.76	-	55,55,55,55	0
59	MG	AA	1610	1/1	0.93	0.09	-	29,29,29,29	0
59	MG	DA	3223	1/1	0.89	0.17	-	61,61,61,61	0
59	MG	BA	3075	1/1	0.94	0.29	-	32,32,32,32	0
59	MG	BA	3263	1/1	0.98	0.16	-	37,37,37,37	0
59	MG	BA	3009	1/1	0.98	0.25	-	30,30,30,30	0
59	MG	BA	3273	1/1	0.93	0.21	-	26,26,26,26	0
59	MG	DA	3219	1/1	0.90	0.17	-	40,40,40,40	0
59	MG	BA	3096	1/1	0.99	0.11	-	17,17,17,17	0
59	MG	DA	3198	1/1	0.89	0.49	-	56,56,56,56	0
59	MG	DA	3126	1/1	0.83	0.30	-	48,48,48,48	0
59	MG	BA	3268	1/1	0.92	0.47	-	44,44,44,44	0
59	MG	AA	1613	1/1	0.98	0.08	-	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	DA	3264	1/1	0.96	0.36	-	41,41,41,41	0
59	MG	BA	3330	1/1	0.98	0.09	-	21,21,21,21	0
59	MG	BA	3184	1/1	0.83	0.26	-	56,56,56,56	0
59	MG	BA	3160	1/1	0.96	0.28	-	13,13,13,13	0
59	MG	DA	3204	1/1	0.97	0.14	-	41,41,41,41	0
59	MG	BA	3230	1/1	0.88	0.17	-	48,48,48,48	0
59	MG	AA	1704	1/1	0.98	0.06	-	40,40,40,40	0
59	MG	CA	1691	1/1	0.94	0.15	-	55,55,55,55	0
59	MG	DA	3111	1/1	0.93	0.62	-	71,71,71,71	0
59	MG	DA	3025	1/1	1.00	0.16	-	5,5,5,5	0
59	MG	DA	3011	1/1	0.92	0.42	-	37,37,37,37	0
59	MG	CV	102	1/1	0.95	0.35	-	44,44,44,44	0
59	MG	BA	3141	1/1	0.99	0.23	-	1,1,1,1	0
59	MG	DA	3018	1/1	0.97	0.17	-	14,14,14,14	0
59	MG	CA	1680	1/1	0.98	0.17	-	59,59,59,59	0
59	MG	DA	3038	1/1	0.97	0.14	-	25,25,25,25	0
59	MG	DA	3141	1/1	0.96	0.14	-	46,46,46,46	0
59	MG	DA	3173	1/1	0.94	0.20	-	57,57,57,57	0
59	MG	CA	1636	1/1	0.92	0.17	-	55,55,55,55	0
59	MG	AA	1639	1/1	0.90	0.16	-	54,54,54,54	0
59	MG	DA	3228	1/1	0.97	0.05	-	16,16,16,16	0
59	MG	DA	3080	1/1	0.90	0.17	-	41,41,41,41	0
59	MG	CA	1635	1/1	0.99	0.28	-	32,32,32,32	0
59	MG	DA	3179	1/1	0.96	0.15	-	33,33,33,33	0
59	MG	BA	3284	1/1	0.95	0.37	-	33,33,33,33	0
59	MG	DA	3175	1/1	0.87	0.54	-	53,53,53,53	0
59	MG	BA	3220	1/1	0.96	0.52	-	52,52,52,52	0
59	MG	DA	3252	1/1	0.93	0.35	-	47,47,47,47	0
59	MG	CA	1671	1/1	0.86	0.30	-	54,54,54,54	0
59	MG	BA	3068	1/1	0.96	0.22	-	15,15,15,15	0
59	MG	DA	3270	1/1	0.85	0.27	-	61,61,61,61	0
59	MG	DA	3178	1/1	0.90	0.57	-	36,36,36,36	0
59	MG	BA	3307	1/1	0.67	0.44	-	64,64,64,64	0
59	MG	DA	3207	1/1	0.81	0.95	-	69,69,69,69	0
59	MG	CE	202	1/1	0.96	0.21	-	40,40,40,40	0
59	MG	B5	101	1/1	0.96	0.47	-	37,37,37,37	0
59	MG	DA	3214	1/1	0.94	0.15	-	34,34,34,34	0
59	MG	BA	3187	1/1	0.96	0.37	-	35,35,35,35	0
59	MG	BD	301	1/1	0.97	0.16	-	13,13,13,13	0
59	MG	AA	1658	1/1	0.93	0.58	-	42,42,42,42	0
59	MG	BA	3067	1/1	0.92	0.37	-	36,36,36,36	0
59	MG	AW	106	1/1	0.78	0.48	-	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3249	1/1	0.87	0.61	-	50,50,50,50	0
59	MG	AE	201	1/1	0.93	0.21	-	87,87,87,87	0
59	MG	DA	3229	1/1	0.87	0.25	-	76,76,76,76	0
59	MG	CA	1651	1/1	0.85	0.15	-	50,50,50,50	0
59	MG	BA	3396	1/1	0.91	0.18	-	37,37,37,37	0
59	MG	BA	3007	1/1	0.98	0.57	-	39,39,39,39	0
59	MG	BA	3019	1/1	0.90	0.31	-	21,21,21,21	0
59	MG	DA	3145	1/1	0.91	0.31	-	45,45,45,45	0
59	MG	BA	3175	1/1	0.93	0.24	-	43,43,43,43	0
59	MG	CA	1664	1/1	0.96	0.41	-	44,44,44,44	0
59	MG	BA	3253	1/1	0.90	0.29	-	56,56,56,56	0
59	MG	DA	3222	1/1	0.96	0.11	-	50,50,50,50	0
59	MG	DA	3123	1/1	0.86	0.26	-	32,32,32,32	0
59	MG	DA	3194	1/1	0.97	0.33	-	52,52,52,52	0
59	MG	BA	3059	1/1	0.97	0.06	-	33,33,33,33	0
59	MG	CA	1626	1/1	0.94	0.33	-	46,46,46,46	0
59	MG	DA	3136	1/1	0.88	0.30	-	47,47,47,47	0
59	MG	AA	1701	1/1	0.98	0.29	-	36,36,36,36	0
59	MG	BA	3042	1/1	0.96	0.20	-	22,22,22,22	0
59	MG	BA	3347	1/1	0.72	0.84	-	78,78,78,78	0
59	MG	BA	3276	1/1	0.91	0.25	-	45,45,45,45	0
59	MG	BA	3198	1/1	0.96	0.08	-	16,16,16,16	0
59	MG	DA	3105	1/1	0.97	0.22	-	28,28,28,28	0
59	MG	BA	3114	1/1	0.91	0.35	-	53,53,53,53	0
59	MG	AA	1706	1/1	0.99	0.29	-	43,43,43,43	0
59	MG	CA	1603	1/1	0.79	0.45	-	113,113,113,113	0
59	MG	CA	1662	1/1	0.97	0.08	-	23,23,23,23	0
59	MG	DA	3242	1/1	0.95	0.17	-	34,34,34,34	0
59	MG	DA	3269	1/1	0.95	0.16	-	43,43,43,43	0
59	MG	AA	1621	1/1	0.83	0.37	-	54,54,54,54	0
59	MG	AT	201	1/1	0.43	0.13	-	92,92,92,92	0
59	MG	CA	1618	1/1	0.88	0.47	-	69,69,69,69	0
59	MG	AA	1653	1/1	0.95	0.25	-	47,47,47,47	0
59	MG	BA	3398	1/1	0.89	0.40	-	66,66,66,66	0
59	MG	BA	3148	1/1	0.90	0.17	-	27,27,27,27	0
59	MG	CA	1611	1/1	0.95	0.22	-	38,38,38,38	0
59	MG	DA	3031	1/1	0.98	0.16	-	31,31,31,31	0
59	MG	BA	3275	1/1	0.96	0.12	-	93,93,93,93	0
59	MG	BA	3211	1/1	0.94	0.18	-	16,16,16,16	0
59	MG	AX	104	1/1	0.90	0.27	-	45,45,45,45	0
59	MG	DA	3271	1/1	0.78	0.16	-	80,80,80,80	0
59	MG	DA	3066	1/1	0.97	0.27	-	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	CA	1601	1/1	0.97	0.17	-	29,29,29,29	0
59	MG	BA	3055	1/1	0.99	0.18	-	21,21,21,21	0
59	MG	BA	3312	1/1	0.94	0.13	-	42,42,42,42	0
59	MG	BA	3372	1/1	0.94	0.21	-	26,26,26,26	0
59	MG	BA	3069	1/1	0.95	0.22	-	20,20,20,20	0
59	MG	DA	3135	1/1	0.98	0.33	-	58,58,58,58	0
59	MG	CA	1605	1/1	0.23	0.46	-	99,99,99,99	0
59	MG	BA	3146	1/1	0.94	0.36	-	12,12,12,12	0
59	MG	BA	3174	1/1	0.88	0.14	-	43,43,43,43	0
59	MG	BA	3033	1/1	0.96	0.29	-	26,26,26,26	0
59	MG	CA	1657	1/1	0.88	0.69	-	62,62,62,62	0
59	MG	B0	102	1/1	0.86	0.32	-	49,49,49,49	0
59	MG	BA	3179	1/1	0.91	0.33	-	31,31,31,31	0
59	MG	CA	1653	1/1	0.92	0.15	-	46,46,46,46	0
59	MG	BA	3243	1/1	0.95	0.29	-	35,35,35,35	0
59	MG	DA	3022	1/1	0.93	0.17	-	14,14,14,14	0
59	MG	DE	301	1/1	0.98	0.20	-	43,43,43,43	0
59	MG	DA	3144	1/1	0.91	0.57	-	57,57,57,57	0
59	MG	CA	1613	1/1	0.95	0.07	-	66,66,66,66	0
59	MG	AW	107	1/1	0.94	0.14	-	41,41,41,41	0
59	MG	BA	3235	1/1	0.90	0.36	-	51,51,51,51	0
59	MG	BA	3299	1/1	0.86	1.43	-	85,85,85,85	0
59	MG	DA	3193	1/1	0.88	0.18	-	40,40,40,40	0
59	MG	BA	3290	1/1	0.63	0.17	-	69,69,69,69	0
59	MG	DA	3104	1/1	0.97	0.11	-	36,36,36,36	0
59	MG	DA	3171	1/1	0.81	0.46	-	75,75,75,75	0
59	MG	BA	3085	1/1	0.97	0.41	-	18,18,18,18	0
59	MG	CE	201	1/1	0.88	0.08	-	71,71,71,71	0
59	MG	BA	3394	1/1	0.88	0.25	-	49,49,49,49	0
59	MG	BA	3132	1/1	0.95	0.17	-	87,87,87,87	0
59	MG	BA	3365	1/1	0.94	0.15	-	36,36,36,36	0
59	MG	DA	3071	1/1	0.98	0.18	-	27,27,27,27	0
59	MG	DA	3247	1/1	0.62	0.35	-	82,82,82,82	0
59	MG	DA	3115	1/1	0.99	0.15	-	59,59,59,59	0
59	MG	BA	3375	1/1	0.95	0.20	-	38,38,38,38	0
59	MG	DA	3265	1/1	0.88	0.44	-	51,51,51,51	0
59	MG	DA	3125	1/1	0.92	0.39	-	59,59,59,59	0
59	MG	BA	3138	1/1	0.93	0.17	-	17,17,17,17	0
59	MG	AA	1643	1/1	0.87	0.20	-	51,51,51,51	0
59	MG	BA	3208	1/1	0.90	0.20	-	54,54,54,54	0
59	MG	BA	3044	1/1	0.98	0.28	-	28,28,28,28	0
59	MG	BA	3363	1/1	0.93	0.26	-	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	AA	1638	1/1	0.91	0.18	-	50,50,50,50	0
59	MG	DA	3151	1/1	0.96	0.13	-	14,14,14,14	0
59	MG	BA	3378	1/1	0.95	0.29	-	25,25,25,25	0
59	MG	CA	1648	1/1	0.95	0.18	-	56,56,56,56	0
59	MG	BH	201	1/1	0.96	0.13	-	71,71,71,71	0
59	MG	CA	1682	1/1	0.95	0.50	-	61,61,61,61	0
59	MG	DA	3268	1/1	0.92	0.21	-	47,47,47,47	0
59	MG	AA	1670	1/1	0.95	0.22	-	36,36,36,36	0
59	MG	BA	3166	1/1	0.85	0.20	-	35,35,35,35	0
59	MG	BA	3308	1/1	0.89	0.82	-	49,49,49,49	0
59	MG	DA	3034	1/1	0.96	0.07	-	30,30,30,30	0
59	MG	BA	3315	1/1	0.86	0.39	-	46,46,46,46	0
59	MG	BA	3374	1/1	0.83	0.42	-	31,31,31,31	0
59	MG	DA	3088	1/1	0.89	0.15	-	36,36,36,36	0
59	MG	DA	3087	1/1	0.92	0.84	-	59,59,59,59	0
59	MG	BA	3323	1/1	0.80	0.17	-	61,61,61,61	0
59	MG	DA	3050	1/1	0.96	0.36	-	70,70,70,70	0
59	MG	CA	1666	1/1	0.89	0.08	-	68,68,68,68	0
59	MG	BA	3339	1/1	0.94	0.39	-	66,66,66,66	0
59	MG	BA	3252	1/1	0.89	0.12	-	18,18,18,18	0
59	MG	BA	3329	1/1	0.96	0.09	-	48,48,48,48	0
59	MG	BA	3111	1/1	0.98	0.26	-	28,28,28,28	0
59	MG	BA	3145	1/1	0.95	0.32	-	13,13,13,13	0
59	MG	AA	1692	1/1	0.98	0.05	-	55,55,55,55	0
59	MG	AA	1618	1/1	0.94	0.23	-	22,22,22,22	0
59	MG	AC	301	1/1	0.86	0.15	-	64,64,64,64	0
59	MG	BA	3159	1/1	0.82	0.19	-	46,46,46,46	0
59	MG	BA	3162	1/1	0.76	0.64	-	66,66,66,66	0
59	MG	BA	3382	1/1	0.85	0.34	-	37,37,37,37	0
59	MG	BA	3099	1/1	0.87	0.87	-	51,51,51,51	0
59	MG	BA	3176	1/1	0.86	0.27	-	27,27,27,27	0
59	MG	AA	1666	1/1	0.92	0.81	-	75,75,75,75	0
59	MG	DA	3163	1/1	0.89	0.61	-	62,62,62,62	0
59	MG	BA	3152	1/1	0.98	0.39	-	18,18,18,18	0
59	MG	AA	1688	1/1	0.89	0.26	-	47,47,47,47	0
59	MG	CA	1612	1/1	0.81	0.50	-	80,80,80,80	0
59	MG	BA	3328	1/1	0.97	0.21	-	35,35,35,35	0
59	MG	BA	3072	1/1	0.99	0.23	-	16,16,16,16	0
59	MG	BA	3393	1/1	0.94	0.16	-	40,40,40,40	0
59	MG	BA	3078	1/1	0.92	0.12	-	20,20,20,20	0
59	MG	DA	3226	1/1	0.85	0.71	-	70,70,70,70	0
59	MG	BA	3343	1/1	0.94	0.21	-	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	AA	1733	1/1	0.94	0.13	-	30,30,30,30	0
59	MG	BA	3165	1/1	0.74	0.63	-	60,60,60,60	0
59	MG	BA	3182	1/1	0.80	0.86	-	81,81,81,81	0
59	MG	AA	1648	1/1	0.87	0.24	-	48,48,48,48	0
59	MG	DA	3020	1/1	0.95	0.26	-	45,45,45,45	0
59	MG	DA	3086	1/1	0.97	0.16	-	26,26,26,26	0
59	MG	BA	3195	1/1	0.94	0.15	-	79,79,79,79	0
59	MG	AA	1730	1/1	0.95	0.51	-	60,60,60,60	0
59	MG	DA	3254	1/1	0.89	0.17	-	54,54,54,54	0
59	MG	BA	3303	1/1	0.79	0.86	-	91,91,91,91	0
59	MG	DA	3172	1/1	0.91	0.30	-	55,55,55,55	0
59	MG	BA	3038	1/1	0.93	0.25	-	20,20,20,20	0
59	MG	AA	1659	1/1	0.75	0.24	-	73,73,73,73	0
59	MG	CA	1621	1/1	0.90	0.40	-	42,42,42,42	0
59	MG	BA	3027	1/1	0.87	0.24	-	35,35,35,35	0
59	MG	DA	3146	1/1	0.92	0.20	-	70,70,70,70	0
59	MG	CA	1608	1/1	0.87	0.80	-	57,57,57,57	0
59	MG	DA	3046	1/1	0.96	0.18	-	15,15,15,15	0
59	MG	DA	3067	1/1	0.98	0.27	-	50,50,50,50	0
59	MG	BA	3051	1/1	0.96	0.22	-	1,1,1,1	0
59	MG	BA	3332	1/1	0.41	0.45	-	105,105,105,105	0
59	MG	BA	3228	1/1	0.90	0.46	-	21,21,21,21	0
59	MG	DA	3117	1/1	0.97	0.08	-	32,32,32,32	0
59	MG	BA	3002	1/1	0.85	0.17	-	59,59,59,59	0
59	MG	BA	3283	1/1	0.95	0.27	-	46,46,46,46	0
59	MG	BA	3226	1/1	0.96	0.09	-	33,33,33,33	0
59	MG	DA	3085	1/1	0.97	0.25	-	22,22,22,22	0
59	MG	DA	3191	1/1	0.94	0.08	-	77,77,77,77	0
59	MG	AA	1650	1/1	0.99	0.20	-	26,26,26,26	0
59	MG	DA	3143	1/1	0.99	0.27	-	30,30,30,30	0
59	MG	DA	3259	1/1	0.94	0.36	-	43,43,43,43	0
59	MG	AA	1662	1/1	0.93	0.22	-	23,23,23,23	0
59	MG	BA	3185	1/1	0.84	0.33	-	62,62,62,62	0
59	MG	DA	3084	1/1	0.87	0.14	-	48,48,48,48	0
59	MG	DA	3272	1/1	0.95	0.52	-	60,60,60,60	0
59	MG	DA	3220	1/1	0.87	0.18	-	64,64,64,64	0
59	MG	CA	1649	1/1	0.93	0.09	-	48,48,48,48	0
59	MG	AA	1608	1/1	0.94	0.07	-	26,26,26,26	0
59	MG	AA	1723	1/1	0.88	0.14	-	36,36,36,36	0
59	MG	DA	3122	1/1	0.97	0.20	-	31,31,31,31	0
59	MG	BA	3210	1/1	0.88	0.25	-	57,57,57,57	0
59	MG	DA	3120	1/1	0.88	0.15	-	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3351	1/1	0.80	0.30	-	60,60,60,60	0
59	MG	BA	3119	1/1	0.91	0.16	-	20,20,20,20	0
59	MG	BA	3300	1/1	0.95	0.13	-	40,40,40,40	0
59	MG	DA	3267	1/1	0.96	0.28	-	53,53,53,53	0
59	MG	BA	3219	1/1	0.79	0.26	-	43,43,43,43	0
59	MG	BA	3241	1/1	0.94	0.27	-	38,38,38,38	0
59	MG	BA	3280	1/1	0.93	0.37	-	54,54,54,54	0
59	MG	CA	1690	1/1	0.96	0.14	-	46,46,46,46	0
59	MG	DA	3072	1/1	0.97	0.29	-	28,28,28,28	0
59	MG	BA	3287	1/1	0.93	0.57	-	56,56,56,56	0
59	MG	DA	3138	1/1	0.95	0.12	-	19,19,19,19	0
59	MG	BA	3239	1/1	0.93	0.21	-	25,25,25,25	0
59	MG	BA	3391	1/1	0.93	0.20	-	31,31,31,31	0
59	MG	CA	1643	1/1	0.84	0.62	-	51,51,51,51	0
59	MG	BA	3136	1/1	0.99	0.07	-	30,30,30,30	0
59	MG	AA	1689	1/1	0.81	0.21	-	73,73,73,73	0
59	MG	AA	1724	1/1	0.86	0.36	-	56,56,56,56	0
59	MG	BA	3310	1/1	0.88	0.37	-	55,55,55,55	0
59	MG	BA	3289	1/1	0.96	0.18	-	36,36,36,36	0
59	MG	DA	3059	1/1	0.99	0.03	-	28,28,28,28	0
59	MG	BA	3036	1/1	0.97	0.32	-	20,20,20,20	0
59	MG	CA	1641	1/1	0.93	0.15	-	28,28,28,28	0
59	MG	BA	3362	1/1	0.85	0.35	-	51,51,51,51	0
59	MG	CA	1679	1/1	0.90	0.18	-	46,46,46,46	0
59	MG	AX	102	1/1	0.86	0.12	-	51,51,51,51	0
59	MG	BA	3076	1/1	0.98	0.42	-	34,34,34,34	0
59	MG	BA	3008	1/1	0.99	0.20	-	13,13,13,13	0
59	MG	BA	3291	1/1	0.91	0.15	-	42,42,42,42	0
59	MG	BA	3125	1/1	0.94	0.48	-	43,43,43,43	0
59	MG	BX	101	1/1	0.70	0.53	-	53,53,53,53	0
59	MG	DA	3047	1/1	0.97	0.17	-	25,25,25,25	0
59	MG	DA	3168	1/1	0.89	0.26	-	43,43,43,43	0
59	MG	CA	1688	1/1	0.90	0.14	-	59,59,59,59	0
59	MG	DA	3248	1/1	0.94	0.46	-	60,60,60,60	0
59	MG	BA	3364	1/1	0.97	0.18	-	8,8,8,8	0
59	MG	BA	3043	1/1	0.91	0.31	-	22,22,22,22	0
59	MG	BA	3016	1/1	0.97	0.41	-	27,27,27,27	0
59	MG	AA	1623	1/1	0.93	0.22	-	27,27,27,27	0
59	MG	BA	3259	1/1	0.85	0.16	-	35,35,35,35	0
59	MG	BA	3395	1/1	0.95	0.18	-	46,46,46,46	0
59	MG	DA	3014	1/1	0.89	0.21	-	79,79,79,79	0
59	MG	DA	3180	1/1	0.97	0.50	-	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3397	1/1	0.88	0.47	-	66,66,66,66	0
59	MG	BA	3052	1/1	0.94	0.43	-	37,37,37,37	0
59	MG	BA	3240	1/1	0.91	0.13	-	60,60,60,60	0
59	MG	BA	3061	1/1	0.94	0.28	-	21,21,21,21	0
59	MG	AA	1605	1/1	0.91	0.30	-	54,54,54,54	0
59	MG	DA	3013	1/1	0.96	0.42	-	32,32,32,32	0
59	MG	AA	1606	1/1	0.96	0.28	-	63,63,63,63	0
59	MG	AA	1712	1/1	0.92	0.43	-	53,53,53,53	0
59	MG	DA	3176	1/1	0.86	0.18	-	51,51,51,51	0
59	MG	BA	3153	1/1	0.92	0.17	-	37,37,37,37	0
59	MG	AA	1686	1/1	0.90	0.15	-	58,58,58,58	0
59	MG	BA	3390	1/1	0.96	0.19	-	53,53,53,53	0
59	MG	CA	1661	1/1	0.91	0.45	-	42,42,42,42	0
59	MG	DA	3016	1/1	0.96	0.13	-	54,54,54,54	0
59	MG	DA	3154	1/1	0.99	0.07	-	64,64,64,64	0
59	MG	BA	3222	1/1	0.96	0.20	-	18,18,18,18	0
59	MG	BA	3236	1/1	0.97	0.22	-	23,23,23,23	0
59	MG	CA	1632	1/1	0.97	0.30	-	47,47,47,47	0
59	MG	BA	3225	1/1	0.97	0.25	-	43,43,43,43	0
59	MG	AA	1682	1/1	0.97	0.12	-	53,53,53,53	0
59	MG	AH	201	1/1	0.97	0.29	-	31,31,31,31	0
59	MG	DA	3234	1/1	0.85	0.41	-	84,84,84,84	0
59	MG	DA	3188	1/1	0.96	0.34	-	40,40,40,40	0
59	MG	DA	3095	1/1	0.79	1.17	-	64,64,64,64	0
59	MG	BA	3092	1/1	0.98	0.08	-	20,20,20,20	0
59	MG	DA	3004	1/1	0.96	0.23	-	54,54,54,54	0
59	MG	BA	3190	1/1	0.96	0.17	-	29,29,29,29	0
59	MG	DA	3068	1/1	0.87	0.20	-	60,60,60,60	0
59	MG	BA	3348	1/1	0.88	0.38	-	62,62,62,62	0
59	MG	CA	1667	1/1	0.96	0.26	-	37,37,37,37	0
59	MG	CA	1622	1/1	0.92	0.26	-	49,49,49,49	0
59	MG	BA	3207	1/1	0.98	0.19	-	24,24,24,24	0
59	MG	AA	1711	1/1	0.81	0.27	-	68,68,68,68	0
59	MG	DR	201	1/1	0.83	0.32	-	65,65,65,65	0
59	MG	BA	3320	1/1	0.78	1.92	-	89,89,89,89	0
59	MG	BA	3262	1/1	0.97	0.23	-	27,27,27,27	0
59	MG	BA	3039	1/1	0.98	0.24	-	18,18,18,18	0
59	MG	BA	3026	1/1	0.91	0.29	-	29,29,29,29	0
59	MG	DA	3036	1/1	0.98	0.35	-	31,31,31,31	0
59	MG	DA	3049	1/1	0.87	0.14	-	41,41,41,41	0
59	MG	BA	3102	1/1	0.92	0.31	-	49,49,49,49	0
59	MG	DA	3183	1/1	0.67	0.11	-	100,100,100,100	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	DA	3189	1/1	0.83	1.16	-	92,92,92,92	0
59	MG	BA	3286	1/1	0.95	0.19	-	26,26,26,26	0
59	MG	BA	3058	1/1	0.93	0.21	-	20,20,20,20	0
59	MG	BA	3293	1/1	0.91	0.64	-	44,44,44,44	0
59	MG	DA	3113	1/1	0.93	0.18	-	49,49,49,49	0
59	MG	AA	1675	1/1	0.97	0.48	-	38,38,38,38	0
59	MG	BA	3104	1/1	0.91	0.41	-	52,52,52,52	0
59	MG	AA	1620	1/1	0.57	0.33	-	45,45,45,45	0
59	MG	BA	3373	1/1	0.89	0.34	-	55,55,55,55	0
59	MG	AA	1609	1/1	0.98	0.11	-	23,23,23,23	0
59	MG	AA	1694	1/1	0.97	0.27	-	24,24,24,24	0
59	MG	BA	3200	1/1	0.93	0.21	-	51,51,51,51	0
59	MG	BA	3277	1/1	0.96	0.32	-	60,60,60,60	0
59	MG	BA	3272	1/1	0.89	0.31	-	30,30,30,30	0
59	MG	AA	1699	1/1	0.84	0.41	-	61,61,61,61	0
59	MG	DA	3212	1/1	0.88	0.43	-	61,61,61,61	0
59	MG	BA	3118	1/1	0.97	0.25	-	18,18,18,18	0
59	MG	BA	3309	1/1	0.91	0.05	-	41,41,41,41	0
59	MG	BA	3139	1/1	0.94	0.15	-	15,15,15,15	0
59	MG	BA	3094	1/1	0.89	0.13	-	12,12,12,12	0
59	MG	BA	3037	1/1	0.85	0.46	-	27,27,27,27	0
59	MG	BA	3080	1/1	0.97	0.24	-	26,26,26,26	0
59	MG	BA	3392	1/1	0.84	0.30	-	63,63,63,63	0
59	MG	AA	1617	1/1	0.89	0.09	-	48,48,48,48	0
59	MG	BA	3127	1/1	0.83	0.24	-	48,48,48,48	0
59	MG	DA	3275	1/1	0.91	0.35	-	54,54,54,54	0
59	MG	BA	3064	1/1	0.93	0.28	-	32,32,32,32	0
59	MG	BA	3376	1/1	0.91	0.91	-	66,66,66,66	0
59	MG	DA	3076	1/1	0.93	0.29	-	48,48,48,48	0
59	MG	BA	3031	1/1	0.94	0.23	-	12,12,12,12	0
59	MG	DA	3238	1/1	0.75	0.53	-	101,101,101,101	0
59	MG	BA	3340	1/1	0.93	0.13	-	42,42,42,42	0
59	MG	DA	3119	1/1	0.78	0.47	-	62,62,62,62	0
59	MG	BA	3089	1/1	0.92	0.15	-	55,55,55,55	0
59	MG	BA	3371	1/1	0.91	0.25	-	57,57,57,57	0
59	MG	DA	3160	1/1	0.92	0.33	-	28,28,28,28	0
59	MG	AA	1651	1/1	0.93	0.30	-	37,37,37,37	0
59	MG	BA	3321	1/1	0.96	0.23	-	51,51,51,51	0
59	MG	AA	1672	1/1	0.89	0.15	-	51,51,51,51	0
59	MG	BA	3331	1/1	0.87	0.12	-	52,52,52,52	0
59	MG	AA	1668	1/1	0.99	0.20	-	194,194,194,194	0
59	MG	BA	3333	1/1	0.80	0.66	-	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	DA	3274	1/1	0.87	0.18	-	62,62,62,62	0
59	MG	BA	3383	1/1	0.92	0.34	-	36,36,36,36	0
59	MG	CA	1681	1/1	0.94	0.07	-	58,58,58,58	0
59	MG	AA	1624	1/1	0.76	0.18	-	54,54,54,54	0
59	MG	BA	3400	1/1	0.90	0.17	-	39,39,39,39	0
59	MG	BA	3074	1/1	0.97	0.18	-	12,12,12,12	0
59	MG	AK	201	1/1	0.83	0.31	-	66,66,66,66	0
59	MG	BA	3326	1/1	0.90	0.15	-	35,35,35,35	0
59	MG	DA	3134	1/1	0.94	0.26	-	42,42,42,42	0
59	MG	AA	1632	1/1	0.96	0.37	-	53,53,53,53	0
59	MG	BA	3098	1/1	0.94	0.31	-	18,18,18,18	0
59	MG	BA	3013	1/1	0.97	0.24	-	6,6,6,6	0
59	MG	CA	1692	1/1	0.90	0.38	-	73,73,73,73	0
59	MG	BA	3389	1/1	0.89	0.20	-	44,44,44,44	0
59	MG	BA	3261	1/1	0.86	0.19	-	53,53,53,53	0
59	MG	BA	3270	1/1	0.83	0.27	-	64,64,64,64	0
59	MG	BA	3305	1/1	0.90	0.29	-	32,32,32,32	0
59	MG	BA	3149	1/1	0.96	0.44	-	31,31,31,31	0
59	MG	AA	1715	1/1	0.94	0.14	-	34,34,34,34	0
59	MG	BA	3282	1/1	0.96	0.22	-	48,48,48,48	0
59	MG	BA	3256	1/1	0.88	0.18	-	56,56,56,56	0
59	MG	BA	3264	1/1	0.97	0.27	-	34,34,34,34	0
59	MG	DA	3217	1/1	0.78	0.39	-	85,85,85,85	0
59	MG	BA	3314	1/1	0.96	0.19	-	68,68,68,68	0
59	MG	BA	3110	1/1	0.93	0.20	-	39,39,39,39	0
59	MG	BA	3164	1/1	0.83	0.49	-	37,37,37,37	0
59	MG	DA	3055	1/1	0.97	0.39	-	42,42,42,42	0
59	MG	BA	3229	1/1	0.92	0.36	-	37,37,37,37	0
59	MG	BA	3108	1/1	0.91	0.14	-	44,44,44,44	0
59	MG	DA	3227	1/1	0.84	0.19	-	72,72,72,72	0
59	MG	BA	3122	1/1	0.95	0.20	-	38,38,38,38	0
59	MG	DA	3187	1/1	0.90	0.51	-	51,51,51,51	0
59	MG	BA	3113	1/1	0.97	0.40	-	34,34,34,34	0
59	MG	AA	1700	1/1	0.78	0.32	-	58,58,58,58	0
59	MG	BA	3117	1/1	0.93	0.24	-	38,38,38,38	0
59	MG	DA	3093	1/1	0.93	0.25	-	40,40,40,40	0
59	MG	BA	3298	1/1	0.74	1.44	-	178,178,178,178	0
59	MG	DA	3148	1/1	0.94	0.62	-	40,40,40,40	0
59	MG	BA	3352	1/1	0.86	0.47	-	51,51,51,51	0
59	MG	DA	3062	1/1	0.96	0.18	-	24,24,24,24	0
59	MG	CA	1650	1/1	0.96	0.43	-	69,69,69,69	0
59	MG	AA	1647	1/1	0.73	0.29	-	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3006	1/1	0.99	0.33	-	16,16,16,16	0
59	MG	BA	3237	1/1	0.85	0.47	-	32,32,32,32	0
59	MG	AD	301	1/1	0.92	0.12	-	49,49,49,49	0
59	MG	DA	3074	1/1	0.94	0.35	-	59,59,59,59	0
59	MG	AA	1628	1/1	0.95	0.47	-	46,46,46,46	0
59	MG	CA	1628	1/1	0.96	0.08	-	27,27,27,27	0
59	MG	DA	3157	1/1	0.93	0.41	-	62,62,62,62	0
59	MG	BA	3029	1/1	0.96	0.15	-	23,23,23,23	0
59	MG	DA	3197	1/1	0.87	0.33	-	84,84,84,84	0
59	MG	DA	3027	1/1	0.92	0.46	-	28,28,28,28	0
59	MG	DA	3195	1/1	0.97	0.30	-	38,38,38,38	0
59	MG	AA	1607	1/1	0.94	0.44	-	43,43,43,43	0
59	MG	AA	1652	1/1	0.87	0.43	-	55,55,55,55	0
59	MG	BA	3265	1/1	0.74	0.24	-	28,28,28,28	0
59	MG	AF	201	1/1	0.91	0.18	-	39,39,39,39	0
59	MG	BA	3399	1/1	0.96	0.19	-	41,41,41,41	0
59	MG	AA	1604	1/1	0.94	0.30	-	56,56,56,56	0
59	MG	AX	106	1/1	0.86	0.14	-	43,43,43,43	0
59	MG	DA	3245	1/1	0.71	0.33	-	86,86,86,86	0
59	MG	BA	3313	1/1	0.93	0.42	-	55,55,55,55	0
59	MG	CA	1668	1/1	0.94	0.08	-	42,42,42,42	0
59	MG	BB	201	1/1	0.98	0.07	-	18,18,18,18	0
59	MG	BA	3197	1/1	0.89	0.36	-	45,45,45,45	0
59	MG	BA	3318	1/1	0.96	0.35	-	41,41,41,41	0
59	MG	CV	101	1/1	0.91	0.24	-	36,36,36,36	0
59	MG	CX	102	1/1	0.92	0.51	-	78,78,78,78	0
59	MG	AO	101	1/1	0.90	0.12	-	62,62,62,62	0
59	MG	DA	3253	1/1	0.82	0.22	-	46,46,46,46	0
59	MG	BA	3302	1/1	0.86	0.15	-	42,42,42,42	0
59	MG	BA	3367	1/1	0.94	0.44	-	35,35,35,35	0
59	MG	DA	3221	1/1	0.95	0.39	-	59,59,59,59	0
59	MG	DA	3260	1/1	0.94	0.28	-	35,35,35,35	0
59	MG	DA	3127	1/1	0.94	0.28	-	48,48,48,48	0
59	MG	DA	3263	1/1	0.96	0.43	-	62,62,62,62	0
59	MG	BA	3244	1/1	0.93	0.17	-	31,31,31,31	0
59	MG	BA	3034	1/1	0.94	0.33	-	37,37,37,37	0
59	MG	DA	3169	1/1	0.94	0.14	-	37,37,37,37	0
59	MG	BA	3227	1/1	0.86	0.15	-	69,69,69,69	0
59	MG	AA	1722	1/1	0.93	0.15	-	35,35,35,35	0
59	MG	BA	3086	1/1	0.95	0.54	-	46,46,46,46	0
59	MG	CA	1654	1/1	0.95	0.12	-	63,63,63,63	0
59	MG	AA	1625	1/1	0.97	0.20	-	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	DA	3021	1/1	0.93	0.17	-	28,28,28,28	0
59	MG	CA	1665	1/1	0.94	0.27	-	34,34,34,34	0
59	MG	BA	3103	1/1	0.89	0.66	-	65,65,65,65	0
59	MG	AA	1691	1/1	0.92	0.44	-	56,56,56,56	0
59	MG	DA	3224	1/1	0.85	0.12	-	53,53,53,53	0
59	MG	BA	3278	1/1	0.95	0.31	-	50,50,50,50	0
59	MG	DA	3133	1/1	0.93	0.15	-	69,69,69,69	0
59	MG	DA	3109	1/1	0.88	0.74	-	65,65,65,65	0
59	MG	BA	3247	1/1	0.95	0.08	-	29,29,29,29	0
59	MG	AA	1718	1/1	0.93	0.14	-	36,36,36,36	0
59	MG	AA	1645	1/1	0.93	0.41	-	64,64,64,64	0
59	MG	BA	3097	1/1	0.97	0.10	-	21,21,21,21	0
59	MG	AA	1693	1/1	0.92	0.16	-	41,41,41,41	0
59	MG	BA	3327	1/1	0.96	0.35	-	44,44,44,44	0
59	MG	BA	3046	1/1	0.97	0.14	-	30,30,30,30	0
59	MG	BA	3004	1/1	0.73	0.49	-	81,81,81,81	0
59	MG	BA	3294	1/1	0.68	1.08	-	72,72,72,72	0
59	MG	DA	3149	1/1	0.95	0.36	-	42,42,42,42	0
59	MG	AY	101	1/1	0.94	0.17	-	71,71,71,71	0
59	MG	DA	3006	1/1	0.97	0.31	-	20,20,20,20	0
59	MG	DA	3186	1/1	0.80	0.16	-	41,41,41,41	0
59	MG	BA	3271	1/1	0.93	0.49	-	64,64,64,64	0
59	MG	BA	3242	1/1	0.97	0.58	-	44,44,44,44	0
59	MG	DA	3094	1/1	0.94	0.24	-	27,27,27,27	0
59	MG	BA	3158	1/1	0.95	0.12	-	40,40,40,40	0
59	MG	BA	3170	1/1	0.93	0.26	-	57,57,57,57	0
59	MG	CA	1645	1/1	0.90	0.05	-	27,27,27,27	0
59	MG	BA	3338	1/1	0.94	0.07	-	60,60,60,60	0
59	MG	BA	3171	1/1	0.95	0.51	-	51,51,51,51	0
59	MG	BA	3032	1/1	0.98	0.15	-	21,21,21,21	0
59	MG	CA	1683	1/1	0.76	0.55	-	55,55,55,55	0
59	MG	BA	3380	1/1	0.95	0.19	-	47,47,47,47	0
59	MG	DA	3019	1/1	0.99	0.19	-	13,13,13,13	0
59	MG	DD	302	1/1	0.97	0.48	-	34,34,34,34	0
59	MG	BA	3370	1/1	0.96	0.15	-	28,28,28,28	0
59	MG	DA	3218	1/1	0.86	0.80	-	75,75,75,75	0
59	MG	BA	3388	1/1	0.94	0.13	-	13,13,13,13	0
59	MG	BA	3177	1/1	0.74	0.26	-	65,65,65,65	0
59	MG	BA	3254	1/1	0.95	0.08	-	43,43,43,43	0
59	MG	DA	3089	1/1	0.93	0.36	-	26,26,26,26	0
59	MG	AA	1707	1/1	0.71	0.55	-	59,59,59,59	0
59	MG	BA	3071	1/1	0.97	0.05	-	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3131	1/1	0.93	0.84	-	68,68,68,68	0
59	MG	DA	3024	1/1	0.97	0.17	-	29,29,29,29	0
59	MG	AA	1710	1/1	0.54	0.65	-	113,113,113,113	0
59	MG	BA	3028	1/1	0.86	0.22	-	41,41,41,41	0
59	MG	BA	3180	1/1	0.94	0.35	-	22,22,22,22	0
59	MG	DA	3231	1/1	0.94	0.21	-	43,43,43,43	0
59	MG	DA	3162	1/1	0.93	0.11	-	40,40,40,40	0
59	MG	AA	1696	1/1	0.98	0.20	-	34,34,34,34	0
59	MG	AA	1635	1/1	0.88	0.21	-	46,46,46,46	0
59	MG	AA	1655	1/1	0.86	0.40	-	28,28,28,28	0
59	MG	BA	3304	1/1	0.96	0.46	-	22,22,22,22	0
59	MG	BA	3060	1/1	0.96	0.13	-	13,13,13,13	0
59	MG	DA	3255	1/1	0.95	0.15	-	13,13,13,13	0
59	MG	AA	1671	1/1	0.90	0.18	-	83,83,83,83	0
59	MG	DA	3140	1/1	0.92	0.41	-	38,38,38,38	0
59	MG	AA	1695	1/1	0.87	0.17	-	55,55,55,55	0
59	MG	DA	3102	1/1	0.89	0.13	-	84,84,84,84	0
59	MG	CA	1672	1/1	0.57	0.27	-	45,45,45,45	0
59	MG	DA	3156	1/1	0.96	0.29	-	28,28,28,28	0
59	MG	BA	3292	1/1	0.90	0.31	-	40,40,40,40	0
59	MG	CA	1647	1/1	0.94	0.43	-	51,51,51,51	0
59	MG	DA	3078	1/1	0.88	0.24	-	58,58,58,58	0
59	MG	AA	1615	1/1	0.99	0.21	-	42,42,42,42	0
59	MG	DA	3161	1/1	0.93	0.50	-	32,32,32,32	0
59	MG	CA	1689	1/1	0.85	0.15	-	63,63,63,63	0
59	MG	BA	3324	1/1	0.93	0.45	-	35,35,35,35	0
59	MG	BA	3048	1/1	0.97	0.10	-	6,6,6,6	0
59	MG	DA	3235	1/1	0.84	0.23	-	68,68,68,68	0
59	MG	CA	1617	1/1	0.93	0.28	-	39,39,39,39	0
59	MG	DA	3240	1/1	0.88	0.19	-	49,49,49,49	0
59	MG	BA	3041	1/1	0.99	0.21	-	20,20,20,20	0
59	MG	BA	3003	1/1	0.88	0.39	-	42,42,42,42	0
59	MG	CA	1644	1/1	0.77	0.80	-	68,68,68,68	0
59	MG	AW	101	1/1	0.74	0.43	-	135,135,135,135	0
59	MG	DA	3199	1/1	0.93	0.50	-	38,38,38,38	0
59	MG	AA	1728	1/1	0.93	0.11	-	59,59,59,59	0
59	MG	BA	3232	1/1	0.86	0.32	-	25,25,25,25	0
59	MG	DA	3058	1/1	0.96	0.07	-	33,33,33,33	0
59	MG	BA	3231	1/1	0.85	0.07	-	54,54,54,54	0
59	MG	BA	3172	1/1	0.97	0.39	-	40,40,40,40	0
59	MG	BA	3234	1/1	0.93	0.33	-	35,35,35,35	0
59	MG	BA	3335	1/1	0.90	0.42	-	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3319	1/1	0.94	0.41	-	25,25,25,25	0
59	MG	BA	3366	1/1	0.88	0.40	-	64,64,64,64	0
59	MG	BP	201	1/1	0.95	0.11	-	21,21,21,21	0
59	MG	AA	1702	1/1	0.92	0.52	-	59,59,59,59	0
59	MG	DA	3201	1/1	0.95	0.12	-	33,33,33,33	0
59	MG	AA	1719	1/1	0.92	0.29	-	58,58,58,58	0
59	MG	CA	1676	1/1	0.97	0.17	-	55,55,55,55	0
59	MG	CA	1619	1/1	0.89	0.43	-	80,80,80,80	0
59	MG	BA	3322	1/1	0.94	0.67	-	147,147,147,147	0
59	MG	AA	1729	1/1	0.81	0.26	-	57,57,57,57	0
59	MG	DA	3042	1/1	0.94	0.29	-	41,41,41,41	0
59	MG	AK	202	1/1	0.71	0.30	-	90,90,90,90	0
59	MG	DA	3210	1/1	0.87	0.47	-	57,57,57,57	0
59	MG	AA	1601	1/1	0.96	0.08	-	38,38,38,38	0
59	MG	AA	1654	1/1	0.87	0.25	-	100,100,100,100	0
59	MG	DA	3181	1/1	0.64	0.25	-	52,52,52,52	0
59	MG	DA	3211	1/1	0.69	1.14	-	78,78,78,78	0
59	MG	AA	1642	1/1	0.92	0.12	-	55,55,55,55	0
59	MG	BA	3354	1/1	0.94	0.11	-	41,41,41,41	0
59	MG	BA	3369	1/1	0.94	0.28	-	38,38,38,38	0
59	MG	DA	3040	1/1	0.98	0.07	-	34,34,34,34	0
59	MG	CA	1602	1/1	0.96	0.37	-	46,46,46,46	0
59	MG	DA	3053	1/1	0.86	0.19	-	47,47,47,47	0
59	MG	AA	1660	1/1	0.93	0.41	-	40,40,40,40	0
59	MG	BA	3084	1/1	0.90	0.26	-	19,19,19,19	0
59	MG	DA	3073	1/1	0.96	0.22	-	18,18,18,18	0
59	MG	BA	3358	1/1	0.97	0.09	-	49,49,49,49	0
59	MG	DA	3251	1/1	0.81	0.17	-	44,44,44,44	0
59	MG	BA	3246	1/1	0.90	0.51	-	46,46,46,46	0
59	MG	BA	3350	1/1	0.93	0.13	-	20,20,20,20	0
59	MG	BA	3140	1/1	0.98	0.04	-	30,30,30,30	0
59	MG	BA	3070	1/1	0.95	0.08	-	14,14,14,14	0
59	MG	BA	3196	1/1	0.88	0.29	-	49,49,49,49	0
59	MG	CA	1670	1/1	0.73	0.29	-	67,67,67,67	0
59	MG	AA	1667	1/1	0.75	0.38	-	59,59,59,59	0
59	MG	DA	3170	1/1	0.86	0.14	-	52,52,52,52	0
59	MG	BA	3325	1/1	0.94	0.14	-	61,61,61,61	0
59	MG	AL	201	1/1	0.94	0.46	-	44,44,44,44	0
59	MG	DA	3213	1/1	0.75	0.65	-	62,62,62,62	0
59	MG	DA	3026	1/1	0.98	0.16	-	36,36,36,36	0
59	MG	DA	3118	1/1	0.96	0.16	-	41,41,41,41	0
59	MG	CA	1609	1/1	0.93	0.48	-	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	DA	3129	1/1	0.98	0.40	-	35,35,35,35	0
59	MG	BA	3342	1/1	0.97	0.21	-	21,21,21,21	0
59	MG	DA	3065	1/1	0.92	0.32	-	51,51,51,51	0
59	MG	AA	1636	1/1	0.97	0.25	-	21,21,21,21	0
59	MG	DA	3032	1/1	0.99	0.09	-	9,9,9,9	0
59	MG	BA	3349	1/1	0.91	0.18	-	53,53,53,53	0
59	MG	DA	3030	1/1	0.85	0.10	-	17,17,17,17	0
59	MG	DA	3121	1/1	0.85	0.18	-	37,37,37,37	0
59	MG	DA	3064	1/1	0.99	0.15	-	48,48,48,48	0
59	MG	DA	3100	1/1	0.92	0.37	-	57,57,57,57	0
59	MG	DA	3273	1/1	0.70	0.96	-	106,106,106,106	0
59	MG	DA	3029	1/1	0.94	0.34	-	34,34,34,34	0
59	MG	AA	1708	1/1	0.98	0.04	-	64,64,64,64	0
59	MG	BA	3163	1/1	0.96	0.12	-	22,22,22,22	0
59	MG	DA	3159	1/1	0.96	0.14	-	16,16,16,16	0
59	MG	AX	107	1/1	0.74	0.58	-	80,80,80,80	0
59	MG	DA	3142	1/1	0.94	0.15	-	44,44,44,44	0
59	MG	BA	3143	1/1	0.93	0.25	-	37,37,37,37	0
59	MG	DA	3051	1/1	0.93	0.45	-	51,51,51,51	0
59	MG	AA	1705	1/1	0.98	0.10	-	47,47,47,47	0
59	MG	CA	1675	1/1	0.74	0.50	-	150,150,150,150	0
59	MG	DA	3060	1/1	0.97	0.12	-	16,16,16,16	0

6.5 Other polymers

There are no such residues in this entry.