



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:49 PM GMT

PDB ID : 4V90
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Deposited on : 2014-02-22
Resolution : 2.95 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

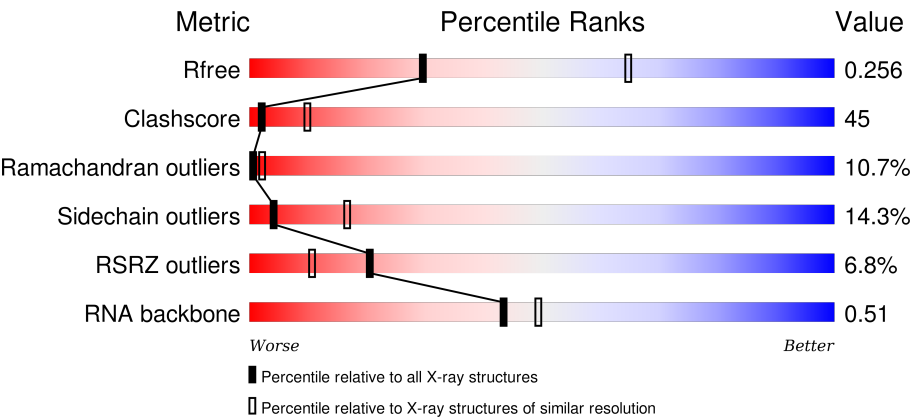
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.95 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.



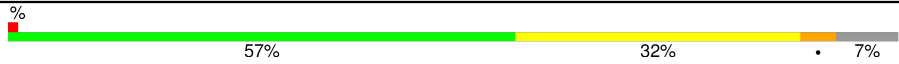

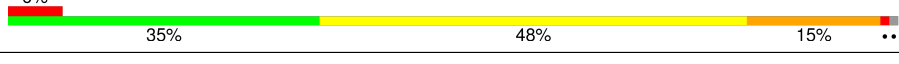

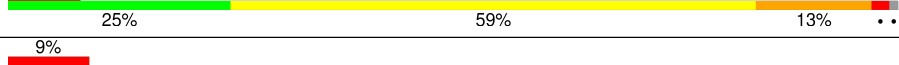
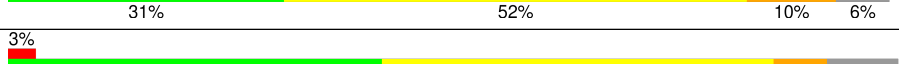
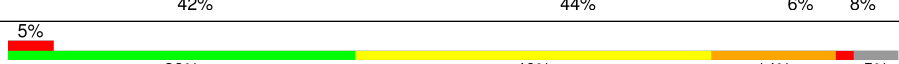
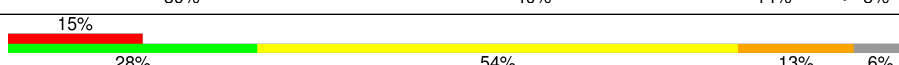
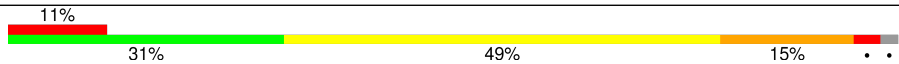

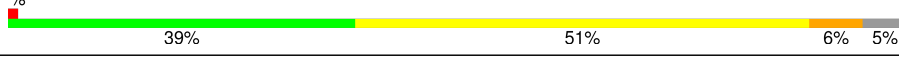
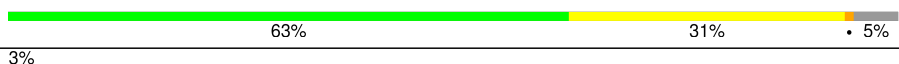



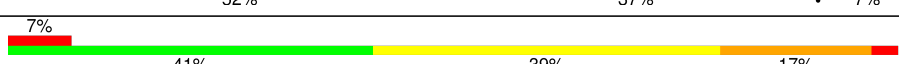
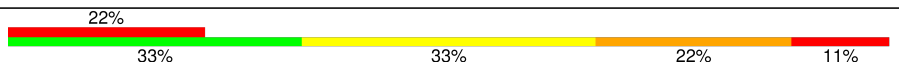
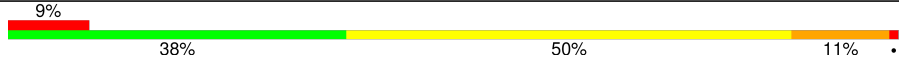
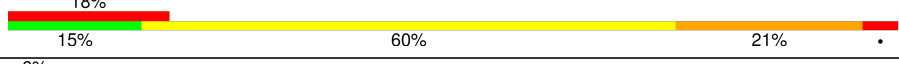
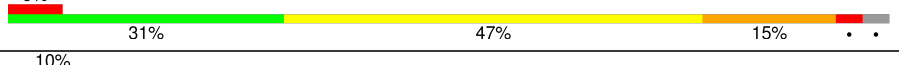





Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	91344	2184 (3.00-2.92)
Clashscore	102246	2552 (3.00-2.92)
Ramachandran outliers	100387	2468 (3.00-2.92)
Sidechain outliers	100360	2471 (3.00-2.92)
RSRZ outliers	91569	2201 (3.00-2.92)
RNA backbone	2183	1010 (3.36-2.56)

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	1519	<div><div>3%</div><div>32%48%19%</div><div></div></div>
2	AB	256	<div><div>8%</div><div>21%49%18%8%</div><div></div></div>
3	AC	239	<div><div>4%</div><div>23%44%18%13%</div><div></div></div>
4	AD	209	<div><div>3%</div><div>45%45%9%</div><div></div></div>

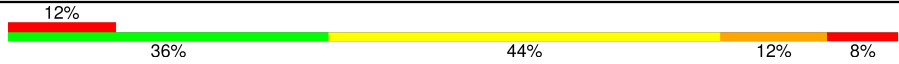

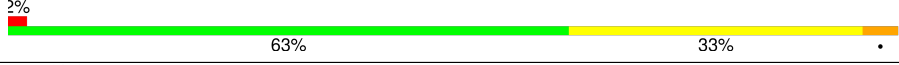
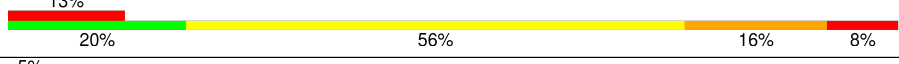
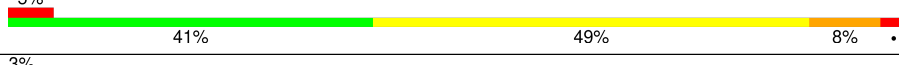
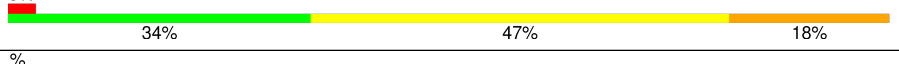
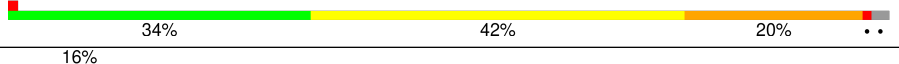
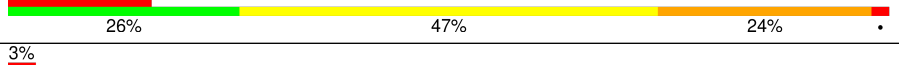
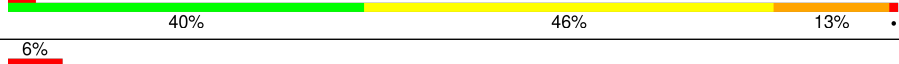
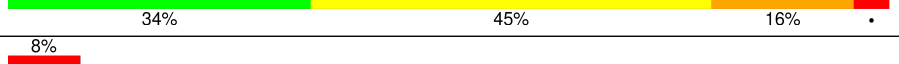

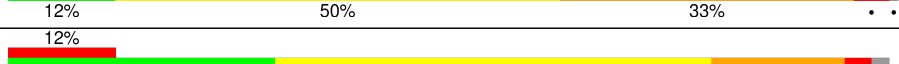
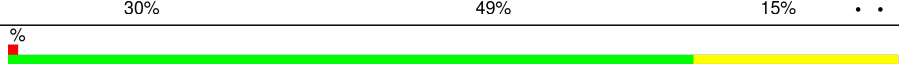
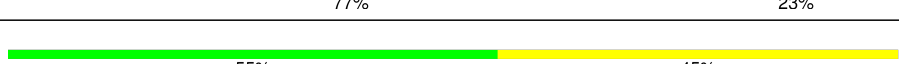

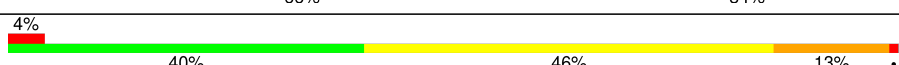
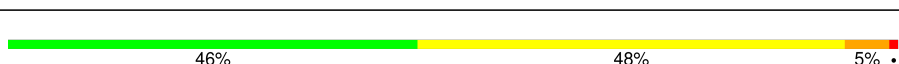
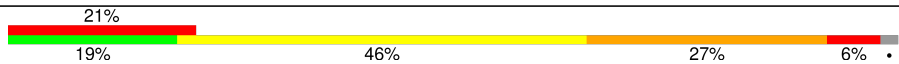
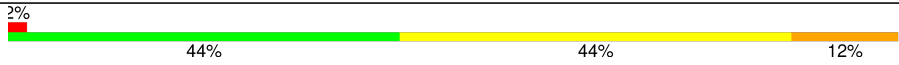


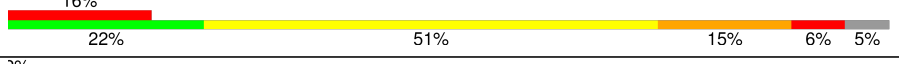

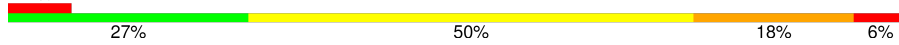

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Mol	Chain	Length	Quality of chain
5	AE	162	
6	AF	101	
7	AG	156	
8	AH	138	
9	AI	128	
10	AJ	105	
11	AK	129	
12	AL	132	
13	AM	126	
14	AN	61	
15	AO	89	
16	AP	88	
17	AQ	105	
18	AR	88	
19	AS	93	
20	AT	106	
21	AU	27	
22	AV	76	
23	AX	9	
24	AY	691	
25	B0	84	
26	B1	97	
27	B2	71	
28	B3	60	
29	B4	71	

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Mol	Chain	Length	Quality of chain
30	B5	59	
31	B6	53	
32	B7	48	
33	B8	64	
34	B9	37	
35	BA	2915	
36	BB	122	
37	BC	228	
38	BD	275	
39	BE	206	
40	BF	210	
41	BG	181	
42	BH	180	
43	BJ	130	
44	BK	140	
45	BL	71	
46	BN	140	
47	BO	122	
48	BP	149	
49	BQ	141	
50	BR	117	
51	BS	111	
52	BT	146	
53	BU	117	
54	BV	101	

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Mol	Chain	Length	Quality of chain
55	BW	113	
56	BX	95	
57	BY	109	
58	BZ	205	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	MG	AA	1604	-	-	-	X
59	MG	AA	1615	-	-	-	X
59	MG	AA	1616	-	-	-	X
59	MG	AA	1623	-	-	-	X
59	MG	AA	1625	-	-	-	X
59	MG	AA	1636	-	-	-	X
59	MG	AA	1638	-	-	-	X
59	MG	AA	1639	-	-	-	X
59	MG	AA	1645	-	-	-	X
59	MG	AA	1649	-	-	-	X
59	MG	AA	1665	-	-	-	X
59	MG	AA	1671	-	-	-	X
59	MG	AA	1677	-	-	-	X
59	MG	AA	1678	-	-	-	X
59	MG	AA	1684	-	-	-	X
59	MG	AA	1686	-	-	-	X
59	MG	AA	1690	-	-	-	X
59	MG	AA	1692	-	-	-	X
59	MG	AA	1700	-	-	-	X
59	MG	AA	1704	-	-	-	X
59	MG	AA	1715	-	-	-	X
59	MG	AA	1724	-	-	-	X
59	MG	AA	1729	-	-	-	X
59	MG	AA	1733	-	-	-	X
59	MG	AA	1741	-	-	-	X
59	MG	AA	1756	-	-	-	X
59	MG	AA	1760	-	-	-	X
59	MG	AA	1762	-	-	-	X
59	MG	AA	1777	-	-	-	X
59	MG	B0	101	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	MG	BA	3004	-	-	-	X
59	MG	BA	3006	-	-	-	X
59	MG	BA	3007	-	-	-	X
59	MG	BA	3024	-	-	-	X
59	MG	BA	3039	-	-	-	X
59	MG	BA	3043	-	-	-	X
59	MG	BA	3044	-	-	-	X
59	MG	BA	3048	-	-	-	X
59	MG	BA	3051	-	-	-	X
59	MG	BA	3052	-	-	-	X
59	MG	BA	3053	-	-	-	X
59	MG	BA	3056	-	-	-	X
59	MG	BA	3071	-	-	-	X
59	MG	BA	3075	-	-	-	X
59	MG	BA	3077	-	-	-	X
59	MG	BA	3078	-	-	-	X
59	MG	BA	3082	-	-	-	X
59	MG	BA	3084	-	-	-	X
59	MG	BA	3087	-	-	-	X
59	MG	BA	3088	-	-	-	X
59	MG	BA	3091	-	-	-	X
59	MG	BA	3094	-	-	-	X
59	MG	BA	3097	-	-	-	X
59	MG	BA	3098	-	-	-	X
59	MG	BA	3104	-	-	-	X
59	MG	BA	3108	-	-	-	X
59	MG	BA	3109	-	-	-	X
59	MG	BA	3110	-	-	-	X
59	MG	BA	3111	-	-	-	X
59	MG	BA	3113	-	-	-	X
59	MG	BA	3116	-	-	-	X
59	MG	BA	3120	-	-	-	X
59	MG	BA	3125	-	-	-	X
59	MG	BA	3127	-	-	-	X
59	MG	BA	3129	-	-	-	X
59	MG	BA	3139	-	-	-	X
59	MG	BA	3145	-	-	-	X
59	MG	BA	3149	-	-	-	X
59	MG	BA	3153	-	-	-	X
59	MG	BA	3154	-	-	-	X
59	MG	BA	3169	-	-	-	X
59	MG	BA	3172	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	MG	BA	3174	-	-	-	X
59	MG	BA	3176	-	-	-	X
59	MG	BA	3180	-	-	-	X
59	MG	BA	3181	-	-	-	X
59	MG	BA	3184	-	-	-	X
59	MG	BA	3189	-	-	-	X
59	MG	BA	3196	-	-	-	X
59	MG	BA	3199	-	-	-	X
59	MG	BA	3206	-	-	-	X
59	MG	BA	3207	-	-	-	X
59	MG	BA	3209	-	-	-	X
59	MG	BA	3210	-	-	-	X
59	MG	BA	3214	-	-	-	X
59	MG	BA	3228	-	-	-	X
59	MG	BA	3236	-	-	-	X
59	MG	BA	3248	-	-	-	X
59	MG	BA	3257	-	-	-	X
59	MG	BA	3258	-	-	-	X
59	MG	BA	3266	-	-	-	X
59	MG	BA	3271	-	-	-	X
59	MG	BA	3277	-	-	-	X
59	MG	BA	3279	-	-	-	X
59	MG	BA	3282	-	-	-	X
59	MG	BA	3295	-	-	-	X
59	MG	BA	3298	-	-	-	X
59	MG	BA	3310	-	-	-	X
59	MG	BA	3312	-	-	-	X
59	MG	BA	3313	-	-	-	X
59	MG	BA	3315	-	-	-	X
60	ZN	AD	301	-	-	-	X
61	GCP	AY	701	-	-	X	-

2 Entry composition

There are 62 unique types of molecules in this entry. The entry contains 153829 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	1507	Total	C	N	O	P	0	0	0
			32391	14418	6002	10465	1506			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AA	1030	C	-	INSERTION	GB 48256
AA	1034	G	-	INSERTION	GB 48256
AA	1245	A	-	INSERTION	GB 48256
AA	1246	C	-	INSERTION	GB 48256

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- 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			

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	0	0	0
			1010	639	197	174			

- 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			

- 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			

- 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			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	119	Total	C	N	O	S	0	0	1
			938	579	194	163	2			

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

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

- 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			

- 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			

- 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			

- 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				

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	88	Total	C	N	O	S	0	0	1
			692	440	128	122	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			

- 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			

- Molecule 22 is a RNA chain called RNA (77-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	76	Total	C	N	O	P	0	0	0
			1619	723	291	530	75			

- Molecule 23 is a RNA chain called 5'-R(*UP*AP*AP*AP*AP*AP*UP*GP*UP)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AX	9	Total	C	N	O	P	0	0	0
			188	86	34	60	8			

- Molecule 24 is a protein called ELONGATION FACTOR G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AY	687	Total	C	N	O	S	0	0	1
			5376	3412	922	1022	20			

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L27.

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

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L28.

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

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L29.

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

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L30.

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

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L32.

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

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L33.

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

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B7	48	Total	C	N	O	S	0	0	0
			419	257	104	56	2			

- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L35.

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

- Molecule 34 is a protein called 50S RIBOSOMAL PROTEIN L36.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BA	2901	Total	C	N	O	P	0	0	0
			62476	27807	11683	20086	2900			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	2155	G	A	CONFLICT	GB 55771382

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

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

- Molecule 37 is a protein called RIBOSOMAL PROTEIN L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BC	227	Total	C	N	O	S	0	0	0
			1735	1096	318	318	3			

- Molecule 38 is a protein called 50S RIBOSOMAL PROTEIN L2.

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

- Molecule 39 is a protein called 50S RIBOSOMAL PROTEIN L3.

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

- Molecule 40 is a protein called 50S RIBOSOMAL PROTEIN L4.

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

- Molecule 41 is a protein called 50S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BG	179	Total	C	N	O	S	0	0	0
			1459	931	266	258	4			

- Molecule 42 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BH	176	Total	C	N	O	S	0	0	1
			1345	853	253	237	2			

- Molecule 43 is a protein called CHAIN J.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BJ	130	Total	C	N	O	0	0	0
			654	393	130	131			

- Molecule 44 is a protein called CHAIN K.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BK	140	Total	C	N	O	0	0	0
			701	420	140	141			

- Molecule 45 is a protein called CHAIN L.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
45	BL	71	Total	C	N	O	0	0	0
			356	213	71	72			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	B5	1	Total	Mg	0	0
			1	1		
59	BU	1	Total	Mg	0	0
			1	1		
59	BA	320	Total	Mg	0	0
			320	320		

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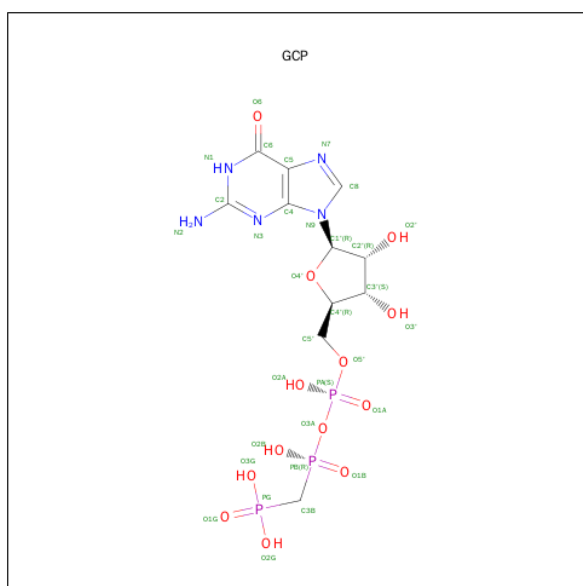
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AA	198	Total	Mg	0	0
			198	198		
59	B0	1	Total	Mg	0	0
			1	1		
59	AY	1	Total	Mg	0	0
			1	1		
59	BC	1	Total	Mg	0	0
			1	1		

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

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

- Molecule 61 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (three-letter code: GCP) (formula: C₁₁H₁₈N₅O₁₃P₃).



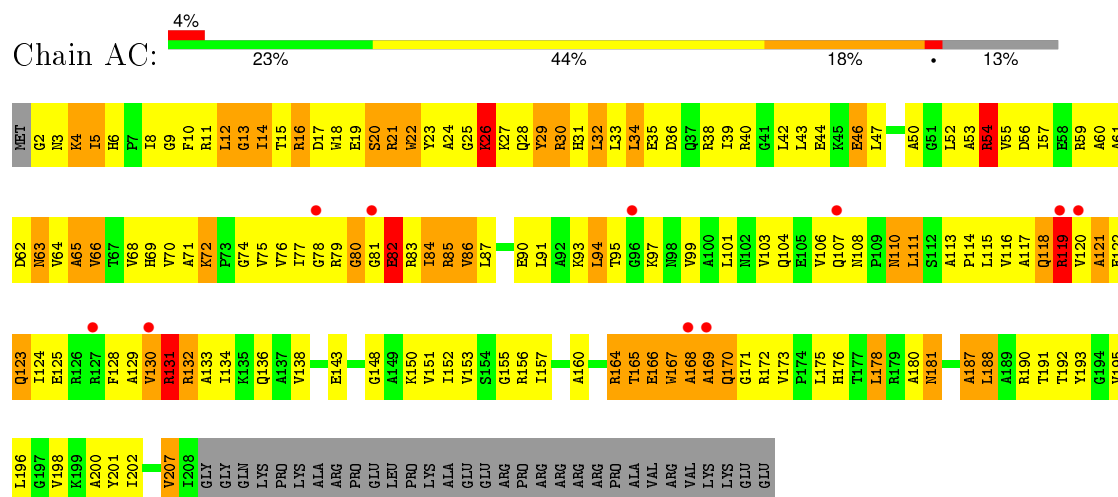
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
61	AY	1	Total	C	N	O	P	0	0
			32	11	5	13	3		

- Molecule 62 is water.

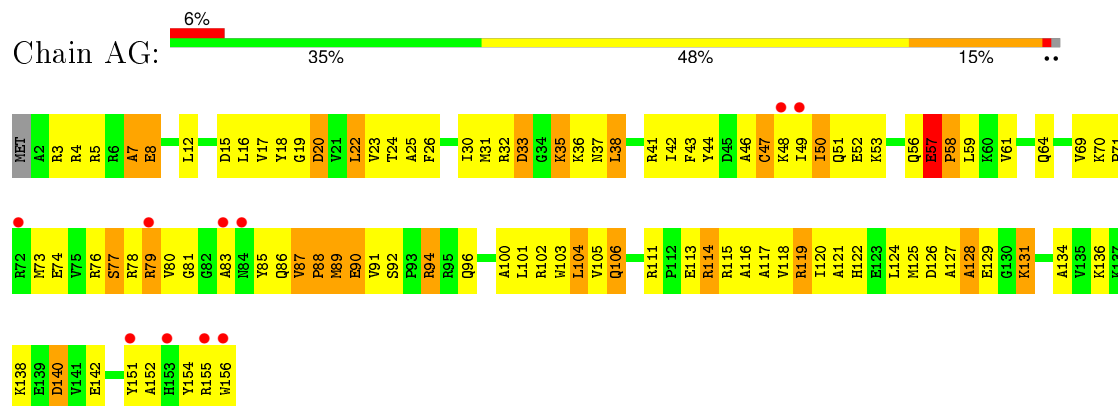
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
62	AY	2	Total	O	0	0
			2	2		



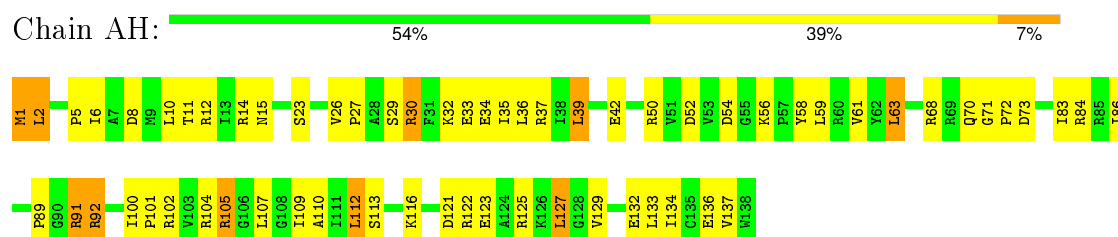
• Molecule 3: 30S RIBOSOMAL PROTEIN S3



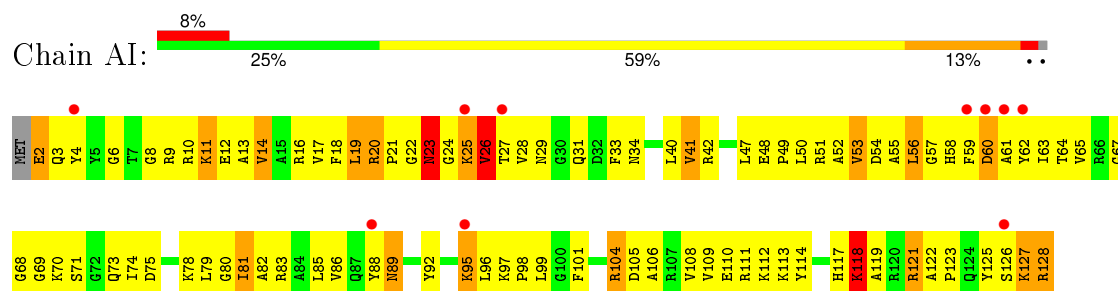
- Molecule 7: 30S RIBOSOMAL PROTEIN S7



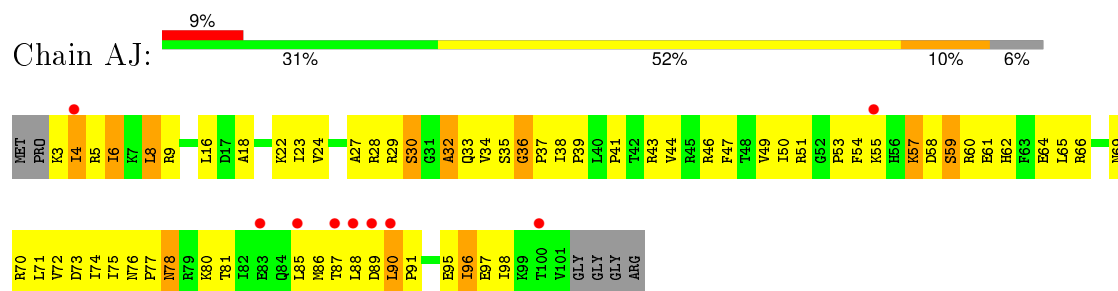
- Molecule 8: 30S RIBOSOMAL PROTEIN S8



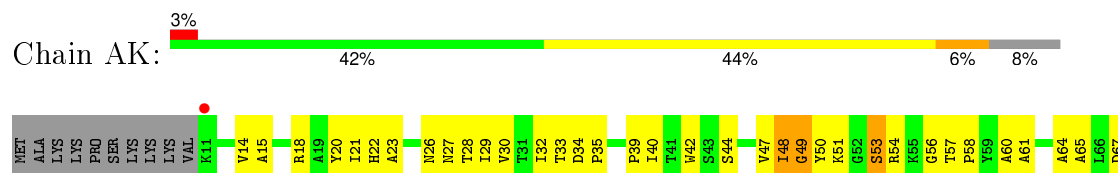
- Molecule 9: 30S RIBOSOMAL PROTEIN S9



- Molecule 10: 30S RIBOSOMAL PROTEIN S10

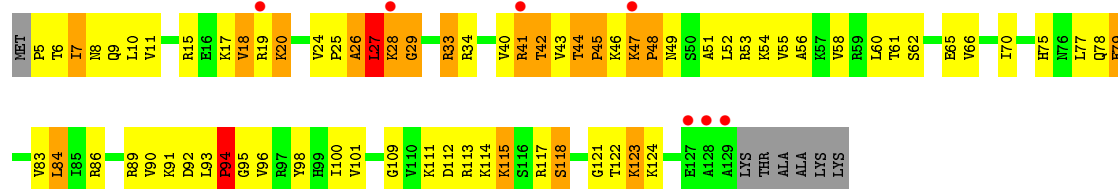


- Molecule 11: 30S RIBOSOMAL PROTEIN S11

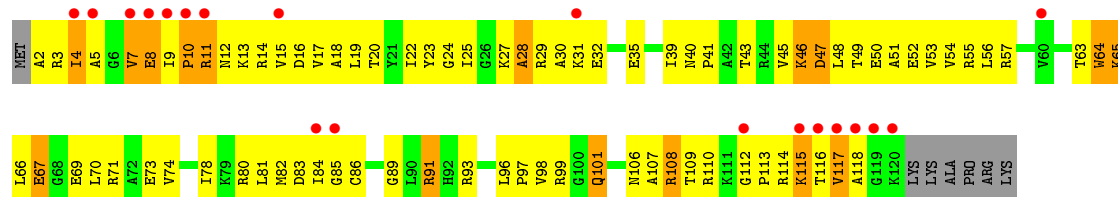




• Molecule 12: 30S RIBOSOMAL PROTEIN S12



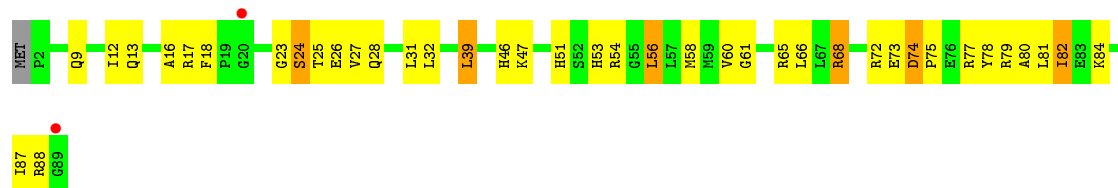
• Molecule 13: 30S RIBOSOMAL PROTEIN S13



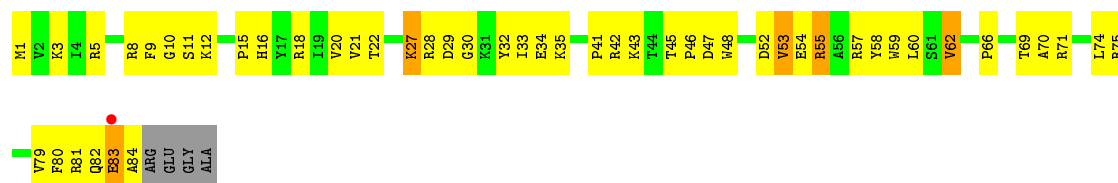
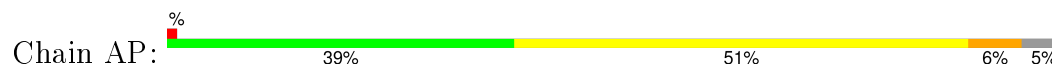
• Molecule 14: 30S RIBOSOMAL PROTEIN S14 TYPE Z



• Molecule 15: 30S RIBOSOMAL PROTEIN S15

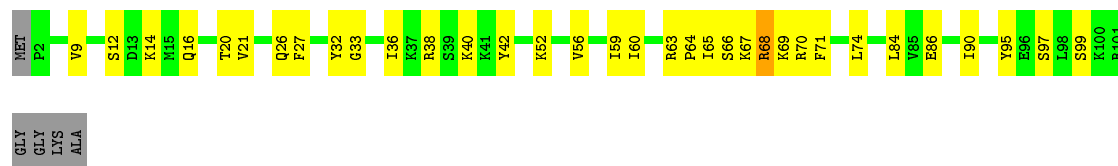


• Molecule 16: 30S RIBOSOMAL PROTEIN S16



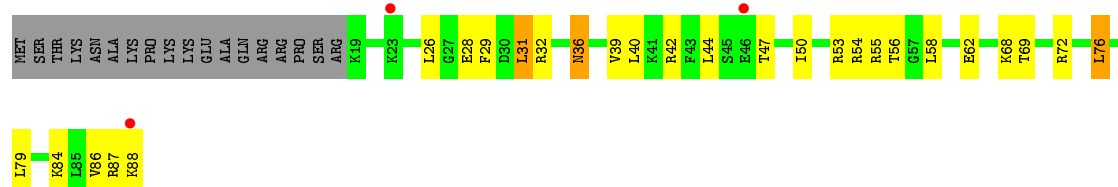
- Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain AQ:  63% 31% • 5%



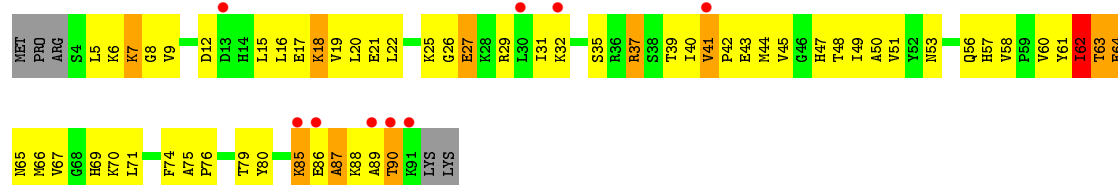
- Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain AR:  3% 49% 27% • 20%




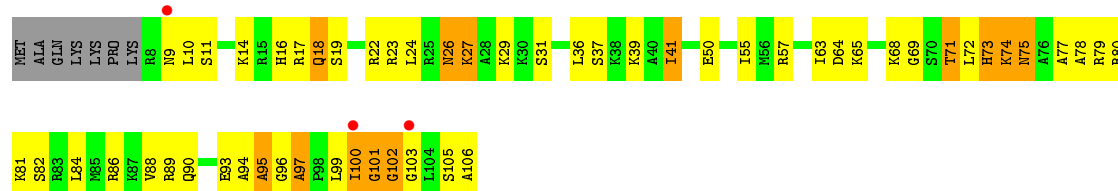
- Molecule 19: 30S RIBOSOMAL PROTEIN S19

Chain AS:  10% 30% 53% 11% • 5%



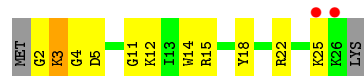
- Molecule 20: 30S RIBOSOMAL PROTEIN S20

Chain AT:  3% 42% 40% 12% 7%

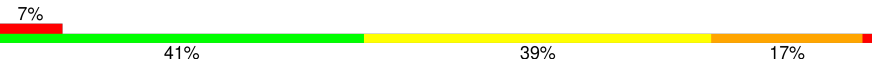


- Molecule 21: 30S RIBOSOMAL PROTEIN THX

Chain AU:  7% 52% 37% • 7%

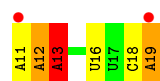


- Molecule 22: RNA (77-MER)

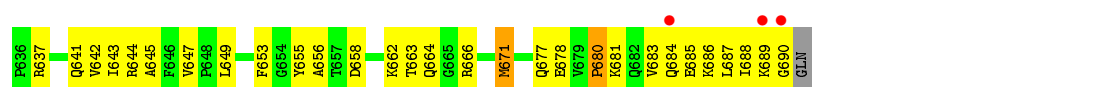
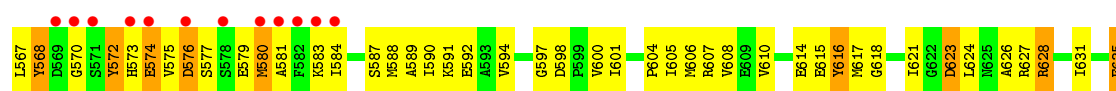
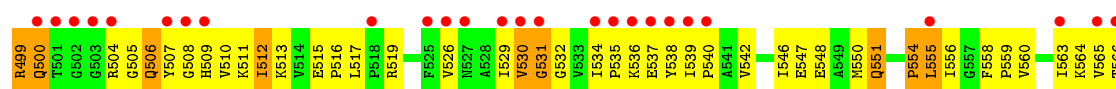
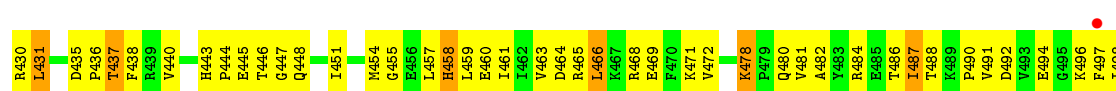
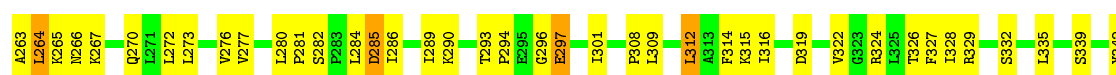
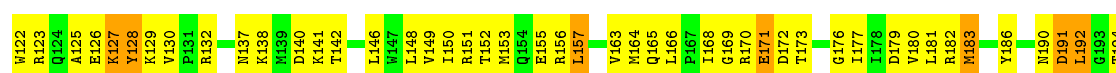
Chain AV:  7% 41% 39% 17%



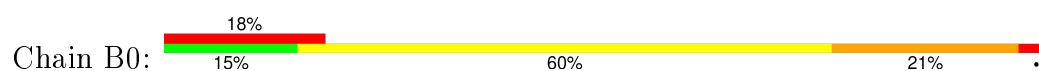
- Molecule 23: 5'-R(*UP*AP*AP*AP*AP*AP*UP*GP*UP)-3'

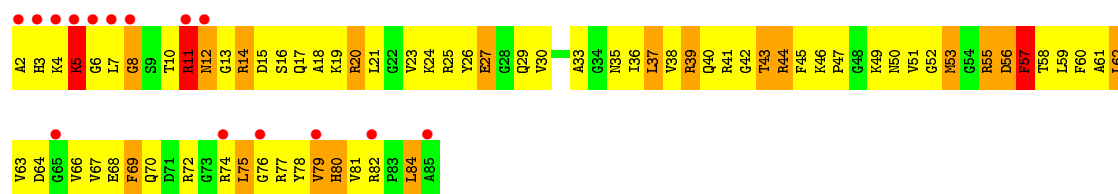


- Molecule 24: ELONGATION FACTOR G

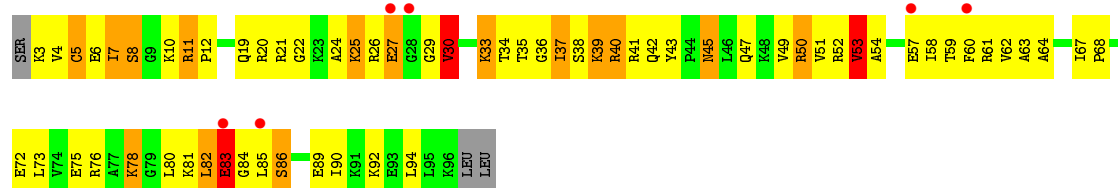


- Molecule 25: 50S RIBOSOMAL PROTEIN L27

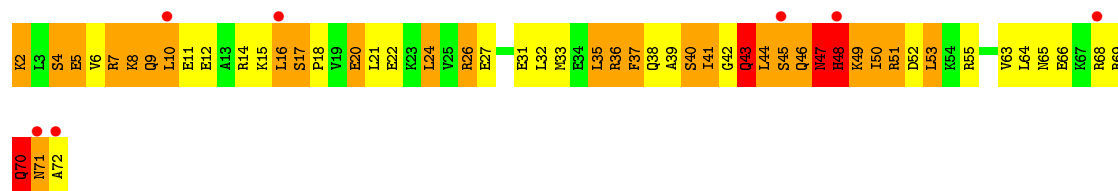
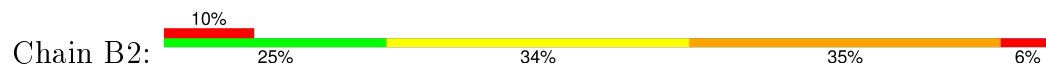




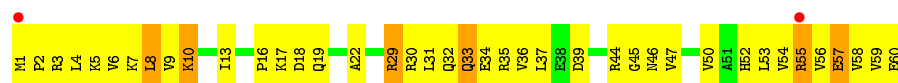
• Molecule 26: 50S RIBOSOMAL PROTEIN L28



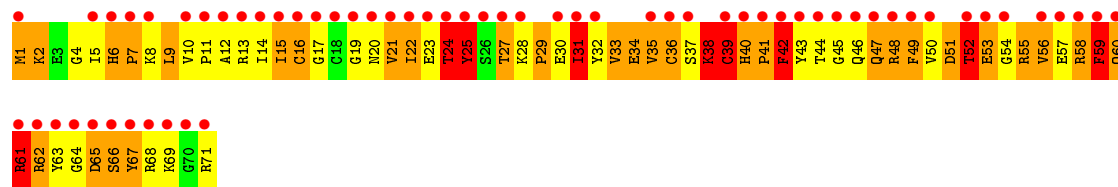
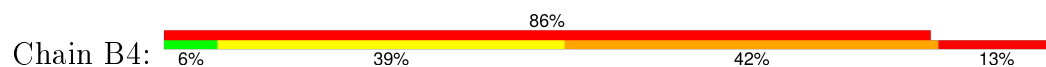
• Molecule 27: 50S RIBOSOMAL PROTEIN L29



• Molecule 28: 50S RIBOSOMAL PROTEIN L30



• Molecule 29: 50S RIBOSOMAL PROTEIN L31

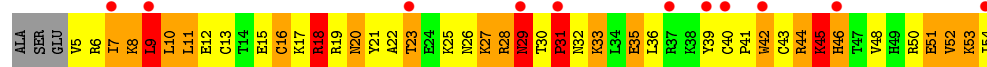


• Molecule 30: 50S RIBOSOMAL PROTEIN L32



- Molecule 31: 50S RIBOSOMAL PROTEIN L33

Chain B6: 



- Molecule 32: 50S RIBOSOMAL PROTEIN L34

Chain B7: 



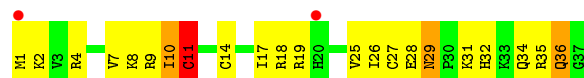
- Molecule 33: 50S RIBOSOMAL PROTEIN L35

Chain B8: 



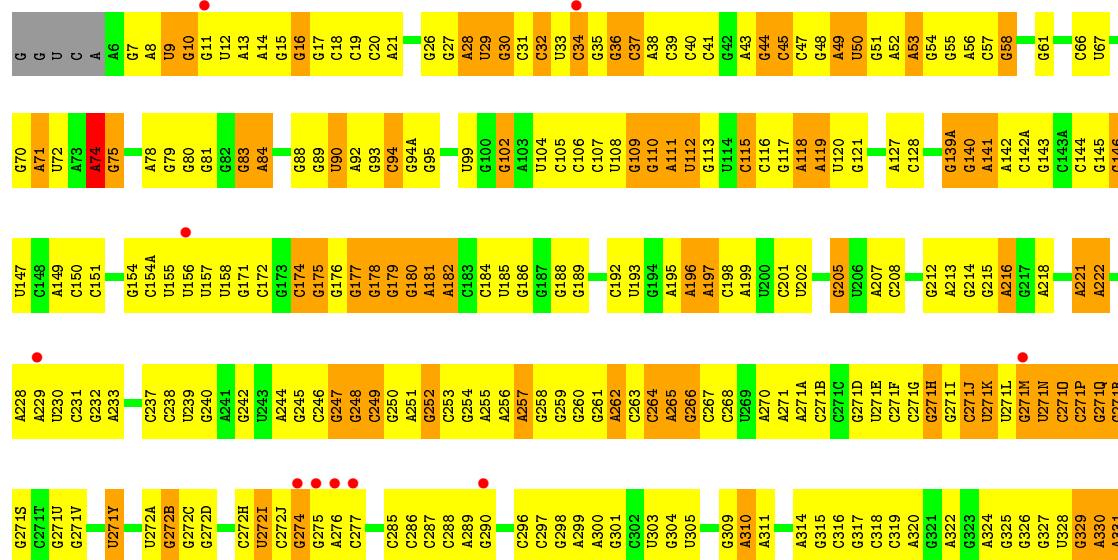
- Molecule 34: 50S RIBOSOMAL PROTEIN L36

Chain B9: 



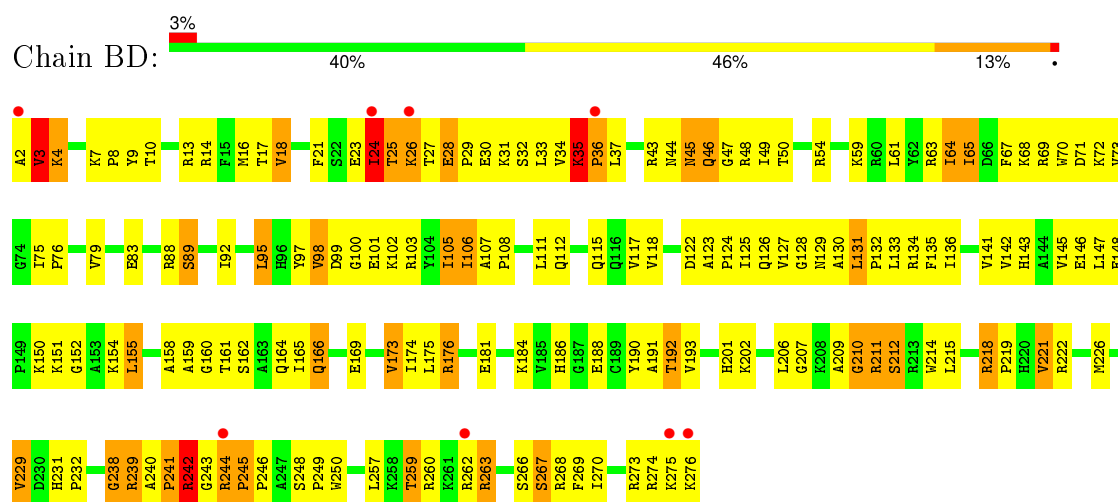
- Molecule 35: 23S RIBOSOMAL RNA

Chain BA: 

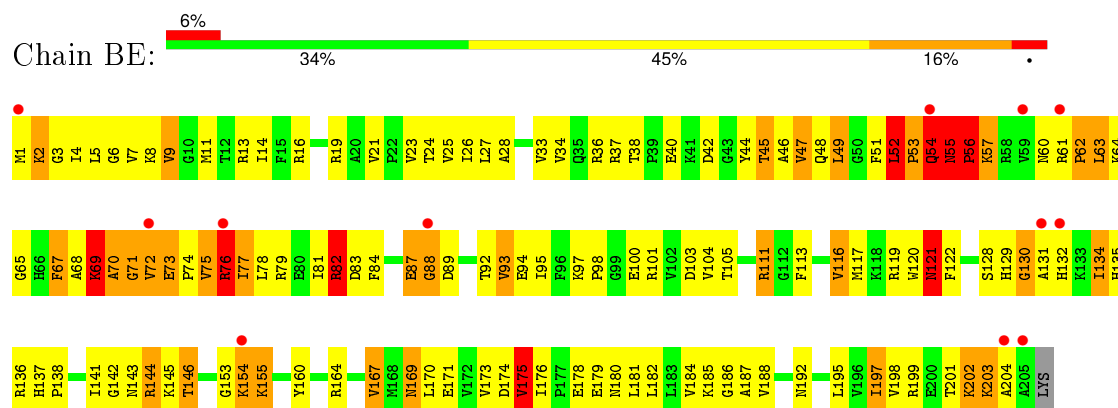


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G1333	G1258	A1189	G1105	A1056	C975	U907	G843	G771	G690	A644	U576	G493	C334
G1259	G1190	C1121	A1057	G1057	A953	C908	C844	G772	C691	A645	G577	G494	C335
G1260	G1191	G1122	G1058	G1059	A953	A909	G852	A773	C692	A646	A422	A423	C336
U1263	G1192	C1123	G1060	G1061	G989	A911	U847	G775	U694	A501	A423	A423	C337
G1264	G1124	G1125	U1061	G1062	C992	C914	G848	G776	G695	A502	G425	G425	C338
A1265	A1126	U1126	G1063	G1064	G993	C915	A849	A777	G696	G651	G426	G426	G341
U1266	U1130	U1127	G1064	G1065	G993	C916	U851	G778	C697	C652	U427	U427	G342
A1268	G1131	G1132	G1065	G1066	C995	A917	G852	U779	C698	A653	A505	A505	
A1269	A1132	A1133	U1066	U1067	C995	A918	G853	G780	A699	A654	G508	G508	G352
A1350	U1133	G997	A996	A1067	G997	G921	C856	A781	G700	C587	C587	C587	G353
C1270	C1135	G998	U1068	A1068	C998	U922	C857	A782	G701	C588	C588	C588	
G1271	G1136	U999	U999	G1069	U999	U922	C857	A783	G702	C589	C589	C589	G356
A1272	G1137	A1000	A1000	A1070	A1000	C923	U858	A784	U703	G654D	A590	A590	
U1273	G1138	G1071	A1070	G1071	A1000	C924	C859	G785	G703	G654E	C591	C591	A359
A1274	G1139	G1072	C1006	G1072	C1006	C925	U860	G786	A706	C654F	G517	G517	G360
U1275	G1140	A1073	A1009	A1073	A1009	A926	U861	A788	G707	C654G	G522	G522	G361
A1278	C1140	G1074	A1009	A1074	A1009	U930	A862	A789	G708	C654H	C523	C523	U862
G1279	U1141	C1075	A1010	G1075	A1010	U931	A863	G790	U709	C654I	C523	C523	G363
G1280	U1142	C1076	A1011	G1076	A1011	G931	A864	C791	G710	A654J	U524	U524	A363A
C1281	A1142A	C1077	A1012	G1077	A1012	G932	C865	G792	G717	C654K	U525	U525	C445
U1282	G1143	A1078	A1013	U1078	A1013	G933	C866	A793	A718	C654L	A526	A526	G446
A1214	G1144	U1078	A1014	U1078	A1014	G934	C867	G794	C719	C654M	C527	C527	A447
G1215	C1145	C1079	U1014	U1079	A1014	C935	U868	G795	G720	C654N	A528	A528	U863E
G1216	C1146	C1079	G1015	U1079	A1015	C936	U869	C796	C721	C654O	A529	A529	A363F
C1217	C1147	A1084	G1016	U1080	A1016	U936	U870	C797	A722	C654P	G530	G530	C364
U1285	A1148	A1085	U1019	A1085	U1019	G940	U871	G808	G738	C654R	U607	U607	U373
A1287	G1149	A1086	A1020	A1086	A1020	G941	A872	A802	G729	C654S	U614	U614	A374
G1288	C1150	A1088	A1021	A1088	A1021	G942	C876	U803	C730	C654T	A608	A608	C376
C1289	G1151	U1089	G1022	U1089	G1022	U943	U877	U803	G731	A654U	A609	A609	C377
C1290	C1152	U1090	U1023	U1090	U1023	G944	A878	G805	C732	A654V	G610	G610	U380
U1292	G1153	G1091	G1024	G1091	G1024	A945	U879	C806	G733	A655	C611	C611	G381
A1365	A1154	C1224	U1092	C1224	U1092	G946	C880	U807	A734	G656	G613	G613	G382
G1366	A1155	U1093	U1026	U1093	U1026	G947	C881	G808	U614	U657	A460	A460	C385
U1295	U1159	U1094	A1027	U1094	A1027	G948	C882	G809	U614A	C658	C461	C461	C386
G1296	G1160	A1095	A1028	A1095	A1028	G952	C883	U811	U614B	C659	C462	C462	U387
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C1299	G1166	G1099	U1033	G1099	U1033	C955	C886	U814	G742	G663	A465	A465	G389
U1300	U1167	C1100	G1034	C1100	G1034	G956	A897	C815	G743	C664	A466	A466	
A1302	G1168	U1101	U1035	U1101	U1035	A957	C888	C816	G744	C665	G467	G467	G396
G1303	G1169	G1102	U1036	G1102	U1036	U958	C889	A819	U747	G666	U554	U554	
C1230	G1170	A1103	G1037	A1103	G1037	U959	A890	G824	G748		U555	U555	A402
G1231	C1104	U1105	C1038	U1105	C1038	A960	C892	C824	C749		A470	A470	U403
C1232	U1171	G1106	U1039	U1171	U1039	C961	C893	A824	G752				C404
U1234	A1172	G1107	G1040	A1172	G1040	G962	C894	C825	A753				U405
G1235	U1175	U1108	A1041	U1108	A1041	U963	U895	U826	C753				G406
U1239	G1176	C1109	A1045	C1109	A1045	C964	C896	U827	C754				G407
G1240	A1177	G1110	U1046	A1177	U1046	C965	C897	U828	C755				G408
A1241	U1178	G1111	G1047	U1178	G1047	G966	C898	A829	C756				G409
U1242	C1179	G1112	U1048	C1179	U1048	C967	C899	G830	G681				G410
G1243	U1179	G1113	A1049	U1179	A1049	C968	A900	G831	G682				G411
C1244	C1180	U1112	U1049	C1180	U1049	U969	A901	G832	A567				A480
U1248	G1181	U1113	U1050	G1181	U1050	C970	C902	G833	A567				G481
U1249	U1182	G1115	G1051	U1182	G1051	C971	C903	U762	A567				A482
G1252	G1183	C1116		G1183		G972	C904	A764	U763				C413
A1253									A764				C414
G1330													A415

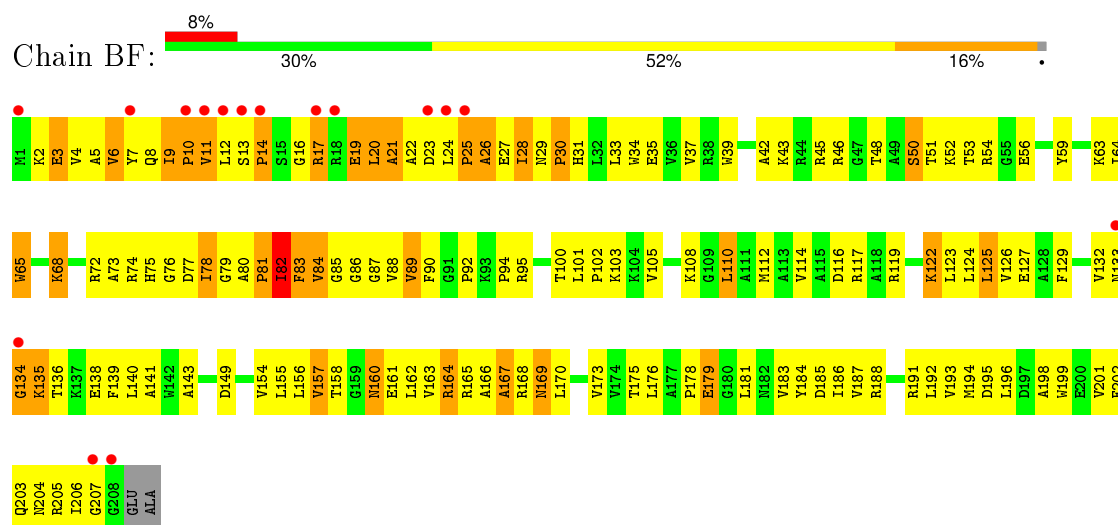
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	C2347	A2198	G2131	G2055	G1985	G1907	A1821	C1754	U1659	A1572	U1489	G1422
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	G2352	G2201	A2134	G2060	C1988	A1913		G1763	A1669	U1579	G1485	G1425
U2419	A2353	G2202	C2135	G2061	G1989	A1914	C1827	G1764	A1670	A1580	A1494	G1426
C2420	G2354	U2203	C2136	A2062	C1990	A1915	G1828	U1765		U1581	A1495	A1427
G2421	C2355	G2205	C2137	G2063	U1991	A1916	G1829	C1766	G1674		A1496	C1428
A2422	G2356	G2206	C2138	G2064	G1992	A1917		U1767			U1497	G1429
G2423	C2357	G2207	C2139	G2065	U1993	U1917	G1835	C1768	C1675	C1584	C1430	
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A2425	G2358	U2218	G2141	G2067	U1995	A1919	C1837	G1769	A1677	C1502	C1432	
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	G2382	G2240		U2097	U2017	C1942	A1859	A1789	U1699	A1610	U1452	
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G2468	C2394		U2180	G2110	G2029	U1964	A1884	A1803	U1639	A1545		
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G2470	G2396	U2257	G2182	G2112	G2031	C1966	C1886	G1719	A1541	C1548	A1472	
	G2397	C2258	C2183	G2113	G2032	A1967	C1887	U1720	G1642	C1549	C1473	
	U2398	G2259	G2184	G2114	A2033	C1967	G1888	C1806	G1543		G1474	
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G2479	G2337	C2263	C2189	U2119	G2038	A1972	C1893	G1811	C1648			
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G2481	C2404	A2267	G2191	G2124	C2040	C1974		G1746	G1650	C1565	G1482	
G2482	G2405	A2268	G2192	G2125	U2041		G1899	G1747A	G1651	C1566	G1483	
C2483	U2406	A2269	G2193	A2126	U2042	G1980	A1900	G1748	A1652	G1568		
G2484	G2407	G2271	G2194	G2127	C2043	A1981	A1901					



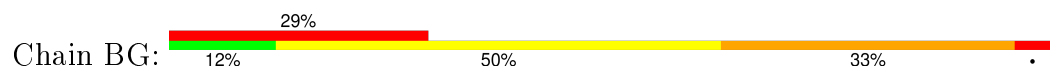
• Molecule 39: 50S RIBOSOMAL PROTEIN L3

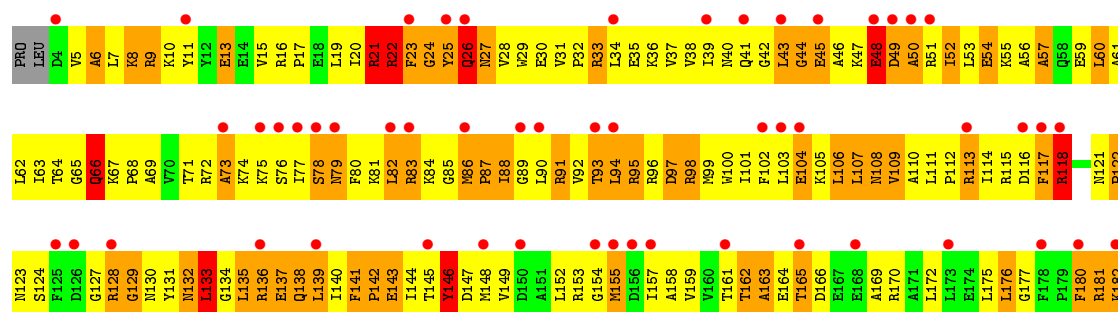


• Molecule 40: 50S RIBOSOMAL PROTEIN L4

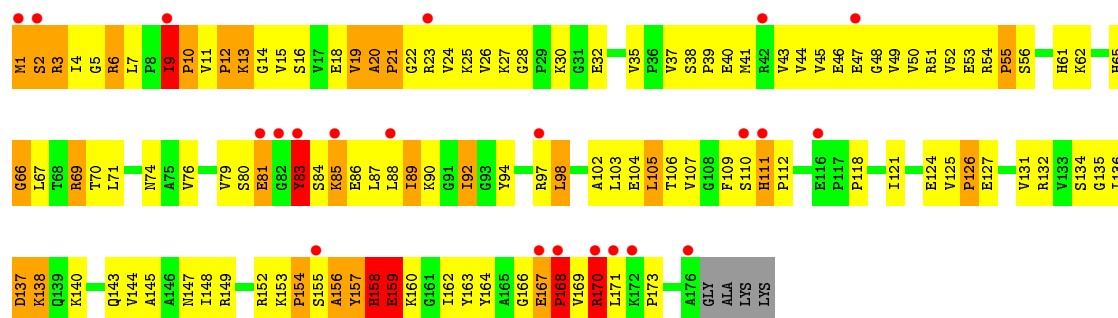


• Molecule 41: 50S RIBOSOMAL PROTEIN L5

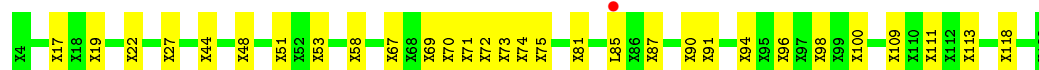
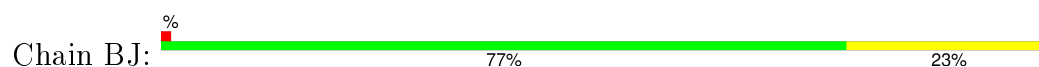




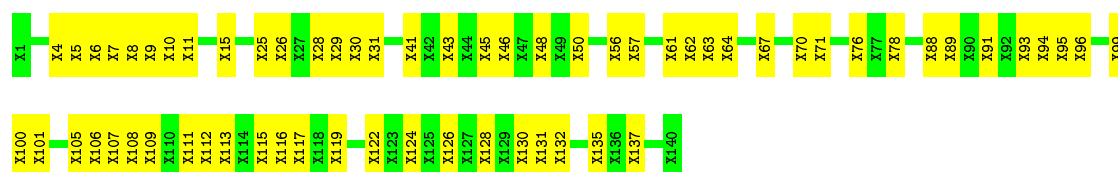
• Molecule 42: 50S RIBOSOMAL PROTEIN L6



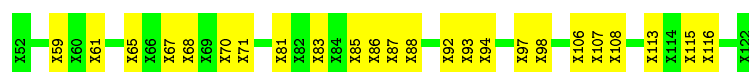
• Molecule 43: CHAIN J



• Molecule 44: CHAIN K

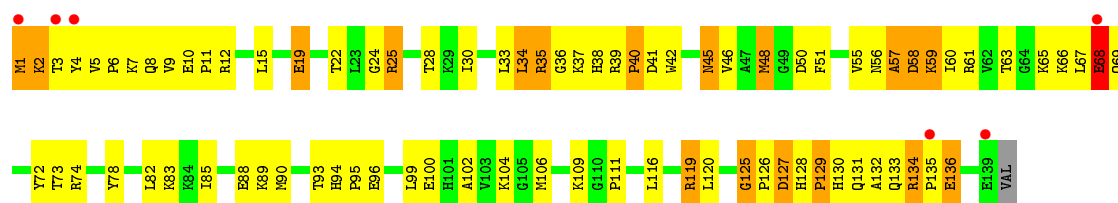


• Molecule 45: CHAIN L



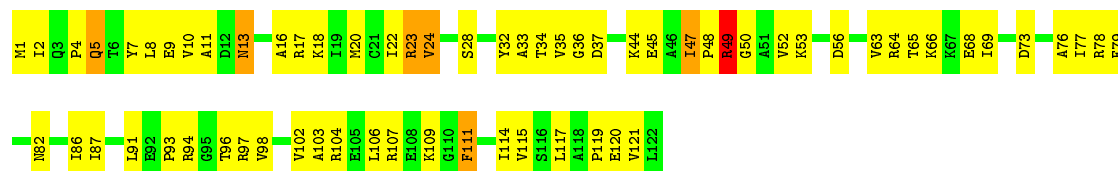
• Molecule 46: 50S RIBOSOMAL PROTEIN L13





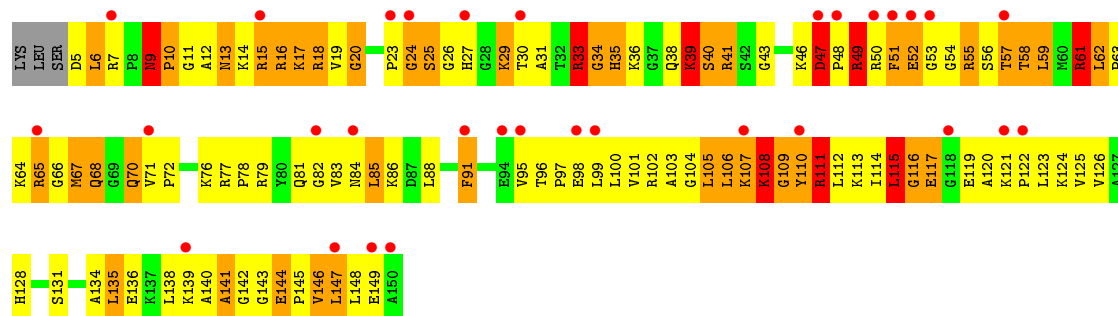
• Molecule 47: 50S RIBOSOMAL PROTEIN L14

Chain BO: 46% 48% 5%



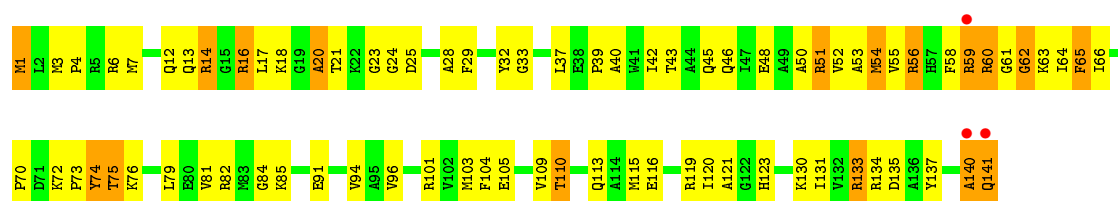
• Molecule 48: 50S RIBOSOMAL PROTEIN L15

Chain BP: 21% 19% 46% 27% 6%



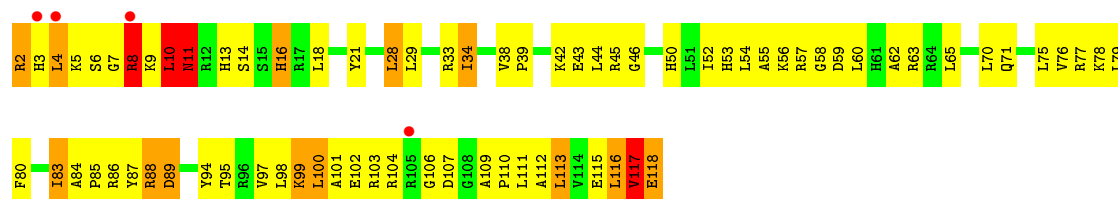
• Molecule 49: 50S RIBOSOMAL PROTEIN L16

Chain BQ: 2% 44% 44% 12%

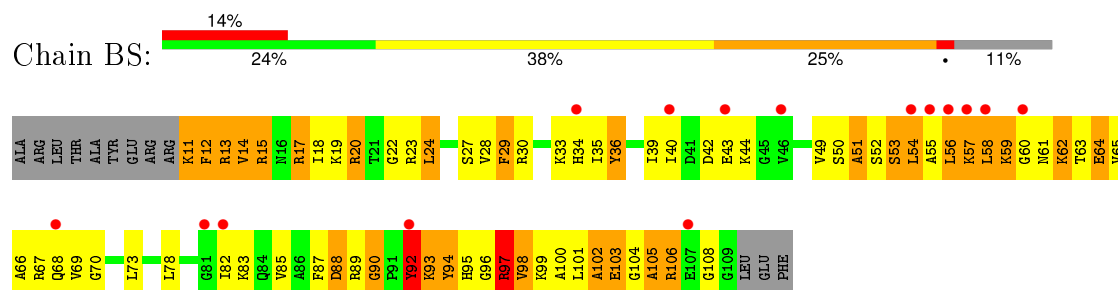


• Molecule 50: 50S RIBOSOMAL PROTEIN L17

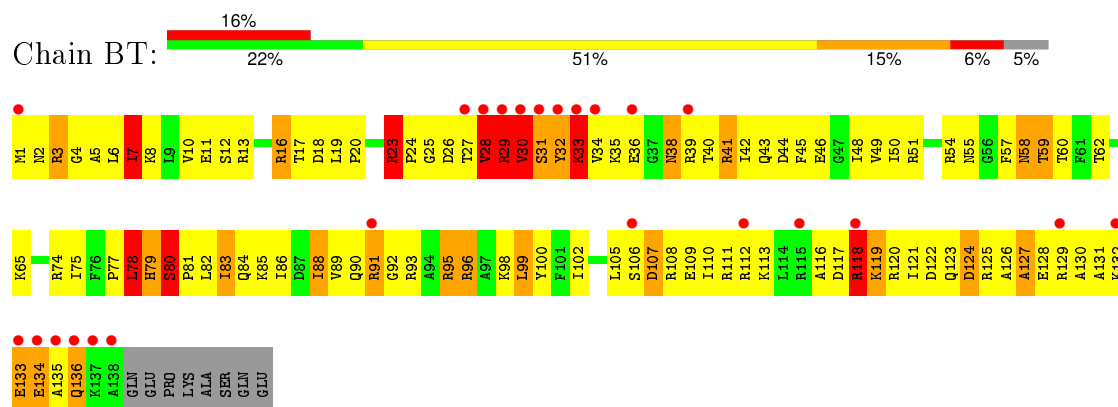
Chain BR: 3% 36% 50% 11%



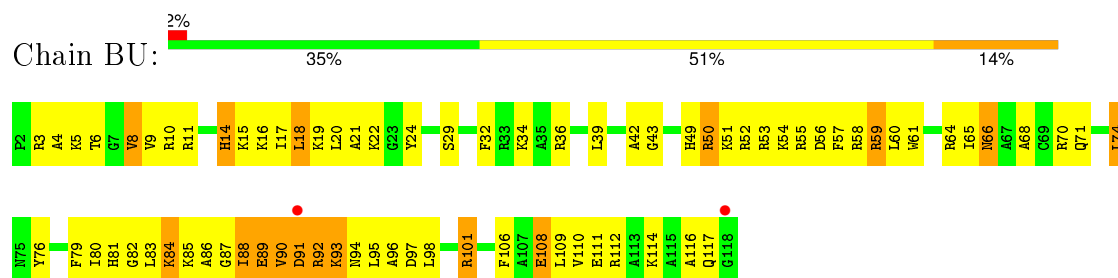
- Molecule 51: 50S RIBOSOMAL PROTEIN L18



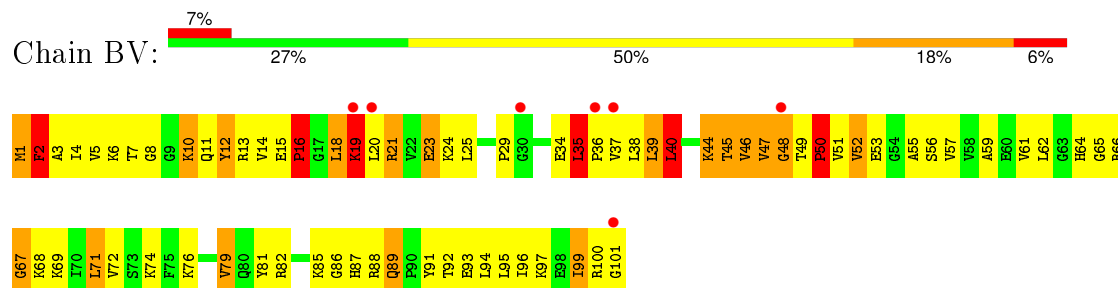
● Molecule 52: 50S RIBOSOMAL PROTEIN L19



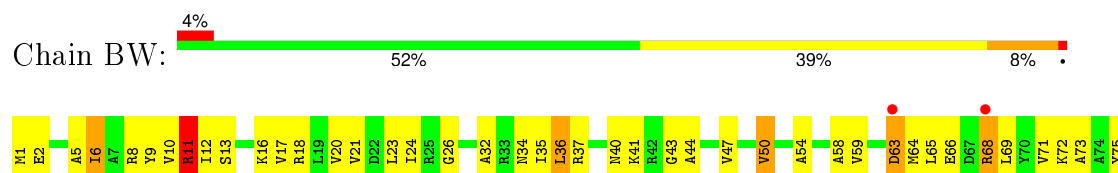
● Molecule 53: 50S RIBOSOMAL PROTEIN L20

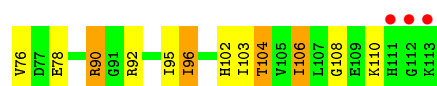


• Molecule 54: 50S RIBOSOMAL PROTEIN L21

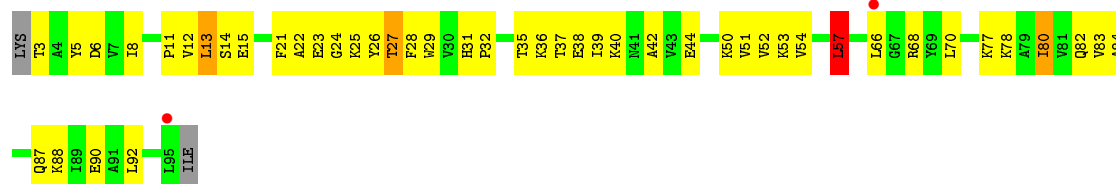


● Molecule 55: 50S RIBOSOMAL PROTEIN L22

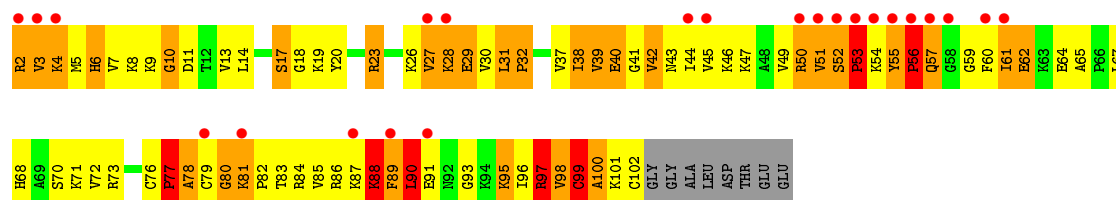
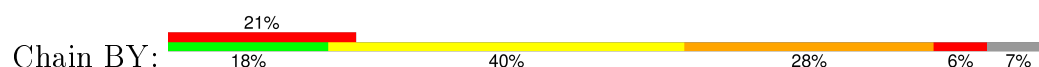




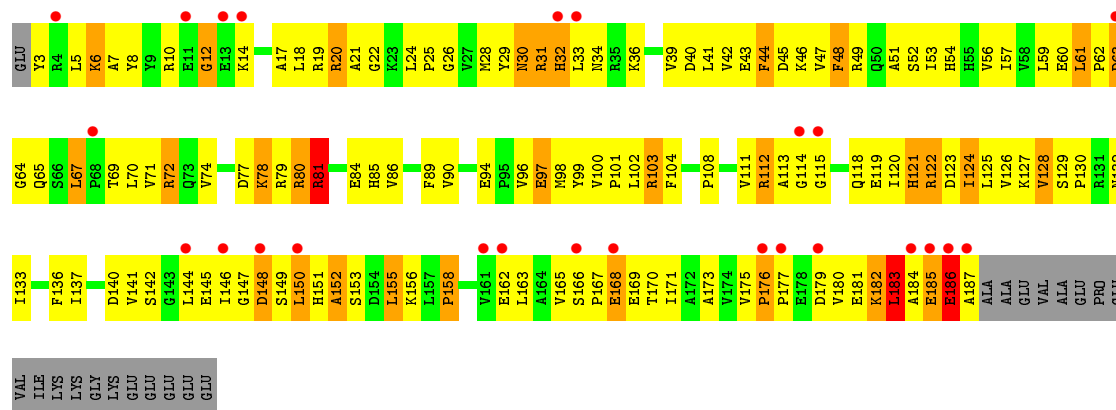
• Molecule 56: 50S RIBOSOMAL PROTEIN L23



• Molecule 57: 50S RIBOSOMAL PROTEIN L24



• Molecule 58: 50S RIBOSOMAL PROTEIN L25



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	202.90 Å 242.63 Å 309.32 Å 90.00° 99.60° 90.00°	Depositor
Resolution (Å)	49.75 – 2.95 49.75 – 2.95	Depositor EDS
% Data completeness (in resolution range)	99.9 (49.75-2.95) 100.0 (49.75-2.95)	Depositor EDS
R_{merge}	0.26	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.70 (at 2.96 Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.210 , 0.244 0.226 , 0.256	Depositor DCC
R_{free} test set	30895 reflections (5.26%)	DCC
Wilson B-factor (Å ²)	49.6	Xtriage
Anisotropy	0.435	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 60.2	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtriage
Outliers	0 of 617901 reflections	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	153829	wwPDB-VP
Average B, all atoms (Å ²)	58.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.73% 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: GCP, ZN, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	AA	0.41	0/36258	0.70	5/56589 (0.0%)
2	AB	0.26	0/1936	0.46	0/2611
3	AC	0.36	0/1637	0.58	0/2207
4	AD	0.36	0/1733	0.61	0/2318
5	AE	0.46	0/1163	0.67	0/1566
6	AF	0.36	0/856	0.63	0/1154
7	AG	0.36	0/1276	0.62	0/1709
8	AH	0.39	0/1136	0.69	0/1527
9	AI	0.36	0/1029	0.69	0/1379
10	AJ	0.40	0/808	0.69	0/1087
11	AK	0.39	0/900	0.68	0/1213
12	AL	0.42	0/987	0.73	1/1322 (0.1%)
13	AM	0.32	0/948	0.60	0/1272
14	AN	0.41	0/501	0.77	0/664
15	AO	0.37	0/745	0.62	0/992
16	AP	0.40	0/717	0.71	0/965
17	AQ	0.40	0/837	0.69	0/1119
18	AR	0.38	0/579	0.60	0/768
19	AS	0.37	0/706	0.64	0/950
20	AT	0.39	0/765	0.76	0/1007
21	AU	0.43	0/213	0.62	0/279
22	AV	0.84	2/1809 (0.1%)	1.27	7/2819 (0.2%)
23	AX	1.26	2/210 (1.0%)	1.37	2/325 (0.6%)
24	AY	0.33	0/5477	0.61	3/7415 (0.0%)
25	B0	0.29	0/671	0.43	0/892
26	B1	0.37	0/739	0.58	0/983
27	B2	10.54	1/600 (0.2%)	0.42	0/793
28	B3	0.32	0/473	0.50	0/636
29	B4	0.29	0/594	0.45	0/795
30	B5	0.40	0/473	0.70	0/639
31	B6	0.48	0/440	0.80	0/586
32	B7	0.44	0/427	0.71	0/561

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	B8	0.56	0/516	0.87	1/681 (0.1%)
34	B9	0.45	0/310	0.72	0/407
35	BA	0.46	1/69972 (0.0%)	0.72	25/109230 (0.0%)
36	BB	0.37	0/2853	0.72	1/4451 (0.0%)
37	BC	0.32	0/1766	0.62	0/2380
38	BD	0.47	0/2195	0.82	1/2955 (0.0%)
39	BE	0.42	0/1597	0.71	0/2155
40	BF	0.39	0/1659	0.66	0/2246
41	BG	0.45	0/1483	0.80	1/1994 (0.1%)
42	BH	0.40	0/1371	0.67	0/1853
43	BJ	0.20	0/7	0.87	0/8
46	BN	0.46	0/1132	0.76	0/1527
47	BO	0.44	0/943	0.71	0/1269
48	BP	0.45	0/1131	0.86	4/1504 (0.3%)
49	BQ	0.41	0/1143	0.65	0/1527
50	BR	0.43	0/974	0.75	0/1302
51	BS	0.39	0/779	0.66	0/1038
52	BT	0.42	0/1156	0.66	0/1544
53	BU	0.48	0/975	0.70	0/1297
54	BV	0.40	0/790	0.72	0/1057
55	BW	0.42	0/907	0.71	0/1216
56	BX	0.47	0/740	0.69	1/995 (0.1%)
57	BY	0.52	0/789	0.87	0/1053
58	BZ	0.34	0/1500	0.63	0/2037
All	All	0.77	6/164331 (0.0%)	0.71	52/244868 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	0	1
24	AY	0	1
35	BA	0	19
36	BB	0	2
All	All	0	23

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	B2	72	ALA	C-OXT	258.07	6.13	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BA	1453	U	O3'-P	-17.05	1.40	1.61
22	AV	37	A	N3-C4	7.56	1.39	1.34
22	AV	37	A	C6-N1	7.26	1.40	1.35
23	AX	11	A	N9-C4	5.43	1.41	1.37
23	AX	11	A	N3-C4	5.08	1.37	1.34

All (52) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BA	2208	A	P-O3'-C3'	9.92	131.60	119.70
22	AV	37	A	N1-C2-N3	-9.87	124.36	129.30
22	AV	74	C	O4'-C1'-N1	8.40	114.92	108.20
22	AV	37	A	N9-C4-C5	-7.54	102.79	105.80
22	AV	37	A	N1-C6-N6	6.87	122.72	118.60
23	AX	18	C	N1-C2-O2	-6.77	114.84	118.90
1	AA	189(H)	G	N9-C1'-C2'	-6.57	104.77	112.00
22	AV	37	A	C8-N9-C4	6.50	108.40	105.80
22	AV	37	A	C2-N3-C4	6.30	113.75	110.60
23	AX	13	A	C2-N3-C4	-6.26	107.47	110.60
35	BA	1453	U	OP1-P-O3'	6.15	118.74	105.20
35	BA	945	A	N9-C1'-C2'	5.99	121.78	114.00
38	BD	210	GLY	N-CA-C	-5.97	98.17	113.10
35	BA	387	U	C2'-C3'-O3'	5.91	123.15	113.70
48	BP	41	ARG	N-CA-C	-5.91	95.05	111.00
41	BG	22	ARG	N-CA-C	-5.87	95.15	111.00
35	BA	1495	A	N9-C1'-C2'	5.79	121.53	114.00
24	AY	356	LEU	CA-CB-CG	5.78	128.59	115.30
56	BX	57	LEU	CA-CB-CG	5.68	128.36	115.30
35	BA	2481	G	N9-C1'-C2'	5.65	121.35	114.00
1	AA	428	G	C2'-C3'-O3'	5.63	122.71	113.70
35	BA	2136	C	C2'-C3'-O3'	5.60	122.66	113.70
48	BP	24	GLY	N-CA-C	5.55	126.98	113.10
24	AY	260	LEU	CA-CB-CG	5.53	128.02	115.30
48	BP	20	GLY	N-CA-C	-5.51	99.34	113.10
35	BA	783	A	N9-C1'-C2'	-5.50	105.95	112.00
35	BA	2542	A	N9-C1'-C2'	5.42	121.04	114.00
33	B8	32	LEU	CA-CB-CG	5.34	127.58	115.30
35	BA	310	A	C5'-C4'-C3'	-5.33	107.48	116.00
35	BA	1015	G	C5'-C4'-C3'	-5.32	107.49	116.00
35	BA	512	G	O4'-C1'-N9	5.29	112.43	108.20
22	AV	18	G	N3-C4-C5	-5.27	125.97	128.60
35	BA	1159	U	C5'-C4'-C3'	-5.26	107.58	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BA	708	C	C5'-C4'-C3'	-5.25	107.60	116.00
35	BA	1947	C	C5'-C4'-C3'	-5.24	107.61	116.00
1	AA	1117	G	C5'-C4'-O4'	-5.23	102.82	109.10
48	BP	29	LYS	N-CA-C	-5.18	97.01	111.00
35	BA	1493	C	N1-C1'-C2'	5.17	120.73	114.00
35	BA	1558	A	C2'-C3'-O3'	5.17	121.97	113.70
36	BB	44	G	N9-C1'-C2'	5.15	120.70	114.00
1	AA	243	A	N9-C1'-C2'	5.15	120.69	114.00
35	BA	74	A	C2'-C3'-O3'	5.15	121.94	113.70
35	BA	2665	A	N9-C1'-C2'	-5.13	106.35	112.00
12	AL	26	ALA	N-CA-C	-5.12	97.17	111.00
24	AY	379	GLY	N-CA-C	-5.11	100.32	113.10
35	BA	1549	C	C5'-C4'-C3'	-5.11	107.82	116.00
35	BA	2346	A	O4'-C1'-N9	5.11	112.29	108.20
35	BA	2346	A	N9-C1'-C2'	5.08	120.61	114.00
35	BA	1838	C	N1-C1'-C2'	5.08	120.61	114.00
1	AA	1054	C	C5'-C4'-C3'	-5.07	107.88	116.00
35	BA	2581	G	O4'-C1'-N9	5.02	112.22	108.20
35	BA	2286	A	N9-C1'-C2'	5.02	120.52	114.00

There are no chirality outliers.

All (23) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	189(H)	G	Sidechain
24	AY	499	ARG	Sidechain
35	BA	1192	G	Sidechain
35	BA	2414	G	Sidechain
35	BA	2464	C	Sidechain
35	BA	2504	U	Sidechain
35	BA	2508	G	Sidechain
35	BA	2516	G	Sidechain
35	BA	2542	A	Sidechain
35	BA	2578	G	Sidechain
35	BA	2581	G	Sidechain
35	BA	2595	G	Sidechain
35	BA	2597	G	Sidechain
35	BA	2664	G	Sidechain
35	BA	271(H)	G	Sidechain
35	BA	271(Q)	G	Sidechain
35	BA	271(Y)	U	Sidechain
35	BA	2746	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	2779	U	Sidechain
35	BA	2848	G	Sidechain
35	BA	476	G	Sidechain
36	BB	16	G	Sidechain
36	BB	67	G	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32391	0	16349	1995	0
2	AB	1901	0	1947	322	1
3	AC	1613	0	1677	223	28
4	AD	1703	0	1765	125	0
5	AE	1147	0	1207	56	0
6	AF	843	0	857	53	0
7	AG	1257	0	1296	138	0
8	AH	1116	0	1177	63	0
9	AI	1010	0	1037	150	0
10	AJ	795	0	840	114	0
11	AK	885	0	904	56	0
12	AL	971	0	1057	112	0
13	AM	938	0	995	124	0
14	AN	492	0	529	68	0
15	AO	734	0	771	49	0
16	AP	701	0	720	58	0
17	AQ	824	0	891	47	0
18	AR	574	0	644	26	0
19	AS	692	0	714	109	0
20	AT	763	0	861	71	11
21	AU	209	0	221	12	0
22	AV	1619	0	823	60	0
23	AX	188	0	98	7	0
24	AY	5376	0	5433	565	0
25	B0	662	0	688	160	0
26	B1	732	0	808	114	0
27	B2	598	0	651	125	11
28	B3	468	0	523	66	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	B4	581	0	577	214	0
30	B5	459	0	478	75	0
31	B6	433	0	461	128	0
32	B7	419	0	467	29	0
33	B8	508	0	576	112	0
34	B9	307	0	335	31	0
35	BA	62476	0	31499	3287	28
36	BB	2551	0	1295	107	0
37	BC	1735	0	1790	277	1
38	BD	2145	0	2234	255	0
39	BE	1564	0	1629	233	0
40	BF	1624	0	1677	220	0
41	BG	1459	0	1516	395	0
42	BH	1345	0	1430	187	0
43	BJ	654	0	156	22	0
44	BK	701	0	168	46	0
45	BL	356	0	86	20	0
46	BN	1105	0	1180	111	0
47	BO	933	0	996	67	0
48	BP	1114	0	1186	302	0
49	BQ	1122	0	1179	111	0
50	BR	960	0	1021	104	0
51	BS	771	0	832	158	0
52	BT	1142	0	1200	229	0
53	BU	958	0	1015	122	0
54	BV	779	0	852	147	0
55	BW	896	0	953	56	0
56	BX	726	0	778	47	0
57	BY	776	0	870	164	0
58	BZ	1468	0	1492	216	0
59	AA	198	0	0	0	0
59	AY	1	0	0	0	0
59	B0	1	0	0	0	0
59	B5	1	0	0	0	0
59	BA	320	0	0	0	0
59	BC	1	0	0	0	0
59	BU	1	0	0	0	0
60	AD	1	0	0	0	0
60	AN	1	0	0	0	0
60	B9	1	0	0	0	0
61	AY	32	0	14	11	0
62	AY	2	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	153829	0	105425	11647	40

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 45.

All (11647) 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)
30:B5:46:CYS:SG	30:B5:47:PRO:HD2	1.41	1.57
29:B4:12:ALA:H	29:B4:24:THR:CG2	1.16	1.56
9:AI:19:LEU:HA	9:AI:61:ALA:CB	1.39	1.53
52:BT:80:SER:HB3	52:BT:81:PRO:CD	1.40	1.51
9:AI:18:PHE:C	9:AI:61:ALA:HB1	1.27	1.50
42:BH:1:MET:SD	42:BH:1:MET:CE	2.04	1.46
1:AA:311:C:C2'	1:AA:312:C:H5'	1.46	1.45
1:AA:950:U:C2'	1:AA:951:G:H5''	1.41	1.45
29:B4:12:ALA:N	29:B4:24:THR:CG2	1.79	1.41
9:AI:19:LEU:CB	9:AI:61:ALA:HB2	1.48	1.40
9:AI:19:LEU:CA	9:AI:61:ALA:HB2	0.93	1.39
1:AA:950:U:H2'	1:AA:951:G:C5'	1.51	1.39
35:BA:111:A:C2'	35:BA:112:U:H5'	1.51	1.38
48:BP:84:ASN:CG	48:BP:116:GLY:HA3	1.45	1.38
35:BA:967:C:C2'	35:BA:968:G:H5'	1.53	1.37
35:BA:2555:U:C2'	35:BA:2556:C:H5'	1.56	1.36
29:B4:12:ALA:N	29:B4:24:THR:HG21	1.38	1.36
35:BA:252:G:OP2	48:BP:50:ARG:NH1	1.58	1.35
37:BC:117:THR:HG22	37:BC:118:PRO:C	1.45	1.33
27:B2:16:LEU:HD22	27:B2:20:GLU:CG	1.58	1.33
48:BP:85:LEU:CD2	48:BP:117:GLU:O	1.76	1.33
35:BA:954:G:C2'	35:BA:955:C:H5'	1.62	1.29
1:AA:37:U:C2'	1:AA:38:G:H5'	1.63	1.28
35:BA:1988:C:C2'	35:BA:1989:G:H5'	1.61	1.28
29:B4:12:ALA:CA	29:B4:24:THR:HG21	1.63	1.28
9:AI:26:VAL:HG21	9:AI:61:ALA:O	1.32	1.28
49:BQ:60:ARG:HG3	58:BZ:179:ASP:OD1	1.16	1.28
35:BA:108:U:O2'	35:BA:109:G:H5'	1.35	1.27
1:AA:545:C:C2'	1:AA:546:G:H5'	1.62	1.27
2:AB:228:GLY:CA	2:AB:229:VAL:HG22	1.65	1.27
31:B6:7:ILE:HG21	31:B6:27:LYS:NZ	1.50	1.26
35:BA:955:C:C2'	35:BA:956:G:H5'	1.66	1.26
35:BA:1417:C:O2'	35:BA:1418:G:H5'	1.34	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:167:PRO:CD	2:AB:188:ALA:HB2	1.65	1.26
2:AB:89:GLY:O	2:AB:90:MET:HG2	1.35	1.25
35:BA:653:A:H5'	35:BA:654:A:OP2	1.35	1.25
35:BA:1678:G:N2	35:BA:1989:G:H22	1.30	1.25
35:BA:246:C:C2'	35:BA:247:G:H5'	1.67	1.25
1:AA:773:G:O2'	1:AA:774:G:H5'	1.33	1.25
35:BA:1596:A:C2'	35:BA:1597:A:H5'	1.64	1.25
1:AA:936:C:O2'	1:AA:937:A:H5'	1.36	1.24
35:BA:697:C:O2'	35:BA:698:C:H5'	1.37	1.24
29:B4:12:ALA:C	29:B4:24:THR:HG21	1.57	1.24
35:BA:856:C:H2'	35:BA:857:C:C6	1.70	1.24
1:AA:775:G:O2'	1:AA:776:G:H5'	1.36	1.24
1:AA:1371:G:C2'	1:AA:1372:U:H5'	1.68	1.24
35:BA:953:A:C2'	35:BA:954:G:H5'	1.67	1.24
35:BA:179:G:C2'	35:BA:180:G:H5'	1.66	1.24
1:AA:590:C:O2'	1:AA:591:U:H5'	1.35	1.23
1:AA:106:C:O2'	1:AA:107:G:H5'	1.34	1.23
2:AB:231:GLU:HB2	2:AB:232:PRO:CD	1.67	1.23
35:BA:702:G:O2'	35:BA:703:U:H5'	1.37	1.23
28:B3:9:VAL:HG11	28:B3:55:ARG:CD	1.69	1.23
22:AV:41:C:O2'	22:AV:42:C:H5'	1.38	1.23
29:B4:12:ALA:C	29:B4:24:THR:CG2	2.06	1.22
1:AA:949:A:H2'	1:AA:950:U:C5'	1.67	1.22
1:AA:543:C:C2'	1:AA:544:G:H5'	1.68	1.22
1:AA:266:G:C5'	1:AA:267:C:H5	1.52	1.22
2:AB:145:LEU:O	2:AB:149:LEU:HB2	1.39	1.22
1:AA:593:G:O2'	1:AA:594:G:H5'	1.36	1.22
1:AA:770:C:O2'	1:AA:771:G:H5'	1.40	1.22
2:AB:228:GLY:HA2	2:AB:229:VAL:CG1	1.68	1.21
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	1.71	1.21
1:AA:490:G:O2'	1:AA:491:G:H5'	1.41	1.21
35:BA:1773:A:C2'	35:BA:1774:C:H5'	1.69	1.21
35:BA:523:C:O2'	35:BA:524:U:H5'	1.37	1.21
31:B6:10:LEU:CD2	31:B6:10:LEU:H	1.54	1.21
1:AA:688:G:O2'	1:AA:689:C:H5'	1.38	1.21
35:BA:2007:C:O2'	35:BA:2008:C:H5'	1.41	1.21
27:B2:16:LEU:CD2	27:B2:20:GLU:HG2	1.71	1.21
35:BA:1902:C:O2'	38:BD:244:ARG:HB2	1.40	1.21
1:AA:359:U:O2'	1:AA:360:A:H5'	1.36	1.21
35:BA:1822:G:O2'	35:BA:1823:G:H5'	1.37	1.21
1:AA:360:A:O2'	1:AA:361:G:H5'	1.37	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1984:G:O2'	35:BA:1985:G:H5'	1.41	1.20
9:AI:18:PHE:O	9:AI:61:ALA:HB1	1.08	1.20
35:BA:968:G:O2'	35:BA:969:U:H5'	1.40	1.20
35:BA:2753:A:O2'	35:BA:2754:U:H5'	1.36	1.20
2:AB:187:LEU:HD23	2:AB:201:ILE:O	1.38	1.20
1:AA:685:G:O2'	1:AA:686:U:H5'	1.40	1.20
35:BA:1423:G:O2'	35:BA:1424:G:H5'	1.36	1.19
35:BA:1464:C:O2'	35:BA:1465:G:H5'	1.42	1.19
35:BA:179:G:H2'	35:BA:180:G:H5'	1.24	1.19
1:AA:509:A:H5'	4:AD:54:TYR:CD2	1.76	1.19
35:BA:2555:U:H2'	35:BA:2556:C:C5'	1.72	1.19
3:AC:81:GLY:O	3:AC:82:GLU:HG3	1.42	1.19
35:BA:2606:C:C2'	35:BA:2607:G:H5'	1.72	1.19
35:BA:1720:U:H2'	35:BA:1721:G:H5''	1.25	1.18
48:BP:51:PHE:CE2	48:BP:53:GLY:HA2	1.78	1.18
1:AA:495:A:H4'	1:AA:496:A:H5'	1.26	1.18
26:B1:29:GLY:HA3	35:BA:2396:G:O2'	1.41	1.18
35:BA:49:A:H5''	35:BA:51:G:O4'	1.44	1.18
35:BA:1301:A:O2'	35:BA:1302:A:H2'	1.40	1.18
35:BA:2715:C:O2'	35:BA:2716:U:H5'	1.43	1.18
35:BA:39:C:O2'	35:BA:40:C:H5'	1.43	1.18
35:BA:747:U:C2	35:BA:2613:U:O4	1.95	1.18
57:BY:76:CYS:SG	57:BY:77:PRO:HD2	1.83	1.18
35:BA:605:C:O2'	35:BA:606:U:H5'	1.39	1.18
57:BY:28:LYS:HD2	57:BY:28:LYS:H	1.06	1.18
48:BP:84:ASN:ND2	48:BP:116:GLY:HA3	1.57	1.17
2:AB:228:GLY:CA	2:AB:229:VAL:HG13	1.75	1.17
1:AA:265:G:H2'	1:AA:266:G:H5''	1.26	1.17
2:AB:14:GLY:O	2:AB:15:VAL:HG23	1.43	1.17
35:BA:246:C:H2'	35:BA:247:G:C5'	1.73	1.17
37:BC:117:THR:CG2	37:BC:119:ASP:HB2	1.75	1.17
35:BA:1222:C:O2'	35:BA:1223:G:H5'	1.45	1.17
1:AA:556:C:O2'	1:AA:557:G:H5'	1.43	1.17
1:AA:862:C:C2'	1:AA:863:U:H5'	1.74	1.17
35:BA:1778:U:O2'	35:BA:1779:U:H5'	1.40	1.17
1:AA:774:G:O2'	1:AA:775:G:H5'	1.40	1.17
30:B5:4:HIS:HB3	30:B5:5:PRO:HD3	1.23	1.16
35:BA:1999:C:O2'	35:BA:2000:G:H5'	1.43	1.16
27:B2:38:GLN:O	27:B2:41:ILE:HG13	1.43	1.16
9:AI:18:PHE:C	9:AI:61:ALA:CB	2.07	1.16
48:BP:57:THR:O	48:BP:59:LEU:N	1.78	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:119:A:O2'	1:AA:120:A:OP2	1.60	1.16
35:BA:2201:C:O2'	35:BA:2202:C:H5'	1.43	1.16
1:AA:687:A:H1'	1:AA:688:G:OP2	1.46	1.16
7:AG:121:ALA:H	7:AG:124:LEU:HD13	1.09	1.16
1:AA:37:U:H2'	1:AA:38:G:H5'	1.21	1.15
1:AA:556:C:C2'	1:AA:557:G:H5'	1.75	1.15
35:BA:1747(A):G:H2'	35:BA:1748:G:H5''	1.25	1.15
35:BA:259:G:O2'	35:BA:260:G:H5'	1.43	1.15
1:AA:1502:A:H2	1:AA:1505:G:N2	1.43	1.15
37:BC:80:LYS:HE3	37:BC:120:VAL:HG12	1.23	1.15
35:BA:2010:G:O2'	35:BA:2011:U:H5'	1.47	1.15
35:BA:1137:G:O2'	35:BA:1138:G:H5'	1.46	1.15
35:BA:1678:G:N2	35:BA:1989:G:N2	1.95	1.15
40:BF:6:VAL:HG12	40:BF:7:TYR:H	1.12	1.15
13:AM:11:ARG:HA	13:AM:45:VAL:HB	1.25	1.15
30:B5:51:TYR:O	30:B5:53:ALA:N	1.80	1.15
52:BT:80:SER:HB3	52:BT:81:PRO:HD2	1.21	1.14
48:BP:85:LEU:HD21	48:BP:117:GLU:O	1.34	1.14
35:BA:1821:A:C2'	35:BA:1822:G:H5'	1.76	1.14
1:AA:1179:A:O2'	1:AA:1180:A:H5'	1.47	1.14
35:BA:742:G:C2'	35:BA:743:G:H5'	1.77	1.14
33:B8:62:LEU:HD13	35:BA:242:G:H5''	1.22	1.14
35:BA:689:A:C2'	35:BA:690:G:H5'	1.78	1.14
35:BA:1540:U:H3'	35:BA:1541:G:H3'	1.29	1.14
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.24	1.14
1:AA:266:G:C5'	1:AA:267:C:C5	2.30	1.14
35:BA:2312:U:H2'	35:BA:2313:C:H5''	1.15	1.14
31:B6:41:PRO:HD2	31:B6:46:HIS:H	1.02	1.14
48:BP:51:PHE:CE2	48:BP:53:GLY:CA	2.31	1.14
1:AA:1175:G:O2'	1:AA:1176:A:H5'	1.46	1.14
35:BA:2010:G:C2'	35:BA:2011:U:H5'	1.78	1.13
35:BA:15:G:C2'	35:BA:16:G:H5'	1.77	1.13
35:BA:1038:C:H3'	35:BA:1039:G:H5''	1.30	1.13
35:BA:1988:C:O2'	35:BA:1989:G:H5'	1.49	1.13
35:BA:176:G:C2'	35:BA:177:G:H5'	1.76	1.13
35:BA:1023:U:C2'	35:BA:1024:G:H5'	1.79	1.13
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.08	1.13
1:AA:1490:C:C2'	1:AA:1491:G:H5'	1.79	1.13
37:BC:117:THR:H	37:BC:118:PRO:CA	1.61	1.13
29:B4:32:TYR:O	29:B4:33:VAL:HG12	1.49	1.13
48:BP:23:PRO:HB2	48:BP:33:ARG:HE	1.11	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1890:A:H2'	35:BA:1891:G:H5'	1.25	1.13
1:AA:1238:A:OP1	1:AA:1335:C:H1'	1.44	1.12
35:BA:1381:G:C2'	35:BA:1382:G:H5'	1.77	1.12
52:BT:30:VAL:CB	52:BT:31:SER:HB3	1.77	1.12
48:BP:47:ASP:HB3	48:BP:48:PRO:C	1.68	1.12
35:BA:689:A:O2'	35:BA:690:G:H5'	1.47	1.12
42:BH:30:LYS:HE2	42:BH:81:GLU:HG3	1.23	1.12
2:AB:87:ARG:NE	2:AB:233:SER:OG	1.82	1.12
35:BA:954:G:H2'	35:BA:955:C:H5'	1.18	1.12
31:B6:9:LEU:HD13	31:B6:9:LEU:O	1.48	1.12
1:AA:938:A:C2'	1:AA:939:G:H5'	1.78	1.12
28:B3:9:VAL:HG11	28:B3:55:ARG:HD3	1.30	1.12
30:B5:46:CYS:SG	30:B5:47:PRO:CD	2.37	1.12
2:AB:152:PHE:CE1	2:AB:155:LEU:HD12	1.83	1.12
27:B2:8:LYS:O	27:B2:11:GLU:HG2	1.48	1.12
9:AI:18:PHE:O	9:AI:61:ALA:CA	1.97	1.12
9:AI:19:LEU:HB3	9:AI:61:ALA:CB	1.80	1.12
52:BT:30:VAL:CG1	52:BT:31:SER:HB3	1.78	1.12
35:BA:743:G:H2'	35:BA:744:G:C8	1.83	1.12
35:BA:2403:C:OP2	35:BA:2403:C:H3'	1.47	1.12
19:AS:40:ILE:HD11	19:AS:62:ILE:HG13	1.32	1.11
52:BT:77:PRO:O	52:BT:78:LEU:HB2	1.49	1.11
27:B2:70:GLN:HG2	27:B2:71:ASN:H	1.03	1.11
1:AA:266:G:H5''	1:AA:267:C:H5	1.10	1.11
35:BA:1300:U:H4'	35:BA:1301:A:O5'	1.47	1.11
2:AB:122:PHE:HE2	2:AB:142:LEU:HD22	1.11	1.11
1:AA:1488:G:O2'	1:AA:1489:G:H5'	1.47	1.11
35:BA:2363:C:O2'	35:BA:2364:C:H5'	1.47	1.11
1:AA:1490:C:H2'	1:AA:1491:G:H5'	1.15	1.11
1:AA:349:A:O2'	1:AA:350:G:H5'	1.46	1.11
24:AY:69:VAL:HB	24:AY:82:ILE:HD11	1.23	1.11
2:AB:228:GLY:HA3	2:AB:229:VAL:CG2	1.81	1.11
9:AI:19:LEU:HA	9:AI:61:ALA:CA	1.79	1.11
35:BA:1590:U:H2'	35:BA:1591:G:H5''	1.30	1.11
1:AA:1526:G:O2'	1:AA:1527:C:H5'	1.49	1.11
35:BA:1596:A:H2'	35:BA:1597:A:H5'	1.26	1.10
35:BA:37:C:O2'	35:BA:38:A:H5'	1.50	1.10
51:BS:97:ARG:HH21	51:BS:98:VAL:HA	1.14	1.10
9:AI:19:LEU:N	9:AI:61:ALA:CB	2.15	1.10
2:AB:230:VAL:HB	2:AB:231:GLU:HA	1.16	1.10
35:BA:523:C:C2'	35:BA:524:U:H5'	1.80	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1770:G:O2'	35:BA:1771:C:H5'	1.51	1.10
1:AA:1047:G:H2'	1:AA:1048:G:H5'	1.34	1.10
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.24	1.10
37:BC:117:THR:N	37:BC:118:PRO:HA	1.57	1.10
1:AA:543:C:H2'	1:AA:544:G:H5'	1.15	1.10
22:AV:40:C:O2'	22:AV:41:C:H5'	1.52	1.10
1:AA:88:A:H4'	1:AA:89:C:H5'	1.20	1.10
35:BA:963:U:O2'	35:BA:964:C:H5'	1.51	1.10
35:BA:612:C:C2'	35:BA:613:G:H5''	1.82	1.10
27:B2:70:GLN:CG	27:B2:71:ASN:H	1.65	1.10
1:AA:938:A:H2'	1:AA:939:G:H5'	1.30	1.10
1:AA:264:U:C2'	1:AA:265:G:H5'	1.80	1.10
1:AA:311:C:H2'	1:AA:312:C:C5'	1.82	1.09
35:BA:1892:C:C2'	35:BA:1893:C:H5'	1.81	1.09
35:BA:2189:U:H2'	35:BA:2190:G:H5''	1.28	1.09
1:AA:112:G:C2'	1:AA:113:G:H5'	1.80	1.09
37:BC:117:THR:HG21	37:BC:119:ASP:HB2	1.20	1.09
35:BA:2009:G:C2'	35:BA:2010:G:H5'	1.82	1.09
35:BA:1642:G:H2'	35:BA:1643:G:H5'	1.33	1.09
41:BG:77:ILE:HG13	41:BG:82:LEU:HB2	1.31	1.09
35:BA:1970:A:C5'	35:BA:1972:A:H1'	1.81	1.09
1:AA:949:A:H2'	1:AA:950:U:H5'	1.28	1.09
27:B2:16:LEU:HD22	27:B2:20:GLU:HG2	1.11	1.09
35:BA:747:U:C4	35:BA:2613:U:C4	2.40	1.09
27:B2:10:LEU:O	27:B2:14:ARG:HD2	1.50	1.09
1:AA:1399:C:H4'	1:AA:1400:C:O5'	1.45	1.09
41:BG:38:VAL:HG22	41:BG:93:THR:HG23	1.19	1.09
1:AA:1282:C:C2'	1:AA:1283:G:H5'	1.81	1.09
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.16	1.09
35:BA:461:C:H2'	35:BA:462:C:H5'	1.26	1.09
1:AA:949:A:C2'	1:AA:950:U:H5''	1.80	1.09
1:AA:697:U:H2'	1:AA:698:G:H5'	1.34	1.09
35:BA:1642:G:C2'	35:BA:1643:G:H5'	1.81	1.09
35:BA:15:G:O2'	35:BA:16:G:H5'	1.49	1.09
24:AY:55:MET:HG2	24:AY:56:GLU:N	1.64	1.09
35:BA:1983:C:H2'	35:BA:1984:G:H5'	1.32	1.08
57:BY:28:LYS:HB2	57:BY:37:VAL:HB	1.32	1.08
35:BA:1999:C:C2'	35:BA:2000:G:H5'	1.81	1.08
1:AA:696:A:O2'	1:AA:697:U:H5'	1.54	1.08
35:BA:2206:G:H21	35:BA:2207:G:H5'	0.97	1.08
31:B6:27:LYS:HG3	31:B6:30:THR:HB	1.35	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1277:C:O2'	1:AA:1279:A:H8	1.36	1.08
35:BA:1484:G:H2'	35:BA:1485:G:H5''	1.30	1.08
58:BZ:180:VAL:HG12	58:BZ:181:GLU:H	1.14	1.08
1:AA:197:A:C6	1:AA:221:C:H4'	1.88	1.08
35:BA:1988:C:H2'	35:BA:1989:G:H5'	1.28	1.08
35:BA:603:A:H1'	35:BA:604:G:OP2	1.52	1.08
35:BA:2000:G:N2	35:BA:2001:A:C4	2.21	1.08
35:BA:890:A:H3'	35:BA:892:G:H5''	1.34	1.08
35:BA:1297:C:O2'	35:BA:1298:C:H5'	1.51	1.08
35:BA:31:C:C2'	35:BA:32:C:H5''	1.84	1.08
35:BA:612:C:H2'	35:BA:613:G:H5''	1.14	1.07
24:AY:55:MET:CG	24:AY:56:GLU:H	1.67	1.07
35:BA:1806:C:O2'	35:BA:1807:G:H5'	1.52	1.07
35:BA:2757:A:H2'	35:BA:2758:A:H5'	1.32	1.07
39:BE:132:HIS:HA	39:BE:135:HIS:CE1	1.89	1.07
29:B4:21:VAL:HG12	29:B4:22:ILE:H	1.00	1.07
42:BH:3:ARG:CB	42:BH:3:ARG:HH11	1.66	1.07
35:BA:1215:G:O2'	35:BA:1216:G:H5'	1.52	1.07
35:BA:1799:G:OP1	35:BA:1799:G:H3'	1.53	1.07
1:AA:1237:C:O2'	1:AA:1335:C:O4'	1.69	1.07
1:AA:1371:G:H2'	1:AA:1372:U:H5'	1.15	1.07
27:B2:44:LEU:HD13	27:B2:45:SER:N	1.70	1.07
42:BH:3:ARG:HB2	42:BH:3:ARG:NH1	1.70	1.07
35:BA:953:A:H2'	35:BA:954:G:H5'	1.28	1.07
3:AC:83:ARG:HG3	3:AC:84:ILE:N	1.69	1.07
35:BA:31:C:H2'	35:BA:32:C:H5''	1.31	1.07
27:B2:44:LEU:HD13	27:B2:44:LEU:C	1.70	1.07
58:BZ:185:GLU:HG2	58:BZ:185:GLU:O	1.54	1.07
35:BA:2757:A:H2'	35:BA:2758:A:C5'	1.83	1.07
1:AA:1498:U:H1'	1:AA:1499:A:OP2	1.53	1.07
35:BA:1119:C:C2'	35:BA:1120:G:H5'	1.85	1.07
27:B2:70:GLN:HG2	27:B2:71:ASN:N	1.69	1.07
1:AA:112:G:H2'	1:AA:113:G:H5'	1.35	1.07
35:BA:654(H):G:H2'	35:BA:654(I):C:H5'	1.37	1.07
1:AA:1052:U:O4	1:AA:1200:C:H2'	1.55	1.07
1:AA:560:U:H4'	1:AA:561:U:C5'	1.85	1.06
1:AA:1157:A:H1'	1:AA:1158:C:OP2	1.52	1.06
52:BT:80:SER:CB	52:BT:81:PRO:CD	2.30	1.06
1:AA:311:C:C2'	1:AA:312:C:C5'	2.33	1.06
35:BA:627:A:H4'	35:BA:628:G:OP2	1.41	1.06
1:AA:264:U:H2'	1:AA:265:G:H5'	1.31	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:180:VAL:HG12	58:BZ:181:GLU:N	1.68	1.06
1:AA:1313:U:H3'	19:AS:6:LYS:HZ2	1.13	1.06
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.16	1.06
35:BA:1600:C:O2'	35:BA:1601:G:H5'	1.55	1.06
2:AB:23:ARG:CG	2:AB:23:ARG:HH11	1.65	1.06
29:B4:12:ALA:H	29:B4:24:THR:HG22	0.96	1.06
35:BA:1427:A:H4'	35:BA:1428:C:O5'	1.55	1.06
35:BA:2126:A:H4'	35:BA:2127:G:O5'	1.54	1.06
36:BB:20:C:H2'	36:BB:21:G:H5''	1.33	1.06
35:BA:604:G:C2'	35:BA:605:C:H5'	1.86	1.06
35:BA:743:G:H2'	35:BA:744:G:H8	0.92	1.06
35:BA:2105:C:H2'	35:BA:2106:G:H5''	1.38	1.06
46:BN:4:TYR:HB3	53:BU:64:ARG:HH12	1.19	1.06
1:AA:521:G:C2'	1:AA:522:C:H5'	1.84	1.06
35:BA:2645:G:H3'	35:BA:2646:C:H5'	1.37	1.06
35:BA:1174:A:H5''	35:BA:1175:U:H5''	1.31	1.06
29:B4:40:HIS:N	29:B4:41:PRO:HD2	1.71	1.06
35:BA:1890:A:C2'	35:BA:1891:G:H5'	1.85	1.06
3:AC:72:LYS:HG2	3:AC:75:VAL:HG23	1.07	1.06
54:BV:62:LEU:HD21	54:BV:95:LEU:HB2	1.35	1.06
33:B8:13:ARG:HD2	48:BP:61:ARG:HD2	1.37	1.05
1:AA:688:G:O6	1:AA:700:G:C6	2.09	1.05
27:B2:9:GLN:H	27:B2:9:GLN:CD	1.50	1.05
35:BA:742:G:H2'	35:BA:743:G:H5'	1.07	1.05
35:BA:1119:C:O2'	35:BA:1120:G:H5'	1.56	1.05
35:BA:1375:C:O2'	35:BA:1376:C:H5'	1.53	1.05
1:AA:949:A:C2'	1:AA:950:U:C5'	2.34	1.05
49:BQ:60:ARG:HG3	58:BZ:179:ASP:CG	1.75	1.05
1:AA:266:G:H4'	1:AA:267:C:O5'	1.48	1.05
1:AA:266:G:H5''	1:AA:267:C:C5	1.89	1.05
29:B4:2:LYS:HE2	29:B4:5:ILE:HB	1.29	1.05
1:AA:1281:U:H5'	1:AA:1282:C:C5	1.91	1.05
35:BA:2176:A:H4'	35:BA:2177:C:OP1	1.53	1.05
5:AE:31:LEU:HD21	5:AE:43:LEU:HD11	1.37	1.05
52:BT:29:ARG:O	52:BT:30:VAL:HG23	1.56	1.05
35:BA:955:C:H2'	35:BA:956:G:H5'	1.06	1.05
35:BA:1822:G:H2'	35:BA:1823:G:H8	1.22	1.05
35:BA:18:C:C2	35:BA:19:C:C5	2.43	1.05
1:AA:1073:U:C2'	1:AA:1074:G:H5'	1.85	1.05
52:BT:54:ARG:HA	52:BT:59:THR:HB	1.34	1.05
25:B0:36:ILE:HG13	25:B0:36:ILE:O	1.57	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:15:VAL:HG12	2:AB:15:VAL:O	1.57	1.05
58:BZ:166:SER:HB2	58:BZ:168:GLU:N	1.70	1.05
35:BA:953:A:O2'	35:BA:954:G:H5'	1.56	1.05
35:BA:1805:U:O2'	35:BA:1806:C:H5'	1.57	1.05
2:AB:228:GLY:HA3	2:AB:229:VAL:HG22	1.07	1.04
35:BA:1773:A:H2'	35:BA:1774:C:H5'	1.06	1.04
35:BA:1797:C:O2	35:BA:1822:G:N2	1.90	1.04
35:BA:747:U:N3	35:BA:2613:U:C4	2.25	1.04
1:AA:1505:G:H5''	1:AA:1506:U:OP2	1.57	1.04
24:AY:55:MET:HG2	24:AY:56:GLU:H	1.10	1.04
1:AA:495:A:C4'	1:AA:496:A:H5'	1.88	1.04
35:BA:1596:A:O2'	35:BA:1597:A:H5'	1.54	1.04
35:BA:18:C:H2'	35:BA:19:C:H6	1.19	1.04
1:AA:521:G:H2'	1:AA:522:C:H5'	1.35	1.04
1:AA:1047:G:C2'	1:AA:1048:G:H5'	1.87	1.04
42:BH:168:PRO:HA	42:BH:170:ARG:HH22	1.19	1.04
52:BT:16:ARG:NH2	52:BT:82:LEU:O	1.91	1.04
1:AA:545:C:H2'	1:AA:546:G:H5'	1.07	1.04
1:AA:495:A:H4'	1:AA:496:A:C5'	1.87	1.04
31:B6:10:LEU:H	31:B6:10:LEU:HD22	1.19	1.04
35:BA:31:C:H2'	35:BA:32:C:C5'	1.86	1.04
15:AO:82:ILE:HD11	15:AO:88:ARG:HB2	1.39	1.04
35:BA:955:C:H2'	35:BA:956:G:C5'	1.87	1.04
2:AB:231:GLU:HB2	2:AB:232:PRO:HD2	1.31	1.04
35:BA:179:G:O2'	35:BA:180:G:H5'	1.56	1.04
35:BA:2189:U:C2'	35:BA:2190:G:H5''	1.88	1.04
35:BA:954:G:O2'	35:BA:955:C:H5'	1.56	1.03
35:BA:176:G:H2'	35:BA:177:G:H5'	1.34	1.03
1:AA:560:U:H4'	1:AA:561:U:O5'	1.53	1.03
31:B6:19:ARG:HG3	31:B6:20:ASN:H	0.89	1.03
52:BT:23:ARG:HB2	52:BT:24:PRO:CD	1.80	1.03
52:BT:85:LYS:NZ	52:BT:85:LYS:HB3	1.70	1.03
35:BA:1997:G:H2'	35:BA:1998:G:H5'	1.34	1.03
35:BA:692:C:O2'	35:BA:693:C:H5'	1.58	1.03
35:BA:1023:U:H2'	35:BA:1024:G:H5'	1.04	1.03
24:AY:69:VAL:HA	24:AY:82:ILE:HG12	1.38	1.03
35:BA:462:C:C2'	35:BA:463:G:H5'	1.88	1.03
58:BZ:166:SER:HB2	58:BZ:168:GLU:H	0.88	1.03
1:AA:975:A:H4'	1:AA:976:G:H5''	1.35	1.03
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.41	1.03
15:AO:68:ARG:HB2	15:AO:68:ARG:HH11	1.20	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:19:LEU:N	9:AI:61:ALA:HB2	1.71	1.03
1:AA:495:A:O2'	1:AA:496:A:H2'	1.57	1.03
1:AA:704:A:H2'	1:AA:705:U:H5'	1.41	1.03
31:B6:19:ARG:CG	31:B6:20:ASN:H	1.70	1.03
1:AA:699:C:C2'	1:AA:700:G:H5'	1.88	1.03
1:AA:862:C:H2'	1:AA:863:U:H5'	1.06	1.03
35:BA:741:G:O2'	35:BA:742:G:H5'	1.57	1.03
40:BF:9:ILE:HG12	40:BF:14:PRO:HA	1.37	1.03
1:AA:312:C:H2'	1:AA:313:A:H8	1.17	1.03
48:BP:65:ARG:HB3	48:BP:68:GLN:HE22	1.24	1.03
2:AB:190:THR:O	2:AB:191:ASP:HB3	1.59	1.03
35:BA:2581:G:C4	35:BA:2610:C:N4	2.27	1.03
35:BA:256:A:H2'	35:BA:257:A:H5'	1.40	1.03
29:B4:15:ILE:HD13	29:B4:33:VAL:HB	1.39	1.03
1:AA:522:C:H41	12:AL:53:ARG:NH2	1.55	1.03
28:B3:6:VAL:HG12	28:B3:56:VAL:HG22	1.41	1.03
29:B4:40:HIS:H	29:B4:41:PRO:HD2	1.23	1.02
1:AA:1282:C:H2'	1:AA:1283:G:H5'	1.36	1.02
58:BZ:180:VAL:CG1	58:BZ:181:GLU:H	1.71	1.02
58:BZ:185:GLU:O	58:BZ:187:ALA:N	1.91	1.02
35:BA:1767:C:C2'	35:BA:1768:U:H5'	1.88	1.02
1:AA:979:C:H2'	1:AA:980:C:H5''	1.41	1.02
35:BA:673:C:H4'	40:BF:82:ILE:HD11	1.35	1.02
48:BP:59:LEU:HA	48:BP:61:ARG:HE	1.22	1.02
35:BA:1747(A):G:C2'	35:BA:1748:G:H5''	1.88	1.02
35:BA:18:C:H2'	35:BA:19:C:C6	1.92	1.02
35:BA:1970:A:H5'	35:BA:1972:A:H1'	1.08	1.02
35:BA:605:C:C2'	35:BA:606:U:H5'	1.90	1.02
1:AA:699:C:H2'	1:AA:700:G:H5'	1.35	1.02
41:BG:133:LEU:HD11	41:BG:157:ILE:HB	1.41	1.02
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	1.90	1.02
35:BA:1892:C:H2'	35:BA:1893:C:H5'	1.41	1.02
24:AY:82:ILE:O	24:AY:82:ILE:HG22	1.59	1.02
35:BA:1106:G:O2'	35:BA:1107:G:H5'	1.57	1.02
52:BT:30:VAL:HG12	52:BT:31:SER:CB	1.90	1.02
2:AB:87:ARG:NH2	2:AB:233:SER:OG	1.93	1.02
35:BA:1982:C:C4	35:BA:1983:C:N4	2.27	1.02
35:BA:1445:A:C8	35:BA:1460:A:C2	2.48	1.02
35:BA:2715:C:H2'	35:BA:2716:U:H6	1.23	1.02
35:BA:256:A:C2'	35:BA:257:A:H5'	1.90	1.02
35:BA:1381:G:H2'	35:BA:1382:G:H5'	1.04	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:23:ARG:HB2	52:BT:24:PRO:HD2	1.38	1.02
55:BW:1:MET:HG2	55:BW:2:GLU:H	1.25	1.02
35:BA:1103:A:H5'	35:BA:1104:C:OP1	1.60	1.02
34:B9:17:ILE:HG13	34:B9:26:ILE:HD12	1.41	1.02
35:BA:111:A:H2'	35:BA:112:U:C5'	1.90	1.01
48:BP:88:LEU:HD11	48:BP:95:VAL:HG21	1.40	1.01
35:BA:2360:A:O2'	35:BA:2361:A:H5''	1.59	1.01
35:BA:2008:C:H2'	35:BA:2009:G:H8	1.24	1.01
35:BA:1983:C:C2'	35:BA:1984:G:H5'	1.89	1.01
35:BA:141:A:H8	35:BA:1408:C:HO2'	1.07	1.01
12:AL:27:LEU:HD13	12:AL:28:LYS:H	1.23	1.01
48:BP:58:THR:O	48:BP:61:ARG:HG2	1.58	1.01
1:AA:365:U:H3'	1:AA:365:U:O2	1.60	1.01
3:AC:81:GLY:C	3:AC:82:GLU:HG3	1.77	1.01
35:BA:2402:C:H4'	35:BA:2403:C:O5'	1.57	1.01
2:AB:187:LEU:HD22	2:AB:187:LEU:O	1.59	1.01
35:BA:1273:U:H5''	35:BA:1646:C:N4	1.73	1.01
42:BH:106:THR:HG22	42:BH:112:PRO:HB3	1.42	1.01
2:AB:87:ARG:HD2	2:AB:219:VAL:HG11	1.41	1.01
48:BP:51:PHE:CZ	48:BP:53:GLY:HA2	1.95	1.01
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.41	1.01
35:BA:742:G:O2'	35:BA:743:G:H5''	1.61	1.01
35:BA:1799:G:H4'	35:BA:1800:C:O5'	1.60	1.01
38:BD:248:SER:HB2	38:BD:249:PRO:HD2	1.39	1.01
35:BA:2009:G:H2'	35:BA:2010:G:C5'	1.91	1.01
35:BA:2716:U:O2'	35:BA:2717:G:H5'	1.59	1.01
41:BG:137:GLU:HG2	41:BG:154:GLY:N	1.75	1.01
2:AB:23:ARG:HG3	2:AB:23:ARG:HH11	0.90	1.01
1:AA:1030(B):C:H2'	1:AA:1030(C):G:H4'	1.39	1.01
36:BB:40:U:H3'	36:BB:41:U:H5''	1.41	1.01
35:BA:326:G:O2'	35:BA:327:G:H5'	1.59	1.01
1:AA:1388:C:H2'	1:AA:1389:C:C6	1.95	1.01
37:BC:117:THR:HG21	37:BC:119:ASP:CB	1.91	1.00
35:BA:1446:C:N4	35:BA:1465:G:H1	1.59	1.00
2:AB:23:ARG:HG3	2:AB:23:ARG:NH1	1.66	1.00
35:BA:2128:C:O2'	35:BA:2129:C:H5'	1.58	1.00
51:BS:106:ARG:HB3	51:BS:106:ARG:HH11	1.19	1.00
20:AT:74:LYS:HG3	20:AT:75:ASN:H	1.22	1.00
1:AA:312:C:H2'	1:AA:313:A:C8	1.95	1.00
48:BP:51:PHE:HA	48:BP:52:GLU:CB	1.89	1.00
35:BA:860:U:O2'	35:BA:861:A:H5'	1.61	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2606:C:H2'	35:BA:2607:G:H5'	1.02	1.00
35:BA:1222:C:C2'	35:BA:1223:G:H5'	1.91	1.00
35:BA:16:G:O2'	35:BA:17:G:H5'	1.60	1.00
1:AA:547:A:H1'	1:AA:548:G:OP2	1.59	1.00
31:B6:19:ARG:HG3	31:B6:20:ASN:N	1.73	1.00
35:BA:462:C:O2'	35:BA:463:G:H5'	1.61	1.00
35:BA:2206:G:N2	35:BA:2207:G:H5'	1.75	1.00
38:BD:44:ASN:HB2	38:BD:48:ARG:O	1.60	1.00
25:B0:10:THR:HG22	25:B0:11:ARG:H	1.24	1.00
50:BR:42:LYS:O	50:BR:45:ARG:HG2	1.60	1.00
35:BA:2009:G:H2'	35:BA:2010:G:H5'	1.03	1.00
29:B4:39:CYS:HB3	29:B4:41:PRO:HD2	1.38	1.00
50:BR:2:ARG:O	50:BR:2:ARG:HD2	1.59	1.00
42:BH:3:ARG:HB2	42:BH:3:ARG:HH11	1.19	1.00
4:AD:139:ARG:HG2	4:AD:139:ARG:HH11	0.84	1.00
1:AA:1285:A:H4'	1:AA:1286:A:C5'	1.91	1.00
26:B1:29:GLY:O	26:B1:30:VAL:HG23	1.59	1.00
1:AA:1492:A:H1'	1:AA:1493:A:OP1	1.62	1.00
39:BE:24:THR:HG21	39:BE:188:VAL:HG11	1.44	1.00
4:AD:110:PHE:HD1	4:AD:110:PHE:H	1.04	1.00
35:BA:856:C:H2'	35:BA:857:C:H6	1.02	0.99
41:BG:137:GLU:HG2	41:BG:154:GLY:H	1.27	0.99
57:BY:28:LYS:H	57:BY:28:LYS:CD	1.72	0.99
1:AA:1154:G:O2'	1:AA:1155:G:H5'	1.62	0.99
2:AB:20:GLU:HG3	2:AB:190:THR:O	1.63	0.99
35:BA:702:G:C2'	35:BA:703:U:H5'	1.92	0.99
35:BA:1821:A:H2'	35:BA:1822:G:H5'	1.37	0.99
1:AA:769:G:C2'	1:AA:770:C:H5'	1.91	0.99
52:BT:27:THR:HG23	52:BT:28:VAL:H	1.24	0.99
53:BU:90:VAL:HG11	54:BV:39:LEU:HG	1.45	0.99
39:BE:57:LYS:HA	39:BE:57:LYS:HE3	1.44	0.99
51:BS:35:ILE:H	51:BS:53:SER:HB2	1.25	0.99
29:B4:12:ALA:CA	29:B4:24:THR:CG2	2.29	0.99
35:BA:2606:C:H2'	35:BA:2607:G:C5'	1.93	0.99
35:BA:29:U:O2'	35:BA:30:G:H5'	1.63	0.99
3:AC:72:LYS:CG	3:AC:75:VAL:HG23	1.91	0.99
35:BA:111:A:C2'	35:BA:112:U:C5'	2.41	0.99
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.28	0.99
58:BZ:128:VAL:HG22	58:BZ:129:SER:H	1.26	0.99
35:BA:967:C:H2'	35:BA:968:G:H5'	0.99	0.98
58:BZ:166:SER:CB	58:BZ:168:GLU:H	1.74	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:139:ARG:HG2	4:AD:139:ARG:NH1	1.63	0.98
1:AA:37:U:O2'	1:AA:38:G:H5'	1.63	0.98
13:AM:15:VAL:O	13:AM:19:LEU:HD23	1.63	0.98
1:AA:188:C:H2'	1:AA:189:G:C8	1.96	0.98
1:AA:197:A:H4'	1:AA:198:G:O5'	1.57	0.98
35:BA:1820:U:H4'	35:BA:1821:A:OP2	1.57	0.98
35:BA:967:C:C2'	35:BA:968:G:C5'	2.41	0.98
1:AA:188:C:H2'	1:AA:189:G:H8	1.23	0.98
1:AA:57:G:H2'	1:AA:58:C:C6	1.98	0.98
37:BC:117:THR:HG22	37:BC:118:PRO:O	1.61	0.98
1:AA:509:A:H5'	4:AD:54:TYR:HD2	1.23	0.98
1:AA:119:A:N6	1:AA:287:U:O2	1.97	0.98
35:BA:1817:G:H2'	35:BA:1818:U:H5'	1.42	0.98
1:AA:593:G:C2'	1:AA:594:G:H5'	1.94	0.98
35:BA:655:A:H4'	35:BA:656:G:H5'	1.42	0.98
24:AY:264:LEU:HB2	61:AY:701:GCP:C5	1.93	0.98
26:B1:5:CYS:SG	26:B1:8:SER:N	2.37	0.98
10:AJ:90:LEU:H	10:AJ:91:PRO:CD	1.76	0.98
1:AA:951:G:N2	1:AA:970:C:O2	1.96	0.98
27:B2:5:GLU:HA	27:B2:8:LYS:HD2	1.46	0.98
2:AB:122:PHE:CE2	2:AB:142:LEU:HD22	1.97	0.98
35:BA:1590:U:C2'	35:BA:1591:G:H5''	1.92	0.98
1:AA:792:A:H4'	1:AA:793:U:O5'	1.62	0.98
1:AA:266:G:H5'	1:AA:267:C:C5	1.99	0.98
35:BA:145:G:C2'	35:BA:146:G:H5''	1.94	0.98
52:BT:30:VAL:HB	52:BT:31:SER:HB3	1.41	0.97
2:AB:15:VAL:HG21	2:AB:209:ARG:HH21	1.26	0.97
35:BA:1767:C:H2'	35:BA:1768:U:H5'	1.43	0.97
35:BA:653:A:C5'	35:BA:654:A:OP2	2.11	0.97
35:BA:1902:C:O2'	38:BD:244:ARG:CB	2.10	0.97
2:AB:17:PHE:HB3	2:AB:44:LEU:HD11	1.47	0.97
35:BA:743:G:C2'	35:BA:744:G:H8	1.77	0.97
1:AA:1002:G:H2'	1:AA:1003:G:H8	1.26	0.97
35:BA:1417:C:C2'	35:BA:1418:G:H5'	1.93	0.97
1:AA:1371:G:H2'	1:AA:1372:U:C5'	1.93	0.97
30:B5:4:HIS:HB3	30:B5:5:PRO:CD	1.89	0.97
35:BA:747:U:C4	35:BA:2613:U:N3	2.32	0.97
35:BA:742:G:C2'	35:BA:743:G:C5'	2.40	0.97
35:BA:692:C:C2'	35:BA:693:C:H5'	1.95	0.97
35:BA:145:G:H2'	35:BA:146:G:H5''	1.43	0.97
7:AG:36:LYS:HG2	7:AG:37:ASN:H	1.28	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:43:A:C2'	35:BA:44:G:H5'	1.93	0.97
2:AB:228:GLY:CA	2:AB:229:VAL:CG2	2.38	0.97
35:BA:742:G:H2'	35:BA:743:G:C5'	1.93	0.97
24:AY:191:ASP:HB3	24:AY:265:LYS:HG3	1.46	0.97
12:AL:46:LYS:C	12:AL:48:PRO:HD2	1.84	0.97
4:AD:139:ARG:CG	4:AD:139:ARG:HH11	1.77	0.97
1:AA:796:C:O2'	1:AA:797:C:H5'	1.65	0.97
49:BQ:60:ARG:CG	58:BZ:179:ASP:OD1	2.12	0.97
2:AB:167:PRO:HD3	2:AB:188:ALA:HB2	1.46	0.97
35:BA:890:A:C3'	35:BA:892:G:H5''	1.94	0.97
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.63	0.97
24:AY:31:ARG:NH1	24:AY:31:ARG:HA	1.79	0.97
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.08	0.97
35:BA:676:A:H8	35:BA:2069:G:H21	1.00	0.97
35:BA:2893:G:H5'	35:BA:2894:G:H5'	1.45	0.97
35:BA:1770:G:C2'	35:BA:1771:C:H5'	1.95	0.97
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.27	0.97
35:BA:2620:C:H5''	39:BE:153:GLY:HA2	1.45	0.97
1:AA:868:C:O2'	1:AA:869:G:H5'	1.64	0.97
52:BT:30:VAL:HG12	52:BT:31:SER:HB3	1.42	0.97
27:B2:69:ARG:O	27:B2:70:GLN:HB3	1.65	0.97
35:BA:2068:U:H3	35:BA:2430:A:H2	1.01	0.97
1:AA:508:C:H4'	1:AA:509:A:O5'	1.62	0.96
35:BA:1291:C:O2'	35:BA:1292:U:H5'	1.64	0.96
1:AA:688:G:C6	1:AA:700:G:N1	2.32	0.96
1:AA:701:C:H5'	1:AA:702:A:OP1	1.63	0.96
24:AY:201:ILE:H	24:AY:201:ILE:HD12	1.29	0.96
1:AA:555:C:C4	1:AA:556:C:N4	2.33	0.96
26:B1:57:GLU:HG2	26:B1:58:ILE:N	1.77	0.96
2:AB:200:ILE:HD12	2:AB:200:ILE:H	1.30	0.96
1:AA:1073:U:H2'	1:AA:1074:G:H5'	1.45	0.96
39:BE:77:ILE:HG22	39:BE:78:LEU:H	1.29	0.96
24:AY:137:ASN:ND2	24:AY:138:LYS:H	1.63	0.96
35:BA:741:G:C2'	35:BA:742:G:H5'	1.95	0.96
1:AA:1053:G:H4'	1:AA:1054:C:C5'	1.96	0.96
35:BA:271(L):U:H5''	35:BA:271(M):G:H5'	1.46	0.96
37:BC:117:THR:CG2	37:BC:118:PRO:C	2.32	0.96
35:BA:2207:G:H5''	35:BA:2207:G:N3	1.80	0.96
20:AT:73:HIS:O	20:AT:74:LYS:HG2	1.64	0.96
1:AA:1150:U:H2'	1:AA:1151:A:H5'	1.47	0.96
35:BA:1282:U:O2	35:BA:1286:A:N6	1.99	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:84:A:H5''	57:BY:9:LYS:HD2	1.47	0.96
29:B4:22:ILE:HG12	41:BG:105:LYS:HA	1.47	0.96
40:BF:178:PRO:HB2	40:BF:201:VAL:HG11	1.46	0.96
35:BA:2358:G:C2'	35:BA:2359:C:H5'	1.95	0.96
35:BA:650:C:H3'	35:BA:651:G:H5''	1.45	0.96
35:BA:2713:A:H3'	35:BA:2714:G:H5'	1.47	0.96
1:AA:1282:C:O2'	1:AA:1283:G:H5'	1.64	0.96
1:AA:1029:C:H3'	1:AA:1030:C:H5''	1.47	0.96
35:BA:896:A:H1'	58:BZ:176:PRO:CG	1.95	0.96
35:BA:2010:G:H2'	35:BA:2011:U:H5'	1.43	0.96
38:BD:24:ILE:HG23	38:BD:25:THR:H	1.30	0.96
57:BY:101:LYS:HG2	57:BY:102:CYS:N	1.79	0.96
9:AI:19:LEU:HB3	9:AI:61:ALA:HB3	1.46	0.96
35:BA:1997:G:C2'	35:BA:1998:G:H5'	1.96	0.96
58:BZ:149:SER:CB	58:BZ:173:ALA:HA	1.96	0.96
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.47	0.95
1:AA:106:C:HO2'	1:AA:107:G:H5'	1.21	0.95
35:BA:53:A:H2'	35:BA:54:G:H5'	1.43	0.95
35:BA:330:A:H2	35:BA:1210:A:H2'	1.30	0.95
35:BA:1067:A:H5''	35:BA:1068:G:H5''	1.45	0.95
19:AS:29:ARG:HB3	19:AS:48:THR:HB	1.48	0.95
35:BA:27:G:N2	35:BA:512:G:H2'	1.81	0.95
27:B2:64:LEU:HD23	27:B2:64:LEU:O	1.64	0.95
39:BE:179:GLU:HB3	39:BE:181:LEU:HD23	1.44	0.95
58:BZ:5:LEU:HD23	58:BZ:47:VAL:HG21	1.44	0.95
1:AA:60:A:H4'	1:AA:61:G:O5'	1.64	0.95
40:BF:24:LEU:HB3	40:BF:25:PRO:HD2	1.48	0.95
1:AA:312:C:O2'	1:AA:313:A:H5'	1.67	0.95
1:AA:949:A:O2'	1:AA:950:U:H5''	1.65	0.95
35:BA:689:A:H2'	35:BA:690:G:H5'	1.48	0.95
1:AA:348:G:H2'	1:AA:349:A:H5'	1.47	0.95
35:BA:630:G:N2	35:BA:633:A:OP1	1.99	0.95
35:BA:967:C:H2'	35:BA:968:G:C5'	1.96	0.95
13:AM:7:VAL:HG21	41:BG:147:ASP:OD1	1.67	0.95
39:BE:36:ARG:HH21	39:BE:88:GLY:HA2	1.31	0.95
35:BA:111:A:H2'	35:BA:112:U:H5'	0.97	0.95
35:BA:2355:C:H2'	35:BA:2356:C:H5'	1.46	0.95
48:BP:47:ASP:OD2	48:BP:49:ARG:HB2	1.65	0.95
26:B1:45:ASN:HD21	35:BA:2090:G:H21	1.14	0.95
1:AA:491:G:H2'	1:AA:492:G:H8	1.32	0.95
35:BA:2126:A:H1'	35:BA:2127:G:O4'	1.67	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1153:C:O2'	1:AA:1154:G:H5''	1.66	0.95
4:AD:17:VAL:HG12	4:AD:18:LYS:H	1.29	0.95
35:BA:604:G:O2'	35:BA:605:C:H5'	1.66	0.95
35:BA:1899:G:H21	35:BA:1902:C:H41	1.00	0.95
35:BA:2606:C:C2'	35:BA:2607:G:C5'	2.44	0.95
1:AA:1399:C:OP2	1:AA:1399:C:H2'	1.65	0.95
12:AL:27:LEU:HD12	12:AL:28:LYS:HE2	1.44	0.95
35:BA:954:G:H2'	35:BA:955:C:C5'	1.97	0.94
35:BA:461:C:C2'	35:BA:462:C:H5'	1.96	0.94
35:BA:53:A:C2'	35:BA:54:G:H5'	1.97	0.94
35:BA:612:C:H2'	35:BA:613:G:C5'	1.96	0.94
35:BA:2756:U:H1'	35:BA:2757:A:OP1	1.67	0.94
52:BT:79:HIS:O	52:BT:80:SER:HB2	1.64	0.94
48:BP:47:ASP:CB	48:BP:48:PRO:HA	1.96	0.94
13:AM:101:GLN:HE21	13:AM:101:GLN:H	1.12	0.94
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.32	0.94
3:AC:138:VAL:HG21	3:AC:168:ALA:CB	1.98	0.94
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.32	0.94
51:BS:54:LEU:HD13	51:BS:57:LYS:HA	1.48	0.94
2:AB:187:LEU:C	2:AB:187:LEU:HD22	1.87	0.94
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.49	0.94
1:AA:173:U:H5'	1:AA:197:A:O4'	1.65	0.94
35:BA:1528(A):A:H62	35:BA:1541:G:N2	1.65	0.94
30:B5:3:LYS:HD3	35:BA:2611:U:O2'	1.68	0.94
35:BA:2306:C:O2	41:BG:45:GLU:HA	1.68	0.94
48:BP:23:PRO:CB	48:BP:33:ARG:HE	1.81	0.94
35:BA:329:G:H1	57:BY:19:LYS:HE3	1.33	0.94
35:BA:1058:G:H2'	35:BA:1059:G:H5''	1.48	0.94
28:B3:9:VAL:CG1	28:B3:55:ARG:CD	2.44	0.94
40:BF:84:VAL:HG22	40:BF:85:GLY:H	1.31	0.94
6:AF:24:GLU:HG2	6:AF:28:ARG:HH12	1.30	0.94
24:AY:454:MET:H	24:AY:458:HIS:HD2	1.06	0.94
30:B5:40:LYS:CE	30:B5:46:CYS:HB3	1.98	0.94
1:AA:1368:G:H2'	1:AA:1369:C:H5'	1.49	0.94
1:AA:198:G:C6	1:AA:220:G:C2	2.55	0.93
1:AA:769:G:H2'	1:AA:770:C:H5'	1.47	0.93
29:B4:40:HIS:N	29:B4:41:PRO:CD	2.30	0.93
1:AA:522:C:C2'	1:AA:523:A:H5'	1.97	0.93
3:AC:53:ALA:HB2	3:AC:115:LEU:HD13	1.50	0.93
48:BP:23:PRO:HB2	48:BP:33:ARG:NE	1.82	0.93
33:B8:59:LYS:HB2	33:B8:59:LYS:HZ3	1.32	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:19:LEU:CB	9:AI:61:ALA:CB	2.23	0.93
35:BA:697:C:HO2'	35:BA:698:C:H5'	1.25	0.93
48:BP:51:PHE:CE2	48:BP:53:GLY:HA3	2.03	0.93
2:AB:228:GLY:HA2	2:AB:229:VAL:HG13	0.94	0.93
35:BA:178:G:C2'	35:BA:179:G:H5'	1.97	0.93
29:B4:39:CYS:O	29:B4:40:HIS:HB2	1.68	0.93
35:BA:327:G:O2'	35:BA:328:U:H5'	1.68	0.93
25:B0:51:VAL:HG21	25:B0:79:VAL:O	1.68	0.93
54:BV:24:LYS:HA	54:BV:92:THR:HG23	1.51	0.93
17:AQ:9:VAL:HG12	17:AQ:56:VAL:HG22	1.47	0.93
35:BA:600:G:O2'	35:BA:601:C:H5'	1.67	0.93
12:AL:33:ARG:HD3	12:AL:62:SER:HB3	1.49	0.93
39:BE:54:GLN:O	39:BE:55:ASN:HB2	1.68	0.93
28:B3:19:GLN:NE2	28:B3:52:HIS:HE1	1.66	0.93
48:BP:47:ASP:HB3	48:BP:48:PRO:HA	1.48	0.93
1:AA:198:G:O6	1:AA:220:G:N1	2.01	0.93
57:BY:28:LYS:HA	57:BY:38:ILE:HG22	1.51	0.93
52:BT:85:LYS:HB3	52:BT:85:LYS:HZ2	1.26	0.93
35:BA:1773:A:H2'	35:BA:1774:C:C5'	1.97	0.93
35:BA:2716:U:C2'	35:BA:2717:G:H5'	1.97	0.93
35:BA:693:C:H2'	35:BA:694:U:C6	2.03	0.93
37:BC:117:THR:CG2	37:BC:119:ASP:CB	2.45	0.93
31:B6:9:LEU:HD13	31:B6:9:LEU:C	1.88	0.93
1:AA:1371:G:O2'	1:AA:1372:U:H5'	1.67	0.93
1:AA:49:U:C2	1:AA:361:G:N2	2.37	0.93
51:BS:106:ARG:HD2	51:BS:108:GLY:H	1.31	0.93
31:B6:41:PRO:HD2	31:B6:46:HIS:N	1.82	0.93
1:AA:961:U:H1'	1:AA:962:C:H5'	1.49	0.93
31:B6:7:ILE:HG21	31:B6:27:LYS:HZ3	1.07	0.93
1:AA:788:U:O2'	1:AA:789:U:H5'	1.68	0.93
42:BH:171:LEU:O	42:BH:173:PRO:HD3	1.69	0.93
2:AB:223:ILE:HG22	2:AB:227:GLY:O	1.69	0.92
1:AA:1238:A:P	1:AA:1335:C:H1'	2.09	0.92
35:BA:2032:G:H21	39:BE:146:THR:CG2	1.80	0.92
24:AY:115:GLU:O	24:AY:118:SER:HB3	1.69	0.92
1:AA:73:G:H1	1:AA:96:U:H3	0.99	0.92
2:AB:152:PHE:CZ	2:AB:155:LEU:HD12	2.05	0.92
35:BA:1416:G:O2'	35:BA:1417:C:H5	1.50	0.92
35:BA:27:G:N2	35:BA:512:G:C2'	2.32	0.92
35:BA:1190:G:H5'	48:BP:35:HIS:H	1.31	0.92
35:BA:673:C:C4'	40:BF:82:ILE:HD11	1.98	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1029:C:H3'	1:AA:1030:C:C5'	2.00	0.92
51:BS:15:ARG:HH11	51:BS:15:ARG:HB2	1.32	0.92
24:AY:99:ARG:HH11	24:AY:402:ILE:N	1.68	0.92
2:AB:230:VAL:CB	2:AB:231:GLU:HA	1.94	0.92
19:AS:63:THR:HG23	19:AS:64:GLU:H	1.32	0.92
35:BA:1381:G:H2'	35:BA:1382:G:C5'	1.97	0.92
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	1.70	0.92
38:BD:44:ASN:HB3	38:BD:49:ILE:HA	1.51	0.92
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.49	0.92
28:B3:9:VAL:HG11	28:B3:55:ARG:HD2	1.48	0.92
3:AC:138:VAL:HG21	3:AC:168:ALA:HB1	1.51	0.92
35:BA:2008:C:H2'	35:BA:2009:G:C8	2.05	0.92
13:AM:8:GLU:OE1	13:AM:22:ILE:HA	1.70	0.92
52:BT:28:VAL:HG13	52:BT:29:ARG:N	1.81	0.92
48:BP:47:ASP:CB	48:BP:48:PRO:CA	2.47	0.92
50:BR:3:HIS:O	50:BR:5:LYS:N	2.03	0.92
1:AA:964:A:N6	1:AA:965:A:N6	2.17	0.92
1:AA:60:A:H1'	1:AA:61:G:O4'	1.70	0.92
1:AA:688:G:C6	1:AA:700:G:C6	2.58	0.92
35:BA:747:U:N3	35:BA:2613:U:O4	2.01	0.92
29:B4:16:CYS:HA	29:B4:33:VAL:HG21	1.52	0.92
1:AA:1049:U:H4'	1:AA:1050:G:O5'	1.66	0.92
27:B2:44:LEU:CD1	27:B2:44:LEU:C	2.37	0.92
35:BA:2176:A:H2'	35:BA:2177:C:C6	2.05	0.92
35:BA:1649:G:O2'	35:BA:1650:G:H5'	1.69	0.92
37:BC:103:LYS:HE3	37:BC:107:GLY:HA3	1.50	0.92
35:BA:1899:G:N2	35:BA:1902:C:H41	1.68	0.92
1:AA:556:C:H2'	1:AA:557:G:H5'	1.51	0.92
29:B4:21:VAL:HG12	29:B4:22:ILE:N	1.83	0.92
39:BE:60:ASN:OD1	39:BE:62:PRO:HD2	1.66	0.92
24:AY:534:ILE:HD11	24:AY:570:GLY:HA3	1.49	0.92
57:BY:7:VAL:HB	57:BY:8:LYS:NZ	1.85	0.92
35:BA:954:G:C2'	35:BA:955:C:C5'	2.47	0.91
30:B5:47:PRO:HG2	30:B5:48:GLU:OE1	1.68	0.91
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.34	0.91
35:BA:1720:U:C2'	35:BA:1721:G:H5''	2.00	0.91
29:B4:33:VAL:HG13	29:B4:34:GLU:N	1.80	0.91
1:AA:964:A:N6	1:AA:965:A:H62	1.69	0.91
1:AA:673:G:H2'	1:AA:674:G:C8	2.05	0.91
48:BP:84:ASN:ND2	48:BP:116:GLY:CA	2.33	0.91
48:BP:52:GLU:HG2	48:BP:57:THR:CG2	2.00	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1371:G:C2'	1:AA:1372:U:C5'	2.48	0.91
1:AA:704:A:C2'	1:AA:705:U:H5'	1.99	0.91
35:BA:1540:U:C3'	35:BA:1541:G:H3'	1.98	0.91
35:BA:1104:C:H2'	35:BA:1105:U:H5'	1.49	0.91
9:AI:112:LYS:HG3	9:AI:118:LYS:HA	1.50	0.91
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.33	0.91
13:AM:22:ILE:HG21	13:AM:66:LEU:HD23	1.53	0.91
35:BA:1104:C:C2'	35:BA:1105:U:H5'	1.99	0.91
50:BR:99:LYS:HD2	50:BR:99:LYS:H	1.35	0.91
39:BE:36:ARG:HH21	39:BE:88:GLY:CA	1.82	0.91
2:AB:130:ARG:HH22	2:AB:134:GLU:HG3	1.36	0.91
29:B4:56:VAL:HA	29:B4:60:GLN:CD	1.91	0.91
24:AY:497:PHE:O	24:AY:507:TYR:HB2	1.69	0.91
35:BA:2362:G:O2'	35:BA:2363:C:H5'	1.70	0.91
7:AG:15:ASP:HB3	7:AG:19:GLY:O	1.71	0.91
1:AA:1279:A:H3'	1:AA:1279:A:N3	1.84	0.91
29:B4:56:VAL:HG22	29:B4:57:GLU:H	1.32	0.91
26:B1:29:GLY:C	26:B1:30:VAL:HG23	1.89	0.91
30:B5:53:ALA:HA	30:B5:56:LYS:NZ	1.84	0.91
24:AY:99:ARG:HD3	24:AY:401:SER:HA	1.51	0.91
46:BN:24:GLY:O	46:BN:28:THR:HG23	1.69	0.91
53:BU:34:LYS:HE2	53:BU:34:LYS:HA	1.50	0.91
1:AA:314:C:O2'	1:AA:315:A:H5'	1.70	0.91
35:BA:953:A:N6	35:BA:965:C:N4	2.17	0.91
12:AL:45:PRO:HG2	12:AL:51:ALA:N	1.86	0.91
1:AA:1148:U:C2'	1:AA:1149:C:H5'	2.00	0.91
1:AA:1368:G:C2'	1:AA:1369:C:H5'	1.99	0.91
29:B4:60:GLN:HB2	29:B4:62:ARG:NH1	1.85	0.91
35:BA:2029:G:O6	35:BA:2033:A:OP1	1.88	0.91
31:B6:7:ILE:CG2	31:B6:27:LYS:NZ	2.32	0.91
35:BA:2312:U:C2'	35:BA:2313:C:H5''	1.98	0.91
1:AA:353:A:H5'	1:AA:353:A:H8	1.34	0.91
1:AA:1386:G:C2	1:AA:1387:G:N7	2.38	0.91
35:BA:2409:G:O2'	35:BA:2410:G:H5'	1.71	0.91
28:B3:19:GLN:HE22	28:B3:52:HIS:HE1	1.01	0.91
22:AV:18:G:O2'	22:AV:57:G:N2	2.02	0.91
38:BD:69:ARG:HD3	38:BD:105:ILE:HD11	1.53	0.91
35:BA:697:C:C2'	35:BA:698:C:H5'	2.00	0.90
22:AV:41:C:C2'	22:AV:42:C:H5'	2.00	0.90
35:BA:1994:C:O2'	35:BA:1995:U:H5'	1.71	0.90
35:BA:1216:G:O2'	35:BA:1217:C:H5'	1.70	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:186:C:O2'	1:AA:187:C:H5'	1.71	0.90
48:BP:16:ARG:HB2	48:BP:16:ARG:NH1	1.85	0.90
1:AA:115:G:H1'	1:AA:116:A:OP2	1.70	0.90
35:BA:2713:A:H3'	35:BA:2714:G:C5'	2.00	0.90
29:B4:15:ILE:O	29:B4:16:CYS:HB2	1.69	0.90
1:AA:1387:G:O2'	1:AA:1388:C:H5'	1.70	0.90
38:BD:24:ILE:HG23	38:BD:25:THR:N	1.86	0.90
58:BZ:97:GLU:HG3	58:BZ:127:LYS:HB3	1.52	0.90
52:BT:28:VAL:HG22	52:BT:45:PHE:O	1.30	0.90
35:BA:2124:G:H5''	37:BC:175:PRO:HG3	1.54	0.90
53:BU:92:ARG:HD3	53:BU:94:ASN:HB3	1.52	0.90
35:BA:176:G:O2'	35:BA:177:G:H5'	1.69	0.90
35:BA:1984:G:C2'	35:BA:1985:G:H5'	2.01	0.90
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.71	0.90
4:AD:17:VAL:HG12	4:AD:18:LYS:N	1.85	0.90
35:BA:925:C:H2'	35:BA:926:A:H5''	1.53	0.90
35:BA:1484:G:C2'	35:BA:1485:G:H5''	2.02	0.90
9:AI:19:LEU:N	9:AI:61:ALA:HB1	1.84	0.90
52:BT:16:ARG:HB3	52:BT:16:ARG:HH11	1.35	0.90
25:B0:45:PHE:HE1	25:B0:77:ARG:HE	1.17	0.90
58:BZ:165:VAL:HG12	58:BZ:167:PRO:HA	1.54	0.90
35:BA:1455:G:C2'	35:BA:1456:G:H5'	2.01	0.90
26:B1:75:GLU:O	26:B1:78:LYS:HG2	1.70	0.90
1:AA:155:C:H2'	1:AA:156:G:H8	1.35	0.90
2:AB:167:PRO:HD2	2:AB:188:ALA:HB2	1.49	0.90
41:BG:59:GLU:HG3	41:BG:60:LEU:H	1.37	0.90
29:B4:60:GLN:HB2	29:B4:62:ARG:HH11	1.37	0.90
50:BR:2:ARG:HG3	50:BR:2:ARG:HH11	1.34	0.90
35:BA:15:G:H2'	35:BA:16:G:H5'	1.53	0.90
51:BS:34:HIS:HB3	51:BS:53:SER:HB3	1.53	0.90
1:AA:187:C:O2'	1:AA:188:C:H5'	1.72	0.90
35:BA:1884:A:H2'	35:BA:1885:A:H5''	1.50	0.90
1:AA:775:G:C2'	1:AA:776:G:H5'	2.02	0.90
40:BF:84:VAL:CG2	40:BF:85:GLY:N	2.33	0.90
35:BA:55:G:N2	35:BA:115:C:O2	2.04	0.90
33:B8:59:LYS:HB2	33:B8:59:LYS:NZ	1.85	0.90
57:BY:42:VAL:HG21	57:BY:67:LEU:HD13	1.52	0.90
52:BT:28:VAL:CG2	52:BT:45:PHE:O	2.19	0.90
35:BA:1786:A:H1'	35:BA:1938:A:N6	1.86	0.90
35:BA:2000:G:C2	35:BA:2001:A:C8	2.60	0.90
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.07	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:75:ASN:HD22	20:AT:75:ASN:H	1.15	0.90
38:BD:27:THR:HG23	38:BD:83:GLU:HG2	1.54	0.90
35:BA:2656:U:H3	35:BA:2665:A:H2	1.15	0.90
35:BA:629:G:H2'	35:BA:630:G:H5'	1.52	0.89
48:BP:52:GLU:HG2	48:BP:57:THR:HG22	1.53	0.89
35:BA:27:G:H22	35:BA:512:G:H2'	1.36	0.89
24:AY:454:MET:H	24:AY:458:HIS:CD2	1.91	0.89
3:AC:120:VAL:O	3:AC:123:GLN:HB2	1.72	0.89
40:BF:160:ASN:HD21	40:BF:162:LEU:HD13	1.34	0.89
35:BA:1963:U:H2'	35:BA:1963:U:O2	1.70	0.89
1:AA:491:G:H2'	1:AA:492:G:C8	2.07	0.89
1:AA:938:A:O2'	1:AA:939:G:H5'	1.73	0.89
35:BA:17:G:H2'	35:BA:18:C:C6	2.06	0.89
29:B4:21:VAL:CG1	29:B4:22:ILE:H	1.86	0.89
9:AI:95:LYS:HE3	9:AI:96:LEU:HD22	1.54	0.89
35:BA:2105:C:C2'	35:BA:2106:G:H5''	2.01	0.89
1:AA:1152:A:O2'	1:AA:1153:C:H5'	1.72	0.89
37:BC:31:LYS:NZ	37:BC:181:PHE:O	2.06	0.89
35:BA:1076:C:H4'	58:BZ:112:ARG:CZ	2.02	0.89
24:AY:526:VAL:HB	24:AY:566:THR:HA	1.51	0.89
52:BT:78:LEU:O	52:BT:79:HIS:HD2	1.54	0.89
35:BA:1970:A:H5'	35:BA:1972:A:C1'	2.01	0.89
35:BA:1799:G:H1'	35:BA:1800:C:OP2	1.70	0.89
35:BA:2129:C:N4	35:BA:2159:G:O6	2.04	0.89
1:AA:859:A:C2'	1:AA:860:A:H5'	2.03	0.89
30:B5:2:ALA:HA	35:BA:2015:A:H1'	1.55	0.89
1:AA:204:U:H4'	1:AA:216:G:O5'	1.72	0.89
52:BT:29:ARG:NH1	52:BT:88:ILE:HD11	1.87	0.89
2:AB:82:ARG:O	2:AB:86:GLU:HG3	1.71	0.89
37:BC:121:MET:HA	37:BC:124:VAL:HG12	1.55	0.89
35:BA:178:G:H2'	35:BA:179:G:H5'	1.54	0.89
35:BA:2131:G:N2	35:BA:2133:A:C2	2.40	0.89
37:BC:117:THR:H	37:BC:118:PRO:HA	0.74	0.89
33:B8:28:GLY:O	33:B8:32:LEU:HD23	1.70	0.89
1:AA:364:A:O2'	1:AA:365:U:H5'	1.73	0.89
41:BG:77:ILE:HG23	41:BG:80:PHE:HB2	1.52	0.89
1:AA:522:C:H2'	1:AA:523:A:H5'	1.53	0.89
3:AC:72:LYS:HG2	3:AC:75:VAL:CG2	1.97	0.89
35:BA:2032:G:H21	39:BE:146:THR:HG23	1.36	0.89
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.38	0.89
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:4:ILE:HG22	13:AM:5:ALA:N	1.88	0.89
35:BA:910:A:H62	49:BQ:12:GLN:HA	1.37	0.89
38:BD:35:LYS:H	38:BD:36:PRO:CD	1.85	0.89
35:BA:155:U:H2'	35:BA:156:U:H5''	1.51	0.89
24:AY:546:ILE:HG23	24:AY:590:ILE:HG13	1.54	0.89
48:BP:59:LEU:HA	48:BP:61:ARG:NE	1.87	0.88
1:AA:40:C:O2'	1:AA:41:G:H5'	1.73	0.88
25:B0:7:LEU:HD13	49:BQ:85:LYS:HE2	1.53	0.88
48:BP:50:ARG:O	48:BP:52:GLU:HB2	1.71	0.88
25:B0:43:THR:O	25:B0:43:THR:HG23	1.72	0.88
1:AA:697:U:C2'	1:AA:698:G:H5'	2.02	0.88
35:BA:30:G:H2'	35:BA:31:C:C6	2.08	0.88
52:BT:23:ARG:CB	52:BT:24:PRO:CD	2.49	0.88
35:BA:262:A:O2'	35:BA:263:C:H5'	1.73	0.88
1:AA:322:C:O2'	1:AA:323:U:H5'	1.72	0.88
1:AA:862:C:C2'	1:AA:863:U:C5'	2.52	0.88
33:B8:56:GLU:HA	33:B8:59:LYS:HZ1	1.38	0.88
57:BY:8:LYS:N	57:BY:8:LYS:HD2	1.88	0.88
48:BP:77:ARG:HD3	48:BP:78:PRO:HD2	1.53	0.88
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	1.54	0.88
1:AA:1238:A:OP1	1:AA:1335:C:O2'	1.91	0.88
35:BA:856:C:C2'	35:BA:857:C:H6	1.87	0.88
54:BV:15:GLU:HG3	54:BV:16:PRO:HD2	1.56	0.88
35:BA:953:A:N6	35:BA:965:C:H42	1.72	0.88
35:BA:1902:C:C2'	38:BD:244:ARG:HB2	2.03	0.88
35:BA:743:G:O2'	35:BA:744:G:H5'	1.74	0.88
1:AA:1285:A:H4'	1:AA:1286:A:H5'	1.55	0.88
35:BA:332:A:H1'	35:BA:333:G:OP2	1.74	0.88
38:BD:30:GLU:HG3	38:BD:63:ARG:CZ	2.04	0.88
27:B2:70:GLN:HE21	27:B2:71:ASN:N	1.72	0.88
1:AA:593:G:HO2'	1:AA:594:G:H5'	1.35	0.88
27:B2:10:LEU:O	27:B2:14:ARG:HB2	1.73	0.88
1:AA:548:G:C2'	1:AA:549:C:H5'	2.04	0.88
31:B6:25:LYS:HE2	33:B8:34:TRP:HE1	1.39	0.88
41:BG:139:LEU:HB3	41:BG:153:ARG:O	1.74	0.88
47:BO:4:PRO:O	47:BO:5:GLN:HB2	1.71	0.88
35:BA:2681:C:H5	35:BA:2725:A:H62	1.19	0.88
41:BG:77:ILE:HG13	41:BG:82:LEU:CB	2.02	0.88
31:B6:52:VAL:HG22	31:B6:53:LYS:H	1.39	0.88
39:BE:141:ILE:CA	39:BE:154:LYS:HE2	2.03	0.88
28:B3:9:VAL:CG1	28:B3:55:ARG:HD2	2.03	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:197:A:N6	1:AA:221:C:H4'	1.88	0.88
35:BA:179:G:C2'	35:BA:180:G:C5'	2.51	0.88
35:BA:179:G:H2'	35:BA:180:G:C5'	2.04	0.88
32:B7:8:ASN:HD22	32:B7:8:ASN:C	1.78	0.88
1:AA:1330:U:H3'	1:AA:1331:G:O4'	1.74	0.87
35:BA:1120:G:O2'	35:BA:1121:C:H5'	1.73	0.87
1:AA:1184:G:O2'	1:AA:1185:G:H5'	1.74	0.87
1:AA:1127:G:H1	1:AA:1145:C:H42	1.20	0.87
1:AA:1229:A:H8	1:AA:1229:A:H5'	1.36	0.87
28:B3:1:MET:HB3	28:B3:2:PRO:HD2	1.56	0.87
35:BA:2147:G:H2'	35:BA:2148:G:O4'	1.74	0.87
31:B6:10:LEU:CD2	31:B6:10:LEU:N	2.30	0.87
25:B0:14:ARG:HG2	25:B0:14:ARG:HH11	1.39	0.87
35:BA:1332:G:N2	35:BA:1609:A:O2'	2.07	0.87
1:AA:173:U:H5''	1:AA:197:A:H5'	1.57	0.87
28:B3:9:VAL:CG1	28:B3:55:ARG:HD3	2.02	0.87
35:BA:1890:A:H2'	35:BA:1891:G:C5'	2.03	0.87
35:BA:2127:G:H2'	35:BA:2128:C:H5'	1.54	0.87
20:AT:75:ASN:HD22	20:AT:75:ASN:N	1.66	0.87
24:AY:618:GLY:HA3	35:BA:1095:A:OP2	1.75	0.87
1:AA:774:G:HO2'	1:AA:775:G:H5'	1.36	0.87
42:BH:3:ARG:HB3	42:BH:6:ARG:HB2	1.56	0.87
35:BA:2029:G:H1	35:BA:2033:A:P	1.98	0.87
35:BA:2180:U:H6	35:BA:2180:U:H5'	1.39	0.87
35:BA:2393:A:H4'	48:BP:61:ARG:O	1.74	0.87
24:AY:84:THR:HG21	24:AY:94:VAL:HG22	1.56	0.87
51:BS:30:ARG:HD3	51:BS:97:ARG:HG2	1.54	0.87
1:AA:522:C:O2'	1:AA:523:A:H5'	1.74	0.87
27:B2:41:ILE:HD12	27:B2:43:GLN:HG3	1.56	0.87
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.09	0.87
1:AA:1076:C:O2'	1:AA:1077:G:H5'	1.73	0.87
50:BR:45:ARG:HG3	50:BR:46:GLY:H	1.37	0.87
58:BZ:48:PHE:HE2	58:BZ:74:VAL:HG21	1.37	0.87
48:BP:112:LEU:H	48:BP:128:HIS:HD2	1.19	0.87
37:BC:124:VAL:O	37:BC:128:LEU:HB3	1.75	0.87
2:AB:228:GLY:C	2:AB:229:VAL:HG22	1.91	0.87
2:AB:16:HIS:HE1	2:AB:210:SER:O	1.58	0.87
35:BA:2207:G:O2'	35:BA:2208:A:H5''	1.74	0.87
1:AA:1313:U:H3'	19:AS:6:LYS:NZ	1.90	0.87
35:BA:896:A:H1'	58:BZ:176:PRO:HG3	1.56	0.87
54:BV:1:MET:O	54:BV:2:PHE:HB3	1.72	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:968:G:HO2'	35:BA:969:U:H5'	1.37	0.87
3:AC:83:ARG:HG3	3:AC:84:ILE:H	1.37	0.87
35:BA:462:C:H2'	35:BA:463:G:H5'	1.56	0.87
58:BZ:151:HIS:HA	58:BZ:171:ILE:HG12	1.57	0.87
38:BD:35:LYS:O	38:BD:35:LYS:HD2	1.73	0.87
47:BO:13:ASN:HD21	47:BO:96:THR:H	1.20	0.87
35:BA:699:A:C2'	35:BA:700:G:H5'	2.05	0.87
31:B6:11:LEU:H	31:B6:11:LEU:HD13	1.39	0.87
1:AA:688:G:O6	1:AA:700:G:N1	2.08	0.87
1:AA:46:G:O2'	1:AA:365:U:H1'	1.75	0.86
35:BA:1821:A:O2'	35:BA:1822:G:H5'	1.74	0.86
1:AA:560:U:H4'	1:AA:561:U:H5''	1.55	0.86
35:BA:1892:C:O2'	35:BA:1893:C:H5'	1.73	0.86
35:BA:1412:A:O2'	35:BA:1413:G:H5'	1.73	0.86
46:BN:12:ARG:HH21	46:BN:135:PRO:HG2	1.37	0.86
35:BA:272(I):U:H6	35:BA:272(I):U:H5'	1.40	0.86
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.57	0.86
35:BA:2000:G:O2'	35:BA:2001:A:H5'	1.73	0.86
35:BA:43:A:O2'	35:BA:44:G:H5'	1.75	0.86
6:AF:24:GLU:HG2	6:AF:28:ARG:NH1	1.89	0.86
35:BA:958:U:OP1	49:BQ:14:ARG:NH1	2.07	0.86
1:AA:106:C:C2'	1:AA:107:G:H5'	2.05	0.86
35:BA:2715:C:H2'	35:BA:2716:U:C6	2.11	0.86
29:B4:39:CYS:HB3	29:B4:41:PRO:CD	2.05	0.86
26:B1:57:GLU:HG2	26:B1:58:ILE:H	1.38	0.86
57:BY:42:VAL:HG12	57:BY:65:ALA:HB3	1.57	0.86
1:AA:547:A:H4'	1:AA:548:G:O5'	1.76	0.86
35:BA:2392:A:H2	35:BA:2424:C:H42	1.18	0.86
7:AG:115:ARG:O	7:AG:118:VAL:HG12	1.76	0.86
57:BY:28:LYS:HB2	57:BY:38:ILE:H	1.41	0.86
1:AA:1305:G:HO2'	1:AA:1306:A:H8	0.91	0.86
35:BA:1023:U:H2'	35:BA:1024:G:C5'	2.00	0.86
1:AA:112:G:O2'	1:AA:113:G:H5'	1.75	0.86
1:AA:105:G:H2'	1:AA:106:C:C6	2.11	0.86
29:B4:56:VAL:HA	29:B4:60:GLN:NE2	1.90	0.86
35:BA:528:A:C2	35:BA:2042:A:H2'	2.11	0.86
25:B0:66:VAL:O	25:B0:81:VAL:HG13	1.76	0.86
35:BA:1822:G:H2'	35:BA:1823:G:C8	2.11	0.86
13:AM:7:VAL:CG2	41:BG:147:ASP:OD1	2.24	0.86
24:AY:238:THR:HG22	24:AY:241:GLU:HG2	1.56	0.86
46:BN:128:HIS:CD2	46:BN:130:HIS:H	1.92	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2580:U:H5'	39:BE:131:ALA:HB2	1.58	0.86
50:BR:7:GLY:HA3	50:BR:8:ARG:NH2	1.90	0.86
1:AA:940:C:C2'	1:AA:941:G:H5'	2.05	0.86
1:AA:558:G:H2'	1:AA:559:A:H2	1.40	0.86
28:B3:8:LEU:HD13	28:B3:31:LEU:HD23	1.56	0.86
35:BA:2029:G:C6	35:BA:2033:A:OP1	2.28	0.86
46:BN:133:GLN:HG2	46:BN:134:ARG:H	1.41	0.86
35:BA:2787:C:H1'	39:BE:61:ARG:HH11	1.38	0.86
52:BT:32:TYR:O	52:BT:33:LYS:HB2	1.75	0.86
1:AA:37:U:C2'	1:AA:38:G:C5'	2.53	0.86
1:AA:1238:A:OP1	1:AA:1335:C:C2'	2.24	0.86
35:BA:604:G:H2'	35:BA:605:C:H5'	1.54	0.86
1:AA:61:G:O2'	1:AA:62:U:H5'	1.75	0.86
41:BG:39:ILE:HD12	41:BG:157:ILE:HG12	1.55	0.86
35:BA:1890:A:C3'	35:BA:1891:G:H5'	2.06	0.86
50:BR:118:GLU:HA	50:BR:118:GLU:OE1	1.75	0.86
35:BA:914:C:H2'	35:BA:915:C:H5'	1.54	0.86
1:AA:308:C:H2'	1:AA:309:G:H8	1.39	0.86
35:BA:32:C:O2'	35:BA:33:U:H5'	1.76	0.86
1:AA:1305:G:OP1	21:AU:2:GLY:HA2	1.73	0.86
40:BF:11:VAL:HG12	40:BF:12:LEU:HG	1.56	0.86
10:AJ:4:ILE:HD13	10:AJ:77:PRO:HG3	1.57	0.86
1:AA:1077:G:N1	1:AA:1081:G:C6	2.44	0.86
1:AA:1388:C:O2'	1:AA:1389:C:H5'	1.75	0.86
37:BC:52:PRO:HG2	37:BC:53:ARG:HD3	1.57	0.86
1:AA:311:C:H2'	1:AA:312:C:H5'	0.86	0.85
35:BA:1494:A:C2'	35:BA:1495:A:H5''	2.06	0.85
48:BP:57:THR:C	48:BP:59:LEU:H	1.79	0.85
31:B6:10:LEU:HD23	31:B6:10:LEU:H	1.40	0.85
35:BA:693:C:O2'	35:BA:694:U:H5'	1.74	0.85
42:BH:83:TYR:HB3	42:BH:134:SER:HA	1.58	0.85
15:AO:68:ARG:CB	15:AO:68:ARG:HH11	1.89	0.85
12:AL:83:VAL:HG11	12:AL:100:ILE:HG12	1.58	0.85
35:BA:1988:C:C2'	35:BA:1989:G:C5'	2.52	0.85
2:AB:231:GLU:CB	2:AB:232:PRO:CD	2.48	0.85
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.74	0.85
1:AA:773:G:HO2'	1:AA:774:G:H5'	1.40	0.85
35:BA:1819:A:OP1	38:BD:158:ALA:N	2.09	0.85
31:B6:17:LYS:HB2	31:B6:18:ARG:HH11	1.41	0.85
1:AA:1523:G:C2'	1:AA:1524:C:H5'	2.06	0.85
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.09	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:522:C:N4	12:AL:53:ARG:NH2	2.24	0.85
1:AA:980:C:H5'	1:AA:980:C:H6	1.40	0.85
56:BX:8:ILE:HD11	56:BX:42:ALA:HB1	1.56	0.85
35:BA:27:G:N2	35:BA:512:G:O2'	2.08	0.85
19:AS:41:VAL:HB	19:AS:44:MET:HB3	1.56	0.85
1:AA:1498:U:H4'	1:AA:1499:A:O5'	1.76	0.85
54:BV:39:LEU:HD12	54:BV:47:VAL:HG11	1.58	0.85
35:BA:528:A:N1	35:BA:2042:A:H2'	1.92	0.85
35:BA:111:A:O2'	35:BA:112:U:H5'	1.73	0.85
35:BA:1988:C:H2'	35:BA:1989:G:C5'	2.07	0.85
35:BA:653:A:H3'	35:BA:653:A:N3	1.91	0.85
24:AY:109:ASP:OD1	24:AY:138:LYS:HD2	1.77	0.85
48:BP:16:ARG:CZ	48:BP:18:ARG:HG2	2.06	0.85
35:BA:2009:G:OP1	55:BW:41:LYS:HE2	1.76	0.85
35:BA:2757:A:C2'	35:BA:2758:A:C5'	2.54	0.85
40:BF:89:VAL:HG12	40:BF:90:PHE:N	1.90	0.85
48:BP:16:ARG:HB2	48:BP:16:ARG:HH11	1.37	0.85
36:BB:7:G:H2'	36:BB:8:U:H5''	1.59	0.85
1:AA:509:A:OP1	1:AA:509:A:H3'	1.76	0.85
35:BA:1779:U:H5	35:BA:1784:A:N7	1.74	0.85
41:BG:59:GLU:HG3	41:BG:60:LEU:N	1.90	0.85
32:B7:34:ARG:HH11	32:B7:34:ARG:HG3	1.41	0.85
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HG12	1.58	0.85
35:BA:526:A:O2'	35:BA:2043:C:O2'	1.93	0.85
35:BA:629:G:C2'	35:BA:630:G:H5'	2.06	0.85
48:BP:51:PHE:CD2	48:BP:52:GLU:O	2.30	0.85
26:B1:29:GLY:CA	35:BA:2396:G:O2'	2.24	0.85
13:AM:91:ARG:HB3	13:AM:98:VAL:HG12	1.57	0.85
35:BA:1379:A:H4'	35:BA:1380:G:OP1	1.77	0.85
1:AA:495:A:O4'	1:AA:496:A:C8	2.30	0.85
35:BA:2712:U:O2'	35:BA:2713:A:H5'	1.76	0.85
2:AB:17:PHE:CD1	2:AB:17:PHE:C	2.44	0.85
35:BA:2032:G:N2	39:BE:146:THR:HG23	1.92	0.85
1:AA:1127:G:H1	1:AA:1145:C:N4	1.73	0.85
52:BT:80:SER:CB	52:BT:81:PRO:HD3	2.01	0.84
27:B2:16:LEU:O	27:B2:17:SER:HB3	1.75	0.84
2:AB:17:PHE:C	2:AB:17:PHE:HD1	1.76	0.84
35:BA:2127:G:O2'	35:BA:2128:C:H5''	1.76	0.84
41:BG:105:LYS:HE2	41:BG:105:LYS:N	1.92	0.84
9:AI:53:VAL:HG22	9:AI:95:LYS:HZ3	1.40	0.84
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.77	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:AY:701:GCP:O1G	62:AY:2002:HOH:O	1.94	0.84
40:BF:25:PRO:HB3	40:BF:119:ARG:HB2	1.59	0.84
1:AA:949:A:H2'	1:AA:950:U:H5''	1.42	0.84
25:B0:29:GLN:O	25:B0:67:VAL:HG23	1.76	0.84
57:BY:28:LYS:CB	57:BY:37:VAL:HB	2.07	0.84
41:BG:141:PHE:HD1	41:BG:142:PRO:HA	1.42	0.84
1:AA:1002:G:H2'	1:AA:1003:G:C8	2.12	0.84
3:AC:40:ARG:O	3:AC:44:GLU:HG2	1.77	0.84
30:B5:40:LYS:NZ	30:B5:46:CYS:HB3	1.91	0.84
40:BF:157:VAL:HG13	40:BF:194:MET:HG2	1.57	0.84
24:AY:69:VAL:HA	24:AY:82:ILE:CG1	2.07	0.84
1:AA:1124:G:H5'	10:AJ:35:SER:HB2	1.60	0.84
1:AA:682:G:H5''	38:BD:169:GLU:OE1	1.78	0.84
57:BY:96:ILE:HG21	57:BY:99:CYS:SG	2.18	0.84
56:BX:35:THR:HG22	56:BX:37:THR:H	1.42	0.84
1:AA:1182:G:OP2	1:AA:1182:G:C8	2.30	0.84
29:B4:12:ALA:H	29:B4:24:THR:CB	1.88	0.84
9:AI:23:ASN:N	9:AI:23:ASN:HD22	1.75	0.84
1:AA:264:U:H2'	1:AA:265:G:C5'	2.07	0.84
35:BA:1412:A:C2'	35:BA:1413:G:H5'	2.07	0.84
2:AB:204:ASN:HD22	2:AB:205:ASP:N	1.76	0.84
35:BA:2009:G:C2'	35:BA:2010:G:C5'	2.51	0.84
1:AA:348:G:C2'	1:AA:349:A:H5'	2.08	0.84
40:BF:84:VAL:HG22	40:BF:85:GLY:N	1.91	0.84
58:BZ:149:SER:HB2	58:BZ:173:ALA:HA	1.57	0.84
35:BA:1455:G:H2'	35:BA:1456:G:H5'	1.57	0.84
7:AG:56:GLN:O	7:AG:57:GLU:HB3	1.78	0.84
3:AC:22:TRP:CE3	3:AC:22:TRP:O	2.30	0.84
1:AA:264:U:O2'	1:AA:265:G:H5'	1.76	0.84
2:AB:16:HIS:O	2:AB:17:PHE:CG	2.30	0.84
25:B0:62:LEU:HD23	25:B0:62:LEU:N	1.93	0.84
24:AY:530:VAL:HG22	24:AY:531:GLY:H	1.40	0.84
35:BA:1865:G:H8	35:BA:1865:G:H5'	1.42	0.84
2:AB:82:ARG:HA	2:AB:92:TYR:CZ	2.13	0.84
31:B6:27:LYS:CG	31:B6:30:THR:HB	2.08	0.84
35:BA:1803:A:O2'	38:BD:259:THR:HG21	1.78	0.84
35:BA:1460:A:O2'	35:BA:1461:G:H5'	1.77	0.84
1:AA:1175:G:C2'	1:AA:1176:A:H5'	2.06	0.84
35:BA:699:A:H2'	35:BA:700:G:H5'	1.60	0.84
1:AA:173:U:C2	1:AA:197:A:C2	2.66	0.84
35:BA:1297:C:O2	35:BA:1643:G:N2	2.11	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1488:G:HO2'	1:AA:1489:G:H5'	1.40	0.84
1:AA:1523:G:H2'	1:AA:1524:C:H5'	1.60	0.84
38:BD:267:SER:O	38:BD:269:PHE:N	2.11	0.84
35:BA:1119:C:H2'	35:BA:1120:G:H5'	1.57	0.84
25:B0:19:LYS:NZ	25:B0:41:ARG:HH22	1.75	0.84
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HG2	1.59	0.84
1:AA:773:G:C2'	1:AA:774:G:H5'	2.08	0.84
38:BD:32:SER:O	38:BD:36:PRO:HD3	1.78	0.84
35:BA:2787:C:H1'	39:BE:61:ARG:HG3	1.60	0.84
1:AA:191:G:C4	20:AT:105:SER:HB3	2.13	0.84
1:AA:495:A:C1'	1:AA:496:A:C8	2.60	0.83
7:AG:50:ILE:HD11	7:AG:61:VAL:HB	1.58	0.83
35:BA:1228:G:N2	35:BA:1229:G:H1'	1.93	0.83
1:AA:1400:C:H4'	1:AA:1401:G:OP2	1.74	0.83
51:BS:66:ALA:HA	51:BS:69:VAL:HG12	1.59	0.83
35:BA:1106:G:C2'	35:BA:1107:G:H5'	2.07	0.83
55:BW:2:GLU:OE1	55:BW:72:LYS:HE3	1.77	0.83
25:B0:11:ARG:HD3	25:B0:12:ASN:H	1.41	0.83
58:BZ:51:ALA:HB1	58:BZ:57:ILE:HD11	1.58	0.83
24:AY:252:ASP:HB3	24:AY:254:LYS:NZ	1.93	0.83
35:BA:528:A:O2'	35:BA:529:A:H5'	1.78	0.83
35:BA:2355:C:C2'	35:BA:2356:C:H5'	2.07	0.83
35:BA:2358:G:H2'	35:BA:2359:C:H5'	1.59	0.83
35:BA:2753:A:HO2'	35:BA:2754:U:H5'	1.39	0.83
1:AA:1399:C:H5'	1:AA:1400:C:H3'	1.60	0.83
3:AC:22:TRP:CE2	14:AN:54:PRO:HG2	2.13	0.83
35:BA:1653:G:H1'	35:BA:1654:A:OP1	1.78	0.83
26:B1:11:ARG:HB3	26:B1:12:PRO:HD2	1.60	0.83
35:BA:108:U:C2'	35:BA:109:G:H5'	2.08	0.83
35:BA:259:G:H2'	35:BA:260:G:H8	1.42	0.83
1:AA:1073:U:O2'	1:AA:1074:G:H5'	1.77	0.83
35:BA:1640:C:H2'	35:BA:1641:A:H5'	1.59	0.83
1:AA:63:C:H5'	1:AA:64:G:OP2	1.78	0.83
35:BA:955:C:C2'	35:BA:956:G:C5'	2.51	0.83
35:BA:71:A:H2	56:BX:31:HIS:HE1	1.27	0.83
24:AY:196:ILE:HG13	24:AY:197:ARG:H	1.43	0.83
31:B6:17:LYS:HA	31:B6:17:LYS:HE2	1.58	0.83
35:BA:1038:C:C3'	35:BA:1039:G:H5''	2.08	0.83
35:BA:2403:C:OP1	35:BA:2403:C:C5	2.31	0.83
35:BA:1805:U:C2'	35:BA:1806:C:H5'	2.08	0.83
50:BR:9:LYS:C	50:BR:10:LEU:HD23	1.99	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2287:A:H62	35:BA:2344:U:H3	1.27	0.83
29:B4:68:ARG:HD3	29:B4:71:ARG:HD3	1.58	0.83
9:AI:20:ARG:O	9:AI:59:PHE:CA	2.26	0.83
47:BO:107:ARG:HD3	52:BT:36:GLU:HG3	1.60	0.83
35:BA:246:C:C2'	35:BA:247:G:C5'	2.42	0.83
37:BC:80:LYS:CE	37:BC:120:VAL:HG12	2.08	0.83
25:B0:24:LYS:HB2	25:B0:37:LEU:O	1.78	0.83
1:AA:862:C:H2'	1:AA:863:U:C5'	2.00	0.83
3:AC:152:ILE:HG12	3:AC:167:TRP:HB2	1.60	0.83
1:AA:1495:U:O2'	1:AA:1496:C:H5'	1.78	0.83
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.60	0.83
26:B1:59:THR:O	26:B1:60:PHE:CD1	2.30	0.83
42:BH:43:VAL:HG12	42:BH:52:VAL:HG22	1.59	0.83
35:BA:955:C:O2'	35:BA:956:G:H5'	1.79	0.83
2:AB:228:GLY:CA	2:AB:229:VAL:CB	2.56	0.83
35:BA:1596:A:C2'	35:BA:1597:A:C5'	2.53	0.83
7:AG:121:ALA:N	7:AG:124:LEU:HD13	1.92	0.83
13:AM:4:ILE:HG22	13:AM:5:ALA:H	1.41	0.83
19:AS:62:ILE:HD13	19:AS:62:ILE:O	1.78	0.83
46:BN:3:THR:HG22	46:BN:4:TYR:H	1.43	0.83
35:BA:953:A:H61	35:BA:965:C:N4	1.77	0.83
31:B6:7:ILE:HG21	31:B6:27:LYS:HZ2	1.38	0.83
2:AB:16:HIS:CE1	2:AB:210:SER:HG	1.97	0.83
19:AS:62:ILE:HA	19:AS:66:MET:HE2	1.59	0.83
29:B4:14:ILE:O	29:B4:15:ILE:HD12	1.79	0.83
41:BG:137:GLU:HG2	41:BG:154:GLY:CA	2.09	0.83
39:BE:75:VAL:O	39:BE:77:ILE:N	2.11	0.83
40:BF:110:LEU:HD22	40:BF:202:PHE:HE1	1.41	0.83
24:AY:99:ARG:HD3	24:AY:401:SER:CA	2.09	0.83
10:AJ:58:ASP:O	10:AJ:59:SER:HB3	1.79	0.83
14:AN:25:VAL:HG23	14:AN:38:GLY:O	1.77	0.83
35:BA:833:U:C4'	48:BP:52:GLU:H	1.91	0.83
35:BA:523:C:H2'	35:BA:524:U:H5'	1.58	0.83
35:BA:1697:G:H3'	35:BA:1698:A:H5'	1.59	0.83
26:B1:26:ARG:HG3	26:B1:27:GLU:H	1.43	0.83
9:AI:20:ARG:O	9:AI:59:PHE:HB3	1.77	0.83
2:AB:152:PHE:CE1	2:AB:155:LEU:CD1	2.62	0.83
48:BP:52:GLU:HG2	48:BP:57:THR:CB	2.09	0.83
1:AA:40:C:H2'	1:AA:41:G:H8	1.44	0.83
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.44	0.83
35:BA:2007:C:HO2'	35:BA:2008:C:H5'	1.40	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:185:ILE:HG23	2:AB:199:TYR:HB2	1.61	0.83
35:BA:2581:G:C6	35:BA:2610:C:N3	2.47	0.83
24:AY:17:ILE:HG22	24:AY:25:LYS:HG2	1.59	0.83
35:BA:1291:C:H2'	35:BA:1292:U:C6	2.14	0.83
28:B3:7:LYS:HG3	28:B3:32:GLN:O	1.79	0.83
2:AB:228:GLY:CA	2:AB:229:VAL:CG1	2.45	0.82
35:BA:2010:G:C2'	35:BA:2011:U:C5'	2.57	0.82
35:BA:327:G:H2'	35:BA:328:U:C6	2.14	0.82
57:BY:81:LYS:HD3	57:BY:97:ARG:HG3	1.60	0.82
9:AI:23:ASN:ND2	9:AI:23:ASN:H	1.76	0.82
57:BY:28:LYS:N	57:BY:28:LYS:HD2	1.92	0.82
35:BA:654(N):G:H2'	35:BA:654(O):G:O4'	1.77	0.82
42:BH:168:PRO:CA	42:BH:170:ARG:HH22	1.93	0.82
49:BQ:141:GLN:O	58:BZ:53:ILE:HB	1.79	0.82
3:AC:187:ALA:CB	3:AC:198:VAL:HB	2.09	0.82
24:AY:507:TYR:CE1	24:AY:572:TYR:HA	2.13	0.82
4:AD:148:VAL:HG12	4:AD:149:ALA:H	1.40	0.82
1:AA:938:A:H2'	1:AA:939:G:C5'	2.09	0.82
40:BF:6:VAL:HG12	40:BF:7:TYR:N	1.93	0.82
42:BH:30:LYS:HE2	42:BH:81:GLU:CG	2.08	0.82
31:B6:12:GLU:HG3	31:B6:23:THR:HG22	1.61	0.82
31:B6:53:LYS:HD3	31:B6:54:ILE:H	1.43	0.82
1:AA:1129:C:O5'	1:AA:1130:A:H5'	1.79	0.82
1:AA:105:G:C5	1:AA:106:C:C4	2.67	0.82
1:AA:1399:C:H5'	1:AA:1401:G:H5'	1.61	0.82
1:AA:1049:U:H4'	1:AA:1050:G:C5'	2.08	0.82
15:AO:87:ILE:HG22	15:AO:88:ARG:N	1.94	0.82
31:B6:12:GLU:CG	31:B6:23:THR:HG22	2.10	0.82
38:BD:108:PRO:HG2	38:BD:111:LEU:HB2	1.60	0.82
31:B6:44:ARG:O	31:B6:45:LYS:HG2	1.79	0.82
31:B6:41:PRO:CD	31:B6:46:HIS:H	1.90	0.82
35:BA:1022:G:N2	35:BA:1142(A):A:C2	2.47	0.82
51:BS:97:ARG:HH21	51:BS:98:VAL:CA	1.93	0.82
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.07	0.82
25:B0:7:LEU:CD1	49:BQ:85:LYS:HE2	2.09	0.82
46:BN:58:ASP:O	46:BN:60:ILE:HG13	1.79	0.82
35:BA:2469:A:H2'	35:BA:2470:G:H5'	1.60	0.82
2:AB:145:LEU:CD2	2:AB:149:LEU:CD2	2.58	0.82
2:AB:16:HIS:CE1	2:AB:210:SER:OG	2.33	0.82
35:BA:2000:G:N2	35:BA:2001:A:N9	2.28	0.82
35:BA:2313:C:H4'	41:BG:40:ASN:ND2	1.95	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:961:U:O2'	1:AA:962:C:H5'	1.79	0.82
1:AA:979:C:C2'	1:AA:980:C:H5''	2.10	0.82
54:BV:19:LYS:HG2	54:BV:94:LEU:HB2	1.61	0.82
2:AB:75:LYS:HA	2:AB:78:GLN:HE21	1.44	0.82
52:BT:106:SER:HA	52:BT:110:ILE:HG12	1.61	0.82
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.61	0.82
2:AB:145:LEU:HD22	2:AB:149:LEU:HD23	1.62	0.82
35:BA:1747(A):G:H2'	35:BA:1748:G:C5'	2.08	0.82
14:AN:27:CYS:SG	14:AN:29:ARG:HB2	2.20	0.82
26:B1:57:GLU:O	26:B1:58:ILE:HG13	1.79	0.82
50:BR:4:LEU:HG	50:BR:4:LEU:O	1.77	0.82
1:AA:375:U:OP1	16:AP:69:THR:HG21	1.79	0.82
31:B6:33:LYS:HA	31:B6:33:LYS:HE2	1.59	0.82
35:BA:702:G:HO2'	35:BA:703:U:H5'	1.43	0.82
35:BA:2610:C:O2'	35:BA:2611:U:P	2.38	0.82
27:B2:8:LYS:O	27:B2:11:GLU:CG	2.28	0.82
20:AT:74:LYS:CG	20:AT:75:ASN:H	1.87	0.82
1:AA:792:A:H1'	1:AA:793:U:OP2	1.79	0.82
36:BB:8:U:H5'	36:BB:8:U:H6	1.43	0.82
10:AJ:78:ASN:HD22	10:AJ:80:LYS:H	1.27	0.82
37:BC:54:ARG:NH2	37:BC:56:ASP:HB3	1.95	0.82
39:BE:52:LEU:HD11	52:BT:1:MET:HE3	1.60	0.82
2:AB:114:ARG:HH12	2:AB:118:LEU:HD11	1.43	0.82
1:AA:198:G:C4	1:AA:199:G:N7	2.47	0.82
33:B8:32:LEU:HD22	35:BA:2392:A:OP1	1.78	0.82
35:BA:693:C:H2'	35:BA:694:U:H6	1.43	0.82
1:AA:1525:G:C2'	1:AA:1526:G:H5'	2.10	0.82
53:BU:92:ARG:NH1	53:BU:94:ASN:HD22	1.78	0.82
50:BR:45:ARG:HG3	50:BR:46:GLY:N	1.95	0.82
35:BA:43:A:H2'	35:BA:44:G:H5'	1.59	0.82
35:BA:262:A:C2'	35:BA:263:C:H5'	2.10	0.82
29:B4:12:ALA:C	29:B4:24:THR:HG23	1.97	0.82
9:AI:19:LEU:HA	9:AI:61:ALA:HB2	0.85	0.82
35:BA:1820:U:O2'	38:BD:201:HIS:HD2	1.63	0.82
35:BA:1798:U:OP1	38:BD:274:ARG:NH2	2.12	0.82
1:AA:88:A:C4'	1:AA:89:C:H5'	2.08	0.82
38:BD:35:LYS:NZ	38:BD:35:LYS:HB3	1.93	0.82
22:AV:44:G:C2'	22:AV:45:U:H5'	2.09	0.82
35:BA:2358:G:O2'	35:BA:2359:C:H5'	1.80	0.81
31:B6:10:LEU:HD22	31:B6:10:LEU:N	1.94	0.81
1:AA:346:G:H4'	52:BT:41:ARG:NH2	1.95	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:74:LYS:HG3	20:AT:75:ASN:N	1.94	0.81
35:BA:2415:G:O3'	48:BP:66:GLY:HA3	1.80	0.81
27:B2:16:LEU:HD22	27:B2:20:GLU:HG3	1.60	0.81
1:AA:359:U:HO2'	1:AA:360:A:H5'	1.41	0.81
35:BA:1779:U:C5	35:BA:1784:A:N7	2.49	0.81
30:B5:53:ALA:HA	30:B5:56:LYS:HZ1	1.42	0.81
35:BA:2127:G:C2'	35:BA:2128:C:H5'	2.10	0.81
58:BZ:74:VAL:HG22	58:BZ:86:VAL:HG13	1.62	0.81
2:AB:128:GLU:HG3	2:AB:128:GLU:O	1.80	0.81
52:BT:129:ARG:NH1	52:BT:131:ALA:HB3	1.95	0.81
39:BE:69:LYS:HE2	39:BE:69:LYS:H	1.43	0.81
1:AA:1442(A):G:O6	52:BT:118:ARG:HB2	1.80	0.81
33:B8:32:LEU:HB2	33:B8:36:LYS:NZ	1.95	0.81
1:AA:697:U:H2'	1:AA:698:G:C5'	2.10	0.81
35:BA:29:U:C2'	35:BA:30:G:H5'	2.10	0.81
35:BA:2581:G:H2'	35:BA:2610:C:H41	1.45	0.81
27:B2:47:ASN:ND2	35:BA:94(A):G:H21	1.78	0.81
52:BT:102:ILE:HB	52:BT:110:ILE:HD12	1.62	0.81
30:B5:29:THR:HG21	35:BA:2815:C:H5'	1.62	0.81
5:AE:68:GLU:HG3	5:AE:68:GLU:O	1.78	0.81
1:AA:773:G:H2'	1:AA:774:G:H8	1.45	0.81
35:BA:896:A:C1'	58:BZ:176:PRO:HG3	2.10	0.81
36:BB:56:G:H5'	41:BG:27:ASN:HD21	1.44	0.81
37:BC:149:ASN:HD22	37:BC:152:GLU:HB3	1.46	0.81
1:AA:115:G:H4'	1:AA:116:A:O5'	1.80	0.81
48:BP:47:ASP:HB3	48:BP:49:ARG:N	1.95	0.81
1:AA:771:G:C6	1:AA:772:U:O4	2.33	0.81
35:BA:2010:G:H2'	35:BA:2011:U:C5'	2.09	0.81
27:B2:48:HIS:O	27:B2:52:ASP:HB2	1.81	0.81
29:B4:40:HIS:NE2	41:BG:118:ARG:HA	1.95	0.81
1:AA:1151:A:C4	1:AA:1152:A:N7	2.49	0.81
55:BW:26:GLY:H	55:BW:71:VAL:HG23	1.45	0.81
47:BO:49:ARG:HA	47:BO:53:LYS:HZ1	1.46	0.81
9:AI:20:ARG:O	9:AI:59:PHE:HA	1.79	0.81
35:BA:666:G:OP1	48:BP:47:ASP:O	1.98	0.81
37:BC:117:THR:HG22	37:BC:119:ASP:N	1.96	0.81
1:AA:347:G:O2'	1:AA:348:G:H5''	1.80	0.81
36:BB:40:U:H3'	36:BB:41:U:C5'	2.11	0.81
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.81	0.81
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.44	0.81
35:BA:1062:G:H1	35:BA:1075:C:H42	1.27	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1170:G:H1	35:BA:1179:C:H42	1.28	0.81
36:BB:16:G:HO2'	36:BB:17:C:H6	1.25	0.81
35:BA:2491:U:H5'	35:BA:2570:G:H5''	1.63	0.81
2:AB:145:LEU:HD22	2:AB:149:LEU:CD2	2.11	0.81
48:BP:23:PRO:HG2	48:BP:33:ARG:HH21	1.46	0.81
35:BA:1273:U:H5''	35:BA:1646:C:H42	1.44	0.81
26:B1:53:VAL:HG21	26:B1:58:ILE:HD12	1.63	0.81
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	1.81	0.81
24:AY:572:TYR:HD1	24:AY:572:TYR:H	1.29	0.81
48:BP:16:ARG:NE	48:BP:18:ARG:HG2	1.96	0.81
26:B1:75:GLU:O	26:B1:78:LYS:HD2	1.80	0.81
42:BH:10:PRO:HB2	42:BH:49:VAL:HG12	1.62	0.81
35:BA:459:U:C2'	35:BA:460:A:H5'	2.10	0.81
35:BA:2363:C:HO2'	35:BA:2364:C:H5'	1.43	0.81
1:AA:737:A:H1'	6:AF:73:ASN:HD21	1.45	0.81
52:BT:28:VAL:O	52:BT:29:ARG:HB2	1.81	0.81
1:AA:543:C:C2'	1:AA:544:G:C5'	2.55	0.81
2:AB:231:GLU:HB2	2:AB:232:PRO:HD3	1.60	0.81
35:BA:1983:C:O2'	35:BA:1984:G:H5''	1.81	0.81
35:BA:1996:C:H4'	35:BA:1997:G:OP1	1.81	0.81
27:B2:10:LEU:HD13	35:BA:78:A:OP2	1.80	0.81
41:BG:66:GLN:NE2	41:BG:94:LEU:HG	1.96	0.81
1:AA:1148:U:H2'	1:AA:1149:C:H5'	1.63	0.81
27:B2:64:LEU:HD23	27:B2:64:LEU:C	2.02	0.81
38:BD:35:LYS:N	38:BD:36:PRO:HD2	1.96	0.81
2:AB:89:GLY:C	2:AB:90:MET:HG2	2.00	0.80
41:BG:41:GLN:OE1	41:BG:56:ALA:HB1	1.81	0.80
38:BD:30:GLU:HG3	38:BD:63:ARG:NE	1.94	0.80
58:BZ:81:ARG:CZ	58:BZ:81:ARG:HB2	2.10	0.80
49:BQ:76:LYS:HB3	49:BQ:91:GLU:HG3	1.62	0.80
36:BB:80:U:H2'	36:BB:81:G:H21	1.43	0.80
1:AA:46:G:HO2'	1:AA:365:U:H1'	1.45	0.80
35:BA:1999:C:H2'	35:BA:2000:G:H5'	1.61	0.80
41:BG:102:PHE:O	41:BG:106:LEU:HB3	1.80	0.80
22:AV:44:G:H2'	22:AV:45:U:H5'	1.61	0.80
35:BA:2807:G:H3'	35:BA:2808:U:H5''	1.62	0.80
1:AA:489:C:O2'	1:AA:490:G:H5'	1.81	0.80
1:AA:939:G:H2'	1:AA:940:C:C6	2.17	0.80
1:AA:360:A:C2'	1:AA:361:G:H5'	2.11	0.80
54:BV:15:GLU:CG	54:BV:16:PRO:HD2	2.11	0.80
36:BB:56:G:C5'	41:BG:27:ASN:HD21	1.95	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:20:ARG:O	9:AI:59:PHE:CB	2.29	0.80
1:AA:936:C:C2'	1:AA:937:A:H5'	2.12	0.80
1:AA:321:A:O2'	1:AA:322:C:H5'	1.81	0.80
35:BA:2710:C:HO2'	35:BA:2711:A:H5'	1.45	0.80
1:AA:1384:C:C2'	1:AA:1385:G:H5'	2.12	0.80
33:B8:52:LYS:N	33:B8:53:PRO:HD2	1.96	0.80
2:AB:164:VAL:O	2:AB:186:ALA:HA	1.81	0.80
4:AD:101:LEU:HB2	4:AD:138:TYR:HB3	1.62	0.80
35:BA:1187:G:H5''	54:BV:81:TYR:CE2	2.16	0.80
1:AA:308:C:H2'	1:AA:309:G:C8	2.15	0.80
1:AA:198:G:O6	1:AA:220:G:C5	2.35	0.80
1:AA:490:G:H2'	1:AA:491:G:H8	1.46	0.80
35:BA:142:A:H8	35:BA:1595:G:H21	1.26	0.80
35:BA:1596:A:H2'	35:BA:1597:A:C5'	2.09	0.80
35:BA:179:G:O2'	35:BA:180:G:C5'	2.30	0.80
35:BA:1899:G:H21	35:BA:1902:C:N4	1.79	0.80
35:BA:1820:U:O4	38:BD:160:GLY:O	1.99	0.80
35:BA:1021:A:H2'	35:BA:1022:G:H4'	1.62	0.80
42:BH:3:ARG:CG	42:BH:3:ARG:HH11	1.94	0.80
35:BA:2287:A:N6	35:BA:2344:U:H3	1.80	0.80
35:BA:1517:G:H5'	35:BA:1517:G:H8	1.45	0.80
35:BA:361:G:H2'	35:BA:362:U:H5''	1.61	0.80
2:AB:114:ARG:HH11	2:AB:114:ARG:HG3	1.44	0.80
1:AA:198:G:N3	1:AA:199:G:N7	2.30	0.80
35:BA:742:G:O2'	35:BA:743:G:C5'	2.30	0.80
42:BH:85:LYS:HE3	42:BH:145:ALA:HB1	1.63	0.80
1:AA:1049:U:OP1	14:AN:3:ARG:HD3	1.81	0.80
35:BA:963:U:O2'	35:BA:964:C:C5'	2.30	0.80
35:BA:2124:G:H1	35:BA:2174:C:H42	1.30	0.80
48:BP:84:ASN:OD1	48:BP:116:GLY:HA3	1.81	0.80
1:AA:545:C:H2'	1:AA:546:G:C5'	2.02	0.80
12:AL:27:LEU:HD13	12:AL:28:LYS:N	1.95	0.80
35:BA:331:A:C1'	35:BA:332:A:OP2	2.30	0.80
34:B9:1:MET:HG2	35:BA:2478:A:OP1	1.82	0.80
48:BP:135:LEU:HD21	48:BP:144:GLU:HG3	1.62	0.80
48:BP:58:THR:O	48:BP:61:ARG:CG	2.29	0.80
35:BA:1678:G:H22	35:BA:1989:G:N2	1.62	0.80
35:BA:1983:C:C2'	35:BA:1984:G:C5'	2.60	0.80
19:AS:40:ILE:HD11	19:AS:62:ILE:CG1	2.11	0.80
29:B4:16:CYS:SG	29:B4:19:GLY:O	2.39	0.80
41:BG:66:GLN:HE22	41:BG:94:LEU:HG	1.47	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:349:A:O2'	1:AA:350:G:C5'	2.30	0.80
4:AD:17:VAL:CG1	4:AD:18:LYS:H	1.95	0.80
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.16	0.80
40:BF:154:VAL:HG22	40:BF:191:ARG:HB3	1.63	0.80
48:BP:47:ASP:OD2	48:BP:49:ARG:CB	2.30	0.80
1:AA:197:A:C6	1:AA:221:C:C4'	2.64	0.80
1:AA:37:U:O2'	1:AA:38:G:C5'	2.30	0.80
57:BY:26:LYS:HG2	57:BY:27:VAL:H	1.47	0.80
29:B4:28:LYS:HD3	41:BG:143:GLU:HA	1.64	0.80
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.17	0.80
24:AY:312:LEU:HD11	24:AY:401:SER:HB2	1.64	0.80
35:BA:2131:G:N2	35:BA:2133:A:N3	2.30	0.80
53:BU:50:ARG:HH12	54:BV:72:VAL:HG12	1.46	0.80
35:BA:2360:A:O2'	35:BA:2361:A:C5'	2.30	0.80
1:AA:39:G:C2'	1:AA:40:C:H5'	2.11	0.80
1:AA:590:C:HO2'	1:AA:591:U:H5'	1.46	0.80
35:BA:1227:G:H2'	35:BA:1228:G:H8	1.47	0.80
39:BE:111:ARG:HA	50:BR:2:ARG:HG2	1.64	0.80
51:BS:28:VAL:HG12	51:BS:29:PHE:H	1.47	0.80
19:AS:6:LYS:HG3	19:AS:7:LYS:H	1.46	0.80
58:BZ:53:ILE:HG22	58:BZ:71:VAL:HB	1.62	0.80
3:AC:123:GLN:NE2	3:AC:128:PHE:HB2	1.97	0.80
48:BP:16:ARG:HD3	48:BP:16:ARG:C	2.02	0.80
35:BA:83:G:N2	35:BA:102:G:H2'	1.97	0.80
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.61	0.80
1:AA:718:G:H5'	11:AK:117:ASN:OD1	1.82	0.80
1:AA:773:G:C2	1:AA:774:G:C5	2.69	0.79
35:BA:1210:A:H8	35:BA:1210:A:H5'	1.47	0.79
1:AA:946:A:H2'	1:AA:947:G:C8	2.17	0.79
1:AA:1027:C:H3'	1:AA:1028:C:H5''	1.63	0.79
24:AY:171:GLU:HG3	24:AY:172:ASP:H	1.45	0.79
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.64	0.79
1:AA:198:G:C6	1:AA:220:G:N1	2.50	0.79
35:BA:1983:C:O2'	35:BA:1984:G:C5'	2.30	0.79
35:BA:1227:G:O2'	35:BA:1228:G:H5'	1.83	0.79
41:BG:21:ARG:HE	41:BG:21:ARG:HA	1.47	0.79
41:BG:66:GLN:OE1	41:BG:94:LEU:HG	1.81	0.79
35:BA:16:G:C2'	35:BA:17:G:H5'	2.12	0.79
30:B5:41:PRO:HG2	30:B5:44:THR:HG21	1.65	0.79
35:BA:967:C:O2'	35:BA:968:G:C5'	2.30	0.79
2:AB:187:LEU:HD13	2:AB:187:LEU:O	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:685:G:C2'	1:AA:686:U:H5'	2.12	0.79
1:AA:509:A:C5'	4:AD:54:TYR:HD2	1.94	0.79
35:BA:1301:A:H4'	35:BA:1302:A:OP2	1.81	0.79
2:AB:41:ILE:O	2:AB:41:ILE:HG22	1.82	0.79
41:BG:21:ARG:NE	41:BG:21:ARG:HA	1.97	0.79
54:BV:49:THR:HB	54:BV:50:PRO:HD2	1.64	0.79
1:AA:1286:A:O2'	1:AA:1287:A:C5'	2.30	0.79
1:AA:1151:A:C6	1:AA:1152:A:N6	2.51	0.79
2:AB:82:ARG:HH11	2:AB:82:ARG:HG3	1.46	0.79
2:AB:230:VAL:HB	2:AB:231:GLU:CA	2.06	0.79
25:B0:26:TYR:CE2	35:BA:857:C:H1'	2.17	0.79
1:AA:60:A:C1'	1:AA:61:G:O4'	2.31	0.79
1:AA:560:U:C4'	1:AA:561:U:O5'	2.30	0.79
35:BA:1777:U:O2'	35:BA:1778:U:H5'	1.82	0.79
41:BG:56:ALA:O	41:BG:60:LEU:HB3	1.83	0.79
41:BG:38:VAL:HA	41:BG:93:THR:HA	1.64	0.79
35:BA:1381:G:C2'	35:BA:1382:G:C5'	2.58	0.79
1:AA:975:A:H8	1:AA:975:A:H5'	1.47	0.79
35:BA:327:G:O2'	35:BA:328:U:C5'	2.30	0.79
35:BA:2068:U:N3	35:BA:2430:A:H2	1.78	0.79
58:BZ:28:MET:O	58:BZ:34:ASN:HA	1.82	0.79
40:BF:20:LEU:HD23	40:BF:21:ALA:H	1.48	0.79
24:AY:21:ILE:H	24:AY:21:ILE:HD12	1.46	0.79
35:BA:1077:A:C5	35:BA:1078:U:H1'	2.17	0.79
52:BT:93:ARG:HG2	52:BT:117:ASP:HA	1.63	0.79
1:AA:35:G:O2'	1:AA:36:C:H5'	1.82	0.79
35:BA:1988:C:O2'	35:BA:1989:G:C5'	2.31	0.79
35:BA:49:A:H4'	35:BA:50:U:OP2	1.80	0.79
2:AB:15:VAL:CG1	2:AB:15:VAL:O	2.30	0.79
35:BA:1992:G:C1'	35:BA:1993:U:OP2	2.30	0.79
41:BG:65:GLY:O	41:BG:66:GLN:HB3	1.81	0.79
24:AY:614:GLU:HA	24:AY:617:MET:HE3	1.65	0.79
33:B8:23:VAL:HG12	33:B8:46:ARG:HH11	1.45	0.79
35:BA:271(P):C:O2'	35:BA:271(Q):G:H5'	1.83	0.79
35:BA:953:A:O2'	35:BA:954:G:C5'	2.31	0.79
1:AA:1504:G:C4'	1:AA:1505:G:OP2	2.30	0.79
35:BA:996:A:H4'	53:BU:92:ARG:NE	1.96	0.79
20:AT:75:ASN:H	20:AT:75:ASN:ND2	1.79	0.79
30:B5:57:VAL:HG12	30:B5:58:LEU:H	1.46	0.79
1:AA:563:A:H5'	1:AA:566:G:N2	1.97	0.79
1:AA:106:C:H2'	1:AA:107:G:H8	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:266:G:C4'	1:AA:267:C:O5'	2.30	0.79
35:BA:692:C:H2'	35:BA:693:C:H5'	1.63	0.79
1:AA:1282:C:C2'	1:AA:1283:G:C5'	2.60	0.79
1:AA:1282:C:H2'	1:AA:1283:G:C5'	2.13	0.79
1:AA:1527:C:O2'	1:AA:1528:U:H5'	1.82	0.79
35:BA:613:G:H5'	35:BA:613:G:H8	1.45	0.79
35:BA:2127:G:O2'	35:BA:2128:C:C5'	2.30	0.79
35:BA:332:A:C1'	35:BA:333:G:OP2	2.30	0.79
40:BF:20:LEU:O	40:BF:24:LEU:HD23	1.82	0.79
37:BC:20:VAL:O	37:BC:21:TYR:HB2	1.83	0.79
35:BA:1820:U:H1'	38:BD:202:LYS:HB3	1.65	0.79
35:BA:1769:G:C6	35:BA:1984:G:C6	2.70	0.79
1:AA:686:U:O2	1:AA:704:A:N6	2.16	0.79
1:AA:119:A:H4'	1:AA:120:A:O5'	1.82	0.79
40:BF:157:VAL:CG1	40:BF:194:MET:HG2	2.12	0.79
29:B4:35:VAL:HA	41:BG:109:VAL:HA	1.62	0.79
1:AA:1179:A:HO2'	1:AA:1180:A:H5'	1.46	0.79
35:BA:743:G:O2'	35:BA:744:G:C5'	2.30	0.79
42:BH:168:PRO:HA	42:BH:170:ARG:NH2	1.97	0.79
1:AA:859:A:H2'	1:AA:860:A:H5'	1.62	0.79
13:AM:53:VAL:HG12	13:AM:57:ARG:HH21	1.48	0.79
29:B4:12:ALA:N	29:B4:24:THR:HG22	1.67	0.79
35:BA:954:G:O2'	35:BA:955:C:C5'	2.30	0.79
35:BA:1819:A:H5''	38:BD:158:ALA:HB3	1.62	0.79
35:BA:38:A:H2'	35:BA:39:C:C6	2.18	0.79
35:BA:2201:C:C2'	35:BA:2202:C:H5'	2.13	0.79
35:BA:1119:C:O2'	35:BA:1120:G:C5'	2.31	0.79
1:AA:788:U:C2'	1:AA:789:U:H5'	2.13	0.79
4:AD:150:GLU:CD	4:AD:151:LYS:H	1.85	0.79
35:BA:1920:C:H6	35:BA:1920:C:H5'	1.46	0.79
35:BA:629:G:O6	35:BA:634:C:N4	2.16	0.79
36:BB:20:C:C2'	36:BB:21:G:H5''	2.13	0.79
1:AA:789:U:H2'	1:AA:791:G:OP2	1.82	0.79
35:BA:2033:A:H4'	35:BA:2034:U:OP1	1.81	0.79
2:AB:114:ARG:NH1	2:AB:118:LEU:HD11	1.97	0.78
1:AA:115:G:C1'	1:AA:116:A:OP2	2.30	0.78
35:BA:1596:A:O2'	35:BA:1597:A:C5'	2.30	0.78
41:BG:20:ILE:HA	41:BG:24:GLY:HA3	1.62	0.78
1:AA:1313:U:C3'	19:AS:6:LYS:HZ2	1.95	0.78
1:AA:1150:U:C2'	1:AA:1151:A:H5'	2.12	0.78
1:AA:1153:C:O2'	1:AA:1154:G:C5'	2.30	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:112:LEU:H	48:BP:128:HIS:CD2	2.00	0.78
48:BP:58:THR:O	48:BP:61:ARG:NE	2.16	0.78
1:AA:547:A:C4'	1:AA:548:G:O5'	2.31	0.78
58:BZ:115:GLY:N	58:BZ:177:PRO:HD3	1.98	0.78
28:B3:19:GLN:HE22	28:B3:52:HIS:CE1	1.93	0.78
58:BZ:151:HIS:CB	58:BZ:170:THR:HA	2.13	0.78
35:BA:1494:A:H2'	35:BA:1495:A:H5''	1.63	0.78
50:BR:104:ARG:HG3	50:BR:111:LEU:HD11	1.64	0.78
55:BW:9:TYR:H	55:BW:102:HIS:HD2	1.29	0.78
5:AE:76:ILE:HG13	5:AE:93:PRO:HG3	1.66	0.78
4:AD:3:ARG:HH21	4:AD:5:ILE:HG12	1.48	0.78
35:BA:2403:C:O2'	35:BA:2404:C:H5'	1.83	0.78
24:AY:82:ILE:CG2	24:AY:82:ILE:O	2.32	0.78
1:AA:1157:A:C1'	1:AA:1158:C:OP2	2.30	0.78
54:BV:29:PRO:HA	54:BV:61:VAL:HG23	1.63	0.78
31:B6:12:GLU:HA	31:B6:23:THR:HA	1.64	0.78
35:BA:1434:A:H61	35:BA:1558:A:H62	1.30	0.78
24:AY:181:LEU:HD23	24:AY:182:ARG:NH1	1.97	0.78
35:BA:1419:A:O2'	35:BA:1420:U:H5''	1.82	0.78
24:AY:100:VAL:HG23	24:AY:329:ARG:HB2	1.66	0.78
1:AA:59:A:H3'	1:AA:331:G:H22	1.48	0.78
35:BA:953:A:C2'	35:BA:954:G:C5'	2.56	0.78
35:BA:955:C:OP1	49:BQ:14:ARG:HD2	1.84	0.78
35:BA:1301:A:N3	35:BA:1301:A:H5''	1.99	0.78
30:B5:2:ALA:HA	35:BA:2015:A:C1'	2.14	0.78
41:BG:82:LEU:HD13	41:BG:88:ILE:HD13	1.64	0.78
35:BA:2126:A:C1'	35:BA:2127:G:O4'	2.30	0.78
12:AL:45:PRO:HD3	12:AL:51:ALA:O	1.83	0.78
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	1.84	0.78
12:AL:17:LYS:HD3	12:AL:18:VAL:H	1.49	0.78
35:BA:1475:G:H5'	35:BA:1475:G:H8	1.48	0.78
24:AY:165:GLN:HE21	24:AY:177:ILE:HG21	1.47	0.78
52:BT:31:SER:N	52:BT:43:GLN:O	2.16	0.78
33:B8:27:THR:HG23	35:BA:2361:A:OP1	1.83	0.78
1:AA:495:A:O2'	1:AA:496:A:C2'	2.30	0.78
41:BG:117:PHE:HD2	41:BG:118:ARG:HD3	1.49	0.78
24:AY:84:THR:HG23	24:AY:85:PRO:HD2	1.65	0.78
1:AA:1029:C:C3'	1:AA:1030:C:H5''	2.12	0.78
40:BF:20:LEU:H	40:BF:24:LEU:CD2	1.97	0.78
46:BN:22:THR:HG22	46:BN:61:ARG:HD3	1.65	0.78
24:AY:628:ARG:HG2	24:AY:628:ARG:HH11	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:153:ARG:HG3	2:AB:153:ARG:O	1.82	0.78
1:AA:173:U:C5'	1:AA:197:A:H5'	2.14	0.78
35:BA:691:C:H2'	35:BA:692:C:H5'	1.66	0.78
38:BD:24:ILE:CD1	38:BD:25:THR:H	1.97	0.78
35:BA:2036:C:O2'	35:BA:2037:G:H5'	1.83	0.78
57:BY:81:LYS:HB3	57:BY:96:ILE:HD11	1.63	0.78
26:B1:3:LYS:HB2	26:B1:61:ARG:NH2	1.98	0.78
14:AN:16:PHE:CD1	14:AN:16:PHE:N	2.51	0.78
35:BA:740:U:H2'	35:BA:741:G:C8	2.18	0.78
40:BF:9:ILE:HG12	40:BF:14:PRO:CA	2.13	0.78
35:BA:1646:C:C5'	35:BA:1647:G:H5''	2.14	0.78
24:AY:95:GLU:OE1	24:AY:403:GLU:HG2	1.83	0.78
36:BB:3:C:H42	36:BB:118:G:H1	1.30	0.78
35:BA:1887:C:H2'	35:BA:1888:G:H5''	1.66	0.78
35:BA:1678:G:H22	35:BA:1989:G:H22	0.79	0.78
33:B8:30:ARG:HA	33:B8:30:ARG:HE	1.48	0.78
1:AA:688:G:H2'	1:AA:689:C:H6	1.48	0.78
1:AA:365:U:C3'	1:AA:365:U:O2	2.31	0.78
41:BG:87:PRO:HG2	41:BG:88:ILE:H	1.48	0.78
35:BA:2123:G:O2'	35:BA:2124:G:H5'	1.83	0.78
53:BU:90:VAL:O	53:BU:92:ARG:N	2.17	0.78
54:BV:40:LEU:HD22	54:BV:46:VAL:HA	1.65	0.78
1:AA:1148:U:O2'	1:AA:1149:C:H5'	1.84	0.78
1:AA:155:C:H2'	1:AA:156:G:C8	2.18	0.78
25:B0:42:GLY:O	25:B0:57:PHE:CG	2.36	0.78
1:AA:311:C:O2'	1:AA:312:C:C5'	2.32	0.78
1:AA:688:G:H2'	1:AA:689:C:C6	2.19	0.78
41:BG:172:LEU:O	41:BG:176:LEU:HB2	1.84	0.78
1:AA:1279:A:C5'	1:AA:1280:A:OP1	2.32	0.78
2:AB:122:PHE:CE2	2:AB:139:LYS:HA	2.17	0.78
51:BS:30:ARG:HH11	51:BS:97:ARG:HG2	1.49	0.78
1:AA:1030:C:H4'	1:AA:1030(A):G:H5'	1.66	0.78
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.65	0.78
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.84	0.78
48:BP:46:LYS:HG2	48:BP:51:PHE:CD1	2.18	0.78
29:B4:39:CYS:O	29:B4:40:HIS:CB	2.32	0.78
35:BA:2206:G:H21	35:BA:2207:G:C5'	1.88	0.78
2:AB:172:ILE:N	2:AB:172:ILE:HD12	1.97	0.78
58:BZ:6:LYS:HE3	58:BZ:6:LYS:H	1.47	0.78
1:AA:64:G:C5'	1:AA:65:U:OP2	2.32	0.78
1:AA:942:G:C4	1:AA:943:U:C5	2.72	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:48:LYS:HG2	7:AG:49:ILE:HG12	1.66	0.77
35:BA:2010:G:O2'	35:BA:2011:U:C5'	2.30	0.77
41:BG:75:LYS:HG2	41:BG:76:SER:H	1.46	0.77
35:BA:1375:C:H2'	35:BA:1376:C:H6	1.49	0.77
28:B3:19:GLN:NE2	28:B3:52:HIS:CE1	2.49	0.77
35:BA:2689:U:H5''	35:BA:2690:C:H5'	1.66	0.77
29:B4:12:ALA:O	29:B4:24:THR:HG21	1.84	0.77
52:BT:78:LEU:O	52:BT:79:HIS:CD2	2.37	0.77
35:BA:49:A:N6	35:BA:177:G:C4	2.52	0.77
35:BA:2011:U:O2'	35:BA:2012:G:H5'	1.83	0.77
35:BA:2203:U:O3'	35:BA:2205:C:P	2.42	0.77
35:BA:2403:C:C3'	35:BA:2403:C:OP2	2.31	0.77
35:BA:1375:C:H2'	35:BA:1376:C:C6	2.19	0.77
58:BZ:115:GLY:HA2	58:BZ:177:PRO:HD3	1.66	0.77
39:BE:117:MET:O	39:BE:121:ASN:HA	1.83	0.77
12:AL:41:ARG:HH11	12:AL:43:VAL:HG22	1.50	0.77
47:BO:104:ARG:HH12	47:BO:107:ARG:NH1	1.82	0.77
52:BT:89:VAL:HB	52:BT:91:ARG:HG3	1.66	0.77
2:AB:87:ARG:CD	2:AB:219:VAL:HG11	2.14	0.77
1:AA:197:A:C5	1:AA:221:C:H4'	2.17	0.77
35:BA:1902:C:H4'	38:BD:244:ARG:HA	1.65	0.77
35:BA:1786:A:C1'	35:BA:1938:A:N6	2.46	0.77
35:BA:1984:G:O2'	35:BA:1985:G:C5'	2.30	0.77
1:AA:685:G:HO2'	1:AA:686:U:H5'	1.46	0.77
35:BA:2713:A:C3'	35:BA:2714:G:C5'	2.62	0.77
35:BA:1892:C:HO2'	35:BA:1893:C:H5'	1.46	0.77
24:AY:264:LEU:HB2	61:AY:701:GCP:C6	2.14	0.77
1:AA:967:C:H4'	9:AI:125:TYR:HE1	1.48	0.77
1:AA:633:G:H5'	1:AA:634:C:OP2	1.83	0.77
1:AA:1502:A:C2	1:AA:1505:G:N2	2.30	0.77
29:B4:1:MET:HB2	36:BB:39:A:H61	1.50	0.77
30:B5:16:ARG:HH11	30:B5:16:ARG:HG2	1.49	0.77
2:AB:139:LYS:O	2:AB:143:GLU:HG3	1.84	0.77
51:BS:97:ARG:HE	51:BS:97:ARG:C	1.88	0.77
12:AL:18:VAL:HG23	12:AL:19:ARG:N	1.99	0.77
35:BA:1640:C:C2'	35:BA:1641:A:H5'	2.14	0.77
35:BA:1419:A:O2'	35:BA:1421:G:N7	2.16	0.77
42:BH:12:PRO:HD2	42:BH:15:VAL:HG21	1.66	0.77
37:BC:92:ALA:HB2	37:BC:154:ILE:HD13	1.66	0.77
48:BP:51:PHE:CD2	48:BP:53:GLY:CA	2.68	0.77
1:AA:39:G:O2'	1:AA:40:C:H5'	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:936:C:HO2'	1:AA:937:A:H5'	1.45	0.77
1:AA:936:C:H2'	1:AA:937:A:H8	1.49	0.77
35:BA:523:C:C2'	35:BA:524:U:C5'	2.61	0.77
35:BA:2715:C:C2'	35:BA:2716:U:H5'	2.14	0.77
41:BG:137:GLU:CG	41:BG:154:GLY:H	1.97	0.77
48:BP:59:LEU:CA	48:BP:61:ARG:HE	1.95	0.77
7:AG:23:VAL:HG13	7:AG:43:PHE:CE2	2.19	0.77
9:AI:11:LYS:O	9:AI:12:GLU:HB2	1.83	0.77
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.66	0.77
37:BC:24:ASP:O	37:BC:28:ARG:HG3	1.85	0.77
24:AY:584:ILE:HG22	24:AY:588:MET:HE2	1.67	0.77
35:BA:605:C:H1'	35:BA:657:U:O2'	1.85	0.77
35:BA:654(S):G:H2'	35:BA:654(T):C:O4'	1.85	0.77
35:BA:2710:C:O2'	35:BA:2711:A:H5'	1.84	0.77
27:B2:10:LEU:O	27:B2:14:ARG:CD	2.31	0.77
29:B4:15:ILE:O	29:B4:16:CYS:CB	2.31	0.77
35:BA:1799:G:H8	38:BD:181:GLU:OE2	1.68	0.77
35:BA:997:G:OP1	53:BU:93:LYS:HD3	1.85	0.77
35:BA:146:G:H8	35:BA:146:G:H5'	1.50	0.77
39:BE:9:VAL:HG23	52:BT:4:GLY:HA2	1.66	0.77
39:BE:141:ILE:HA	39:BE:154:LYS:HE2	1.64	0.77
1:AA:1321:C:H5"	1:AA:1322:C:H5"	1.64	0.77
2:AB:113:HIS:O	2:AB:117:GLU:HG3	1.84	0.77
1:AA:918:A:H2'	1:AA:919:A:C8	2.20	0.77
52:BT:77:PRO:O	52:BT:78:LEU:CB	2.32	0.77
37:BC:144:GLY:O	37:BC:145:THR:HG23	1.85	0.77
35:BA:856:C:H4'	35:BA:857:C:OP1	1.82	0.77
1:AA:973:G:O4'	10:AJ:55:LYS:HG2	1.85	0.77
1:AA:1071:C:O2'	1:AA:1072:G:H5'	1.84	0.77
46:BN:133:GLN:HG2	46:BN:135:PRO:HD3	1.67	0.77
35:BA:1459:G:N3	35:BA:1459:G:H3'	1.98	0.77
48:BP:144:GLU:H	48:BP:145:PRO:HD3	1.49	0.77
1:AA:490:G:C2'	1:AA:491:G:H5'	2.14	0.77
7:AG:15:ASP:O	7:AG:19:GLY:HA2	1.85	0.77
35:BA:1819:A:H1'	35:BA:1820:U:OP1	1.85	0.77
3:AC:81:GLY:O	3:AC:82:GLU:CG	2.31	0.77
35:BA:1778:U:HO2'	35:BA:1779:U:H5'	1.44	0.77
35:BA:607:U:OP2	40:BF:103:LYS:HG3	1.84	0.77
35:BA:962:G:C2'	35:BA:963:U:H5'	2.15	0.77
35:BA:2104:G:H1'	35:BA:2105:C:OP2	1.85	0.77
7:AG:81:GLY:HA3	23:AX:12:A:H4'	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:83:VAL:HG13	12:AL:100:ILE:HG23	1.67	0.77
35:BA:1653:G:C1'	35:BA:1654:A:OP1	2.33	0.77
44:BK:99:UNK:C	44:BK:101:UNK:H	1.98	0.77
1:AA:494:U:O5'	1:AA:494:U:H6	1.67	0.77
1:AA:266:G:H5'	1:AA:267:C:H5	1.36	0.77
41:BG:38:VAL:HG22	41:BG:93:THR:CG2	2.08	0.77
41:BG:61:ALA:HB2	41:BG:68:PRO:HD3	1.66	0.77
41:BG:61:ALA:HB1	41:BG:67:LYS:HA	1.65	0.77
58:BZ:165:VAL:HG12	58:BZ:166:SER:N	1.99	0.77
24:AY:227:ILE:HG23	24:AY:237:PRO:HG2	1.65	0.77
52:BT:50:ILE:HD11	52:BT:102:ILE:HD11	1.65	0.77
44:BK:46:UNK:C	44:BK:48:UNK:H	1.97	0.77
48:BP:84:ASN:CG	48:BP:116:GLY:CA	2.41	0.76
35:BA:195:A:OP1	48:BP:46:LYS:NZ	2.18	0.76
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.49	0.76
35:BA:743:G:C2'	35:BA:744:G:O5'	2.33	0.76
33:B8:62:LEU:HD13	35:BA:242:G:C5'	2.08	0.76
35:BA:1799:G:C4'	35:BA:1800:C:O5'	2.32	0.76
35:BA:1919:A:H2'	35:BA:1920:C:H5''	1.66	0.76
22:AV:27:G:H22	22:AV:43:C:H5	1.32	0.76
15:AO:28:GLN:O	15:AO:32:LEU:HD23	1.85	0.76
1:AA:548:G:O2'	1:AA:549:C:H5'	1.84	0.76
35:BA:1767:C:O2'	35:BA:1768:U:H5'	1.86	0.76
39:BE:48:GLN:NE2	39:BE:78:LEU:HD22	2.00	0.76
40:BF:2:LYS:HG3	40:BF:25:PRO:HG2	1.67	0.76
38:BD:35:LYS:H	38:BD:36:PRO:HD2	1.46	0.76
20:AT:93:GLU:O	20:AT:93:GLU:HG2	1.84	0.76
1:AA:664:G:H22	1:AA:741:G:H1	1.30	0.76
35:BA:967:C:O2'	35:BA:968:G:H5'	1.83	0.76
26:B1:11:ARG:HG2	26:B1:11:ARG:HH11	1.49	0.76
42:BH:65:HIS:O	42:BH:67:LEU:N	2.18	0.76
41:BG:15:VAL:HG22	41:BG:175:LEU:O	1.85	0.76
35:BA:1131:G:H21	46:BN:73:THR:HG21	1.48	0.76
48:BP:101:VAL:HB	48:BP:107:LYS:HA	1.67	0.76
27:B2:8:LYS:HG3	27:B2:9:GLN:OE1	1.85	0.76
29:B4:16:CYS:SG	29:B4:21:VAL:CG2	2.73	0.76
2:AB:122:PHE:HE2	2:AB:142:LEU:CD2	1.95	0.76
40:BF:12:LEU:O	40:BF:14:PRO:HD3	1.86	0.76
38:BD:24:ILE:HD13	38:BD:25:THR:N	2.00	0.76
52:BT:60:THR:HG22	52:BT:77:PRO:HA	1.68	0.76
27:B2:69:ARG:O	27:B2:70:GLN:CB	2.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:969:U:H2'	35:BA:970:C:C6	2.21	0.76
35:BA:247:G:H3'	35:BA:249:C:C5	2.21	0.76
2:AB:167:PRO:CD	2:AB:188:ALA:CB	2.58	0.76
13:AM:11:ARG:HA	13:AM:45:VAL:CB	2.12	0.76
35:BA:17:G:H2'	35:BA:18:C:H6	1.46	0.76
24:AY:26:THR:HG22	24:AY:52:MET:HG2	1.67	0.76
1:AA:1498:U:C1'	1:AA:1499:A:OP2	2.31	0.76
35:BA:1257:C:O2'	40:BF:83:PHE:HA	1.84	0.76
20:AT:74:LYS:CG	20:AT:75:ASN:N	2.49	0.76
57:BY:7:VAL:HB	57:BY:8:LYS:HZ2	1.50	0.76
37:BC:27:ALA:O	37:BC:30:VAL:HG22	1.85	0.76
35:BA:582:G:OP2	53:BU:14:HIS:HD2	1.68	0.76
40:BF:167:ALA:HB1	40:BF:173:VAL:HG11	1.68	0.76
1:AA:1363(A):A:H4'	1:AA:1364:U:H5''	1.68	0.76
13:AM:108:ARG:HH11	13:AM:108:ARG:HG3	1.50	0.76
2:AB:91:PRO:HG3	2:AB:155:LEU:HD23	1.65	0.76
1:AA:107:G:H2'	1:AA:108:G:O5'	1.86	0.76
3:AC:47:LEU:HD23	3:AC:68:VAL:HG11	1.68	0.76
2:AB:16:HIS:CE1	2:AB:210:SER:HA	2.21	0.76
35:BA:1019:U:H3	35:BA:1142(A):A:H62	1.34	0.76
35:BA:1087:G:H21	35:BA:1103:A:H61	1.30	0.76
1:AA:1384:C:H2'	1:AA:1385:G:H5'	1.67	0.76
37:BC:153:ILE:HG23	37:BC:161:ARG:HH12	1.49	0.76
35:BA:956:G:OP1	49:BQ:14:ARG:NH2	2.19	0.76
7:AG:49:ILE:O	7:AG:50:ILE:HB	1.86	0.76
22:AV:40:C:H2'	22:AV:41:C:H6	1.51	0.76
27:B2:50:ILE:HG22	27:B2:51:ARG:N	2.00	0.76
2:AB:16:HIS:CE1	2:AB:210:SER:O	2.39	0.76
1:AA:1399:C:C4'	1:AA:1400:C:O5'	2.31	0.76
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.84	0.76
51:BS:89:ARG:O	51:BS:92:TYR:HB3	1.85	0.76
35:BA:673:C:H4'	40:BF:82:ILE:CD1	2.14	0.76
20:AT:26:ASN:HA	20:AT:29:LYS:HG3	1.68	0.76
25:B0:10:THR:HG22	25:B0:11:ARG:N	2.01	0.76
35:BA:1283:G:N2	35:BA:1286:A:OP1	2.18	0.76
39:BE:51:PHE:O	39:BE:74:PRO:HB2	1.86	0.76
51:BS:78:LEU:HD11	51:BS:103:GLU:CB	2.16	0.76
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.20	0.76
50:BR:58:GLY:HA2	50:BR:80:PHE:CE2	2.20	0.76
1:AA:940:C:O2'	1:AA:941:G:H5'	1.86	0.76
2:AB:33:TYR:HB3	2:AB:41:ILE:O	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:18:ARG:HG2	31:B6:19:ARG:H	1.50	0.76
1:AA:859:A:O2'	1:AA:860:A:H5'	1.86	0.76
43:BJ:53:UNK:O	43:BJ:85:LEU:HD12	1.85	0.76
14:AN:12:ARG:C	14:AN:14:PRO:HD2	2.05	0.76
1:AA:770:C:O2'	1:AA:771:G:C5'	2.30	0.76
9:AI:53:VAL:CG1	9:AI:95:LYS:HE2	2.16	0.76
40:BF:80:ALA:HB1	40:BF:81:PRO:HD2	1.68	0.76
3:AC:22:TRP:CZ2	14:AN:54:PRO:HG2	2.20	0.76
39:BE:203:LYS:HE3	39:BE:204:ALA:HB2	1.65	0.76
48:BP:121:LYS:O	48:BP:123:LEU:HD23	1.85	0.76
1:AA:265:G:C2'	1:AA:266:G:H5''	2.11	0.75
1:AA:696:A:C2'	1:AA:697:U:H5'	2.16	0.75
58:BZ:165:VAL:HG12	58:BZ:166:SER:H	1.52	0.75
24:AY:138:LYS:HG2	61:AY:701:GCP:C6	2.15	0.75
35:BA:925:C:C2'	35:BA:926:A:H5''	2.16	0.75
42:BH:11:VAL:HG23	42:BH:50:VAL:HG23	1.66	0.75
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.68	0.75
1:AA:199:G:O2'	1:AA:200:G:H5'	1.86	0.75
35:BA:1676:A:C2	35:BA:1993:U:H5'	2.20	0.75
3:AC:117:ALA:HB2	3:AC:200:ALA:CB	2.16	0.75
54:BV:19:LYS:HG3	54:BV:20:LEU:O	1.86	0.75
52:BT:79:HIS:O	52:BT:80:SER:CB	2.33	0.75
52:BT:83:ILE:HG13	52:BT:84:GLN:N	1.99	0.75
1:AA:769:G:O2'	1:AA:770:C:H5'	1.86	0.75
35:BA:1445:A:C8	35:BA:1460:A:N1	2.54	0.75
13:AM:2:ALA:C	13:AM:9:ILE:HG22	2.07	0.75
35:BA:691:C:C2'	35:BA:692:C:H5'	2.16	0.75
39:BE:132:HIS:CA	39:BE:135:HIS:CE1	2.69	0.75
35:BA:1215:G:C2'	35:BA:1216:G:H5'	2.16	0.75
35:BA:1216:G:C2'	35:BA:1217:C:H5'	2.17	0.75
42:BH:156:ALA:O	42:BH:158:HIS:HD2	1.69	0.75
35:BA:407:G:H2'	35:BA:408:G:H8	1.51	0.75
39:BE:4:ILE:HD13	39:BE:28:ALA:HB1	1.67	0.75
24:AY:308:PRO:HB2	24:AY:394:ALA:HB1	1.69	0.75
37:BC:105:LEU:O	37:BC:106:ASP:HB3	1.86	0.75
1:AA:495:A:H1'	1:AA:496:A:H2'	1.69	0.75
2:AB:190:THR:O	2:AB:191:ASP:CB	2.35	0.75
1:AA:687:A:C1'	1:AA:688:G:OP2	2.30	0.75
2:AB:16:HIS:O	2:AB:17:PHE:CD1	2.40	0.75
35:BA:1222:C:H2'	35:BA:1223:G:H5'	1.66	0.75
41:BG:94:LEU:HD12	41:BG:98:ARG:CD	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1282:C:O2'	1:AA:1283:G:C5'	2.34	0.75
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.51	0.75
1:AA:973:G:H1'	10:AJ:55:LYS:HZ2	1.51	0.75
15:AO:79:ARG:O	15:AO:82:ILE:HG22	1.86	0.75
35:BA:661:C:H4'	48:BP:16:ARG:HH12	1.51	0.75
28:B3:35:ARG:CD	28:B3:37:LEU:HD21	2.16	0.75
1:AA:342:C:O2'	1:AA:343:U:H5'	1.86	0.75
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.68	0.75
35:BA:1722:A:O2'	35:BA:1739:U:H5''	1.85	0.75
2:AB:14:GLY:O	2:AB:15:VAL:CG2	2.30	0.75
1:AA:1390:U:C2'	1:AA:1391:U:H5'	2.16	0.75
19:AS:45:VAL:HB	19:AS:64:GLU:HB3	1.68	0.75
41:BG:77:ILE:CG1	41:BG:82:LEU:HB2	2.15	0.75
38:BD:27:THR:CG2	38:BD:83:GLU:HG2	2.16	0.75
54:BV:64:HIS:ND1	54:BV:92:THR:HG22	2.01	0.75
57:BY:95:LYS:HD2	57:BY:100:ALA:HA	1.69	0.75
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.51	0.75
35:BA:389:G:H1	48:BP:71:VAL:HG12	1.51	0.75
37:BC:102:GLN:C	37:BC:104:ILE:H	1.89	0.75
25:B0:37:LEU:H	25:B0:37:LEU:HD22	1.52	0.75
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.67	0.75
13:AM:10:PRO:HB3	13:AM:18:ALA:HB1	1.69	0.75
35:BA:2313:C:H4'	41:BG:40:ASN:HD21	1.52	0.75
1:AA:521:G:O2'	1:AA:522:C:H5'	1.87	0.75
12:AL:6:THR:N	12:AL:9:GLN:HE21	1.85	0.75
35:BA:1332:G:N2	35:BA:1610:A:H8	1.83	0.75
35:BA:1396:U:H2'	35:BA:1396:U:O2	1.86	0.75
1:AA:949:A:C2'	1:AA:950:U:H5'	2.07	0.75
1:AA:37:U:H2'	1:AA:38:G:C5'	2.12	0.75
31:B6:9:LEU:CD1	31:B6:9:LEU:O	2.31	0.75
35:BA:1770:G:H2'	35:BA:1771:C:H5'	1.66	0.75
35:BA:1464:C:H2'	35:BA:1465:G:H8	1.51	0.75
27:B2:2:LYS:HD3	27:B2:5:GLU:OE2	1.87	0.75
41:BG:69:ALA:O	41:BG:90:LEU:HA	1.87	0.75
33:B8:61:LEU:HD12	33:B8:63:PRO:HD2	1.69	0.75
35:BA:962:G:O2'	35:BA:963:U:H5'	1.86	0.75
2:AB:172:ILE:H	2:AB:172:ILE:CD1	1.92	0.75
49:BQ:141:GLN:C	58:BZ:53:ILE:HB	2.06	0.75
24:AY:165:GLN:NE2	24:AY:177:ILE:HG21	2.01	0.75
48:BP:124:LYS:HD3	48:BP:143:GLY:HA3	1.68	0.75
35:BA:246:C:H2'	35:BA:247:G:H5'	0.82	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:51:PHE:HA	48:BP:52:GLU:HB3	1.67	0.75
48:BP:52:GLU:HG2	48:BP:57:THR:HB	1.68	0.75
27:B2:16:LEU:O	27:B2:17:SER:CB	2.33	0.75
35:BA:1417:C:C2'	35:BA:1418:G:C5'	2.64	0.75
35:BA:599:G:C2'	35:BA:600:G:H5'	2.16	0.75
35:BA:1999:C:O2'	35:BA:2000:G:C5'	2.30	0.75
24:AY:55:MET:CG	24:AY:56:GLU:N	2.32	0.75
35:BA:145:G:H2'	35:BA:146:G:C5'	2.17	0.75
24:AY:127:LYS:HE3	24:AY:128:TYR:HE1	1.51	0.75
25:B0:19:LYS:HB3	25:B0:19:LYS:HZ3	1.52	0.75
1:AA:737:A:H1'	6:AF:73:ASN:ND2	2.01	0.75
52:BT:78:LEU:C	52:BT:79:HIS:CD2	2.60	0.75
33:B8:32:LEU:HB2	33:B8:36:LYS:HZ2	1.52	0.75
3:AC:83:ARG:O	3:AC:86:VAL:HG13	1.87	0.75
52:BT:96:ARG:HB2	52:BT:96:ARG:NH1	2.01	0.75
35:BA:31:C:C2'	35:BA:32:C:C5'	2.55	0.75
54:BV:38:LEU:O	54:BV:39:LEU:HD13	1.86	0.75
22:AV:27:G:H1	22:AV:43:C:H41	1.35	0.75
35:BA:2245:U:H5'	35:BA:2246:G:H5'	1.68	0.75
37:BC:117:THR:CG2	37:BC:119:ASP:N	2.50	0.74
25:B0:27:GLU:CB	25:B0:68:GLU:HA	2.17	0.74
1:AA:359:U:C2'	1:AA:360:A:H5'	2.17	0.74
2:AB:187:LEU:O	2:AB:187:LEU:CD2	2.34	0.74
41:BG:45:GLU:OE2	41:BG:152:LEU:HD21	1.86	0.74
41:BG:71:THR:OG1	41:BG:89:GLY:HA3	1.87	0.74
9:AI:53:VAL:HG13	9:AI:95:LYS:HE2	1.69	0.74
35:BA:2286:A:H4'	35:BA:2287:A:O4'	1.86	0.74
38:BD:65:ILE:HD11	38:BD:67:PHE:CE2	2.22	0.74
35:BA:1809:A:H2'	35:BA:1810:A:C8	2.21	0.74
48:BP:62:LEU:HD23	48:BP:62:LEU:N	2.02	0.74
31:B6:32:ASN:O	31:B6:33:LYS:HG2	1.86	0.74
1:AA:771:G:C6	1:AA:772:U:C4	2.75	0.74
2:AB:24:TRP:HE3	2:AB:32:ILE:HD11	1.52	0.74
13:AM:3:ARG:N	13:AM:9:ILE:HG22	2.02	0.74
24:AY:157:LEU:HD23	24:AY:157:LEU:H	1.50	0.74
1:AA:1229:A:C8	1:AA:1229:A:H5'	2.20	0.74
46:BN:128:HIS:HD2	46:BN:130:HIS:H	1.34	0.74
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.87	0.74
35:BA:882:G:H2'	35:BA:883:G:H8	1.52	0.74
30:B5:33:CYS:HB2	30:B5:40:LYS:HE3	1.68	0.74
52:BT:27:THR:HG23	52:BT:28:VAL:N	2.02	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1041:G:H22	35:BA:1114:G:H22	1.31	0.74
48:BP:85:LEU:HD23	48:BP:86:LYS:N	2.02	0.74
1:AA:774:G:O2'	1:AA:775:G:C5'	2.30	0.74
1:AA:1371:G:O2'	1:AA:1372:U:C5'	2.35	0.74
1:AA:770:C:C2'	1:AA:771:G:H5'	2.17	0.74
1:AA:690:G:C6	1:AA:691:G:C6	2.75	0.74
3:AC:81:GLY:C	3:AC:82:GLU:CG	2.56	0.74
13:AM:101:GLN:NE2	13:AM:101:GLN:H	1.86	0.74
41:BG:38:VAL:CG2	41:BG:93:THR:HG23	2.09	0.74
35:BA:743:G:C4	35:BA:744:G:C8	2.75	0.74
31:B6:15:GLU:CD	31:B6:18:ARG:CZ	2.55	0.74
1:AA:1073:U:H6	1:AA:1073:U:O5'	1.70	0.74
35:BA:673:C:H5''	40:BF:81:PRO:HD2	1.70	0.74
38:BD:35:LYS:N	38:BD:36:PRO:CD	2.49	0.74
1:AA:226:G:O2'	1:AA:227:G:H5'	1.88	0.74
24:AY:290:LYS:O	24:AY:400:GLU:HG3	1.87	0.74
1:AA:274:A:O2'	1:AA:275:G:O4'	2.05	0.74
17:AQ:21:VAL:HG21	17:AQ:59:ILE:HD11	1.68	0.74
35:BA:111:A:O2'	35:BA:112:U:C5'	2.35	0.74
35:BA:1798:U:H5'	38:BD:259:THR:HG22	1.69	0.74
35:BA:1079:C:H2'	35:BA:1079:C:O2	1.85	0.74
35:BA:267:C:H2'	35:BA:268:C:H6	1.52	0.74
1:AA:490:G:O2'	1:AA:491:G:C5'	2.30	0.74
1:AA:105:G:N7	1:AA:106:C:N4	2.36	0.74
9:AI:53:VAL:HG22	9:AI:95:LYS:NZ	2.02	0.74
42:BH:28:GLY:HA3	42:BH:79:VAL:HB	1.70	0.74
3:AC:168:ALA:O	3:AC:169:ALA:HB2	1.86	0.74
35:BA:1332:G:N2	35:BA:1610:A:C8	2.55	0.74
38:BD:130:ALA:C	38:BD:131:LEU:HD12	2.07	0.74
13:AM:14:ARG:HB3	13:AM:16:ASP:OD1	1.86	0.74
35:BA:628:G:H2'	35:BA:629:G:H5''	1.70	0.74
35:BA:1464:C:O2'	35:BA:1465:G:C5'	2.30	0.74
26:B1:29:GLY:O	26:B1:30:VAL:CG2	2.35	0.74
35:BA:1817:G:C2'	35:BA:1818:U:H5'	2.17	0.74
1:AA:522:C:H2'	1:AA:523:A:C5'	2.17	0.74
35:BA:330:A:C2	35:BA:1210:A:H2'	2.20	0.74
50:BR:56:LYS:HE3	50:BR:88:ARG:HA	1.69	0.74
35:BA:1503:U:H2'	35:BA:1504:C:C6	2.22	0.74
1:AA:573:A:H5'	1:AA:573:A:H8	1.52	0.74
22:AV:47:U:O5'	22:AV:47:U:H6	1.68	0.74
35:BA:2555:U:C2'	35:BA:2556:C:C5'	2.49	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2581:G:C2'	35:BA:2610:C:H41	2.00	0.74
35:BA:1223:G:N1	35:BA:1227:G:C6	2.56	0.74
41:BG:77:ILE:HD12	41:BG:80:PHE:HB2	1.69	0.74
35:BA:2645:G:H3'	35:BA:2646:C:C5'	2.15	0.74
25:B0:50:ASN:HB3	25:B0:63:VAL:CG2	2.17	0.74
10:AJ:46:ARG:HG2	10:AJ:64:GLU:HB3	1.70	0.74
38:BD:176:ARG:HG2	38:BD:176:ARG:HH11	1.51	0.74
56:BX:3:THR:HA	56:BX:6:ASP:OD2	1.87	0.74
48:BP:146:VAL:HG22	48:BP:147:LEU:N	2.02	0.74
1:AA:489:C:H2'	1:AA:490:G:H8	1.53	0.74
35:BA:605:C:H2'	35:BA:606:U:H5'	1.68	0.74
1:AA:509:A:H5'	4:AD:54:TYR:CE2	2.22	0.74
42:BH:83:TYR:HB3	42:BH:135:GLY:H	1.52	0.74
1:AA:190:U:H3	20:AT:105:SER:HB2	1.52	0.74
1:AA:492:G:O2'	1:AA:493:G:H5'	1.88	0.74
35:BA:2203:U:HO3'	35:BA:2205:C:P	2.11	0.74
35:BA:1970:A:C5'	35:BA:1972:A:C1'	2.63	0.74
12:AL:25:PRO:C	12:AL:27:LEU:H	1.89	0.74
1:AA:186:C:H2'	1:AA:187:C:C6	2.23	0.74
1:AA:57:G:O2'	1:AA:58:C:H5'	1.87	0.74
58:BZ:115:GLY:CA	58:BZ:177:PRO:HD3	2.16	0.74
24:AY:99:ARG:NH2	24:AY:403:GLU:HB2	2.01	0.74
35:BA:1696:G:H2'	35:BA:1697:G:H5'	1.70	0.74
27:B2:55:ARG:HH11	27:B2:55:ARG:HG3	1.52	0.74
27:B2:55:ARG:NH2	35:BA:75:G:H4'	2.03	0.74
20:AT:10:LEU:HD12	20:AT:11:SER:H	1.51	0.74
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.87	0.74
47:BO:107:ARG:HD3	52:BT:36:GLU:CG	2.18	0.74
52:BT:29:ARG:HG2	52:BT:86:ILE:HG22	1.69	0.74
35:BA:1822:G:O2'	35:BA:1823:G:C5'	2.30	0.74
35:BA:2403:C:OP1	35:BA:2403:C:C6	2.41	0.74
40:BF:9:ILE:CG1	40:BF:14:PRO:HA	2.16	0.74
31:B6:12:GLU:HG3	31:B6:23:THR:CG2	2.18	0.74
35:BA:2111:C:N3	35:BA:2147:G:N2	2.31	0.74
37:BC:48:LEU:HB3	37:BC:50:ILE:HD12	1.70	0.74
53:BU:6:THR:O	53:BU:9:VAL:HG22	1.86	0.74
24:AY:631:ILE:HA	24:AY:645:ALA:HB2	1.69	0.74
35:BA:2555:U:H2'	35:BA:2556:C:H5'	0.76	0.73
1:AA:198:G:N3	1:AA:199:G:C8	2.56	0.73
35:BA:1416:G:N3	35:BA:1417:C:C4	2.55	0.73
2:AB:187:LEU:CD2	2:AB:201:ILE:O	2.30	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:556:C:O2'	1:AA:557:G:C5'	2.30	0.73
24:AY:69:VAL:CA	24:AY:82:ILE:HG12	2.17	0.73
14:AN:16:PHE:HD1	14:AN:16:PHE:H	1.36	0.73
52:BT:80:SER:CB	52:BT:81:PRO:HD2	2.09	0.73
35:BA:1041:G:H1	35:BA:1114:G:H1	1.35	0.73
35:BA:523:C:H2'	35:BA:524:U:C5'	2.17	0.73
1:AA:688:G:C6	1:AA:700:G:C2	2.75	0.73
27:B2:9:GLN:N	27:B2:9:GLN:CD	2.30	0.73
29:B4:16:CYS:HA	29:B4:33:VAL:HG11	1.70	0.73
36:BB:43:C:O2'	41:BG:94:LEU:HD13	1.88	0.73
35:BA:332:A:C4	35:BA:335:C:N4	2.55	0.73
1:AA:1193:G:O2'	1:AA:1194:U:H5'	1.89	0.73
1:AA:1190:G:OP1	3:AC:4:LYS:HA	1.89	0.73
52:BT:62:THR:HG22	52:BT:75:ILE:HG12	1.69	0.73
35:BA:1819:A:H4'	35:BA:1820:U:O5'	1.87	0.73
35:BA:1423:G:C2'	35:BA:1424:G:H5'	2.18	0.73
51:BS:97:ARG:NH2	51:BS:98:VAL:HA	1.97	0.73
35:BA:1036:G:C6	35:BA:1120:G:O6	2.41	0.73
3:AC:50:ALA:HB2	3:AC:75:VAL:CG1	2.18	0.73
35:BA:1494:A:H5'	35:BA:1494:A:N3	2.04	0.73
35:BA:880:G:H2'	35:BA:881:G:H5''	1.69	0.73
35:BA:1945:G:C6	35:BA:1946:U:C4	2.76	0.73
1:AA:243:A:H4'	1:AA:244:U:O5'	1.89	0.73
35:BA:1041:G:H22	35:BA:1114:G:N2	1.85	0.73
35:BA:2751:G:C4	42:BH:2:SER:OG	2.38	0.73
1:AA:950:U:C2'	1:AA:951:G:C5'	2.30	0.73
3:AC:82:GLU:O	3:AC:84:ILE:HG22	1.88	0.73
35:BA:2201:C:H2'	35:BA:2202:C:C6	2.24	0.73
29:B4:21:VAL:HG21	29:B4:35:VAL:CG2	2.18	0.73
1:AA:1277:C:O2'	1:AA:1279:A:C8	2.22	0.73
42:BH:156:ALA:O	42:BH:158:HIS:N	2.21	0.73
34:B9:17:ILE:HG22	34:B9:18:ARG:H	1.52	0.73
1:AA:1150:U:O5'	1:AA:1150:U:H6	1.71	0.73
2:AB:130:ARG:NH2	2:AB:134:GLU:HG3	2.02	0.73
10:AJ:78:ASN:HD21	10:AJ:80:LYS:HB2	1.51	0.73
20:AT:50:GLU:OE2	20:AT:100:ILE:HD13	1.87	0.73
35:BA:2152:G:H5'	35:BA:2153:G:OP2	1.88	0.73
3:AC:148:GLY:HA2	3:AC:171:GLY:HA3	1.69	0.73
7:AG:48:LYS:HE2	7:AG:115:ARG:HH12	1.52	0.73
35:BA:2606:C:O2'	35:BA:2607:G:H5''	1.88	0.73
35:BA:1543:C:H3'	35:BA:1544:A:H5''	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1402:C:H2'	1:AA:1403:C:H5'	1.70	0.73
1:AA:1255:G:C6	1:AA:1283:G:C6	2.75	0.73
35:BA:2128:C:O2'	35:BA:2129:C:C5'	2.36	0.73
9:AI:83:ARG:O	9:AI:86:VAL:HG12	1.87	0.73
12:AL:20:LYS:HD3	12:AL:20:LYS:H	1.54	0.73
40:BF:64:ILE:N	40:BF:76:GLY:O	2.21	0.73
22:AV:76:A:H4'	22:AV:76:A:OP1	1.87	0.73
27:B2:70:GLN:CG	27:B2:71:ASN:N	2.35	0.73
27:B2:17:SER:HB2	27:B2:18:PRO:HD2	1.70	0.73
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.07	0.73
29:B4:33:VAL:HG13	29:B4:34:GLU:H	1.52	0.73
29:B4:5:ILE:HG21	41:BG:67:LYS:HD3	1.71	0.73
35:BA:2126:A:C4'	35:BA:2127:G:O5'	2.35	0.73
35:BA:1702:G:H2'	35:BA:1703:G:O4'	1.89	0.73
24:AY:680:PRO:HD2	24:AY:683:VAL:HG21	1.70	0.73
48:BP:96:THR:HG22	48:BP:126:VAL:HB	1.69	0.73
28:B3:17:LYS:HG2	35:BA:969:U:OP1	1.88	0.73
35:BA:1899:G:N2	35:BA:1902:C:N4	2.35	0.73
35:BA:2208:A:H1'	35:BA:2219:G:C5	2.22	0.73
3:AC:50:ALA:HB2	3:AC:75:VAL:HB	1.71	0.73
38:BD:43:ARG:HD2	38:BD:44:ASN:OD1	1.88	0.73
24:AY:126:GLU:HG2	24:AY:132:ARG:HH22	1.54	0.73
42:BH:5:GLY:H	42:BH:69:ARG:HD3	1.54	0.73
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.70	0.73
12:AL:40:VAL:O	12:AL:40:VAL:HG12	1.88	0.73
58:BZ:17:ALA:HA	58:BZ:20:ARG:CD	2.18	0.73
3:AC:173:VAL:O	3:AC:175:LEU:HD22	1.87	0.73
9:AI:18:PHE:O	9:AI:61:ALA:HA	1.88	0.73
52:BT:83:ILE:CG1	52:BT:84:GLN:N	2.52	0.73
1:AA:1238:A:OP1	1:AA:1335:C:O4'	2.06	0.73
1:AA:1504:G:H4'	1:AA:1505:G:OP2	1.87	0.73
1:AA:1490:C:C2'	1:AA:1491:G:C5'	2.64	0.73
42:BH:85:LYS:HZ3	42:BH:87:LEU:HG	1.54	0.73
12:AL:45:PRO:CD	12:AL:51:ALA:O	2.37	0.73
40:BF:8:GLN:HB3	40:BF:126:VAL:HA	1.70	0.73
35:BA:1695:G:H3'	35:BA:1695:G:N3	2.04	0.73
2:AB:60:ASP:O	2:AB:64:ARG:HG2	1.89	0.73
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.89	0.73
49:BQ:32:TYR:O	49:BQ:105:GLU:HB2	1.89	0.73
1:AA:311:C:O2'	1:AA:312:C:H5'	1.87	0.73
48:BP:64:LYS:O	48:BP:66:GLY:N	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:654(A):G:C2'	35:BA:654(B):C:H5'	2.19	0.73
1:AA:938:A:C2'	1:AA:939:G:C5'	2.64	0.73
35:BA:1448:G:H1'	35:BA:1528:A:H62	1.54	0.73
35:BA:1778:U:O2'	35:BA:1779:U:C5'	2.31	0.73
35:BA:2401:U:C2'	35:BA:2402:C:OP1	2.36	0.73
24:AY:69:VAL:CB	24:AY:82:ILE:HD11	2.11	0.73
51:BS:17:ARG:O	51:BS:20:ARG:HB2	1.89	0.73
35:BA:1799:G:H3'	35:BA:1799:G:P	2.29	0.73
33:B8:50:LEU:HD12	33:B8:51:ALA:H	1.53	0.73
35:BA:1653:G:H4'	35:BA:1654:A:O5'	1.87	0.73
38:BD:131:LEU:HB2	38:BD:136:ILE:HD11	1.69	0.73
24:AY:168:ILE:HG23	24:AY:205:TYR:HE2	1.54	0.73
24:AY:205:TYR:O	24:AY:207:ASP:N	2.22	0.73
35:BA:1464:C:H2'	35:BA:1465:G:C8	2.24	0.73
35:BA:2712:U:H1'	35:BA:2712(A):A:C8	2.23	0.73
41:BG:77:ILE:HG22	41:BG:78:SER:N	2.04	0.73
1:AA:1179:A:C2'	1:AA:1180:A:H5'	2.19	0.73
18:AR:36:ASN:ND2	18:AR:39:VAL:HG23	2.03	0.73
35:BA:2192:G:O2'	35:BA:2193:G:H5''	1.89	0.73
1:AA:922:G:C6	1:AA:923:A:C6	2.77	0.73
37:BC:117:THR:HG22	37:BC:119:ASP:HB2	1.69	0.72
1:AA:40:C:H2'	1:AA:41:G:C8	2.23	0.72
1:AA:322:C:C2'	1:AA:323:U:H5'	2.19	0.72
35:BA:1819:A:C1'	35:BA:1820:U:OP1	2.37	0.72
1:AA:555:C:H2'	1:AA:556:C:C6	2.24	0.72
39:BE:132:HIS:CD2	39:BE:135:HIS:CE1	2.77	0.72
35:BA:2129:C:OP1	37:BC:7:ARG:HD2	1.89	0.72
35:BA:327:G:H2'	35:BA:328:U:H6	1.51	0.72
38:BD:44:ASN:CB	38:BD:49:ILE:HA	2.18	0.72
35:BA:1291:C:H2'	35:BA:1292:U:H6	1.53	0.72
36:BB:80:U:O2'	36:BB:81:G:H5''	1.88	0.72
35:BA:1403:C:H5''	35:BA:1471:A:H1'	1.69	0.72
24:AY:71:THR:HG21	24:AY:357:ARG:HD3	1.70	0.72
9:AI:23:ASN:HD22	9:AI:23:ASN:H	1.32	0.72
52:BT:29:ARG:C	52:BT:30:VAL:CG2	2.58	0.72
35:BA:2007:C:O2'	35:BA:2008:C:C5'	2.30	0.72
1:AA:556:C:C2'	1:AA:557:G:C5'	2.64	0.72
41:BG:77:ILE:HB	41:BG:82:LEU:O	1.88	0.72
35:BA:1799:G:N2	35:BA:1800:C:C5	2.57	0.72
35:BA:2103:C:C2'	35:BA:2104:G:H5'	2.19	0.72
1:AA:1074:G:H2'	1:AA:1075:C:C6	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:12:GLN:HG2	49:BQ:73:PRO:HD2	1.71	0.72
38:BD:79:VAL:HG21	38:BD:111:LEU:HD11	1.70	0.72
35:BA:2801(A):A:H4'	35:BA:2802:G:H5'	1.71	0.72
35:BA:2463:C:O2'	35:BA:2464:C:H5'	1.87	0.72
46:BN:96:GLU:O	46:BN:100:GLU:HG3	1.88	0.72
1:AA:545:C:C2'	1:AA:546:G:C5'	2.56	0.72
25:B0:27:GLU:HB3	25:B0:68:GLU:HA	1.70	0.72
7:AG:49:ILE:CD1	7:AG:118:VAL:HA	2.18	0.72
35:BA:31:C:H6	35:BA:31:C:O5'	1.72	0.72
29:B4:16:CYS:CA	29:B4:33:VAL:HG21	2.18	0.72
1:AA:346:G:H4'	52:BT:41:ARG:CZ	2.18	0.72
1:AA:1075:C:H6	1:AA:1075:C:O5'	1.72	0.72
7:AG:80:VAL:HB	7:AG:83:ALA:HB3	1.68	0.72
6:AF:28:ARG:O	6:AF:32:ASN:HB2	1.88	0.72
38:BD:30:GLU:CD	38:BD:63:ARG:HE	1.92	0.72
57:BY:95:LYS:NZ	57:BY:99:CYS:O	2.22	0.72
27:B2:63:VAL:O	27:B2:66:GLU:HG2	1.89	0.72
6:AF:68:PRO:HG2	6:AF:71:ARG:HG3	1.70	0.72
10:AJ:8:LEU:HB3	10:AJ:96:ILE:HG22	1.70	0.72
35:BA:1796:U:H2'	35:BA:1797:C:C6	2.25	0.72
19:AS:64:GLU:HB2	29:B4:48:ARG:HH22	1.53	0.72
9:AI:104:ARG:C	9:AI:104:ARG:HD3	2.10	0.72
1:AA:89:C:O2'	1:AA:90:U:H2'	1.89	0.72
24:AY:57:GLN:O	24:AY:60:GLU:N	2.20	0.72
1:AA:1030(B):C:H2'	1:AA:1030(C):G:C4'	2.18	0.72
24:AY:14:ASN:HD21	24:AY:80:ASN:HD22	1.36	0.72
8:AH:83:ILE:HD12	8:AH:137:VAL:HG22	1.71	0.72
1:AA:1060:C:C5	3:AC:2:GLY:HA2	2.25	0.72
1:AA:839:U:O2	1:AA:839:U:H2'	1.89	0.72
1:AA:266:G:O2'	1:AA:267:C:C5'	2.37	0.72
1:AA:46:G:H2'	1:AA:366:C:N4	2.04	0.72
1:AA:961:U:C1'	1:AA:962:C:H5'	2.20	0.72
35:BA:1805:U:H5''	38:BD:250:TRP:CE2	2.25	0.72
35:BA:2123:G:C2'	35:BA:2124:G:H5'	2.19	0.72
1:AA:1151:A:C2	1:AA:1152:A:C5	2.78	0.72
58:BZ:128:VAL:HG22	58:BZ:129:SER:N	2.01	0.72
40:BF:24:LEU:O	40:BF:26:ALA:N	2.21	0.72
35:BA:2811:G:OP2	39:BE:60:ASN:HB2	1.90	0.72
35:BA:267:C:H2'	35:BA:268:C:C6	2.24	0.72
35:BA:2023:G:H5'	35:BA:2617:C:H4'	1.70	0.72
8:AH:23:SER:HA	8:AH:63:LEU:HD22	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:35:VAL:HG11	47:BO:103:ALA:HB3	1.71	0.72
52:BT:16:ARG:HG2	52:BT:79:HIS:HB3	1.71	0.72
1:AA:1303:C:C2'	1:AA:1304:G:H5'	2.19	0.72
35:BA:1464:C:HO2'	35:BA:1528:A:H8	1.36	0.72
35:BA:654(H):G:C2'	35:BA:654(I):C:H5'	2.16	0.72
1:AA:1386:G:N2	1:AA:1387:G:C5	2.57	0.72
12:AL:47:LYS:N	12:AL:48:PRO:HD2	2.02	0.72
24:AY:252:ASP:O	24:AY:254:LYS:HE3	1.89	0.72
24:AY:608:VAL:HG22	24:AY:671:MET:HB2	1.70	0.72
28:B3:22:ALA:HA	28:B3:46:ASN:HD22	1.55	0.72
2:AB:192:SER:O	2:AB:194:PRO:HD3	1.90	0.72
35:BA:2716:U:H2'	35:BA:2717:G:H5'	1.71	0.72
35:BA:31:C:H2'	35:BA:32:C:H5'	1.72	0.72
41:BG:55:LYS:O	41:BG:59:GLU:HG2	1.90	0.72
58:BZ:183:LEU:C	58:BZ:183:LEU:CD1	2.57	0.72
42:BH:149:ARG:HD3	42:BH:164:TYR:CE1	2.25	0.72
36:BB:7:G:C2'	36:BB:8:U:H5''	2.20	0.72
35:BA:2807:G:C3'	35:BA:2808:U:H5''	2.19	0.72
25:B0:42:GLY:O	25:B0:57:PHE:CD2	2.43	0.72
39:BE:203:LYS:O	39:BE:203:LYS:HD2	1.90	0.72
9:AI:49:PRO:HG2	9:AI:81:ILE:HG21	1.70	0.72
35:BA:2443:C:O2'	35:BA:2444:G:H5'	1.89	0.72
9:AI:26:VAL:HG21	9:AI:61:ALA:C	2.10	0.72
1:AA:543:C:O2'	1:AA:544:G:H5'	1.88	0.72
35:BA:1417:C:H2'	35:BA:1418:G:C5'	2.20	0.72
1:AA:590:C:C2'	1:AA:591:U:H5'	2.19	0.72
1:AA:685:G:O2'	1:AA:686:U:C5'	2.31	0.72
2:AB:15:VAL:HG21	2:AB:209:ARG:NH2	2.03	0.72
41:BG:60:LEU:O	41:BG:63:ILE:HG12	1.90	0.72
19:AS:7:LYS:HD3	19:AS:7:LYS:H	1.55	0.72
35:BA:115:C:O2'	35:BA:116:C:H5'	1.90	0.72
3:AC:117:ALA:HB2	3:AC:200:ALA:HB2	1.72	0.72
1:AA:311:C:H6	1:AA:311:C:O5'	1.72	0.72
48:BP:51:PHE:HA	48:BP:52:GLU:HB2	1.70	0.72
35:BA:462:C:HO2'	35:BA:463:G:H5'	1.54	0.72
29:B4:56:VAL:HG23	29:B4:60:GLN:HG3	1.71	0.72
35:BA:833:U:C5'	48:BP:51:PHE:O	2.38	0.72
35:BA:1133:U:O3'	35:BA:1135:C:P	2.48	0.72
29:B4:2:LYS:HE2	29:B4:4:GLY:O	1.89	0.72
1:AA:1280:A:O4'	10:AJ:41:PRO:HG3	1.90	0.72
35:BA:2206:G:H3'	35:BA:2206:G:N3	2.05	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1658:C:OP1	39:BE:132:HIS:O	2.07	0.72
42:BH:158:HIS:HA	42:BH:170:ARG:HD2	1.71	0.72
51:BS:106:ARG:HD2	51:BS:108:GLY:N	2.04	0.72
26:B1:75:GLU:O	26:B1:78:LYS:CG	2.37	0.72
54:BV:19:LYS:HZ1	54:BV:20:LEU:HB2	1.54	0.72
37:BC:88:GLU:CB	37:BC:92:ALA:HB3	2.19	0.72
1:AA:118:U:H6	1:AA:118:U:O5'	1.73	0.72
1:AA:356:A:O2'	1:AA:368:U:O2'	2.03	0.72
1:AA:60:A:O2'	1:AA:61:G:C5'	2.38	0.71
35:BA:1954:G:N2	35:BA:1986:A:OP1	2.22	0.71
35:BA:1224:C:H6	35:BA:1224:C:O5'	1.73	0.71
1:AA:556:C:H6	1:AA:556:C:O5'	1.73	0.71
29:B4:35:VAL:O	41:BG:112:PRO:HG2	1.88	0.71
35:BA:2310:A:O2'	35:BA:2311:A:H5''	1.90	0.71
30:B5:52:TYR:O	30:B5:53:ALA:CB	2.37	0.71
55:BW:1:MET:HG2	55:BW:2:GLU:N	2.03	0.71
33:B8:56:GLU:HA	33:B8:59:LYS:NZ	2.04	0.71
35:BA:2873:A:C2	50:BR:6:SER:HB2	2.25	0.71
35:BA:1097:U:H2'	35:BA:1098:A:H5'	1.70	0.71
52:BT:95:ARG:NH1	52:BT:95:ARG:HB3	2.05	0.71
1:AA:369:C:O2'	1:AA:370:C:H5'	1.88	0.71
49:BQ:56:ARG:HG3	49:BQ:56:ARG:HH11	1.52	0.71
38:BD:70:TRP:CH2	38:BD:150:LYS:HA	2.25	0.71
50:BR:55:ALA:HB2	50:BR:79:LEU:HD11	1.72	0.71
1:AA:123:C:OP1	1:AA:311:C:O2'	2.07	0.71
48:BP:114:ILE:HD12	48:BP:114:ILE:C	2.10	0.71
1:AA:1237:C:O2'	1:AA:1335:C:C4'	2.38	0.71
41:BG:7:LEU:O	41:BG:9:ARG:N	2.23	0.71
1:AA:1152:A:O2'	1:AA:1153:C:C5'	2.37	0.71
25:B0:78:TYR:O	25:B0:79:VAL:HG23	1.90	0.71
48:BP:16:ARG:CB	48:BP:16:ARG:HH11	2.03	0.71
37:BC:51:ASP:HB3	37:BC:57:GLN:OE1	1.91	0.71
20:AT:86:ARG:O	20:AT:90:GLN:HG2	1.90	0.71
35:BA:1405:U:H2'	35:BA:1406:U:C6	2.25	0.71
19:AS:32:LYS:HB3	19:AS:50:ALA:HB3	1.72	0.71
52:BT:29:ARG:N	52:BT:45:PHE:O	2.23	0.71
35:BA:652:C:C2	35:BA:653:A:H8	2.08	0.71
3:AC:68:VAL:HG12	3:AC:70:VAL:HG13	1.72	0.71
35:BA:1994:C:H6	35:BA:1994:C:O5'	1.74	0.71
35:BA:689:A:O2'	35:BA:690:G:C5'	2.32	0.71
42:BH:3:ARG:HG2	42:BH:4:ILE:O	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1646:C:H5'	35:BA:1647:G:H5''	1.70	0.71
10:AJ:90:LEU:H	10:AJ:91:PRO:HD3	1.53	0.71
51:BS:15:ARG:CB	51:BS:15:ARG:HH11	2.01	0.71
3:AC:119:ARG:O	3:AC:122:GLU:HB2	1.90	0.71
24:AY:507:TYR:HE1	24:AY:572:TYR:HA	1.55	0.71
14:AN:13:THR:N	14:AN:14:PRO:HD2	2.04	0.71
42:BH:70:THR:HG22	42:BH:74:ASN:HD21	1.55	0.71
1:AA:39:G:O6	1:AA:547:A:H2'	1.90	0.71
29:B4:15:ILE:HD13	29:B4:33:VAL:CB	2.19	0.71
1:AA:1525:G:H2'	1:AA:1526:G:H5'	1.71	0.71
25:B0:14:ARG:CG	25:B0:14:ARG:HH11	2.01	0.71
6:AF:28:ARG:HG3	6:AF:28:ARG:HH11	1.55	0.71
28:B3:1:MET:CB	28:B3:2:PRO:HD2	2.19	0.71
58:BZ:46:LYS:HD2	58:BZ:46:LYS:O	1.91	0.71
10:AJ:9:ARG:HG2	10:AJ:69:ASN:OD1	1.90	0.71
33:B8:48:PHE:O	33:B8:49:VAL:HG22	1.90	0.71
2:AB:20:GLU:HA	2:AB:20:GLU:OE1	1.89	0.71
35:BA:605:C:C2'	35:BA:606:U:C5'	2.69	0.71
25:B0:26:TYR:HE2	35:BA:857:C:H1'	1.54	0.71
35:BA:859:G:O2'	35:BA:916:G:O6	2.08	0.71
35:BA:1540:U:H3'	35:BA:1541:G:C3'	2.14	0.71
35:BA:1748:G:H5'	35:BA:1748:G:H8	1.56	0.71
41:BG:104:GLU:HB3	41:BG:105:LYS:CE	2.19	0.71
35:BA:2756:U:H1'	35:BA:2757:A:P	2.30	0.71
48:BP:16:ARG:HD3	48:BP:16:ARG:O	1.91	0.71
26:B1:75:GLU:HA	26:B1:78:LYS:HD2	1.71	0.71
58:BZ:123:ASP:O	58:BZ:124:ILE:HG23	1.89	0.71
49:BQ:17:LEU:HD21	49:BQ:96:VAL:HG13	1.71	0.71
1:AA:495:A:H1'	1:AA:496:A:N9	2.04	0.71
35:BA:39:C:C2'	35:BA:40:C:H5'	2.20	0.71
1:AA:1305:G:OP1	21:AU:2:GLY:CA	2.38	0.71
30:B5:52:TYR:O	30:B5:53:ALA:HB3	1.89	0.71
35:BA:688:U:C2'	35:BA:689:A:H5'	2.20	0.71
1:AA:89:C:H1'	1:AA:90:U:OP1	1.91	0.71
35:BA:1806:C:C2'	35:BA:1807:G:H5'	2.20	0.71
53:BU:85:LYS:HD3	53:BU:117:GLN:HE21	1.56	0.71
38:BD:43:ARG:HB3	38:BD:54:ARG:HB2	1.71	0.71
58:BZ:149:SER:OG	58:BZ:173:ALA:HA	1.90	0.71
35:BA:1210:A:H5''	35:BA:1212:G:O4'	1.91	0.71
25:B0:79:VAL:O	25:B0:79:VAL:HG12	1.90	0.71
35:BA:526:A:O2'	35:BA:2043:C:C2'	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:40:ILE:HG23	11:AK:75:TYR:CD2	2.26	0.71
46:BN:7:LYS:O	46:BN:9:VAL:HG23	1.89	0.71
35:BA:1318:C:H3'	35:BA:1319:G:H5''	1.73	0.71
33:B8:15:LYS:HB2	48:BP:65:ARG:HH12	1.55	0.71
35:BA:2364:C:O2'	35:BA:2365:G:H5'	1.89	0.71
48:BP:51:PHE:CD2	48:BP:53:GLY:HA3	2.26	0.71
17:AQ:67:LYS:O	17:AQ:68:ARG:HB2	1.90	0.71
27:B2:47:ASN:O	27:B2:49:LYS:N	2.24	0.71
1:AA:1305:G:O2'	1:AA:1306:A:H8	1.69	0.71
29:B4:15:ILE:HD11	29:B4:31:ILE:HG23	1.71	0.71
41:BG:66:GLN:CD	41:BG:94:LEU:HG	2.11	0.71
1:AA:1279:A:C4'	1:AA:1280:A:OP1	2.39	0.71
1:AA:973:G:C4	10:AJ:55:LYS:HE3	2.25	0.71
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.25	0.71
1:AA:538:G:H5''	12:AL:114:LYS:HB2	1.72	0.71
31:B6:30:THR:HG23	31:B6:31:PRO:HD2	1.73	0.71
1:AA:360:A:O2'	1:AA:361:G:C5'	2.30	0.71
35:BA:1769:G:C6	35:BA:1984:G:O6	2.43	0.71
35:BA:1228:G:H21	35:BA:1229:G:H1'	1.54	0.71
9:AI:95:LYS:HE3	9:AI:96:LEU:CD2	2.21	0.71
35:BA:654(F):C:H2'	35:BA:654(G):C:O4'	1.91	0.71
53:BU:90:VAL:HG11	54:BV:39:LEU:CG	2.21	0.71
1:AA:185:A:C6	1:AA:186:C:N4	2.58	0.71
40:BF:132:VAL:HG22	40:BF:133:ASN:H	1.53	0.71
38:BD:35:LYS:HD3	38:BD:61:LEU:HB3	1.73	0.71
35:BA:459:U:H2'	35:BA:460:A:H5'	1.72	0.71
28:B3:22:ALA:HB3	28:B3:50:VAL:HG11	1.72	0.71
44:BK:57:UNK:HA	44:BK:67:UNK:HA	1.73	0.71
35:BA:404:C:H4'	35:BA:405:U:H5'	1.71	0.71
1:AA:250:A:H4'	1:AA:251:G:O5'	1.90	0.71
35:BA:1713:U:O2'	35:BA:1714:G:H5'	1.91	0.71
47:BO:87:ILE:CG2	47:BO:91:LEU:HA	2.20	0.71
39:BE:87:GLU:O	39:BE:87:GLU:OE1	2.09	0.71
35:BA:630:G:N2	35:BA:632:A:H3'	2.06	0.71
48:BP:144:GLU:N	48:BP:145:PRO:HD3	2.06	0.71
49:BQ:60:ARG:CG	58:BZ:179:ASP:CG	2.58	0.71
25:B0:37:LEU:HD21	25:B0:61:ALA:HB2	1.73	0.71
2:AB:51:LEU:O	2:AB:55:PHE:HB2	1.91	0.71
1:AA:558:G:H2'	1:AA:559:A:C2	2.24	0.71
29:B4:1:MET:HB2	36:BB:39:A:N6	2.05	0.71
1:AA:1049:U:H1'	1:AA:1050:G:OP2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1210:A:C8	35:BA:1210:A:H5'	2.24	0.71
4:AD:13:ARG:HB3	4:AD:38:TYR:O	1.90	0.71
2:AB:132:LYS:HA	2:AB:135:GLN:HG3	1.72	0.71
35:BA:1332:G:N2	35:BA:1609:A:HO2'	1.89	0.71
35:BA:272(H):C:C2'	35:BA:272(I):U:H5''	2.21	0.71
50:BR:7:GLY:HA3	50:BR:8:ARG:CZ	2.21	0.71
35:BA:1639:U:C2'	35:BA:1640:C:H5''	2.19	0.71
37:BC:55:SER:O	37:BC:57:GLN:N	2.22	0.71
1:AA:921:U:H2'	1:AA:922:G:O4'	1.91	0.71
38:BD:10:THR:OG1	38:BD:13:ARG:HB2	1.89	0.71
35:BA:500:G:N2	35:BA:502:A:H3'	2.06	0.71
35:BA:930:U:H4'	35:BA:931:G:O5'	1.91	0.71
53:BU:108:GLU:HG3	54:BV:44:LYS:HD3	1.72	0.71
37:BC:72:GLN:HA	37:BC:72:GLN:HE21	1.56	0.71
35:BA:248:G:N7	35:BA:250:G:C4	2.59	0.71
1:AA:199:G:O2'	1:AA:200:G:C5'	2.39	0.71
1:AA:1240:U:OP1	7:AG:116:ALA:HB2	1.91	0.71
1:AA:1176:A:H2'	1:AA:1177:G:H8	1.55	0.71
1:AA:701:C:C5'	1:AA:702:A:OP1	2.37	0.71
35:BA:415:A:N1	35:BA:2409:G:C6	2.59	0.71
58:BZ:112:ARG:HD3	58:BZ:112:ARG:C	2.11	0.71
24:AY:517:LEU:HD11	24:AY:564:LYS:CB	2.21	0.71
16:AP:21:VAL:HG13	16:AP:33:ILE:HB	1.73	0.71
37:BC:88:GLU:HG3	37:BC:89:GLU:H	1.55	0.71
48:BP:71:VAL:HG13	48:BP:72:PRO:HD3	1.73	0.71
1:AA:1408:A:H5'	1:AA:1408:A:H8	1.56	0.71
1:AA:548:G:H2'	1:AA:549:C:H5'	1.72	0.70
1:AA:406:G:H5''	4:AD:5:ILE:HG23	1.73	0.70
35:BA:603:A:C4'	35:BA:604:G:O5'	2.39	0.70
35:BA:603:A:C1'	35:BA:604:G:OP2	2.36	0.70
35:BA:2753:A:C2'	35:BA:2754:U:H5'	2.20	0.70
30:B5:56:LYS:HD2	30:B5:59:GLU:OE2	1.89	0.70
1:AA:1176:A:O2'	1:AA:1177:G:H5'	1.91	0.70
1:AA:1498:U:C4'	1:AA:1499:A:O5'	2.39	0.70
37:BC:85:LYS:HD2	37:BC:151:GLY:HA3	1.72	0.70
2:AB:71:VAL:HG21	2:AB:162:ILE:HD11	1.72	0.70
35:BA:83:G:H22	35:BA:102:G:H2'	1.56	0.70
1:AA:563:A:H61	1:AA:884:U:H3	1.39	0.70
22:AV:73:A:H2'	22:AV:74:C:H5'	1.73	0.70
24:AY:342:TYR:CE2	24:AY:347:GLY:HA2	2.26	0.70
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B3:59:VAL:HG12	28:B3:60:GLU:N	2.05	0.70
46:BN:39:ARG:HH21	46:BN:41:ASP:CB	2.04	0.70
52:BT:32:TYR:O	52:BT:33:LYS:CB	2.39	0.70
1:AA:495:A:H1'	1:AA:496:A:C8	2.26	0.70
1:AA:1399:C:C2	1:AA:1502:A:N6	2.59	0.70
41:BG:107:LEU:HD11	41:BG:177:GLY:O	1.90	0.70
35:BA:689:A:H2'	35:BA:690:G:C5'	2.21	0.70
30:B5:20:ARG:HG2	30:B5:23:HIS:CD2	2.26	0.70
53:BU:55:ARG:HA	53:BU:58:ARG:HD2	1.72	0.70
4:AD:30:LYS:C	4:AD:32:ALA:H	1.94	0.70
3:AC:167:TRP:CD1	3:AC:168:ALA:O	2.44	0.70
24:AY:530:VAL:HG22	24:AY:531:GLY:N	2.06	0.70
35:BA:71:A:C2	56:BX:31:HIS:HE1	2.09	0.70
35:BA:1808:U:H2'	35:BA:1809:A:H5'	1.72	0.70
41:BG:83:ARG:H	41:BG:83:ARG:HD2	1.56	0.70
1:AA:1039:C:H2'	1:AA:1040:U:C6	2.26	0.70
1:AA:874:G:C6	1:AA:875:C:N4	2.59	0.70
35:BA:1416:G:O2'	35:BA:1417:C:C5	2.30	0.70
1:AA:774:G:H2'	1:AA:775:G:H8	1.56	0.70
1:AA:939:G:H1	1:AA:1344:C:H42	1.37	0.70
1:AA:1370:G:O2'	1:AA:1371:G:H5'	1.92	0.70
57:BY:28:LYS:N	57:BY:28:LYS:CD	2.49	0.70
40:BF:6:VAL:CG1	40:BF:7:TYR:H	1.98	0.70
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.73	0.70
35:BA:796:C:H2'	35:BA:797:C:C6	2.26	0.70
35:BA:1649:G:C2'	35:BA:1650:G:H5'	2.20	0.70
35:BA:8:A:H2'	35:BA:9:U:C5	2.26	0.70
58:BZ:152:ALA:HB2	58:BZ:169:GLU:O	1.91	0.70
4:AD:105:VAL:HG21	4:AD:126:ILE:HG12	1.72	0.70
35:BA:2007:C:H2'	35:BA:2008:C:H6	1.56	0.70
35:BA:27:G:H22	35:BA:512:G:C2'	1.97	0.70
35:BA:1778:U:H2'	35:BA:1784:A:N6	2.07	0.70
35:BA:689:A:C2'	35:BA:690:G:C5'	2.63	0.70
48:BP:34:GLY:O	48:BP:35:HIS:HB2	1.91	0.70
1:AA:1001(A):G:H2'	1:AA:1002:G:O4'	1.90	0.70
26:B1:52:ARG:O	26:B1:53:VAL:HG22	1.92	0.70
24:AY:122:TRP:CD2	24:AY:157:LEU:HD12	2.26	0.70
54:BV:19:LYS:NZ	54:BV:20:LEU:H	1.89	0.70
42:BH:9:ILE:HG22	42:BH:10:PRO:CA	2.20	0.70
35:BA:1808:U:O5'	35:BA:1808:U:H6	1.74	0.70
35:BA:893:C:H2'	35:BA:894:C:H6	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:129:ASN:ND2	4:AD:145:GLU:H	1.88	0.70
35:BA:774:A:H2	35:BA:787:U:HO2'	1.36	0.70
9:AI:13:ALA:HA	9:AI:67:GLY:O	1.91	0.70
52:BT:29:ARG:HH11	52:BT:88:ILE:HD11	1.53	0.70
35:BA:968:G:O2'	35:BA:969:U:C5'	2.30	0.70
1:AA:489:C:H2'	1:AA:490:G:C8	2.26	0.70
1:AA:543:C:O2'	1:AA:544:G:C5'	2.39	0.70
35:BA:603:A:C8	35:BA:655:A:N6	2.59	0.70
35:BA:2715:C:HO2'	35:BA:2716:U:H5'	1.56	0.70
35:BA:743:G:H2'	35:BA:744:G:O5'	1.90	0.70
10:AJ:50:ILE:HA	10:AJ:60:ARG:HG2	1.73	0.70
15:AO:82:ILE:CD1	15:AO:88:ARG:HB2	2.19	0.70
3:AC:118:GLN:O	3:AC:121:ALA:N	2.25	0.70
26:B1:75:GLU:O	26:B1:78:LYS:CD	2.39	0.70
35:BA:1884:A:C2'	35:BA:1885:A:H5''	2.21	0.70
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	1.71	0.70
37:BC:15:VAL:O	37:BC:16:ASP:HB3	1.92	0.70
1:AA:1103:C:OP1	2:AB:96:ARG:NH2	2.23	0.70
48:BP:115:LEU:HD23	48:BP:116:GLY:N	2.07	0.70
35:BA:2362:G:C2'	35:BA:2363:C:H5'	2.21	0.70
31:B6:7:ILE:CG2	31:B6:27:LYS:HZ3	1.93	0.70
35:BA:599:G:H2'	35:BA:600:G:H5'	1.71	0.70
1:AA:109:A:C6	1:AA:326:G:C6	2.78	0.70
1:AA:1279:A:H4'	1:AA:1280:A:OP1	1.92	0.70
24:AY:25:LYS:NZ	24:AY:86:GLY:N	2.40	0.70
42:BH:149:ARG:HD3	42:BH:164:TYR:HE1	1.56	0.70
35:BA:144:C:H2'	35:BA:145:G:H8	1.56	0.70
35:BA:1963:U:C2'	35:BA:1963:U:O2	2.39	0.70
1:AA:946:A:O2'	1:AA:947:G:H5'	1.92	0.70
2:AB:212:GLN:HG2	2:AB:235:SER:HB2	1.73	0.70
41:BG:61:ALA:CB	41:BG:68:PRO:HD3	2.20	0.70
9:AI:65:VAL:HG21	9:AI:73:GLN:CB	2.13	0.70
51:BS:28:VAL:HG12	51:BS:29:PHE:N	2.06	0.70
15:AO:87:ILE:CG2	15:AO:88:ARG:H	2.03	0.70
51:BS:106:ARG:HB3	51:BS:106:ARG:NH1	2.02	0.70
25:B0:19:LYS:NZ	25:B0:41:ARG:NH2	2.39	0.70
34:B9:1:MET:SD	34:B9:31:LYS:HB3	2.31	0.70
25:B0:53:MET:SD	25:B0:57:PHE:HA	2.31	0.70
35:BA:880:G:C2'	35:BA:881:G:H5''	2.21	0.70
24:AY:14:ASN:ND2	24:AY:80:ASN:HD22	1.89	0.70
34:B9:10:ILE:O	34:B9:11:CYS:HB3	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:461:ILE:O	24:AY:465:ARG:HB2	1.92	0.70
40:BF:101:LEU:HD12	40:BF:102:PRO:HD2	1.74	0.70
2:AB:82:ARG:HA	2:AB:92:TYR:CE1	2.26	0.70
35:BA:968:G:H2'	35:BA:969:U:C6	2.27	0.70
35:BA:658:C:H2'	35:BA:659:C:C6	2.27	0.70
1:AA:940:C:H2'	1:AA:941:G:H5'	1.73	0.70
22:AV:40:C:H2'	22:AV:41:C:C6	2.26	0.70
35:BA:1786:A:H1'	35:BA:1938:A:H62	1.54	0.70
2:AB:36:ARG:O	2:AB:37:ASN:CB	2.40	0.70
24:AY:86:GLY:O	24:AY:117:GLN:HG2	1.92	0.70
1:AA:1047:G:O2'	1:AA:1048:G:H5'	1.91	0.70
1:AA:1075:C:C2'	1:AA:1076:C:H5'	2.22	0.70
26:B1:57:GLU:C	26:B1:58:ILE:HG13	2.12	0.70
1:AA:1368:G:O2'	1:AA:1369:C:H5'	1.92	0.70
3:AC:187:ALA:HB2	3:AC:198:VAL:HB	1.74	0.70
35:BA:1941:C:C2'	35:BA:1942:C:H5'	2.22	0.70
58:BZ:19:ARG:NH1	58:BZ:84:GLU:O	2.25	0.70
24:AY:8:ASP:HB3	24:AY:11:ARG:HD2	1.74	0.70
33:B8:15:LYS:HD2	48:BP:65:ARG:HH22	1.56	0.70
37:BC:153:ILE:HG23	37:BC:161:ARG:NH1	2.06	0.70
1:AA:46:G:O2'	1:AA:365:U:C1'	2.40	0.70
24:AY:15:ILE:O	24:AY:81:ILE:HA	1.92	0.70
39:BE:34:VAL:HG22	39:BE:48:GLN:HE21	1.56	0.70
24:AY:111:SER:OG	24:AY:141:LYS:HD2	1.92	0.70
7:AG:36:LYS:HG2	7:AG:37:ASN:N	2.04	0.70
35:BA:1058:G:H2'	35:BA:1059:G:C5'	2.22	0.70
58:BZ:104:PHE:HB3	58:BZ:141:VAL:HG21	1.73	0.70
35:BA:2870:C:H2'	35:BA:2871:C:O4'	1.92	0.70
35:BA:171:G:O2'	35:BA:172:C:H5'	1.91	0.70
24:AY:301:ILE:HG22	24:AY:332:SER:HB2	1.73	0.70
35:BA:110:G:C2'	35:BA:111:A:H5'	2.22	0.70
1:AA:110:C:C2'	1:AA:111:G:H5'	2.22	0.70
57:BY:11:ASP:O	57:BY:28:LYS:HE3	1.92	0.70
41:BG:104:GLU:OE2	41:BG:107:LEU:HD12	1.92	0.70
35:BA:461:C:C2'	35:BA:462:C:C5'	2.69	0.70
35:BA:2176:A:C4'	35:BA:2177:C:OP1	2.37	0.70
24:AY:149:VAL:O	24:AY:153:MET:HG3	1.92	0.70
52:BT:50:ILE:HA	52:BT:99:LEU:CD1	2.22	0.70
55:BW:71:VAL:O	55:BW:71:VAL:HG23	1.90	0.70
30:B5:44:THR:HG21	50:BR:101:ALA:HB2	1.74	0.70
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:82:VAL:HG13	11:AK:108:ILE:HA	1.74	0.70
12:AL:123:LYS:H	12:AL:123:LYS:HE3	1.56	0.70
1:AA:1442(A):G:C6	52:BT:118:ARG:HB2	2.26	0.69
35:BA:630:G:C4	35:BA:632:A:OP1	2.45	0.69
27:B2:16:LEU:HD23	27:B2:20:GLU:HG2	1.71	0.69
25:B0:27:GLU:CD	25:B0:27:GLU:N	2.45	0.69
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.26	0.69
35:BA:702:G:H2'	35:BA:703:U:H5'	1.74	0.69
35:BA:89:G:H3'	35:BA:90:U:C5'	2.21	0.69
19:AS:63:THR:HG23	19:AS:64:GLU:N	2.06	0.69
29:B4:14:ILE:HG22	29:B4:14:ILE:O	1.92	0.69
31:B6:41:PRO:HD2	31:B6:45:LYS:HA	1.74	0.69
25:B0:10:THR:O	25:B0:11:ARG:HG3	1.92	0.69
1:AA:57:G:H2'	1:AA:58:C:H6	1.52	0.69
24:AY:386:GLY:CA	24:AY:402:ILE:HG12	2.21	0.69
25:B0:19:LYS:HZ3	25:B0:41:ARG:NH2	1.90	0.69
35:BA:1696:G:C2'	35:BA:1697:G:H5'	2.22	0.69
28:B3:35:ARG:HD3	28:B3:37:LEU:HD21	1.73	0.69
2:AB:96:ARG:O	2:AB:96:ARG:HG3	1.92	0.69
2:AB:156:LYS:O	2:AB:157:ARG:HB2	1.91	0.69
47:BO:77:ILE:HD13	52:BT:74:ARG:HD3	1.74	0.69
49:BQ:54:MET:HB3	49:BQ:64:ILE:HD13	1.72	0.69
27:B2:70:GLN:NE2	27:B2:71:ASN:H	1.90	0.69
1:AA:264:U:C2'	1:AA:265:G:C5'	2.65	0.69
35:BA:1300:U:C4'	35:BA:1301:A:O5'	2.34	0.69
35:BA:1221(A):C:O2'	35:BA:1222:C:H5'	1.93	0.69
29:B4:31:ILE:HG12	29:B4:32:TYR:N	2.07	0.69
24:AY:84:THR:HG23	24:AY:85:PRO:CD	2.22	0.69
42:BH:168:PRO:CA	42:BH:170:ARG:NH2	2.54	0.69
35:BA:1289:C:O2'	35:BA:1290:C:H5'	1.92	0.69
35:BA:2580:U:H5'	39:BE:131:ALA:CB	2.23	0.69
35:BA:1516:C:H2'	35:BA:1517:G:H5'	1.73	0.69
34:B9:10:ILE:HD13	34:B9:34:GLN:HE22	1.56	0.69
37:BC:183:PRO:HG2	37:BC:184:GLU:OE2	1.92	0.69
35:BA:2836:U:H2'	35:BA:2837:G:C8	2.27	0.69
37:BC:100:ILE:C	37:BC:102:GLN:H	1.96	0.69
37:BC:80:LYS:HE3	37:BC:120:VAL:CG1	2.14	0.69
35:BA:1539:G:C5	35:BA:1540:U:H1'	2.27	0.69
35:BA:1998:G:H2'	35:BA:1999:C:C6	2.27	0.69
29:B4:43:TYR:C	29:B4:45:GLY:H	1.96	0.69
41:BG:136:ARG:O	41:BG:136:ARG:HG3	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:185:GLU:C	58:BZ:187:ALA:N	2.44	0.69
1:AA:100:C:H2'	1:AA:101:A:C8	2.27	0.69
58:BZ:17:ALA:HA	58:BZ:20:ARG:HG2	1.74	0.69
24:AY:551:GLN:O	24:AY:559:PRO:HA	1.93	0.69
1:AA:542:G:H2'	1:AA:543:C:C6	2.28	0.69
25:B0:43:THR:H	35:BA:2331:G:H4'	1.57	0.69
1:AA:982:U:H4'	1:AA:983:A:O5'	1.92	0.69
35:BA:2645:G:C3'	35:BA:2646:C:H5'	2.20	0.69
35:BA:1104:C:O2'	35:BA:1105:U:H5'	1.92	0.69
29:B4:56:VAL:HG13	29:B4:57:GLU:HG3	1.75	0.69
56:BX:35:THR:HG22	56:BX:37:THR:N	2.07	0.69
25:B0:53:MET:CG	25:B0:57:PHE:HA	2.23	0.69
29:B4:15:ILE:CD1	29:B4:33:VAL:HB	2.18	0.69
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.92	0.69
35:BA:1290:C:O2'	35:BA:1291:C:H5'	1.93	0.69
35:BA:2875:C:O2'	52:BT:5:ALA:HB3	1.92	0.69
51:BS:13:ARG:CG	51:BS:14:VAL:H	2.04	0.69
1:AA:1027:C:H2'	1:AA:1028:C:O4'	1.92	0.69
47:BO:2:ILE:HB	47:BO:33:ALA:HB3	1.75	0.69
25:B0:43:THR:O	25:B0:43:THR:CG2	2.40	0.69
7:AG:50:ILE:HG23	7:AG:58:PRO:HG3	1.74	0.69
35:BA:176:G:C2'	35:BA:177:G:C5'	2.65	0.69
1:AA:60:A:C4'	1:AA:61:G:O5'	2.40	0.69
1:AA:360:A:HO2'	1:AA:361:G:H5'	1.58	0.69
27:B2:2:LYS:HD2	27:B2:5:GLU:HG3	1.74	0.69
35:BA:806:C:OP2	48:BP:39:LYS:HG3	1.91	0.69
42:BH:3:ARG:CB	42:BH:3:ARG:NH1	2.41	0.69
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.26	0.69
26:B1:82:LEU:O	26:B1:83:GLU:CB	2.40	0.69
26:B1:45:ASN:ND2	35:BA:2090:G:H21	1.89	0.69
1:AA:1139:G:H5'	1:AA:1140:C:OP1	1.92	0.69
37:BC:80:LYS:HG3	37:BC:120:VAL:CG1	2.22	0.69
27:B2:16:LEU:CD2	27:B2:20:GLU:CG	2.45	0.69
1:AA:942:G:H2'	1:AA:943:U:C6	2.28	0.69
1:AA:688:G:C2'	1:AA:689:C:H5'	2.22	0.69
35:BA:1301:A:H2'	35:BA:1302:A:H3'	1.75	0.69
2:AB:16:HIS:CE1	2:AB:210:SER:CA	2.76	0.69
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.07	0.69
1:AA:973:G:H1'	10:AJ:55:LYS:NZ	2.07	0.69
25:B0:10:THR:C	25:B0:11:ARG:HG3	2.13	0.69
24:AY:138:LYS:HG2	61:AY:701:GCP:C5	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:84:ARG:NH2	57:BY:97:ARG:HB3	2.07	0.69
58:BZ:152:ALA:O	58:BZ:155:LEU:HD22	1.93	0.69
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.57	0.69
1:AA:1337:G:H5'	1:AA:1338:G:OP2	1.93	0.69
52:BT:32:TYR:CD2	52:BT:81:PRO:O	1.95	0.69
48:BP:115:LEU:CG	48:BP:116:GLY:H	2.05	0.69
37:BC:122:GLY:O	37:BC:127:LYS:CE	2.41	0.69
1:AA:199:G:H2'	1:AA:200:G:C8	2.28	0.69
35:BA:652:C:C2	35:BA:653:A:C8	2.81	0.69
1:AA:688:G:O2'	1:AA:689:C:C5'	2.31	0.69
35:BA:1423:G:HO2'	35:BA:1424:G:H5'	1.55	0.69
26:B1:29:GLY:C	26:B1:30:VAL:CG2	2.62	0.69
35:BA:1301:A:O2'	35:BA:1302:A:C2'	2.30	0.69
2:AB:33:TYR:HB3	2:AB:41:ILE:HG22	1.75	0.69
35:BA:1222:C:O2'	35:BA:1223:G:C5'	2.35	0.69
35:BA:2201:C:H2'	35:BA:2202:C:H6	1.57	0.69
35:BA:259:G:HO2'	35:BA:260:G:H5'	1.55	0.69
41:BG:7:LEU:HD13	41:BG:100:TRP:CE3	2.27	0.69
29:B4:7:PRO:HD3	41:BG:66:GLN:HA	1.74	0.69
1:AA:114:U:O5'	1:AA:114:U:H6	1.75	0.69
1:AA:961:U:H5'	1:AA:984:C:H1'	1.75	0.69
1:AA:1157:A:C4'	1:AA:1158:C:O5'	2.40	0.69
29:B4:66:SER:O	29:B4:67:TYR:HB2	1.93	0.69
47:BO:4:PRO:O	47:BO:5:GLN:CB	2.40	0.69
1:AA:921:U:O2'	5:AE:19:MET:O	2.11	0.69
11:AK:56:GLY:O	11:AK:89:ALA:HB1	1.92	0.69
3:AC:130:VAL:HG13	3:AC:157:ILE:HG22	1.74	0.69
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.23	0.69
24:AY:98:MET:HG2	24:AY:125:ALA:HA	1.74	0.69
1:AA:505:G:H2'	1:AA:506:G:C8	2.28	0.69
38:BD:210:GLY:O	38:BD:211:ARG:HB3	1.92	0.69
9:AI:25:LYS:O	9:AI:26:VAL:HG12	1.93	0.69
35:BA:1041:G:N2	35:BA:1114:G:H22	1.91	0.69
31:B6:25:LYS:HZ1	33:B8:34:TRP:HZ2	1.40	0.69
35:BA:860:U:C2'	35:BA:861:A:H5'	2.22	0.69
9:AI:70:LYS:O	9:AI:74:ILE:HG13	1.92	0.69
35:BA:1446:C:N4	35:BA:1465:G:N1	2.39	0.69
3:AC:83:ARG:CG	3:AC:84:ILE:H	2.05	0.69
31:B6:15:GLU:OE2	31:B6:41:PRO:HB3	1.92	0.69
48:BP:30:THR:HG22	48:BP:31:ALA:N	2.08	0.69
35:BA:465:G:H2'	35:BA:466:A:C8	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:103:ARG:HH12	50:BR:110:PRO:HD3	1.58	0.69
19:AS:88:LYS:O	19:AS:90:THR:HG22	1.92	0.69
13:AM:81:LEU:O	13:AM:86:CYS:HB3	1.92	0.69
1:AA:170:U:O2'	1:AA:171:A:H5'	1.91	0.69
35:BA:285:C:H2'	35:BA:286:C:C6	2.28	0.69
29:B4:24:THR:O	29:B4:25:TYR:CG	2.46	0.69
52:BT:30:VAL:HG12	52:BT:31:SER:HB2	1.73	0.69
48:BP:115:LEU:HG	48:BP:116:GLY:H	1.58	0.69
1:AA:698:G:H2'	1:AA:699:C:C6	2.27	0.69
35:BA:259:G:C2'	35:BA:260:G:H5'	2.22	0.69
51:BS:66:ALA:HB1	51:BS:99:LYS:HG2	1.74	0.69
58:BZ:165:VAL:CG1	58:BZ:166:SER:H	2.06	0.69
35:BA:326:G:HO2'	35:BA:327:G:H5'	1.57	0.69
49:BQ:76:LYS:HB3	49:BQ:91:GLU:CG	2.23	0.69
1:AA:539:A:H2'	1:AA:540:G:C8	2.28	0.69
44:BK:100:UNK:HA	44:BK:137:UNK:O	1.93	0.69
38:BD:76:PRO:HG2	38:BD:98:VAL:HG21	1.75	0.69
35:BA:2291:U:H2'	35:BA:2292:C:C6	2.28	0.69
35:BA:907:U:OP2	49:BQ:24:GLY:N	2.26	0.69
52:BT:29:ARG:O	52:BT:30:VAL:CG2	2.37	0.68
1:AA:593:G:C2'	1:AA:594:G:C5'	2.71	0.68
1:AA:593:G:H2'	1:AA:594:G:H5'	1.75	0.68
50:BR:2:ARG:C	50:BR:2:ARG:HD2	2.13	0.68
29:B4:14:ILE:C	29:B4:15:ILE:HD12	2.12	0.68
29:B4:22:ILE:CG2	41:BG:105:LYS:HD3	2.23	0.68
42:BH:30:LYS:HG2	42:BH:79:VAL:O	1.93	0.68
51:BS:23:ARG:HB3	51:BS:24:LEU:HD22	1.74	0.68
58:BZ:79:ARG:C	58:BZ:81:ARG:H	1.96	0.68
49:BQ:54:MET:HB3	49:BQ:64:ILE:CD1	2.23	0.68
35:BA:34:C:O5'	35:BA:34:C:H6	1.76	0.68
13:AM:65:LYS:HD3	13:AM:69:GLU:HG3	1.75	0.68
35:BA:1383:C:O5'	35:BA:1383:C:H6	1.75	0.68
1:AA:353:A:C8	1:AA:353:A:H5'	2.23	0.68
24:AY:53:ASP:HB3	24:AY:58:GLU:OE1	1.92	0.68
35:BA:262:A:H2'	35:BA:263:C:H5'	1.75	0.68
35:BA:1864:U:C2'	35:BA:1865:G:H5''	2.23	0.68
52:BT:102:ILE:HB	52:BT:110:ILE:CD1	2.22	0.68
37:BC:25:GLU:HA	37:BC:28:ARG:HD2	1.74	0.68
11:AK:82:VAL:HG11	11:AK:108:ILE:HG12	1.75	0.68
25:B0:64:ASP:O	25:B0:84:LEU:HG	1.94	0.68
35:BA:2524:G:H5'	35:BA:2524:G:H8	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:145:LEU:HD23	2:AB:149:LEU:CD2	2.22	0.68
1:AA:311:C:HO2'	1:AA:312:C:C5'	2.07	0.68
35:BA:1989:G:O2'	35:BA:1990:C:H5'	1.93	0.68
7:AG:120:ILE:O	7:AG:121:ALA:HB3	1.94	0.68
7:AG:49:ILE:HD13	7:AG:118:VAL:HA	1.76	0.68
1:AA:267:C:P	17:AQ:67:LYS:HB2	2.33	0.68
35:BA:1296:G:O2'	35:BA:1297:C:H5'	1.93	0.68
35:BA:326:G:C2'	35:BA:327:G:H5'	2.22	0.68
24:AY:153:MET:HA	24:AY:157:LEU:HD21	1.76	0.68
35:BA:2409:G:H2'	35:BA:2410:G:H8	1.57	0.68
58:BZ:81:ARG:O	58:BZ:81:ARG:HG3	1.92	0.68
35:BA:1941:C:H2'	35:BA:1942:C:H5'	1.75	0.68
13:AM:118:ALA:HB1	19:AS:88:LYS:HZ3	1.58	0.68
24:AY:246:ILE:HG23	24:AY:255:ILE:HD11	1.75	0.68
1:AA:166:G:H2'	1:AA:167:G:H8	1.56	0.68
49:BQ:21:THR:HG22	49:BQ:23:GLY:O	1.93	0.68
35:BA:248:G:N7	35:BA:250:G:N3	2.41	0.68
4:AD:3:ARG:H	4:AD:3:ARG:HD3	1.57	0.68
31:B6:11:LEU:HD13	31:B6:11:LEU:N	2.09	0.68
35:BA:1223:G:C6	35:BA:1227:G:O6	2.47	0.68
1:AA:1281:U:C5'	1:AA:1282:C:H5	1.98	0.68
48:BP:38:GLN:O	48:BP:39:LYS:HB2	1.91	0.68
1:AA:112:G:C2'	1:AA:113:G:C5'	2.67	0.68
35:BA:1054:A:C6	35:BA:1106:G:O6	2.46	0.68
35:BA:141:A:H8	35:BA:1408:C:O2'	1.73	0.68
51:BS:104:GLY:O	51:BS:106:ARG:N	2.27	0.68
52:BT:3:ARG:O	52:BT:7:ILE:HG13	1.93	0.68
35:BA:1062:G:H1	35:BA:1075:C:N4	1.91	0.68
31:B6:53:LYS:CD	31:B6:54:ILE:H	2.05	0.68
50:BR:4:LEU:O	50:BR:4:LEU:CG	2.41	0.68
39:BE:65:GLY:HA2	39:BE:70:ALA:HB2	1.76	0.68
40:BF:123:LEU:HD12	40:BF:124:LEU:H	1.58	0.68
50:BR:59:ASP:O	50:BR:60:LEU:HB3	1.94	0.68
25:B0:66:VAL:CG1	25:B0:67:VAL:N	2.57	0.68
7:AG:47:CYS:HA	7:AG:50:ILE:HG22	1.76	0.68
26:B1:25:LYS:HD3	35:BA:2396:G:O5'	1.94	0.68
57:BY:76:CYS:HG	57:BY:77:PRO:HD2	1.58	0.68
13:AM:101:GLN:HE21	13:AM:101:GLN:N	1.90	0.68
29:B4:33:VAL:O	29:B4:34:GLU:CB	2.40	0.68
35:BA:15:G:O2'	35:BA:16:G:C5'	2.36	0.68
35:BA:327:G:HO2'	35:BA:328:U:H5'	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:896:A:C1'	58:BZ:176:PRO:CG	2.69	0.68
40:BF:3:GLU:CA	40:BF:24:LEU:HG	2.24	0.68
35:BA:699:A:O2'	35:BA:700:G:H5'	1.94	0.68
24:AY:238:THR:HG22	24:AY:241:GLU:CG	2.24	0.68
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.40	0.68
58:BZ:63:ASP:HB2	58:BZ:65:GLN:HE21	1.59	0.68
48:BP:85:LEU:HD22	48:BP:117:GLU:O	1.88	0.68
2:AB:168:THR:HG21	2:AB:191:ASP:O	1.93	0.68
7:AG:125:MET:O	7:AG:128:ALA:HB3	1.93	0.68
35:BA:2009:G:C2	35:BA:2010:G:C8	2.82	0.68
35:BA:1642:G:O2'	35:BA:1643:G:H5'	1.94	0.68
41:BG:6:ALA:HB1	41:BG:105:LYS:HZ2	1.58	0.68
39:BE:34:VAL:CG2	39:BE:48:GLN:HE21	2.06	0.68
58:BZ:44:PHE:CZ	58:BZ:48:PHE:HD2	2.11	0.68
38:BD:65:ILE:HD11	38:BD:67:PHE:CD2	2.28	0.68
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.58	0.68
38:BD:166:GLN:HE21	38:BD:166:GLN:N	1.92	0.68
35:BA:697:C:O2'	35:BA:698:C:C5'	2.30	0.68
35:BA:2007:C:H2'	35:BA:2008:C:C6	2.28	0.68
1:AA:46:G:HO2'	1:AA:365:U:C1'	2.06	0.68
1:AA:1402:C:C2'	1:AA:1403:C:H5'	2.23	0.68
1:AA:1305:G:N2	1:AA:1331:G:H2'	2.09	0.68
31:B6:43:CYS:O	31:B6:44:ARG:HB2	1.92	0.68
30:B5:16:ARG:NH1	30:B5:17:ASP:OD1	2.26	0.68
1:AA:88:A:H5''	1:AA:89:C:OP1	1.93	0.68
35:BA:2208:A:H1'	35:BA:2219:G:C4	2.28	0.68
52:BT:3:ARG:HD2	52:BT:6:LEU:HB2	1.75	0.68
35:BA:2783:G:H2'	35:BA:2784:C:C6	2.28	0.68
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.28	0.68
37:BC:46:ALA:HB3	37:BC:172:ILE:CG2	2.23	0.68
12:AL:93:LEU:HB3	12:AL:96:VAL:HG21	1.76	0.68
2:AB:145:LEU:CD2	2:AB:149:LEU:HD23	2.23	0.68
35:BA:175:G:C2'	35:BA:176:G:H5'	2.23	0.68
35:BA:1821:A:O2'	35:BA:1822:G:C5'	2.39	0.68
35:BA:1461:G:C2'	35:BA:1462:C:H5'	2.24	0.68
41:BG:94:LEU:HD12	41:BG:98:ARG:HD3	1.76	0.68
7:AG:38:LEU:O	7:AG:38:LEU:HD22	1.93	0.68
49:BQ:12:GLN:CG	49:BQ:73:PRO:HD2	2.23	0.68
39:BE:69:LYS:C	39:BE:71:GLY:H	1.96	0.68
30:B5:44:THR:CG2	50:BR:101:ALA:HB2	2.23	0.68
35:BA:1887:C:H2'	35:BA:1888:G:C5'	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:38:VAL:HB	50:BR:39:PRO:HD3	1.76	0.68
52:BT:92:GLY:HA3	52:BT:120:ARG:HH21	1.59	0.68
27:B2:70:GLN:NE2	27:B2:71:ASN:N	2.42	0.68
37:BC:123:ALA:O	37:BC:127:LYS:HG2	1.94	0.68
1:AA:593:G:O2'	1:AA:594:G:C5'	2.30	0.68
41:BG:37:VAL:HG21	41:BG:99:MET:HG3	1.76	0.68
48:BP:29:LYS:HD2	48:BP:29:LYS:N	2.09	0.68
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.75	0.68
55:BW:64:MET:O	55:BW:65:LEU:HB2	1.92	0.68
35:BA:1646:C:H5''	35:BA:1647:G:C5'	2.24	0.68
25:B0:7:LEU:HB3	49:BQ:85:LYS:HG3	1.76	0.68
35:BA:1352:U:O2'	35:BA:1353:A:H5'	1.94	0.68
37:BC:57:GLN:HG3	37:BC:57:GLN:O	1.93	0.68
13:AM:108:ARG:HG3	13:AM:108:ARG:NH1	2.08	0.68
51:BS:49:VAL:HG12	51:BS:50:SER:H	1.57	0.68
52:BT:28:VAL:CG1	52:BT:29:ARG:N	2.54	0.68
1:AA:309:G:O2'	1:AA:310:G:H5'	1.94	0.68
1:AA:198:G:C6	1:AA:220:G:C6	2.80	0.68
29:B4:33:VAL:O	29:B4:34:GLU:HB2	1.94	0.68
10:AJ:54:PHE:CE1	10:AJ:55:LYS:NZ	2.56	0.68
37:BC:30:VAL:HG23	37:BC:31:LYS:N	2.09	0.68
35:BA:261:G:H2'	35:BA:262:A:H5'	1.76	0.68
31:B6:12:GLU:CB	31:B6:23:THR:HG22	2.24	0.68
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.74	0.68
1:AA:563:A:H2	12:AL:15:ARG:CZ	2.06	0.68
13:AM:118:ALA:HB1	19:AS:88:LYS:NZ	2.09	0.68
37:BC:176:VAL:HG11	37:BC:190:ILE:HD13	1.76	0.68
24:AY:169:GLY:HA3	24:AY:173:THR:O	1.93	0.68
52:BT:109:GLU:O	52:BT:112:ARG:HG2	1.94	0.68
30:B5:40:LYS:HE2	30:B5:46:CYS:HB3	1.75	0.67
35:BA:953:A:H2'	35:BA:954:G:C5'	2.13	0.67
1:AA:490:G:C4	1:AA:491:G:N7	2.62	0.67
1:AA:39:G:N7	1:AA:547:A:C8	2.62	0.67
1:AA:35:G:N2	1:AA:549:C:O2	2.17	0.67
35:BA:1415:U:O5'	35:BA:1415:U:H6	1.76	0.67
27:B2:48:HIS:C	27:B2:48:HIS:CD2	2.67	0.67
19:AS:40:ILE:HG12	19:AS:66:MET:O	1.93	0.67
31:B6:15:GLU:OE1	31:B6:18:ARG:NE	2.27	0.67
30:B5:16:ARG:HD2	30:B5:20:ARG:NH1	2.10	0.67
25:B0:62:LEU:H	25:B0:62:LEU:HD23	1.59	0.67
38:BD:241:PRO:O	38:BD:242:ARG:HB2	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:11:PRO:CB	29:B4:24:THR:HB	2.25	0.67
27:B2:70:GLN:HE21	27:B2:71:ASN:H	1.40	0.67
35:BA:967:C:O5'	35:BA:967:C:H6	1.77	0.67
35:BA:833:U:C4'	48:BP:52:GLU:N	2.56	0.67
1:AA:495:A:H4'	1:AA:496:A:OP1	1.94	0.67
1:AA:107:G:C2'	1:AA:108:G:O5'	2.40	0.67
1:AA:687:A:H4'	1:AA:688:G:O5'	1.94	0.67
57:BY:28:LYS:CB	57:BY:38:ILE:H	2.07	0.67
1:AA:1504:G:H4'	1:AA:1505:G:O4'	1.93	0.67
35:BA:2128:C:OP1	37:BC:37:LYS:HG2	1.94	0.67
46:BN:1:MET:C	46:BN:2:LYS:HE3	2.13	0.67
39:BE:24:THR:HG21	39:BE:188:VAL:CG1	2.23	0.67
54:BV:2:PHE:CD1	54:BV:2:PHE:C	2.66	0.67
3:AC:22:TRP:HZ3	3:AC:24:ALA:HB2	1.58	0.67
26:B1:41:ARG:HH12	35:BA:1365:A:H5''	1.58	0.67
26:B1:59:THR:C	26:B1:60:PHE:CD1	2.67	0.67
39:BE:197:ILE:HD11	39:BE:199:ARG:NE	2.09	0.67
35:BA:2562:U:H1'	47:BO:23:ARG:HH11	1.58	0.67
35:BA:900:A:H3'	35:BA:901:A:H8	1.58	0.67
29:B4:11:PRO:CA	29:B4:24:THR:HB	2.24	0.67
48:BP:97:PRO:O	48:BP:98:GLU:HB3	1.94	0.67
35:BA:1769:G:C5	35:BA:1984:G:C6	2.83	0.67
35:BA:1446:C:C5	35:BA:1465:G:N2	2.59	0.67
51:BS:36:TYR:HD1	51:BS:36:TYR:N	1.92	0.67
35:BA:52:A:C2'	35:BA:53:A:H5'	2.23	0.67
3:AC:16:ARG:CD	3:AC:17:ASP:H	2.07	0.67
48:BP:14:LYS:O	48:BP:15:ARG:HB2	1.94	0.67
31:B6:6:ARG:NH1	31:B6:6:ARG:HB3	2.07	0.67
33:B8:15:LYS:CD	48:BP:65:ARG:HH22	2.07	0.67
35:BA:603:A:H4'	35:BA:604:G:O5'	1.94	0.67
1:AA:61:G:O6	1:AA:107:G:C6	2.48	0.67
17:AQ:67:LYS:HA	17:AQ:70:ARG:NH1	2.08	0.67
35:BA:2007:C:C2	35:BA:2008:C:C5	2.82	0.67
26:B1:25:LYS:HD3	35:BA:2396:G:C5'	2.24	0.67
35:BA:37:C:C2'	35:BA:38:A:H5'	2.24	0.67
50:BR:2:ARG:HG3	50:BR:2:ARG:NH1	2.05	0.67
35:BA:461:C:H2'	35:BA:462:C:C5'	2.14	0.67
35:BA:2103:C:H42	35:BA:2186:G:H1	1.41	0.67
57:BY:17:SER:HB2	57:BY:71:LYS:HE2	1.75	0.67
35:BA:2657:A:H2'	35:BA:2658:C:H5'	1.76	0.67
57:BY:82:PRO:O	57:BY:96:ILE:HG13	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.25	0.67
42:BH:54:ARG:HH11	42:BH:65:HIS:CD2	2.13	0.67
3:AC:129:ALA:HB1	3:AC:132:ARG:HG3	1.76	0.67
35:BA:1028:A:H2'	35:BA:1029:A:C8	2.30	0.67
27:B2:40:SER:O	56:BX:13:LEU:CD1	2.43	0.67
6:AF:99:ALA:O	6:AF:100:ASN:HB2	1.93	0.67
40:BF:52:LYS:O	40:BF:88:VAL:HG12	1.95	0.67
1:AA:197:A:C4'	1:AA:198:G:O5'	2.34	0.67
1:AA:36:C:H2'	1:AA:37:U:C6	2.30	0.67
35:BA:1902:C:H5'	38:BD:246:PRO:HD3	1.76	0.67
41:BG:152:LEU:HD23	41:BG:152:LEU:H	1.60	0.67
35:BA:2033:A:H2'	35:BA:2035:G:OP1	1.95	0.67
37:BC:30:VAL:HG23	37:BC:31:LYS:H	1.58	0.67
14:AN:15:LYS:O	14:AN:16:PHE:O	2.13	0.67
37:BC:46:ALA:HB3	37:BC:172:ILE:HG22	1.75	0.67
1:AA:179:A:H2'	1:AA:180:U:H6	1.58	0.67
9:AI:26:VAL:CG2	9:AI:61:ALA:O	2.27	0.67
1:AA:37:U:H6	1:AA:37:U:O5'	1.78	0.67
1:AA:687:A:C4'	1:AA:688:G:O5'	2.43	0.67
35:BA:1446:C:C5	35:BA:1466:G:C2	2.83	0.67
35:BA:36:G:C2'	35:BA:37:C:H5'	2.25	0.67
13:AM:64:TRP:HD1	13:AM:66:LEU:HD11	1.59	0.67
41:BG:59:GLU:CG	41:BG:60:LEU:H	2.06	0.67
5:AE:31:LEU:CD2	5:AE:43:LEU:HD11	2.21	0.67
1:AA:792:A:C1'	1:AA:793:U:OP2	2.43	0.67
40:BF:20:LEU:H	40:BF:24:LEU:HD23	1.57	0.67
54:BV:61:VAL:HG23	54:BV:61:VAL:O	1.94	0.67
50:BR:10:LEU:HD23	50:BR:10:LEU:N	2.09	0.67
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.75	0.67
35:BA:285:C:H2'	35:BA:286:C:H6	1.60	0.67
25:B0:46:LYS:HE3	25:B0:75:LEU:O	1.92	0.67
29:B4:38:LYS:O	29:B4:38:LYS:HD2	1.95	0.67
41:BG:24:GLY:O	41:BG:25:TYR:HB2	1.95	0.67
7:AG:81:GLY:O	23:AX:13:A:P	2.52	0.67
24:AY:487:ILE:H	24:AY:487:ILE:HD13	1.59	0.67
35:BA:2469:A:H2	35:BA:2481:G:H21	1.40	0.67
42:BH:9:ILE:HG22	42:BH:10:PRO:C	2.15	0.67
33:B8:23:VAL:CG1	33:B8:46:ARG:HH11	2.07	0.67
24:AY:92:ILE:O	24:AY:96:ARG:HG2	1.95	0.67
1:AA:274:A:O2'	1:AA:275:G:C8	2.48	0.67
42:BH:143:GLN:NE2	42:BH:147:ASN:HD21	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:539:ILE:HB	24:AY:540:PRO:HD3	1.76	0.67
35:BA:1270:C:H5''	35:BA:1271:G:O5'	1.94	0.67
33:B8:29:LYS:HD3	33:B8:44:LYS:CB	2.25	0.67
7:AG:115:ARG:O	7:AG:119:ARG:HD3	1.94	0.67
35:BA:39:C:H6	35:BA:39:C:O5'	1.76	0.67
1:AA:1052:U:O4	1:AA:1200:C:C2'	2.39	0.67
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.76	0.67
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.76	0.67
35:BA:1926:U:H2'	35:BA:1927:A:C8	2.29	0.67
35:BA:1858:G:H2'	35:BA:1883:G:H22	1.60	0.67
24:AY:42:ILE:HG22	24:AY:44:GLU:H	1.60	0.67
35:BA:1358:G:O2'	35:BA:1359:A:H5''	1.94	0.67
7:AG:111:ARG:NH2	7:AG:126:ASP:OD2	2.28	0.67
1:AA:547:A:C1'	1:AA:548:G:OP2	2.40	0.67
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.76	0.67
35:BA:1773:A:C2'	35:BA:1774:C:C5'	2.62	0.67
29:B4:1:MET:O	29:B4:2:LYS:HB3	1.94	0.67
36:BB:43:C:H4'	41:BG:94:LEU:HD11	1.77	0.67
35:BA:2403:C:P	35:BA:2403:C:H3'	2.34	0.67
54:BV:52:VAL:CG1	54:BV:55:ALA:HB3	2.24	0.67
12:AL:27:LEU:O	12:AL:29:GLY:N	2.28	0.67
26:B1:82:LEU:O	26:B1:83:GLU:HG3	1.94	0.67
55:BW:36:LEU:H	55:BW:36:LEU:HD22	1.59	0.67
14:AN:15:LYS:HB3	14:AN:16:PHE:CE1	2.30	0.67
48:BP:71:VAL:CG1	48:BP:72:PRO:HD3	2.24	0.67
35:BA:893:C:H2'	35:BA:894:C:C6	2.29	0.67
35:BA:2345:G:N3	35:BA:2381:C:H2'	2.10	0.67
24:AY:423:LYS:HD3	24:AY:472:VAL:HG22	1.77	0.67
43:BJ:72:UNK:O	43:BJ:74:UNK:N	2.28	0.67
24:AY:358:MET:SD	24:AY:363:ARG:HD3	2.34	0.67
39:BE:134:ILE:C	39:BE:134:ILE:HD12	2.14	0.67
49:BQ:43:THR:OG1	49:BQ:46:GLN:HG3	1.94	0.67
35:BA:902:C:H2'	35:BA:903:C:C6	2.29	0.67
37:BC:133:GLY:C	37:BC:135:ARG:H	1.98	0.67
24:AY:26:THR:CG2	24:AY:52:MET:HG2	2.25	0.67
15:AO:68:ARG:NH1	15:AO:68:ARG:HB2	2.03	0.67
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CE2	2.30	0.67
35:BA:2157:G:H4'	35:BA:2158:A:OP2	1.95	0.67
35:BA:1331:A:O2'	35:BA:1332:G:H5''	1.95	0.67
1:AA:64:G:H4'	1:AA:65:U:O5'	1.95	0.67
55:BW:37:ARG:HH11	55:BW:37:ARG:HG3	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:19:LEU:HA	9:AI:61:ALA:HA	1.75	0.66
1:AA:116:A:C8	1:AA:116:A:OP2	2.47	0.66
35:BA:49:A:O2'	35:BA:50:U:P	2.53	0.66
1:AA:321:A:C2'	1:AA:322:C:H5'	2.24	0.66
35:BA:1770:G:C2'	35:BA:1771:C:C5'	2.73	0.66
29:B4:30:GLU:HG2	29:B4:31:ILE:N	2.08	0.66
41:BG:136:ARG:HB3	41:BG:138:GLN:OE1	1.94	0.66
1:AA:1255:G:C6	1:AA:1283:G:O6	2.48	0.66
1:AA:1490:C:H2'	1:AA:1491:G:C5'	2.09	0.66
35:BA:942:G:H5'	48:BP:35:HIS:HA	1.76	0.66
35:BA:1890:A:C2'	35:BA:1891:G:C5'	2.66	0.66
35:BA:1892:C:H2'	35:BA:1893:C:C5'	2.23	0.66
1:AA:1160:G:O6	1:AA:1181:G:O6	2.13	0.66
42:BH:149:ARG:HA	42:BH:162:ILE:CD1	2.24	0.66
35:BA:1646:C:C5'	35:BA:1647:G:C5'	2.73	0.66
3:AC:116:VAL:HG11	3:AC:202:ILE:HD11	1.77	0.66
35:BA:2552:U:O5'	35:BA:2552:U:H6	1.78	0.66
31:B6:7:ILE:CG2	31:B6:27:LYS:HZ2	2.01	0.66
7:AG:43:PHE:O	7:AG:46:ALA:HB3	1.95	0.66
35:BA:607:U:C4	35:BA:620:G:C5	2.83	0.66
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.25	0.66
13:AM:65:LYS:HB2	13:AM:69:GLU:HG2	1.77	0.66
1:AA:961:U:O2'	1:AA:962:C:C5'	2.44	0.66
35:BA:1600:C:HO2'	35:BA:1601:G:H5'	1.57	0.66
1:AA:185:A:O2'	1:AA:186:C:H5'	1.95	0.66
26:B1:82:LEU:O	26:B1:83:GLU:CG	2.43	0.66
37:BC:31:LYS:NZ	37:BC:180:SER:O	2.28	0.66
38:BD:35:LYS:C	38:BD:35:LYS:HZ2	1.99	0.66
35:BA:2117:A:O2'	35:BA:2118:U:H3'	1.95	0.66
36:BB:56:G:H5'	41:BG:27:ASN:ND2	2.10	0.66
16:AP:20:VAL:HG23	16:AP:34:GLU:O	1.93	0.66
26:B1:76:ARG:HD2	35:BA:271(R):G:OP1	1.96	0.66
35:BA:1886:C:O2'	35:BA:1887:C:H5'	1.95	0.66
3:AC:91:LEU:HB3	3:AC:99:VAL:HG21	1.77	0.66
13:AM:17:VAL:HG22	13:AM:27:LYS:HE3	1.77	0.66
35:BA:1416:G:C2	35:BA:1417:C:N3	2.64	0.66
1:AA:46:G:HO2'	1:AA:365:U:C2'	2.07	0.66
35:BA:688:U:H6	35:BA:688:U:O5'	1.78	0.66
9:AI:69:GLY:O	9:AI:73:GLN:HG3	1.94	0.66
35:BA:1019:U:HO2'	35:BA:1021:A:H2	1.40	0.66
10:AJ:43:ARG:HH11	10:AJ:43:ARG:HG3	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1799:G:C1'	35:BA:1800:C:OP2	2.43	0.66
35:BA:1105:U:O2'	35:BA:1106:G:H5'	1.95	0.66
35:BA:2334:G:H21	51:BS:18:ILE:HG12	1.60	0.66
55:BW:9:TYR:H	55:BW:102:HIS:CD2	2.11	0.66
11:AK:21:ILE:HD13	11:AK:82:VAL:HG23	1.78	0.66
35:BA:1151:G:H5''	53:BU:81:HIS:CE1	2.30	0.66
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.29	0.66
48:BP:64:LYS:O	48:BP:65:ARG:C	2.34	0.66
25:B0:25:ARG:HB2	25:B0:37:LEU:HD12	1.77	0.66
2:AB:24:TRP:CE3	2:AB:32:ILE:HD11	2.31	0.66
35:BA:1221:C:H2'	35:BA:1221(A):C:H6	1.59	0.66
41:BG:72:ARG:HA	41:BG:87:PRO:O	1.95	0.66
35:BA:741:G:H2'	35:BA:742:G:H5'	1.75	0.66
35:BA:2401:U:H2'	35:BA:2402:C:OP1	1.95	0.66
24:AY:84:THR:CG2	24:AY:85:PRO:N	2.57	0.66
39:BE:76:ARG:HG3	39:BE:195:LEU:HD22	1.76	0.66
35:BA:1412:A:H2'	35:BA:1413:G:H5'	1.76	0.66
2:AB:76:GLN:O	2:AB:77:ALA:HB2	1.94	0.66
1:AA:532:A:N1	3:AC:193:TYR:HB3	2.11	0.66
35:BA:2145:C:H5'	35:BA:2146:C:C5	2.30	0.66
2:AB:7:VAL:O	2:AB:11:LEU:HB2	1.95	0.66
37:BC:65:LEU:HB3	37:BC:189:ASN:ND2	2.11	0.66
35:BA:2195:C:O2'	35:BA:2196:C:H5'	1.96	0.66
52:BT:91:ARG:HA	52:BT:116:ALA:HA	1.78	0.66
37:BC:63:VAL:O	37:BC:161:ARG:HA	1.96	0.66
31:B6:10:LEU:HD12	33:B8:34:TRP:HB2	1.76	0.66
35:BA:650:C:C3'	35:BA:651:G:H5''	2.24	0.66
35:BA:36:G:H2'	35:BA:37:C:H5'	1.76	0.66
35:BA:607:U:C4	35:BA:620:G:C4	2.82	0.66
1:AA:1401:G:N2	1:AA:1501:C:O2	2.18	0.66
13:AM:45:VAL:HG13	13:AM:48:LEU:HD12	1.77	0.66
1:AA:1386:G:H2'	1:AA:1387:G:H5'	1.76	0.66
51:BS:14:VAL:HG12	51:BS:15:ARG:N	2.10	0.66
35:BA:1058:G:C2'	35:BA:1059:G:H5''	2.24	0.66
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.26	0.66
13:AM:27:LYS:HG3	13:AM:31:LYS:HE3	1.76	0.66
1:AA:722:A:N3	1:AA:722:A:H2'	2.08	0.66
5:AE:10:MET:SD	5:AE:10:MET:N	2.69	0.66
35:BA:2845:G:O2'	35:BA:2846:G:H5'	1.95	0.66
47:BO:66:LYS:H	47:BO:82:ASN:ND2	1.94	0.66
52:BT:16:ARG:CB	52:BT:16:ARG:HH11	2.07	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1587:A:H3'	35:BA:1588:C:H6	1.60	0.66
1:AA:774:G:C2'	1:AA:775:G:H5'	2.25	0.66
1:AA:699:C:O2'	1:AA:700:G:H5'	1.94	0.66
35:BA:1222:C:C2'	35:BA:1223:G:C5'	2.72	0.66
27:B2:42:GLY:O	27:B2:43:GLN:C	2.34	0.66
41:BG:147:ASP:O	41:BG:149:VAL:HG13	1.95	0.66
1:AA:975:A:C8	1:AA:975:A:H5'	2.28	0.66
40:BF:155:LEU:HD11	40:BF:176:LEU:HD13	1.76	0.66
1:AA:748:C:H1'	1:AA:749:C:H5	1.61	0.66
52:BT:29:ARG:C	52:BT:30:VAL:HG23	2.15	0.66
35:BA:833:U:H4'	48:BP:51:PHE:O	1.96	0.66
35:BA:2006:C:C4	35:BA:2007:C:N4	2.64	0.66
35:BA:259:G:H21	35:BA:621:A:H8	1.43	0.66
35:BA:943:U:OP1	48:BP:38:GLN:CD	2.34	0.66
36:BB:48:A:H4'	51:BS:95:HIS:HD2	1.60	0.66
1:AA:522:C:C2'	1:AA:523:A:C5'	2.74	0.66
1:AA:522:C:N4	12:AL:53:ARG:HH22	1.92	0.66
42:BH:159:GLU:OE1	42:BH:159:GLU:HA	1.96	0.66
1:AA:792:A:C4'	1:AA:793:U:O5'	2.41	0.66
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.06	0.66
35:BA:2033:A:O2'	35:BA:2034:U:P	2.54	0.66
24:AY:685:GLU:HA	24:AY:688:ILE:HD13	1.78	0.66
24:AY:44:GLU:O	24:AY:45:VAL:HG22	1.96	0.66
35:BA:1782:C:H1'	35:BA:2609:U:H5'	1.78	0.66
24:AY:228:MET:O	24:AY:231:TYR:HB3	1.96	0.66
52:BT:19:LEU:HD22	52:BT:85:LYS:HB2	1.78	0.66
35:BA:110:G:H2'	35:BA:111:A:H5'	1.76	0.66
35:BA:952:G:C6	35:BA:953:A:N7	2.64	0.66
35:BA:49:A:P	35:BA:51:G:H5'	2.36	0.66
39:BE:111:ARG:HG3	39:BE:160:TYR:CD2	2.31	0.66
41:BG:7:LEU:C	41:BG:7:LEU:HD23	2.16	0.66
1:AA:346:G:C5'	52:BT:35:LYS:HZ1	2.09	0.66
34:B9:17:ILE:HG22	34:B9:18:ARG:N	2.10	0.66
35:BA:1273:U:H5''	35:BA:1646:C:H41	1.60	0.66
24:AY:114:VAL:HG23	24:AY:152:THR:HG23	1.76	0.66
35:BA:2408:U:H2'	35:BA:2409:G:C8	2.30	0.66
35:BA:2656:U:H2'	35:BA:2657:A:H5''	1.77	0.66
14:AN:15:LYS:HB3	14:AN:16:PHE:CD1	2.30	0.66
1:AA:917:G:O2'	1:AA:918:A:H5'	1.96	0.66
35:BA:674:G:H1'	40:BF:74:ARG:HD2	1.78	0.66
24:AY:199:ILE:O	24:AY:199:ILE:HD12	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:44:VAL:HG12	42:BH:46:GLU:H	1.61	0.66
1:AA:939:G:N2	1:AA:1344:C:N3	2.42	0.66
35:BA:176:G:O2'	35:BA:177:G:C5'	2.44	0.66
35:BA:1982:C:N4	35:BA:1983:C:N4	2.44	0.66
27:B2:5:GLU:HA	27:B2:8:LYS:CD	2.25	0.66
19:AS:62:ILE:HA	19:AS:66:MET:CE	2.26	0.66
41:BG:117:PHE:CD2	41:BG:118:ARG:HD3	2.31	0.66
35:BA:2305:A:C6	41:BG:137:GLU:OE2	2.49	0.66
41:BG:39:ILE:HD11	41:BG:155:MET:CG	2.26	0.66
53:BU:85:LYS:HD3	53:BU:117:GLN:NE2	2.10	0.66
1:AA:1003:G:H2'	1:AA:1004:A:O4'	1.96	0.66
37:BC:41:THR:O	37:BC:42:VAL:HB	1.94	0.66
50:BR:87:TYR:O	50:BR:89:ASP:N	2.27	0.66
41:BG:124:SER:HB3	41:BG:131:TYR:CE1	2.31	0.66
49:BQ:1:MET:CE	49:BQ:1:MET:HA	2.26	0.66
35:BA:108:U:H2'	35:BA:109:G:H8	1.61	0.66
1:AA:1370:G:C2'	1:AA:1371:G:H5'	2.26	0.66
35:BA:1961:C:H6	35:BA:1961:C:O5'	1.79	0.66
35:BA:144:C:H2'	35:BA:145:G:C8	2.31	0.66
35:BA:271(L):U:H5''	35:BA:271(M):G:C5'	2.25	0.66
35:BA:271(M):G:H2'	35:BA:271(N):U:H5''	1.78	0.66
49:BQ:141:GLN:H	58:BZ:53:ILE:HD12	1.61	0.66
35:BA:2131:G:OP1	35:BA:2132:U:H5''	1.96	0.66
57:BY:13:VAL:HG21	57:BY:72:VAL:HB	1.77	0.66
37:BC:42:VAL:HG13	37:BC:43:GLU:N	2.10	0.66
48:BP:6:LEU:H	48:BP:6:LEU:HD23	1.60	0.66
11:AK:126:ARG:NH1	11:AK:126:ARG:HB3	2.11	0.66
1:AA:344:A:H4'	1:AA:345:C:OP2	1.94	0.66
57:BY:2:ARG:HD3	57:BY:3:VAL:HG23	1.78	0.66
52:BT:28:VAL:HG11	52:BT:46:GLU:HG3	1.76	0.65
35:BA:247:G:C2'	35:BA:248:G:O5'	2.44	0.65
37:BC:129:GLY:O	37:BC:132:LEU:N	2.29	0.65
35:BA:48:G:H2'	35:BA:49:A:H2	1.61	0.65
35:BA:2611:U:H6	35:BA:2611:U:OP2	1.79	0.65
41:BG:94:LEU:HD12	41:BG:98:ARG:HD2	1.77	0.65
35:BA:2401:U:O2'	35:BA:2402:C:P	2.54	0.65
1:AA:113:G:H2'	1:AA:114:U:C6	2.31	0.65
35:BA:2123:G:C6	35:BA:2176:A:N6	2.64	0.65
35:BA:1375:C:O2'	35:BA:1376:C:C5'	2.38	0.65
40:BF:10:PRO:HA	40:BF:127:GLU:HG2	1.78	0.65
12:AL:17:LYS:CD	12:AL:18:VAL:H	2.08	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:134:ARG:HA	49:BQ:137:TYR:HD2	1.60	0.65
35:BA:2422:A:H4'	35:BA:2423:U:OP2	1.96	0.65
35:BA:535:C:O2'	35:BA:536:A:H5'	1.96	0.65
48:BP:112:LEU:HD23	48:BP:113:LYS:N	2.11	0.65
35:BA:2356:C:C2'	35:BA:2357:U:O5'	2.43	0.65
37:BC:144:GLY:C	37:BC:161:ARG:HH21	1.99	0.65
35:BA:2392:A:H2	35:BA:2424:C:N4	1.94	0.65
35:BA:1797:C:O5'	35:BA:1797:C:H6	1.79	0.65
58:BZ:183:LEU:C	58:BZ:183:LEU:HD13	2.15	0.65
35:BA:2103:C:O2'	35:BA:2104:G:H5'	1.96	0.65
24:AY:137:ASN:ND2	24:AY:138:LYS:N	2.42	0.65
3:AC:187:ALA:HB3	3:AC:198:VAL:HB	1.77	0.65
35:BA:2134:A:C8	35:BA:2158:A:H2	2.14	0.65
10:AJ:66:ARG:HH11	10:AJ:66:ARG:HB2	1.60	0.65
24:AY:627:ARG:O	24:AY:628:ARG:HB2	1.96	0.65
12:AL:41:ARG:O	12:AL:55:VAL:O	2.14	0.65
3:AC:173:VAL:O	3:AC:173:VAL:HG13	1.94	0.65
39:BE:87:GLU:O	39:BE:89:ASP:N	2.28	0.65
47:BO:10:VAL:HG21	47:BO:16:ALA:O	1.96	0.65
37:BC:206:LYS:NZ	37:BC:206:LYS:HB3	2.12	0.65
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.61	0.65
37:BC:84:ILE:HG13	37:BC:84:ILE:O	1.95	0.65
1:AA:1195:C:H6	1:AA:1195:C:O5'	1.79	0.65
1:AA:311:C:O2'	1:AA:312:C:H5''	1.96	0.65
31:B6:9:LEU:CD1	31:B6:9:LEU:C	2.63	0.65
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	2.11	0.65
57:BY:9:LYS:O	57:BY:28:LYS:HD3	1.96	0.65
41:BG:75:LYS:HG2	41:BG:76:SER:N	2.10	0.65
33:B8:4:MET:HG2	33:B8:61:LEU:HD23	1.77	0.65
1:AA:17:U:H2'	1:AA:18:C:C6	2.30	0.65
40:BF:24:LEU:HB3	40:BF:25:PRO:CD	2.24	0.65
3:AC:123:GLN:HE22	3:AC:128:PHE:HB2	1.61	0.65
24:AY:238:THR:CG2	24:AY:241:GLU:HG2	2.24	0.65
36:BB:56:G:H4'	36:BB:57:A:O5'	1.96	0.65
42:BH:12:PRO:HD3	42:BH:76:VAL:CG1	2.26	0.65
35:BA:2777:G:H5''	35:BA:2778:A:H5'	1.77	0.65
1:AA:1116:C:H2'	1:AA:1117:G:H5'	1.75	0.65
35:BA:1990:C:H6	35:BA:1990:C:O5'	1.78	0.65
35:BA:856:C:O2'	35:BA:857:C:P	2.54	0.65
9:AI:71:SER:HA	9:AI:74:ILE:HD12	1.78	0.65
1:AA:62:U:O5'	1:AA:62:U:H6	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:702:G:C2'	35:BA:703:U:C5'	2.72	0.65
17:AQ:68:ARG:H	17:AQ:70:ARG:HH11	1.45	0.65
35:BA:1025:G:C4	35:BA:1135:C:H1'	2.31	0.65
29:B4:32:TYR:O	29:B4:33:VAL:CG1	2.35	0.65
35:BA:2308:G:H2'	35:BA:2309:A:C8	2.31	0.65
35:BA:688:U:H2'	35:BA:689:A:H5'	1.76	0.65
1:AA:1488:G:H2'	1:AA:1489:G:C8	2.31	0.65
1:AA:112:G:O2'	1:AA:113:G:C5'	2.45	0.65
1:AA:1384:C:O2'	1:AA:1385:G:H5'	1.96	0.65
25:B0:12:ASN:HB2	35:BA:2278:A:N7	2.11	0.65
1:AA:56:U:O2'	1:AA:57:G:H5'	1.97	0.65
42:BH:157:TYR:HE1	42:BH:171:LEU:HD22	1.61	0.65
24:AY:252:ASP:HB3	24:AY:254:LYS:HZ2	1.59	0.65
35:BA:1653:G:OP2	35:BA:2822:G:N1	2.30	0.65
39:BE:51:PHE:CE2	39:BE:52:LEU:HD13	2.32	0.65
3:AC:191:THR:HG22	3:AC:192:THR:N	2.12	0.65
39:BE:16:ARG:HH21	39:BE:173:VAL:HG13	1.62	0.65
35:BA:971:C:H2'	35:BA:972:G:O4'	1.95	0.65
35:BA:2653:U:H5''	35:BA:2654:A:H2'	1.78	0.65
35:BA:627:A:N6	48:BP:116:GLY:HA2	2.11	0.65
48:BP:66:GLY:O	48:BP:67:MET:HB2	1.96	0.65
1:AA:39:G:H2'	1:AA:40:C:H5'	1.78	0.65
35:BA:49:A:N6	35:BA:177:G:N3	2.44	0.65
35:BA:523:C:O2'	35:BA:524:U:C5'	2.31	0.65
35:BA:2000:G:N2	35:BA:2001:A:C5	2.65	0.65
40:BF:125:LEU:H	40:BF:125:LEU:HD23	1.61	0.65
13:AM:91:ARG:CB	13:AM:98:VAL:HG12	2.25	0.65
35:BA:743:G:O6	35:BA:755:C:N4	2.29	0.65
38:BD:43:ARG:CB	38:BD:54:ARG:HB2	2.26	0.65
35:BA:332:A:C2	35:BA:335:C:C5	2.84	0.65
35:BA:1062:G:H2'	35:BA:1063:G:C8	2.32	0.65
35:BA:155:U:C2'	35:BA:156:U:H5''	2.23	0.65
31:B6:35:GLU:H	31:B6:51:GLU:HG3	1.60	0.65
41:BG:83:ARG:N	41:BG:83:ARG:HD2	2.11	0.65
37:BC:84:ILE:O	37:BC:86:GLU:N	2.30	0.65
24:AY:282:SER:HB3	24:AY:285:ASP:OD1	1.97	0.65
40:BF:161:GLU:O	40:BF:165:ARG:HG3	1.96	0.65
12:AL:78:GLN:NE2	24:AY:444:PRO:HA	2.12	0.65
56:BX:80:ILE:O	56:BX:80:ILE:HG12	1.97	0.65
9:AI:21:PRO:HA	9:AI:58:HIS:O	1.97	0.65
15:AO:80:ALA:O	15:AO:84:LYS:HG3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1304:G:H1'	1:AA:1333:A:H61	1.62	0.65
1:AA:773:G:H2'	1:AA:774:G:C8	2.28	0.65
35:BA:1983:C:H5''	35:BA:2607:G:OP2	1.95	0.65
30:B5:51:TYR:O	30:B5:54:GLY:N	2.30	0.65
35:BA:742:G:HO2'	35:BA:743:G:H5''	1.60	0.65
39:BE:132:HIS:HA	39:BE:135:HIS:HE1	1.57	0.65
35:BA:2124:G:C2'	35:BA:2125:G:H5'	2.27	0.65
1:AA:1492:A:H1'	1:AA:1493:A:P	2.35	0.65
54:BV:25:LEU:H	54:BV:92:THR:HG21	1.61	0.65
1:AA:204:U:H2'	1:AA:204:U:O2	1.97	0.65
35:BA:459:U:O2'	35:BA:460:A:H5'	1.95	0.65
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.78	0.65
24:AY:683:VAL:O	24:AY:687:LEU:HG	1.96	0.65
18:AR:26:LEU:HD21	18:AR:42:ARG:NH2	2.12	0.65
3:AC:16:ARG:HH11	3:AC:16:ARG:HB2	1.61	0.65
24:AY:156:ARG:HH22	24:AY:666:ARG:NH1	1.93	0.65
46:BN:120:LEU:HD13	46:BN:120:LEU:O	1.96	0.65
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.12	0.65
14:AN:58:LYS:NZ	14:AN:58:LYS:HB3	2.12	0.65
1:AA:193:C:O2'	1:AA:194:C:H5'	1.95	0.65
9:AI:23:ASN:N	9:AI:60:ASP:OD1	2.29	0.65
2:AB:149:LEU:O	2:AB:151:GLY:N	2.30	0.65
33:B8:33:ASN:CG	33:B8:34:TRP:N	2.50	0.65
35:BA:1773:A:N7	35:BA:1829:A:C1'	2.60	0.65
1:AA:509:A:OP1	1:AA:509:A:C3'	2.44	0.65
41:BG:103:LEU:O	41:BG:104:GLU:HG2	1.96	0.65
41:BG:145:THR:O	41:BG:146:TYR:O	2.15	0.65
51:BS:54:LEU:HD21	51:BS:59:LYS:O	1.96	0.65
20:AT:69:GLY:O	20:AT:73:HIS:CD2	2.49	0.65
1:AA:1148:U:H2'	1:AA:1149:C:C5'	2.27	0.65
1:AA:1151:A:N3	1:AA:1152:A:N7	2.43	0.65
1:AA:1151:A:N3	1:AA:1152:A:C5	2.64	0.65
57:BY:44:ILE:HG22	57:BY:45:VAL:N	2.11	0.65
35:BA:2512:C:H2'	35:BA:2513:G:O4'	1.97	0.65
35:BA:629:G:N1	35:BA:634:C:N3	2.43	0.65
52:BT:96:ARG:HB2	52:BT:96:ARG:CZ	2.26	0.65
35:BA:1994:C:C2'	35:BA:1995:U:H5'	2.26	0.65
1:AA:1255:G:O6	1:AA:1283:G:O6	2.15	0.65
35:BA:1892:C:O5'	35:BA:1892:C:H6	1.79	0.65
51:BS:36:TYR:CD1	51:BS:36:TYR:N	2.64	0.65
35:BA:2104:G:H1'	35:BA:2105:C:P	2.36	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:52:VAL:HG11	54:BV:55:ALA:HB3	1.79	0.65
12:AL:46:LYS:O	12:AL:47:LYS:C	2.35	0.65
35:BA:769:G:H4'	35:BA:1379:A:C6	2.32	0.65
57:BY:98:VAL:HG12	57:BY:99:CYS:N	2.11	0.65
25:B0:19:LYS:HZ2	25:B0:41:ARG:HH22	1.45	0.65
13:AM:116:THR:HG22	13:AM:117:VAL:H	1.61	0.65
1:AA:179:A:H2'	1:AA:180:U:C6	2.31	0.65
3:AC:64:VAL:HG12	3:AC:66:VAL:HG23	1.77	0.65
35:BA:2145:C:H4'	35:BA:2146:C:OP1	1.96	0.65
1:AA:1005:A:H2'	1:AA:1006:C:H5'	1.79	0.65
42:BH:55:PRO:HG2	42:BH:56:SER:H	1.60	0.65
31:B6:8:LYS:HG3	31:B6:26:ASN:O	1.96	0.65
1:AA:110:C:H2'	1:AA:111:G:H5'	1.79	0.65
35:BA:28:A:H2'	35:BA:29:U:H5'	1.79	0.65
1:AA:1526:G:C2'	1:AA:1527:C:H5'	2.26	0.65
1:AA:1285:A:C4'	1:AA:1286:A:O5'	2.39	0.65
24:AY:99:ARG:HD3	24:AY:401:SER:CB	2.26	0.65
39:BE:117:MET:CE	39:BE:136:ARG:HA	2.27	0.65
35:BA:272(H):C:H2'	35:BA:272(I):U:H5''	1.79	0.65
1:AA:189(L):G:H2'	1:AA:190:U:C6	2.32	0.65
42:BH:5:GLY:N	42:BH:69:ARG:HD3	2.12	0.65
1:AA:1228:C:OP1	13:AM:115:LYS:HB2	1.96	0.65
37:BC:69:LEU:O	37:BC:178:LYS:HG3	1.97	0.65
52:BT:85:LYS:HZ3	52:BT:85:LYS:HB3	1.60	0.65
1:AA:495:A:C2'	1:AA:496:A:H2'	2.27	0.65
35:BA:856:C:C2'	35:BA:857:C:C6	2.63	0.65
7:AG:12:LEU:HD13	7:AG:24:THR:HG22	1.80	0.65
35:BA:1902:C:H4'	38:BD:244:ARG:CA	2.26	0.65
13:AM:15:VAL:HG11	13:AM:48:LEU:HD21	1.79	0.65
29:B4:7:PRO:HG2	29:B4:9:LEU:CD1	2.26	0.65
29:B4:7:PRO:HB3	41:BG:62:LEU:HG	1.78	0.65
35:BA:811:U:OP2	48:BP:33:ARG:NH1	2.30	0.65
26:B1:82:LEU:C	26:B1:83:GLU:HG3	2.17	0.65
52:BT:50:ILE:HA	52:BT:99:LEU:HD11	1.79	0.65
35:BA:267:C:O2'	35:BA:268:C:H5'	1.97	0.65
52:BT:34:VAL:HG22	52:BT:39:ARG:HB3	1.79	0.65
35:BA:2779:U:H1'	35:BA:2781:A:C5	2.32	0.65
26:B1:37:ILE:HD12	26:B1:37:ILE:C	2.17	0.65
35:BA:944:G:H5'	35:BA:945:A:O5'	1.97	0.65
6:AF:4:TYR:HD1	6:AF:92:LYS:HA	1.60	0.65
1:AA:1237:C:HO2'	1:AA:1335:C:C4'	2.07	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:83:ARG:O	3:AC:85:ARG:N	2.30	0.64
1:AA:1385:G:H2'	1:AA:1386:G:H8	1.61	0.64
2:AB:200:ILE:CD1	2:AB:200:ILE:H	2.08	0.64
48:BP:78:PRO:HA	48:BP:110:TYR:CE2	2.32	0.64
10:AJ:66:ARG:NH1	10:AJ:66:ARG:HB2	2.11	0.64
1:AA:64:G:H5'	1:AA:65:U:OP2	1.96	0.64
1:AA:738:C:H5''	6:AF:69:GLU:HB2	1.79	0.64
1:AA:838:G:H2'	1:AA:839:U:H5''	1.79	0.64
12:AL:90:VAL:HG11	12:AL:93:LEU:HD12	1.77	0.64
54:BV:67:GLY:O	54:BV:88:ARG:HD2	1.97	0.64
39:BE:97:LYS:O	39:BE:100:GLU:HG3	1.97	0.64
35:BA:2389:G:H5''	35:BA:2390:U:H5'	1.79	0.64
2:AB:178:ARG:HH22	8:AH:68:ARG:HH12	1.45	0.64
52:BT:29:ARG:NH1	52:BT:88:ILE:CD1	2.60	0.64
2:AB:82:ARG:HB2	2:AB:92:TYR:OH	1.97	0.64
37:BC:102:GLN:O	37:BC:104:ILE:HG13	1.97	0.64
37:BC:122:GLY:O	37:BC:127:LYS:HE3	1.96	0.64
1:AA:545:C:O2'	1:AA:546:G:H5'	1.98	0.64
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	1.97	0.64
35:BA:605:C:H2'	35:BA:606:U:C5'	2.27	0.64
35:BA:1992:G:H1'	35:BA:1993:U:OP2	1.96	0.64
29:B4:34:GLU:O	29:B4:36:CYS:N	2.30	0.64
42:BH:85:LYS:C	42:BH:85:LYS:HD3	2.18	0.64
53:BU:101:ARG:HH11	53:BU:101:ARG:HG3	1.61	0.64
54:BV:51:VAL:HG12	54:BV:52:VAL:N	2.12	0.64
39:BE:36:ARG:NH2	39:BE:88:GLY:HA2	2.07	0.64
24:AY:21:ILE:N	24:AY:21:ILE:HD12	2.12	0.64
24:AY:401:SER:O	24:AY:402:ILE:HG13	1.97	0.64
58:BZ:119:GLU:HG3	58:BZ:122:ARG:HH12	1.62	0.64
35:BA:271(Q):G:HO2'	35:BA:271(R):G:H8	1.45	0.64
4:AD:150:GLU:CG	4:AD:151:LYS:N	2.60	0.64
1:AA:1216:G:O2'	1:AA:1217:C:H5'	1.98	0.64
35:BA:197:A:H5'	35:BA:197:A:C8	2.32	0.64
35:BA:195:A:H5''	48:BP:46:LYS:HZ1	1.62	0.64
48:BP:58:THR:O	48:BP:61:ARG:CD	2.45	0.64
48:BP:61:ARG:C	48:BP:62:LEU:HD23	2.18	0.64
1:AA:589:C:H6	1:AA:589:C:O5'	1.79	0.64
1:AA:362:G:N2	1:AA:365:U:OP2	2.30	0.64
2:AB:218:ALA:O	2:AB:222:ILE:HG12	1.95	0.64
35:BA:36:G:H4'	35:BA:451:C:C2	2.32	0.64
24:AY:86:GLY:O	24:AY:117:GLN:CG	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:69:VAL:HB	24:AY:82:ILE:CD1	2.14	0.64
35:BA:2757:A:C2'	35:BA:2758:A:H5'	2.19	0.64
1:AA:1075:C:H2'	1:AA:1076:C:H5'	1.79	0.64
1:AA:1153:C:O2'	1:AA:1154:G:P	2.55	0.64
33:B8:52:LYS:H	33:B8:53:PRO:HD2	1.62	0.64
57:BY:42:VAL:HG21	57:BY:67:LEU:CD1	2.26	0.64
35:BA:2579:C:O3'	39:BE:131:ALA:HB2	1.97	0.64
50:BR:7:GLY:O	50:BR:8:ARG:HB2	1.97	0.64
35:BA:2469:A:C2'	35:BA:2470:G:H5'	2.27	0.64
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.32	0.64
47:BO:104:ARG:HH21	52:BT:33:LYS:HE3	1.62	0.64
37:BC:117:THR:HG21	37:BC:119:ASP:CG	2.18	0.64
2:AB:167:PRO:CG	2:AB:188:ALA:HB2	2.25	0.64
1:AA:46:G:O2'	1:AA:365:U:C2'	2.46	0.64
35:BA:1984:G:H2'	35:BA:1985:G:H5'	1.79	0.64
35:BA:1984:G:HO2'	35:BA:1985:G:H5'	1.61	0.64
1:AA:1390:U:H2'	1:AA:1391:U:H5'	1.78	0.64
19:AS:67:VAL:HB	29:B4:50:VAL:HG13	1.79	0.64
35:BA:962:G:H2'	35:BA:963:U:H5'	1.77	0.64
35:BA:2105:C:C3'	35:BA:2106:G:H5''	2.27	0.64
57:BY:17:SER:HB2	57:BY:71:LYS:NZ	2.11	0.64
35:BA:1075:C:H2'	35:BA:1076:C:C6	2.31	0.64
58:BZ:108:PRO:HB3	58:BZ:141:VAL:HG12	1.78	0.64
3:AC:129:ALA:HB3	3:AC:133:ALA:HB2	1.79	0.64
1:AA:960:U:O2'	1:AA:1223:C:H4'	1.98	0.64
1:AA:408:A:H4'	4:AD:112:VAL:HG11	1.78	0.64
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.63	0.64
21:AU:5:ASP:O	21:AU:11:GLY:HA3	1.97	0.64
6:AF:3:ARG:HB2	6:AF:3:ARG:CZ	2.25	0.64
35:BA:2360:A:HO2'	35:BA:2361:A:H5''	1.58	0.64
1:AA:39:G:C8	1:AA:498:U:N3	2.44	0.64
35:BA:49:A:O5'	35:BA:51:G:H5'	1.97	0.64
35:BA:1984:G:C2'	35:BA:1985:G:C5'	2.75	0.64
35:BA:37:C:H2'	35:BA:38:A:H8	1.63	0.64
41:BG:96:ARG:O	41:BG:99:MET:HB3	1.97	0.64
35:BA:2756:U:C1'	35:BA:2757:A:P	2.86	0.64
35:BA:1036:G:C6	35:BA:1120:G:C6	2.86	0.64
12:AL:27:LEU:CD1	12:AL:28:LYS:HG3	2.27	0.64
57:BY:17:SER:OG	57:BY:18:GLY:N	2.30	0.64
1:AA:788:U:H3	1:AA:792:A:HO2'	1.43	0.64
58:BZ:145:GLU:HG3	58:BZ:146:ILE:H	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:53:A:H2'	35:BA:54:G:C5'	2.24	0.64
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.98	0.64
24:AY:98:MET:CG	24:AY:125:ALA:HA	2.28	0.64
41:BG:131:TYR:O	41:BG:132:ASN:HB2	1.96	0.64
11:AK:97:ALA:O	11:AK:101:SER:HB3	1.97	0.64
54:BV:65:GLY:HA3	54:BV:91:TYR:CZ	2.32	0.64
39:BE:11:MET:HB2	39:BE:23:VAL:O	1.96	0.64
36:BB:13:A:O2'	36:BB:14:U:H3'	1.98	0.64
50:BR:50:HIS:NE2	50:BR:54:LEU:HD11	2.13	0.64
35:BA:1797:C:O2'	35:BA:1798:U:H5'	1.97	0.64
29:B4:33:VAL:CG1	29:B4:34:GLU:N	2.54	0.64
30:B5:16:ARG:NH2	35:BA:517:C:OP2	2.31	0.64
35:BA:325:G:H2'	35:BA:326:G:H8	1.63	0.64
39:BE:48:GLN:HE21	39:BE:78:LEU:HD22	1.62	0.64
57:BY:44:ILE:N	57:BY:44:ILE:HD12	2.12	0.64
24:AY:546:ILE:HD13	24:AY:565:VAL:HG11	1.79	0.64
3:AC:25:GLY:O	3:AC:27:LYS:N	2.31	0.64
36:BB:2:C:H2'	36:BB:3:C:H6	1.63	0.64
3:AC:11:ARG:O	3:AC:12:LEU:C	2.35	0.64
50:BR:97:VAL:O	50:BR:98:LEU:HD23	1.96	0.64
24:AY:438:PHE:CZ	24:AY:451:ILE:HG13	2.32	0.64
12:AL:86:ARG:O	12:AL:86:ARG:HG2	1.98	0.64
9:AI:4:TYR:CD2	9:AI:88:TYR:HB2	2.33	0.64
2:AB:87:ARG:NH2	2:AB:233:SER:H	1.96	0.64
35:BA:2555:U:C3'	35:BA:2556:C:H5'	2.27	0.64
35:BA:1221:C:H2'	35:BA:1221(A):C:C6	2.32	0.64
35:BA:607:U:O4	35:BA:620:G:C4	2.51	0.64
41:BG:104:GLU:HB3	41:BG:105:LYS:HE2	1.79	0.64
51:BS:66:ALA:HA	51:BS:69:VAL:CG1	2.26	0.64
35:BA:465:G:C6	35:BA:466:A:N6	2.65	0.64
1:AA:1184:G:C2'	1:AA:1185:G:H5'	2.28	0.64
35:BA:2124:G:O2'	35:BA:2125:G:H5'	1.96	0.64
1:AA:188:C:C2	1:AA:189:G:N7	2.66	0.64
35:BA:52:A:O2'	35:BA:53:A:H5'	1.97	0.64
35:BA:699:A:H2'	35:BA:700:G:C5'	2.28	0.64
26:B1:50:ARG:HA	26:B1:59:THR:HA	1.80	0.64
46:BN:57:ALA:O	46:BN:58:ASP:O	2.15	0.64
49:BQ:52:VAL:O	49:BQ:56:ARG:HB2	1.97	0.64
42:BH:98:LEU:HD12	42:BH:102:ALA:O	1.98	0.64
42:BH:136:ILE:HD12	42:BH:136:ILE:N	2.13	0.64
48:BP:81:GLN:NE2	48:BP:106:LEU:HA	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:44:ARG:NH2	35:BA:858:U:OP2	2.29	0.64
35:BA:2581:G:C5	35:BA:2610:C:N4	2.66	0.64
27:B2:2:LYS:HE3	27:B2:52:ASP:OD1	1.97	0.64
19:AS:49:ILE:O	19:AS:60:VAL:HG12	1.98	0.64
29:B4:22:ILE:HG23	41:BG:105:LYS:HD3	1.79	0.64
41:BG:144:ILE:HG23	41:BG:145:THR:N	2.12	0.64
35:BA:2123:G:N1	35:BA:2176:A:C6	2.66	0.64
40:BF:89:VAL:HG12	40:BF:90:PHE:H	1.63	0.64
1:AA:58:C:O5'	1:AA:58:C:H6	1.80	0.64
33:B8:50:LEU:C	33:B8:52:LYS:H	2.01	0.64
33:B8:52:LYS:N	33:B8:53:PRO:CD	2.60	0.64
24:AY:99:ARG:HG2	24:AY:401:SER:OG	1.97	0.64
28:B3:1:MET:HB3	28:B3:2:PRO:CD	2.22	0.64
35:BA:1701:A:H2'	35:BA:1702:G:H5'	1.80	0.64
38:BD:123:ALA:HB3	38:BD:131:LEU:HG	1.80	0.64
25:B0:53:MET:HG3	25:B0:57:PHE:HA	1.79	0.64
3:AC:11:ARG:HH11	3:AC:11:ARG:HG2	1.63	0.64
57:BY:88:LYS:NZ	57:BY:93:GLY:HA3	2.13	0.64
1:AA:710:G:OP1	6:AF:54:LYS:HE3	1.98	0.64
55:BW:90:ARG:HH11	55:BW:90:ARG:HG3	1.62	0.64
55:BW:69:LEU:HA	55:BW:108:GLY:O	1.98	0.64
35:BA:1113:U:P	42:BH:1:MET:H1	2.21	0.64
48:BP:65:ARG:CB	48:BP:68:GLN:HE22	2.06	0.64
1:AA:263:A:O2'	1:AA:264:U:H5'	1.98	0.64
35:BA:1770:G:H2'	35:BA:1771:C:C5'	2.27	0.64
35:BA:37:C:H2'	35:BA:38:A:C8	2.33	0.64
2:AB:17:PHE:CB	2:AB:44:LEU:HD11	2.24	0.64
24:AY:17:ILE:CD1	24:AY:81:ILE:CG2	2.76	0.64
35:BA:654(O):G:H2'	35:BA:654(P):C:C5	2.33	0.64
53:BU:95:LEU:C	53:BU:97:ASP:H	2.02	0.64
35:BA:1173:G:H5'	35:BA:1174:A:O5'	1.98	0.64
51:BS:24:LEU:HB3	51:BS:85:VAL:HG12	1.78	0.64
10:AJ:90:LEU:H	10:AJ:91:PRO:HD2	1.61	0.64
25:B0:69:PHE:CG	25:B0:79:VAL:HG22	2.33	0.64
24:AY:386:GLY:HA3	24:AY:402:ILE:HG12	1.77	0.64
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.18	0.64
48:BP:9:ASN:H	48:BP:10:PRO:CD	2.11	0.64
24:AY:471:LYS:O	24:AY:471:LYS:HG2	1.98	0.64
35:BA:2361:A:C2'	35:BA:2362:G:H5'	2.28	0.64
35:BA:247:G:OP2	35:BA:249:C:N4	2.30	0.64
35:BA:696:G:C2'	35:BA:697:C:H5'	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:16:CYS:HA	29:B4:33:VAL:CG2	2.26	0.64
24:AY:31:ARG:HH11	24:AY:31:ARG:HA	1.61	0.64
40:BF:3:GLU:HA	40:BF:24:LEU:CB	2.28	0.64
29:B4:56:VAL:HG22	29:B4:57:GLU:N	2.11	0.64
54:BV:19:LYS:CE	54:BV:20:LEU:H	2.11	0.64
38:BD:30:GLU:HG3	38:BD:63:ARG:NH2	2.12	0.64
35:BA:1808:U:C2'	35:BA:1809:A:H5'	2.28	0.64
47:BO:65:THR:HA	47:BO:82:ASN:HD22	1.63	0.64
40:BF:165:ARG:HH11	40:BF:165:ARG:HB3	1.64	0.64
35:BA:1847:A:H4'	35:BA:1848:A:OP1	1.97	0.64
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.33	0.64
35:BA:2567:G:H2'	35:BA:2568:C:C6	2.32	0.64
35:BA:1449:A:H5'	35:BA:1450:G:OP2	1.97	0.64
37:BC:121:MET:HA	37:BC:124:VAL:CG1	2.27	0.63
1:AA:60:A:O2'	1:AA:61:G:P	2.56	0.63
1:AA:361:G:O2'	1:AA:362:G:H5'	1.98	0.63
35:BA:2581:G:N9	35:BA:2610:C:N4	2.46	0.63
35:BA:2681:C:H5	35:BA:2725:A:N6	1.93	0.63
29:B4:34:GLU:O	29:B4:35:VAL:C	2.36	0.63
41:BG:106:LEU:O	41:BG:110:ALA:HB3	1.97	0.63
41:BG:48:GLU:CD	41:BG:49:ASP:H	2.00	0.63
41:BG:93:THR:HG22	41:BG:94:LEU:N	2.12	0.63
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.33	0.63
35:BA:2756:U:C4	35:BA:2759:G:O6	2.51	0.63
54:BV:38:LEU:C	54:BV:39:LEU:HD13	2.18	0.63
35:BA:331:A:H1'	35:BA:332:A:OP2	1.96	0.63
38:BD:108:PRO:HB3	38:BD:143:HIS:CE1	2.33	0.63
35:BA:389:G:N1	48:BP:70:GLN:HG3	2.13	0.63
34:B9:10:ILE:CD1	34:B9:34:GLN:HE22	2.10	0.63
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.80	0.63
10:AJ:65:LEU:HD13	14:AN:56:VAL:HG23	1.80	0.63
1:AA:163:C:H2'	1:AA:164:U:C6	2.33	0.63
35:BA:627:A:C4'	35:BA:628:G:OP2	2.31	0.63
35:BA:605:C:O2'	35:BA:606:U:C5'	2.33	0.63
32:B7:32:LYS:NZ	35:BA:181:A:OP1	2.32	0.63
13:AM:11:ARG:C	13:AM:13:LYS:H	2.01	0.63
41:BG:66:GLN:HE22	41:BG:94:LEU:CG	2.11	0.63
35:BA:2189:U:H2'	35:BA:2190:G:C5'	2.17	0.63
54:BV:39:LEU:CD1	54:BV:47:VAL:HG11	2.27	0.63
58:BZ:71:VAL:HG11	58:BZ:74:VAL:HG23	1.78	0.63
35:BA:2036:C:C2'	35:BA:2037:G:H5'	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:35:LYS:HZ2	38:BD:36:PRO:N	1.96	0.63
35:BA:1170:G:H1	35:BA:1179:C:N4	1.94	0.63
24:AY:431:LEU:HD11	24:AY:465:ARG:NH1	2.12	0.63
37:BC:68:GLY:N	37:BC:189:ASN:HD21	1.96	0.63
34:B9:36:GLN:HG2	35:BA:1124:C:O2'	1.99	0.63
35:BA:967:C:O2'	35:BA:968:G:H5''	1.97	0.63
33:B8:13:ARG:HD2	48:BP:61:ARG:CD	2.20	0.63
35:BA:2363:C:H2'	35:BA:2364:C:C6	2.33	0.63
35:BA:654(T):C:O2'	35:BA:654(U):A:O4'	2.16	0.63
1:AA:592:G:C2	1:AA:593:G:C8	2.86	0.63
3:AC:84:ILE:O	3:AC:86:VAL:N	2.31	0.63
35:BA:1022:G:O6	46:BN:66:LYS:HE3	1.99	0.63
24:AY:17:ILE:HD13	24:AY:81:ILE:CG2	2.29	0.63
39:BE:132:HIS:ND1	39:BE:132:HIS:O	2.30	0.63
19:AS:7:LYS:O	19:AS:7:LYS:HG2	1.98	0.63
35:BA:310:A:OP2	57:BY:17:SER:O	2.16	0.63
35:BA:1282:U:C2	35:BA:1286:A:N6	2.66	0.63
58:BZ:30:ASN:O	58:BZ:32:HIS:N	2.31	0.63
3:AC:71:ALA:HB2	3:AC:115:LEU:HD21	1.78	0.63
1:AA:190:U:N3	20:AT:105:SER:HB2	2.13	0.63
1:AA:539:A:H2'	1:AA:540:G:H8	1.64	0.63
3:AC:15:THR:HG23	3:AC:181:ASN:HA	1.80	0.63
48:BP:136:GLU:O	48:BP:139:LYS:HB2	1.98	0.63
51:BS:61:ASN:HB3	51:BS:64:GLU:HB2	1.78	0.63
54:BV:12:TYR:CD1	54:BV:12:TYR:N	2.66	0.63
47:BO:104:ARG:HH21	52:BT:33:LYS:CE	2.12	0.63
37:BC:101:ILE:C	37:BC:103:LYS:H	1.99	0.63
2:AB:19:HIS:CE1	2:AB:206:ASP:HB2	2.33	0.63
1:AA:60:A:O2'	1:AA:61:G:H5''	1.98	0.63
35:BA:702:G:O2'	35:BA:703:U:C5'	2.30	0.63
35:BA:694:U:H6	35:BA:694:U:O5'	1.80	0.63
35:BA:463:G:N2	35:BA:466:A:OP1	2.30	0.63
35:BA:2757:A:O2'	35:BA:2758:A:H5''	1.98	0.63
1:AA:1158:C:O2	1:AA:1158:C:C2'	2.47	0.63
26:B1:52:ARG:NH1	35:BA:2218:U:O2'	2.32	0.63
10:AJ:78:ASN:ND2	10:AJ:80:LYS:HB2	2.14	0.63
12:AL:123:LYS:CE	12:AL:123:LYS:H	2.11	0.63
48:BP:51:PHE:CA	48:BP:52:GLU:CB	2.70	0.63
37:BC:115:VAL:HA	37:BC:139:PRO:HB3	1.80	0.63
1:AA:942:G:N3	1:AA:943:U:C6	2.67	0.63
35:BA:1301:A:O2'	35:BA:1302:A:P	2.55	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:84:THR:CG2	24:AY:94:VAL:HG22	2.27	0.63
1:AA:973:G:H3'	1:AA:974:A:H5''	1.81	0.63
35:BA:1805:U:HO2'	35:BA:1806:C:H5'	1.61	0.63
35:BA:327:G:C2'	35:BA:328:U:O5'	2.47	0.63
35:BA:1434:A:H61	35:BA:1558:A:N6	1.95	0.63
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.12	0.63
38:BD:186:HIS:CD2	38:BD:188:GLU:H	2.16	0.63
9:AI:28:VAL:O	9:AI:29:ASN:HB2	1.99	0.63
56:BX:53:LYS:HB3	56:BX:82:GLN:HB3	1.79	0.63
25:B0:20:ARG:NH1	35:BA:2357:U:OP1	2.32	0.63
33:B8:33:ASN:CG	33:B8:34:TRP:H	2.01	0.63
35:BA:860:U:H5	35:BA:917:A:N7	1.96	0.63
35:BA:2606:C:O2'	35:BA:2607:G:C5'	2.46	0.63
35:BA:1543:C:H3'	35:BA:1544:A:C5'	2.28	0.63
35:BA:28:A:C2'	35:BA:29:U:H5'	2.28	0.63
35:BA:1223:G:N2	35:BA:1226:A:OP1	2.31	0.63
35:BA:2313:C:C4'	41:BG:40:ASN:ND2	2.60	0.63
41:BG:33:ARG:HA	41:BG:172:LEU:HD11	1.81	0.63
41:BG:38:VAL:HG13	41:BG:93:THR:HA	1.81	0.63
58:BZ:108:PRO:HG2	58:BZ:111:VAL:HG23	1.80	0.63
48:BP:78:PRO:HA	48:BP:110:TYR:HE2	1.64	0.63
3:AC:22:TRP:CZ3	3:AC:24:ALA:HB2	2.33	0.63
35:BA:1698:A:H4'	35:BA:1699:G:OP1	1.97	0.63
3:AC:180:ALA:O	3:AC:181:ASN:HB3	1.99	0.63
35:BA:1925:C:H5'	35:BA:1926:U:OP2	1.98	0.63
1:AA:1195:C:H5''	1:AA:1196:U:O5'	1.99	0.63
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.29	0.63
16:AP:45:THR:HG22	16:AP:47:ASP:N	2.14	0.63
1:AA:314:C:O5'	1:AA:314:C:H6	1.82	0.63
7:AG:121:ALA:H	7:AG:124:LEU:CD1	1.99	0.63
35:BA:1461:G:H2'	35:BA:1462:C:H5'	1.81	0.63
57:BY:28:LYS:HB2	57:BY:38:ILE:N	2.10	0.63
41:BG:65:GLY:O	41:BG:66:GLN:CB	2.46	0.63
1:AA:961:U:H1'	1:AA:962:C:C5'	2.28	0.63
35:BA:1086:A:O2'	35:BA:1103:A:N6	2.31	0.63
39:BE:48:GLN:HE22	39:BE:64:LYS:HE3	1.62	0.63
1:AA:56:U:H2'	1:AA:57:G:C8	2.33	0.63
10:AJ:22:LYS:HD2	10:AJ:90:LEU:HD22	1.80	0.63
58:BZ:79:ARG:HG3	58:BZ:80:ARG:HG2	1.81	0.63
35:BA:848:G:H2'	35:BA:849:A:C8	2.34	0.63
37:BC:44:VAL:CG2	37:BC:176:VAL:HG21	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2423:U:H5'	35:BA:2423:U:H6	1.63	0.63
9:AI:126:SER:O	9:AI:127:LYS:HB3	1.96	0.63
2:AB:25:ASN:O	2:AB:26:PRO:C	2.36	0.63
5:AE:147:ASP:HB3	5:AE:150:ARG:NH1	2.14	0.63
37:BC:158:LYS:O	37:BC:159:ALA:HB3	1.99	0.63
1:AA:491:G:O2'	1:AA:492:G:H5'	1.98	0.63
1:AA:942:G:H2'	1:AA:943:U:H6	1.63	0.63
25:B0:66:VAL:HG12	25:B0:67:VAL:N	2.13	0.63
1:AA:105:G:C5	1:AA:106:C:N4	2.67	0.63
3:AC:83:ARG:O	3:AC:84:ILE:C	2.37	0.63
29:B4:16:CYS:SG	29:B4:21:VAL:HG23	2.37	0.63
29:B4:7:PRO:HG2	29:B4:9:LEU:HD11	1.80	0.63
41:BG:144:ILE:HG23	41:BG:145:THR:H	1.62	0.63
35:BA:1890:A:C3'	35:BA:1891:G:C5'	2.77	0.63
24:AY:56:GLU:O	24:AY:57:GLN:C	2.37	0.63
37:BC:7:ARG:O	37:BC:11:LEU:HD23	1.99	0.63
38:BD:35:LYS:HB3	38:BD:35:LYS:HZ2	1.64	0.63
38:BD:142:VAL:HG23	38:BD:192:THR:C	2.19	0.63
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.29	0.63
24:AY:614:GLU:HG3	24:AY:617:MET:HE3	1.80	0.63
24:AY:96:ARG:HD3	24:AY:314:PHE:O	1.99	0.63
13:AM:108:ARG:N	13:AM:108:ARG:HD2	2.14	0.63
35:BA:1695:G:H1'	38:BD:8:PRO:O	1.98	0.63
35:BA:848:G:H5'	35:BA:848:G:H8	1.63	0.63
26:B1:34:THR:HG22	26:B1:36:GLY:H	1.63	0.63
35:BA:1839:G:H5'	35:BA:1839:G:H8	1.64	0.63
42:BH:22:GLY:O	42:BH:37:VAL:N	2.27	0.63
54:BV:5:VAL:HG23	54:BV:37:VAL:O	1.98	0.63
35:BA:2492:U:O2'	35:BA:2493:U:H5'	1.99	0.63
1:AA:313:A:H2'	1:AA:314:C:C6	2.34	0.63
37:BC:133:GLY:O	37:BC:135:ARG:N	2.32	0.63
1:AA:1348:U:C5	1:AA:1373:G:N2	2.67	0.63
57:BY:27:VAL:HB	57:BY:29:GLU:OE1	1.98	0.63
35:BA:89:G:OP1	35:BA:90:U:H2'	1.99	0.63
1:AA:1281:U:C5'	1:AA:1282:C:C5	2.77	0.63
1:AA:349:A:HO2'	1:AA:350:G:H5'	1.62	0.63
1:AA:1049:U:C1'	1:AA:1050:G:OP2	2.46	0.63
35:BA:2126:A:H1'	35:BA:2127:G:C1'	2.29	0.63
37:BC:6:LYS:HG3	37:BC:7:ARG:N	2.14	0.63
35:BA:1646:C:H5''	35:BA:1647:G:O5'	1.99	0.63
1:AA:1286:A:O2'	1:AA:1287:A:H4'	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B7:8:ASN:ND2	32:B7:11:LYS:H	1.97	0.63
3:AC:55:VAL:O	3:AC:55:VAL:HG12	1.97	0.63
36:BB:28:C:H42	36:BB:56:G:H1	1.45	0.63
48:BP:6:LEU:HD12	48:BP:9:ASN:OD1	1.99	0.63
50:BR:50:HIS:O	50:BR:54:LEU:HD12	1.99	0.63
2:AB:10:LEU:HD23	2:AB:10:LEU:C	2.19	0.63
1:AA:1320:C:H5'	1:AA:1320:C:H6	1.64	0.63
48:BP:55:ARG:HG2	48:BP:56:SER:N	2.14	0.63
35:BA:968:G:H2'	35:BA:969:U:H6	1.64	0.62
35:BA:247:G:H4'	35:BA:386:G:C5	2.34	0.62
1:AA:198:G:C2	1:AA:199:G:C5	2.88	0.62
1:AA:936:C:C2'	1:AA:937:A:C5'	2.76	0.62
13:AM:3:ARG:CZ	13:AM:7:VAL:HG13	2.29	0.62
19:AS:42:PRO:HB3	19:AS:67:VAL:CG1	2.29	0.62
53:BU:95:LEU:HD13	54:BV:4:ILE:HG23	1.80	0.62
1:AA:521:G:C2'	1:AA:522:C:C5'	2.72	0.62
20:AT:71:THR:HG22	20:AT:72:LEU:N	2.13	0.62
1:AA:1287:A:C6	1:AA:1288:A:C6	2.86	0.62
35:BA:2029:G:N1	35:BA:2033:A:P	2.71	0.62
39:BE:68:ALA:C	39:BE:70:ALA:H	2.02	0.62
25:B0:57:PHE:CD1	25:B0:57:PHE:N	2.67	0.62
35:BA:408:G:O2'	35:BA:409:C:H5'	1.99	0.62
58:BZ:18:LEU:O	58:BZ:21:ALA:HB3	1.99	0.62
1:AA:166:G:H2'	1:AA:167:G:C8	2.34	0.62
40:BF:51:THR:HB	40:BF:88:VAL:HG11	1.80	0.62
35:BA:2445:G:OP2	40:BF:74:ARG:NH2	2.32	0.62
41:BG:129:GLY:HA3	41:BG:169:ALA:HB2	1.81	0.62
47:BO:104:ARG:HE	52:BT:33:LYS:HE3	1.63	0.62
2:AB:82:ARG:HG3	2:AB:82:ARG:NH1	2.13	0.62
1:AA:200:G:H1	1:AA:217:C:H42	1.46	0.62
2:AB:204:ASN:HD22	2:AB:205:ASP:H	1.44	0.62
1:AA:61:G:C6	1:AA:107:G:C6	2.88	0.62
52:BT:98:LYS:HB3	52:BT:100:TYR:CE2	2.34	0.62
1:AA:1305:G:H5'	21:AU:4:GLY:CA	2.28	0.62
36:BB:34:U:O4	36:BB:44:G:H2'	1.99	0.62
24:AY:262:SER:OG	24:AY:265:LYS:HB2	1.98	0.62
1:AA:788:U:H2'	1:AA:789:U:H5'	1.80	0.62
35:BA:146:G:H5'	35:BA:146:G:C8	2.32	0.62
38:BD:24:ILE:CD1	38:BD:25:THR:N	2.61	0.62
28:B3:7:LYS:CG	28:B3:32:GLN:O	2.45	0.62
37:BC:29:LEU:O	37:BC:32:GLU:N	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2134:A:H5'	35:BA:2134:A:H8	1.64	0.62
28:B3:4:LEU:HD11	28:B3:44:ARG:CZ	2.29	0.62
26:B1:3:LYS:NZ	35:BA:1364:G:C8	2.65	0.62
52:BT:102:ILE:O	52:BT:106:SER:HB3	1.99	0.62
41:BG:85:GLY:O	41:BG:86:MET:HB2	1.99	0.62
42:BH:18:GLU:HG3	42:BH:25:LYS:HB2	1.81	0.62
35:BA:363(E):U:H5'	35:BA:363(F):A:OP1	1.98	0.62
25:B0:36:ILE:CG1	25:B0:36:ILE:O	2.41	0.62
37:BC:73:VAL:HG13	37:BC:74:ARG:N	2.15	0.62
31:B6:11:LEU:HD22	31:B6:11:LEU:C	2.19	0.62
1:AA:560:U:H5'	1:AA:561:U:H3'	1.80	0.62
35:BA:752:A:O2'	35:BA:753:C:OP1	2.16	0.62
9:AI:52:ALA:HB3	9:AI:95:LYS:NZ	2.13	0.62
1:AA:346:G:H5''	52:BT:35:LYS:HZ1	1.65	0.62
24:AY:25:LYS:NZ	24:AY:86:GLY:CA	2.62	0.62
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.11	0.62
51:BS:106:ARG:CB	51:BS:106:ARG:HH11	2.05	0.62
40:BF:3:GLU:HA	40:BF:24:LEU:HB3	1.80	0.62
4:AD:17:VAL:CG1	4:AD:18:LYS:N	2.54	0.62
35:BA:2130:U:O3'	35:BA:2133:A:H5'	2.00	0.62
35:BA:2822:G:O6	50:BR:4:LEU:HD22	2.00	0.62
14:AN:13:THR:N	14:AN:14:PRO:CD	2.61	0.62
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.28	0.62
52:BT:27:THR:O	52:BT:28:VAL:HG12	2.00	0.62
1:AA:495:A:C1'	1:AA:496:A:H2'	2.28	0.62
25:B0:45:PHE:HZ	25:B0:77:ARG:HH21	1.47	0.62
35:BA:48:G:O3'	35:BA:51:G:H5'	1.99	0.62
57:BY:39:VAL:O	57:BY:40:GLU:HG2	1.99	0.62
1:AA:559:A:H4'	1:AA:560:U:H5''	1.80	0.62
1:AA:863:U:C5'	1:AA:863:U:O2	2.47	0.62
54:BV:49:THR:HB	54:BV:50:PRO:CD	2.28	0.62
1:AA:1076:C:C2'	1:AA:1077:G:H5'	2.29	0.62
35:BA:1107:G:H4'	43:BJ:81:UNK:HA	1.80	0.62
28:B3:8:LEU:HD23	28:B3:53:LEU:O	2.00	0.62
38:BD:35:LYS:C	38:BD:35:LYS:HD2	2.19	0.62
35:BA:2580:U:C5'	39:BE:131:ALA:HB2	2.29	0.62
22:AV:12:U:H3	22:AV:23:A:N6	1.97	0.62
35:BA:2137:C:H2'	35:BA:2138:C:C6	2.35	0.62
42:BH:70:THR:HG22	42:BH:74:ASN:ND2	2.13	0.62
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.00	0.62
35:BA:774:A:H2	35:BA:787:U:O2'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:131:ARG:HB2	3:AC:131:ARG:HH11	1.65	0.62
46:BN:25:ARG:HH11	46:BN:25:ARG:HG3	1.65	0.62
35:BA:518:G:H4'	55:BW:18:ARG:NH1	2.15	0.62
35:BA:1902:C:C5'	38:BD:246:PRO:HD3	2.30	0.62
41:BG:104:GLU:C	41:BG:105:LYS:HE2	2.20	0.62
35:BA:2123:G:O6	35:BA:2176:A:N6	2.31	0.62
35:BA:2185:C:HO2'	35:BA:2186:G:H8	1.48	0.62
58:BZ:165:VAL:CG1	58:BZ:166:SER:N	2.61	0.62
57:BY:17:SER:HB2	57:BY:71:LYS:CE	2.29	0.62
2:AB:129:GLU:O	2:AB:130:ARG:C	2.38	0.62
24:AY:590:ILE:HG22	24:AY:594:VAL:HG23	1.82	0.62
47:BO:13:ASN:H	47:BO:13:ASN:HD22	1.46	0.62
2:AB:73:THR:HA	2:AB:94:ASN:O	2.00	0.62
55:BW:36:LEU:HD22	55:BW:36:LEU:N	2.15	0.62
1:AA:946:A:H2'	1:AA:947:G:H8	1.61	0.62
1:AA:564:C:O2'	8:AH:91:ARG:NH2	2.33	0.62
46:BN:96:GLU:CD	46:BN:96:GLU:H	2.00	0.62
35:BA:1093:G:H1'	35:BA:1099:G:H22	1.65	0.62
1:AA:505:G:H2'	1:AA:506:G:H8	1.65	0.62
35:BA:1925:C:H3'	35:BA:1926:U:C5'	2.29	0.62
47:BO:66:LYS:H	47:BO:82:ASN:HD21	1.47	0.62
40:BF:185:ASP:HA	40:BF:188:ARG:CG	2.30	0.62
56:BX:87:GLN:O	56:BX:88:LYS:HD3	1.98	0.62
35:BA:1786:A:N9	35:BA:1938:A:N6	2.47	0.62
35:BA:2581:G:C4	35:BA:2610:C:C4	2.88	0.62
41:BG:142:PRO:O	41:BG:143:GLU:C	2.37	0.62
40:BF:54:ARG:CZ	40:BF:80:ALA:HB2	2.29	0.62
40:BF:135:LYS:H	40:BF:166:ALA:HB2	1.64	0.62
1:AA:274:A:O2'	1:AA:275:G:H8	1.83	0.62
39:BE:47:VAL:HG23	39:BE:84:PHE:HB3	1.81	0.62
15:AO:53:HIS:O	15:AO:56:LEU:HB3	2.00	0.62
3:AC:130:VAL:HG13	3:AC:157:ILE:CG2	2.29	0.62
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.34	0.62
55:BW:20:VAL:CG2	55:BW:47:VAL:HG21	2.29	0.62
38:BD:276:LYS:HD3	38:BD:276:LYS:OXT	1.99	0.62
35:BA:1906:G:H3'	35:BA:1907:G:H5''	1.80	0.62
1:AA:312:C:O2'	1:AA:313:A:C5'	2.46	0.62
1:AA:942:G:N2	1:AA:943:U:C2	2.67	0.62
39:BE:111:ARG:CA	50:BR:2:ARG:HG2	2.30	0.62
27:B2:5:GLU:CA	27:B2:8:LYS:HD2	2.27	0.62
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1160:G:C6	1:AA:1181:G:O6	2.52	0.62
40:BF:10:PRO:HA	40:BF:127:GLU:HB3	1.82	0.62
4:AD:110:PHE:CD1	4:AD:110:PHE:N	2.56	0.62
24:AY:252:ASP:HB3	24:AY:254:LYS:HZ1	1.65	0.62
3:AC:25:GLY:C	3:AC:27:LYS:H	2.03	0.62
52:BT:106:SER:HA	52:BT:110:ILE:CG1	2.29	0.62
13:AM:53:VAL:CG1	13:AM:57:ARG:HH21	2.13	0.62
24:AY:100:VAL:HG21	24:AY:314:PHE:CE1	2.35	0.62
35:BA:2887:U:H2'	35:BA:2888:C:C6	2.34	0.62
53:BU:49:HIS:C	53:BU:51:LYS:H	2.03	0.62
38:BD:4:LYS:HB3	38:BD:18:VAL:HG13	1.82	0.62
35:BA:247:G:O2'	35:BA:248:G:C5'	2.47	0.62
35:BA:965:C:C2'	35:BA:966:G:H5'	2.30	0.62
1:AA:405:U:H3'	1:AA:406:G:H5'	1.82	0.62
35:BA:41:C:H42	35:BA:437:G:H1	1.47	0.62
22:AV:41:C:O2'	22:AV:42:C:C5'	2.32	0.62
13:AM:66:LEU:N	13:AM:66:LEU:HD12	2.14	0.62
35:BA:2305:A:C2	35:BA:2306:C:H1'	2.35	0.62
35:BA:1019:U:O2'	35:BA:1021:A:H2	1.82	0.62
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.13	0.62
35:BA:1806:C:HO2'	35:BA:1807:G:H5'	1.62	0.62
37:BC:11:LEU:HD12	37:BC:33:LEU:HA	1.82	0.62
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.30	0.62
42:BH:89:ILE:CD1	42:BH:94:TYR:HB3	2.29	0.62
25:B0:12:ASN:HA	25:B0:14:ARG:HH12	1.64	0.62
1:AA:1152:A:C6	1:AA:1153:C:N4	2.68	0.62
12:AL:46:LYS:O	12:AL:48:PRO:HD2	1.99	0.62
56:BX:8:ILE:N	56:BX:8:ILE:HD12	2.15	0.62
46:BN:58:ASP:O	46:BN:59:LYS:C	2.38	0.62
35:BA:389:G:N1	48:BP:71:VAL:HG12	2.15	0.62
58:BZ:17:ALA:HA	58:BZ:20:ARG:CG	2.30	0.62
2:AB:25:ASN:O	2:AB:27:LYS:N	2.33	0.62
35:BA:1932:A:H2'	35:BA:1933:G:O4'	1.99	0.62
25:B0:56:ASP:O	25:B0:58:THR:N	2.33	0.62
1:AA:92:C:H2'	1:AA:93:G:H5'	1.82	0.62
24:AY:459:LEU:HD12	24:AY:459:LEU:H	1.65	0.62
17:AQ:65:ILE:N	17:AQ:65:ILE:HD12	2.14	0.62
2:AB:87:ARG:O	2:AB:87:ARG:HG2	1.99	0.62
2:AB:91:PRO:O	2:AB:92:TYR:HB3	2.00	0.62
35:BA:833:U:H4'	48:BP:52:GLU:N	2.15	0.62
37:BC:125:GLY:O	37:BC:127:LYS:N	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:436:C:H2'	1:AA:437:U:C6	2.35	0.62
1:AA:936:C:H2'	1:AA:937:A:C8	2.32	0.62
1:AA:688:G:O6	1:AA:700:G:O6	2.17	0.62
1:AA:359:U:O2'	1:AA:360:A:C5'	2.30	0.62
35:BA:1803:A:H4'	38:BD:259:THR:HG23	1.82	0.62
35:BA:1227:G:N3	35:BA:1228:G:C8	2.68	0.62
1:AA:556:C:H2'	1:AA:557:G:C5'	2.27	0.62
35:BA:2207:G:C2'	35:BA:2208:A:H5''	2.29	0.62
35:BA:1216:G:HO2'	35:BA:1217:C:H5'	1.65	0.62
3:AC:50:ALA:HB2	3:AC:75:VAL:CB	2.29	0.62
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.29	0.62
12:AL:6:THR:H	12:AL:9:GLN:NE2	1.89	0.62
33:B8:51:ALA:N	33:B8:53:PRO:HD2	2.15	0.62
41:BG:164:GLU:HG3	41:BG:165:THR:H	1.65	0.62
56:BX:40:LYS:HG2	56:BX:51:VAL:HB	1.82	0.62
7:AG:92:SER:O	7:AG:96:GLN:HG3	2.00	0.62
29:B4:12:ALA:O	29:B4:24:THR:CG2	2.43	0.62
52:BT:28:VAL:HG13	52:BT:29:ARG:H	1.60	0.62
1:AA:775:G:C2'	1:AA:776:G:C5'	2.76	0.62
57:BY:28:LYS:HA	57:BY:39:VAL:H	1.64	0.62
35:BA:1999:C:C2'	35:BA:2000:G:C5'	2.71	0.62
27:B2:10:LEU:CD1	35:BA:78:A:OP2	2.48	0.62
1:AA:1390:U:O2'	1:AA:1391:U:H5'	1.99	0.62
31:B6:15:GLU:HG2	31:B6:18:ARG:HH11	1.65	0.62
48:BP:24:GLY:N	48:BP:33:ARG:NE	2.47	0.62
35:BA:1428:C:N4	35:BA:1570:A:OP2	2.29	0.62
1:AA:1492:A:C1'	1:AA:1493:A:OP1	2.45	0.62
10:AJ:4:ILE:CD1	10:AJ:77:PRO:HG3	2.28	0.62
39:BE:52:LEU:HD11	52:BT:1:MET:CE	2.29	0.62
35:BA:221:A:C8	35:BA:266:G:O6	2.52	0.62
35:BA:2773:C:H5''	39:BE:164:ARG:HG2	1.82	0.62
24:AY:539:ILE:O	24:AY:542:VAL:HG12	2.00	0.62
35:BA:105:C:H2'	35:BA:106:C:C6	2.34	0.62
38:BD:174:ILE:HG12	38:BD:184:LYS:HG2	1.82	0.62
52:BT:58:ASN:H	52:BT:58:ASN:ND2	1.97	0.62
35:BA:1300:U:H5''	35:BA:1301:A:C2	2.35	0.61
1:AA:861:G:O2'	1:AA:862:C:H5'	2.00	0.61
41:BG:101:ILE:HA	41:BG:105:LYS:HG2	1.82	0.61
35:BA:1141:U:H4'	35:BA:1142(A):A:O4'	2.00	0.61
51:BS:89:ARG:HG2	51:BS:92:TYR:HA	1.83	0.61
1:AA:1047:G:C2'	1:AA:1048:G:C5'	2.72	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1270:C:O2'	1:AA:1314:C:H5'	2.00	0.61
35:BA:328:U:H6	35:BA:328:U:O5'	1.82	0.61
35:BA:331:A:O2'	35:BA:332:A:P	2.58	0.61
35:BA:262:A:H2'	35:BA:263:C:C5'	2.29	0.61
54:BV:19:LYS:HB3	54:BV:94:LEU:O	2.00	0.61
32:B7:8:ASN:HD22	32:B7:9:ARG:N	1.98	0.61
49:BQ:137:TYR:HE1	58:BZ:81:ARG:NH2	1.97	0.61
3:AC:64:VAL:HB	3:AC:99:VAL:HG12	1.82	0.61
52:BT:58:ASN:HD22	52:BT:58:ASN:H	1.48	0.61
13:AM:40:ASN:HD22	13:AM:43:THR:HG23	1.64	0.61
26:B1:40:ARG:NH2	26:B1:42:GLN:HG2	2.15	0.61
25:B0:43:THR:HG22	35:BA:2331:G:O3'	1.99	0.61
7:AG:47:CYS:SG	7:AG:48:LYS:N	2.73	0.61
35:BA:1798:U:C5'	38:BD:259:THR:HG22	2.29	0.61
35:BA:1820:U:C1'	38:BD:202:LYS:HB3	2.29	0.61
41:BG:137:GLU:C	41:BG:138:GLN:HG2	2.20	0.61
41:BG:11:TYR:O	41:BG:16:ARG:HB2	2.00	0.61
41:BG:66:GLN:HE22	41:BG:94:LEU:CD2	2.13	0.61
46:BN:3:THR:HG22	46:BN:4:TYR:N	2.14	0.61
15:AO:82:ILE:HD13	15:AO:82:ILE:O	2.01	0.61
35:BA:1065:U:H2'	35:BA:1067:A:OP2	1.99	0.61
3:AC:168:ALA:O	3:AC:169:ALA:CB	2.46	0.61
35:BA:2408:U:H2'	35:BA:2409:G:H8	1.65	0.61
57:BY:81:LYS:CB	57:BY:96:ILE:HD11	2.30	0.61
28:B3:22:ALA:HB3	28:B3:50:VAL:CG1	2.29	0.61
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.35	0.61
39:BE:134:ILE:C	39:BE:134:ILE:CD1	2.68	0.61
35:BA:674:G:O2'	40:BF:74:ARG:HD3	2.00	0.61
48:BP:6:LEU:N	48:BP:6:LEU:HD23	2.14	0.61
6:AF:4:TYR:CD1	6:AF:92:LYS:HA	2.35	0.61
35:BA:12:U:O2	35:BA:2626:C:H4'	2.00	0.61
5:AE:148:VAL:HG21	8:AH:107:LEU:HD13	1.82	0.61
35:BA:548:A:H2'	35:BA:549:G:O4'	2.00	0.61
35:BA:271(A):A:H5'	35:BA:271(B):C:OP2	2.00	0.61
9:AI:18:PHE:O	9:AI:61:ALA:C	2.39	0.61
37:BC:103:LYS:HA	37:BC:103:LYS:NZ	2.15	0.61
37:BC:127:LYS:N	37:BC:127:LYS:HD3	2.15	0.61
35:BA:696:G:H2'	35:BA:697:C:H5'	1.81	0.61
1:AA:110:C:O2'	1:AA:111:G:H5'	2.00	0.61
35:BA:1460:A:O2'	35:BA:1461:G:C5'	2.48	0.61
35:BA:2712:U:O2'	35:BA:2712(A):A:P	2.58	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:33:MET:O	27:B2:37:PHE:HB2	1.99	0.61
35:BA:1599:C:O2'	35:BA:1600:C:H5'	2.01	0.61
1:AA:975:A:H4'	1:AA:976:G:C5'	2.21	0.61
1:AA:1286:A:O2'	1:AA:1287:A:H5''	1.98	0.61
1:AA:1492:A:C1'	1:AA:1493:A:P	2.88	0.61
1:AA:1151:A:C2	1:AA:1152:A:C6	2.89	0.61
52:BT:11:GLU:CD	52:BT:11:GLU:N	2.53	0.61
33:B8:50:LEU:C	33:B8:53:PRO:HD2	2.20	0.61
24:AY:127:LYS:HE3	24:AY:128:TYR:CE1	2.34	0.61
28:B3:1:MET:CB	28:B3:2:PRO:CD	2.77	0.61
24:AY:100:VAL:CG2	24:AY:329:ARG:HB2	2.29	0.61
46:BN:6:PRO:O	46:BN:7:LYS:HB3	2.00	0.61
29:B4:42:PHE:CE1	41:BG:180:PHE:HE1	2.18	0.61
1:AA:828:A:N3	2:AB:26:PRO:HG2	2.15	0.61
1:AA:77:G:H1	1:AA:92:C:N4	1.99	0.61
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.81	0.61
24:AY:535:PRO:C	24:AY:537:GLU:H	2.03	0.61
24:AY:210:ARG:HH11	24:AY:210:ARG:HG2	1.65	0.61
15:AO:54:ARG:HG2	15:AO:58:MET:HE2	1.82	0.61
15:AO:47:LYS:H	15:AO:47:LYS:HD2	1.64	0.61
35:BA:2359:C:N4	35:BA:2360:A:N6	2.49	0.61
48:BP:51:PHE:CA	48:BP:52:GLU:HB2	2.30	0.61
2:AB:228:GLY:C	2:AB:229:VAL:CG2	2.62	0.61
2:AB:15:VAL:O	2:AB:16:HIS:ND1	2.31	0.61
1:AA:1399:C:C5'	1:AA:1400:C:H3'	2.29	0.61
30:B5:55:ARG:NE	30:B5:55:ARG:HA	2.15	0.61
1:AA:961:U:OP1	1:AA:961:U:H3'	2.01	0.61
35:BA:2185:C:O2'	35:BA:2186:G:H8	1.83	0.61
42:BH:89:ILE:HB	42:BH:162:ILE:HG22	1.83	0.61
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.14	0.61
35:BA:1474:C:H2'	35:BA:1475:G:H5''	1.81	0.61
34:B9:10:ILE:HD13	34:B9:34:GLN:NE2	2.15	0.61
3:AC:191:THR:HG21	3:AC:193:TYR:CZ	2.35	0.61
2:AB:27:LYS:HD2	2:AB:193:ASP:OD1	2.00	0.61
45:BL:113:UNK:C	45:BL:115:UNK:N	2.62	0.61
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.66	0.61
5:AE:100:VAL:HG23	5:AE:107:ARG:NH2	2.15	0.61
35:BA:2062:A:H8	35:BA:2062:A:H5'	1.65	0.61
35:BA:1964:G:H4'	35:BA:1965:C:OP2	2.00	0.61
35:BA:1153:C:H2'	35:BA:1154:G:O4'	2.00	0.61
1:AA:384:G:H2'	1:AA:385:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:42:ASP:O	51:BS:43:GLU:HB3	1.99	0.61
48:BP:115:LEU:HD23	48:BP:115:LEU:C	2.21	0.61
33:B8:30:ARG:NH2	35:BA:2419:U:O4	2.34	0.61
35:BA:1227:G:C2'	35:BA:1228:G:H5'	2.29	0.61
50:BR:3:HIS:C	50:BR:5:LYS:H	2.02	0.61
41:BG:7:LEU:HD12	41:BG:104:GLU:CD	2.20	0.61
51:BS:34:HIS:HB2	51:BS:36:TYR:HE1	1.65	0.61
1:AA:1048:G:N3	1:AA:1050:G:N7	2.49	0.61
35:BA:1600:C:C2'	35:BA:1601:G:H5'	2.30	0.61
53:BU:88:ILE:O	53:BU:90:VAL:N	2.33	0.61
53:BU:91:ASP:O	53:BU:92:ARG:HB3	1.99	0.61
38:BD:248:SER:HB2	38:BD:249:PRO:CD	2.22	0.61
35:BA:2620:C:OP1	39:BE:153:GLY:N	2.34	0.61
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.14	0.61
1:AA:1124:G:O2'	1:AA:1145:C:N4	2.33	0.61
40:BF:136:THR:HG23	40:BF:170:LEU:HD21	1.82	0.61
52:BT:34:VAL:HG22	52:BT:39:ARG:CB	2.31	0.61
41:BG:129:GLY:HA3	41:BG:169:ALA:CB	2.31	0.61
35:BA:118:A:H5'	35:BA:119:A:H8	1.65	0.61
46:BN:90:MET:O	46:BN:93:THR:O	2.19	0.61
35:BA:1113:U:OP1	42:BH:1:MET:N	2.34	0.61
1:AA:936:C:O2'	1:AA:937:A:C5'	2.30	0.61
30:B5:3:LYS:HD2	35:BA:747:U:OP1	2.00	0.61
27:B2:35:LEU:O	27:B2:37:PHE:N	2.33	0.61
27:B2:2:LYS:O	27:B2:6:VAL:HG23	1.99	0.61
19:AS:22:LEU:HD13	19:AS:26:GLY:HA2	1.82	0.61
29:B4:31:ILE:HG12	29:B4:33:VAL:H	1.65	0.61
35:BA:1019:U:O2'	35:BA:1021:A:C2	2.52	0.61
35:BA:2126:A:O2'	35:BA:2127:G:P	2.59	0.61
12:AL:45:PRO:HG2	12:AL:51:ALA:H	1.63	0.61
35:BA:2130:U:H6	35:BA:2130:U:O5'	1.83	0.61
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.01	0.61
38:BD:8:PRO:HB3	38:BD:14:ARG:HB3	1.81	0.61
38:BD:134:ARG:NH1	38:BD:135:PHE:HE1	1.98	0.61
35:BA:2492:U:H2'	35:BA:2493:U:H6	1.65	0.61
35:BA:654(C):G:H2'	35:BA:654(D):G:H5'	1.82	0.61
42:BH:118:PRO:HG2	42:BH:121:ILE:HD12	1.81	0.61
42:BH:144:VAL:O	42:BH:148:ILE:HG12	2.00	0.61
24:AY:276:VAL:HA	24:AY:280:LEU:HD23	1.81	0.61
48:BP:125:VAL:O	48:BP:145:PRO:HD2	2.00	0.61
35:BA:45:C:C2	35:BA:47:C:C5	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:267:C:OP2	17:AQ:67:LYS:HD2	2.00	0.61
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.81	0.61
35:BA:622:G:O2'	35:BA:623:G:H5'	2.00	0.61
1:AA:925:G:H1'	1:AA:1502:A:C4	2.35	0.61
41:BG:7:LEU:O	41:BG:10:LYS:N	2.33	0.61
10:AJ:50:ILE:HD11	10:AJ:57:LYS:HD3	1.82	0.61
1:AA:1285:A:O2'	1:AA:1286:A:P	2.57	0.61
1:AA:1286:A:O2'	1:AA:1287:A:C4'	2.48	0.61
24:AY:252:ASP:O	24:AY:253:LEU:HB2	1.99	0.61
32:B7:12:ARG:HD3	32:B7:46:VAL:HG21	1.82	0.61
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.01	0.61
58:BZ:79:ARG:O	58:BZ:81:ARG:N	2.34	0.61
35:BA:1475:G:O2'	35:BA:1476:C:H5'	2.01	0.61
35:BA:1810:A:O5'	35:BA:1810:A:H8	1.82	0.61
24:AY:681:LYS:O	24:AY:681:LYS:HD2	1.99	0.61
56:BX:24:GLY:O	56:BX:82:GLN:HA	2.00	0.61
5:AE:147:ASP:HB3	5:AE:150:ARG:HH12	1.65	0.61
51:BS:42:ASP:C	51:BS:44:LYS:H	2.03	0.61
35:BA:2317:C:C2'	35:BA:2318:G:H5'	2.31	0.61
24:AY:5:VAL:C	24:AY:7:TYR:H	2.04	0.61
58:BZ:156:LYS:O	58:BZ:158:PRO:HD3	2.00	0.61
40:BF:108:LYS:O	40:BF:112:MET:HG3	2.01	0.61
35:BA:271(U):G:O2'	35:BA:271(V):G:H5'	2.01	0.61
36:BB:25:A:H2'	36:BB:25:A:N3	2.15	0.61
49:BQ:61:GLY:O	49:BQ:62:GLY:O	2.18	0.61
35:BA:2031:A:O2'	35:BA:2454:G:N2	2.33	0.61
37:BC:117:THR:O	37:BC:147:GLY:O	2.19	0.61
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.34	0.61
35:BA:1417:C:H2'	35:BA:1418:G:H5'	1.76	0.61
35:BA:175:G:O2'	35:BA:176:G:H5'	1.99	0.61
1:AA:590:C:O2'	1:AA:591:U:C5'	2.30	0.61
35:BA:2753:A:O2'	35:BA:2754:U:C5'	2.30	0.61
2:AB:187:LEU:O	2:AB:187:LEU:CD1	2.48	0.61
35:BA:1995:U:H3'	35:BA:1996:C:H2'	1.82	0.61
13:AM:15:VAL:HG22	13:AM:41:PRO:O	2.01	0.61
54:BV:47:VAL:HG12	54:BV:52:VAL:HB	1.82	0.61
30:B5:57:VAL:HG12	30:B5:58:LEU:N	2.12	0.61
34:B9:35:ARG:O	34:B9:36:GLN:HB2	1.99	0.61
24:AY:198:GLU:HG3	24:AY:198:GLU:O	2.00	0.61
36:BB:87:G:H2'	36:BB:88:C:H5''	1.81	0.61
1:AA:1354:C:O2'	1:AA:1355:G:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2359:C:N4	35:BA:2360:A:C6	2.68	0.61
2:AB:189:ASP:HB3	2:AB:203:GLY:O	2.01	0.61
1:AA:1305:G:N2	1:AA:1332:A:OP2	2.34	0.61
13:AM:5:ALA:HB2	13:AM:66:LEU:HD22	1.82	0.61
41:BG:118:ARG:NH1	41:BG:182:LYS:HD3	2.15	0.61
40:BF:10:PRO:HA	40:BF:127:GLU:CB	2.31	0.61
1:AA:787:A:H2'	1:AA:788:U:H5'	1.82	0.61
4:AD:33:MET:O	4:AD:37:PRO:HG3	2.00	0.61
39:BE:141:ILE:HA	39:BE:154:LYS:CE	2.30	0.61
38:BD:70:TRP:HZ3	38:BD:146:GLU:OE2	1.83	0.61
33:B8:43:GLN:O	33:B8:44:LYS:HD2	2.00	0.61
35:BA:1925:C:C3'	35:BA:1926:U:H5''	2.30	0.61
35:BA:2492:U:H2'	35:BA:2493:U:C6	2.35	0.61
35:BA:1204:A:N1	35:BA:1241:A:H2	1.98	0.61
1:AA:1457:G:OP2	1:AA:1457:G:H8	1.84	0.61
1:AA:119:A:HO2'	1:AA:120:A:P	2.23	0.61
58:BZ:183:LEU:HD13	58:BZ:184:ALA:N	2.15	0.61
35:BA:1646:C:H5''	35:BA:1647:G:H5''	1.79	0.61
38:BD:248:SER:CB	38:BD:249:PRO:HD2	2.23	0.61
1:AA:1386:G:C2'	1:AA:1387:G:H5'	2.30	0.61
39:BE:76:ARG:O	39:BE:77:ILE:O	2.19	0.61
24:AY:191:ASP:CB	24:AY:265:LYS:HG3	2.27	0.61
35:BA:2620:C:C5'	39:BE:153:GLY:HA2	2.27	0.61
1:AA:1193:G:C2'	1:AA:1194:U:H5'	2.30	0.61
24:AY:21:ILE:H	24:AY:21:ILE:CD1	2.12	0.61
50:BR:99:LYS:N	50:BR:99:LYS:HD2	2.11	0.61
12:AL:18:VAL:CG2	12:AL:19:ARG:H	2.13	0.61
35:BA:2787:C:H1'	39:BE:61:ARG:NH1	2.14	0.61
57:BY:96:ILE:CG2	57:BY:99:CYS:SG	2.89	0.61
35:BA:1181:C:O2'	35:BA:1182:A:H5'	2.00	0.61
35:BA:582:G:H2'	35:BA:583:G:C8	2.35	0.61
35:BA:1945:G:C5	35:BA:1946:U:C4	2.88	0.61
35:BA:7:G:H2'	35:BA:8:A:O4'	2.01	0.61
40:BF:183:VAL:O	40:BF:187:VAL:HG23	1.99	0.61
26:B1:89:GLU:HA	26:B1:92:LYS:HG2	1.83	0.61
8:AH:116:LYS:HD3	8:AH:127:LEU:HD12	1.82	0.61
17:AQ:68:ARG:H	17:AQ:70:ARG:NH1	1.99	0.60
35:BA:1820:U:C2	38:BD:159:ALA:O	2.54	0.60
2:AB:187:LEU:C	2:AB:187:LEU:CD2	2.61	0.60
35:BA:1445:A:H5'	35:BA:1460:A:H1'	1.83	0.60
33:B8:6:THR:HA	33:B8:61:LEU:HD11	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:34:HIS:HB3	51:BS:53:SER:CB	2.29	0.60
35:BA:1107:G:OP1	43:BJ:58:UNK:HA	2.00	0.60
1:AA:877:C:O2'	1:AA:878:G:H5'	2.01	0.60
2:AB:127:ILE:HD13	2:AB:127:ILE:O	2.01	0.60
57:BY:44:ILE:HG22	57:BY:45:VAL:H	1.64	0.60
38:BD:35:LYS:NZ	38:BD:35:LYS:CB	2.64	0.60
22:AV:45:U:O2	22:AV:45:U:C5'	2.49	0.60
58:BZ:122:ARG:HH11	58:BZ:122:ARG:HB3	1.66	0.60
13:AM:116:THR:O	13:AM:117:VAL:HB	2.01	0.60
12:AL:20:LYS:HD3	12:AL:20:LYS:N	2.16	0.60
34:B9:9:ARG:O	34:B9:14:CYS:SG	2.59	0.60
9:AI:22:GLY:N	9:AI:58:HIS:O	2.33	0.60
1:AA:957:U:H2'	1:AA:959:A:OP2	2.01	0.60
53:BU:86:ALA:HB2	53:BU:116:ALA:HB2	1.83	0.60
35:BA:1709:U:H2'	35:BA:1710:C:C6	2.36	0.60
9:AI:27:THR:HA	9:AI:31:GLN:O	2.01	0.60
35:BA:1048:A:N6	42:BH:1:MET:HE1	2.15	0.60
33:B8:32:LEU:CB	33:B8:36:LYS:NZ	2.64	0.60
7:AG:22:LEU:HD21	7:AG:101:LEU:HD11	1.82	0.60
1:AA:688:G:N1	1:AA:700:G:C5	2.68	0.60
1:AA:358:U:H2'	1:AA:359:U:C6	2.36	0.60
58:BZ:183:LEU:HD11	58:BZ:186:GLU:N	2.16	0.60
58:BZ:128:VAL:CG2	58:BZ:129:SER:H	2.08	0.60
24:AY:31:ARG:HH12	24:AY:34:TYR:HB3	1.67	0.60
24:AY:201:ILE:CD1	24:AY:201:ILE:H	2.08	0.60
35:BA:896:A:H1'	58:BZ:176:PRO:CB	2.30	0.60
35:BA:261:G:C2'	35:BA:262:A:H5'	2.30	0.60
37:BC:53:ARG:H	37:BC:53:ARG:HD3	1.65	0.60
35:BA:271(Q):G:O2'	35:BA:271(R):G:H8	1.84	0.60
35:BA:1403:C:H5''	35:BA:1471:A:C1'	2.31	0.60
1:AA:874:G:C6	1:AA:875:C:C4	2.89	0.60
51:BS:63:THR:O	51:BS:67:ARG:HG3	2.01	0.60
5:AE:100:VAL:HG23	5:AE:107:ARG:HH21	1.65	0.60
40:BF:42:ALA:O	40:BF:45:ARG:HG3	2.01	0.60
33:B8:27:THR:HG22	48:BP:62:LEU:HD22	1.82	0.60
35:BA:2356:C:H2'	35:BA:2357:U:O5'	2.00	0.60
33:B8:30:ARG:CZ	35:BA:2419:U:O4	2.49	0.60
26:B1:25:LYS:HD3	35:BA:2396:G:H5'	1.82	0.60
35:BA:31:C:O2'	35:BA:32:C:H5''	2.00	0.60
1:AA:1305:G:H1'	1:AA:1332:A:N6	2.16	0.60
41:BG:7:LEU:HD12	41:BG:104:GLU:CG	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1281:U:OP2	1:AA:1282:C:N4	2.34	0.60
35:BA:2405:G:H8	35:BA:2405:G:O5'	1.85	0.60
52:BT:35:LYS:HE2	52:BT:41:ARG:HD2	1.82	0.60
35:BA:1348:G:H2'	35:BA:1349:A:H5''	1.83	0.60
32:B7:37:LYS:HE2	35:BA:469:G:O6	2.01	0.60
1:AA:1385:G:H2'	1:AA:1386:G:C8	2.36	0.60
25:B0:21:LEU:CD1	25:B0:41:ARG:HG2	2.31	0.60
39:BE:69:LYS:HE2	39:BE:69:LYS:N	2.15	0.60
38:BD:68:LYS:HG3	38:BD:68:LYS:O	2.01	0.60
1:AA:501:C:H2'	1:AA:502:G:H8	1.66	0.60
2:AB:27:LYS:O	2:AB:29:ALA:N	2.32	0.60
1:AA:189(H):G:O2'	1:AA:189(I):G:H8	1.83	0.60
40:BF:116:ASP:OD2	48:BP:5:ASP:N	2.34	0.60
1:AA:313:A:O2'	1:AA:314:C:H5'	2.01	0.60
37:BC:121:MET:SD	37:BC:124:VAL:HG11	2.41	0.60
1:AA:199:G:H2'	1:AA:200:G:H8	1.66	0.60
31:B6:10:LEU:HD23	31:B6:10:LEU:N	2.06	0.60
1:AA:937:A:O2'	1:AA:938:A:H5'	2.00	0.60
35:BA:1820:U:C4'	35:BA:1821:A:OP2	2.40	0.60
35:BA:1446:C:H5	35:BA:1466:G:N3	1.99	0.60
35:BA:1528(A):A:N6	35:BA:1541:G:N2	2.45	0.60
9:AI:95:LYS:O	9:AI:98:PRO:HD2	2.00	0.60
35:BA:1894:C:O5'	35:BA:1894:C:H6	1.85	0.60
1:AA:1488:G:H2'	1:AA:1489:G:H8	1.66	0.60
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.65	0.60
40:BF:84:VAL:HG23	40:BF:85:GLY:N	2.16	0.60
35:BA:141:A:C8	35:BA:1408:C:O2'	2.52	0.60
58:BZ:130:PRO:O	58:BZ:133:ILE:HG12	2.01	0.60
10:AJ:89:ASP:HB3	10:AJ:91:PRO:CD	2.31	0.60
40:BF:3:GLU:HB2	40:BF:24:LEU:HG	1.84	0.60
3:AC:118:GLN:O	3:AC:120:VAL:N	2.34	0.60
38:BD:30:GLU:CG	38:BD:63:ARG:NH2	2.64	0.60
37:BC:214:TYR:CE2	37:BC:224:ARG:HG2	2.37	0.60
50:BR:97:VAL:HA	50:BR:113:LEU:O	2.02	0.60
48:BP:122:PRO:HA	48:BP:141:ALA:O	2.01	0.60
38:BD:186:HIS:HD2	38:BD:188:GLU:H	1.50	0.60
35:BA:2298:A:H62	35:BA:2318:G:H8	1.47	0.60
37:BC:80:LYS:HE2	37:BC:99:GLU:HG2	1.84	0.60
35:BA:1821:A:C2'	35:BA:1822:G:C5'	2.68	0.60
35:BA:1769:G:C2'	35:BA:1770:G:H5'	2.31	0.60
35:BA:37:C:HO2'	35:BA:38:A:H5'	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:17:PHE:O	2:AB:17:PHE:HD1	1.83	0.60
35:BA:1225:G:O2'	35:BA:1226:A:H5'	2.02	0.60
19:AS:64:GLU:HB2	29:B4:48:ARG:NH2	2.16	0.60
29:B4:14:ILE:O	29:B4:15:ILE:C	2.39	0.60
41:BG:182:LYS:HD2	41:BG:182:LYS:OXT	2.02	0.60
38:BD:232:PRO:HD2	38:BD:249:PRO:HA	1.83	0.60
10:AJ:89:ASP:HB3	10:AJ:91:PRO:HD2	1.84	0.60
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.16	0.60
15:AO:26:GLU:OE2	15:AO:77:ARG:HD2	2.01	0.60
11:AK:82:VAL:CG1	11:AK:108:ILE:HG12	2.31	0.60
27:B2:40:SER:O	56:BX:13:LEU:HD11	2.02	0.60
39:BE:134:ILE:O	39:BE:134:ILE:CD1	2.48	0.60
1:AA:1108:G:H5'	3:AC:176:HIS:CD2	2.35	0.60
20:AT:96:GLY:O	20:AT:97:ALA:HB3	2.00	0.60
48:BP:85:LEU:HD23	48:BP:117:GLU:O	1.91	0.60
1:AA:328:C:H4'	1:AA:329:A:H5'	1.82	0.60
1:AA:265:G:H2'	1:AA:266:G:C5'	2.18	0.60
35:BA:1422:G:C6	35:BA:1423:G:C6	2.90	0.60
29:B4:6:HIS:CE1	41:BG:66:GLN:HB2	2.37	0.60
51:BS:97:ARG:O	51:BS:99:LYS:HG3	2.01	0.60
1:AA:1158:C:O2	1:AA:1181:G:N2	2.34	0.60
35:BA:1067:A:H5''	35:BA:1068:G:C5'	2.28	0.60
40:BF:132:VAL:HG13	40:BF:133:ASN:ND2	2.16	0.60
46:BN:12:ARG:NH2	46:BN:135:PRO:HG2	2.13	0.60
35:BA:1864:U:H2'	35:BA:1865:G:H5''	1.83	0.60
1:AA:563:A:O2'	1:AA:566:G:O3'	2.19	0.60
58:BZ:17:ALA:O	58:BZ:20:ARG:HG2	2.00	0.60
24:AY:8:ASP:O	24:AY:9:LEU:HB3	1.99	0.60
1:AA:167:G:O2'	1:AA:168:G:H5'	2.02	0.60
39:BE:134:ILE:O	39:BE:134:ILE:HD13	2.02	0.60
2:AB:106:LYS:O	2:AB:110:GLN:HB3	2.02	0.60
35:BA:947:G:H2'	35:BA:948:G:C8	2.36	0.60
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.02	0.60
37:BC:121:MET:CE	37:BC:139:PRO:O	2.49	0.60
1:AA:490:G:C2'	1:AA:491:G:C5'	2.80	0.60
1:AA:545:C:C3'	1:AA:546:G:H5'	2.32	0.60
35:BA:652:C:C6	35:BA:653:A:N7	2.70	0.60
35:BA:654(A):G:H2'	35:BA:654(B):C:H5'	1.83	0.60
1:AA:328:C:O2	1:AA:328:C:H2'	2.01	0.60
35:BA:258:G:O2'	35:BA:259:G:H5'	2.01	0.60
29:B4:38:LYS:HD2	29:B4:38:LYS:C	2.22	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:103:LEU:HD11	41:BG:107:LEU:HG	1.84	0.60
41:BG:88:ILE:O	41:BG:88:ILE:HG22	2.02	0.60
35:BA:15:G:C2'	35:BA:16:G:C5'	2.69	0.60
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.34	0.60
1:AA:796:C:H2'	1:AA:797:C:H6	1.67	0.60
57:BY:101:LYS:CG	57:BY:102:CYS:N	2.56	0.60
3:AC:124:ILE:HD11	3:AC:196:LEU:HG	1.84	0.60
50:BR:99:LYS:CD	50:BR:99:LYS:H	2.08	0.60
24:AY:227:ILE:HG23	24:AY:237:PRO:CG	2.30	0.60
56:BX:8:ILE:H	56:BX:8:ILE:HD12	1.66	0.60
10:AJ:78:ASN:HD22	10:AJ:80:LYS:N	1.95	0.60
10:AJ:80:LYS:HB3	10:AJ:80:LYS:NZ	2.16	0.60
35:BA:2808:U:O2'	35:BA:2809:A:H5'	2.01	0.60
1:AA:1321:C:H5''	1:AA:1322:C:C5'	2.32	0.60
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.66	0.60
37:BC:68:GLY:H	37:BC:189:ASN:HD21	1.47	0.60
35:BA:2653:U:H5'	35:BA:2654:A:OP1	2.02	0.60
25:B0:4:LYS:HD3	35:BA:2252:G:O6	2.01	0.60
1:AA:755:G:OP2	15:AO:65:ARG:HD2	2.02	0.60
48:BP:146:VAL:HG13	48:BP:147:LEU:N	2.17	0.60
1:AA:936:C:O5'	1:AA:936:C:H6	1.85	0.60
25:B0:27:GLU:OE1	25:B0:27:GLU:N	2.34	0.60
26:B1:29:GLY:HA3	35:BA:2396:G:HO2'	1.63	0.60
27:B2:35:LEU:O	27:B2:38:GLN:N	2.32	0.60
13:AM:23:TYR:HE2	13:AM:70:LEU:HD22	1.67	0.60
1:AA:1179:A:C2'	1:AA:1180:A:C5'	2.79	0.60
42:BH:83:TYR:HB3	42:BH:135:GLY:N	2.17	0.60
1:AA:89:C:O2	1:AA:89:C:H2'	2.00	0.60
42:BH:153:LYS:HG3	42:BH:154:PRO:HD2	1.83	0.60
42:BH:89:ILE:HD13	42:BH:94:TYR:HB3	1.83	0.60
1:AA:979:C:C3'	1:AA:980:C:H5''	2.32	0.60
1:AA:1387:G:C6	1:AA:1388:C:N4	2.69	0.60
1:AA:1286:A:C2	21:AU:18:TYR:OH	2.54	0.60
1:AA:1154:G:C2'	1:AA:1155:G:H5'	2.31	0.60
35:BA:676:A:H8	35:BA:2069:G:N2	1.86	0.60
26:B1:90:ILE:O	26:B1:94:LEU:HD13	2.01	0.60
35:BA:2633:G:H1'	39:BE:61:ARG:HD2	1.84	0.60
56:BX:8:ILE:CD1	56:BX:42:ALA:HB1	2.30	0.60
35:BA:1865:G:C8	35:BA:1865:G:H5'	2.31	0.60
49:BQ:56:ARG:HH11	49:BQ:56:ARG:CG	2.15	0.60
35:BA:2682:U:H6	35:BA:2682:U:H5'	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:9:GLN:O	15:AO:13:GLN:HG3	2.01	0.60
32:B7:10:ARG:O	32:B7:14:LYS:HG2	2.02	0.60
35:BA:274:G:OP2	35:BA:274:G:H3'	2.00	0.60
33:B8:25:MET:HG3	48:BP:64:LYS:HD3	1.84	0.60
7:AG:49:ILE:HD12	7:AG:121:ALA:HB3	1.84	0.60
1:AA:109:A:N6	1:AA:326:G:C6	2.69	0.60
35:BA:1819:A:OP1	38:BD:158:ALA:CB	2.49	0.60
35:BA:1797:C:O2'	38:BD:259:THR:CG2	2.50	0.60
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.83	0.60
29:B4:28:LYS:HE3	41:BG:145:THR:OG1	2.00	0.60
31:B6:15:GLU:O	31:B6:17:LYS:N	2.31	0.60
35:BA:1119:C:H2'	35:BA:1120:G:H8	1.67	0.60
3:AC:50:ALA:CB	3:AC:75:VAL:HB	2.31	0.60
1:AA:1285:A:O4'	1:AA:1286:A:C8	2.55	0.60
33:B8:50:LEU:O	33:B8:51:ALA:HB3	2.02	0.60
24:AY:99:ARG:NH1	24:AY:402:ILE:N	2.46	0.60
35:BA:2409:G:C2'	35:BA:2410:G:H5'	2.31	0.60
54:BV:15:GLU:O	54:BV:18:LEU:HD13	2.02	0.60
26:B1:41:ARG:NH2	35:BA:1365:A:OP2	2.34	0.60
36:BB:56:G:C5'	41:BG:27:ASN:ND2	2.65	0.60
35:BA:221:A:C5	35:BA:266:G:N7	2.70	0.60
8:AH:116:LYS:HD2	8:AH:129:VAL:HG11	1.84	0.60
38:BD:28:GLU:HB2	38:BD:29:PRO:CD	2.32	0.60
1:AA:1037:C:H2'	1:AA:1038:C:C2	2.36	0.60
53:BU:106:PHE:O	53:BU:109:LEU:HB2	2.01	0.60
40:BF:164:ARG:HH11	40:BF:164:ARG:HG2	1.67	0.60
24:AY:293:THR:HB	24:AY:294:PRO:HD2	1.82	0.60
16:AP:58:TYR:O	16:AP:62:VAL:HG22	2.01	0.60
24:AY:61:ARG:HB3	35:BA:2663:G:OP2	2.02	0.60
35:BA:1113:U:H2'	35:BA:1114:G:C8	2.37	0.60
27:B2:16:LEU:HD22	27:B2:20:GLU:CB	2.29	0.60
1:AA:198:G:N1	1:AA:220:G:C4	2.69	0.60
1:AA:197:A:C6	1:AA:221:C:C5'	2.85	0.60
1:AA:438:G:O2'	1:AA:494:U:O4	2.19	0.60
35:BA:654(V):A:OP2	35:BA:655:A:H3'	2.02	0.60
35:BA:1297:C:H2'	35:BA:1298:C:C6	2.37	0.60
29:B4:2:LYS:CE	29:B4:5:ILE:HB	2.19	0.60
35:BA:886:C:H3'	35:BA:887:A:H5''	1.83	0.60
35:BA:2127:G:C2'	35:BA:2128:C:C5'	2.79	0.60
36:BB:21:G:H2'	36:BB:22:U:O4'	2.01	0.60
35:BA:995:C:C2	46:BN:1:MET:HG2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2580:U:H4'	39:BE:130:GLY:CA	2.32	0.60
57:BY:73:ARG:NH2	57:BY:82:PRO:HD3	2.16	0.60
35:BA:1925:C:C4	35:BA:1926:U:C5	2.90	0.60
50:BR:84:ALA:HB3	50:BR:85:PRO:HD3	1.82	0.60
52:BT:39:ARG:HD2	52:BT:39:ARG:H	1.67	0.60
57:BY:88:LYS:HZ1	57:BY:93:GLY:HA3	1.66	0.60
35:BA:1837:C:H2'	35:BA:1838:C:H5''	1.82	0.60
39:BE:167:VAL:HG22	39:BE:170:LEU:HD11	1.83	0.60
49:BQ:70:PRO:HA	49:BQ:94:VAL:O	2.01	0.60
35:BA:644:A:C2	35:BA:2369:A:H1'	2.36	0.60
16:AP:66:PRO:HD2	16:AP:71:ARG:HH12	1.67	0.60
34:B9:19:ARG:NH1	35:BA:2755:C:C4	2.70	0.60
26:B1:21:ARG:HG2	26:B1:22:GLY:N	2.16	0.60
37:BC:121:MET:SD	37:BC:124:VAL:CG1	2.89	0.59
33:B8:32:LEU:CD2	35:BA:2392:A:OP1	2.49	0.59
7:AG:47:CYS:O	7:AG:51:GLN:N	2.35	0.59
1:AA:592:G:C2	1:AA:593:G:N7	2.70	0.59
35:BA:1264:G:H2'	35:BA:2014:A:N6	2.16	0.59
2:AB:41:ILE:CG2	2:AB:41:ILE:O	2.50	0.59
35:BA:61:G:H1	35:BA:94:C:H42	1.49	0.59
1:AA:1306:A:C2'	1:AA:1307:U:H5'	2.32	0.59
41:BG:59:GLU:O	41:BG:63:ILE:HG23	2.02	0.59
42:BH:85:LYS:CE	42:BH:145:ALA:HB1	2.32	0.59
35:BA:2128:C:H1'	35:BA:2129:C:H5''	1.83	0.59
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.37	0.59
35:BA:1106:G:C2'	35:BA:1107:G:C5'	2.78	0.59
35:BA:1106:G:HO2'	35:BA:1107:G:H5'	1.66	0.59
25:B0:50:ASN:HB3	25:B0:63:VAL:HG22	1.83	0.59
24:AY:526:VAL:CG1	24:AY:566:THR:HG23	2.32	0.59
39:BE:37:ARG:HA	39:BE:42:ASP:OD2	2.02	0.59
42:BH:143:GLN:HE22	42:BH:147:ASN:HD21	1.48	0.59
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.01	0.59
41:BG:159:VAL:O	41:BG:159:VAL:HG13	2.03	0.59
24:AY:554:PRO:HG2	24:AY:555:LEU:H	1.66	0.59
6:AF:19:LEU:HD23	6:AF:19:LEU:C	2.23	0.59
35:BA:784:A:C5	38:BD:229:VAL:HG21	2.37	0.59
30:B5:7:PRO:HG2	35:BA:2016:U:O2	2.02	0.59
1:AA:639:G:O2'	1:AA:640:A:H5'	2.02	0.59
39:BE:44:TYR:O	39:BE:45:THR:HB	2.02	0.59
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.83	0.59
37:BC:103:LYS:HZ1	37:BC:103:LYS:HA	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:49:ILE:CD1	7:AG:121:ALA:HB3	2.32	0.59
35:BA:176:G:H2'	35:BA:177:G:C5'	2.22	0.59
35:BA:49:A:H5''	35:BA:51:G:C4'	2.32	0.59
27:B2:44:LEU:HD13	27:B2:45:SER:CA	2.32	0.59
1:AA:1308:U:OP1	13:AM:98:VAL:HG22	2.02	0.59
13:AM:11:ARG:O	13:AM:13:LYS:N	2.35	0.59
35:BA:15:G:N3	35:BA:16:G:C8	2.70	0.59
35:BA:18:C:O2'	35:BA:19:C:H5'	2.02	0.59
1:AA:1049:U:HO2'	14:AN:2:ALA:N	2.00	0.59
53:BU:92:ARG:NH2	54:BV:11:GLN:H	2.00	0.59
35:BA:676:A:H2	35:BA:802:A:H61	1.49	0.59
35:BA:1516:C:H2'	35:BA:1517:G:C5'	2.32	0.59
3:AC:130:VAL:O	3:AC:131:ARG:CB	2.50	0.59
40:BF:185:ASP:OD1	40:BF:188:ARG:NH1	2.34	0.59
35:BA:947:G:H2'	35:BA:948:G:H8	1.66	0.59
35:BA:2746:U:O2'	35:BA:2747:G:H5'	2.02	0.59
38:BD:71:ASP:HB2	38:BD:103:ARG:HH22	1.67	0.59
3:AC:108:ASN:OD1	3:AC:110:ASN:ND2	2.35	0.59
24:AY:637:ARG:HD2	24:AY:642:VAL:HG21	1.84	0.59
1:AA:629:G:H2'	1:AA:630:G:O4'	2.02	0.59
48:BP:107:LYS:O	48:BP:109:GLY:N	2.36	0.59
37:BC:122:GLY:O	37:BC:127:LYS:HE2	2.02	0.59
35:BA:1529:G:C2	35:BA:1541:G:N2	2.71	0.59
35:BA:1301:A:C2'	35:BA:1302:A:H2'	2.31	0.59
57:BY:26:LYS:O	57:BY:28:LYS:HE2	2.03	0.59
19:AS:44:MET:HA	19:AS:44:MET:HE2	1.83	0.59
29:B4:4:GLY:O	29:B4:5:ILE:HB	2.02	0.59
35:BA:2312:U:OP1	41:BG:74:LYS:HG2	2.02	0.59
41:BG:113:ARG:HA	41:BG:113:ARG:NE	2.17	0.59
35:BA:755:C:H2'	35:BA:756:C:C6	2.37	0.59
31:B6:15:GLU:OE1	31:B6:18:ARG:CD	2.51	0.59
35:BA:1805:U:H2'	35:BA:1806:C:H5'	1.83	0.59
35:BA:654(E):G:H2'	35:BA:654(F):C:O4'	2.02	0.59
35:BA:1571:A:H2'	35:BA:1572:A:C8	2.37	0.59
53:BU:59:ARG:HH11	53:BU:59:ARG:HG2	1.67	0.59
35:BA:1087:G:H21	35:BA:1103:A:N6	1.99	0.59
35:BA:1106:G:H2'	35:BA:1107:G:C5'	2.32	0.59
57:BY:17:SER:CB	57:BY:71:LYS:HE2	2.32	0.59
1:AA:1288:A:O5'	1:AA:1288:A:H8	1.85	0.59
1:AA:788:U:H2'	1:AA:789:U:C5'	2.31	0.59
22:AV:43:C:O2	22:AV:43:C:O4'	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1503:U:H2'	35:BA:1504:C:H6	1.64	0.59
12:AL:113:ARG:O	12:AL:114:LYS:HD2	2.01	0.59
44:BK:41:UNK:C	44:BK:43:UNK:H	2.14	0.59
35:BA:483:A:H5''	57:BY:49:VAL:HG22	1.83	0.59
25:B0:55:ARG:HD3	35:BA:2384:G:OP1	2.03	0.59
1:AA:397:A:N7	1:AA:548:G:OP2	2.35	0.59
35:BA:178:G:O2'	35:BA:179:G:H5'	2.02	0.59
1:AA:326:G:O5'	1:AA:326:G:H8	1.85	0.59
35:BA:1822:G:C2'	35:BA:1823:G:H5'	2.30	0.59
35:BA:28:A:H61	35:BA:512:G:H1'	1.65	0.59
27:B2:46:GLN:O	27:B2:47:ASN:C	2.41	0.59
19:AS:40:ILE:HG22	19:AS:69:HIS:O	2.01	0.59
41:BG:133:LEU:HD13	41:BG:134:GLY:H	1.66	0.59
48:BP:23:PRO:HB2	48:BP:33:ARG:HG2	1.82	0.59
1:AA:1049:U:H4'	1:AA:1050:G:H5'	1.82	0.59
1:AA:522:C:H41	12:AL:53:ARG:HH21	1.46	0.59
42:BH:169:VAL:HG13	42:BH:170:ARG:N	2.18	0.59
26:B1:82:LEU:O	26:B1:83:GLU:HB3	2.03	0.59
35:BA:1652:A:N6	35:BA:1653:G:N1	2.51	0.59
35:BA:2469:A:H2'	35:BA:2470:G:C5'	2.29	0.59
1:AA:946:A:C6	1:AA:947:G:C6	2.91	0.59
35:BA:1887:C:C2'	35:BA:1888:G:H5''	2.32	0.59
37:BC:89:GLU:C	37:BC:91:GLY:H	2.06	0.59
24:AY:688:ILE:HG22	24:AY:688:ILE:O	2.02	0.59
35:BA:476:G:H4'	35:BA:502:A:N1	2.18	0.59
41:BG:132:ASN:OD1	41:BG:158:ALA:HA	2.02	0.59
35:BA:1578:U:O2'	35:BA:1579:A:H5''	2.02	0.59
1:AA:865:A:O5'	1:AA:865:A:H8	1.83	0.59
51:BS:83:LYS:O	51:BS:105:ALA:HB3	2.02	0.59
5:AE:69:VAL:O	5:AE:71:LEU:N	2.35	0.59
47:BO:9:GLU:HG3	47:BO:18:LYS:HZ2	1.67	0.59
2:AB:97:TRP:CZ3	2:AB:176:GLU:OE2	2.55	0.59
43:BJ:27:UNK:CB	43:BJ:113:UNK:HA	2.32	0.59
33:B8:13:ARG:CD	48:BP:61:ARG:HD2	2.24	0.59
7:AG:15:ASP:OD1	7:AG:44:TYR:OH	2.20	0.59
1:AA:359:U:H2'	1:AA:360:A:H8	1.66	0.59
35:BA:1445:A:O4'	35:BA:1460:A:N3	2.36	0.59
2:AB:24:TRP:CE3	2:AB:32:ILE:CD1	2.84	0.59
35:BA:1999:C:H6	35:BA:1999:C:O5'	1.85	0.59
29:B4:43:TYR:C	29:B4:45:GLY:N	2.56	0.59
41:BG:107:LEU:HD23	41:BG:111:LEU:HD11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:146:TYR:O	41:BG:147:ASP:HB2	2.02	0.59
24:AY:81:ILE:O	24:AY:82:ILE:HG13	2.02	0.59
54:BV:39:LEU:HA	54:BV:47:VAL:HG13	1.84	0.59
58:BZ:5:LEU:O	58:BZ:59:LEU:HA	2.01	0.59
40:BF:20:LEU:H	40:BF:24:LEU:HD21	1.67	0.59
46:BN:56:ASN:H	46:BN:125:GLY:HA3	1.68	0.59
1:AA:563:A:O4'	1:AA:566:G:N3	2.36	0.59
51:BS:78:LEU:HD11	51:BS:103:GLU:HB2	1.83	0.59
37:BC:41:THR:HG22	37:BC:42:VAL:N	2.17	0.59
4:AD:205:GLU:OE2	5:AE:100:VAL:HG22	2.02	0.59
24:AY:5:VAL:O	24:AY:7:TYR:N	2.34	0.59
47:BO:18:LYS:HD2	47:BO:45:GLU:OE1	2.02	0.59
37:BC:194:ILE:HD11	37:BC:227:PRO:CB	2.32	0.59
1:AA:512:U:H2'	1:AA:513:C:C6	2.38	0.59
24:AY:616:TYR:HE2	24:AY:664:GLN:HG3	1.66	0.59
2:AB:204:ASN:HD21	2:AB:206:ASP:H	1.47	0.59
35:BA:651:G:C6	35:BA:652:C:N4	2.71	0.59
1:AA:941:G:C2'	1:AA:942:G:O5'	2.51	0.59
7:AG:16:LEU:HD12	9:AI:42:ARG:HA	1.83	0.59
35:BA:1267:U:C5	35:BA:2012:G:N2	2.70	0.59
35:BA:1445:A:O2'	35:BA:1445(A):C:H5'	2.02	0.59
35:BA:2201:C:HO2'	35:BA:2202:C:H5'	1.61	0.59
1:AA:1281:U:H4'	1:AA:1282:C:OP2	2.02	0.59
24:AY:25:LYS:HZ2	24:AY:86:GLY:N	1.98	0.59
1:AA:961:U:C2'	1:AA:962:C:H5'	2.33	0.59
1:AA:519:C:N4	1:AA:520:A:C6	2.71	0.59
12:AL:27:LEU:CD1	12:AL:28:LYS:HE2	2.25	0.59
1:AA:1286:A:O2'	1:AA:1287:A:P	2.60	0.59
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.82	0.59
33:B8:50:LEU:HD12	33:B8:51:ALA:N	2.17	0.59
48:BP:108:LYS:C	48:BP:110:TYR:H	2.05	0.59
35:BA:1639:U:H2'	35:BA:1640:C:H5''	1.83	0.59
35:BA:1517:G:H5'	35:BA:1517:G:C8	2.34	0.59
37:BC:214:TYR:CZ	37:BC:224:ARG:HG2	2.37	0.59
35:BA:1504:C:O2'	35:BA:1505:C:H5'	2.02	0.59
4:AD:120:LEU:HB3	4:AD:126:ILE:CD1	2.32	0.59
35:BA:1027:A:N6	35:BA:1126:A:C4	2.70	0.59
1:AA:1005:A:C2'	1:AA:1006:C:H5'	2.33	0.59
52:BT:126:ALA:C	52:BT:128:GLU:H	2.05	0.59
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.84	0.59
1:AA:530:G:H3'	1:AA:531:U:C5'	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:860:U:C5'	35:BA:860:U:O2	2.50	0.59
22:AV:39:U:H2'	22:AV:40:C:C6	2.38	0.59
1:AA:266:G:H4'	1:AA:267:C:H6	1.68	0.59
1:AA:266:G:H4'	1:AA:267:C:C6	2.38	0.59
1:AA:360:A:C2'	1:AA:361:G:C5'	2.80	0.59
35:BA:1997:G:C2'	35:BA:1998:G:C5'	2.77	0.59
35:BA:237:C:O2'	35:BA:238:C:H5'	2.02	0.59
1:AA:1306:A:H2'	1:AA:1307:U:H5'	1.84	0.59
41:BG:81:LYS:HG3	41:BG:82:LEU:HD23	1.84	0.59
41:BG:48:GLU:HG2	41:BG:87:PRO:HD2	1.84	0.59
31:B6:45:LYS:O	31:B6:46:HIS:HB3	2.02	0.59
35:BA:890:A:C2'	35:BA:892:G:H5''	2.32	0.59
25:B0:10:THR:HG21	35:BA:2277:G:OP1	2.02	0.59
1:AA:185:A:C6	1:AA:186:C:C4	2.90	0.59
1:AA:701:C:O2'	1:AA:703:G:C5	2.50	0.59
35:BA:1062:G:H21	44:BK:132:UNK:CB	2.15	0.59
38:BD:35:LYS:O	38:BD:37:LEU:N	2.35	0.59
12:AL:43:VAL:HG12	12:AL:44:THR:N	2.18	0.59
9:AI:48:GLU:OE2	9:AI:51:ARG:HD3	2.03	0.59
34:B9:7:VAL:HG21	34:B9:35:ARG:O	2.02	0.59
35:BA:2298:A:H2'	35:BA:2299:G:O4'	2.02	0.59
57:BY:50:ARG:HG3	57:BY:52:SER:O	2.03	0.59
7:AG:102:ARG:O	7:AG:106:GLN:HB2	2.02	0.59
27:B2:70:GLN:CD	27:B2:71:ASN:H	2.05	0.59
35:BA:108:U:O2'	35:BA:109:G:C5'	2.30	0.59
7:AG:50:ILE:HD11	7:AG:61:VAL:CB	2.30	0.59
35:BA:2581:G:C5	35:BA:2610:C:N3	2.70	0.59
35:BA:2000:G:C2	35:BA:2001:A:N7	2.70	0.59
14:AN:33:VAL:HA	14:AN:40:CYS:HA	1.83	0.59
35:BA:1804:C:H6	35:BA:1804:C:O5'	1.85	0.59
39:BE:117:MET:HE1	39:BE:136:ARG:HA	1.83	0.59
32:B7:12:ARG:HG3	35:BA:686:G:O6	2.03	0.59
35:BA:1474:C:C2'	35:BA:1475:G:H5''	2.33	0.59
24:AY:309:LEU:HB3	24:AY:391:GLY:H	1.66	0.59
50:BR:78:LYS:HE2	50:BR:83:ILE:HD11	1.85	0.59
1:AA:956:U:C2'	1:AA:957:U:H5'	2.33	0.59
57:BY:50:ARG:C	57:BY:52:SER:H	2.06	0.59
52:BT:128:GLU:OE1	52:BT:130:ALA:HB2	2.03	0.59
22:AV:52:G:O6	22:AV:62:C:N4	2.24	0.59
19:AS:5:LEU:H	19:AS:5:LEU:HD23	1.67	0.59
35:BA:2379:G:H2'	35:BA:2380:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2415:G:O3'	48:BP:66:GLY:CA	2.50	0.59
37:BC:118:PRO:C	37:BC:120:VAL:H	2.04	0.59
22:AV:41:C:C2'	22:AV:42:C:C5'	2.79	0.59
35:BA:2202:C:H2'	35:BA:2203:U:H6	1.66	0.59
35:BA:613:G:C8	35:BA:613:G:H5'	2.34	0.59
35:BA:466:A:C2	35:BA:796:C:O4'	2.55	0.59
53:BU:83:LEU:CD1	53:BU:88:ILE:HD11	2.33	0.59
1:AA:1386:G:N2	1:AA:1387:G:N7	2.51	0.59
25:B0:50:ASN:HB3	25:B0:63:VAL:HG21	1.83	0.59
35:BA:1568:G:O5'	38:BD:61:LEU:HD23	2.03	0.59
54:BV:2:PHE:CD1	54:BV:13:ARG:NH1	2.71	0.59
46:BN:133:GLN:O	46:BN:134:ARG:HB3	2.02	0.59
24:AY:530:VAL:HG13	24:AY:531:GLY:N	2.18	0.59
26:B1:3:LYS:CB	26:B1:61:ARG:NH2	2.65	0.59
39:BE:197:ILE:HD11	39:BE:199:ARG:HE	1.65	0.59
35:BA:674:G:H1'	40:BF:74:ARG:CD	2.32	0.59
1:AA:956:U:H2'	1:AA:957:U:H5'	1.83	0.59
57:BY:50:ARG:O	57:BY:52:SER:N	2.36	0.59
53:BU:20:LEU:HD22	53:BU:20:LEU:H	1.67	0.59
32:B7:23:ARG:HH11	32:B7:23:ARG:HG3	1.67	0.59
49:BQ:63:LYS:HD2	58:BZ:175:VAL:HG21	1.85	0.59
1:AA:31:G:N1	1:AA:48:C:H5"	2.18	0.59
7:AG:74:GLU:HG2	7:AG:91:VAL:HG22	1.84	0.59
1:AA:951:G:O6	1:AA:1230:C:N3	2.36	0.59
35:BA:824:A:O2'	35:BA:2358:G:O6	2.09	0.59
35:BA:952:G:C6	35:BA:966:G:C6	2.91	0.59
31:B6:25:LYS:HD2	35:BA:2285:C:H41	1.66	0.59
57:BY:29:GLU:OE1	57:BY:29:GLU:N	2.32	0.59
35:BA:2000:G:C2	35:BA:2001:A:C5	2.91	0.59
48:BP:39:LYS:HD2	48:BP:40:SER:H	1.68	0.59
42:BH:149:ARG:HA	42:BH:162:ILE:HG13	1.85	0.59
38:BD:26:LYS:HA	38:BD:26:LYS:CE	2.33	0.59
58:BZ:5:LEU:HD21	58:BZ:44:PHE:HA	1.85	0.59
4:AD:36:ARG:N	4:AD:37:PRO:HD3	2.17	0.59
35:BA:1455:G:O2'	35:BA:1456:G:H5'	2.01	0.59
35:BA:2787:C:O2	39:BE:61:ARG:NH1	2.35	0.59
26:B1:4:VAL:HA	26:B1:10:LYS:O	2.02	0.59
24:AY:327:PHE:CE1	24:AY:376:ALA:HB2	2.38	0.59
24:AY:580:MET:O	24:AY:584:ILE:HG12	2.02	0.59
35:BA:2394:C:OP2	48:BP:63:PRO:HD2	2.03	0.59
1:AA:501:C:H2'	1:AA:502:G:C8	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:19:ARG:NH1	58:BZ:84:GLU:HG2	2.18	0.59
16:AP:45:THR:HG22	16:AP:47:ASP:H	1.66	0.59
35:BA:547:A:H2'	35:BA:548:A:C8	2.37	0.59
57:BY:52:SER:O	57:BY:54:LYS:N	2.35	0.59
2:AB:9:GLU:N	2:AB:9:GLU:OE1	2.30	0.59
49:BQ:131:ILE:N	49:BQ:131:ILE:HD12	2.17	0.59
40:BF:53:THR:HG22	40:BF:56:GLU:CD	2.24	0.59
35:BA:1430:C:H6	35:BA:1430:C:O5'	1.85	0.59
35:BA:270:A:O2'	35:BA:271:A:H5'	2.03	0.59
33:B8:34:TRP:HA	35:BA:2420:C:OP1	2.03	0.58
1:AA:324:G:N2	1:AA:327:A:OP2	2.37	0.58
35:BA:1980:G:O2'	35:BA:1982:C:OP1	2.20	0.58
35:BA:2581:G:C5	35:BA:2610:C:C4	2.91	0.58
29:B4:35:VAL:O	29:B4:36:CYS:SG	2.58	0.58
41:BG:53:LEU:O	41:BG:55:LYS:N	2.36	0.58
41:BG:93:THR:HG22	41:BG:94:LEU:H	1.68	0.58
31:B6:19:ARG:CG	31:B6:20:ASN:N	2.48	0.58
24:AY:47:GLU:HG3	24:AY:52:MET:SD	2.43	0.58
51:BS:89:ARG:CG	51:BS:92:TYR:HA	2.32	0.58
49:BQ:141:GLN:HG3	58:BZ:72:ARG:NH1	2.18	0.58
26:B1:75:GLU:CA	26:B1:78:LYS:HD2	2.33	0.58
46:BN:133:GLN:HG2	46:BN:134:ARG:N	2.16	0.58
39:BE:7:VAL:HG12	39:BE:27:LEU:HB3	1.85	0.58
35:BA:2406:U:O4	48:BP:70:GLN:HB2	2.03	0.58
1:AA:177:C:O2'	1:AA:178:C:H5'	2.02	0.58
44:BK:122:UNK:C	44:BK:124:UNK:N	2.65	0.58
48:BP:97:PRO:HG3	48:BP:112:LEU:HD12	1.86	0.58
25:B0:36:ILE:HD11	35:BA:2355:C:C4'	2.33	0.58
1:AA:942:G:N3	1:AA:943:U:C5	2.71	0.58
35:BA:1297:C:HO2'	35:BA:1298:C:H5'	1.67	0.58
35:BA:259:G:H2'	35:BA:260:G:C8	2.32	0.58
41:BG:57:ALA:O	41:BG:61:ALA:HB2	2.03	0.58
1:AA:1279:A:C3'	1:AA:1279:A:N3	2.62	0.58
1:AA:89:C:O2'	1:AA:90:U:O5'	2.19	0.58
58:BZ:180:VAL:CG1	58:BZ:181:GLU:N	2.34	0.58
19:AS:7:LYS:O	19:AS:7:LYS:NZ	2.33	0.58
26:B1:6:GLU:O	26:B1:7:ILE:CG1	2.51	0.58
26:B1:53:VAL:CG2	26:B1:58:ILE:HD12	2.32	0.58
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.02	0.58
35:BA:528:A:H2	35:BA:2043:C:H5'	1.67	0.58
1:AA:190:U:H3	20:AT:105:SER:CB	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:72:VAL:HG23	54:BV:85:LYS:HB3	1.84	0.58
4:AD:150:GLU:HG2	4:AD:151:LYS:N	2.18	0.58
33:B8:43:GLN:C	33:B8:44:LYS:HD2	2.23	0.58
16:AP:18:ARG:CG	16:AP:35:LYS:HE3	2.32	0.58
24:AY:443:HIS:HB3	24:AY:446:THR:O	2.04	0.58
25:B0:16:SER:OG	35:BA:2261:C:H3'	2.02	0.58
35:BA:316:C:H2'	35:BA:317:G:O5'	2.03	0.58
47:BO:20:MET:HE3	47:BO:44:LYS:HE3	1.85	0.58
1:AA:452:A:H1'	1:AA:453:A:H5''	1.85	0.58
1:AA:950:U:O2'	1:AA:951:G:H5''	2.01	0.58
1:AA:690:G:H8	1:AA:690:G:O5'	1.86	0.58
19:AS:64:GLU:O	29:B4:50:VAL:HG21	2.02	0.58
29:B4:30:GLU:C	29:B4:31:ILE:HG22	2.23	0.58
29:B4:43:TYR:O	29:B4:45:GLY:N	2.36	0.58
41:BG:112:PRO:O	41:BG:113:ARG:HB3	2.03	0.58
41:BG:172:LEU:HD23	41:BG:172:LEU:O	2.03	0.58
51:BS:28:VAL:HB	51:BS:89:ARG:HB2	1.86	0.58
51:BS:34:HIS:CB	51:BS:53:SER:HB3	2.32	0.58
35:BA:1970:A:H4'	35:BA:1972:A:O4'	2.03	0.58
46:BN:4:TYR:HB3	53:BU:64:ARG:NH1	2.04	0.58
35:BA:1593:G:C6	35:BA:1594:G:C6	2.91	0.58
20:AT:18:GLN:O	20:AT:22:ARG:HG3	2.02	0.58
40:BF:199:TRP:O	40:BF:203:GLN:HG2	2.02	0.58
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	1.85	0.58
50:BR:55:ALA:HB2	50:BR:79:LEU:CD1	2.32	0.58
34:B9:9:ARG:C	34:B9:10:ILE:HD12	2.24	0.58
47:BO:9:GLU:HG3	47:BO:18:LYS:NZ	2.19	0.58
35:BA:296:C:O2'	35:BA:297:C:H5'	2.04	0.58
35:BA:2327:A:H2'	35:BA:2328:A:C8	2.37	0.58
35:BA:2243:U:H2'	35:BA:2244:U:C6	2.39	0.58
1:AA:1078:U:H6	1:AA:1078:U:O5'	1.85	0.58
1:AA:1532:U:O5'	1:AA:1532:U:H6	1.87	0.58
29:B4:61:ARG:HH11	29:B4:61:ARG:HB2	1.68	0.58
29:B4:13:ARG:N	29:B4:24:THR:CG2	2.64	0.58
35:BA:1048:A:N6	42:BH:1:MET:CE	2.67	0.58
1:AA:940:C:O5'	1:AA:940:C:H6	1.85	0.58
35:BA:47:C:C4	35:BA:179:G:N1	2.71	0.58
1:AA:594:G:O2'	1:AA:595:G:H5'	2.04	0.58
1:AA:555:C:N4	1:AA:556:C:N4	2.51	0.58
41:BG:6:ALA:HB3	41:BG:105:LYS:CE	2.33	0.58
33:B8:61:LEU:N	33:B8:61:LEU:HD12	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:692:C:C2'	35:BA:693:C:C5'	2.77	0.58
9:AI:95:LYS:HZ2	9:AI:96:LEU:HD13	1.67	0.58
35:BA:18:C:H2'	35:BA:19:C:C5	2.37	0.58
53:BU:76:TYR:OH	53:BU:93:LYS:HE3	2.03	0.58
29:B4:56:VAL:CG2	29:B4:60:GLN:HG3	2.33	0.58
48:BP:16:ARG:O	48:BP:16:ARG:NH1	2.35	0.58
1:AA:204:U:O4'	1:AA:216:G:C8	2.57	0.58
35:BA:2784:C:H1'	39:BE:37:ARG:HH12	1.68	0.58
40:BF:185:ASP:HA	40:BF:188:ARG:HG2	1.84	0.58
7:AG:70:LYS:HD3	7:AG:96:GLN:HB3	1.85	0.58
24:AY:600:VAL:CG2	24:AY:678:GLU:HG3	2.34	0.58
39:BE:13:ARG:O	52:BT:57:PHE:HE2	1.86	0.58
7:AG:76:ARG:HD2	7:AG:156:TRP:CZ2	2.39	0.58
35:BA:1778:U:C2'	35:BA:1779:U:H5'	2.32	0.58
35:BA:1999:C:H2'	35:BA:2000:G:H8	1.68	0.58
27:B2:9:GLN:O	27:B2:11:GLU:N	2.37	0.58
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.66	0.58
24:AY:15:ILE:HG22	24:AY:103:GLY:C	2.24	0.58
1:AA:1154:G:HO2'	1:AA:1155:G:H5'	1.66	0.58
49:BQ:141:GLN:N	58:BZ:53:ILE:HD12	2.18	0.58
58:BZ:51:ALA:HB1	58:BZ:57:ILE:CD1	2.32	0.58
10:AJ:74:ILE:HG13	10:AJ:74:ILE:O	2.03	0.58
15:AO:39:LEU:HB3	15:AO:56:LEU:HD23	1.85	0.58
34:B9:32:HIS:O	34:B9:34:GLN:HG3	2.03	0.58
35:BA:2523:G:C2'	35:BA:2524:G:H5''	2.32	0.58
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.38	0.58
53:BU:74:LEU:HD11	53:BU:79:PHE:HB2	1.85	0.58
1:AA:1163:C:H2'	1:AA:1164:G:H8	1.67	0.58
37:BC:73:VAL:HG13	37:BC:74:ARG:H	1.67	0.58
33:B8:41:ILE:HD12	35:BA:2419:U:OP2	2.03	0.58
2:AB:167:PRO:HD2	2:AB:188:ALA:CB	2.26	0.58
35:BA:1676:A:H2	35:BA:1993:U:H5'	1.66	0.58
1:AA:1306:A:N6	1:AA:1331:G:O2'	2.36	0.58
35:BA:554:U:O2'	35:BA:555:U:H5'	2.04	0.58
46:BN:63:THR:O	46:BN:66:LYS:HG3	2.04	0.58
2:AB:122:PHE:CE2	2:AB:142:LEU:CD2	2.79	0.58
14:AN:32:SER:HB3	14:AN:41:ARG:HG3	1.84	0.58
39:BE:132:HIS:CG	39:BE:135:HIS:CE1	2.92	0.58
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.67	0.58
42:BH:88:LEU:HD23	42:BH:164:TYR:O	2.04	0.58
24:AY:137:ASN:HD21	24:AY:263:ALA:H	1.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:6:GLU:O	26:B1:7:ILE:HG12	2.03	0.58
25:B0:50:ASN:O	25:B0:62:LEU:CD2	2.52	0.58
54:BV:25:LEU:N	54:BV:92:THR:HG21	2.17	0.58
24:AY:517:LEU:HD12	24:AY:517:LEU:N	2.18	0.58
26:B1:11:ARG:NH1	26:B1:11:ARG:HG2	2.17	0.58
42:BH:46:GLU:OE2	42:BH:51:ARG:HD2	2.04	0.58
48:BP:139:LYS:O	48:BP:141:ALA:N	2.30	0.58
35:BA:272(C):G:H2'	35:BA:272(D):G:H8	1.69	0.58
35:BA:2150:U:H2'	35:BA:2151:G:H8	1.68	0.58
8:AH:122:ARG:NH1	8:AH:122:ARG:HB2	2.18	0.58
51:BS:101:LEU:O	51:BS:101:LEU:HD12	2.04	0.58
2:AB:166:ASP:OD2	2:AB:169:LYS:HB2	2.03	0.58
35:BA:184:C:H2'	35:BA:185:U:C6	2.38	0.58
1:AA:840:C:H5'	1:AA:841:U:OP1	2.02	0.58
35:BA:1798:U:O2	35:BA:1821:A:H2	1.87	0.58
35:BA:747:U:C5	35:BA:2613:U:N3	2.72	0.58
19:AS:40:ILE:HG23	19:AS:67:VAL:O	2.02	0.58
41:BG:141:PHE:CD1	41:BG:142:PRO:HA	2.30	0.58
1:AA:962:C:H2'	1:AA:963:G:H8	1.66	0.58
35:BA:654(O):G:H2'	35:BA:654(P):C:C6	2.38	0.58
1:AA:1029:C:N4	1:AA:1033:G:H1	2.01	0.58
1:AA:1388:C:O2'	1:AA:1389:C:C5'	2.50	0.58
25:B0:11:ARG:O	25:B0:13:GLY:N	2.31	0.58
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.85	0.58
35:BA:271(L):U:H4'	35:BA:271(M):G:C8	2.38	0.58
3:AC:167:TRP:NE1	3:AC:168:ALA:O	2.37	0.58
35:BA:527:C:H1'	35:BA:528:A:N7	2.18	0.58
1:AA:682:G:C5'	38:BD:169:GLU:OE1	2.52	0.58
26:B1:4:VAL:HG23	26:B1:10:LYS:O	2.03	0.58
35:BA:1701:A:C3'	35:BA:1702:G:H5'	2.34	0.58
35:BA:1516:C:O2'	35:BA:1517:G:H5''	2.04	0.58
25:B0:53:MET:HE1	25:B0:57:PHE:HD2	1.68	0.58
1:AA:502:G:OP1	12:AL:118:SER:HB3	2.03	0.58
25:B0:46:LYS:CE	25:B0:75:LEU:O	2.52	0.58
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.02	0.58
35:BA:272(J):C:H2'	35:BA:274:G:C5'	2.34	0.58
4:AD:70:ILE:HG22	4:AD:71:SER:O	2.03	0.58
1:AA:954:G:H2'	1:AA:955:U:C6	2.39	0.58
11:AK:84:VAL:HG11	11:AK:91:ARG:HD3	1.84	0.58
8:AH:1:MET:HE3	8:AH:1:MET:H3	1.68	0.58
25:B0:66:VAL:O	25:B0:81:VAL:CG1	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:46:GLU:OE1	3:AC:83:ARG:NH2	2.37	0.58
35:BA:2710:C:C2'	35:BA:2711:A:H5'	2.33	0.58
52:BT:35:LYS:CE	52:BT:41:ARG:HD2	2.34	0.58
1:AA:796:C:C2'	1:AA:797:C:H5'	2.34	0.58
39:BE:25:VAL:CG1	39:BE:181:LEU:HD12	2.33	0.58
40:BF:24:LEU:CB	40:BF:25:PRO:HD2	2.30	0.58
57:BY:44:ILE:H	57:BY:44:ILE:HD12	1.68	0.58
46:BN:126:PRO:O	46:BN:127:ASP:O	2.21	0.58
46:BN:57:ALA:C	46:BN:58:ASP:O	2.41	0.58
35:BA:407:G:H2'	35:BA:408:G:C8	2.37	0.58
39:BE:47:VAL:O	39:BE:49:LEU:HD23	2.04	0.58
41:BG:73:ALA:HB3	41:BG:85:GLY:HA2	1.85	0.58
35:BA:2145:C:H5'	35:BA:2146:C:H5	1.66	0.58
7:AG:88:PRO:O	7:AG:89:MET:CB	2.51	0.58
58:BZ:67:LEU:HD12	58:BZ:67:LEU:O	2.04	0.58
1:AA:536:C:H2'	1:AA:537:G:C8	2.39	0.58
35:BA:1914:C:H5'	35:BA:1915:U:OP2	2.04	0.58
35:BA:600:G:C2'	35:BA:601:C:H5'	2.34	0.58
35:BA:2754:U:O5'	35:BA:2754:U:H6	1.86	0.58
35:BA:1422:G:H2'	35:BA:1423:G:H8	1.69	0.58
35:BA:1299:G:O5'	35:BA:1299:G:H8	1.86	0.58
29:B4:53:GLU:CD	29:B4:54:GLY:N	2.57	0.58
35:BA:15:G:H2'	35:BA:16:G:H8	1.69	0.58
35:BA:2124:G:H2'	35:BA:2125:G:H5'	1.86	0.58
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.69	0.58
58:BZ:48:PHE:CE1	58:BZ:52:SER:HA	2.39	0.58
35:BA:1076:C:H4'	58:BZ:112:ARG:NH2	2.17	0.58
31:B6:51:GLU:O	31:B6:52:VAL:HB	2.04	0.58
56:BX:35:THR:O	56:BX:39:ILE:HG13	2.04	0.58
3:AC:22:TRP:O	3:AC:22:TRP:CD2	2.56	0.58
50:BR:58:GLY:HA2	50:BR:80:PHE:HE2	1.69	0.58
1:AA:874:G:C4	1:AA:875:C:C5	2.92	0.58
35:BA:2836:U:H2'	35:BA:2837:G:H8	1.65	0.58
47:BO:10:VAL:HG21	47:BO:16:ALA:C	2.24	0.58
24:AY:156:ARG:NH2	24:AY:666:ARG:CZ	2.67	0.58
17:AQ:63:ARG:O	17:AQ:65:ILE:HD12	2.03	0.58
58:BZ:10:ARG:NH2	58:BZ:26:GLY:O	2.36	0.58
24:AY:478:LYS:HA	24:AY:653:PHE:CE1	2.38	0.58
11:AK:92:GLU:HG3	11:AK:96:ARG:NH2	2.18	0.58
37:BC:108:TRP:C	37:BC:110:ASP:H	2.07	0.58
35:BA:107:C:O2'	35:BA:108:U:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:195:A:H5''	48:BP:46:LYS:NZ	2.18	0.58
35:BA:857:C:N4	35:BA:858:U:O4	2.36	0.58
35:BA:1798:U:C5	38:BD:274:ARG:NH2	2.71	0.58
35:BA:1463:C:O2'	35:BA:1464:C:H5'	2.03	0.58
2:AB:12:GLU:O	2:AB:16:HIS:HB2	2.04	0.58
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.37	0.58
35:BA:752:A:C5	35:BA:1781:C:O4'	2.57	0.58
24:AY:104:ALA:C	24:AY:105:ILE:HD12	2.24	0.58
51:BS:35:ILE:H	51:BS:53:SER:CB	2.08	0.58
1:AA:1049:U:C2'	14:AN:2:ALA:N	2.67	0.58
53:BU:65:ILE:HD11	53:BU:96:ALA:HB3	1.85	0.58
39:BE:9:VAL:HG13	39:BE:25:VAL:HB	1.86	0.58
58:BZ:48:PHE:CE2	58:BZ:74:VAL:HG21	2.28	0.58
3:AC:53:ALA:O	3:AC:54:ARG:CB	2.51	0.58
38:BD:35:LYS:HZ2	38:BD:35:LYS:CB	2.15	0.58
24:AY:488:THR:OG1	24:AY:598:ASP:HB3	2.04	0.58
32:B7:12:ARG:CD	32:B7:46:VAL:HG21	2.34	0.58
35:BA:1652:A:N6	35:BA:1653:G:H1	2.00	0.58
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.04	0.58
35:BA:1027:A:C6	35:BA:1126:A:C4	2.92	0.58
57:BY:3:VAL:H	57:BY:5:MET:HE3	1.68	0.58
13:AM:40:ASN:ND2	13:AM:43:THR:HG23	2.19	0.58
46:BN:10:GLU:OE2	46:BN:11:PRO:HD2	2.03	0.58
19:AS:86:GLU:O	19:AS:87:ALA:HB3	2.03	0.58
9:AI:121:ARG:HH11	9:AI:121:ARG:HG2	1.68	0.58
3:AC:35:GLU:HG2	3:AC:39:ILE:CD1	2.34	0.58
35:BA:2199:A:C5'	35:BA:2200:C:OP1	2.52	0.58
3:AC:19:GLU:O	3:AC:56:ASP:HA	2.03	0.58
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.19	0.58
52:BT:81:PRO:O	52:BT:82:LEU:HG	2.04	0.57
37:BC:103:LYS:O	37:BC:103:LYS:HG3	2.03	0.57
37:BC:103:LYS:O	37:BC:105:LEU:N	2.36	0.57
35:BA:1528(A):A:H62	35:BA:1541:G:H21	1.50	0.57
31:B6:40:CYS:SG	31:B6:45:LYS:NZ	2.71	0.57
30:B5:16:ARG:NH1	30:B5:16:ARG:HG2	2.17	0.57
51:BS:35:ILE:HG23	51:BS:35:ILE:O	2.03	0.57
10:AJ:51:ARG:HG3	10:AJ:60:ARG:HA	1.85	0.57
24:AY:57:GLN:O	24:AY:58:GLU:C	2.42	0.57
35:BA:1484:G:C3'	35:BA:1485:G:H5''	2.34	0.57
42:BH:3:ARG:CG	42:BH:3:ARG:NH1	2.63	0.57
19:AS:7:LYS:HD3	19:AS:7:LYS:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:300:A:H2'	35:BA:334:C:H1'	1.86	0.57
27:B2:64:LEU:C	27:B2:64:LEU:CD2	2.72	0.57
24:AY:496:LYS:HE2	24:AY:498:ILE:HD13	1.85	0.57
58:BZ:97:GLU:HA	58:BZ:127:LYS:HA	1.85	0.57
48:BP:79:ARG:H	48:BP:110:TYR:HD2	1.52	0.57
36:BB:56:G:O2'	36:BB:57:A:OP2	2.22	0.57
35:BA:1458:C:H5'	35:BA:1459:G:C8	2.39	0.57
24:AY:343:ASN:C	24:AY:343:ASN:HD22	2.06	0.57
50:BR:87:TYR:C	50:BR:89:ASP:H	2.07	0.57
36:BB:25:A:H3'	36:BB:26:A:H8	1.69	0.57
35:BA:272(J):C:H2'	35:BA:274:G:H5'	1.84	0.57
24:AY:379:GLY:O	24:AY:380:LEU:HB2	2.03	0.57
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.69	0.57
52:BT:25:GLY:O	52:BT:48:ILE:HG23	2.05	0.57
52:BT:46:GLU:HB3	52:BT:65:LYS:HE3	1.85	0.57
35:BA:651:G:H2'	35:BA:652:C:H5'	1.85	0.57
35:BA:697:C:C2'	35:BA:698:C:C5'	2.78	0.57
1:AA:651:C:O2'	1:AA:652:U:H5'	2.04	0.57
1:AA:109:A:H3'	1:AA:110:C:H5'	1.85	0.57
17:AQ:67:LYS:O	17:AQ:68:ARG:CB	2.53	0.57
35:BA:1462:C:H2'	35:BA:1463:C:C6	2.39	0.57
35:BA:621:A:H2'	35:BA:622:G:H5'	1.85	0.57
41:BG:48:GLU:O	41:BG:49:ASP:HB2	2.05	0.57
41:BG:5:VAL:CG1	41:BG:8:LYS:HB2	2.34	0.57
41:BG:9:ARG:HD2	41:BG:9:ARG:H	1.69	0.57
33:B8:63:PRO:O	33:B8:64:TYR:O	2.22	0.57
31:B6:20:ASN:O	31:B6:21:TYR:CG	2.57	0.57
9:AI:95:LYS:HD2	9:AI:95:LYS:C	2.25	0.57
35:BA:461:C:O5'	35:BA:461:C:H6	1.86	0.57
24:AY:55:MET:HG3	24:AY:56:GLU:H	1.66	0.57
37:BC:6:LYS:HG3	37:BC:7:ARG:H	1.69	0.57
38:BD:24:ILE:CG2	38:BD:25:THR:N	2.59	0.57
35:BA:332:A:OP1	35:BA:332:A:H3'	2.03	0.57
25:B0:80:HIS:H	25:B0:80:HIS:CD2	2.21	0.57
35:BA:2029:G:N1	35:BA:2033:A:OP1	2.37	0.57
1:AA:563:A:H3'	1:AA:563:A:N3	2.19	0.57
1:AA:919:A:O5'	1:AA:919:A:H8	1.87	0.57
28:B3:45:GLY:HA3	35:BA:851:U:O2'	2.04	0.57
56:BX:26:TYR:OH	56:BX:88:LYS:HD2	2.04	0.57
38:BD:2:ALA:O	38:BD:3:VAL:HG23	2.04	0.57
26:B1:40:ARG:HH11	26:B1:40:ARG:HG2	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1914:C:H5''	35:BA:1915:U:H5	1.68	0.57
35:BA:588:U:H2'	35:BA:589:C:C6	2.39	0.57
52:BT:125:ARG:HG2	52:BT:125:ARG:HH11	1.69	0.57
1:AA:723:U:H2'	1:AA:723:U:O2	2.04	0.57
35:BA:1607:C:H4'	35:BA:1608:A:O5'	2.03	0.57
1:AA:757:U:H2'	1:AA:758:G:O4'	2.04	0.57
2:AB:87:ARG:CD	2:AB:219:VAL:CG1	2.82	0.57
31:B6:9:LEU:CD1	31:B6:11:LEU:HD12	2.34	0.57
35:BA:604:G:C6	35:BA:605:C:N4	2.73	0.57
35:BA:2267:A:H5''	35:BA:2268:A:H5'	1.86	0.57
35:BA:2715:C:C2	35:BA:2716:U:C5	2.91	0.57
29:B4:17:GLY:H	29:B4:33:VAL:HG11	1.69	0.57
24:AY:57:GLN:O	24:AY:60:GLU:HB2	2.03	0.57
24:AY:57:GLN:O	24:AY:60:GLU:CB	2.53	0.57
35:BA:1060:U:C5	35:BA:1062:G:H4'	2.39	0.57
46:BN:22:THR:HA	46:BN:61:ARG:O	2.05	0.57
1:AA:180:U:H2'	1:AA:181:G:H5'	1.86	0.57
3:AC:191:THR:HG22	3:AC:192:THR:H	1.69	0.57
1:AA:952:U:C2'	1:AA:953:G:H5'	2.34	0.57
36:BB:45:A:H1'	41:BG:95:ARG:NH2	2.19	0.57
24:AY:385:THR:HG21	24:AY:436:PRO:HD3	1.86	0.57
34:B9:27:CYS:SG	34:B9:28:GLU:N	2.76	0.57
20:AT:37:SER:O	20:AT:41:ILE:HG12	2.03	0.57
37:BC:117:THR:N	37:BC:118:PRO:CA	2.35	0.57
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.34	0.57
35:BA:654(A):G:O2'	35:BA:654(B):C:H5'	2.05	0.57
1:AA:942:G:C6	1:AA:943:U:C4	2.92	0.57
35:BA:1464:C:H1'	35:BA:1528:A:H8	1.69	0.57
35:BA:1038:C:H3'	35:BA:1039:G:C5'	2.20	0.57
35:BA:1891:G:H2'	35:BA:1892:C:C6	2.40	0.57
1:AA:1203:C:OP1	14:AN:3:ARG:HD2	2.04	0.57
35:BA:2748:A:C4	35:BA:2757:A:C6	2.92	0.57
54:BV:47:VAL:HG23	54:BV:47:VAL:O	2.03	0.57
1:AA:1000:U:H2'	1:AA:1001:A:C8	2.39	0.57
35:BA:272(I):U:C5'	35:BA:272(I):U:H6	2.16	0.57
42:BH:7:LEU:CD2	42:BH:69:ARG:HE	2.16	0.57
1:AA:1216:G:H5''	14:AN:5:ALA:CB	2.33	0.57
35:BA:826:U:O2'	48:BP:54:GLY:HA3	2.03	0.57
56:BX:50:LYS:H	56:BX:87:GLN:HE22	1.52	0.57
24:AY:600:VAL:HG21	24:AY:678:GLU:HG3	1.86	0.57
8:AH:33:GLU:OE1	8:AH:50:ARG:NH1	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.39	0.57
42:BH:19:VAL:O	42:BH:20:ALA:HB3	2.03	0.57
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.04	0.57
1:AA:488:C:O2'	1:AA:489:C:H5'	2.05	0.57
1:AA:1237:C:HO2'	1:AA:1335:C:Cl'	2.12	0.57
1:AA:324:G:H22	1:AA:327:A:P	2.27	0.57
35:BA:729:G:N2	35:BA:1774:C:O2	2.25	0.57
35:BA:1422:G:C5	35:BA:1423:G:N7	2.72	0.57
30:B5:3:LYS:HA	30:B5:3:LYS:HE3	1.86	0.57
41:BG:147:ASP:O	41:BG:148:MET:C	2.42	0.57
35:BA:16:G:H2'	35:BA:17:G:H8	1.69	0.57
1:AA:1054:C:OP1	1:AA:1197:G:OP1	2.22	0.57
3:AC:72:LYS:HE3	3:AC:74:GLY:HA3	1.86	0.57
5:AE:11:ILE:HD11	5:AE:31:LEU:HD22	1.86	0.57
25:B0:14:ARG:CG	25:B0:14:ARG:NH1	2.63	0.57
39:BE:77:ILE:HG22	39:BE:78:LEU:N	2.09	0.57
24:AY:137:ASN:ND2	24:AY:263:ALA:H	2.03	0.57
10:AJ:22:LYS:NZ	10:AJ:90:LEU:HD22	2.19	0.57
35:BA:1068:G:N3	35:BA:1068:G:H2'	2.19	0.57
24:AY:517:LEU:HD11	24:AY:564:LYS:HB2	1.85	0.57
57:BY:95:LYS:HD2	57:BY:100:ALA:CA	2.34	0.57
35:BA:1864:U:C3'	35:BA:1865:G:H5''	2.34	0.57
38:BD:142:VAL:HG21	38:BD:191:ALA:HB1	1.87	0.57
2:AB:75:LYS:O	2:AB:77:ALA:N	2.37	0.57
58:BZ:122:ARG:HB3	58:BZ:122:ARG:NH1	2.19	0.57
35:BA:221:A:N6	35:BA:265:A:H8	2.03	0.57
40:BF:63:LYS:HA	40:BF:76:GLY:O	2.04	0.57
44:BK:57:UNK:HA	44:BK:67:UNK:CA	2.34	0.57
35:BA:8:A:H2'	35:BA:9:U:C6	2.40	0.57
1:AA:1302:U:C5	13:AM:17:VAL:HG21	2.39	0.57
24:AY:232:LEU:HD13	24:AY:232:LEU:N	2.20	0.57
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.19	0.57
2:AB:97:TRP:HZ3	2:AB:176:GLU:OE2	1.86	0.57
42:BH:20:ALA:HB1	42:BH:21:PRO:HD2	1.85	0.57
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.19	0.57
1:AA:832:C:O2'	1:AA:833:U:H5'	2.05	0.57
27:B2:17:SER:CB	27:B2:18:PRO:HD2	2.34	0.57
35:BA:1769:G:H2'	35:BA:1770:G:H5'	1.84	0.57
3:AC:86:VAL:CG2	3:AC:87:LEU:N	2.68	0.57
1:AA:119:A:O2'	1:AA:120:A:P	2.62	0.57
29:B4:33:VAL:HG22	29:B4:34:GLU:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:61:LEU:CD1	33:B8:63:PRO:HD2	2.34	0.57
35:BA:1022:G:N2	35:BA:1142(A):A:H2	1.99	0.57
35:BA:309:G:N3	35:BA:329:G:O2'	2.37	0.57
39:BE:56:PRO:O	39:BE:57:LYS:CE	2.53	0.57
35:BA:1701:A:C2'	35:BA:1702:G:H5'	2.34	0.57
2:AB:71:VAL:HB	2:AB:164:VAL:HG22	1.85	0.57
20:AT:100:ILE:O	20:AT:101:GLY:C	2.42	0.57
50:BR:52:ILE:O	50:BR:55:ALA:HB3	2.04	0.57
41:BG:85:GLY:O	41:BG:86:MET:CB	2.51	0.57
41:BG:122:PRO:HD3	41:BG:181:ARG:HA	1.87	0.57
41:BG:122:PRO:O	41:BG:124:SER:N	2.37	0.57
46:BN:34:LEU:HD21	46:BN:120:LEU:HB2	1.87	0.57
7:AG:88:PRO:HG2	7:AG:152:ALA:HB2	1.86	0.57
1:AA:872:A:O2'	1:AA:873:A:H3'	2.04	0.57
2:AB:91:PRO:HA	2:AB:151:GLY:O	2.05	0.57
1:AA:35:G:H2'	1:AA:36:C:C6	2.39	0.57
35:BA:862:G:H2'	35:BA:863:A:O4'	2.04	0.57
1:AA:593:G:H2'	1:AA:594:G:C5'	2.32	0.57
35:BA:90:U:O2'	35:BA:92:A:OP2	2.21	0.57
19:AS:67:VAL:HB	29:B4:50:VAL:CG1	2.34	0.57
29:B4:21:VAL:CG2	29:B4:35:VAL:CG2	2.83	0.57
51:BS:30:ARG:CD	51:BS:97:ARG:HG2	2.32	0.57
35:BA:963:U:HO2'	35:BA:964:C:H5'	1.64	0.57
35:BA:1970:A:C4'	35:BA:1972:A:O4'	2.52	0.57
35:BA:462:C:C2'	35:BA:463:G:C5'	2.75	0.57
1:AA:1313:U:C6	19:AS:6:LYS:NZ	2.73	0.57
42:BH:89:ILE:HG13	42:BH:89:ILE:O	2.04	0.57
35:BA:1054:A:O2'	35:BA:1055:G:H5'	2.05	0.57
10:AJ:58:ASP:O	10:AJ:59:SER:CB	2.49	0.57
46:BN:56:ASN:C	46:BN:57:ALA:O	2.42	0.57
36:BB:2:C:H2'	36:BB:3:C:C6	2.39	0.57
35:BA:2690:C:OP1	50:BR:14:SER:HB3	2.04	0.57
35:BA:221:A:H61	35:BA:265:A:H8	1.50	0.57
1:AA:573:A:H5'	1:AA:573:A:C8	2.38	0.57
18:AR:26:LEU:HD21	18:AR:42:ARG:HH22	1.67	0.57
24:AY:9:LEU:HD21	24:AY:284:LEU:HD13	1.86	0.57
54:BV:5:VAL:HG22	54:BV:6:LYS:N	2.20	0.57
35:BA:1906:G:H2'	35:BA:1907:G:O4'	2.05	0.57
33:B8:54:GLU:O	33:B8:58:ILE:HG12	2.04	0.57
3:AC:103:VAL:HG12	3:AC:104:GLN:N	2.20	0.57
20:AT:84:LEU:O	20:AT:88:VAL:HG23	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2340:G:O2'	35:BA:2341:G:H5'	2.05	0.57
5:AE:64:ARG:O	5:AE:64:ARG:HG2	2.05	0.57
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.38	0.57
25:B0:20:ARG:HG2	25:B0:20:ARG:HH11	1.68	0.57
35:BA:248:G:H2'	35:BA:249:C:OP2	2.04	0.57
2:AB:231:GLU:CB	2:AB:232:PRO:HD2	2.20	0.57
33:B8:37:SER:O	33:B8:41:ILE:HG22	2.05	0.57
35:BA:651:G:O6	35:BA:652:C:N4	2.38	0.57
1:AA:937:A:C2'	1:AA:938:A:H5'	2.35	0.57
7:AG:48:LYS:CG	7:AG:49:ILE:N	2.67	0.57
7:AG:48:LYS:HG3	7:AG:49:ILE:HG23	1.84	0.57
35:BA:1423:G:O2'	35:BA:1424:G:C5'	2.30	0.57
41:BG:152:LEU:CD2	41:BG:152:LEU:H	2.17	0.57
33:B8:62:LEU:CD1	35:BA:242:G:H5''	2.15	0.57
1:AA:1385:G:C2	1:AA:1386:G:C4	2.93	0.57
39:BE:8:LYS:HE2	39:BE:192:ASN:ND2	2.20	0.57
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.18	0.57
35:BA:1131:G:N2	46:BN:73:THR:HG21	2.19	0.57
35:BA:1945:G:C4	35:BA:1946:U:C5	2.92	0.57
24:AY:357:ARG:NH1	24:AY:366:VAL:HG11	2.20	0.57
1:AA:1296:C:H5'	1:AA:1302:U:O4	2.05	0.57
35:BA:81:G:H21	57:BY:2:ARG:NH1	2.02	0.57
35:BA:2662:A:H2'	35:BA:2663:G:O4'	2.04	0.57
7:AG:76:ARG:O	7:AG:77:SER:HB2	2.05	0.57
2:AB:239:VAL:HG12	2:AB:239:VAL:O	2.03	0.57
35:BA:1889:A:N1	35:BA:2234:G:H1'	2.19	0.57
35:BA:2397:G:O2'	35:BA:2398:U:H5'	2.05	0.57
52:BT:30:VAL:HB	52:BT:31:SER:CB	2.27	0.57
1:AA:493:G:H8	1:AA:493:G:O5'	1.87	0.57
35:BA:599:G:O2'	35:BA:600:G:H5'	2.05	0.57
1:AA:649:G:O2'	1:AA:650:G:H5'	2.05	0.57
35:BA:702:G:H2'	35:BA:703:U:C5'	2.35	0.57
35:BA:1902:C:C1'	38:BD:244:ARG:HB2	2.35	0.57
35:BA:1771:C:C1'	35:BA:1786:A:C8	2.87	0.57
41:BG:77:ILE:HG21	41:BG:82:LEU:H	1.70	0.57
35:BA:832:G:OP2	48:BP:40:SER:HB3	2.04	0.57
51:BS:88:ASP:CG	51:BS:89:ARG:H	2.07	0.57
35:BA:462:C:H2'	35:BA:463:G:C5'	2.32	0.57
35:BA:2123:G:C6	35:BA:2176:A:C6	2.93	0.57
53:BU:83:LEU:HD12	53:BU:88:ILE:HD11	1.86	0.57
1:AA:518:C:H4'	1:AA:519:C:H5''	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:156:ALA:O	42:BH:158:HIS:CD2	2.54	0.57
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.39	0.57
58:BZ:44:PHE:C	58:BZ:44:PHE:CD1	2.79	0.57
3:AC:195:VAL:O	3:AC:196:LEU:HD22	2.04	0.57
35:BA:2409:G:H2'	35:BA:2410:G:C8	2.39	0.57
40:BF:138:GLU:O	40:BF:141:ALA:HB3	2.05	0.57
40:BF:134:GLY:HA2	40:BF:166:ALA:HB2	1.86	0.57
49:BQ:74:TYR:HD1	49:BQ:75:THR:N	2.03	0.57
24:AY:316:ILE:CD1	24:AY:326:THR:HG23	2.35	0.57
38:BD:176:ARG:HG2	38:BD:176:ARG:NH1	2.20	0.57
3:AC:14:ILE:O	3:AC:15:THR:HB	2.03	0.57
35:BA:598:G:H5'	48:BP:15:ARG:HB3	1.87	0.57
10:AJ:38:ILE:HG12	10:AJ:71:LEU:HB3	1.87	0.57
35:BA:2052:G:H4'	39:BE:143:ASN:O	2.05	0.57
35:BA:271(G):C:O2'	35:BA:271(H):G:H5'	2.05	0.57
54:BV:79:VAL:HG12	54:BV:79:VAL:O	2.04	0.57
29:B4:13:ARG:N	29:B4:24:THR:HG23	2.19	0.57
37:BC:124:VAL:HG13	37:BC:125:GLY:N	2.20	0.57
31:B6:8:LYS:HE3	31:B6:25:LYS:HG3	1.87	0.57
1:AA:60:A:H1'	1:AA:61:G:C1'	2.34	0.57
35:BA:1422:G:C6	35:BA:1423:G:C5	2.92	0.57
35:BA:1721:G:N3	35:BA:1721:G:H5'	2.19	0.57
30:B5:2:ALA:CA	35:BA:2015:A:H1'	2.31	0.57
19:AS:26:GLY:O	19:AS:27:GLU:HG3	2.04	0.57
24:AY:81:ILE:HG22	24:AY:82:ILE:H	1.69	0.57
35:BA:1119:C:C2'	35:BA:1120:G:C5'	2.74	0.57
35:BA:470:A:OP1	40:BF:59:TYR:HE1	1.88	0.57
35:BA:271(L):U:H4'	35:BA:271(M):G:N7	2.19	0.57
25:B0:69:PHE:CD2	25:B0:79:VAL:CG2	2.88	0.57
35:BA:1062:G:H2'	35:BA:1063:G:H8	1.70	0.57
35:BA:2118:U:O4	35:BA:2149:G:H1'	2.04	0.57
38:BD:142:VAL:HG23	38:BD:192:THR:O	2.04	0.57
42:BH:5:GLY:CA	42:BH:69:ARG:HD3	2.35	0.57
10:AJ:8:LEU:HD13	10:AJ:70:ARG:HB2	1.87	0.57
35:BA:1316:U:H2'	35:BA:1317:A:C8	2.40	0.57
24:AY:9:LEU:C	24:AY:9:LEU:HD23	2.26	0.57
16:AP:28:ARG:NH1	16:AP:29:ASP:OD1	2.38	0.57
1:AA:1447:A:C2'	1:AA:1452:C:O5'	2.53	0.57
35:BA:2790:A:N3	35:BA:2790:A:H2'	2.20	0.57
35:BA:852:G:O2'	35:BA:853:G:H5'	2.04	0.57
35:BA:1088:A:N3	35:BA:1088:A:H3'	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:2:LYS:HD3	39:BE:95:ILE:HG22	1.86	0.57
1:AA:992:U:O2	1:AA:992:U:H2'	2.05	0.57
18:AR:58:LEU:HD22	18:AR:62:GLU:HB3	1.86	0.57
1:AA:986:A:H2'	1:AA:987:G:C8	2.39	0.57
1:AA:314:C:HO2'	1:AA:315:A:H5'	1.70	0.56
4:AD:3:ARG:HE	4:AD:5:ILE:CG1	2.18	0.56
35:BA:604:G:O2'	35:BA:605:C:C5'	2.48	0.56
35:BA:174:C:H5'	35:BA:175:G:OP2	2.05	0.56
35:BA:1540:U:O3'	35:BA:1541:G:H3'	2.05	0.56
40:BF:192:LEU:CD2	40:BF:194:MET:HG3	2.35	0.56
19:AS:42:PRO:C	19:AS:44:MET:H	2.09	0.56
19:AS:63:THR:CG2	19:AS:64:GLU:H	2.07	0.56
30:B5:51:TYR:O	30:B5:52:TYR:C	2.37	0.56
31:B6:15:GLU:HB2	31:B6:20:ASN:HB3	1.85	0.56
35:BA:1800:C:OP1	38:BD:266:SER:OG	2.18	0.56
35:BA:1427:A:H1'	35:BA:1428:C:OP2	2.05	0.56
24:AY:183:MET:O	24:AY:201:ILE:HD11	2.05	0.56
3:AC:117:ALA:HB2	3:AC:200:ALA:HB3	1.87	0.56
24:AY:99:ARG:HH11	24:AY:401:SER:C	2.08	0.56
47:BO:13:ASN:N	47:BO:13:ASN:HD22	2.01	0.56
28:B3:50:VAL:O	28:B3:54:VAL:HG13	2.05	0.56
41:BG:84:LYS:HG3	41:BG:84:LYS:O	2.04	0.56
3:AC:12:LEU:O	3:AC:14:ILE:N	2.38	0.56
43:BJ:67:UNK:C	43:BJ:69:UNK:H	2.17	0.56
41:BG:114:ILE:O	41:BG:114:ILE:HG23	2.04	0.56
24:AY:297:GLU:O	24:AY:297:GLU:HG3	2.05	0.56
35:BA:2668:G:O2'	35:BA:2669:G:H5'	2.05	0.56
9:AI:24:GLY:O	9:AI:26:VAL:N	2.38	0.56
48:BP:115:LEU:CG	48:BP:116:GLY:N	2.68	0.56
35:BA:833:U:H4'	48:BP:52:GLU:H	1.65	0.56
37:BC:102:GLN:C	37:BC:104:ILE:N	2.58	0.56
37:BC:133:GLY:N	37:BC:134:PRO:HD2	2.19	0.56
35:BA:1771:C:O4'	35:BA:1786:A:C8	2.58	0.56
1:AA:684:A:O2'	11:AK:39:PRO:O	2.21	0.56
35:BA:1465:G:H5'	35:BA:1528:A:H1'	1.87	0.56
35:BA:2610:C:H4'	35:BA:2611:U:OP2	2.05	0.56
35:BA:93:G:H2'	35:BA:94:C:C6	2.40	0.56
35:BA:2306:C:N4	35:BA:2311:A:N7	2.53	0.56
41:BG:7:LEU:HB2	41:BG:104:GLU:OE1	2.05	0.56
41:BG:66:GLN:NE2	41:BG:92:VAL:CG2	2.67	0.56
35:BA:16:G:H2'	35:BA:17:G:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:58:LEU:HD21	51:BS:68:GLN:HB2	1.87	0.56
10:AJ:54:PHE:C	10:AJ:55:LYS:HG3	2.25	0.56
1:AA:189:G:O2'	1:AA:189(A):C:H5'	2.05	0.56
35:BA:896:A:H5'	58:BZ:146:ILE:HD12	1.88	0.56
26:B1:45:ASN:ND2	26:B1:47:GLN:HE21	2.02	0.56
31:B6:52:VAL:HG22	31:B6:53:LYS:N	2.14	0.56
35:BA:272(I):U:H5'	35:BA:272(I):U:C6	2.30	0.56
1:AA:190:U:C2	20:AT:105:SER:HB2	2.40	0.56
51:BS:102:ALA:HB3	51:BS:103:GLU:OE1	2.05	0.56
1:AA:1100:C:C4	2:AB:96:ARG:NH2	2.74	0.56
35:BA:197:A:H5'	35:BA:197:A:H8	1.68	0.56
1:AA:511:C:O2'	1:AA:512:U:H5''	2.05	0.56
13:AM:39:ILE:HD11	13:AM:56:LEU:HB2	1.87	0.56
35:BA:1213:A:O2'	35:BA:1214:A:H5'	2.04	0.56
35:BA:1441:G:O2'	35:BA:1442:G:H5'	2.04	0.56
35:BA:1789:A:OP2	38:BD:222:ARG:NH1	2.36	0.56
1:AA:123:C:OP1	1:AA:312:C:H5''	2.05	0.56
37:BC:109:MET:HA	37:BC:111:PHE:CZ	2.40	0.56
1:AA:197:A:N6	1:AA:221:C:C4'	2.67	0.56
49:BQ:14:ARG:HG2	49:BQ:14:ARG:HH11	1.70	0.56
1:AA:490:G:C4	1:AA:491:G:C8	2.93	0.56
33:B8:30:ARG:NE	33:B8:30:ARG:HA	2.19	0.56
35:BA:1416:G:HO2'	35:BA:1417:C:H5	0.70	0.56
35:BA:652:C:N1	35:BA:653:A:C8	2.73	0.56
35:BA:697:C:H2'	35:BA:698:C:H5'	1.84	0.56
35:BA:1268:A:H2'	35:BA:1269:A:O4'	2.06	0.56
35:BA:1461:G:C6	35:BA:1462:C:C4	2.93	0.56
57:BY:39:VAL:HG12	57:BY:40:GLU:N	2.21	0.56
1:AA:862:C:O2'	1:AA:863:U:H5''	2.06	0.56
35:BA:258:G:C2'	35:BA:259:G:H5'	2.35	0.56
35:BA:1137:G:C2'	35:BA:1138:G:H5'	2.33	0.56
29:B4:32:TYR:CE2	29:B4:34:GLU:HB2	2.40	0.56
41:BG:110:ALA:CB	41:BG:142:PRO:HB3	2.35	0.56
35:BA:693:C:O2'	35:BA:694:U:C5'	2.50	0.56
35:BA:2401:U:H3'	35:BA:2402:C:C6	2.40	0.56
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.04	0.56
42:BH:166:GLY:O	42:BH:167:GLU:CB	2.53	0.56
35:BA:1257:C:H4'	40:BF:83:PHE:CD2	2.40	0.56
12:AL:27:LEU:HD13	12:AL:28:LYS:HG3	1.86	0.56
57:BY:17:SER:CA	57:BY:71:LYS:HE2	2.35	0.56
1:AA:1001:A:H2'	1:AA:1001:A:N3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:45:ASN:HD21	35:BA:2090:G:N2	1.93	0.56
24:AY:534:ILE:CD1	24:AY:570:GLY:HA3	2.30	0.56
35:BA:2408:U:C2	35:BA:2409:G:N7	2.73	0.56
35:BA:412:A:N7	35:BA:2411:A:H2	2.03	0.56
40:BF:160:ASN:ND2	40:BF:162:LEU:HD13	2.14	0.56
35:BA:1077:A:C6	35:BA:1078:U:H1'	2.40	0.56
35:BA:1688:U:H1'	35:BA:1701:A:C6	2.40	0.56
55:BW:24:ILE:O	55:BW:71:VAL:HG21	2.04	0.56
37:BC:88:GLU:HB2	37:BC:92:ALA:HB3	1.85	0.56
47:BO:35:VAL:HG23	47:BO:69:ILE:HD11	1.86	0.56
33:B8:48:PHE:C	33:B8:49:VAL:HG22	2.25	0.56
44:BK:56:UNK:O	44:BK:67:UNK:HA	2.05	0.56
22:AV:73:A:C2'	22:AV:74:C:H5'	2.36	0.56
4:AD:145:GLU:OE1	4:AD:182:LYS:HD3	2.05	0.56
3:AC:131:ARG:O	3:AC:134:ILE:HB	2.05	0.56
38:BD:211:ARG:HD3	38:BD:214:TRP:CZ3	2.41	0.56
40:BF:175:THR:C	40:BF:176:LEU:HD12	2.24	0.56
35:BA:492:A:H2'	35:BA:493:G:O4'	2.04	0.56
1:AA:882:C:O2'	1:AA:883:C:H5'	2.06	0.56
58:BZ:103:ARG:HH11	58:BZ:103:ARG:HB2	1.70	0.56
35:BA:1047:G:H2'	35:BA:1110:G:H21	1.69	0.56
29:B4:12:ALA:N	29:B4:24:THR:CB	2.55	0.56
35:BA:252:G:O2'	35:BA:253:C:H5'	2.05	0.56
35:BA:965:C:H2'	35:BA:966:G:H5'	1.87	0.56
33:B8:28:GLY:O	33:B8:30:ARG:N	2.35	0.56
2:AB:19:HIS:NE2	2:AB:206:ASP:HB2	2.20	0.56
1:AA:685:G:H8	1:AA:685:G:O5'	1.87	0.56
35:BA:1445:A:C8	35:BA:1460:A:C6	2.94	0.56
13:AM:97:PRO:HB2	13:AM:101:GLN:NE2	2.19	0.56
29:B4:48:ARG:HG2	29:B4:48:ARG:HH11	1.70	0.56
41:BG:52:ILE:O	41:BG:53:LEU:HG	2.06	0.56
1:AA:1175:G:H2'	1:AA:1176:A:H5'	1.87	0.56
1:AA:89:C:C2	1:AA:90:U:H5	2.23	0.56
35:BA:2106:G:H5'	35:BA:2106:G:H8	1.70	0.56
1:AA:1366:C:O2'	1:AA:1367:C:H5'	2.05	0.56
35:BA:2410:G:N2	35:BA:2411:A:H1'	2.20	0.56
58:BZ:56:VAL:HG13	58:BZ:69:THR:O	2.05	0.56
24:AY:631:ILE:HA	24:AY:645:ALA:CB	2.34	0.56
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.20	0.56
24:AY:5:VAL:HG13	24:AY:6:GLU:N	2.21	0.56
24:AY:151:ARG:O	24:AY:155:GLU:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:11:PRO:HB3	56:BX:92:LEU:HD21	1.86	0.56
41:BG:128:ARG:O	41:BG:128:ARG:HG3	2.05	0.56
35:BA:2363:C:C2	35:BA:2364:C:C5	2.93	0.56
37:BC:74:ARG:HG2	37:BC:111:PHE:HA	1.87	0.56
1:AA:197:A:N6	1:AA:221:C:C5'	2.68	0.56
2:AB:204:ASN:ND2	2:AB:205:ASP:N	2.50	0.56
2:AB:20:GLU:CA	2:AB:20:GLU:OE1	2.54	0.56
35:BA:1797:C:O2'	38:BD:259:THR:HG22	2.04	0.56
35:BA:89:G:H3'	35:BA:90:U:H5'	1.88	0.56
13:AM:65:LYS:HD2	13:AM:73:GLU:HG3	1.86	0.56
35:BA:692:C:H2'	35:BA:693:C:C5'	2.36	0.56
35:BA:1893:C:O2'	35:BA:1894:C:H5'	2.06	0.56
1:AA:1488:G:C2'	1:AA:1489:G:H5'	2.35	0.56
35:BA:885:C:O2	35:BA:885:C:H2'	2.05	0.56
35:BA:2756:U:C1'	35:BA:2757:A:OP1	2.47	0.56
1:AA:1077:G:C6	1:AA:1081:G:O6	2.59	0.56
38:BD:43:ARG:HH11	38:BD:44:ASN:CG	2.08	0.56
24:AY:38:ARG:HH22	24:AY:270:GLN:NE2	2.03	0.56
3:AC:190:ARG:HG3	3:AC:190:ARG:HH11	1.71	0.56
40:BF:132:VAL:HG22	40:BF:133:ASN:N	2.20	0.56
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.37	0.56
24:AY:431:LEU:HD11	24:AY:465:ARG:HH12	1.71	0.56
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.88	0.56
39:BE:101:ARG:HD2	39:BE:169:ASN:ND2	2.19	0.56
35:BA:1493:C:H2'	35:BA:1493:C:O2	2.05	0.56
17:AQ:40:LYS:HD3	17:AQ:42:TYR:OH	2.05	0.56
2:AB:145:LEU:O	2:AB:149:LEU:CB	2.32	0.56
35:BA:2751:G:C6	42:BH:1:MET:HG2	2.41	0.56
35:BA:108:U:C2'	35:BA:109:G:C5'	2.83	0.56
35:BA:2556:C:C2'	35:BA:2557:G:O5'	2.52	0.56
35:BA:2361:A:H2'	35:BA:2362:G:H5'	1.86	0.56
1:AA:36:C:O5'	1:AA:36:C:H6	1.88	0.56
1:AA:322:C:H41	1:AA:328:C:H6	1.53	0.56
1:AA:327:A:C2	1:AA:329:A:C4	2.94	0.56
35:BA:1821:A:H2'	35:BA:1822:G:H8	1.71	0.56
1:AA:555:C:N3	1:AA:556:C:C4	2.74	0.56
35:BA:2001:A:H2'	35:BA:2002:G:C8	2.40	0.56
35:BA:256:A:O2'	35:BA:257:A:H5'	2.04	0.56
35:BA:259:G:O2'	35:BA:260:G:C5'	2.36	0.56
35:BA:1137:G:O2'	35:BA:1138:G:C5'	2.38	0.56
41:BG:68:PRO:HB3	41:BG:92:VAL:HB	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:692:C:O2'	35:BA:693:C:C5'	2.45	0.56
52:BT:41:ARG:HD3	52:BT:41:ARG:C	2.26	0.56
1:AA:961:U:H2'	1:AA:961:U:OP1	2.05	0.56
40:BF:80:ALA:O	40:BF:81:PRO:C	2.43	0.56
39:BE:34:VAL:HG21	39:BE:78:LEU:CD2	2.35	0.56
35:BA:145:G:O2'	35:BA:146:G:H5'	2.05	0.56
57:BY:8:LYS:N	57:BY:8:LYS:CD	2.65	0.56
29:B4:42:PHE:HD1	29:B4:42:PHE:N	2.03	0.56
41:BG:127:GLY:C	41:BG:129:GLY:H	2.08	0.56
35:BA:2699:C:O2'	35:BA:2700:C:H5'	2.06	0.56
53:BU:52:ARG:HB3	53:BU:52:ARG:NH1	2.20	0.56
35:BA:2439:A:H5'	35:BA:2439:A:C8	2.41	0.56
39:BE:201:THR:C	39:BE:202:LYS:HD2	2.26	0.56
48:BP:96:THR:O	48:BP:100:LEU:HD23	2.05	0.56
1:AA:39:G:N7	1:AA:547:A:H8	2.03	0.56
35:BA:659:C:H4'	40:BF:100:THR:O	2.06	0.56
35:BA:30:G:OP1	53:BU:5:LYS:NZ	2.39	0.56
35:BA:747:U:N1	35:BA:2613:U:O4	2.35	0.56
41:BG:52:ILE:HB	41:BG:54:GLU:HG3	1.88	0.56
41:BG:6:ALA:CB	41:BG:105:LYS:NZ	2.69	0.56
51:BS:53:SER:OG	51:BS:54:LEU:N	2.38	0.56
51:BS:89:ARG:HB3	51:BS:92:TYR:HB3	1.87	0.56
35:BA:1804:C:O2'	35:BA:1805:U:H5'	2.05	0.56
35:BA:1806:C:C2'	35:BA:1807:G:C5'	2.84	0.56
4:AD:36:ARG:HA	4:AD:38:TYR:CE1	2.40	0.56
10:AJ:35:SER:OG	10:AJ:73:ASP:HB2	2.05	0.56
26:B1:72:GLU:O	26:B1:76:ARG:HG3	2.05	0.56
35:BA:2784:C:H1'	39:BE:37:ARG:NH1	2.21	0.56
39:BE:14:ILE:HD11	39:BE:173:VAL:HG11	1.86	0.56
57:BY:52:SER:O	57:BY:53:PRO:C	2.44	0.56
46:BN:45:ASN:N	46:BN:45:ASN:HD22	2.03	0.56
1:AA:614:A:H2'	1:AA:615:C:C6	2.41	0.56
35:BA:627:A:H62	48:BP:116:GLY:HA2	1.70	0.56
1:AA:490:G:HO2'	1:AA:491:G:H5'	1.68	0.56
1:AA:592:G:H2'	1:AA:593:G:H5'	1.86	0.56
1:AA:61:G:H2'	1:AA:62:U:C6	2.41	0.56
1:AA:698:G:O2'	1:AA:699:C:H5'	2.05	0.56
35:BA:1222:C:H2'	35:BA:1223:G:C5'	2.33	0.56
51:BS:97:ARG:NE	51:BS:97:ARG:C	2.58	0.56
46:BN:2:LYS:HE3	46:BN:2:LYS:N	2.19	0.56
35:BA:54:G:C6	35:BA:117:G:N2	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:6:LEU:O	52:BT:10:VAL:HG23	2.06	0.56
4:AD:31:CYS:C	4:AD:33:MET:H	2.08	0.56
35:BA:925:C:C3'	35:BA:926:A:H5''	2.36	0.56
1:AA:154:C:H2'	1:AA:155:C:C6	2.41	0.56
57:BY:42:VAL:HG12	57:BY:42:VAL:O	2.06	0.56
35:BA:1459:G:N3	35:BA:1459:G:C3'	2.68	0.56
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.88	0.56
1:AA:118:U:H3'	1:AA:288:A:H61	1.69	0.56
41:BG:83:ARG:C	41:BG:85:GLY:H	2.08	0.56
16:AP:45:THR:HG23	16:AP:46:PRO:HD2	1.87	0.56
42:BH:137:ASP:O	42:BH:138:LYS:HB2	2.05	0.56
35:BA:644:A:H2	35:BA:2369:A:H1'	1.69	0.56
38:BD:106:ILE:HG12	38:BD:106:ILE:O	2.05	0.56
24:AY:686:LYS:HD3	24:AY:686:LYS:O	2.06	0.56
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.05	0.56
57:BY:43:ASN:HA	57:BY:64:GLU:HA	1.88	0.56
30:B5:47:PRO:O	30:B5:48:GLU:C	2.44	0.56
48:BP:115:LEU:HA	48:BP:134:ALA:HB2	1.86	0.56
48:BP:126:VAL:HG12	48:BP:148:LEU:HD11	1.88	0.56
1:AA:1239:A:H4'	1:AA:1240:U:O5'	2.06	0.56
35:BA:49:A:O4'	35:BA:51:G:C4	2.59	0.56
1:AA:1179:A:H2'	1:AA:1180:A:C5'	2.35	0.56
1:AA:1490:C:C3'	1:AA:1491:G:H5'	2.34	0.56
51:BS:54:LEU:C	51:BS:56:LEU:H	2.07	0.56
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.41	0.56
54:BV:55:ALA:CB	54:BV:101:GLY:HA2	2.35	0.56
1:AA:1386:G:C2	1:AA:1387:G:C8	2.94	0.56
1:AA:788:U:N3	1:AA:792:A:O2'	2.34	0.56
24:AY:506:GLN:HB2	24:AY:576:ASP:O	2.05	0.56
46:BN:94:HIS:N	46:BN:95:PRO:CD	2.69	0.56
1:AA:967:C:H4'	9:AI:125:TYR:CE1	2.36	0.56
38:BD:8:PRO:HB3	38:BD:14:ARG:CB	2.36	0.56
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	2.20	0.56
13:AM:40:ASN:HD22	13:AM:43:THR:CG2	2.18	0.56
1:AA:1036:G:H5''	1:AA:1037:C:C5	2.41	0.56
7:AG:152:ALA:HB1	7:AG:155:ARG:HH21	1.70	0.56
1:AA:953:G:H2'	1:AA:954:G:O4'	2.06	0.56
2:AB:59:GLU:HB2	2:AB:221:LEU:HD21	1.86	0.56
24:AY:348:ARG:HG3	24:AY:348:ARG:HH11	1.69	0.56
58:BZ:60:GLU:O	58:BZ:61:LEU:CB	2.54	0.56
52:BT:28:VAL:O	52:BT:29:ARG:CB	2.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:115:LEU:HB2	48:BP:131:SER:OG	2.05	0.56
22:AV:39:U:H2'	22:AV:40:C:H6	1.69	0.56
22:AV:41:C:H2'	22:AV:42:C:H5'	1.85	0.56
1:AA:1505:G:H4'	1:AA:1506:U:H5''	1.88	0.56
13:AM:11:ARG:H	13:AM:45:VAL:HG21	1.70	0.56
41:BG:93:THR:O	41:BG:94:LEU:HB2	2.06	0.56
53:BU:87:GLY:C	53:BU:89:GLU:H	2.09	0.56
1:AA:1029:C:H42	1:AA:1033:G:H1	1.54	0.56
17:AQ:9:VAL:HG11	17:AQ:84:LEU:CD1	2.36	0.56
48:BP:77:ARG:HH11	48:BP:77:ARG:HG2	1.71	0.56
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.06	0.56
35:BA:1695:G:H5''	35:BA:1695:G:N3	2.20	0.56
1:AA:1041:A:H2'	1:AA:1042:G:H8	1.70	0.56
24:AY:228:MET:O	24:AY:232:LEU:HD22	2.06	0.56
39:BE:16:ARG:NH2	39:BE:171:GLU:OE2	2.39	0.56
54:BV:5:VAL:CG2	54:BV:6:LYS:N	2.69	0.56
24:AY:7:TYR:CE2	24:AY:370:LYS:HD2	2.40	0.56
1:AA:1447:A:H2'	1:AA:1452:C:O5'	2.06	0.56
7:AG:73:MET:HE2	7:AG:89:MET:C	2.26	0.56
1:AA:453:A:O2'	1:AA:454:C:C6	2.58	0.56
2:AB:102:LEU:HB3	2:AB:180:LEU:HD12	1.87	0.56
52:BT:38:ASN:ND2	52:BT:38:ASN:H	2.04	0.56
41:BG:34:LEU:HG	41:BG:161:THR:HG22	1.87	0.56
30:B5:40:LYS:HD3	30:B5:46:CYS:HB2	1.87	0.55
1:AA:775:G:O2'	1:AA:776:G:C5'	2.30	0.55
25:B0:45:PHE:CE1	25:B0:77:ARG:NE	2.71	0.55
35:BA:49:A:N6	35:BA:177:G:C2	2.74	0.55
1:AA:106:C:C2'	1:AA:107:G:C5'	2.83	0.55
35:BA:1902:C:C4'	38:BD:244:ARG:HB2	2.35	0.55
1:AA:359:U:H2'	1:AA:360:A:C8	2.41	0.55
1:AA:683:G:C6	1:AA:684:A:C6	2.94	0.55
35:BA:1424:G:H2'	35:BA:1425:G:O5'	2.06	0.55
35:BA:2610:C:HO2'	35:BA:2611:U:P	2.27	0.55
1:AA:1305:G:H5'	21:AU:4:GLY:C	2.26	0.55
35:BA:1970:A:C4'	35:BA:1972:A:C1'	2.83	0.55
40:BF:8:GLN:O	40:BF:9:ILE:C	2.44	0.55
1:AA:1033:G:H2'	1:AA:1034:G:H8	1.71	0.55
20:AT:73:HIS:O	20:AT:74:LYS:CG	2.48	0.55
1:AA:788:U:C2'	1:AA:789:U:C5'	2.83	0.55
1:AA:792:A:H1'	1:AA:794:A:N7	2.21	0.55
7:AG:83:ALA:HB1	7:AG:85:TYR:CZ	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:141:VAL:O	58:BZ:144:LEU:HD23	2.06	0.55
12:AL:83:VAL:CG1	12:AL:100:ILE:HG23	2.35	0.55
36:BB:7:G:C3'	36:BB:8:U:H5'	2.36	0.55
24:AY:610:VAL:HG22	24:AY:643:ILE:HB	1.89	0.55
35:BA:894:C:O2'	35:BA:895:U:H5'	2.06	0.55
35:BA:2464:C:O2'	35:BA:2465:C:H6	1.88	0.55
35:BA:848:G:N3	35:BA:933:A:H1'	2.21	0.55
19:AS:32:LYS:CB	19:AS:50:ALA:HB3	2.36	0.55
37:BC:42:VAL:O	37:BC:216:THR:O	2.24	0.55
29:B4:42:PHE:N	29:B4:42:PHE:CD1	2.74	0.55
1:AA:959:A:O3'	1:AA:960:U:H4'	2.06	0.55
9:AI:126:SER:O	9:AI:127:LYS:CB	2.53	0.55
43:BJ:69:UNK:O	43:BJ:70:UNK:O	2.24	0.55
35:BA:1835:G:H1'	35:BA:1931:U:C2	2.41	0.55
36:BB:111:G:O2'	36:BB:112:U:H5'	2.06	0.55
3:AC:164:ARG:HG2	3:AC:164:ARG:HH11	1.71	0.55
1:AA:948:C:H6	1:AA:948:C:O5'	1.89	0.55
44:BK:128:UNK:O	44:BK:130:UNK:N	2.39	0.55
7:AG:71:PRO:HD3	7:AG:103:TRP:CZ3	2.41	0.55
44:BK:28:UNK:O	44:BK:29:UNK:C	2.52	0.55
35:BA:1192:G:O2'	35:BA:1193:G:H5'	2.06	0.55
9:AI:3:GLN:OE1	9:AI:20:ARG:NH1	2.38	0.55
52:BT:42:ILE:O	52:BT:42:ILE:HG13	2.05	0.55
35:BA:247:G:H2'	35:BA:248:G:O5'	2.06	0.55
37:BC:129:GLY:O	37:BC:131:ILE:N	2.38	0.55
1:AA:591:U:C2'	1:AA:592:G:O5'	2.54	0.55
35:BA:1773:A:O2'	35:BA:1774:C:H5'	2.03	0.55
2:AB:37:ASN:O	2:AB:39:ILE:HG13	2.06	0.55
41:BG:39:ILE:HD11	41:BG:155:MET:HG3	1.88	0.55
24:AY:84:THR:HG23	24:AY:85:PRO:N	2.20	0.55
10:AJ:49:VAL:O	10:AJ:60:ARG:HB3	2.05	0.55
35:BA:889:C:H2'	35:BA:890:A:O4'	2.06	0.55
35:BA:1804:C:C2'	35:BA:1805:U:H5'	2.36	0.55
35:BA:1216:G:H2'	35:BA:1217:C:H5'	1.88	0.55
24:AY:264:LEU:CB	61:AY:701:GCP:C6	2.84	0.55
1:AA:867:G:C2'	1:AA:868:C:H5'	2.36	0.55
35:BA:896:A:N3	58:BZ:176:PRO:HB3	2.21	0.55
24:AY:506:GLN:HG2	24:AY:573:HIS:CE1	2.41	0.55
24:AY:550:MET:HE1	24:AY:563:ILE:HD11	1.88	0.55
25:B0:33:ALA:N	25:B0:64:ASP:OD1	2.34	0.55
49:BQ:110:THR:HG23	49:BQ:113:GLN:OE1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1204:A:N1	35:BA:1241:A:C2	2.74	0.55
57:BY:55:TYR:N	57:BY:56:PRO:HD3	2.22	0.55
55:BW:10:VAL:O	55:BW:11:ARG:CB	2.54	0.55
35:BA:2182:G:O2'	35:BA:2183:C:H5'	2.06	0.55
58:BZ:100:VAL:HG11	58:BZ:137:ILE:HD11	1.89	0.55
52:BT:28:VAL:HG11	52:BT:46:GLU:CG	2.36	0.55
35:BA:1041:G:H1	35:BA:1114:G:H22	1.54	0.55
1:AA:951:G:O6	1:AA:1230:C:C4	2.59	0.55
1:AA:197:A:N6	1:AA:221:C:H5''	2.21	0.55
2:AB:168:THR:HG23	2:AB:192:SER:CB	2.36	0.55
35:BA:658:C:H2'	35:BA:659:C:H6	1.72	0.55
1:AA:588:G:H2'	1:AA:589:C:C6	2.41	0.55
35:BA:1798:U:O2	35:BA:1821:A:C2	2.59	0.55
35:BA:1297:C:H2'	35:BA:1298:C:H6	1.71	0.55
1:AA:1505:G:C5'	1:AA:1506:U:OP2	2.42	0.55
41:BG:11:TYR:OH	41:BG:33:ARG:HB3	2.07	0.55
41:BG:54:GLU:O	41:BG:57:ALA:HB3	2.06	0.55
48:BP:23:PRO:C	48:BP:33:ARG:NE	2.60	0.55
51:BS:29:PHE:HD1	51:BS:30:ARG:N	2.04	0.55
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.88	0.55
52:BT:6:LEU:C	52:BT:8:LYS:H	2.08	0.55
40:BF:3:GLU:CB	40:BF:24:LEU:HG	2.36	0.55
35:BA:1313:U:H2'	35:BA:1610:A:C2	2.41	0.55
3:AC:28:GLN:O	3:AC:29:TYR:C	2.44	0.55
4:AD:150:GLU:CG	4:AD:151:LYS:H	2.19	0.55
1:AA:356:A:H1'	1:AA:368:U:O2'	2.06	0.55
52:BT:34:VAL:CG1	52:BT:39:ARG:HG3	2.36	0.55
24:AY:348:ARG:CG	24:AY:348:ARG:HH11	2.19	0.55
54:BV:59:ALA:HB2	54:BV:96:ILE:HD13	1.88	0.55
44:BK:61:UNK:O	44:BK:62:UNK:CB	2.54	0.55
35:BA:2461:C:H2'	35:BA:2462:U:C6	2.42	0.55
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.41	0.55
1:AA:1396:A:O4'	1:AA:1398:A:H1'	2.07	0.55
52:BT:118:ARG:O	52:BT:119:LYS:HB2	2.07	0.55
35:BA:1048:A:H62	42:BH:1:MET:HE1	1.71	0.55
35:BA:2360:A:O2'	35:BA:2361:A:P	2.63	0.55
1:AA:495:A:H1'	1:AA:496:A:C2'	2.36	0.55
35:BA:657:U:H2'	35:BA:658:C:C6	2.41	0.55
7:AG:121:ALA:O	7:AG:125:MET:N	2.38	0.55
2:AB:187:LEU:O	2:AB:187:LEU:CG	2.52	0.55
41:BG:6:ALA:HB1	41:BG:105:LYS:NZ	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:71:THR:H	41:BG:90:LEU:H	1.54	0.55
35:BA:1142(A):A:C4	35:BA:1144:G:N7	2.74	0.55
1:AA:1282:C:H6	1:AA:1282:C:O5'	1.89	0.55
48:BP:33:ARG:O	48:BP:34:GLY:O	2.24	0.55
1:AA:1048:G:O6	1:AA:1210:C:N4	2.39	0.55
1:AA:91:C:O2	1:AA:91:C:H2'	2.07	0.55
14:AN:32:SER:HB3	14:AN:41:ARG:CG	2.37	0.55
35:BA:2129:C:N3	35:BA:2159:G:N1	2.39	0.55
51:BS:85:VAL:O	51:BS:106:ARG:HG2	2.06	0.55
58:BZ:129:SER:OG	58:BZ:132:ASN:HB3	2.07	0.55
1:AA:186:C:O2'	1:AA:187:C:C5'	2.48	0.55
40:BF:110:LEU:HD22	40:BF:202:PHE:CE1	2.32	0.55
3:AC:169:ALA:O	3:AC:170:GLN:HB2	2.05	0.55
3:AC:120:VAL:C	3:AC:122:GLU:H	2.09	0.55
54:BV:18:LEU:HD22	54:BV:18:LEU:C	2.27	0.55
38:BD:30:GLU:CG	38:BD:63:ARG:NE	2.67	0.55
12:AL:83:VAL:HG11	12:AL:100:ILE:CG1	2.35	0.55
39:BE:203:LYS:C	39:BE:203:LYS:HD2	2.26	0.55
51:BS:83:LYS:O	51:BS:105:ALA:N	2.39	0.55
13:AM:56:LEU:HD13	13:AM:56:LEU:C	2.27	0.55
35:BA:2169:A:H5'	37:BC:130:ARG:NH2	2.21	0.55
35:BA:2559:C:C2'	35:BA:2560:C:H5'	2.36	0.55
35:BA:603:A:N7	35:BA:655:A:C6	2.74	0.55
35:BA:655:A:C4'	35:BA:656:G:H5'	2.29	0.55
1:AA:774:G:C2'	1:AA:775:G:C5'	2.84	0.55
7:AG:121:ALA:HA	7:AG:124:LEU:HB2	1.88	0.55
35:BA:1983:C:O5'	35:BA:1983:C:H6	1.89	0.55
40:BF:125:LEU:HA	40:BF:194:MET:O	2.06	0.55
29:B4:21:VAL:HG21	29:B4:35:VAL:HG23	1.88	0.55
33:B8:4:MET:CE	33:B8:61:LEU:HD23	2.36	0.55
35:BA:18:C:O2	35:BA:19:C:C6	2.60	0.55
35:BA:1144:G:O2'	35:BA:1145:C:H5'	2.07	0.55
53:BU:101:ARG:HG3	53:BU:101:ARG:NH1	2.20	0.55
53:BU:92:ARG:HH11	53:BU:94:ASN:HD22	1.52	0.55
20:AT:72:LEU:O	20:AT:73:HIS:HB2	2.06	0.55
4:AD:34:GLU:O	4:AD:35:ARG:CB	2.55	0.55
10:AJ:28:ARG:C	10:AJ:30:SER:H	2.09	0.55
24:AY:122:TRP:CH2	24:AY:132:ARG:HD2	2.41	0.55
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.22	0.55
35:BA:914:C:C2'	35:BA:915:C:H5'	2.30	0.55
35:BA:1945:G:C5	35:BA:1946:U:C5	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2849:U:P	52:BT:95:ARG:HH12	2.29	0.55
24:AY:8:ASP:CB	24:AY:11:ARG:HD2	2.36	0.55
31:B6:5:VAL:O	31:B6:6:ARG:HB2	2.05	0.55
35:BA:363(F):A:H1'	35:BA:364:C:H5	1.72	0.55
24:AY:469:GLU:HG2	24:AY:469:GLU:O	2.07	0.55
35:BA:1377:G:O5'	35:BA:1377:G:H8	1.90	0.55
35:BA:1877:A:H5'	35:BA:1878:G:OP2	2.07	0.55
16:AP:82:GLN:O	16:AP:84:ALA:N	2.39	0.55
48:BP:115:LEU:N	48:BP:115:LEU:HD22	2.21	0.55
37:BC:121:MET:CA	37:BC:124:VAL:HG12	2.34	0.55
35:BA:858:U:O2	35:BA:2268:A:H2'	2.07	0.55
35:BA:47:C:N3	35:BA:179:G:N1	2.54	0.55
35:BA:49:A:HO2'	35:BA:50:U:P	2.28	0.55
35:BA:39:C:HO2'	35:BA:40:C:H5'	1.67	0.55
1:AA:560:U:C4'	1:AA:561:U:H5''	2.32	0.55
13:AM:84:ILE:HD12	19:AS:66:MET:SD	2.46	0.55
35:BA:1144:G:H2'	35:BA:1145:C:C6	2.41	0.55
32:B7:34:ARG:HG3	32:B7:34:ARG:NH1	2.18	0.55
35:BA:1426:G:O5'	35:BA:1426:G:H8	1.90	0.55
42:BH:106:THR:CG2	42:BH:112:PRO:HB3	2.29	0.55
58:BZ:48:PHE:HD1	58:BZ:48:PHE:O	1.90	0.55
24:AY:157:LEU:N	24:AY:157:LEU:HD23	2.21	0.55
58:BZ:150:LEU:O	58:BZ:151:HIS:HB3	2.06	0.55
38:BD:35:LYS:HZ1	38:BD:35:LYS:HB3	1.72	0.55
46:BN:133:GLN:O	46:BN:134:ARG:CB	2.54	0.55
9:AI:78:LYS:HD3	9:AI:79:LEU:N	2.21	0.55
35:BA:2523:G:H2'	35:BA:2524:G:C5'	2.36	0.55
24:AY:232:LEU:HD12	45:BL:87:UNK:CB	2.36	0.55
29:B4:42:PHE:CE1	41:BG:180:PHE:CE1	2.95	0.55
26:B1:86:SER:OG	26:B1:89:GLU:HG3	2.07	0.55
8:AH:113:SER:HB2	8:AH:134:ILE:HD11	1.89	0.55
35:BA:1385:G:H4'	35:BA:1386:C:OP1	2.05	0.55
35:BA:762:U:H4'	35:BA:763:G:O5'	2.06	0.55
56:BX:66:LEU:HD23	56:BX:66:LEU:O	2.06	0.55
38:BD:132:PRO:HG3	38:BD:190:TYR:CE1	2.42	0.55
52:BT:16:ARG:HG3	52:BT:79:HIS:HA	1.88	0.55
52:BT:90:GLN:O	52:BT:92:GLY:N	2.40	0.55
35:BA:70:G:H2'	35:BA:113:G:O2'	2.06	0.55
35:BA:2360:A:O2'	35:BA:2361:A:H8	1.89	0.55
35:BA:1416:G:C4	35:BA:1417:C:C4	2.95	0.55
35:BA:1543:C:C3'	35:BA:1544:A:H5''	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2581:G:C2'	35:BA:2610:C:N4	2.68	0.55
35:BA:1223:G:C2	35:BA:1227:G:C6	2.95	0.55
1:AA:555:C:N3	1:AA:556:C:N4	2.55	0.55
27:B2:47:ASN:ND2	35:BA:94(A):G:N2	2.51	0.55
13:AM:3:ARG:N	13:AM:9:ILE:CG2	2.70	0.55
41:BG:133:LEU:CD1	41:BG:134:GLY:N	2.70	0.55
30:B5:45:VAL:HG13	30:B5:51:TYR:CD1	2.42	0.55
48:BP:23:PRO:CB	48:BP:33:ARG:HG2	2.37	0.55
24:AY:47:GLU:HB3	24:AY:52:MET:HB2	1.89	0.55
51:BS:89:ARG:HG2	51:BS:89:ARG:HH11	1.72	0.55
35:BA:1599:C:H2'	35:BA:1600:C:C6	2.42	0.55
53:BU:84:LYS:CD	53:BU:89:GLU:HG3	2.37	0.55
54:BV:51:VAL:HG12	54:BV:52:VAL:H	1.72	0.55
35:BA:1106:G:H2'	35:BA:1107:G:O4'	2.06	0.55
1:AA:1030:C:H4'	1:AA:1030(A):G:C5'	2.36	0.55
35:BA:1845:G:O2'	35:BA:1846:G:H5'	2.06	0.55
58:BZ:43:GLU:O	58:BZ:47:VAL:HG23	2.07	0.55
39:BE:120:TRP:O	39:BE:121:ASN:C	2.45	0.55
35:BA:2111:C:C2	35:BA:2147:G:N2	2.74	0.55
37:BC:52:PRO:HB2	37:BC:168:LYS:O	2.07	0.55
3:AC:25:GLY:C	3:AC:27:LYS:N	2.60	0.55
36:BB:17:C:O2'	36:BB:18:G:H5'	2.06	0.55
2:AB:164:VAL:O	2:AB:186:ALA:CA	2.53	0.55
2:AB:71:VAL:CG1	2:AB:170:GLU:HG2	2.37	0.55
35:BA:2136:C:H2'	35:BA:2137:C:C6	2.42	0.55
1:AA:1100:C:C5	2:AB:96:ARG:NH2	2.75	0.55
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	2.20	0.55
36:BB:24:G:H4'	36:BB:25:A:C8	2.42	0.55
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.22	0.55
35:BA:188:G:H2'	35:BA:189:G:H5'	1.88	0.55
35:BA:1971:A:H1'	38:BD:240:ALA:O	2.07	0.55
39:BE:104:VAL:HG22	39:BE:198:VAL:HG13	1.88	0.55
1:AA:714:G:H2'	1:AA:715:A:C8	2.41	0.55
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.06	0.55
1:AA:472:A:H2'	1:AA:473:G:O4'	2.07	0.55
52:BT:25:GLY:HA2	52:BT:92:GLY:HA2	1.89	0.55
31:B6:26:ASN:HD21	31:B6:32:ASN:ND2	2.05	0.55
35:BA:637:A:N1	35:BA:652:C:H5'	2.22	0.55
1:AA:775:G:H2'	1:AA:776:G:H5'	1.87	0.55
35:BA:858:U:O2'	35:BA:859:G:C4	2.60	0.55
22:AV:41:C:HO2'	22:AV:42:C:H5'	1.67	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:688:G:N2	1:AA:699:C:O2	2.36	0.55
35:BA:28:A:N6	35:BA:512:G:H1'	2.21	0.55
35:BA:747:U:H5	35:BA:2014:A:N3	2.04	0.55
41:BG:7:LEU:HB2	41:BG:104:GLU:HG3	1.88	0.55
31:B6:44:ARG:C	31:B6:45:LYS:HG2	2.27	0.55
35:BA:1021:A:H61	35:BA:1142(A):A:N6	2.04	0.55
35:BA:2757:A:H2'	35:BA:2758:A:O5'	2.06	0.55
35:BA:2126:A:O2'	35:BA:2127:G:C5'	2.54	0.55
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.41	0.55
1:AA:1081:G:O2'	1:AA:1082:G:H5'	2.07	0.55
25:B0:10:THR:C	25:B0:11:ARG:CG	2.75	0.55
1:AA:187:C:H2'	1:AA:188:C:H6	1.72	0.55
1:AA:187:C:H2'	1:AA:188:C:C6	2.41	0.55
24:AY:264:LEU:HD12	61:AY:701:GCP:C2	2.37	0.55
51:BS:12:PHE:O	51:BS:14:VAL:HG23	2.07	0.55
35:BA:1649:G:HO2'	35:BA:1650:G:H5'	1.68	0.55
1:AA:191:G:H1'	20:AT:105:SER:HA	1.87	0.55
24:AY:309:LEU:HB3	24:AY:391:GLY:N	2.22	0.55
3:AC:11:ARG:HB3	3:AC:15:THR:HB	1.89	0.55
54:BV:21:ARG:HG2	54:BV:91:TYR:CD1	2.42	0.55
35:BA:363(F):A:H4'	35:BA:364:C:O5'	2.07	0.55
40:BF:184:TYR:O	40:BF:188:ARG:HG2	2.07	0.55
24:AY:556:ILE:HD13	24:AY:601:ILE:HD13	1.89	0.55
53:BU:17:ILE:HA	53:BU:20:LEU:HD23	1.88	0.55
35:BA:1827:C:C2'	35:BA:1828:G:H5'	2.36	0.55
35:BA:573:G:O2'	35:BA:574:C:H3'	2.07	0.55
14:AN:7:ILE:HG13	14:AN:8:GLU:HG3	1.88	0.55
1:AA:795:C:H6	1:AA:795:C:O5'	1.90	0.55
38:BD:218:ARG:HB3	38:BD:219:PRO:HD2	1.88	0.55
1:AA:490:G:C5	1:AA:491:G:N7	2.74	0.55
1:AA:936:C:H2'	1:AA:937:A:C5'	2.37	0.55
35:BA:175:G:H2'	35:BA:176:G:H5'	1.88	0.55
1:AA:751:U:O2'	1:AA:752:G:H5'	2.06	0.55
35:BA:1301:A:HO2'	35:BA:1302:A:P	2.30	0.55
57:BY:76:CYS:SG	57:BY:77:PRO:CD	2.77	0.55
1:AA:561:U:C6	1:AA:561:U:OP1	2.59	0.55
1:AA:862:C:O2'	1:AA:863:U:C5'	2.55	0.55
41:BG:41:GLN:HG3	41:BG:154:GLY:O	2.07	0.55
6:AF:28:ARG:HG3	6:AF:28:ARG:NH1	2.21	0.55
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.87	0.55
24:AY:505:GLY:O	24:AY:506:GLN:HG3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:13:VAL:HG23	57:BY:73:ARG:C	2.28	0.55
34:B9:31:LYS:HE2	35:BA:2478:A:H5'	1.87	0.55
40:BF:64:ILE:HD12	40:BF:78:ILE:CG2	2.37	0.55
3:AC:131:ARG:HD3	3:AC:166:GLU:HG2	1.89	0.55
26:B1:37:ILE:HD12	26:B1:38:SER:N	2.22	0.55
52:BT:126:ALA:O	52:BT:128:GLU:N	2.39	0.55
1:AA:996:A:H2'	1:AA:997:U:C6	2.42	0.55
43:BJ:22:UNK:O	43:BJ:118:UNK:HA	2.06	0.55
35:BA:1684:C:H2'	35:BA:1685:C:C6	2.42	0.55
35:BA:2448:A:HO2'	35:BA:2449:U:H5	1.54	0.55
16:AP:75:ARG:HH11	16:AP:75:ARG:HG3	1.72	0.55
24:AY:192:LEU:HD12	24:AY:194:THR:HG23	1.89	0.55
35:BA:1050:A:H2'	35:BA:1051:G:C8	2.41	0.55
35:BA:541:C:O2'	35:BA:542:C:H5'	2.07	0.55
35:BA:968:G:C2'	35:BA:969:U:H5'	2.33	0.55
1:AA:495:A:O2'	1:AA:496:A:C3'	2.55	0.55
35:BA:1902:C:H1'	38:BD:244:ARG:HG3	1.89	0.55
35:BA:1445:A:H8	35:BA:1460:A:C2	2.18	0.55
19:AS:22:LEU:O	19:AS:26:GLY:N	2.40	0.55
31:B6:15:GLU:CG	31:B6:18:ARG:NH1	2.70	0.55
1:AA:1281:U:P	1:AA:1282:C:H41	2.30	0.55
51:BS:96:GLY:C	51:BS:98:VAL:H	2.10	0.55
35:BA:1658:C:OP1	39:BE:132:HIS:CE1	2.60	0.55
1:AA:1499:A:N3	1:AA:1500:A:C8	2.75	0.55
1:AA:184:G:O2'	1:AA:185:A:H5'	2.06	0.55
24:AY:36:THR:O	24:AY:38:ARG:N	2.40	0.55
24:AY:454:MET:N	24:AY:458:HIS:HD2	1.90	0.55
35:BA:2115:G:H5'	35:BA:2116:G:OP2	2.07	0.55
36:BB:28:C:H2'	36:BB:29:A:C8	2.42	0.55
42:BH:10:PRO:HB2	42:BH:49:VAL:CG1	2.36	0.55
58:BZ:81:ARG:NH1	58:BZ:81:ARG:HB2	2.22	0.55
1:AA:21:G:H2'	1:AA:22:G:C8	2.41	0.55
47:BO:87:ILE:HG23	47:BO:91:LEU:HA	1.88	0.55
3:AC:13:GLY:HA3	14:AN:57:ARG:NH1	2.22	0.55
35:BA:81:G:H21	57:BY:2:ARG:CZ	2.20	0.55
1:AA:163:C:H2'	1:AA:164:U:H6	1.70	0.55
34:B9:4:ARG:O	34:B9:36:GLN:HA	2.07	0.55
1:AA:828:A:H2'	1:AA:829:G:O4'	2.07	0.55
1:AA:848:C:H2'	1:AA:849:C:H6	1.71	0.55
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.47	0.55
7:AG:131:LYS:H	7:AG:131:LYS:HD2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:148:GLU:HB2	38:BD:151:LYS:HD2	1.89	0.55
7:AG:69:VAL:HG21	7:AG:134:ALA:HB1	1.89	0.55
4:AD:173:TRP:HB2	4:AD:187:ARG:O	2.06	0.55
9:AI:59:PHE:HZ	9:AI:88:TYR:CE2	2.25	0.54
35:BA:248:G:C2'	35:BA:249:C:OP2	2.55	0.54
33:B8:13:ARG:NH2	35:BA:250:G:OP1	2.40	0.54
35:BA:603:A:C1'	35:BA:604:G:P	2.96	0.54
25:B0:45:PHE:HZ	25:B0:77:ARG:NH2	2.04	0.54
35:BA:856:C:HO2'	35:BA:857:C:P	2.30	0.54
35:BA:35:G:C6	35:BA:446:G:N2	2.75	0.54
27:B2:10:LEU:O	27:B2:14:ARG:CB	2.50	0.54
41:BG:104:GLU:CB	41:BG:105:LYS:HE2	2.37	0.54
31:B6:13:CYS:O	31:B6:21:TYR:HA	2.07	0.54
35:BA:831:G:O3'	48:BP:40:SER:CB	2.56	0.54
42:BH:81:GLU:HG2	42:BH:83:TYR:OH	2.07	0.54
1:AA:1051:C:O5'	1:AA:1051:C:H6	1.90	0.54
39:BE:132:HIS:C	39:BE:135:HIS:NE2	2.60	0.54
53:BU:84:LYS:HD3	53:BU:89:GLU:HG3	1.89	0.54
51:BS:15:ARG:CB	51:BS:15:ARG:NH1	2.70	0.54
24:AY:99:ARG:HH22	24:AY:403:GLU:HB2	1.70	0.54
44:BK:131:UNK:O	44:BK:132:UNK:C	2.54	0.54
1:AA:859:A:H2'	1:AA:860:A:C5'	2.34	0.54
24:AY:490:PRO:HG3	24:AY:516:PRO:HD2	1.89	0.54
35:BA:2481:G:O2'	35:BA:2482:G:P	2.65	0.54
52:BT:106:SER:O	52:BT:107:ASP:CB	2.54	0.54
22:AV:45:U:O2	22:AV:45:U:H3'	2.07	0.54
39:BE:71:GLY:C	39:BE:73:GLU:H	2.10	0.54
35:BA:1168:G:O2'	35:BA:1169:G:H5'	2.07	0.54
1:AA:875:C:H1'	8:AH:15:ASN:OD1	2.07	0.54
38:BD:210:GLY:O	38:BD:211:ARG:CB	2.53	0.54
1:AA:1216:G:H5''	14:AN:5:ALA:HB2	1.89	0.54
57:BY:3:VAL:H	57:BY:5:MET:CE	2.20	0.54
35:BA:536:A:H2'	35:BA:537:C:C6	2.42	0.54
4:AD:70:ILE:HD11	4:AD:100:ARG:HD2	1.89	0.54
54:BV:79:VAL:CG1	54:BV:79:VAL:O	2.54	0.54
35:BA:2466:C:O2'	35:BA:2467:C:H5'	2.07	0.54
1:AA:298:A:H2'	1:AA:299:G:O4'	2.08	0.54
52:BT:92:GLY:HA3	52:BT:120:ARG:NH2	2.22	0.54
52:BT:30:VAL:HG13	52:BT:84:GLN:O	2.07	0.54
35:BA:109:G:C2'	35:BA:110:G:O5'	2.55	0.54
7:AG:50:ILE:CG2	7:AG:58:PRO:HG3	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:40:C:C2'	22:AV:41:C:H5'	2.36	0.54
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	1.90	0.54
35:BA:1722:A:C2	35:BA:1740:G:H2'	2.42	0.54
35:BA:29:U:HO2'	35:BA:30:G:H5'	1.70	0.54
13:AM:10:PRO:HB2	13:AM:18:ALA:CB	2.37	0.54
13:AM:4:ILE:CG2	13:AM:5:ALA:N	2.58	0.54
19:AS:22:LEU:O	19:AS:22:LEU:HD13	2.06	0.54
41:BG:108:ASN:O	41:BG:109:VAL:HB	2.07	0.54
31:B6:15:GLU:HG2	31:B6:18:ARG:NH1	2.22	0.54
35:BA:15:G:HO2'	35:BA:16:G:H5'	1.69	0.54
35:BA:2403:C:C2'	35:BA:2404:C:H5'	2.37	0.54
1:AA:348:G:C2	1:AA:349:A:C8	2.94	0.54
24:AY:30:GLU:HB2	24:AY:52:MET:HE2	1.89	0.54
51:BS:30:ARG:NH1	51:BS:97:ARG:HG2	2.19	0.54
10:AJ:22:LYS:CD	10:AJ:90:LEU:HD22	2.37	0.54
1:AA:792:A:H4'	1:AA:793:U:C5'	2.37	0.54
3:AC:187:ALA:O	3:AC:188:LEU:HB2	2.07	0.54
2:AB:132:LYS:HA	2:AB:135:GLN:CG	2.37	0.54
29:B4:64:GLY:HA3	29:B4:67:TYR:CE2	2.42	0.54
35:BA:2409:G:HO2'	35:BA:2410:G:H5'	1.71	0.54
39:BE:141:ILE:C	39:BE:154:LYS:HE2	2.26	0.54
35:BA:1313:U:H2'	35:BA:1610:A:N1	2.21	0.54
1:AA:368:U:H3'	1:AA:368:U:H6	1.73	0.54
24:AY:156:ARG:NH2	24:AY:666:ARG:NH1	2.55	0.54
38:BD:186:HIS:HD2	38:BD:188:GLU:HB2	1.72	0.54
7:AG:89:MET:HG3	7:AG:90:GLU:OE2	2.08	0.54
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	1.89	0.54
35:BA:1813:G:H1'	38:BD:50:THR:OG1	2.06	0.54
35:BA:433:C:H2'	35:BA:434:U:C6	2.42	0.54
8:AH:110:ALA:HB3	8:AH:121:ASP:HB3	1.89	0.54
9:AI:18:PHE:O	9:AI:62:TYR:N	2.41	0.54
9:AI:26:VAL:HG13	9:AI:27:THR:N	2.21	0.54
48:BP:115:LEU:CD2	48:BP:115:LEU:N	2.70	0.54
1:AA:40:C:O2'	1:AA:41:G:C5'	2.53	0.54
2:AB:223:ILE:CG2	2:AB:227:GLY:O	2.50	0.54
31:B6:25:LYS:CE	33:B8:34:TRP:HE1	2.18	0.54
35:BA:858:U:O2'	35:BA:859:G:C5	2.60	0.54
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.07	0.54
1:AA:266:G:O2'	1:AA:267:C:P	2.66	0.54
35:BA:1541:G:O2'	35:BA:1542:A:H5''	2.08	0.54
35:BA:1995:U:H2'	35:BA:1996:C:C5	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2203:U:H1'	35:BA:2221:G:N2	2.23	0.54
35:BA:942:G:O2'	35:BA:943:U:H5'	2.06	0.54
51:BS:28:VAL:CG1	51:BS:29:PHE:H	2.19	0.54
51:BS:66:ALA:CA	51:BS:69:VAL:HG12	2.33	0.54
1:AA:1048:G:C2	1:AA:1050:G:N7	2.75	0.54
35:BA:654(G):C:HO2'	35:BA:654(H):G:H8	1.55	0.54
37:BC:6:LYS:HA	37:BC:9:ARG:HH11	1.72	0.54
35:BA:2894:G:N3	35:BA:2894:G:H2'	2.23	0.54
35:BA:54:G:O6	35:BA:117:G:N2	2.40	0.54
6:AF:20:ALA:O	6:AF:24:GLU:HB2	2.07	0.54
37:BC:88:GLU:HG3	37:BC:89:GLU:N	2.22	0.54
20:AT:99:LEU:O	20:AT:100:ILE:C	2.46	0.54
35:BA:1092:C:H2'	35:BA:1093:G:O4'	2.07	0.54
2:AB:104:ASN:ND2	2:AB:107:THR:HB	2.22	0.54
47:BO:68:GLU:HB3	47:BO:78:ARG:HD3	1.90	0.54
35:BA:718:A:H2'	35:BA:719:C:O4'	2.06	0.54
1:AA:1351:U:H4'	7:AG:33:ASP:OD2	2.07	0.54
37:BC:117:THR:HG23	37:BC:119:ASP:OD1	2.07	0.54
35:BA:1416:G:C2	35:BA:1417:C:C4	2.95	0.54
2:AB:167:PRO:HG2	2:AB:192:SER:HB2	1.90	0.54
35:BA:654(A):G:H1	35:BA:654(S):G:N2	2.05	0.54
1:AA:773:G:N3	1:AA:774:G:C8	2.76	0.54
25:B0:26:TYR:CD2	35:BA:857:C:H1'	2.42	0.54
1:AA:106:C:H2'	1:AA:107:G:C8	2.36	0.54
1:AA:690:G:O6	1:AA:691:G:C6	2.61	0.54
1:AA:47:C:OP2	1:AA:366:C:N4	2.36	0.54
2:AB:185:ILE:HG23	2:AB:199:TYR:CB	2.36	0.54
27:B2:47:ASN:O	27:B2:50:ILE:N	2.41	0.54
41:BG:141:PHE:HA	41:BG:142:PRO:O	2.08	0.54
31:B6:15:GLU:HG2	31:B6:18:ARG:HD3	1.89	0.54
1:AA:113:G:O4'	1:AA:354:G:H4'	2.06	0.54
51:BS:14:VAL:HG12	51:BS:15:ARG:H	1.72	0.54
33:B8:53:PRO:HA	33:B8:56:GLU:HB2	1.88	0.54
35:BA:2579:C:O2'	39:BE:131:ALA:HB3	2.07	0.54
39:BE:69:LYS:C	39:BE:71:GLY:N	2.58	0.54
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.28	0.54
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.40	0.54
19:AS:39:THR:HA	19:AS:70:LYS:HD3	1.90	0.54
19:AS:20:LEU:HD13	29:B4:61:ARG:HH21	1.73	0.54
58:BZ:60:GLU:O	58:BZ:61:LEU:HG	2.08	0.54
42:BH:86:GLU:HA	42:BH:132:ARG:HA	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:87:THR:OG1	10:AJ:88:LEU:N	2.40	0.54
35:BA:2101:G:H2'	35:BA:2102:U:O4'	2.08	0.54
20:AT:36:LEU:CD1	20:AT:55:ILE:HG23	2.37	0.54
26:B1:19:GLN:O	26:B1:35:THR:HG22	2.06	0.54
25:B0:36:ILE:HD11	35:BA:2355:C:O4'	2.08	0.54
2:AB:167:PRO:CG	2:AB:188:ALA:CB	2.86	0.54
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.20	0.54
35:BA:1982:C:N3	35:BA:1983:C:C4	2.76	0.54
27:B2:47:ASN:O	27:B2:48:HIS:C	2.45	0.54
35:BA:1382:G:H2'	35:BA:1383:C:C6	2.43	0.54
1:AA:346:G:H2'	1:AA:346:G:N3	2.22	0.54
53:BU:90:VAL:HG21	54:BV:47:VAL:HG21	1.90	0.54
5:AE:47:LYS:O	5:AE:57:LYS:HE3	2.06	0.54
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.43	0.54
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.43	0.54
1:AA:867:G:H2'	1:AA:868:C:H5'	1.89	0.54
40:BF:20:LEU:N	40:BF:24:LEU:CD2	2.69	0.54
54:BV:25:LEU:H	54:BV:92:THR:CG2	2.20	0.54
28:B3:7:LYS:HB2	28:B3:34:GLU:HB3	1.90	0.54
40:BF:133:ASN:HA	40:BF:162:LEU:HD23	1.88	0.54
37:BC:30:VAL:HG23	37:BC:31:LYS:HG2	1.89	0.54
35:BA:272(H):C:H2'	35:BA:272(I):U:C5'	2.37	0.54
50:BR:7:GLY:CA	50:BR:8:ARG:NH2	2.67	0.54
38:BD:79:VAL:CG2	38:BD:111:LEU:HD11	2.37	0.54
35:BA:1092:C:C2'	35:BA:1093:G:H5'	2.38	0.54
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.55	0.54
37:BC:44:VAL:HG23	37:BC:176:VAL:HG21	1.89	0.54
39:BE:21:VAL:O	39:BE:23:VAL:HG13	2.07	0.54
19:AS:35:SER:C	19:AS:37:ARG:H	2.09	0.54
14:AN:7:ILE:HG13	14:AN:8:GLU:N	2.23	0.54
30:B5:37:LYS:O	30:B5:37:LYS:HG3	2.07	0.54
2:AB:35:GLU:HG2	2:AB:35:GLU:O	2.07	0.54
35:BA:794:G:H2'	35:BA:795:C:C6	2.43	0.54
46:BN:67:LEU:HB3	46:BN:88:GLU:HG2	1.88	0.54
11:AK:22:HIS:HB3	11:AK:29:ILE:HG23	1.89	0.54
28:B3:29:ARG:NH1	35:BA:1183:G:O3'	2.37	0.54
2:AB:89:GLY:C	2:AB:90:MET:CG	2.75	0.54
48:BP:114:ILE:HD12	48:BP:114:ILE:O	2.08	0.54
1:AA:773:G:N2	1:AA:774:G:C4	2.76	0.54
1:AA:690:G:C6	1:AA:691:G:N1	2.76	0.54
2:AB:16:HIS:O	2:AB:17:PHE:CB	2.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:20:THR:HA	13:AM:25:ILE:O	2.08	0.54
13:AM:45:VAL:C	13:AM:47:ASP:H	2.11	0.54
33:B8:4:MET:HB3	33:B8:61:LEU:HD22	1.89	0.54
1:AA:1256:A:H2	1:AA:1277:C:N3	2.06	0.54
35:BA:963:U:H2'	35:BA:964:C:C6	2.43	0.54
10:AJ:53:PRO:HA	14:AN:42:ILE:CD1	2.37	0.54
52:BT:23:ARG:CB	52:BT:24:PRO:HD3	2.35	0.54
39:BE:53:PRO:C	39:BE:54:GLN:HG2	2.28	0.54
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.41	0.54
28:B3:31:LEU:O	28:B3:33:GLN:N	2.31	0.54
24:AY:122:TRP:CZ3	24:AY:132:ARG:HD2	2.42	0.54
53:BU:34:LYS:CA	53:BU:34:LYS:HE2	2.30	0.54
35:BA:1516:C:C2'	35:BA:1517:G:C5'	2.86	0.54
54:BV:72:VAL:CG2	54:BV:85:LYS:HB3	2.38	0.54
42:BH:11:VAL:HG13	42:BH:15:VAL:CG2	2.38	0.54
50:BR:88:ARG:O	50:BR:88:ARG:HD2	2.07	0.54
3:AC:130:VAL:O	3:AC:130:VAL:HG12	2.07	0.54
1:AA:1089:G:HO2'	1:AA:1170:A:H2	1.55	0.54
1:AA:1035:A:H2'	1:AA:1036:G:O4'	2.08	0.54
35:BA:484:C:OP1	57:BY:49:VAL:HG13	2.07	0.54
37:BC:194:ILE:HD11	37:BC:227:PRO:HB3	1.89	0.54
47:BO:7:TYR:CZ	47:BO:44:LYS:HG3	2.42	0.54
53:BU:52:ARG:HB3	53:BU:52:ARG:HH11	1.71	0.54
46:BN:99:LEU:O	46:BN:99:LEU:HD13	2.08	0.54
37:BC:49:GLY:N	37:BC:209:PHE:O	2.39	0.54
35:BA:653:A:C3'	35:BA:653:A:N3	2.66	0.54
35:BA:1595:G:C2'	35:BA:1596:A:H5'	2.37	0.54
1:AA:235:C:C5'	17:AQ:70:ARG:HG2	2.37	0.54
1:AA:687:A:C1'	1:AA:688:G:P	2.96	0.54
35:BA:26:G:C6	35:BA:27:G:N1	2.75	0.54
1:AA:561:U:H6	1:AA:561:U:OP1	1.91	0.54
1:AA:1400:C:N4	22:AV:34:G:C8	2.76	0.54
1:AA:1306:A:N6	1:AA:1331:G:C2'	2.70	0.54
13:AM:13:LYS:O	13:AM:45:VAL:HG23	2.08	0.54
42:BH:85:LYS:O	42:BH:85:LYS:HD3	2.07	0.54
35:BA:2404:C:C4	35:BA:2414:G:N1	2.75	0.54
24:AY:25:LYS:NZ	24:AY:86:GLY:HA3	2.22	0.54
1:AA:1314:C:C5	19:AS:6:LYS:NZ	2.75	0.54
12:AL:28:LYS:HE3	12:AL:33:ARG:HH12	1.73	0.54
1:AA:1384:C:N3	1:AA:1385:G:N7	2.56	0.54
58:BZ:6:LYS:N	58:BZ:6:LYS:HD3	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:3:GLU:C	40:BF:24:LEU:HG	2.26	0.54
24:AY:312:LEU:HD11	24:AY:401:SER:CB	2.36	0.54
24:AY:573:HIS:CG	24:AY:573:HIS:O	2.60	0.54
12:AL:17:LYS:NZ	12:AL:18:VAL:HG22	2.23	0.54
31:B6:12:GLU:HB3	31:B6:23:THR:HG22	1.89	0.54
39:BE:141:ILE:O	39:BE:154:LYS:HE2	2.07	0.54
24:AY:614:GLU:HA	24:AY:617:MET:CE	2.37	0.54
46:BN:73:THR:HG23	46:BN:82:LEU:HD11	1.90	0.54
1:AA:1228:C:H4'	13:AM:116:THR:O	2.07	0.54
13:AM:108:ARG:CG	13:AM:108:ARG:HH11	2.19	0.54
37:BC:72:GLN:HA	37:BC:72:GLN:NE2	2.23	0.54
40:BF:102:PRO:HB2	40:BF:105:VAL:HG23	1.89	0.54
35:BA:2523:G:H2'	35:BA:2524:G:H5''	1.88	0.54
2:AB:10:LEU:O	2:AB:10:LEU:HD23	2.07	0.54
7:AG:70:LYS:HB3	7:AG:100:ALA:HB2	1.89	0.54
35:BA:2062:A:H5'	35:BA:2062:A:C8	2.43	0.54
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.43	0.54
35:BA:706:A:H2'	35:BA:707:G:O4'	2.08	0.54
35:BA:1071:G:H1'	35:BA:1089:G:C8	2.43	0.54
53:BU:8:VAL:HG23	53:BU:11:ARG:HH21	1.73	0.54
37:BC:73:VAL:HG21	37:BC:157:ILE:HG22	1.88	0.54
49:BQ:60:ARG:HA	58:BZ:179:ASP:HA	1.90	0.54
1:AA:591:U:C2	1:AA:592:G:C8	2.95	0.54
35:BA:688:U:O2'	35:BA:689:A:H5'	2.08	0.54
52:BT:35:LYS:NZ	52:BT:41:ARG:HD2	2.23	0.54
39:BE:179:GLU:CB	39:BE:181:LEU:HD23	2.28	0.54
1:AA:1368:G:H2'	1:AA:1369:C:C5'	2.33	0.54
24:AY:498:ILE:HG22	24:AY:507:TYR:CD2	2.42	0.54
48:BP:16:ARG:NH2	48:BP:18:ARG:HG2	2.22	0.54
24:AY:513:LYS:HB2	24:AY:566:THR:HB	1.89	0.54
48:BP:108:LYS:O	48:BP:110:TYR:N	2.41	0.54
35:BA:1652:A:O5'	35:BA:1652:A:H8	1.91	0.54
37:BC:54:ARG:CZ	37:BC:56:ASP:HB3	2.37	0.54
1:AA:563:A:H5'	1:AA:566:G:H21	1.70	0.54
1:AA:1228:C:OP1	13:AM:108:ARG:NH2	2.38	0.54
22:AV:1:G:C2	22:AV:73:A:C8	2.95	0.54
49:BQ:1:MET:HE3	49:BQ:1:MET:HA	1.90	0.54
8:AH:123:GLU:O	8:AH:127:LEU:HB2	2.07	0.54
1:AA:848:C:O2'	1:AA:849:C:H5'	2.08	0.54
35:BA:2339:G:H2'	35:BA:2340:G:C8	2.43	0.54
5:AE:64:ARG:HH11	5:AE:64:ARG:HG3	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1137:C:H4'	1:AA:1138:G:N2	2.22	0.54
12:AL:58:VAL:O	12:AL:65:GLU:HA	2.08	0.54
7:AG:79:ARG:HD3	7:AG:79:ARG:N	2.23	0.54
18:AR:84:LYS:N	18:AR:84:LYS:HD3	2.22	0.54
48:BP:17:LYS:O	48:BP:17:LYS:HG2	2.08	0.54
1:AA:609:A:C2'	1:AA:610:G:H5'	2.37	0.54
1:AA:477:A:O2'	1:AA:479:C:H5'	2.07	0.54
24:AY:89:ASP:O	24:AY:90:PHE:CD1	2.61	0.54
52:BT:46:GLU:O	52:BT:65:LYS:HE3	2.07	0.54
35:BA:2556:C:H2'	35:BA:2557:G:O5'	2.08	0.54
22:AV:39:U:O2'	22:AV:40:C:H5'	2.07	0.54
1:AA:507:C:H3'	1:AA:508:C:H2'	1.88	0.54
2:AB:39:ILE:O	2:AB:40:HIS:C	2.46	0.54
35:BA:259:G:H1'	35:BA:621:A:O2'	2.07	0.54
40:BF:7:TYR:HB3	40:BF:16:GLY:H	1.73	0.54
41:BG:91:ARG:HG2	41:BG:92:VAL:N	2.23	0.54
33:B8:62:LEU:C	33:B8:64:TYR:H	2.11	0.54
31:B6:15:GLU:CD	31:B6:18:ARG:NH1	2.62	0.54
24:AY:26:THR:HA	24:AY:83:ASP:OD2	2.07	0.54
24:AY:25:LYS:HZ1	24:AY:86:GLY:H	1.54	0.54
1:AA:1077:G:C2	1:AA:1081:G:C6	2.96	0.54
27:B2:21:LEU:O	27:B2:24:LEU:N	2.41	0.54
25:B0:69:PHE:CD1	25:B0:69:PHE:N	2.75	0.54
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.38	0.54
20:AT:27:LYS:HD3	20:AT:27:LYS:C	2.29	0.54
1:AA:355:C:H2'	1:AA:356:A:O4'	2.08	0.54
4:AD:129:ASN:HD21	4:AD:145:GLU:H	1.53	0.54
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.17	0.54
40:BF:34:TRP:HB2	48:BP:10:PRO:HB2	1.89	0.54
47:BO:10:VAL:HG23	47:BO:10:VAL:O	2.08	0.54
1:AA:78:G:H1'	1:AA:79:G:O5'	2.08	0.54
35:BA:1842:G:H2'	35:BA:1843:C:C6	2.43	0.54
35:BA:207:A:H2'	35:BA:208:C:O4'	2.08	0.54
11:AK:93:GLN:OE1	11:AK:93:GLN:HA	2.06	0.54
35:BA:1084:A:N7	35:BA:1085:A:C5	2.76	0.54
30:B5:48:GLU:N	30:B5:48:GLU:OE1	2.39	0.54
7:AG:49:ILE:HG22	7:AG:53:LYS:HE3	1.89	0.54
1:AA:699:C:C2'	1:AA:700:G:C5'	2.75	0.54
29:B4:28:LYS:HZ2	41:BG:145:THR:H	1.56	0.54
29:B4:6:HIS:CE1	41:BG:66:GLN:HG3	2.44	0.54
41:BG:42:GLY:C	41:BG:47:LYS:HZ2	2.11	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:37:VAL:O	41:BG:93:THR:O	2.25	0.54
35:BA:15:G:H2'	35:BA:16:G:C5'	2.32	0.54
58:BZ:180:VAL:O	58:BZ:181:GLU:HB2	2.08	0.54
35:BA:1120:G:H2'	35:BA:1121:C:C6	2.43	0.54
19:AS:6:LYS:HG3	19:AS:7:LYS:N	2.20	0.54
35:BA:2126:A:N6	35:BA:2163:C:H4'	2.22	0.54
54:BV:62:LEU:HD21	54:BV:95:LEU:CB	2.25	0.54
40:BF:126:VAL:HG21	40:BF:129:PHE:CZ	2.43	0.54
1:AA:1029:C:C4	1:AA:1030(A):G:O6	2.61	0.54
35:BA:327:G:H2'	35:BA:328:U:O5'	2.08	0.54
35:BA:896:A:O4'	58:BZ:176:PRO:HG3	2.07	0.54
51:BS:13:ARG:HG3	51:BS:14:VAL:N	2.15	0.54
24:AY:516:PRO:C	24:AY:517:LEU:HD12	2.28	0.54
35:BA:262:A:C2'	35:BA:263:C:C5'	2.83	0.54
39:BE:141:ILE:CB	39:BE:154:LYS:HE2	2.38	0.54
22:AV:27:G:H1	22:AV:43:C:N4	2.03	0.54
1:AA:679:C:H2'	1:AA:680:C:H6	1.73	0.54
48:BP:9:ASN:H	48:BP:10:PRO:HD2	1.71	0.54
1:AA:536:C:H2'	1:AA:537:G:H8	1.71	0.54
39:BE:101:ARG:HB3	39:BE:169:ASN:HD22	1.72	0.54
4:AD:83:SER:HA	4:AD:89:THR:HG21	1.89	0.54
1:AA:625:G:H2'	1:AA:626:U:C6	2.42	0.54
35:BA:877:U:O2'	35:BA:878:A:H5''	2.07	0.54
52:BT:91:ARG:O	52:BT:117:ASP:HB2	2.07	0.53
48:BP:66:GLY:O	48:BP:67:MET:CB	2.56	0.53
35:BA:250:G:C6	35:BA:251:A:C6	2.96	0.53
1:AA:41:G:H2'	1:AA:42:G:C8	2.43	0.53
1:AA:588:G:O6	1:AA:753:A:H2'	2.08	0.53
1:AA:699:C:O5'	1:AA:699:C:H6	1.91	0.53
35:BA:1446:C:H41	35:BA:1465:G:H1	1.49	0.53
35:BA:1301:A:N3	35:BA:1301:A:C5'	2.71	0.53
35:BA:2000:G:N3	35:BA:2001:A:C8	2.75	0.53
39:BE:111:ARG:HB3	50:BR:2:ARG:CZ	2.39	0.53
41:BG:113:ARG:HG2	41:BG:141:PHE:CD2	2.43	0.53
41:BG:60:LEU:HD12	41:BG:60:LEU:O	2.08	0.53
35:BA:18:C:O2	35:BA:19:C:C5	2.60	0.53
48:BP:24:GLY:HA3	48:BP:29:LYS:O	2.08	0.53
24:AY:25:LYS:NZ	24:AY:86:GLY:H	2.05	0.53
53:BU:90:VAL:O	53:BU:91:ASP:C	2.47	0.53
40:BF:27:GLU:OE1	40:BF:27:GLU:N	2.41	0.53
3:AC:187:ALA:O	3:AC:188:LEU:CB	2.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:87:GLU:OE1	39:BE:89:ASP:HB3	2.08	0.53
24:AY:9:LEU:CD2	24:AY:284:LEU:HD13	2.38	0.53
1:AA:92:C:C2'	1:AA:93:G:H5'	2.37	0.53
16:AP:18:ARG:HG3	16:AP:35:LYS:HE3	1.89	0.53
53:BU:17:ILE:HG23	53:BU:39:LEU:HD12	1.89	0.53
35:BA:2328:A:H2'	35:BA:2329:G:C8	2.42	0.53
3:AC:35:GLU:HG2	3:AC:39:ILE:HD11	1.90	0.53
3:AC:60:ALA:HB3	3:AC:63:ASN:HD22	1.72	0.53
51:BS:39:ILE:O	51:BS:39:ILE:HG22	2.08	0.53
35:BA:1231:G:H2'	35:BA:1232:G:C8	2.43	0.53
5:AE:12:LEU:C	5:AE:13:ILE:HD12	2.28	0.53
27:B2:70:GLN:HE21	27:B2:71:ASN:HB2	1.73	0.53
35:BA:955:C:OP1	49:BQ:14:ARG:CD	2.55	0.53
35:BA:1587:A:H3'	35:BA:1588:C:C6	2.43	0.53
1:AA:1372:U:H2'	1:AA:1373:G:O5'	2.07	0.53
7:AG:113:GLU:HB2	7:AG:119:ARG:HD2	1.90	0.53
7:AG:48:LYS:HG2	7:AG:49:ILE:N	2.22	0.53
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.39	0.53
35:BA:2753:A:C2'	35:BA:2754:U:C5'	2.85	0.53
57:BY:26:LYS:CG	57:BY:27:VAL:H	2.18	0.53
1:AA:1047:G:H2'	1:AA:1048:G:C5'	2.24	0.53
53:BU:15:LYS:O	53:BU:19:LYS:HD3	2.08	0.53
1:AA:188:C:O2'	1:AA:189:G:H5'	2.08	0.53
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.08	0.53
25:B0:76:GLY:O	25:B0:78:TYR:CE1	2.60	0.53
35:BA:1063:G:H22	35:BA:1074:G:H1	1.56	0.53
31:B6:53:LYS:O	31:B6:54:ILE:OXT	2.25	0.53
26:B1:49:VAL:HG13	26:B1:60:PHE:HB2	1.91	0.53
36:BB:30:C:H1'	36:BB:57:A:H61	1.72	0.53
24:AY:617:MET:CE	24:AY:641:GLN:HG2	2.38	0.53
35:BA:1475:G:C8	35:BA:1475:G:H5'	2.37	0.53
2:AB:169:LYS:O	2:AB:169:LYS:HD3	2.08	0.53
9:AI:121:ARG:HG2	9:AI:121:ARG:NH1	2.22	0.53
3:AC:35:GLU:OE1	3:AC:97:LYS:HE2	2.08	0.53
37:BC:103:LYS:HZ2	37:BC:103:LYS:HB2	1.74	0.53
37:BC:106:ASP:O	37:BC:107:GLY:C	2.46	0.53
37:BC:127:LYS:H	37:BC:127:LYS:HD3	1.73	0.53
1:AA:36:C:O2'	1:AA:37:U:H5'	2.08	0.53
35:BA:177:G:N3	35:BA:177:G:H2'	2.23	0.53
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.40	0.53
27:B2:11:GLU:O	27:B2:15:LYS:HG2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1305:G:H1'	1:AA:1332:A:H62	1.73	0.53
41:BG:104:GLU:C	41:BG:106:LEU:H	2.12	0.53
41:BG:77:ILE:CG2	41:BG:80:PHE:HB2	2.32	0.53
41:BG:9:ARG:HD2	41:BG:9:ARG:N	2.23	0.53
24:AY:58:GLU:HG2	24:AY:63:ILE:O	2.08	0.53
25:B0:10:THR:CG2	25:B0:11:ARG:H	2.02	0.53
35:BA:2838:G:O2'	50:BR:45:ARG:HD3	2.08	0.53
25:B0:69:PHE:CD2	25:B0:79:VAL:HG22	2.43	0.53
35:BA:686:G:N2	35:BA:788:A:H61	2.06	0.53
1:AA:64:G:C4'	1:AA:65:U:OP2	2.56	0.53
29:B4:71:ARG:O	29:B4:71:ARG:HG3	2.08	0.53
35:BA:1516:C:C2'	35:BA:1517:G:H5''	2.37	0.53
35:BA:265:A:H1'	35:BA:266:G:O4'	2.08	0.53
12:AL:75:HIS:CD2	12:AL:77:LEU:H	2.23	0.53
1:AA:1241:G:H2'	1:AA:1242:C:H6	1.69	0.53
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.43	0.53
42:BH:124:GLU:HB2	42:BH:132:ARG:HG2	1.90	0.53
53:BU:24:TYR:HB2	53:BU:29:SER:HB3	1.89	0.53
40:BF:140:LEU:O	40:BF:143:ALA:HB3	2.07	0.53
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	1.90	0.53
47:BO:34:THR:HG22	47:BO:37:ASP:OD2	2.08	0.53
50:BR:13:HIS:CE1	50:BR:16:HIS:HB2	2.43	0.53
1:AA:152:A:H62	1:AA:169:C:H42	1.57	0.53
37:BC:100:ILE:O	37:BC:102:GLN:N	2.42	0.53
1:AA:937:A:H2'	1:AA:938:A:H5'	1.90	0.53
35:BA:860:U:H5'	35:BA:860:U:O2	2.08	0.53
1:AA:266:G:O2'	1:AA:267:C:H5''	2.08	0.53
1:AA:359:U:C2'	1:AA:360:A:C5'	2.87	0.53
35:BA:1528:A:N1	35:BA:1542:A:H2	2.07	0.53
35:BA:2712:U:H1'	35:BA:2712(A):A:N7	2.23	0.53
35:BA:2717:G:O2'	52:BT:96:ARG:HD3	2.09	0.53
2:AB:39:ILE:O	2:AB:41:ILE:CD1	2.57	0.53
35:BA:2310:A:N7	41:BG:75:LYS:HE2	2.24	0.53
41:BG:94:LEU:N	41:BG:94:LEU:HD22	2.22	0.53
24:AY:69:VAL:O	24:AY:69:VAL:HG13	2.08	0.53
51:BS:88:ASP:CG	51:BS:89:ARG:N	2.61	0.53
35:BA:1427:A:C4'	35:BA:1428:C:O5'	2.40	0.53
55:BW:1:MET:HB3	55:BW:64:MET:CE	2.38	0.53
10:AJ:90:LEU:O	10:AJ:90:LEU:HG	2.08	0.53
24:AY:402:ILE:HG22	24:AY:403:GLU:N	2.23	0.53
50:BR:101:ALA:O	50:BR:102:GLU:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:53:MET:HE1	25:B0:57:PHE:CD2	2.43	0.53
35:BA:1451:C:H2'	35:BA:1458:C:H41	1.73	0.53
44:BK:56:UNK:C	44:BK:67:UNK:HA	2.38	0.53
41:BG:131:TYR:O	41:BG:132:ASN:CB	2.55	0.53
35:BA:843:G:O2'	35:BA:844:C:H5'	2.09	0.53
35:BA:419:C:H2'	35:BA:420:C:H6	1.72	0.53
8:AH:72:PRO:O	8:AH:73:ASP:HB3	2.08	0.53
2:AB:89:GLY:O	2:AB:90:MET:CG	2.30	0.53
37:BC:124:VAL:CG1	37:BC:125:GLY:N	2.71	0.53
1:AA:199:G:C2'	1:AA:200:G:O5'	2.57	0.53
1:AA:1347:G:N7	9:AI:10:ARG:NH2	2.56	0.53
7:AG:46:ALA:HB1	7:AG:121:ALA:HB2	1.89	0.53
9:AI:11:LYS:HG3	9:AI:11:LYS:O	2.09	0.53
35:BA:1798:U:H5	38:BD:274:ARG:NH2	2.06	0.53
35:BA:1539:G:C6	35:BA:1540:U:H1'	2.43	0.53
35:BA:1300:U:H1'	35:BA:1301:A:OP2	2.09	0.53
2:AB:15:VAL:HG13	2:AB:209:ARG:HB3	1.91	0.53
1:AA:1504:G:P	1:AA:1504:G:H3'	2.48	0.53
13:AM:65:LYS:O	13:AM:65:LYS:HG3	2.08	0.53
29:B4:32:TYR:CD2	29:B4:33:VAL:O	2.62	0.53
35:BA:2312:U:H2'	35:BA:2313:C:C5'	2.10	0.53
41:BG:53:LEU:C	41:BG:55:LYS:H	2.11	0.53
35:BA:755:C:H2'	35:BA:756:C:H6	1.74	0.53
35:BA:1145:C:O2'	35:BA:1146:C:H5'	2.09	0.53
1:AA:1279:A:H2'	1:AA:1282:C:N4	2.24	0.53
35:BA:1122:G:C2	35:BA:1123:C:C5	2.97	0.53
10:AJ:89:ASP:O	10:AJ:90:LEU:HB2	2.09	0.53
1:AA:701:C:OP1	1:AA:703:G:H5'	2.09	0.53
35:BA:1413:G:C2'	35:BA:1414:G:O5'	2.56	0.53
35:BA:2022:U:O2'	35:BA:2617:C:H5'	2.07	0.53
24:AY:342:TYR:CZ	24:AY:347:GLY:HA2	2.44	0.53
35:BA:900:A:H3'	35:BA:901:A:C8	2.41	0.53
35:BA:2779:U:H1'	35:BA:2781:A:C6	2.44	0.53
38:BD:134:ARG:CZ	38:BD:135:PHE:HE1	2.20	0.53
55:BW:20:VAL:HG23	55:BW:47:VAL:HG21	1.90	0.53
35:BA:492:A:C2'	35:BA:493:G:H5'	2.39	0.53
22:AV:19:G:N2	22:AV:56:C:N3	2.47	0.53
35:BA:2467:C:H4'	49:BQ:123:HIS:CD2	2.43	0.53
24:AY:408:VAL:HG12	24:AY:656:ALA:HB2	1.89	0.53
35:BA:244:A:C2	35:BA:255:A:C4	2.97	0.53
35:BA:2373:G:H2'	35:BA:2374:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:689:LYS:HG3	24:AY:690:GLY:N	2.23	0.53
4:AD:170:VAL:HG21	4:AD:176:LEU:HB2	1.90	0.53
27:B2:69:ARG:O	27:B2:70:GLN:CD	2.47	0.53
35:BA:632:A:H8	35:BA:632:A:O5'	1.90	0.53
35:BA:2363:C:O2'	35:BA:2364:C:C5'	2.39	0.53
35:BA:2363:C:H2'	35:BA:2364:C:H6	1.72	0.53
37:BC:128:LEU:HD12	37:BC:128:LEU:O	2.09	0.53
1:AA:436:C:H2'	1:AA:437:U:H6	1.72	0.53
1:AA:942:G:C2	1:AA:943:U:C2	2.97	0.53
25:B0:35:ASN:O	25:B0:37:LEU:HD22	2.08	0.53
1:AA:592:G:C2'	1:AA:593:G:H5'	2.38	0.53
1:AA:105:G:C6	1:AA:106:C:N3	2.77	0.53
55:BW:13:SER:HB3	55:BW:16:LYS:HD2	1.89	0.53
35:BA:1461:G:C6	35:BA:1462:C:N4	2.76	0.53
35:BA:1227:G:C4	35:BA:1228:G:C8	2.96	0.53
35:BA:813:U:O2'	35:BA:1225:G:H1'	2.09	0.53
13:AM:23:TYR:HB3	13:AM:67:GLU:HA	1.91	0.53
41:BG:39:ILE:HD11	41:BG:155:MET:SD	2.48	0.53
31:B6:15:GLU:OE2	31:B6:41:PRO:CB	2.56	0.53
31:B6:17:LYS:HB2	31:B6:18:ARG:NH1	2.19	0.53
35:BA:2403:C:P	35:BA:2403:C:C6	3.01	0.53
35:BA:2758:A:C4	35:BA:2759:G:C8	2.97	0.53
54:BV:47:VAL:O	54:BV:49:THR:N	2.41	0.53
35:BA:1767:C:H2'	35:BA:1768:U:C5'	2.29	0.53
35:BA:672:C:O3'	40:BF:81:PRO:HG2	2.08	0.53
35:BA:1291:C:HO2'	35:BA:1292:U:H5'	1.70	0.53
24:AY:312:LEU:HD23	24:AY:387:ASP:O	2.08	0.53
25:B0:21:LEU:HD13	25:B0:41:ARG:HG2	1.90	0.53
2:AB:74:LYS:O	2:AB:75:LYS:C	2.46	0.53
55:BW:26:GLY:N	55:BW:71:VAL:HG23	2.21	0.53
35:BA:2491:U:H4'	35:BA:2570:G:OP1	2.09	0.53
24:AY:5:VAL:HG13	24:AY:6:GLU:H	1.74	0.53
39:BE:101:ARG:HB3	39:BE:169:ASN:ND2	2.24	0.53
35:BA:1684:C:O2'	35:BA:1685:C:H5'	2.09	0.53
35:BA:1050:A:H2'	35:BA:1051:G:H8	1.74	0.53
20:AT:64:ASP:OD1	20:AT:81:LYS:HD2	2.07	0.53
38:BD:92:ILE:HA	38:BD:107:ALA:H	1.74	0.53
35:BA:11:G:H8	35:BA:11:G:O5'	1.90	0.53
35:BA:14:A:H8	35:BA:14:A:O5'	1.91	0.53
51:BS:19:LYS:HG2	51:BS:19:LYS:O	2.09	0.53
35:BA:2092:U:H5	35:BA:2226:C:OP1	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B4:12:ALA:O	29:B4:13:ARG:HG2	2.09	0.53
1:AA:1372:U:OP2	9:AI:11:LYS:HE3	2.07	0.53
1:AA:696:A:O5'	1:AA:696:A:H8	1.91	0.53
35:BA:2000:G:N2	35:BA:2001:A:C8	2.75	0.53
31:B6:20:ASN:CG	31:B6:21:TYR:H	2.12	0.53
35:BA:1021:A:O2'	35:BA:1023:U:H5''	2.08	0.53
51:BS:68:GLN:C	51:BS:70:GLY:N	2.62	0.53
51:BS:88:ASP:OD1	51:BS:89:ARG:N	2.42	0.53
35:BA:963:U:C2'	35:BA:964:C:O5'	2.56	0.53
35:BA:888:C:O2'	35:BA:889:C:H5''	2.08	0.53
19:AS:7:LYS:O	19:AS:7:LYS:CG	2.56	0.53
54:BV:47:VAL:HB	54:BV:49:THR:O	2.09	0.53
12:AL:27:LEU:HD12	12:AL:28:LYS:CE	2.28	0.53
26:B1:57:GLU:O	26:B1:58:ILE:CG1	2.54	0.53
4:AD:34:GLU:O	4:AD:35:ARG:HB2	2.08	0.53
24:AY:99:ARG:NH1	24:AY:402:ILE:C	2.62	0.53
10:AJ:8:LEU:HD12	10:AJ:8:LEU:H	1.73	0.53
35:BA:597:U:O2'	48:BP:15:ARG:HG2	2.08	0.53
37:BC:65:LEU:HD22	37:BC:189:ASN:HB3	1.91	0.53
35:BA:1839:G:C8	35:BA:1839:G:H5'	2.42	0.53
1:AA:92:C:H2'	1:AA:93:G:C5'	2.38	0.53
25:B0:4:LYS:O	25:B0:5:LYS:C	2.47	0.53
35:BA:2262:U:O2'	35:BA:2263:C:H5'	2.09	0.53
4:AD:170:VAL:HG12	4:AD:174:LEU:HB2	1.91	0.53
47:BO:98:VAL:HG12	47:BO:117:LEU:HB3	1.89	0.53
57:BY:57:GLN:HA	57:BY:57:GLN:OE1	2.08	0.53
52:BT:93:ARG:CG	52:BT:117:ASP:HA	2.36	0.53
37:BC:116:ALA:HB1	37:BC:118:PRO:HA	1.91	0.53
1:AA:198:G:O2'	1:AA:199:G:P	2.66	0.53
1:AA:543:C:O2'	1:AA:544:G:H5''	2.09	0.53
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.44	0.53
1:AA:1370:G:H2'	1:AA:1371:G:H5'	1.91	0.53
35:BA:1771:C:C1'	35:BA:1786:A:H8	2.22	0.53
27:B2:41:ILE:HD12	27:B2:43:GLN:CG	2.34	0.53
35:BA:2404:C:H2'	35:BA:2405:G:O5'	2.09	0.53
1:AA:1048:G:N3	1:AA:1050:G:C8	2.77	0.53
1:AA:89:C:O2'	1:AA:90:U:H6	1.92	0.53
42:BH:166:GLY:O	42:BH:167:GLU:HB2	2.09	0.53
35:BA:1258:C:O4'	40:BF:84:VAL:HG11	2.08	0.53
12:AL:46:LYS:O	12:AL:48:PRO:CD	2.57	0.53
35:BA:2801:A:O2'	35:BA:2895:U:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:21:LEU:HD13	27:B2:64:LEU:HB2	1.90	0.53
32:B7:8:ASN:C	32:B7:8:ASN:ND2	2.52	0.53
50:BR:21:TYR:OH	50:BR:43:GLU:HG2	2.09	0.53
35:BA:1252:G:OP1	53:BU:14:HIS:HE1	1.91	0.53
3:AC:12:LEU:O	3:AC:13:GLY:C	2.47	0.53
38:BD:206:LEU:HD23	38:BD:211:ARG:NH1	2.24	0.53
24:AY:229:LEU:C	24:AY:231:TYR:H	2.12	0.53
35:BA:2150:U:H2'	35:BA:2151:G:C8	2.43	0.53
1:AA:609:A:H2'	1:AA:610:G:H5'	1.91	0.53
46:BN:46:VAL:HG13	46:BN:48:MET:HG2	1.90	0.53
50:BR:70:LEU:HD13	50:BR:75:LEU:CD1	2.39	0.53
16:AP:10:GLY:CA	16:AP:16:HIS:HB2	2.39	0.53
27:B2:31:GLU:HB3	27:B2:53:LEU:HD11	1.91	0.53
1:AA:790:A:H5'	22:AV:38:A:O3'	2.09	0.53
6:AF:45:LEU:O	6:AF:46:ARG:HG2	2.08	0.53
40:BF:46:ARG:HH11	40:BF:46:ARG:HG3	1.74	0.53
58:BZ:40:ASP:OD1	58:BZ:42:VAL:HG12	2.09	0.53
37:BC:116:ALA:CB	37:BC:118:PRO:HA	2.37	0.53
7:AG:47:CYS:HA	7:AG:50:ILE:CG2	2.39	0.53
35:BA:1821:A:O5'	35:BA:1821:A:H8	1.92	0.53
35:BA:1984:G:H2'	35:BA:1985:G:C5'	2.37	0.53
57:BY:38:ILE:CG2	57:BY:39:VAL:N	2.72	0.53
19:AS:40:ILE:HG23	19:AS:67:VAL:HA	1.91	0.53
10:AJ:4:ILE:HG21	10:AJ:74:ILE:HD11	1.91	0.53
58:BZ:112:ARG:HD3	58:BZ:112:ARG:O	2.09	0.53
52:BT:106:SER:C	52:BT:107:ASP:OD1	2.47	0.53
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.09	0.53
46:BN:22:THR:HG22	46:BN:61:ARG:HB3	1.91	0.53
52:BT:34:VAL:HG13	52:BT:39:ARG:HA	1.90	0.53
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.91	0.53
35:BA:2317:C:H2'	35:BA:2318:G:H5'	1.91	0.53
37:BC:108:TRP:C	37:BC:110:ASP:N	2.62	0.53
49:BQ:65:PHE:CD1	49:BQ:65:PHE:N	2.77	0.53
35:BA:558:G:OP2	46:BN:111:PRO:HD2	2.09	0.53
46:BN:119:ARG:CG	46:BN:119:ARG:HH11	2.22	0.53
31:B6:16:CYS:SG	31:B6:48:VAL:HG23	2.48	0.53
39:BE:93:VAL:HG12	39:BE:182:LEU:HD13	1.91	0.53
48:BP:101:VAL:CG2	48:BP:102:ARG:N	2.71	0.53
33:B8:39:LYS:HE3	35:BA:2365:G:O6	2.09	0.53
36:BB:91:C:H5'	49:BQ:18:LYS:HG2	1.91	0.53
1:AA:106:C:O2'	1:AA:107:G:C5'	2.30	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:770:C:C2'	1:AA:771:G:C5'	2.86	0.53
35:BA:523:C:HO2'	35:BA:524:U:H5'	1.65	0.53
35:BA:1301:A:C4'	35:BA:1302:A:OP2	2.56	0.53
24:AY:17:ILE:N	24:AY:17:ILE:HD12	2.24	0.53
35:BA:1121:C:H2'	35:BA:1122:G:O5'	2.09	0.53
53:BU:95:LEU:HD12	54:BV:11:GLN:HG3	1.91	0.53
54:BV:39:LEU:HA	54:BV:47:VAL:CG1	2.38	0.53
54:BV:49:THR:O	54:BV:50:PRO:C	2.47	0.53
35:BA:1104:C:C2'	35:BA:1105:U:C5'	2.82	0.53
35:BA:1272:A:OP2	35:BA:1647:G:OP2	2.26	0.53
1:AA:868:C:C2'	1:AA:869:G:H5'	2.39	0.53
1:AA:1125:U:O4	10:AJ:5:ARG:NE	2.41	0.53
35:BA:1412:A:HO2'	35:BA:1413:G:H5'	1.72	0.53
37:BC:52:PRO:HG2	37:BC:53:ARG:H	1.73	0.53
53:BU:50:ARG:NH1	54:BV:72:VAL:HG12	2.19	0.53
35:BA:1458:C:H4'	35:BA:1459:G:O5'	2.09	0.53
35:BA:1694:C:H4'	35:BA:1695:G:H5''	1.91	0.53
24:AY:459:LEU:HD12	24:AY:459:LEU:N	2.23	0.53
40:BF:50:SER:HB2	40:BF:94:PRO:HD3	1.90	0.53
5:AE:6:PHE:CB	5:AE:34:VAL:HG22	2.39	0.53
35:BA:402:A:O2'	35:BA:403:U:H5'	2.09	0.53
35:BA:2649:U:H2'	35:BA:2650:U:C6	2.44	0.53
35:BA:1711:C:O2'	35:BA:1712:C:H5'	2.08	0.53
35:BA:2584:U:C2'	35:BA:2585:U:H5'	2.38	0.53
52:BT:89:VAL:HG12	52:BT:91:ARG:H	1.74	0.52
2:AB:114:ARG:HG3	2:AB:114:ARG:NH1	2.15	0.52
37:BC:138:LEU:HD23	37:BC:139:PRO:HD2	1.90	0.52
1:AA:406:G:H5''	4:AD:5:ILE:CG2	2.39	0.52
35:BA:174:C:O2	35:BA:174:C:H2'	2.08	0.52
35:BA:2011:U:H2'	35:BA:2012:G:O5'	2.09	0.52
1:AA:46:G:O2'	1:AA:365:U:O2'	2.25	0.52
35:BA:1461:G:O2'	35:BA:1462:C:H5'	2.09	0.52
35:BA:1541:G:H1'	35:BA:1542:A:C4	2.44	0.52
35:BA:2611:U:OP2	35:BA:2611:U:C6	2.61	0.52
1:AA:1400:C:H3'	1:AA:1401:G:H5'	1.91	0.52
13:AM:70:LEU:O	13:AM:73:GLU:HB2	2.09	0.52
29:B4:16:CYS:HA	29:B4:33:VAL:CG1	2.39	0.52
41:BG:135:LEU:O	41:BG:137:GLU:N	2.31	0.52
41:BG:154:GLY:O	41:BG:155:MET:HB3	2.09	0.52
35:BA:2401:U:H5''	35:BA:2402:C:C5	2.44	0.52
1:AA:1487:G:H2'	1:AA:1488:G:H5'	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1029:C:C3'	1:AA:1030:C:C5'	2.80	0.52
24:AY:498:ILE:HA	24:AY:507:TYR:CB	2.39	0.52
40:BF:162:LEU:H	40:BF:162:LEU:HD12	1.74	0.52
39:BE:116:VAL:HG13	39:BE:122:PHE:HB2	1.90	0.52
35:BA:1494:A:H2'	35:BA:1495:A:C5'	2.38	0.52
52:BT:50:ILE:HA	52:BT:99:LEU:HD12	1.90	0.52
37:BC:88:GLU:HB2	37:BC:91:GLY:O	2.09	0.52
38:BD:218:ARG:HH11	38:BD:218:ARG:HG3	1.74	0.52
46:BN:15:LEU:HD12	46:BN:136:GLU:CG	2.39	0.52
1:AA:627:G:O2'	1:AA:628:G:H5'	2.07	0.52
35:BA:375:C:H2'	35:BA:376:C:C6	2.44	0.52
1:AA:447:G:H2'	1:AA:485:G:N2	2.23	0.52
35:BA:2554:U:O2'	35:BA:2555:U:H5'	2.09	0.52
37:BC:118:PRO:CB	37:BC:121:MET:HG2	2.40	0.52
1:AA:406:G:H1'	1:AA:495:A:N1	2.24	0.52
1:AA:108:G:N3	1:AA:108:G:H5''	2.23	0.52
2:AB:54:THR:HG23	2:AB:185:ILE:CG2	2.40	0.52
26:B1:30:VAL:O	35:BA:2395:C:O2'	2.26	0.52
2:AB:36:ARG:O	2:AB:37:ASN:HB2	2.08	0.52
29:B4:21:VAL:HG11	29:B4:35:VAL:HG22	1.91	0.52
29:B4:39:CYS:CB	29:B4:41:PRO:CD	2.86	0.52
41:BG:111:LEU:HB2	41:BG:112:PRO:HD3	1.92	0.52
42:BH:83:TYR:HB3	42:BH:134:SER:CA	2.36	0.52
51:BS:17:ARG:NH2	51:BS:90:GLY:H	2.07	0.52
1:AA:1052:U:H6	1:AA:1052:U:O5'	1.92	0.52
35:BA:1601:G:C5	35:BA:1602:U:C4	2.98	0.52
20:AT:74:LYS:HG3	20:AT:75:ASN:ND2	2.23	0.52
35:BA:331:A:HO2'	35:BA:332:A:P	2.31	0.52
3:AC:116:VAL:C	3:AC:118:GLN:H	2.12	0.52
24:AY:99:ARG:NE	24:AY:128:TYR:CE2	2.69	0.52
24:AY:490:PRO:HB3	24:AY:515:GLU:HB3	1.91	0.52
37:BC:51:ASP:OD2	37:BC:54:ARG:HB2	2.09	0.52
49:BQ:137:TYR:HE1	58:BZ:81:ARG:CZ	2.22	0.52
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.71	0.52
35:BA:1419:A:O2'	35:BA:1420:U:C5'	2.54	0.52
1:AA:275:G:H5'	17:AQ:14:LYS:HD3	1.91	0.52
35:BA:1695:G:C3'	35:BA:1695:G:N3	2.71	0.52
28:B3:22:ALA:HA	28:B3:46:ASN:ND2	2.23	0.52
35:BA:1925:C:C5	35:BA:1926:U:H5	2.28	0.52
35:BA:185:U:H4'	35:BA:218:A:H4'	1.90	0.52
15:AO:23:GLY:O	15:AO:24:SER:O	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1156:G:H8	1:AA:1156:G:O5'	1.91	0.52
7:AG:94:ARG:HH11	7:AG:94:ARG:HG3	1.73	0.52
8:AH:35:ILE:HG22	8:AH:39:LEU:CD2	2.38	0.52
38:BD:16:MET:HB3	38:BD:207:GLY:HA3	1.91	0.52
7:AG:59:LEU:HD23	7:AG:59:LEU:C	2.29	0.52
46:BN:35:ARG:NH2	46:BN:42:TRP:HH2	2.08	0.52
9:AI:62:TYR:CE2	9:AI:64:THR:OG1	2.63	0.52
1:AA:950:U:O2'	1:AA:951:G:C5'	2.57	0.52
48:BP:88:LEU:HD11	48:BP:95:VAL:CG2	2.26	0.52
1:AA:397:A:H5'	1:AA:398:C:OP1	2.09	0.52
31:B6:29:ASN:O	31:B6:30:THR:C	2.48	0.52
35:BA:41:C:N4	35:BA:437:G:H1	2.07	0.52
1:AA:699:C:H2'	1:AA:700:G:C5'	2.25	0.52
1:AA:1390:U:O5'	1:AA:1390:U:H6	1.92	0.52
19:AS:47:HIS:O	19:AS:62:ILE:HG23	2.09	0.52
48:BP:23:PRO:C	48:BP:33:ARG:HE	2.12	0.52
1:AA:346:G:H5''	52:BT:35:LYS:NZ	2.23	0.52
24:AY:24:GLY:O	24:AY:28:THR:N	2.25	0.52
35:BA:2206:G:H5''	35:BA:2207:G:OP1	2.08	0.52
54:BV:4:ILE:HD12	54:BV:40:LEU:HG	1.90	0.52
1:AA:1287:A:N6	1:AA:1288:A:N6	2.58	0.52
1:AA:186:C:H2'	1:AA:187:C:C5	2.44	0.52
20:AT:89:ARG:NH2	20:AT:106:ALA:HB2	2.24	0.52
26:B1:57:GLU:CG	26:B1:58:ILE:N	2.61	0.52
51:BS:12:PHE:CD1	51:BS:12:PHE:C	2.82	0.52
35:BA:926:A:H5'	35:BA:926:A:H8	1.73	0.52
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.28	0.52
29:B4:68:ARG:CD	29:B4:71:ARG:HD3	2.36	0.52
9:AI:114:TYR:CE1	10:AJ:59:SER:HA	2.45	0.52
42:BH:5:GLY:HA2	42:BH:69:ARG:HD3	1.91	0.52
44:BK:57:UNK:HA	44:BK:67:UNK:N	2.24	0.52
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.38	0.52
55:BW:90:ARG:NH1	55:BW:90:ARG:HG3	2.24	0.52
54:BV:6:LYS:O	54:BV:37:VAL:HG21	2.09	0.52
52:BT:38:ASN:N	52:BT:38:ASN:HD22	2.07	0.52
58:BZ:3:TYR:CD1	58:BZ:3:TYR:N	2.78	0.52
35:BA:2818:G:O2'	35:BA:2819:G:H5'	2.10	0.52
8:AH:58:TYR:O	8:AH:59:LEU:HD23	2.09	0.52
37:BC:171:ALA:HB1	37:BC:173:HIS:CE1	2.43	0.52
35:BA:1048:A:H62	42:BH:1:MET:CE	2.22	0.52
1:AA:493:G:H2'	1:AA:494:U:C5	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:543:C:H6	1:AA:543:C:O5'	1.92	0.52
35:BA:142:A:H5'	35:BA:142(A):C:OP2	2.10	0.52
35:BA:35:G:O6	35:BA:446:G:N2	2.43	0.52
1:AA:302:G:N3	1:AA:556:C:H4'	2.25	0.52
30:B5:17:ASP:HB3	35:BA:16:G:OP1	2.09	0.52
42:BH:83:TYR:CB	42:BH:134:SER:HA	2.35	0.52
51:BS:66:ALA:HB1	51:BS:99:LYS:CG	2.40	0.52
35:BA:1484:G:H2'	35:BA:1485:G:C5'	2.22	0.52
35:BA:1570:A:H2'	35:BA:1571:A:C8	2.44	0.52
3:AC:74:GLY:O	3:AC:78:GLY:HA2	2.09	0.52
1:AA:1075:C:O2'	1:AA:1076:C:H5'	2.10	0.52
42:BH:149:ARG:NH1	42:BH:167:GLU:OE1	2.43	0.52
51:BS:22:GLY:O	51:BS:23:ARG:HB2	2.09	0.52
54:BV:99:ILE:HD13	54:BV:99:ILE:N	2.24	0.52
58:BZ:119:GLU:HG3	58:BZ:122:ARG:NH1	2.25	0.52
42:BH:13:LYS:O	42:BH:15:VAL:N	2.42	0.52
1:AA:355:C:O4'	1:AA:388:G:O2'	2.26	0.52
24:AY:281:PRO:HB2	24:AY:286:ILE:HD13	1.92	0.52
35:BA:1848:A:H2'	35:BA:1849:G:O4'	2.10	0.52
24:AY:61:ARG:NH2	24:AY:460:GLU:OE1	2.41	0.52
1:AA:625:G:H2'	1:AA:626:U:H6	1.74	0.52
35:BA:212:G:O2'	35:BA:213:A:H5'	2.10	0.52
9:AI:20:ARG:O	9:AI:60:ASP:N	2.41	0.52
9:AI:88:TYR:O	9:AI:89:ASN:HB3	2.10	0.52
35:BA:195:A:H61	35:BA:198:C:H3'	1.75	0.52
37:BC:109:MET:HA	37:BC:111:PHE:CE2	2.45	0.52
8:AH:30:ARG:HB3	8:AH:30:ARG:NH1	2.25	0.52
1:AA:697:U:C2'	1:AA:698:G:C5'	2.80	0.52
35:BA:1424:G:C2'	35:BA:1425:G:O5'	2.58	0.52
3:AC:47:LEU:HD11	3:AC:87:LEU:HD13	1.90	0.52
27:B2:4:SER:C	27:B2:6:VAL:H	2.12	0.52
29:B4:46:GLN:C	29:B4:48:ARG:H	2.10	0.52
41:BG:110:ALA:HB1	41:BG:142:PRO:CG	2.40	0.52
35:BA:812:C:O5'	48:BP:25:SER:HB2	2.09	0.52
35:BA:1121:C:C2	35:BA:1122:G:C8	2.98	0.52
42:BH:156:ALA:C	42:BH:158:HIS:H	2.11	0.52
1:AA:1030:C:C4'	1:AA:1030(A):G:H5'	2.38	0.52
35:BA:271(L):U:C5'	35:BA:271(M):G:H5'	2.29	0.52
58:BZ:6:LYS:CD	58:BZ:6:LYS:N	2.72	0.52
24:AY:437:THR:HG23	24:AY:454:MET:HG2	1.92	0.52
24:AY:526:VAL:HB	24:AY:566:THR:CA	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1568:G:C5'	38:BD:61:LEU:HD23	2.39	0.52
54:BV:2:PHE:CG	54:BV:13:ARG:NH1	2.77	0.52
35:BA:2580:U:H4'	39:BE:130:GLY:HA3	1.91	0.52
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.10	0.52
48:BP:6:LEU:HG	48:BP:9:ASN:CG	2.29	0.52
35:BA:2777:G:H5''	35:BA:2778:A:C5'	2.40	0.52
16:AP:59:TRP:HA	16:AP:62:VAL:CG2	2.39	0.52
49:BQ:29:PHE:HB3	49:BQ:65:PHE:CE2	2.44	0.52
13:AM:74:VAL:O	13:AM:78:ILE:HG12	2.09	0.52
13:AM:46:LYS:O	13:AM:46:LYS:HG2	2.09	0.52
35:BA:2543:G:H2'	35:BA:2544:G:C8	2.43	0.52
24:AY:624:LEU:HD11	24:AY:655:TYR:OH	2.09	0.52
35:BA:1149:G:H2'	35:BA:1150:C:C6	2.44	0.52
11:AK:23:ALA:HB2	11:AK:28:THR:HG23	1.92	0.52
40:BF:65:TRP:HZ3	40:BF:73:ALA:O	1.93	0.52
39:BE:38:THR:HG21	39:BE:40:GLU:OE1	2.10	0.52
1:AA:1066:C:H5'	1:AA:1067:A:OP2	2.09	0.52
29:B4:23:GLU:O	29:B4:24:THR:C	2.48	0.52
48:BP:101:VAL:HA	48:BP:105:LEU:O	2.10	0.52
35:BA:654(U):A:H2'	35:BA:654(V):A:H8	1.75	0.52
1:AA:359:U:O5'	1:AA:359:U:H6	1.91	0.52
35:BA:1820:U:O2'	38:BD:201:HIS:CD2	2.54	0.52
35:BA:747:U:O4	35:BA:2613:U:N3	2.42	0.52
35:BA:1993:U:H2'	35:BA:1994:C:C6	2.45	0.52
35:BA:2680:C:H2'	35:BA:2681:C:O2	2.09	0.52
35:BA:1137:G:H2'	35:BA:1138:G:C8	2.44	0.52
40:BF:192:LEU:HD23	40:BF:193:VAL:N	2.25	0.52
1:AA:1306:A:N6	1:AA:1331:G:HO2'	2.08	0.52
41:BG:135:LEU:HD12	41:BG:135:LEU:N	2.25	0.52
35:BA:1022:G:O6	46:BN:66:LYS:CE	2.57	0.52
35:BA:2176:A:C2'	35:BA:2177:C:C6	2.86	0.52
12:AL:45:PRO:HG3	12:AL:53:ARG:CD	2.39	0.52
57:BY:17:SER:HB3	57:BY:71:LYS:HB3	1.90	0.52
7:AG:80:VAL:HG12	7:AG:81:GLY:N	2.24	0.52
35:BA:1281:G:O2'	35:BA:1282:U:H5'	2.09	0.52
38:BD:69:ARG:NH2	38:BD:128:GLY:O	2.43	0.52
35:BA:1455:G:O6	35:BA:2705:A:C2	2.62	0.52
24:AY:487:ILE:CD1	24:AY:563:ILE:HG22	2.39	0.52
26:B1:62:VAL:HG22	26:B1:63:ALA:N	2.25	0.52
44:BK:99:UNK:O	44:BK:101:UNK:N	2.40	0.52
24:AY:357:ARG:HG3	24:AY:357:ARG:HH11	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1405:U:H2'	35:BA:1406:U:H6	1.73	0.52
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.09	0.52
41:BG:170:ARG:CZ	41:BG:180:PHE:HE2	2.22	0.52
1:AA:992:U:H1'	1:AA:993:G:C2	2.45	0.52
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.93	0.52
1:AA:415:A:O2'	1:AA:416:G:H5'	2.09	0.52
1:AA:603:U:O2'	1:AA:604:G:H5'	2.10	0.52
35:BA:2376:A:H2'	35:BA:2377:A:O4'	2.09	0.52
30:B5:19:ARG:NH1	35:BA:1265:A:H3'	2.24	0.52
48:BP:101:VAL:CG1	48:BP:106:LEU:HD23	2.39	0.52
1:AA:198:G:C5	1:AA:220:G:C2	2.96	0.52
1:AA:495:A:O4'	1:AA:496:A:H5'	2.10	0.52
33:B8:28:GLY:O	33:B8:32:LEU:CD2	2.53	0.52
35:BA:603:A:H1'	35:BA:604:G:P	2.48	0.52
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.92	0.52
35:BA:1739:U:O2'	35:BA:1740:G:H5'	2.10	0.52
1:AA:1306:A:H61	1:AA:1331:G:C1'	2.22	0.52
1:AA:1331:G:OP2	13:AM:23:TYR:CD1	2.63	0.52
41:BG:48:GLU:CD	41:BG:49:ASP:N	2.62	0.52
31:B6:45:LYS:O	31:B6:46:HIS:CB	2.58	0.52
1:AA:346:G:N3	1:AA:346:G:C2'	2.73	0.52
39:BE:132:HIS:CG	39:BE:135:HIS:NE2	2.77	0.52
53:BU:85:LYS:NZ	53:BU:117:GLN:HE22	2.08	0.52
40:BF:77:ASP:O	40:BF:79:GLY:N	2.34	0.52
51:BS:106:ARG:NE	51:BS:108:GLY:HA3	2.25	0.52
51:BS:12:PHE:HD1	51:BS:13:ARG:N	2.07	0.52
35:BA:263:C:H2'	35:BA:264:C:C6	2.44	0.52
57:BY:97:ARG:O	57:BY:98:VAL:HB	2.09	0.52
35:BA:1420:U:H5'	35:BA:1421:G:OP2	2.09	0.52
17:AQ:26:GLN:O	17:AQ:27:PHE:HB3	2.09	0.52
6:AF:71:ARG:HH11	6:AF:71:ARG:HG3	1.75	0.52
41:BG:83:ARG:N	41:BG:83:ARG:CD	2.69	0.52
1:AA:1320:C:H5"	19:AS:70:LYS:HG3	1.92	0.52
49:BQ:58:PHE:O	49:BQ:58:PHE:HD1	1.91	0.52
35:BA:2747:G:O6	35:BA:2755:C:H5"	2.10	0.52
41:BG:130:ASN:O	41:BG:159:VAL:HG13	2.09	0.52
25:B0:16:SER:HB2	35:BA:2262:U:H5	1.74	0.52
18:AR:53:ARG:HA	18:AR:56:THR:OG1	2.10	0.52
36:BB:106:G:O2'	36:BB:107:G:H5'	2.09	0.52
1:AA:80:G:H2'	1:AA:80:G:N3	2.24	0.52
35:BA:565:C:H4'	35:BA:1253:A:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:106:ALA:O	9:AI:108:VAL:HG23	2.10	0.52
35:BA:2853:C:H2'	35:BA:2854:G:H8	1.75	0.52
52:BT:30:VAL:CB	52:BT:31:SER:CB	2.69	0.52
1:AA:198:G:C6	1:AA:220:G:C4	2.98	0.52
25:B0:45:PHE:CZ	25:B0:77:ARG:NH2	2.77	0.52
1:AA:61:G:C6	1:AA:107:G:N1	2.78	0.52
22:AV:39:U:H6	22:AV:39:U:O5'	1.92	0.52
35:BA:260:G:O4'	35:BA:621:A:H1'	2.10	0.52
41:BG:89:GLY:O	41:BG:90:LEU:HB3	2.10	0.52
30:B5:16:ARG:HD2	30:B5:20:ARG:HH12	1.74	0.52
42:BH:168:PRO:HB3	42:BH:170:ARG:NH2	2.25	0.52
1:AA:793:U:OP2	1:AA:794:A:C8	2.63	0.52
7:AG:36:LYS:O	7:AG:37:ASN:HB3	2.10	0.52
39:BE:36:ARG:NH2	39:BE:88:GLY:CA	2.63	0.52
3:AC:188:LEU:HD12	3:AC:190:ARG:NH1	2.24	0.52
35:BA:413:C:H42	35:BA:2410:G:H1	1.57	0.52
35:BA:661:C:H4'	48:BP:16:ARG:NH1	2.23	0.52
24:AY:487:ILE:CD1	24:AY:487:ILE:H	2.23	0.52
49:BQ:134:ARG:NH1	58:BZ:122:ARG:NH2	2.58	0.52
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.38	0.52
24:AY:393:ASP:O	24:AY:394:ALA:O	2.28	0.52
20:AT:27:LYS:HD3	20:AT:27:LYS:O	2.09	0.52
37:BC:44:VAL:HG21	37:BC:176:VAL:HG21	1.92	0.52
48:BP:9:ASN:N	48:BP:10:PRO:CD	2.72	0.52
41:BG:127:GLY:O	41:BG:129:GLY:N	2.43	0.52
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.25	0.52
58:BZ:98:MET:O	58:BZ:125:LEU:HA	2.09	0.52
1:AA:1120:G:H2'	1:AA:1121:U:H6	1.75	0.52
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.24	0.52
13:AM:113:PRO:O	13:AM:114:ARG:HB2	2.09	0.52
42:BH:1:MET:O	42:BH:2:SER:OG	2.28	0.52
31:B6:30:THR:O	31:B6:31:PRO:C	2.46	0.52
35:BA:2203:U:H3'	35:BA:2205:C:OP2	2.10	0.52
29:B4:16:CYS:SG	29:B4:21:VAL:HG21	2.50	0.52
41:BG:55:LYS:HD3	41:BG:148:MET:CE	2.39	0.52
41:BG:77:ILE:HG21	41:BG:82:LEU:N	2.25	0.52
41:BG:77:ILE:HD12	41:BG:80:PHE:CB	2.37	0.52
48:BP:30:THR:HA	48:BP:33:ARG:HD2	1.91	0.52
37:BC:6:LYS:N	37:BC:9:ARG:NH1	2.58	0.52
35:BA:2105:C:OP2	35:BA:2105:C:O4'	2.27	0.52
35:BA:996:A:H4'	53:BU:92:ARG:HE	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:11:LYS:HG2	51:BS:11:LYS:O	2.10	0.52
28:B3:4:LEU:HD11	28:B3:44:ARG:NE	2.25	0.52
26:B1:49:VAL:HG13	26:B1:49:VAL:O	2.09	0.52
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.91	0.52
24:AY:327:PHE:CD1	24:AY:376:ALA:HB2	2.45	0.52
35:BA:1486:A:C1'	35:BA:1505:C:H42	2.23	0.52
4:AD:145:GLU:HG2	4:AD:184:LYS:HG2	1.92	0.52
42:BH:35:VAL:O	42:BH:37:VAL:HG23	2.10	0.52
35:BA:272(C):G:H2'	35:BA:272(D):G:C8	2.45	0.52
10:AJ:38:ILE:HG13	10:AJ:38:ILE:O	2.10	0.52
35:BA:316:C:C2'	35:BA:317:G:O5'	2.58	0.52
20:AT:65:LYS:O	20:AT:68:LYS:HG2	2.10	0.52
41:BG:29:TRP:C	41:BG:31:VAL:H	2.13	0.52
1:AA:1529:G:N3	1:AA:1529:G:H2'	2.25	0.52
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.74	0.52
35:BA:639:U:H2'	35:BA:640:C:C6	2.44	0.52
1:AA:942:G:C2	1:AA:943:U:C4	2.98	0.52
7:AG:51:GLN:O	7:AG:52:GLU:HB2	2.10	0.52
1:AA:321:A:H62	1:AA:328:C:H1'	1.75	0.52
35:BA:1445:A:H8	35:BA:1460:A:C4	2.28	0.52
35:BA:1999:C:C2	35:BA:2000:G:C8	2.98	0.52
27:B2:48:HIS:CD2	27:B2:49:LYS:N	2.78	0.52
35:BA:1892:C:C2'	35:BA:1893:C:C5'	2.72	0.52
3:AC:74:GLY:O	3:AC:78:GLY:N	2.43	0.52
35:BA:1258:C:O4'	40:BF:84:VAL:CG1	2.58	0.52
1:AA:787:A:C2'	1:AA:788:U:H5'	2.40	0.52
1:AA:797:C:O2'	1:AA:798:G:H5'	2.10	0.52
49:BQ:141:GLN:HG3	58:BZ:72:ARG:CZ	2.40	0.52
57:BY:44:ILE:HD13	57:BY:65:ALA:HB2	1.91	0.52
32:B7:12:ARG:HD3	32:B7:46:VAL:CG2	2.40	0.52
42:BH:7:LEU:HD21	42:BH:69:ARG:HE	1.75	0.52
54:BV:81:TYR:C	54:BV:82:ARG:HD2	2.29	0.52
27:B2:63:VAL:O	27:B2:66:GLU:CG	2.57	0.52
2:AB:212:GLN:NE2	2:AB:216:SER:OG	2.43	0.52
35:BA:1925:C:H3'	35:BA:1926:U:H5''	1.91	0.52
35:BA:1151:G:H2'	35:BA:1152:C:C6	2.45	0.52
52:BT:34:VAL:HG22	52:BT:39:ARG:HA	1.91	0.52
24:AY:276:VAL:O	24:AY:280:LEU:HB2	2.10	0.52
35:BA:1579:A:H8	35:BA:1579:A:H5'	1.75	0.52
14:AN:21:TYR:OH	14:AN:23:ARG:NH1	2.43	0.52
35:BA:1013:C:O2'	35:BA:1014:U:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1488:G:H5'	35:BA:1489:U:OP1	2.10	0.52
36:BB:52:A:O2'	36:BB:53:A:C8	2.62	0.52
3:AC:90:GLU:HA	3:AC:93:LYS:HB2	1.91	0.52
1:AA:268:C:O2'	1:AA:269:C:H5'	2.10	0.52
35:BA:1917:U:O2'	35:BA:1918:A:H5'	2.10	0.52
33:B8:18:ALA:HB2	35:BA:628:G:O3'	2.10	0.51
37:BC:100:ILE:C	37:BC:102:GLN:N	2.64	0.51
1:AA:437:U:C2'	1:AA:438:G:H5'	2.40	0.51
35:BA:1423:G:C2'	35:BA:1424:G:C5'	2.88	0.51
35:BA:1221:C:O2'	35:BA:1221(A):C:H5'	2.10	0.51
35:BA:1784:A:H4'	35:BA:1785:A:C5'	2.40	0.51
1:AA:1399:C:N3	1:AA:1502:A:N6	2.58	0.51
1:AA:1305:G:OP2	1:AA:1305:G:C8	2.63	0.51
19:AS:40:ILE:HG23	19:AS:67:VAL:C	2.30	0.51
35:BA:1381:G:O2'	35:BA:1382:G:H5'	2.10	0.51
35:BA:2404:C:C2'	35:BA:2405:G:O5'	2.58	0.51
51:BS:92:TYR:O	51:BS:93:LYS:CB	2.57	0.51
51:BS:30:ARG:HH11	51:BS:97:ARG:CG	2.19	0.51
1:AA:982:U:H1'	1:AA:983:A:C2	2.44	0.51
1:AA:90:U:H4'	1:AA:91:C:OP1	2.09	0.51
1:AA:91:C:O2	1:AA:91:C:C2'	2.57	0.51
35:BA:1173:G:H3'	35:BA:1174:A:H5'	1.92	0.51
1:AA:1285:A:C1'	1:AA:1286:A:C8	2.93	0.51
57:BY:7:VAL:HB	57:BY:8:LYS:CE	2.40	0.51
48:BP:108:LYS:HD2	48:BP:108:LYS:N	2.24	0.51
32:B7:45:ALA:O	32:B7:46:VAL:HG23	2.10	0.51
12:AL:83:VAL:HG12	12:AL:84:LEU:N	2.24	0.51
35:BA:1697:G:H3'	35:BA:1698:A:C5'	2.37	0.51
24:AY:96:ARG:HH11	24:AY:315:LYS:HG2	1.75	0.51
1:AA:663:A:O2'	1:AA:664:G:H5'	2.10	0.51
51:BS:78:LEU:HD11	51:BS:103:GLU:CG	2.40	0.51
37:BC:48:LEU:CB	37:BC:50:ILE:HD12	2.38	0.51
4:AD:182:LYS:HG2	4:AD:183:GLY:H	1.75	0.51
37:BC:67:HIS:CG	37:BC:185:LYS:HD2	2.45	0.51
1:AA:506:G:O5'	1:AA:506:G:H8	1.92	0.51
37:BC:42:VAL:CG1	37:BC:43:GLU:N	2.73	0.51
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	2.25	0.51
35:BA:935:C:H2'	35:BA:936:C:H6	1.75	0.51
35:BA:1073:A:N3	35:BA:1073:A:H2'	2.24	0.51
9:AI:2:GLU:HG2	9:AI:2:GLU:O	2.10	0.51
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:60:PHE:HE2	18:AR:76:LEU:HD12	1.75	0.51
24:AY:604:PRO:C	24:AY:605:ILE:HD12	2.31	0.51
35:BA:960:A:H8	35:BA:960:A:O5'	1.93	0.51
44:BK:25:UNK:O	44:BK:26:UNK:C	2.58	0.51
48:BP:101:VAL:HG23	48:BP:102:ARG:N	2.24	0.51
48:BP:111:ARG:HG3	48:BP:128:HIS:CG	2.45	0.51
37:BC:64:SER:HA	37:BC:161:ARG:H	1.74	0.51
1:AA:197:A:O2'	1:AA:198:G:P	2.68	0.51
1:AA:544:G:H2'	1:AA:545:C:O5'	2.09	0.51
1:AA:266:G:C5'	1:AA:267:C:C6	2.90	0.51
35:BA:1992:G:C4	35:BA:1997:G:O6	2.63	0.51
35:BA:2000:G:C2'	35:BA:2001:A:H5'	2.40	0.51
1:AA:119:A:H62	1:AA:287:U:H3	1.57	0.51
40:BF:139:PHE:CZ	40:BF:156:LEU:HD22	2.45	0.51
13:AM:11:ARG:C	13:AM:13:LYS:N	2.64	0.51
1:AA:1256:A:H2	1:AA:1277:C:C4	2.27	0.51
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.45	0.51
1:AA:1499:A:C2	1:AA:1500:A:C8	2.99	0.51
35:BA:654(E):G:O2'	35:BA:654(F):C:H5'	2.09	0.51
35:BA:2103:C:H2'	35:BA:2104:G:H5'	1.92	0.51
53:BU:83:LEU:HG	53:BU:88:ILE:HD11	1.92	0.51
40:BF:10:PRO:HA	40:BF:127:GLU:CG	2.40	0.51
12:AL:26:ALA:O	12:AL:27:LEU:O	2.27	0.51
1:AA:796:C:H2'	1:AA:797:C:C6	2.43	0.51
58:BZ:54:HIS:HB3	58:BZ:101:PRO:HD3	1.92	0.51
40:BF:20:LEU:N	40:BF:24:LEU:HD21	2.25	0.51
24:AY:386:GLY:HA2	24:AY:402:ILE:HG12	1.91	0.51
37:BC:29:LEU:O	37:BC:30:VAL:C	2.48	0.51
1:AA:1495:U:O5'	1:AA:1495:U:H6	1.93	0.51
49:BQ:134:ARG:HA	49:BQ:137:TYR:CD2	2.43	0.51
42:BH:12:PRO:CD	42:BH:15:VAL:HG21	2.36	0.51
24:AY:71:THR:HG22	24:AY:80:ASN:OD1	2.09	0.51
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.91	0.51
44:BK:135:UNK:O	44:BK:137:UNK:N	2.44	0.51
1:AA:680:C:O2'	38:BD:166:GLN:HG2	2.10	0.51
12:AL:78:GLN:HE22	24:AY:444:PRO:HA	1.74	0.51
36:BB:70:C:H2'	36:BB:71:C:H6	1.75	0.51
9:AI:126:SER:OG	9:AI:127:LYS:N	2.41	0.51
35:BA:2199:A:H5'	35:BA:2200:C:OP1	2.09	0.51
35:BA:2109:U:H1'	35:BA:2181:G:N2	2.24	0.51
35:BA:2853:C:H2'	35:BA:2854:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:580:U:H2'	1:AA:581:G:O4'	2.10	0.51
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.09	0.51
35:BA:2320:A:C2	35:BA:2333:A:C8	2.98	0.51
40:BF:28:ILE:N	40:BF:28:ILE:HD13	2.24	0.51
35:BA:107:C:C2'	35:BA:108:U:H5'	2.40	0.51
48:BP:52:GLU:CG	48:BP:57:THR:HB	2.38	0.51
37:BC:101:ILE:O	37:BC:103:LYS:N	2.42	0.51
35:BA:1588:C:H2'	35:BA:1588:C:O2	2.10	0.51
55:BW:40:ASN:O	55:BW:41:LYS:HD3	2.10	0.51
1:AA:509:A:H3'	1:AA:509:A:P	2.50	0.51
27:B2:38:GLN:HA	27:B2:41:ILE:HD11	1.91	0.51
35:BA:2404:C:N4	35:BA:2414:G:C6	2.78	0.51
1:AA:81:U:H3'	1:AA:81:U:O2	2.10	0.51
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.75	0.51
38:BD:21:PHE:HB3	38:BD:24:ILE:HG21	1.93	0.51
47:BO:13:ASN:ND2	47:BO:13:ASN:H	2.09	0.51
3:AC:22:TRP:HZ3	3:AC:24:ALA:CB	2.22	0.51
26:B1:4:VAL:HG23	26:B1:11:ARG:HG3	1.91	0.51
39:BE:26:ILE:HG22	39:BE:27:LEU:N	2.24	0.51
1:AA:662:G:H2'	1:AA:663:A:C8	2.45	0.51
39:BE:47:VAL:HB	39:BE:49:LEU:CD2	2.40	0.51
35:BA:1029:A:O5'	35:BA:1029:A:H8	1.93	0.51
35:BA:1926:U:O2	35:BA:1926:U:H2'	2.10	0.51
42:BH:136:ILE:HD12	42:BH:136:ILE:H	1.75	0.51
41:BG:35:GLU:O	41:BG:95:ARG:HB3	2.10	0.51
1:AA:833:U:H2'	1:AA:834:C:H6	1.75	0.51
18:AR:53:ARG:C	18:AR:55:ARG:H	2.13	0.51
35:BA:1213:A:H2'	35:BA:1214:A:H8	1.76	0.51
35:BA:1213:A:H2'	35:BA:1214:A:C8	2.45	0.51
58:BZ:136:PHE:O	58:BZ:136:PHE:CD1	2.63	0.51
48:BP:95:VAL:CG2	48:BP:125:VAL:HG23	2.39	0.51
1:AA:490:G:N3	1:AA:491:G:C8	2.79	0.51
7:AG:15:ASP:CB	7:AG:19:GLY:O	2.52	0.51
35:BA:1643:G:C2	35:BA:1644:C:C2	2.99	0.51
35:BA:2713:A:C3'	35:BA:2714:G:H5'	2.26	0.51
35:BA:1223:G:C6	35:BA:1227:G:C6	2.98	0.51
50:BR:2:ARG:C	50:BR:2:ARG:CD	2.79	0.51
50:BR:2:ARG:O	50:BR:3:HIS:ND1	2.44	0.51
40:BF:7:TYR:CD2	40:BF:16:GLY:HA3	2.45	0.51
41:BG:82:LEU:HD22	41:BG:88:ILE:HD11	1.91	0.51
41:BG:94:LEU:N	41:BG:94:LEU:CD2	2.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1139:G:O2'	35:BA:1140:C:H5'	2.10	0.51
35:BA:1142:U:H2'	35:BA:1142(A):A:OP1	2.10	0.51
24:AY:69:VAL:CA	24:AY:82:ILE:CG1	2.84	0.51
51:BS:68:GLN:C	51:BS:70:GLY:H	2.14	0.51
51:BS:93:LYS:O	51:BS:94:TYR:C	2.47	0.51
10:AJ:51:ARG:HG3	10:AJ:60:ARG:CA	2.40	0.51
35:BA:1215:G:H2'	35:BA:1216:G:H8	1.76	0.51
35:BA:1036:G:N2	35:BA:1119:C:O2	2.37	0.51
40:BF:83:PHE:O	40:BF:86:GLY:N	2.35	0.51
1:AA:1151:A:C5	1:AA:1152:A:N6	2.78	0.51
26:B1:5:CYS:SG	26:B1:8:SER:HB3	2.51	0.51
1:AA:1291:G:OP1	7:AG:37:ASN:ND2	2.42	0.51
7:AG:38:LEU:C	7:AG:38:LEU:HD13	2.31	0.51
40:BF:20:LEU:HD23	40:BF:21:ALA:N	2.23	0.51
3:AC:167:TRP:CD1	3:AC:167:TRP:C	2.83	0.51
24:AY:507:TYR:HD1	24:AY:508:GLY:N	2.08	0.51
35:BA:662:G:OP2	48:BP:18:ARG:CZ	2.59	0.51
38:BD:30:GLU:CG	38:BD:63:ARG:HH21	2.23	0.51
57:BY:97:ARG:O	57:BY:98:VAL:HG23	2.10	0.51
16:AP:34:GLU:OE1	16:AP:55:ARG:NH1	2.44	0.51
15:AO:39:LEU:HD13	15:AO:56:LEU:HD23	1.91	0.51
11:AK:21:ILE:HD12	11:AK:21:ILE:N	2.26	0.51
24:AY:10:LYS:HA	24:AY:282:SER:OG	2.10	0.51
25:B0:4:LYS:HD2	49:BQ:82:ARG:CZ	2.40	0.51
22:AV:61:C:H2'	22:AV:62:C:H6	1.76	0.51
42:BH:20:ALA:HB1	42:BH:21:PRO:CD	2.40	0.51
35:BA:494:G:OP1	55:BW:8:ARG:NH1	2.41	0.51
4:AD:208:SER:O	4:AD:209:ARG:HB2	2.09	0.51
31:B6:42:TRP:HA	31:B6:42:TRP:CE3	2.46	0.51
24:AY:345:THR:HG22	24:AY:345:THR:O	2.11	0.51
13:AM:80:ARG:HG3	19:AS:65:ASN:HD21	1.76	0.51
35:BA:1177:A:H4'	35:BA:1178:C:C5	2.45	0.51
29:B4:10:VAL:CG2	29:B4:11:PRO:HD2	2.40	0.51
1:AA:310:G:H2'	1:AA:311:C:C6	2.45	0.51
48:BP:147:LEU:O	48:BP:148:LEU:HB2	2.11	0.51
1:AA:60:A:N6	1:AA:110:C:N3	2.58	0.51
1:AA:771:G:C5	1:AA:772:U:C5	2.98	0.51
1:AA:1392:G:N2	1:AA:1502:A:C8	2.79	0.51
41:BG:135:LEU:C	41:BG:137:GLU:H	2.11	0.51
41:BG:145:THR:HG22	41:BG:145:THR:O	2.10	0.51
41:BG:7:LEU:CD2	41:BG:7:LEU:C	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:95:LYS:HD2	9:AI:96:LEU:N	2.25	0.51
35:BA:15:G:C2	35:BA:16:G:C8	2.99	0.51
51:BS:27:SER:HA	51:BS:88:ASP:HB3	1.93	0.51
1:AA:868:C:H2'	1:AA:869:G:O5'	2.11	0.51
26:B1:51:VAL:N	26:B1:58:ILE:O	2.35	0.51
35:BA:52:A:H2'	35:BA:53:A:H5'	1.92	0.51
54:BV:64:HIS:ND1	54:BV:92:THR:CG2	2.71	0.51
17:AQ:9:VAL:CG1	17:AQ:56:VAL:HG22	2.31	0.51
7:AG:57:GLU:O	7:AG:57:GLU:HG3	2.10	0.51
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.11	0.51
46:BN:58:ASP:HB3	46:BN:95:PRO:HB2	1.91	0.51
39:BE:67:PHE:CD1	39:BE:69:LYS:HE3	2.45	0.51
4:AD:152:SER:O	4:AD:155:LEU:HB2	2.11	0.51
24:AY:165:GLN:HE21	24:AY:177:ILE:CG2	2.21	0.51
22:AV:23:A:H2'	22:AV:24:G:H5'	1.92	0.51
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.74	0.51
9:AI:82:ALA:O	9:AI:86:VAL:HB	2.11	0.51
46:BN:39:ARG:HH21	46:BN:41:ASP:HB2	1.73	0.51
37:BC:68:GLY:H	37:BC:189:ASN:ND2	2.09	0.51
37:BC:42:VAL:HG13	37:BC:43:GLU:H	1.73	0.51
6:AF:3:ARG:HB3	6:AF:93:SER:HB3	1.92	0.51
35:BA:960:A:H5''	35:BA:961:C:OP2	2.10	0.51
43:BJ:90:UNK:O	43:BJ:91:UNK:C	2.58	0.51
35:BA:127:A:H5''	35:BA:128:C:O4'	2.10	0.51
48:BP:111:ARG:HG2	48:BP:111:ARG:HH11	1.75	0.51
35:BA:833:U:H2'	35:BA:834:C:C6	2.46	0.51
35:BA:601:C:H2'	35:BA:602:G:O4'	2.10	0.51
1:AA:324:G:N2	1:AA:326:G:H3'	2.26	0.51
1:AA:688:G:C5	1:AA:700:G:C2	2.98	0.51
3:AC:84:ILE:C	3:AC:86:VAL:N	2.64	0.51
35:BA:35:G:H2'	35:BA:36:G:H8	1.76	0.51
35:BA:444:C:O2'	35:BA:445:C:H5'	2.09	0.51
35:BA:1676:A:H2'	35:BA:1677:A:O4'	2.11	0.51
27:B2:39:ALA:O	27:B2:42:GLY:N	2.41	0.51
13:AM:2:ALA:N	13:AM:9:ILE:CG2	2.74	0.51
41:BG:36:LYS:HD3	41:BG:38:VAL:CG2	2.41	0.51
1:AA:1175:G:C2'	1:AA:1176:A:C5'	2.86	0.51
1:AA:347:G:N3	1:AA:348:G:C8	2.78	0.51
35:BA:1121:C:H6	35:BA:1121:C:O5'	1.93	0.51
42:BH:168:PRO:HB3	42:BH:170:ARG:HH21	1.76	0.51
55:BW:72:LYS:HD2	55:BW:106:ILE:HD11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:9:ARG:CG	9:AI:14:VAL:HG13	2.40	0.51
35:BA:330:A:H2	35:BA:1210:A:C2'	2.14	0.51
24:AY:401:SER:O	24:AY:402:ILE:CG1	2.59	0.51
57:BY:7:VAL:C	57:BY:8:LYS:HD2	2.30	0.51
35:BA:2632:A:O2'	39:BE:61:ARG:NH2	2.43	0.51
57:BY:97:ARG:O	57:BY:98:VAL:CB	2.57	0.51
2:AB:76:GLN:O	2:AB:77:ALA:CB	2.58	0.51
39:BE:71:GLY:O	39:BE:73:GLU:N	2.43	0.51
25:B0:53:MET:CE	25:B0:57:PHE:CD2	2.94	0.51
35:BA:881:G:H2'	35:BA:882:G:O4'	2.10	0.51
38:BD:70:TRP:CZ3	38:BD:150:LYS:HA	2.46	0.51
35:BA:1941:C:O2'	35:BA:1942:C:H5'	2.10	0.51
57:BY:2:ARG:CD	57:BY:3:VAL:HG23	2.40	0.51
8:AH:2:LEU:HD21	8:AH:5:PRO:HA	1.92	0.51
1:AA:1395:C:H2'	1:AA:1396:A:H5'	1.93	0.51
35:BA:1876:A:H2'	35:BA:1877:A:C8	2.45	0.51
51:BS:51:ALA:CB	51:BS:73:LEU:HB2	2.41	0.51
51:BS:51:ALA:HB3	51:BS:73:LEU:HB2	1.91	0.51
4:AD:199:ASN:OD1	4:AD:201:GLN:HB2	2.11	0.51
35:BA:320:A:H4'	35:BA:322:A:N7	2.25	0.51
6:AF:90:VAL:HG13	6:AF:90:VAL:O	2.09	0.51
48:BP:83:VAL:O	48:BP:83:VAL:HG13	2.11	0.51
24:AY:491:VAL:HG12	24:AY:492:ASP:N	2.25	0.51
8:AH:29:SER:HB3	8:AH:32:LYS:HG3	1.93	0.51
48:BP:95:VAL:HG23	48:BP:125:VAL:HG23	1.92	0.51
7:AG:47:CYS:O	7:AG:48:LYS:C	2.48	0.51
1:AA:687:A:H1'	1:AA:688:G:P	2.49	0.51
35:BA:2012:G:O5'	35:BA:2012:G:H8	1.94	0.51
35:BA:1462:C:O2'	35:BA:1463:C:H5'	2.11	0.51
41:BG:39:ILE:CD1	41:BG:157:ILE:HG12	2.35	0.51
41:BG:43:LEU:CD1	41:BG:48:GLU:H	2.24	0.51
1:AA:1126:U:OP2	1:AA:1281:U:O2	2.29	0.51
35:BA:1799:G:OP1	35:BA:1799:G:C3'	2.43	0.51
35:BA:1107:G:H4'	43:BJ:81:UNK:CA	2.39	0.51
57:BY:42:VAL:O	57:BY:65:ALA:HB3	2.11	0.51
40:BF:132:VAL:O	40:BF:138:GLU:OE1	2.29	0.51
35:BA:1496:A:H8	35:BA:1577:C:O2'	1.93	0.51
50:BR:9:LYS:C	50:BR:10:LEU:CD2	2.75	0.51
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.25	0.51
31:B6:6:ARG:CB	31:B6:6:ARG:HH11	2.23	0.51
38:BD:134:ARG:CZ	38:BD:135:PHE:CE1	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:1:MET:H3	8:AH:1:MET:CE	2.24	0.51
24:AY:478:LYS:HG3	24:AY:478:LYS:O	2.10	0.51
24:AY:575:VAL:HG12	24:AY:575:VAL:O	2.10	0.51
35:BA:1233:C:O2'	35:BA:1234:U:H5'	2.11	0.51
1:AA:161:A:O2'	1:AA:162:A:H5'	2.08	0.51
35:BA:1248:G:P	40:BF:92:PRO:HG3	2.51	0.51
1:AA:1147:C:O2	9:AI:16:ARG:CZ	2.59	0.51
48:BP:101:VAL:HG12	48:BP:106:LEU:HD23	1.93	0.51
48:BP:107:LYS:C	48:BP:109:GLY:H	2.14	0.51
48:BP:84:ASN:HD22	48:BP:115:LEU:HD23	1.75	0.51
48:BP:84:ASN:OD1	48:BP:116:GLY:CA	2.54	0.51
33:B8:32:LEU:CB	33:B8:36:LYS:HZ1	2.23	0.51
35:BA:747:U:C4	35:BA:2613:U:O4	2.53	0.51
2:AB:24:TRP:CZ3	2:AB:32:ILE:HD12	2.46	0.51
35:BA:1227:G:H2'	35:BA:1228:G:C8	2.37	0.51
31:B6:41:PRO:CD	31:B6:45:LYS:HA	2.39	0.51
9:AI:95:LYS:NZ	9:AI:96:LEU:HD13	2.26	0.51
35:BA:1022:G:C6	35:BA:1141:U:C4	2.99	0.51
58:BZ:183:LEU:HD11	58:BZ:186:GLU:CA	2.41	0.51
35:BA:654(M):C:H2'	35:BA:654(N):G:C8	2.45	0.51
35:BA:1601:G:C6	35:BA:1602:U:C4	2.99	0.51
53:BU:80:ILE:O	53:BU:84:LYS:HB2	2.11	0.51
53:BU:92:ARG:HB2	54:BV:11:GLN:NE2	2.24	0.51
57:BY:17:SER:HA	57:BY:71:LYS:HE2	1.93	0.51
35:BA:896:A:H1'	58:BZ:176:PRO:HB3	1.92	0.51
4:AD:30:LYS:C	4:AD:32:ALA:N	2.63	0.51
24:AY:129:LYS:HA	24:AY:253:LEU:HD21	1.92	0.51
35:BA:1859:A:C2	35:BA:1884:A:H1'	2.45	0.51
58:BZ:108:PRO:HA	58:BZ:142:SER:HA	1.92	0.51
48:BP:79:ARG:O	48:BP:110:TYR:HB3	2.10	0.51
57:BY:99:CYS:O	57:BY:100:ALA:HB2	2.11	0.51
39:BE:69:LYS:O	39:BE:71:GLY:N	2.43	0.51
42:BH:5:GLY:C	42:BH:65:HIS:HE1	2.14	0.51
35:BA:1919:A:H2'	35:BA:1920:C:C5'	2.39	0.51
1:AA:1228:C:O5'	13:AM:115:LYS:HB3	2.10	0.51
52:BT:95:ARG:HA	52:BT:95:ARG:HH11	1.76	0.51
50:BR:85:PRO:O	50:BR:87:TYR:N	2.44	0.51
54:BV:21:ARG:HD3	54:BV:21:ARG:N	2.26	0.51
25:B0:56:ASP:C	25:B0:58:THR:N	2.63	0.51
35:BA:315:G:H2'	35:BA:316:C:C6	2.45	0.51
35:BA:1827:C:H2'	35:BA:1828:G:H5'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:473:G:H2'	1:AA:474:G:H8	1.75	0.51
35:BA:2591:C:H2'	35:BA:2592:G:C8	2.46	0.51
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.10	0.51
3:AC:106:VAL:O	3:AC:107:GLN:C	2.48	0.51
39:BE:174:ASP:OD1	39:BE:175:VAL:N	2.39	0.51
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.45	0.51
55:BW:6:ILE:HA	55:BW:103:ILE:O	2.11	0.51
36:BB:94:C:O2'	36:BB:95:C:H5'	2.11	0.51
24:AY:494:GLU:CB	24:AY:511:LYS:HG2	2.40	0.51
16:AP:54:GLU:HA	16:AP:54:GLU:OE1	2.11	0.51
1:AA:311:C:C3'	1:AA:312:C:H5'	2.30	0.51
48:BP:115:LEU:CD2	48:BP:116:GLY:N	2.74	0.51
1:AA:322:C:H2'	1:AA:323:U:H5'	1.93	0.51
17:AQ:68:ARG:N	17:AQ:70:ARG:HH11	2.08	0.51
41:BG:106:LEU:HA	41:BG:110:ALA:CB	2.41	0.51
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.35	0.51
35:BA:2207:G:C5'	35:BA:2207:G:N3	2.64	0.51
53:BU:95:LEU:O	53:BU:98:LEU:HG	2.11	0.51
53:BU:91:ASP:CG	53:BU:96:ALA:HB2	2.30	0.51
42:BH:149:ARG:HA	42:BH:162:ILE:CG1	2.41	0.51
42:BH:169:VAL:HG13	42:BH:170:ARG:H	1.75	0.51
24:AY:264:LEU:HB2	61:AY:701:GCP:N7	2.26	0.51
26:B1:53:VAL:HG21	26:B1:58:ILE:CD1	2.38	0.51
58:BZ:28:MET:HE3	58:BZ:59:LEU:HD12	1.93	0.51
35:BA:1649:G:H2'	35:BA:1650:G:H5'	1.92	0.51
58:BZ:108:PRO:HG2	58:BZ:111:VAL:CG2	2.41	0.51
35:BA:264:C:O5'	35:BA:264:C:H6	1.92	0.51
57:BY:84:ARG:HH21	57:BY:97:ARG:HB3	1.76	0.51
22:AV:45:U:O2	22:AV:45:U:C3'	2.59	0.51
35:BA:2808:U:H5'	35:BA:2891:G:O6	2.10	0.51
9:AI:80:GLY:O	9:AI:81:ILE:C	2.49	0.51
35:BA:7:G:H2'	35:BA:8:A:C8	2.46	0.51
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.25	0.51
40:BF:101:LEU:HD12	40:BF:102:PRO:CD	2.40	0.51
35:BA:1027:A:O2'	35:BA:1028:A:H5'	2.11	0.51
41:BG:180:PHE:O	41:BG:181:ARG:O	2.29	0.51
35:BA:2653:U:O2'	42:BH:110:SER:HB2	2.11	0.51
46:BN:90:MET:CE	46:BN:90:MET:HA	2.41	0.51
53:BU:74:LEU:CD1	53:BU:79:PHE:HB2	2.41	0.51
35:BA:1188:U:O2'	35:BA:1189:A:H5'	2.10	0.51
35:BA:2181:G:O2'	35:BA:2182:G:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.46	0.51
35:BA:2273:A:H2'	35:BA:2274:A:C8	2.46	0.51
42:BH:26:VAL:O	42:BH:32:GLU:HA	2.10	0.51
35:BA:627:A:H62	48:BP:84:ASN:HD21	1.59	0.51
1:AA:397:A:N3	1:AA:397:A:H3'	2.26	0.51
1:AA:549:C:C2	1:AA:550:G:C8	2.99	0.51
35:BA:139(A):G:H3'	35:BA:140:G:H8	1.76	0.51
1:AA:110:C:H2'	1:AA:111:G:C5'	2.40	0.51
26:B1:29:GLY:O	26:B1:30:VAL:CB	2.58	0.51
1:AA:555:C:H2'	1:AA:556:C:C5	2.46	0.51
1:AA:560:U:C5'	1:AA:561:U:H3'	2.39	0.51
27:B2:50:ILE:CG2	27:B2:51:ARG:N	2.72	0.51
41:BG:103:LEU:CD1	41:BG:107:LEU:HG	2.41	0.51
41:BG:137:GLU:HG3	41:BG:155:MET:N	2.25	0.51
41:BG:55:LYS:HD3	41:BG:148:MET:HE1	1.92	0.51
51:BS:20:ARG:NE	51:BS:20:ARG:HA	2.24	0.51
51:BS:35:ILE:HD13	51:BS:99:LYS:HD3	1.92	0.51
35:BA:886:C:N3	35:BA:890:A:N6	2.59	0.51
19:AS:6:LYS:CG	19:AS:7:LYS:H	2.12	0.51
35:BA:1348:G:C2'	35:BA:1349:A:H5''	2.40	0.51
5:AE:80:ILE:HG22	8:AH:104:ARG:NH2	2.26	0.51
55:BW:58:ALA:O	55:BW:64:MET:HG3	2.10	0.51
35:BA:779:U:OP2	38:BD:49:ILE:HG13	2.11	0.51
1:AA:868:C:C2'	1:AA:869:G:C5'	2.89	0.51
35:BA:271(J):C:HO2'	35:BA:271(K):U:H6	1.57	0.51
38:BD:26:LYS:NZ	38:BD:26:LYS:HA	2.25	0.51
58:BZ:44:PHE:CE1	58:BZ:48:PHE:HD2	2.29	0.51
54:BV:18:LEU:O	54:BV:19:LYS:HB2	2.10	0.51
1:AA:1128:C:O2'	1:AA:1129:C:H5''	2.11	0.51
56:BX:35:THR:CG2	56:BX:36:LYS:N	2.74	0.51
1:AA:63:C:C5'	1:AA:64:G:OP2	2.54	0.51
35:BA:1180:C:C2'	35:BA:1181:C:H5'	2.41	0.51
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.10	0.51
4:AD:152:SER:HA	4:AD:155:LEU:HD12	1.93	0.51
35:BA:1854:A:H62	35:BA:1888:G:H8	1.59	0.51
42:BH:12:PRO:HD3	42:BH:76:VAL:HG13	1.92	0.51
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD2	2.46	0.51
24:AY:70:THR:O	24:AY:80:ASN:HA	2.11	0.51
1:AA:388:G:O2'	1:AA:389:A:P	2.69	0.51
37:BC:65:LEU:HB3	37:BC:189:ASN:HD22	1.75	0.51
1:AA:1316:G:H2'	1:AA:1317:C:H5''	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BK:28:UNK:O	44:BK:31:UNK:N	2.44	0.51
35:BA:2648:C:H2'	35:BA:2649:U:C6	2.46	0.51
35:BA:213:A:O2'	35:BA:214:G:H5'	2.11	0.51
11:AK:79:SER:OG	11:AK:106:LYS:HD2	2.11	0.51
45:BL:92:UNK:O	45:BL:94:UNK:N	2.43	0.51
24:AY:512:ILE:H	24:AY:512:ILE:HD13	1.76	0.51
58:BZ:45:ASP:O	58:BZ:49:ARG:HG2	2.10	0.51
1:AA:157:G:H2'	1:AA:158:G:H8	1.75	0.51
33:B8:15:LYS:HD2	48:BP:65:ARG:NH2	2.25	0.50
35:BA:833:U:C4'	48:BP:51:PHE:O	2.59	0.50
37:BC:138:LEU:HD23	37:BC:139:PRO:CD	2.41	0.50
35:BA:953:A:N6	35:BA:965:C:C4	2.78	0.50
35:BA:965:C:O2'	35:BA:966:G:H5'	2.11	0.50
35:BA:436:C:H2'	35:BA:437:G:C8	2.47	0.50
35:BA:1786:A:C4	35:BA:1938:A:C6	2.98	0.50
2:AB:39:ILE:O	2:AB:41:ILE:HD13	2.10	0.50
31:B6:18:ARG:HH22	31:B6:44:ARG:HB3	1.76	0.50
35:BA:17:G:H2'	35:BA:18:C:C5	2.45	0.50
24:AY:15:ILE:HD12	24:AY:81:ILE:HG23	1.94	0.50
51:BS:24:LEU:CB	51:BS:85:VAL:HG12	2.41	0.50
39:BE:6:GLY:O	39:BE:195:LEU:HD12	2.10	0.50
24:AY:38:ARG:NH2	24:AY:270:GLN:NE2	2.58	0.50
25:B0:69:PHE:N	25:B0:69:PHE:HD1	2.08	0.50
42:BH:171:LEU:O	42:BH:173:PRO:CD	2.51	0.50
38:BD:69:ARG:CD	38:BD:105:ILE:HD11	2.34	0.50
58:BZ:97:GLU:HG3	58:BZ:127:LYS:CB	2.35	0.50
40:BF:135:LYS:H	40:BF:166:ALA:CB	2.24	0.50
35:BA:2180:U:H5'	35:BA:2180:U:C6	2.32	0.50
26:B1:63:ALA:O	26:B1:67:ILE:HG13	2.11	0.50
37:BC:50:ILE:H	37:BC:50:ILE:HD13	1.76	0.50
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.73	0.50
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.46	0.50
11:AK:121:PRO:HG2	11:AK:126:ARG:HG3	1.92	0.50
1:AA:1116:C:C2'	1:AA:1117:G:C5'	2.89	0.50
1:AA:77:G:N1	1:AA:92:C:N4	2.60	0.50
26:B1:85:LEU:O	26:B1:86:SER:HB3	2.11	0.50
37:BC:191:ARG:O	37:BC:195:ARG:HG2	2.11	0.50
1:AA:511:C:O4'	4:AD:43:HIS:NE2	2.44	0.50
35:BA:2339:G:H2'	35:BA:2340:G:H8	1.74	0.50
4:AD:83:SER:HA	4:AD:89:THR:CG2	2.41	0.50
35:BA:402:A:C2'	35:BA:403:U:H5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:2:PRO:O	33:B8:3:LYS:C	2.49	0.50
35:BA:1762:A:O5'	35:BA:1762:A:H8	1.93	0.50
43:BJ:96:UNK:C	43:BJ:98:UNK:N	2.74	0.50
46:BN:85:ILE:HD12	46:BN:85:ILE:N	2.26	0.50
6:AF:87:ARG:HG2	6:AF:87:ARG:HH11	1.77	0.50
56:BX:83:VAL:HG12	56:BX:84:ALA:N	2.26	0.50
52:BT:121:ILE:O	52:BT:124:ASP:HB2	2.11	0.50
33:B8:31:HIS:O	33:B8:32:LEU:C	2.48	0.50
35:BA:637:A:H4'	35:BA:638:G:O5'	2.11	0.50
1:AA:323:U:H2'	1:AA:324:G:O4'	2.11	0.50
1:AA:769:G:C2'	1:AA:770:C:C5'	2.78	0.50
35:BA:1301:A:H2'	35:BA:1302:A:C3'	2.41	0.50
41:BG:16:ARG:HB3	41:BG:17:PRO:HD3	1.92	0.50
41:BG:69:ALA:O	41:BG:90:LEU:HD12	2.11	0.50
1:AA:963:G:N2	10:AJ:55:LYS:CE	2.75	0.50
35:BA:1215:G:HO2'	35:BA:1216:G:H5'	1.66	0.50
35:BA:996:A:O2'	53:BU:92:ARG:HG3	2.11	0.50
1:AA:1152:A:C2	1:AA:1153:C:N3	2.79	0.50
57:BY:81:LYS:HD3	57:BY:97:ARG:O	2.11	0.50
35:BA:71:A:C2	56:BX:31:HIS:CE1	2.97	0.50
36:BB:30:C:H2'	36:BB:31:C:O4'	2.11	0.50
42:BH:9:ILE:HA	42:BH:69:ARG:NH1	2.26	0.50
35:BA:271(R):G:O2'	35:BA:271(S):G:H5'	2.11	0.50
42:BH:11:VAL:HB	42:BH:48:GLY:O	2.12	0.50
40:BF:167:ALA:O	40:BF:169:ASN:N	2.44	0.50
49:BQ:51:ARG:O	49:BQ:55:VAL:HG12	2.11	0.50
24:AY:11:ARG:HA	24:AY:77:HIS:CE1	2.46	0.50
3:AC:64:VAL:HG12	3:AC:66:VAL:CG2	2.41	0.50
2:AB:104:ASN:CG	2:AB:107:THR:HB	2.31	0.50
35:BA:2261:C:O2'	35:BA:2262:U:H5'	2.10	0.50
8:AH:122:ARG:CZ	8:AH:122:ARG:HB2	2.41	0.50
3:AC:95:THR:O	3:AC:97:LYS:N	2.38	0.50
35:BA:1788:C:O2'	35:BA:1789:A:H5'	2.10	0.50
35:BA:1453:U:H5'	50:BR:63:ARG:NE	2.26	0.50
10:AJ:6:ILE:HB	10:AJ:98:ILE:HD12	1.94	0.50
11:AK:124:LYS:HZ3	11:AK:125:PHE:HE1	1.57	0.50
24:AY:463:VAL:O	24:AY:466:LEU:HB2	2.11	0.50
35:BA:2691:C:H5'	35:BA:2691:C:H6	1.76	0.50
1:AA:514:C:H2'	1:AA:515:G:H8	1.75	0.50
1:AA:1444:C:O2'	1:AA:1445:C:H5'	2.11	0.50
9:AI:33:PHE:HD2	9:AI:34:ASN:ND2	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:39:PRO:C	42:BH:41:MET:H	2.14	0.50
42:BH:1:MET:HG3	42:BH:2:SER:N	2.26	0.50
35:BA:109:G:C2	35:BA:110:G:C4	2.99	0.50
1:AA:775:G:H2'	1:AA:776:G:C5'	2.41	0.50
35:BA:139(A):G:H3'	35:BA:140:G:C8	2.47	0.50
1:AA:107:G:OP1	1:AA:325:A:N6	2.45	0.50
35:BA:1773:A:N7	35:BA:1829:A:H1'	2.26	0.50
35:BA:2009:G:N1	35:BA:2010:G:N7	2.59	0.50
35:BA:2606:C:C3'	35:BA:2607:G:H5'	2.41	0.50
35:BA:1446:C:H5	35:BA:1466:G:C2	2.28	0.50
35:BA:1544:A:H2'	35:BA:1545:A:C8	2.46	0.50
27:B2:47:ASN:ND2	35:BA:95:G:H1'	2.25	0.50
35:BA:2305:A:C2	35:BA:2306:C:C1'	2.94	0.50
35:BA:692:C:H2'	35:BA:693:C:H6	1.75	0.50
35:BA:1023:U:C3'	35:BA:1024:G:H5'	2.38	0.50
36:BB:49:C:OP1	51:BS:97:ARG:HG3	2.11	0.50
35:BA:2124:G:H2'	35:BA:2125:G:C5'	2.41	0.50
5:AE:80:ILE:HG13	5:AE:91:LEU:HB2	1.93	0.50
35:BA:1256:G:H21	40:BF:82:ILE:HG22	1.77	0.50
1:AA:1285:A:HO2'	1:AA:1286:A:P	2.32	0.50
1:AA:788:U:HO2'	23:AX:13:A:H2	1.57	0.50
35:BA:2875:C:H4'	52:BT:5:ALA:HB2	1.93	0.50
39:BE:179:GLU:O	39:BE:180:ASN:HB2	2.11	0.50
58:BZ:30:ASN:O	58:BZ:31:ARG:C	2.50	0.50
58:BZ:32:HIS:O	58:BZ:33:LEU:HB3	2.11	0.50
57:BY:60:PHE:C	57:BY:61:ILE:HG13	2.32	0.50
49:BQ:12:GLN:OE1	49:BQ:72:LYS:HG3	2.11	0.50
35:BA:699:A:C2'	35:BA:700:G:C5'	2.86	0.50
35:BA:527:C:O2	35:BA:527:C:H5'	2.12	0.50
49:BQ:135:ASP:N	49:BQ:137:TYR:CD2	2.79	0.50
22:AV:9:A:H62	22:AV:23:A:H2	1.60	0.50
38:BD:146:GLU:HG2	38:BD:152:GLY:C	2.31	0.50
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.44	0.50
13:AM:40:ASN:HB3	13:AM:43:THR:HG23	1.93	0.50
10:AJ:38:ILE:CG1	10:AJ:71:LEU:HB3	2.41	0.50
24:AY:616:TYR:CE2	24:AY:664:GLN:HG3	2.45	0.50
11:AK:58:PRO:O	11:AK:61:ALA:HB3	2.11	0.50
30:B5:40:LYS:HZ3	30:B5:46:CYS:HB3	1.72	0.50
35:BA:1784:A:H4'	35:BA:1785:A:H5''	1.93	0.50
1:AA:1392:G:H21	1:AA:1502:A:H8	1.57	0.50
35:BA:1025:G:C4	35:BA:1135:C:C1'	2.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:139:LEU:CD2	41:BG:139:LEU:H	2.25	0.50
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.24	0.50
51:BS:58:LEU:HD21	51:BS:68:GLN:CB	2.41	0.50
1:AA:1049:U:H2'	14:AN:2:ALA:N	2.25	0.50
37:BC:218:THR:HG22	37:BC:219:MET:SD	2.50	0.50
12:AL:27:LEU:O	12:AL:28:LYS:C	2.49	0.50
25:B0:11:ARG:HD3	25:B0:12:ASN:N	2.17	0.50
25:B0:11:ARG:O	25:B0:14:ARG:NH1	2.44	0.50
24:AY:141:LYS:HG2	24:AY:142:THR:N	2.27	0.50
35:BA:2040:C:H2'	35:BA:2041:U:C6	2.46	0.50
26:B1:75:GLU:C	26:B1:78:LYS:HD2	2.32	0.50
57:BY:42:VAL:CG2	57:BY:67:LEU:HD13	2.33	0.50
10:AJ:66:ARG:HH11	10:AJ:66:ARG:CB	2.25	0.50
26:B1:26:ARG:HG3	26:B1:27:GLU:N	2.21	0.50
35:BA:1503:U:H2'	35:BA:1504:C:C5	2.46	0.50
14:AN:58:LYS:HZ2	14:AN:58:LYS:HB3	1.74	0.50
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.45	0.50
3:AC:108:ASN:HB3	3:AC:111:LEU:HB2	1.93	0.50
35:BA:2397:G:C2'	35:BA:2398:U:H5'	2.41	0.50
26:B1:81:LYS:HE3	35:BA:271(H):G:H5''	1.92	0.50
35:BA:491:G:O2'	35:BA:492:A:H5'	2.11	0.50
35:BA:1109:C:H2'	35:BA:1110:G:O4'	2.11	0.50
49:BQ:65:PHE:N	49:BQ:65:PHE:HD1	2.08	0.50
35:BA:565:C:H4'	35:BA:1253:A:N6	2.26	0.50
35:BA:298:G:H5'	35:BA:299:A:OP1	2.11	0.50
16:AP:52:ASP:OD1	16:AP:54:GLU:HB2	2.12	0.50
1:AA:175:C:H2'	1:AA:176:C:H6	1.77	0.50
35:BA:2475:C:H5'	35:BA:2476:A:OP1	2.11	0.50
24:AY:211:GLU:O	24:AY:215:LYS:HG3	2.11	0.50
35:BA:252:G:P	48:BP:50:ARG:NH1	2.78	0.50
35:BA:860:U:HO2'	35:BA:861:A:H5'	1.74	0.50
1:AA:695:A:H2'	1:AA:696:A:C8	2.46	0.50
1:AA:360:A:OP1	24:AY:430:ARG:NH2	2.45	0.50
1:AA:1306:A:N6	1:AA:1331:G:C1'	2.73	0.50
41:BG:104:GLU:HA	41:BG:107:LEU:HB3	1.92	0.50
41:BG:137:GLU:HA	41:BG:155:MET:H	1.76	0.50
1:AA:346:G:O2'	1:AA:347:G:P	2.69	0.50
35:BA:2206:G:C3'	35:BA:2206:G:N3	2.72	0.50
35:BA:1103:A:C5'	35:BA:1104:C:OP1	2.46	0.50
39:BE:55:ASN:O	39:BE:56:PRO:C	2.50	0.50
1:AA:188:C:C4'	20:AT:89:ARG:NH1	2.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.56	0.50
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.12	0.50
50:BR:4:LEU:C	50:BR:6:SER:H	2.14	0.50
42:BH:9:ILE:HG22	42:BH:10:PRO:N	2.25	0.50
1:AA:563:A:OP2	1:AA:564:C:OP1	2.30	0.50
24:AY:100:VAL:HG23	24:AY:329:ARG:CB	2.40	0.50
24:AY:628:ARG:NH1	24:AY:628:ARG:HG2	2.24	0.50
22:AV:43:C:O2	22:AV:43:C:C5'	2.59	0.50
13:AM:116:THR:O	13:AM:117:VAL:CB	2.60	0.50
1:AA:1041:A:H2'	1:AA:1042:G:C8	2.46	0.50
35:BA:272(B):G:H2'	35:BA:272(C):G:H8	1.76	0.50
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.46	0.50
3:AC:6:HIS:ND1	3:AC:8:ILE:HB	2.26	0.50
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.47	0.50
38:BD:45:ASN:CG	38:BD:46:GLN:H	2.14	0.50
24:AY:146:LEU:HD23	24:AY:146:LEU:C	2.32	0.50
24:AY:457:LEU:O	24:AY:457:LEU:HD23	2.12	0.50
1:AA:260:G:H2'	1:AA:261:U:C6	2.47	0.50
2:AB:148:TYR:O	2:AB:149:LEU:HD13	2.12	0.50
48:BP:95:VAL:HA	48:BP:99:LEU:HD23	1.94	0.50
37:BC:117:THR:CG2	37:BC:119:ASP:OD1	2.60	0.50
1:AA:1372:U:H2'	1:AA:1373:G:H8	1.76	0.50
1:AA:771:G:O6	1:AA:772:U:O4	2.30	0.50
1:AA:507:C:C6	1:AA:508:C:C6	2.99	0.50
1:AA:559:A:O4'	1:AA:561:U:H2'	2.10	0.50
27:B2:45:SER:O	27:B2:47:ASN:OD1	2.30	0.50
13:AM:9:ILE:O	13:AM:10:PRO:O	2.30	0.50
13:AM:4:ILE:CG2	13:AM:5:ALA:H	2.08	0.50
29:B4:16:CYS:CA	29:B4:33:VAL:HG11	2.41	0.50
29:B4:5:ILE:O	29:B4:6:HIS:O	2.30	0.50
41:BG:24:GLY:O	41:BG:25:TYR:CB	2.58	0.50
41:BG:5:VAL:HB	41:BG:8:LYS:CB	2.41	0.50
41:BG:7:LEU:O	41:BG:8:LYS:C	2.50	0.50
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.47	0.50
35:BA:1890:A:H3'	35:BA:1891:G:H5'	1.91	0.50
42:BH:30:LYS:CE	42:BH:81:GLU:HG3	2.17	0.50
35:BA:2189:U:C3'	35:BA:2190:G:H5''	2.40	0.50
35:BA:1806:C:H2'	35:BA:1807:G:C5'	2.41	0.50
35:BA:1036:G:C2	35:BA:1120:G:C5	3.00	0.50
36:BB:22:U:H2'	36:BB:23:G:C8	2.47	0.50
54:BV:47:VAL:C	54:BV:49:THR:N	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1087:G:N2	35:BA:1103:A:H61	2.03	0.50
35:BA:1054:A:C6	35:BA:1106:G:C6	3.00	0.50
39:BE:77:ILE:HG22	39:BE:78:LEU:HD12	1.93	0.50
26:B1:57:GLU:CG	26:B1:58:ILE:H	2.18	0.50
49:BQ:141:GLN:HE21	58:BZ:72:ARG:HA	1.77	0.50
24:AY:128:TYR:HD1	24:AY:128:TYR:N	2.10	0.50
12:AL:18:VAL:CG2	12:AL:19:ARG:N	2.70	0.50
28:B3:39:ASP:CG	28:B3:44:ARG:HH21	2.13	0.50
35:BA:1411:C:H2'	35:BA:1412:A:C8	2.47	0.50
3:AC:40:ARG:NH1	3:AC:40:ARG:HG3	2.27	0.50
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.94	0.50
47:BO:53:LYS:O	47:BO:56:ASP:HB2	2.12	0.50
2:AB:71:VAL:HG11	2:AB:170:GLU:HG2	1.93	0.50
14:AN:12:ARG:NH1	14:AN:14:PRO:HG2	2.26	0.50
48:BP:71:VAL:HG13	48:BP:72:PRO:CD	2.41	0.50
24:AY:339:SER:O	24:AY:351:ARG:HD2	2.11	0.50
35:BA:1914:C:H5''	35:BA:1915:U:C5	2.46	0.50
1:AA:614:A:H2'	1:AA:615:C:H6	1.76	0.50
35:BA:2182:G:H2'	35:BA:2183:C:C6	2.46	0.50
42:BH:124:GLU:HG3	42:BH:132:ARG:HG3	1.93	0.50
36:BB:101:G:H2'	36:BB:102:A:O4'	2.12	0.50
4:AD:12:CYS:SG	4:AD:19:LEU:HB2	2.52	0.50
2:AB:115:LEU:HD22	2:AB:153:ARG:NH1	2.26	0.50
35:BA:958:U:C2'	35:BA:959:A:OP1	2.60	0.50
1:AA:437:U:O2'	1:AA:438:G:H5'	2.11	0.50
35:BA:654:A:C8	35:BA:654(V):A:H4'	2.47	0.50
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.45	0.50
35:BA:1902:C:O2'	38:BD:244:ARG:HB3	2.06	0.50
35:BA:1464:C:H1'	35:BA:1528:A:C8	2.47	0.50
2:AB:16:HIS:CD2	2:AB:210:SER:OG	2.65	0.50
27:B2:2:LYS:HA	27:B2:5:GLU:HG2	1.94	0.50
19:AS:67:VAL:CG1	29:B4:52:THR:HG23	2.42	0.50
29:B4:14:ILE:O	29:B4:15:ILE:O	2.30	0.50
29:B4:5:ILE:O	29:B4:6:HIS:C	2.50	0.50
41:BG:38:VAL:HG13	41:BG:93:THR:CA	2.41	0.50
9:AI:53:VAL:HG13	9:AI:95:LYS:CE	2.40	0.50
35:BA:2401:U:C5	35:BA:2402:C:N4	2.79	0.50
1:AA:1499:A:OP1	1:AA:1499:A:H3'	2.12	0.50
35:BA:2893:G:H5'	35:BA:2894:G:C5'	2.32	0.50
40:BF:203:GLN:C	40:BF:205:ARG:H	2.15	0.50
24:AY:20:HIS:CG	24:AY:115:GLU:HB2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:20:HIS:CD2	24:AY:21:ILE:N	2.80	0.50
18:AR:32:ARG:CA	18:AR:69:THR:HG21	2.32	0.50
46:BN:57:ALA:O	46:BN:58:ASP:C	2.48	0.50
36:BB:16:G:O2'	36:BB:17:C:H6	1.92	0.50
54:BV:82:ARG:HD2	54:BV:82:ARG:N	2.26	0.50
28:B3:35:ARG:HD2	28:B3:37:LEU:HD21	1.93	0.50
39:BE:33:VAL:HG12	39:BE:89:ASP:O	2.12	0.50
3:AC:130:VAL:O	3:AC:131:ARG:HB2	2.11	0.50
35:BA:2524:G:H2'	35:BA:2525:G:O4'	2.11	0.50
36:BB:66:A:O2'	36:BB:67:G:O5'	2.30	0.50
42:BH:37:VAL:HG12	42:BH:38:SER:N	2.27	0.50
15:AO:54:ARG:HG2	15:AO:58:MET:CE	2.41	0.50
37:BC:108:TRP:O	37:BC:110:ASP:N	2.45	0.50
41:BG:34:LEU:N	41:BG:34:LEU:HD12	2.26	0.50
2:AB:105:PHE:O	2:AB:109:SER:N	2.42	0.50
35:BA:1669:A:O3'	35:BA:2549:G:H5'	2.12	0.50
25:B0:52:GLY:O	25:B0:60:PHE:CD1	2.64	0.50
19:AS:58:VAL:O	19:AS:58:VAL:HG23	2.10	0.50
5:AE:40:ARG:HG2	5:AE:40:ARG:HH11	1.76	0.50
35:BA:1274:A:C2	35:BA:1645:G:O4'	2.65	0.50
30:B5:40:LYS:CE	30:B5:46:CYS:CB	2.80	0.50
27:B2:70:GLN:O	27:B2:71:ASN:C	2.50	0.50
48:BP:105:LEU:N	48:BP:105:LEU:HD12	2.26	0.50
35:BA:1416:G:O2'	35:BA:1417:C:OP1	2.30	0.50
35:BA:860:U:C2'	35:BA:861:A:C5'	2.90	0.50
1:AA:688:G:N1	1:AA:700:G:C6	2.80	0.50
35:BA:2009:G:C6	35:BA:2010:G:N7	2.79	0.50
1:AA:1399:C:H1'	1:AA:1400:C:OP2	2.12	0.50
29:B4:36:CYS:O	29:B4:38:LYS:HE2	2.11	0.50
41:BG:133:LEU:HD13	41:BG:134:GLY:N	2.26	0.50
35:BA:2401:U:O2'	35:BA:2402:C:OP1	2.30	0.50
51:BS:88:ASP:O	51:BS:89:ARG:HB3	2.11	0.50
1:AA:962:C:C2'	1:AA:963:G:O5'	2.60	0.50
53:BU:59:ARG:HH11	53:BU:59:ARG:CG	2.25	0.50
53:BU:92:ARG:NH1	54:BV:11:GLN:O	2.44	0.50
5:AE:80:ILE:HD12	5:AE:138:ALA:CB	2.28	0.50
35:BA:2620:C:P	39:BE:153:GLY:H	2.34	0.50
38:BD:21:PHE:C	38:BD:24:ILE:HG22	2.31	0.50
52:BT:11:GLU:OE1	52:BT:11:GLU:N	2.44	0.50
51:BS:13:ARG:CG	51:BS:14:VAL:N	2.74	0.50
35:BA:2035:G:H4'	35:BA:2036:C:OP2	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1495:A:N3	35:BA:1496:A:C2	2.80	0.50
35:BA:1653:G:O4'	35:BA:1654:A:OP1	2.30	0.50
1:AA:563:A:O5'	1:AA:564:C:OP1	2.30	0.50
2:AB:157:ARG:O	2:AB:158:LEU:O	2.30	0.50
3:AC:129:ALA:CB	3:AC:133:ALA:HB2	2.42	0.50
43:BJ:72:UNK:C	43:BJ:74:UNK:N	2.75	0.50
35:BA:2145:C:C5'	35:BA:2146:C:H5	2.25	0.50
57:BY:2:ARG:O	57:BY:3:VAL:HB	2.11	0.50
36:BB:15:A:H1'	36:BB:110:G:C5	2.47	0.50
37:BC:191:ARG:O	37:BC:194:ILE:HG22	2.12	0.50
35:BA:271(D):G:O2'	35:BA:271(E):U:H5'	2.12	0.50
39:BE:103:ASP:OD2	39:BE:201:THR:HA	2.11	0.50
58:BZ:60:GLU:O	58:BZ:61:LEU:CG	2.60	0.50
35:BA:2461:C:H2'	35:BA:2462:U:H6	1.75	0.50
8:AH:121:ASP:HB2	8:AH:125:ARG:NH2	2.26	0.50
35:BA:2320:A:H8	35:BA:2321:G:O6	1.95	0.50
35:BA:443:A:H1'	35:BA:1201:C:O4'	2.12	0.50
1:AA:149:A:O2'	1:AA:150:C:H5'	2.11	0.50
50:BR:53:HIS:HD2	50:BR:94:TYR:OH	1.95	0.50
3:AC:94:LEU:C	3:AC:94:LEU:HD12	2.32	0.50
1:AA:272:C:O2'	1:AA:273:A:H5'	2.12	0.50
47:BO:115:VAL:HG13	47:BO:121:VAL:HG21	1.93	0.50
1:AA:311:C:HO2'	1:AA:312:C:H5''	1.72	0.50
48:BP:115:LEU:O	48:BP:116:GLY:O	2.30	0.50
35:BA:833:U:H4'	48:BP:51:PHE:C	2.32	0.50
37:BC:144:GLY:C	37:BC:161:ARG:NH2	2.65	0.50
35:BA:956:G:H2'	35:BA:957:A:H2'	1.93	0.50
1:AA:774:G:H2'	1:AA:775:G:C8	2.40	0.50
35:BA:1424:G:H2'	35:BA:1425:G:C8	2.46	0.50
35:BA:1425:G:H8	35:BA:1425:G:O5'	1.95	0.50
35:BA:1301:A:N7	35:BA:1303:G:C8	2.80	0.50
27:B2:35:LEU:C	27:B2:37:PHE:N	2.64	0.50
19:AS:19:VAL:CG1	19:AS:44:MET:HG2	2.41	0.50
29:B4:22:ILE:HG21	41:BG:105:LYS:HB3	1.93	0.50
41:BG:82:LEU:HD22	41:BG:88:ILE:CD1	2.41	0.50
35:BA:740:U:H2'	35:BA:741:G:H8	1.75	0.50
31:B6:15:GLU:C	31:B6:17:LYS:H	2.13	0.50
9:AI:52:ALA:HB3	9:AI:95:LYS:HZ2	1.77	0.50
10:AJ:43:ARG:NH1	10:AJ:43:ARG:HG3	2.23	0.50
48:BP:30:THR:CG2	48:BP:31:ALA:N	2.74	0.50
48:BP:39:LYS:HD2	48:BP:40:SER:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1890:A:O5'	35:BA:1890:A:H8	1.95	0.50
1:AA:1047:G:O2'	1:AA:1048:G:C5'	2.59	0.50
35:BA:2126:A:O2'	35:BA:2127:G:OP1	2.30	0.50
35:BA:2173:A:H5'	35:BA:2174:C:OP1	2.12	0.50
12:AL:27:LEU:CD1	12:AL:28:LYS:H	2.11	0.50
35:BA:331:A:O2'	35:BA:332:A:O5'	2.30	0.50
36:BB:73:A:C4	36:BB:105:A:C2	3.00	0.50
48:BP:16:ARG:O	48:BP:18:ARG:N	2.45	0.50
46:BN:128:HIS:C	46:BN:128:HIS:CD2	2.84	0.50
38:BD:133:LEU:HA	38:BD:136:ILE:HD13	1.93	0.50
2:AB:76:GLN:H	2:AB:76:GLN:NE2	2.10	0.50
2:AB:76:GLN:O	2:AB:211:ILE:HD12	2.11	0.50
37:BC:57:GLN:HB2	37:BC:202:PRO:HG2	1.93	0.50
35:BA:265:A:C1'	35:BA:266:G:O4'	2.59	0.50
35:BA:74:A:H5''	35:BA:75:G:O4'	2.12	0.50
4:AD:194:LEU:HD22	4:AD:194:LEU:N	2.27	0.50
3:AC:12:LEU:O	3:AC:16:ARG:O	2.30	0.50
3:AC:35:GLU:OE1	3:AC:95:THR:HG23	2.12	0.50
1:AA:833:U:H2'	1:AA:834:C:C6	2.46	0.50
35:BA:271(F):C:H2'	35:BA:271(G):C:C6	2.47	0.50
7:AG:86:GLN:O	7:AG:87:VAL:HG12	2.12	0.50
1:AA:1132:C:O2'	1:AA:1133:G:H5'	2.12	0.50
35:BA:2386:C:H2'	35:BA:2387:U:C6	2.47	0.50
2:AB:90:MET:O	2:AB:91:PRO:O	2.30	0.49
35:BA:2554:U:C4	35:BA:2555:U:O4	2.65	0.49
25:B0:36:ILE:HD11	35:BA:2355:C:H4'	1.94	0.49
48:BP:47:ASP:OD2	48:BP:49:ARG:N	2.45	0.49
37:BC:118:PRO:C	37:BC:120:VAL:N	2.66	0.49
37:BC:118:PRO:O	37:BC:120:VAL:N	2.45	0.49
31:B6:11:LEU:CD1	31:B6:11:LEU:N	2.75	0.49
31:B6:32:ASN:O	31:B6:33:LYS:CG	2.58	0.49
7:AG:50:ILE:HD13	7:AG:58:PRO:HA	1.93	0.49
35:BA:1423:G:H2'	35:BA:1424:G:H8	1.76	0.49
41:BG:106:LEU:HG	41:BG:110:ALA:HB3	1.94	0.49
41:BG:110:ALA:HB1	41:BG:142:PRO:HB3	1.92	0.49
41:BG:62:LEU:HD12	41:BG:62:LEU:N	2.26	0.49
41:BG:66:GLN:NE2	41:BG:94:LEU:CG	2.72	0.49
1:AA:1283:G:O2'	1:AA:1284:C:OP2	2.30	0.49
51:BS:99:LYS:NZ	51:BS:99:LYS:CB	2.75	0.49
35:BA:1799:G:C8	38:BD:181:GLU:OE2	2.56	0.49
42:BH:158:HIS:CA	42:BH:170:ARG:HD2	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:81:PRO:O	40:BF:82:ILE:O	2.30	0.49
58:BZ:128:VAL:CG1	58:BZ:133:ILE:HD13	2.42	0.49
35:BA:896:A:O2'	58:BZ:176:PRO:HG2	2.12	0.49
4:AD:13:ARG:HD2	4:AD:36:ARG:O	2.12	0.49
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.94	0.49
35:BA:1062:G:N2	35:BA:1076:C:H42	2.09	0.49
24:AY:488:THR:HG1	24:AY:598:ASP:HB3	1.77	0.49
24:AY:490:PRO:HG3	24:AY:515:GLU:HB2	1.94	0.49
22:AV:45:U:O2	22:AV:45:U:O5'	2.30	0.49
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.26	0.49
50:BR:50:HIS:CE1	50:BR:54:LEU:HD11	2.47	0.49
7:AG:102:ARG:HG3	7:AG:102:ARG:HH11	1.76	0.49
35:BA:1914:C:H3'	35:BA:1915:U:H6	1.76	0.49
56:BX:28:PHE:CZ	56:BX:92:LEU:HD11	2.47	0.49
7:AG:94:ARG:HG3	7:AG:94:ARG:NH1	2.26	0.49
35:BA:1917:U:C2'	35:BA:1918:A:H5'	2.42	0.49
35:BA:2593:U:H2'	35:BA:2594:C:C6	2.46	0.49
35:BA:773:U:H5'	38:BD:47:GLY:HA3	1.94	0.49
55:BW:68:ARG:HB3	55:BW:110:LYS:H	1.77	0.49
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.11	0.49
29:B4:23:GLU:O	29:B4:24:THR:O	2.30	0.49
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.94	0.49
48:BP:146:VAL:O	48:BP:148:LEU:HG	2.13	0.49
1:AA:197:A:O2'	1:AA:198:G:O5'	2.30	0.49
1:AA:491:G:O2'	1:AA:492:G:C5'	2.60	0.49
1:AA:940:C:H2'	1:AA:941:G:H8	1.78	0.49
25:B0:26:TYR:O	25:B0:29:GLN:HG3	2.12	0.49
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.94	0.49
35:BA:1228:G:N2	35:BA:1229:G:C1'	2.70	0.49
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.48	0.49
19:AS:17:GLU:O	19:AS:18:LYS:C	2.50	0.49
41:BG:87:PRO:HG2	41:BG:88:ILE:N	2.22	0.49
33:B8:4:MET:HE2	33:B8:61:LEU:HB3	1.95	0.49
35:BA:1021:A:H61	35:BA:1142(A):A:H61	1.61	0.49
1:AA:961:U:C3'	1:AA:961:U:OP1	2.59	0.49
1:AA:962:C:H2'	1:AA:963:G:C8	2.46	0.49
35:BA:1799:G:P	35:BA:1799:G:C3'	3.00	0.49
35:BA:1009:A:C4'	53:BU:59:ARG:HD3	2.42	0.49
1:AA:56:U:H2'	1:AA:57:G:H8	1.75	0.49
26:B1:83:GLU:OE1	26:B1:84:GLY:N	2.44	0.49
35:BA:331:A:C2'	35:BA:332:A:OP2	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:29:ARG:CB	19:AS:48:THR:HB	2.32	0.49
49:BQ:140:ALA:O	58:BZ:72:ARG:O	2.29	0.49
24:AY:128:TYR:CD1	24:AY:128:TYR:N	2.80	0.49
35:BA:2115:G:H2'	35:BA:2117:A:H62	1.77	0.49
35:BA:2810:A:O2'	39:BE:61:ARG:NH1	2.45	0.49
25:B0:19:LYS:HZ3	25:B0:41:ARG:HH22	1.45	0.49
37:BC:54:ARG:HD2	37:BC:55:SER:H	1.76	0.49
38:BD:70:TRP:CZ3	38:BD:146:GLU:OE2	2.65	0.49
4:AD:121:VAL:N	4:AD:126:ILE:HD13	2.26	0.49
24:AY:431:LEU:CD1	24:AY:465:ARG:HH12	2.24	0.49
37:BC:183:PRO:C	37:BC:185:LYS:H	2.16	0.49
35:BA:2524:G:C8	35:BA:2524:G:H5'	2.44	0.49
49:BQ:21:THR:HG23	49:BQ:101:ARG:HB2	1.94	0.49
12:AL:93:LEU:HB3	12:AL:96:VAL:CG2	2.40	0.49
39:BE:197:ILE:HD11	39:BE:199:ARG:CZ	2.42	0.49
2:AB:25:ASN:O	2:AB:28:PHE:N	2.46	0.49
25:B0:56:ASP:C	25:B0:58:THR:H	2.15	0.49
1:AA:512:U:H2'	1:AA:513:C:H6	1.75	0.49
24:AY:348:ARG:HG2	24:AY:382:GLU:HG3	1.95	0.49
5:AE:6:PHE:HB3	5:AE:34:VAL:HG22	1.94	0.49
46:BN:15:LEU:HD12	46:BN:136:GLU:HG3	1.94	0.49
40:BF:65:TRP:CZ3	40:BF:72:ARG:HB3	2.47	0.49
21:AU:3:LYS:HD3	21:AU:14:TRP:CD1	2.47	0.49
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.12	0.49
30:B5:28:PRO:HD2	55:BW:35:ILE:HD12	1.94	0.49
14:AN:44:LEU:O	14:AN:44:LEU:HD12	2.11	0.49
35:BA:2842:G:O2'	35:BA:2843:G:H5'	2.12	0.49
18:AR:68:LYS:O	18:AR:72:ARG:HG3	2.13	0.49
1:AA:314:C:O2'	1:AA:315:A:C5'	2.54	0.49
48:BP:96:THR:HG22	48:BP:126:VAL:CB	2.41	0.49
35:BA:967:C:C3'	35:BA:968:G:H5'	2.33	0.49
35:BA:2361:A:O2'	35:BA:2362:G:H5'	2.12	0.49
1:AA:199:G:O2'	1:AA:200:G:O5'	2.30	0.49
1:AA:200:G:H8	1:AA:200:G:O5'	1.95	0.49
1:AA:35:G:HO2'	1:AA:36:C:H5'	1.76	0.49
25:B0:77:ARG:NH2	35:BA:857:C:H5'	2.26	0.49
1:AA:648:A:H2'	1:AA:649:G:C8	2.47	0.49
1:AA:60:A:O2'	1:AA:61:G:OP2	2.30	0.49
35:BA:1301:A:O2'	35:BA:1302:A:O5'	2.31	0.49
2:AB:18:GLY:HA2	2:AB:41:ILE:HD12	1.93	0.49
9:AI:95:LYS:C	9:AI:98:PRO:HD2	2.32	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:83:TYR:O	42:BH:84:SER:HB3	2.12	0.49
35:BA:466:A:O4'	35:BA:683:C:H4'	2.12	0.49
57:BY:68:HIS:ND1	57:BY:70:SER:HB3	2.27	0.49
1:AA:1267:C:O2'	1:AA:1268:A:O4'	2.29	0.49
1:AA:868:C:H2'	1:AA:869:G:C5'	2.42	0.49
38:BD:26:LYS:HE2	38:BD:26:LYS:HA	1.93	0.49
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD13	1.94	0.49
24:AY:402:ILE:O	24:AY:403:GLU:HB3	2.11	0.49
55:BW:71:VAL:CG2	55:BW:71:VAL:O	2.60	0.49
42:BH:53:GLU:HG3	42:BH:54:ARG:N	2.27	0.49
22:AV:46:G:H3'	22:AV:47:U:H5'	1.94	0.49
35:BA:34:C:O5'	35:BA:34:C:C6	2.63	0.49
57:BY:55:TYR:N	57:BY:56:PRO:CD	2.74	0.49
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.77	0.49
35:BA:491:G:H2'	35:BA:492:A:C8	2.48	0.49
24:AY:192:LEU:O	24:AY:192:LEU:HD13	2.12	0.49
35:BA:1049:C:H2'	35:BA:1050:A:H8	1.77	0.49
7:AG:18:TYR:HB3	7:AG:59:LEU:HD12	1.93	0.49
35:BA:2321:G:N3	35:BA:2321:G:H2'	2.27	0.49
8:AH:29:SER:HB3	8:AH:32:LYS:CG	2.42	0.49
35:BA:2074:U:H2'	35:BA:2075:U:C6	2.47	0.49
36:BB:75:G:H21	58:BZ:85:HIS:CE1	2.30	0.49
1:AA:223:U:H2'	1:AA:224:C:C6	2.47	0.49
35:BA:776:G:H4'	35:BA:777:A:O5'	2.12	0.49
35:BA:2095:C:O2'	35:BA:2096:U:H5'	2.12	0.49
1:AA:818:G:O2'	1:AA:819:A:H5'	2.11	0.49
37:BC:94:TYR:O	37:BC:95:VAL:O	2.30	0.49
35:BA:1278:A:O2'	35:BA:1279:G:H5'	2.11	0.49
24:AY:72:CYS:SG	24:AY:79:ILE:HB	2.52	0.49
35:BA:720:C:H2'	35:BA:721:C:H6	1.77	0.49
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.42	0.49
1:AA:549:C:C2'	1:AA:550:G:O5'	2.60	0.49
35:BA:1721:G:C6	35:BA:1739:U:H5'	2.47	0.49
35:BA:2203:U:O3'	35:BA:2205:C:OP2	2.30	0.49
35:BA:259:G:C2'	35:BA:260:G:C5'	2.90	0.49
40:BF:156:LEU:HD12	40:BF:193:VAL:O	2.11	0.49
1:AA:1330:U:H5'	1:AA:1331:G:OP2	2.12	0.49
29:B4:17:GLY:N	29:B4:33:VAL:HG11	2.26	0.49
31:B6:40:CYS:SG	31:B6:45:LYS:HB2	2.53	0.49
24:AY:19:ALA:N	24:AY:25:LYS:HD3	2.26	0.49
51:BS:57:LYS:C	51:BS:57:LYS:HD2	2.33	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:983:A:O2'	1:AA:1050:G:OP2	2.31	0.49
42:BH:3:ARG:HG3	42:BH:3:ARG:HH11	1.75	0.49
46:BN:2:LYS:O	46:BN:4:TYR:CE1	2.65	0.49
58:BZ:114:GLY:O	58:BZ:146:ILE:HG22	2.12	0.49
49:BQ:141:GLN:HG2	58:BZ:72:ARG:HD3	1.94	0.49
40:BF:22:ALA:O	40:BF:26:ALA:HB2	2.12	0.49
9:AI:117:HIS:C	9:AI:118:LYS:HG3	2.33	0.49
57:BY:44:ILE:CD1	57:BY:65:ALA:HB2	2.42	0.49
35:BA:2580:U:C5'	39:BE:131:ALA:N	2.75	0.49
46:BN:19:GLU:O	46:BN:59:LYS:O	2.30	0.49
24:AY:14:ASN:HD21	24:AY:80:ASN:ND2	2.06	0.49
35:BA:2464:C:O2'	35:BA:2465:C:P	2.70	0.49
2:AB:212:GLN:CG	2:AB:235:SER:HB2	2.42	0.49
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.77	0.49
38:BD:241:PRO:O	38:BD:242:ARG:CB	2.58	0.49
35:BA:1925:C:C3'	35:BA:1926:U:C5'	2.90	0.49
38:BD:3:VAL:CG1	38:BD:17:THR:HB	2.42	0.49
16:AP:60:LEU:HD21	16:AP:66:PRO:HG3	1.95	0.49
35:BA:184:C:H2'	35:BA:185:U:H6	1.77	0.49
33:B8:54:GLU:HG2	33:B8:57:ARG:HH21	1.77	0.49
1:AA:1395:C:C2'	1:AA:1396:A:H5'	2.43	0.49
46:BN:119:ARG:NH1	46:BN:119:ARG:HG3	2.27	0.49
39:BE:38:THR:CG2	39:BE:40:GLU:OE1	2.60	0.49
44:BK:117:UNK:C	44:BK:119:UNK:N	2.73	0.49
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.94	0.49
1:AA:399:G:H2'	1:AA:400:C:C6	2.48	0.49
52:BT:27:THR:CG2	52:BT:28:VAL:H	2.03	0.49
35:BA:246:C:O5'	35:BA:246:C:H6	1.94	0.49
1:AA:493:G:H2'	1:AA:494:U:H5	1.76	0.49
31:B6:33:LYS:HA	31:B6:33:LYS:CE	2.38	0.49
35:BA:1819:A:O4'	35:BA:1820:U:OP1	2.30	0.49
35:BA:2679:A:O2'	35:BA:2680:C:H5'	2.13	0.49
27:B2:42:GLY:O	27:B2:43:GLN:O	2.31	0.49
1:AA:1504:G:O4'	1:AA:1505:G:OP2	2.30	0.49
19:AS:16:LEU:O	19:AS:19:VAL:HB	2.13	0.49
29:B4:53:GLU:CD	29:B4:54:GLY:H	2.13	0.49
41:BG:20:ILE:O	41:BG:21:ARG:CB	2.59	0.49
41:BG:77:ILE:CG2	41:BG:78:SER:N	2.75	0.49
35:BA:2311:A:C2	41:BG:80:PHE:HD2	2.29	0.49
41:BG:66:GLN:NE2	41:BG:94:LEU:CD2	2.75	0.49
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1142:U:C2'	35:BA:1142(A):A:OP1	2.61	0.49
15:AO:82:ILE:HD11	15:AO:87:ILE:C	2.33	0.49
40:BF:10:PRO:CA	40:BF:127:GLU:HG2	2.41	0.49
35:BA:1067:A:H3'	35:BA:1068:G:H5''	1.94	0.49
1:AA:946:A:C6	1:AA:947:G:O6	2.65	0.49
35:BA:1420:U:O4'	35:BA:1420:U:OP1	2.30	0.49
58:BZ:17:ALA:HA	58:BZ:20:ARG:HD3	1.95	0.49
1:AA:838:G:C2'	1:AA:839:U:H5''	2.40	0.49
58:BZ:19:ARG:C	58:BZ:21:ALA:N	2.65	0.49
24:AY:285:ASP:O	24:AY:286:ILE:HD12	2.13	0.49
54:BV:37:VAL:HG23	54:BV:37:VAL:O	2.13	0.49
35:BA:363(F):A:O2'	35:BA:364:C:OP2	2.28	0.49
1:AA:1452:C:H5'	1:AA:1457:G:N7	2.27	0.49
35:BA:643:A:O2'	35:BA:644:A:H5'	2.12	0.49
1:AA:1163:C:H2'	1:AA:1164:G:C8	2.46	0.49
37:BC:3:LYS:O	37:BC:3:LYS:HG2	2.13	0.49
42:BH:124:GLU:HB2	42:BH:132:ARG:CG	2.42	0.49
24:AY:510:VAL:CG1	24:AY:511:LYS:N	2.76	0.49
47:BO:111:PHE:HB3	47:BO:114:ILE:HD13	1.95	0.49
30:B5:46:CYS:SG	30:B5:48:GLU:HG2	2.53	0.49
48:BP:50:ARG:O	48:BP:52:GLU:CB	2.52	0.49
1:AA:197:A:O2'	1:AA:198:G:C8	2.65	0.49
1:AA:60:A:O2'	1:AA:61:G:O4'	2.30	0.49
35:BA:1819:A:H5''	38:BD:158:ALA:CB	2.37	0.49
35:BA:1462:C:H2'	35:BA:1463:C:H6	1.77	0.49
2:AB:16:HIS:ND1	2:AB:210:SER:OG	2.45	0.49
1:AA:26:A:N6	1:AA:558:G:H1'	2.28	0.49
27:B2:2:LYS:CE	27:B2:52:ASP:OD1	2.61	0.49
1:AA:1503:A:H3'	1:AA:1504:G:H5'	1.94	0.49
41:BG:144:ILE:O	41:BG:145:THR:C	2.51	0.49
35:BA:16:G:C2'	35:BA:17:G:C5'	2.89	0.49
1:AA:1279:A:C2'	1:AA:1282:C:N4	2.76	0.49
35:BA:2403:C:H6	35:BA:2403:C:O5'	1.95	0.49
1:AA:81:U:H2'	1:AA:82:U:H5''	1.94	0.49
1:AA:519:C:C2'	1:AA:520:A:H5'	2.43	0.49
35:BA:1408:C:H42	35:BA:1594:G:H1	1.59	0.49
1:AA:1385:G:N2	1:AA:1386:G:C4	2.81	0.49
35:BA:53:A:O2'	35:BA:54:G:H5'	2.11	0.49
57:BY:13:VAL:CG2	57:BY:72:VAL:HB	2.43	0.49
35:BA:2468:G:N2	35:BA:2481:G:O2'	2.46	0.49
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.16	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:79:ARG:C	58:BZ:81:ARG:N	2.65	0.49
33:B8:23:VAL:HG11	33:B8:46:ARG:HD3	1.94	0.49
12:AL:41:ARG:HG2	12:AL:42:THR:N	2.23	0.49
24:AY:688:ILE:HD12	24:AY:688:ILE:N	2.28	0.49
10:AJ:8:LEU:HD12	10:AJ:8:LEU:N	2.27	0.49
35:BA:2023:G:H4'	35:BA:2617:C:O3'	2.13	0.49
38:BD:145:VAL:HG12	38:BD:146:GLU:O	2.12	0.49
57:BY:88:LYS:NZ	57:BY:93:GLY:CA	2.75	0.49
41:BG:164:GLU:OE1	41:BG:164:GLU:HA	2.11	0.49
46:BN:89:LYS:O	46:BN:93:THR:HG22	2.12	0.49
35:BA:2298:A:N6	35:BA:2318:G:C8	2.76	0.49
38:BD:97:TYR:C	38:BD:99:ASP:N	2.65	0.49
22:AV:19:G:C6	35:BA:2169:A:H1'	2.48	0.49
1:AA:78:G:N3	1:AA:78:G:H2'	2.27	0.49
51:BS:39:ILE:HD11	51:BS:73:LEU:HD21	1.94	0.49
46:BN:116:LEU:O	46:BN:119:ARG:HB2	2.12	0.49
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.47	0.49
35:BA:2248:C:C2'	35:BA:2249:U:H5'	2.42	0.49
35:BA:2728:U:H2'	35:BA:2729:G:C8	2.48	0.49
49:BQ:39:PRO:O	49:BQ:40:ALA:HB2	2.13	0.49
30:B5:10:LYS:HG3	35:BA:1263:U:H1'	1.95	0.49
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.47	0.49
45:BL:85:UNK:O	45:BL:86:UNK:O	2.31	0.49
57:BY:46:LYS:H	57:BY:62:GLU:CG	2.26	0.49
11:AK:44:SER:H	11:AK:47:VAL:HB	1.78	0.49
1:AA:1019:C:O2'	1:AA:1020:U:H5'	2.13	0.49
2:AB:145:LEU:HD23	2:AB:149:LEU:HD22	1.94	0.49
2:AB:155:LEU:CD2	2:AB:159:PRO:HG3	2.37	0.49
35:BA:2362:G:H2'	35:BA:2363:C:H5'	1.93	0.49
1:AA:404:U:H2'	1:AA:405:U:C6	2.47	0.49
1:AA:942:G:N1	1:AA:943:U:C4	2.81	0.49
25:B0:27:GLU:HB2	25:B0:68:GLU:HA	1.94	0.49
1:AA:771:G:N1	1:AA:772:U:C4	2.80	0.49
35:BA:1821:A:C2	35:BA:1822:G:C5	3.01	0.49
3:AC:84:ILE:O	3:AC:87:LEU:N	2.46	0.49
35:BA:1295:C:H2'	35:BA:1296:G:C8	2.47	0.49
57:BY:28:LYS:CA	57:BY:38:ILE:H	2.25	0.49
50:BR:3:HIS:O	50:BR:5:LYS:HD3	2.13	0.49
35:BA:2309:A:C2	35:BA:2310:A:H2	2.30	0.49
35:BA:2309:A:H2	35:BA:2310:A:H2	1.60	0.49
14:AN:24:CYS:HB2	14:AN:29:ARG:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1384:C:C4	1:AA:1385:G:N7	2.81	0.49
38:BD:24:ILE:HD12	38:BD:25:THR:H	1.78	0.49
39:BE:176:ILE:HB	39:BE:181:LEU:HB2	1.93	0.49
39:BE:181:LEU:HD21	52:BT:7:ILE:HG22	1.93	0.49
35:BA:2410:G:H21	35:BA:2411:A:H1'	1.77	0.49
35:BA:2656:U:N3	35:BA:2665:A:H2	1.97	0.49
39:BE:154:LYS:O	39:BE:155:LYS:O	2.30	0.49
35:BA:1496:A:C8	35:BA:1577:C:O2'	2.66	0.49
48:BP:27:HIS:CE1	54:BV:82:ARG:O	2.66	0.49
35:BA:2478:A:H2'	35:BA:2479:G:O4'	2.13	0.49
35:BA:272(D):G:H1	35:BA:364:C:H42	1.60	0.49
39:BE:44:TYR:O	39:BE:45:THR:CB	2.59	0.49
35:BA:314:A:O2'	35:BA:315:G:H5'	2.13	0.49
35:BA:189:G:H2'	35:BA:205:G:N2	2.28	0.49
35:BA:214:G:H1'	35:BA:216:A:O2'	2.13	0.49
1:AA:415:A:H2'	1:AA:416:G:C8	2.47	0.49
44:BK:93:UNK:O	44:BK:94:UNK:C	2.60	0.49
29:B4:11:PRO:HA	29:B4:24:THR:HB	1.93	0.49
48:BP:120:ALA:HB1	48:BP:138:LEU:HD12	1.95	0.49
35:BA:247:G:O2'	35:BA:248:G:O5'	2.30	0.49
35:BA:248:G:C2	35:BA:2431:U:H4'	2.47	0.49
37:BC:133:GLY:C	37:BC:135:ARG:N	2.65	0.49
37:BC:115:VAL:HG23	37:BC:145:THR:O	2.13	0.49
1:AA:1372:U:C2'	1:AA:1373:G:O5'	2.61	0.49
1:AA:255:G:H1'	17:AQ:16:GLN:HE21	1.76	0.49
1:AA:365:U:O2	1:AA:365:U:O5'	2.30	0.49
1:AA:1392:G:O5'	1:AA:1392:G:H8	1.96	0.49
41:BG:41:GLN:NE2	41:BG:60:LEU:HD22	2.27	0.49
48:BP:31:ALA:C	48:BP:33:ARG:N	2.65	0.49
14:AN:29:ARG:HG2	14:AN:40:CYS:HB2	1.93	0.49
35:BA:2756:U:O4'	35:BA:2757:A:O5'	2.30	0.49
35:BA:2756:U:C4'	35:BA:2757:A:O5'	2.61	0.49
35:BA:2756:U:O4	35:BA:2759:G:O6	2.30	0.49
35:BA:2128:C:O2'	35:BA:2129:C:OP2	2.31	0.49
35:BA:2104:G:C1'	35:BA:2105:C:P	2.99	0.49
35:BA:995:C:O2	46:BN:4:TYR:OH	2.23	0.49
35:BA:996:A:O2'	35:BA:997:G:H5'	2.13	0.49
5:AE:82:VAL:HG11	5:AE:137:GLU:HB3	1.94	0.49
61:AY:701:GCP:H3B1	62:AY:2001:HOH:O	2.13	0.49
35:BA:1067:A:N3	35:BA:1067:A:H2'	2.28	0.49
58:BZ:6:LYS:CE	58:BZ:6:LYS:H	2.22	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:25:PRO:HB3	40:BF:119:ARG:CB	2.36	0.49
51:BS:11:LYS:C	51:BS:13:ARG:H	2.14	0.49
3:AC:53:ALA:HB2	3:AC:115:LEU:CD1	2.32	0.49
24:AY:403:GLU:HA	24:AY:403:GLU:OE1	2.13	0.49
24:AY:517:LEU:HD11	24:AY:564:LYS:HB3	1.94	0.49
30:B5:57:VAL:HG12	30:B5:58:LEU:HD12	1.95	0.49
12:AL:115:LYS:O	12:AL:117:ARG:N	2.42	0.49
3:AC:9:GLY:HA2	3:AC:12:LEU:HG	1.93	0.49
35:BA:287:C:H2'	35:BA:288:C:H6	1.78	0.49
35:BA:105:C:H2'	35:BA:106:C:H6	1.76	0.49
35:BA:1231:G:H2'	35:BA:1232:G:H8	1.76	0.49
16:AP:9:PHE:HB2	16:AP:16:HIS:O	2.12	0.49
6:AF:86:ARG:O	6:AF:87:ARG:CB	2.61	0.49
35:BA:2695:C:H2'	35:BA:2696:U:C6	2.48	0.49
5:AE:98:THR:HB	5:AE:117:ASP:HB3	1.94	0.49
49:BQ:66:ILE:HD12	49:BQ:66:ILE:O	2.12	0.49
7:AG:7:ALA:O	7:AG:8:GLU:CB	2.60	0.49
1:AA:1294:G:O2'	1:AA:1295:G:H5'	2.12	0.49
35:BA:2415:G:H4'	48:BP:67:MET:N	2.28	0.49
35:BA:856:C:O2'	35:BA:857:C:O5'	2.30	0.49
35:BA:1269:A:H61	35:BA:2011:U:H3	1.60	0.49
35:BA:1227:G:C4	35:BA:1228:G:N7	2.81	0.49
41:BG:77:ILE:O	41:BG:78:SER:OG	2.27	0.49
42:BH:6:ARG:HG3	42:BH:6:ARG:HH11	1.78	0.49
40:BF:54:ARG:NH2	40:BF:80:ALA:HB2	2.28	0.49
38:BD:25:THR:O	38:BD:26:LYS:HB3	2.13	0.49
35:BA:332:A:O4'	35:BA:333:G:OP2	2.30	0.49
40:BF:4:VAL:HG11	40:BF:17:ARG:HE	1.77	0.49
1:AA:964:A:C6	1:AA:965:A:N6	2.79	0.49
1:AA:190:U:O2	20:AT:105:SER:HB2	2.13	0.49
39:BE:70:ALA:O	39:BE:71:GLY:C	2.51	0.49
24:AY:617:MET:HG3	24:AY:643:ILE:HD11	1.94	0.49
35:BA:2836:U:C4	35:BA:2883:A:N6	2.81	0.49
3:AC:16:ARG:CB	3:AC:16:ARG:HH11	2.24	0.49
24:AY:356:LEU:HD23	24:AY:356:LEU:C	2.33	0.49
54:BV:21:ARG:HG2	54:BV:21:ARG:HH11	1.78	0.49
16:AP:47:ASP:CG	16:AP:47:ASP:O	2.51	0.49
39:BE:82:ARG:O	39:BE:83:ASP:HB2	2.12	0.49
5:AE:64:ARG:HG3	5:AE:64:ARG:NH1	2.28	0.49
9:AI:128:ARG:H	9:AI:128:ARG:HD3	1.77	0.49
9:AI:26:VAL:HG22	9:AI:27:THR:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:104:ARG:HB2	47:BO:104:ARG:NH1	2.27	0.49
35:BA:953:A:C6	35:BA:965:C:N3	2.81	0.49
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.13	0.49
1:AA:594:G:H2'	1:AA:595:G:C5'	2.42	0.49
35:BA:1297:C:C2'	35:BA:1298:C:H5'	2.41	0.49
1:AA:861:G:H8	1:AA:861:G:O5'	1.95	0.49
13:AM:10:PRO:CG	13:AM:18:ALA:HB1	2.40	0.49
19:AS:41:VAL:HG21	19:AS:44:MET:HG3	1.94	0.49
21:AU:2:GLY:O	21:AU:4:GLY:N	2.46	0.49
35:BA:18:C:C2	35:BA:19:C:C6	3.00	0.49
35:BA:18:C:N3	35:BA:19:C:C4	2.81	0.49
35:BA:2404:C:N4	35:BA:2414:G:N1	2.61	0.49
24:AY:47:GLU:HB3	24:AY:52:MET:CB	2.42	0.49
1:AA:1523:G:O2'	1:AA:1524:C:H5'	2.12	0.49
1:AA:1049:U:C4'	1:AA:1050:G:O5'	2.49	0.49
1:AA:1053:G:O2'	1:AA:1054:C:OP2	2.29	0.49
24:AY:55:MET:SD	24:AY:65:ILE:HD11	2.53	0.49
42:BH:6:ARG:HG3	42:BH:6:ARG:NH1	2.27	0.49
35:BA:1121:C:C2'	35:BA:1122:G:O5'	2.61	0.49
35:BA:1427:A:C1'	35:BA:1428:C:OP2	2.61	0.49
20:AT:26:ASN:N	20:AT:26:ASN:HD22	2.11	0.49
1:AA:184:G:H2'	1:AA:185:A:H8	1.78	0.49
35:BA:2068:U:N3	35:BA:2430:A:C2	2.56	0.49
1:AA:1366:C:C4	1:AA:1367:C:N4	2.81	0.49
29:B4:65:ASP:O	29:B4:66:SER:C	2.51	0.49
57:BY:41:GLY:O	57:BY:42:VAL:C	2.50	0.49
35:BA:1062:G:H8	35:BA:1062:G:OP1	1.96	0.49
54:BV:19:LYS:HE2	54:BV:20:LEU:H	1.78	0.49
39:BE:129:HIS:O	39:BE:130:GLY:O	2.31	0.49
52:BT:106:SER:CA	52:BT:110:ILE:HG12	2.38	0.49
35:BA:1181:C:C2'	35:BA:1182:A:H5'	2.43	0.49
30:B5:41:PRO:HG2	30:B5:44:THR:CG2	2.39	0.49
35:BA:1887:C:C3'	35:BA:1888:G:H5''	2.43	0.49
24:AY:308:PRO:HB2	24:AY:394:ALA:CB	2.41	0.49
34:B9:10:ILE:N	34:B9:10:ILE:HD12	2.28	0.49
46:BN:25:ARG:HH11	46:BN:25:ARG:CG	2.24	0.49
2:AB:166:ASP:CG	2:AB:169:LYS:HB2	2.33	0.49
35:BA:1453:U:OP2	50:BR:77:ARG:NH1	2.45	0.49
45:BL:86:UNK:C	45:BL:88:UNK:N	2.71	0.49
4:AD:158:ILE:CG2	4:AD:181:MET:HE2	2.42	0.49
24:AY:422:GLU:O	24:AY:426:GLN:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:120:THR:HG23	24:AY:123:ARG:HH22	1.77	0.49
29:B4:10:VAL:HG23	29:B4:11:PRO:HD2	1.94	0.48
35:BA:958:U:H6	35:BA:958:U:H3'	1.78	0.48
1:AA:495:A:C4'	1:AA:496:A:OP1	2.61	0.48
35:BA:652:C:O2'	35:BA:653:A:O5'	2.31	0.48
35:BA:858:U:O2'	35:BA:859:G:C8	2.56	0.48
35:BA:436:C:H2'	35:BA:437:G:H8	1.78	0.48
1:AA:105:G:H2'	1:AA:106:C:C5	2.47	0.48
35:BA:1899:G:O2'	35:BA:1900:A:H5''	2.12	0.48
1:AA:362:G:H8	1:AA:362:G:O5'	1.94	0.48
35:BA:1985:G:C2'	35:BA:1986:A:O5'	2.60	0.48
29:B4:21:VAL:CG2	29:B4:35:VAL:HG21	2.43	0.48
29:B4:6:HIS:O	29:B4:7:PRO:O	2.30	0.48
41:BG:133:LEU:CD1	41:BG:134:GLY:H	2.24	0.48
41:BG:80:PHE:O	41:BG:81:LYS:CG	2.61	0.48
35:BA:690:G:H2'	35:BA:691:C:C6	2.48	0.48
1:AA:1177:G:H8	1:AA:1177:G:O5'	1.96	0.48
35:BA:18:C:O2'	35:BA:554:U:OP1	2.31	0.48
2:AB:122:PHE:HE2	2:AB:139:LYS:HA	1.75	0.48
35:BA:2757:A:O2'	35:BA:2758:A:C5'	2.57	0.48
35:BA:1426:G:OP2	35:BA:1427:A:O2'	2.30	0.48
35:BA:2123:G:H2'	35:BA:2124:G:H5'	1.92	0.48
58:BZ:115:GLY:HA2	58:BZ:177:PRO:CD	2.41	0.48
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.71	0.48
1:AA:1367:C:C2'	1:AA:1368:G:O5'	2.61	0.48
3:AC:155:GLY:HA3	3:AC:196:LEU:HD13	1.94	0.48
25:B0:50:ASN:CB	25:B0:63:VAL:HG21	2.43	0.48
24:AY:99:ARG:CD	24:AY:402:ILE:H	2.26	0.48
56:BX:36:LYS:HD3	56:BX:54:VAL:O	2.13	0.48
34:B9:1:MET:SD	34:B9:31:LYS:C	2.92	0.48
35:BA:1504:C:O2'	35:BA:1505:C:C5'	2.60	0.48
37:BC:184:GLU:O	37:BC:188:ASP:OD2	2.31	0.48
41:BG:127:GLY:C	41:BG:129:GLY:N	2.65	0.48
1:AA:1447:A:H3'	1:AA:1447:A:N3	2.27	0.48
57:BY:50:ARG:HD2	57:BY:54:LYS:O	2.13	0.48
35:BA:2199:A:H2'	35:BA:2199:A:N3	2.27	0.48
54:BV:14:VAL:HB	54:BV:96:ILE:HG13	1.94	0.48
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	1.95	0.48
35:BA:680:G:H2'	35:BA:681:G:C8	2.48	0.48
3:AC:38:ARG:HB2	3:AC:38:ARG:HH11	1.78	0.48
35:BA:464:U:O5'	35:BA:464:U:H6	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:162:THR:HG22	41:BG:163:ALA:N	2.28	0.48
35:BA:782:A:H5'	35:BA:783:A:C2	2.48	0.48
24:AY:32:ILE:HG23	24:AY:273:LEU:HD21	1.95	0.48
2:AB:82:ARG:HG2	2:AB:83:MET:N	2.26	0.48
48:BP:65:ARG:HB3	48:BP:68:GLN:NE2	2.08	0.48
1:AA:34:C:O2'	1:AA:35:G:H5'	2.13	0.48
1:AA:442:C:H42	1:AA:492:G:H1	1.62	0.48
35:BA:1416:G:N2	35:BA:1417:C:C2	2.82	0.48
35:BA:1415:U:H3	35:BA:1587:A:H61	1.62	0.48
35:BA:605:C:H1'	35:BA:657:U:HO2'	1.78	0.48
35:BA:1595:G:H2'	35:BA:1596:A:H5'	1.95	0.48
35:BA:2009:G:O2'	35:BA:2010:G:H5''	2.13	0.48
38:BD:89:SER:HB2	38:BD:159:ALA:H	1.78	0.48
35:BA:2606:C:H6	35:BA:2606:C:O5'	1.96	0.48
3:AC:84:ILE:HG23	3:AC:85:ARG:H	1.77	0.48
35:BA:1296:G:C2'	35:BA:1297:C:H5'	2.43	0.48
35:BA:29:U:H2'	35:BA:30:G:H5'	1.88	0.48
35:BA:1992:G:O4'	35:BA:1993:U:OP2	2.30	0.48
19:AS:17:GLU:O	19:AS:19:VAL:N	2.46	0.48
41:BG:118:ARG:HD3	41:BG:118:ARG:H	1.78	0.48
41:BG:40:ASN:HD21	41:BG:91:ARG:HG3	1.77	0.48
31:B6:20:ASN:CG	31:B6:21:TYR:N	2.67	0.48
35:BA:17:G:C4	35:BA:18:C:C5	3.00	0.48
35:BA:1144:G:C6	35:BA:1145:C:N4	2.81	0.48
35:BA:2103:C:O2'	35:BA:2104:G:C5'	2.59	0.48
35:BA:2103:C:N4	35:BA:2186:G:H1	2.08	0.48
1:AA:980:C:H2'	1:AA:981:U:H5'	1.94	0.48
1:AA:1153:C:O2'	1:AA:1154:G:O5'	2.30	0.48
38:BD:21:PHE:O	38:BD:24:ILE:HG22	2.13	0.48
4:AD:36:ARG:HH11	4:AD:36:ARG:HB3	1.78	0.48
25:B0:7:LEU:HD12	49:BQ:85:LYS:HE2	1.93	0.48
54:BV:2:PHE:HD1	54:BV:3:ALA:N	2.11	0.48
3:AC:40:ARG:HG3	3:AC:40:ARG:HH11	1.78	0.48
35:BA:143:G:H4'	56:BX:35:THR:HG21	1.95	0.48
35:BA:2807:G:C2'	35:BA:2808:U:H5''	2.42	0.48
33:B8:24:ALA:O	33:B8:46:ARG:HA	2.12	0.48
35:BA:1925:C:O2	35:BA:1925:C:H2'	2.12	0.48
35:BA:1848:A:H3'	35:BA:1848:A:OP2	2.13	0.48
35:BA:1579:A:H2'	35:BA:1580:A:O4'	2.14	0.48
46:BN:45:ASN:HD22	46:BN:45:ASN:H	1.58	0.48
35:BA:2169:A:O2'	35:BA:2170:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:46:ARG:NH1	40:BF:46:ARG:HG3	2.29	0.48
35:BA:2651:C:O2'	35:BA:2652:C:H5'	2.12	0.48
35:BA:1645:G:O5'	35:BA:1645:G:H8	1.96	0.48
35:BA:2770:G:H5'	35:BA:2771:C:OP1	2.13	0.48
1:AA:1030(D):A:O2'	1:AA:1031:G:P	2.70	0.48
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.27	0.48
35:BA:869:G:O2'	35:BA:870:A:H5'	2.13	0.48
35:BA:2197:U:O2'	35:BA:2198:A:H2'	2.13	0.48
1:AA:335:C:H2'	1:AA:336:C:H6	1.78	0.48
27:B2:69:ARG:O	27:B2:70:GLN:OE1	2.31	0.48
1:AA:773:G:N1	1:AA:774:G:C6	2.81	0.48
1:AA:265:G:H2'	1:AA:267:C:C5	2.48	0.48
35:BA:39:C:H2'	35:BA:40:C:C6	2.48	0.48
30:B5:3:LYS:HG3	30:B5:4:HIS:H	1.77	0.48
57:BY:39:VAL:O	57:BY:40:GLU:CG	2.60	0.48
1:AA:863:U:O2	1:AA:863:U:H5'	2.13	0.48
35:BA:621:A:H2'	35:BA:622:G:C5'	2.42	0.48
29:B4:47:GLN:O	29:B4:48:ARG:C	2.51	0.48
41:BG:55:LYS:HB3	41:BG:148:MET:HE1	1.96	0.48
30:B5:53:ALA:O	30:B5:55:ARG:N	2.46	0.48
24:AY:47:GLU:HB3	24:AY:52:MET:HA	1.94	0.48
35:BA:890:A:H2'	35:BA:892:G:H5''	1.94	0.48
1:AA:1385:G:C2'	1:AA:1386:G:O5'	2.61	0.48
20:AT:26:ASN:N	20:AT:26:ASN:ND2	2.60	0.48
40:BF:19:GLU:CD	40:BF:19:GLU:N	2.67	0.48
4:AD:13:ARG:HG2	4:AD:33:MET:HE3	1.94	0.48
2:AB:130:ARG:HE	2:AB:131:PRO:HD2	1.79	0.48
35:BA:2033:A:O2'	35:BA:2034:U:O5'	2.30	0.48
38:BD:117:VAL:HG22	38:BD:118:VAL:N	2.28	0.48
31:B6:53:LYS:HD3	31:B6:54:ILE:N	2.22	0.48
35:BA:271(P):C:C2'	35:BA:271(Q):G:H5'	2.43	0.48
24:AY:628:ARG:HH11	24:AY:628:ARG:CG	2.16	0.48
25:B0:53:MET:SD	25:B0:57:PHE:CA	3.00	0.48
28:B3:36:VAL:O	28:B3:36:VAL:HG23	2.12	0.48
24:AY:680:PRO:HD2	24:AY:683:VAL:CG2	2.40	0.48
24:AY:606:MET:HE3	24:AY:671:MET:HG3	1.96	0.48
35:BA:848:G:N9	35:BA:933:A:H8	2.12	0.48
36:BB:77:U:P	58:BZ:19:ARG:NH2	2.86	0.48
3:AC:11:ARG:O	3:AC:14:ILE:N	2.38	0.48
35:BA:2485:G:H5''	49:BQ:46:GLN:HE21	1.78	0.48
48:BP:9:ASN:N	48:BP:10:PRO:HD2	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:97:TYR:C	38:BD:99:ASP:H	2.17	0.48
1:AA:723:U:C2'	1:AA:723:U:O2	2.61	0.48
52:BT:38:ASN:H	52:BT:38:ASN:HD22	1.61	0.48
35:BA:2559:C:H2'	35:BA:2560:C:H5'	1.94	0.48
35:BA:1684:C:H2'	35:BA:1685:C:H6	1.77	0.48
31:B6:42:TRP:HA	31:B6:42:TRP:HE3	1.77	0.48
35:BA:2142:C:O2'	35:BA:2143:C:H5'	2.13	0.48
11:AK:15:ALA:HA	11:AK:76:GLY:O	2.13	0.48
24:AY:623:ASP:O	24:AY:626:ALA:HB3	2.13	0.48
22:AV:63:G:H2'	22:AV:64:A:O4'	2.14	0.48
4:AD:159:ARG:HH11	4:AD:159:ARG:HB3	1.78	0.48
35:BA:1967:C:N4	35:BA:1968:G:C6	2.81	0.48
35:BA:1968:G:O2'	35:BA:1969:A:O4'	2.30	0.48
37:BC:81:GLY:O	37:BC:82:GLU:HB3	2.12	0.48
35:BA:738:G:O6	35:BA:739:G:N1	2.46	0.48
1:AA:486:U:H2'	1:AA:487:A:C8	2.48	0.48
48:BP:85:LEU:HD22	48:BP:115:LEU:O	2.13	0.48
37:BC:101:ILE:C	37:BC:103:LYS:N	2.67	0.48
37:BC:129:GLY:O	37:BC:133:GLY:N	2.29	0.48
1:AA:490:G:H2'	1:AA:491:G:C5'	2.43	0.48
1:AA:1239:A:H62	1:AA:1299:A:H61	1.60	0.48
7:AG:49:ILE:HD11	7:AG:118:VAL:HA	1.94	0.48
35:BA:36:G:C6	35:BA:37:C:C4	3.02	0.48
57:BY:28:LYS:HB2	57:BY:37:VAL:CB	2.22	0.48
13:AM:96:LEU:HB3	13:AM:97:PRO:CD	2.41	0.48
29:B4:29:PRO:HG2	29:B4:30:GLU:H	1.78	0.48
9:AI:92:TYR:O	9:AI:95:LYS:HG3	2.14	0.48
40:BF:89:VAL:CG1	40:BF:90:PHE:N	2.63	0.48
29:B4:56:VAL:C	29:B4:58:ARG:H	2.16	0.48
40:BF:133:ASN:HD22	40:BF:133:ASN:N	2.10	0.48
54:BV:15:GLU:CG	54:BV:16:PRO:CD	2.86	0.48
35:BA:528:A:C2	35:BA:2043:C:C5'	2.96	0.48
57:BY:95:LYS:CE	57:BY:99:CYS:O	2.61	0.48
57:BY:81:LYS:CD	57:BY:97:ARG:HG3	2.38	0.48
4:AD:149:ALA:O	4:AD:153:ARG:HG3	2.13	0.48
35:BA:2481:G:O2'	35:BA:2482:G:OP2	2.30	0.48
39:BE:68:ALA:C	39:BE:70:ALA:N	2.66	0.48
54:BV:72:VAL:HG23	54:BV:72:VAL:O	2.13	0.48
24:AY:315:LYS:HB3	24:AY:327:PHE:HD2	1.78	0.48
35:BA:34:C:H42	35:BA:447:A:H61	1.61	0.48
57:BY:3:VAL:C	57:BY:5:MET:H	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2151:G:OP1	37:BC:3:LYS:HE2	2.12	0.48
53:BU:42:ALA:O	53:BU:43:GLY:C	2.51	0.48
9:AI:50:LEU:HD23	9:AI:85:LEU:CD2	2.44	0.48
33:B8:15:LYS:HE3	35:BA:630:G:OP1	2.14	0.48
33:B8:32:LEU:HB2	33:B8:36:LYS:HZ1	1.75	0.48
1:AA:697:U:O2'	1:AA:698:G:H5'	2.13	0.48
29:B4:2:LYS:O	29:B4:2:LYS:HD3	2.13	0.48
29:B4:9:LEU:N	29:B4:9:LEU:HD12	2.28	0.48
33:B8:4:MET:HG2	33:B8:61:LEU:CD2	2.43	0.48
51:BS:89:ARG:HG3	51:BS:92:TYR:CA	2.43	0.48
38:BD:260:ARG:HH22	38:BD:266:SER:HB3	1.79	0.48
1:AA:519:C:H2'	1:AA:520:A:H5'	1.95	0.48
24:AY:138:LYS:HG2	61:AY:701:GCP:C4	2.43	0.48
35:BA:332:A:C6	35:BA:335:C:C4	3.01	0.48
35:BA:331:A:O4'	35:BA:332:A:OP2	2.32	0.48
25:B0:49:LYS:O	25:B0:50:ASN:HB2	2.14	0.48
28:B3:5:LYS:CE	28:B3:34:GLU:OE2	2.61	0.48
24:AY:127:LYS:C	24:AY:128:TYR:HD1	2.16	0.48
24:AY:401:SER:O	24:AY:402:ILE:CB	2.61	0.48
24:AY:99:ARG:HD2	24:AY:402:ILE:H	1.78	0.48
2:AB:132:LYS:HG3	2:AB:135:GLN:OE1	2.13	0.48
29:B4:60:GLN:C	29:B4:62:ARG:HD2	2.33	0.48
35:BA:2410:G:C2	35:BA:2411:A:C4	3.01	0.48
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.13	0.48
58:BZ:121:HIS:HB2	58:BZ:171:ILE:HA	1.95	0.48
25:B0:19:LYS:HG3	25:B0:41:ARG:HH21	1.79	0.48
35:BA:2287:A:N6	35:BA:2344:U:N3	2.57	0.48
38:BD:133:LEU:HB3	38:BD:173:VAL:HG11	1.94	0.48
46:BN:22:THR:CG2	46:BN:61:ARG:HD3	2.40	0.48
37:BC:88:GLU:O	37:BC:89:GLU:HB3	2.14	0.48
13:AM:112:GLY:HA3	13:AM:115:LYS:HE2	1.93	0.48
20:AT:23:ARG:HH11	20:AT:23:ARG:HG2	1.79	0.48
49:BQ:52:VAL:HA	49:BQ:55:VAL:CG1	2.44	0.48
24:AY:44:GLU:C	24:AY:45:VAL:HG13	2.33	0.48
46:BN:30:ILE:HG22	46:BN:34:LEU:HD22	1.95	0.48
35:BA:570:G:H2'	35:BA:2030:A:C5	2.49	0.48
1:AA:454:C:H5'	1:AA:455:C:OP2	2.13	0.48
35:BA:1188:U:H4'	54:BV:79:VAL:HG13	1.95	0.48
43:BJ:70:UNK:O	43:BJ:71:UNK:CB	2.61	0.48
7:AG:131:LYS:N	7:AG:131:LYS:HD2	2.29	0.48
46:BN:67:LEU:O	46:BN:68:GLU:CB	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:484:G:H4'	1:AA:485:G:O5'	2.14	0.48
35:BA:872:A:H4'	49:BQ:66:ILE:HD11	1.94	0.48
53:BU:110:VAL:O	53:BU:114:LYS:HG2	2.13	0.48
24:AY:538:TYR:CD1	24:AY:579:GLU:HG2	2.48	0.48
4:AD:104:VAL:O	4:AD:108:LEU:HB2	2.13	0.48
55:BW:59:VAL:O	55:BW:63:ASP:HA	2.13	0.48
35:BA:2457:U:O2'	35:BA:2458:G:H5'	2.13	0.48
52:BT:117:ASP:O	52:BT:119:LYS:N	2.46	0.48
2:AB:141:GLU:O	2:AB:144:ARG:HG2	2.13	0.48
2:AB:87:ARG:HD2	2:AB:219:VAL:CG1	2.27	0.48
1:AA:123:C:H2'	1:AA:124:G:H8	1.79	0.48
35:BA:635:C:O2'	35:BA:639:U:OP2	2.31	0.48
31:B6:26:ASN:HD21	31:B6:32:ASN:HD22	1.60	0.48
7:AG:47:CYS:CA	7:AG:50:ILE:HG22	2.42	0.48
9:AI:10:ARG:O	9:AI:11:LYS:C	2.52	0.48
1:AA:60:A:O2'	1:AA:61:G:O5'	2.32	0.48
35:BA:2011:U:C2'	35:BA:2012:G:O5'	2.61	0.48
35:BA:1771:C:H1'	35:BA:1786:A:C8	2.48	0.48
35:BA:2713:A:O2'	35:BA:2714:G:H5''	2.14	0.48
35:BA:2820:A:H1'	50:BR:5:LYS:HE3	1.95	0.48
27:B2:5:GLU:O	27:B2:8:LYS:HG3	2.14	0.48
35:BA:256:A:C2'	35:BA:257:A:C5'	2.80	0.48
35:BA:607:U:N3	35:BA:620:G:C8	2.82	0.48
19:AS:41:VAL:CB	19:AS:44:MET:HB3	2.37	0.48
41:BG:106:LEU:HA	41:BG:110:ALA:HB2	1.96	0.48
35:BA:2305:A:H5''	41:BG:134:GLY:HA3	1.95	0.48
29:B4:28:LYS:CD	41:BG:143:GLU:HA	2.38	0.48
35:BA:1140:C:H6	35:BA:1140:C:O5'	1.97	0.48
48:BP:30:THR:HG22	48:BP:31:ALA:H	1.75	0.48
51:BS:30:ARG:NH1	51:BS:97:ARG:HB3	2.28	0.48
39:BE:132:HIS:CG	39:BE:132:HIS:O	2.64	0.48
38:BD:147:LEU:HD22	38:BD:155:LEU:HD11	1.94	0.48
35:BA:2175:C:C2	35:BA:2176:A:N7	2.82	0.48
53:BU:92:ARG:NH1	53:BU:94:ASN:ND2	2.57	0.48
12:AL:53:ARG:HH12	12:AL:92:ASP:HB2	1.79	0.48
52:BT:23:ARG:CB	52:BT:24:PRO:HD2	2.23	0.48
20:AT:26:ASN:H	20:AT:26:ASN:ND2	2.11	0.48
1:AA:1152:A:C2	1:AA:1153:C:C4	3.01	0.48
24:AY:34:TYR:O	24:AY:38:ARG:HB2	2.12	0.48
25:B0:19:LYS:HE2	25:B0:19:LYS:HA	1.95	0.48
3:AC:28:GLN:O	3:AC:31:HIS:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:55:U:H2'	36:BB:56:G:C8	2.48	0.48
36:BB:17:C:H2'	36:BB:18:G:O4'	2.14	0.48
35:BA:1458:C:H4'	35:BA:1459:G:C4	2.49	0.48
51:BS:102:ALA:O	51:BS:103:GLU:HG2	2.13	0.48
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.95	0.48
35:BA:1319:G:O2'	35:BA:1320:C:H5'	2.13	0.48
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.14	0.48
38:BD:28:GLU:CD	38:BD:28:GLU:N	2.66	0.48
35:BA:2383:G:O2'	35:BA:2384:G:H5'	2.13	0.48
1:AA:995:C:H4'	14:AN:8:GLU:OE2	2.14	0.48
6:AF:44:GLY:HA2	6:AF:59:TYR:CE1	2.49	0.48
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD22	1.95	0.48
35:BA:780:G:H21	35:BA:783:A:H62	1.60	0.48
1:AA:853:G:O2'	1:AA:854:G:H5'	2.13	0.48
35:BA:2692:C:H1'	35:BA:2847:U:O2'	2.13	0.48
24:AY:421:GLN:C	24:AY:421:GLN:HE21	2.17	0.48
38:BD:33:LEU:C	38:BD:33:LEU:HD23	2.34	0.48
35:BA:1090:U:H2'	35:BA:1091:G:C8	2.49	0.48
2:AB:111:ARG:HG3	2:AB:145:LEU:HD21	1.94	0.48
35:BA:968:G:C2'	35:BA:969:U:C5'	2.92	0.48
35:BA:246:C:C3'	35:BA:247:G:C5'	2.91	0.48
35:BA:248:G:C8	35:BA:250:G:C4	3.02	0.48
48:BP:51:PHE:CD2	48:BP:52:GLU:C	2.87	0.48
1:AA:405:U:O2	1:AA:498:U:H2'	2.14	0.48
35:BA:140:G:N3	35:BA:142:A:N1	2.61	0.48
35:BA:856:C:C4'	35:BA:857:C:OP1	2.57	0.48
35:BA:435:C:H2'	35:BA:436:C:H5'	1.95	0.48
35:BA:48:G:C6	35:BA:178:G:O6	2.66	0.48
1:AA:590:C:C2'	1:AA:591:U:C5'	2.90	0.48
35:BA:1820:U:C4	38:BD:160:GLY:O	2.65	0.48
35:BA:1982:C:N3	35:BA:1983:C:N4	2.60	0.48
35:BA:35:G:H2'	35:BA:36:G:C8	2.48	0.48
57:BY:38:ILE:HG22	57:BY:39:VAL:N	2.27	0.48
35:BA:743:G:O2'	35:BA:744:G:O5'	2.30	0.48
48:BP:24:GLY:N	48:BP:33:ARG:CZ	2.76	0.48
1:AA:961:U:HO2'	1:AA:962:C:H6	1.62	0.48
39:BE:56:PRO:O	39:BE:57:LYS:NZ	2.47	0.48
35:BA:146:G:H2'	35:BA:147:U:O4'	2.14	0.48
35:BA:271(M):G:N7	35:BA:271(O):C:C4	2.82	0.48
35:BA:896:A:C8	58:BZ:146:ILE:HD12	2.49	0.48
35:BA:333:G:C6	35:BA:334:C:N4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:72:ARG:HG2	58:BZ:89:PHE:HB2	1.96	0.48
24:AY:99:ARG:NH2	24:AY:128:TYR:OH	2.46	0.48
40:BF:133:ASN:O	40:BF:134:GLY:C	2.52	0.48
35:BA:1062:G:H22	35:BA:1076:C:H42	1.61	0.48
54:BV:61:VAL:HG12	54:BV:94:LEU:CD2	2.43	0.48
39:BE:141:ILE:HB	39:BE:154:LYS:HE2	1.95	0.48
3:AC:22:TRP:HB2	3:AC:59:ARG:HB2	1.96	0.48
47:BO:17:ARG:HE	47:BO:47:ILE:HD12	1.78	0.48
1:AA:567:G:H2'	1:AA:568:G:O4'	2.14	0.48
25:B0:42:GLY:O	25:B0:57:PHE:CB	2.62	0.48
50:BR:103:ARG:NH1	50:BR:110:PRO:HB3	2.28	0.48
12:AL:94:PRO:C	12:AL:96:VAL:H	2.17	0.48
37:BC:42:VAL:HA	37:BC:216:THR:O	2.13	0.48
1:AA:390:C:H2'	1:AA:391:G:C8	2.49	0.48
54:BV:21:ARG:HG3	54:BV:93:GLU:HB2	1.96	0.48
35:BA:644:A:H2'	35:BA:646:A:C2	2.49	0.48
32:B7:23:ARG:NH1	32:B7:23:ARG:HG3	2.28	0.48
35:BA:558:G:P	46:BN:111:PRO:HD2	2.53	0.48
35:BA:534:U:H5'	53:BU:42:ALA:HB1	1.96	0.48
17:AQ:95:TYR:C	17:AQ:97:SER:H	2.17	0.48
35:BA:1249:U:O4'	53:BU:4:ALA:HB3	2.14	0.48
42:BH:16:SER:HB2	42:BH:27:LYS:HB2	1.94	0.48
35:BA:387:U:H6	35:BA:387:U:O5'	1.96	0.48
49:BQ:50:ALA:O	49:BQ:53:ALA:HB3	2.14	0.48
37:BC:125:GLY:O	37:BC:127:LYS:HG2	2.13	0.48
31:B6:26:ASN:ND2	31:B6:32:ASN:ND2	2.61	0.48
7:AG:22:LEU:O	7:AG:24:THR:N	2.38	0.48
1:AA:591:U:H2'	1:AA:592:G:H8	1.79	0.48
35:BA:1786:A:H2'	35:BA:1786:A:N3	2.29	0.48
1:AA:1401:G:H2'	1:AA:1402:C:O4'	2.13	0.48
1:AA:1305:G:O2'	1:AA:1306:A:O5'	2.30	0.48
19:AS:42:PRO:HB3	19:AS:67:VAL:HG13	1.95	0.48
41:BG:6:ALA:CB	41:BG:105:LYS:HZ2	2.22	0.48
30:B5:51:TYR:OH	35:BA:2884:U:C2	2.55	0.48
33:B8:4:MET:O	33:B8:62:LEU:HD11	2.14	0.48
33:B8:61:LEU:HD13	33:B8:62:LEU:H	1.78	0.48
31:B6:15:GLU:OE1	31:B6:18:ARG:CG	2.61	0.48
35:BA:19:C:O2'	35:BA:20:C:H5'	2.13	0.48
35:BA:1215:G:O6	35:BA:1235:G:N3	2.47	0.48
55:BW:73:ALA:HB3	55:BW:106:ILE:HG12	1.95	0.48
39:BE:188:VAL:O	39:BE:188:VAL:HG13	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1151:A:H1'	1:AA:1152:A:C8	2.48	0.48
3:AC:167:TRP:CD1	3:AC:168:ALA:N	2.82	0.48
10:AJ:32:ALA:HB2	10:AJ:81:THR:HG21	1.95	0.48
39:BE:60:ASN:OD1	39:BE:62:PRO:CD	2.53	0.48
24:AY:497:PHE:CE2	24:AY:581:ALA:HA	2.49	0.48
38:BD:36:PRO:O	38:BD:37:LEU:HG	2.14	0.48
31:B6:53:LYS:CD	31:B6:54:ILE:N	2.76	0.48
39:BE:120:TRP:CE3	39:BE:155:LYS:HE2	2.48	0.48
56:BX:35:THR:HG22	56:BX:36:LYS:N	2.27	0.48
38:BD:142:VAL:CG2	38:BD:191:ALA:HB1	2.43	0.48
2:AB:74:LYS:O	2:AB:74:LYS:HG3	2.14	0.48
36:BB:80:U:H2'	36:BB:81:G:N2	2.22	0.48
58:BZ:155:LEU:CD2	58:BZ:155:LEU:H	2.27	0.48
35:BA:971:C:OP1	35:BA:974:G:C8	2.67	0.48
1:AA:193:C:H2'	1:AA:194:C:C6	2.48	0.48
36:BB:65:C:O2'	36:BB:66:A:H5'	2.13	0.48
5:AE:100:VAL:O	5:AE:100:VAL:HG23	2.13	0.48
24:AY:272:LEU:O	24:AY:276:VAL:HG23	2.13	0.48
35:BA:1430:C:H2'	35:BA:1431:U:C6	2.48	0.48
1:AA:453:A:O2'	1:AA:454:C:O4'	2.32	0.48
26:B1:39:LYS:NZ	35:BA:189:G:OP1	2.47	0.48
20:AT:36:LEU:HD13	20:AT:55:ILE:HG23	1.95	0.48
1:AA:339:C:OP2	47:BO:97:ARG:NH1	2.46	0.48
1:AA:339:C:H2'	1:AA:340:U:C6	2.48	0.48
35:BA:250:G:H2'	35:BA:251:A:C8	2.49	0.48
1:AA:1370:G:C2	1:AA:1371:G:N7	2.82	0.48
7:AG:15:ASP:OD2	7:AG:23:VAL:HG11	2.13	0.48
1:AA:770:C:HO2'	1:AA:771:G:H5'	1.66	0.48
35:BA:1295:C:H2'	35:BA:1296:G:H8	1.78	0.48
13:AM:65:LYS:HB2	13:AM:69:GLU:CG	2.43	0.48
35:BA:1893:C:H2'	35:BA:1894:C:C5'	2.43	0.48
52:BT:35:LYS:NZ	52:BT:41:ARG:HE	2.12	0.48
24:AY:25:LYS:HZ3	24:AY:86:GLY:HA3	1.79	0.48
1:AA:89:C:C2	1:AA:90:U:C5	3.02	0.48
35:BA:2126:A:C6	35:BA:2163:C:H4'	2.48	0.48
53:BU:92:ARG:CB	54:BV:11:GLN:NE2	2.76	0.48
1:AA:1387:G:C2'	1:AA:1388:C:H5'	2.42	0.48
25:B0:12:ASN:HB2	35:BA:2278:A:C8	2.49	0.48
1:AA:1154:G:N3	1:AA:1155:G:C8	2.82	0.48
40:BF:20:LEU:HB3	40:BF:23:ASP:OD1	2.14	0.48
4:AD:36:ARG:CB	4:AD:36:ARG:HH11	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:148:LEU:O	24:AY:152:THR:HG22	2.14	0.48
24:AY:384:ILE:HG12	24:AY:387:ASP:OD2	2.13	0.48
31:B6:35:GLU:HB3	31:B6:51:GLU:HG3	1.96	0.48
31:B6:35:GLU:HB3	31:B6:51:GLU:CG	2.44	0.48
24:AY:196:ILE:HG13	24:AY:197:ARG:N	2.21	0.48
35:BA:1169:G:H2'	35:BA:1170:G:O4'	2.14	0.48
35:BA:848:G:C4	35:BA:933:A:H8	2.31	0.48
35:BA:1099:G:O2'	35:BA:1100:C:H5'	2.14	0.48
28:B3:59:VAL:CG1	28:B3:60:GLU:N	2.75	0.48
24:AY:249:GLY:C	24:AY:255:ILE:HG23	2.34	0.48
24:AY:438:PHE:CE1	24:AY:451:ILE:HG13	2.48	0.48
36:BB:50:G:OP2	51:BS:62:LYS:HB2	2.14	0.48
40:BF:185:ASP:HA	40:BF:188:ARG:HD3	1.95	0.48
35:BA:271(D):G:H2'	35:BA:271(E):U:H6	1.78	0.48
35:BA:1683:C:H2'	35:BA:1684:C:C6	2.49	0.48
51:BS:73:LEU:HD23	51:BS:73:LEU:C	2.34	0.48
1:AA:484:G:H8	1:AA:484:G:OP1	1.96	0.48
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.48	0.48
11:AK:69:ALA:O	11:AK:72:ALA:N	2.47	0.48
38:BD:263:ARG:HB2	38:BD:263:ARG:CZ	2.44	0.48
22:AV:55:U:OP2	37:BC:142:LYS:HD2	2.14	0.48
2:AB:114:ARG:NH1	2:AB:118:LEU:CD1	2.72	0.48
35:BA:654(A):G:N1	35:BA:654(S):G:N2	2.61	0.48
1:AA:1371:G:HO2'	1:AA:1372:U:H5'	1.78	0.48
7:AG:26:PHE:HD1	7:AG:101:LEU:HD22	1.79	0.48
35:BA:177:G:N2	35:BA:177:G:OP1	2.41	0.48
35:BA:1465:G:C4	35:BA:1466:G:C8	3.02	0.48
1:AA:509:A:OP1	1:AA:510:A:OP2	2.32	0.48
2:AB:16:HIS:CG	2:AB:210:SER:OG	2.66	0.48
2:AB:17:PHE:CD1	2:AB:18:GLY:N	2.81	0.48
19:AS:19:VAL:HG13	19:AS:44:MET:HG2	1.96	0.48
29:B4:1:MET:O	29:B4:2:LYS:CB	2.58	0.48
35:BA:743:G:C6	35:BA:755:C:N3	2.81	0.48
2:AB:142:LEU:O	2:AB:146:GLN:HB2	2.14	0.48
53:BU:88:ILE:O	53:BU:88:ILE:HG13	2.14	0.48
54:BV:47:VAL:HG12	54:BV:52:VAL:N	2.29	0.48
1:AA:521:G:O2'	1:AA:522:C:C5'	2.59	0.48
40:BF:9:ILE:O	40:BF:11:VAL:N	2.47	0.48
40:BF:54:ARG:HB2	40:BF:79:GLY:O	2.13	0.48
34:B9:18:ARG:HG2	34:B9:18:ARG:HH11	1.79	0.48
1:AA:1152:A:N1	1:AA:1153:C:N4	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:23:GLU:O	38:BD:24:ILE:O	2.32	0.48
54:BV:19:LYS:HZ1	54:BV:20:LEU:H	1.61	0.48
38:BD:30:GLU:CG	38:BD:63:ARG:HE	2.26	0.48
57:BY:13:VAL:HG22	57:BY:14:LEU:N	2.29	0.48
6:AF:69:GLU:CD	6:AF:69:GLU:N	2.68	0.48
35:BA:99:U:C4'	35:BA:102:G:H1'	2.44	0.48
37:BC:88:GLU:CA	37:BC:92:ALA:HB3	2.43	0.48
58:BZ:19:ARG:C	58:BZ:21:ALA:H	2.16	0.48
47:BO:66:LYS:HA	47:BO:79:PHE:O	2.13	0.48
37:BC:158:LYS:O	37:BC:159:ALA:CB	2.62	0.48
38:BD:95:LEU:HD13	38:BD:97:TYR:CE1	2.49	0.48
53:BU:16:LYS:O	53:BU:20:LEU:HD22	2.14	0.48
1:AA:452:A:O2'	1:AA:453:A:H5'	2.14	0.48
1:AA:161:A:H2'	1:AA:162:A:C8	2.49	0.48
35:BA:2257:U:O2'	35:BA:2258:C:H5'	2.14	0.48
35:BA:425:G:O2'	35:BA:426:C:H5'	2.14	0.48
16:AP:70:ALA:O	16:AP:74:LEU:HG	2.13	0.48
35:BA:627:A:O2'	35:BA:636:G:N2	2.47	0.47
35:BA:859:G:N2	35:BA:917:A:OP1	2.36	0.47
35:BA:47:C:N4	35:BA:179:G:H1	2.12	0.47
35:BA:1786:A:C2'	35:BA:1786:A:N3	2.77	0.47
1:AA:560:U:O2'	1:AA:561:U:OP2	2.30	0.47
1:AA:1504:G:H3'	1:AA:1504:G:OP2	2.14	0.47
19:AS:18:LYS:O	19:AS:22:LEU:HB2	2.14	0.47
41:BG:49:ASP:O	41:BG:50:ALA:C	2.52	0.47
41:BG:80:PHE:O	41:BG:81:LYS:HG2	2.14	0.47
35:BA:18:C:N3	35:BA:19:C:C5	2.81	0.47
35:BA:963:U:H2'	35:BA:964:C:O5'	2.14	0.47
35:BA:2206:G:C2'	35:BA:2206:G:N3	2.76	0.47
2:AB:23:ARG:CG	2:AB:23:ARG:NH1	2.37	0.47
35:BA:2104:G:N3	35:BA:2104:G:H2'	2.29	0.47
35:BA:326:G:H2'	35:BA:327:G:H8	1.78	0.47
1:AA:1153:C:O2'	1:AA:1154:G:OP2	2.30	0.47
1:AA:187:C:O5'	1:AA:187:C:H6	1.97	0.47
4:AD:36:ARG:O	4:AD:38:TYR:N	2.46	0.47
57:BY:47:LYS:HG3	57:BY:60:PHE:CZ	2.49	0.47
38:BD:35:LYS:CD	38:BD:35:LYS:C	2.82	0.47
46:BN:128:HIS:HD2	46:BN:130:HIS:N	2.08	0.47
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.82	0.47
55:BW:32:ALA:O	55:BW:36:LEU:HD22	2.14	0.47
35:BA:2807:G:H2'	35:BA:2808:U:H5''	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:583:G:OP2	53:BU:10:ARG:HD2	2.14	0.47
1:AA:1015:A:H1'	1:AA:1218:C:O2'	2.14	0.47
24:AY:229:LEU:C	24:AY:231:TYR:N	2.66	0.47
35:BA:1239:G:H2'	35:BA:1240:U:O4'	2.14	0.47
35:BA:2746:U:C2'	35:BA:2747:G:H5'	2.44	0.47
1:AA:952:U:H2'	1:AA:953:G:H5'	1.96	0.47
42:BH:86:GLU:OE1	42:BH:86:GLU:N	2.47	0.47
1:AA:624:C:H4'	16:AP:10:GLY:O	2.14	0.47
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.96	0.47
1:AA:247:G:OP2	17:AQ:99:SER:HB2	2.13	0.47
44:BK:15:UNK:HA	44:BK:45:UNK:O	2.13	0.47
16:AP:27:LYS:HG2	16:AP:30:GLY:H	1.79	0.47
54:BV:71:LEU:HD12	54:BV:86:GLY:HA2	1.95	0.47
1:AA:1239:A:O2'	1:AA:1240:U:OP2	2.28	0.47
35:BA:1448:G:H1'	35:BA:1528:A:N6	2.26	0.47
1:AA:1305:G:OP2	1:AA:1305:G:H8	1.97	0.47
29:B4:31:ILE:HG12	29:B4:33:VAL:N	2.29	0.47
36:BB:44:G:H1'	36:BB:47:C:N4	2.28	0.47
41:BG:135:LEU:C	41:BG:137:GLU:N	2.68	0.47
41:BG:152:LEU:HD23	41:BG:152:LEU:N	2.25	0.47
41:BG:66:GLN:HE21	41:BG:92:VAL:CG2	2.26	0.47
41:BG:5:VAL:HG21	41:BG:8:LYS:NZ	2.29	0.47
35:BA:2207:G:HO2'	35:BA:2208:A:H5''	1.76	0.47
35:BA:1215:G:O6	35:BA:1235:G:C2	2.67	0.47
1:AA:521:G:H2'	1:AA:522:C:C5'	2.25	0.47
1:AA:868:C:HO2'	1:AA:869:G:H5'	1.74	0.47
38:BD:26:LYS:O	38:BD:27:THR:HB	2.14	0.47
37:BC:180:SER:O	37:BC:181:PHE:O	2.33	0.47
24:AY:550:MET:HG2	24:AY:560:VAL:HB	1.97	0.47
56:BX:8:ILE:HD11	56:BX:42:ALA:CB	2.34	0.47
26:B1:3:LYS:NZ	35:BA:1364:G:N7	2.46	0.47
35:BA:1698:A:N3	35:BA:1700:A:O4'	2.47	0.47
39:BE:52:LEU:HD21	52:BT:1:MET:HE1	1.96	0.47
22:AV:45:U:O2	22:AV:45:U:C4'	2.62	0.47
55:BW:24:ILE:HG21	55:BW:36:LEU:CD1	2.44	0.47
13:AM:54:VAL:HA	13:AM:57:ARG:HB3	1.96	0.47
42:BH:13:LYS:O	42:BH:15:VAL:HG22	2.15	0.47
49:BQ:33:GLY:HA2	49:BQ:105:GLU:HA	1.96	0.47
28:B3:46:ASN:ND2	35:BA:850:C:O2'	2.47	0.47
35:BA:286:C:H2'	35:BA:287:C:C6	2.49	0.47
38:BD:76:PRO:HG2	38:BD:98:VAL:CG2	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:206:LYS:HB3	37:BC:206:LYS:HZ3	1.79	0.47
35:BA:2389:G:C5'	35:BA:2390:U:H5'	2.43	0.47
43:BJ:69:UNK:O	43:BJ:70:UNK:C	2.62	0.47
1:AA:1396:A:C4'	1:AA:1398:A:H1'	2.44	0.47
52:BT:123:GLN:O	52:BT:127:ALA:HB3	2.13	0.47
53:BU:32:PHE:O	53:BU:36:ARG:HB2	2.14	0.47
1:AA:778:G:O2'	1:AA:779:C:H5'	2.14	0.47
45:BL:59:UNK:C	45:BL:61:UNK:N	2.75	0.47
15:AO:72:ARG:HG2	15:AO:73:GLU:OE2	2.14	0.47
37:BC:17:PRO:HG2	37:BC:18:ASN:H	1.79	0.47
1:AA:197:A:C5	1:AA:221:C:C4'	2.95	0.47
35:BA:602:G:O6	35:BA:654(T):C:C2	2.67	0.47
25:B0:61:ALA:HB2	25:B0:81:VAL:HG21	1.96	0.47
8:AH:30:ARG:CZ	8:AH:30:ARG:HB3	2.44	0.47
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.17	0.47
35:BA:2401:U:HO2'	35:BA:2402:C:P	2.37	0.47
35:BA:1036:G:N1	35:BA:1120:G:C6	2.82	0.47
1:AA:1073:U:O2'	1:AA:1074:G:C5'	2.58	0.47
51:BS:24:LEU:O	51:BS:85:VAL:HB	2.15	0.47
1:AA:867:G:C6	1:AA:868:C:C4	3.02	0.47
40:BF:20:LEU:HD13	40:BF:203:GLN:OE1	2.15	0.47
10:AJ:3:LYS:HB3	10:AJ:4:ILE:CD1	2.45	0.47
1:AA:1368:G:C2'	1:AA:1369:C:C5'	2.83	0.47
29:B4:66:SER:O	29:B4:69:LYS:HG2	2.14	0.47
58:BZ:151:HIS:CB	58:BZ:171:ILE:H	2.27	0.47
24:AY:550:MET:CE	24:AY:563:ILE:HD11	2.44	0.47
35:BA:527:C:O2	35:BA:527:C:O4'	2.30	0.47
35:BA:1652:A:H62	50:BR:11:ASN:ND2	2.12	0.47
55:BW:24:ILE:HG21	55:BW:36:LEU:HD13	1.96	0.47
1:AA:563:A:C2	1:AA:567:G:C5	3.03	0.47
37:BC:20:VAL:O	37:BC:21:TYR:CB	2.58	0.47
4:AD:150:GLU:C	4:AD:152:SER:N	2.67	0.47
1:AA:342:C:C2'	1:AA:343:U:H5'	2.43	0.47
35:BA:882:G:N2	35:BA:895:U:C2	2.82	0.47
9:AI:17:VAL:O	9:AI:17:VAL:HG13	2.15	0.47
15:AO:39:LEU:HD13	15:AO:56:LEU:CB	2.43	0.47
35:BA:7:G:O2'	35:BA:8:A:H5'	2.15	0.47
35:BA:1151:G:H2'	35:BA:1152:C:H6	1.79	0.47
25:B0:4:LYS:O	25:B0:5:LYS:O	2.31	0.47
53:BU:74:LEU:C	53:BU:74:LEU:HD12	2.35	0.47
4:AD:70:ILE:HG23	4:AD:74:GLN:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2052:G:O4'	39:BE:142:GLY:HA3	2.14	0.47
35:BA:717:G:H2'	35:BA:718:A:O4'	2.15	0.47
46:BN:119:ARG:HH11	46:BN:119:ARG:HG3	1.77	0.47
44:BK:4:UNK:O	44:BK:5:UNK:C	2.62	0.47
29:B4:59:PHE:O	29:B4:59:PHE:CD1	2.66	0.47
35:BA:2110:G:H8	35:BA:2110:G:OP2	1.96	0.47
26:B1:20:ARG:HH11	26:B1:20:ARG:HG2	1.79	0.47
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	1.96	0.47
37:BC:129:GLY:C	37:BC:131:ILE:N	2.67	0.47
37:BC:80:LYS:O	37:BC:83:LYS:HB3	2.14	0.47
33:B8:41:ILE:O	33:B8:41:ILE:HG12	2.14	0.47
7:AG:22:LEU:CD2	7:AG:101:LEU:HD11	2.45	0.47
1:AA:1298:C:H2'	7:AG:114:ARG:HH12	1.78	0.47
35:BA:27:G:C2	35:BA:512:G:H2'	2.48	0.47
1:AA:863:U:O2	1:AA:863:U:C4'	2.62	0.47
27:B2:4:SER:OG	27:B2:5:GLU:N	2.48	0.47
1:AA:1392:G:N2	1:AA:1502:A:H8	2.12	0.47
1:AA:1400:C:C4'	1:AA:1401:G:OP2	2.56	0.47
35:BA:1133:U:O2	35:BA:1137:G:H5''	2.15	0.47
29:B4:16:CYS:CB	29:B4:19:GLY:O	2.62	0.47
41:BG:137:GLU:CD	41:BG:154:GLY:H	2.18	0.47
35:BA:806:C:P	48:BP:39:LYS:HG3	2.53	0.47
58:BZ:183:LEU:HD11	58:BZ:186:GLU:HA	1.96	0.47
42:BH:153:LYS:CG	42:BH:154:PRO:HD2	2.44	0.47
35:BA:325:G:H2'	35:BA:326:G:C8	2.46	0.47
40:BF:181:LEU:HD23	40:BF:202:PHE:HD1	1.79	0.47
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.32	0.47
39:BE:117:MET:HE3	39:BE:136:ARG:HA	1.94	0.47
35:BA:993:G:OP1	53:BU:50:ARG:NH1	2.48	0.47
24:AY:614:GLU:CA	24:AY:617:MET:HE3	2.39	0.47
37:BC:75:VAL:HG12	37:BC:113:ALA:HB3	1.97	0.47
37:BC:42:VAL:CG1	37:BC:43:GLU:H	2.27	0.47
40:BF:53:THR:HG22	40:BF:56:GLU:OE1	2.14	0.47
1:AA:177:C:H2'	1:AA:178:C:H6	1.78	0.47
1:AA:605:U:O2'	1:AA:606:G:H5'	2.14	0.47
35:BA:738:G:C6	35:BA:739:G:C2	3.02	0.47
35:BA:201:C:C2'	35:BA:202:U:H5'	2.45	0.47
24:AY:164:MET:O	24:AY:180:VAL:HG22	2.14	0.47
56:BX:32:PRO:HA	56:BX:77:LYS:HB2	1.97	0.47
49:BQ:3:MET:HB2	49:BQ:4:PRO:HD2	1.95	0.47
1:AA:1381:U:H5	1:AA:1382:C:C4	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:46:LYS:HA	2:AB:49:GLU:OE1	2.15	0.47
52:BT:90:GLN:CB	52:BT:121:ILE:HG12	2.44	0.47
35:BA:108:U:H2'	35:BA:109:G:C8	2.46	0.47
35:BA:2557:G:C2'	35:BA:2558:C:H5'	2.44	0.47
1:AA:490:G:H2'	1:AA:491:G:C8	2.38	0.47
7:AG:116:ALA:HA	7:AG:119:ARG:NH1	2.30	0.47
7:AG:49:ILE:O	7:AG:50:ILE:CB	2.61	0.47
1:AA:646:U:H2'	1:AA:647:C:C6	2.49	0.47
35:BA:39:C:C2'	35:BA:40:C:C5'	2.91	0.47
35:BA:2610:C:O2'	35:BA:2611:U:OP1	2.32	0.47
35:BA:1992:G:C2'	35:BA:1993:U:OP2	2.62	0.47
35:BA:620:G:H4'	35:BA:621:A:H5''	1.97	0.47
35:BA:1132:A:O2'	35:BA:1133:U:H5'	2.15	0.47
41:BG:7:LEU:HB2	41:BG:104:GLU:CG	2.43	0.47
41:BG:77:ILE:CG2	41:BG:80:PHE:H	2.28	0.47
33:B8:4:MET:HB2	35:BA:592:G:O2'	2.14	0.47
33:B8:60:LEU:C	33:B8:61:LEU:HD12	2.35	0.47
35:BA:1023:U:C2'	35:BA:1024:G:C5'	2.72	0.47
35:BA:1800:C:H5'	38:BD:147:LEU:HD21	1.96	0.47
53:BU:54:LYS:O	53:BU:58:ARG:HG3	2.15	0.47
40:BF:81:PRO:HB3	40:BF:89:VAL:HG23	1.96	0.47
34:B9:17:ILE:CG2	34:B9:18:ARG:H	2.25	0.47
1:AA:868:C:C2'	1:AA:869:G:O5'	2.62	0.47
35:BA:1885:A:H8	35:BA:1885:A:H5'	1.79	0.47
35:BA:2134:A:C8	35:BA:2158:A:C2	3.00	0.47
39:BE:61:ARG:C	39:BE:63:LEU:H	2.16	0.47
38:BD:131:LEU:N	38:BD:131:LEU:HD12	2.28	0.47
35:BA:271(Q):G:O2'	35:BA:271(R):G:P	2.72	0.47
1:AA:563:A:N3	1:AA:563:A:C2'	2.77	0.47
24:AY:584:ILE:HG22	24:AY:588:MET:CE	2.43	0.47
22:AV:76:A:H8	35:BA:2394:C:H42	1.60	0.47
1:AA:839:U:O2	1:AA:839:U:C2'	2.61	0.47
35:BA:1097:U:C2'	35:BA:1098:A:H5'	2.43	0.47
34:B9:29:ASN:ND2	34:B9:32:HIS:CE1	2.83	0.47
39:BE:2:LYS:HD3	39:BE:95:ILE:CG2	2.45	0.47
7:AG:69:VAL:O	7:AG:69:VAL:HG22	2.14	0.47
7:AG:33:ASP:C	7:AG:35:LYS:H	2.17	0.47
24:AY:512:ILE:N	24:AY:512:ILE:HD13	2.29	0.47
25:B0:52:GLY:C	25:B0:60:PHE:CE1	2.88	0.47
1:AA:1133:G:C4	1:AA:1142:G:N2	2.81	0.47
1:AA:431:A:O2'	1:AA:432:A:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:709:U:H2'	35:BA:710:G:C8	2.49	0.47
35:BA:363:G:H2'	35:BA:363(A):A:H8	1.79	0.47
35:BA:2364:C:C2'	35:BA:2365:G:H5'	2.45	0.47
48:BP:52:GLU:CG	48:BP:57:THR:HG22	2.35	0.47
35:BA:1678:G:O5'	35:BA:1678:G:H8	1.98	0.47
35:BA:747:U:H1'	55:BW:92:ARG:NH2	2.29	0.47
35:BA:1223:G:C2	35:BA:1227:G:C5	3.03	0.47
35:BA:90:U:HO2'	35:BA:92:A:P	2.37	0.47
29:B4:21:VAL:O	29:B4:22:ILE:C	2.52	0.47
29:B4:38:LYS:HG2	29:B4:47:GLN:OE1	2.15	0.47
31:B6:17:LYS:C	31:B6:18:ARG:HD2	2.35	0.47
1:AA:1487:G:C2'	1:AA:1488:G:H5'	2.45	0.47
1:AA:963:G:N2	10:AJ:55:LYS:HD3	2.29	0.47
35:BA:1805:U:O2'	35:BA:1806:C:C5'	2.47	0.47
35:BA:2175:C:H2'	35:BA:2176:A:H8	1.78	0.47
53:BU:61:TRP:O	53:BU:65:ILE:HD13	2.15	0.47
25:B0:12:ASN:HA	25:B0:14:ARG:NH1	2.30	0.47
1:AA:1151:A:C4	1:AA:1152:A:C5	3.02	0.47
1:AA:188:C:O5'	1:AA:188:C:H6	1.97	0.47
40:BF:198:ALA:O	40:BF:201:VAL:HG12	2.15	0.47
52:BT:13:ARG:NE	52:BT:13:ARG:HA	2.27	0.47
49:BQ:141:GLN:CG	58:BZ:72:ARG:CZ	2.93	0.47
40:BF:20:LEU:HB3	40:BF:23:ASP:CG	2.35	0.47
3:AC:190:ARG:NH1	3:AC:190:ARG:HG3	2.30	0.47
58:BZ:102:LEU:HD12	58:BZ:121:HIS:O	2.14	0.47
24:AY:488:THR:O	24:AY:516:PRO:HG3	2.14	0.47
24:AY:550:MET:SD	24:AY:563:ILE:HD11	2.54	0.47
35:BA:2147:G:H2'	35:BA:2148:G:C4'	2.44	0.47
35:BA:527:C:H1'	35:BA:528:A:C8	2.49	0.47
39:BE:61:ARG:O	39:BE:63:LEU:N	2.41	0.47
32:B7:40:TRP:CD2	35:BA:459:U:H5''	2.49	0.47
58:BZ:20:ARG:HB3	58:BZ:20:ARG:HH11	1.80	0.47
35:BA:2193:G:C4	35:BA:2194:G:C8	3.02	0.47
28:B3:22:ALA:CA	28:B3:46:ASN:HD22	2.26	0.47
41:BG:83:ARG:C	41:BG:85:GLY:N	2.68	0.47
36:BB:13:A:N1	36:BB:69:G:O2'	2.40	0.47
35:BA:2615:U:H2'	35:BA:2616:C:H6	1.79	0.47
7:AG:89:MET:HE1	7:AG:155:ARG:HB3	1.96	0.47
47:BO:11:ALA:O	47:BO:98:VAL:HG23	2.14	0.47
27:B2:53:LEU:HD23	27:B2:53:LEU:O	2.14	0.47
46:BN:15:LEU:O	46:BN:136:GLU:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:32:GLU:O	13:AM:35:GLU:HG2	2.14	0.47
43:BJ:51:UNK:O	43:BJ:87:UNK:HA	2.14	0.47
24:AY:186:TYR:N	24:AY:186:TYR:CD1	2.82	0.47
1:AA:425:G:O2'	1:AA:426:G:H5'	2.15	0.47
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.95	0.47
35:BA:1198:U:H2'	35:BA:1199:U:C6	2.50	0.47
52:BT:48:ILE:HD12	52:BT:48:ILE:H	1.79	0.47
52:BT:25:GLY:CA	52:BT:92:GLY:HA2	2.45	0.47
1:AA:123:C:H2'	1:AA:124:G:C8	2.50	0.47
35:BA:628:G:H2'	35:BA:629:G:C5'	2.42	0.47
48:BP:46:LYS:HG2	48:BP:51:PHE:CG	2.49	0.47
37:BC:105:LEU:H	37:BC:105:LEU:HD22	1.80	0.47
1:AA:491:G:C2'	1:AA:492:G:O5'	2.62	0.47
1:AA:544:G:C2'	1:AA:545:C:O5'	2.63	0.47
35:BA:603:A:C8	35:BA:655:A:C6	3.03	0.47
7:AG:15:ASP:HB3	7:AG:19:GLY:C	2.34	0.47
1:AA:590:C:OP1	8:AH:30:ARG:N	2.43	0.47
35:BA:2009:G:C2'	35:BA:2010:G:H5''	2.43	0.47
1:AA:360:A:H2'	1:AA:361:G:C5'	2.45	0.47
1:AA:360:A:H2'	1:AA:361:G:C8	2.50	0.47
35:BA:1779:U:H3'	35:BA:1779:U:H6	1.79	0.47
41:BG:5:VAL:HG11	41:BG:8:LYS:HB2	1.96	0.47
30:B5:54:GLY:O	30:B5:55:ARG:C	2.53	0.47
35:BA:753:C:H2'	35:BA:754:C:H6	1.78	0.47
35:BA:15:G:C4	35:BA:16:G:C8	3.03	0.47
35:BA:1893:C:C2'	35:BA:1894:C:H5'	2.44	0.47
36:BB:37:C:H2'	36:BB:38:C:H5'	1.97	0.47
51:BS:93:LYS:O	51:BS:93:LYS:HG3	2.14	0.47
51:BS:56:LEU:HD23	51:BS:57:LYS:O	2.14	0.47
35:BA:612:C:C2'	35:BA:613:G:C5'	2.71	0.47
1:AA:353:A:H2'	1:AA:354:G:OP2	2.15	0.47
1:AA:961:U:C2'	1:AA:961:U:OP1	2.63	0.47
35:BA:796:C:H2'	35:BA:797:C:H6	1.77	0.47
58:BZ:185:GLU:O	58:BZ:186:GLU:C	2.50	0.47
2:AB:21:ARG:O	2:AB:23:ARG:N	2.40	0.47
1:AA:1073:U:H2'	1:AA:1074:G:C5'	2.32	0.47
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.97	0.47
40:BF:82:ILE:H	40:BF:82:ILE:HG12	1.32	0.47
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.47	0.47
1:AA:187:C:C2'	1:AA:188:C:H5'	2.44	0.47
7:AG:81:GLY:C	23:AX:12:A:O3'	2.53	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:47:LYS:O	12:AL:48:PRO:C	2.53	0.47
40:BF:3:GLU:HA	40:BF:24:LEU:CG	2.44	0.47
28:B3:10:LYS:HB3	28:B3:53:LEU:HD23	1.95	0.47
24:AY:126:GLU:O	24:AY:129:LYS:N	2.37	0.47
35:BA:2148:G:O2'	35:BA:2149:G:H5'	2.14	0.47
35:BA:528:A:C2	35:BA:2043:C:H5'	2.47	0.47
24:AY:238:THR:HG23	24:AY:241:GLU:H	1.79	0.47
57:BY:81:LYS:HD3	57:BY:97:ARG:CG	2.39	0.47
26:B1:24:ALA:HB3	26:B1:27:GLU:HG3	1.97	0.47
1:AA:564:C:C4	1:AA:565:U:C4	3.02	0.47
24:AY:588:MET:HA	24:AY:591:LYS:HB3	1.96	0.47
24:AY:584:ILE:O	24:AY:588:MET:HE2	2.14	0.47
35:BA:582:G:H2'	35:BA:583:G:H8	1.78	0.47
9:AI:6:GLY:O	9:AI:17:VAL:HG12	2.14	0.47
6:AF:71:ARG:NH1	6:AF:71:ARG:HG3	2.29	0.47
47:BO:77:ILE:CD1	52:BT:74:ARG:HD3	2.44	0.47
35:BA:2783:G:H2'	35:BA:2784:C:H6	1.79	0.47
33:B8:29:LYS:HD3	33:B8:44:LYS:HB3	1.95	0.47
35:BA:902:C:H2'	35:BA:903:C:H6	1.76	0.47
3:AC:91:LEU:CB	3:AC:99:VAL:HG21	2.44	0.47
49:BQ:1:MET:HE2	49:BQ:1:MET:HA	1.97	0.47
1:AA:160:A:H1'	1:AA:344:A:C2	2.49	0.47
38:BD:186:HIS:CD2	38:BD:188:GLU:HB2	2.50	0.47
19:AS:20:LEU:CD1	29:B4:61:ARG:HH21	2.28	0.47
1:AA:954:G:H2'	1:AA:955:U:H6	1.78	0.47
18:AR:56:THR:HB	18:AR:58:LEU:HD12	1.94	0.47
1:AA:713:G:H2'	1:AA:714:G:C8	2.49	0.47
7:AG:69:VAL:HG11	7:AG:104:LEU:HD13	1.96	0.47
11:AK:57:THR:OG1	11:AK:58:PRO:HD2	2.14	0.47
1:AA:1142:G:C8	1:AA:1143:G:C8	3.03	0.47
9:AI:50:LEU:HD23	9:AI:85:LEU:HD23	1.97	0.47
1:AA:339:C:H2'	1:AA:340:U:H6	1.80	0.47
35:BA:1197:G:O2'	35:BA:1198:U:H5'	2.14	0.47
35:BA:576:U:H2'	35:BA:577:G:C8	2.50	0.47
35:BA:2352:A:H2'	35:BA:2353:G:O4'	2.14	0.47
56:BX:23:GLU:CD	56:BX:23:GLU:H	2.18	0.47
41:BG:28:VAL:O	41:BG:28:VAL:HG12	2.13	0.47
24:AY:583:LYS:HD3	24:AY:583:LYS:C	2.35	0.47
35:BA:1288:U:C2	35:BA:1327:C:O2	2.67	0.47
54:BV:68:LYS:HD2	54:BV:69:LYS:H	1.80	0.47
1:AA:933:G:OP2	7:AG:3:ARG:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:35:TYR:OH	24:AY:266:ASN:HB3	2.14	0.47
35:BA:2505:G:O6	35:BA:2576:G:H2'	2.15	0.47
1:AA:1476:G:H2'	1:AA:1477:C:C6	2.50	0.47
3:AC:207:VAL:HG12	3:AC:207:VAL:O	2.14	0.47
52:BT:133:GLU:OE1	52:BT:136:GLN:HB3	2.15	0.47
30:B5:40:LYS:HD3	30:B5:46:CYS:CB	2.44	0.47
35:BA:2360:A:HO2'	35:BA:2361:A:P	2.37	0.47
37:BC:118:PRO:HB3	37:BC:121:MET:HG2	1.97	0.47
1:AA:444:C:H2'	1:AA:445:G:C8	2.50	0.47
2:AB:19:HIS:O	2:AB:20:GLU:HB2	2.14	0.47
2:AB:20:GLU:CB	2:AB:190:THR:OG1	2.62	0.47
1:AA:774:G:H2'	1:AA:775:G:O5'	2.15	0.47
35:BA:150:C:H2'	35:BA:151:C:C6	2.50	0.47
1:AA:751:U:C2'	1:AA:752:G:H5'	2.45	0.47
38:BD:243:GLY:O	38:BD:244:ARG:O	2.32	0.47
35:BA:1540:U:O2'	35:BA:1541:G:OP1	2.33	0.47
35:BA:1995:U:H2'	35:BA:1996:C:C6	2.50	0.47
35:BA:1133:U:O3'	35:BA:1135:C:OP2	2.33	0.47
40:BF:192:LEU:HD22	40:BF:194:MET:HE2	1.96	0.47
19:AS:25:LYS:HG3	19:AS:26:GLY:N	2.30	0.47
29:B4:35:VAL:HG13	41:BG:108:ASN:O	2.15	0.47
41:BG:51:ARG:C	41:BG:52:ILE:HG13	2.33	0.47
35:BA:2401:U:H5''	35:BA:2402:C:H5	1.79	0.47
1:AA:961:U:O2'	1:AA:962:C:P	2.73	0.47
38:BD:266:SER:O	38:BD:267:SER:O	2.33	0.47
1:AA:1157:A:H4'	1:AA:1158:C:C5'	2.43	0.47
35:BA:2126:A:O2'	35:BA:2127:G:O4'	2.30	0.47
35:BA:1106:G:H2'	35:BA:1107:G:H8	1.80	0.47
1:AA:1384:C:C2	1:AA:1385:G:C8	3.03	0.47
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	1.96	0.47
1:AA:412:A:H5'	1:AA:413:G:OP2	2.15	0.47
3:AC:113:ALA:HA	3:AC:116:VAL:HG12	1.96	0.47
35:BA:2580:U:H5'	39:BE:131:ALA:H	1.79	0.47
39:BE:61:ARG:HH11	39:BE:61:ARG:HG3	1.79	0.47
36:BB:3:C:N4	36:BB:118:G:H1	2.05	0.47
35:BA:285:C:O2'	35:BA:286:C:H5'	2.15	0.47
44:BK:88:UNK:HA	44:BK:96:UNK:H2	1.79	0.47
35:BA:2291:U:OP1	35:BA:2381:C:H5'	2.15	0.47
12:AL:94:PRO:O	12:AL:96:VAL:N	2.48	0.47
41:BG:180:PHE:C	41:BG:180:PHE:CD1	2.88	0.47
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:35:SER:C	19:AS:37:ARG:N	2.67	0.47
46:BN:45:ASN:ND2	46:BN:45:ASN:H	2.13	0.47
1:AA:820:U:H4'	1:AA:821:G:OP2	2.15	0.47
49:BQ:116:GLU:O	49:BQ:120:ILE:HG12	2.14	0.47
35:BA:1501:C:H1'	38:BD:100:GLY:HA2	1.95	0.47
35:BA:2337:G:H2'	35:BA:2338:G:H8	1.80	0.47
37:BC:228:HIS:O	37:BC:229:SER:HB3	2.15	0.47
24:AY:319:ASP:OD2	24:AY:322:VAL:HG22	2.15	0.47
35:BA:860:U:O4'	35:BA:860:U:O2	2.31	0.47
1:AA:1346:A:O3'	1:AA:1347:G:H4'	2.15	0.47
35:BA:1541:G:O2'	35:BA:1542:A:C5'	2.63	0.47
35:BA:1542:A:C8	35:BA:1544:A:H5'	2.50	0.47
35:BA:31:C:C3'	35:BA:32:C:C5'	2.93	0.47
35:BA:1999:C:H5''	35:BA:2723:C:O2'	2.15	0.47
13:AM:2:ALA:N	13:AM:9:ILE:HG22	2.29	0.47
29:B4:16:CYS:HB3	29:B4:19:GLY:O	2.15	0.47
29:B4:2:LYS:HD2	29:B4:6:HIS:CD2	2.50	0.47
41:BG:9:ARG:HB3	41:BG:13:GLU:OE1	2.15	0.47
41:BG:39:ILE:HG23	41:BG:39:ILE:O	2.14	0.47
33:B8:61:LEU:N	33:B8:61:LEU:CD1	2.76	0.47
31:B6:45:LYS:CB	31:B6:45:LYS:NZ	2.78	0.47
1:AA:1283:G:O2'	1:AA:1284:C:P	2.73	0.47
48:BP:34:GLY:O	48:BP:35:HIS:CB	2.62	0.47
32:B7:34:ARG:HD3	35:BA:467:G:OP2	2.14	0.47
35:BA:2757:A:C2'	35:BA:2758:A:O5'	2.61	0.47
37:BC:6:LYS:HA	37:BC:9:ARG:NH1	2.30	0.47
3:AC:72:LYS:HE3	3:AC:74:GLY:H	1.80	0.47
1:AA:17:U:H4'	1:AA:1080:A:O4'	2.15	0.47
42:BH:89:ILE:O	42:BH:89:ILE:CG1	2.62	0.47
1:AA:701:C:P	1:AA:703:G:H5'	2.55	0.47
26:B1:84:GLY:O	26:B1:90:ILE:HD11	2.15	0.47
35:BA:1286:A:C4	35:BA:1329:U:C4	3.03	0.47
38:BD:21:PHE:HB3	38:BD:24:ILE:CG2	2.44	0.47
35:BA:1067:A:C3'	35:BA:1068:G:H5''	2.45	0.47
3:AC:121:ALA:O	3:AC:124:ILE:HG22	2.14	0.47
24:AY:108:PHE:CE2	24:AY:114:VAL:HG22	2.50	0.47
2:AB:127:ILE:HD13	2:AB:135:GLN:NE2	2.29	0.47
48:BP:18:ARG:O	48:BP:20:GLY:N	2.48	0.47
35:BA:2134:A:N6	35:BA:2157:G:H1'	2.30	0.47
24:AY:547:GLU:O	24:AY:550:MET:HB3	2.15	0.47
1:AA:1129:C:O3'	1:AA:1131:G:OP2	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:95:LYS:HE3	57:BY:96:ILE:O	2.14	0.47
9:AI:114:TYR:HE1	10:AJ:59:SER:HA	1.80	0.47
52:BT:106:SER:O	52:BT:107:ASP:HB3	2.15	0.47
37:BC:88:GLU:HA	37:BC:92:ALA:CB	2.45	0.47
35:BA:2848:G:H3'	52:BT:95:ARG:O	2.14	0.47
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.15	0.47
11:AK:108:ILE:HG21	18:AR:88:LYS:HB3	1.97	0.47
38:BD:209:ALA:C	38:BD:210:GLY:O	2.52	0.47
38:BD:210:GLY:O	38:BD:212:SER:N	2.46	0.47
25:B0:72:ARG:HB3	25:B0:75:LEU:HB2	1.96	0.47
40:BF:29:ASN:H	40:BF:112:MET:CE	2.28	0.47
24:AY:600:VAL:HG21	24:AY:678:GLU:CG	2.45	0.47
36:BB:53:A:H2'	36:BB:53:A:N3	2.29	0.47
24:AY:428:LEU:HB3	24:AY:440:VAL:HG21	1.96	0.47
50:BR:28:LEU:HD23	50:BR:28:LEU:O	2.15	0.47
3:AC:42:LEU:HD12	3:AC:42:LEU:O	2.14	0.47
25:B0:38:VAL:HG12	25:B0:39:ARG:N	2.29	0.47
33:B8:27:THR:CG2	35:BA:2361:A:OP1	2.59	0.47
35:BA:958:U:O4	49:BQ:17:LEU:HG	2.15	0.47
1:AA:41:G:O2'	1:AA:42:G:H5'	2.15	0.47
1:AA:941:G:H2'	1:AA:942:G:O5'	2.15	0.47
1:AA:942:G:C2	1:AA:943:U:C5	3.03	0.47
1:AA:255:G:O6	1:AA:266:G:O6	2.33	0.47
35:BA:1461:G:H8	35:BA:1461:G:P	2.38	0.47
27:B2:8:LYS:O	27:B2:9:GLN:C	2.53	0.47
1:AA:1305:G:O2'	1:AA:1306:A:C8	2.54	0.47
41:BG:100:TRP:O	41:BG:104:GLU:HB2	2.15	0.47
13:AM:7:VAL:HG22	41:BG:147:ASP:OD1	2.10	0.47
35:BA:693:C:C2'	35:BA:694:U:O5'	2.63	0.47
35:BA:1818:U:O4	38:BD:154:LYS:HD3	2.16	0.47
29:B4:62:ARG:C	29:B4:64:GLY:H	2.19	0.47
31:B6:22:ALA:C	31:B6:23:THR:HG23	2.35	0.47
42:BH:67:LEU:O	42:BH:71:LEU:HD12	2.15	0.47
35:BA:880:G:H2'	35:BA:881:G:C5'	2.42	0.47
35:BA:9:U:O2'	35:BA:10:G:P	2.73	0.47
2:AB:96:ARG:HG3	2:AB:98:LEU:HD23	1.97	0.47
51:BS:49:VAL:HG12	51:BS:50:SER:N	2.28	0.47
56:BX:14:SER:O	56:BX:15:GLU:C	2.54	0.47
36:BB:14:U:OP2	36:BB:71:C:H5'	2.15	0.47
50:BR:54:LEU:HB3	50:BR:62:ALA:HB1	1.97	0.47
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:95:LEU:HD11	38:BD:103:ARG:HB2	1.97	0.47
57:BY:49:VAL:O	57:BY:50:ARG:HB2	2.14	0.47
8:AH:121:ASP:HB2	8:AH:125:ARG:HH22	1.80	0.47
35:BA:2236:C:H2'	35:BA:2237:G:O4'	2.15	0.47
35:BA:614:U:O2	35:BA:614:U:O4'	2.31	0.47
56:BX:57:LEU:HD22	56:BX:78:LYS:HB3	1.97	0.47
4:AD:25:ARG:C	4:AD:27:TYR:H	2.18	0.47
52:BT:16:ARG:HH12	52:BT:19:LEU:HG	1.80	0.46
52:BT:27:THR:O	52:BT:28:VAL:CB	2.63	0.46
52:BT:90:GLN:HB3	52:BT:121:ILE:HG12	1.96	0.46
2:AB:115:LEU:CD1	2:AB:149:LEU:HB3	2.45	0.46
2:AB:115:LEU:HD23	2:AB:115:LEU:C	2.35	0.46
35:BA:1113:U:H2'	35:BA:1114:G:H8	1.79	0.46
1:AA:949:A:C3'	1:AA:950:U:C5'	2.91	0.46
48:BP:146:VAL:CG2	48:BP:147:LEU:H	2.07	0.46
1:AA:198:G:C6	1:AA:220:G:C5	3.00	0.46
1:AA:774:G:C2'	1:AA:775:G:O5'	2.63	0.46
35:BA:860:U:H2'	35:BA:861:A:H5'	1.97	0.46
28:B3:9:VAL:CG2	28:B3:55:ARG:HD2	2.44	0.46
1:AA:688:G:N1	1:AA:700:G:C4	2.83	0.46
35:BA:1422:G:H2'	35:BA:1423:G:C8	2.49	0.46
35:BA:2713:A:C3'	35:BA:2714:G:H5''	2.43	0.46
35:BA:33:U:O4	35:BA:446:G:O2'	2.17	0.46
40:BF:192:LEU:HD22	40:BF:194:MET:HG3	1.97	0.46
1:AA:1307:U:C2	1:AA:1308:U:C5	3.02	0.46
41:BG:56:ALA:HB2	41:BG:153:ARG:CZ	2.45	0.46
41:BG:52:ILE:HD12	41:BG:53:LEU:N	2.30	0.46
30:B5:51:TYR:HB3	30:B5:54:GLY:HA3	1.97	0.46
42:BH:85:LYS:HZ2	42:BH:145:ALA:HA	1.80	0.46
24:AY:86:GLY:O	24:AY:117:GLN:HG3	2.15	0.46
32:B7:34:ARG:CG	32:B7:34:ARG:HH11	2.20	0.46
1:AA:1498:U:H4'	1:AA:1499:A:C5'	2.44	0.46
1:AA:1312:G:O2'	1:AA:1313:U:H5'	2.15	0.46
3:AC:72:LYS:HE3	3:AC:74:GLY:CA	2.45	0.46
1:AA:1388:C:HO2'	1:AA:1389:C:H5'	1.75	0.46
24:AY:36:THR:OG1	24:AY:37:GLY:N	2.49	0.46
40:BF:178:PRO:HG2	40:BF:179:GLU:OE1	2.15	0.46
4:AD:13:ARG:HG2	4:AD:33:MET:CE	2.45	0.46
10:AJ:33:GLN:CG	10:AJ:75:ILE:HD11	2.45	0.46
28:B3:5:LYS:HE2	28:B3:34:GLU:CD	2.35	0.46
24:AY:108:PHE:HE2	24:AY:114:VAL:HG22	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:148:LEU:O	24:AY:152:THR:HB	2.14	0.46
29:B4:65:ASP:O	29:B4:67:TYR:N	2.48	0.46
54:BV:19:LYS:NZ	54:BV:20:LEU:N	2.62	0.46
35:BA:2580:U:H5'	39:BE:131:ALA:N	2.30	0.46
36:BB:8:U:H5'	36:BB:8:U:C6	2.35	0.46
46:BN:58:ASP:O	46:BN:60:ILE:N	2.48	0.46
36:BB:54:G:O2'	36:BB:55:U:H5'	2.15	0.46
35:BA:221:A:N7	35:BA:266:G:C6	2.83	0.46
58:BZ:20:ARG:HH11	58:BZ:20:ARG:CB	2.27	0.46
24:AY:343:ASN:O	24:AY:347:GLY:N	2.48	0.46
3:AC:17:ASP:CG	3:AC:18:TRP:H	2.18	0.46
1:AA:679:C:H2'	1:AA:680:C:C6	2.50	0.46
37:BC:176:VAL:O	37:BC:176:VAL:HG12	2.15	0.46
2:AB:93:VAL:HG22	2:AB:93:VAL:O	2.14	0.46
24:AY:600:VAL:HG21	24:AY:678:GLU:CD	2.36	0.46
46:BN:37:LYS:HG3	46:BN:42:TRP:CE3	2.50	0.46
44:BK:112:UNK:O	44:BK:113:UNK:C	2.62	0.46
1:AA:423:G:C2'	1:AA:424:G:H5'	2.45	0.46
52:BT:16:ARG:NH1	52:BT:18:ASP:OD1	2.49	0.46
2:AB:111:ARG:HD2	2:AB:111:ARG:HA	1.64	0.46
37:BC:115:VAL:HG22	37:BC:150:ILE:HD13	1.97	0.46
35:BA:1416:G:N2	35:BA:1417:C:N3	2.63	0.46
35:BA:1769:G:O6	35:BA:1984:G:O6	2.34	0.46
35:BA:1463:C:H2'	35:BA:1464:C:C6	2.50	0.46
3:AC:84:ILE:HG23	3:AC:85:ARG:N	2.30	0.46
35:BA:2581:G:C6	35:BA:2610:C:C2	3.02	0.46
13:AM:66:LEU:N	13:AM:66:LEU:CD1	2.77	0.46
29:B4:6:HIS:ND1	29:B4:7:PRO:HD2	2.30	0.46
1:AA:1180:A:O5'	1:AA:1180:A:H8	1.99	0.46
51:BS:54:LEU:C	51:BS:56:LEU:N	2.68	0.46
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.84	0.46
1:AA:1046:A:H2'	1:AA:1047:G:H5'	1.97	0.46
36:BB:22:U:H2'	36:BB:23:G:H8	1.79	0.46
35:BA:1104:C:O5'	35:BA:1104:C:H6	1.97	0.46
1:AA:1151:A:N1	1:AA:1152:A:C6	2.83	0.46
1:AA:789:U:H6	1:AA:789:U:O5'	1.98	0.46
35:BA:1290:C:H2'	35:BA:1291:C:C6	2.49	0.46
24:AY:122:TRP:CG	24:AY:157:LEU:HD12	2.50	0.46
1:AA:859:A:C2'	1:AA:860:A:C5'	2.87	0.46
35:BA:155:U:C3'	35:BA:156:U:H5''	2.46	0.46
50:BR:9:LYS:HG3	50:BR:43:GLU:OE1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:31:HIS:O	3:AC:34:LEU:N	2.49	0.46
37:BC:54:ARG:HH22	37:BC:56:ASP:HB3	1.76	0.46
1:AA:736:C:H2'	1:AA:737:A:C8	2.50	0.46
35:BA:361:G:C2'	35:BA:362:U:H5''	2.38	0.46
40:BF:122:LYS:HG3	40:BF:191:ARG:HA	1.97	0.46
35:BA:1434:A:H2'	35:BA:1435:G:C8	2.50	0.46
22:AV:47:U:H3'	22:AV:48:C:H5''	1.98	0.46
40:BF:63:LYS:NZ	40:BF:75:HIS:O	2.48	0.46
18:AR:26:LEU:HG	18:AR:42:ARG:NH1	2.30	0.46
1:AA:389:A:N3	1:AA:389:A:H2'	2.30	0.46
15:AO:17:ARG:O	15:AO:18:PHE:HB3	2.16	0.46
3:AC:99:VAL:O	3:AC:99:VAL:HG23	2.14	0.46
1:AA:1296:C:C5'	1:AA:1302:U:O4	2.63	0.46
37:BC:68:GLY:N	37:BC:189:ASN:ND2	2.62	0.46
36:BB:67:G:O2'	36:BB:68:C:H6	1.97	0.46
35:BA:2741:A:H2'	35:BA:2742:C:O4'	2.15	0.46
36:BB:50:G:OP2	51:BS:62:LYS:HD3	2.15	0.46
35:BA:570:G:H2'	35:BA:2030:A:N7	2.30	0.46
1:AA:865:A:C5	1:AA:866:C:C4	3.03	0.46
37:BC:108:TRP:CD1	37:BC:108:TRP:N	2.82	0.46
35:BA:2572:A:N7	39:BE:144:ARG:HD2	2.30	0.46
35:BA:843:G:C2'	35:BA:844:C:H5'	2.45	0.46
4:AD:158:ILE:HG22	4:AD:181:MET:HE2	1.98	0.46
4:AD:158:ILE:HG22	4:AD:181:MET:CE	2.45	0.46
24:AY:421:GLN:CA	24:AY:421:GLN:HE21	2.28	0.46
36:BB:5:C:O2'	36:BB:6:C:H5'	2.14	0.46
43:BJ:109:UNK:C	43:BJ:111:UNK:N	2.78	0.46
2:AB:95:GLN:HE21	2:AB:147:LYS:HE2	1.80	0.46
1:AA:29:G:O2'	1:AA:30:U:H5'	2.15	0.46
35:BA:1625:C:H2'	35:BA:1626:G:H5'	1.97	0.46
35:BA:833:U:H5'	48:BP:51:PHE:O	2.11	0.46
1:AA:545:C:O2'	1:AA:546:G:C5'	2.63	0.46
4:AD:5:ILE:O	4:AD:5:ILE:HG22	2.15	0.46
35:BA:1988:C:H2'	35:BA:1989:G:H8	1.80	0.46
1:AA:589:C:C2'	1:AA:590:C:H5'	2.44	0.46
35:BA:1773:A:C8	35:BA:1829:A:C8	3.03	0.46
1:AA:688:G:C2'	1:AA:689:C:C5'	2.93	0.46
35:BA:1797:C:C2'	35:BA:1798:U:H5'	2.45	0.46
35:BA:2714:G:C6	35:BA:2715:C:C4	3.03	0.46
1:AA:559:A:H1'	1:AA:561:U:O2'	2.16	0.46
27:B2:5:GLU:O	27:B2:9:GLN:OE1	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:42:PRO:HG2	19:AS:43:GLU:H	1.80	0.46
36:BB:43:C:C4'	41:BG:94:LEU:HD11	2.44	0.46
33:B8:60:LEU:O	33:B8:63:PRO:HG2	2.15	0.46
35:BA:18:C:H6	35:BA:18:C:O5'	1.99	0.46
32:B7:33:ARG:NH1	35:BA:467:G:OP1	2.47	0.46
35:BA:1599:C:H2'	35:BA:1600:C:H6	1.81	0.46
2:AB:21:ARG:C	2:AB:23:ARG:H	2.16	0.46
53:BU:90:VAL:CG1	54:BV:39:LEU:HG	2.29	0.46
54:BV:47:VAL:C	54:BV:49:THR:H	2.17	0.46
3:AC:50:ALA:HB2	3:AC:75:VAL:HG11	1.93	0.46
3:AC:74:GLY:O	3:AC:78:GLY:CA	2.64	0.46
52:BT:3:ARG:O	52:BT:4:GLY:C	2.53	0.46
4:AD:36:ARG:C	4:AD:38:TYR:H	2.19	0.46
24:AY:455:GLY:O	24:AY:458:HIS:HB3	2.15	0.46
3:AC:115:LEU:O	3:AC:118:GLN:HB3	2.15	0.46
31:B6:53:LYS:CG	31:B6:54:ILE:N	2.78	0.46
46:BN:133:GLN:C	46:BN:134:ARG:HG2	2.36	0.46
24:AY:241:GLU:O	24:AY:245:ALA:HB2	2.16	0.46
35:BA:1353:A:C8	35:BA:1378:A:N6	2.83	0.46
1:AA:1407:C:H2'	1:AA:1408:A:H5'	1.97	0.46
46:BN:39:ARG:HE	46:BN:41:ASP:HB2	1.80	0.46
52:BT:109:GLU:HG2	52:BT:112:ARG:CZ	2.45	0.46
16:AP:8:ARG:NH2	16:AP:15:PRO:HG3	2.30	0.46
35:BA:1431:U:H2'	35:BA:1432:C:C6	2.50	0.46
35:BA:2200:C:H42	35:BA:2223:G:H1	1.62	0.46
35:BA:271(E):U:H2'	35:BA:271(F):C:C6	2.51	0.46
39:BE:98:PRO:HG3	39:BE:175:VAL:HG12	1.97	0.46
1:AA:135:C:H2'	1:AA:136:C:H5'	1.97	0.46
1:AA:309:G:H2'	1:AA:310:G:H8	1.80	0.46
37:BC:126:SER:C	37:BC:128:LEU:H	2.19	0.46
2:AB:227:GLY:O	2:AB:228:GLY:C	2.54	0.46
1:AA:942:G:C2	1:AA:943:U:C6	3.03	0.46
1:AA:61:G:C2'	1:AA:62:U:H5'	2.46	0.46
1:AA:266:G:C4'	1:AA:267:C:C6	2.99	0.46
35:BA:2716:U:O2'	35:BA:2717:G:C5'	2.48	0.46
2:AB:16:HIS:ND1	2:AB:210:SER:HA	2.30	0.46
27:B2:47:ASN:C	27:B2:49:LYS:N	2.67	0.46
24:AY:49:ALA:N	24:AY:52:MET:HB3	2.31	0.46
1:AA:972:C:O3'	10:AJ:57:LYS:HG2	2.16	0.46
58:BZ:181:GLU:C	58:BZ:182:LYS:HG3	2.35	0.46
39:BE:55:ASN:O	39:BE:56:PRO:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:76:ARG:CG	39:BE:195:LEU:HD22	2.42	0.46
1:AA:869:G:O5'	1:AA:869:G:H8	1.97	0.46
58:BZ:5:LEU:HD23	58:BZ:47:VAL:CG2	2.30	0.46
1:AA:859:A:H2'	1:AA:860:A:H8	1.81	0.46
35:BA:157:U:O2'	35:BA:158:U:H5'	2.15	0.46
46:BN:134:ARG:H	46:BN:135:PRO:HD3	1.80	0.46
24:AY:238:THR:C	24:AY:240:GLU:H	2.18	0.46
38:BD:108:PRO:HB3	38:BD:143:HIS:HE1	1.79	0.46
49:BQ:134:ARG:CZ	58:BZ:122:ARG:NH2	2.79	0.46
38:BD:164:GLN:O	38:BD:166:GLN:NE2	2.48	0.46
56:BX:27:THR:HA	56:BX:80:ILE:HA	1.97	0.46
1:AA:1452:C:OP1	1:AA:1457:G:C6	2.69	0.46
35:BA:1828:G:O6	38:BD:222:ARG:HD2	2.16	0.46
35:BA:2650:U:H2'	35:BA:2651:C:C6	2.50	0.46
41:BG:29:TRP:O	41:BG:31:VAL:N	2.46	0.46
57:BY:89:PHE:O	57:BY:90:LEU:HD23	2.16	0.46
1:AA:84:U:O2	1:AA:84:U:O4'	2.32	0.46
35:BA:1336:A:H2'	35:BA:1337:G:C8	2.49	0.46
58:BZ:77:ASP:O	58:BZ:78:LYS:HB2	2.16	0.46
47:BO:102:VAL:HB	47:BO:106:LEU:HD12	1.98	0.46
37:BC:117:THR:CG2	37:BC:119:ASP:CG	2.81	0.46
37:BC:123:ALA:O	37:BC:127:LYS:CG	2.63	0.46
1:AA:38:G:O2'	1:AA:39:G:O5'	2.30	0.46
7:AG:120:ILE:O	7:AG:121:ALA:CB	2.59	0.46
7:AG:22:LEU:O	7:AG:23:VAL:HB	2.15	0.46
35:BA:1993:U:H2'	35:BA:1994:C:H6	1.80	0.46
39:BE:111:ARG:C	50:BR:2:ARG:HG2	2.36	0.46
35:BA:2723:C:O3'	50:BR:2:ARG:NH2	2.49	0.46
27:B2:9:GLN:C	27:B2:11:GLU:N	2.69	0.46
35:BA:1133:U:HO3'	35:BA:1135:C:P	2.38	0.46
41:BG:118:ARG:HH12	41:BG:182:LYS:HD3	1.79	0.46
41:BG:16:ARG:O	41:BG:20:ILE:HG13	2.16	0.46
41:BG:57:ALA:O	41:BG:61:ALA:CB	2.63	0.46
41:BG:61:ALA:CB	41:BG:67:LYS:HA	2.42	0.46
35:BA:832:G:P	48:BP:40:SER:HB3	2.55	0.46
42:BH:30:LYS:HZ3	42:BH:80:SER:HA	1.80	0.46
1:AA:346:G:O2'	1:AA:347:G:OP1	2.33	0.46
35:BA:1591:G:H5'	35:BA:1591:G:H8	1.80	0.46
36:BB:37:C:C2'	36:BB:38:C:H5'	2.45	0.46
51:BS:28:VAL:CG1	51:BS:29:PHE:N	2.76	0.46
35:BA:2748:A:C4	35:BA:2757:A:N6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1157:A:C4	1:AA:1181:G:C2	3.04	0.46
42:BH:168:PRO:CB	42:BH:170:ARG:NH2	2.78	0.46
35:BA:1285:G:O5'	35:BA:1285:G:H8	1.99	0.46
58:BZ:114:GLY:C	58:BZ:177:PRO:HD3	2.36	0.46
40:BF:4:VAL:N	40:BF:24:LEU:HD12	2.30	0.46
25:B0:51:VAL:CA	25:B0:62:LEU:HD21	2.45	0.46
35:BA:1063:G:H1	35:BA:1074:G:H1	1.63	0.46
12:AL:17:LYS:CD	12:AL:18:VAL:N	2.76	0.46
26:B1:11:ARG:NH2	35:BA:1365:A:O2'	2.49	0.46
35:BA:1639:U:H2'	35:BA:1640:C:C5'	2.46	0.46
37:BC:88:GLU:CG	37:BC:89:GLU:H	2.18	0.46
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.98	0.46
3:AC:14:ILE:CG1	3:AC:15:THR:N	2.79	0.46
50:BR:57:ARG:HB3	50:BR:59:ASP:OD1	2.15	0.46
1:AA:77:G:H1	1:AA:92:C:H42	1.63	0.46
24:AY:296:GLY:O	24:AY:297:GLU:HB3	2.14	0.46
35:BA:1265:A:OP1	35:BA:1265:A:H8	1.99	0.46
41:BG:32:PRO:HB3	41:BG:163:ALA:HB2	1.96	0.46
39:BE:19:ARG:HA	47:BO:73:ASP:HA	1.96	0.46
44:BK:76:UNK:C	44:BK:78:UNK:N	2.75	0.46
47:BO:36:GLY:HA3	47:BO:109:LYS:HD2	1.96	0.46
37:BC:223:VAL:O	37:BC:223:VAL:HG23	2.15	0.46
38:BD:124:PRO:O	38:BD:126:GLN:HG2	2.16	0.46
46:BN:40:PRO:HB3	53:BU:68:ALA:HB2	1.97	0.46
3:AC:10:PHE:CZ	3:AC:178:LEU:HD11	2.51	0.46
2:AB:90:MET:HB3	2:AB:91:PRO:HD2	1.97	0.46
35:BA:602:G:N1	35:BA:654(U):A:N7	2.64	0.46
1:AA:773:G:N2	1:AA:806:C:O2	2.48	0.46
1:AA:366:C:H6	1:AA:366:C:O5'	1.98	0.46
50:BR:2:ARG:NH1	50:BR:2:ARG:CG	2.71	0.46
40:BF:125:LEU:HD23	40:BF:125:LEU:N	2.29	0.46
41:BG:42:GLY:O	41:BG:47:LYS:HD2	2.15	0.46
1:AA:1279:A:H5''	1:AA:1280:A:P	2.55	0.46
42:BH:85:LYS:HZ3	42:BH:87:LEU:CG	2.27	0.46
51:BS:30:ARG:HD3	51:BS:97:ARG:CG	2.34	0.46
39:BE:132:HIS:CA	39:BE:135:HIS:NE2	2.79	0.46
35:BA:2125:G:O5'	35:BA:2125:G:H8	1.99	0.46
1:AA:930:C:O2'	1:AA:931:C:H5'	2.15	0.46
39:BE:57:LYS:HA	39:BE:57:LYS:CE	2.27	0.46
58:BZ:149:SER:HB2	58:BZ:173:ALA:CA	2.39	0.46
52:BT:10:VAL:O	52:BT:13:ARG:HG2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:22:ALA:HB1	40:BF:26:ALA:HB2	1.97	0.46
10:AJ:28:ARG:NH1	10:AJ:34:VAL:HB	2.31	0.46
35:BA:2533:A:OP2	35:BA:2665:A:H1'	2.15	0.46
35:BA:2287:A:H2	35:BA:2346:A:N1	2.14	0.46
26:B1:59:THR:O	26:B1:60:PHE:CG	2.67	0.46
35:BA:1689:A:H62	35:BA:1698:A:H2	1.63	0.46
1:AA:946:A:N1	1:AA:947:G:C6	2.83	0.46
35:BA:1478:G:HO2'	35:BA:1558:A:H2	1.61	0.46
24:AY:357:ARG:NH1	24:AY:357:ARG:HG3	2.31	0.46
28:B3:54:VAL:O	28:B3:54:VAL:CG2	2.63	0.46
35:BA:34:C:N4	35:BA:447:A:N6	2.63	0.46
37:BC:46:ALA:O	37:BC:47:LYS:HB2	2.15	0.46
3:AC:191:THR:CG2	3:AC:192:THR:N	2.79	0.46
1:AA:958:A:H8	1:AA:958:A:O5'	1.99	0.46
45:BL:115:UNK:O	45:BL:116:UNK:C	2.63	0.46
35:BA:2317:C:O2'	35:BA:2318:G:H5'	2.15	0.46
35:BA:1240:U:O2'	35:BA:1241:A:H5'	2.16	0.46
16:AP:60:LEU:HD21	16:AP:66:PRO:CG	2.44	0.46
24:AY:324:ARG:HD3	24:AY:380:LEU:O	2.15	0.46
1:AA:827:U:H3	1:AA:872:A:H61	1.62	0.46
35:BA:2572:A:C8	39:BE:144:ARG:HD2	2.50	0.46
35:BA:574:C:N3	39:BE:145:LYS:HE2	2.31	0.46
35:BA:2770:G:C5'	35:BA:2771:C:OP1	2.64	0.46
45:BL:65:UNK:O	45:BL:67:UNK:N	2.49	0.46
44:BK:10:UNK:O	44:BK:11:UNK:CB	2.63	0.46
35:BA:904:C:O2'	35:BA:905:U:H5'	2.15	0.46
52:BT:78:LEU:HB3	52:BT:79:HIS:CD2	2.51	0.46
48:BP:105:LEU:O	48:BP:106:LEU:HB3	2.16	0.46
48:BP:48:PRO:HB2	48:BP:51:PHE:O	2.15	0.46
25:B0:25:ARG:CB	25:B0:37:LEU:HD12	2.43	0.46
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.81	0.46
35:BA:1983:C:O2'	35:BA:1984:G:H5'	1.99	0.46
57:BY:10:GLY:CA	57:BY:27:VAL:HG12	2.46	0.46
1:AA:555:C:N4	1:AA:556:C:H42	2.12	0.46
1:AA:557:G:O2'	1:AA:558:G:H5'	2.16	0.46
27:B2:9:GLN:NE2	27:B2:9:GLN:H	2.08	0.46
35:BA:2203:U:C3'	35:BA:2205:C:OP2	2.64	0.46
41:BG:144:ILE:HD11	41:BG:146:TYR:CE1	2.50	0.46
35:BA:742:G:C2'	35:BA:743:G:H5''	2.22	0.46
35:BA:812:C:H5'	48:BP:25:SER:CB	2.45	0.46
32:B7:34:ARG:HB2	32:B7:42:LEU:HD22	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2126:A:HO2'	35:BA:2127:G:H8	1.63	0.46
42:BH:149:ARG:HA	42:BH:162:ILE:HD11	1.94	0.46
1:AA:1286:A:HO2'	1:AA:1287:A:H5''	1.80	0.46
1:AA:1151:A:O4'	10:AJ:39:PRO:HB2	2.16	0.46
1:AA:701:C:H6	1:AA:701:C:H3'	1.80	0.46
38:BD:27:THR:CG2	38:BD:83:GLU:CG	2.90	0.46
37:BC:30:VAL:CG2	37:BC:31:LYS:H	2.27	0.46
58:BZ:151:HIS:CG	58:BZ:170:THR:HA	2.51	0.46
35:BA:1639:U:H6	35:BA:1639:U:O5'	1.99	0.46
2:AB:76:GLN:H	2:AB:76:GLN:HE21	1.63	0.46
39:BE:65:GLY:C	39:BE:67:PHE:N	2.69	0.46
24:AY:628:ARG:NH1	24:AY:628:ARG:CG	2.76	0.46
35:BA:2849:U:OP2	52:BT:95:ARG:NH1	2.49	0.46
3:AC:11:ARG:O	3:AC:14:ILE:O	2.34	0.46
35:BA:535:C:C2'	35:BA:536:A:H5'	2.46	0.46
50:BR:97:VAL:C	50:BR:98:LEU:HD23	2.35	0.46
35:BA:999:U:O2'	35:BA:1000:A:H5'	2.16	0.46
1:AA:1037:C:C2	1:AA:1038:C:N3	2.84	0.46
57:BY:50:ARG:NE	57:BY:55:TYR:O	2.48	0.46
7:AG:88:PRO:O	7:AG:89:MET:HB3	2.15	0.46
1:AA:841:U:H3'	1:AA:848:C:O4'	2.15	0.46
1:AA:614:A:O2'	1:AA:615:C:H5'	2.16	0.46
3:AC:60:ALA:O	3:AC:62:ASP:N	2.45	0.46
39:BE:38:THR:HG22	39:BE:40:GLU:H	1.81	0.46
1:AA:602:A:H2'	1:AA:603:U:C6	2.51	0.46
41:BG:162:THR:O	41:BG:163:ALA:O	2.34	0.46
50:BR:44:LEU:HD13	50:BR:44:LEU:O	2.16	0.46
52:BT:134:GLU:O	52:BT:135:ALA:HB3	2.16	0.46
30:B5:40:LYS:HE2	30:B5:46:CYS:CB	2.43	0.46
35:BA:2751:G:C6	42:BH:1:MET:CG	2.99	0.46
31:B6:11:LEU:C	31:B6:11:LEU:CD2	2.83	0.46
35:BA:604:G:C2'	35:BA:605:C:C5'	2.77	0.46
1:AA:648:A:H2'	1:AA:649:G:H8	1.81	0.46
1:AA:364:A:H8	1:AA:364:A:O5'	1.99	0.46
35:BA:1820:U:O2'	35:BA:1821:A:OP1	2.30	0.46
40:BF:125:LEU:HD12	40:BF:196:LEU:HD23	1.98	0.46
29:B4:21:VAL:HG12	29:B4:22:ILE:HD13	1.97	0.46
36:BB:42:C:O2'	36:BB:43:C:P	2.74	0.46
35:BA:1142(A):A:N3	35:BA:1144:G:C8	2.84	0.46
1:AA:982:U:O2'	1:AA:983:A:OP2	2.30	0.46
38:BD:181:GLU:HB2	38:BD:273:ARG:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:1:MET:SD	46:BN:1:MET:C	2.94	0.46
54:BV:55:ALA:HA	54:BV:100:ARG:O	2.15	0.46
1:AA:185:A:C4	1:AA:186:C:C5	3.03	0.46
26:B1:5:CYS:SG	26:B1:8:SER:CB	3.04	0.46
52:BT:7:ILE:O	52:BT:11:GLU:OE1	2.34	0.46
33:B8:50:LEU:C	33:B8:52:LYS:N	2.68	0.46
46:BN:132:ALA:O	46:BN:133:GLN:HB3	2.15	0.46
3:AC:21:ARG:O	3:AC:22:TRP:HB3	2.15	0.46
30:B5:57:VAL:HG12	30:B5:58:LEU:CD1	2.46	0.46
1:AA:1408:A:H5'	1:AA:1408:A:C8	2.43	0.46
46:BN:39:ARG:HH21	46:BN:41:ASP:CG	2.19	0.46
24:AY:246:ILE:HG23	24:AY:255:ILE:CD1	2.46	0.46
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.15	0.46
18:AR:53:ARG:C	18:AR:55:ARG:N	2.69	0.46
18:AR:53:ARG:O	18:AR:55:ARG:N	2.49	0.46
6:AF:86:ARG:O	6:AF:87:ARG:HB2	2.16	0.46
45:BL:83:UNK:O	45:BL:86:UNK:CB	2.64	0.46
1:AA:599:C:O2'	1:AA:600:C:H5'	2.16	0.46
24:AY:448:GLN:OE1	24:AY:480:GLN:HG3	2.16	0.46
48:BP:91:PHE:CD1	48:BP:91:PHE:N	2.84	0.46
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.16	0.46
24:AY:445:GLU:OE1	24:AY:482:ALA:HB1	2.16	0.46
55:BW:75:TYR:O	55:BW:104:THR:HG23	2.15	0.46
9:AI:4:TYR:CG	9:AI:88:TYR:HB2	2.50	0.46
52:BT:88:ILE:HG22	52:BT:89:VAL:N	2.30	0.46
1:AA:307:C:C5	1:AA:308:C:N4	2.84	0.46
48:BP:98:GLU:HA	48:BP:101:VAL:HG22	1.98	0.46
25:B0:39:ARG:HG3	25:B0:39:ARG:O	2.15	0.46
1:AA:66:G:H4'	1:AA:173:U:C5	2.51	0.46
1:AA:492:G:H2'	1:AA:493:G:O5'	2.14	0.46
1:AA:547:A:C1'	1:AA:548:G:P	3.03	0.46
35:BA:863:A:O2'	35:BA:864:G:H5'	2.16	0.46
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.98	0.46
35:BA:1982:C:C2	35:BA:1983:C:C5	3.04	0.46
35:BA:1528:A:C2	35:BA:1542:A:H2	2.34	0.46
35:BA:1297:C:OP1	35:BA:2710:C:H4'	2.16	0.46
35:BA:2715:C:C2'	35:BA:2716:U:C5'	2.90	0.46
1:AA:863:U:O2	1:AA:863:U:H3'	2.16	0.46
1:AA:925:G:N3	1:AA:1502:A:H1'	2.31	0.46
41:BG:6:ALA:O	41:BG:7:LEU:C	2.52	0.46
41:BG:7:LEU:HD11	41:BG:176:LEU:CD2	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2403:C:C2	35:BA:2404:C:C5	3.03	0.46
42:BH:154:PRO:HB2	42:BH:163:TYR:CZ	2.50	0.46
1:AA:185:A:H2'	1:AA:186:C:C6	2.50	0.46
35:BA:332:A:C5	35:BA:335:C:N4	2.83	0.46
24:AY:487:ILE:N	24:AY:487:ILE:HD13	2.28	0.46
35:BA:1187:G:H5''	54:BV:81:TYR:HE2	1.73	0.46
37:BC:20:VAL:O	37:BC:224:ARG:O	2.34	0.46
35:BA:1434:A:O2'	35:BA:1435:G:H5'	2.16	0.46
28:B3:3:ARG:HA	28:B3:37:LEU:O	2.16	0.46
35:BA:267:C:C2	35:BA:268:C:C5	3.04	0.46
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.16	0.46
11:AK:40:ILE:HG23	11:AK:75:TYR:CE2	2.51	0.46
3:AC:11:ARG:CG	3:AC:11:ARG:HH11	2.28	0.46
35:BA:1027:A:H61	35:BA:1126:A:C1'	2.29	0.46
52:BT:34:VAL:HG13	52:BT:39:ARG:CA	2.45	0.46
34:B9:7:VAL:HG13	34:B9:25:VAL:HG23	1.98	0.46
36:BB:50:G:OP1	51:BS:63:THR:HG23	2.15	0.46
49:BQ:109:VAL:HG12	49:BQ:113:GLN:OE1	2.15	0.46
39:BE:46:ALA:HB2	39:BE:82:ARG:HA	1.97	0.46
24:AY:616:TYR:CD2	24:AY:663:THR:HA	2.51	0.46
35:BA:2791:C:H4'	35:BA:2792:G:O5'	2.14	0.46
35:BA:590:A:OP1	40:BF:95:ARG:NH1	2.49	0.46
4:AD:109:GLY:O	4:AD:111:ALA:N	2.49	0.46
6:AF:79:LEU:O	6:AF:85:VAL:HG11	2.15	0.46
47:BO:86:ILE:HG22	47:BO:94:ARG:HG3	1.98	0.46
8:AH:84:ARG:NH2	8:AH:136:GLU:OE2	2.49	0.46
48:BP:84:ASN:ND2	48:BP:115:LEU:HD23	2.30	0.46
48:BP:61:ARG:C	48:BP:62:LEU:CD2	2.84	0.46
31:B6:26:ASN:O	31:B6:27:LYS:HB2	2.15	0.46
25:B0:66:VAL:CG1	25:B0:67:VAL:H	2.28	0.46
1:AA:1250:A:C2	1:AA:1370:G:H1'	2.50	0.46
41:BG:43:LEU:HD13	41:BG:53:LEU:HD12	1.97	0.46
41:BG:87:PRO:O	41:BG:88:ILE:HB	2.16	0.46
33:B8:4:MET:HB3	33:B8:61:LEU:CD2	2.45	0.46
35:BA:831:G:O3'	48:BP:40:SER:HB3	2.16	0.46
1:AA:90:U:C4'	1:AA:91:C:OP1	2.64	0.46
35:BA:2208:A:H1'	35:BA:2219:G:C6	2.51	0.46
35:BA:686:G:H21	35:BA:788:A:H61	1.64	0.46
1:AA:1494:G:O3'	24:AY:499:ARG:NH2	2.49	0.46
11:AK:115:PRO:C	11:AK:117:ASN:H	2.19	0.46
1:AA:192:U:H1'	20:AT:103:GLY:HA2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:104:PHE:O	49:BQ:105:GLU:HB3	2.15	0.46
35:BA:34:C:H42	35:BA:447:A:N6	2.13	0.46
36:BB:64:C:H2'	36:BB:65:C:C6	2.51	0.46
1:AA:551:U:H2'	1:AA:552:U:C6	2.51	0.46
25:B0:16:SER:HB2	35:BA:2262:U:C5	2.51	0.46
35:BA:185:U:H2'	35:BA:186:G:C8	2.51	0.46
42:BH:19:VAL:HG12	42:BH:20:ALA:N	2.31	0.46
8:AH:132:GLU:HG2	8:AH:134:ILE:HD13	1.96	0.46
40:BF:65:TRP:CZ3	40:BF:73:ALA:O	2.69	0.46
47:BO:114:ILE:HD12	47:BO:114:ILE:H	1.81	0.46
35:BA:426:C:O2'	35:BA:427:U:H5'	2.16	0.46
35:BA:363(A):A:N3	35:BA:363(A):A:H2'	2.31	0.46
42:BH:126:PRO:HG2	42:BH:127:GLU:H	1.81	0.46
11:AK:65:ALA:O	11:AK:68:ALA:HB3	2.15	0.46
4:AD:60:GLU:HG2	4:AD:202:LEU:HD12	1.98	0.46
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.30	0.46
48:BP:81:GLN:CD	48:BP:106:LEU:HA	2.36	0.45
9:AI:40:LEU:O	9:AI:42:ARG:N	2.49	0.45
1:AA:769:G:O2'	1:AA:770:C:C5'	2.62	0.45
35:BA:1771:C:O4'	35:BA:1786:A:H8	1.99	0.45
35:BA:1529:G:N1	35:BA:1541:G:N2	2.64	0.45
27:B2:10:LEU:HB3	27:B2:14:ARG:NH1	2.31	0.45
27:B2:50:ILE:HG21	35:BA:61:G:H5'	1.98	0.45
35:BA:2205:C:O5'	35:BA:2205:C:H6	1.99	0.45
1:AA:1305:G:C6	1:AA:1331:G:C6	3.05	0.45
29:B4:40:HIS:NE2	41:BG:118:ARG:CA	2.74	0.45
41:BG:103:LEU:HD13	41:BG:103:LEU:C	2.36	0.45
41:BG:40:ASN:ND2	41:BG:91:ARG:HG3	2.31	0.45
41:BG:43:LEU:O	41:BG:44:GLY:O	2.34	0.45
35:BA:1022:G:C5	35:BA:1141:U:C4	3.03	0.45
53:BU:57:PHE:O	53:BU:58:ARG:C	2.54	0.45
35:BA:1155:A:OP1	53:BU:58:ARG:NH1	2.50	0.45
35:BA:1375:C:HO2'	35:BA:1376:C:H5'	1.75	0.45
1:AA:1286:A:O2'	1:AA:1287:A:OP2	2.30	0.45
1:AA:791:G:O5'	1:AA:791:G:H8	1.98	0.45
4:AD:15:GLU:C	4:AD:17:VAL:H	2.18	0.45
1:AA:644:G:H5'	8:AH:92:ARG:NH2	2.31	0.45
24:AY:526:VAL:HG11	24:AY:566:THR:HG23	1.96	0.45
58:BZ:124:ILE:O	58:BZ:126:VAL:HG13	2.16	0.45
38:BD:35:LYS:CA	38:BD:35:LYS:HZ2	2.29	0.45
24:AY:548:GLU:C	24:AY:550:MET:H	2.18	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:53:LYS:O	31:B6:54:ILE:C	2.54	0.45
1:AA:1145:C:O2'	1:AA:1146:A:O5'	2.32	0.45
50:BR:7:GLY:C	50:BR:8:ARG:NE	2.70	0.45
26:B1:67:ILE:N	26:B1:68:PRO:HD2	2.31	0.45
35:BA:2137:C:O2'	35:BA:2138:C:OP2	2.34	0.45
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.97	0.45
12:AL:123:LYS:N	12:AL:123:LYS:CE	2.78	0.45
3:AC:16:ARG:CG	3:AC:17:ASP:N	2.79	0.45
8:AH:86:ILE:HB	8:AH:133:LEU:O	2.16	0.45
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.98	0.45
9:AI:99:LEU:N	9:AI:99:LEU:HD22	2.30	0.45
35:BA:438:G:O2'	35:BA:440:G:H5'	2.16	0.45
8:AH:8:ASP:O	8:AH:12:ARG:HG3	2.15	0.45
1:AA:951:G:C6	1:AA:1230:C:N3	2.85	0.45
1:AA:495:A:HO2'	1:AA:496:A:P	2.40	0.45
1:AA:937:A:H2'	1:AA:938:A:C5'	2.46	0.45
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.30	0.45
35:BA:2606:C:N3	35:BA:2607:G:N7	2.64	0.45
1:AA:684:A:H2'	1:AA:685:G:C8	2.50	0.45
3:AC:86:VAL:HG23	3:AC:87:LEU:N	2.30	0.45
2:AB:16:HIS:CE1	2:AB:210:SER:C	2.89	0.45
39:BE:119:ARG:HG3	39:BE:160:TYR:HB2	1.99	0.45
1:AA:1402:C:OP2	23:AX:19:A:O3'	2.19	0.45
36:BB:42:C:H5''	41:BG:67:LYS:HE3	1.97	0.45
33:B8:4:MET:CG	33:B8:61:LEU:HD23	2.44	0.45
31:B6:17:LYS:CA	31:B6:17:LYS:HE2	2.39	0.45
51:BS:35:ILE:CD1	51:BS:99:LYS:HD3	2.45	0.45
35:BA:654(P):C:O2'	35:BA:654(Q):C:H5'	2.15	0.45
37:BC:37:LYS:O	37:BC:38:PHE:HB3	2.17	0.45
42:BH:154:PRO:C	42:BH:156:ALA:H	2.19	0.45
42:BH:166:GLY:O	42:BH:167:GLU:HG3	2.16	0.45
51:BS:106:ARG:C	51:BS:108:GLY:H	2.20	0.45
1:AA:1285:A:H8	1:AA:1285:A:O5'	1.98	0.45
1:AA:1151:A:O2'	1:AA:1152:A:P	2.74	0.45
39:BE:34:VAL:HG11	39:BE:78:LEU:HD23	1.98	0.45
39:BE:34:VAL:HG22	39:BE:48:GLN:NE2	2.30	0.45
24:AY:138:LYS:HG2	61:AY:701:GCP:N1	2.31	0.45
1:AA:797:C:H2'	1:AA:798:G:H8	1.81	0.45
58:BZ:31:ARG:HD2	58:BZ:94:GLU:OE1	2.17	0.45
3:AC:117:ALA:O	3:AC:187:ALA:HB2	2.16	0.45
35:BA:2531:A:H4'	42:BH:157:TYR:CD2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:73:G:H5'	1:AA:76:C:OP2	2.16	0.45
57:BY:44:ILE:CG2	57:BY:45:VAL:H	2.28	0.45
28:B3:2:PRO:O	28:B3:39:ASP:HB2	2.15	0.45
35:BA:2115:G:C5'	35:BA:2116:G:OP2	2.64	0.45
35:BA:1412:A:C2'	35:BA:1413:G:C5'	2.89	0.45
35:BA:99:U:H4'	35:BA:102:G:H1'	1.98	0.45
18:AR:29:PHE:CD2	18:AR:39:VAL:HG11	2.50	0.45
1:AA:1407:C:H2'	1:AA:1408:A:C5'	2.46	0.45
40:BF:155:LEU:HD22	40:BF:186:ILE:HA	1.98	0.45
1:AA:959:A:C3'	1:AA:960:U:H4'	2.46	0.45
42:BH:19:VAL:O	42:BH:23:ARG:O	2.34	0.45
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.81	0.45
3:AC:5:ILE:HD13	3:AC:5:ILE:H	1.82	0.45
24:AY:510:VAL:CG1	24:AY:567:LEU:HD11	2.46	0.45
43:BJ:98:UNK:C	43:BJ:100:UNK:N	2.77	0.45
4:AD:162:LEU:HG	4:AD:181:MET:HE2	1.99	0.45
24:AY:74:TRP:NE1	24:AY:273:LEU:HB3	2.31	0.45
4:AD:122:ARG:NH1	4:AD:134:ASP:OD2	2.49	0.45
3:AC:165:THR:HG22	3:AC:165:THR:O	2.15	0.45
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.16	0.45
45:BL:70:UNK:O	45:BL:71:UNK:C	2.65	0.45
13:AM:82:MET:SD	13:AM:93:ARG:HG3	2.57	0.45
32:B7:43:THR:O	32:B7:44:PRO:C	2.53	0.45
9:AI:23:ASN:ND2	9:AI:23:ASN:N	2.38	0.45
25:B0:20:ARG:CG	25:B0:20:ARG:HH11	2.29	0.45
35:BA:247:G:H3'	35:BA:249:C:H5	1.78	0.45
48:BP:48:PRO:O	48:BP:50:ARG:N	2.50	0.45
1:AA:444:C:H2'	1:AA:445:G:H8	1.80	0.45
35:BA:651:G:H2'	35:BA:652:C:C5'	2.46	0.45
35:BA:659:C:H2'	35:BA:660:G:H8	1.82	0.45
1:AA:938:A:O2'	1:AA:939:G:C5'	2.55	0.45
7:AG:113:GLU:OE1	7:AG:113:GLU:N	2.43	0.45
35:BA:1936:A:OP1	35:BA:1937:A:H5'	2.16	0.45
35:BA:2680:C:O2'	35:BA:2681:C:H5'	2.17	0.45
1:AA:1307:U:O2'	1:AA:1308:U:H5'	2.16	0.45
29:B4:21:VAL:O	29:B4:22:ILE:O	2.34	0.45
29:B4:48:ARG:HH11	29:B4:48:ARG:CG	2.29	0.45
1:AA:1178:G:H8	1:AA:1178:G:O5'	1.99	0.45
1:AA:1178:G:C4	1:AA:1180:A:OP2	2.69	0.45
51:BS:89:ARG:CG	51:BS:92:TYR:CA	2.94	0.45
1:AA:1202:G:H1'	14:AN:29:ARG:HD3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:997:G:O2'	35:BA:998:C:H5'	2.16	0.45
54:BV:38:LEU:HD23	54:BV:38:LEU:C	2.36	0.45
42:BH:154:PRO:CB	42:BH:163:TYR:CZ	2.99	0.45
40:BF:82:ILE:O	40:BF:83:PHE:O	2.33	0.45
12:AL:27:LEU:CB	12:AL:62:SER:HB2	2.46	0.45
50:BR:45:ARG:CG	50:BR:46:GLY:N	2.72	0.45
10:AJ:89:ASP:HB3	10:AJ:91:PRO:HD3	1.99	0.45
35:BA:1058:G:N2	35:BA:1059:G:H1'	2.32	0.45
54:BV:19:LYS:HE2	54:BV:19:LYS:HA	1.98	0.45
32:B7:11:LYS:CE	35:BA:686:G:H5''	2.46	0.45
26:B1:11:ARG:CB	26:B1:12:PRO:HD2	2.40	0.45
35:BA:2287:A:C2	35:BA:2346:A:N1	2.85	0.45
26:B1:49:VAL:HG12	26:B1:62:VAL:HG12	1.98	0.45
2:AB:76:GLN:O	2:AB:211:ILE:CD1	2.65	0.45
1:AA:343:U:H6	1:AA:343:U:O5'	1.99	0.45
38:BD:65:ILE:HD11	38:BD:67:PHE:CZ	2.51	0.45
1:AA:356:A:C2'	1:AA:368:U:O2'	2.64	0.45
6:AF:97:PHE:CD2	18:AR:31:LEU:HD21	2.46	0.45
2:AB:178:ARG:NH1	8:AH:71:GLY:O	2.49	0.45
8:AH:112:LEU:CD2	8:AH:133:LEU:HD13	2.46	0.45
1:AA:1324:A:C4'	1:AA:1362:C:H4'	2.46	0.45
4:AD:170:VAL:CG1	4:AD:174:LEU:HB2	2.46	0.45
38:BD:34:VAL:O	38:BD:64:ILE:HG23	2.16	0.45
37:BC:23:ILE:HG12	37:BC:229:SER:OXT	2.16	0.45
7:AG:5:ARG:HE	7:AG:5:ARG:HB2	1.43	0.45
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.15	0.45
19:AS:53:ASN:N	19:AS:56:GLN:O	2.48	0.45
52:BT:91:ARG:O	52:BT:92:GLY:C	2.54	0.45
2:AB:114:ARG:CG	2:AB:114:ARG:NH1	2.77	0.45
35:BA:70:G:H5''	35:BA:112:U:O2	2.17	0.45
1:AA:495:A:O4'	1:AA:496:A:H8	1.93	0.45
35:BA:2009:G:C2	35:BA:2010:G:N7	2.84	0.45
35:BA:1786:A:C4	35:BA:1938:A:N6	2.84	0.45
35:BA:1981:A:H5''	35:BA:1982:C:OP1	2.16	0.45
1:AA:507:C:H3'	1:AA:507:C:H6	1.82	0.45
13:AM:10:PRO:O	13:AM:11:ARG:CB	2.63	0.45
36:BB:34:U:H5	41:BG:96:ARG:HH12	1.63	0.45
1:AA:113:G:H2'	1:AA:114:U:H6	1.78	0.45
35:BA:885:C:O2	35:BA:886:C:N4	2.50	0.45
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.96	0.45
1:AA:1314:C:OP2	19:AS:6:LYS:CD	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:52:VAL:HG13	54:BV:55:ALA:HB3	1.98	0.45
35:BA:1646:C:H6	35:BA:1646:C:O5'	2.00	0.45
24:AY:137:ASN:CG	24:AY:138:LYS:H	2.18	0.45
35:BA:43:A:O5'	35:BA:43:A:H8	2.00	0.45
12:AL:48:PRO:HG2	12:AL:49:ASN:H	1.81	0.45
35:BA:1290:C:HO2'	35:BA:1291:C:H5'	1.80	0.45
35:BA:1291:C:O2'	35:BA:1292:U:C5'	2.52	0.45
58:BZ:48:PHE:CD1	58:BZ:52:SER:HA	2.51	0.45
51:BS:12:PHE:HD1	51:BS:12:PHE:C	2.20	0.45
10:AJ:32:ALA:CB	10:AJ:81:THR:HG21	2.47	0.45
57:BY:60:PHE:O	57:BY:61:ILE:HG13	2.15	0.45
39:BE:120:TRP:O	39:BE:122:PHE:N	2.50	0.45
49:BQ:135:ASP:H	49:BQ:137:TYR:HD2	1.59	0.45
28:B3:35:ARG:HD3	28:B3:37:LEU:CD2	2.41	0.45
22:AV:47:U:H3'	22:AV:48:C:C5'	2.46	0.45
37:BC:48:LEU:HD23	37:BC:59:VAL:HG21	1.98	0.45
1:AA:368:U:P	24:AY:351:ARG:HH21	2.39	0.45
52:BT:95:ARG:CB	52:BT:95:ARG:HH11	2.30	0.45
52:BT:95:ARG:CZ	52:BT:95:ARG:HB3	2.47	0.45
38:BD:206:LEU:HD23	38:BD:206:LEU:HA	1.78	0.45
38:BD:211:ARG:O	38:BD:215:LEU:HG	2.17	0.45
52:BT:34:VAL:HG11	52:BT:39:ARG:HG3	1.97	0.45
36:BB:13:A:H5'	36:BB:13:A:H8	1.82	0.45
1:AA:159:G:H22	1:AA:163:C:H42	1.64	0.45
35:BA:2887:U:H2'	35:BA:2888:C:H6	1.81	0.45
1:AA:189(I):G:O2'	1:AA:189(J):G:H5'	2.16	0.45
4:AD:157:LEU:HG	4:AD:161:ASN:ND2	2.32	0.45
35:BA:491:G:H2'	35:BA:492:A:H8	1.81	0.45
44:BK:30:UNK:O	44:BK:31:UNK:C	2.64	0.45
24:AY:491:VAL:HG21	24:AY:597:GLY:HA2	1.97	0.45
56:BX:57:LEU:HD22	56:BX:57:LEU:O	2.15	0.45
53:BU:68:ALA:O	53:BU:71:GLN:HG3	2.17	0.45
12:AL:109:GLY:HA3	12:AL:121:GLY:O	2.17	0.45
24:AY:500:GLN:O	24:AY:500:GLN:NE2	2.38	0.45
48:BP:51:PHE:CG	48:BP:52:GLU:O	2.69	0.45
37:BC:104:ILE:O	37:BC:105:LEU:C	2.55	0.45
37:BC:139:PRO:HB2	37:BC:146:VAL:HG22	1.97	0.45
35:BA:956:G:P	49:BQ:14:ARG:HH21	2.38	0.45
1:AA:941:G:O2'	1:AA:942:G:O5'	2.34	0.45
35:BA:2007:C:C2'	35:BA:2008:C:H5'	2.40	0.45
35:BA:2009:G:C3'	35:BA:2010:G:C5'	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1422:G:C4	35:BA:1423:G:N7	2.85	0.45
51:BS:89:ARG:NH1	51:BS:92:TYR:HA	2.31	0.45
35:BA:654(N):G:H2'	35:BA:654(O):G:C4'	2.46	0.45
54:BV:39:LEU:N	54:BV:39:LEU:HD22	2.31	0.45
35:BA:1688:U:H5'	35:BA:1689:A:OP2	2.15	0.45
55:BW:26:GLY:H	55:BW:71:VAL:CG2	2.22	0.45
33:B8:48:PHE:C	33:B8:49:VAL:CG2	2.84	0.45
35:BA:477:A:H2'	35:BA:478:A:C8	2.52	0.45
3:AC:65:ALA:O	3:AC:66:VAL:HB	2.17	0.45
2:AB:11:LEU:HD13	2:AB:217:ARG:NH2	2.32	0.45
40:BF:185:ASP:OD1	40:BF:188:ARG:HD3	2.17	0.45
1:AA:1447:A:H4'	1:AA:1447:A:OP2	2.16	0.45
41:BG:130:ASN:O	41:BG:159:VAL:O	2.34	0.45
51:BS:83:LYS:HG2	51:BS:105:ALA:CB	2.47	0.45
24:AY:600:VAL:HG21	24:AY:678:GLU:OE1	2.16	0.45
16:AP:57:ARG:HG3	16:AP:79:VAL:HG13	1.99	0.45
35:BA:1336:A:O2'	35:BA:1337:G:H5'	2.16	0.45
35:BA:79:G:O2'	35:BA:80:G:H5'	2.17	0.45
6:AF:41:GLU:HG3	6:AF:62:TRP:CE3	2.52	0.45
4:AD:107:ARG:HH11	4:AD:107:ARG:HG2	1.82	0.45
35:BA:2688:U:H5	35:BA:2720:U:OP1	2.00	0.45
35:BA:1243:G:H2'	35:BA:1244:G:O4'	2.16	0.45
1:AA:744:C:H2'	1:AA:745:C:C6	2.52	0.45
29:B4:24:THR:O	29:B4:25:TYR:CB	2.65	0.45
35:BA:111:A:O2'	35:BA:112:U:H5''	2.15	0.45
48:BP:82:GLY:HA2	48:BP:113:LYS:O	2.16	0.45
35:BA:2555:U:C3'	35:BA:2556:C:C5'	2.90	0.45
1:AA:773:G:C2	1:AA:774:G:C4	3.05	0.45
1:AA:943:U:H6	1:AA:943:U:O5'	1.98	0.45
35:BA:49:A:C6	35:BA:177:G:C2	3.04	0.45
35:BA:2012:G:O3'	55:BW:96:ILE:HG13	2.16	0.45
35:BA:1820:U:N3	38:BD:160:GLY:HA3	2.31	0.45
35:BA:1770:G:O2'	35:BA:1771:C:C5'	2.43	0.45
35:BA:1298:C:O2'	35:BA:1301:A:H1'	2.16	0.45
1:AA:863:U:O2	1:AA:863:U:C3'	2.65	0.45
35:BA:607:U:O2	35:BA:621:A:N1	2.50	0.45
13:AM:22:ILE:HB	13:AM:25:ILE:HB	1.98	0.45
29:B4:2:LYS:CE	29:B4:4:GLY:O	2.60	0.45
41:BG:106:LEU:C	41:BG:106:LEU:HD23	2.37	0.45
41:BG:110:ALA:HB1	41:BG:142:PRO:HG3	1.98	0.45
41:BG:113:ARG:NE	41:BG:113:ARG:CA	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:77:ILE:HG21	41:BG:81:LYS:N	2.31	0.45
1:AA:1279:A:H2'	1:AA:1282:C:H42	1.80	0.45
1:AA:346:G:H5'	52:BT:35:LYS:HZ1	1.80	0.45
52:BT:40:THR:O	52:BT:41:ARG:HB3	2.17	0.45
51:BS:20:ARG:NE	51:BS:20:ARG:CA	2.80	0.45
35:BA:884:C:N4	35:BA:892:G:N1	2.61	0.45
53:BU:95:LEU:HD13	54:BV:4:ILE:CG2	2.46	0.45
54:BV:52:VAL:HG13	54:BV:52:VAL:O	2.16	0.45
35:BA:1407:C:H5'	35:BA:1408:C:OP2	2.14	0.45
57:BY:17:SER:CB	57:BY:71:LYS:HB3	2.46	0.45
1:AA:1285:A:O2'	1:AA:1286:A:OP2	2.35	0.45
1:AA:1288:A:H1'	1:AA:1352:C:O2'	2.17	0.45
35:BA:271(M):G:H3'	35:BA:271(M):G:H8	1.80	0.45
19:AS:31:ILE:O	19:AS:31:ILE:HG23	2.16	0.45
25:B0:50:ASN:CG	25:B0:63:VAL:HG21	2.37	0.45
58:BZ:104:PHE:HB3	58:BZ:141:VAL:CG2	2.43	0.45
35:BA:1670:C:O2	39:BE:129:HIS:HE1	1.99	0.45
57:BY:13:VAL:HG22	57:BY:14:LEU:H	1.80	0.45
38:BD:108:PRO:HG2	38:BD:111:LEU:CB	2.40	0.45
33:B8:45:GLY:O	33:B8:46:ARG:HB2	2.17	0.45
24:AY:181:LEU:HD23	24:AY:182:ARG:CZ	2.47	0.45
28:B3:35:ARG:HG2	28:B3:36:VAL:N	2.31	0.45
1:AA:275:G:H5'	17:AQ:14:LYS:CD	2.47	0.45
35:BA:1504:C:HO2'	35:BA:1505:C:P	2.40	0.45
9:AI:78:LYS:HE2	9:AI:101:PHE:HA	1.99	0.45
34:B9:10:ILE:O	34:B9:11:CYS:CB	2.61	0.45
13:AM:81:LEU:O	13:AM:89:GLY:HA3	2.16	0.45
41:BG:180:PHE:CD1	41:BG:181:ARG:HG2	2.51	0.45
35:BA:2389:G:H5''	35:BA:2390:U:O4'	2.17	0.45
7:AG:70:LYS:CB	7:AG:100:ALA:HB2	2.46	0.45
3:AC:95:THR:C	3:AC:97:LYS:H	2.18	0.45
1:AA:161:A:H2'	1:AA:162:A:H8	1.81	0.45
7:AG:7:ALA:O	7:AG:8:GLU:HB3	2.17	0.45
35:BA:1967:C:C4	35:BA:1968:G:C5	3.04	0.45
53:BU:114:LYS:HG2	53:BU:114:LYS:H	1.57	0.45
44:BK:109:UNK:C	44:BK:111:UNK:N	2.80	0.45
35:BA:1336:A:H2'	35:BA:1337:G:H8	1.82	0.45
35:BA:2864:G:H2'	35:BA:2865:U:C6	2.51	0.45
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.17	0.45
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.16	0.45
37:BC:203:GLU:N	37:BC:203:GLU:CD	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:61:LEU:HD11	2:AB:160:ASP:HB2	1.97	0.45
30:B5:8:LYS:O	35:BA:2017:U:H4'	2.16	0.45
1:AA:1442:G:H22	1:AA:1461:G:H21	1.65	0.45
58:BZ:62:PRO:C	58:BZ:64:GLY:H	2.20	0.45
2:AB:67:THR:HA	2:AB:90:MET:SD	2.57	0.45
25:B0:23:VAL:HG22	25:B0:38:VAL:HG22	1.98	0.45
37:BC:138:LEU:O	37:BC:139:PRO:C	2.53	0.45
49:BQ:17:LEU:CD2	49:BQ:96:VAL:HG13	2.44	0.45
35:BA:1786:A:C1'	35:BA:1938:A:H61	2.26	0.45
35:BA:1422:G:C4	35:BA:1423:G:C8	3.04	0.45
30:B5:2:ALA:HA	35:BA:2015:A:O4'	2.17	0.45
35:BA:2612:C:H2'	35:BA:2613:U:H5'	1.98	0.45
2:AB:15:VAL:CG1	2:AB:209:ARG:HB3	2.46	0.45
27:B2:33:MET:HG3	27:B2:36:ARG:NH2	2.31	0.45
35:BA:1132:A:C2'	35:BA:1133:U:H5'	2.46	0.45
35:BA:2305:A:H2	35:BA:2306:C:H1'	1.80	0.45
29:B4:32:TYR:CD2	41:BG:113:ARG:HD2	2.51	0.45
41:BG:19:LEU:O	41:BG:21:ARG:N	2.50	0.45
35:BA:743:G:C2'	35:BA:744:G:C8	2.68	0.45
35:BA:1140:C:H2'	35:BA:1141:U:H5'	1.98	0.45
1:AA:81:U:H2'	1:AA:88:A:H61	1.81	0.45
35:BA:1658:C:OP1	39:BE:132:HIS:ND1	2.49	0.45
1:AA:1498:U:C1'	1:AA:1499:A:P	3.05	0.45
1:AA:1314:C:H5	19:AS:6:LYS:CE	2.30	0.45
2:AB:21:ARG:HB3	2:AB:38:GLY:O	2.17	0.45
35:BA:995:C:C2	53:BU:57:PHE:HE2	2.35	0.45
53:BU:95:LEU:C	53:BU:97:ASP:N	2.69	0.45
1:AA:1077:G:C6	1:AA:1081:G:C6	3.03	0.45
8:AH:105:ARG:HD3	8:AH:105:ARG:HA	1.63	0.45
40:BF:9:ILE:HA	40:BF:14:PRO:HA	1.98	0.45
35:BA:1105:U:O2'	35:BA:1106:G:OP1	2.30	0.45
20:AT:75:ASN:HA	20:AT:78:ALA:HB3	1.99	0.45
58:BZ:53:ILE:HG13	58:BZ:54:HIS:CD2	2.52	0.45
35:BA:2410:G:H2'	35:BA:2411:A:O4'	2.17	0.45
40:BF:160:ASN:HD21	40:BF:162:LEU:CD1	2.18	0.45
35:BA:2134:A:C8	35:BA:2134:A:H5'	2.49	0.45
38:BD:142:VAL:HG21	38:BD:191:ALA:CB	2.47	0.45
35:BA:1517:G:H2'	35:BA:1518:U:O4'	2.16	0.45
37:BC:22:THR:HG23	37:BC:25:GLU:OE1	2.17	0.45
2:AB:113:HIS:HA	2:AB:116:GLU:HG3	1.98	0.45
50:BR:103:ARG:HH12	50:BR:110:PRO:CD	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:232:LEU:H	24:AY:232:LEU:HD13	1.81	0.45
42:BH:44:VAL:HG12	42:BH:45:VAL:N	2.32	0.45
52:BT:39:ARG:N	52:BT:39:ARG:HD2	2.29	0.45
35:BA:2030:A:H4'	35:BA:2031:A:C8	2.52	0.45
1:AA:1457:G:OP1	20:AT:39:LYS:NZ	2.50	0.45
24:AY:190:ASN:C	24:AY:192:LEU:H	2.20	0.45
4:AD:61:LYS:NZ	4:AD:62:GLN:NE2	2.65	0.45
35:BA:773:U:C5'	38:BD:47:GLY:HA3	2.46	0.45
44:BK:117:UNK:O	44:BK:119:UNK:N	2.49	0.45
4:AD:63:LYS:HD3	4:AD:197:PRO:O	2.17	0.45
50:BR:33:ARG:HG3	50:BR:115:GLU:HG3	1.97	0.45
35:BA:2602:A:OP1	35:BA:2602:A:H4'	2.16	0.45
2:AB:124:SER:HB2	2:AB:125:PRO:CD	2.46	0.45
37:BC:211:ARG:HG2	37:BC:211:ARG:HH11	1.81	0.45
35:BA:2078:C:H2'	35:BA:2079:U:C6	2.51	0.45
35:BA:610:G:H2'	35:BA:611:C:C6	2.52	0.45
1:AA:189(B):C:O2'	1:AA:189(C):C:H5'	2.16	0.45
35:BA:1041:G:H1	35:BA:1114:G:N2	2.15	0.45
48:BP:113:LYS:HG2	48:BP:115:LEU:HD13	1.99	0.45
35:BA:698:C:O2'	35:BA:734:A:N6	2.48	0.45
25:B0:26:TYR:CD1	25:B0:26:TYR:N	2.84	0.45
25:B0:67:VAL:O	25:B0:68:GLU:HB3	2.16	0.45
7:AG:113:GLU:HB3	7:AG:118:VAL:CG1	2.47	0.45
9:AI:10:ARG:CD	9:AI:105:ASP:HB3	2.47	0.45
3:AC:43:LEU:O	3:AC:47:LEU:HB2	2.17	0.45
30:B5:2:ALA:N	35:BA:747:U:C5	2.85	0.45
57:BY:28:LYS:CE	57:BY:28:LYS:N	2.79	0.45
35:BA:1992:G:H5'	35:BA:1994:C:N4	2.32	0.45
27:B2:51:ARG:HE	27:B2:51:ARG:HB2	1.52	0.45
35:BA:1138:G:O2'	46:BN:102:ALA:O	2.34	0.45
24:AY:105:ILE:HD12	24:AY:105:ILE:N	2.31	0.45
51:BS:99:LYS:HB3	51:BS:99:LYS:HZ3	1.81	0.45
14:AN:33:VAL:O	14:AN:33:VAL:CG2	2.64	0.45
35:BA:1120:G:H2'	35:BA:1121:C:H6	1.82	0.45
35:BA:996:A:C4'	53:BU:92:ARG:NE	2.76	0.45
58:BZ:166:SER:N	58:BZ:167:PRO:HA	2.32	0.45
35:BA:673:C:H4'	40:BF:82:ILE:CG1	2.47	0.45
1:AA:1029:C:C2'	1:AA:1030:C:H5''	2.46	0.45
35:BA:324:A:H2'	35:BA:325:G:O4'	2.17	0.45
20:AT:26:ASN:CB	20:AT:71:THR:OG1	2.62	0.45
1:AA:188:C:O4'	20:AT:89:ARG:NH1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:52:ARG:C	26:B1:53:VAL:HG13	2.36	0.45
24:AY:517:LEU:HD11	24:AY:564:LYS:N	2.31	0.45
48:BP:77:ARG:CD	48:BP:78:PRO:HD2	2.37	0.45
57:BY:81:LYS:HG3	57:BY:82:PRO:HD2	1.98	0.45
26:B1:64:ALA:HA	26:B1:67:ILE:CD1	2.47	0.45
36:BB:16:G:O2'	36:BB:17:C:O5'	2.34	0.45
49:BQ:133:ARG:HG3	49:BQ:133:ARG:NH1	2.32	0.45
24:AY:96:ARG:O	24:AY:100:VAL:HG12	2.17	0.45
3:AC:129:ALA:HB1	3:AC:133:ALA:H	1.82	0.45
1:AA:180:U:C2'	1:AA:181:G:H5'	2.47	0.45
1:AA:159:G:H22	1:AA:163:C:N4	2.14	0.45
2:AB:107:THR:O	2:AB:110:GLN:HG2	2.17	0.45
25:B0:15:ASP:OD1	25:B0:16:SER:N	2.41	0.45
1:AA:1119:C:O2'	1:AA:1120:G:H5'	2.17	0.45
35:BA:2695:C:H2'	35:BA:2696:U:H6	1.82	0.45
1:AA:335:C:H2'	1:AA:336:C:C6	2.52	0.45
53:BU:32:PHE:CB	53:BU:36:ARG:NH2	2.80	0.45
35:BA:201:C:O2'	35:BA:202:U:H5'	2.17	0.45
35:BA:1922:G:O2'	35:BA:1923:U:H5'	2.16	0.45
54:BV:8:GLY:O	54:BV:10:LYS:HE3	2.17	0.45
44:BK:8:UNK:O	44:BK:9:UNK:CB	2.64	0.45
29:B4:27:THR:OG1	29:B4:27:THR:O	2.31	0.45
35:BA:318:C:H2'	35:BA:319:C:H6	1.82	0.45
49:BQ:42:ILE:HG12	49:BQ:103:MET:CE	2.47	0.45
52:BT:30:VAL:CG1	52:BT:31:SER:CB	2.57	0.45
2:AB:229:VAL:HB	2:AB:230:VAL:H	1.46	0.45
35:BA:603:A:O4'	35:BA:604:G:O5'	2.35	0.45
35:BA:654(A):G:H2'	35:BA:654(B):C:C5'	2.47	0.45
35:BA:654(U):A:H2'	35:BA:654(V):A:C8	2.52	0.45
7:AG:30:ILE:HD13	7:AG:105:VAL:HG22	1.99	0.45
1:AA:591:U:H2'	1:AA:592:G:O5'	2.17	0.45
35:BA:13:A:H61	35:BA:525:U:H3'	1.82	0.45
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.17	0.45
35:BA:1445:A:H8	35:BA:1460:A:C6	2.35	0.45
35:BA:1754:C:N3	35:BA:2716:U:O2'	2.43	0.45
35:BA:1999:C:H2'	35:BA:2000:G:C5'	2.40	0.45
35:BA:61:G:H1	35:BA:94:C:N4	2.14	0.45
41:BG:104:GLU:HB3	41:BG:105:LYS:NZ	2.31	0.45
35:BA:693:C:H2'	35:BA:694:U:O5'	2.17	0.45
31:B6:39:TYR:O	31:B6:41:PRO:HD3	2.16	0.45
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:17:ILE:HD13	24:AY:81:ILE:HG22	1.99	0.45
1:AA:89:C:O2'	1:AA:90:U:C6	2.69	0.45
1:AA:973:G:N3	10:AJ:55:LYS:HE3	2.31	0.45
35:BA:885:C:H2'	35:BA:886:C:C5	2.52	0.45
35:BA:2748:A:C8	35:BA:2757:A:N6	2.85	0.45
37:BC:174:ALA:HA	37:BC:175:PRO:HD3	1.81	0.45
35:BA:2106:G:H5'	35:BA:2106:G:C8	2.51	0.45
42:BH:89:ILE:C	42:BH:89:ILE:HD12	2.37	0.45
35:BA:1055:G:H2'	35:BA:1056:G:O4'	2.16	0.45
1:AA:1387:G:HO2'	1:AA:1388:C:H5'	1.77	0.45
50:BR:45:ARG:HA	50:BR:95:THR:HG21	1.97	0.45
35:BA:271(J):C:O2	35:BA:271(M):G:O6	2.35	0.45
35:BA:271(M):G:C8	35:BA:271(M):G:H3'	2.52	0.45
35:BA:2332:U:H5'	35:BA:2336:A:N6	2.32	0.45
24:AY:114:VAL:CG2	24:AY:152:THR:HG23	2.46	0.45
35:BA:2131:G:H5'	35:BA:2133:A:O4'	2.17	0.45
54:BV:61:VAL:CG2	54:BV:61:VAL:O	2.64	0.45
35:BA:1494:A:O2'	35:BA:1495:A:H5''	2.17	0.45
52:BT:107:ASP:CG	52:BT:108:ARG:H	2.20	0.45
1:AA:564:C:N4	1:AA:565:U:O4	2.50	0.45
22:AV:27:G:O2'	22:AV:28:G:H5'	2.17	0.45
35:BA:1810:A:H2'	35:BA:1811:G:O4'	2.17	0.45
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.17	0.45
1:AA:680:C:O2'	38:BD:166:GLN:CG	2.64	0.45
35:BA:1028:A:O2'	35:BA:1029:A:H5'	2.16	0.45
32:B7:10:ARG:NH1	35:BA:771:G:OP2	2.49	0.45
35:BA:869:G:C2'	35:BA:870:A:H5'	2.47	0.45
11:AK:15:ALA:O	11:AK:78:GLN:N	2.41	0.45
1:AA:1476:G:H2'	1:AA:1477:C:H6	1.81	0.45
2:AB:136:VAL:O	2:AB:140:HIS:HB2	2.17	0.45
40:BF:39:TRP:O	40:BF:43:LYS:HG2	2.17	0.45
35:BA:2879:C:H4'	35:BA:2880:C:OP1	2.17	0.45
55:BW:66:GLU:HG2	55:BW:66:GLU:O	2.17	0.45
27:B2:12:GLU:O	27:B2:12:GLU:HG2	2.16	0.45
1:AA:449:C:O2	16:AP:42:ARG:HD2	2.16	0.45
24:AY:29:THR:O	24:AY:33:LEU:HD13	2.17	0.45
2:AB:87:ARG:NH2	2:AB:233:SER:N	2.64	0.45
2:AB:86:GLU:C	2:AB:88:ALA:H	2.20	0.45
49:BQ:16:ARG:HH11	49:BQ:16:ARG:CG	2.30	0.45
1:AA:773:G:C2'	1:AA:774:G:C5'	2.88	0.45
1:AA:776:G:N2	1:AA:802:A:OP2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:36:ARG:O	2:AB:37:ASN:HB3	2.16	0.45
35:BA:94:C:H2'	35:BA:94:C:O2	2.17	0.45
40:BF:125:LEU:HD12	40:BF:196:LEU:CD2	2.47	0.45
35:BA:1146:C:O2'	35:BA:1147:C:H5'	2.17	0.45
42:BH:83:TYR:HB2	42:BH:84:SER:H	1.49	0.45
24:AY:67:ALA:HB3	24:AY:83:ASP:O	2.17	0.45
24:AY:81:ILE:O	24:AY:82:ILE:CG1	2.64	0.45
1:AA:1526:G:C2'	1:AA:1527:C:C5'	2.95	0.45
51:BS:52:SER:O	51:BS:69:VAL:HG23	2.16	0.45
10:AJ:53:PRO:HA	14:AN:42:ILE:HD12	1.98	0.45
35:BA:886:C:N4	35:BA:892:G:C2	2.85	0.45
35:BA:1806:C:H2'	35:BA:1807:G:C8	2.52	0.45
35:BA:1806:C:H2'	35:BA:1807:G:H8	1.82	0.45
35:BA:2124:G:H1	35:BA:2174:C:N4	2.06	0.45
53:BU:57:PHE:HB3	53:BU:61:TRP:CZ2	2.52	0.45
20:AT:89:ARG:HH22	20:AT:106:ALA:HB2	1.82	0.45
39:BE:9:VAL:HG11	39:BE:25:VAL:HG12	1.99	0.45
40:BF:2:LYS:O	40:BF:3:GLU:HB3	2.17	0.45
10:AJ:4:ILE:CD1	10:AJ:4:ILE:N	2.80	0.45
40:BF:135:LYS:O	40:BF:138:GLU:N	2.50	0.45
37:BC:179:ALA:O	37:BC:180:SER:O	2.35	0.45
35:BA:2117:A:H4'	35:BA:2118:U:OP1	2.17	0.45
35:BA:1317:A:H2'	35:BA:1318:C:C6	2.51	0.45
37:BC:16:ASP:OD2	37:BC:19:LYS:HB2	2.17	0.45
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.98	0.45
35:BA:536:A:H2'	35:BA:537:C:H6	1.81	0.45
2:AB:80:ILE:HD11	2:AB:208:ILE:HG23	1.98	0.45
35:BA:1204:A:C2	35:BA:1241:A:N1	2.85	0.45
24:AY:554:PRO:HG2	24:AY:555:LEU:N	2.32	0.45
38:BD:97:TYR:HB3	38:BD:99:ASP:HB2	1.99	0.45
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.90	0.45
35:BA:1827:C:O2'	35:BA:1828:G:H5'	2.16	0.45
35:BA:1047:G:N2	35:BA:1110:G:H2'	2.32	0.45
1:AA:627:G:H2'	1:AA:628:G:H8	1.82	0.45
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.17	0.45
1:AA:486:U:H2'	1:AA:487:A:H8	1.81	0.45
45:BL:68:UNK:HA	45:BL:71:UNK:CB	2.47	0.45
1:AA:141:A:H1'	1:AA:182:U:O2	2.17	0.45
53:BU:111:GLU:HA	53:BU:111:GLU:OE1	2.16	0.45
6:AF:98:LEU:N	6:AF:98:LEU:HD12	2.32	0.45
52:BT:113:LYS:HA	52:BT:113:LYS:HD3	1.77	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:101:ILE:O	5:AE:120:THR:HB	2.18	0.45
1:AA:450:G:C5'	16:AP:41:PRO:O	2.65	0.45
35:BA:289:A:H2'	35:BA:290:G:O4'	2.17	0.45
29:B4:12:ALA:C	29:B4:13:ARG:HG2	2.36	0.44
35:BA:109:G:H2'	35:BA:110:G:O5'	2.18	0.44
1:AA:492:G:C2'	1:AA:493:G:O5'	2.64	0.44
35:BA:1268:A:C2	35:BA:2013:A:C4	3.05	0.44
27:B2:46:GLN:HE21	27:B2:48:HIS:CE1	2.36	0.44
35:BA:2307:G:H21	35:BA:2308:G:H5'	1.82	0.44
41:BG:137:GLU:O	41:BG:138:GLN:HG2	2.17	0.44
41:BG:78:SER:OG	41:BG:79:ASN:N	2.50	0.44
41:BG:5:VAL:HB	41:BG:8:LYS:HB2	1.99	0.44
1:AA:1175:G:O2'	1:AA:1176:A:C5'	2.39	0.44
35:BA:1591:G:H8	35:BA:1591:G:C5'	2.30	0.44
51:BS:97:ARG:HG3	51:BS:97:ARG:H	1.52	0.44
35:BA:466:A:C2'	35:BA:467:G:H5'	2.47	0.44
35:BA:2126:A:O2'	35:BA:2127:G:H5''	2.17	0.44
54:BV:39:LEU:HD12	54:BV:47:VAL:HG21	1.99	0.44
3:AC:72:LYS:HG3	3:AC:72:LYS:O	2.16	0.44
1:AA:976:G:H5'	1:AA:1358:U:O2'	2.18	0.44
1:AA:1033:G:H2'	1:AA:1034:G:C8	2.50	0.44
39:BE:55:ASN:HA	39:BE:55:ASN:HD22	1.51	0.44
1:AA:1001:A:H2'	1:AA:1001(A):G:H5'	1.99	0.44
39:BE:181:LEU:HD21	52:BT:7:ILE:CG2	2.46	0.44
40:BF:4:VAL:HA	40:BF:19:GLU:HB3	1.98	0.44
35:BA:2334:G:H4'	35:BA:2335:A:OP1	2.16	0.44
57:BY:7:VAL:CB	57:BY:8:LYS:NZ	2.70	0.44
37:BC:30:VAL:CG2	37:BC:31:LYS:N	2.78	0.44
48:BP:79:ARG:N	48:BP:110:TYR:HD2	2.15	0.44
54:BV:1:MET:O	54:BV:2:PHE:CB	2.52	0.44
47:BO:47:ILE:HG12	47:BO:48:PRO:HD2	1.99	0.44
42:BH:7:LEU:HD23	42:BH:7:LEU:H	1.82	0.44
4:AD:102:ASP:OD1	4:AD:103:ASN:N	2.44	0.44
35:BA:1475:G:H2'	35:BA:1476:C:H6	1.82	0.44
24:AY:391:GLY:C	24:AY:393:ASP:H	2.21	0.44
33:B8:21:LYS:HD3	33:B8:48:PHE:CE1	2.52	0.44
1:AA:875:C:O2'	8:AH:14:ARG:HD2	2.17	0.44
35:BA:2300:G:N2	35:BA:2317:C:H1'	2.32	0.44
24:AY:556:ILE:HG13	24:AY:558:PHE:HD1	1.83	0.44
2:AB:93:VAL:HG11	2:AB:97:TRP:CD1	2.52	0.44
38:BD:46:GLN:N	38:BD:46:GLN:OE1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1278:A:H4'	50:BR:34:ILE:HD12	1.98	0.44
35:BA:1967:C:H2'	35:BA:1968:G:H5'	1.99	0.44
49:BQ:20:ALA:HB1	58:BZ:78:LYS:HB3	1.98	0.44
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.17	0.44
35:BA:566:U:H2'	35:BA:567:A:O4'	2.17	0.44
49:BQ:37:LEU:HD11	49:BQ:130:LYS:HB2	1.97	0.44
4:AD:204:ILE:HD13	5:AE:97:GLY:O	2.17	0.44
40:BF:117:ARG:HD3	40:BF:117:ARG:HA	1.69	0.44
35:BA:614(A):U:H4'	35:BA:614(B):G:H5''	1.97	0.44
1:AA:814:A:H2'	1:AA:816:A:H5''	1.98	0.44
39:BE:3:GLY:HA3	39:BE:81:ILE:HD12	1.99	0.44
48:BP:114:ILE:O	48:BP:115:LEU:HB3	2.18	0.44
48:BP:85:LEU:HD23	48:BP:86:LYS:H	1.78	0.44
35:BA:958:U:O2'	35:BA:959:A:OP1	2.30	0.44
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.53	0.44
25:B0:66:VAL:HG13	25:B0:67:VAL:H	1.82	0.44
7:AG:22:LEU:C	7:AG:24:THR:H	2.18	0.44
35:BA:49:A:C5	35:BA:177:G:C6	3.05	0.44
1:AA:647:C:O2'	1:AA:648:A:H5'	2.16	0.44
1:AA:690:G:C5	1:AA:691:G:C5	3.05	0.44
1:AA:694:A:OP1	11:AK:53:SER:HB3	2.17	0.44
1:AA:692:U:H2'	1:AA:694:A:OP2	2.17	0.44
35:BA:2606:C:C3'	35:BA:2607:G:C5'	2.94	0.44
35:BA:1642:G:O2'	35:BA:1643:G:C5'	2.65	0.44
27:B2:38:GLN:HB3	27:B2:44:LEU:HB3	1.99	0.44
35:BA:1801:G:H3'	35:BA:1802:A:H5'	1.98	0.44
35:BA:623:G:H2'	35:BA:624:C:C6	2.52	0.44
1:AA:1501:C:C4	1:AA:1504:G:C5	3.04	0.44
35:BA:1006:C:O2	46:BN:106:MET:HG2	2.17	0.44
19:AS:41:VAL:HA	19:AS:42:PRO:HD2	1.86	0.44
35:BA:2308:G:N7	35:BA:2310:A:H5'	2.32	0.44
41:BG:16:ARG:N	41:BG:17:PRO:HD2	2.32	0.44
41:BG:25:TYR:CE2	41:BG:26:GLN:OE1	2.70	0.44
41:BG:80:PHE:O	41:BG:81:LYS:CB	2.65	0.44
41:BG:87:PRO:C	41:BG:88:ILE:HG13	2.37	0.44
9:AI:53:VAL:HG11	9:AI:95:LYS:HE2	1.95	0.44
52:BT:41:ARG:O	52:BT:41:ARG:HD3	2.17	0.44
1:AA:1202:G:H2'	1:AA:1203:C:H5'	1.99	0.44
1:AA:1080:A:O5'	1:AA:1080:A:H8	1.99	0.44
42:BH:158:HIS:HB2	42:BH:159:GLU:H	1.63	0.44
35:BA:1106:G:H2'	35:BA:1107:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:310:A:OP2	57:BY:18:GLY:HA2	2.16	0.44
25:B0:11:ARG:CD	25:B0:11:ARG:N	2.81	0.44
58:BZ:128:VAL:HG11	58:BZ:133:ILE:HD13	1.98	0.44
35:BA:2630:G:H1'	35:BA:2894:G:N9	2.32	0.44
26:B1:58:ILE:HD11	26:B1:90:ILE:CG2	2.48	0.44
58:BZ:5:LEU:HD13	58:BZ:6:LYS:N	2.32	0.44
4:AD:34:GLU:O	4:AD:35:ARG:HG3	2.16	0.44
14:AN:59:ALA:O	14:AN:60:SER:CB	2.65	0.44
9:AI:117:HIS:O	9:AI:118:LYS:CB	2.65	0.44
29:B4:57:GLU:HB2	29:B4:58:ARG:HD2	1.99	0.44
35:BA:2134:A:O2'	35:BA:2135:A:H5'	2.16	0.44
29:B4:68:ARG:O	29:B4:71:ARG:HG2	2.17	0.44
10:AJ:16:LEU:HD12	10:AJ:70:ARG:HG3	1.99	0.44
12:AL:117:ARG:CZ	12:AL:124:LYS:HA	2.47	0.44
39:BE:33:VAL:O	39:BE:33:VAL:HG13	2.17	0.44
4:AD:126:ILE:N	4:AD:126:ILE:CD1	2.81	0.44
3:AC:129:ALA:O	3:AC:131:ARG:N	2.50	0.44
24:AY:424:LEU:HB2	24:AY:472:VAL:HG11	2.00	0.44
1:AA:748:C:O2'	1:AA:749:C:OP2	2.35	0.44
24:AY:229:LEU:O	24:AY:231:TYR:N	2.50	0.44
35:BA:104:U:C5	35:BA:105:C:C5	3.05	0.44
45:BL:113:UNK:O	45:BL:115:UNK:N	2.50	0.44
24:AY:555:LEU:HD13	24:AY:601:ILE:HG13	1.99	0.44
6:AF:44:GLY:O	6:AF:46:ARG:HG3	2.16	0.44
46:BN:15:LEU:C	46:BN:15:LEU:HD13	2.38	0.44
35:BA:2593:U:H2'	35:BA:2594:C:H6	1.83	0.44
35:BA:304:G:O2'	35:BA:305:U:H5'	2.16	0.44
30:B5:39:MET:HB2	55:BW:34:ASN:ND2	2.32	0.44
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.52	0.44
33:B8:38:GLY:O	33:B8:42:ARG:N	2.48	0.44
2:AB:82:ARG:CG	2:AB:82:ARG:NH1	2.80	0.44
48:BP:138:LEU:HD23	48:BP:143:GLY:O	2.17	0.44
1:AA:488:C:N4	1:AA:489:C:N4	2.66	0.44
9:AI:42:ARG:NH2	9:AI:75:ASP:OD1	2.51	0.44
1:AA:324:G:O5'	1:AA:324:G:H8	2.00	0.44
35:BA:524:U:H2'	35:BA:525:U:C6	2.52	0.44
1:AA:698:G:H2'	1:AA:699:C:H6	1.79	0.44
35:BA:2008:C:O2'	35:BA:2009:G:H5'	2.17	0.44
35:BA:1902:C:H4'	38:BD:244:ARG:HB2	2.00	0.44
35:BA:2581:G:C6	35:BA:2610:C:C4	3.05	0.44
1:AA:861:G:C2'	1:AA:862:C:H5'	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:110:ALA:O	41:BG:111:LEU:C	2.56	0.44
41:BG:136:ARG:O	41:BG:138:GLN:N	2.50	0.44
41:BG:144:ILE:CG2	41:BG:145:THR:N	2.80	0.44
35:BA:1799:G:H8	38:BD:181:GLU:CD	2.20	0.44
35:BA:654(M):C:H2'	35:BA:654(N):G:N7	2.33	0.44
35:BA:1345:C:H42	35:BA:1601:G:H1	1.64	0.44
35:BA:2128:C:O2'	35:BA:2129:C:P	2.76	0.44
42:BH:158:HIS:N	42:BH:158:HIS:CD2	2.85	0.44
40:BF:9:ILE:CB	40:BF:14:PRO:HA	2.47	0.44
40:BF:80:ALA:HB1	40:BF:81:PRO:CD	2.44	0.44
38:BD:248:SER:CB	38:BD:249:PRO:CD	2.89	0.44
1:AA:1384:C:H2'	1:AA:1385:G:H8	1.83	0.44
1:AA:413:G:O6	4:AD:35:ARG:HD2	2.17	0.44
1:AA:1367:C:H2'	1:AA:1368:G:O5'	2.16	0.44
25:B0:50:ASN:O	25:B0:62:LEU:HD23	2.15	0.44
24:AY:128:TYR:O	24:AY:129:LYS:C	2.54	0.44
35:BA:2410:G:C2	35:BA:2411:A:H1'	2.52	0.44
40:BF:162:LEU:N	40:BF:162:LEU:HD12	2.31	0.44
54:BV:19:LYS:NZ	54:BV:20:LEU:HB2	2.28	0.44
32:B7:11:LYS:HE2	35:BA:686:G:H5''	1.99	0.44
46:BN:55:VAL:HG22	46:BN:56:ASN:N	2.33	0.44
1:AA:226:G:C2'	1:AA:227:G:H5'	2.47	0.44
19:AS:32:LYS:CA	19:AS:50:ALA:HB3	2.47	0.44
3:AC:129:ALA:HB1	3:AC:133:ALA:N	2.31	0.44
42:BH:61:HIS:O	42:BH:62:LYS:C	2.55	0.44
13:AM:40:ASN:HB3	13:AM:43:THR:CG2	2.47	0.44
44:BK:122:UNK:O	44:BK:124:UNK:N	2.50	0.44
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.52	0.44
24:AY:510:VAL:HG13	24:AY:567:LEU:HD11	1.98	0.44
35:BA:1287:A:C5	35:BA:1288:U:C4	3.05	0.44
54:BV:34:GLU:O	54:BV:36:PRO:CD	2.65	0.44
35:BA:2065:C:H2'	35:BA:2066:C:C6	2.52	0.44
46:BN:65:LYS:O	46:BN:69:GLN:HB2	2.17	0.44
58:BZ:7:ALA:C	58:BZ:8:TYR:CD1	2.91	0.44
2:AB:145:LEU:CD2	2:AB:149:LEU:HD21	2.45	0.44
2:AB:155:LEU:HD23	2:AB:155:LEU:HA	1.78	0.44
35:BA:833:U:H5''	48:BP:48:PRO:HB2	1.99	0.44
1:AA:173:U:H5'	1:AA:197:A:H5'	1.95	0.44
35:BA:651:G:C6	35:BA:652:C:C4	3.05	0.44
1:AA:590:C:OP1	8:AH:30:ARG:HB2	2.18	0.44
35:BA:1224:C:N4	35:BA:1225:G:C6	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1994:C:C6	35:BA:1994:C:O5'	2.62	0.44
27:B2:35:LEU:C	27:B2:37:PHE:H	2.21	0.44
27:B2:45:SER:O	27:B2:47:ASN:N	2.45	0.44
46:BN:104:LYS:C	46:BN:106:MET:H	2.20	0.44
29:B4:38:LYS:O	29:B4:40:HIS:N	2.50	0.44
32:B7:34:ARG:HB2	32:B7:42:LEU:CD2	2.47	0.44
35:BA:461:C:C3'	35:BA:462:C:H5'	2.47	0.44
35:BA:2128:C:H1'	35:BA:2129:C:C5'	2.47	0.44
51:BS:106:ARG:CD	51:BS:108:GLY:HA3	2.48	0.44
1:AA:1001:A:O2'	1:AA:1001(A):G:H5''	2.17	0.44
38:BD:25:THR:C	38:BD:27:THR:H	2.19	0.44
35:BA:2875:C:O2'	52:BT:3:ARG:HD3	2.17	0.44
36:BB:105:A:H4'	58:BZ:89:PHE:CE1	2.53	0.44
58:BZ:29:TYR:HB3	58:BZ:34:ASN:HD22	1.81	0.44
51:BS:15:ARG:HH12	51:BS:18:ILE:HD11	1.81	0.44
28:B3:52:HIS:C	28:B3:53:LEU:HG	2.37	0.44
29:B4:62:ARG:O	29:B4:63:TYR:HB2	2.18	0.44
54:BV:18:LEU:C	54:BV:18:LEU:CD2	2.85	0.44
35:BA:1413:G:H2'	35:BA:1414:G:O5'	2.17	0.44
35:BA:1379:A:N3	35:BA:1379:A:O5'	2.51	0.44
36:BB:81:G:N3	36:BB:81:G:H5'	2.32	0.44
1:AA:1027:C:C3'	1:AA:1028:C:H5''	2.41	0.44
1:AA:884:U:H4'	1:AA:885:G:H5''	2.00	0.44
37:BC:88:GLU:HA	37:BC:92:ALA:HB3	1.98	0.44
35:BA:1503:U:O2'	35:BA:1504:C:H5'	2.18	0.44
27:B2:55:ARG:NH1	27:B2:55:ARG:HG3	2.26	0.44
52:BT:95:ARG:NH1	52:BT:95:ARG:CB	2.79	0.44
39:BE:87:GLU:H	39:BE:87:GLU:HG3	1.65	0.44
35:BA:1925:C:C4	35:BA:1926:U:H5	2.36	0.44
39:BE:14:ILE:HD11	39:BE:173:VAL:CG1	2.47	0.44
2:AB:195:ASP:O	8:AH:68:ARG:NH2	2.50	0.44
36:BB:67:G:O2'	36:BB:68:C:C6	2.67	0.44
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.17	0.44
42:BH:121:ILE:HD11	42:BH:140:LYS:HB3	2.00	0.44
49:BQ:58:PHE:HB3	49:BQ:113:GLN:NE2	2.32	0.44
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.99	0.44
24:AY:348:ARG:NH1	24:AY:348:ARG:CG	2.80	0.44
1:AA:995:C:O4'	14:AN:8:GLU:OE1	2.35	0.44
35:BA:2585:U:O2'	35:BA:2586:C:OP1	2.33	0.44
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.32	0.44
50:BR:34:ILE:HA	50:BR:34:ILE:HD13	1.77	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:114:ILE:N	47:BO:114:ILE:HD12	2.32	0.44
35:BA:839:U:H2'	35:BA:840:C:C6	2.53	0.44
35:BA:2537:U:H2'	35:BA:2538:C:C6	2.52	0.44
57:BY:51:VAL:O	57:BY:51:VAL:HG12	2.18	0.44
35:BA:2283:C:H2'	35:BA:2284:C:O4'	2.17	0.44
35:BA:1165:U:O2'	35:BA:1166:C:H5'	2.18	0.44
35:BA:449:A:H4'	53:BU:3:ARG:NH2	2.32	0.44
31:B6:36:LEU:CD1	31:B6:50:ARG:NH1	2.81	0.44
35:BA:2025:C:H2'	35:BA:2026:C:C6	2.52	0.44
35:BA:2556:C:H2'	35:BA:2557:G:O4'	2.17	0.44
37:BC:118:PRO:HB2	37:BC:121:MET:H	1.82	0.44
27:B2:16:LEU:HB3	27:B2:20:GLU:HB3	1.98	0.44
1:AA:198:G:C6	1:AA:220:G:N3	2.86	0.44
4:AD:3:ARG:HE	4:AD:5:ILE:HG13	1.82	0.44
31:B6:9:LEU:HD11	31:B6:11:LEU:HD12	2.00	0.44
1:AA:773:G:C2	1:AA:774:G:N7	2.86	0.44
35:BA:1595:G:C2	35:BA:1596:A:C8	3.06	0.44
1:AA:590:C:H2'	1:AA:591:U:C6	2.53	0.44
35:BA:1794:U:H1'	35:BA:1900:A:C2	2.53	0.44
35:BA:1794:U:H1'	35:BA:1900:A:N3	2.32	0.44
1:AA:49:U:N3	1:AA:361:G:N2	2.66	0.44
1:AA:507:C:H2'	1:AA:508:C:OP1	2.18	0.44
35:BA:1299:G:H4'	35:BA:1301:A:C4	2.52	0.44
35:BA:1301:A:C8	35:BA:1303:G:C8	3.05	0.44
35:BA:445:C:O2'	35:BA:446:G:H5'	2.18	0.44
35:BA:747:U:O4'	35:BA:747:U:O2	2.35	0.44
1:AA:555:C:C2	1:AA:556:C:C4	3.06	0.44
27:B2:9:GLN:O	27:B2:10:LEU:C	2.56	0.44
13:AM:67:GLU:OE2	13:AM:71:ARG:NH2	2.43	0.44
19:AS:60:VAL:HG22	19:AS:62:ILE:H	1.82	0.44
1:AA:1177:G:OP2	9:AI:97:LYS:NZ	2.33	0.44
1:AA:1050:G:O2'	1:AA:1051:C:H5'	2.18	0.44
14:AN:31:ARG:O	14:AN:32:SER:HB2	2.18	0.44
1:AA:1181:G:O2'	1:AA:1184:G:H5'	2.17	0.44
1:AA:1270:C:C2'	1:AA:1271:G:H5'	2.47	0.44
1:AA:1270:C:O2'	1:AA:1271:G:H5'	2.17	0.44
1:AA:1079:G:C6	1:AA:1080:A:N6	2.85	0.44
42:BH:167:GLU:N	42:BH:168:PRO:CD	2.81	0.44
40:BF:84:VAL:C	40:BF:86:GLY:H	2.19	0.44
39:BE:8:LYS:NZ	39:BE:188:VAL:HG13	2.31	0.44
39:BE:53:PRO:O	39:BE:75:VAL:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1063:G:N2	35:BA:1074:G:H1	2.16	0.44
42:BH:5:GLY:HA2	42:BH:69:ARG:HB2	2.00	0.44
35:BA:1854:A:H2'	35:BA:1855:G:O4'	2.17	0.44
50:BR:79:LEU:C	50:BR:79:LEU:HD13	2.38	0.44
58:BZ:46:LYS:HD2	58:BZ:46:LYS:C	2.38	0.44
22:AV:73:A:C3'	22:AV:74:C:H5'	2.48	0.44
1:AA:1063:C:H3'	1:AA:1064:G:H2'	2.00	0.44
1:AA:345:C:OP1	1:AA:345:C:H6	2.00	0.44
54:BV:35:LEU:C	54:BV:37:VAL:N	2.71	0.44
35:BA:826:U:H4'	48:BP:55:ARG:HB2	1.99	0.44
35:BA:548:A:H2'	35:BA:549:G:C5'	2.47	0.44
20:AT:96:GLY:O	20:AT:97:ALA:CB	2.65	0.44
35:BA:2169:A:C4'	37:BC:130:ARG:HH21	2.30	0.44
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.18	0.44
50:BR:70:LEU:HD13	50:BR:75:LEU:HD12	1.98	0.44
54:BV:69:LYS:HA	54:BV:87:HIS:O	2.17	0.44
44:BK:111:UNK:O	44:BK:112:UNK:C	2.65	0.44
35:BA:381:G:O2'	35:BA:382:G:H5'	2.18	0.44
37:BC:77:ALA:O	37:BC:78:ILE:HD13	2.17	0.44
1:AA:1438:G:H2'	1:AA:1439:C:H6	1.82	0.44
42:BH:109:PHE:CZ	42:BH:152:ARG:HD2	2.51	0.44
9:AI:23:ASN:HB2	9:AI:24:GLY:H	1.52	0.44
52:BT:117:ASP:OD1	52:BT:119:LYS:HB3	2.17	0.44
1:AA:312:C:C2'	1:AA:313:A:O5'	2.66	0.44
35:BA:967:C:C6	35:BA:967:C:O5'	2.66	0.44
35:BA:2358:G:H2'	35:BA:2359:C:C5'	2.39	0.44
48:BP:62:LEU:O	48:BP:62:LEU:HG	2.18	0.44
35:BA:47:C:N3	35:BA:179:G:C2	2.86	0.44
1:AA:109:A:H3'	1:AA:110:C:C5'	2.47	0.44
22:AV:39:U:C2	22:AV:40:C:C5	3.06	0.44
35:BA:1301:A:C2'	35:BA:1302:A:C2'	2.93	0.44
40:BF:6:VAL:CG1	40:BF:7:TYR:N	2.66	0.44
19:AS:40:ILE:CG2	19:AS:69:HIS:H	2.29	0.44
41:BG:57:ALA:N	41:BG:90:LEU:HD21	2.33	0.44
31:B6:19:ARG:O	31:B6:20:ASN:O	2.35	0.44
35:BA:1590:U:C3'	35:BA:1591:G:H5''	2.44	0.44
10:AJ:50:ILE:CD1	10:AJ:57:LYS:HD3	2.46	0.44
35:BA:1032:A:H2	35:BA:1122:G:H22	1.66	0.44
53:BU:66:ASN:ND2	53:BU:70:ARG:HE	2.15	0.44
7:AG:81:GLY:HA3	23:AX:12:A:O3'	2.17	0.44
7:AG:36:LYS:O	7:AG:37:ASN:CB	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:20:HIS:CG	24:AY:21:ILE:N	2.86	0.44
29:B4:56:VAL:HG23	29:B4:60:GLN:CG	2.44	0.44
35:BA:414:C:H2'	35:BA:415:A:C8	2.53	0.44
57:BY:44:ILE:CG2	57:BY:45:VAL:N	2.78	0.44
35:BA:2656:U:C2'	35:BA:2657:A:H5''	2.45	0.44
24:AY:238:THR:C	24:AY:240:GLU:N	2.70	0.44
26:B1:11:ARG:CG	26:B1:11:ARG:HH11	2.25	0.44
30:B5:44:THR:HG21	50:BR:101:ALA:CB	2.46	0.44
35:BA:880:G:C3'	35:BA:881:G:H5''	2.46	0.44
35:BA:265:A:N3	35:BA:265:A:H5'	2.33	0.44
15:AO:56:LEU:HD13	15:AO:60:VAL:HG23	1.99	0.44
3:AC:64:VAL:CB	3:AC:99:VAL:HG12	2.47	0.44
1:AA:960:U:H2'	1:AA:960:U:O2	2.17	0.44
50:BR:50:HIS:CD2	50:BR:54:LEU:HD11	2.53	0.44
14:AN:55:GLY:O	14:AN:56:VAL:HB	2.18	0.44
19:AS:86:GLU:O	19:AS:87:ALA:CB	2.65	0.44
39:BE:1:MET:O	39:BE:2:LYS:C	2.55	0.44
39:BE:144:ARG:HB3	39:BE:145:LYS:H	1.46	0.44
8:AH:100:ILE:HA	8:AH:101:PRO:HD3	1.82	0.44
1:AA:514:C:O2'	1:AA:515:G:H5'	2.17	0.44
2:AB:124:SER:HB2	2:AB:125:PRO:HD2	1.99	0.44
18:AR:44:LEU:HD22	18:AR:79:LEU:HD22	1.99	0.44
3:AC:36:ASP:OD1	3:AC:57:ILE:HG21	2.17	0.44
1:AA:19:C:H4'	1:AA:864:A:O4'	2.18	0.44
35:BA:2515:C:O2'	35:BA:2516:G:H5'	2.16	0.44
1:AA:434:U:H2'	1:AA:435:C:O4'	2.18	0.44
45:BL:97:UNK:O	45:BL:98:UNK:CB	2.65	0.44
48:BP:57:THR:C	48:BP:59:LEU:N	2.46	0.44
1:AA:173:U:H5'	1:AA:197:A:C4'	2.48	0.44
7:AG:44:TYR:C	7:AG:46:ALA:N	2.68	0.44
35:BA:181:A:C2	35:BA:435:C:C5	3.06	0.44
1:AA:105:G:C4	1:AA:106:C:C4	3.06	0.44
1:AA:262:A:H2'	1:AA:263:A:C8	2.53	0.44
38:BD:244:ARG:HA	38:BD:245:PRO:HA	1.51	0.44
35:BA:1778:U:H6	35:BA:1778:U:O5'	1.99	0.44
27:B2:44:LEU:O	27:B2:44:LEU:CD1	2.64	0.44
29:B4:7:PRO:HG2	29:B4:9:LEU:HD12	1.97	0.44
41:BG:16:ARG:HB3	41:BG:17:PRO:CD	2.48	0.44
41:BG:9:ARG:CD	41:BG:9:ARG:H	2.25	0.44
1:AA:1279:A:O2'	1:AA:1281:U:H5''	2.18	0.44
35:BA:2403:C:C6	35:BA:2403:C:O5'	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2402:C:H1'	35:BA:2403:C:OP1	2.18	0.44
1:AA:973:G:C1'	10:AJ:55:LYS:HG2	2.46	0.44
35:BA:1217:C:OP2	53:BU:15:LYS:HE3	2.18	0.44
37:BC:7:ARG:HH22	37:BC:219:MET:HB2	1.82	0.44
46:BN:3:THR:CG2	46:BN:4:TYR:H	2.23	0.44
54:BV:55:ALA:O	54:BV:56:SER:HB3	2.18	0.44
40:BF:10:PRO:O	40:BF:11:VAL:HG23	2.17	0.44
35:BA:1767:C:C2'	35:BA:1768:U:C5'	2.78	0.44
55:BW:2:GLU:OE2	55:BW:106:ILE:HD12	2.17	0.44
1:AA:1268:A:C8	1:AA:1326:C:O2'	2.70	0.44
58:BZ:44:PHE:CZ	58:BZ:48:PHE:CD2	2.98	0.44
24:AY:149:VAL:O	24:AY:152:THR:HG22	2.18	0.44
39:BE:154:LYS:O	39:BE:154:LYS:CG	2.66	0.44
35:BA:1094:U:H5'	35:BA:1095:A:OP1	2.17	0.44
35:BA:528:A:C2	35:BA:2043:C:H4'	2.53	0.44
24:AY:530:VAL:HG13	24:AY:531:GLY:H	1.82	0.44
50:BR:4:LEU:C	50:BR:6:SER:N	2.70	0.44
37:BC:55:SER:C	37:BC:57:GLN:N	2.71	0.44
58:BZ:122:ARG:HH11	58:BZ:122:ARG:CB	2.30	0.44
12:AL:43:VAL:CG1	12:AL:44:THR:N	2.81	0.44
46:BN:73:THR:HG23	46:BN:82:LEU:CD1	2.48	0.44
14:AN:9:LYS:HA	14:AN:12:ARG:NH2	2.33	0.44
35:BA:2464:C:HO2'	35:BA:2465:C:P	2.41	0.44
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.99	0.44
15:AO:56:LEU:HD13	15:AO:56:LEU:C	2.38	0.44
39:BE:164:ARG:NH2	39:BE:199:ARG:NH2	2.65	0.44
24:AY:156:ARG:HH22	24:AY:666:ARG:CZ	2.29	0.44
34:B9:8:LYS:O	34:B9:25:VAL:HG21	2.17	0.44
35:BA:1204:A:H2	35:BA:1241:A:N1	2.15	0.44
1:AA:1452:C:O2'	1:AA:1456:G:P	2.75	0.44
40:BF:37:VAL:HG11	48:BP:7:ARG:HH12	1.81	0.44
19:AS:20:LEU:HD22	29:B4:61:ARG:HH21	1.82	0.44
35:BA:533:G:H5'	53:BU:24:TYR:CE1	2.52	0.44
46:BN:51:PHE:CZ	46:BN:119:ARG:HD2	2.52	0.44
24:AY:512:ILE:CD1	24:AY:589:ALA:HB1	2.47	0.44
55:BW:110:LYS:HA	55:BW:110:LYS:HD2	1.77	0.44
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.53	0.44
19:AS:75:ALA:O	19:AS:76:PRO:C	2.56	0.44
35:BA:2517:C:C6	35:BA:2542:A:C2	3.06	0.44
57:BY:6:HIS:CD2	57:BY:6:HIS:N	2.85	0.44
24:AY:40:HIS:HB3	24:AY:41:LYS:H	1.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:121:G:H4'	35:BA:149:A:H5'	2.00	0.44
1:AA:620:C:H2'	1:AA:621:A:O4'	2.18	0.44
35:BA:2019:A:H2'	35:BA:2020:A:O5'	2.18	0.44
35:BA:2364:C:H2'	35:BA:2365:G:O4'	2.18	0.44
49:BQ:16:ARG:HG3	49:BQ:17:LEU:H	1.82	0.44
1:AA:498:U:O2'	1:AA:499:A:P	2.76	0.44
1:AA:1371:G:OP1	9:AI:12:GLU:HB2	2.17	0.44
35:BA:181:A:C6	35:BA:182:A:C6	3.06	0.44
35:BA:1982:C:C4	35:BA:1983:C:C4	3.04	0.44
35:BA:1446:C:H3'	35:BA:1446:C:O2	2.18	0.44
35:BA:1992:G:C2	35:BA:1997:G:C5	3.06	0.44
13:AM:45:VAL:HA	13:AM:48:LEU:HG	1.99	0.44
13:AM:70:LEU:O	13:AM:71:ARG:C	2.56	0.44
29:B4:22:ILE:HG13	41:BG:105:LYS:HD3	2.00	0.44
29:B4:52:THR:O	29:B4:53:GLU:C	2.56	0.44
35:BA:2884:U:H2'	35:BA:2885:C:H5'	2.00	0.44
42:BH:85:LYS:NZ	42:BH:145:ALA:HA	2.32	0.44
36:BB:37:C:H2'	36:BB:38:C:C5'	2.48	0.44
1:AA:961:U:C6	1:AA:962:C:C5	3.06	0.44
35:BA:2207:G:H5''	35:BA:2207:G:C2	2.48	0.44
35:BA:1215:G:C2'	35:BA:1216:G:C5'	2.90	0.44
1:AA:1073:U:C2'	1:AA:1074:G:C5'	2.76	0.44
1:AA:979:C:C3'	1:AA:980:C:C5'	2.94	0.44
35:BA:327:G:O2'	35:BA:328:U:O5'	2.36	0.44
38:BD:43:ARG:HB3	38:BD:54:ARG:CB	2.43	0.44
12:AL:5:PRO:HB2	12:AL:9:GLN:HB2	1.98	0.44
40:BF:26:ALA:C	40:BF:27:GLU:OE1	2.57	0.44
35:BA:264:C:H4'	35:BA:428:A:C2	2.53	0.44
54:BV:1:MET:HB3	54:BV:2:PHE:H	1.55	0.44
54:BV:57:VAL:HG23	54:BV:99:ILE:HG23	2.00	0.44
35:BA:2468:G:OP2	49:BQ:119:ARG:NH2	2.47	0.44
35:BA:1180:C:H2'	35:BA:1181:C:H5'	2.00	0.44
33:B8:23:VAL:HG12	33:B8:46:ARG:NH1	2.24	0.44
24:AY:165:GLN:OE1	24:AY:259:PHE:HD2	2.01	0.44
42:BH:11:VAL:HG12	42:BH:12:PRO:O	2.17	0.44
37:BC:75:VAL:CG2	37:BC:92:ALA:HA	2.47	0.44
24:AY:587:SER:O	24:AY:591:LYS:HB2	2.17	0.44
14:AN:12:ARG:HB3	14:AN:14:PRO:CD	2.48	0.44
35:BA:221:A:O2'	35:BA:222:A:OP2	2.32	0.44
28:B3:54:VAL:O	28:B3:54:VAL:HG22	2.17	0.44
55:BW:37:ARG:NH1	55:BW:37:ARG:HG3	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:229:LEU:HA	24:AY:232:LEU:CD2	2.48	0.44
24:AY:7:TYR:CD2	24:AY:370:LYS:HD2	2.52	0.44
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.82	0.44
13:AM:39:ILE:CD1	13:AM:56:LEU:HB2	2.48	0.44
35:BA:1047:G:H2'	35:BA:1110:G:N2	2.33	0.44
35:BA:1493:C:C2'	35:BA:1493:C:O2	2.66	0.44
37:BC:130:ARG:O	37:BC:130:ARG:HG3	2.17	0.44
35:BA:876:C:H2'	35:BA:877:U:O4'	2.18	0.44
1:AA:818:G:HO2'	1:AA:820:U:H6	1.64	0.44
35:BA:1249:U:C4'	53:BU:4:ALA:HB3	2.47	0.44
58:BZ:118:GLN:HG2	58:BZ:120:ILE:HD13	2.00	0.44
44:BK:6:UNK:O	44:BK:7:UNK:CB	2.64	0.44
35:BA:2259:G:C8	35:BA:2427:C:C4	3.06	0.44
1:AA:363:A:H8	1:AA:363:A:O5'	2.01	0.44
12:AL:10:LEU:HB3	17:AQ:32:TYR:CE2	2.53	0.44
22:AV:15:G:H5'	22:AV:16:C:O2	2.18	0.44
9:AI:19:LEU:O	9:AI:19:LEU:HD12	2.18	0.44
52:BT:26:ASP:HB3	52:BT:89:VAL:O	2.18	0.44
48:BP:51:PHE:HD2	48:BP:52:GLU:O	1.91	0.44
25:B0:37:LEU:N	25:B0:37:LEU:HD22	2.27	0.44
35:BA:860:U:H2'	35:BA:861:A:C5'	2.48	0.44
9:AI:42:ARG:HH22	9:AI:75:ASP:CG	2.21	0.44
35:BA:49:A:N3	35:BA:49:A:H5'	2.33	0.44
35:BA:1464:C:O2'	35:BA:1528:A:H1'	2.18	0.44
35:BA:2202:C:H2'	35:BA:2203:U:C6	2.51	0.44
35:BA:256:A:O2'	35:BA:257:A:C5'	2.66	0.44
35:BA:1136:G:C2	35:BA:1137:G:C5	3.06	0.44
13:AM:18:ALA:O	13:AM:19:LEU:C	2.55	0.44
19:AS:67:VAL:HG12	29:B4:52:THR:HG23	2.00	0.44
29:B4:7:PRO:HB2	29:B4:8:LYS:H	1.70	0.44
41:BG:117:PHE:CD2	41:BG:118:ARG:CD	2.99	0.44
41:BG:38:VAL:HG12	41:BG:39:ILE:N	2.33	0.44
30:B5:45:VAL:HG13	30:B5:51:TYR:HB2	1.99	0.44
1:AA:1280:A:O4'	10:AJ:41:PRO:CG	2.63	0.44
35:BA:807:U:OP2	48:BP:39:LYS:HG2	2.18	0.44
51:BS:54:LEU:CD1	51:BS:57:LYS:HA	2.34	0.44
35:BA:2756:U:C1'	35:BA:2757:A:O5'	2.66	0.44
1:AA:1157:A:C1'	1:AA:1158:C:P	3.05	0.44
1:AA:975:A:C4'	1:AA:976:G:H5''	2.25	0.44
12:AL:28:LYS:O	12:AL:29:GLY:C	2.55	0.44
40:BF:114:VAL:HG21	40:BF:202:PHE:CZ	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:39:VAL:HG21	58:BZ:44:PHE:HB2	1.99	0.44
40:BF:26:ALA:HB1	40:BF:27:GLU:OE1	2.17	0.44
3:AC:167:TRP:CD1	3:AC:168:ALA:C	2.91	0.44
25:B0:62:LEU:CD2	25:B0:62:LEU:N	2.66	0.44
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD12	1.99	0.44
24:AY:99:ARG:NE	24:AY:128:TYR:CZ	2.84	0.44
24:AY:498:ILE:HA	24:AY:507:TYR:HB3	2.00	0.44
35:BA:2037:G:H2'	35:BA:2038:G:C8	2.53	0.44
35:BA:1654:A:H1'	35:BA:2823:A:H5'	1.99	0.44
35:BA:2287:A:C2	35:BA:2346:A:C2	3.06	0.44
35:BA:1688:U:H1'	35:BA:1701:A:N6	2.33	0.44
39:BE:71:GLY:C	39:BE:73:GLU:N	2.71	0.44
35:BA:1169:G:N2	35:BA:1181:C:C2	2.86	0.44
13:AM:49:THR:O	13:AM:50:GLU:C	2.57	0.44
24:AY:92:ILE:HD12	24:AY:96:ARG:HE	1.83	0.44
35:BA:2394:C:OP2	48:BP:63:PRO:CD	2.66	0.44
39:BE:33:VAL:HG23	39:BE:47:VAL:HG12	2.00	0.44
35:BA:478:A:N1	35:BA:500:G:H4'	2.32	0.44
37:BC:86:GLU:O	37:BC:87:ALA:HB3	2.18	0.44
38:BD:134:ARG:NH1	38:BD:188:GLU:OE2	2.51	0.44
38:BD:3:VAL:HG13	38:BD:17:THR:HB	1.99	0.44
10:AJ:37:PRO:HA	10:AJ:71:LEU:O	2.18	0.44
35:BA:2233:U:H2'	35:BA:2234:G:C8	2.52	0.44
1:AA:415:A:H2'	1:AA:416:G:H8	1.83	0.44
45:BL:61:UNK:HA	45:BL:93:UNK:O	2.18	0.44
53:BU:21:ALA:O	53:BU:22:LYS:C	2.56	0.44
35:BA:940:G:H2'	35:BA:941:A:O4'	2.18	0.44
52:BT:30:VAL:O	52:BT:44:ASP:HA	2.18	0.43
52:BT:59:THR:O	52:BT:77:PRO:O	2.36	0.43
48:BP:96:THR:HG22	48:BP:126:VAL:CG2	2.48	0.43
37:BC:121:MET:HE3	37:BC:139:PRO:O	2.17	0.43
1:AA:37:U:O2'	1:AA:38:G:H5''	2.17	0.43
1:AA:38:G:HO2'	1:AA:39:G:P	2.41	0.43
1:AA:545:C:O2'	1:AA:549:C:OP1	2.36	0.43
35:BA:1595:G:N3	35:BA:1596:A:C8	2.86	0.43
1:AA:936:C:H2'	1:AA:937:A:O5'	2.18	0.43
7:AG:48:LYS:HG2	7:AG:49:ILE:H	1.83	0.43
35:BA:47:C:N4	35:BA:179:G:N1	2.66	0.43
35:BA:701:G:C2'	35:BA:702:G:H5'	2.47	0.43
35:BA:1982:C:N4	35:BA:1983:C:H42	2.13	0.43
35:BA:2712:U:O2	35:BA:2712:U:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1221(A):C:C2'	35:BA:1222:C:H5'	2.47	0.43
27:B2:10:LEU:O	27:B2:14:ARG:CG	2.66	0.43
35:BA:2203:U:O2	35:BA:2203:U:H2'	2.17	0.43
29:B4:48:ARG:O	29:B4:50:VAL:N	2.48	0.43
29:B4:51:ASP:O	29:B4:53:GLU:N	2.50	0.43
29:B4:32:TYR:HB3	41:BG:141:PHE:CZ	2.52	0.43
41:BG:6:ALA:HB3	41:BG:105:LYS:HE3	1.99	0.43
41:BG:37:VAL:CG2	41:BG:99:MET:HG3	2.46	0.43
24:AY:27:THR:O	24:AY:30:GLU:HB3	2.18	0.43
32:B7:34:ARG:CD	35:BA:467:G:OP2	2.66	0.43
53:BU:76:TYR:CZ	53:BU:80:ILE:HG13	2.53	0.43
35:BA:1086:A:H3'	35:BA:1086:A:N3	2.33	0.43
40:BF:3:GLU:CA	40:BF:24:LEU:CG	2.95	0.43
35:BA:2033:A:O2'	35:BA:2034:U:OP1	2.30	0.43
24:AY:530:VAL:C	24:AY:532:GLY:H	2.20	0.43
26:B1:50:ARG:H	26:B1:50:ARG:HG2	1.50	0.43
54:BV:76:LYS:HB2	54:BV:81:TYR:HB3	1.99	0.43
40:BF:136:THR:HG23	40:BF:170:LEU:CD2	2.45	0.43
35:BA:221:A:C4	35:BA:266:G:N7	2.85	0.43
47:BO:76:ALA:HB3	52:BT:75:ILE:HD12	1.99	0.43
35:BA:1316:U:H2'	35:BA:1317:A:H8	1.83	0.43
28:B3:58:VAL:HG12	28:B3:59:VAL:N	2.33	0.43
3:AC:131:ARG:CB	3:AC:131:ARG:HH11	2.28	0.43
3:AC:16:ARG:CD	3:AC:17:ASP:N	2.80	0.43
6:AF:100:ASN:O	18:AR:28:GLU:HG2	2.17	0.43
37:BC:39:ASP:O	37:BC:178:LYS:HE3	2.17	0.43
35:BA:1449:A:H5''	35:BA:1449:A:H8	1.82	0.43
34:B9:7:VAL:HG12	34:B9:7:VAL:O	2.17	0.43
35:BA:547:A:C6	35:BA:548:A:C6	3.06	0.43
35:BA:1578:U:H2'	35:BA:1579:A:H5'	1.98	0.43
35:BA:2199:A:OP2	35:BA:2200:C:H5	2.00	0.43
26:B1:19:GLN:HB2	26:B1:35:THR:HG22	1.99	0.43
35:BA:2543:G:H2'	35:BA:2544:G:H8	1.83	0.43
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.48	0.43
38:BD:221:VAL:HG22	38:BD:226:MET:CE	2.48	0.43
1:AA:1458:G:H5''	20:AT:31:SER:HB2	2.00	0.43
52:BT:29:ARG:H	52:BT:45:PHE:C	2.21	0.43
33:B8:27:THR:HG22	48:BP:62:LEU:CD2	2.48	0.43
35:BA:2354:G:N1	35:BA:2364:C:C4	2.86	0.43
1:AA:549:C:H2'	1:AA:550:G:O4'	2.17	0.43
2:AB:19:HIS:HB3	2:AB:189:ASP:OD2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:601:C:O2'	35:BA:605:C:OP2	2.36	0.43
1:AA:684:A:H1'	11:AK:39:PRO:HD2	1.99	0.43
29:B4:39:CYS:HB3	29:B4:40:HIS:H	1.68	0.43
41:BG:20:ILE:O	41:BG:21:ARG:HB2	2.17	0.43
41:BG:87:PRO:CG	41:BG:88:ILE:N	2.81	0.43
35:BA:16:G:N3	35:BA:17:G:C8	2.86	0.43
24:AY:47:GLU:HB3	24:AY:52:MET:CA	2.47	0.43
10:AJ:49:VAL:HG22	10:AJ:50:ILE:O	2.18	0.43
2:AB:23:ARG:CG	2:AB:23:ARG:O	2.66	0.43
1:AA:979:C:H3'	1:AA:980:C:C5'	2.48	0.43
1:AA:1032:G:H2'	1:AA:1033:G:C8	2.54	0.43
57:BY:17:SER:HB2	57:BY:71:LYS:HZ3	1.84	0.43
24:AY:138:LYS:C	24:AY:140:ASP:H	2.21	0.43
24:AY:140:ASP:OD2	24:AY:265:LYS:HD3	2.18	0.43
35:BA:333:G:N3	35:BA:333:G:H2'	2.33	0.43
51:BS:14:VAL:CG1	51:BS:15:ARG:H	2.29	0.43
29:B4:56:VAL:HG13	29:B4:57:GLU:N	2.33	0.43
24:AY:573:HIS:O	24:AY:574:GLU:HB2	2.18	0.43
36:BB:8:U:C5'	36:BB:8:U:H6	2.21	0.43
3:AC:25:GLY:O	3:AC:28:GLN:N	2.38	0.43
35:BA:2808:U:N3	35:BA:2892:A:N7	2.65	0.43
14:AN:12:ARG:CB	14:AN:14:PRO:HD2	2.48	0.43
24:AY:168:ILE:HB	24:AY:176:GLY:H	1.83	0.43
30:B5:35:GLU:HB2	30:B5:49:CYS:HB3	2.00	0.43
35:BA:900:A:N3	35:BA:900:A:H2'	2.32	0.43
24:AY:471:LYS:O	24:AY:471:LYS:CG	2.61	0.43
24:AY:535:PRO:O	24:AY:537:GLU:N	2.51	0.43
52:BT:125:ARG:HG2	52:BT:125:ARG:NH1	2.32	0.43
16:AP:52:ASP:O	16:AP:54:GLU:N	2.51	0.43
24:AY:589:ALA:O	24:AY:592:GLU:HG2	2.17	0.43
7:AG:87:VAL:HG23	7:AG:151:TYR:O	2.18	0.43
4:AD:108:LEU:HD12	4:AD:108:LEU:HA	1.71	0.43
50:BR:44:LEU:HD13	50:BR:44:LEU:C	2.39	0.43
35:BA:590:A:H2'	35:BA:591:C:C6	2.52	0.43
45:BL:68:UNK:C	45:BL:70:UNK:N	2.79	0.43
35:BA:2688:U:C5	35:BA:2720:U:OP1	2.71	0.43
57:BY:86:ARG:HG2	57:BY:87:LYS:N	2.33	0.43
35:BA:2534:A:H2'	35:BA:2535:G:O5'	2.18	0.43
35:BA:239:U:H2'	35:BA:240:G:O4'	2.17	0.43
52:BT:29:ARG:HH11	52:BT:88:ILE:CD1	2.24	0.43
35:BA:630:G:H4'	35:BA:640:C:H4'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:144:GLU:N	48:BP:145:PRO:CD	2.78	0.43
35:BA:2362:G:C2'	35:BA:2363:C:C5'	2.94	0.43
1:AA:491:G:C2	1:AA:492:G:C5	3.05	0.43
1:AA:940:C:H2'	1:AA:941:G:C8	2.52	0.43
1:AA:360:A:C6	1:AA:361:G:C6	3.06	0.43
35:BA:1264:G:C2	35:BA:2014:A:N7	2.87	0.43
57:BY:28:LYS:HA	57:BY:38:ILE:CG2	2.34	0.43
57:BY:28:LYS:N	57:BY:28:LYS:HE2	2.34	0.43
35:BA:1784:A:C4'	35:BA:1785:A:H5''	2.48	0.43
35:BA:1784:A:H4'	35:BA:1785:A:O5'	2.18	0.43
1:AA:1508:G:O2'	1:AA:1509:C:H5'	2.18	0.43
29:B4:36:CYS:C	29:B4:38:LYS:H	2.22	0.43
35:BA:743:G:N9	35:BA:744:G:C8	2.85	0.43
31:B6:18:ARG:NH2	31:B6:44:ARG:CB	2.82	0.43
48:BP:39:LYS:O	48:BP:40:SER:CB	2.67	0.43
35:BA:2403:C:O2'	35:BA:2404:C:C5'	2.62	0.43
1:AA:1048:G:O2'	1:AA:1049:U:H3'	2.18	0.43
1:AA:983:A:H1'	1:AA:1049:U:O2	2.18	0.43
39:BE:132:HIS:CD2	39:BE:135:HIS:NE2	2.86	0.43
19:AS:6:LYS:CG	19:AS:7:LYS:N	2.81	0.43
40:BF:81:PRO:HA	40:BF:87:GLY:O	2.17	0.43
39:BE:56:PRO:O	39:BE:57:LYS:HE3	2.18	0.43
35:BA:2620:C:OP1	39:BE:153:GLY:CA	2.66	0.43
35:BA:1068:G:H1'	35:BA:1069:A:OP1	2.18	0.43
58:BZ:74:VAL:CG2	58:BZ:86:VAL:HG13	2.42	0.43
35:BA:2034:U:H2'	35:BA:2035:G:O5'	2.18	0.43
38:BD:117:VAL:HG23	38:BD:128:GLY:C	2.38	0.43
35:BA:1076:C:O5'	35:BA:1076:C:H6	2.00	0.43
35:BA:910:A:H2'	35:BA:911:A:C8	2.53	0.43
35:BA:261:G:O2'	35:BA:262:A:H5'	2.18	0.43
35:BA:1412:A:H2'	35:BA:1413:G:C5'	2.46	0.43
35:BA:1378:A:C4	35:BA:1380:G:N7	2.86	0.43
14:AN:25:VAL:O	14:AN:25:VAL:HG12	2.18	0.43
35:BA:1458:C:O4'	35:BA:1459:G:C5	2.71	0.43
43:BJ:53:UNK:C	43:BJ:85:LEU:HD12	2.46	0.43
8:AH:42:GLU:HG3	8:AH:109:ILE:CD1	2.43	0.43
22:AV:11:C:H42	22:AV:24:G:H1	1.66	0.43
9:AI:81:ILE:HG22	9:AI:82:ALA:N	2.33	0.43
46:BN:120:LEU:HD13	46:BN:120:LEU:C	2.38	0.43
52:BT:34:VAL:HG22	52:BT:39:ARG:CA	2.48	0.43
42:BH:137:ASP:OD2	42:BH:140:LYS:HE3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:185:U:H2'	35:BA:186:G:H8	1.84	0.43
36:BB:111:G:H2'	36:BB:112:U:O4'	2.18	0.43
3:AC:164:ARG:CG	3:AC:164:ARG:HH11	2.30	0.43
1:AA:152:A:H62	1:AA:169:C:N4	2.16	0.43
35:BA:1681:G:O2'	35:BA:1762:A:C2'	2.66	0.43
11:AK:57:THR:CG2	11:AK:60:ALA:H	2.31	0.43
20:AT:57:ARG:HD2	20:AT:102:GLY:CA	2.48	0.43
26:B1:33:LYS:HB2	35:BA:2432:A:C2	2.53	0.43
15:AO:12:ILE:O	15:AO:16:ALA:HB2	2.18	0.43
11:AK:105:VAL:O	11:AK:105:VAL:HG23	2.17	0.43
35:BA:1211:U:O2	35:BA:1211:U:O5'	2.35	0.43
1:AA:1309:G:N7	13:AM:99:ARG:NH2	2.65	0.43
1:AA:937:A:H2'	1:AA:938:A:H8	1.84	0.43
7:AG:51:GLN:O	7:AG:52:GLU:CB	2.65	0.43
1:AA:321:A:H2'	1:AA:322:C:H5'	1.99	0.43
35:BA:1770:G:H2'	35:BA:1771:C:C6	2.53	0.43
35:BA:2607:G:C2'	35:BA:2608:G:O5'	2.66	0.43
35:BA:1424:G:H2'	35:BA:1425:G:H8	1.82	0.43
35:BA:1300:U:C1'	35:BA:1301:A:OP2	2.67	0.43
35:BA:1642:G:H8	35:BA:1642:G:O5'	2.02	0.43
57:BY:77:PRO:O	57:BY:78:ALA:HB2	2.17	0.43
35:BA:1748:G:C8	35:BA:1748:G:H5'	2.43	0.43
35:BA:1137:G:H2'	35:BA:1138:G:H8	1.81	0.43
19:AS:19:VAL:O	19:AS:22:LEU:HB3	2.18	0.43
41:BG:49:ASP:O	41:BG:52:ILE:N	2.50	0.43
35:BA:19:C:H5'	35:BA:554:U:OP1	2.18	0.43
48:BP:38:GLN:CG	48:BP:39:LYS:H	2.18	0.43
24:AY:15:ILE:HA	24:AY:103:GLY:O	2.18	0.43
51:BS:53:SER:C	51:BS:55:ALA:H	2.22	0.43
58:BZ:180:VAL:HG13	58:BZ:181:GLU:H	1.73	0.43
35:BA:1122:G:C2	35:BA:1123:C:C6	3.07	0.43
53:BU:64:ARG:O	53:BU:65:ILE:C	2.56	0.43
1:AA:185:A:C5	1:AA:186:C:C4	3.06	0.43
35:BA:2032:G:N2	39:BE:146:THR:CG2	2.58	0.43
24:AY:153:MET:HA	24:AY:157:LEU:CD2	2.46	0.43
57:BY:59:GLY:C	57:BY:60:PHE:HD1	2.21	0.43
35:BA:1496:A:O3'	35:BA:1497:U:O2	2.36	0.43
35:BA:769:G:H4'	35:BA:1379:A:N6	2.33	0.43
57:BY:81:LYS:HA	57:BY:82:PRO:HD3	1.78	0.43
35:BA:2137:C:N3	35:BA:2154:G:O6	2.52	0.43
24:AY:684:GLN:O	24:AY:687:LEU:HB2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:606:MET:CE	24:AY:671:MET:HG3	2.48	0.43
3:AC:132:ARG:O	3:AC:136:GLN:HB2	2.18	0.43
3:AC:180:ALA:O	3:AC:181:ASN:CB	2.66	0.43
33:B8:29:LYS:HD3	33:B8:44:LYS:HB2	1.97	0.43
24:AY:229:LEU:HA	24:AY:232:LEU:HD22	2.00	0.43
35:BA:2298:A:N6	35:BA:2318:G:H8	2.14	0.43
36:BB:87:G:C2'	36:BB:88:C:H5''	2.45	0.43
35:BA:1710:C:H4'	35:BA:2858:C:O2	2.18	0.43
37:BC:194:ILE:HD11	37:BC:227:PRO:HB2	1.99	0.43
24:AY:348:ARG:NH1	24:AY:382:GLU:HG3	2.33	0.43
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.17	0.43
38:BD:72:LYS:HE2	38:BD:101:GLU:CD	2.38	0.43
24:AY:12:LEU:O	24:AY:13:ARG:HD2	2.19	0.43
46:BN:78:TYR:N	46:BN:78:TYR:CD1	2.87	0.43
1:AA:951:G:C6	1:AA:1231:G:C6	3.06	0.43
35:BA:628:G:O5'	35:BA:628:G:H8	2.02	0.43
48:BP:98:GLU:O	48:BP:101:VAL:HG22	2.17	0.43
35:BA:833:U:O4'	48:BP:52:GLU:N	2.44	0.43
1:AA:41:G:H2'	1:AA:42:G:H8	1.84	0.43
1:AA:488:C:C2'	1:AA:489:C:H5'	2.48	0.43
33:B8:33:ASN:N	33:B8:36:LYS:HE3	2.34	0.43
1:AA:774:G:H2'	1:AA:775:G:C5'	2.48	0.43
38:BD:274:ARG:HB3	38:BD:275:LYS:H	1.73	0.43
35:BA:1983:C:H4'	35:BA:2606:C:O3'	2.19	0.43
35:BA:2716:U:C2'	35:BA:2717:G:C5'	2.84	0.43
27:B2:4:SER:C	27:B2:6:VAL:N	2.72	0.43
13:AM:70:LEU:O	13:AM:73:GLU:N	2.51	0.43
41:BG:116:ASP:CG	41:BG:117:PHE:H	2.21	0.43
41:BG:60:LEU:HA	41:BG:63:ILE:CG2	2.49	0.43
29:B4:6:HIS:HE1	41:BG:66:GLN:HB2	1.82	0.43
35:BA:1142(A):A:C4	35:BA:1144:G:C8	3.07	0.43
35:BA:1970:A:O4'	35:BA:1972:A:C8	2.72	0.43
1:AA:1314:C:OP2	19:AS:6:LYS:HD2	2.18	0.43
35:BA:2175:C:H1'	37:BC:218:THR:O	2.19	0.43
40:BF:201:VAL:HG13	40:BF:202:PHE:N	2.33	0.43
1:AA:412:A:H4'	1:AA:413:G:H8	1.82	0.43
24:AY:572:TYR:N	24:AY:572:TYR:CD1	2.77	0.43
35:BA:2036:C:H2'	35:BA:2037:G:H5'	1.99	0.43
35:BA:1568:G:H5''	38:BD:61:LEU:CD2	2.49	0.43
39:BE:27:LEU:HD23	52:BT:1:MET:HB2	2.00	0.43
34:B9:1:MET:HG3	34:B9:1:MET:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:150:GLU:C	4:AD:152:SER:H	2.21	0.43
35:BA:448:U:C4	35:BA:583:G:H1'	2.54	0.43
24:AY:225:GLU:O	24:AY:228:MET:HB3	2.18	0.43
35:BA:971:C:O2'	35:BA:972:G:H5'	2.18	0.43
1:AA:1456:G:H2'	1:AA:1456:G:N3	2.34	0.43
8:AH:1:MET:CE	8:AH:1:MET:N	2.81	0.43
35:BA:1827:C:H2'	35:BA:1828:G:C5'	2.49	0.43
55:BW:10:VAL:O	55:BW:11:ARG:HB2	2.19	0.43
22:AV:19:G:O6	35:BA:2169:A:H1'	2.18	0.43
38:BD:45:ASN:CG	38:BD:46:GLN:N	2.71	0.43
35:BA:1669:A:H5''	35:BA:2550:G:OP1	2.19	0.43
1:AA:779:C:H2'	1:AA:780:A:O4'	2.18	0.43
24:AY:164:MET:C	24:AY:180:VAL:HG22	2.39	0.43
24:AY:33:LEU:HD23	24:AY:360:ALA:CB	2.48	0.43
38:BD:161:THR:O	38:BD:162:SER:HB3	2.18	0.43
9:AI:41:VAL:HG12	9:AI:41:VAL:O	2.19	0.43
24:AY:170:ARG:HD2	24:AY:170:ARG:N	2.32	0.43
35:BA:792:G:C3'	35:BA:793:A:H5'	2.47	0.43
35:BA:1259:G:O2'	35:BA:1260:G:H5'	2.18	0.43
1:AA:51:A:H4'	1:AA:52:G:C5'	2.49	0.43
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.52	0.43
37:BC:104:ILE:HD12	37:BC:104:ILE:O	2.18	0.43
1:AA:441:A:H3'	1:AA:442:C:H6	1.84	0.43
35:BA:653:A:C4'	35:BA:654:A:OP2	2.64	0.43
1:AA:594:G:H2'	1:AA:595:G:O5'	2.18	0.43
1:AA:691:G:H2'	1:AA:692:U:C6	2.53	0.43
35:BA:2753:A:H2'	35:BA:2754:U:C6	2.53	0.43
1:AA:508:C:C4'	1:AA:509:A:O5'	2.49	0.43
1:AA:560:U:C5'	1:AA:561:U:O5'	2.66	0.43
35:BA:2310:A:N7	41:BG:75:LYS:CE	2.82	0.43
41:BG:137:GLU:O	41:BG:138:GLN:C	2.57	0.43
41:BG:139:LEU:N	41:BG:139:LEU:HD23	2.34	0.43
1:AA:982:U:HO2'	1:AA:983:A:P	2.41	0.43
35:BA:1036:G:O2'	35:BA:1037:G:H5'	2.18	0.43
35:BA:1348:G:C2	35:BA:1599:C:N3	2.87	0.43
37:BC:11:LEU:HD11	37:BC:35:THR:HG23	2.01	0.43
54:BV:38:LEU:HD23	54:BV:39:LEU:N	2.34	0.43
54:BV:46:VAL:O	54:BV:48:GLY:N	2.51	0.43
7:AG:36:LYS:O	7:AG:38:LEU:N	2.51	0.43
7:AG:41:ARG:O	7:AG:42:ILE:C	2.57	0.43
3:AC:118:GLN:O	3:AC:119:ARG:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B3:31:LEU:C	28:B3:33:GLN:H	2.18	0.43
24:AY:148:LEU:O	24:AY:152:THR:CG2	2.66	0.43
35:BA:1649:G:C2'	35:BA:1650:G:C5'	2.95	0.43
9:AI:118:LYS:O	9:AI:119:ALA:CB	2.66	0.43
39:BE:116:VAL:HG13	39:BE:122:PHE:CB	2.49	0.43
57:BY:81:LYS:HG3	57:BY:97:ARG:HD3	2.00	0.43
24:AY:530:VAL:CG2	24:AY:531:GLY:N	2.74	0.43
35:BA:1652:A:C6	35:BA:1653:G:N1	2.86	0.43
2:AB:73:THR:O	2:AB:74:LYS:C	2.57	0.43
37:BC:149:ASN:ND2	37:BC:152:GLU:HB3	2.23	0.43
24:AY:610:VAL:CG2	24:AY:643:ILE:HB	2.48	0.43
12:AL:41:ARG:NH1	12:AL:43:VAL:HG22	2.26	0.43
17:AQ:26:GLN:HA	17:AQ:36:ILE:O	2.18	0.43
14:AN:12:ARG:HB3	14:AN:14:PRO:HD2	2.00	0.43
12:AL:117:ARG:HD2	12:AL:122:THR:OG1	2.19	0.43
35:BA:500:G:H22	35:BA:502:A:H3'	1.80	0.43
39:BE:105:THR:OG1	39:BE:199:ARG:NH2	2.45	0.43
2:AB:238:LEU:O	2:AB:239:VAL:C	2.55	0.43
1:AA:992:U:H4'	1:AA:993:G:O5'	2.18	0.43
57:BY:43:ASN:CG	57:BY:43:ASN:O	2.57	0.43
52:BT:38:ASN:N	52:BT:38:ASN:ND2	2.63	0.43
1:AA:223:U:H2'	1:AA:224:C:H6	1.83	0.43
37:BC:78:ILE:O	37:BC:78:ILE:HG22	2.19	0.43
57:BY:79:CYS:O	57:BY:80:GLY:O	2.35	0.43
35:BA:56:A:H2'	35:BA:57:C:O4'	2.19	0.43
35:BA:1208:C:C4	35:BA:1209:G:N7	2.86	0.43
35:BA:1490:A:C2	38:BD:75:ILE:HD13	2.54	0.43
35:BA:2350:C:H2'	35:BA:2351:G:O4'	2.18	0.43
46:BN:109:LYS:HB2	46:BN:109:LYS:HE3	1.83	0.43
24:AY:484:ARG:HA	24:AY:484:ARG:HD3	1.83	0.43
24:AY:615:GLU:HG3	24:AY:615:GLU:H	1.55	0.43
24:AY:102:ASP:O	24:AY:130:VAL:HG13	2.17	0.43
1:AA:911:U:H2'	1:AA:912:C:C6	2.54	0.43
25:B0:18:ALA:HB1	35:BA:2271:G:OP2	2.19	0.43
52:BT:27:THR:O	52:BT:28:VAL:CG1	2.66	0.43
1:AA:115:G:O4'	1:AA:116:A:OP2	2.36	0.43
1:AA:124:G:C6	1:AA:125:U:C4	3.06	0.43
48:BP:125:VAL:HG11	48:BP:138:LEU:HD21	2.01	0.43
35:BA:2554:U:C2'	35:BA:2555:U:H5'	2.49	0.43
37:BC:73:VAL:CG1	37:BC:74:ARG:N	2.82	0.43
22:AV:41:C:H2'	22:AV:42:C:C5'	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1820:U:H3	38:BD:160:GLY:HA3	1.84	0.43
35:BA:1786:A:H1'	35:BA:1938:A:H61	1.77	0.43
35:BA:1445:A:H8	35:BA:1460:A:C5	2.36	0.43
27:B2:2:LYS:HD2	27:B2:5:GLU:CG	2.45	0.43
1:AA:1502:A:H4'	1:AA:1503:A:OP1	2.18	0.43
35:BA:2306:C:H4'	41:BG:136:ARG:NH1	2.34	0.43
41:BG:172:LEU:CD2	41:BG:176:LEU:HD12	2.48	0.43
35:BA:18:C:C4	35:BA:19:C:N4	2.87	0.43
35:BA:1145:C:H6	35:BA:1145:C:O5'	2.01	0.43
51:BS:89:ARG:CB	51:BS:92:TYR:HB3	2.48	0.43
58:BZ:185:GLU:HG2	58:BZ:187:ALA:N	2.33	0.43
53:BU:85:LYS:C	53:BU:87:GLY:H	2.22	0.43
40:BF:83:PHE:O	40:BF:84:VAL:C	2.57	0.43
52:BT:6:LEU:C	52:BT:8:LYS:N	2.72	0.43
40:BF:203:GLN:C	40:BF:205:ARG:N	2.72	0.43
28:B3:32:GLN:O	28:B3:33:GLN:C	2.56	0.43
1:AA:964:A:H8	1:AA:964:A:O5'	2.01	0.43
58:BZ:151:HIS:HB2	58:BZ:171:ILE:H	1.83	0.43
39:BE:154:LYS:O	39:BE:154:LYS:HG2	2.18	0.43
35:BA:1654:A:C1'	35:BA:2823:A:H5'	2.48	0.43
24:AY:165:GLN:HB2	24:AY:260:LEU:HD13	1.99	0.43
52:BT:62:THR:CG2	52:BT:75:ILE:HG12	2.46	0.43
18:AR:26:LEU:HD13	18:AR:39:VAL:HG13	2.00	0.43
35:BA:2192:G:HO2'	35:BA:2193:G:H5''	1.83	0.43
35:BA:1092:C:O2'	35:BA:1093:G:H5'	2.17	0.43
35:BA:1782:C:H1'	35:BA:2609:U:C5'	2.46	0.43
54:BV:21:ARG:HG2	54:BV:21:ARG:NH1	2.34	0.43
42:BH:125:VAL:O	42:BH:125:VAL:HG12	2.17	0.43
49:BQ:58:PHE:CD1	49:BQ:58:PHE:O	2.70	0.43
39:BE:45:THR:O	39:BE:46:ALA:HB2	2.18	0.43
35:BA:270:A:H2'	35:BA:271:A:O4'	2.19	0.43
14:AN:4:LYS:HA	14:AN:7:ILE:HG12	1.99	0.43
1:AA:299:G:H2'	1:AA:300:A:C8	2.53	0.43
3:AC:6:HIS:CB	14:AN:49:HIS:HB3	2.48	0.43
49:BQ:50:ALA:HB1	49:BQ:121:ALA:HB1	2.00	0.43
35:BA:2230:G:C6	35:BA:2231:C:C4	3.06	0.43
35:BA:1171:G:H2'	35:BA:1171:G:N3	2.34	0.43
56:BX:21:PHE:N	56:BX:21:PHE:CD1	2.87	0.43
35:BA:2086:U:H2'	35:BA:2087:G:C8	2.52	0.43
35:BA:2833:G:H3'	35:BA:2834:G:C5'	2.49	0.43
52:BT:89:VAL:CB	52:BT:91:ARG:HG3	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:406:G:C4	1:AA:495:A:C6	3.06	0.43
31:B6:9:LEU:HD22	31:B6:10:LEU:N	2.33	0.43
25:B0:45:PHE:O	25:B0:59:LEU:HD11	2.19	0.43
7:AG:122:HIS:HD2	7:AG:125:MET:CE	2.31	0.43
1:AA:650:G:O2'	1:AA:651:C:H5'	2.19	0.43
2:AB:58:ILE:HG22	2:AB:222:ILE:HD13	2.01	0.43
57:BY:29:GLU:N	57:BY:29:GLU:CD	2.71	0.43
35:BA:1227:G:C2	35:BA:1228:G:C8	3.07	0.43
1:AA:1403:C:H2'	1:AA:1404:C:C6	2.54	0.43
19:AS:66:MET:HE3	19:AS:74:PHE:CE2	2.54	0.43
41:BG:87:PRO:O	41:BG:88:ILE:CB	2.67	0.43
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	2.01	0.43
35:BA:1115:G:H2'	35:BA:1116:C:O4'	2.19	0.43
35:BA:1890:A:H2	35:BA:2235:G:O4'	2.02	0.43
42:BH:87:LEU:N	42:BH:131:VAL:O	2.40	0.43
24:AY:464:ASP:O	24:AY:468:ARG:HG3	2.19	0.43
24:AY:58:GLU:O	24:AY:60:GLU:N	2.51	0.43
35:BA:890:A:H2'	35:BA:892:G:C5'	2.48	0.43
35:BA:2103:C:H4'	35:BA:2104:G:OP1	2.19	0.43
53:BU:76:TYR:CE1	53:BU:80:ILE:HG13	2.54	0.43
53:BU:83:LEU:CG	53:BU:88:ILE:HD11	2.48	0.43
28:B3:47:VAL:CG1	28:B3:56:VAL:HG21	2.48	0.43
35:BA:329:G:P	57:BY:71:LYS:HD3	2.59	0.43
20:AT:71:THR:HG22	20:AT:72:LEU:H	1.84	0.43
35:BA:2839:G:H5'	50:BR:46:GLY:HA2	2.01	0.43
1:AA:1267:C:N4	1:AA:1327:C:O2'	2.51	0.43
1:AA:1366:C:N4	1:AA:1367:C:N4	2.66	0.43
25:B0:49:LYS:N	25:B0:80:HIS:HB3	2.33	0.43
24:AY:403:GLU:O	24:AY:404:VAL:HB	2.19	0.43
35:BA:2033:A:H8	35:BA:2033:A:O5'	2.01	0.43
35:BA:2029:G:N1	35:BA:2033:A:OP2	2.32	0.43
1:AA:1145:C:O2'	1:AA:1146:A:H8	2.01	0.43
39:BE:128:SER:O	39:BE:129:HIS:HB2	2.19	0.43
39:BE:70:ALA:O	39:BE:72:VAL:N	2.52	0.43
37:BC:89:GLU:OE2	37:BC:90:ALA:HB2	2.19	0.43
35:BA:1079:C:C2'	35:BA:1079:C:O2	2.58	0.43
34:B9:9:ARG:O	34:B9:10:ILE:O	2.36	0.43
35:BA:171:G:C2'	35:BA:172:C:H5'	2.48	0.43
50:BR:59:ASP:O	50:BR:60:LEU:CB	2.65	0.43
24:AY:199:ILE:C	24:AY:199:ILE:HD12	2.39	0.43
54:BV:5:VAL:HG23	54:BV:37:VAL:HG23	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2318:G:H2'	35:BA:2319:G:OP1	2.19	0.43
37:BC:195:ARG:HH11	37:BC:195:ARG:HG3	1.83	0.43
1:AA:453:A:O2'	1:AA:454:C:H6	1.99	0.43
56:BX:11:PRO:HB3	56:BX:92:LEU:CD2	2.48	0.43
39:BE:202:LYS:HD2	39:BE:202:LYS:N	2.33	0.43
44:BK:128:UNK:C	44:BK:130:UNK:N	2.81	0.43
14:AN:4:LYS:O	14:AN:7:ILE:HG12	2.19	0.43
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.19	0.43
4:AD:106:TYR:C	4:AD:108:LEU:H	2.22	0.43
50:BR:100:LEU:HD22	50:BR:112:ALA:HA	2.00	0.43
44:BK:105:UNK:O	44:BK:106:UNK:C	2.65	0.43
35:BA:2600:A:O2'	35:BA:2601:C:H5'	2.19	0.43
1:AA:524:G:O5'	1:AA:524:G:H8	2.02	0.43
40:BF:149:ASP:OD1	40:BF:149:ASP:N	2.50	0.43
5:AE:20:GLN:HE21	5:AE:20:GLN:HB3	1.54	0.43
1:AA:116:A:H8	1:AA:116:A:O5'	2.02	0.43
35:BA:634:C:H2'	35:BA:635:C:C6	2.53	0.43
48:BP:146:VAL:HG13	48:BP:147:LEU:H	1.81	0.43
37:BC:103:LYS:O	37:BC:104:ILE:C	2.57	0.43
37:BC:138:LEU:HA	37:BC:139:PRO:HD2	1.91	0.43
1:AA:198:G:N3	1:AA:199:G:C5	2.87	0.43
35:BA:652:C:O2'	35:BA:653:A:C4	2.71	0.43
7:AG:49:ILE:HD11	7:AG:117:ALA:O	2.19	0.43
1:AA:266:G:HO2'	1:AA:267:C:P	2.39	0.43
35:BA:2012:G:H4'	55:BW:96:ILE:CD1	2.49	0.43
35:BA:1902:C:H4'	38:BD:244:ARG:CB	2.49	0.43
3:AC:84:ILE:O	3:AC:85:ARG:C	2.57	0.43
35:BA:814:C:H2'	35:BA:815:C:H6	1.82	0.43
40:BF:157:VAL:O	40:BF:194:MET:HA	2.18	0.43
19:AS:41:VAL:CG2	19:AS:44:MET:HG3	2.49	0.43
35:BA:2313:C:H2'	35:BA:2314:C:C6	2.54	0.43
41:BG:104:GLU:H	41:BG:107:LEU:H	1.67	0.43
41:BG:182:LYS:OXT	41:BG:182:LYS:CD	2.66	0.43
35:BA:2758:A:C2	35:BA:2759:G:H1'	2.53	0.43
46:BN:1:MET:SD	46:BN:2:LYS:C	2.97	0.43
1:AA:523:A:C2	12:AL:91:LYS:HB3	2.53	0.43
15:AO:68:ARG:CG	15:AO:68:ARG:HH11	2.31	0.43
35:BA:1054:A:C2	35:BA:1106:G:C6	3.07	0.43
20:AT:72:LEU:HD21	20:AT:80:ARG:HE	1.83	0.43
1:AA:1327:C:OP2	21:AU:12:LYS:NZ	2.52	0.43
26:B1:58:ILE:HD11	26:B1:90:ILE:HG21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:7:VAL:HB	57:BY:8:LYS:HZ1	1.76	0.43
54:BV:2:PHE:CD1	54:BV:3:ALA:N	2.87	0.43
35:BA:2579:C:H2'	35:BA:2580:U:O4'	2.19	0.43
35:BA:2580:U:O3'	39:BE:130:GLY:HA2	2.19	0.43
35:BA:2482:G:C2	35:BA:2483:C:H1'	2.53	0.43
30:B5:41:PRO:HA	30:B5:42:PRO:HD3	1.80	0.43
37:BC:90:ALA:HB1	37:BC:155:ARG:HG2	2.01	0.43
22:AV:27:G:N2	22:AV:43:C:H5	2.07	0.43
40:BF:167:ALA:HA	40:BF:170:LEU:HD23	2.01	0.43
35:BA:385:C:O2	48:BP:71:VAL:HG21	2.19	0.43
9:AI:48:GLU:CD	9:AI:51:ARG:HD3	2.39	0.43
35:BA:847:U:H2'	35:BA:848:G:H5''	1.99	0.43
35:BA:848:G:H5'	35:BA:848:G:C8	2.49	0.43
49:BQ:54:MET:HB3	49:BQ:64:ILE:HD11	1.99	0.43
35:BA:1858:G:OP2	35:BA:1858:G:H8	2.02	0.43
47:BO:8:LEU:HD13	47:BO:82:ASN:HB3	2.00	0.43
1:AA:160:A:H1'	1:AA:344:A:C6	2.54	0.43
35:BA:2423:U:C6	35:BA:2423:U:H5'	2.49	0.43
52:BT:58:ASN:ND2	52:BT:58:ASN:N	2.58	0.43
38:BD:31:LYS:NZ	38:BD:102:LYS:NZ	2.67	0.43
37:BC:225:ILE:O	37:BC:227:PRO:HD3	2.19	0.43
1:AA:474:G:O2'	1:AA:475:G:H5'	2.18	0.43
1:AA:376:G:H5''	16:AP:5:ARG:HD2	2.01	0.43
56:BX:12:VAL:HG12	56:BX:29:TRP:CE2	2.53	0.43
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	2.01	0.43
35:BA:341:G:O2'	35:BA:342:G:H5'	2.18	0.43
24:AY:213:HIS:O	24:AY:217:VAL:HG23	2.19	0.43
7:AG:127:ALA:O	7:AG:129:GLU:N	2.52	0.43
27:B2:69:ARG:C	27:B2:70:GLN:CD	2.78	0.43
27:B2:70:GLN:O	27:B2:71:ASN:O	2.36	0.43
35:BA:108:U:H2'	35:BA:109:G:H5'	1.98	0.43
2:AB:231:GLU:CB	2:AB:232:PRO:HD3	2.33	0.43
33:B8:32:LEU:O	33:B8:33:ASN:O	2.36	0.43
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.54	0.43
35:BA:859:G:O3'	35:BA:860:U:O2	2.37	0.43
7:AG:19:GLY:O	7:AG:20:ASP:CB	2.66	0.43
32:B7:32:LYS:HE2	35:BA:180:G:OP2	2.19	0.43
35:BA:522:G:C6	35:BA:523:C:N4	2.86	0.43
35:BA:1794:U:H2'	35:BA:1795:C:C6	2.54	0.43
57:BY:28:LYS:O	57:BY:38:ILE:N	2.52	0.43
35:BA:92:A:H2'	35:BA:93:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1801:G:C6	35:BA:2202:C:O4'	2.71	0.43
19:AS:22:LEU:HD11	19:AS:27:GLU:H	1.84	0.43
29:B4:50:VAL:O	29:B4:51:ASP:C	2.57	0.43
41:BG:107:LEU:HD23	41:BG:111:LEU:CD1	2.49	0.43
35:BA:2305:A:O2'	41:BG:136:ARG:HD2	2.19	0.43
41:BG:39:ILE:HD12	41:BG:157:ILE:CG1	2.39	0.43
9:AI:52:ALA:HB3	9:AI:95:LYS:HZ3	1.82	0.43
35:BA:16:G:HO2'	35:BA:17:G:H5'	1.79	0.43
24:AY:82:ILE:O	24:AY:83:ASP:C	2.57	0.43
35:BA:462:C:O2'	35:BA:463:G:C5'	2.49	0.43
1:AA:1184:G:H2'	1:AA:1185:G:H5'	1.98	0.43
35:BA:2104:G:N7	35:BA:2186:G:N2	2.67	0.43
1:AA:1081:G:O6	5:AE:47:LYS:NZ	2.41	0.43
39:BE:24:THR:HB	39:BE:184:VAL:HG23	2.01	0.43
39:BE:8:LYS:HE2	39:BE:192:ASN:HD22	1.84	0.43
35:BA:1283:G:H2'	35:BA:1285:G:OP1	2.19	0.43
40:BF:178:PRO:HB3	40:BF:198:ALA:CB	2.49	0.43
4:AD:38:TYR:N	4:AD:38:TYR:CD1	2.87	0.43
24:AY:153:MET:O	24:AY:157:LEU:HD23	2.18	0.43
58:BZ:144:LEU:HD11	58:BZ:150:LEU:H	1.84	0.43
24:AY:517:LEU:CD1	24:AY:517:LEU:N	2.80	0.43
31:B6:12:GLU:OE1	31:B6:52:VAL:HG13	2.19	0.43
28:B3:2:PRO:HG2	28:B3:39:ASP:HB3	2.01	0.43
35:BA:1332:G:H4'	35:BA:1333:C:OP2	2.18	0.43
35:BA:301:G:OP2	57:BY:97:ARG:NH1	2.52	0.43
35:BA:71:A:H5'	35:BA:71:A:C8	2.54	0.43
35:BA:71:A:OP1	35:BA:71:A:H3'	2.18	0.43
46:BN:55:VAL:HG22	46:BN:56:ASN:H	1.83	0.43
36:BB:28:C:H2'	36:BB:29:A:H8	1.82	0.43
1:AA:563:A:N3	1:AA:563:A:H2'	2.34	0.43
35:BA:1478:G:O2'	35:BA:1558:A:C2	2.72	0.43
37:BC:24:ASP:C	37:BC:24:ASP:OD1	2.55	0.43
39:BE:4:ILE:HG12	39:BE:5:LEU:N	2.34	0.43
1:AA:192:U:H1'	20:AT:103:GLY:CA	2.49	0.43
24:AY:681:LYS:O	24:AY:684:GLN:HB3	2.19	0.43
52:BT:95:ARG:HG2	52:BT:95:ARG:H	1.67	0.43
24:AY:9:LEU:HD22	24:AY:284:LEU:HD22	2.00	0.43
35:BA:2870:C:H5''	50:BR:65:LEU:HD21	2.01	0.43
35:BA:154:G:O2'	35:BA:154(A):C:H5'	2.18	0.43
1:AA:1217:C:O2'	1:AA:1218:C:H5'	2.19	0.43
24:AY:251:ILE:HD13	24:AY:285:ASP:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:81:VAL:CG1	49:BQ:82:ARG:N	2.81	0.43
57:BY:50:ARG:C	57:BY:52:SER:N	2.69	0.43
1:AA:865:A:H2'	1:AA:866:C:C6	2.54	0.43
37:BC:195:ARG:HG3	37:BC:195:ARG:NH1	2.34	0.43
42:BH:86:GLU:CB	42:BH:132:ARG:HB3	2.48	0.43
45:BL:85:UNK:O	45:BL:86:UNK:C	2.67	0.43
4:AD:104:VAL:HG11	4:AD:146:ILE:HG13	2.01	0.43
46:BN:36:GLY:HA2	46:BN:38:HIS:CE1	2.54	0.43
24:AY:658:ASP:O	24:AY:662:LYS:HG2	2.19	0.43
35:BA:422:A:H2'	35:BA:423:A:C8	2.54	0.43
1:AA:382:A:H2'	1:AA:383:A:C8	2.54	0.43
37:BC:60:ARG:HG3	37:BC:165:ARG:HB2	2.01	0.43
1:AA:309:G:C2	1:AA:310:G:N7	2.87	0.42
9:AI:10:ARG:HG2	9:AI:75:ASP:HB2	2.00	0.42
1:AA:262:A:C6	1:AA:263:A:C6	3.06	0.42
1:AA:264:U:O2'	17:AQ:64:PRO:O	2.37	0.42
35:BA:2007:C:H6	35:BA:2007:C:O5'	2.02	0.42
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.19	0.42
35:BA:1446:C:O2	35:BA:1446:C:H5''	2.19	0.42
35:BA:1543:C:C3'	35:BA:1544:A:C5'	2.97	0.42
35:BA:1643:G:C2'	35:BA:1644:C:O5'	2.67	0.42
13:AM:8:GLU:OE1	13:AM:22:ILE:HG12	2.19	0.42
41:BG:51:ARG:O	41:BG:52:ILE:HG13	2.18	0.42
1:AA:1255:G:OP1	3:AC:26:LYS:HE2	2.18	0.42
48:BP:25:SER:O	48:BP:30:THR:OG1	2.33	0.42
24:AY:24:GLY:O	24:AY:25:LYS:C	2.56	0.42
24:AY:67:ALA:CB	24:AY:83:ASP:O	2.67	0.42
51:BS:30:ARG:HH11	51:BS:97:ARG:CB	2.32	0.42
51:BS:56:LEU:HD23	51:BS:56:LEU:O	2.19	0.42
35:BA:1658:C:H2'	35:BA:1659:U:C6	2.54	0.42
1:AA:519:C:C4	1:AA:520:A:C5	3.07	0.42
1:AA:57:G:O2'	1:AA:58:C:C5'	2.61	0.42
58:BZ:48:PHE:HA	58:BZ:51:ALA:HB3	2.00	0.42
40:BF:20:LEU:N	40:BF:24:LEU:HD23	2.30	0.42
35:BA:2334:G:N3	51:BS:18:ILE:CD1	2.82	0.42
3:AC:124:ILE:HG23	3:AC:125:GLU:N	2.33	0.42
35:BA:2703:C:H2'	35:BA:2704:C:H6	1.84	0.42
35:BA:1568:G:H5''	38:BD:61:LEU:HD23	2.00	0.42
48:BP:108:LYS:C	48:BP:110:TYR:N	2.72	0.42
12:AL:83:VAL:CG1	12:AL:84:LEU:N	2.81	0.42
52:BT:106:SER:HB2	52:BT:110:ILE:HG13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:55:VAL:HG22	12:AL:56:ALA:H	1.83	0.42
42:BH:12:PRO:CD	42:BH:76:VAL:HG13	2.48	0.42
35:BA:405:U:H3'	35:BA:406:G:H5'	2.01	0.42
57:BY:2:ARG:N	57:BY:4:LYS:HG2	2.34	0.42
1:AA:960:U:C4	1:AA:1225:A:C8	3.07	0.42
51:BS:62:LYS:C	51:BS:64:GLU:H	2.22	0.42
46:BN:25:ARG:NH1	46:BN:25:ARG:CG	2.82	0.42
40:BF:187:VAL:HG12	48:BP:7:ARG:HA	2.01	0.42
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.22	0.42
29:B4:61:ARG:NH1	29:B4:61:ARG:HB2	2.32	0.42
2:AB:166:ASP:HB3	2:AB:169:LYS:CB	2.49	0.42
3:AC:103:VAL:HG12	3:AC:104:GLN:H	1.82	0.42
35:BA:2341:G:H2'	35:BA:2342:C:C6	2.54	0.42
35:BA:852:G:H2'	35:BA:853:G:H8	1.84	0.42
51:BS:39:ILE:CD1	51:BS:73:LEU:HD21	2.48	0.42
24:AY:491:VAL:CG1	24:AY:492:ASP:N	2.81	0.42
17:AQ:95:TYR:C	17:AQ:97:SER:N	2.72	0.42
24:AY:166:LEU:HD13	24:AY:180:VAL:HG11	2.01	0.42
35:BA:1326:U:O2'	35:BA:1327:C:H5'	2.19	0.42
16:AP:11:SER:OG	16:AP:12:LYS:N	2.51	0.42
49:BQ:59:ARG:O	49:BQ:59:ARG:HD2	2.19	0.42
6:AF:21:LEU:C	6:AF:21:LEU:HD13	2.40	0.42
42:BH:97:ARG:O	42:BH:97:ARG:HG2	2.18	0.42
1:AA:902:G:H2'	1:AA:903:G:H8	1.84	0.42
1:AA:276:G:O2'	1:AA:277:C:H5'	2.18	0.42
52:BT:30:VAL:C	52:BT:43:GLN:O	2.57	0.42
1:AA:942:G:C6	1:AA:943:U:O4	2.72	0.42
35:BA:49:A:H5''	35:BA:51:G:C5'	2.49	0.42
1:AA:751:U:H2'	1:AA:752:G:O4'	2.19	0.42
35:BA:2010:G:H2'	35:BA:2011:U:H6	1.84	0.42
35:BA:1937:A:O2'	35:BA:1938:A:O5'	2.33	0.42
35:BA:1994:C:HO2'	35:BA:1995:U:H5'	1.79	0.42
13:AM:9:ILE:HA	13:AM:10:PRO:HD2	1.87	0.42
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.40	0.42
13:AM:91:ARG:CD	13:AM:97:PRO:O	2.67	0.42
29:B4:36:CYS:C	29:B4:38:LYS:N	2.72	0.42
51:BS:89:ARG:HG3	51:BS:92:TYR:HA	2.00	0.42
35:BA:1970:A:O4'	35:BA:1972:A:C1'	2.67	0.42
53:BU:66:ASN:CG	53:BU:76:TYR:HB2	2.40	0.42
53:BU:97:ASP:OD2	53:BU:101:ARG:NH1	2.52	0.42
1:AA:520:A:OP2	12:AL:51:ALA:HB1	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B3:6:VAL:HG12	28:B3:56:VAL:CG2	2.30	0.42
35:BA:309:G:O3'	57:BY:18:GLY:HA2	2.19	0.42
35:BA:2635:C:OP2	39:BE:77:ILE:HG21	2.19	0.42
1:AA:185:A:N6	1:AA:186:C:N4	2.67	0.42
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.29	0.42
35:BA:2069:G:C2'	35:BA:2070:G:H5'	2.49	0.42
58:BZ:53:ILE:HG13	58:BZ:54:HIS:HD2	1.84	0.42
3:AC:138:VAL:HG21	3:AC:168:ALA:HB2	1.93	0.42
10:AJ:28:ARG:O	10:AJ:30:SER:N	2.43	0.42
12:AL:17:LYS:HD3	12:AL:18:VAL:N	2.26	0.42
24:AY:546:ILE:HG22	24:AY:547:GLU:N	2.34	0.42
49:BQ:84:GLY:O	49:BQ:85:LYS:HB2	2.19	0.42
37:BC:54:ARG:HE	37:BC:57:GLN:HG2	1.83	0.42
47:BO:50:GLY:H	47:BO:53:LYS:NZ	2.16	0.42
24:AY:96:ARG:NH1	24:AY:315:LYS:HG2	2.34	0.42
20:AT:10:LEU:CD1	20:AT:11:SER:H	2.26	0.42
35:BA:2777:G:C5'	35:BA:2778:A:H5'	2.47	0.42
35:BA:1848:A:O2'	35:BA:1849:G:H5'	2.18	0.42
35:BA:548:A:H2'	35:BA:549:G:H5'	2.01	0.42
24:AY:535:PRO:C	24:AY:537:GLU:N	2.69	0.42
46:BN:72:TYR:CD2	46:BN:90:MET:HG3	2.54	0.42
35:BA:2031:A:C6	35:BA:2498:C:H1'	2.54	0.42
1:AA:1452:C:H4'	1:AA:1456:G:O5'	2.19	0.42
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.34	0.42
9:AI:108:VAL:HG12	9:AI:109:VAL:N	2.34	0.42
35:BA:792:G:H3'	35:BA:793:A:H5'	2.01	0.42
12:AL:54:LYS:HD2	12:AL:54:LYS:N	2.34	0.42
43:BJ:73:UNK:C	43:BJ:75:UNK:N	2.79	0.42
1:AA:825:G:N2	8:AH:11:THR:HG21	2.34	0.42
44:BK:115:UNK:O	44:BK:116:UNK:C	2.67	0.42
57:BY:23:ARG:HH11	57:BY:23:ARG:CG	2.31	0.42
11:AK:14:VAL:HG23	11:AK:14:VAL:O	2.19	0.42
5:AE:131:ILE:HA	5:AE:131:ILE:HD13	1.93	0.42
40:BF:68:LYS:HB3	40:BF:68:LYS:HE3	1.69	0.42
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.54	0.42
35:BA:1690:A:H2'	35:BA:1691:C:O4'	2.19	0.42
2:AB:145:LEU:O	2:AB:149:LEU:N	2.52	0.42
35:BA:2751:G:O6	42:BH:1:MET:HG2	2.18	0.42
27:B2:69:ARG:NH2	35:BA:111:A:H4'	2.35	0.42
33:B8:12:LYS:HE2	48:BP:68:GLN:HG2	2.02	0.42
48:BP:97:PRO:O	48:BP:98:GLU:CB	2.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:153:ILE:O	37:BC:157:ILE:HG13	2.19	0.42
37:BC:97:GLY:O	37:BC:100:ILE:HG13	2.19	0.42
31:B6:30:THR:O	31:B6:32:ASN:HB2	2.19	0.42
2:AB:204:ASN:HD22	2:AB:204:ASN:C	2.16	0.42
7:AG:47:CYS:C	7:AG:49:ILE:N	2.71	0.42
35:BA:49:A:N7	35:BA:177:G:C6	2.86	0.42
28:B3:9:VAL:HG13	28:B3:55:ARG:CD	2.45	0.42
2:AB:58:ILE:CG2	2:AB:222:ILE:HD11	2.49	0.42
1:AA:686:U:O4'	11:AK:42:TRP:NE1	2.39	0.42
35:BA:814:C:H2'	35:BA:815:C:C6	2.54	0.42
1:AA:559:A:H2'	1:AA:559:A:N3	2.35	0.42
41:BG:139:LEU:CD2	41:BG:139:LEU:N	2.81	0.42
48:BP:35:HIS:O	48:BP:36:LYS:HB2	2.19	0.42
24:AY:15:ILE:HD13	24:AY:105:ILE:HD13	2.01	0.42
35:BA:1591:G:H5'	35:BA:1591:G:C8	2.54	0.42
35:BA:1035:U:H3	35:BA:1120:G:H1	1.67	0.42
35:BA:654(O):G:HO2'	35:BA:654(P):C:C1'	2.32	0.42
35:BA:2174:C:O2	37:BC:219:MET:HE3	2.19	0.42
25:B0:50:ASN:C	25:B0:62:LEU:HD21	2.39	0.42
24:AY:99:ARG:NH2	24:AY:128:TYR:CZ	2.83	0.42
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.33	0.42
38:BD:130:ALA:HA	38:BD:192:THR:HA	2.00	0.42
42:BH:9:ILE:HD12	42:BH:69:ARG:HH11	1.85	0.42
35:BA:1098:A:C2'	35:BA:1099:G:H5'	2.49	0.42
40:BF:101:LEU:CD1	40:BF:102:PRO:HD2	2.47	0.42
44:BK:95:UNK:CB	44:BK:135:UNK:HA	2.49	0.42
35:BA:598:G:C5'	48:BP:15:ARG:HB3	2.47	0.42
57:BY:2:ARG:C	57:BY:4:LYS:H	2.23	0.42
35:BA:2199:A:H3'	35:BA:2200:C:H6	1.84	0.42
10:AJ:6:ILE:CD1	10:AJ:23:ILE:HG21	2.48	0.42
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD11	2.01	0.42
3:AC:38:ARG:NH1	3:AC:38:ARG:CB	2.82	0.42
38:BD:33:LEU:HD22	38:BD:34:VAL:HG13	2.01	0.42
24:AY:166:LEU:HD21	24:AY:208:GLN:HG2	2.00	0.42
47:BO:63:VAL:HG12	47:BO:106:LEU:HD11	2.00	0.42
35:BA:479:A:N3	35:BA:481:G:H5''	2.34	0.42
6:AF:15:ASP:C	6:AF:17:SER:H	2.22	0.42
6:AF:15:ASP:O	6:AF:17:SER:N	2.52	0.42
11:AK:67:ASP:OD2	11:AK:71:LYS:HE3	2.19	0.42
1:AA:803:G:H2'	1:AA:804:U:C6	2.54	0.42
35:BA:994:C:OP1	53:BU:53:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:206:ILE:HG22	40:BF:207:GLY:N	2.34	0.42
47:BO:119:PRO:O	47:BO:120:GLU:HB2	2.19	0.42
48:BP:124:LYS:HE3	48:BP:142:GLY:O	2.20	0.42
35:BA:248:G:H5''	35:BA:386:G:N2	2.34	0.42
4:AD:3:ARG:NH2	4:AD:5:ILE:HG12	2.25	0.42
35:BA:45:C:N4	35:BA:47:C:H41	2.17	0.42
1:AA:264:U:HO2'	1:AA:265:G:H5'	1.77	0.42
35:BA:1770:G:C5	35:BA:1771:C:C4	3.07	0.42
1:AA:560:U:H6	1:AA:560:U:O5'	2.03	0.42
27:B2:43:GLN:HB2	27:B2:44:LEU:H	1.58	0.42
1:AA:924:C:H2'	1:AA:925:G:C8	2.54	0.42
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.49	0.42
29:B4:21:VAL:HG22	29:B4:35:VAL:HG21	2.02	0.42
41:BG:104:GLU:HA	41:BG:107:LEU:CB	2.50	0.42
41:BG:137:GLU:CG	41:BG:155:MET:N	2.82	0.42
9:AI:95:LYS:NZ	9:AI:96:LEU:CD1	2.82	0.42
36:BB:38:C:O2	36:BB:48:A:H1'	2.19	0.42
51:BS:53:SER:C	51:BS:55:ALA:N	2.73	0.42
1:AA:112:G:H2'	1:AA:113:G:C5'	2.25	0.42
58:BZ:183:LEU:C	58:BZ:183:LEU:HD12	2.36	0.42
35:BA:1800:C:H5'	38:BD:147:LEU:CD2	2.49	0.42
1:AA:1498:U:O2'	23:AX:16:U:O3'	2.37	0.42
1:AA:1158:C:O2	1:AA:1158:C:O2'	2.36	0.42
54:BV:47:VAL:HG12	54:BV:52:VAL:CB	2.49	0.42
35:BA:1104:C:O2'	35:BA:1105:U:C5'	2.66	0.42
1:AA:1385:G:N2	1:AA:1386:G:N3	2.67	0.42
25:B0:10:THR:CG2	25:B0:11:ARG:N	2.70	0.42
1:AA:1286:A:C2	21:AU:22:ARG:NH2	2.88	0.42
26:B1:5:CYS:C	26:B1:7:ILE:H	2.22	0.42
35:BA:896:A:C2	58:BZ:177:PRO:HD2	2.54	0.42
49:BQ:141:GLN:NE2	58:BZ:72:ARG:NE	2.67	0.42
35:BA:2335:A:O2'	35:BA:2336:A:H5''	2.19	0.42
1:AA:1193:G:H2'	1:AA:1194:U:H5'	2.00	0.42
58:BZ:102:LEU:HD21	58:BZ:124:ILE:CD1	2.49	0.42
54:BV:29:PRO:CA	54:BV:61:VAL:HG23	2.43	0.42
50:BR:116:LEU:HA	50:BR:116:LEU:HD23	1.67	0.42
3:AC:20:SER:HB3	3:AC:40:ARG:HH22	1.84	0.42
6:AF:69:GLU:HG2	6:AF:70:ASP:N	2.34	0.42
35:BA:882:G:H2'	35:BA:883:G:C8	2.43	0.42
22:AV:47:U:C6	22:AV:47:U:O5'	2.59	0.42
35:BA:2153:G:N2	35:BA:2154:G:H1'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:370:C:C2	1:AA:392:G:N2	2.87	0.42
18:AR:31:LEU:HD23	18:AR:31:LEU:H	1.84	0.42
41:BG:170:ARG:NE	41:BG:180:PHE:HE2	2.17	0.42
6:AF:3:ARG:HD3	6:AF:64:GLN:NE2	2.35	0.42
36:BB:68:C:O2'	36:BB:69:G:H5'	2.19	0.42
41:BG:164:GLU:O	41:BG:165:THR:C	2.58	0.42
51:BS:42:ASP:C	51:BS:44:LYS:N	2.71	0.42
47:BO:20:MET:CE	47:BO:44:LYS:HE3	2.48	0.42
13:AM:28:ALA:O	13:AM:29:ARG:C	2.56	0.42
35:BA:1084:A:N7	35:BA:1085:A:C4	2.88	0.42
6:AF:45:LEU:HD21	6:AF:57:GLN:HE22	1.85	0.42
35:BA:376:C:H2'	35:BA:377:C:C6	2.54	0.42
35:BA:868:U:C4	35:BA:869:G:N7	2.87	0.42
56:BX:23:GLU:O	56:BX:25:LYS:N	2.45	0.42
56:BX:22:ALA:HB3	56:BX:23:GLU:OE2	2.19	0.42
35:BA:2774:C:H2'	35:BA:2775:A:O4'	2.19	0.42
35:BA:2693:A:H2'	35:BA:2694:G:H8	1.84	0.42
35:BA:580:C:H2'	35:BA:581:C:C6	2.54	0.42
12:AL:34:ARG:O	12:AL:61:THR:HG23	2.19	0.42
1:AA:417:C:O2'	1:AA:418:C:H5'	2.19	0.42
45:BL:106:UNK:O	45:BL:107:UNK:C	2.68	0.42
56:BX:52:VAL:O	56:BX:52:VAL:HG12	2.20	0.42
35:BA:921:G:H4'	35:BA:2269:A:C5	2.54	0.42
1:AA:203:U:OP2	1:AA:203:U:C6	2.72	0.42
35:BA:1510:G:H2'	35:BA:1511:C:C6	2.54	0.42
35:BA:992:C:OP2	54:BV:74:LYS:NZ	2.51	0.42
35:BA:531:C:OP2	35:BA:561:G:N1	2.48	0.42
48:BP:115:LEU:CB	48:BP:131:SER:OG	2.67	0.42
2:AB:204:ASN:ND2	2:AB:204:ASN:C	2.72	0.42
35:BA:603:A:N7	35:BA:655:A:C5	2.87	0.42
17:AQ:68:ARG:N	17:AQ:70:ARG:NH1	2.64	0.42
35:BA:2009:G:N3	35:BA:2010:G:C8	2.88	0.42
1:AA:45:U:H2'	1:AA:46:G:C8	2.54	0.42
1:AA:862:C:C3'	1:AA:863:U:H5'	2.45	0.42
35:BA:2000:G:H21	35:BA:2001:A:C1'	2.32	0.42
27:B2:2:LYS:HE3	27:B2:52:ASP:CG	2.39	0.42
1:AA:1403:C:O5'	1:AA:1403:C:H6	2.03	0.42
13:AM:23:TYR:CD2	13:AM:70:LEU:HD13	2.55	0.42
41:BG:138:GLN:C	41:BG:140:ILE:H	2.23	0.42
41:BG:144:ILE:CG2	41:BG:145:THR:H	2.30	0.42
35:BA:2310:A:C5	41:BG:75:LYS:HE2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:38:VAL:CA	41:BG:93:THR:HA	2.41	0.42
41:BG:96:ARG:O	41:BG:97:ASP:C	2.58	0.42
31:B6:17:LYS:O	31:B6:18:ARG:HD2	2.20	0.42
35:BA:811:U:P	48:BP:33:ARG:NH1	2.92	0.42
14:AN:41:ARG:NH1	14:AN:42:ILE:HD13	2.34	0.42
24:AY:57:GLN:NE2	24:AY:464:ASP:OD1	2.52	0.42
53:BU:91:ASP:O	53:BU:95:LEU:HB2	2.19	0.42
35:BA:310:A:P	57:BY:18:GLY:HA2	2.59	0.42
1:AA:1389:C:O5'	1:AA:1389:C:H6	2.03	0.42
24:AY:109:ASP:O	24:AY:111:SER:N	2.53	0.42
7:AG:31:MET:SD	7:AG:36:LYS:HB2	2.59	0.42
26:B1:58:ILE:HD11	26:B1:90:ILE:HB	2.01	0.42
40:BF:110:LEU:HD21	40:BF:181:LEU:HG	2.01	0.42
4:AD:18:LYS:HG3	4:AD:33:MET:HG3	2.00	0.42
24:AY:517:LEU:HD13	24:AY:563:ILE:CA	2.50	0.42
24:AY:238:THR:HG22	24:AY:241:GLU:CD	2.40	0.42
35:BA:2823:A:OP2	39:BE:113:PHE:HB2	2.19	0.42
24:AY:621:ILE:CG1	24:AY:643:ILE:HD13	2.49	0.42
25:B0:53:MET:SD	25:B0:57:PHE:HB3	2.59	0.42
37:BC:89:GLU:O	37:BC:91:GLY:N	2.51	0.42
38:BD:65:ILE:HD13	38:BD:65:ILE:C	2.39	0.42
13:AM:16:ASP:OD1	13:AM:16:ASP:N	2.53	0.42
9:AI:47:LEU:CD1	9:AI:47:LEU:N	2.82	0.42
49:BQ:56:ARG:NH1	49:BQ:56:ARG:CG	2.76	0.42
10:AJ:9:ARG:HH22	10:AJ:97:GLU:HG3	1.84	0.42
15:AO:74:ASP:HB3	15:AO:77:ARG:HG2	2.00	0.42
35:BA:1027:A:N6	35:BA:1126:A:N9	2.68	0.42
34:B9:35:ARG:HD3	35:BA:2742:C:OP1	2.20	0.42
5:AE:145:LYS:HA	8:AH:107:LEU:HD22	2.02	0.42
24:AY:87:HIS:HE2	35:BA:2662:A:P	2.42	0.42
35:BA:1787:A:C2	35:BA:1788:C:C5	3.08	0.42
56:BX:28:PHE:CE2	56:BX:92:LEU:HD11	2.54	0.42
7:AG:33:ASP:C	7:AG:35:LYS:N	2.72	0.42
40:BF:28:ILE:H	40:BF:28:ILE:CD1	2.32	0.42
35:BA:299:A:C5	35:BA:322:A:C2	3.07	0.42
45:BL:106:UNK:C	45:BL:108:UNK:N	2.81	0.42
35:BA:1564:C:O2'	35:BA:1565:C:H5'	2.19	0.42
4:AD:191:ARG:HD3	4:AD:200:GLU:OE1	2.19	0.42
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.19	0.42
50:BR:107:ASP:C	50:BR:107:ASP:OD1	2.56	0.42
1:AA:1440:C:O2'	1:AA:1441:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.20	0.42
24:AY:203:GLU:O	24:AY:204:GLU:C	2.57	0.42
49:BQ:6:ARG:O	49:BQ:7:MET:HG3	2.19	0.42
47:BO:104:ARG:NH1	47:BO:107:ARG:NH1	2.60	0.42
35:BA:697:C:H2'	35:BA:698:C:C5'	2.45	0.42
28:B3:9:VAL:HG21	28:B3:55:ARG:HD2	2.01	0.42
35:BA:1936:A:OP2	35:BA:1961:C:N4	2.51	0.42
26:B1:25:LYS:HB2	26:B1:25:LYS:HE3	1.56	0.42
1:AA:1393:U:HO2'	1:AA:1501:C:HO2'	1.67	0.42
41:BG:140:ILE:O	41:BG:141:PHE:O	2.37	0.42
41:BG:50:ALA:C	41:BG:52:ILE:H	2.23	0.42
41:BG:93:THR:CG2	41:BG:94:LEU:H	2.29	0.42
31:B6:45:LYS:C	31:B6:46:HIS:ND1	2.73	0.42
35:BA:1022:G:C5	35:BA:1141:U:O4	2.73	0.42
35:BA:1144:G:C6	35:BA:1145:C:C4	3.08	0.42
35:BA:943:U:OP1	48:BP:38:GLN:NE2	2.52	0.42
51:BS:92:TYR:CD1	51:BS:93:LYS:N	2.87	0.42
35:BA:1817:G:H2'	35:BA:1818:U:C5'	2.31	0.42
35:BA:1348:G:H2'	35:BA:1349:A:C5'	2.47	0.42
35:BA:2174:C:C3'	35:BA:2175:C:H5'	2.49	0.42
1:AA:980:C:H6	1:AA:980:C:C5'	2.20	0.42
35:BA:328:U:H2'	35:BA:329:G:OP1	2.19	0.42
1:AA:1287:A:C6	1:AA:1288:A:N6	2.88	0.42
1:AA:867:G:O2'	1:AA:868:C:H5'	2.19	0.42
26:B1:52:ARG:O	26:B1:53:VAL:O	2.37	0.42
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.18	0.42
58:BZ:5:LEU:HD11	58:BZ:39:VAL:HB	2.02	0.42
40:BF:4:VAL:H	40:BF:24:LEU:HD12	1.84	0.42
1:AA:1368:G:OP1	10:AJ:62:HIS:NE2	2.44	0.42
3:AC:123:GLN:HE21	3:AC:123:GLN:CA	2.33	0.42
24:AY:126:GLU:HG2	24:AY:132:ARG:NH2	2.29	0.42
24:AY:113:GLY:HA3	24:AY:152:THR:HG21	2.02	0.42
38:BD:105:ILE:HD12	38:BD:105:ILE:HA	1.80	0.42
57:BY:97:ARG:O	57:BY:98:VAL:CG2	2.67	0.42
26:B1:3:LYS:O	26:B1:12:PRO:HD3	2.20	0.42
3:AC:31:HIS:O	3:AC:33:LEU:N	2.52	0.42
2:AB:72:GLY:O	2:AB:94:ASN:HA	2.19	0.42
1:AA:563:A:N3	1:AA:563:A:C3'	2.83	0.42
12:AL:20:LYS:CD	12:AL:20:LYS:N	2.83	0.42
47:BO:35:VAL:CG2	47:BO:69:ILE:HD11	2.48	0.42
38:BD:70:TRP:O	38:BD:73:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:56:GLY:O	11:AK:89:ALA:CB	2.67	0.42
2:AB:7:VAL:O	2:AB:11:LEU:HD12	2.19	0.42
36:BB:66:A:O2'	36:BB:67:G:P	2.76	0.42
52:BT:58:ASN:HD22	52:BT:58:ASN:N	2.10	0.42
35:BA:999:U:H5''	35:BA:1154:G:O6	2.19	0.42
25:B0:5:LYS:O	25:B0:6:GLY:C	2.58	0.42
35:BA:646:A:H2'	35:BA:647:G:O4'	2.19	0.42
7:AG:74:GLU:HG2	7:AG:91:VAL:CG2	2.47	0.42
19:AS:20:LEU:HD13	29:B4:61:ARG:NH2	2.33	0.42
1:AA:954:G:O2'	1:AA:955:U:H5'	2.19	0.42
7:AG:71:PRO:HD3	7:AG:103:TRP:HZ3	1.82	0.42
36:BB:106:G:H2'	36:BB:107:G:H8	1.84	0.42
5:AE:120:THR:HG22	5:AE:121:LYS:N	2.35	0.42
55:BW:12:ILE:HD13	55:BW:17:VAL:HG22	2.02	0.42
35:BA:2563:U:H4'	47:BO:28:SER:HA	2.00	0.42
35:BA:1530:C:H2'	35:BA:1531:C:C6	2.55	0.42
1:AA:1010:G:O2'	1:AA:1011:G:H5'	2.19	0.42
35:BA:192:C:C5	35:BA:193:U:C6	3.07	0.42
52:BT:93:ARG:HD2	52:BT:93:ARG:HA	1.79	0.42
37:BC:103:LYS:HZ2	37:BC:103:LYS:CB	2.32	0.42
37:BC:73:VAL:CG1	37:BC:74:ARG:H	2.33	0.42
1:AA:38:G:O2'	1:AA:39:G:C5'	2.68	0.42
1:AA:1304:G:H1'	1:AA:1333:A:N6	2.32	0.42
7:AG:125:MET:O	7:AG:128:ALA:CB	2.65	0.42
35:BA:1820:U:HO2'	35:BA:1821:A:P	2.42	0.42
2:AB:51:LEU:CD2	2:AB:201:ILE:HD12	2.49	0.42
1:AA:507:C:C2'	1:AA:508:C:OP1	2.68	0.42
3:AC:84:ILE:C	3:AC:86:VAL:H	2.23	0.42
35:BA:2722:G:H2'	35:BA:2723:C:C6	2.55	0.42
35:BA:2203:U:O3'	35:BA:2205:C:OP1	2.38	0.42
35:BA:607:U:H6	35:BA:607:U:H3'	1.85	0.42
29:B4:33:VAL:CG1	29:B4:34:GLU:H	2.22	0.42
41:BG:67:LYS:HA	41:BG:68:PRO:HD3	1.78	0.42
35:BA:752:A:HO2'	35:BA:753:C:P	2.39	0.42
35:BA:554:U:C2'	35:BA:555:U:H5'	2.50	0.42
14:AN:24:CYS:HB2	14:AN:40:CYS:HB3	2.01	0.42
8:AH:104:ARG:O	8:AH:105:ARG:C	2.58	0.42
38:BD:43:ARG:HB2	38:BD:54:ARG:HB2	2.01	0.42
35:BA:54:G:C2'	35:BA:55:G:O5'	2.67	0.42
38:BD:30:GLU:CG	38:BD:63:ARG:CZ	2.87	0.42
28:B3:1:MET:CG	28:B3:2:PRO:HD2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:237:PRO:HB2	24:AY:242:LEU:HG	2.02	0.42
55:BW:24:ILE:O	55:BW:71:VAL:CG2	2.67	0.42
35:BA:2808:U:H5	35:BA:2891:G:C5	2.37	0.42
1:AA:22:G:H4'	1:AA:885:G:C8	2.55	0.42
37:BC:89:GLU:C	37:BC:91:GLY:N	2.72	0.42
35:BA:221:A:H4'	35:BA:222:A:O5'	2.20	0.42
52:BT:105:LEU:HD22	52:BT:109:GLU:OE1	2.20	0.42
1:AA:1116:C:O2'	1:AA:1117:G:H5''	2.19	0.42
24:AY:7:TYR:CZ	24:AY:370:LYS:HB2	2.55	0.42
24:AY:5:VAL:C	24:AY:7:TYR:N	2.72	0.42
35:BA:1203:G:H3'	35:BA:1204:A:H5''	2.01	0.42
35:BA:2789:C:H5'	35:BA:2790:A:OP1	2.20	0.42
24:AY:150:ILE:HD11	24:AY:163:VAL:HG22	2.01	0.42
16:AP:52:ASP:O	16:AP:53:VAL:C	2.57	0.42
35:BA:922:U:H2'	35:BA:923:C:C6	2.55	0.42
14:AN:26:ARG:HB3	14:AN:43:CYS:SG	2.59	0.42
35:BA:2241:A:H2'	35:BA:2242:G:C8	2.54	0.42
44:BK:70:UNK:O	44:BK:71:UNK:CB	2.68	0.42
15:AO:66:LEU:HD12	15:AO:66:LEU:HA	1.88	0.42
38:BD:7:LYS:O	38:BD:9:TYR:N	2.50	0.42
35:BA:359:A:H2'	35:BA:360:G:O4'	2.20	0.42
29:B4:12:ALA:CA	29:B4:24:THR:HG22	2.25	0.42
37:BC:97:GLY:O	37:BC:98:GLU:C	2.58	0.42
1:AA:38:G:O2'	1:AA:39:G:H5''	2.20	0.42
1:AA:39:G:N9	1:AA:498:U:C4	2.59	0.42
1:AA:490:G:C2	1:AA:491:G:C5	3.07	0.42
35:BA:1678:G:H21	35:BA:1989:G:N2	2.06	0.42
1:AA:936:C:C2'	1:AA:937:A:O5'	2.68	0.42
35:BA:861:A:H2'	35:BA:862:G:O4'	2.20	0.42
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	2.01	0.42
35:BA:1541:G:O2'	35:BA:1542:A:P	2.77	0.42
35:BA:36:G:N2	35:BA:444:C:O2	2.45	0.42
2:AB:15:VAL:CG2	2:AB:209:ARG:HH21	2.14	0.42
35:BA:1221:C:C2	35:BA:1221(A):C:C5	3.06	0.42
41:BG:64:THR:HA	41:BG:102:PHE:CD1	2.54	0.42
41:BG:40:ASN:HA	41:BG:91:ARG:HB2	2.01	0.42
41:BG:66:GLN:OE1	41:BG:94:LEU:CG	2.61	0.42
33:B8:5:LYS:HG2	35:BA:242:G:C8	2.54	0.42
51:BS:57:LYS:HD2	51:BS:58:LEU:N	2.35	0.42
51:BS:90:GLY:C	51:BS:92:TYR:H	2.22	0.42
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:39:LEU:CD1	54:BV:51:VAL:HA	2.50	0.42
1:AA:796:C:HO2'	1:AA:797:C:H5'	1.77	0.42
35:BA:2039:C:H2'	35:BA:2040:C:H6	1.85	0.42
35:BA:1060:U:C4	35:BA:1062:G:H4'	2.55	0.42
25:B0:7:LEU:O	25:B0:8:GLY:O	2.37	0.42
48:BP:78:PRO:CA	48:BP:110:TYR:HE2	2.31	0.42
35:BA:526:A:O2'	35:BA:2043:C:H2'	2.14	0.42
35:BA:2810:A:H2'	39:BE:61:ARG:NH2	2.35	0.42
1:AA:190:U:O2'	1:AA:191:G:H5'	2.19	0.42
2:AB:73:THR:O	2:AB:78:GLN:HG3	2.20	0.42
39:BE:67:PHE:CE1	39:BE:69:LYS:HE3	2.55	0.42
24:AY:614:GLU:HG3	24:AY:617:MET:CE	2.48	0.42
24:AY:179:ASP:OD1	24:AY:181:LEU:HB3	2.20	0.42
35:BA:1856:G:C2	35:BA:1887:C:C2	3.08	0.42
4:AD:120:LEU:C	4:AD:126:ILE:HD13	2.40	0.42
3:AC:129:ALA:CB	3:AC:132:ARG:HG3	2.47	0.42
35:BA:1027:A:N6	35:BA:1126:A:C1'	2.83	0.42
54:BV:66:ARG:O	54:BV:67:GLY:O	2.38	0.42
36:BB:13:A:O2'	36:BB:15:A:H5''	2.19	0.42
42:BH:98:LEU:HB2	42:BH:125:VAL:CG2	2.50	0.42
57:BY:88:LYS:CB	57:BY:91:GLU:HB2	2.49	0.42
51:BS:61:ASN:O	51:BS:65:VAL:HG23	2.20	0.42
24:AY:210:ARG:CG	24:AY:210:ARG:HH11	2.31	0.42
24:AY:556:ILE:HG13	24:AY:558:PHE:CD1	2.55	0.42
52:BT:126:ALA:C	52:BT:128:GLU:N	2.69	0.42
20:AT:41:ILE:HG12	20:AT:41:ILE:H	1.58	0.42
35:BA:1213:A:C2'	35:BA:1214:A:H5'	2.50	0.42
24:AY:605:ILE:HD13	24:AY:677:GLN:HG2	2.02	0.42
24:AY:494:GLU:O	24:AY:494:GLU:HG3	2.20	0.42
24:AY:218:GLU:OE2	45:BL:83:UNK:CB	2.68	0.42
4:AD:39:PRO:HB2	4:AD:44:GLY:HA2	2.02	0.42
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.20	0.42
41:BG:22:ARG:O	41:BG:23:PHE:CG	2.72	0.42
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	2.01	0.42
7:AG:138:LYS:HD3	7:AG:138:LYS:C	2.40	0.42
38:BD:112:GLN:HB2	38:BD:115:GLN:NE2	2.35	0.42
25:B0:3:HIS:HB2	35:BA:2494:G:H5'	2.01	0.42
52:BT:90:GLN:HB3	52:BT:121:ILE:CG1	2.50	0.42
48:BP:88:LEU:HD21	48:BP:125:VAL:HG21	2.02	0.42
35:BA:1823:G:O2'	35:BA:1824:G:H5'	2.20	0.42
1:AA:683:G:C5	1:AA:684:A:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:92:A:C2	35:BA:93:G:H1'	2.55	0.42
40:BF:7:TYR:CE1	40:BF:196:LEU:HD11	2.55	0.42
29:B4:30:GLU:CG	29:B4:31:ILE:N	2.81	0.42
35:BA:2307:G:H3'	35:BA:2307:G:N3	2.35	0.42
41:BG:7:LEU:HD11	41:BG:176:LEU:HD21	2.02	0.42
41:BG:7:LEU:HD12	41:BG:104:GLU:HG3	2.01	0.42
35:BA:753:C:H2'	35:BA:754:C:C6	2.55	0.42
35:BA:17:G:O2'	35:BA:18:C:H5'	2.20	0.42
1:AA:1279:A:H2	10:AJ:43:ARG:HH12	1.68	0.42
1:AA:347:G:H21	1:AA:348:G:H1'	1.85	0.42
24:AY:15:ILE:HG22	24:AY:103:GLY:CA	2.50	0.42
10:AJ:54:PHE:CZ	10:AJ:55:LYS:CE	3.03	0.42
35:BA:1036:G:N1	35:BA:1120:G:C5	2.88	0.42
53:BU:59:ARG:NH1	53:BU:59:ARG:CG	2.81	0.42
53:BU:84:LYS:HD2	53:BU:89:GLU:HG3	2.02	0.42
40:BF:10:PRO:HD2	40:BF:13:SER:O	2.19	0.42
3:AC:71:ALA:HB2	3:AC:115:LEU:CD2	2.47	0.42
26:B1:78:LYS:HB3	26:B1:78:LYS:HE2	1.68	0.42
24:AY:515:GLU:N	24:AY:515:GLU:OE1	2.53	0.42
50:BR:116:LEU:O	50:BR:117:VAL:HG12	2.20	0.42
56:BX:35:THR:HB	56:BX:38:GLU:HB2	2.02	0.42
3:AC:22:TRP:CE2	14:AN:54:PRO:CG	2.94	0.42
50:BR:104:ARG:HD2	50:BR:109:ALA:HB3	2.02	0.42
5:AE:92:LYS:HA	5:AE:93:PRO:HD3	1.95	0.42
35:BA:1558:A:H4'	35:BA:1559:G:H2'	2.02	0.42
24:AY:315:LYS:O	24:AY:316:ILE:HD13	2.19	0.42
37:BC:48:LEU:CD2	37:BC:59:VAL:HG21	2.50	0.42
15:AO:56:LEU:HD13	15:AO:56:LEU:O	2.20	0.42
19:AS:88:LYS:O	19:AS:90:THR:N	2.53	0.42
37:BC:42:VAL:O	37:BC:216:THR:C	2.59	0.42
35:BA:2567:G:H2'	35:BA:2568:C:H6	1.84	0.42
35:BA:548:A:C2'	35:BA:549:G:H5'	2.49	0.42
39:BE:170:LEU:N	39:BE:170:LEU:HD12	2.34	0.42
1:AA:1316:G:O2'	14:AN:18:VAL:HG11	2.19	0.42
39:BE:92:THR:O	39:BE:95:ILE:HG12	2.20	0.42
39:BE:201:THR:OG1	39:BE:202:LYS:N	2.52	0.42
7:AG:86:GLN:O	7:AG:87:VAL:CG1	2.68	0.42
30:B5:10:LYS:HG3	35:BA:1263:U:C1'	2.50	0.42
35:BA:1625:C:C2'	35:BA:1626:G:H5'	2.50	0.42
11:AK:81:ASP:OD1	11:AK:107:SER:OG	2.34	0.42
1:AA:1134:G:N2	1:AA:1141:C:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:75:PRO:O	15:AO:78:TYR:HB3	2.20	0.42
25:B0:36:ILE:CD1	35:BA:2355:C:O4'	2.68	0.42
48:BP:47:ASP:CB	48:BP:49:ARG:N	2.74	0.42
1:AA:495:A:O2'	1:AA:496:A:O5'	2.30	0.42
17:AQ:67:LYS:CA	17:AQ:70:ARG:NH1	2.81	0.42
35:BA:1902:C:H2'	35:BA:1903:G:O5'	2.19	0.42
1:AA:560:U:C4'	1:AA:561:U:C5'	2.76	0.42
39:BE:111:ARG:HB3	50:BR:2:ARG:NH1	2.35	0.42
29:B4:22:ILE:CG1	41:BG:105:LYS:HD3	2.50	0.42
41:BG:110:ALA:HB1	41:BG:142:PRO:CB	2.50	0.42
36:BB:42:C:H41	41:BG:91:ARG:NH2	2.18	0.42
30:B5:53:ALA:HA	30:B5:56:LYS:HZ2	1.73	0.42
51:BS:87:PHE:O	51:BS:88:ASP:HB2	2.19	0.42
14:AN:42:ILE:O	14:AN:46:GLU:HG3	2.20	0.42
35:BA:2177:C:N4	35:BA:2178:C:C4	2.87	0.42
37:BC:6:LYS:N	37:BC:9:ARG:HH12	2.17	0.42
54:BV:47:VAL:HG12	54:BV:52:VAL:CA	2.49	0.42
4:AD:81:GLU:OE2	4:AD:139:ARG:NH2	2.52	0.42
25:B0:78:TYR:O	25:B0:79:VAL:CG2	2.63	0.42
24:AY:403:GLU:HG3	24:AY:404:VAL:N	2.35	0.42
2:AB:127:ILE:C	2:AB:129:GLU:H	2.23	0.42
35:BA:2033:A:C4'	35:BA:2034:U:OP1	2.57	0.42
35:BA:1076:C:C5	35:BA:1077:A:N7	2.88	0.42
54:BV:19:LYS:HG2	54:BV:94:LEU:CB	2.42	0.42
54:BV:19:LYS:HZ3	54:BV:20:LEU:C	2.23	0.42
50:BR:4:LEU:O	50:BR:4:LEU:CD2	2.68	0.42
1:AA:1495:U:H2'	1:AA:1496:C:C6	2.55	0.42
39:BE:51:PHE:CG	39:BE:52:LEU:N	2.88	0.42
55:BW:36:LEU:CD2	55:BW:36:LEU:N	2.83	0.42
1:AA:663:A:C2'	1:AA:664:G:H5'	2.49	0.42
1:AA:368:U:C6	1:AA:368:U:C3'	3.03	0.42
50:BR:79:LEU:HA	50:BR:83:ILE:HG12	2.02	0.42
58:BZ:155:LEU:H	58:BZ:155:LEU:HD23	1.85	0.42
35:BA:2292:C:O2'	35:BA:2293:C:H5'	2.20	0.42
1:AA:1296:C:H4'	1:AA:1302:U:O4	2.20	0.42
1:AA:748:C:H1'	1:AA:749:C:C5	2.48	0.42
36:BB:13:A:HO2'	36:BB:15:A:H5''	1.85	0.42
42:BH:98:LEU:HB2	42:BH:125:VAL:HG21	2.02	0.42
38:BD:4:LYS:O	38:BD:17:THR:HA	2.19	0.42
17:AQ:65:ILE:HG22	17:AQ:65:ILE:O	2.20	0.42
5:AE:145:LYS:HD2	8:AH:107:LEU:CD2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:167:VAL:CG2	39:BE:170:LEU:HD11	2.50	0.42
35:BA:2615:U:H2'	35:BA:2616:C:C6	2.55	0.42
53:BU:20:LEU:N	53:BU:20:LEU:HD22	2.32	0.42
42:BH:86:GLU:HB2	42:BH:132:ARG:HB3	2.02	0.42
40:BF:28:ILE:HD13	40:BF:28:ILE:H	1.85	0.42
24:AY:146:LEU:O	24:AY:146:LEU:HD23	2.19	0.42
25:B0:2:ALA:HB3	35:BA:2602:A:H61	1.85	0.42
5:AE:38:GLN:HB3	5:AE:38:GLN:HE21	1.69	0.42
35:BA:575:A:OP1	35:BA:2499:C:O2'	2.32	0.42
35:BA:66:C:O2'	35:BA:67:U:H5'	2.20	0.42
35:BA:586:A:H2	35:BA:809:G:N3	2.18	0.42
44:BK:63:UNK:O	44:BK:64:UNK:CB	2.67	0.42
24:AY:486:THR:HG21	24:AY:519:ARG:NH2	2.35	0.42
1:AA:240:C:H2'	1:AA:241:C:H6	1.85	0.42
35:BA:908:C:O2'	35:BA:909:A:H5'	2.20	0.42
48:BP:104:GLY:H	48:BP:105:LEU:HD12	1.85	0.41
48:BP:114:ILE:CD1	48:BP:114:ILE:C	2.80	0.41
48:BP:85:LEU:HA	48:BP:88:LEU:CB	2.50	0.41
25:B0:39:ARG:NH2	35:BA:2355:C:O2	2.53	0.41
35:BA:2363:C:C2'	35:BA:2364:C:H5'	2.42	0.41
31:B6:25:LYS:HE2	33:B8:34:TRP:NE1	2.20	0.41
25:B0:67:VAL:HG12	25:B0:68:GLU:N	2.35	0.41
35:BA:2011:U:H2'	35:BA:2012:G:C5'	2.50	0.41
35:BA:1822:G:C2'	35:BA:1823:G:C5'	2.96	0.41
35:BA:2712(A):A:O5'	35:BA:2712(A):A:H8	2.03	0.41
52:BT:96:ARG:HG2	52:BT:98:LYS:O	2.19	0.41
35:BA:28:A:N6	35:BA:512:G:O2'	2.53	0.41
57:BY:28:LYS:CG	57:BY:37:VAL:HB	2.49	0.41
2:AB:39:ILE:O	2:AB:40:HIS:O	2.38	0.41
27:B2:2:LYS:HA	27:B2:5:GLU:OE2	2.20	0.41
13:AM:67:GLU:CD	13:AM:71:ARG:HH21	2.23	0.41
29:B4:37:SER:O	29:B4:38:LYS:HB3	2.20	0.41
29:B4:46:GLN:HG3	29:B4:48:ARG:HD3	2.02	0.41
41:BG:137:GLU:O	41:BG:138:GLN:O	2.37	0.41
41:BG:42:GLY:O	41:BG:43:LEU:CB	2.67	0.41
41:BG:7:LEU:HB2	41:BG:104:GLU:CD	2.40	0.41
35:BA:1038:C:C3'	35:BA:1039:G:C5'	2.90	0.41
51:BS:68:GLN:O	51:BS:70:GLY:N	2.52	0.41
1:AA:1053:G:O2'	1:AA:1054:C:P	2.78	0.41
1:AA:962:C:H2'	1:AA:963:G:O5'	2.20	0.41
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1799:G:C2	35:BA:1800:C:C5	3.08	0.41
35:BA:654(F):C:N4	35:BA:654(M):C:H42	2.18	0.41
1:AA:1158:C:O2	1:AA:1158:C:H2'	2.17	0.41
53:BU:112:ARG:NH1	54:BV:46:VAL:HG11	2.35	0.41
1:AA:979:C:O2	14:AN:19:ARG:HG2	2.20	0.41
1:AA:1151:A:O2'	1:AA:1152:A:OP2	2.30	0.41
3:AC:120:VAL:O	3:AC:123:GLN:N	2.50	0.41
24:AY:402:ILE:O	24:AY:403:GLU:CB	2.68	0.41
29:B4:56:VAL:O	29:B4:58:ARG:N	2.53	0.41
24:AY:546:ILE:O	24:AY:550:MET:HB2	2.20	0.41
54:BV:15:GLU:HG2	54:BV:16:PRO:CD	2.50	0.41
54:BV:16:PRO:HD3	54:BV:99:ILE:HD11	2.01	0.41
2:AB:75:LYS:HB3	2:AB:76:GLN:HE21	1.85	0.41
1:AA:917:G:H2'	1:AA:918:A:C8	2.54	0.41
9:AI:17:VAL:HG23	9:AI:63:ILE:HG12	2.01	0.41
24:AY:687:LEU:C	24:AY:688:ILE:HD12	2.40	0.41
35:BA:849:A:C8	35:BA:850:C:C5	3.07	0.41
50:BR:103:ARG:NH1	50:BR:110:PRO:HD3	2.30	0.41
1:AA:748:C:O2'	1:AA:749:C:P	2.78	0.41
35:BA:2653:U:H3'	35:BA:2654:A:C8	2.55	0.41
51:BS:67:ARG:HH21	51:BS:100:ALA:HB3	1.85	0.41
54:BV:35:LEU:HB3	54:BV:37:VAL:HG23	2.02	0.41
53:BU:49:HIS:C	53:BU:51:LYS:N	2.70	0.41
38:BD:28:GLU:O	38:BD:29:PRO:C	2.57	0.41
35:BA:1914:C:H3'	35:BA:1915:U:C6	2.55	0.41
35:BA:2788:C:H2'	35:BA:2789:C:O4'	2.20	0.41
1:AA:222:U:H2'	1:AA:223:U:C6	2.55	0.41
54:BV:34:GLU:O	54:BV:36:PRO:HD3	2.20	0.41
24:AY:328:ILE:HD11	24:AY:335:LEU:HD23	2.01	0.41
11:AK:50:TYR:CD1	11:AK:54:ARG:HB3	2.54	0.41
27:B2:22:GLU:O	27:B2:26:ARG:HD2	2.20	0.41
35:BA:2785:C:H2'	35:BA:2786:U:C6	2.55	0.41
1:AA:131:C:H2'	1:AA:132:C:H6	1.85	0.41
13:AM:52:GLU:HA	13:AM:55:ARG:HB3	2.02	0.41
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.19	0.41
35:BA:2171:A:O2'	35:BA:2172:U:O4'	2.26	0.41
35:BA:2191:G:H2'	35:BA:2191:G:N3	2.35	0.41
26:B1:43:TYR:CD1	26:B1:43:TYR:N	2.87	0.41
1:AA:116:A:OP2	1:AA:116:A:N7	2.53	0.41
33:B8:12:LYS:HG2	48:BP:68:GLN:CG	2.50	0.41
48:BP:97:PRO:HG3	48:BP:112:LEU:CD1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:196:A:H5'	48:BP:46:LYS:HE2	2.01	0.41
1:AA:773:G:C4	1:AA:774:G:N7	2.88	0.41
25:B0:37:LEU:CD2	25:B0:37:LEU:H	2.26	0.41
25:B0:43:THR:O	25:B0:44:ARG:C	2.58	0.41
35:BA:435:C:C2'	35:BA:436:C:H5'	2.51	0.41
1:AA:264:U:O5'	1:AA:264:U:H6	2.03	0.41
1:AA:771:G:C4	1:AA:772:U:C5	3.07	0.41
48:BP:30:THR:CG2	48:BP:31:ALA:H	2.33	0.41
1:AA:973:G:N3	10:AJ:55:LYS:CE	2.83	0.41
24:AY:58:GLU:HG3	24:AY:65:ILE:HG12	2.03	0.41
42:BH:6:ARG:HH11	42:BH:6:ARG:CG	2.33	0.41
35:BA:996:A:H4'	53:BU:92:ARG:CD	2.51	0.41
38:BD:48:ARG:NH1	38:BD:48:ARG:HG3	2.35	0.41
58:BZ:129:SER:O	58:BZ:130:PRO:C	2.58	0.41
24:AY:137:ASN:CG	24:AY:138:LYS:N	2.73	0.41
35:BA:330:A:HO2'	35:BA:331:A:H8	1.67	0.41
1:AA:411:A:O2'	1:AA:413:G:H5'	2.20	0.41
35:BA:2040:C:H2'	35:BA:2041:U:H6	1.85	0.41
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	2.02	0.41
46:BN:56:ASN:O	46:BN:57:ALA:O	2.37	0.41
35:BA:1475:G:H2'	35:BA:1476:C:C6	2.55	0.41
35:BA:1853:A:H2'	35:BA:1854:A:C8	2.54	0.41
24:AY:343:ASN:ND2	24:AY:346:LYS:N	2.68	0.41
30:B5:49:CYS:HB2	30:B5:50:GLY:H	1.63	0.41
24:AY:356:LEU:HD21	24:AY:358:MET:SD	2.60	0.41
47:BO:64:ARG:HG2	47:BO:79:PHE:CG	2.56	0.41
11:AK:126:ARG:CZ	11:AK:126:ARG:HB3	2.49	0.41
56:BX:27:THR:HB	56:BX:80:ILE:HB	2.03	0.41
35:BA:944:G:H5'	35:BA:945:A:C5'	2.50	0.41
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.20	0.41
26:B1:86:SER:O	26:B1:86:SER:OG	2.32	0.41
16:AP:59:TRP:HA	16:AP:62:VAL:HG23	2.02	0.41
16:AP:60:LEU:HA	16:AP:60:LEU:HD23	1.86	0.41
1:AA:872:A:O3'	1:AA:873:A:H2'	2.20	0.41
35:BA:1789:A:OP1	38:BD:222:ARG:HD3	2.20	0.41
35:BA:2648:C:H2'	35:BA:2649:U:H6	1.83	0.41
1:AA:432:A:C8	1:AA:433:C:C5	3.08	0.41
57:BY:6:HIS:CD2	57:BY:6:HIS:H	2.38	0.41
1:AA:304:U:O2'	1:AA:305:G:H5'	2.19	0.41
35:BA:231:C:O2'	35:BA:232:G:H5'	2.20	0.41
32:B7:4:THR:HG22	35:BA:687:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:895:G:H2'	1:AA:896:C:C6	2.54	0.41
52:BT:85:LYS:NZ	52:BT:85:LYS:CB	2.54	0.41
35:BA:630:G:C4'	35:BA:640:C:H4'	2.50	0.41
35:BA:2362:G:H2'	35:BA:2363:C:C5'	2.49	0.41
36:BB:91:C:OP1	49:BQ:16:ARG:HG3	2.20	0.41
31:B6:8:LYS:HA	31:B6:27:LYS:HA	2.02	0.41
25:B0:67:VAL:HG12	25:B0:68:GLU:H	1.84	0.41
35:BA:1301:A:H2'	35:BA:1302:A:C2'	2.51	0.41
35:BA:29:U:H2'	35:BA:30:G:C8	2.55	0.41
35:BA:2611:U:H2'	35:BA:2611:U:O2	2.20	0.41
19:AS:47:HIS:O	19:AS:62:ILE:CG2	2.68	0.41
41:BG:60:LEU:HA	41:BG:63:ILE:HG23	2.02	0.41
33:B8:4:MET:HE2	33:B8:61:LEU:HD23	2.03	0.41
33:B8:62:LEU:O	33:B8:64:TYR:N	2.53	0.41
35:BA:1039:G:O6	35:BA:1116:C:N3	2.53	0.41
35:BA:1144:G:C4	35:BA:1145:C:C5	3.08	0.41
1:AA:1049:U:O2'	14:AN:2:ALA:N	2.53	0.41
53:BU:66:ASN:HD21	53:BU:70:ARG:HE	1.67	0.41
35:BA:1374:G:O2'	35:BA:1375:C:H5'	2.19	0.41
35:BA:673:C:H5"	40:BF:80:ALA:HB1	2.02	0.41
20:AT:14:LYS:HE3	20:AT:18:GLN:HE22	1.85	0.41
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.19	0.41
35:BA:1289:C:H2'	35:BA:1290:C:C6	2.55	0.41
4:AD:28:SER:OG	4:AD:30:LYS:HG2	2.21	0.41
24:AY:95:GLU:OE1	24:AY:128:TYR:OH	2.37	0.41
24:AY:507:TYR:CD1	24:AY:508:GLY:N	2.88	0.41
1:AA:204:U:H4'	1:AA:216:G:C5'	2.48	0.41
35:BA:2117:A:O2'	35:BA:2118:U:O5'	2.35	0.41
57:BY:95:LYS:HD2	57:BY:99:CYS:O	2.20	0.41
16:AP:21:VAL:HG12	16:AP:34:GLU:O	2.20	0.41
38:BD:65:ILE:O	38:BD:65:ILE:HD13	2.21	0.41
35:BA:1486:A:O4'	35:BA:1505:C:N4	2.53	0.41
22:AV:12:U:H3	22:AV:23:A:H62	1.67	0.41
39:BE:47:VAL:HG22	39:BE:84:PHE:O	2.20	0.41
58:BZ:155:LEU:N	58:BZ:155:LEU:CD2	2.83	0.41
36:BB:77:U:P	58:BZ:19:ARG:HH22	2.43	0.41
33:B8:26:LYS:HB3	33:B8:44:LYS:HG3	2.01	0.41
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.54	0.41
26:B1:40:ARG:NH1	26:B1:40:ARG:HG2	2.35	0.41
35:BA:643:A:C2'	35:BA:644:A:H5'	2.51	0.41
38:BD:102:LYS:C	38:BD:103:ARG:HG2	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:49:VAL:O	57:BY:50:ARG:CB	2.67	0.41
24:AY:150:ILE:O	24:AY:151:ARG:C	2.59	0.41
46:BN:45:ASN:ND2	46:BN:45:ASN:N	2.67	0.41
58:BZ:60:GLU:O	58:BZ:61:LEU:HB2	2.20	0.41
2:AB:160:ASP:O	2:AB:161:ALA:HB2	2.20	0.41
18:AR:40:LEU:HB3	18:AR:79:LEU:HD11	2.02	0.41
35:BA:664:C:H4'	35:BA:941:A:OP1	2.20	0.41
35:BA:2637:U:O2'	35:BA:2638:G:H5'	2.20	0.41
6:AF:42:GLU:HG3	6:AF:61:LEU:HD23	2.01	0.41
6:AF:42:GLU:HG3	6:AF:61:LEU:CD2	2.51	0.41
28:B3:13:ILE:HD11	35:BA:989:G:C8	2.55	0.41
38:BD:129:ASN:O	38:BD:193:VAL:HG12	2.20	0.41
35:BA:1344:G:H4'	35:BA:1384:A:C5	2.56	0.41
9:AI:56:LEU:HB3	9:AI:57:GLY:H	1.71	0.41
1:AA:668:G:O2'	15:AO:46:HIS:CD2	2.74	0.41
2:AB:114:ARG:NH1	2:AB:141:GLU:OE2	2.54	0.41
35:BA:955:C:O2'	35:BA:956:G:C5'	2.57	0.41
2:AB:19:HIS:HE2	2:AB:206:ASP:CG	2.23	0.41
1:AA:266:G:O2'	1:AA:267:C:OP2	2.35	0.41
35:BA:1528:A:N1	35:BA:1542:A:C2	2.88	0.41
35:BA:1996:C:OP2	35:BA:1996:C:H6	2.03	0.41
35:BA:2680:C:OP2	39:BE:111:ARG:NH2	2.51	0.41
36:BB:43:C:H1'	41:BG:94:LEU:HD22	2.02	0.41
1:AA:1118:C:O2	1:AA:1179:A:C6	2.74	0.41
35:BA:20:C:O2'	35:BA:21:A:H5'	2.20	0.41
35:BA:942:G:C2'	35:BA:943:U:H5'	2.50	0.41
35:BA:1381:G:O2'	35:BA:1382:G:C5'	2.68	0.41
35:BA:1805:U:C2'	35:BA:1806:C:C5'	2.88	0.41
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.21	0.41
20:AT:14:LYS:HA	20:AT:17:ARG:NE	2.36	0.41
1:AA:1152:A:C2'	1:AA:1153:C:O5'	2.69	0.41
39:BE:77:ILE:CG2	39:BE:78:LEU:HD12	2.51	0.41
35:BA:1290:C:H6	35:BA:1290:C:O5'	2.04	0.41
1:AA:701:C:H1'	1:AA:703:G:C2	2.55	0.41
4:AD:31:CYS:O	4:AD:32:ALA:HB3	2.20	0.41
3:AC:151:VAL:O	3:AC:167:TRP:HA	2.20	0.41
24:AY:435:ASP:OD1	24:AY:437:THR:HB	2.20	0.41
35:BA:156:U:C2'	35:BA:157:U:H5'	2.50	0.41
35:BA:157:U:C2'	35:BA:158:U:H5'	2.50	0.41
24:AY:517:LEU:HD13	24:AY:563:ILE:HA	2.01	0.41
35:BA:262:A:HO2'	35:BA:263:C:H5'	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1495:A:H2'	35:BA:1495:A:N3	2.35	0.41
25:B0:19:LYS:NZ	25:B0:19:LYS:HB3	2.23	0.41
58:BZ:119:GLU:HG2	58:BZ:119:GLU:O	2.20	0.41
5:AE:50:GLU:CD	5:AE:51:VAL:H	2.24	0.41
1:AA:917:G:C2'	1:AA:918:A:H5'	2.50	0.41
35:BA:385:C:O2'	35:BA:388:G:N2	2.53	0.41
33:B8:48:PHE:HB3	33:B8:49:VAL:H	1.75	0.41
54:BV:5:VAL:CG2	54:BV:35:LEU:HB3	2.50	0.41
51:BS:83:LYS:HG2	51:BS:83:LYS:O	2.20	0.41
7:AG:152:ALA:HB1	7:AG:155:ARG:NH2	2.36	0.41
43:BJ:94:UNK:C	43:BJ:96:UNK:N	2.82	0.41
1:AA:149:A:H2'	1:AA:150:C:C6	2.55	0.41
35:BA:773:U:H4'	38:BD:47:GLY:HA3	2.01	0.41
49:BQ:66:ILE:HG13	49:BQ:66:ILE:H	1.66	0.41
9:AI:85:LEU:C	9:AI:85:LEU:HD12	2.41	0.41
1:AA:431:A:H2'	1:AA:432:A:O4'	2.20	0.41
57:BY:31:LEU:HA	57:BY:31:LEU:HD13	1.92	0.41
44:BK:89:UNK:C	44:BK:91:UNK:N	2.82	0.41
58:BZ:12:GLY:HA2	58:BZ:36:LYS:NZ	2.35	0.41
35:BA:1692:U:O2'	35:BA:1693:U:H2'	2.20	0.41
2:AB:181:PHE:HD1	8:AH:70:GLN:HB3	1.86	0.41
43:BJ:44:UNK:O	43:BJ:48:UNK:CB	2.68	0.41
9:AI:59:PHE:CZ	9:AI:88:TYR:CE2	3.07	0.41
1:AA:1442(A):G:H2'	52:BT:122:ASP:OD2	2.21	0.41
2:AB:87:ARG:HD3	2:AB:219:VAL:CG1	2.49	0.41
48:BP:47:ASP:OD2	48:BP:49:ARG:CA	2.69	0.41
1:AA:494:U:O5'	1:AA:494:U:C6	2.59	0.41
4:AD:3:ARG:H	4:AD:3:ARG:CD	2.25	0.41
1:AA:939:G:H1	1:AA:1344:C:N4	2.13	0.41
1:AA:696:A:H1'	1:AA:786:G:O2'	2.21	0.41
35:BA:2006:C:N4	35:BA:2007:C:N4	2.68	0.41
1:AA:683:G:H3'	1:AA:684:A:C8	2.56	0.41
35:BA:747:U:O4	35:BA:2613:U:C2	2.72	0.41
2:AB:32:ILE:HD13	2:AB:40:HIS:CD2	2.55	0.41
35:BA:1748:G:H2'	35:BA:1749:A:O4'	2.20	0.41
29:B4:28:LYS:NZ	41:BG:144:ILE:HG22	2.36	0.41
29:B4:53:GLU:OE1	29:B4:54:GLY:N	2.54	0.41
41:BG:135:LEU:HD12	41:BG:135:LEU:H	1.84	0.41
35:BA:1893:C:H2'	35:BA:1894:C:O4'	2.20	0.41
52:BT:35:LYS:NZ	52:BT:41:ARG:CD	2.83	0.41
1:AA:1048:G:C6	1:AA:1210:C:N4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:962:G:H2'	35:BA:963:U:C5'	2.47	0.41
35:BA:2176:A:O2'	35:BA:2177:C:P	2.79	0.41
37:BC:11:LEU:H	37:BC:11:LEU:HD22	1.86	0.41
53:BU:112:ARG:NH2	54:BV:46:VAL:HG13	2.35	0.41
26:B1:82:LEU:HD12	26:B1:82:LEU:HA	1.82	0.41
3:AC:122:GLU:C	3:AC:124:ILE:N	2.74	0.41
3:AC:123:GLN:HE21	3:AC:123:GLN:HA	1.86	0.41
28:B3:7:LYS:CB	28:B3:34:GLU:HB3	2.49	0.41
2:AB:130:ARG:O	2:AB:131:PRO:C	2.59	0.41
36:BB:7:G:C3'	36:BB:8:U:C5'	2.99	0.41
3:AC:29:TYR:O	3:AC:30:ARG:C	2.59	0.41
38:BD:142:VAL:HG22	38:BD:143:HIS:N	2.36	0.41
38:BD:165:ILE:HA	38:BD:175:LEU:HD23	2.03	0.41
37:BC:149:ASN:O	37:BC:151:GLY:N	2.54	0.41
35:BA:361:G:H2'	35:BA:362:U:C5'	2.42	0.41
16:AP:21:VAL:CG1	16:AP:34:GLU:HB3	2.50	0.41
1:AA:946:A:N6	1:AA:947:G:O6	2.54	0.41
35:BA:1887:C:H2'	35:BA:1888:G:C4'	2.51	0.41
35:BA:1855:G:N2	35:BA:1888:G:H1'	2.36	0.41
42:BH:11:VAL:HG13	42:BH:12:PRO:HD2	2.03	0.41
35:BA:1505:C:O4'	35:BA:1505:C:O2	2.39	0.41
9:AI:49:PRO:HG2	9:AI:81:ILE:CG2	2.43	0.41
49:BQ:32:TYR:O	49:BQ:105:GLU:CB	2.66	0.41
49:BQ:48:GLU:O	49:BQ:52:VAL:HG23	2.20	0.41
38:BD:68:LYS:HD3	38:BD:70:TRP:CZ2	2.55	0.41
35:BA:1318:C:C3'	35:BA:1319:G:H5''	2.47	0.41
47:BO:87:ILE:HD13	47:BO:93:PRO:HA	2.02	0.41
40:BF:102:PRO:HB2	40:BF:105:VAL:CG2	2.49	0.41
35:BA:2523:G:H2'	35:BA:2524:G:H5'	2.01	0.41
31:B6:6:ARG:NH1	31:B6:6:ARG:CB	2.78	0.41
1:AA:957:U:H4'	19:AS:79:THR:O	2.21	0.41
2:AB:10:LEU:CD2	2:AB:10:LEU:C	2.88	0.41
35:BA:569:U:C4	35:BA:570:G:C6	3.08	0.41
35:BA:483:A:H2'	35:BA:484:C:O4'	2.20	0.41
51:BS:101:LEU:C	51:BS:101:LEU:HD12	2.41	0.41
8:AH:1:MET:O	8:AH:2:LEU:CB	2.69	0.41
46:BN:37:LYS:HG3	46:BN:42:TRP:CZ3	2.55	0.41
24:AY:266:ASN:C	24:AY:267:LYS:HG3	2.41	0.41
35:BA:1509(B):A:H2'	35:BA:1510:G:C8	2.55	0.41
1:AA:671:G:H2'	1:AA:672:U:O4'	2.20	0.41
35:BA:2528:U:H2'	35:BA:2530:A:O5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:635:GLU:OE2	24:AY:644:ARG:NH1	2.54	0.41
1:AA:711:G:O2'	1:AA:712:A:H5'	2.20	0.41
35:BA:749:C:O2	35:BA:1618:A:H2'	2.20	0.41
35:BA:245:G:C6	35:BA:254:G:N2	2.88	0.41
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.20	0.41
5:AE:139:LEU:HD23	5:AE:142:LEU:HD11	2.02	0.41
35:BA:2666:C:H5'	35:BA:2667:C:OP1	2.20	0.41
35:BA:1636:C:H2'	35:BA:1637:A:C8	2.55	0.41
52:BT:16:ARG:CG	52:BT:16:ARG:HH11	2.34	0.41
35:BA:1111:A:O4'	42:BH:1:MET:SD	2.79	0.41
1:AA:66:G:C6	1:AA:104:G:C2	3.09	0.41
1:AA:490:G:H2'	1:AA:491:G:O5'	2.20	0.41
1:AA:498:U:HO2'	1:AA:499:A:P	2.43	0.41
35:BA:600:G:H2'	35:BA:601:C:C6	2.54	0.41
1:AA:774:G:N2	1:AA:805:C:O2	2.54	0.41
35:BA:2011:U:OP1	55:BW:16:LYS:HD3	2.21	0.41
35:BA:1770:G:C6	35:BA:1771:C:C4	3.08	0.41
35:BA:2606:C:C2	35:BA:2607:G:C8	3.08	0.41
30:B5:2:ALA:N	35:BA:747:U:C4	2.89	0.41
1:AA:862:C:C3'	1:AA:863:U:C5'	2.98	0.41
35:BA:257:A:H2'	35:BA:258:G:H8	1.86	0.41
1:AA:1505:G:C8	1:AA:1505:G:OP2	2.73	0.41
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.56	0.41
31:B6:44:ARG:HA	31:B6:44:ARG:HD2	1.85	0.41
35:BA:2402:C:C1'	35:BA:2403:C:OP1	2.69	0.41
1:AA:1527:C:H6	1:AA:1527:C:O5'	2.03	0.41
35:BA:1599:C:HO2'	35:BA:1600:C:H5'	1.84	0.41
36:BB:22:U:H3	36:BB:61:G:H1	1.68	0.41
53:BU:112:ARG:NH1	54:BV:46:VAL:CG1	2.83	0.41
42:BH:92:ILE:C	42:BH:94:TYR:H	2.23	0.41
1:AA:1030(A):G:C6	1:AA:1030(B):C:N4	2.89	0.41
24:AY:137:ASN:HD22	24:AY:138:LYS:H	1.59	0.41
24:AY:31:ARG:HD2	24:AY:263:ALA:O	2.20	0.41
1:AA:999:C:O2'	1:AA:1000:U:H5'	2.20	0.41
40:BF:19:GLU:HA	40:BF:24:LEU:HD21	2.02	0.41
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.51	0.41
58:BZ:96:VAL:O	58:BZ:127:LYS:HA	2.20	0.41
57:BY:45:VAL:HG11	57:BY:60:PHE:HB3	2.02	0.41
12:AL:18:VAL:O	12:AL:19:ARG:CB	2.68	0.41
50:BR:10:LEU:HB2	50:BR:11:ASN:H	1.52	0.41
2:AB:42:ILE:CD1	2:AB:202:PRO:C	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:26:ARG:O	26:B1:27:GLU:C	2.59	0.41
10:AJ:78:ASN:ND2	10:AJ:80:LYS:H	2.06	0.41
42:BH:5:GLY:HA2	42:BH:69:ARG:CB	2.50	0.41
49:BQ:75:THR:HG23	49:BQ:76:LYS:N	2.34	0.41
27:B2:7:ARG:NH2	35:BA:102:G:OP1	2.53	0.41
35:BA:2153:G:H2'	35:BA:2153:G:N3	2.34	0.41
9:AI:17:VAL:HG11	9:AI:80:GLY:C	2.41	0.41
40:BF:78:ILE:HG13	40:BF:78:ILE:O	2.20	0.41
58:BZ:20:ARG:NH1	58:BZ:20:ARG:CB	2.84	0.41
42:BH:70:THR:O	42:BH:74:ASN:ND2	2.52	0.41
1:AA:538:G:H2'	1:AA:539:A:C8	2.56	0.41
35:BA:2836:U:O5'	35:BA:2836:U:H6	2.02	0.41
3:AC:191:THR:HG21	3:AC:193:TYR:CE1	2.55	0.41
52:BT:34:VAL:HA	52:BT:39:ARG:HA	2.03	0.41
1:AA:958:A:C6	1:AA:959:A:N1	2.89	0.41
2:AB:9:GLU:CD	2:AB:9:GLU:N	2.74	0.41
29:B4:61:ARG:N	29:B4:61:ARG:NH1	2.69	0.41
3:AC:69:HIS:HA	3:AC:104:GLN:HB2	2.02	0.41
24:AY:150:ILE:CD1	24:AY:163:VAL:HG22	2.51	0.41
39:BE:103:ASP:CG	39:BE:201:THR:HA	2.41	0.41
35:BA:1386:C:H2'	35:BA:1387:C:C6	2.56	0.41
8:AH:72:PRO:O	8:AH:73:ASP:CB	2.69	0.41
35:BA:2320:A:N3	35:BA:2320:A:H2'	2.36	0.41
45:BL:81:UNK:C	45:BL:83:UNK:N	2.84	0.41
35:BA:1750:G:O2'	35:BA:1751:C:H5'	2.20	0.41
1:AA:409:G:OP1	4:AD:22:LYS:O	2.38	0.41
44:BK:107:UNK:O	44:BK:108:UNK:C	2.68	0.41
35:BA:2553:G:O5'	35:BA:2553:G:H8	2.04	0.41
42:BH:105:LEU:HD23	42:BH:105:LEU:H	1.84	0.41
35:BA:1790:C:H5''	35:BA:1791:A:OP1	2.20	0.41
10:AJ:47:PHE:CE2	14:AN:37:PHE:HE2	2.38	0.41
35:BA:2577:A:H5''	35:BA:2578:G:H5'	2.02	0.41
17:AQ:74:LEU:HD13	17:AQ:74:LEU:C	2.41	0.41
36:BB:35:U:O2'	36:BB:36:C:H5'	2.21	0.41
47:BO:104:ARG:NH2	52:BT:33:LYS:HE3	2.31	0.41
48:BP:111:ARG:HA	48:BP:128:HIS:CD2	2.56	0.41
35:BA:2355:C:C4	35:BA:2356:C:C4	3.08	0.41
35:BA:247:G:H1'	35:BA:251:A:H62	1.86	0.41
1:AA:198:G:O2'	1:AA:199:G:OP2	2.38	0.41
35:BA:600:G:C2'	35:BA:601:C:C5'	2.98	0.41
25:B0:24:LYS:HA	25:B0:24:LYS:HD3	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:22:LEU:C	7:AG:24:THR:N	2.74	0.41
7:AG:24:THR:O	7:AG:25:ALA:C	2.59	0.41
1:AA:592:G:N3	1:AA:593:G:C8	2.89	0.41
1:AA:323:U:H6	1:AA:323:U:O5'	2.03	0.41
35:BA:27:G:O2'	35:BA:28:A:OP2	2.30	0.41
35:BA:2612:C:C2'	35:BA:2613:U:H5'	2.51	0.41
19:AS:60:VAL:O	19:AS:60:VAL:HG13	2.20	0.41
41:BG:56:ALA:HB2	41:BG:153:ARG:NH1	2.36	0.41
41:BG:67:LYS:HG2	41:BG:68:PRO:O	2.20	0.41
33:B8:62:LEU:C	33:B8:64:TYR:N	2.74	0.41
35:BA:1144:G:H2'	35:BA:1145:C:H6	1.84	0.41
51:BS:66:ALA:O	51:BS:69:VAL:HG12	2.20	0.41
58:BZ:182:LYS:O	58:BZ:183:LEU:HB3	2.21	0.41
35:BA:1817:G:OP2	38:BD:88:ARG:NH2	2.50	0.41
38:BD:266:SER:C	38:BD:267:SER:O	2.59	0.41
40:BF:8:GLN:O	40:BF:10:PRO:N	2.53	0.41
40:BF:8:GLN:CB	40:BF:126:VAL:HA	2.44	0.41
40:BF:126:VAL:HG22	40:BF:195:ASP:HA	2.02	0.41
1:AA:1385:G:H2'	1:AA:1386:G:O5'	2.21	0.41
40:BF:19:GLU:CA	40:BF:24:LEU:HD21	2.51	0.41
10:AJ:76:ASN:HA	10:AJ:77:PRO:HD2	1.96	0.41
29:B4:55:ARG:O	29:B4:56:VAL:C	2.57	0.41
35:BA:2131:G:C5'	35:BA:2133:A:O4'	2.69	0.41
24:AY:546:ILE:HG12	24:AY:590:ILE:HG12	2.02	0.41
25:B0:7:LEU:HB3	49:BQ:85:LYS:CG	2.46	0.41
39:BE:68:ALA:O	39:BE:70:ALA:N	2.54	0.41
49:BQ:133:ARG:O	49:BQ:137:TYR:HE2	2.04	0.41
46:BN:73:THR:CG2	46:BN:82:LEU:HD11	2.50	0.41
39:BE:203:LYS:CD	39:BE:203:LYS:C	2.88	0.41
48:BP:70:GLN:HB3	48:BP:72:PRO:HD2	2.02	0.41
11:AK:21:ILE:CD1	11:AK:21:ILE:N	2.83	0.41
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.68	0.41
24:AY:438:PHE:CE1	24:AY:451:ILE:CG1	3.04	0.41
40:BF:185:ASP:HA	40:BF:188:ARG:CD	2.50	0.41
24:AY:459:LEU:CD1	24:AY:459:LEU:H	2.32	0.41
53:BU:82:GLY:O	53:BU:86:ALA:N	2.41	0.41
1:AA:530:G:H3'	1:AA:531:U:H5'	2.01	0.41
1:AA:892:A:C2	1:AA:907:A:C4	3.09	0.41
13:AM:29:ARG:O	13:AM:30:ALA:C	2.59	0.41
49:BQ:29:PHE:HB3	49:BQ:65:PHE:CD2	2.55	0.41
1:AA:269:C:H2'	1:AA:270:A:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:380:U:O2'	35:BA:381:G:H5'	2.20	0.41
42:BH:107:VAL:O	42:BH:152:ARG:NE	2.51	0.41
35:BA:732:C:H2'	35:BA:733:G:O4'	2.21	0.41
1:AA:307:C:C5	1:AA:308:C:C5	3.08	0.41
37:BC:117:THR:HG22	37:BC:118:PRO:CA	2.42	0.41
1:AA:490:G:C2'	1:AA:491:G:O5'	2.69	0.41
31:B6:8:LYS:HE3	31:B6:25:LYS:CD	2.51	0.41
31:B6:27:LYS:O	31:B6:28:ARG:C	2.59	0.41
35:BA:917:A:H2'	35:BA:918:A:O4'	2.20	0.41
1:AA:593:G:H1	1:AA:646:U:H3	1.68	0.41
2:AB:58:ILE:CG2	2:AB:222:ILE:CD1	2.99	0.41
35:BA:30:G:H2'	35:BA:31:C:H6	1.75	0.41
35:BA:1994:C:H2'	35:BA:1995:U:H5'	2.03	0.41
29:B4:2:LYS:HD3	29:B4:2:LYS:C	2.41	0.41
41:BG:103:LEU:HD13	41:BG:107:LEU:HB2	2.03	0.41
41:BG:77:ILE:HD11	41:BG:82:LEU:HD12	2.03	0.41
35:BA:1589:C:H2'	35:BA:1590:U:C6	2.56	0.41
51:BS:96:GLY:O	51:BS:98:VAL:N	2.52	0.41
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.86	0.41
40:BF:59:TYR:HE2	40:BF:85:GLY:O	2.04	0.41
1:AA:1149:C:P	9:AI:9:ARG:NH1	2.94	0.41
1:AA:1003:G:O2'	1:AA:1004:A:O5'	2.29	0.41
40:BF:110:LEU:O	40:BF:114:VAL:HG23	2.21	0.41
35:BA:115:C:H2'	35:BA:116:C:H6	1.84	0.41
4:AD:31:CYS:C	4:AD:33:MET:N	2.74	0.41
44:BK:48:UNK:O	44:BK:50:UNK:N	2.54	0.41
1:AA:356:A:C1'	1:AA:368:U:O2'	2.67	0.41
35:BA:1092:C:H2'	35:BA:1093:G:H5'	2.02	0.41
15:AO:39:LEU:HD13	15:AO:56:LEU:CD2	2.51	0.41
48:BP:13:ASN:HB3	48:BP:14:LYS:H	1.49	0.41
42:BH:56:SER:HB2	42:BH:61:HIS:CE1	2.55	0.41
12:AL:86:ARG:HB2	12:AL:101:VAL:HG23	2.03	0.41
1:AA:955:U:H4'	19:AS:85:LYS:O	2.20	0.41
46:BN:10:GLU:CD	46:BN:11:PRO:HD2	2.40	0.41
1:AA:872:A:N3	1:AA:872:A:H2'	2.35	0.41
35:BA:1047:G:C2'	35:BA:1110:G:H21	2.31	0.41
49:BQ:28:ALA:O	49:BQ:29:PHE:HD1	2.03	0.41
35:BA:2584:U:H2'	35:BA:2585:U:H5'	2.03	0.41
1:AA:269:C:H2'	1:AA:270:A:C8	2.56	0.41
11:AK:79:SER:HB2	11:AK:106:LYS:HG3	2.03	0.41
1:AA:175:C:H2'	1:AA:176:C:C6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:25:ASP:OD2	58:BZ:78:LYS:HD3	2.20	0.41
40:BF:30:PRO:O	40:BF:31:HIS:C	2.59	0.41
35:BA:1472:A:C2'	35:BA:1473:G:H5'	2.51	0.41
35:BA:1569:A:O5'	38:BD:59:LYS:NZ	2.53	0.41
55:BW:43:GLY:O	55:BW:44:ALA:C	2.58	0.41
1:AA:1226:C:H4'	19:AS:80:TYR:CZ	2.55	0.41
1:AA:1059:C:O3'	14:AN:45:ARG:NH2	2.53	0.41
24:AY:367:GLU:O	24:AY:367:GLU:HG2	2.21	0.41
57:BY:20:TYR:N	57:BY:20:TYR:CD1	2.89	0.41
35:BA:2097:C:H2'	35:BA:2098:U:O4'	2.21	0.41
35:BA:1360:A:C8	35:BA:1361:G:C8	3.09	0.41
16:AP:81:ARG:HD3	16:AP:83:GLU:OE2	2.21	0.41
7:AG:140:ASP:C	7:AG:142:GLU:N	2.71	0.41
2:AB:82:ARG:NH1	2:AB:86:GLU:OE2	2.53	0.41
48:BP:48:PRO:C	48:BP:50:ARG:N	2.74	0.41
37:BC:129:GLY:HA3	37:BC:138:LEU:HD12	2.02	0.41
37:BC:117:THR:HG23	37:BC:119:ASP:N	2.32	0.41
49:BQ:16:ARG:NH1	49:BQ:16:ARG:CG	2.82	0.41
35:BA:958:U:C3'	35:BA:958:U:C6	3.04	0.41
4:AD:4:TYR:HE2	4:AD:7:PRO:O	2.03	0.41
35:BA:637:A:C2	35:BA:652:C:H5'	2.56	0.41
35:BA:1595:G:O2'	35:BA:1596:A:H5'	2.21	0.41
1:AA:1372:U:H2'	1:AA:1373:G:C8	2.54	0.41
35:BA:49:A:C4'	35:BA:50:U:OP2	2.57	0.41
1:AA:105:G:C6	1:AA:106:C:C4	3.09	0.41
1:AA:106:C:O5'	1:AA:106:C:H6	2.03	0.41
1:AA:109:A:N3	1:AA:109:A:H5''	2.36	0.41
35:BA:522:G:C6	35:BA:523:C:C4	3.09	0.41
35:BA:1819:A:OP1	38:BD:158:ALA:HB3	2.20	0.41
1:AA:683:G:H2'	1:AA:684:A:C8	2.56	0.41
35:BA:1445:A:C8	35:BA:1460:A:N3	2.87	0.41
35:BA:1720:U:H2'	35:BA:1721:G:C5'	2.19	0.41
35:BA:1297:C:O2'	35:BA:1298:C:C5'	2.44	0.41
35:BA:28:A:C5	35:BA:29:U:C5	3.09	0.41
35:BA:1224:C:C4	35:BA:1225:G:C6	3.08	0.41
1:AA:302:G:O2'	1:AA:556:C:H5''	2.20	0.41
35:BA:1777:U:C2'	35:BA:1778:U:H5'	2.50	0.41
1:AA:1507:A:C2	1:AA:1508:G:C4	3.09	0.41
19:AS:17:GLU:C	19:AS:19:VAL:N	2.73	0.41
19:AS:61:TYR:O	19:AS:62:ILE:C	2.59	0.41
19:AS:60:VAL:O	19:AS:62:ILE:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:42:PRO:HB3	19:AS:67:VAL:HG11	2.01	0.41
41:BG:45:GLU:N	41:BG:45:GLU:OE1	2.54	0.41
9:AI:53:VAL:O	9:AI:55:ALA:N	2.53	0.41
48:BP:29:LYS:CD	48:BP:29:LYS:N	2.82	0.41
35:BA:964:C:O5'	35:BA:964:C:H6	2.04	0.41
1:AA:89:C:N3	1:AA:90:U:H5	2.18	0.41
1:AA:114:U:O5'	1:AA:114:U:C6	2.65	0.41
35:BA:1215:G:H2'	35:BA:1216:G:H5'	2.00	0.41
1:AA:1314:C:H5	19:AS:6:LYS:NZ	2.16	0.41
37:BC:11:LEU:CD1	37:BC:33:LEU:HA	2.50	0.41
54:BV:46:VAL:HG13	54:BV:46:VAL:O	2.21	0.41
54:BV:45:THR:O	54:BV:46:VAL:C	2.59	0.41
35:BA:1375:C:O5'	35:BA:1375:C:H6	2.04	0.41
58:BZ:153:SER:HB2	58:BZ:167:PRO:HG2	2.02	0.41
15:AO:87:ILE:CG2	15:AO:88:ARG:N	2.65	0.41
40:BF:8:GLN:HB3	40:BF:126:VAL:CA	2.47	0.41
35:BA:469:G:C2'	35:BA:470:A:H5''	2.51	0.41
12:AL:27:LEU:HB2	12:AL:62:SER:HB2	2.03	0.41
38:BD:231:HIS:CD2	38:BD:249:PRO:HB3	2.56	0.41
35:BA:328:U:H4'	57:BY:68:HIS:CE1	2.56	0.41
1:AA:1384:C:H2'	1:AA:1385:G:C5'	2.44	0.41
1:AA:1267:C:O2'	1:AA:1268:A:O5'	2.38	0.41
1:AA:185:A:C5	1:AA:186:C:N4	2.89	0.41
35:BA:2070:G:H2'	35:BA:2071:A:C8	2.55	0.41
1:AA:702:A:N6	35:BA:1846:G:OP1	2.54	0.41
35:BA:332:A:N1	35:BA:335:C:C5	2.88	0.41
52:BT:4:GLY:O	52:BT:8:LYS:HB2	2.20	0.41
39:BE:9:VAL:HG23	52:BT:4:GLY:CA	2.42	0.41
40:BF:4:VAL:HG11	40:BF:17:ARG:NE	2.36	0.41
35:BA:1057:A:H2'	35:BA:1058:G:H8	1.86	0.41
42:BH:155:SER:O	42:BH:157:TYR:N	2.54	0.41
24:AY:107:VAL:HG12	24:AY:108:PHE:N	2.35	0.41
24:AY:529:ILE:HD11	24:AY:534:ILE:HD12	2.03	0.41
1:AA:673:G:H2'	1:AA:674:G:H8	1.73	0.41
35:BA:2133:A:H1'	35:BA:2157:G:N2	2.35	0.41
54:BV:3:ALA:HB2	54:BV:99:ILE:HG21	2.02	0.41
50:BR:117:VAL:O	50:BR:118:GLU:HB2	2.21	0.41
24:AY:530:VAL:O	24:AY:532:GLY:N	2.53	0.41
38:BD:130:ALA:HB2	38:BD:192:THR:HB	2.03	0.41
1:AA:563:A:H2	12:AL:15:ARG:NH2	2.19	0.41
24:AY:181:LEU:HD21	24:AY:243:VAL:CG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:100:VAL:HG13	24:AY:101:LEU:N	2.35	0.41
13:AM:116:THR:HG22	13:AM:117:VAL:N	2.31	0.41
35:BA:266:G:H2'	35:BA:267:C:O5'	2.21	0.41
22:AV:9:A:C2	22:AV:46:G:C6	3.09	0.41
35:BA:405:U:O4'	35:BA:405:U:O2	2.39	0.41
24:AY:461:ILE:HD12	24:AY:461:ILE:C	2.41	0.41
49:BQ:21:THR:CG2	49:BQ:23:GLY:O	2.67	0.41
25:B0:46:LYS:HA	25:B0:47:PRO:HD3	1.93	0.41
24:AY:356:LEU:O	24:AY:356:LEU:HD23	2.21	0.41
50:BR:85:PRO:C	50:BR:87:TYR:H	2.25	0.41
41:BG:166:ASP:O	41:BG:170:ARG:HB3	2.21	0.41
36:BB:50:G:OP2	51:BS:62:LYS:CB	2.69	0.41
42:BH:37:VAL:CG1	42:BH:38:SER:N	2.83	0.41
17:AQ:65:ILE:N	17:AQ:65:ILE:CD1	2.83	0.41
42:BH:103:LEU:HD23	42:BH:148:ILE:HD12	2.03	0.41
49:BQ:62:GLY:HA3	49:BQ:109:VAL:HG22	2.03	0.41
1:AA:1452:C:H5'	1:AA:1457:G:C8	2.56	0.41
1:AA:1036:G:H2'	1:AA:1036:G:N3	2.36	0.41
37:BC:194:ILE:CD1	37:BC:227:PRO:CB	2.99	0.41
35:BA:1188:U:C5'	54:BV:79:VAL:HG13	2.51	0.41
20:AT:36:LEU:HD12	20:AT:55:ILE:HG23	2.02	0.41
24:AY:689:LYS:CG	24:AY:690:GLY:N	2.83	0.41
6:AF:37:VAL:CG1	6:AF:38:GLU:N	2.84	0.41
1:AA:1132:C:C4	1:AA:1133:G:C6	3.08	0.41
57:BY:46:LYS:HB3	57:BY:62:GLU:HG3	2.03	0.41
24:AY:74:TRP:CE2	24:AY:273:LEU:HB3	2.55	0.41
11:AK:15:ALA:HB1	11:AK:78:GLN:CG	2.51	0.41
35:BA:1288:U:C2	35:BA:1327:C:C2	3.09	0.41
33:B8:38:GLY:O	33:B8:42:ARG:CB	2.69	0.41
1:AA:203:U:H6	1:AA:203:U:OP2	2.03	0.41
35:BA:1510:G:O2'	35:BA:1511:C:H5'	2.21	0.41
5:AE:36:ASP:O	5:AE:38:GLN:HG2	2.21	0.41
28:B3:18:ASP:N	28:B3:18:ASP:OD1	2.53	0.41
35:BA:337:C:H2'	35:BA:338:G:O4'	2.21	0.41
38:BD:238:GLY:O	38:BD:239:ARG:O	2.39	0.41
39:BE:137:HIS:HB3	39:BE:138:PRO:HD2	2.03	0.41
35:BA:1362:C:O2'	35:BA:1363:C:H5'	2.21	0.41
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	2.03	0.41
54:BV:89:GLN:OE1	54:BV:89:GLN:HA	2.21	0.41
16:AP:43:LYS:HG3	16:AP:48:TRP:CD2	2.56	0.41
58:BZ:24:LEU:HA	58:BZ:25:PRO:HD2	1.96	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1055:A:H2'	3:AC:156:ARG:HD2	2.03	0.41
11:AK:18:ARG:O	11:AK:32:ILE:HA	2.21	0.41
52:BT:19:LEU:HA	52:BT:20:PRO:HD3	1.74	0.41
52:BT:42:ILE:HD13	52:BT:83:ILE:HD13	2.03	0.41
52:BT:55:ASN:H	52:BT:59:THR:HG22	1.86	0.41
1:AA:312:C:H2'	1:AA:313:A:O5'	2.21	0.41
35:BA:2712:U:O2'	35:BA:2712(A):A:O5'	2.39	0.41
57:BY:28:LYS:CA	57:BY:39:VAL:H	2.32	0.41
35:BA:1992:G:C2	35:BA:1997:G:C6	3.08	0.41
29:B4:1:MET:HB2	36:BB:39:A:C6	2.56	0.41
41:BG:36:LYS:HG2	41:BG:37:VAL:N	2.36	0.41
35:BA:1892:C:O2'	35:BA:1893:C:C5'	2.58	0.41
1:AA:1526:G:O2'	1:AA:1527:C:C5'	2.42	0.41
1:AA:961:U:O2'	1:AA:962:C:O5'	2.38	0.41
1:AA:1314:C:H5	19:AS:6:LYS:HE2	1.85	0.41
54:BV:51:VAL:CG1	54:BV:52:VAL:N	2.80	0.41
28:B3:56:VAL:HG12	28:B3:57:GLU:N	2.36	0.41
35:BA:1766:U:H2'	35:BA:1767:C:H6	1.86	0.41
1:AA:1003:G:N2	1:AA:1004:A:H1'	2.35	0.41
35:BA:271(N):U:P	35:BA:271(N):U:H6	2.44	0.41
8:AH:92:ARG:HD2	8:AH:92:ARG:HA	1.78	0.41
25:B0:49:LYS:O	25:B0:80:HIS:HB3	2.20	0.41
54:BV:24:LYS:HA	54:BV:92:THR:CG2	2.36	0.41
2:AB:127:ILE:CD1	2:AB:135:GLN:NE2	2.84	0.41
35:BA:156:U:H2'	35:BA:157:U:C5'	2.51	0.41
42:BH:53:GLU:CG	42:BH:54:ARG:N	2.84	0.41
1:AA:718:G:H5'	11:AK:117:ASN:CG	2.40	0.41
11:AK:116:HIS:O	11:AK:117:ASN:HB2	2.21	0.41
22:AV:43:C:O2	22:AV:43:C:O5'	2.38	0.41
35:BA:850:C:O2'	35:BA:851:U:H5'	2.21	0.41
37:BC:44:VAL:HG23	37:BC:176:VAL:CG2	2.51	0.41
35:BA:2318:G:C2'	35:BA:2319:G:OP1	2.69	0.41
30:B5:7:PRO:HA	35:BA:2615:U:C2	2.56	0.41
1:AA:471:G:C6	1:AA:472:A:C5	3.09	0.41
30:B5:19:ARG:HH12	35:BA:1265:A:H3'	1.86	0.41
4:AD:106:TYR:C	4:AD:108:LEU:N	2.73	0.41
1:AA:1258:G:H2'	1:AA:1259:C:H6	1.85	0.41
35:BA:733:G:C8	35:BA:761:A:N6	2.88	0.41
1:AA:731:G:H5'	1:AA:766:A:H4'	2.03	0.41
25:B0:82:ARG:HB3	25:B0:82:ARG:HE	1.69	0.41
25:B0:17:GLN:HA	25:B0:17:GLN:NE2	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:80:PHE:CD1	16:AP:80:PHE:N	2.89	0.41
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.21	0.41
35:BA:803:U:O2'	35:BA:804:A:H5'	2.21	0.41
47:BO:107:ARG:HD3	52:BT:36:GLU:CD	2.42	0.40
48:BP:125:VAL:HG13	48:BP:125:VAL:O	2.21	0.40
37:BC:129:GLY:CA	37:BC:138:LEU:HD12	2.51	0.40
37:BC:135:ARG:O	37:BC:137:LEU:HG	2.20	0.40
1:AA:495:A:C4'	1:AA:496:A:C5'	2.67	0.40
1:AA:594:G:C2'	1:AA:595:G:H5'	2.50	0.40
1:AA:652:U:C2	1:AA:752:G:N2	2.89	0.40
35:BA:37:C:C2'	35:BA:38:A:C5'	2.97	0.40
35:BA:1779:U:C3'	35:BA:1779:U:C6	3.04	0.40
35:BA:1661:G:C6	35:BA:2000:G:C6	3.10	0.40
27:B2:10:LEU:HD13	35:BA:78:A:P	2.60	0.40
35:BA:258:G:H2'	35:BA:259:G:H5'	2.02	0.40
35:BA:1137:G:C2'	35:BA:1138:G:C5'	2.96	0.40
29:B4:40:HIS:HA	29:B4:45:GLY:HA3	2.03	0.40
35:BA:1022:G:C6	35:BA:1141:U:C5	3.09	0.40
1:AA:1256:A:H5'	1:AA:1257:U:OP1	2.21	0.40
42:BH:30:LYS:HG3	42:BH:81:GLU:H	1.86	0.40
52:BT:35:LYS:NZ	52:BT:41:ARG:NE	2.69	0.40
35:BA:1804:C:H2'	35:BA:1805:U:H5'	2.04	0.40
35:BA:1805:U:H5''	38:BD:250:TRP:CD2	2.56	0.40
46:BN:3:THR:O	46:BN:4:TYR:CG	2.74	0.40
54:BV:47:VAL:HG21	54:BV:50:PRO:O	2.21	0.40
40:BF:129:PHE:CD2	40:BF:163:VAL:HG21	2.57	0.40
55:BW:1:MET:HB3	55:BW:64:MET:HE2	2.02	0.40
20:AT:69:GLY:O	20:AT:73:HIS:HD2	2.02	0.40
35:BA:146:G:H8	35:BA:146:G:C5'	2.29	0.40
26:B1:53:VAL:O	26:B1:54:ALA:C	2.59	0.40
35:BA:271(N):U:P	35:BA:271(N):U:C6	3.14	0.40
1:AA:1193:G:OP2	3:AC:167:TRP:HZ3	2.04	0.40
14:AN:59:ALA:O	14:AN:60:SER:HB2	2.20	0.40
35:BA:1060:U:O2'	35:BA:1061:U:P	2.78	0.40
31:B6:51:GLU:O	31:B6:52:VAL:CB	2.68	0.40
1:AA:1125:U:H5	10:AJ:73:ASP:OD2	2.04	0.40
24:AY:238:THR:O	24:AY:240:GLU:N	2.54	0.40
26:B1:3:LYS:CB	26:B1:61:ARG:HH21	2.33	0.40
37:BC:54:ARG:CZ	37:BC:55:SER:O	2.69	0.40
39:BE:72:VAL:O	39:BE:72:VAL:HG12	2.20	0.40
55:BW:26:GLY:N	55:BW:71:VAL:CG2	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:66:GLY:O	42:BH:67:LEU:C	2.59	0.40
35:BA:2807:G:H3'	35:BA:2808:U:C5'	2.41	0.40
1:AA:59:A:H2'	1:AA:59:A:N3	2.37	0.40
1:AA:1363:C:H5'	1:AA:1363(A):A:O5'	2.20	0.40
14:AN:12:ARG:HB2	14:AN:12:ARG:NH1	2.36	0.40
35:BA:9:U:O2'	35:BA:10:G:O5'	2.35	0.40
35:BA:7:G:H2'	35:BA:8:A:H8	1.85	0.40
24:AY:8:ASP:O	24:AY:9:LEU:CB	2.69	0.40
35:BA:154:G:H1	35:BA:172:C:H42	1.69	0.40
38:BD:210:GLY:C	38:BD:212:SER:H	2.22	0.40
35:BA:2523:G:C2'	35:BA:2524:G:C5'	2.97	0.40
36:BB:13:A:HO2'	36:BB:14:U:H3'	1.82	0.40
53:BU:39:LEU:HA	53:BU:39:LEU:HD23	1.94	0.40
36:BB:111:G:C2'	36:BB:112:U:H5'	2.50	0.40
44:BK:126:UNK:C	44:BK:128:UNK:N	2.82	0.40
8:AH:101:PRO:HG2	8:AH:133:LEU:HD21	2.02	0.40
1:AA:604:G:O2'	1:AA:605:U:H5'	2.22	0.40
11:AK:124:LYS:NZ	11:AK:125:PHE:CE1	2.88	0.40
1:AA:174:C:H2'	1:AA:175:C:C6	2.56	0.40
4:AD:60:GLU:O	4:AD:63:LYS:HB3	2.20	0.40
1:AA:434:U:H2'	1:AA:435:C:C6	2.56	0.40
35:BA:1344:G:H5'	35:BA:1384:A:C6	2.56	0.40
17:AQ:60:ILE:HG21	17:AQ:74:LEU:HD23	2.02	0.40
35:BA:2881:C:O2'	35:BA:2882:A:H5'	2.20	0.40
20:AT:63:ILE:HG22	20:AT:77:ALA:HB1	2.04	0.40
35:BA:2629:A:H5'	35:BA:2629:A:N3	2.36	0.40
35:BA:1506:C:O2	35:BA:1506:C:H2'	2.20	0.40
54:BV:97:LYS:HD3	54:BV:97:LYS:HA	1.89	0.40
35:BA:608:A:H2'	35:BA:609:A:C8	2.57	0.40
37:BC:141:PRO:O	37:BC:143:ALA:N	2.46	0.40
1:AA:658:G:O2'	1:AA:659:U:H5'	2.21	0.40
30:B5:47:PRO:HG2	30:B5:48:GLU:H	1.85	0.40
52:BT:33:LYS:NZ	52:BT:43:GLN:NE2	2.68	0.40
1:AA:951:G:C6	1:AA:1231:G:C5	3.09	0.40
1:AA:951:G:C5	1:AA:1231:G:C6	3.10	0.40
37:BC:98:GLU:O	37:BC:99:GLU:C	2.59	0.40
1:AA:443:C:H2'	1:AA:444:C:C6	2.56	0.40
35:BA:1415:U:HO2'	35:BA:1417:C:P	2.43	0.40
35:BA:860:U:C5	35:BA:917:A:N7	2.82	0.40
7:AG:15:ASP:OD1	7:AG:16:LEU:N	2.54	0.40
1:AA:46:G:H2'	1:AA:366:C:C4	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2752:C:H2'	35:BA:2753:A:H5'	2.03	0.40
2:AB:185:ILE:HG23	2:AB:199:TYR:O	2.22	0.40
33:B8:62:LEU:H	33:B8:62:LEU:HG	1.69	0.40
31:B6:15:GLU:OE1	31:B6:18:ARG:HG2	2.21	0.40
35:BA:16:G:H2'	35:BA:17:G:C5'	2.50	0.40
35:BA:2403:C:H2'	35:BA:2404:C:H5'	2.03	0.40
24:AY:17:ILE:O	24:AY:84:THR:HB	2.21	0.40
51:BS:33:LYS:HB3	51:BS:34:HIS:HD2	1.86	0.40
1:AA:1048:G:C2	1:AA:1050:G:C5	3.10	0.40
35:BA:1009:A:H5'	53:BU:59:ARG:HD3	2.03	0.40
42:BH:90:LYS:HD2	42:BH:163:TYR:CE1	2.55	0.40
5:AE:91:LEU:HD12	5:AE:91:LEU:HA	1.87	0.40
35:BA:1765:C:H2'	35:BA:1766:U:H6	1.86	0.40
1:AA:1149:C:OP2	9:AI:9:ARG:NH1	2.53	0.40
35:BA:145:G:C2'	35:BA:146:G:C5'	2.82	0.40
4:AD:32:ALA:C	4:AD:34:GLU:H	2.23	0.40
25:B0:69:PHE:CE2	25:B0:79:VAL:CG2	3.03	0.40
28:B3:31:LEU:HD23	28:B3:31:LEU:HA	1.85	0.40
29:B4:56:VAL:CG2	29:B4:57:GLU:N	2.80	0.40
35:BA:2038:G:H2'	35:BA:2039:C:O4'	2.21	0.40
3:AC:40:ARG:HG2	3:AC:55:VAL:HG11	2.03	0.40
25:B0:21:LEU:HD11	25:B0:41:ARG:HG2	2.02	0.40
26:B1:11:ARG:NH1	26:B1:11:ARG:CG	2.81	0.40
1:AA:1496:C:O5'	1:AA:1496:C:H6	2.04	0.40
35:BA:1697:G:C2'	35:BA:1698:A:OP1	2.69	0.40
35:BA:1131:G:N2	46:BN:73:THR:CG2	2.84	0.40
35:BA:389:G:C6	48:BP:70:GLN:HG3	2.55	0.40
35:BA:1503:U:C2	35:BA:1504:C:C5	3.10	0.40
9:AI:79:LEU:HD13	9:AI:83:ARG:HD2	2.02	0.40
8:AH:23:SER:HB2	8:AH:61:VAL:O	2.22	0.40
50:BR:76:VAL:O	50:BR:79:LEU:HB3	2.22	0.40
24:AY:343:ASN:C	24:AY:343:ASN:ND2	2.74	0.40
41:BG:83:ARG:HB2	41:BG:84:LYS:H	1.51	0.40
11:AK:82:VAL:CG1	11:AK:108:ILE:HA	2.48	0.40
44:BK:95:UNK:O	44:BK:96:UNK:O	2.38	0.40
56:BX:13:LEU:O	56:BX:14:SER:HB3	2.21	0.40
35:BA:118:A:OP1	35:BA:119:A:H5''	2.21	0.40
35:BA:2297:C:O2'	35:BA:2298:A:H5'	2.21	0.40
15:AO:61:GLY:O	15:AO:65:ARG:HG2	2.22	0.40
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.21	0.40
39:BE:1:MET:O	39:BE:2:LYS:O	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:995:C:O2'	1:AA:996:A:P	2.80	0.40
1:AA:995:C:HO2'	1:AA:996:A:P	2.44	0.40
16:AP:53:VAL:O	16:AP:57:ARG:HG3	2.21	0.40
35:BA:2771:C:H2'	35:BA:2772:C:C6	2.55	0.40
1:AA:600:C:H2'	1:AA:601:C:C6	2.56	0.40
12:AL:52:LEU:O	12:AL:54:LYS:HD2	2.21	0.40
35:BA:923:C:H2'	35:BA:924:C:C6	2.56	0.40
1:AA:131:C:H2'	1:AA:132:C:C6	2.56	0.40
4:AD:169:LYS:HB2	4:AD:169:LYS:HE2	1.98	0.40
1:AA:890:G:O2'	1:AA:906:G:O6	2.31	0.40
35:BA:2672:G:H3'	35:BA:2673:G:H5''	2.03	0.40
35:BA:2552:U:C2	35:BA:2554:U:H5'	2.56	0.40
35:BA:1956:U:H1'	35:BA:2552:U:OP2	2.21	0.40
1:AA:443:C:H2'	1:AA:444:C:H6	1.86	0.40
1:AA:546:G:O2'	1:AA:547:A:O5'	2.30	0.40
1:AA:589:C:H2'	1:AA:590:C:H5'	2.02	0.40
35:BA:2011:U:C2'	35:BA:2012:G:C5'	3.00	0.40
35:BA:1902:C:C3'	38:BD:244:ARG:HB2	2.51	0.40
35:BA:2588:G:O6	35:BA:2607:G:C6	2.75	0.40
2:AB:24:TRP:CE3	2:AB:32:ILE:HD12	2.54	0.40
35:BA:813:U:H2'	35:BA:814:C:C6	2.56	0.40
35:BA:815:C:H2'	35:BA:816:C:H6	1.85	0.40
1:AA:1307:U:O4'	13:AM:109:THR:HG21	2.21	0.40
41:BG:45:GLU:OE2	41:BG:152:LEU:HD11	2.21	0.40
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.21	0.40
42:BH:30:LYS:HG2	42:BH:30:LYS:HZ2	1.74	0.40
35:BA:1351:C:O2'	35:BA:1571:A:H1'	2.21	0.40
12:AL:45:PRO:HD2	12:AL:51:ALA:O	2.19	0.40
58:BZ:29:TYR:O	58:BZ:30:ASN:HB3	2.21	0.40
58:BZ:30:ASN:HB3	58:BZ:89:PHE:CE1	2.56	0.40
24:AY:401:SER:O	24:AY:402:ILE:HB	2.21	0.40
9:AI:117:HIS:C	9:AI:118:LYS:CG	2.89	0.40
35:BA:2117:A:HO2'	35:BA:2118:U:H3'	1.83	0.40
24:AY:242:LEU:O	24:AY:245:ALA:HB3	2.22	0.40
10:AJ:44:VAL:HG22	10:AJ:66:ARG:CG	2.42	0.40
3:AC:31:HIS:O	3:AC:32:LEU:C	2.60	0.40
36:BB:56:G:H5''	41:BG:27:ASN:HD21	1.83	0.40
4:AD:101:LEU:O	4:AD:102:ASP:C	2.60	0.40
35:BA:265:A:O4'	35:BA:266:G:O4'	2.39	0.40
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	2.03	0.40
48:BP:6:LEU:CD1	48:BP:9:ASN:OD1	2.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:26:PRO:O	2:AB:29:ALA:HB2	2.21	0.40
1:AA:1452:C:OP2	1:AA:1452:C:C6	2.74	0.40
3:AC:103:VAL:CG1	3:AC:104:GLN:N	2.84	0.40
1:AA:992:U:O2'	1:AA:993:G:P	2.80	0.40
8:AH:100:ILE:HG22	8:AH:125:ARG:HH12	1.87	0.40
40:BF:46:ARG:HG3	40:BF:48:THR:HG23	2.04	0.40
46:BN:119:ARG:CG	46:BN:119:ARG:NH1	2.83	0.40
37:BC:228:HIS:O	37:BC:229:SER:CB	2.68	0.40
1:AA:744:C:H2'	1:AA:745:C:H6	1.87	0.40
35:BA:303:U:O2'	35:BA:304:G:H5'	2.21	0.40
35:BA:1530:C:H2'	35:BA:1531:C:H6	1.86	0.40
11:AK:50:TYR:O	11:AK:51:LYS:HG3	2.21	0.40
47:BO:1:MET:HB3	47:BO:32:TYR:CD2	2.56	0.40
24:AY:568:TYR:HD1	24:AY:568:TYR:H	1.70	0.40
35:BA:2100:G:H2'	35:BA:2100:G:N3	2.36	0.40
35:BA:1973:G:O2'	35:BA:1974:C:H5'	2.22	0.40
35:BA:373:U:H2'	35:BA:374:A:H8	1.87	0.40
33:B8:15:LYS:CD	48:BP:65:ARG:NH2	2.79	0.40
48:BP:95:VAL:HB	48:BP:100:LEU:HD21	2.03	0.40
35:BA:967:C:H2'	35:BA:968:G:H8	1.86	0.40
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.55	0.40
1:AA:935:A:H2'	1:AA:936:C:C6	2.56	0.40
1:AA:937:A:C5	1:AA:938:A:N7	2.90	0.40
35:BA:1798:U:H5'	38:BD:259:THR:CG2	2.46	0.40
26:B1:30:VAL:H	35:BA:2396:G:H4'	1.87	0.40
27:B2:39:ALA:C	27:B2:41:ILE:N	2.74	0.40
27:B2:36:ARG:NH2	56:BX:5:TYR:O	2.39	0.40
13:AM:22:ILE:HG22	13:AM:23:TYR:N	2.37	0.40
41:BG:40:ASN:CG	41:BG:91:ARG:HB2	2.42	0.40
1:AA:1118:C:H1'	1:AA:1179:A:C8	2.56	0.40
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	2.02	0.40
1:AA:89:C:C1'	1:AA:90:U:OP1	2.66	0.40
35:BA:1216:G:C2'	35:BA:1217:C:C5'	2.95	0.40
35:BA:2104:G:C1'	35:BA:2105:C:OP2	2.64	0.40
53:BU:57:PHE:C	53:BU:59:ARG:N	2.71	0.40
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.41	0.40
35:BA:1103:A:H5'	35:BA:1104:C:H5	1.85	0.40
35:BA:1273:U:C5'	35:BA:1646:C:H41	2.31	0.40
1:AA:1154:G:C2	1:AA:1155:G:C8	3.10	0.40
3:AC:121:ALA:HB1	3:AC:198:VAL:HG21	2.02	0.40
2:AB:127:ILE:HD13	2:AB:135:GLN:HE21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:507:TYR:CD1	24:AY:507:TYR:C	2.94	0.40
58:BZ:151:HIS:HB2	58:BZ:170:THR:CA	2.38	0.40
35:BA:911:A:O5'	35:BA:911:A:H8	2.04	0.40
28:B3:4:LEU:HG	28:B3:39:ASP:HB2	2.02	0.40
47:BO:48:PRO:O	47:BO:49:ARG:C	2.59	0.40
35:BA:265:A:H4'	35:BA:266:G:O5'	2.22	0.40
35:BA:1093:G:H1'	35:BA:1099:G:N2	2.33	0.40
41:BG:73:ALA:HB3	41:BG:85:GLY:CA	2.50	0.40
44:BK:95:UNK:O	44:BK:96:UNK:C	2.70	0.40
1:AA:165:C:O2'	1:AA:166:G:H5'	2.20	0.40
47:BO:24:VAL:O	47:BO:24:VAL:CG2	2.70	0.40
57:BY:2:ARG:O	57:BY:3:VAL:CB	2.69	0.40
57:BY:3:VAL:C	57:BY:5:MET:N	2.74	0.40
24:AY:247:ARG:O	24:AY:251:ILE:HG13	2.21	0.40
20:AT:39:LYS:HB2	20:AT:39:LYS:HE3	1.93	0.40
35:BA:2252:G:H2'	35:BA:2253:G:C8	2.57	0.40
35:BA:2252:G:O2'	35:BA:2253:G:H5'	2.22	0.40
24:AY:87:HIS:NE2	35:BA:2662:A:OP2	2.48	0.40
35:BA:2199:A:H5''	35:BA:2200:C:OP1	2.20	0.40
1:AA:1316:G:O3'	14:AN:18:VAL:CG1	2.70	0.40
35:BA:1683:C:H2'	35:BA:1684:C:H6	1.85	0.40
6:AF:91:VAL:HG13	18:AR:72:ARG:NH2	2.36	0.40
55:BW:5:ALA:CB	55:BW:50:VAL:HG23	2.52	0.40
35:BA:1199:U:H2'	35:BA:1200:C:O4'	2.21	0.40
1:AA:1437:C:O2'	1:AA:1438:G:H5'	2.21	0.40
35:BA:57:C:H2'	35:BA:58:G:O4'	2.20	0.40
53:BU:18:LEU:HD13	53:BU:18:LEU:HA	1.96	0.40
8:AH:36:LEU:O	8:AH:37:ARG:C	2.59	0.40
8:AH:34:GLU:OE1	8:AH:37:ARG:NH1	2.55	0.40
35:BA:1161:C:O2'	54:BV:23:GLU:HG3	2.21	0.40
46:BN:74:ARG:HH21	46:BN:83:LYS:HD3	1.85	0.40
2:AB:111:ARG:NH2	2:AB:114:ARG:HG2	2.36	0.40
35:BA:246:C:C2'	35:BA:247:G:H5''	2.45	0.40
35:BA:953:A:C2	35:BA:954:G:C8	3.10	0.40
1:AA:34:C:H2'	1:AA:35:G:H8	1.86	0.40
35:BA:1418:G:O5'	35:BA:1418:G:H8	2.04	0.40
2:AB:167:PRO:HG3	2:AB:188:ALA:CB	2.50	0.40
25:B0:25:ARG:HD2	25:B0:29:GLN:NE2	2.37	0.40
7:AG:64:GLN:HG3	7:AG:128:ALA:O	2.21	0.40
1:AA:60:A:H62	1:AA:110:C:N4	2.19	0.40
17:AQ:66:SER:OG	17:AQ:69:LYS:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:689:C:O2'	1:AA:690:G:H5'	2.21	0.40
35:BA:2712:U:C1'	35:BA:2712(A):A:N7	2.84	0.40
35:BA:1228:G:C2	35:BA:1229:G:N9	2.89	0.40
27:B2:10:LEU:HB3	27:B2:14:ARG:CZ	2.51	0.40
29:B4:28:LYS:HZ2	41:BG:145:THR:N	2.19	0.40
41:BG:106:LEU:CA	41:BG:110:ALA:HB3	2.52	0.40
41:BG:43:LEU:HD13	41:BG:48:GLU:H	1.87	0.40
42:BH:84:SER:O	42:BH:85:LYS:HB3	2.22	0.40
24:AY:25:LYS:HZ2	24:AY:86:GLY:CA	2.34	0.40
1:AA:89:C:C4	1:AA:90:U:H5	2.40	0.40
36:BB:22:U:O2'	36:BB:23:G:H5'	2.21	0.40
35:BA:2105:C:P	35:BA:2105:C:O4'	2.80	0.40
1:AA:1151:A:N3	1:AA:1152:A:C8	2.89	0.40
35:BA:2801:A:O2'	35:BA:2894:G:H5''	2.21	0.40
35:BA:896:A:C8	58:BZ:146:ILE:CD1	3.05	0.40
51:BS:11:LYS:C	51:BS:13:ARG:N	2.74	0.40
24:AY:506:GLN:HB3	24:AY:507:TYR:H	1.70	0.40
35:BA:156:U:H2'	35:BA:157:U:H5'	2.04	0.40
35:BA:2117:A:O2'	35:BA:2118:U:P	2.80	0.40
38:BD:165:ILE:HG23	38:BD:173:VAL:CG2	2.52	0.40
1:AA:737:A:H2'	1:AA:738:C:C6	2.57	0.40
24:AY:100:VAL:HG21	24:AY:314:PHE:CD1	2.55	0.40
37:BC:89:GLU:O	37:BC:90:ALA:HB3	2.20	0.40
48:BP:121:LYS:O	48:BP:123:LEU:CD2	2.61	0.40
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD2	1.84	0.40
22:AV:46:G:H3'	22:AV:47:U:C5'	2.51	0.40
35:BA:848:G:C4	35:BA:933:A:C8	3.09	0.40
1:AA:678:U:H2'	1:AA:679:C:C6	2.57	0.40
33:B8:26:LYS:CB	33:B8:44:LYS:HG3	2.51	0.40
2:AB:213:LEU:HD23	2:AB:217:ARG:HG2	2.03	0.40
24:AY:199:ILE:H	24:AY:199:ILE:HG13	1.72	0.40
56:BX:40:LYS:O	56:BX:44:GLU:HG3	2.20	0.40
5:AE:145:LYS:HA	8:AH:107:LEU:CD2	2.52	0.40
35:BA:492:A:H2'	35:BA:493:G:H5'	2.03	0.40
24:AY:192:LEU:HD12	24:AY:194:THR:CG2	2.49	0.40
8:AH:100:ILE:HB	8:AH:125:ARG:NH1	2.37	0.40
1:AA:414:A:C2	1:AA:415:A:C4	3.09	0.40
36:BB:93:G:H2'	36:BB:94:C:C6	2.56	0.40
1:AA:1030(D):A:H1'	1:AA:1031:G:OP2	2.21	0.40
19:AS:51:VAL:CG2	19:AS:71:LEU:HB3	2.51	0.40
2:AB:95:GLN:HA	2:AB:95:GLN:OE1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:8:A:H5'	5:AE:120:THR:O	2.21	0.40
35:BA:2026:C:H2'	35:BA:2027:G:O4'	2.22	0.40
13:AM:52:GLU:HA	13:AM:55:ARG:HD3	2.03	0.40
39:BE:137:HIS:CB	39:BE:138:PRO:HD2	2.51	0.40
35:BA:2061:G:H5''	35:BA:2503:A:C2	2.55	0.40
35:BA:545:C:OP1	35:BA:545:C:H6	2.04	0.40
5:AE:28:PHE:N	5:AE:28:PHE:CD1	2.90	0.40
2:AB:137:ARG:O	2:AB:137:ARG:HD3	2.21	0.40
43:BJ:17:UNK:C	43:BJ:19:UNK:N	2.85	0.40
35:BA:2564:A:C2	35:BA:2647:U:H4'	2.57	0.40
1:AA:1007:C:O2'	1:AA:1008:C:H5'	2.20	0.40

All (40) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:100:ILE:CG1	27:B2:43:GLN:CD[2_554]	0.34	1.86
20:AT:100:ILE:CD1	27:B2:43:GLN:NE2[2_554]	0.69	1.51
3:AC:79:ARG:CD	35:BA:2139:C:C4[2_555]	0.83	1.37
3:AC:79:ARG:CD	35:BA:2139:C:C5[2_555]	0.87	1.33
3:AC:79:ARG:CG	35:BA:2139:C:C6[2_555]	0.96	1.24
3:AC:79:ARG:CZ	35:BA:2139:C:N4[2_555]	1.08	1.12
20:AT:100:ILE:CB	27:B2:43:GLN:OE1[2_554]	1.11	1.09
3:AC:79:ARG:NE	35:BA:2139:C:C4[2_555]	1.16	1.04
3:AC:79:ARG:NH1	35:BA:2139:C:N4[2_555]	1.19	1.01
20:AT:100:ILE:CG2	27:B2:43:GLN:OE1[2_554]	1.21	0.99
3:AC:79:ARG:CG	35:BA:2139:C:N1[2_555]	1.24	0.96
3:AC:79:ARG:NE	35:BA:2139:C:N4[2_555]	1.32	0.88
20:AT:100:ILE:CG1	27:B2:43:GLN:OE1[2_554]	1.33	0.87
3:AC:79:ARG:CG	35:BA:2139:C:C5[2_555]	1.42	0.78
20:AT:100:ILE:CG1	27:B2:43:GLN:CG[2_554]	1.43	0.77
20:AT:100:ILE:CG1	27:B2:43:GLN:NE2[2_554]	1.43	0.77
20:AT:100:ILE:CD1	27:B2:43:GLN:CD[2_554]	1.48	0.72
3:AC:81:GLY:N	35:BA:2140:C:OP1[2_555]	1.54	0.66
20:AT:100:ILE:CB	27:B2:43:GLN:CD[2_554]	1.60	0.60
3:AC:79:ARG:NE	35:BA:2139:C:N3[2_555]	1.61	0.59
3:AC:78:GLY:O	35:BA:2140:C:O4'[2_555]	1.71	0.49
3:AC:77:ILE:O	35:BA:2140:C:OP2[2_555]	1.71	0.49
3:AC:79:ARG:N	35:BA:2139:C:C3'[2_555]	1.71	0.49
3:AC:79:ARG:CD	35:BA:2139:C:N4[2_555]	1.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:79:ARG:N	35:BA:2139:C:C2'[2_555]	1.77	0.43
3:AC:79:ARG:CG	35:BA:2139:C:C2[2_555]	1.86	0.34
3:AC:79:ARG:CD	35:BA:2139:C:C6[2_555]	1.92	0.28
3:AC:79:ARG:CG	35:BA:2139:C:C4[2_555]	1.93	0.27
3:AC:79:ARG:CD	35:BA:2139:C:N3[2_555]	1.93	0.27
3:AC:78:GLY:C	35:BA:2140:C:O5'[2_555]	1.93	0.27
3:AC:80:GLY:N	35:BA:2139:C:O3'[2_555]	2.01	0.19
3:AC:78:GLY:O	35:BA:2140:C:O5'[2_555]	2.02	0.18
3:AC:79:ARG:CZ	35:BA:2139:C:C4[2_555]	2.06	0.14
3:AC:78:GLY:CA	35:BA:2140:C:OP2[2_555]	2.08	0.12
20:AT:100:ILE:CD1	27:B2:43:GLN:CG[2_554]	2.09	0.11
3:AC:79:ARG:NH1	35:BA:2152:G:N1[2_555]	2.11	0.09
3:AC:79:ARG:CB	35:BA:2139:C:C6[2_555]	2.12	0.08
20:AT:100:ILE:CB	27:B2:43:GLN:NE2[2_554]	2.12	0.08
3:AC:79:ARG:CG	35:BA:2139:C:N3[2_555]	2.12	0.08
2:AB:105:PHE:CE2	37:BC:28:ARG:NH2[2_555]	2.16	0.04

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	233/256 (91%)	163 (70%)	44 (19%)	26 (11%)	0	2
3	AC	205/239 (86%)	145 (71%)	32 (16%)	28 (14%)	0	1
4	AD	206/209 (99%)	160 (78%)	35 (17%)	11 (5%)	2	12
5	AE	149/162 (92%)	134 (90%)	12 (8%)	3 (2%)	9	38
6	AF	99/101 (98%)	80 (81%)	13 (13%)	6 (6%)	2	9
7	AG	153/156 (98%)	113 (74%)	26 (17%)	14 (9%)	1	3
8	AH	136/138 (99%)	122 (90%)	13 (10%)	1 (1%)	26	67
9	AI	125/128 (98%)	93 (74%)	21 (17%)	11 (9%)	1	4
10	AJ	97/105 (92%)	73 (75%)	15 (16%)	9 (9%)	1	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	AK	117/129 (91%)	95 (81%)	19 (16%)	3 (3%)	7	30
12	AL	123/132 (93%)	101 (82%)	11 (9%)	11 (9%)	1	4
13	AM	117/126 (93%)	74 (63%)	32 (27%)	11 (9%)	1	3
14	AN	58/61 (95%)	44 (76%)	7 (12%)	7 (12%)	0	1
15	AO	86/89 (97%)	78 (91%)	7 (8%)	1 (1%)	16	53
16	AP	82/88 (93%)	73 (89%)	7 (8%)	2 (2%)	7	33
17	AQ	98/105 (93%)	86 (88%)	10 (10%)	2 (2%)	9	38
18	AR	68/88 (77%)	58 (85%)	8 (12%)	2 (3%)	6	27
19	AS	86/93 (92%)	53 (62%)	21 (24%)	12 (14%)	0	1
20	AT	97/106 (92%)	79 (81%)	10 (10%)	8 (8%)	1	4
21	AU	23/27 (85%)	17 (74%)	4 (17%)	2 (9%)	1	4
24	AY	685/691 (99%)	537 (78%)	99 (14%)	49 (7%)	1	6
25	B0	82/84 (98%)	56 (68%)	19 (23%)	7 (8%)	1	4
26	B1	92/97 (95%)	73 (79%)	14 (15%)	5 (5%)	2	11
27	B2	69/71 (97%)	45 (65%)	11 (16%)	13 (19%)	0	0
28	B3	58/60 (97%)	50 (86%)	7 (12%)	1 (2%)	11	43
29	B4	69/71 (97%)	16 (23%)	17 (25%)	36 (52%)	0	0
30	B5	57/59 (97%)	45 (79%)	3 (5%)	9 (16%)	0	1
31	B6	48/53 (91%)	22 (46%)	11 (23%)	15 (31%)	0	0
32	B7	46/48 (96%)	43 (94%)	3 (6%)	0	100	100
33	B8	62/64 (97%)	42 (68%)	8 (13%)	12 (19%)	0	0
34	B9	35/37 (95%)	23 (66%)	9 (26%)	3 (9%)	1	4
37	BC	225/228 (99%)	121 (54%)	56 (25%)	48 (21%)	0	0
38	BD	273/275 (99%)	222 (81%)	33 (12%)	18 (7%)	1	7
39	BE	203/206 (98%)	145 (71%)	34 (17%)	24 (12%)	0	1
40	BF	206/210 (98%)	165 (80%)	19 (9%)	22 (11%)	0	2
41	BG	177/181 (98%)	78 (44%)	49 (28%)	50 (28%)	0	0
42	BH	174/180 (97%)	112 (64%)	31 (18%)	31 (18%)	0	0
43	BJ	1/130 (1%)	0	1 (100%)	0	100	100
46	BN	137/140 (98%)	110 (80%)	15 (11%)	12 (9%)	1	4
47	BO	120/122 (98%)	109 (91%)	8 (7%)	3 (2%)	7	31

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
48	BP	144/149 (97%)	84 (58%)	23 (16%)	37 (26%)	0	0
49	BQ	139/141 (99%)	115 (83%)	18 (13%)	6 (4%)	3	16
50	BR	115/117 (98%)	90 (78%)	17 (15%)	8 (7%)	1	6
51	BS	97/111 (87%)	52 (54%)	25 (26%)	20 (21%)	0	0
52	BT	136/146 (93%)	90 (66%)	25 (18%)	21 (15%)	0	1
53	BU	115/117 (98%)	87 (76%)	22 (19%)	6 (5%)	2	12
54	BV	99/101 (98%)	73 (74%)	11 (11%)	15 (15%)	0	1
55	BW	111/113 (98%)	93 (84%)	14 (13%)	4 (4%)	4	21
56	BX	91/95 (96%)	79 (87%)	11 (12%)	1 (1%)	17	56
57	BY	99/109 (91%)	54 (54%)	17 (17%)	28 (28%)	0	0
58	BZ	183/205 (89%)	131 (72%)	30 (16%)	22 (12%)	0	1
All	All	6506/6949 (94%)	4803 (74%)	1007 (16%)	696 (11%)	0	2

All (696) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	26	PRO
2	AB	37	ASN
2	AB	76	GLN
2	AB	77	ALA
2	AB	150	SER
2	AB	191	ASP
2	AB	229	VAL
2	AB	231	GLU
3	AC	12	LEU
3	AC	82	GLU
3	AC	84	ILE
3	AC	119	ARG
3	AC	131	ARG
3	AC	160	ALA
3	AC	169	ALA
3	AC	188	LEU
4	AD	35	ARG
6	AF	87	ARG
7	AG	7	ALA
7	AG	8	GLU
7	AG	50	ILE

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Mol	Chain	Res	Type
7	AG	77	SER
7	AG	87	VAL
7	AG	88	PRO
9	AI	23	ASN
9	AI	25	LYS
9	AI	26	VAL
9	AI	56	LEU
9	AI	118	LYS
10	AJ	36	GLY
10	AJ	90	LEU
11	AK	48	ILE
12	AL	27	LEU
12	AL	28	LYS
12	AL	47	LYS
12	AL	94	PRO
13	AM	10	PRO
13	AM	63	THR
13	AM	67	GLU
13	AM	117	VAL
14	AN	14	PRO
14	AN	16	PHE
14	AN	29	ARG
14	AN	59	ALA
15	AO	24	SER
18	AR	87	ARG
19	AS	63	THR
24	AY	40	HIS
24	AY	57	GLN
24	AY	82	ILE
24	AY	206	LEU
24	AY	394	ALA
24	AY	402	ILE
24	AY	403	GLU
24	AY	530	VAL
24	AY	555	LEU
25	B0	37	LEU
25	B0	57	PHE
26	B1	83	GLU
27	B2	17	SER
27	B2	43	GLN
27	B2	48	HIS
27	B2	70	GLN

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Mol	Chain	Res	Type
27	B2	71	ASN
29	B4	7	PRO
29	B4	15	ILE
29	B4	16	CYS
29	B4	22	ILE
29	B4	24	THR
29	B4	25	TYR
29	B4	29	PRO
29	B4	33	VAL
29	B4	34	GLU
29	B4	35	VAL
29	B4	38	LYS
29	B4	40	HIS
29	B4	55	ARG
29	B4	60	GLN
29	B4	66	SER
30	B5	4	HIS
30	B5	48	GLU
30	B5	49	CYS
30	B5	52	TYR
30	B5	53	ALA
30	B5	54	GLY
30	B5	57	VAL
31	B6	18	ARG
31	B6	20	ASN
31	B6	27	LYS
31	B6	31	PRO
31	B6	33	LYS
31	B6	46	HIS
31	B6	52	VAL
33	B8	29	LYS
33	B8	33	ASN
33	B8	34	TRP
33	B8	35	GLN
33	B8	61	LEU
33	B8	64	TYR
37	BC	42	VAL
37	BC	47	LYS
37	BC	68	GLY
37	BC	95	VAL
37	BC	101	ILE
37	BC	104	ILE

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Mol	Chain	Res	Type
37	BC	117	THR
37	BC	145	THR
37	BC	148	PHE
37	BC	180	SER
37	BC	181	PHE
38	BD	24	ILE
38	BD	45	ASN
38	BD	125	ILE
38	BD	127	VAL
38	BD	267	SER
39	BE	2	LYS
39	BE	55	ASN
39	BE	56	PRO
39	BE	72	VAL
39	BE	76	ARG
39	BE	77	ILE
39	BE	88	GLY
39	BE	130	GLY
39	BE	155	LYS
40	BF	3	GLU
40	BF	11	VAL
40	BF	14	PRO
40	BF	21	ALA
40	BF	26	ALA
40	BF	82	ILE
40	BF	83	PHE
40	BF	89	VAL
40	BF	168	ARG
41	BG	8	LYS
41	BG	21	ARG
41	BG	22	ARG
41	BG	23	PHE
41	BG	25	TYR
41	BG	44	GLY
41	BG	48	GLU
41	BG	49	ASP
41	BG	54	GLU
41	BG	66	GLN
41	BG	73	ALA
41	BG	86	MET
41	BG	87	PRO
41	BG	88	ILE

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Mol	Chain	Res	Type
41	BG	104	GLU
41	BG	109	VAL
41	BG	117	PHE
41	BG	118	ARG
41	BG	122	PRO
41	BG	123	ASN
41	BG	143	GLU
41	BG	146	TYR
41	BG	181	ARG
42	BH	21	PRO
42	BH	55	PRO
42	BH	83	TYR
42	BH	126	PRO
42	BH	137	ASP
42	BH	138	LYS
42	BH	157	TYR
42	BH	167	GLU
46	BN	58	ASP
46	BN	127	ASP
46	BN	134	ARG
48	BP	10	PRO
48	BP	13	ASN
48	BP	15	ARG
48	BP	17	LYS
48	BP	19	VAL
48	BP	34	GLY
48	BP	39	LYS
48	BP	40	SER
48	BP	47	ASP
48	BP	58	THR
48	BP	61	ARG
48	BP	65	ARG
48	BP	103	ALA
48	BP	107	LYS
48	BP	108	LYS
48	BP	115	LEU
48	BP	140	ALA
48	BP	146	VAL
49	BQ	62	GLY
50	BR	4	LEU
50	BR	117	VAL
51	BS	53	SER

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Mol	Chain	Res	Type
51	BS	88	ASP
51	BS	92	TYR
51	BS	93	LYS
51	BS	105	ALA
52	BT	23	ARG
52	BT	28	VAL
52	BT	30	VAL
52	BT	32	TYR
52	BT	33	LYS
52	BT	80	SER
52	BT	88	ILE
52	BT	91	ARG
52	BT	107	ASP
52	BT	119	LYS
52	BT	127	ALA
53	BU	89	GLU
53	BU	91	ASP
54	BV	2	PHE
54	BV	16	PRO
54	BV	53	GLU
55	BW	63	ASP
57	BY	17	SER
57	BY	27	VAL
57	BY	30	VAL
57	BY	50	ARG
57	BY	51	VAL
57	BY	56	PRO
57	BY	57	GLN
57	BY	62	GLU
57	BY	77	PRO
57	BY	78	ALA
57	BY	80	GLY
57	BY	90	LEU
57	BY	98	VAL
57	BY	99	CYS
58	BZ	31	ARG
58	BZ	61	LEU
58	BZ	113	ALA
58	BZ	124	ILE
58	BZ	152	ALA
58	BZ	186	GLU
2	AB	17	PHE

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Mol	Chain	Res	Type
2	AB	28	PHE
2	AB	40	HIS
2	AB	91	PRO
2	AB	95	GLN
2	AB	228	GLY
3	AC	13	GLY
3	AC	22	TRP
3	AC	26	LYS
3	AC	85	ARG
3	AC	168	ALA
3	AC	181	ASN
3	AC	207	VAL
4	AD	3	ARG
4	AD	26	CYS
4	AD	30	LYS
4	AD	88	VAL
4	AD	110	PHE
6	AF	39	LYS
6	AF	40	VAL
9	AI	11	LYS
9	AI	41	VAL
9	AI	127	LYS
10	AJ	32	ALA
10	AJ	86	MET
12	AL	79	GLU
13	AM	4	ILE
13	AM	12	ASN
13	AM	28	ALA
13	AM	46	LYS
14	AN	24	CYS
16	AP	83	GLU
17	AQ	33	GLY
19	AS	27	GLU
19	AS	62	ILE
19	AS	64	GLU
20	AT	101	GLY
21	AU	3	LYS
21	AU	25	LYS
24	AY	6	GLU
24	AY	25	LYS
24	AY	45	VAL
24	AY	58	GLU

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Mol	Chain	Res	Type
24	AY	110	SER
24	AY	114	VAL
24	AY	197	ARG
24	AY	224	ASP
24	AY	400	GLU
24	AY	401	SER
24	AY	447	GLY
24	AY	536	LYS
25	B0	5	LYS
25	B0	8	GLY
25	B0	11	ARG
25	B0	12	ASN
25	B0	79	VAL
26	B1	7	ILE
26	B1	53	VAL
27	B2	10	LEU
27	B2	36	ARG
27	B2	47	ASN
29	B4	20	ASN
29	B4	31	ILE
29	B4	39	CYS
29	B4	44	THR
29	B4	48	ARG
29	B4	49	PHE
29	B4	52	THR
29	B4	56	VAL
29	B4	61	ARG
29	B4	65	ASP
30	B5	55	ARG
31	B6	28	ARG
31	B6	29	ASN
31	B6	44	ARG
31	B6	51	GLU
34	B9	36	GLN
37	BC	53	ARG
37	BC	81	GLY
37	BC	85	LYS
37	BC	92	ALA
37	BC	99	GLU
37	BC	102	GLN
37	BC	105	LEU
37	BC	106	ASP

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Mol	Chain	Res	Type
37	BC	109	MET
37	BC	130	ARG
37	BC	143	ALA
37	BC	150	ILE
37	BC	159	ALA
37	BC	161	ARG
37	BC	179	ALA
38	BD	28	GLU
38	BD	239	ARG
38	BD	242	ARG
38	BD	244	ARG
38	BD	268	ARG
39	BE	71	GLY
39	BE	75	VAL
39	BE	121	ASN
39	BE	186	GLY
40	BF	5	ALA
40	BF	25	PRO
40	BF	78	ILE
40	BF	134	GLY
40	BF	167	ALA
41	BG	6	ALA
41	BG	24	GLY
41	BG	43	LEU
41	BG	52	ILE
41	BG	78	SER
41	BG	97	ASP
41	BG	98	ARG
41	BG	115	ARG
41	BG	128	ARG
41	BG	129	GLY
41	BG	132	ASN
41	BG	138	GLN
41	BG	162	THR
41	BG	163	ALA
42	BH	2	SER
42	BH	14	GLY
42	BH	66	GLY
42	BH	156	ALA
42	BH	158	HIS
46	BN	19	GLU
46	BN	57	ALA

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Mol	Chain	Res	Type
47	BO	5	GLN
47	BO	49	ARG
47	BO	111	PHE
48	BP	12	ALA
48	BP	26	GLY
48	BP	76	LYS
48	BP	109	GLY
48	BP	116	GLY
48	BP	117	GLU
48	BP	147	LEU
49	BQ	60	ARG
50	BR	10	LEU
50	BR	86	ARG
51	BS	58	LEU
51	BS	62	LYS
51	BS	90	GLY
51	BS	94	TYR
51	BS	97	ARG
51	BS	103	GLU
52	BT	29	ARG
52	BT	78	LEU
53	BU	88	ILE
54	BV	23	GLU
54	BV	40	LEU
54	BV	46	VAL
54	BV	47	VAL
54	BV	50	PRO
54	BV	67	GLY
55	BW	11	ARG
55	BW	68	ARG
57	BY	42	VAL
58	BZ	30	ASN
58	BZ	81	ARG
58	BZ	147	GLY
58	BZ	148	ASP
58	BZ	150	LEU
2	AB	75	LYS
2	AB	92	TYR
2	AB	125	PRO
2	AB	157	ARG
3	AC	54	ARG
4	AD	37	PRO

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Mol	Chain	Res	Type
4	AD	189	PRO
5	AE	70	PRO
6	AF	13	ASN
7	AG	57	GLU
7	AG	89	MET
8	AH	2	LEU
10	AJ	29	ARG
10	AJ	30	SER
10	AJ	59	SER
13	AM	51	ALA
17	AQ	68	ARG
18	AR	54	ARG
19	AS	8	GLY
19	AS	9	VAL
19	AS	85	LYS
20	AT	73	HIS
20	AT	95	ALA
24	AY	22	ASP
24	AY	55	MET
24	AY	127	LYS
24	AY	171	GLU
24	AY	204	GLU
24	AY	297	GLU
29	B4	36	CYS
29	B4	51	ASP
31	B6	9	LEU
31	B6	16	CYS
31	B6	45	LYS
33	B8	31	HIS
33	B8	49	VAL
34	B9	10	ILE
37	BC	30	VAL
37	BC	43	GLU
37	BC	52	PRO
37	BC	69	LEU
37	BC	107	GLY
37	BC	119	ASP
37	BC	128	LEU
37	BC	134	PRO
37	BC	184	GLU
37	BC	202	PRO
37	BC	209	PHE

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Mol	Chain	Res	Type
38	BD	35	LYS
38	BD	262	ARG
38	BD	263	ARG
39	BE	53	PRO
39	BE	54	GLN
39	BE	70	ALA
39	BE	82	ARG
39	BE	187	ALA
40	BF	10	PRO
40	BF	84	VAL
40	BF	135	LYS
41	BG	133	LEU
41	BG	137	GLU
41	BG	155	MET
42	BH	12	PRO
42	BH	24	VAL
42	BH	81	GLU
42	BH	154	PRO
42	BH	170	ARG
48	BP	49	ARG
48	BP	106	LEU
48	BP	111	ARG
48	BP	149	GLU
49	BQ	13	GLN
49	BQ	115	MET
50	BR	88	ARG
50	BR	106	GLY
51	BS	13	ARG
51	BS	24	LEU
51	BS	51	ALA
51	BS	57	LYS
52	BT	118	ARG
52	BT	134	GLU
52	BT	136	GLN
53	BU	93	LYS
54	BV	19	LYS
55	BW	6	ILE
57	BY	39	VAL
57	BY	40	GLU
57	BY	53	PRO
57	BY	100	ALA
58	BZ	12	GLY

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Mol	Chain	Res	Type
58	BZ	22	GLY
58	BZ	80	ARG
58	BZ	128	VAL
2	AB	190	THR
3	AC	4	LYS
3	AC	29	TYR
3	AC	61	ALA
3	AC	80	GLY
3	AC	170	GLN
5	AE	8	GLU
6	AF	16	GLN
12	AL	115	LYS
13	AM	85	GLY
14	AN	56	VAL
14	AN	60	SER
16	AP	53	VAL
19	AS	18	LYS
19	AS	89	ALA
19	AS	90	THR
20	AT	71	THR
20	AT	74	LYS
20	AT	97	ALA
24	AY	49	ALA
24	AY	551	GLN
27	B2	35	LEU
27	B2	46	GLN
27	B2	50	ILE
29	B4	21	VAL
29	B4	42	PHE
29	B4	47	GLN
29	B4	59	PHE
29	B4	67	TYR
30	B5	51	TYR
31	B6	23	THR
33	B8	3	LYS
37	BC	16	ASP
37	BC	88	GLU
37	BC	141	PRO
37	BC	142	LYS
38	BD	3	VAL
38	BD	241	PRO
39	BE	69	LYS

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Mol	Chain	Res	Type
40	BF	81	PRO
41	BG	26	GLN
41	BG	46	ALA
41	BG	57	ALA
42	BH	160	LYS
46	BN	8	GLN
46	BN	59	LYS
46	BN	68	GLU
48	BP	9	ASN
48	BP	25	SER
48	BP	33	ARG
49	BQ	20	ALA
49	BQ	140	ALA
51	BS	14	VAL
51	BS	102	ALA
52	BT	3	ARG
52	BT	12	SER
53	BU	50	ARG
56	BX	13	LEU
57	BY	97	ARG
58	BZ	14	LYS
58	BZ	78	LYS
2	AB	8	LYS
2	AB	16	HIS
3	AC	32	LEU
3	AC	66	VAL
3	AC	118	GLN
3	AC	121	ALA
3	AC	187	ALA
4	AD	191	ARG
6	AF	70	ASP
7	AG	4	ARG
7	AG	47	CYS
7	AG	58	PRO
7	AG	128	ALA
9	AI	54	ASP
10	AJ	18	ALA
12	AL	29	GLY
12	AL	45	PRO
12	AL	95	GLY
19	AS	41	VAL
19	AS	87	ALA

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Mol	Chain	Res	Type
20	AT	100	ILE
24	AY	47	GLU
24	AY	59	ARG
24	AY	183	MET
24	AY	205	TYR
24	AY	210	ARG
24	AY	253	LEU
24	AY	380	LEU
24	AY	506	GLN
24	AY	574	GLU
27	B2	5	GLU
27	B2	16	LEU
28	B3	16	PRO
29	B4	2	LYS
29	B4	6	HIS
29	B4	9	LEU
33	B8	32	LEU
33	B8	43	GLN
34	B9	11	CYS
37	BC	21	TYR
37	BC	89	GLU
37	BC	116	ALA
37	BC	126	SER
39	BE	52	LEU
40	BF	9	ILE
41	BG	93	THR
42	BH	13	LYS
42	BH	19	VAL
42	BH	40	GLU
42	BH	85	LYS
42	BH	98	LEU
42	BH	159	GLU
42	BH	168	PRO
46	BN	5	VAL
48	BP	67	MET
48	BP	141	ALA
50	BR	8	ARG
50	BR	11	ASN
52	BT	7	ILE
52	BT	17	THR
54	BV	44	LYS
54	BV	48	GLY

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Mol	Chain	Res	Type
57	BY	3	VAL
57	BY	10	GLY
57	BY	31	LEU
57	BY	61	ILE
58	BZ	63	ASP
58	BZ	158	PRO
58	BZ	162	GLU
58	BZ	183	LEU
2	AB	130	ARG
2	AB	158	LEU
3	AC	65	ALA
4	AD	150	GLU
4	AD	171	GLY
5	AE	22	GLY
7	AG	20	ASP
9	AI	89	ASN
11	AK	117	ASN
24	AY	23	ALA
24	AY	60	GLU
24	AY	81	ILE
24	AY	230	LYS
24	AY	239	GLU
24	AY	531	GLY
24	AY	554	PRO
24	AY	577	SER
24	AY	680	PRO
37	BC	221	PRO
38	BD	36	PRO
39	BE	45	THR
39	BE	73	GLU
40	BF	204	ASN
41	BG	30	GLU
41	BG	50	ALA
41	BG	94	LEU
41	BG	165	THR
42	BH	9	ILE
46	BN	125	GLY
46	BN	129	PRO
48	BP	43	GLY
52	BT	31	SER
57	BY	4	LYS
57	BY	81	LYS

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Mol	Chain	Res	Type
57	BY	88	LYS
2	AB	234	PRO
2	AB	239	VAL
3	AC	130	VAL
10	AJ	4	ILE
20	AT	102	GLY
24	AY	37	GLY
24	AY	404	VAL
26	B1	30	VAL
38	BD	238	GLY
40	BF	30	PRO
46	BN	40	PRO
48	BP	144	GLU
51	BS	82	ILE
54	BV	35	LEU
57	BY	52	SER
26	B1	86	SER
29	B4	41	PRO
37	BC	75	VAL
37	BC	84	ILE
39	BE	175	VAL
40	BF	6	VAL
41	BG	141	PHE
41	BG	142	PRO
42	BH	111	HIS
53	BU	90	VAL
7	AG	17	VAL
9	AI	81	ILE
12	AL	48	PRO
33	B8	63	PRO
48	BP	11	GLY
51	BS	60	GLY
54	BV	79	VAL
39	BE	62	PRO
42	BH	92	ILE
51	BS	98	VAL
54	BV	52	VAL
58	BZ	176	PRO
11	AK	49	GLY
12	AL	18	VAL
13	AM	24	GLY
42	BH	20	ALA

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Mol	Chain	Res	Type
42	BH	10	PRO
38	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%)	157 (78%)	45 (22%)	1	4
3	AC	160/188 (85%)	129 (81%)	31 (19%)	2	7
4	AD	180/181 (99%)	155 (86%)	25 (14%)	4	17
5	AE	115/123 (94%)	109 (95%)	6 (5%)	29	66
6	AF	90/90 (100%)	83 (92%)	7 (8%)	16	46
7	AG	126/127 (99%)	108 (86%)	18 (14%)	4	17
8	AH	119/119 (100%)	103 (87%)	16 (13%)	5	19
9	AI	98/99 (99%)	85 (87%)	13 (13%)	5	19
10	AJ	88/92 (96%)	82 (93%)	6 (7%)	20	54
11	AK	90/99 (91%)	84 (93%)	6 (7%)	20	55
12	AL	104/109 (95%)	90 (86%)	14 (14%)	5	18
13	AM	94/101 (93%)	84 (89%)	10 (11%)	8	29
14	AN	49/50 (98%)	43 (88%)	6 (12%)	6	23
15	AO	79/80 (99%)	71 (90%)	8 (10%)	9	32
16	AP	72/74 (97%)	68 (94%)	4 (6%)	26	63
17	AQ	94/97 (97%)	92 (98%)	2 (2%)	61	88
18	AR	61/77 (79%)	55 (90%)	6 (10%)	10	34
19	AS	74/80 (92%)	68 (92%)	6 (8%)	15	44
20	AT	76/82 (93%)	68 (90%)	8 (10%)	8	30
21	AU	19/22 (86%)	18 (95%)	1 (5%)	28	65
24	AY	579/582 (100%)	516 (89%)	63 (11%)	8	28
25	B0	66/66 (100%)	45 (68%)	21 (32%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	B1	78/82 (95%)	60 (77%)	18 (23%)	1	4
27	B2	66/66 (100%)	42 (64%)	24 (36%)	0	1
28	B3	51/52 (98%)	44 (86%)	7 (14%)	4	18
29	B4	63/63 (100%)	48 (76%)	15 (24%)	1	3
30	B5	51/51 (100%)	42 (82%)	9 (18%)	2	10
31	B6	49/51 (96%)	37 (76%)	12 (24%)	1	3
32	B7	41/41 (100%)	39 (95%)	2 (5%)	31	68
33	B8	53/54 (98%)	42 (79%)	11 (21%)	1	6
34	B9	34/34 (100%)	31 (91%)	3 (9%)	12	40
37	BC	179/180 (99%)	160 (89%)	19 (11%)	8	29
38	BD	217/217 (100%)	185 (85%)	32 (15%)	4	15
39	BE	165/166 (99%)	133 (81%)	32 (19%)	2	7
40	BF	165/166 (99%)	146 (88%)	19 (12%)	7	26
41	BG	153/155 (99%)	123 (80%)	30 (20%)	1	7
42	BH	146/148 (99%)	131 (90%)	15 (10%)	9	31
43	BJ	1/1 (100%)	1 (100%)	0	100	100
46	BN	117/119 (98%)	103 (88%)	14 (12%)	6	24
47	BO	100/100 (100%)	93 (93%)	7 (7%)	19	53
48	BP	112/115 (97%)	84 (75%)	28 (25%)	1	3
49	BQ	111/111 (100%)	96 (86%)	15 (14%)	5	18
50	BR	100/100 (100%)	82 (82%)	18 (18%)	2	9
51	BS	77/87 (88%)	62 (80%)	15 (20%)	2	7
52	BT	120/127 (94%)	94 (78%)	26 (22%)	1	5
53	BU	92/93 (99%)	80 (87%)	12 (13%)	5	20
54	BV	82/82 (100%)	65 (79%)	17 (21%)	1	6
55	BW	91/92 (99%)	79 (87%)	12 (13%)	5	20
56	BX	74/77 (96%)	68 (92%)	6 (8%)	15	44
57	BY	84/90 (93%)	65 (77%)	19 (23%)	1	4
58	BZ	162/178 (91%)	138 (85%)	24 (15%)	4	15
All	All	5469/5656 (97%)	4686 (86%)	783 (14%)	4	17

All (783) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	16	HIS
2	AB	17	PHE
2	AB	22	LYS
2	AB	23	ARG
2	AB	24	TRP
2	AB	28	PHE
2	AB	36	ARG
2	AB	42	ILE
2	AB	48	MET
2	AB	52	GLU
2	AB	60	ASP
2	AB	74	LYS
2	AB	76	GLN
2	AB	82	ARG
2	AB	83	MET
2	AB	87	ARG
2	AB	90	MET
2	AB	93	VAL
2	AB	96	ARG
2	AB	101	MET
2	AB	102	LEU
2	AB	109	SER
2	AB	110	GLN
2	AB	114	ARG
2	AB	116	GLU
2	AB	122	PHE
2	AB	127	ILE
2	AB	137	ARG
2	AB	142	LEU
2	AB	149	LEU
2	AB	153	ARG
2	AB	157	ARG
2	AB	163	PHE
2	AB	170	GLU
2	AB	178	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	191	ASP
2	AB	198	ASP
2	AB	200	ILE
2	AB	204	ASN
2	AB	224	GLN
2	AB	229	VAL

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Mol	Chain	Res	Type
2	AB	231	GLU
2	AB	233	SER
3	AC	3	ASN
3	AC	5	ILE
3	AC	14	ILE
3	AC	16	ARG
3	AC	20	SER
3	AC	21	ARG
3	AC	26	LYS
3	AC	30	ARG
3	AC	34	LEU
3	AC	46	GLU
3	AC	52	LEU
3	AC	54	ARG
3	AC	63	ASN
3	AC	72	LYS
3	AC	76	VAL
3	AC	82	GLU
3	AC	86	VAL
3	AC	94	LEU
3	AC	101	LEU
3	AC	110	ASN
3	AC	111	LEU
3	AC	119	ARG
3	AC	123	GLN
3	AC	131	ARG
3	AC	132	ARG
3	AC	143	GLU
3	AC	164	ARG
3	AC	165	THR
3	AC	166	GLU
3	AC	167	TRP
3	AC	178	LEU
4	AD	3	ARG
4	AD	8	VAL
4	AD	13	ARG
4	AD	15	GLU
4	AD	21	LEU
4	AD	34	GLU
4	AD	36	ARG
4	AD	50	ARG
4	AD	58	LEU

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Mol	Chain	Res	Type
4	AD	76	ARG
4	AD	88	VAL
4	AD	101	LEU
4	AD	110	PHE
4	AD	112	VAL
4	AD	127	THR
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	139	ARG
4	AD	168	ARG
4	AD	190	ASP
4	AD	194	LEU
4	AD	196	LEU
4	AD	200	GLU
4	AD	209	ARG
5	AE	10	MET
5	AE	20	GLN
5	AE	31	LEU
5	AE	68	GLU
5	AE	73	ASN
5	AE	91	LEU
6	AF	19	LEU
6	AF	25	ILE
6	AF	32	ASN
6	AF	43	LEU
6	AF	67	MET
6	AF	69	GLU
6	AF	73	ASN
7	AG	22	LEU
7	AG	32	ARG
7	AG	33	ASP
7	AG	35	LYS
7	AG	38	LEU
7	AG	57	GLU
7	AG	78	ARG
7	AG	79	ARG
7	AG	90	GLU
7	AG	94	ARG
7	AG	104	LEU
7	AG	106	GLN
7	AG	114	ARG

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Mol	Chain	Res	Type
7	AG	119	ARG
7	AG	131	LYS
7	AG	136	LYS
7	AG	140	ASP
7	AG	154	TYR
8	AH	1	MET
8	AH	6	ILE
8	AH	26	VAL
8	AH	27	PRO
8	AH	30	ARG
8	AH	39	LEU
8	AH	52	ASP
8	AH	54	ASP
8	AH	56	LYS
8	AH	63	LEU
8	AH	91	ARG
8	AH	92	ARG
8	AH	102	ARG
8	AH	105	ARG
8	AH	112	LEU
8	AH	127	LEU
9	AI	2	GLU
9	AI	14	VAL
9	AI	19	LEU
9	AI	20	ARG
9	AI	23	ASN
9	AI	26	VAL
9	AI	53	VAL
9	AI	60	ASP
9	AI	95	LYS
9	AI	104	ARG
9	AI	118	LYS
9	AI	121	ARG
9	AI	128	ARG
10	AJ	6	ILE
10	AJ	8	LEU
10	AJ	57	LYS
10	AJ	78	ASN
10	AJ	95	GLU
10	AJ	96	ILE
11	AK	53	SER
11	AK	81	ASP

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Mol	Chain	Res	Type
11	AK	96	ARG
11	AK	104	GLN
11	AK	124	LYS
11	AK	126	ARG
12	AL	7	ILE
12	AL	8	ASN
12	AL	20	LYS
12	AL	27	LEU
12	AL	33	ARG
12	AL	41	ARG
12	AL	42	THR
12	AL	44	THR
12	AL	79	GLU
12	AL	84	LEU
12	AL	89	ARG
12	AL	94	PRO
12	AL	118	SER
12	AL	123	LYS
13	AM	7	VAL
13	AM	8	GLU
13	AM	11	ARG
13	AM	47	ASP
13	AM	64	TRP
13	AM	65	LYS
13	AM	91	ARG
13	AM	101	GLN
13	AM	108	ARG
13	AM	115	LYS
14	AN	14	PRO
14	AN	16	PHE
14	AN	23	ARG
14	AN	31	ARG
14	AN	33	VAL
14	AN	58	LYS
15	AO	25	THR
15	AO	31	LEU
15	AO	39	LEU
15	AO	56	LEU
15	AO	68	ARG
15	AO	74	ASP
15	AO	81	LEU
15	AO	82	ILE

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Mol	Chain	Res	Type
16	AP	1	MET
16	AP	27	LYS
16	AP	55	ARG
16	AP	62	VAL
17	AQ	38	ARG
17	AQ	52	LYS
18	AR	31	LEU
18	AR	36	ASN
18	AR	47	THR
18	AR	50	ILE
18	AR	76	LEU
18	AR	86	VAL
19	AS	7	LYS
19	AS	12	ASP
19	AS	15	LEU
19	AS	21	GLU
19	AS	37	ARG
19	AS	62	ILE
20	AT	9	ASN
20	AT	18	GLN
20	AT	24	LEU
20	AT	26	ASN
20	AT	27	LYS
20	AT	41	ILE
20	AT	75	ASN
20	AT	82	SER
21	AU	15	ARG
24	AY	31	ARG
24	AY	40	HIS
24	AY	45	VAL
24	AY	52	MET
24	AY	54	PHE
24	AY	59	ARG
24	AY	60	GLU
24	AY	84	THR
24	AY	91	THR
24	AY	92	ILE
24	AY	98	MET
24	AY	101	LEU
24	AY	120	THR
24	AY	121	VAL
24	AY	128	TYR

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Mol	Chain	Res	Type
24	AY	157	LEU
24	AY	191	ASP
24	AY	192	LEU
24	AY	224	ASP
24	AY	225	GLU
24	AY	232	LEU
24	AY	236	GLU
24	AY	252	ASP
24	AY	255	ILE
24	AY	260	LEU
24	AY	264	LEU
24	AY	277	VAL
24	AY	285	ASP
24	AY	289	ILE
24	AY	312	LEU
24	AY	343	ASN
24	AY	348	ARG
24	AY	356	LEU
24	AY	357	ARG
24	AY	369	LEU
24	AY	381	LYS
24	AY	417	THR
24	AY	420	ASP
24	AY	421	GLN
24	AY	426	GLN
24	AY	431	LEU
24	AY	437	THR
24	AY	458	HIS
24	AY	466	LEU
24	AY	478	LYS
24	AY	481	VAL
24	AY	487	ILE
24	AY	500	GLN
24	AY	504	ARG
24	AY	509	HIS
24	AY	512	ILE
24	AY	568	TYR
24	AY	572	TYR
24	AY	576	ASP
24	AY	580	MET
24	AY	607	ARG
24	AY	616	TYR

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Mol	Chain	Res	Type
24	AY	623	ASP
24	AY	628	ARG
24	AY	635	GLU
24	AY	647	VAL
24	AY	649	LEU
24	AY	671	MET
25	B0	5	LYS
25	B0	11	ARG
25	B0	14	ARG
25	B0	20	ARG
25	B0	27	GLU
25	B0	30	VAL
25	B0	39	ARG
25	B0	40	GLN
25	B0	43	THR
25	B0	44	ARG
25	B0	53	MET
25	B0	55	ARG
25	B0	56	ASP
25	B0	57	PHE
25	B0	62	LEU
25	B0	69	PHE
25	B0	70	GLN
25	B0	74	ARG
25	B0	75	LEU
25	B0	80	HIS
25	B0	84	LEU
26	B1	5	CYS
26	B1	8	SER
26	B1	11	ARG
26	B1	25	LYS
26	B1	27	GLU
26	B1	30	VAL
26	B1	33	LYS
26	B1	37	ILE
26	B1	39	LYS
26	B1	40	ARG
26	B1	45	ASN
26	B1	50	ARG
26	B1	53	VAL
26	B1	73	LEU
26	B1	78	LYS

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Mol	Chain	Res	Type
26	B1	80	LEU
26	B1	82	LEU
26	B1	83	GLU
27	B2	2	LYS
27	B2	4	SER
27	B2	7	ARG
27	B2	8	LYS
27	B2	9	GLN
27	B2	20	GLU
27	B2	24	LEU
27	B2	26	ARG
27	B2	27	GLU
27	B2	32	LEU
27	B2	37	PHE
27	B2	40	SER
27	B2	41	ILE
27	B2	43	GLN
27	B2	44	LEU
27	B2	45	SER
27	B2	47	ASN
27	B2	48	HIS
27	B2	49	LYS
27	B2	51	ARG
27	B2	53	LEU
27	B2	65	ASN
27	B2	68	ARG
27	B2	70	GLN
28	B3	8	LEU
28	B3	10	LYS
28	B3	29	ARG
28	B3	30	ARG
28	B3	33	GLN
28	B3	55	ARG
28	B3	57	GLU
29	B4	1	MET
29	B4	24	THR
29	B4	25	TYR
29	B4	27	THR
29	B4	31	ILE
29	B4	38	LYS
29	B4	39	CYS
29	B4	42	PHE

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Mol	Chain	Res	Type
29	B4	49	PHE
29	B4	52	THR
29	B4	53	GLU
29	B4	58	ARG
29	B4	59	PHE
29	B4	61	ARG
29	B4	62	ARG
30	B5	3	LYS
30	B5	4	HIS
30	B5	26	THR
30	B5	29	THR
30	B5	44	THR
30	B5	48	GLU
30	B5	51	TYR
30	B5	52	TYR
30	B5	55	ARG
31	B6	7	ILE
31	B6	8	LYS
31	B6	9	LEU
31	B6	10	LEU
31	B6	11	LEU
31	B6	18	ARG
31	B6	29	ASN
31	B6	31	PRO
31	B6	35	GLU
31	B6	42	TRP
31	B6	45	LYS
31	B6	53	LYS
32	B7	8	ASN
32	B7	43	THR
33	B8	13	ARG
33	B8	19	SER
33	B8	30	ARG
33	B8	31	HIS
33	B8	32	LEU
33	B8	34	TRP
33	B8	41	ILE
33	B8	44	LYS
33	B8	47	LYS
33	B8	49	VAL
33	B8	61	LEU
34	B9	2	LYS

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Mol	Chain	Res	Type
34	B9	11	CYS
34	B9	29	ASN
37	BC	28	ARG
37	BC	32	GLU
37	BC	48	LEU
37	BC	50	ILE
37	BC	53	ARG
37	BC	54	ARG
37	BC	98	GLU
37	BC	99	GLU
37	BC	103	LYS
37	BC	106	ASP
37	BC	108	TRP
37	BC	119	ASP
37	BC	121	MET
37	BC	127	LYS
37	BC	130	ARG
37	BC	138	LEU
37	BC	148	PHE
37	BC	158	LYS
37	BC	203	GLU
38	BD	3	VAL
38	BD	4	LYS
38	BD	18	VAL
38	BD	24	ILE
38	BD	25	THR
38	BD	26	LYS
38	BD	35	LYS
38	BD	46	GLN
38	BD	64	ILE
38	BD	65	ILE
38	BD	89	SER
38	BD	95	LEU
38	BD	98	VAL
38	BD	105	ILE
38	BD	106	ILE
38	BD	122	ASP
38	BD	131	LEU
38	BD	141	VAL
38	BD	155	LEU
38	BD	166	GLN
38	BD	173	VAL

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Mol	Chain	Res	Type
38	BD	176	ARG
38	BD	192	THR
38	BD	211	ARG
38	BD	212	SER
38	BD	218	ARG
38	BD	221	VAL
38	BD	229	VAL
38	BD	242	ARG
38	BD	257	LEU
38	BD	259	THR
38	BD	270	ILE
39	BE	9	VAL
39	BE	47	VAL
39	BE	49	LEU
39	BE	52	LEU
39	BE	54	GLN
39	BE	55	ASN
39	BE	56	PRO
39	BE	57	LYS
39	BE	63	LEU
39	BE	67	PHE
39	BE	69	LYS
39	BE	76	ARG
39	BE	79	ARG
39	BE	82	ARG
39	BE	87	GLU
39	BE	93	VAL
39	BE	94	GLU
39	BE	111	ARG
39	BE	116	VAL
39	BE	121	ASN
39	BE	134	ILE
39	BE	144	ARG
39	BE	146	THR
39	BE	154	LYS
39	BE	167	VAL
39	BE	169	ASN
39	BE	175	VAL
39	BE	178	GLU
39	BE	185	LYS
39	BE	197	ILE
39	BE	202	LYS

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Mol	Chain	Res	Type
39	BE	203	LYS
40	BF	17	ARG
40	BF	19	GLU
40	BF	20	LEU
40	BF	28	ILE
40	BF	33	LEU
40	BF	35	GLU
40	BF	50	SER
40	BF	65	TRP
40	BF	68	LYS
40	BF	82	ILE
40	BF	110	LEU
40	BF	122	LYS
40	BF	125	LEU
40	BF	157	VAL
40	BF	158	THR
40	BF	160	ASN
40	BF	164	ARG
40	BF	169	ASN
40	BF	179	GLU
41	BG	9	ARG
41	BG	13	GLU
41	BG	21	ARG
41	BG	22	ARG
41	BG	26	GLN
41	BG	27	ASN
41	BG	33	ARG
41	BG	45	GLU
41	BG	48	GLU
41	BG	60	LEU
41	BG	66	GLN
41	BG	79	ASN
41	BG	82	LEU
41	BG	83	ARG
41	BG	91	ARG
41	BG	95	ARG
41	BG	106	LEU
41	BG	107	LEU
41	BG	108	ASN
41	BG	113	ARG
41	BG	118	ARG
41	BG	121	ASN

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Mol	Chain	Res	Type
41	BG	133	LEU
41	BG	135	LEU
41	BG	136	ARG
41	BG	139	LEU
41	BG	146	TYR
41	BG	176	LEU
41	BG	180	PHE
41	BG	182	LYS
42	BH	1	MET
42	BH	3	ARG
42	BH	6	ARG
42	BH	9	ILE
42	BH	47	GLU
42	BH	69	ARG
42	BH	83	TYR
42	BH	89	ILE
42	BH	104	GLU
42	BH	105	LEU
42	BH	111	HIS
42	BH	158	HIS
42	BH	159	GLU
42	BH	168	PRO
42	BH	170	ARG
46	BN	1	MET
46	BN	2	LYS
46	BN	25	ARG
46	BN	33	LEU
46	BN	34	LEU
46	BN	35	ARG
46	BN	45	ASN
46	BN	48	MET
46	BN	50	ASP
46	BN	68	GLU
46	BN	119	ARG
46	BN	129	PRO
46	BN	131	GLN
46	BN	136	GLU
47	BO	13	ASN
47	BO	22	ILE
47	BO	23	ARG
47	BO	24	VAL
47	BO	47	ILE

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Mol	Chain	Res	Type
47	BO	49	ARG
47	BO	52	VAL
48	BP	6	LEU
48	BP	9	ASN
48	BP	16	ARG
48	BP	18	ARG
48	BP	33	ARG
48	BP	35	HIS
48	BP	39	LYS
48	BP	41	ARG
48	BP	47	ASP
48	BP	49	ARG
48	BP	51	PHE
48	BP	52	GLU
48	BP	55	ARG
48	BP	57	THR
48	BP	59	LEU
48	BP	61	ARG
48	BP	62	LEU
48	BP	68	GLN
48	BP	70	GLN
48	BP	85	LEU
48	BP	91	PHE
48	BP	105	LEU
48	BP	108	LYS
48	BP	110	TYR
48	BP	111	ARG
48	BP	115	LEU
48	BP	119	GLU
48	BP	135	LEU
49	BQ	1	MET
49	BQ	14	ARG
49	BQ	16	ARG
49	BQ	45	GLN
49	BQ	51	ARG
49	BQ	54	MET
49	BQ	56	ARG
49	BQ	59	ARG
49	BQ	65	PHE
49	BQ	74	TYR
49	BQ	75	THR
49	BQ	79	LEU

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Mol	Chain	Res	Type
49	BQ	110	THR
49	BQ	133	ARG
49	BQ	141	GLN
50	BR	2	ARG
50	BR	8	ARG
50	BR	10	LEU
50	BR	11	ASN
50	BR	16	HIS
50	BR	18	LEU
50	BR	28	LEU
50	BR	29	LEU
50	BR	34	ILE
50	BR	71	GLN
50	BR	83	ILE
50	BR	89	ASP
50	BR	99	LYS
50	BR	100	LEU
50	BR	113	LEU
50	BR	116	LEU
50	BR	117	VAL
50	BR	118	GLU
51	BS	11	LYS
51	BS	12	PHE
51	BS	15	ARG
51	BS	17	ARG
51	BS	20	ARG
51	BS	29	PHE
51	BS	36	TYR
51	BS	40	ILE
51	BS	54	LEU
51	BS	56	LEU
51	BS	59	LYS
51	BS	64	GLU
51	BS	92	TYR
51	BS	97	ARG
51	BS	106	ARG
52	BT	2	ASN
52	BT	7	ILE
52	BT	16	ARG
52	BT	23	ARG
52	BT	28	VAL
52	BT	29	ARG

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Mol	Chain	Res	Type
52	BT	30	VAL
52	BT	33	LYS
52	BT	38	ASN
52	BT	41	ARG
52	BT	49	VAL
52	BT	51	ARG
52	BT	58	ASN
52	BT	59	THR
52	BT	78	LEU
52	BT	79	HIS
52	BT	80	SER
52	BT	83	ILE
52	BT	95	ARG
52	BT	96	ARG
52	BT	99	LEU
52	BT	111	ARG
52	BT	118	ARG
52	BT	124	ASP
52	BT	132	LYS
52	BT	133	GLU
53	BU	8	VAL
53	BU	14	HIS
53	BU	18	LEU
53	BU	56	ASP
53	BU	59	ARG
53	BU	60	LEU
53	BU	66	ASN
53	BU	74	LEU
53	BU	84	LYS
53	BU	92	ARG
53	BU	101	ARG
53	BU	108	GLU
54	BV	1	MET
54	BV	2	PHE
54	BV	7	THR
54	BV	10	LYS
54	BV	12	TYR
54	BV	16	PRO
54	BV	18	LEU
54	BV	19	LYS
54	BV	21	ARG
54	BV	35	LEU

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Mol	Chain	Res	Type
54	BV	39	LEU
54	BV	40	LEU
54	BV	45	THR
54	BV	50	PRO
54	BV	71	LEU
54	BV	89	GLN
54	BV	99	ILE
55	BW	11	ARG
55	BW	21	VAL
55	BW	23	LEU
55	BW	36	LEU
55	BW	50	VAL
55	BW	76	VAL
55	BW	78	GLU
55	BW	90	ARG
55	BW	95	ILE
55	BW	96	ILE
55	BW	104	THR
55	BW	106	ILE
56	BX	27	THR
56	BX	57	LEU
56	BX	68	ARG
56	BX	70	LEU
56	BX	80	ILE
56	BX	90	GLU
57	BY	2	ARG
57	BY	6	HIS
57	BY	23	ARG
57	BY	28	LYS
57	BY	29	GLU
57	BY	32	PRO
57	BY	38	ILE
57	BY	53	PRO
57	BY	55	TYR
57	BY	56	PRO
57	BY	77	PRO
57	BY	83	THR
57	BY	85	VAL
57	BY	88	LYS
57	BY	89	PHE
57	BY	90	LEU
57	BY	95	LYS

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Mol	Chain	Res	Type
57	BY	97	ARG
57	BY	99	CYS
58	BZ	6	LYS
58	BZ	20	ARG
58	BZ	32	HIS
58	BZ	41	LEU
58	BZ	44	PHE
58	BZ	48	PHE
58	BZ	67	LEU
58	BZ	70	LEU
58	BZ	72	ARG
58	BZ	81	ARG
58	BZ	97	GLU
58	BZ	103	ARG
58	BZ	112	ARG
58	BZ	121	HIS
58	BZ	122	ARG
58	BZ	140	ASP
58	BZ	148	ASP
58	BZ	155	LEU
58	BZ	163	LEU
58	BZ	168	GLU
58	BZ	182	LYS
58	BZ	183	LEU
58	BZ	185	GLU
58	BZ	186	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (168) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	37	ASN
2	AB	45	GLN
2	AB	78	GLN
2	AB	146	GLN
2	AB	204	ASN
2	AB	212	GLN
3	AC	63	ASN
3	AC	110	ASN
3	AC	123	GLN
3	AC	170	GLN
3	AC	176	HIS
3	AC	181	ASN

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Mol	Chain	Res	Type
4	AD	62	GLN
4	AD	77	ASN
4	AD	129	ASN
5	AE	20	GLN
5	AE	38	GLN
5	AE	73	ASN
6	AF	16	GLN
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	57	GLN
6	AF	73	ASN
6	AF	84	ASN
6	AF	94	GLN
6	AF	100	ASN
7	AG	64	GLN
7	AG	68	ASN
7	AG	84	ASN
7	AG	122	HIS
7	AG	153	HIS
9	AI	23	ASN
9	AI	34	ASN
9	AI	124	GLN
10	AJ	56	HIS
10	AJ	78	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	75	HIS
12	AL	78	GLN
13	AM	12	ASN
13	AM	40	ASN
13	AM	62	ASN
13	AM	77	ASN
13	AM	101	GLN
14	AN	49	HIS
15	AO	37	ASN
15	AO	46	HIS
15	AO	71	GLN
16	AP	16	HIS
16	AP	76	GLN
17	AQ	16	GLN

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Mol	Chain	Res	Type
18	AR	36	ASN
19	AS	47	HIS
19	AS	53	ASN
19	AS	65	ASN
20	AT	18	GLN
20	AT	26	ASN
20	AT	73	HIS
20	AT	75	ASN
24	AY	14	ASN
24	AY	137	ASN
24	AY	165	GLN
24	AY	208	GLN
24	AY	270	GLN
24	AY	343	ASN
24	AY	421	GLN
24	AY	458	HIS
24	AY	543	GLN
24	AY	625	ASN
24	AY	641	GLN
24	AY	664	GLN
24	AY	684	GLN
25	B0	17	GLN
25	B0	29	GLN
25	B0	50	ASN
25	B0	70	GLN
26	B1	19	GLN
26	B1	45	ASN
27	B2	46	GLN
27	B2	47	ASN
27	B2	70	GLN
28	B3	19	GLN
28	B3	46	ASN
28	B3	52	HIS
30	B5	23	HIS
31	B6	32	ASN
32	B7	8	ASN
34	B9	34	GLN
37	BC	67	HIS
37	BC	72	GLN
37	BC	149	ASN
37	BC	189	ASN
37	BC	200	HIS

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Mol	Chain	Res	Type
38	BD	96	HIS
38	BD	115	GLN
38	BD	116	GLN
38	BD	126	GLN
38	BD	166	GLN
38	BD	186	HIS
38	BD	198	ASN
38	BD	201	HIS
39	BE	48	GLN
39	BE	54	GLN
39	BE	55	ASN
39	BE	129	HIS
39	BE	143	ASN
39	BE	169	ASN
39	BE	192	ASN
40	BF	69	HIS
40	BF	133	ASN
40	BF	160	ASN
40	BF	169	ASN
40	BF	204	ASN
41	BG	27	ASN
41	BG	66	GLN
41	BG	108	ASN
42	BH	65	HIS
42	BH	74	ASN
42	BH	139	GLN
42	BH	147	ASN
42	BH	158	HIS
46	BN	45	ASN
46	BN	56	ASN
46	BN	128	HIS
47	BO	13	ASN
47	BO	82	ASN
48	BP	27	HIS
48	BP	38	GLN
48	BP	68	GLN
48	BP	81	GLN
48	BP	84	ASN
48	BP	128	HIS
49	BQ	13	GLN
49	BQ	45	GLN
49	BQ	57	HIS

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Mol	Chain	Res	Type
49	BQ	141	GLN
50	BR	3	HIS
50	BR	11	ASN
50	BR	13	HIS
50	BR	23	ASN
50	BR	53	HIS
50	BR	61	HIS
50	BR	71	GLN
51	BS	34	HIS
52	BT	38	ASN
52	BT	43	GLN
52	BT	79	HIS
52	BT	90	GLN
53	BU	14	HIS
53	BU	49	HIS
53	BU	66	ASN
53	BU	81	HIS
53	BU	94	ASN
53	BU	117	GLN
54	BV	11	GLN
55	BW	34	ASN
55	BW	57	ASN
55	BW	102	HIS
56	BX	31	HIS
56	BX	41	ASN
56	BX	87	GLN
58	BZ	34	ASN
58	BZ	54	HIS
58	BZ	65	GLN
58	BZ	132	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1505/1519 (99%)	320 (21%)	51 (3%)
22	AV	75/76 (98%)	24 (32%)	2 (2%)
23	AX	8/9 (88%)	3 (37%)	0
35	BA	2897/2915 (99%)	665 (22%)	60 (2%)
36	BB	118/122 (96%)	26 (22%)	2 (1%)
All	All	4603/4641 (99%)	1038 (22%)	115 (2%)

All (1038) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	38	G
1	AA	39	G
1	AA	40	C
1	AA	48	C
1	AA	51	A
1	AA	57	G
1	AA	60	A
1	AA	61	G
1	AA	64	G
1	AA	65	U
1	AA	76	C
1	AA	77	G
1	AA	78	G
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	82	U
1	AA	83	U
1	AA	84	U
1	AA	88	A
1	AA	89	C
1	AA	90	U
1	AA	91	C
1	AA	92	C
1	AA	101	A
1	AA	107	G
1	AA	108	G
1	AA	113	G
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	144	G
1	AA	189(H)	G
1	AA	189(I)	G
1	AA	195	A
1	AA	197	A
1	AA	198	G
1	AA	199	G
1	AA	203	U

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Mol	Chain	Res	Type
1	AA	204	U
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	265	G
1	AA	266	G
1	AA	267	C
1	AA	268	C
1	AA	275	G
1	AA	289	G
1	AA	312	C
1	AA	321	A
1	AA	324	G
1	AA	328	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	348	G
1	AA	349	A
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	365	U
1	AA	366	C
1	AA	367	U
1	AA	372	C
1	AA	384	G
1	AA	389	A
1	AA	397	A
1	AA	398	C
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	429	U
1	AA	430	A
1	AA	442	C
1	AA	452	A
1	AA	453	A

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Mol	Chain	Res	Type
1	AA	454	C
1	AA	484	G
1	AA	485	G
1	AA	491	G
1	AA	496	A
1	AA	499	A
1	AA	505	G
1	AA	507	C
1	AA	508	C
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	522	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	544	G
1	AA	546	G
1	AA	547	A
1	AA	548	G
1	AA	557	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	563	A
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	589	C
1	AA	590	C
1	AA	593	G
1	AA	595	G
1	AA	632	A
1	AA	633	G
1	AA	653	A
1	AA	665	A

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Mol	Chain	Res	Type
1	AA	686	U
1	AA	687	A
1	AA	688	G
1	AA	700	G
1	AA	702	A
1	AA	703	G
1	AA	705	U
1	AA	722	A
1	AA	723	U
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	770	C
1	AA	771	G
1	AA	774	G
1	AA	777	A
1	AA	788	U
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	796	C
1	AA	816	A
1	AA	817	C
1	AA	828	A
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	861	G
1	AA	863	U
1	AA	868	C
1	AA	872	A
1	AA	874	G
1	AA	902	G
1	AA	917	G
1	AA	922	G
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	939	G

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Mol	Chain	Res	Type
1	AA	940	C
1	AA	941	G
1	AA	948	C
1	AA	950	U
1	AA	951	G
1	AA	952	U
1	AA	953	G
1	AA	957	U
1	AA	960	U
1	AA	961	U
1	AA	962	C
1	AA	963	G
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	980	C
1	AA	981	U
1	AA	982	U
1	AA	983	A
1	AA	992	U
1	AA	993	G
1	AA	996	A
1	AA	1001(A)	G
1	AA	1004	A
1	AA	1025	U
1	AA	1028	C
1	AA	1029	C
1	AA	1030	C
1	AA	1030(C)	G
1	AA	1031	G
1	AA	1048	G
1	AA	1050	G
1	AA	1054	C
1	AA	1066	C
1	AA	1072	G
1	AA	1074	G
1	AA	1076	C
1	AA	1078	U

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Mol	Chain	Res	Type
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G
1	AA	1125	U
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1145	C
1	AA	1151	A
1	AA	1152	A
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1176	A
1	AA	1182	G
1	AA	1183	A
1	AA	1184	G
1	AA	1185	G
1	AA	1187	G
1	AA	1190	G
1	AA	1195	C
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1201	A
1	AA	1212	U
1	AA	1213	A
1	AA	1227	A
1	AA	1229	A
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1256	A
1	AA	1257	U

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Mol	Chain	Res	Type
1	AA	1267	C
1	AA	1268	A
1	AA	1280	A
1	AA	1281	U
1	AA	1283	G
1	AA	1284	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1299	A
1	AA	1300	G
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1364	U
1	AA	1369	C
1	AA	1370	G
1	AA	1371	G
1	AA	1372	U
1	AA	1373	G
1	AA	1385	G
1	AA	1386	G
1	AA	1387	G
1	AA	1390	U
1	AA	1391	U
1	AA	1398	A
1	AA	1399	C
1	AA	1400	C
1	AA	1401	G
1	AA	1402	C
1	AA	1408	A
1	AA	1419	G
1	AA	1442	G

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Mol	Chain	Res	Type
1	AA	1442(A)	G
1	AA	1446	U
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1487	G
1	AA	1490	C
1	AA	1491	G
1	AA	1492	A
1	AA	1493	A
1	AA	1499	A
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1520	G
1	AA	1524	C
1	AA	1525	G
1	AA	1526	G
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
22	AV	10	G
22	AV	13	C
22	AV	15	G
22	AV	16	C
22	AV	17	C
22	AV	18	G
22	AV	19	G
22	AV	20	U
22	AV	21	A
22	AV	22	G
22	AV	23	A
22	AV	30	G
22	AV	34	G
22	AV	44	G
22	AV	45	U
22	AV	46	G
22	AV	48	C

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Mol	Chain	Res	Type
22	AV	52	G
22	AV	53	G
22	AV	61	C
22	AV	73	A
22	AV	74	C
22	AV	75	C
22	AV	76	A
23	AX	12	A
23	AX	13	A
23	AX	19	A
35	BA	9	U
35	BA	10	G
35	BA	16	G
35	BA	28	A
35	BA	29	U
35	BA	30	G
35	BA	32	C
35	BA	34	C
35	BA	36	G
35	BA	37	C
35	BA	44	G
35	BA	45	C
35	BA	49	A
35	BA	50	U
35	BA	53	A
35	BA	58	G
35	BA	71	A
35	BA	72	U
35	BA	74	A
35	BA	75	G
35	BA	83	G
35	BA	84	A
35	BA	88	G
35	BA	90	U
35	BA	94	C
35	BA	102	G
35	BA	109	G
35	BA	110	G
35	BA	111	A
35	BA	112	U
35	BA	115	C
35	BA	118	A

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Mol	Chain	Res	Type
35	BA	119	A
35	BA	120	U
35	BA	139(A)	G
35	BA	140	G
35	BA	141	A
35	BA	146	G
35	BA	174	C
35	BA	175	G
35	BA	177	G
35	BA	178	G
35	BA	179	G
35	BA	180	G
35	BA	181	A
35	BA	182	A
35	BA	196	A
35	BA	197	A
35	BA	199	A
35	BA	205	G
35	BA	215	G
35	BA	216	A
35	BA	221	A
35	BA	222	A
35	BA	228	A
35	BA	229	A
35	BA	230	U
35	BA	233	A
35	BA	247	G
35	BA	248	G
35	BA	249	C
35	BA	252	G
35	BA	257	A
35	BA	262	A
35	BA	264	C
35	BA	265	A
35	BA	266	G
35	BA	271(I)	G
35	BA	271(J)	C
35	BA	271(K)	U
35	BA	271(M)	G
35	BA	271(N)	U
35	BA	271(O)	C
35	BA	271(P)	C

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Mol	Chain	Res	Type
35	BA	271(R)	G
35	BA	271(Y)	U
35	BA	272(A)	U
35	BA	272(B)	G
35	BA	272(I)	U
35	BA	274	G
35	BA	275	G
35	BA	276	A
35	BA	277	C
35	BA	311	A
35	BA	329	G
35	BA	330	A
35	BA	331	A
35	BA	332	A
35	BA	333	G
35	BA	334	C
35	BA	352	G
35	BA	353	G
35	BA	356	G
35	BA	362	U
35	BA	363(E)	U
35	BA	364	C
35	BA	386	G
35	BA	387	U
35	BA	388	G
35	BA	396	G
35	BA	405	U
35	BA	411	G
35	BA	412	A
35	BA	418	G
35	BA	428	A
35	BA	444	C
35	BA	448	U
35	BA	454	A
35	BA	456	C
35	BA	457	A
35	BA	460	A
35	BA	462	C
35	BA	463	G
35	BA	464	U
35	BA	467	G
35	BA	470	A

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Mol	Chain	Res	Type
35	BA	473	G
35	BA	481	G
35	BA	505	A
35	BA	508	G
35	BA	509	C
35	BA	525	U
35	BA	526	A
35	BA	527	C
35	BA	528	A
35	BA	530	G
35	BA	531	C
35	BA	532	A
35	BA	533	G
35	BA	563	G
35	BA	573	G
35	BA	575	A
35	BA	586	A
35	BA	588	U
35	BA	600	G
35	BA	603	A
35	BA	604	G
35	BA	605	C
35	BA	607	U
35	BA	613	G
35	BA	614(B)	G
35	BA	627	A
35	BA	628	G
35	BA	629	G
35	BA	630	G
35	BA	637	A
35	BA	645	C
35	BA	646	A
35	BA	651	G
35	BA	653	A
35	BA	654	A
35	BA	654(I)	C
35	BA	654(J)	A
35	BA	654(K)	C
35	BA	654(T)	C
35	BA	655	A
35	BA	656	G
35	BA	686	G

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Mol	Chain	Res	Type
35	BA	689	A
35	BA	690	G
35	BA	691	C
35	BA	692	C
35	BA	693	C
35	BA	697	C
35	BA	698	C
35	BA	699	A
35	BA	708	C
35	BA	722	A
35	BA	730	C
35	BA	740	U
35	BA	742	G
35	BA	743	G
35	BA	744	G
35	BA	753	C
35	BA	764	A
35	BA	776	G
35	BA	782	A
35	BA	784	A
35	BA	785	G
35	BA	790	C
35	BA	791	C
35	BA	792	G
35	BA	805	G
35	BA	812	C
35	BA	819	A
35	BA	827	U
35	BA	828	U
35	BA	830	G
35	BA	848	G
35	BA	856	C
35	BA	857	C
35	BA	858	U
35	BA	859	G
35	BA	860	U
35	BA	866	A
35	BA	878	A
35	BA	881	G
35	BA	885	C
35	BA	886	C
35	BA	887	A

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Mol	Chain	Res	Type
35	BA	888	C
35	BA	889	C
35	BA	890	A
35	BA	892	G
35	BA	893	C
35	BA	896	A
35	BA	897	C
35	BA	901	A
35	BA	910	A
35	BA	917	A
35	BA	926	A
35	BA	932	G
35	BA	934	G
35	BA	941	A
35	BA	945	A
35	BA	946	G
35	BA	954	G
35	BA	955	C
35	BA	956	G
35	BA	958	U
35	BA	959	A
35	BA	961	C
35	BA	966	G
35	BA	968	G
35	BA	970	C
35	BA	974	G
35	BA	975	C
35	BA	983	A
35	BA	996	A
35	BA	1011	G
35	BA	1012	U
35	BA	1013	C
35	BA	1016	G
35	BA	1023	U
35	BA	1026	U
35	BA	1027	A
35	BA	1033	U
35	BA	1039	G
35	BA	1045	A
35	BA	1046	A
35	BA	1047	G
35	BA	1048	A

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Mol	Chain	Res	Type
35	BA	1059	G
35	BA	1061	U
35	BA	1065	U
35	BA	1066	U
35	BA	1067	A
35	BA	1068	G
35	BA	1069	A
35	BA	1070	A
35	BA	1073	A
35	BA	1074	G
35	BA	1087	G
35	BA	1088	A
35	BA	1091	G
35	BA	1101	U
35	BA	1105	U
35	BA	1106	G
35	BA	1110	G
35	BA	1111	A
35	BA	1112	G
35	BA	1114	G
35	BA	1116	C
35	BA	1119	C
35	BA	1120	G
35	BA	1130	U
35	BA	1133	U
35	BA	1136	G
35	BA	1137	G
35	BA	1142	U
35	BA	1142(A)	A
35	BA	1155	A
35	BA	1173	G
35	BA	1174	A
35	BA	1175	U
35	BA	1176	G
35	BA	1178	C
35	BA	1180	C
35	BA	1205	U
35	BA	1210	A
35	BA	1211	U
35	BA	1213	A
35	BA	1220	A
35	BA	1221	C

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Mol	Chain	Res	Type
35	BA	1223	G
35	BA	1224	C
35	BA	1253	A
35	BA	1256	G
35	BA	1265	A
35	BA	1271	G
35	BA	1272	A
35	BA	1273	U
35	BA	1284	A
35	BA	1285	G
35	BA	1287	A
35	BA	1300	U
35	BA	1301	A
35	BA	1302	A
35	BA	1314	C
35	BA	1319	G
35	BA	1321	A
35	BA	1332	G
35	BA	1345	C
35	BA	1349	A
35	BA	1359	A
35	BA	1365	A
35	BA	1368	G
35	BA	1377	G
35	BA	1378	A
35	BA	1380	G
35	BA	1382	G
35	BA	1384	A
35	BA	1385	G
35	BA	1386	C
35	BA	1396	U
35	BA	1407	C
35	BA	1416	G
35	BA	1417	C
35	BA	1420	U
35	BA	1425	G
35	BA	1426	G
35	BA	1427	A
35	BA	1428	C
35	BA	1437	C
35	BA	1445	A
35	BA	1449	A

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Mol	Chain	Res	Type
35	BA	1450	G
35	BA	1456	G
35	BA	1459	G
35	BA	1460	A
35	BA	1461	G
35	BA	1462	C
35	BA	1467	C
35	BA	1471	A
35	BA	1475	G
35	BA	1478	G
35	BA	1482	G
35	BA	1485	G
35	BA	1490	A
35	BA	1493	C
35	BA	1494	A
35	BA	1495	A
35	BA	1497	U
35	BA	1501	C
35	BA	1502	C
35	BA	1505	C
35	BA	1509	C
35	BA	1509(A)	A
35	BA	1517	G
35	BA	1534	U
35	BA	1541	G
35	BA	1542	A
35	BA	1543	C
35	BA	1544	A
35	BA	1547	C
35	BA	1554	A
35	BA	1558	A
35	BA	1559	G
35	BA	1569	A
35	BA	1578	U
35	BA	1579	A
35	BA	1581	G
35	BA	1584	C
35	BA	1586	A
35	BA	1588	C
35	BA	1591	G
35	BA	1597	A
35	BA	1598	C

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Mol	Chain	Res	Type
35	BA	1599	C
35	BA	1608	A
35	BA	1616	A
35	BA	1617	C
35	BA	1618	A
35	BA	1639	U
35	BA	1640	C
35	BA	1642	G
35	BA	1643	G
35	BA	1646	C
35	BA	1647	G
35	BA	1648	C
35	BA	1653	G
35	BA	1654	A
35	BA	1674	G
35	BA	1696	G
35	BA	1698	A
35	BA	1699	G
35	BA	1702	G
35	BA	1718	G
35	BA	1721	G
35	BA	1722	A
35	BA	1739	U
35	BA	1740	G
35	BA	1741	A
35	BA	1745(A)	C
35	BA	1746	G
35	BA	1748	G
35	BA	1750	G
35	BA	1763	G
35	BA	1764	G
35	BA	1768	U
35	BA	1770	G
35	BA	1772	G
35	BA	1773	A
35	BA	1776	G
35	BA	1779	U
35	BA	1780	A
35	BA	1781	C
35	BA	1782	C
35	BA	1786	A
35	BA	1787	A

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Mol	Chain	Res	Type
35	BA	1788	C
35	BA	1791	A
35	BA	1799	G
35	BA	1800	C
35	BA	1801	G
35	BA	1805	U
35	BA	1806	C
35	BA	1808	U
35	BA	1816	G
35	BA	1820	U
35	BA	1821	A
35	BA	1822	G
35	BA	1829	A
35	BA	1835	G
35	BA	1839	G
35	BA	1847	A
35	BA	1848	A
35	BA	1858	G
35	BA	1865	G
35	BA	1877	A
35	BA	1878	G
35	BA	1881	C
35	BA	1885	A
35	BA	1888	G
35	BA	1889	A
35	BA	1890	A
35	BA	1891	G
35	BA	1893	C
35	BA	1906	G
35	BA	1907	G
35	BA	1912	A
35	BA	1913	A
35	BA	1914	C
35	BA	1920	C
35	BA	1925	C
35	BA	1926	U
35	BA	1930	G
35	BA	1936	A
35	BA	1937	A
35	BA	1938	A
35	BA	1941	C
35	BA	1955	U

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Mol	Chain	Res	Type
35	BA	1962	C
35	BA	1963	U
35	BA	1965	C
35	BA	1967	C
35	BA	1969	A
35	BA	1970	A
35	BA	1971	A
35	BA	1972	A
35	BA	1982	C
35	BA	1984	G
35	BA	1985	G
35	BA	1987	G
35	BA	1988	C
35	BA	1989	G
35	BA	1992	G
35	BA	1993	U
35	BA	1995	U
35	BA	1996	C
35	BA	1997	G
35	BA	1998	G
35	BA	2000	G
35	BA	2010	G
35	BA	2011	U
35	BA	2020	A
35	BA	2023	G
35	BA	2027	G
35	BA	2031	A
35	BA	2032	G
35	BA	2033	A
35	BA	2034	U
35	BA	2036	C
35	BA	2043	C
35	BA	2051	A
35	BA	2055	C
35	BA	2056	G
35	BA	2060	A
35	BA	2061	G
35	BA	2062	A
35	BA	2069	G
35	BA	2099	U
35	BA	2100	G
35	BA	2103	C

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Mol	Chain	Res	Type
35	BA	2104	G
35	BA	2105	C
35	BA	2106	G
35	BA	2110	G
35	BA	2111	C
35	BA	2112	G
35	BA	2116	G
35	BA	2117	A
35	BA	2118	U
35	BA	2127	G
35	BA	2128	C
35	BA	2129	C
35	BA	2132	U
35	BA	2133	A
35	BA	2134	A
35	BA	2137	C
35	BA	2138	C
35	BA	2140	C
35	BA	2145	C
35	BA	2146	C
35	BA	2147	G
35	BA	2152	G
35	BA	2153	G
35	BA	2154	G
35	BA	2158	A
35	BA	2159	G
35	BA	2172	U
35	BA	2173	A
35	BA	2174	C
35	BA	2175	C
35	BA	2177	C
35	BA	2178	C
35	BA	2180	U
35	BA	2186	G
35	BA	2187	G
35	BA	2190	G
35	BA	2193	G
35	BA	2198	A
35	BA	2199	A
35	BA	2200	C
35	BA	2201	C
35	BA	2202	C

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Mol	Chain	Res	Type
35	BA	2206	G
35	BA	2207	G
35	BA	2208	A
35	BA	2218	U
35	BA	2219	G
35	BA	2225	A
35	BA	2238	G
35	BA	2239	G
35	BA	2275	C
35	BA	2283	C
35	BA	2287	A
35	BA	2288	A
35	BA	2305	A
35	BA	2307	G
35	BA	2308	G
35	BA	2309	A
35	BA	2313	C
35	BA	2316	C
35	BA	2319	G
35	BA	2320	A
35	BA	2334	G
35	BA	2336	A
35	BA	2347	C
35	BA	2350	C
35	BA	2356	C
35	BA	2357	U
35	BA	2361	A
35	BA	2364	C
35	BA	2383	G
35	BA	2385	C
35	BA	2392	A
35	BA	2400	G
35	BA	2401	U
35	BA	2402	C
35	BA	2403	C
35	BA	2404	C
35	BA	2405	G
35	BA	2406	U
35	BA	2409	G
35	BA	2423	U
35	BA	2425	A
35	BA	2429	G

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Mol	Chain	Res	Type
35	BA	2430	A
35	BA	2431	U
35	BA	2439	A
35	BA	2441	C
35	BA	2447	G
35	BA	2448	A
35	BA	2465	C
35	BA	2469	A
35	BA	2470	G
35	BA	2476	A
35	BA	2482	G
35	BA	2484	G
35	BA	2491	U
35	BA	2502	G
35	BA	2505	G
35	BA	2518	A
35	BA	2524	G
35	BA	2529	G
35	BA	2542	A
35	BA	2543	G
35	BA	2552	U
35	BA	2554	U
35	BA	2555	U
35	BA	2556	C
35	BA	2557	G
35	BA	2558	C
35	BA	2560	C
35	BA	2566	A
35	BA	2567	G
35	BA	2573	C
35	BA	2578	G
35	BA	2586	C
35	BA	2602	A
35	BA	2603	G
35	BA	2607	G
35	BA	2608	G
35	BA	2609	U
35	BA	2610	C
35	BA	2611	U
35	BA	2612	C
35	BA	2613	U
35	BA	2615	U

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Mol	Chain	Res	Type
35	BA	2630	G
35	BA	2654	A
35	BA	2657	A
35	BA	2658	C
35	BA	2673	G
35	BA	2690	C
35	BA	2691	C
35	BA	2712	U
35	BA	2712(A)	A
35	BA	2713	A
35	BA	2714	G
35	BA	2717	G
35	BA	2726	U
35	BA	2733	A
35	BA	2750	A
35	BA	2751	G
35	BA	2752	C
35	BA	2753	A
35	BA	2756	U
35	BA	2757	A
35	BA	2758	A
35	BA	2759	G
35	BA	2764	A
35	BA	2765	A
35	BA	2766	G
35	BA	2778	A
35	BA	2779	U
35	BA	2780	G
35	BA	2789	C
35	BA	2790	A
35	BA	2791	C
35	BA	2794	C
35	BA	2799	C
35	BA	2802	G
35	BA	2803	C
35	BA	2808	U
35	BA	2820	A
35	BA	2821	A
35	BA	2833	G
35	BA	2834	G
35	BA	2835	A
35	BA	2849	U

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Mol	Chain	Res	Type
35	BA	2872	G
35	BA	2893	G
35	BA	2894	G
36	BB	8	U
36	BB	13	A
36	BB	15	A
36	BB	17	C
36	BB	21	G
36	BB	25	A
36	BB	26	A
36	BB	27	C
36	BB	32	C
36	BB	35	U
36	BB	39	A
36	BB	40	U
36	BB	41	U
36	BB	42	C
36	BB	43	C
36	BB	45	A
36	BB	53	A
36	BB	57	A
36	BB	66	A
36	BB	67	G
36	BB	68	C
36	BB	73	A
36	BB	81	G
36	BB	88	C
36	BB	110	G
36	BB	113	G

All (115) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	60	A
1	AA	64	G
1	AA	78	G
1	AA	84	U
1	AA	89	C
1	AA	90	U
1	AA	115	G
1	AA	119	A
1	AA	197	A

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Mol	Chain	Res	Type
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	274	A
1	AA	344	A
1	AA	353	A
1	AA	388	G
1	AA	412	A
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	495	A
1	AA	547	A
1	AA	560	U
1	AA	573	A
1	AA	575	G
1	AA	687	A
1	AA	748	C
1	AA	792	A
1	AA	968	A
1	AA	980	C
1	AA	982	U
1	AA	992	U
1	AA	1003	G
1	AA	1030(D)	A
1	AA	1049	U
1	AA	1053	G
1	AA	1101	A
1	AA	1139	G
1	AA	1157	A
1	AA	1200	C
1	AA	1229	A
1	AA	1239	A
1	AA	1279	A
1	AA	1285	A
1	AA	1399	C
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1492	A
1	AA	1498	U
1	AA	1504	G

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Mol	Chain	Res	Type
22	AV	15	G
22	AV	16	C
35	BA	49	A
35	BA	71	A
35	BA	74	A
35	BA	197	A
35	BA	221	A
35	BA	331	A
35	BA	332	A
35	BA	363(F)	A
35	BA	387	U
35	BA	587	C
35	BA	603	A
35	BA	627	A
35	BA	752	A
35	BA	764	A
35	BA	790	C
35	BA	856	C
35	BA	887	A
35	BA	974	G
35	BA	1060	U
35	BA	1068	G
35	BA	1210	A
35	BA	1300	U
35	BA	1301	A
35	BA	1379	A
35	BA	1427	A
35	BA	1540	U
35	BA	1541	G
35	BA	1558	A
35	BA	1591	G
35	BA	1608	A
35	BA	1653	G
35	BA	1799	G
35	BA	1819	A
35	BA	1820	U
35	BA	1839	G
35	BA	1992	G
35	BA	2033	A
35	BA	2103	C
35	BA	2104	G
35	BA	2111	C

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Mol	Chain	Res	Type
35	BA	2116	G
35	BA	2117	A
35	BA	2126	A
35	BA	2136	C
35	BA	2137	C
35	BA	2145	C
35	BA	2157	G
35	BA	2176	A
35	BA	2180	U
35	BA	2282	G
35	BA	2401	U
35	BA	2402	C
35	BA	2422	A
35	BA	2439	A
35	BA	2481	G
35	BA	2542	A
35	BA	2610	C
35	BA	2689	U
35	BA	2750	A
35	BA	2756	U
36	BB	56	G
36	BB	66	A

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 527 ligands modelled in this entry, 526 are monoatomic - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected

value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
61	GCP	AY	701	59	26,34,34	1.89	9 (34%)	34,54,54	2.04	9 (26%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
61	GCP	AY	701	59	-	0/15/38/38	0/3/3/3

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AY	701	GCP	C6-C5	-3.87	1.33	1.41
61	AY	701	GCP	PB-O2B	-3.31	1.48	1.56
61	AY	701	GCP	PG-O3G	-3.15	1.47	1.54
61	AY	701	GCP	C5-C4	-2.93	1.33	1.40
61	AY	701	GCP	PG-O2G	-2.68	1.48	1.54
61	AY	701	GCP	O4'-C1'	2.20	1.44	1.41
61	AY	701	GCP	PB-O3A	2.45	1.61	1.58
61	AY	701	GCP	C2-N1	2.54	1.39	1.35
61	AY	701	GCP	C6-N1	3.80	1.40	1.33

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AY	701	GCP	N3-C2-N1	-5.31	119.36	127.44
61	AY	701	GCP	C4'-O4'-C1'	-5.24	103.96	109.72
61	AY	701	GCP	PA-O3A-PB	-4.54	119.98	132.73
61	AY	701	GCP	O1G-PG-C3B	-3.12	104.02	111.13
61	AY	701	GCP	C5-C6-N1	-2.91	119.61	123.59
61	AY	701	GCP	O2G-PG-C3B	-2.23	101.00	106.40
61	AY	701	GCP	C2'-C1'-N9	-2.15	111.01	114.29
61	AY	701	GCP	O3G-PG-O2G	2.15	114.44	108.13
61	AY	701	GCP	O2B-PB-O1B	3.02	119.61	110.12

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	AY	701	GCP	11	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
35	BA	3
1	AA	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	496:A	O3'	498:U	P	3.07
1	BA	45:C	O3'	47:C	P	2.97
1	BA	1133:U	O3'	1135:C	P	2.48
1	BA	2203:U	O3'	2205:C	P	2.42

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	1507/1519 (99%)	0.21	46 (3%) 52 33	24, 47, 125, 239	0
2	AB	235/256 (91%)	0.48	20 (8%) 13 6	34, 61, 112, 122	0
3	AC	207/239 (86%)	0.33	10 (4%) 34 20	30, 54, 84, 102	0
4	AD	208/209 (99%)	0.15	6 (2%) 55 35	36, 57, 80, 89	0
5	AE	151/162 (93%)	-0.08	2 (1%) 79 61	29, 40, 59, 81	0
6	AF	101/101 (100%)	0.24	3 (2%) 54 33	41, 68, 86, 99	0
7	AG	155/156 (99%)	0.48	10 (6%) 22 12	44, 67, 112, 126	0
8	AH	138/138 (100%)	-0.11	0 100 100	32, 45, 63, 74	0
9	AI	127/128 (99%)	0.42	10 (7%) 15 8	33, 61, 81, 90	0
10	AJ	99/105 (94%)	0.51	9 (9%) 11 6	38, 58, 100, 104	0
11	AK	119/129 (92%)	0.28	4 (3%) 49 30	26, 53, 76, 94	0
12	AL	125/132 (94%)	0.29	7 (5%) 28 15	27, 45, 64, 96	0
13	AM	119/126 (94%)	1.05	19 (15%) 3 1	46, 83, 107, 117	0
14	AN	60/61 (98%)	0.41	7 (11%) 6 3	35, 48, 83, 91	0
15	AO	88/89 (98%)	0.21	2 (2%) 64 43	33, 51, 75, 85	0
16	AP	84/88 (95%)	0.17	1 (1%) 81 63	37, 47, 70, 95	0
17	AQ	100/105 (95%)	-0.07	0 100 100	27, 44, 62, 65	0
18	AR	70/88 (79%)	0.28	3 (4%) 39 23	36, 57, 94, 95	0
19	AS	88/93 (94%)	0.85	9 (10%) 9 5	59, 82, 103, 109	0
20	AT	99/106 (93%)	0.13	3 (3%) 54 33	33, 45, 68, 73	0
21	AU	25/27 (92%)	1.03	2 (8%) 15 8	43, 59, 79, 81	0
22	AV	76/76 (100%)	0.42	5 (6%) 22 11	33, 74, 111, 145	0
23	AX	9/9 (100%)	1.12	2 (22%) 1 1	28, 51, 122, 134	0
24	AY	687/691 (99%)	0.55	64 (9%) 11 6	39, 67, 119, 141	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	B0	84/84 (100%)	1.80	15 (17%) 2 1	43, 56, 121, 140	0
26	B1	94/97 (96%)	0.50	6 (6%) 23 12	26, 47, 76, 88	0
27	B2	71/71 (100%)	0.64	7 (9%) 9 5	41, 57, 88, 112	0
28	B3	60/60 (100%)	0.59	2 (3%) 50 31	35, 56, 75, 100	0
29	B4	71/71 (100%)	3.88	61 (85%) 0 0	129, 151, 159, 159	0
30	B5	59/59 (100%)	0.62	7 (11%) 6 3	20, 42, 109, 122	0
31	B6	50/53 (94%)	1.54	11 (22%) 1 1	41, 72, 91, 98	0
32	B7	48/48 (100%)	0.02	1 (2%) 67 46	18, 30, 60, 86	0
33	B8	64/64 (100%)	0.66	8 (12%) 5 2	32, 49, 70, 87	0
34	B9	37/37 (100%)	0.69	2 (5%) 29 17	40, 52, 62, 76	0
35	BA	2901/2915 (99%)	0.22	99 (3%) 49 30	18, 42, 116, 244	0
36	BB	119/122 (97%)	0.24	1 (0%) 87 73	42, 88, 115, 130	0
37	BC	227/228 (99%)	0.83	36 (15%) 3 1	25, 78, 124, 135	0
38	BD	275/275 (100%)	0.01	8 (2%) 55 35	18, 32, 58, 93	0
39	BE	205/206 (99%)	0.35	12 (5%) 26 14	23, 42, 78, 86	0
40	BF	208/210 (99%)	0.44	16 (7%) 16 8	17, 52, 104, 121	0
41	BG	179/181 (98%)	1.49	53 (29%) 1 0	94, 122, 138, 144	0
42	BH	176/180 (97%)	0.91	22 (12%) 5 2	52, 75, 97, 108	0
43	BJ	1/130 (0%)	2.84	1 (100%) 0 0	121, 121, 121, 121	0
44	BK	0/140	-	-	-	-
45	BL	0/71	-	-	-	-
46	BN	139/140 (99%)	0.14	6 (4%) 39 23	31, 45, 72, 93	0
47	BO	122/122 (100%)	-0.25	0 100 100	25, 39, 54, 63	0
48	BP	146/149 (97%)	1.26	31 (21%) 1 1	34, 67, 96, 118	0
49	BQ	141/141 (100%)	0.22	3 (2%) 67 46	33, 49, 75, 115	0
50	BR	117/117 (100%)	0.13	4 (3%) 49 30	23, 40, 59, 67	0
51	BS	99/111 (89%)	1.02	15 (15%) 3 1	68, 91, 113, 122	0
52	BT	138/146 (94%)	0.96	24 (17%) 2 1	32, 53, 122, 144	0
53	BU	117/117 (100%)	-0.04	2 (1%) 73 53	28, 42, 69, 85	0
54	BV	101/101 (100%)	0.42	7 (6%) 20 10	25, 62, 83, 87	0
55	BW	113/113 (100%)	0.15	5 (4%) 38 22	26, 38, 69, 104	0
56	BX	93/95 (97%)	-0.14	2 (2%) 65 44	30, 41, 58, 63	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
57	BY	101/109 (92%)	1.31	23 (22%) 1 1	37, 61, 118, 127	0
58	BZ	185/205 (90%)	0.87	25 (13%) 4 2	25, 81, 96, 109	0
All	All	11218/11801 (95%)	0.40	759 (6%) 20 11	17, 52, 116, 244	0

All (759) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
35	BA	654(E)	G	16.8
24	AY	48	GLY	16.6
25	B0	3	HIS	15.4
39	BE	205	ALA	15.3
49	BQ	141	GLN	14.1
13	AM	120	LYS	13.9
25	B0	7	LEU	13.3
57	BY	51	VAL	13.0
49	BQ	140	ALA	12.9
35	BA	654(V)	A	12.5
35	BA	654(I)	C	12.2
24	AY	50	ALA	12.1
35	BA	654(G)	C	11.2
24	AY	573	HIS	11.2
35	BA	654(H)	G	11.1
25	B0	5	LYS	11.1
25	B0	4	LYS	11.0
35	BA	2802	G	11.0
11	AK	129	SER	10.7
25	B0	2	ALA	10.7
24	AY	690	GLY	10.0
24	AY	46	HIS	9.7
35	BA	654(F)	C	9.6
11	AK	128	ALA	9.5
25	B0	6	GLY	9.3
35	BA	654(K)	C	9.1
35	BA	1534	U	9.1
24	AY	52	MET	9.0
19	AS	91	LYS	9.0
35	BA	654(L)	G	8.7
24	AY	51	THR	8.6
35	BA	2795	G	8.4
13	AM	119	GLY	8.3
12	AL	129	ALA	8.2

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Mol	Chain	Res	Type	RSRZ
30	B5	2	ALA	8.1
35	BA	1077	A	8.1
29	B4	63	TYR	8.0
35	BA	654(D)	G	7.8
57	BY	52	SER	7.8
35	BA	2803	C	7.8
24	AY	5	VAL	7.8
35	BA	2793	G	7.7
34	B9	1	MET	7.7
25	B0	8	GLY	7.7
48	BP	149	GLU	7.6
38	BD	276	LYS	7.6
29	B4	67	TYR	7.6
35	BA	2799	C	7.6
29	B4	25	TYR	7.6
40	BF	12	LEU	7.4
37	BC	105	LEU	7.4
31	B6	31	PRO	7.4
29	B4	71	ARG	7.4
29	B4	64	GLY	7.3
24	AY	537	GLU	7.2
35	BA	2805	G	7.2
29	B4	47	GLN	7.2
35	BA	654(C)	G	7.2
40	BF	11	VAL	7.1
38	BD	36	PRO	7.1
5	AE	155	GLU	7.1
21	AU	26	LYS	7.0
52	BT	137	LYS	6.9
29	B4	46	GLN	6.9
39	BE	204	ALA	6.9
41	BG	50	ALA	6.9
35	BA	2796	U	6.9
52	BT	136	GLN	6.9
54	BV	36	PRO	6.8
29	B4	42	PHE	6.8
30	B5	58	LEU	6.7
29	B4	65	ASP	6.7
24	AY	49	ALA	6.7
35	BA	275	G	6.6
13	AM	84	ILE	6.6
24	AY	44	GLU	6.6

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Mol	Chain	Res	Type	RSRZ
29	B4	12	ALA	6.6
13	AM	116	THR	6.5
40	BF	10	PRO	6.5
40	BF	1	MET	6.5
35	BA	2896	C	6.5
13	AM	117	VAL	6.4
29	B4	68	ARG	6.4
29	B4	70	GLY	6.3
57	BY	2	ARG	6.3
58	BZ	114	GLY	6.3
52	BT	138	ALA	6.3
35	BA	2792	G	6.3
52	BT	1	MET	6.3
37	BC	126	SER	6.2
42	BH	176	ALA	6.1
1	AA	88	A	6.1
24	AY	503	GLY	6.0
29	B4	66	SER	5.9
14	AN	2	ALA	5.9
30	B5	59	GLU	5.8
24	AY	43	GLY	5.8
29	B4	62	ARG	5.7
1	AA	1030	C	5.7
35	BA	2801	A	5.7
1	AA	89	C	5.7
1	AA	83	U	5.6
52	BT	39	ARG	5.6
24	AY	42	ILE	5.6
22	AV	17	C	5.6
52	BT	32	TYR	5.5
24	AY	4	LYS	5.5
35	BA	2602	A	5.5
35	BA	654(U)	A	5.5
29	B4	39	CYS	5.5
52	BT	133	GLU	5.5
35	BA	654(Q)	C	5.4
22	AV	16	C	5.4
3	AC	78	GLY	5.4
7	AG	49	ILE	5.3
24	AY	45	VAL	5.3
6	AF	101	ALA	5.3
48	BP	110	TYR	5.3

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Mol	Chain	Res	Type	RSRZ
51	BS	58	LEU	5.3
24	AY	507	TYR	5.2
13	AM	7	VAL	5.2
40	BF	24	LEU	5.2
35	BA	1847	A	5.2
29	B4	6	HIS	5.2
24	AY	47	GLU	5.1
41	BG	113	ARG	5.1
41	BG	154	GLY	5.1
3	AC	130	VAL	5.1
41	BG	76	SER	5.0
35	BA	2804	C	5.0
35	BA	654(J)	A	5.0
35	BA	2894	G	5.0
31	B6	54	ILE	5.0
35	BA	2801(A)	A	5.0
35	BA	1541	G	4.9
35	BA	2794	C	4.9
52	BT	135	ALA	4.9
35	BA	654(T)	C	4.9
35	BA	884	C	4.9
35	BA	1536	C	4.9
1	AA	1534	A	4.8
40	BF	7	TYR	4.8
10	AJ	85	LEU	4.8
3	AC	120	VAL	4.8
26	B1	85	LEU	4.8
1	AA	1001(A)	G	4.7
41	BG	90	LEU	4.7
53	BU	118	GLY	4.7
1	AA	1533	C	4.7
57	BY	55	TYR	4.7
58	BZ	179	ASP	4.7
7	AG	84	ASN	4.6
29	B4	61	ARG	4.6
37	BC	96	GLY	4.6
29	B4	69	LYS	4.6
37	BC	78	ILE	4.6
24	AY	538	TYR	4.6
29	B4	24	THR	4.6
46	BN	3	THR	4.6
1	AA	1031	G	4.6

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Mol	Chain	Res	Type	RSRZ
35	BA	2897	U	4.6
27	B2	71	ASN	4.6
48	BP	150	ALA	4.6
42	BH	2	SER	4.5
1	AA	1032	G	4.5
2	AB	7	VAL	4.5
42	BH	83	TYR	4.5
41	BG	4	ASP	4.5
2	AB	16	HIS	4.5
42	BH	168	PRO	4.5
39	BE	76	ARG	4.5
28	B3	1	MET	4.5
29	B4	1	MET	4.5
29	B4	7	PRO	4.5
52	BT	28	VAL	4.4
24	AY	539	ILE	4.4
35	BA	654(S)	G	4.4
24	AY	500	GLN	4.4
1	AA	1129	C	4.4
41	BG	41	GLN	4.4
1	AA	1030(B)	C	4.3
23	AX	11	A	4.3
40	BF	208	GLY	4.3
29	B4	48	ARG	4.3
1	AA	1493	A	4.3
54	BV	48	GLY	4.3
12	AL	28	LYS	4.3
33	B8	48	PHE	4.3
35	BA	2310	A	4.3
29	B4	28	LYS	4.2
24	AY	536	LYS	4.2
35	BA	654	A	4.2
52	BT	30	VAL	4.2
53	BU	91	ASP	4.2
41	BG	51	ARG	4.2
1	AA	1030(A)	G	4.2
52	BT	27	THR	4.2
35	BA	1535	A	4.2
14	AN	14	PRO	4.2
41	BG	102	PHE	4.2
37	BC	106	ASP	4.2
41	BG	128	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
35	BA	1174	A	4.2
29	B4	37	SER	4.1
35	BA	352	G	4.1
35	BA	654(N)	G	4.1
37	BC	114	VAL	4.1
57	BY	89	PHE	4.1
57	BY	58	GLY	4.1
29	B4	27	THR	4.1
55	BW	112	GLY	4.1
13	AM	118	ALA	4.1
1	AA	1036	G	4.1
41	BG	118	ARG	4.1
29	B4	5	ILE	4.1
1	AA	1026	G	4.1
24	AY	6	GLU	4.1
51	BS	54	LEU	4.0
38	BD	275	LYS	4.0
57	BY	54	LYS	4.0
35	BA	1076	C	4.0
24	AY	571	SER	4.0
39	BE	132	HIS	4.0
57	BY	56	PRO	4.0
20	AT	9	ASN	4.0
32	B7	48	LYS	4.0
57	BY	53	PRO	3.9
29	B4	52	THR	3.9
29	B4	58	ARG	3.9
58	BZ	150	LEU	3.9
20	AT	100	ILE	3.9
29	B4	10	VAL	3.9
13	AM	85	GLY	3.9
39	BE	72	VAL	3.9
29	B4	40	HIS	3.9
30	B5	55	ARG	3.9
35	BA	1173	G	3.9
24	AY	540	PRO	3.8
41	BG	82	LEU	3.8
24	AY	501	THR	3.8
29	B4	22	ILE	3.8
41	BG	26	GLN	3.8
48	BP	51	PHE	3.8
31	B6	42	TRP	3.8

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Mol	Chain	Res	Type	RSRZ
35	BA	2892	A	3.8
58	BZ	176	PRO	3.8
29	B4	31	ILE	3.8
51	BS	57	LYS	3.8
35	BA	881	G	3.8
37	BC	122	GLY	3.7
19	AS	90	THR	3.7
42	BH	85	LYS	3.7
9	AI	61	ALA	3.7
12	AL	128	ALA	3.7
35	BA	2807	G	3.7
31	B6	46	HIS	3.7
24	AY	534	ILE	3.7
29	B4	19	GLY	3.7
3	AC	169	ALA	3.7
35	BA	1176	G	3.7
57	BY	61	ILE	3.7
35	BA	508	G	3.7
24	AY	504	ARG	3.7
58	BZ	187	ALA	3.7
35	BA	277	C	3.7
35	BA	1509	C	3.7
42	BH	42	ARG	3.6
29	B4	41	PRO	3.6
29	B4	43	TYR	3.6
37	BC	86	GLU	3.6
1	AA	82	U	3.6
24	AY	508	GLY	3.6
24	AY	531	GLY	3.6
58	BZ	115	GLY	3.6
1	AA	1030(D)	A	3.6
57	BY	3	VAL	3.6
41	BG	78	SER	3.6
55	BW	111	HIS	3.6
3	AC	127	ARG	3.6
39	BE	88	GLY	3.6
41	BG	148	MET	3.6
2	AB	19	HIS	3.6
29	B4	16	CYS	3.6
9	AI	62	TYR	3.6
29	B4	21	VAL	3.6
29	B4	36	CYS	3.6

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Mol	Chain	Res	Type	RSRZ
3	AC	107	GLN	3.6
13	AM	115	LYS	3.6
33	B8	34	TRP	3.6
35	BA	654(A)	G	3.6
35	BA	2402	C	3.6
2	AB	18	GLY	3.6
29	B4	15	ILE	3.5
24	AY	525	PHE	3.5
29	B4	56	VAL	3.5
30	B5	60	VAL	3.5
41	BG	25	TYR	3.5
29	B4	13	ARG	3.5
7	AG	156	TRP	3.5
24	AY	570	GLY	3.5
35	BA	883	G	3.5
7	AG	79	ARG	3.5
21	AU	25	LYS	3.5
35	BA	887	A	3.5
51	BS	107	GLU	3.5
37	BC	72	GLN	3.4
4	AD	209	ARG	3.4
57	BY	60	PHE	3.4
12	AL	127	GLU	3.4
41	BG	45	GLU	3.4
48	BP	118	GLY	3.4
26	B1	57	GLU	3.4
10	AJ	55	LYS	3.4
58	BZ	148	ASP	3.4
58	BZ	184	ALA	3.4
51	BS	82	ILE	3.4
58	BZ	186	GLU	3.4
35	BA	156	U	3.4
35	BA	2207	G	3.4
51	BS	68	GLN	3.4
2	AB	15	VAL	3.3
29	B4	11	PRO	3.3
37	BC	206	LYS	3.3
27	B2	16	LEU	3.3
48	BP	50	ARG	3.3
48	BP	53	GLY	3.3
9	AI	126	SER	3.3
37	BC	128	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
57	BY	50	ARG	3.3
48	BP	27	HIS	3.3
29	B4	23	GLU	3.3
58	BZ	166	SER	3.3
35	BA	654(M)	C	3.3
39	BE	54	GLN	3.3
57	BY	57	GLN	3.3
2	AB	122	PHE	3.3
13	AM	10	PRO	3.3
41	BG	126	ASP	3.3
27	B2	68	ARG	3.3
24	AY	582	PHE	3.2
35	BA	888	C	3.2
38	BD	244	ARG	3.2
40	BF	25	PRO	3.2
42	BH	155	SER	3.2
3	AC	119	ARG	3.2
24	AY	502	GLY	3.2
9	AI	4	TYR	3.2
40	BF	13	SER	3.2
5	AE	154	GLY	3.2
27	B2	72	ALA	3.2
25	B0	76	GLY	3.2
27	B2	45	SER	3.2
24	AY	530	VAL	3.2
48	BP	91	PHE	3.2
52	BT	134	GLU	3.2
35	BA	885	C	3.2
37	BC	123	ALA	3.1
29	B4	49	PHE	3.1
29	B4	59	PHE	3.1
54	BV	30	GLY	3.1
13	AM	4	ILE	3.1
48	BP	52	GLU	3.1
58	BZ	168	GLU	3.1
2	AB	128	GLU	3.1
33	B8	64	TYR	3.1
52	BT	34	VAL	3.1
29	B4	57	GLU	3.1
57	BY	91	GLU	3.1
41	BG	117	PHE	3.1
19	AS	30	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
19	AS	41	VAL	3.1
24	AY	203	GLU	3.1
35	BA	886	C	3.1
37	BC	124	VAL	3.0
40	BF	23	ASP	3.0
35	BA	276	A	3.0
24	AY	583	LYS	3.0
48	BP	48	PRO	3.0
24	AY	574	GLU	3.0
42	BH	81	GLU	3.0
7	AG	151	TYR	3.0
57	BY	87	LYS	3.0
35	BA	2140	C	3.0
2	AB	140	HIS	3.0
37	BC	121	MET	3.0
52	BT	106	SER	3.0
1	AA	1002	G	3.0
3	AC	168	ALA	3.0
24	AY	569	ASP	3.0
58	BZ	63	ASP	3.0
3	AC	81	GLY	3.0
24	AY	509	HIS	3.0
35	BA	229	A	3.0
10	AJ	4	ILE	3.0
41	BG	43	LEU	3.0
40	BF	14	PRO	3.0
48	BP	23	PRO	3.0
2	AB	230	VAL	3.0
19	AS	89	ALA	3.0
37	BC	113	ALA	2.9
52	BT	91	ARG	2.9
57	BY	28	LYS	2.9
24	AY	578	SER	2.9
10	AJ	89	ASP	2.9
48	BP	15	ARG	2.9
11	AK	11	LYS	2.9
19	AS	85	LYS	2.9
37	BC	81	GLY	2.9
29	B4	44	THR	2.9
41	BG	178	PHE	2.9
29	B4	30	GLU	2.9
35	BA	1068	G	2.9

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Mol	Chain	Res	Type	RSRZ
1	AA	78	G	2.9
11	AK	127	LYS	2.9
13	AM	8	GLU	2.9
57	BY	4	LYS	2.9
29	B4	45	GLY	2.9
58	BZ	177	PRO	2.9
42	BH	47	GLU	2.9
51	BS	43	GLU	2.9
42	BH	1	MET	2.9
41	BG	165	THR	2.9
25	B0	79	VAL	2.9
29	B4	8	LYS	2.9
42	BH	9	ILE	2.9
33	B8	65	GLU	2.8
43	BJ	85	LEU	2.8
7	AG	72	ARG	2.8
52	BT	115	ARG	2.8
55	BW	113	LYS	2.8
58	BZ	33	LEU	2.8
12	AL	19	ARG	2.8
29	B4	50	VAL	2.8
42	BH	172	LYS	2.8
46	BN	1	MET	2.8
31	B6	9	LEU	2.8
35	BA	2139	C	2.8
58	BZ	13	GLU	2.8
35	BA	896	A	2.8
35	BA	1848	A	2.8
52	BT	112	ARG	2.8
10	AJ	83	GLU	2.8
52	BT	33	LYS	2.8
35	BA	654(O)	G	2.8
25	B0	74	ARG	2.8
37	BC	53	ARG	2.8
41	BG	94	LEU	2.8
23	AX	19	A	2.8
41	BG	125	PHE	2.8
24	AY	197	ARG	2.8
24	AY	563	ILE	2.8
29	B4	17	GLY	2.8
58	BZ	68	PRO	2.8
14	AN	15	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
57	BY	81	LYS	2.8
35	BA	1066	U	2.7
2	AB	37	ASN	2.7
7	AG	83	ALA	2.7
41	BG	48	GLU	2.7
9	AI	60	ASP	2.7
48	BP	95	VAL	2.7
35	BA	654(R)	C	2.7
19	AS	86	GLU	2.7
46	BN	68	GLU	2.7
31	B6	7	ILE	2.7
41	BG	104	GLU	2.7
39	BE	154	LYS	2.7
52	BT	31	SER	2.7
24	AY	689	LYS	2.7
58	BZ	161	VAL	2.7
42	BH	171	LEU	2.7
40	BF	17	ARG	2.7
33	B8	35	GLN	2.7
37	BC	80	LYS	2.7
31	B6	29	ASN	2.7
37	BC	115	VAL	2.7
16	AP	83	GLU	2.7
37	BC	168	LYS	2.7
48	BP	107	LYS	2.7
1	AA	1399	C	2.7
29	B4	18	CYS	2.7
1	AA	1033	G	2.7
41	BG	180	PHE	2.7
37	BC	109	MET	2.6
41	BG	145	THR	2.6
37	BC	177	GLY	2.6
41	BG	75	LYS	2.6
35	BA	34	C	2.6
30	B5	51	TYR	2.6
37	BC	76	LEU	2.6
37	BC	143	ALA	2.6
48	BP	47	ASP	2.6
10	AJ	100	THR	2.6
4	AD	151	LYS	2.6
42	BH	167	GLU	2.6
25	B0	12	ASN	2.6

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Mol	Chain	Res	Type	RSRZ
35	BA	654(B)	C	2.6
31	B6	37	ARG	2.6
52	BT	29	ARG	2.6
12	AL	47	LYS	2.6
18	AR	46	GLU	2.6
30	B5	57	VAL	2.6
58	BZ	162	GLU	2.6
31	B6	39	TYR	2.6
2	AB	137	ARG	2.6
24	AY	526	VAL	2.6
41	BG	182	LYS	2.6
41	BG	49	ASP	2.6
50	BR	8	ARG	2.6
50	BR	3	HIS	2.6
24	AY	232	LEU	2.6
27	B2	10	LEU	2.6
35	BA	614(B)	G	2.6
26	B1	28	GLY	2.6
35	BA	545	C	2.6
2	AB	126	GLU	2.6
41	BG	139	LEU	2.6
42	BH	88	LEU	2.6
48	BP	147	LEU	2.6
41	BG	77	ILE	2.6
13	AM	5	ALA	2.6
1	AA	470	C	2.6
58	BZ	146	ILE	2.5
29	B4	32	TYR	2.5
35	BA	2893	G	2.5
15	AO	89	GLY	2.5
41	BG	173	LEU	2.5
51	BS	60	GLY	2.5
54	BV	101	GLY	2.5
37	BC	98	GLU	2.5
48	BP	94	GLU	2.5
28	B3	55	ARG	2.5
50	BR	105	ARG	2.5
41	BG	150	ASP	2.5
14	AN	16	PHE	2.5
29	B4	53	GLU	2.5
37	BC	170	GLY	2.5
40	BF	207	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
24	AY	529	ILE	2.5
41	BG	73	ALA	2.5
57	BY	44	ILE	2.5
41	BG	155	MET	2.5
58	BZ	185	GLU	2.5
1	AA	92	C	2.5
24	AY	576	ASP	2.5
7	AG	48	LYS	2.5
1	AA	1037	C	2.5
22	AV	20	U	2.5
41	BG	156	ASP	2.5
25	B0	65	GLY	2.5
48	BP	139	LYS	2.5
33	B8	33	ASN	2.5
24	AY	581	ALA	2.5
35	BA	2610	C	2.5
37	BC	142	LYS	2.5
55	BW	63	ASP	2.5
41	BG	34	LEU	2.4
6	AF	100	ASN	2.4
29	B4	26	SER	2.4
41	BG	136	ARG	2.4
41	BG	103	LEU	2.4
42	BH	116	GLU	2.4
42	BH	23	ARG	2.4
24	AY	53	ASP	2.4
14	AN	17	LYS	2.4
31	B6	23	THR	2.4
40	BF	18	ARG	2.4
9	AI	25	LYS	2.4
26	B1	27	GLU	2.4
1	AA	1034	G	2.4
1	AA	1504	G	2.4
58	BZ	144	LEU	2.4
14	AN	19	ARG	2.4
2	AB	125	PRO	2.4
35	BA	645	C	2.4
37	BC	151	GLY	2.4
54	BV	19	LYS	2.4
1	AA	77	G	2.4
48	BP	122	PRO	2.4
2	AB	231	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
24	AY	236	GLU	2.4
41	BG	39	ILE	2.4
31	B6	40	CYS	2.4
1	AA	80	G	2.4
19	AS	32	LYS	2.4
1	AA	162	A	2.3
1	AA	1025	U	2.3
58	BZ	32	HIS	2.3
24	AY	211	GLU	2.3
13	AM	112	GLY	2.3
29	B4	14	ILE	2.3
29	B4	54	GLY	2.3
38	BD	26	LYS	2.3
48	BP	121	LYS	2.3
24	AY	497	PHE	2.3
2	AB	124	SER	2.3
13	AM	15	VAL	2.3
7	AG	153	HIS	2.3
26	B1	83	GLU	2.3
2	AB	237	ALA	2.3
57	BY	79	CYS	2.3
13	AM	9	ILE	2.3
24	AY	584	ILE	2.3
37	BC	95	VAL	2.3
29	B4	60	GLN	2.3
56	BX	66	LEU	2.3
15	AO	20	GLY	2.3
24	AY	580	MET	2.3
35	BA	271(M)	G	2.3
35	BA	274	G	2.3
39	BE	61	ARG	2.3
42	BH	170	ARG	2.3
37	BC	24	ASP	2.3
52	BT	118	ARG	2.3
1	AA	1024	G	2.3
29	B4	35	VAL	2.3
37	BC	56	ASP	2.3
34	B9	20	HIS	2.3
37	BC	79	ALA	2.3
41	BG	157	ILE	2.3
2	AB	132	LYS	2.3
51	BS	81	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
24	AY	23	ALA	2.3
37	BC	159	ALA	2.3
1	AA	702	A	2.3
35	BA	1301	A	2.3
41	BG	83	ARG	2.3
52	BT	129	ARG	2.3
57	BY	27	VAL	2.3
10	AJ	88	LEU	2.3
48	BP	24	GLY	2.3
51	BS	56	LEU	2.3
35	BA	1740	G	2.3
24	AY	231	TYR	2.3
24	AY	527	ASN	2.3
46	BN	139	GLU	2.3
35	BA	1046	A	2.3
33	B8	32	LEU	2.3
48	BP	82	GLY	2.3
1	AA	198	G	2.2
38	BD	262	ARG	2.2
39	BE	59	VAL	2.2
1	AA	1257	U	2.2
7	AG	155	ARG	2.2
1	AA	97	G	2.2
35	BA	890	A	2.2
6	AF	47	ARG	2.2
49	BQ	59	ARG	2.2
13	AM	60	VAL	2.2
24	AY	565	VAL	2.2
35	BA	2410	G	2.2
36	BB	67	G	2.2
54	BV	37	VAL	2.2
58	BZ	11	GLU	2.2
39	BE	131	ALA	2.2
38	BD	24	ILE	2.2
25	B0	11	ARG	2.2
48	BP	71	VAL	2.2
9	AI	95	LYS	2.2
13	AM	31	LYS	2.2
37	BC	118	PRO	2.2
27	B2	48	HIS	2.2
3	AC	96	GLY	2.2
39	BE	1	MET	2.2

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Mol	Chain	Res	Type	RSRZ
35	BA	2791	C	2.2
25	B0	85	ALA	2.2
35	BA	899	A	2.2
35	BA	2790	A	2.2
2	AB	131	PRO	2.2
10	AJ	87	THR	2.2
13	AM	11	ARG	2.2
22	AV	44	G	2.2
35	BA	1087	G	2.2
55	BW	68	ARG	2.2
58	BZ	14	LYS	2.2
29	B4	20	ASN	2.2
4	AD	158	ILE	2.2
41	BG	79	ASN	2.2
48	BP	65	ARG	2.2
52	BT	36	GLU	2.2
24	AY	684	GLN	2.2
57	BY	45	VAL	2.2
35	BA	2403	C	2.1
1	AA	496	A	2.1
1	AA	563	A	2.1
40	BF	134	GLY	2.1
42	BH	97	ARG	2.1
35	BA	11	G	2.1
38	BD	2	ALA	2.1
41	BG	11	TYR	2.1
20	AT	103	GLY	2.1
24	AY	518	PRO	2.1
33	B8	63	PRO	2.1
41	BG	89	GLY	2.1
37	BC	15	VAL	2.1
41	BG	161	THR	2.1
1	AA	1335	C	2.1
12	AL	41	ARG	2.1
14	AN	12	ARG	2.1
35	BA	1075	C	2.1
48	BP	7	ARG	2.1
48	BP	57	THR	2.1
9	AI	59	PHE	2.1
46	BN	4	TYR	2.1
18	AR	23	LYS	2.1
1	AA	1042	G	2.1

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Mol	Chain	Res	Type	RSRZ
50	BR	4	LEU	2.1
41	BG	86	MET	2.1
9	AI	88	TYR	2.1
26	B1	60	PHE	2.1
1	AA	91	C	2.1
4	AD	47	ARG	2.1
42	BH	82	GLY	2.1
1	AA	532	A	2.1
1	AA	1001	A	2.1
24	AY	555	LEU	2.1
51	BS	46	VAL	2.1
41	BG	116	ASP	2.1
25	B0	82	ARG	2.1
51	BS	92	TYR	2.1
51	BS	40	ILE	2.1
2	AB	159	PRO	2.1
24	AY	535	PRO	2.1
48	BP	99	LEU	2.1
51	BS	55	ALA	2.1
4	AD	9	CYS	2.1
48	BP	30	THR	2.1
48	BP	84	ASN	2.1
10	AJ	90	LEU	2.1
1	AA	84	U	2.0
42	BH	111	HIS	2.0
4	AD	26	CYS	2.0
40	BF	133	ASN	2.0
1	AA	204	U	2.0
1	AA	841	U	2.0
2	AB	149	LEU	2.0
56	BX	95	LEU	2.0
46	BN	135	PRO	2.0
35	BA	1646	C	2.0
52	BT	132	LYS	2.0
51	BS	34	HIS	2.0
9	AI	27	THR	2.0
22	AV	19	G	2.0
35	BA	2131	G	2.0
54	BV	20	LEU	2.0
18	AR	88	LYS	2.0
19	AS	13	ASP	2.0
35	BA	290	G	2.0

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Mol	Chain	Res	Type	RSRZ
35	BA	1822	G	2.0
41	BG	23	PHE	2.0
1	AA	1499	A	2.0
35	BA	1045	A	2.0
37	BC	88	GLU	2.0
48	BP	98	GLU	2.0
58	BZ	4	ARG	2.0
24	AY	566	THR	2.0
41	BG	93	THR	2.0
41	BG	168	GLU	2.0
42	BH	110	SER	2.0

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 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	AA	1615	1/1	0.88	0.75	57.77	51,51,51,51	0
59	MG	AA	1684	1/1	0.82	0.85	50.95	61,61,61,61	0
59	MG	BA	3312	1/1	0.94	0.52	47.56	44,44,44,44	0
59	MG	AA	1636	1/1	0.77	0.51	43.25	60,60,60,60	0
59	MG	BA	3174	1/1	0.54	0.64	41.92	97,97,97,97	0
59	MG	BA	3044	1/1	0.97	0.40	38.40	21,21,21,21	0
59	MG	BA	3110	1/1	0.97	0.49	30.19	31,31,31,31	0
59	MG	BA	3007	1/1	0.93	0.45	26.36	26,26,26,26	0
59	MG	BA	3071	1/1	0.94	0.37	23.13	22,22,22,22	0
59	MG	BA	3209	1/1	0.76	0.63	19.33	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	AA	1623	1/1	0.98	0.53	19.05	33,33,33,33	0
59	MG	AA	1762	1/1	0.59	0.41	18.48	100,100,100,100	0
59	MG	BA	3048	1/1	0.91	0.39	18.34	28,28,28,28	0
59	MG	BA	3207	1/1	0.86	0.29	18.31	30,30,30,30	0
59	MG	BA	3310	1/1	0.91	0.29	17.77	20,20,20,20	0
59	MG	BA	3006	1/1	0.97	0.41	17.44	30,30,30,30	0
59	MG	BA	3094	1/1	0.98	0.32	17.34	25,25,25,25	0
59	MG	BA	3266	1/1	0.92	0.31	17.21	71,71,71,71	0
59	MG	BA	3180	1/1	0.95	0.34	17.18	47,47,47,47	0
59	MG	BA	3196	1/1	0.88	0.38	17.11	53,53,53,53	0
59	MG	BA	3077	1/1	0.94	0.35	16.55	31,31,31,31	0
59	MG	AA	1649	1/1	0.93	0.40	16.53	23,23,23,23	0
59	MG	BA	3024	1/1	0.88	0.28	16.43	44,44,44,44	0
59	MG	BA	3149	1/1	0.96	0.48	15.93	29,29,29,29	0
59	MG	BA	3277	1/1	0.94	0.45	15.87	57,57,57,57	0
59	MG	BA	3154	1/1	0.82	0.60	15.81	59,59,59,59	0
59	MG	AA	1741	1/1	0.73	0.46	15.50	58,58,58,58	0
59	MG	BA	3056	1/1	0.90	0.37	15.32	38,38,38,38	0
59	MG	BA	3120	1/1	0.95	0.38	14.85	43,43,43,43	0
59	MG	BA	3172	1/1	0.96	0.45	14.49	31,31,31,31	0
59	MG	AA	1760	1/1	0.64	0.67	13.97	70,70,70,70	0
59	MG	AA	1604	1/1	0.85	0.41	13.90	59,59,59,59	0
59	MG	BA	3279	1/1	0.59	0.44	13.82	63,63,63,63	0
59	MG	BA	3108	1/1	0.86	0.27	13.64	34,34,34,34	0
59	MG	BA	3295	1/1	0.80	0.30	13.45	32,32,32,32	0
59	MG	BA	3176	1/1	0.95	0.46	12.56	23,23,23,23	0
59	MG	BA	3111	1/1	0.93	0.32	12.45	30,30,30,30	0
59	MG	BA	3169	1/1	0.85	0.37	12.31	43,43,43,43	0
59	MG	BA	3084	1/1	0.93	0.54	12.27	38,38,38,38	0
59	MG	BA	3184	1/1	0.90	0.24	12.08	40,40,40,40	0
59	MG	AA	1665	1/1	0.94	0.42	12.03	28,28,28,28	0
59	MG	AA	1733	1/1	0.93	0.31	11.90	67,67,67,67	0
59	MG	AA	1677	1/1	0.64	0.37	11.79	77,77,77,77	0
59	MG	AA	1616	1/1	0.94	0.41	11.11	30,30,30,30	0
59	MG	AA	1671	1/1	0.96	0.65	11.05	43,43,43,43	0
59	MG	BA	3088	1/1	0.89	0.24	10.92	27,27,27,27	0
59	MG	BA	3004	1/1	0.97	0.38	10.78	24,24,24,24	0
59	MG	BA	3039	1/1	0.97	0.39	10.39	38,38,38,38	0
59	MG	AA	1645	1/1	0.92	0.26	10.31	22,22,22,22	0
59	MG	B0	101	1/1	0.86	0.77	9.83	72,72,72,72	0
59	MG	BA	3087	1/1	0.84	0.34	9.31	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3116	1/1	0.82	0.28	9.23	78,78,78,78	0
59	MG	BA	3109	1/1	0.98	0.44	9.05	20,20,20,20	0
59	MG	BA	3125	1/1	0.74	0.38	8.99	122,122,122,122	0
59	MG	BA	3315	1/1	0.79	0.35	8.77	52,52,52,52	0
59	MG	BA	3104	1/1	0.98	0.32	8.55	30,30,30,30	0
59	MG	BA	3113	1/1	0.97	0.52	8.36	32,32,32,32	0
59	MG	BA	3199	1/1	0.94	0.27	8.28	26,26,26,26	0
59	MG	AA	1756	1/1	0.84	0.39	8.27	54,54,54,54	0
59	MG	BA	3153	1/1	0.85	0.24	8.12	54,54,54,54	0
59	MG	BA	3139	1/1	0.93	0.29	8.08	35,35,35,35	0
59	MG	AA	1692	1/1	0.93	0.23	8.05	48,48,48,48	0
59	MG	BA	3097	1/1	0.89	0.41	7.52	37,37,37,37	0
59	MG	BA	3248	1/1	0.83	0.44	7.48	58,58,58,58	0
59	MG	BA	3214	1/1	0.80	0.31	7.46	39,39,39,39	0
59	MG	BA	3258	1/1	0.77	0.32	7.43	51,51,51,51	0
59	MG	BA	3051	1/1	0.94	0.37	7.40	31,31,31,31	0
59	MG	BA	3271	1/1	0.84	0.34	7.36	28,28,28,28	0
59	MG	AA	1777	1/1	0.49	0.31	7.32	40,40,40,40	0
59	MG	BA	3129	1/1	0.87	0.29	7.26	51,51,51,51	0
59	MG	BA	3282	1/1	0.56	0.30	7.05	67,67,67,67	0
59	MG	BA	3091	1/1	0.97	0.22	6.88	21,21,21,21	0
59	MG	BA	3053	1/1	0.91	0.33	6.77	24,24,24,24	0
59	MG	AA	1678	1/1	0.96	0.35	6.63	29,29,29,29	0
59	MG	AA	1690	1/1	0.95	0.47	6.61	35,35,35,35	0
59	MG	BA	3313	1/1	0.96	0.26	6.46	36,36,36,36	0
59	MG	AA	1724	1/1	0.74	0.42	6.40	48,48,48,48	0
59	MG	BA	3082	1/1	0.95	0.49	6.21	23,23,23,23	0
59	MG	BA	3236	1/1	0.81	0.24	6.19	52,52,52,52	0
59	MG	BA	3127	1/1	0.93	0.24	5.92	38,38,38,38	0
59	MG	AA	1700	1/1	0.91	0.32	5.76	27,27,27,27	0
59	MG	BA	3043	1/1	0.98	0.23	5.35	28,28,28,28	0
59	MG	AA	1639	1/1	0.66	0.30	5.26	55,55,55,55	0
59	MG	BA	3145	1/1	0.86	0.23	5.08	32,32,32,32	0
59	MG	AA	1729	1/1	0.86	0.47	4.91	45,45,45,45	0
59	MG	BA	3189	1/1	0.93	0.19	4.84	26,26,26,26	0
59	MG	AA	1625	1/1	0.96	0.36	4.84	17,17,17,17	0
59	MG	BA	3052	1/1	0.97	0.31	4.79	32,32,32,32	0
59	MG	BA	3228	1/1	0.90	0.32	4.55	23,23,23,23	0
59	MG	AA	1686	1/1	0.90	0.25	4.52	34,34,34,34	0
59	MG	BA	3210	1/1	0.95	0.29	4.50	23,23,23,23	0
59	MG	AA	1704	1/1	0.92	0.37	4.47	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3075	1/1	0.88	0.23	4.06	31,31,31,31	0
59	MG	BA	3257	1/1	0.94	0.22	3.73	43,43,43,43	0
59	MG	AA	1715	1/1	0.75	0.24	3.22	42,42,42,42	0
59	MG	BA	3078	1/1	0.92	0.20	3.08	26,26,26,26	0
60	ZN	AD	301	1/1	0.96	0.35	3.03	54,54,54,54	0
59	MG	BA	3181	1/1	0.87	0.18	2.87	32,32,32,32	0
59	MG	AA	1638	1/1	0.76	0.17	2.86	38,38,38,38	0
59	MG	BA	3206	1/1	0.83	0.23	2.80	65,65,65,65	0
59	MG	BA	3298	1/1	0.93	0.17	2.73	20,20,20,20	0
59	MG	BA	3098	1/1	0.91	0.23	2.07	25,25,25,25	0
59	MG	AA	1653	1/1	0.94	0.31	1.97	19,19,19,19	0
59	MG	AA	1780	1/1	0.40	0.18	1.93	54,54,54,54	0
59	MG	AA	1682	1/1	0.96	0.27	1.81	53,53,53,53	0
59	MG	BA	3244	1/1	0.92	0.21	1.80	41,41,41,41	0
59	MG	BA	3232	1/1	0.89	0.24	1.78	33,33,33,33	0
59	MG	AA	1701	1/1	0.81	0.17	1.75	30,30,30,30	0
59	MG	AA	1725	1/1	0.93	0.25	1.72	35,35,35,35	0
59	MG	BA	3150	1/1	0.98	0.15	1.66	15,15,15,15	0
59	MG	AA	1673	1/1	0.94	0.21	1.45	35,35,35,35	0
59	MG	AA	1732	1/1	0.87	0.25	0.78	20,20,20,20	0
59	MG	BA	3219	1/1	0.81	0.16	0.66	44,44,44,44	0
59	MG	AA	1719	1/1	0.93	0.16	0.58	32,32,32,32	0
59	MG	BA	3141	1/1	0.89	0.20	0.50	29,29,29,29	0
59	MG	BA	3243	1/1	0.86	0.23	0.41	32,32,32,32	0
59	MG	AA	1726	1/1	0.83	0.21	0.36	45,45,45,45	0
59	MG	BA	3289	1/1	0.89	0.21	0.33	51,51,51,51	0
59	MG	BA	3269	1/1	0.66	0.16	0.29	48,48,48,48	0
59	MG	AA	1711	1/1	0.77	0.19	0.26	34,34,34,34	0
59	MG	AA	1761	1/1	0.86	0.20	0.20	30,30,30,30	0
59	MG	BA	3171	1/1	0.97	0.23	0.17	19,19,19,19	0
59	MG	BA	3157	1/1	0.93	0.17	0.13	17,17,17,17	0
59	MG	AA	1722	1/1	0.82	0.23	0.12	32,32,32,32	0
59	MG	AA	1687	1/1	0.95	0.20	0.11	30,30,30,30	0
59	MG	BA	3142	1/1	0.70	0.20	0.08	48,48,48,48	0
59	MG	AA	1736	1/1	0.94	0.19	-0.11	29,29,29,29	0
59	MG	BA	3208	1/1	0.91	0.23	-0.16	34,34,34,34	0
59	MG	BA	3217	1/1	0.95	0.18	-0.23	35,35,35,35	0
61	GCP	AY	701	32/32	0.87	0.21	-0.26	41,53,61,63	0
59	MG	AA	1693	1/1	0.92	0.17	-0.28	30,30,30,30	0
59	MG	BA	3288	1/1	0.98	0.18	-0.31	24,24,24,24	0
59	MG	AA	1668	1/1	0.85	0.17	-0.32	34,34,34,34	0
59	MG	AA	1738	1/1	0.90	0.17	-0.46	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	AA	1751	1/1	0.90	0.14	-0.87	46,46,46,46	0
59	MG	AA	1749	1/1	0.88	0.13	-0.89	38,38,38,38	0
59	MG	BA	3151	1/1	0.95	0.13	-1.04	33,33,33,33	0
60	ZN	AN	101	1/1	1.00	0.13	-1.06	45,45,45,45	0
59	MG	BA	3050	1/1	0.94	0.15	-1.20	23,23,23,23	0
59	MG	BA	3319	1/1	0.96	0.11	-1.47	35,35,35,35	0
59	MG	BA	3001	1/1	0.96	0.11	-1.47	35,35,35,35	0
59	MG	BA	3229	1/1	0.96	0.13	-1.75	5,5,5,5	0
59	MG	AA	1734	1/1	0.87	0.12	-1.93	41,41,41,41	0
59	MG	AA	1778	1/1	0.97	0.12	-2.02	6,6,6,6	0
59	MG	AA	1657	1/1	0.92	0.10	-2.04	32,32,32,32	0
59	MG	AA	1721	1/1	0.93	0.12	-2.20	17,17,17,17	0
59	MG	BA	3221	1/1	0.90	0.10	-2.20	43,43,43,43	0
59	MG	AA	1783	1/1	0.88	0.13	-2.58	43,43,43,43	0
59	MG	AA	1747	1/1	0.86	0.08	-2.84	23,23,23,23	0
59	MG	BA	3308	1/1	0.95	0.12	-2.93	58,58,58,58	0
59	MG	BA	3140	1/1	0.82	0.13	-3.14	45,45,45,45	0
59	MG	AA	1785	1/1	0.96	0.08	-3.20	47,47,47,47	0
60	ZN	B9	101	1/1	1.00	0.06	-3.39	49,49,49,49	0
59	MG	AY	702	1/1	0.93	0.08	-3.97	23,23,23,23	0
59	MG	BA	3259	1/1	0.92	0.12	-4.47	39,39,39,39	0
59	MG	AA	1710	1/1	0.95	0.06	-4.82	35,35,35,35	0
59	MG	BA	3061	1/1	0.93	0.05	-5.03	37,37,37,37	0
59	MG	AA	1705	1/1	0.97	0.08	-5.87	23,23,23,23	0
59	MG	AA	1660	1/1	0.94	0.10	-6.03	19,19,19,19	0
59	MG	AA	1699	1/1	0.68	0.25	-	33,33,33,33	0
59	MG	AA	1679	1/1	0.98	0.55	-	32,32,32,32	0
59	MG	AA	1664	1/1	0.93	0.39	-	29,29,29,29	0
59	MG	BA	3300	1/1	0.93	0.17	-	65,65,65,65	0
59	MG	BA	3255	1/1	0.86	0.24	-	35,35,35,35	0
59	MG	AA	1789	1/1	0.81	0.28	-	61,61,61,61	0
59	MG	AA	1791	1/1	0.95	0.09	-	57,57,57,57	0
59	MG	BA	3020	1/1	0.84	0.22	-	63,63,63,63	0
59	MG	BA	3118	1/1	0.95	0.30	-	29,29,29,29	0
59	MG	BA	3156	1/1	0.96	0.19	-	25,25,25,25	0
59	MG	AA	1666	1/1	0.76	0.53	-	83,83,83,83	0
59	MG	AA	1610	1/1	0.95	0.66	-	46,46,46,46	0
59	MG	AA	1794	1/1	0.83	0.27	-	53,53,53,53	0
59	MG	BA	3197	1/1	0.79	0.56	-	58,58,58,58	0
59	MG	BA	3132	1/1	0.82	0.33	-	59,59,59,59	0
59	MG	BA	3234	1/1	0.86	0.20	-	63,63,63,63	0
59	MG	BA	3065	1/1	0.98	0.29	-	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	AA	1748	1/1	0.85	0.36	-	56,56,56,56	0
59	MG	BA	3280	1/1	0.79	0.24	-	87,87,87,87	0
59	MG	BA	3060	1/1	0.90	0.39	-	31,31,31,31	0
59	MG	AA	1753	1/1	0.66	0.53	-	89,89,89,89	0
59	MG	BA	3175	1/1	0.79	0.19	-	62,62,62,62	0
59	MG	AA	1667	1/1	0.97	0.35	-	33,33,33,33	0
59	MG	BA	3106	1/1	0.84	0.22	-	47,47,47,47	0
59	MG	AA	1634	1/1	0.81	0.22	-	43,43,43,43	0
59	MG	BA	3144	1/1	0.88	0.23	-	28,28,28,28	0
59	MG	AA	1768	1/1	0.87	0.45	-	34,34,34,34	0
59	MG	BA	3079	1/1	0.86	0.34	-	34,34,34,34	0
59	MG	BA	3057	1/1	0.95	0.29	-	29,29,29,29	0
59	MG	BA	3166	1/1	0.80	0.28	-	68,68,68,68	0
59	MG	AA	1689	1/1	0.83	0.40	-	79,79,79,79	0
59	MG	AA	1674	1/1	0.75	0.44	-	74,74,74,74	0
59	MG	BA	3018	1/1	0.89	0.56	-	43,43,43,43	0
59	MG	BA	3074	1/1	0.97	0.36	-	3,3,3,3	0
59	MG	BA	3230	1/1	0.67	0.35	-	40,40,40,40	0
59	MG	BA	3224	1/1	0.96	0.46	-	32,32,32,32	0
59	MG	BA	3296	1/1	0.90	0.38	-	38,38,38,38	0
59	MG	BA	3105	1/1	0.88	0.20	-	69,69,69,69	0
59	MG	BA	3009	1/1	0.77	0.72	-	77,77,77,77	0
59	MG	AA	1770	1/1	0.96	0.29	-	41,41,41,41	0
59	MG	AA	1694	1/1	0.93	0.13	-	19,19,19,19	0
59	MG	BA	3303	1/1	0.92	0.09	-	42,42,42,42	0
59	MG	BA	3100	1/1	0.94	0.10	-	24,24,24,24	0
59	MG	AA	1707	1/1	0.81	0.22	-	60,60,60,60	0
59	MG	BA	3168	1/1	0.80	0.11	-	58,58,58,58	0
59	MG	BA	3183	1/1	0.95	0.14	-	58,58,58,58	0
59	MG	AA	1683	1/1	0.92	0.23	-	25,25,25,25	0
59	MG	AA	1765	1/1	0.91	0.56	-	63,63,63,63	0
59	MG	AA	1788	1/1	0.84	0.33	-	73,73,73,73	0
59	MG	BA	3225	1/1	0.76	0.14	-	44,44,44,44	0
59	MG	AA	1781	1/1	0.33	0.27	-	54,54,54,54	0
59	MG	BA	3242	1/1	0.73	0.44	-	78,78,78,78	0
59	MG	BA	3085	1/1	0.74	0.21	-	25,25,25,25	0
59	MG	BA	3249	1/1	0.96	0.31	-	22,22,22,22	0
59	MG	AA	1740	1/1	0.44	0.75	-	79,79,79,79	0
59	MG	AA	1739	1/1	0.91	0.42	-	28,28,28,28	0
59	MG	BA	3016	1/1	0.72	0.63	-	77,77,77,77	0
59	MG	AA	1755	1/1	0.74	0.35	-	60,60,60,60	0
59	MG	BA	3028	1/1	0.65	0.40	-	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	AA	1618	1/1	0.97	0.38	-	47,47,47,47	0
59	MG	BA	3267	1/1	0.77	0.34	-	62,62,62,62	0
59	MG	AA	1603	1/1	0.94	0.41	-	38,38,38,38	0
59	MG	AA	1757	1/1	0.87	0.30	-	57,57,57,57	0
59	MG	BA	3121	1/1	0.92	0.34	-	33,33,33,33	0
59	MG	AA	1659	1/1	0.97	0.39	-	34,34,34,34	0
59	MG	AA	1787	1/1	0.86	0.27	-	55,55,55,55	0
59	MG	BA	3128	1/1	0.74	0.26	-	38,38,38,38	0
59	MG	BA	3134	1/1	0.87	0.31	-	65,65,65,65	0
59	MG	BA	3069	1/1	0.97	0.33	-	18,18,18,18	0
59	MG	BA	3081	1/1	0.98	0.28	-	23,23,23,23	0
59	MG	BA	3095	1/1	0.81	0.38	-	47,47,47,47	0
59	MG	BA	3239	1/1	0.76	0.27	-	87,87,87,87	0
59	MG	BA	3102	1/1	0.96	0.23	-	30,30,30,30	0
59	MG	AA	1626	1/1	0.92	0.42	-	59,59,59,59	0
59	MG	BA	3307	1/1	0.94	0.16	-	40,40,40,40	0
59	MG	BA	3059	1/1	0.94	0.45	-	45,45,45,45	0
59	MG	AA	1779	1/1	0.63	0.53	-	81,81,81,81	0
59	MG	AA	1709	1/1	0.66	0.19	-	41,41,41,41	0
59	MG	BA	3314	1/1	0.91	0.10	-	49,49,49,49	0
59	MG	BA	3198	1/1	0.88	0.17	-	63,63,63,63	0
59	MG	BA	3201	1/1	0.77	0.41	-	64,64,64,64	0
59	MG	BA	3114	1/1	0.93	0.21	-	29,29,29,29	0
59	MG	AA	1769	1/1	0.91	0.36	-	33,33,33,33	0
59	MG	AA	1743	1/1	0.71	0.39	-	38,38,38,38	0
59	MG	BA	3291	1/1	0.92	0.32	-	27,27,27,27	0
59	MG	BA	3170	1/1	0.93	0.52	-	41,41,41,41	0
59	MG	AA	1776	1/1	0.96	0.29	-	25,25,25,25	0
59	MG	AA	1606	1/1	0.76	0.53	-	60,60,60,60	0
59	MG	AA	1730	1/1	0.96	0.13	-	62,62,62,62	0
59	MG	AA	1773	1/1	0.59	0.56	-	60,60,60,60	0
59	MG	BA	3013	1/1	0.93	0.49	-	37,37,37,37	0
59	MG	BA	3220	1/1	0.93	0.19	-	56,56,56,56	0
59	MG	AA	1635	1/1	0.72	0.22	-	65,65,65,65	0
59	MG	BA	3143	1/1	0.86	0.21	-	57,57,57,57	0
59	MG	BA	3241	1/1	0.90	0.19	-	65,65,65,65	0
59	MG	BA	3317	1/1	0.98	0.28	-	29,29,29,29	0
59	MG	AA	1643	1/1	0.80	0.23	-	38,38,38,38	0
59	MG	AA	1764	1/1	0.79	0.27	-	61,61,61,61	0
59	MG	BA	3273	1/1	0.88	0.65	-	72,72,72,72	0
59	MG	BA	3131	1/1	0.97	0.43	-	33,33,33,33	0
59	MG	BA	3305	1/1	0.80	0.10	-	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	3163	1/1	0.84	0.30	-	55,55,55,55	0
59	MG	AA	1716	1/1	0.65	0.37	-	71,71,71,71	0
59	MG	AA	1629	1/1	0.96	0.28	-	44,44,44,44	0
59	MG	BA	3179	1/1	0.37	0.43	-	87,87,87,87	0
59	MG	BA	3250	1/1	0.84	0.24	-	53,53,53,53	0
59	MG	AA	1797	1/1	0.80	0.19	-	58,58,58,58	0
59	MG	AA	1767	1/1	0.88	0.29	-	60,60,60,60	0
59	MG	BA	3293	1/1	0.89	0.50	-	76,76,76,76	0
59	MG	BA	3160	1/1	0.79	0.17	-	55,55,55,55	0
59	MG	BA	3063	1/1	0.97	0.15	-	22,22,22,22	0
59	MG	AA	1763	1/1	0.82	0.30	-	51,51,51,51	0
59	MG	BA	3284	1/1	0.72	0.42	-	61,61,61,61	0
59	MG	BA	3202	1/1	0.90	0.40	-	43,43,43,43	0
59	MG	AA	1612	1/1	0.96	0.46	-	47,47,47,47	0
59	MG	BA	3200	1/1	0.92	0.31	-	71,71,71,71	0
59	MG	AA	1670	1/1	0.92	0.21	-	57,57,57,57	0
59	MG	BA	3032	1/1	0.69	0.25	-	73,73,73,73	0
59	MG	BA	3205	1/1	0.95	0.12	-	35,35,35,35	0
59	MG	BA	3062	1/1	0.97	0.15	-	13,13,13,13	0
59	MG	BA	3286	1/1	0.93	0.34	-	42,42,42,42	0
59	MG	BA	3212	1/1	0.88	0.28	-	46,46,46,46	0
59	MG	AA	1784	1/1	0.88	0.17	-	37,37,37,37	0
59	MG	BA	3178	1/1	0.98	0.27	-	43,43,43,43	0
59	MG	BA	3086	1/1	0.95	0.26	-	46,46,46,46	0
59	MG	AA	1646	1/1	0.92	0.38	-	34,34,34,34	0
59	MG	BA	3316	1/1	0.95	0.38	-	34,34,34,34	0
59	MG	BA	3047	1/1	0.96	0.37	-	42,42,42,42	0
59	MG	AA	1611	1/1	0.80	0.34	-	75,75,75,75	0
59	MG	BA	3015	1/1	0.89	0.53	-	63,63,63,63	0
59	MG	AA	1742	1/1	0.91	0.22	-	45,45,45,45	0
59	MG	BA	3030	1/1	0.58	1.26	-	86,86,86,86	0
59	MG	AA	1752	1/1	0.90	0.22	-	59,59,59,59	0
59	MG	BA	3222	1/1	0.96	0.30	-	44,44,44,44	0
59	MG	BA	3019	1/1	0.55	0.72	-	77,77,77,77	0
59	MG	BA	3213	1/1	0.90	0.36	-	31,31,31,31	0
59	MG	B5	101	1/1	0.88	0.27	-	47,47,47,47	0
59	MG	BA	3027	1/1	0.88	0.30	-	71,71,71,71	0
59	MG	AA	1708	1/1	0.90	0.26	-	57,57,57,57	0
59	MG	BA	3099	1/1	0.97	0.21	-	19,19,19,19	0
59	MG	AA	1631	1/1	0.94	0.20	-	40,40,40,40	0
59	MG	BA	3182	1/1	0.89	0.27	-	73,73,73,73	0
59	MG	BA	3042	1/1	0.80	0.37	-	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3115	1/1	0.92	0.30	-	52,52,52,52	0
59	MG	BA	3049	1/1	0.92	0.46	-	47,47,47,47	0
59	MG	BA	3215	1/1	0.39	0.60	-	81,81,81,81	0
59	MG	AA	1627	1/1	0.86	0.23	-	74,74,74,74	0
59	MG	BA	3185	1/1	0.91	0.43	-	36,36,36,36	0
59	MG	BA	3309	1/1	0.96	0.17	-	50,50,50,50	0
59	MG	AA	1642	1/1	0.86	0.26	-	61,61,61,61	0
59	MG	AA	1662	1/1	0.90	0.33	-	34,34,34,34	0
59	MG	BA	3055	1/1	0.83	0.16	-	33,33,33,33	0
59	MG	BA	3287	1/1	0.92	0.17	-	41,41,41,41	0
59	MG	AA	1644	1/1	0.69	0.20	-	60,60,60,60	0
59	MG	AA	1614	1/1	0.96	0.40	-	26,26,26,26	0
59	MG	AA	1669	1/1	0.86	0.20	-	40,40,40,40	0
59	MG	BA	3223	1/1	0.95	0.34	-	32,32,32,32	0
59	MG	AA	1798	1/1	0.87	0.07	-	39,39,39,39	0
59	MG	BA	3247	1/1	0.37	0.36	-	49,49,49,49	0
59	MG	AA	1720	1/1	0.95	0.47	-	37,37,37,37	0
59	MG	AA	1602	1/1	0.88	0.48	-	42,42,42,42	0
59	MG	AA	1782	1/1	0.96	0.09	-	39,39,39,39	0
59	MG	BC	301	1/1	0.66	0.21	-	115,115,115,115	0
59	MG	AA	1605	1/1	0.94	0.42	-	40,40,40,40	0
59	MG	AA	1619	1/1	0.96	0.36	-	37,37,37,37	0
59	MG	BA	3068	1/1	0.91	0.19	-	33,33,33,33	0
59	MG	AA	1632	1/1	0.64	0.25	-	56,56,56,56	0
59	MG	BA	3194	1/1	0.38	0.35	-	74,74,74,74	0
59	MG	BA	3133	1/1	0.87	0.31	-	39,39,39,39	0
59	MG	BA	3211	1/1	0.90	0.65	-	58,58,58,58	0
59	MG	BA	3107	1/1	0.83	0.30	-	44,44,44,44	0
59	MG	BA	3096	1/1	0.97	0.20	-	23,23,23,23	0
59	MG	BA	3136	1/1	0.64	0.30	-	90,90,90,90	0
59	MG	BA	3036	1/1	0.83	0.28	-	47,47,47,47	0
59	MG	BA	3276	1/1	0.77	0.51	-	46,46,46,46	0
59	MG	AA	1654	1/1	0.92	0.26	-	24,24,24,24	0
59	MG	BA	3292	1/1	0.80	0.36	-	64,64,64,64	0
59	MG	BA	3072	1/1	0.84	0.63	-	70,70,70,70	0
59	MG	BA	3187	1/1	0.81	0.89	-	68,68,68,68	0
59	MG	BA	3256	1/1	0.95	0.44	-	52,52,52,52	0
59	MG	AA	1723	1/1	0.96	0.14	-	10,10,10,10	0
59	MG	BA	3245	1/1	0.95	0.23	-	25,25,25,25	0
59	MG	AA	1655	1/1	0.94	0.40	-	30,30,30,30	0
59	MG	AA	1651	1/1	0.88	0.20	-	68,68,68,68	0
59	MG	BA	3148	1/1	0.80	0.29	-	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	AA	1607	1/1	0.74	0.34	-	97,97,97,97	0
59	MG	AA	1681	1/1	0.96	0.45	-	34,34,34,34	0
59	MG	BA	3191	1/1	0.89	0.38	-	72,72,72,72	0
59	MG	BA	3119	1/1	0.98	0.26	-	24,24,24,24	0
59	MG	BA	3002	1/1	0.98	0.13	-	39,39,39,39	0
59	MG	AA	1717	1/1	0.94	0.43	-	41,41,41,41	0
59	MG	BA	3083	1/1	0.97	0.42	-	23,23,23,23	0
59	MG	AA	1637	1/1	0.68	0.58	-	65,65,65,65	0
59	MG	AA	1790	1/1	0.77	0.25	-	57,57,57,57	0
59	MG	BA	3124	1/1	0.99	0.27	-	15,15,15,15	0
59	MG	BA	3251	1/1	0.83	0.28	-	44,44,44,44	0
59	MG	BA	3192	1/1	0.92	0.36	-	51,51,51,51	0
59	MG	BA	3123	1/1	0.98	0.49	-	32,32,32,32	0
59	MG	BA	3301	1/1	0.91	0.41	-	45,45,45,45	0
59	MG	AA	1696	1/1	0.88	0.35	-	35,35,35,35	0
59	MG	BA	3195	1/1	0.93	0.25	-	32,32,32,32	0
59	MG	BA	3005	1/1	0.97	0.48	-	16,16,16,16	0
59	MG	AA	1795	1/1	0.96	0.15	-	46,46,46,46	0
59	MG	BA	3265	1/1	0.71	0.55	-	65,65,65,65	0
59	MG	AA	1672	1/1	0.93	0.18	-	42,42,42,42	0
59	MG	BA	3126	1/1	0.84	0.42	-	55,55,55,55	0
59	MG	BA	3158	1/1	0.95	0.30	-	27,27,27,27	0
59	MG	AA	1758	1/1	0.77	0.39	-	75,75,75,75	0
59	MG	AA	1745	1/1	0.80	0.44	-	66,66,66,66	0
59	MG	AA	1621	1/1	0.80	0.40	-	68,68,68,68	0
59	MG	BA	3270	1/1	0.83	0.34	-	70,70,70,70	0
59	MG	AA	1766	1/1	0.76	0.29	-	58,58,58,58	0
59	MG	AA	1744	1/1	0.80	0.21	-	90,90,90,90	0
59	MG	BA	3089	1/1	0.92	0.24	-	18,18,18,18	0
59	MG	BA	3029	1/1	0.87	0.33	-	73,73,73,73	0
59	MG	BA	3173	1/1	0.95	0.27	-	20,20,20,20	0
59	MG	AA	1695	1/1	0.78	0.34	-	50,50,50,50	0
59	MG	AA	1656	1/1	0.87	0.15	-	46,46,46,46	0
59	MG	BA	3025	1/1	0.74	0.32	-	42,42,42,42	0
59	MG	BA	3067	1/1	0.79	0.28	-	71,71,71,71	0
59	MG	AA	1775	1/1	0.91	0.13	-	45,45,45,45	0
59	MG	BA	3235	1/1	0.96	0.20	-	29,29,29,29	0
59	MG	AA	1714	1/1	0.69	0.53	-	44,44,44,44	0
59	MG	BA	3254	1/1	0.91	0.27	-	18,18,18,18	0
59	MG	BA	3281	1/1	0.41	0.46	-	79,79,79,79	0
59	MG	AA	1727	1/1	0.90	0.14	-	55,55,55,55	0
59	MG	BA	3146	1/1	0.89	0.23	-	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3092	1/1	0.96	0.59	-	37,37,37,37	0
59	MG	BA	3041	1/1	0.82	0.21	-	75,75,75,75	0
59	MG	BA	3268	1/1	0.59	0.35	-	85,85,85,85	0
59	MG	AA	1617	1/1	0.96	0.49	-	49,49,49,49	0
59	MG	BA	3193	1/1	0.81	0.53	-	64,64,64,64	0
59	MG	BA	3022	1/1	0.91	0.55	-	65,65,65,65	0
59	MG	BA	3152	1/1	0.94	0.41	-	64,64,64,64	0
59	MG	BA	3285	1/1	0.91	0.28	-	40,40,40,40	0
59	MG	AA	1728	1/1	0.77	0.32	-	47,47,47,47	0
59	MG	BA	3026	1/1	0.77	0.36	-	67,67,67,67	0
59	MG	AA	1620	1/1	0.85	0.44	-	75,75,75,75	0
59	MG	BA	3101	1/1	0.97	0.35	-	29,29,29,29	0
59	MG	BA	3080	1/1	0.98	0.41	-	38,38,38,38	0
59	MG	AA	1698	1/1	0.85	0.31	-	58,58,58,58	0
59	MG	AA	1786	1/1	0.88	0.15	-	35,35,35,35	0
59	MG	AA	1624	1/1	0.85	0.84	-	61,61,61,61	0
59	MG	BA	3130	1/1	0.92	0.55	-	56,56,56,56	0
59	MG	BA	3038	1/1	0.93	0.31	-	40,40,40,40	0
59	MG	BA	3311	1/1	0.96	0.35	-	22,22,22,22	0
59	MG	BA	3240	1/1	0.69	0.33	-	60,60,60,60	0
59	MG	BA	3216	1/1	0.91	0.20	-	54,54,54,54	0
59	MG	BA	3064	1/1	0.77	0.12	-	62,62,62,62	0
59	MG	BA	3012	1/1	0.64	0.44	-	79,79,79,79	0
59	MG	AA	1754	1/1	0.57	0.40	-	75,75,75,75	0
59	MG	AA	1796	1/1	0.79	0.28	-	44,44,44,44	0
59	MG	BA	3204	1/1	0.42	0.40	-	60,60,60,60	0
59	MG	BA	3031	1/1	0.92	0.35	-	35,35,35,35	0
59	MG	AA	1691	1/1	0.84	0.11	-	65,65,65,65	0
59	MG	BA	3070	1/1	0.98	0.45	-	25,25,25,25	0
59	MG	BA	3093	1/1	0.91	0.42	-	69,69,69,69	0
59	MG	AA	1650	1/1	0.76	0.26	-	36,36,36,36	0
59	MG	AA	1772	1/1	0.88	0.58	-	79,79,79,79	0
59	MG	BA	3299	1/1	0.86	0.41	-	53,53,53,53	0
59	MG	BA	3165	1/1	0.99	0.45	-	29,29,29,29	0
59	MG	AA	1647	1/1	0.75	0.46	-	79,79,79,79	0
59	MG	BA	3306	1/1	0.94	0.23	-	39,39,39,39	0
59	MG	AA	1706	1/1	0.95	0.16	-	43,43,43,43	0
59	MG	BA	3040	1/1	0.79	0.41	-	71,71,71,71	0
59	MG	AA	1759	1/1	0.97	0.33	-	37,37,37,37	0
59	MG	BA	3138	1/1	0.88	0.47	-	57,57,57,57	0
59	MG	BA	3177	1/1	0.95	0.40	-	31,31,31,31	0
59	MG	BA	3090	1/1	0.89	0.32	-	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	BA	3304	1/1	0.67	0.39	-	32,32,32,32	0
59	MG	BA	3003	1/1	0.96	0.35	-	20,20,20,20	0
59	MG	AA	1712	1/1	0.43	0.23	-	66,66,66,66	0
59	MG	AA	1750	1/1	0.93	0.30	-	42,42,42,42	0
59	MG	BA	3190	1/1	0.67	0.38	-	81,81,81,81	0
59	MG	AA	1735	1/1	0.89	0.41	-	62,62,62,62	0
59	MG	BA	3218	1/1	0.77	0.23	-	58,58,58,58	0
59	MG	BA	3264	1/1	0.76	0.56	-	77,77,77,77	0
59	MG	BA	3278	1/1	0.96	0.24	-	91,91,91,91	0
59	MG	AA	1702	1/1	0.97	0.53	-	44,44,44,44	0
59	MG	BA	3263	1/1	0.63	0.33	-	63,63,63,63	0
59	MG	AA	1688	1/1	0.94	0.25	-	30,30,30,30	0
59	MG	BA	3011	1/1	0.94	0.27	-	46,46,46,46	0
59	MG	BA	3237	1/1	0.84	0.20	-	94,94,94,94	0
59	MG	AA	1622	1/1	0.91	0.47	-	49,49,49,49	0
59	MG	AA	1731	1/1	0.87	0.09	-	48,48,48,48	0
59	MG	AA	1703	1/1	0.72	0.42	-	81,81,81,81	0
59	MG	BA	3260	1/1	0.80	0.46	-	72,72,72,72	0
59	MG	BA	3017	1/1	0.96	0.33	-	37,37,37,37	0
59	MG	BA	3283	1/1	0.81	0.21	-	73,73,73,73	0
59	MG	BA	3147	1/1	0.72	0.55	-	119,119,119,119	0
59	MG	BA	3238	1/1	0.86	0.28	-	42,42,42,42	0
59	MG	BA	3272	1/1	0.94	0.43	-	52,52,52,52	0
59	MG	AA	1676	1/1	0.82	0.24	-	62,62,62,62	0
59	MG	BA	3066	1/1	0.97	0.16	-	27,27,27,27	0
59	MG	AA	1675	1/1	0.95	0.27	-	45,45,45,45	0
59	MG	BA	3274	1/1	0.88	0.18	-	79,79,79,79	0
59	MG	BA	3294	1/1	0.94	0.20	-	42,42,42,42	0
59	MG	AA	1648	1/1	0.91	0.35	-	29,29,29,29	0
59	MG	BU	201	1/1	0.92	0.14	-	28,28,28,28	0
59	MG	BA	3164	1/1	0.88	0.24	-	49,49,49,49	0
59	MG	AA	1601	1/1	0.81	0.23	-	97,97,97,97	0
59	MG	BA	3046	1/1	0.89	0.28	-	27,27,27,27	0
59	MG	AA	1718	1/1	0.95	0.50	-	35,35,35,35	0
59	MG	AA	1663	1/1	0.85	0.47	-	37,37,37,37	0
59	MG	BA	3290	1/1	0.94	0.42	-	43,43,43,43	0
59	MG	AA	1640	1/1	0.79	0.26	-	74,74,74,74	0
59	MG	BA	3227	1/1	0.92	0.28	-	27,27,27,27	0
59	MG	AA	1641	1/1	0.97	0.17	-	17,17,17,17	0
59	MG	AA	1713	1/1	0.92	0.16	-	40,40,40,40	0
59	MG	BA	3045	1/1	0.81	0.69	-	54,54,54,54	0
59	MG	AA	1658	1/1	0.89	0.19	-	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3162	1/1	0.89	0.27	-	45,45,45,45	0
59	MG	BA	3203	1/1	0.94	0.27	-	30,30,30,30	0
59	MG	AA	1737	1/1	0.86	0.18	-	61,61,61,61	0
59	MG	BA	3117	1/1	0.90	0.19	-	26,26,26,26	0
59	MG	BA	3159	1/1	0.97	0.20	-	36,36,36,36	0
59	MG	BA	3035	1/1	0.97	0.51	-	31,31,31,31	0
59	MG	AA	1628	1/1	0.53	0.42	-	64,64,64,64	0
59	MG	BA	3233	1/1	0.86	0.20	-	42,42,42,42	0
59	MG	BA	3252	1/1	0.39	0.60	-	50,50,50,50	0
59	MG	BA	3135	1/1	0.95	0.25	-	58,58,58,58	0
59	MG	BA	3023	1/1	0.90	0.12	-	87,87,87,87	0
59	MG	BA	3302	1/1	0.89	0.39	-	52,52,52,52	0
59	MG	AA	1661	1/1	0.86	0.29	-	40,40,40,40	0
59	MG	AA	1680	1/1	0.96	0.19	-	37,37,37,37	0
59	MG	BA	3137	1/1	0.86	0.16	-	49,49,49,49	0
59	MG	BA	3320	1/1	0.98	0.13	-	39,39,39,39	0
59	MG	BA	3155	1/1	0.72	0.29	-	60,60,60,60	0
59	MG	BA	3188	1/1	0.93	0.41	-	34,34,34,34	0
59	MG	AA	1613	1/1	0.91	0.18	-	65,65,65,65	0
59	MG	BA	3253	1/1	0.84	0.40	-	98,98,98,98	0
59	MG	BA	3167	1/1	0.86	0.17	-	61,61,61,61	0
59	MG	BA	3037	1/1	0.90	0.40	-	49,49,49,49	0
59	MG	AA	1630	1/1	0.88	0.53	-	56,56,56,56	0
59	MG	BA	3262	1/1	0.90	0.15	-	68,68,68,68	0
59	MG	BA	3054	1/1	0.87	0.28	-	31,31,31,31	0
59	MG	BA	3010	1/1	0.98	0.41	-	33,33,33,33	0
59	MG	AA	1792	1/1	0.81	0.12	-	37,37,37,37	0
59	MG	BA	3103	1/1	0.97	0.20	-	35,35,35,35	0
59	MG	AA	1685	1/1	0.92	0.42	-	40,40,40,40	0
59	MG	BA	3246	1/1	0.94	0.31	-	34,34,34,34	0
59	MG	AA	1608	1/1	0.87	0.37	-	48,48,48,48	0
59	MG	BA	3226	1/1	0.82	0.34	-	56,56,56,56	0
59	MG	BA	3014	1/1	0.96	0.34	-	53,53,53,53	0
59	MG	BA	3008	1/1	0.96	0.46	-	45,45,45,45	0
59	MG	BA	3034	1/1	0.96	0.25	-	36,36,36,36	0
59	MG	BA	3231	1/1	0.97	0.34	-	13,13,13,13	0
59	MG	AA	1697	1/1	0.80	0.12	-	61,61,61,61	0
59	MG	BA	3112	1/1	0.85	0.71	-	51,51,51,51	0
59	MG	BA	3275	1/1	0.65	0.38	-	52,52,52,52	0
59	MG	AA	1746	1/1	0.90	0.39	-	47,47,47,47	0
59	MG	BA	3261	1/1	0.83	0.14	-	67,67,67,67	0
59	MG	AA	1771	1/1	0.75	0.23	-	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
59	MG	BA	3033	1/1	0.98	0.21	-	41,41,41,41	0
59	MG	AA	1609	1/1	0.95	0.42	-	40,40,40,40	0
59	MG	BA	3297	1/1	0.92	0.18	-	39,39,39,39	0
59	MG	AA	1793	1/1	0.86	0.23	-	50,50,50,50	0
59	MG	BA	3076	1/1	0.98	0.29	-	18,18,18,18	0
59	MG	BA	3058	1/1	0.97	0.31	-	31,31,31,31	0
59	MG	AA	1774	1/1	0.91	0.62	-	51,51,51,51	0
59	MG	BA	3021	1/1	0.96	0.32	-	37,37,37,37	0
59	MG	BA	3318	1/1	0.99	0.08	-	46,46,46,46	0
59	MG	AA	1652	1/1	0.94	0.44	-	41,41,41,41	0
59	MG	BA	3122	1/1	0.89	0.17	-	26,26,26,26	0
59	MG	BA	3186	1/1	0.86	0.14	-	50,50,50,50	0
59	MG	AA	1633	1/1	0.95	0.54	-	52,52,52,52	0
59	MG	BA	3161	1/1	0.95	0.42	-	30,30,30,30	0
59	MG	BA	3073	1/1	0.88	0.33	-	83,83,83,83	0

6.5 Other polymers [i](#)

There are no such residues in this entry.