



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:33 PM GMT

PDB ID : 4WWW
Title : Crystal structure of the E. coli ribosome bound to CEM-101
Authors : Dunkle, J.A.; Zhang, W.; Cate, J.H.D.; Mankin, A.S.
Deposited on : 2014-11-12
Resolution : 3.10 Å(reported)

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

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

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

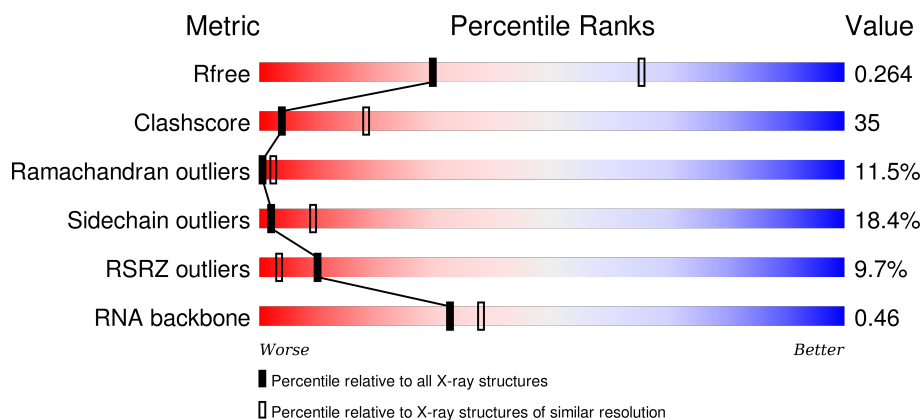
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	91344	1114 (3.14-3.06)
Clashscore	102246	1222 (3.14-3.06)
Ramachandran outliers	100387	1174 (3.14-3.06)
Sidechain outliers	100360	1174 (3.14-3.06)
RSRZ outliers	91569	1119 (3.14-3.06)
RNA backbone	2183	1010 (3.52-2.68)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 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	RA	2904	<div> <div>3%</div> <div>39% 43% 15%</div> <div>..</div> </div>
1	YA	2904	<div> <div>3%</div> <div>19% 52% 26%</div> <div>..</div> </div>
2	RB	118	<div> <div>43% 47% 10%</div> <div></div> </div>
2	YB	118	<div> <div>21% 54% 24%</div> <div>.</div> </div>

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Mol	Chain	Length	Quality of chain
3	RC	271	
3	YC	271	
4	RD	209	
4	YD	209	
5	RE	201	
5	YE	201	
6	RF	178	
6	YF	178	
7	RG	176	
7	YG	176	
8	RH	149	
8	YH	149	
9	RI	141	
9	YI	141	
10	RJ	142	
10	YJ	142	
11	RK	122	
11	YK	122	
12	RL	143	
12	YL	143	
13	RM	136	
13	YM	136	
14	RN	120	
14	YN	120	
15	RO	116	

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Mol	Chain	Length	Quality of chain
15	YO	116	
16	RP	114	
16	YP	114	
17	RQ	117	
17	YQ	117	
18	RR	103	
18	YR	103	
19	RS	110	
19	YS	110	
20	RT	93	
20	YT	93	
21	RU	102	
21	YU	102	
22	RV	94	
22	YV	94	
23	RW	79	
23	YW	79	
24	RX	77	
24	YX	77	
25	RY	63	
25	YY	63	
26	RZ	58	
26	YZ	58	
27	R0	56	
27	Y0	56	

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Mol	Chain	Length	Quality of chain
28	R1	50	
28	Y1	50	
29	R2	46	
29	Y2	46	
30	R3	64	
30	Y3	64	
31	R4	38	
31	Y4	38	
32	QA	1533	
32	XA	1533	
33	QB	218	
33	XB	218	
34	QC	206	
34	XC	206	
35	QD	205	
35	XD	205	
36	QE	150	
36	XE	150	
37	QF	100	
37	XF	100	
38	QG	151	
38	XG	151	
39	QH	129	
39	XH	129	
40	QI	127	

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Mol	Chain	Length	Quality of chain
40	XI	127	
41	QJ	98	
41	XJ	98	
42	QK	117	
42	XK	117	
43	QL	123	
43	XL	123	
44	QM	114	
44	XM	114	
45	QN	101	
45	XN	101	
46	QO	88	
46	XO	88	
47	QP	82	
47	XP	82	
48	QQ	80	
48	XQ	80	
49	QR	55	
49	XR	55	
50	QS	79	
50	XS	79	
51	QT	85	
51	XT	85	
52	QU	51	
52	XU	51	

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
53	MG	RA	3020	-	-	-	X
53	MG	RA	3035	-	-	-	X
53	MG	RA	3039	-	-	-	X
53	MG	RA	3070	-	-	-	X
53	MG	RA	3081	-	-	-	X
53	MG	RA	3099	-	-	-	X
53	MG	RA	3105	-	-	-	X
53	MG	RA	3107	-	-	-	X
53	MG	RA	3134	-	-	-	X
53	MG	XA	1616	-	-	-	X
53	MG	XA	1625	-	-	-	X
53	MG	XA	1628	-	-	-	X
53	MG	XA	1640	-	-	-	X
53	MG	YA	3002	-	-	-	X
53	MG	YA	3033	-	-	-	X
53	MG	YA	3075	-	-	-	X
53	MG	YA	3079	-	-	-	X
53	MG	YA	3108	-	-	-	X
53	MG	YA	3115	-	-	-	X
53	MG	YA	3128	-	-	-	X
54	EM1	RA	3135	-	-	-	X

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 284464 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 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	RA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			
1	YA	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 2 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	RB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			
2	YB	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	RC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			
3	YC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 4 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	RD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
4	YD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	RE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
5	YE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	RF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			
6	YF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	RG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
7	YG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 8 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	RH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			
8	YH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 9 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	RI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
9	YI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	RJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	YJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 11 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	RK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			
11	YK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			

- Molecule 12 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	RL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
12	YL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 13 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	RM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
13	YM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 14 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	RN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			
14	YN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

- Molecule 15 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	RO	116	Total	C	N	O	0	0	0
			892	552	178	162			
15	YO	116	Total	C	N	O	0	0	0
			892	552	178	162			

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	RP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
16	YP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 17 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	RQ	117	Total	C	N	O		0	0	0
			947	604	192	151				
17	YQ	117	Total	C	N	O		0	0	0
			947	604	192	151				

- Molecule 18 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	RR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
18	YR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 19 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	RS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
19	YS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 20 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	RT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
20	YT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 21 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	RU	102	Total	C	N	O	0	0	0
			779	492	146	141			
21	YU	102	Total	C	N	O	0	0	0
			779	492	146	141			

- Molecule 22 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	RV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			
22	YV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 23 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	RW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			
23	YW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			

- Molecule 24 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	RX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
24	YX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 25 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	RY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
25	YY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 26 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	RZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	YZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	R0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
27	Y0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	R1	50	Total	C	N	O	S	0	0	0
			409	263	75	71				
28	Y1	50	Total	C	N	O	S	0	0	0
			409	263	75	71				

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	R2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
29	Y2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	R3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
30	Y3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	R4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
31	Y4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 32 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	QA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			
32	XA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

- Molecule 33 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	QB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
33	XB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			

- Molecule 34 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	QC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			
34	XC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			

- Molecule 35 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	QD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
35	XD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

- Molecule 36 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	QE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			
36	XE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

- Molecule 37 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	QF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			
37	XF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

- Molecule 38 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	QG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			
38	XG	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			

- Molecule 39 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	QH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
39	XH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 40 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	QI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
40	XI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 41 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	QJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			
41	XJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

- Molecule 42 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	QK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	XK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 43 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	QL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
43	XL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 44 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	QM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
44	XM	113	Total	C	N	O	S	0	0	0
			876	541	177	155	3			

- Molecule 45 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	QN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
45	XN	91	Total	C	N	O	S	0	0	0
			735	461	151	120	3			

- Molecule 46 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	QO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
46	XO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

- Molecule 47 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	QP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
47	XP	80	Total	C	N	O	S	0	0	0
			638	400	126	111	1			

- Molecule 48 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	QQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
48	XQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			

- Molecule 49 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	QR	55	Total	C	N	O	0	0	0
			455	288	86	81			
49	XR	55	Total	C	N	O	0	0	0
			455	288	86	81			

- Molecule 50 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	QS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			
50	XS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			

- Molecule 51 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	QT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
51	XT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

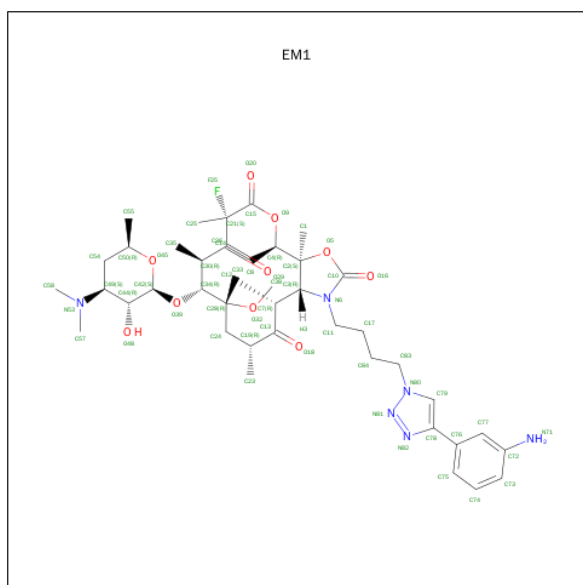
- Molecule 52 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	QU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			
52	XU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

- Molecule 53 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
53	XA	42	Total Mg 42 42	0	0
53	QA	43	Total Mg 43 43	0	0
53	YJ	1	Total Mg 1 1	0	0
53	YA	134	Total Mg 134 134	0	0
53	YB	1	Total Mg 1 1	0	0
53	RB	4	Total Mg 4 4	0	0
53	RA	135	Total Mg 135 135	0	0
53	YE	1	Total Mg 1 1	0	0

- Molecule 54 is (3a*S*,4*R*,7*S*,9*R*,10*R*,11*R*,13*R*,15*R*,15a*R*)-1-{4-[4-(3-aminophenyl)-1*H*-1,2,3-triazol-1-yl]butyl}-4-ethyl-7-fluoro-11-methoxy-3a,7,9,11,13,15-hexamethyl-2,6,8,14-tetraoxotetradecahydro-2*H*-oxacyclotetradecino[4,3-*d*][1,3]oxazol-10-yl 3,4,6-trideoxy-3-(dimethylamino)-β-D-xylo-hexopyranoside (three-letter code: EM1) (formula: C₄₃H₆₅FN₆O₁₀).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	RA	1	Total C F N O 60 43 1 6 10	0	0

- Molecule 55 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	R4	1	Total Zn 1 1	0	0
55	Y4	1	Total Zn 1 1	0	0

- Molecule 56 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	RA	606	Total O 606 606	0	0
56	RB	20	Total O 20 20	0	0
56	RC	9	Total O 9 9	0	0
56	RD	1	Total O 1 1	0	0
56	RL	4	Total O 4 4	0	0
56	RN	3	Total O 3 3	0	0
56	RT	2	Total O 2 2	0	0
56	R2	1	Total O 1 1	0	0
56	R3	2	Total O 2 2	0	0
56	R4	2	Total O 2 2	0	0
56	QA	200	Total O 200 200	0	0
56	QL	1	Total O 1 1	0	0
56	QN	5	Total O 5 5	0	0
56	QT	1	Total O 1 1	0	0
56	QU	1	Total O 1 1	0	0
56	XA	194	Total O 194 194	0	0
56	XE	5	Total O 5 5	0	0
56	XI	1	Total O 1 1	0	0

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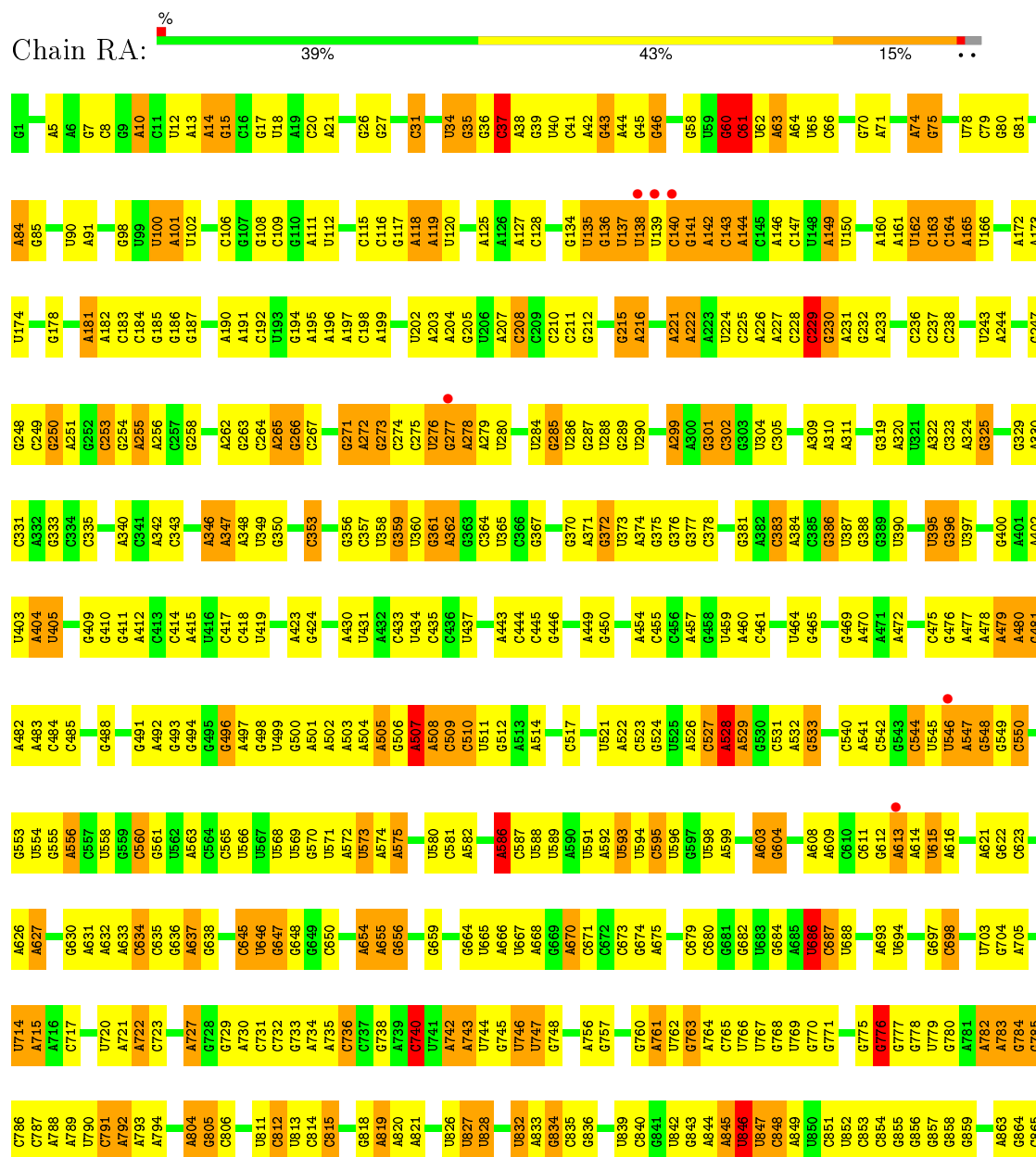
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	XL	1	Total 1	O 1	0	0
56	XN	3	Total 3	O 3	0	0
56	XT	2	Total 2	O 2	0	0
56	XU	1	Total 1	O 1	0	0
56	YA	605	Total 605	O 605	0	0
56	YB	4	Total 4	O 4	0	0
56	YC	8	Total 8	O 8	0	0
56	YD	3	Total 3	O 3	0	0
56	YE	3	Total 3	O 3	0	0
56	YJ	3	Total 3	O 3	0	0
56	YL	4	Total 4	O 4	0	0
56	YN	1	Total 1	O 1	0	0
56	YT	2	Total 2	O 2	0	0
56	YU	2	Total 2	O 2	0	0
56	YV	1	Total 1	O 1	0	0
56	Y2	1	Total 1	O 1	0	0
56	Y3	1	Total 1	O 1	0	0
56	Y4	5	Total 5	O 5	0	0

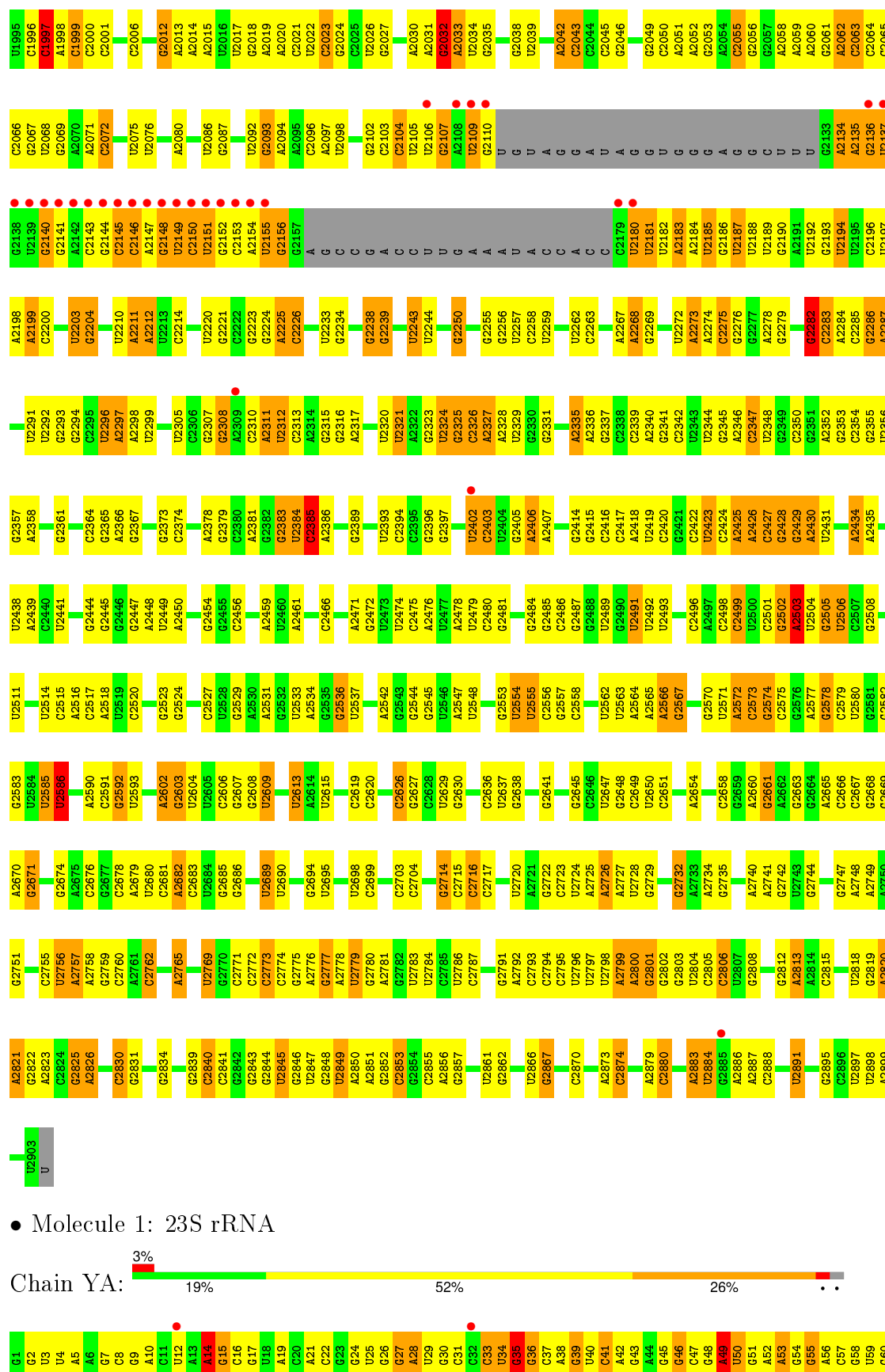
3 Residue-property plots

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

• Molecule 1: 23S rRNA



A1927	G1849	A1783	U1716	A1626	G1546	U1467	A1392	G1309	C1229	A1151	U1082	G1011	A936	A866
A1928	G1850	A1784	A1717	G1627	G1546	U1468	A1392	G1310	C1229	C1152	U1083	U1012	C937	C867
G1930	U1851	A1785	U1720	G1628	U1554	A1469	A1393	G1311	U1231	C1153	A1084	C1013	A941	U868
U1931	A1853	A1786	U1721	U1635	G1555	A1470	A1394	C1315	U1232	G1154	A1085	A1014	A941	G869
A1932	A1854	A1789	A1722	U1636	G1555	U1470	A1395	C1316	C1232	A1155	A1086	U1015	C946	U870
G1933	U1855	G1790	G1723	A1637	C1558	U1474	C1399	U1316	C1233	A1156	G1087	U1019	C946	U871
G1934	U1856	A1791	G1724	C1638	U1562	U1475	U1399	G1317	U1234	G1157	A1088	U1019	A947	G875
G1935	G1857	G1792	U1725	C1644	U1563	A1477	U1402	C1319	G1235	G1160	A1089	A1020	C948	G875
A1936	A1858	G1793	G1726	G1644	U1563	U1477	A1403	C1320	G1238	C1161	A1090	A1021	G949	A877
A1937	U1859	A1794	C1727	U1644	G1564	G1478	C1404	G1320	G1239	G1165	A1091	G1022	G950	A877
A1938	G1860	A1801	G1734	G1653	A1571	U1486	U1405	A1322	G1239	G1166	G1092	U1023	C951	A878
U1939	U1864	A1802	C1735	A1654	C1565	U1487	U1405	A1323	U1242	A1165	G1093	G1024	G954	G879
U1940	U1865	G1797	U1729	U1648	A1566	U1487	U1405	C1323	U1243	G1166	U1094	G1025	G954	U884
A1941	A1866	U1798	G1730	G1649	G1567	G1482	G1408	G1324	C1243	C1167	A1095	G1026	U958	U884
C1942	G1867	G1799	G1731	A1650	G1568	U1483	U1409	G1325	A1244	G1168	A1096	A1027	A959	A
U1943	C1868	C1800	C1732	G1651	A1569	U1484	G1410	U1326	G1245	A1169	U1097	A1028	A960	U
U1944	G1869	A1801	G1733	A1652	A1570	U1485	U1411	A1327	G1246	C1170	A1098	U1032	C961	C
G1945	A1870	A1802	G1734	G1653	A1571	U1486	U1412	A1328	A1247	G1171	G1099	A1032	C961	C
U1946	C1870	A1802	A1735	A1654	A1572	U1487	A1413	G1333	U1248	C1172		U1033	G962	C
A1871	A1870	A1805	U1736	A1655	G1573	U1488	C1414	G1334	U1249	U1173	A1103		G969	G
A1872	A1872	A1806	G1737	C1656	U1573	C1489	U1415	G1334	G1250	U1174	C1104	G1037	U970	A892
G1873	G1873	A1807	G1738	G1656	U1576	C1489	G1416	G1335	C1251	A1175	U1105		U970	A892
C1874	A1874	A1808	A1739	G1663	U1576	C1493	G1417	U1336	G1252	U1176	G1106	A1040	G971	C893
G1875	A1876	A1809	G1743	A1664	U1578	A1494	G1418	G1337	A1253	G1177	G1107	G1041	A972	U894
A1952	A1876	A1810	A1744	G1666	C1581	U1495	A1419	G1338	A1254	C1178	U1108	G1042	A973	U894
G1954	A1877	G1811	A1745	G1667	G1581	U1496	A1420	G1339	U1255	G1179	C1109	C1043	A974	U895
U1955	C1881	U1812	A1746	G1667	C1582	U1497	G1421	U1340	G1256	U1180	G1110	C1044	A975	C897
G1956	U1882	G1813	A1746	A1668	A1583	U1498	G1422	G1341	C1257	U1181	A1111	C1045	G976	C898
C1957	U1883	A1814	U1747	A1669	U1584	C1499	G1423	G1341	U1258	G1182	G1112	A1046	G977	C898
C1958	G1884	A1815	C1748	C1670	C1585	G1500	G1423	U1341	U1258	G1182	G1112	A1046	G977	A899
G1959	A1885	G1816	C1748	C1670	C1585	G1500	G1423	U1341	U1258	G1182	G1112	A1046	G977	A899
U1959	A1885	G1816	C1748	C1670	C1585	G1500	G1423	U1341	U1258	G1182	G1112	A1046	G977	A899
A1960	U1886	A1817	A1749	U1688	C1586	G1501	A1427	A1347	C1261	U1184	G1114	A1048	A979	C901
C1961	U1887	U1818	A1754	G1674	G1587	A1502	C1428	C1348	A1262	G1185	C1115	A1048	A980	U906
A1889	A1819	A1755	A1754	G1675	G1588	U1501	G1429	C1351	G1266	G1187	U1119	A1050	A981	U906
U1820	G1756	A1590	G1756	A1677	U1589	A1503	G1429	U1352	U1267	U1188	G1122	G1056	C982	G907
A1890	A1590	A1505	A1431	A1677	A1590	A1505	A1431	A1353	A1268	U1188	G1122	G1056	A983	C908
G1964	A1821	A1821	A1757	U1680	A1592	U1506	A1431	A1354	A1268	A1189	G1122	G1056	A984	A909
C1965	C1822	C1822	U1758	U1680	C1592	C1507	G1432	G1355	A1269	G1190	C1123	U1058	C985	A910
A1966	U1898	A1822	A1759	G1681	A1593	A1508	A1433	G1355	C1270	G1193	G1124	G1059	C986	A911
C1967	A1899	G1826	C1760	G1682	U1594	A1509	A1434	C1357	G1271	G1193	G1125	U1060	C987	C912
G1968	A1900	U1827	C1761	U1683	U1594	G1510	G1435	C1357	U1272	A1194	U1061	U1061	A988	U913
A1969	A1901	G1828	A1762	G1684	C1599	G1511	C1437	G1358	U1273	A1194	G1128	G1062	G989	G914
C1902	C1902	A1829	G1763	G1684	C1600	C1512	U1438	G1360	A1274	G1197	A1129	G1063	A990	C915
U1970	U1970	C1830	C1764	U1688	A1603	G1512	U1438	G1360	A1274	G1197	A1129	G1063	A990	C915
U1971	G1906	G1831	G1764	U1688	A1603	C1513	A1439	U1360	A1274	U1198	A1129	G1063	A990	C915
G1972	A1906	G1832	G1767	U1692	C1604	U1514	U1440	A1365	A1276	U1198	U1130	U1064	C994	A918
G1973	G1907	C1833	G1768	U1693	C1605	A1515	U1440	A1365	G1277	U1199	G1131	U1065	C995	U919
A1977	A1913	U1833	U1769	C1694	C1606	G1516	U1442	G1368	G1278	A1203	A1134	A1067	A996	A920
G1983	C1914	U1834	G1770	G1695	C1607	U1520	G1444	U1371	G1279	U1204	G1135	G1068	C997	C921
U1915	U1915	G1836	C1771	G1696	A1608	U1520	G1444	U1371	G1279	A1205	C1136	A1069	C998	G922
A1916	A1916	C1837	A1772	G1697	A1609	A1528	G1450	U1372	G1281	G1206	G1137	G1071	U999	G923
U1917	U1917	C1838	A1773	U1700	A1610	G1529	C1451	G1377	A1287	C1207	G1138	C1072	A1000	G924
A1918	A1918	G1839	C1774	A1700	C1611	G1529	C1451	G1377	A1287	C1207	G1138	C1072	A1001	A927
G1919	G1919	U1840	U1775	A1701	C1612	C1533	G1452	U1378	A1288	G1212	G1139	G1073	G1002	A928
C1920	C1920	U1841	G1776	U1705	G1613	U1534	C1454	G1380	C1290	G1212	U1141	G1074	G1003	A928
G1921	G1921	G1842	U1777	A1705	A1614	C1535	G1455	G1383	C1295	G1220	A1142	C1075	U1004	U929
U1989	G1989	C1843	U1778	G1706	A1618	C1536	G1456	A1383	C1295	G1221	A1143	C1076	C1005	G930
C1922	C1922	C1844	U1779	G1707	A1618	U1537	U1457	A1384	C1295	G1221	A1144	U1077	C1006	U931
U1991	U1923	C1844	U1779	G1707	A1618	G1538	U1458	A1385	G1300	G1223	A1144	U1078	C1007	U932
G1992	C1924	A1847	A1780	U1714	G1622	U1539	U1459	A1386	A1301	G1223	A1144	C1079	A1008	A933
U1983	C1925	A1848	U1781	U1714	G1622	U1539	G1459	A1386	A1301	G1223	A1144	C1079	A1008	U934
A1904	U1904	A1848	U1782	G1715	G1622	G1540	U1460	A1387	A1301	G1225	C1150	U1081	U1009	C935

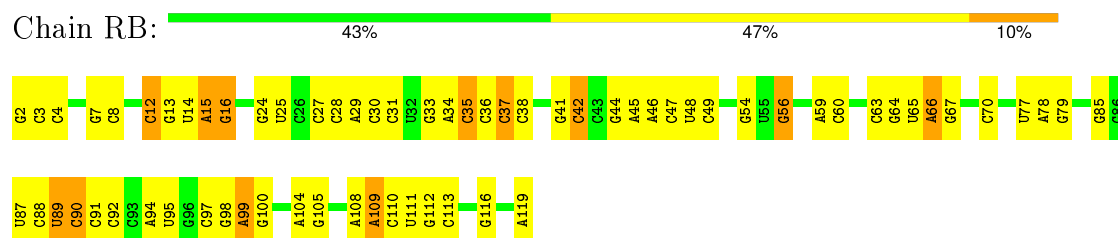


A928	G864	U803	U741	C671	C610	G549	G498	U427	C366	U243	A182	G121	C61
U929	C865	A804	A742	C672	C611	C550	G489	A428	G367	A244	C183	G122	U62
G930	A866	G805	G612	C673	G612	G551	G490	A429	A368	G245	C184	G123	A63
U931	C867	C806	A743	G674	A613	U552	G491	A430	U369	C246	G185	G124	A64
U932	U868	U807	G745	A675	A614	G553	G492	U431	G370	G247	G186	A125	U65
A933	G869	G808	U746	A676	U615	U554	G493	A432	A371	G248	G187	A126	C66
U934	U870	U809	U747	A677	A616	G555	G494	C433	G372	C249	G188	A127	U67
C935	U871	U810	G748		G617		G495	U434	U373	G250	G189	C128	G68
A936	U872	U811	A749	G682	G618	U558	G496	U435	A374	A251	A190	C129	C69
A941	C873	C812	A750	U683	G619	G559	A497	C436	G375	G252	C191	C130	A71
G942	G874	U813	A751	G684	G620	C560	G498	U437	G376	C253	C192	A131	U71
A943	G875	C814	A752	A685	A621	G561	G499	G438	G377	G254	G193	G132	U72
C944	C876	C815	A753	U686	G622	U562	G500	A439	C378	A255	G194	U133	A73
	A877	C816	U754	C687	C623	A563	A501		G379		A195	G134	A74
A945	A878	C817	U755	C682	C624	C564	A502	G442	G380	G259	A196	G135	A75
C946	G	G818	U756	C683	G625	C565	A503	A443	G381	A197	A197	U136	C76
A947	G	A819	G757	C682	A626	U566	A504	C444	A382	C198	C198	U137	C77
C948	C	A820	C758	A693	G627	U567	A505	C445	C383	A262	A199	U138	C78
G949	G	A821	G759	U694	G628	U568	G506	C446	A384	G263	U200	U139	C79
G950	U	G822	G760	G695	G629	U569	A507	A447	C385	C264	C201	C140	G80
C951	C		U761	G696	G630	G570	A508	U448	G386	A265	U202	G141	G81
G952	A	G823	G762	C697	A632	U571	C509	A449	U387	G266	A203	C142	U82
G953	U		G763	C698	A633	A572	C510	G450	G388	C267	A204	C143	A83
G954	C	U827	A764	A699	G634	U573	U511	U451	G389		G205	A144	A84
U955	C	U828		A574	C635	A575	G512	G452	U390	A270	U206	C145	G85
G956	C	A829	U767	A701	C636	A576	A513	A453	A391	G271	A207	A146	G86
C957	C	G830	G768		G636	U576	A514	A454		A272		C147	U87
U958	C	G831	G769	A705	A637	C565	A515	A455	C394	G273	C210	U148	G88
A959	A	U832	G770	A706	A637	G577	C516	C456	U395	C274	C211	A149	A89
A960	C	A833	G771	G707	G638	G578		A457	G396	C275	G212	U150	U90
G961	U	G834	G772	G708	U639	G579	U519	U458	U397	U276	A213	C151	A91
G962	U	C835	G773	U709	U640	C581	G520	U459	C398	G277	G214	C152	U92
U963	A	G836	G774	U710	U642	A582	G521	A460	U399	A278	G215	U153	G93
C964	C	C837	G775	G711	A643	G583	A522	C461	G400	A279	A216	U154	A94
G965	A899	U838	G776	G712	A644	C584	C523	C462	A401	U280	A217	A155	A95
U967		U839	G777	G713	G645	G585	G524	G463	A402	C281	A218	A156	C96
C968		C840	G778	G714	U646	A586	U525	U464	U403	A282	A219	C157	C97
G969	C902	G841	G779	A715	G647	C587	A526	G465	A404	G283	G220	U158	G98
U970	G903	U842	A781	A716	U648	U588	C527	A466	U405	U284	A221	G159	U99
G971	G904	G843	A782	C717	G649	U589	A528	G467	G406	G285	A222	A160	U100
A972	A905	A844	A783	U718	C650	A590	A529	G468	G407	U286	A223		A101
A973		A845	G784	C719		U591	G530	G469	G408	G287	U224	C163	U102
G974		U846	G785	A721	U653	A592	C531	A470	G409	U288	C225	A164	A103
A975	C912	U847	C786		A654	U593	A532	A471	G410	G289	A226	A165	A104
G976	U913	C848	C787	U724	A655	U594	A533	A472	G411	U290	A227	U166	C105
G977	G913	G849	A788	G725	G656	C596	U534	G473	A412	G291	C228	A167	C106
G978	G914	U850	A789	G726	U657	U596	G535	G474	C413	U292	C229	G168	G107
A979	C915	C851	U790	A727	U658	G597	G536	C475	C414	U293	G230	G169	G108
G980	G916	U852	C791	G728	G659	G598	G537	G476	A415	A294	A231	U170	C109
A981	A917	C853	A792	G729	C660	A599	A538	A477	U416	G295	G232	U171	G110
G982	G918	C854	A793	A730	A661	G600	G539	A478	C417	U296	A233	A172	A111
C983	U919	G855	A794	C731	G662	C501	C540	A479	C418	G297	U234	A173	U112
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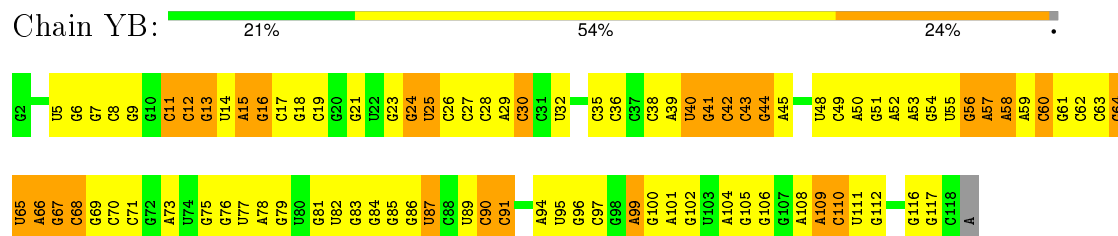
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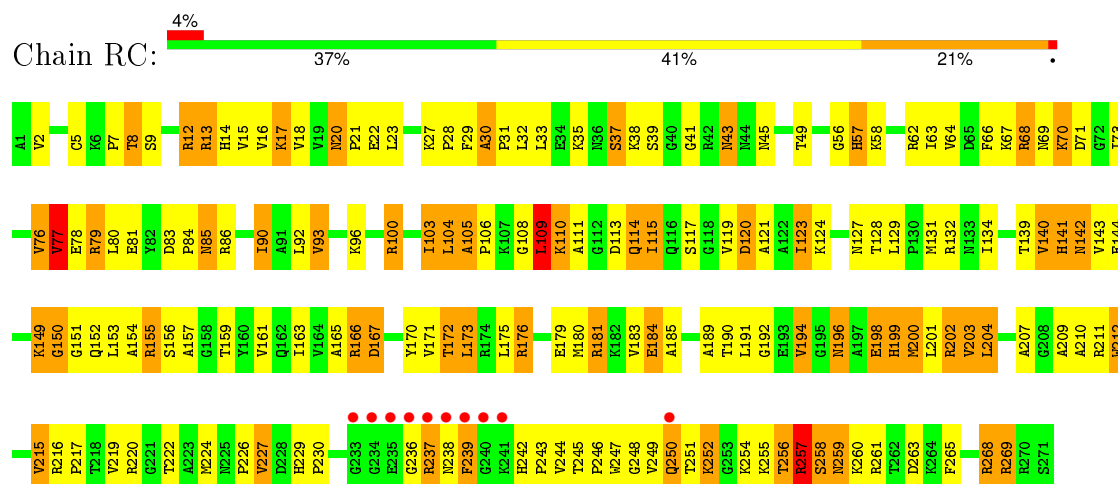
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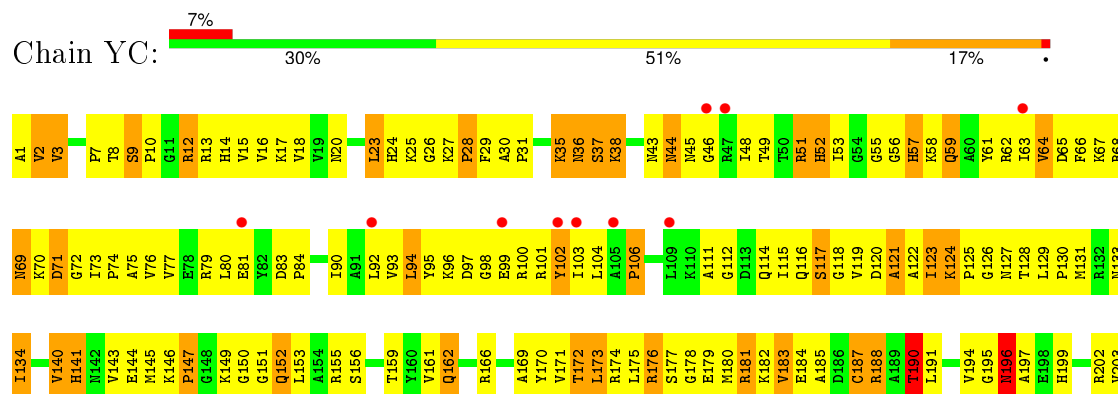
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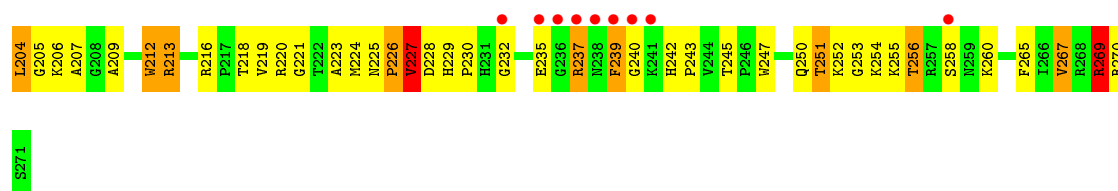


- Molecule 3: 50S ribosomal protein L2

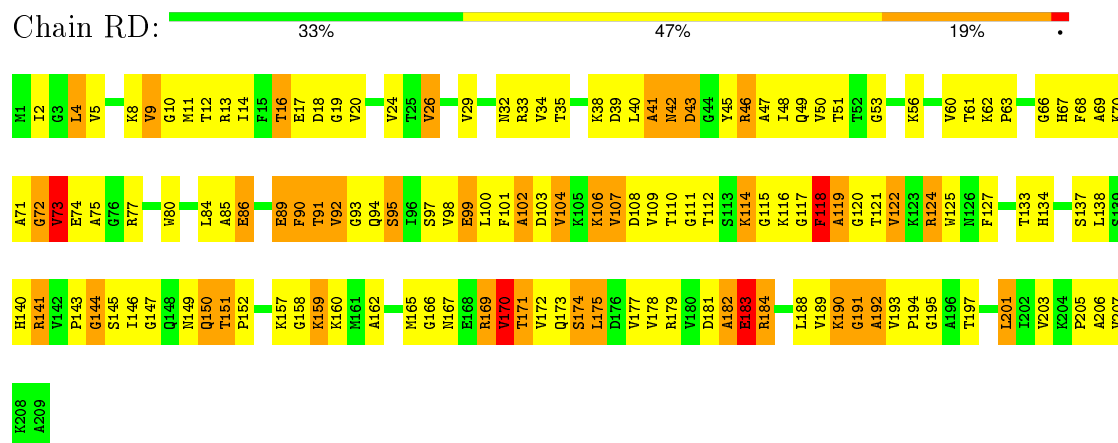


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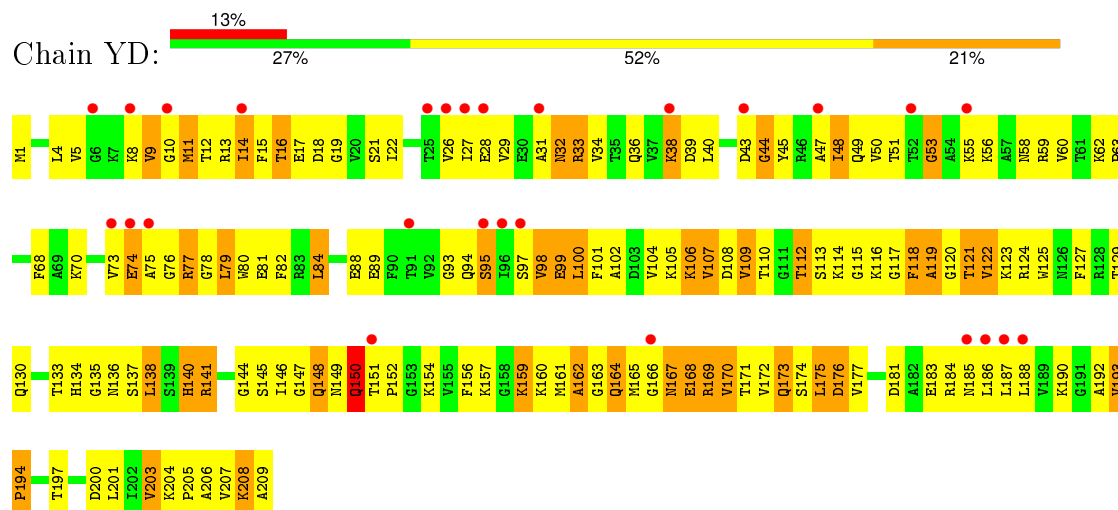




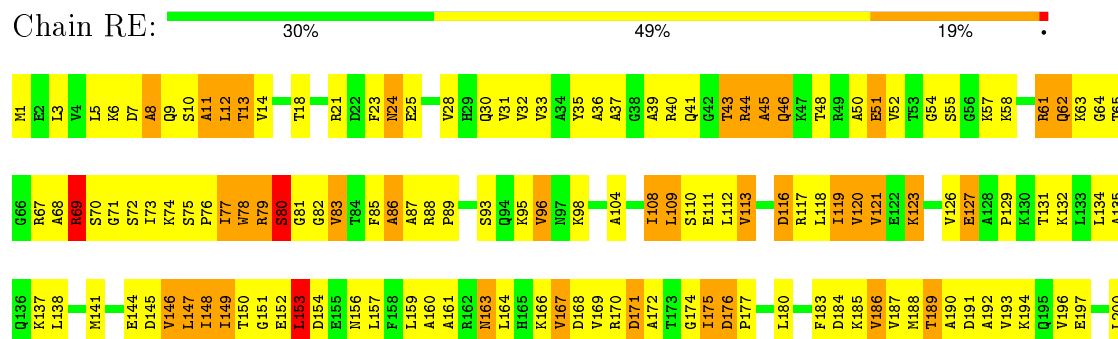
- Molecule 4: 50S ribosomal protein L3



- Molecule 4: 50S ribosomal protein L3

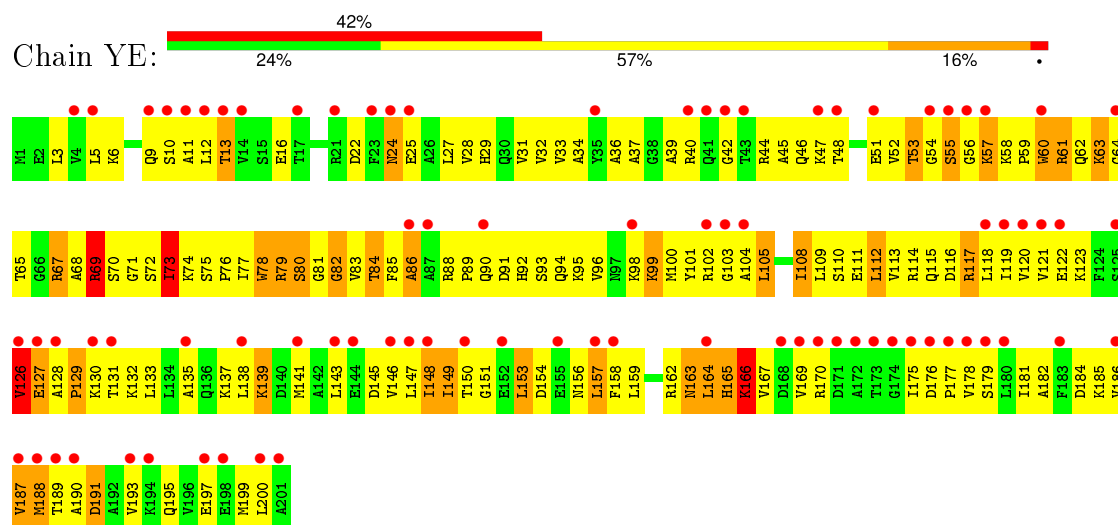


- Molecule 5: 50S ribosomal protein L4

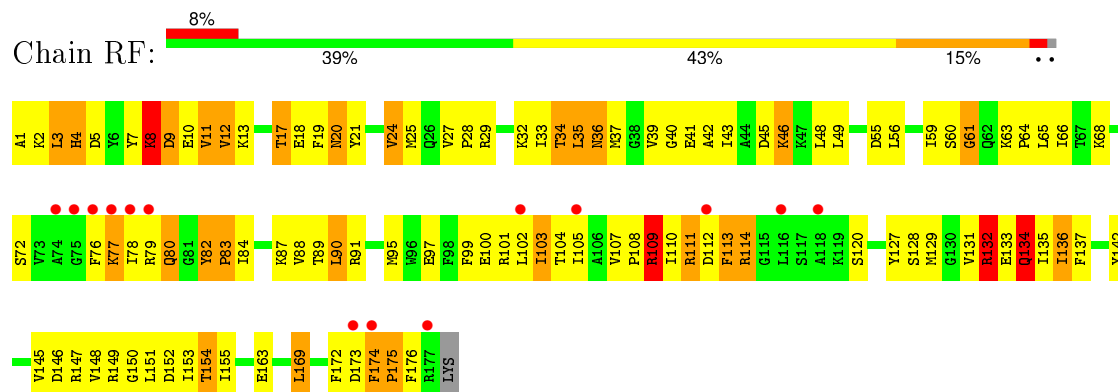


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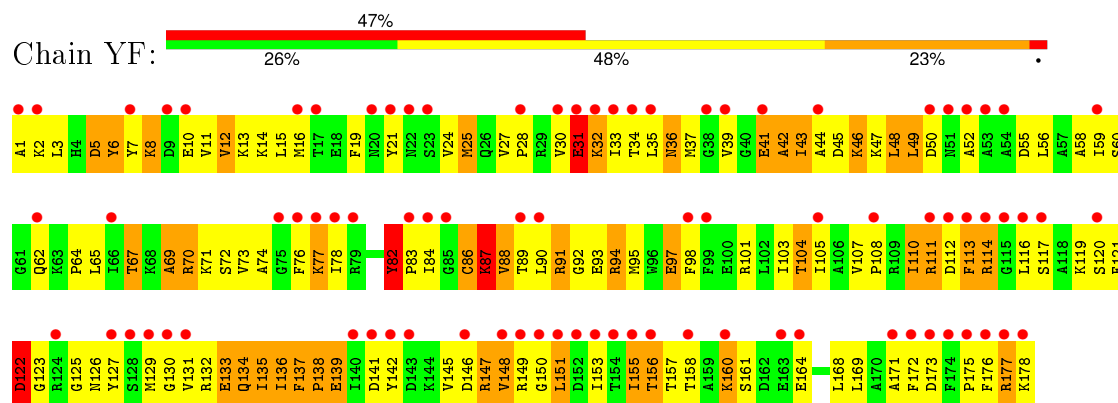
- Molecule 5: 50S ribosomal protein L4



- Molecule 6: 50S ribosomal protein L5

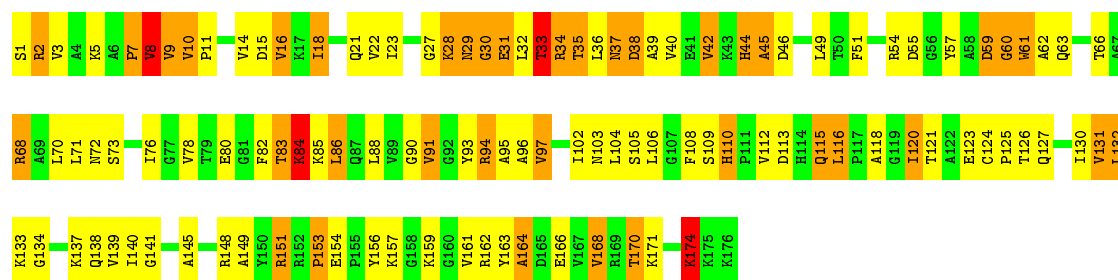


- Molecule 6: 50S ribosomal protein L5

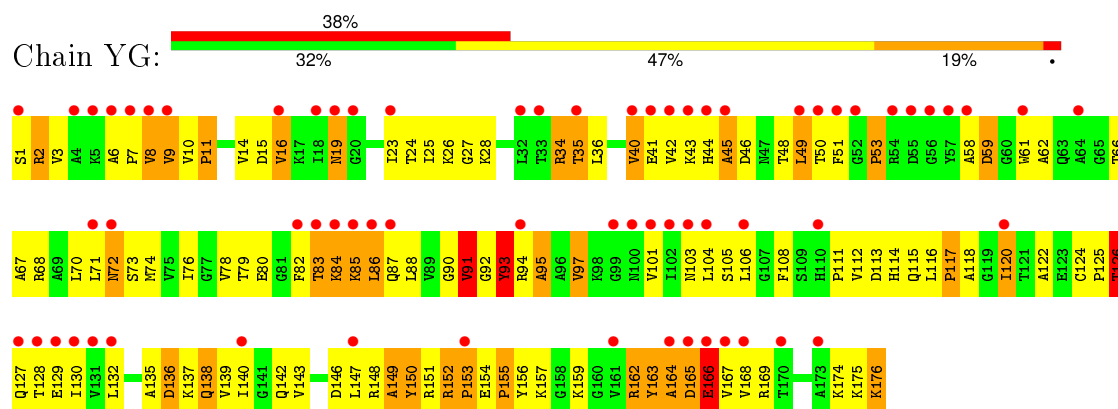


- Molecule 7: 50S ribosomal protein L6

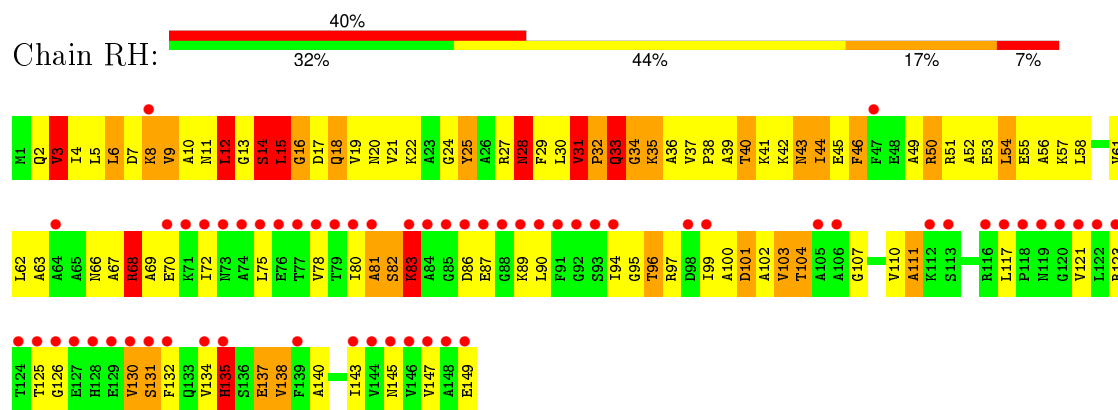




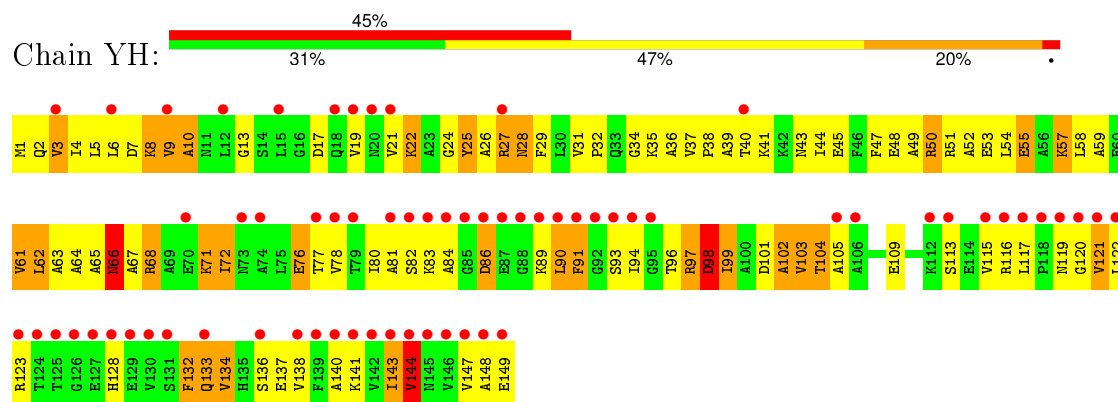
• Molecule 7: 50S ribosomal protein L6



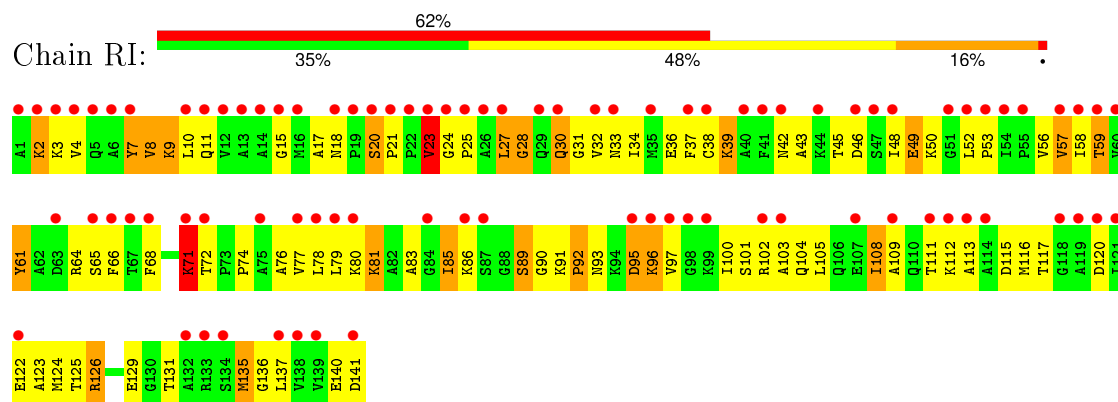
• Molecule 8: 50S ribosomal protein L9



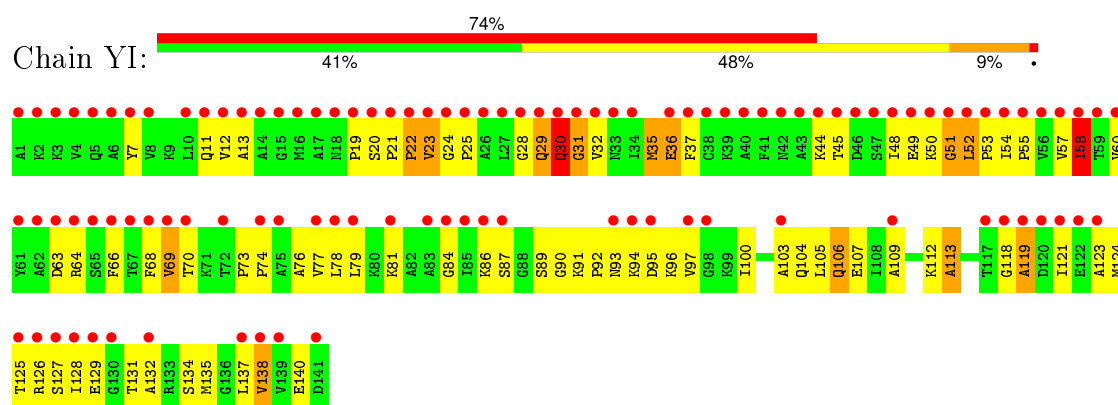
• Molecule 8: 50S ribosomal protein L9



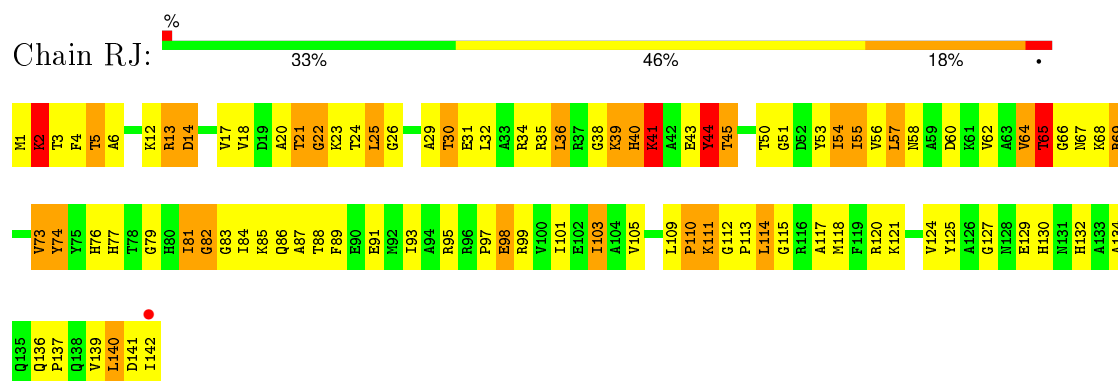
- Molecule 9: 50S ribosomal protein L11



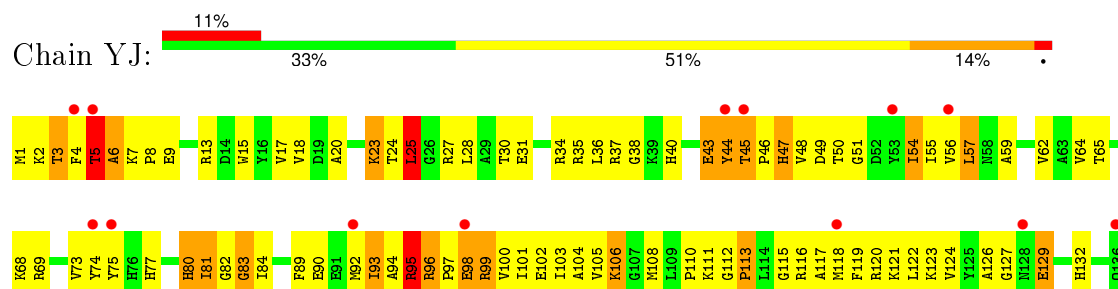
- Molecule 9: 50S ribosomal protein L11

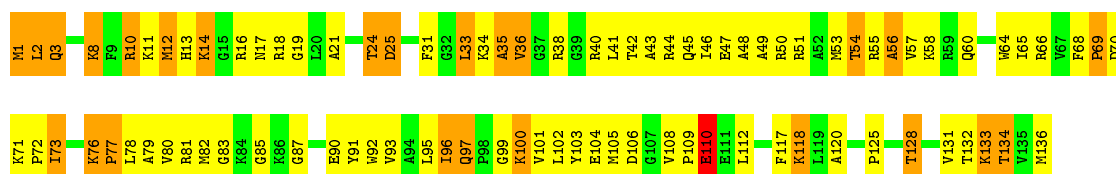


- Molecule 10: 50S ribosomal protein L13

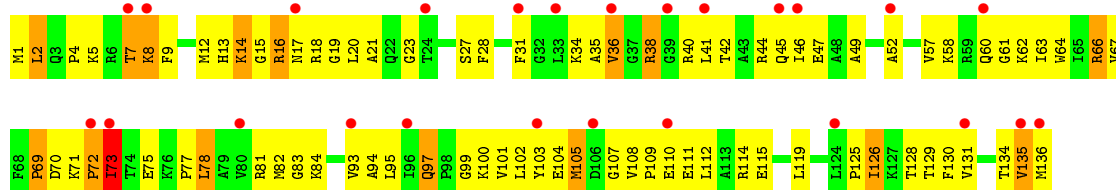


- Molecule 10: 50S ribosomal protein L13

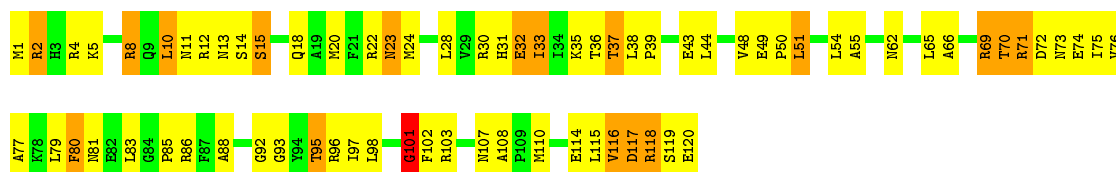




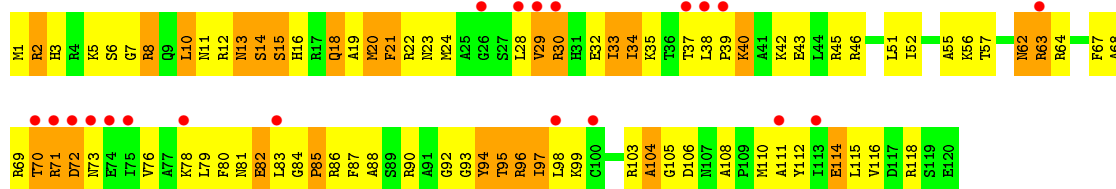
• Molecule 13: 50S ribosomal protein L16



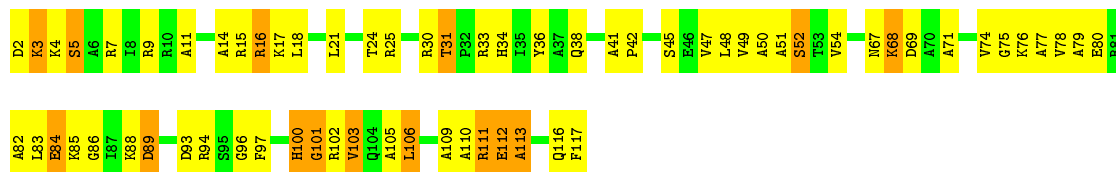
• Molecule 14: 50S ribosomal protein L17



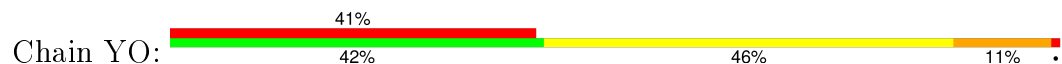
• Molecule 14: 50S ribosomal protein L17

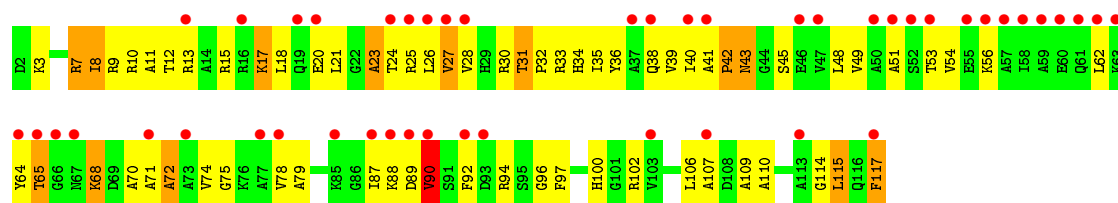


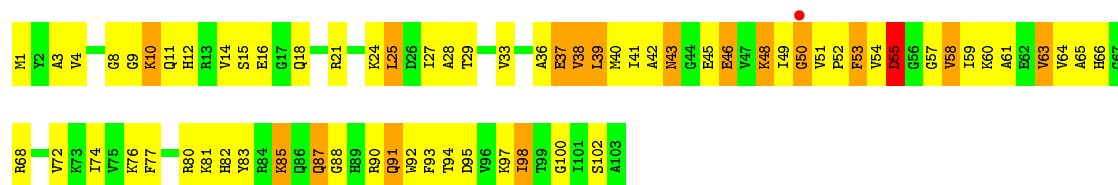
• Molecule 15: 50S ribosomal protein L18



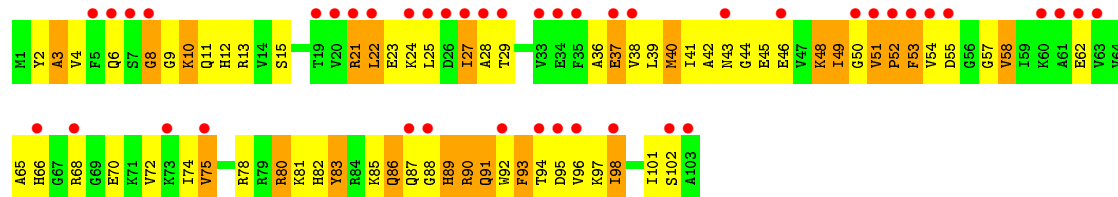
• Molecule 15: 50S ribosomal protein L18



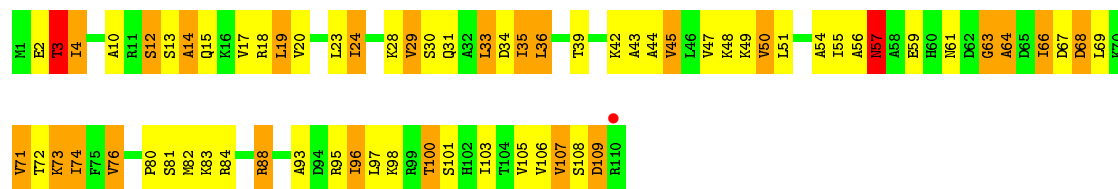




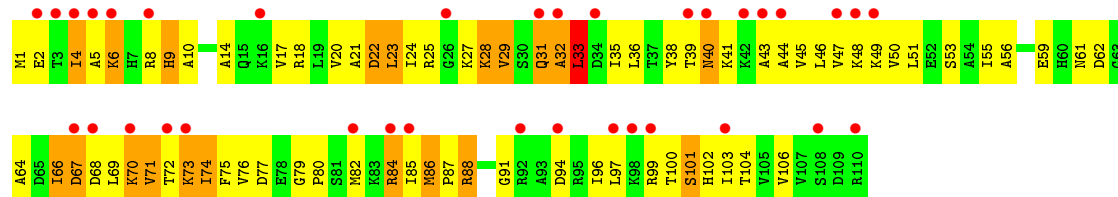
• Molecule 18: 50S ribosomal protein L21



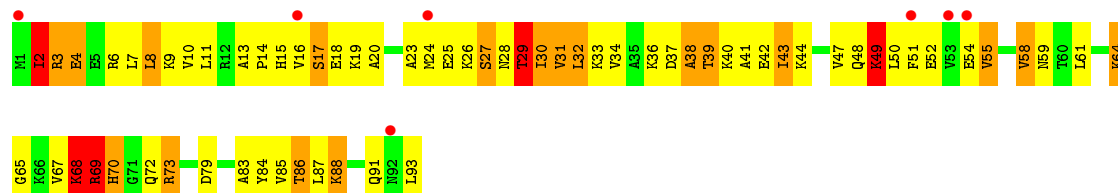
• Molecule 19: 50S ribosomal protein L22



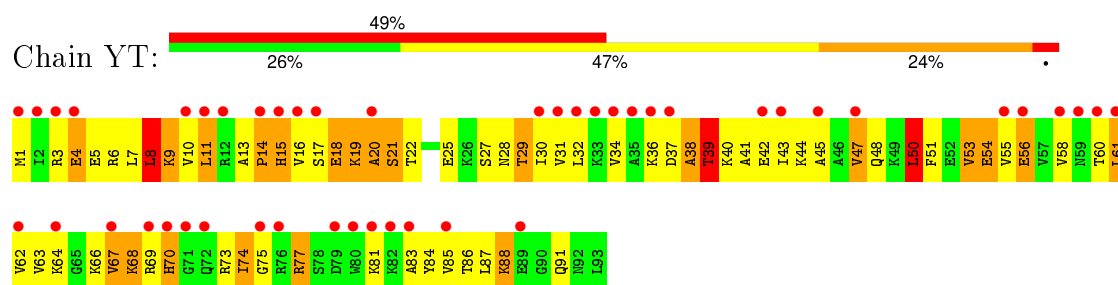
• Molecule 19: 50S ribosomal protein L22



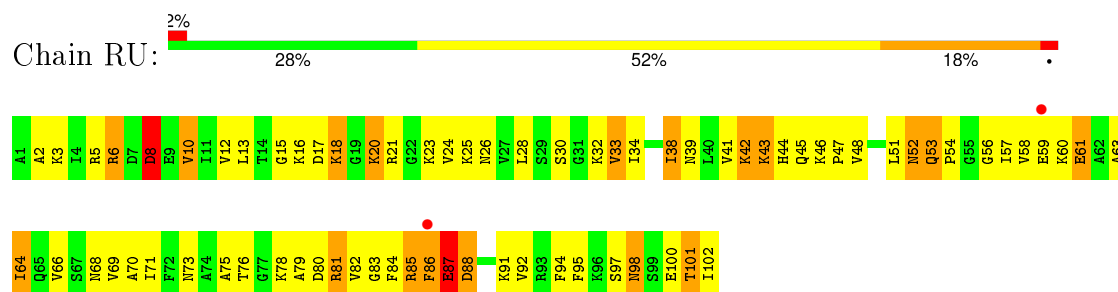
• Molecule 20: 50S ribosomal protein L23



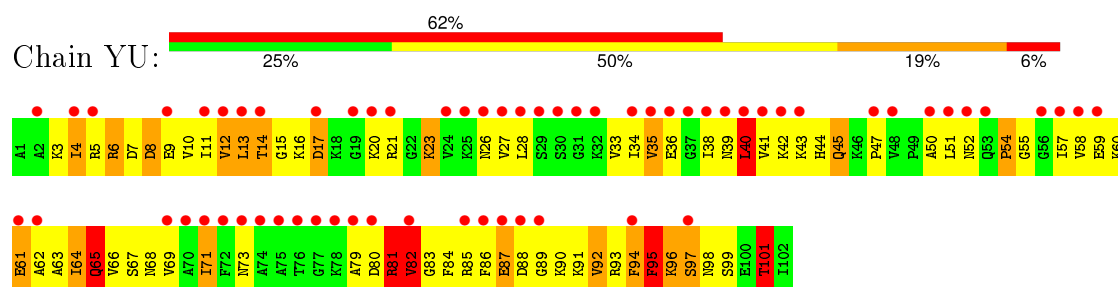
• Molecule 20: 50S ribosomal protein L23



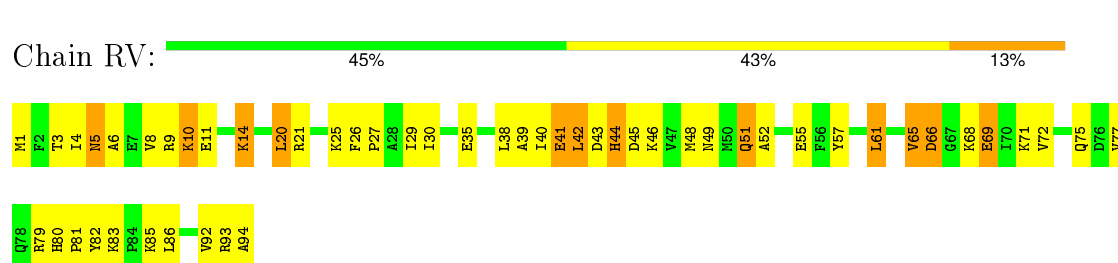
- Molecule 21: 50S ribosomal protein L24



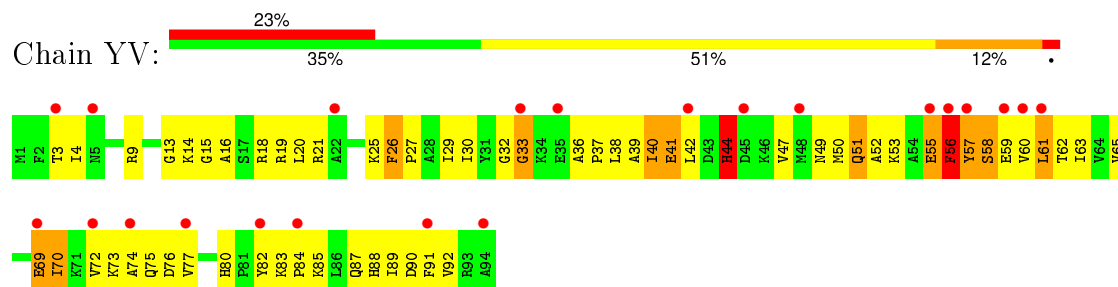
- Molecule 21: 50S ribosomal protein L24



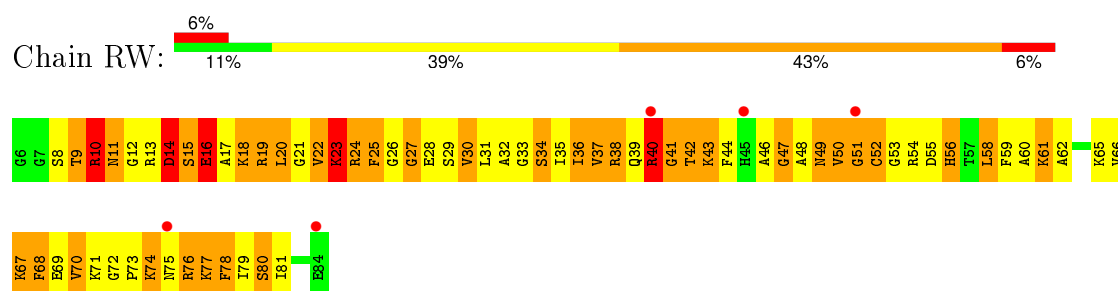
- Molecule 22: 50S ribosomal protein L25



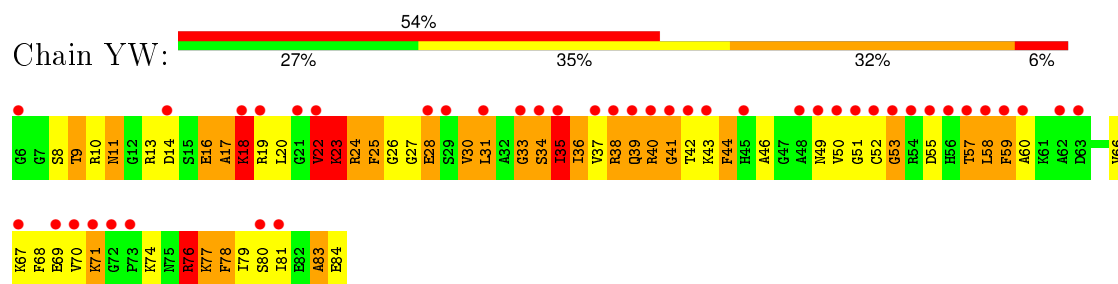
- Molecule 22: 50S ribosomal protein L25



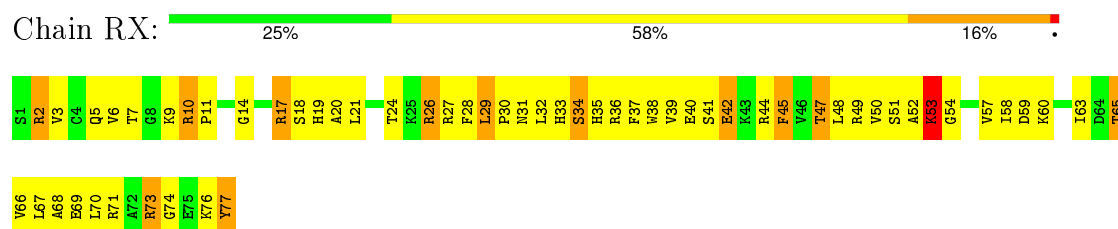
- Molecule 23: 50S ribosomal protein L27



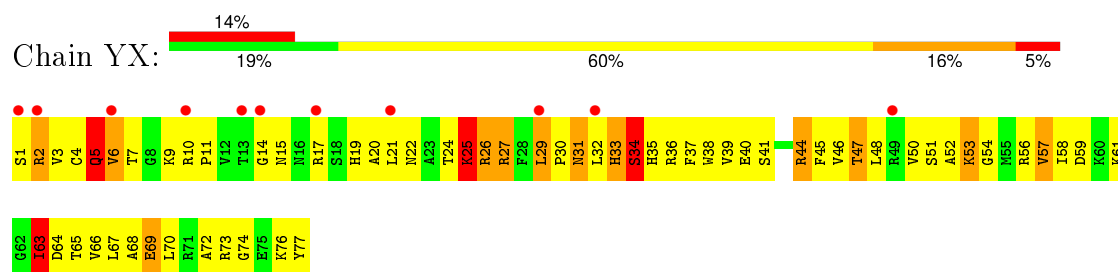
- Molecule 23: 50S ribosomal protein L27



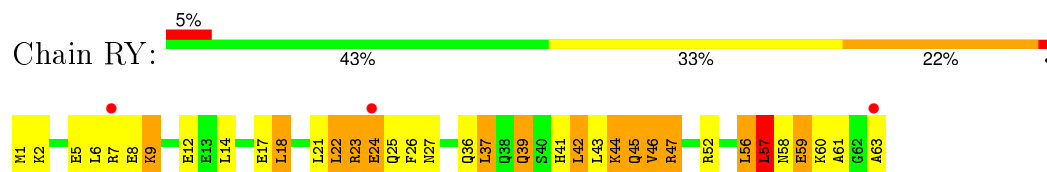
- Molecule 24: 50S ribosomal protein L28



- Molecule 24: 50S ribosomal protein L28

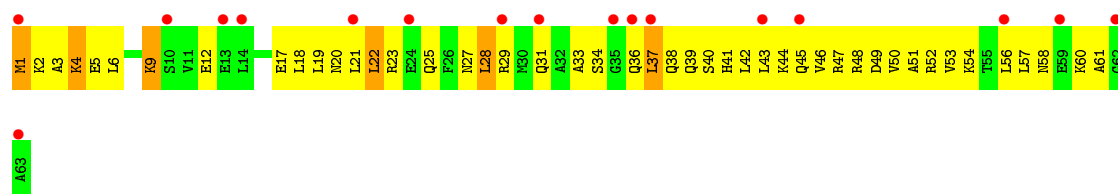


- Molecule 25: 50S ribosomal protein L29



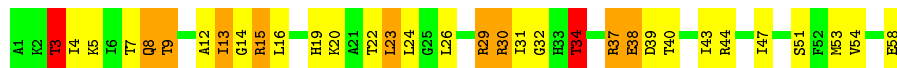
- Molecule 25: 50S ribosomal protein L29





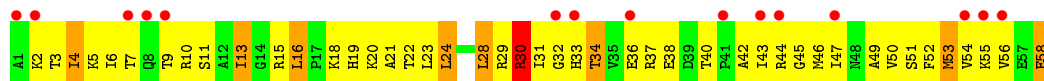
- Molecule 26: 50S ribosomal protein L30

Chain RZ: 43% 38% 16%



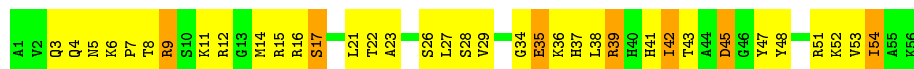
- Molecule 26: 50S ribosomal protein L30

Chain YZ: 22% 62% 14%



- Molecule 27: 50S ribosomal protein L32

Chain R0: 36% 52% 13%



- Molecule 27: 50S ribosomal protein L32

Chain Y0: 34% 39% 21% 5%



- Molecule 28: 50S ribosomal protein L33

Chain R1: 2% 34% 44% 18%

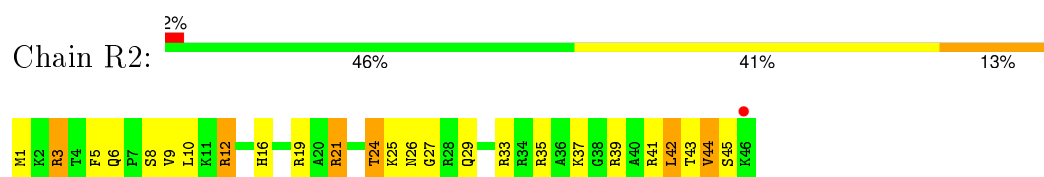


- Molecule 28: 50S ribosomal protein L33

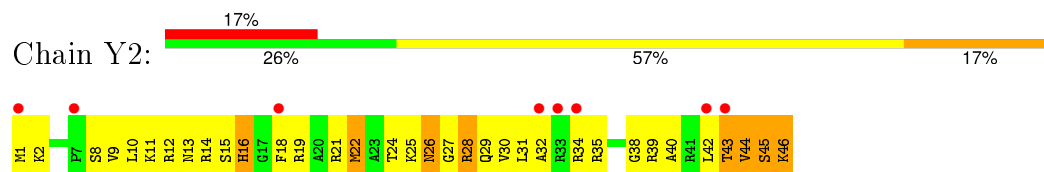
Chain Y1: 32% 42% 46% 12%



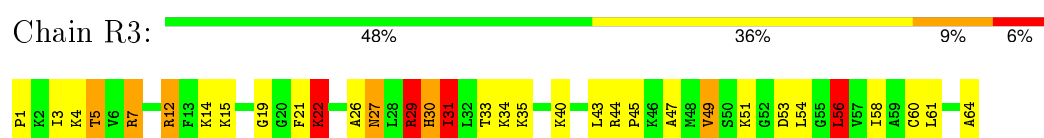
- Molecule 29: 50S ribosomal protein L34



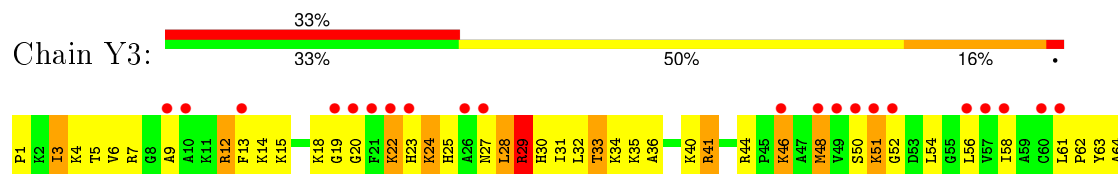
- Molecule 29: 50S ribosomal protein L34



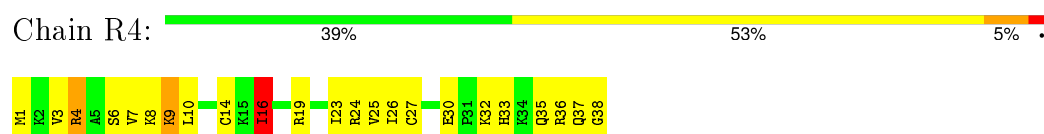
- Molecule 30: 50S ribosomal protein L35



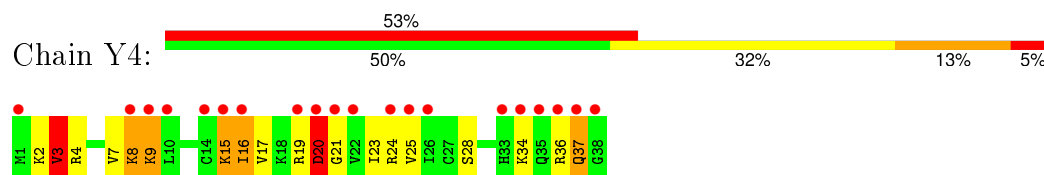
- Molecule 30: 50S ribosomal protein L35



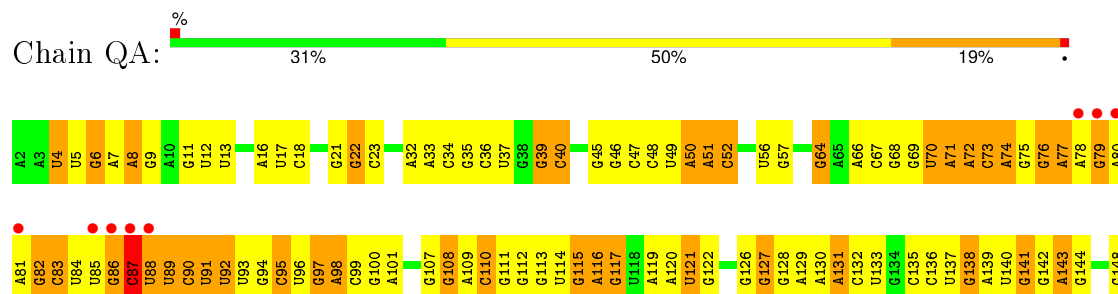
- Molecule 31: 50S ribosomal protein L36



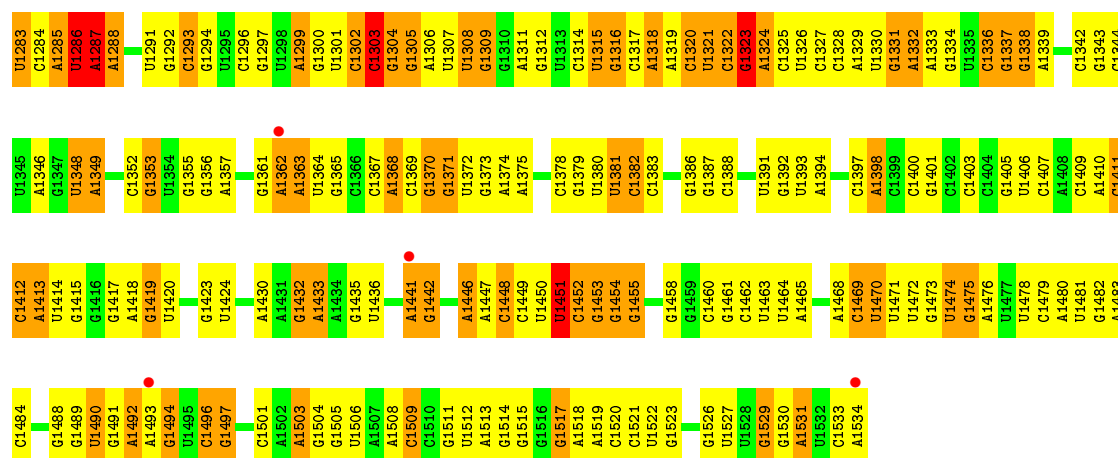
- Molecule 31: 50S ribosomal protein L36



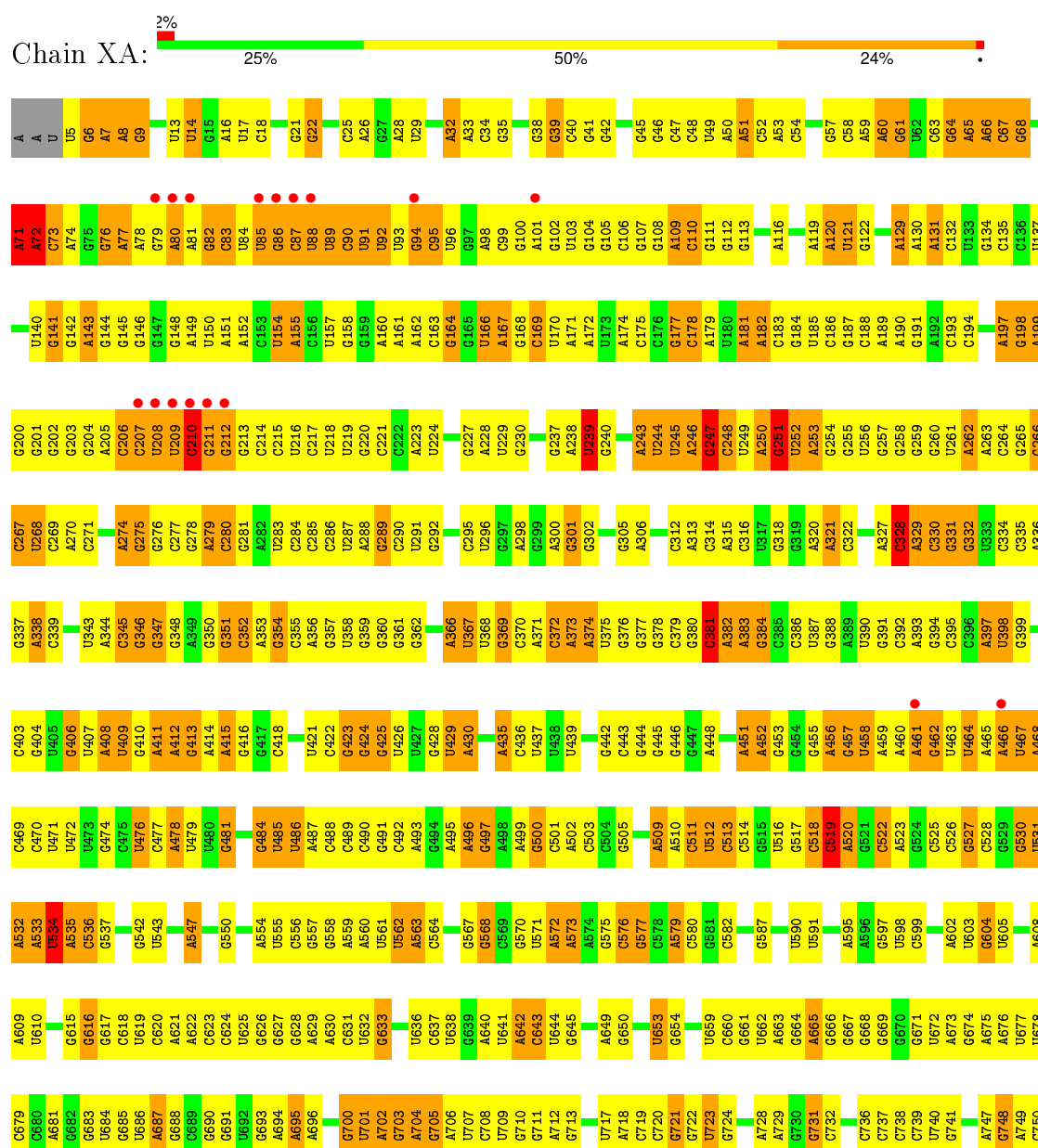
- Molecule 32: 16S rRNA



C1217	G1144	U1007	G933	A865	U793	G646	U571	G500	U434	A363	C286	A149
C1218	A1145	U1008	C934	C866	A794	C647	A572	C501	A435	A364	U287	U150
A1219	A1146	U1009	A935	C867	C795	A649	A573	A502	A336	U365	A288	C153
G1220	C936	U1010	C936	C868	C796	A649	A574	C503	U437	A366	G289	U154
G1221	C1149	A1081	A937	C869	C797	G650	G575	C504	U438	U367	C290	C217
G1222	A1150	A1082	C940	U870	U798	C651	C576	C505	A439	U368	U291	U157
C1223	A1151	U1083	C940	U871	C799	U852	C577	G506	C440	C389	G292	U219
U1224	A1152	G1084	C945	A872	G800	U853	A579	C507	C441	C370	U219	G158
U1225	G1153	U1017	G945	A873	U801	U854	C580	U508	G442	A371	G221	G159
C1226	G1154	G1018	A946	C874	A802	A655	G581	A509	A300	C372	A300	A160
A1227	A1155	A1019	G947	U875	G803	G732	C582	A510	C443	A373	A222	A161
C1228	G1156	G1088	C948	C876	U804	G733	A583	C511	G444	A374	U224	A162
A1229	A1157	A1021	A949	G877	U804	C658	A583	C511	G445	A375	C225	C163
U1230	C1158	A1022	U950	G878	C805	U859	G587	G515	G446	G376	G256	G164
G1231	U1159	U1023	G951	C879	C806	C660	G588	G515	G447	G377	G227	U166
G1232	G1160	G1024	U952	C880	A807	U861	U591	C518	A451	A382	G230	A167
C1233	A1161	A1093	C953	C881	C808	A663	G592	A520	A452	A383	G230	G168
U1234	C1162	G1094	G954	C882	G809	G664	U593	A521	G453	A384	G237	C169
U1235	A1163	U1095	U955	C883	C810	A665	U594	C522	U458	A389	G240	A172
A1236	C1163	C1027	U956	U884	C811	G666	A595	A523	A459	U390	G241	U173
G1237	U1101	U1028	U957	G887	A814	U867	G596	A523	A460	A391	G242	A174
A1238	A1167	U1030	A958	C888	A815	G674	U597	G527	A461	G392	A243	C175
A1239	U1168	C1031	A959	C889	A816	U869	U598	C528	G462	C393	U244	C176
U1240	C1103	G1032	A960	U890	C817	G670	A600	G529	U463	A393	U245	G177
G1241	A1170	G1033	U960	G890	C817	U867	A601	G530	U464	A394	U246	C178
C1243	A1171	G1034	U960	G891	C818	A673	A602	G531	A465	A245	G247	A179
A1244	G1108	A1035	U965	G895	G818	U867	G603	U534	A466	U398	G247	U180
G1245	A1111	U1036	G966	C896	A819	G674	G604	A532	U467	A327	A250	A181
U1246	C1112	C1037	C967	C897	U820	A675	A608	A533	A468	G328	G251	A182
A1248	C1113	G1038	A969	G898	G821	C680	U605	A535	C469	A329	U252	C183
C1249	U1114	U1039	C970	C899	U822	A681	G606	A536	C470	A330	A253	G184
U1250	U1115	G1040	C971	A900	U823	G682	A607	G537	U471	G331	G254	U185
A1251	G1116	G1041	C972	U903	G829	U683	A608	A538	U472	U407	G255	C186
A1252	U1117	C1045	C973	U904	A831	U684	C612	G540	U473	U408	U256	G187
G1253	C1119	A1046	A975	U905	G832	U685	C613	G541	G474	U409	G257	C188
A1254	C1120	G1047	G976	A906	G833	A687	C614	U542	C475	G410	G258	G191
U1255	U1121	G1048	A977	U907	U834	G685	U619	U543	U476	A411	G259	A192
G1256	G1187	U1049	A978	A908	U835	U690	G615	U544	C477	A412	G260	C193
A1257	U1122	U1050	U982	A909	G836	G691	G616	C545	A478	A413	U261	G194
G1258	G1124	C1051	U983	U910	G836	U692	G617	A546	U479	G413	A262	C195
A1261	U1125	U1052	U983	C912	C841	A694	U619	A547	G481	A415	A263	A195
U1262	U1126	G1053	A983	A913	U842	U697	A622	G548	A482	A416	C264	A196
A1263	G1127	C1054	G988	A914	U843	U698	C623	C549	C483	G417	G265	A197
G1266	C1128	A1055	U989	A915	G844	G699	C624	A553	G484	A418	G266	G198
A1269	U1199	U1056	C990	U916	A845	U699	U625	A554	U485	G419	C267	A199
G1270	C1200	G1057	U991	G917	G846	U700	U625	A555	U486	U420	U268	G200
A1271	A1201	G1131	U992	A918	G847	G701	U625	U556	A487	A421	C269	G201
U1272	U1202	C1132	G993	A919	C848	A702	G633	C556	C488	C422	A270	G202
C1273	C1203	G1133	A994	U920	G848	G703	C634	G557	C489	G423	C271	G203
A1274	G1206	U1062	C995	U921	U855	U706	A635	G558	G491	G424	C272	G204
U1275	U1135	C1063	A996	A922	C856	A707	U636	A559	G492	U427	U273	C206
G1276	C1136	U1064	U997	A923	C857	U707	U637	A562	G493	U428	A274	G207
U1277	U1137	G1065	A1000	C924	G858	U708	C637	U563	G494	U429	G275	U208
G1278	G1138	C1066	C1001	G925	A859	U709	U638	A563	G495	A495	G357	U209
A1279	U1212	U1067	G1002	G926	G860	U710	U641	C564	A496	A496	U358	C210
C1280	C1140	C1069	G1003	G927	G861	A787	U644	C569	G497	A431	G359	G211
U1281	A1213	C1142	A1004	G928	U862	U715	U644	C569	G498	A432	G362	C212
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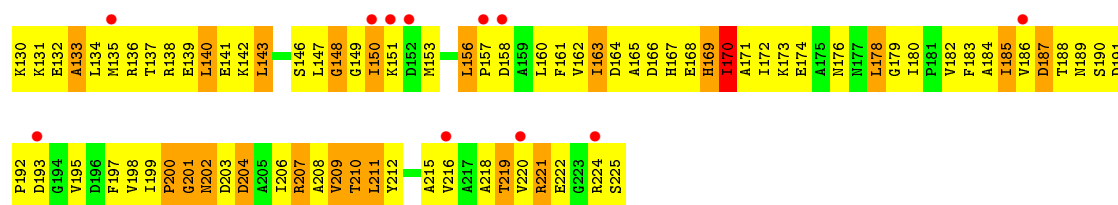


• Molecule 32: 16S rRNA

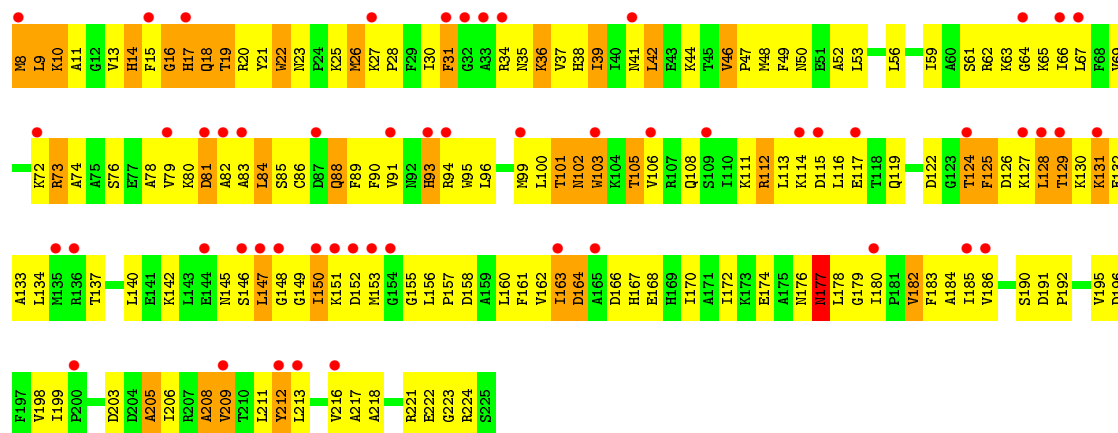


- Molecule 33: 30S ribosomal protein S2

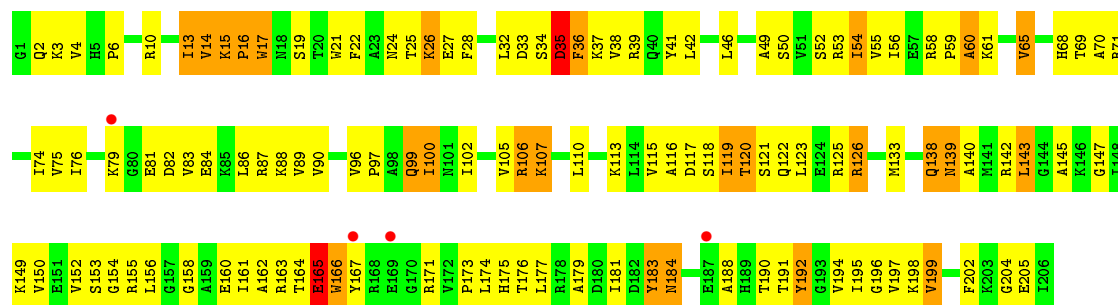
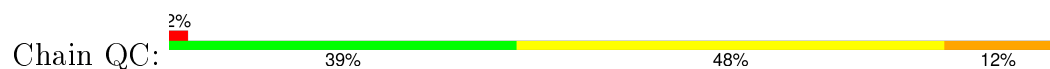
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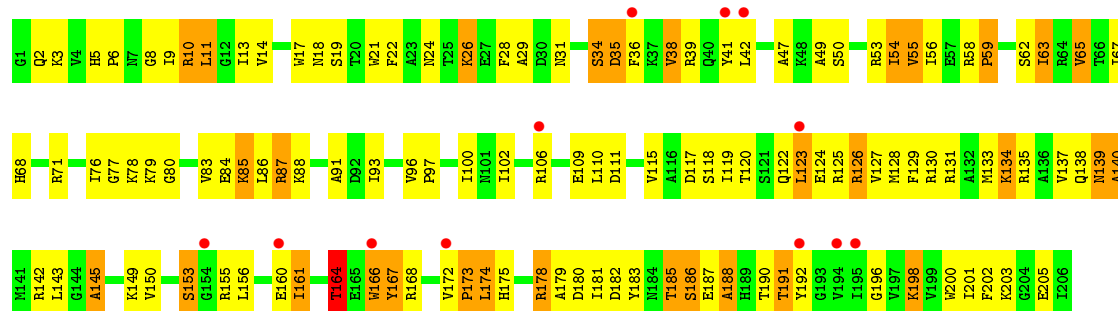
• Molecule 33: 30S ribosomal protein S2



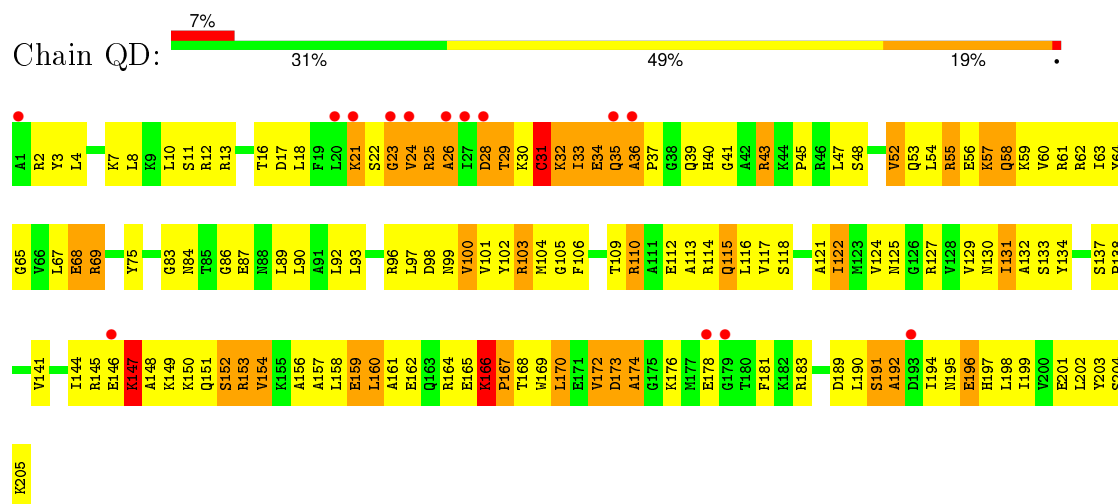
• Molecule 34: 30S ribosomal protein S3

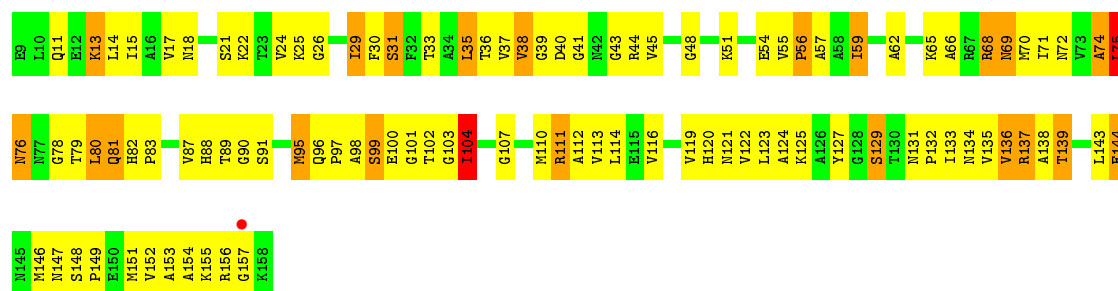


• Molecule 34: 30S ribosomal protein S3

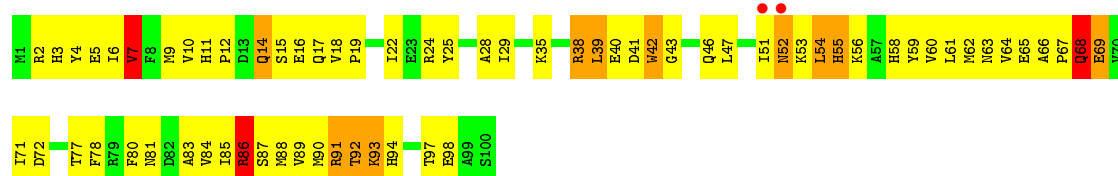


- Molecule 35: 30S ribosomal protein S4

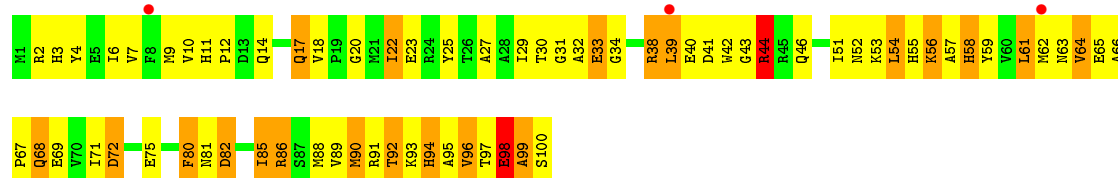




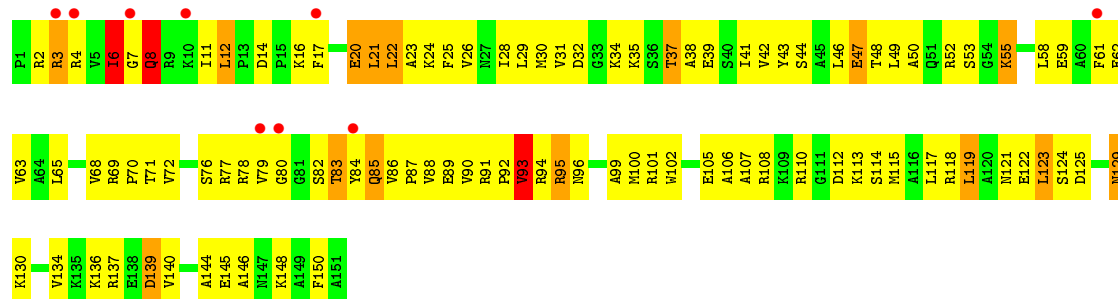
- Molecule 37: 30S ribosomal protein S6



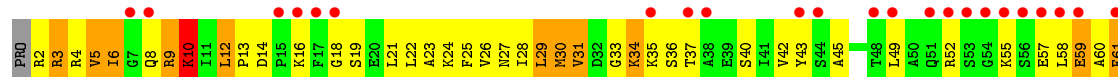
- Molecule 37: 30S ribosomal protein S6

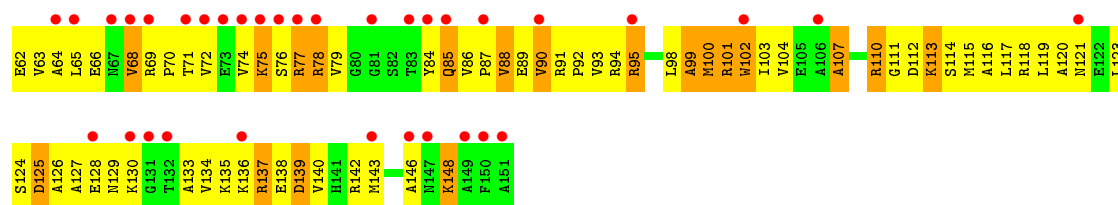


- Molecule 38: 30S ribosomal protein S7

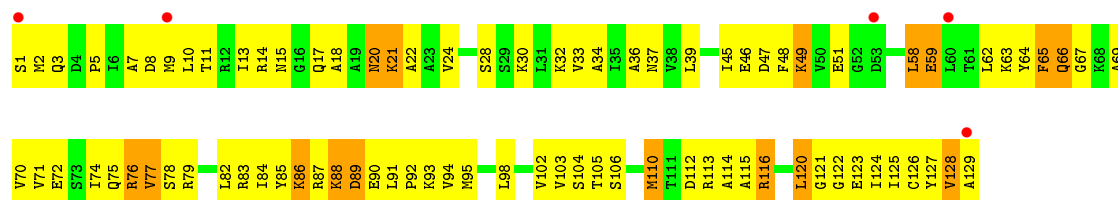


- Molecule 38: 30S ribosomal protein S7

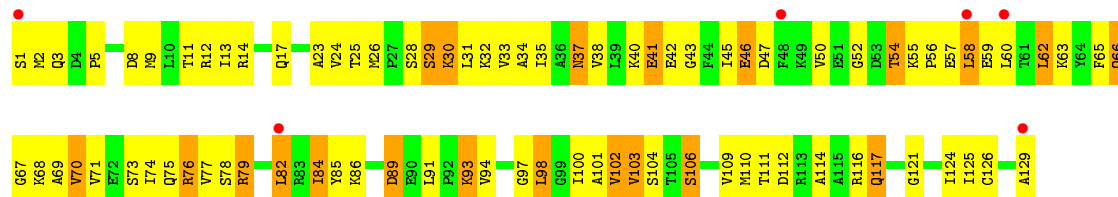




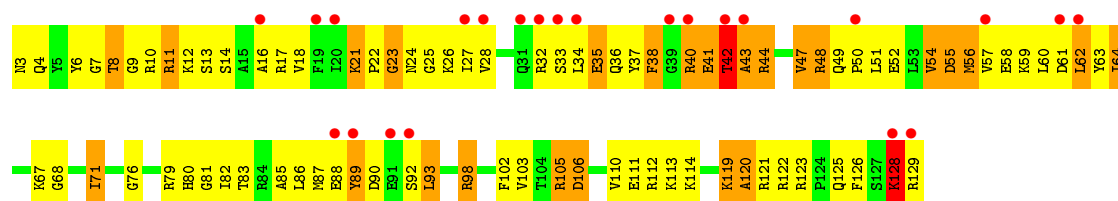
- Molecule 39: 30S ribosomal protein S8



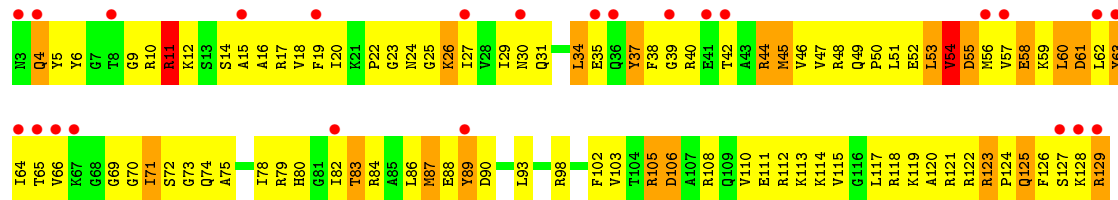
- Molecule 39: 30S ribosomal protein S8



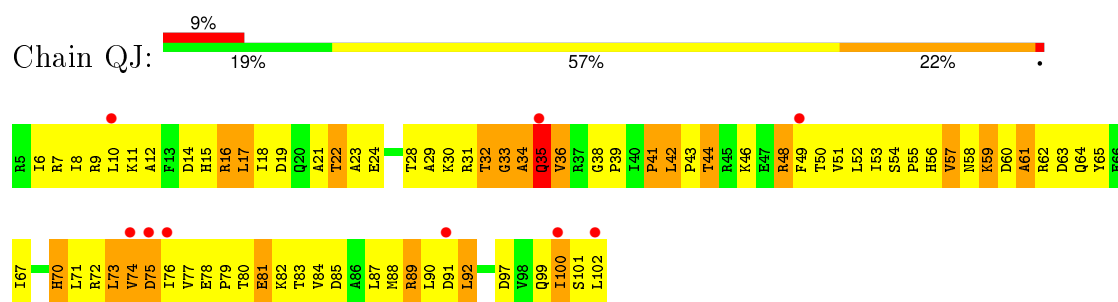
- Molecule 40: 30S ribosomal protein S9



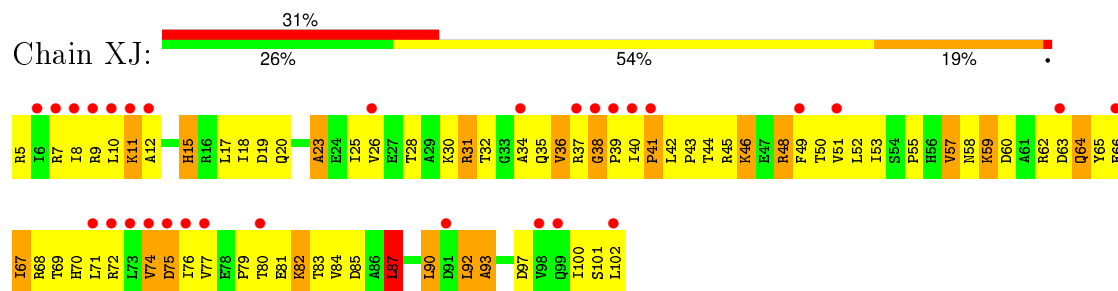
- Molecule 40: 30S ribosomal protein S9



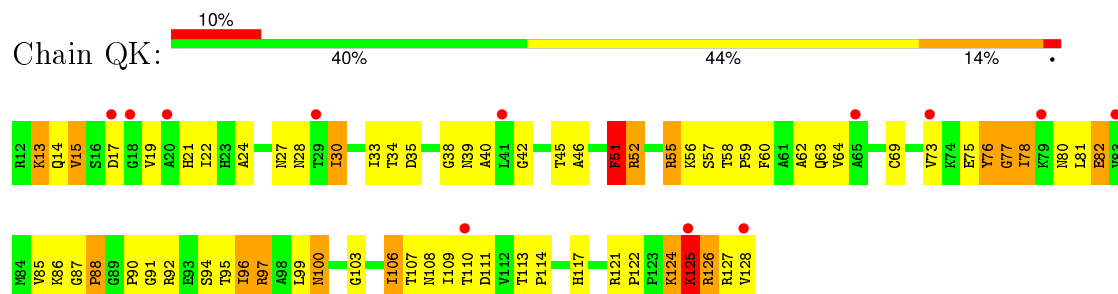
- Molecule 41: 30S ribosomal protein S10



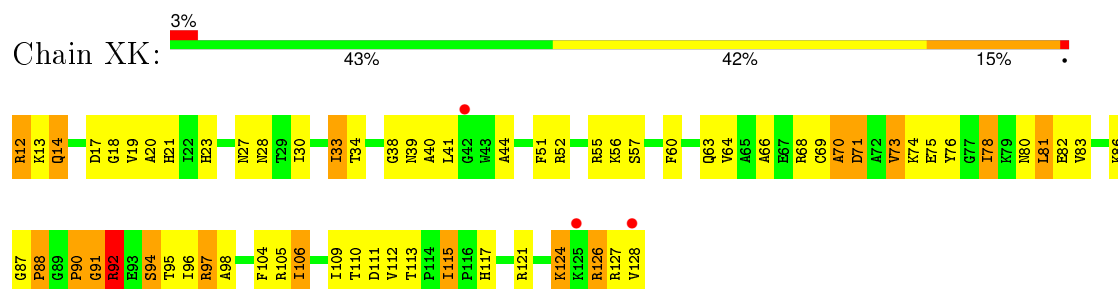
- Molecule 41: 30S ribosomal protein S10



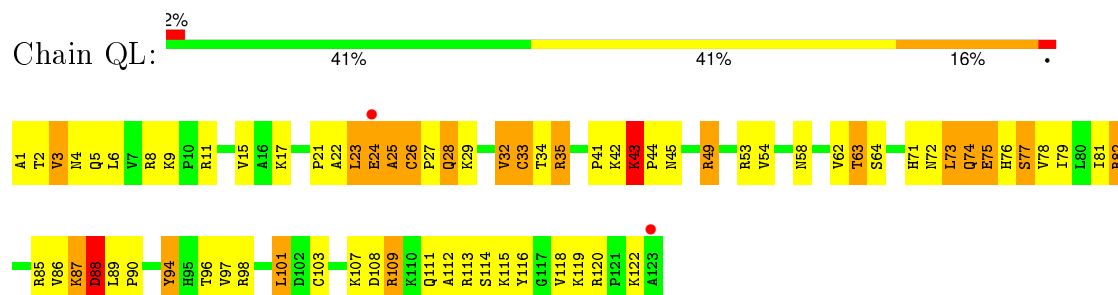
- Molecule 42: 30S ribosomal protein S11



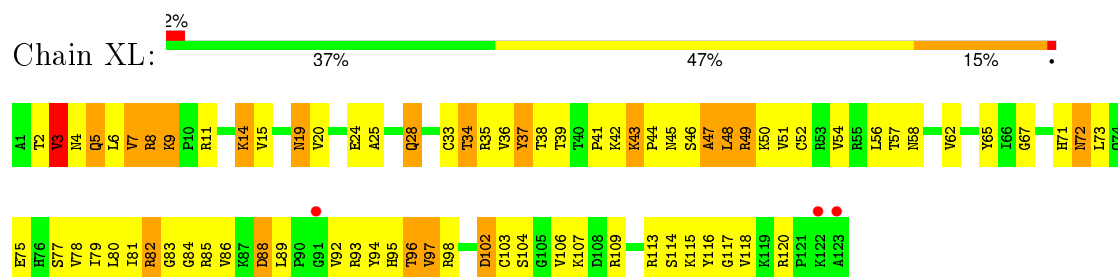
- Molecule 42: 30S ribosomal protein S11



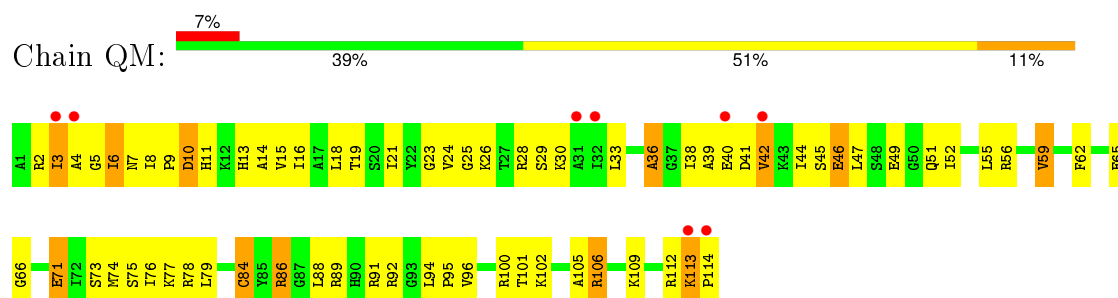
- Molecule 43: 30S ribosomal protein S12



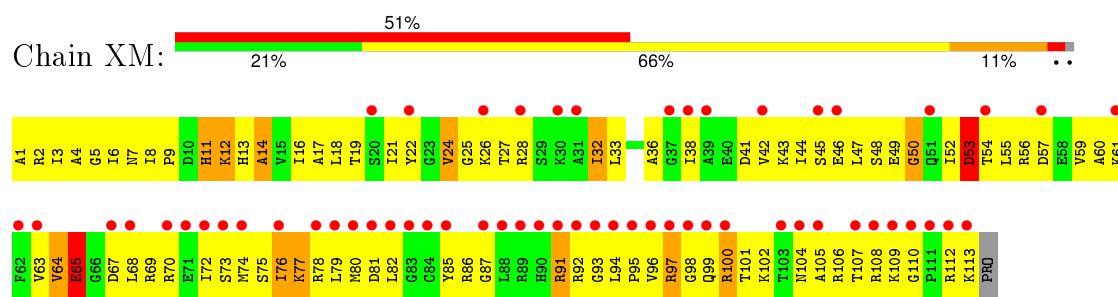
- Molecule 43: 30S ribosomal protein S12



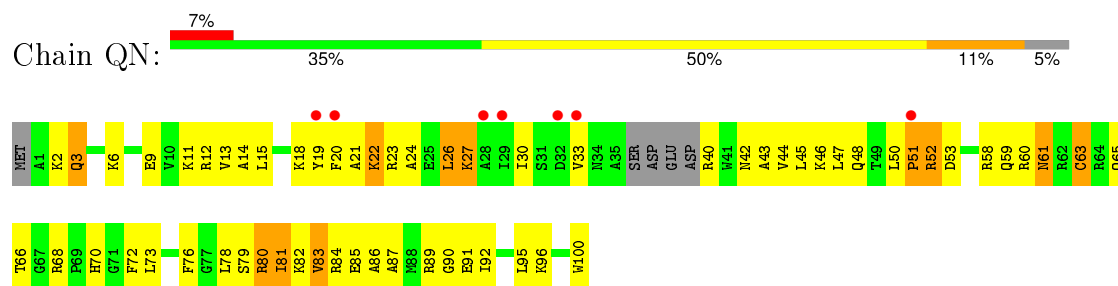
- Molecule 44: 30S ribosomal protein S13



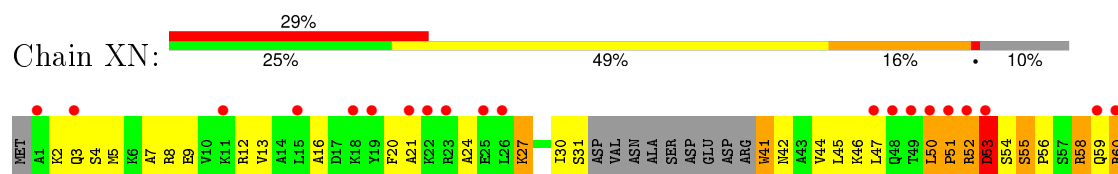
- Molecule 44: 30S ribosomal protein S13

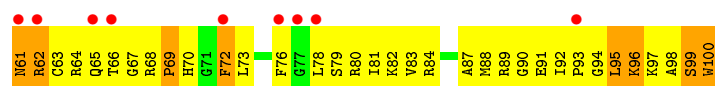


- Molecule 45: 30S ribosomal protein S14

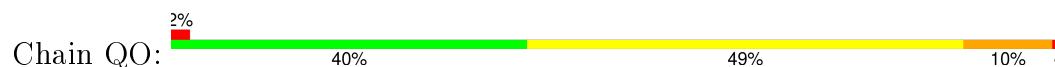


- Molecule 45: 30S ribosomal protein S14





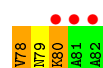
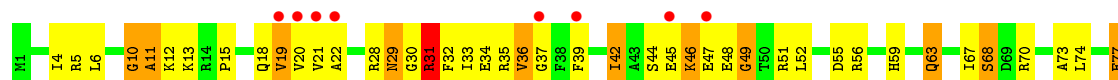
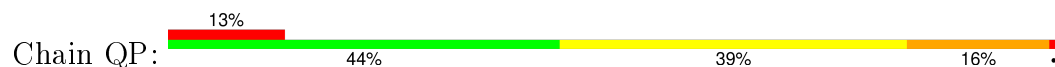
- Molecule 46: 30S ribosomal protein S15



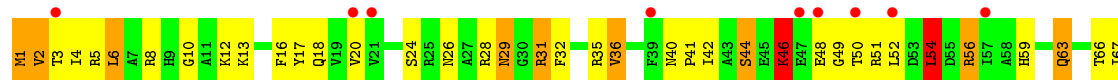
- Molecule 46: 30S ribosomal protein S15



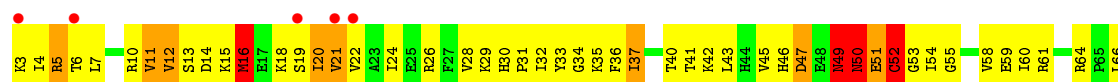
- Molecule 47: 30S ribosomal protein S16

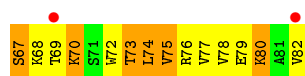


- Molecule 47: 30S ribosomal protein S16

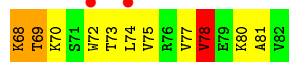
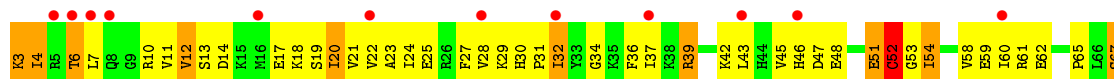


- Molecule 48: 30S ribosomal protein S17





• Molecule 48: 30S ribosomal protein S17



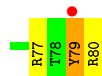
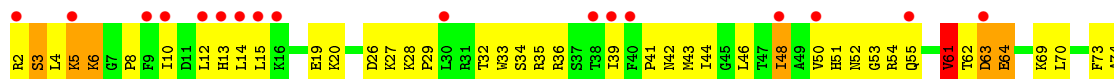
• Molecule 49: 30S ribosomal protein S18



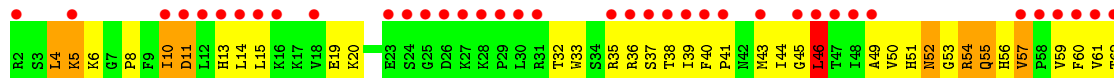
• Molecule 49: 30S ribosomal protein S18



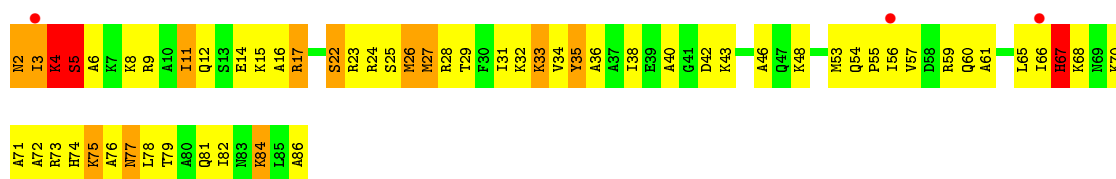
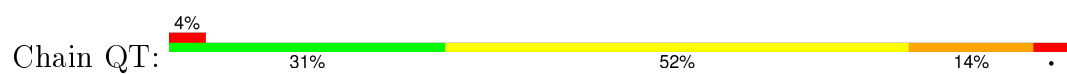
• Molecule 50: 30S ribosomal protein S19



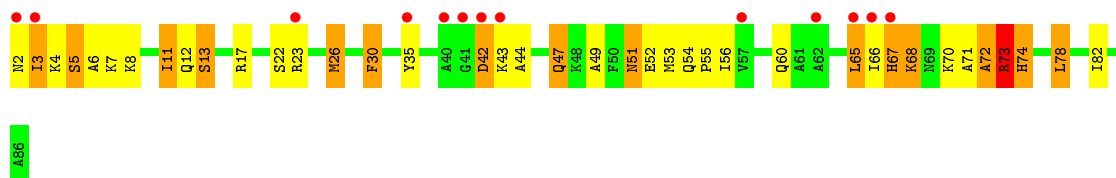
• Molecule 50: 30S ribosomal protein S19



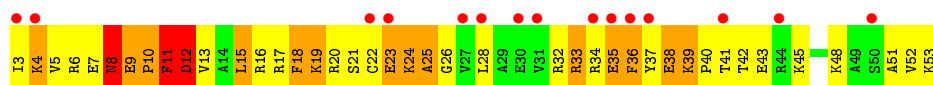
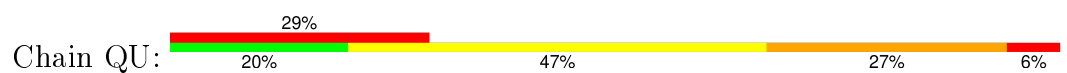
• Molecule 51: 30S ribosomal protein S20



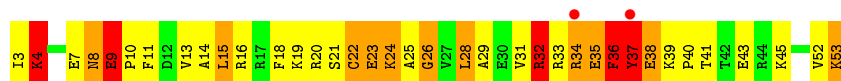
- Molecule 51: 30S ribosomal protein S20



- Molecule 52: 30S ribosomal protein S21



- Molecule 52: 30S ribosomal protein S21



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.76Å 433.27Å 618.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.78 – 3.10 69.78 – 3.10	Depositor EDS
% Data completeness (in resolution range)	95.8 (69.78-3.10) 95.9 (69.78-3.10)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.51 (at 3.13Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.200 , 0.252 0.214 , 0.264	Depositor DCC
R_{free} test set	19579 reflections (2.06%)	DCC
Wilson B-factor (Å ²)	68.1	Xtriage
Anisotropy	0.435	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.24 , 91.3	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	0 of 971020 reflections	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	284464	wwPDB-VP
Average B, all atoms (Å ²)	117.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.42% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, EM1, 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	RA	0.73	7/68626 (0.0%)	1.08	288/107056 (0.3%)
1	YA	0.38	0/68314	0.83	60/106569 (0.1%)
2	RB	0.64	0/2828	0.94	1/4410 (0.0%)
2	YB	0.30	0/2803	0.76	1/4371 (0.0%)
3	RC	0.47	0/2121	0.72	1/2852 (0.0%)
3	YC	0.32	0/2121	0.55	0/2852
4	RD	0.56	0/1586	0.80	1/2134 (0.0%)
4	YD	0.31	0/1586	0.57	0/2134
5	RE	0.43	0/1571	0.66	0/2113
5	YE	0.27	0/1571	0.51	0/2113
6	RF	0.32	0/1434	0.53	0/1926
6	YF	0.24	0/1444	0.50	0/1937
7	RG	0.40	0/1343	0.65	0/1816
7	YG	0.24	0/1343	0.50	0/1816
8	RH	0.32	0/1122	0.56	0/1515
8	YH	0.29	0/1122	0.52	0/1515
9	RI	0.23	0/1046	0.48	0/1410
9	YI	0.22	0/1046	0.47	0/1410
10	RJ	0.57	0/1152	0.82	1/1551 (0.1%)
10	YJ	0.29	0/1152	0.60	1/1551 (0.1%)
11	RK	0.54	0/947	0.80	0/1268
11	YK	0.34	0/947	0.58	0/1268
12	RL	0.44	0/1054	0.75	1/1403 (0.1%)
12	YL	0.28	0/1054	0.56	0/1403
13	RM	0.50	0/1093	0.71	0/1460
13	YM	0.29	0/1093	0.50	0/1460
14	RN	0.49	0/973	0.72	0/1301
14	YN	0.30	0/973	0.53	0/1301
15	RO	0.41	0/902	0.63	0/1209
15	YO	0.24	0/902	0.45	0/1209
16	RP	0.48	0/929	0.73	0/1242
16	YP	0.32	0/929	0.52	0/1242

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	RQ	0.58	0/960	0.75	0/1278
17	YQ	0.30	0/960	0.47	0/1278
18	RR	0.59	0/829	0.80	0/1107
18	YR	0.30	0/829	0.52	0/1107
19	RS	0.54	0/864	0.76	0/1156
19	YS	0.29	0/864	0.54	1/1156 (0.1%)
20	RT	0.47	0/744	0.72	0/994
20	YT	0.26	0/744	0.54	0/994
21	RU	0.43	0/787	0.68	0/1051
21	YU	0.26	0/787	0.51	0/1051
22	RV	0.42	0/766	0.61	0/1025
22	YV	0.24	0/766	0.44	0/1025
23	RW	0.67	1/603 (0.2%)	0.96	2/797 (0.3%)
23	YW	0.29	0/603	0.54	0/797
24	RX	0.44	0/635	0.69	0/848
24	YX	0.28	0/635	0.58	0/848
25	RY	0.35	0/510	0.61	0/677
25	YY	0.23	0/510	0.50	0/677
26	RZ	0.56	0/453	0.77	0/605
26	YZ	0.28	0/453	0.53	0/605
27	R0	0.45	0/450	0.74	0/599
27	Y0	0.30	0/450	0.52	0/599
28	R1	0.39	0/416	0.63	0/554
28	Y1	0.27	0/416	0.49	0/554
29	R2	0.52	0/380	0.76	0/498
29	Y2	0.30	0/380	0.54	0/498
30	R3	0.46	0/513	0.73	1/676 (0.1%)
30	Y3	0.29	0/513	0.56	0/676
31	R4	0.52	0/303	0.73	0/397
31	Y4	0.33	0/303	0.53	0/397
32	QA	0.43	0/36834	0.82	31/57462 (0.1%)
32	XA	0.39	0/36762	0.80	29/57350 (0.1%)
33	QB	0.30	0/1735	0.55	0/2338
33	XB	0.26	0/1735	0.49	0/2338
34	QC	0.30	0/1651	0.53	1/2225 (0.0%)
34	XC	0.26	0/1651	0.48	0/2225
35	QD	0.32	0/1665	0.54	0/2227
35	XD	0.40	0/1665	0.63	0/2227
36	QE	0.38	0/1118	0.63	0/1504
36	XE	0.35	0/1118	0.60	0/1504
37	QF	0.31	0/835	0.51	0/1128
37	XF	0.30	0/835	0.54	0/1128
38	QG	0.27	0/1195	0.47	0/1602

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	XG	0.25	0/1187	0.48	0/1591
39	QH	0.35	0/989	0.56	0/1326
39	XH	0.30	0/989	0.51	0/1326
40	QI	0.27	0/1034	0.51	0/1375
40	XI	0.26	0/1034	0.48	0/1375
41	QJ	0.30	0/796	0.52	0/1077
41	XJ	0.26	0/796	0.50	0/1077
42	QK	0.29	0/893	0.54	0/1205
42	XK	0.29	0/893	0.55	0/1205
43	QL	0.35	0/969	0.67	0/1300
43	XL	0.34	0/969	0.58	0/1300
44	QM	0.26	0/892	0.50	0/1193
44	XM	0.22	0/884	0.44	0/1181
45	QN	0.29	0/785	0.51	0/1043
45	XN	0.23	0/746	0.42	0/990
46	QO	0.31	0/722	0.49	0/964
46	XO	0.27	0/722	0.46	0/964
47	QP	0.29	0/659	0.51	0/884
47	XP	0.31	0/648	0.53	0/870
48	QQ	0.39	0/657	0.63	0/881
48	XQ	0.32	0/657	0.53	0/881
49	QR	0.30	0/462	0.52	0/621
49	XR	0.35	0/462	0.50	0/621
50	QS	0.26	0/652	0.48	0/877
50	XS	0.22	0/652	0.45	0/877
51	QT	0.38	0/671	0.58	0/888
51	XT	0.27	0/671	0.52	0/888
52	QU	0.33	0/430	0.50	0/570
52	XU	0.38	0/430	0.64	0/570
All	All	0.48	8/306703 (0.0%)	0.84	420/458519 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
4	RD	0	1
10	RJ	0	1
14	RN	0	1
30	R3	0	1
All	All	0	4

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	RA	984	A	N9-C4	-8.71	1.32	1.37
1	RA	1142	A	N9-C4	-8.61	1.32	1.37
1	RA	1936	A	N9-C4	-6.89	1.33	1.37
23	RW	32	ALA	CA-CB	5.66	1.64	1.52
1	RA	984	A	C5-C6	-5.54	1.36	1.41
1	RA	804	A	N9-C4	-5.31	1.34	1.37
1	RA	528	A	N7-C5	-5.13	1.36	1.39
1	RA	1142	A	C5-C6	-5.01	1.36	1.41

All (420) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	974	G	C5-N7-C8	-11.14	98.73	104.30
1	RA	1142	A	C2-N3-C4	-10.75	105.23	110.60
1	RA	974	G	N7-C8-N9	10.43	118.31	113.10
1	RA	1990	C	C6-N1-C2	10.42	124.47	120.30
1	RA	560	C	N3-C4-C5	10.30	126.02	121.90
1	RA	783	A	C5-N7-C8	-10.18	98.81	103.90
1	RA	1278	C	C6-N1-C2	10.10	124.34	120.30
1	RA	1936	A	C2-N3-C4	-9.95	105.63	110.60
1	RA	560	C	C6-N1-C2	9.94	124.28	120.30
1	RA	2055	C	C6-N1-C2	9.74	124.20	120.30
1	RA	783	A	N7-C8-N9	9.70	118.65	113.80
1	RA	698	C	C6-N1-C2	9.39	124.06	120.30
1	RA	2250	G	C5-N7-C8	-9.37	99.61	104.30
1	RA	974	G	C4-C5-N7	9.35	114.54	110.80
1	RA	783	A	N1-C6-N6	9.20	124.12	118.60
1	RA	984	A	C2-N3-C4	-9.20	106.00	110.60
1	RA	2815	C	C6-N1-C2	9.19	123.98	120.30
1	RA	984	A	C5-N7-C8	-8.99	99.40	103.90
1	RA	2499	C	N1-C2-O2	-8.96	113.53	118.90
1	RA	740	C	C6-N1-C2	8.87	123.85	120.30
1	RA	2250	G	C4-C5-N7	8.76	114.30	110.80
1	RA	2773	C	C6-N1-C2	8.72	123.79	120.30
1	RA	2606	C	C6-N1-C2	8.56	123.73	120.30
1	RA	1790	C	C6-N1-C2	8.45	123.68	120.30
1	RA	1997	C	C6-N1-C2	8.31	123.62	120.30
1	RA	984	A	N1-C6-N6	8.26	123.55	118.60
1	RA	1142	A	N3-C4-C5	8.17	132.52	126.80
1	RA	1790	C	N3-C4-C5	8.12	125.15	121.90
32	XA	765	G	C4-N9-C1'	8.08	137.01	126.50
1	RA	951	C	C6-N1-C2	8.02	123.51	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	783	A	C4-C5-N7	7.94	114.67	110.70
1	RA	1779	U	C5-C6-N1	-7.75	118.83	122.70
1	RA	528	A	N7-C8-N9	7.71	117.65	113.80
32	XA	210	C	C2-N1-C1'	7.69	127.25	118.80
1	RA	2606	C	N3-C4-C5	7.68	124.97	121.90
32	XA	251	G	C4-N9-C1'	7.65	136.45	126.50
1	RA	787	C	C6-N1-C2	7.65	123.36	120.30
1	RA	786	C	N3-C4-C5	7.61	124.94	121.90
32	QA	365	U	C5-C6-N1	-7.55	118.92	122.70
1	RA	2870	C	C6-N1-C2	7.41	123.27	120.30
1	RA	686	U	C2-N1-C1'	-7.28	108.97	117.70
1	RA	2806	C	C6-N1-C2	7.25	123.20	120.30
1	RA	2501	C	C2-N1-C1'	-7.25	110.83	118.80
1	RA	2815	C	C5-C6-N1	-7.24	117.38	121.00
32	XA	381	C	C2-N1-C1'	7.24	126.76	118.80
1	RA	2527	C	C6-N1-C2	7.23	123.19	120.30
1	RA	2419	U	C5-C6-N1	-7.23	119.08	122.70
1	RA	1200	C	C6-N1-C2	7.23	123.19	120.30
1	RA	2000	C	C6-N1-C2	7.20	123.18	120.30
1	RA	783	A	C6-C5-N7	-7.18	127.27	132.30
1	RA	2250	G	N7-C8-N9	7.14	116.67	113.10
1	RA	2586	U	C5-C6-N1	7.14	126.27	122.70
1	RA	528	A	C5-N7-C8	-7.08	100.36	103.90
1	RA	736	C	C6-N1-C2	7.08	123.13	120.30
1	RA	984	A	C4-C5-N7	7.06	114.23	110.70
1	RA	705	A	N1-C6-N6	7.05	122.83	118.60
1	RA	1962	C	N1-C2-O2	-7.04	114.67	118.90
1	RA	2606	C	C2-N3-C4	-7.04	116.38	119.90
1	RA	2274	A	C8-N9-C4	7.03	108.61	105.80
1	RA	528	A	C8-N9-C4	-6.98	103.01	105.80
1	RA	1694	C	C6-N1-C2	6.97	123.09	120.30
1	RA	740	C	N3-C4-C5	6.96	124.69	121.90
1	RA	786	C	C6-N1-C2	6.96	123.09	120.30
1	RA	783	A	C8-N9-C4	-6.96	103.02	105.80
32	QA	733	G	C4-N9-C1'	-6.95	117.46	126.50
1	RA	2055	C	C5-C6-N1	-6.92	117.54	121.00
32	XA	251	G	C8-N9-C1'	-6.92	118.01	127.00
32	QA	1484	C	C6-N1-C2	6.91	123.06	120.30
1	RA	128	C	C6-N1-C2	6.89	123.06	120.30
1	RA	2606	C	C5-C6-N1	-6.87	117.56	121.00
32	XA	765	G	C8-N9-C1'	-6.80	118.15	127.00
1	RA	974	G	C8-N9-C4	-6.79	103.68	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	1656	C	N3-C4-C5	6.79	124.61	121.90
1	RA	561	G	N3-C4-N9	-6.78	121.93	126.00
1	RA	1790	C	C2-N3-C4	-6.78	116.51	119.90
1	RA	736	C	N3-C4-C5	6.78	124.61	121.90
1	RA	2853	C	C6-N1-C2	6.76	123.01	120.30
1	RA	732	C	C6-N1-C2	6.76	123.00	120.30
1	RA	2250	G	N1-C6-O6	6.72	123.93	119.90
1	RA	1348	C	C6-N1-C2	6.69	122.97	120.30
1	RA	1278	C	C5-C6-N1	-6.67	117.67	121.00
1	RA	2250	G	C2-N3-C4	-6.60	108.60	111.90
32	QA	1053	G	C4-N9-C1'	-6.59	117.94	126.50
1	RA	1142	A	N1-C6-N6	6.58	122.55	118.60
1	RA	835	C	N3-C4-C5	6.57	124.53	121.90
1	YA	335	C	C2-N1-C1'	6.54	125.99	118.80
1	YA	1428	C	C2-N1-C1'	-6.53	111.62	118.80
1	RA	2874	C	C6-N1-C2	6.48	122.89	120.30
1	RA	794	A	C8-N9-C4	6.48	108.39	105.80
1	RA	2843	G	C8-N9-C4	6.46	108.98	106.40
1	RA	1936	A	N1-C6-N6	6.44	122.47	118.60
10	YJ	25	LEU	CA-CB-CG	6.38	129.97	115.30
1	RA	1828	G	C4-C5-N7	-6.36	108.25	110.80
1	RA	743	A	C8-N9-C4	6.35	108.34	105.80
1	RA	1152	C	N1-C2-O2	-6.34	115.09	118.90
1	RA	2503	A	C2-N3-C4	6.34	113.77	110.60
1	RA	2630	G	C8-N9-C4	6.34	108.94	106.40
1	RA	1830	C	C6-N1-C2	6.34	122.83	120.30
32	QA	4	U	C2-N1-C1'	6.33	125.30	117.70
1	RA	853	C	C6-N1-C2	6.29	122.81	120.30
32	XA	210	C	C6-N1-C1'	-6.28	113.27	120.80
1	RA	742	A	N1-C6-N6	6.26	122.36	118.60
1	RA	2283	C	N1-C2-O2	-6.25	115.15	118.90
1	YA	740	C	C6-N1-C2	6.25	122.80	120.30
1	RA	2769	U	C5-C6-N1	-6.21	119.59	122.70
1	RA	1962	C	N3-C2-O2	6.21	126.24	121.90
1	RA	686	U	C5-C6-N1	-6.20	119.60	122.70
1	RA	229	C	C6-N1-C1'	-6.18	113.39	120.80
1	RA	974	G	C4-N9-C1'	6.18	134.53	126.50
1	YA	2405	G	C4-N9-C1'	6.17	134.53	126.50
1	RA	128	C	N3-C2-O2	6.17	126.22	121.90
1	RA	494	G	C8-N9-C4	6.15	108.86	106.40
1	YA	776	G	C4-N9-C1'	6.14	134.48	126.50
1	RA	2250	G	N3-C4-C5	6.13	131.67	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	1022	G	N9-C4-C5	6.12	107.85	105.40
12	RL	19	LEU	CA-CB-CG	6.12	129.37	115.30
1	RA	229	C	C2-N1-C1'	6.11	125.52	118.80
10	RJ	82	GLY	N-CA-C	-6.10	97.85	113.10
1	RA	2609	U	C2-N1-C1'	-6.09	110.39	117.70
1	RA	2501	C	C6-N1-C1'	6.08	128.09	120.80
32	XA	1297	G	C4-N9-C1'	-6.07	118.61	126.50
1	RA	673	C	C6-N1-C2	6.07	122.73	120.30
1	RA	378	C	C6-N1-C2	6.06	122.72	120.30
1	RA	815	C	C6-N1-C2	6.06	122.72	120.30
3	RC	109	LEU	CA-CB-CG	6.05	129.23	115.30
1	RA	1663	G	C8-N9-C4	6.04	108.82	106.40
1	RA	2250	G	C6-C5-N7	-6.04	126.78	130.40
1	RA	1520	U	C6-N1-C2	6.03	124.62	121.00
1	RA	561	G	C5-N7-C8	-6.02	101.29	104.30
1	RA	2870	C	N3-C4-C5	6.02	124.31	121.90
1	RA	1618	A	N1-C6-N6	-6.02	114.99	118.60
1	RA	1994	C	C6-N1-C2	6.02	122.71	120.30
1	RA	1997	C	C2-N1-C1'	-6.02	112.18	118.80
1	RA	1936	A	C5-N7-C8	-6.01	100.89	103.90
1	RA	2626	C	C6-N1-C2	5.99	122.70	120.30
1	YA	828	U	C2-N1-C1'	5.99	124.89	117.70
1	RA	1604	C	C6-N1-C2	5.98	122.69	120.30
1	RA	1760	C	C6-N1-C2	5.97	122.69	120.30
1	RA	742	A	C8-N9-C4	5.97	108.19	105.80
1	RA	2419	U	C6-N1-C2	5.93	124.56	121.00
1	RA	1452	G	C5-N7-C8	-5.92	101.34	104.30
32	QA	244	U	N3-C2-O2	-5.92	118.06	122.20
1	RA	1168	G	N3-C4-N9	5.92	129.55	126.00
1	RA	1790	C	C5-C6-N1	-5.91	118.05	121.00
1	RA	560	C	N3-C4-N4	-5.91	113.86	118.00
1	RA	2286	G	C4-C5-N7	5.90	113.16	110.80
32	XA	381	C	C5-C6-N1	5.90	123.95	121.00
1	RA	846	U	C2-N1-C1'	5.89	124.77	117.70
1	RA	2023	C	C6-N1-C2	5.89	122.66	120.30
1	YA	1799	G	N3-C4-C5	-5.89	125.66	128.60
1	RA	1573	G	C8-N9-C4	5.88	108.75	106.40
32	QA	733	G	C8-N9-C1'	5.88	134.64	127.00
1	RA	2815	C	C2-N1-C1'	-5.88	112.34	118.80
1	RA	1245	G	C8-N9-C4	5.87	108.75	106.40
1	RA	1828	G	C5-C6-O6	5.86	132.12	128.60
1	RA	687	C	C6-N1-C2	5.86	122.64	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	QA	899	C	C6-N1-C2	5.84	122.64	120.30
1	RA	253	C	C6-N1-C2	5.84	122.64	120.30
1	RA	740	C	N3-C2-O2	5.84	125.99	121.90
1	YA	2620	C	C6-N1-C2	5.84	122.64	120.30
1	RA	1776	G	N1-C6-O6	5.83	123.40	119.90
1	RA	2385	C	N1-C2-O2	-5.83	115.41	118.90
32	QA	108	G	N7-C8-N9	5.82	116.01	113.10
1	RA	61	C	C6-N1-C2	5.81	122.62	120.30
32	XA	328	C	C6-N1-C2	-5.80	117.98	120.30
1	RA	2286	G	C5-N7-C8	-5.78	101.41	104.30
1	RA	1276	A	N1-C6-N6	5.78	122.07	118.60
1	RA	595	C	C6-N1-C2	5.78	122.61	120.30
23	RW	20	LEU	CB-CG-CD2	5.77	120.81	111.00
1	RA	698	C	C5-C6-N1	-5.75	118.12	121.00
32	QA	1496	C	C6-N1-C2	5.75	122.60	120.30
1	RA	593	U	C5-C6-N1	-5.74	119.83	122.70
2	RB	92	C	C6-N1-C2	5.74	122.60	120.30
32	XA	1297	G	C8-N9-C1'	5.73	134.45	127.00
1	YA	1255	U	C2-N1-C1'	5.73	124.58	117.70
32	QA	1451	U	C2-N1-C1'	5.73	124.57	117.70
1	RA	2286	G	N7-C8-N9	5.72	115.96	113.10
1	RA	1764	C	C6-N1-C2	5.72	122.59	120.30
1	RA	528	A	N1-C6-N6	5.72	122.03	118.60
1	RA	732	C	C5-C6-N1	-5.71	118.14	121.00
1	RA	2830	C	C6-N1-C2	5.71	122.58	120.30
1	RA	1836	C	C6-N1-C2	5.70	122.58	120.30
1	YA	774	G	C4-N9-C1'	-5.70	119.09	126.50
1	RA	1771	C	N1-C2-O2	-5.70	115.48	118.90
1	RA	2275	C	N1-C2-O2	5.69	122.31	118.90
1	RA	1072	C	C2-N1-C1'	5.69	125.06	118.80
32	XA	765	G	N7-C8-N9	5.68	115.94	113.10
1	YA	757	G	N3-C4-C5	5.68	131.44	128.60
1	RA	2055	C	N1-C2-O2	-5.68	115.49	118.90
32	XA	717	U	C2-N1-C1'	5.67	124.50	117.70
1	RA	31	C	C6-N1-C2	5.66	122.56	120.30
1	RA	128	C	N1-C2-O2	-5.66	115.50	118.90
1	RA	854	C	C6-N1-C2	5.66	122.56	120.30
1	RA	1229	C	N1-C2-O2	-5.65	115.51	118.90
1	RA	1020	A	N1-C6-N6	5.64	121.99	118.60
1	RA	2645	G	C4-N9-C1'	5.64	133.84	126.50
1	RA	1142	A	N3-C4-N9	-5.64	122.89	127.40
1	RA	727	A	C8-N9-C4	5.63	108.05	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	783	A	C2-N3-C4	-5.63	107.78	110.60
1	RA	804	A	C8-N9-C4	5.62	108.05	105.80
1	RA	560	C	C2-N1-C1'	-5.62	112.61	118.80
1	RA	561	G	N3-C4-C5	5.62	131.41	128.60
1	YA	246	C	C6-N1-C2	5.62	122.55	120.30
1	RA	528	A	C6-C5-N7	-5.61	128.37	132.30
1	YA	1428	C	C6-N1-C1'	5.61	127.53	120.80
1	YA	2405	G	C8-N9-C1'	-5.61	119.70	127.00
1	RA	381	G	C8-N9-C4	5.61	108.64	106.40
1	RA	1936	A	C4-C5-N7	5.60	113.50	110.70
1	RA	984	A	N3-C4-C5	5.60	130.72	126.80
1	RA	2844	G	C8-N9-C4	5.59	108.64	106.40
1	RA	731	C	C6-N1-C2	5.59	122.53	120.30
1	RA	1990	C	N3-C4-C5	5.58	124.13	121.90
1	RA	2845	U	C5-C6-N1	-5.58	119.91	122.70
1	RA	2042	A	N1-C6-N6	5.58	121.94	118.60
1	RA	2499	C	N3-C2-O2	5.57	125.80	121.90
1	YA	475	C	C2-N1-C1'	5.57	124.92	118.80
1	RA	2774	C	N3-C4-C5	5.55	124.12	121.90
1	RA	984	A	N7-C8-N9	5.55	116.57	113.80
1	RA	740	C	N1-C2-O2	-5.55	115.57	118.90
1	RA	1168	G	N9-C4-C5	-5.54	103.18	105.40
1	YA	1021	A	C3'-C2'-C1'	5.54	105.93	101.50
1	RA	1278	C	N3-C4-C5	5.53	124.11	121.90
1	RA	2032	G	N1-C6-O6	5.53	123.22	119.90
32	XA	251	G	C6-C5-N7	-5.53	127.08	130.40
32	XA	765	G	C6-C5-N7	-5.51	127.09	130.40
1	RA	556	A	N1-C6-N6	5.51	121.91	118.60
1	RA	698	C	C2-N1-C1'	-5.50	112.75	118.80
1	RA	1990	C	C5-C6-N1	-5.50	118.25	121.00
1	YA	139	U	C2-N1-C1'	5.50	124.30	117.70
1	RA	2282	G	N3-C4-C5	-5.49	125.85	128.60
1	YA	1568	G	C8-N9-C1'	-5.48	119.87	127.00
1	RA	2586	U	C4-C5-C6	-5.48	116.41	119.70
1	RA	381	G	N3-C4-C5	5.48	131.34	128.60
1	RA	1168	G	C8-N9-C1'	-5.47	119.89	127.00
1	RA	984	A	C6-C5-N7	-5.47	128.47	132.30
32	QA	1053	G	N3-C4-N9	-5.47	122.72	126.00
1	RA	832	U	C5-C6-N1	-5.45	119.97	122.70
1	RA	2658	C	C6-N1-C2	5.45	122.48	120.30
1	RA	2055	C	C2-N1-C1'	-5.44	112.82	118.80
1	RA	974	G	N3-C4-C5	5.44	131.32	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	1760	C	C5-C6-N1	-5.43	118.28	121.00
1	RA	1999	C	C6-N1-C2	5.43	122.47	120.30
32	QA	1053	G	N3-C4-C5	5.43	131.32	128.60
1	YA	2310	C	C3'-C2'-C1'	5.43	105.84	101.50
1	RA	1399	C	C6-N1-C2	5.41	122.47	120.30
19	YS	97	LEU	CA-CB-CG	5.41	127.75	115.30
1	RA	2536	G	C8-N9-C4	5.41	108.56	106.40
1	RA	1351	C	C2-N1-C1'	-5.40	112.86	118.80
1	RA	507	A	C3'-C2'-C1'	5.40	105.82	101.50
1	RA	1452	G	N7-C8-N9	5.38	115.79	113.10
32	QA	733	G	N3-C4-C5	5.38	131.29	128.60
1	RA	2815	C	N3-C4-C5	5.37	124.05	121.90
1	RA	1156	A	N1-C6-N6	5.37	121.82	118.60
1	RA	1977	A	C8-N9-C4	5.37	107.95	105.80
32	QA	414	A	C3'-C2'-C1'	5.37	105.80	101.50
1	RA	1706	C	C6-N1-C1'	-5.37	114.36	120.80
1	RA	1994	C	N3-C4-C5	5.37	124.05	121.90
1	YA	49	A	C3'-C2'-C1'	5.37	105.80	101.50
1	RA	1785	A	N1-C6-N6	5.36	121.82	118.60
32	QA	733	G	N3-C4-N9	-5.36	122.78	126.00
1	YA	476	G	C4-N9-C1'	5.36	133.47	126.50
1	YA	671	C	C2-N1-C1'	5.36	124.69	118.80
1	YA	1455	G	C3'-C2'-C1'	5.36	105.78	101.50
32	QA	1323	G	C3'-C2'-C1'	5.35	105.78	101.50
1	RA	727	A	N1-C6-N6	5.35	121.81	118.60
1	RA	37	C	C6-N1-C2	5.34	122.44	120.30
1	RA	2012	G	N3-C4-N9	5.34	129.20	126.00
32	XA	239	U	C5-C6-N1	5.34	125.37	122.70
1	YA	335	C	C6-N1-C1'	-5.34	114.39	120.80
1	RA	978	G	C8-N9-C4	5.33	108.53	106.40
1	RA	1638	C	C6-N1-C2	5.33	122.43	120.30
32	QA	198	G	C3'-C2'-C1'	5.33	105.77	101.50
1	RA	981	A	C8-N9-C4	5.33	107.93	105.80
32	XA	1381	U	C3'-C2'-C1'	5.32	105.76	101.50
1	RA	686	U	C6-N1-C2	5.31	124.19	121.00
1	RA	2385	C	C6-N1-C2	5.31	122.42	120.30
1	RA	1816	C	C3'-C2'-C1'	5.30	105.74	101.50
1	RA	834	G	N1-C6-O6	5.30	123.08	119.90
1	RA	1858	A	C3'-C2'-C1'	5.30	105.74	101.50
1	RA	2555	U	C2-N1-C1'	-5.30	111.34	117.70
1	RA	1706	C	C2-N1-C1'	5.29	124.62	118.80
1	RA	2815	C	C2-N3-C4	-5.29	117.25	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	QA	1287	A	C3'-C2'-C1'	5.29	105.73	101.50
1	RA	60	G	N3-C4-C5	-5.29	125.95	128.60
1	RA	2774	C	C6-N1-C2	5.29	122.42	120.30
1	RA	974	G	C6-C5-N7	-5.28	127.23	130.40
1	YA	2061	G	N1-C6-O6	5.28	123.07	119.90
32	QA	1303	C	C3'-C2'-C1'	5.28	105.72	101.50
1	YA	2347	C	C3'-C2'-C1'	5.28	105.72	101.50
32	XA	765	G	C8-N9-C4	-5.27	104.29	106.40
32	QA	1286	U	C2-N1-C1'	5.27	124.03	117.70
32	QA	1053	G	C8-N9-C1'	5.27	133.85	127.00
32	QA	1241	G	C3'-C2'-C1'	5.27	105.71	101.50
1	RA	973	A	C6-N1-C2	-5.26	115.44	118.60
1	RA	2274	A	N7-C8-N9	-5.26	111.17	113.80
1	YA	2682	A	C3'-C2'-C1'	5.26	105.71	101.50
1	RA	1936	A	N3-C4-C5	5.26	130.48	126.80
1	RA	2853	C	C5-C6-N1	-5.26	118.37	121.00
1	RA	1223	G	C4-N9-C1'	-5.25	119.68	126.50
32	XA	247	G	C3'-C2'-C1'	5.25	105.70	101.50
1	YA	389	G	C3'-C2'-C1'	5.25	105.70	101.50
1	RA	2762	C	C6-N1-C2	5.24	122.40	120.30
34	QC	204	GLY	N-CA-C	5.24	126.21	113.10
1	YA	412	A	C3'-C2'-C1'	5.24	105.69	101.50
1	RA	2773	C	N3-C4-C5	5.24	124.00	121.90
1	RA	650	C	C6-N1-C2	5.23	122.39	120.30
1	RA	1135	C	C6-N1-C2	5.23	122.39	120.30
1	RA	1666	G	N3-C4-C5	5.23	131.22	128.60
1	YA	1314	C	C2-N1-C1'	5.23	124.56	118.80
1	RA	1764	C	N1-C2-O2	-5.23	115.76	118.90
32	XA	519	C	C3'-C2'-C1'	5.23	105.68	101.50
1	RA	835	C	C6-N1-C2	5.23	122.39	120.30
1	RA	2749	A	C8-N9-C4	5.23	107.89	105.80
1	YA	1274	A	C3'-C2'-C1'	5.23	105.68	101.50
1	YA	73	A	C3'-C2'-C1'	5.22	105.68	101.50
1	YA	2615	U	C3'-C2'-C1'	5.22	105.67	101.50
1	YA	1648	U	C3'-C2'-C1'	5.21	105.67	101.50
32	XA	1348	U	C3'-C2'-C1'	5.21	105.67	101.50
1	YA	1555	G	C3'-C2'-C1'	5.21	105.67	101.50
1	YA	35	G	C3'-C2'-C1'	5.21	105.66	101.50
1	YA	1568	G	C4-N9-C1'	5.20	133.26	126.50
1	RA	2645	G	C6-C5-N7	-5.20	127.28	130.40
1	YA	2458	G	C4-N9-C1'	5.20	133.25	126.50
1	RA	2275	C	N3-C2-O2	-5.19	118.27	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	60	G	C8-N9-C4	-5.19	104.32	106.40
1	YA	1400	U	C3'-C2'-C1'	5.19	105.65	101.50
1	RA	783	A	C5-C6-N6	-5.17	119.56	123.70
1	RA	1150	C	C3'-C2'-C1'	5.17	105.63	101.50
1	RA	836	G	N1-C6-O6	5.16	123.00	119.90
1	RA	1983	G	N3-C4-C5	5.16	131.18	128.60
32	QA	1302	C	C2-N1-C1'	5.16	124.47	118.80
1	YA	1682	G	C3'-C2'-C1'	5.16	105.63	101.50
1	RA	2072	C	C6-N1-C2	5.15	122.36	120.30
1	YA	1612	C	C3'-C2'-C1'	5.15	105.62	101.50
1	RA	1123	C	C6-N1-C2	5.15	122.36	120.30
1	YA	990	A	C3'-C2'-C1'	5.14	105.61	101.50
1	RA	736	C	N3-C2-O2	5.14	125.50	121.90
1	RA	1989	G	N9-C4-C5	-5.14	103.34	105.40
32	QA	534	U	C3'-C2'-C1'	5.14	105.61	101.50
32	QA	1212	U	C2-N1-C1'	5.14	123.87	117.70
1	RA	1062	G	C3'-C2'-C1'	5.14	105.61	101.50
1	RA	2012	G	N9-C4-C5	-5.14	103.34	105.40
1	RA	561	G	N7-C8-N9	5.13	115.67	113.10
1	RA	2844	G	N9-C4-C5	-5.13	103.35	105.40
32	QA	87	C	C3'-C2'-C1'	5.13	105.60	101.50
32	QA	108	G	C8-N9-C4	-5.13	104.35	106.40
32	QA	175	C	C3'-C2'-C1'	5.13	105.60	101.50
32	XA	1138	G	C3'-C2'-C1'	5.13	105.60	101.50
1	YA	1915	U	C3'-C2'-C1'	5.12	105.60	101.50
1	RA	1997	C	C5-C6-N1	-5.12	118.44	121.00
1	YA	475	C	C6-N1-C1'	-5.12	114.65	120.80
1	YA	1695	G	C3'-C2'-C1'	5.12	105.60	101.50
1	RA	954	G	N3-C4-C5	5.12	131.16	128.60
32	XA	1160	G	C3'-C2'-C1'	5.12	105.60	101.50
32	XA	534	U	C3'-C2'-C1'	5.12	105.59	101.50
1	YA	1388	G	C3'-C2'-C1'	5.12	105.59	101.50
1	RA	1152	C	N3-C2-O2	5.11	125.48	121.90
1	RA	1288	G	N1-C6-O6	5.11	122.97	119.90
1	YA	1439	A	C4-C5-C6	5.11	119.56	117.00
1	RA	2286	G	C6-C5-N7	-5.11	127.33	130.40
1	RA	794	A	N7-C8-N9	-5.11	111.25	113.80
32	QA	530	G	C4-N9-C1'	5.11	133.14	126.50
1	YA	103	A	C3'-C2'-C1'	5.11	105.58	101.50
1	RA	761	A	N7-C8-N9	5.10	116.35	113.80
1	RA	1957	C	N3-C4-C5	5.10	123.94	121.90
32	XA	71	A	C3'-C2'-C1'	5.10	105.58	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	919	U	C2-N1-C1'	5.10	123.82	117.70
1	RA	2699	C	C6-N1-C2	5.10	122.34	120.30
1	RA	743	A	N7-C8-N9	-5.09	111.25	113.80
30	R3	56	LEU	CA-CB-CG	5.09	127.02	115.30
32	XA	1282	C	C3'-C2'-C1'	5.09	105.57	101.50
1	YA	2656	U	C3'-C2'-C1'	5.09	105.57	101.50
1	RA	208	C	C6-N1-C2	5.08	122.33	120.30
1	RA	1987	A	C8-N9-C4	5.08	107.83	105.80
1	RA	2565	A	C8-N9-C4	5.08	107.83	105.80
1	RA	973	A	N1-C2-N3	5.08	131.84	129.30
1	RA	2503	A	C8-N9-C4	-5.08	103.77	105.80
1	YA	2777	G	C3'-C2'-C1'	5.08	105.56	101.50
1	RA	61	C	C5-C6-N1	-5.08	118.46	121.00
1	RA	736	C	N1-C2-O2	-5.08	115.85	118.90
1	RA	848	C	C6-N1-C2	5.07	122.33	120.30
1	YA	1489	C	C3'-C2'-C1'	5.07	105.56	101.50
1	RA	958	U	C3'-C2'-C1'	5.07	105.55	101.50
1	YA	1799	G	C4-N9-C1'	5.07	133.09	126.50
1	RA	586	A	N7-C8-N9	-5.06	111.27	113.80
1	YA	604	G	C3'-C2'-C1'	5.06	105.55	101.50
2	YB	41	G	C4-N9-C1'	5.06	133.08	126.50
1	RA	1655	A	C8-N9-C4	5.06	107.82	105.80
1	RA	2760	C	C6-N1-C2	5.06	122.32	120.30
1	YA	1789	A	C8-N9-C4	5.06	107.82	105.80
1	RA	906	U	C2-N1-C1'	-5.05	111.64	117.70
1	RA	2263	C	C5-C6-N1	-5.05	118.47	121.00
1	RA	1791	A	C8-N9-C4	5.05	107.82	105.80
1	RA	2830	C	N3-C4-C5	5.05	123.92	121.90
32	XA	381	C	C6-N1-C2	-5.05	118.28	120.30
1	RA	2045	C	C6-N1-C2	5.04	122.32	120.30
1	RA	2456	C	C6-N1-C2	5.04	122.32	120.30
32	XA	328	C	C5-C6-N1	5.04	123.52	121.00
1	YA	324	A	C3'-C2'-C1'	5.04	105.53	101.50
1	RA	1142	A	C5-N7-C8	-5.04	101.38	103.90
23	RW	43	LYS	CD-CE-NZ	-5.04	100.10	111.70
4	RD	10	GLY	N-CA-C	5.04	125.69	113.10
1	YA	2752	C	C3'-C2'-C1'	5.04	105.53	101.50
1	RA	1276	A	N9-C4-C5	-5.04	103.79	105.80
1	RA	2813	A	C8-N9-C4	5.04	107.81	105.80
1	YA	2727	A	C3'-C2'-C1'	5.03	105.53	101.50
1	RA	1651	G	C8-N9-C1'	-5.03	120.46	127.00
1	RA	1985	C	C5-C6-N1	-5.03	118.48	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	YA	1135	C	C3'-C2'-C1'	5.03	105.52	101.50
1	YA	14	A	C3'-C2'-C1'	5.02	105.52	101.50
1	YA	1313	U	N3-C2-O2	-5.02	118.69	122.20
1	RA	1758	U	C5-C6-N1	-5.02	120.19	122.70
1	RA	2773	C	C5-C6-N1	-5.02	118.49	121.00
32	QA	1282	C	C3'-C2'-C1'	5.02	105.51	101.50
1	RA	395	U	C5-C6-N1	-5.02	120.19	122.70
32	XA	72	A	C3'-C2'-C1'	5.02	105.51	101.50
1	RA	2592	G	N3-C2-N2	-5.01	116.39	119.90
1	RA	2840	C	C6-N1-C2	5.01	122.30	120.30
1	RA	776	G	C5-C6-N1	-5.01	109.00	111.50
1	RA	2815	C	N1-C2-O2	-5.00	115.90	118.90

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	R3	29	ARG	Peptide
4	RD	9	VAL	Peptide
10	RJ	110	PRO	Peptide
14	RN	101	GLY	Peptide

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	RA	61274	0	30819	1808	0
1	YA	60995	0	30679	3669	0
2	RB	2529	0	1281	57	0
2	YB	2507	0	1270	166	0
3	RC	2082	0	2157	207	0
3	YC	2082	0	2157	227	0
4	RD	1565	0	1616	201	0
4	YD	1565	0	1616	202	0
5	RE	1552	0	1619	151	0
5	YE	1552	0	1619	188	0
6	RF	1410	0	1447	128	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	YF	1420	0	1460	158	0
7	RG	1323	0	1374	138	0
7	YG	1323	0	1374	144	0
8	RH	1111	0	1148	97	0
8	YH	1111	0	1148	119	0
9	RI	1032	0	1088	108	0
9	YI	1032	0	1088	83	0
10	RJ	1129	0	1162	151	0
10	YJ	1129	0	1162	132	0
11	RK	938	0	1012	91	0
11	YK	938	0	1012	107	0
12	RL	1045	0	1117	110	0
12	YL	1045	0	1117	136	0
13	RM	1074	0	1157	94	0
13	YM	1074	0	1157	91	0
14	RN	960	0	1000	77	0
14	YN	960	0	1000	141	0
15	RO	892	0	923	50	0
15	YO	892	0	923	76	0
16	RP	917	0	965	122	0
16	YP	917	0	965	123	0
17	RQ	947	0	1022	139	0
17	YQ	947	0	1022	124	0
18	RR	816	0	839	102	0
18	YR	816	0	839	94	0
19	RS	857	0	922	83	0
19	YS	857	0	922	69	0
20	RT	738	0	807	107	0
20	YT	738	0	807	104	0
21	RU	779	0	834	61	0
21	YU	779	0	834	98	0
22	RV	753	0	780	47	0
22	YV	753	0	780	62	0
23	RW	596	0	610	191	0
23	YW	596	0	610	127	0
24	RX	625	0	655	53	0
24	YX	625	0	655	77	0
25	RY	509	0	543	40	0
25	YY	509	0	543	76	0
26	RZ	449	0	491	33	0
26	YZ	449	0	491	42	0
27	R0	444	0	461	29	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	Y0	444	0	461	54	0
28	R1	409	0	440	42	0
28	Y1	409	0	440	39	0
29	R2	377	0	418	25	0
29	Y2	377	0	418	52	0
30	R3	504	0	574	42	0
30	Y3	504	0	574	52	0
31	R4	302	0	340	29	0
31	Y4	302	0	342	22	0
32	QA	32895	0	16553	1244	0
32	XA	32831	0	16521	1591	0
33	QB	1704	0	1732	225	0
33	XB	1704	0	1732	160	0
34	QC	1624	0	1699	109	0
34	XC	1624	0	1699	125	0
35	QD	1643	0	1710	153	0
35	XD	1643	0	1710	156	0
36	QE	1105	0	1148	135	0
36	XE	1105	0	1148	106	0
37	QF	817	0	808	83	0
37	XF	817	0	808	85	0
38	QG	1181	0	1240	93	0
38	XG	1174	0	1230	130	0
39	QH	979	0	1034	86	0
39	XH	979	0	1034	97	0
40	QI	1022	0	1070	99	0
40	XI	1022	0	1070	127	0
41	QJ	786	0	828	93	0
41	XJ	786	0	828	96	0
42	QK	877	0	887	83	0
42	XK	877	0	887	74	0
43	QL	955	0	1019	88	0
43	XL	955	0	1019	86	0
44	QM	883	0	944	67	0
44	XM	876	0	937	106	0
45	QN	774	0	827	78	0
45	XN	735	0	790	97	0
46	QO	714	0	737	54	0
46	XO	714	0	737	43	0
47	QP	649	0	666	48	0
47	XP	638	0	656	51	0
48	QQ	648	0	691	89	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	XQ	648	0	691	56	0
49	QR	455	0	478	21	0
49	XR	455	0	478	39	0
50	QS	637	0	665	54	0
50	XS	637	0	665	87	0
51	QT	665	0	714	85	0
51	XT	665	0	714	40	0
52	QU	425	0	449	79	0
52	XU	425	0	449	76	0
53	QA	43	0	0	0	0
53	RA	135	0	0	0	0
53	RB	4	0	0	0	0
53	XA	42	0	0	0	0
53	YA	134	0	0	0	0
53	YB	1	0	0	0	0
53	YE	1	0	0	0	0
53	YJ	1	0	0	0	0
54	RA	60	0	65	4	0
55	R4	1	0	0	0	0
55	Y4	1	0	0	0	0
56	QA	200	0	0	4	0
56	QL	1	0	0	0	0
56	QN	5	0	0	1	0
56	QT	1	0	0	0	0
56	QU	1	0	0	0	0
56	R2	1	0	0	0	0
56	R3	2	0	0	0	0
56	R4	2	0	0	0	0
56	RA	606	0	0	39	0
56	RB	20	0	0	0	0
56	RC	9	0	0	0	0
56	RD	1	0	0	0	0
56	RL	4	0	0	0	0
56	RN	3	0	0	0	0
56	RT	2	0	0	0	0
56	XA	194	0	0	7	0
56	XE	5	0	0	1	0
56	XI	1	0	0	0	0
56	XL	1	0	0	0	0
56	XN	3	0	0	0	0
56	XT	2	0	0	0	0
56	XU	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	Y2	1	0	0	1	0
56	Y3	1	0	0	0	0
56	Y4	5	0	0	0	0
56	YA	605	0	0	35	0
56	YB	4	0	0	1	0
56	YC	8	0	0	0	0
56	YD	3	0	0	0	0
56	YE	3	0	0	0	0
56	YJ	3	0	0	0	0
56	YL	4	0	0	0	0
56	YN	1	0	0	0	0
56	YT	2	0	0	0	0
56	YU	2	0	0	0	0
56	YV	1	0	0	0	0
All	All	284464	0	190873	16435	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 35.

All (16435) 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)
17:RQ:63:ARG:NH1	17:RQ:96:ASP:HA	1.42	1.33
43:XL:43:LYS:HB3	43:XL:44:PRO:HD2	1.18	1.17
1:RA:1073:A:H3'	1:RA:1074:G:H5''	1.20	1.17
32:XA:120:A:C3'	32:XA:121:U:H5''	1.75	1.17
37:QF:16:GLU:HG2	35:XD:191:SER:HB2	1.20	1.17
35:XD:2:ARG:HH21	35:XD:114:ARG:HD3	1.05	1.16
32:QA:1468:A:H2'	32:QA:1469:C:H5''	1.25	1.15
1:YA:216:A:O2'	1:YA:217:A:H8	1.31	1.14
8:RH:31:VAL:HB	8:RH:32:PRO:HD2	1.30	1.13
16:RP:50:ARG:HB3	16:RP:57:ALA:H	1.12	1.13
32:QA:982:U:H4'	32:QA:983:A:O5'	1.35	1.13
43:QL:49:ARG:HG2	43:QL:49:ARG:HH11	1.06	1.12
1:YA:397:U:OP1	24:YX:30:PRO:HA	1.48	1.12
17:RQ:63:ARG:HH12	17:RQ:96:ASP:CA	1.63	1.12
6:RF:35:LEU:HB3	6:RF:153:ILE:HG22	1.26	1.11
17:YQ:87:VAL:HG21	18:YR:52:PRO:HD3	1.32	1.11
10:RJ:81:ILE:HG23	10:RJ:82:GLY:H	1.09	1.11
23:RW:76:ARG:HG3	23:RW:76:ARG:HH21	1.15	1.11
1:YA:1565:C:H3'	3:YC:17:LYS:HE2	1.29	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:RR:49:ILE:HD12	18:RR:52:PRO:HA	1.33	1.11
2:YB:12:C:H4'	2:YB:13:G:OP1	1.33	1.11
37:QF:38:ARG:HG2	37:QF:38:ARG:HH11	1.14	1.10
10:RJ:44:TYR:HB2	17:RQ:63:ARG:HB3	1.27	1.10
32:XA:1278:G:H4'	32:XA:1279:G:O5'	1.46	1.10
23:RW:18:LYS:HA	23:RW:36:ILE:HG13	1.30	1.10
52:XU:16:ARG:HG3	52:XU:19:LYS:HG2	1.32	1.10
37:XF:86:ARG:NH1	49:XR:63:TYR:HB3	1.64	1.09
1:YA:454:A:H4'	1:YA:455:C:OP2	1.47	1.09
32:XA:1183:U:H3'	32:XA:1184:G:H5''	1.23	1.09
16:RP:4:ILE:HG22	16:RP:5:LYS:H	1.06	1.09
46:QO:63:ARG:HG2	46:QO:87:ARG:HH12	1.18	1.08
32:XA:6:G:H2'	32:XA:6:G:N3	1.53	1.08
1:YA:1489:C:H4'	1:YA:1490:A:OP1	1.36	1.08
1:RA:271:G:H4'	1:RA:272:A:OP1	1.44	1.08
30:R3:31:ILE:HD11	30:R3:34:LYS:HD2	1.36	1.07
1:RA:2800:A:H4'	1:RA:2801:G:OP2	1.31	1.07
1:YA:1817:G:O2'	1:YA:1818:U:H5'	1.53	1.07
2:YB:56:G:H4'	2:YB:57:A:O5'	1.48	1.07
40:XI:71:ILE:HD12	40:XI:72:SER:H	1.20	1.07
16:RP:50:ARG:CB	16:RP:57:ALA:H	1.67	1.07
33:QB:185:ILE:HD11	33:QB:203:ASP:HA	1.35	1.06
36:XE:29:ILE:HG23	36:XE:30:PHE:N	1.68	1.06
43:XL:43:LYS:HB3	43:XL:44:PRO:CD	1.85	1.06
46:QO:63:ARG:HD3	46:QO:87:ARG:HH22	1.15	1.06
10:RJ:6:ALA:HB3	10:RJ:45:THR:HG21	1.36	1.06
32:XA:120:A:H3'	32:XA:121:U:H5''	1.34	1.05
32:XA:1224:U:H5'	32:XA:1225:A:OP2	1.56	1.05
10:RJ:111:LYS:HD3	10:RJ:112:GLY:H	1.18	1.05
1:YA:1552:A:O2'	1:YA:1553:A:H5'	1.54	1.05
17:YQ:4:LYS:HE3	17:YQ:7:VAL:HG13	1.36	1.05
7:RG:84:LYS:HG3	7:RG:132:LEU:H	1.18	1.05
3:YC:144:GLU:HA	3:YC:151:GLY:HA2	1.36	1.05
23:RW:28:GLU:HB3	23:RW:31:LEU:HD21	1.35	1.05
4:RD:106:LYS:HB3	4:RD:206:ALA:HB3	1.35	1.05
23:YW:40:ARG:HG2	23:YW:40:ARG:HH11	0.92	1.05
28:Y1:7:LYS:HD3	30:Y3:33:THR:HG21	1.28	1.05
1:YA:1032:A:H1'	31:Y4:23:ILE:HD13	1.38	1.04
1:YA:2346:A:H3'	1:YA:2347:C:H5''	1.35	1.04
6:YF:28:PRO:HB2	6:YF:168:LEU:HD21	1.37	1.04
18:YR:39:LEU:HA	18:YR:49:ILE:HG21	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1179:G:H3'	1:RA:1180:U:H4'	1.32	1.04
1:YA:975:A:O2'	1:YA:976:G:H8	1.38	1.04
1:YA:249:C:H5'	1:YA:2394:C:O2'	1.58	1.04
51:QT:43:LYS:HB3	51:QT:86:ALA:HB1	1.37	1.04
32:QA:1129:C:H5''	40:QI:17:ARG:HH22	0.94	1.04
32:XA:701:U:O2'	32:XA:702:A:OP2	1.73	1.04
11:RK:18:ARG:HH11	11:RK:18:ARG:HG3	1.16	1.04
1:RA:1060:U:H4'	1:RA:1061:U:H5'	1.33	1.04
32:XA:1157:A:H4'	32:XA:1158:C:O5'	1.53	1.04
32:XA:1329:A:H5''	44:XM:25:GLY:H	1.18	1.04
1:YA:227:A:H4'	1:YA:228:C:OP1	1.54	1.03
1:YA:1537:G:C2'	1:YA:1538:G:H4'	1.88	1.03
32:QA:484:G:H4'	32:QA:485:U:O5'	1.58	1.03
3:YC:128:THR:HG22	3:YC:188:ARG:HB3	1.40	1.03
7:RG:84:LYS:HG3	7:RG:132:LEU:N	1.73	1.03
1:YA:1913:A:H4'	1:YA:1914:C:OP1	1.52	1.03
5:RE:44:ARG:HG3	5:RE:44:ARG:HH21	1.24	1.03
1:RA:1458:U:H4'	1:RA:1459:G:O5'	1.56	1.02
36:XE:29:ILE:HG23	36:XE:30:PHE:H	0.90	1.02
51:XT:73:ARG:HG2	51:XT:73:ARG:HH11	1.24	1.02
1:YA:1237:A:C2	1:YA:1238:G:H1'	1.94	1.02
1:YA:1385:A:H4'	1:YA:1386:C:OP1	1.52	1.02
1:YA:197:A:H62	1:YA:2430:A:H2'	1.17	1.02
32:QA:1101:A:H4'	32:QA:1102:A:O5'	1.54	1.02
1:YA:2023:C:HO2'	1:YA:2024:G:H8	1.07	1.02
1:YA:2838:G:H1'	14:YN:45:ARG:HH22	1.20	1.02
1:RA:2577:A:H5''	1:RA:2578:G:H5'	1.40	1.02
1:RA:335:C:H5''	21:RU:81:ARG:HD3	1.37	1.02
10:RJ:111:LYS:CD	10:RJ:112:GLY:H	1.72	1.02
1:RA:1179:G:C6	1:RA:1180:U:H1'	1.94	1.02
41:QJ:53:ILE:HG22	41:QJ:61:ALA:HB1	1.40	1.02
32:QA:1468:A:C2'	32:QA:1469:C:H5''	1.90	1.01
1:RA:1179:G:C5	1:RA:1180:U:H1'	1.95	1.01
1:RA:1509:A:H1'	1:RA:1510:G:H5'	1.41	1.01
23:YW:28:GLU:H	23:YW:31:LEU:HD21	1.19	1.01
32:QA:486:U:C6	32:QA:486:U:H5''	1.94	1.01
5:YE:108:ILE:HD11	5:YE:181:ILE:HB	1.38	1.01
1:YA:2216:G:H2'	1:YA:2217:G:H8	1.24	1.01
52:QU:33:ARG:HE	52:QU:34:ARG:HG3	1.24	1.01
14:YN:37:THR:HG22	14:YN:39:PRO:HD2	1.41	1.01
35:QD:25:ARG:HH11	35:QD:30:LYS:HE3	1.20	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:204:G:H3'	32:QA:205:A:H5''	1.36	1.01
32:XA:1182:G:H4'	32:XA:1183:U:H5'	1.42	1.01
1:YA:1808:A:H3'	1:YA:1809:A:H8	1.23	1.01
10:RJ:130:HIS:HD2	10:RJ:132:HIS:H	1.06	1.01
1:YA:297:G:H5''	21:YU:84:PHE:HB2	1.37	1.01
44:XM:78:ARG:HH21	44:XM:79:LEU:HD23	1.26	1.01
17:RQ:69:ARG:HH21	17:RQ:69:ARG:HB2	1.22	1.01
3:YC:146:LYS:HB2	3:YC:149:LYS:HB2	1.42	1.01
22:RV:80:HIS:HD2	22:RV:83:LYS:HB2	1.25	1.01
18:RR:42:ALA:HA	18:RR:46:GLU:HB2	1.39	1.01
1:RA:1073:A:H3'	1:RA:1074:G:C5'	1.90	1.01
1:YA:1809:A:O2'	1:YA:1810:A:H8	1.43	1.01
1:RA:2355:G:H4'	23:RW:20:LEU:HD13	1.42	1.01
17:YQ:61:ILE:HD11	17:YQ:92:LYS:HD3	1.42	1.01
1:YA:996:A:H4'	17:YQ:91:ARG:HD2	1.42	1.01
37:XF:86:ARG:HH11	49:XR:63:TYR:HB3	1.26	1.00
5:YE:130:LYS:HB3	5:YE:133:LEU:HB3	1.43	1.00
10:YJ:44:TYR:HB2	17:YQ:63:ARG:CZ	1.89	1.00
1:YA:2822:G:H5''	4:YD:164:GLN:HE22	1.25	1.00
1:YA:1537:G:H2'	1:YA:1538:G:H4'	1.37	1.00
50:QS:28:LYS:HB3	50:QS:29:PRO:HD2	1.40	1.00
32:XA:202:G:HO2'	32:XA:468:A:H8	1.06	1.00
32:XA:1074:G:H4'	33:XB:101:THR:O	1.60	1.00
36:QE:81:GLN:H	36:QE:81:GLN:NE2	1.60	1.00
32:QA:975:A:H4'	32:QA:976:G:H5'	1.43	0.99
1:YA:1458:U:O3'	1:YA:1459:G:H4'	1.60	0.99
23:RW:39:GLN:HG2	23:RW:41:GLY:H	1.24	0.99
42:XK:74:LYS:HA	42:XK:78:ILE:HD11	1.44	0.99
33:QB:209:VAL:HG23	33:QB:210:THR:H	1.28	0.99
33:XB:114:LYS:HA	33:XB:117:GLU:HG2	1.44	0.99
12:RL:93:ASN:HD22	12:RL:94:THR:N	1.59	0.99
32:QA:486:U:H6	32:QA:486:U:H5''	1.22	0.99
41:QJ:57:VAL:HG22	41:QJ:58:ASN:H	1.27	0.99
32:QA:841:C:C2	32:QA:843:U:H5'	1.98	0.99
1:YA:1056:G:H1'	1:YA:1103:A:H61	1.28	0.99
32:XA:330:C:O2'	32:XA:331:G:H8	1.41	0.99
38:QG:114:SER:HB3	38:QG:117:LEU:HG	1.44	0.99
1:YA:1447:C:H2'	1:YA:1448:G:C8	1.98	0.99
36:XE:76:ASN:O	36:XE:79:THR:HG22	1.62	0.99
42:XK:70:ALA:HA	42:XK:73:VAL:HG22	1.44	0.98
27:Y0:28:SER:HB3	27:Y0:39:ARG:HE	1.27	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2352:A:C2	23:RW:30:VAL:HG11	1.98	0.98
2:YB:57:A:O2'	2:YB:58:A:H8	1.45	0.98
16:YP:91:VAL:HG22	16:YP:109:ILE:HG21	1.41	0.98
32:XA:532:A:C8	34:XC:192:TYR:HE2	1.81	0.98
32:XA:209:U:H5''	32:XA:210:C:OP2	1.63	0.98
47:QP:4:ILE:HG12	47:QP:21:VAL:HG22	1.44	0.98
2:YB:42:C:O2'	2:YB:43:C:H5'	1.63	0.98
1:YA:2297:A:O2'	1:YA:2298:A:H8	1.43	0.98
12:YL:48:ARG:HH11	12:YL:48:ARG:HG3	1.28	0.98
1:YA:491:G:H2'	1:YA:492:A:C8	1.98	0.98
35:XD:2:ARG:NH2	35:XD:114:ARG:HD3	1.77	0.97
1:RA:2346:A:H3'	1:RA:2347:C:H5''	1.44	0.97
1:RA:1654:A:O2'	4:RD:118:PHE:CG	2.16	0.97
48:QQ:18:LYS:HA	48:QQ:47:ASP:HB2	1.46	0.97
23:YW:37:VAL:HG23	23:YW:38:ARG:HD2	1.46	0.97
31:R4:9:LYS:HD3	31:R4:9:LYS:H	1.28	0.97
1:YA:2776:A:H4'	1:YA:2777:G:O5'	1.60	0.97
1:YA:2267:A:H61	1:YA:2272:U:H3	1.11	0.97
9:YI:52:LEU:HD12	9:YI:53:PRO:HD2	1.44	0.97
1:YA:483:A:H2'	1:YA:484:C:H6	1.24	0.97
1:YA:49:A:H4'	1:YA:50:U:O5'	1.63	0.97
1:YA:867:C:O2'	1:YA:868:U:H6	1.46	0.97
32:QA:451:A:H4'	32:QA:452:A:O5'	1.58	0.97
23:YW:18:LYS:HD3	23:YW:19:ARG:H	1.29	0.97
1:YA:1079:C:H41	1:YA:1088:A:H5''	1.24	0.96
32:XA:702:A:OP1	32:XA:702:A:H8	1.47	0.96
17:RQ:65:ASN:HD21	17:RQ:69:ARG:HH22	1.11	0.96
7:YG:93:TYR:H	7:YG:93:TYR:HD2	1.04	0.96
1:RA:243:U:OP1	30:R3:5:THR:HG21	1.64	0.96
1:YA:647:G:H2'	1:YA:648:G:H8	1.30	0.96
10:RJ:55:ILE:HD11	10:RJ:57:LEU:HD22	1.44	0.96
39:XH:103:VAL:HG12	39:XH:124:ILE:HA	1.46	0.96
21:YU:14:THR:HG23	21:YU:15:GLY:H	1.29	0.96
1:YA:873:C:H4'	13:YM:64:TRP:HE1	1.31	0.96
32:XA:1151:A:O2'	32:XA:1152:A:H8	1.46	0.96
32:QA:1129:C:H5''	40:QI:17:ARG:NH2	1.79	0.96
1:YA:2311:A:H5'	1:YA:2312:U:C6	2.00	0.96
1:RA:265:A:H4'	1:RA:266:G:OP1	1.62	0.96
1:YA:1662:U:H2'	1:YA:1663:G:H5''	1.45	0.96
5:RE:119:ILE:HD11	5:RE:187:VAL:HG22	1.47	0.96
22:YV:77:VAL:HA	22:YV:89:ILE:HG22	1.48	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:636:G:C5	12:RL:111:ILE:HD11	2.00	0.96
1:RA:780:G:H21	1:RA:783:A:H62	1.09	0.96
1:YA:627:A:H2'	12:YL:78:ARG:HH11	1.31	0.96
1:RA:1535:A:H4'	1:RA:1536:C:OP2	1.66	0.96
1:YA:215:G:H4'	1:YA:216:A:OP1	1.62	0.95
1:YA:2216:G:H2'	1:YA:2217:G:C8	1.99	0.95
4:RD:118:PHE:HD2	4:RD:119:ALA:H	1.05	0.95
1:RA:1073:A:C3'	1:RA:1074:G:H5''	1.96	0.95
32:XA:82:G:H2'	32:XA:83:C:H4'	1.49	0.95
1:YA:1808:A:H3'	1:YA:1809:A:C8	2.00	0.95
1:YA:310:A:O2'	1:YA:311:A:H8	1.49	0.95
1:YA:508:A:H62	19:YS:9:HIS:CE1	1.85	0.95
1:YA:1021:A:O2'	1:YA:1022:G:H4'	1.66	0.95
3:YC:59:GLN:HE21	3:YC:84:PRO:HB2	1.28	0.95
48:XQ:30:HIS:HE1	48:XQ:32:ILE:HG13	1.29	0.95
13:YM:27:SER:H	13:YM:66:ARG:NH2	1.65	0.95
36:QE:11:GLN:HE21	36:QE:11:GLN:HA	1.29	0.95
1:RA:161:A:H3'	1:RA:162:U:H5''	1.48	0.95
1:YA:445:C:H2'	1:YA:446:G:C8	2.01	0.95
32:QA:1279:G:H1'	32:QA:1282:C:N4	1.81	0.95
4:RD:169:ARG:O	4:RD:170:VAL:HG13	1.67	0.95
1:RA:855:G:N3	23:RW:23:LYS:HD3	1.82	0.95
38:XG:22:LEU:HA	38:XG:25:PHE:HB3	1.47	0.95
6:RF:134:GLN:H	6:RF:134:GLN:HE21	1.04	0.95
33:QB:163:ILE:HG23	33:QB:164:ASP:H	1.31	0.95
1:YA:2389:G:H5''	1:YA:2390:U:H5'	1.48	0.95
9:RI:23:VAL:HB	9:RI:27:LEU:HB3	1.48	0.95
22:RV:10:LYS:HD3	22:RV:10:LYS:H	1.31	0.95
3:YC:16:VAL:H	3:YC:203:VAL:HG12	1.27	0.95
3:RC:12:ARG:CG	3:RC:12:ARG:HH11	1.80	0.94
48:QQ:45:VAL:HG21	48:QQ:60:ILE:HD13	1.46	0.94
13:RM:35:ALA:O	13:RM:36:VAL:HB	1.65	0.94
32:XA:820:U:H4'	32:XA:821:G:OP2	1.67	0.94
14:YN:90:ARG:NH2	14:YN:116:VAL:HG11	1.82	0.94
18:YR:27:ILE:HG22	18:YR:28:ALA:H	1.31	0.94
24:YX:53:LYS:HA	24:YX:56:ARG:HB3	1.49	0.94
1:YA:740:C:H5'	1:YA:1784:A:H3'	1.48	0.94
1:YA:479:A:H4'	1:YA:480:A:OP1	1.64	0.94
32:XA:961:U:O2'	32:XA:962:C:H6	1.49	0.94
23:YW:40:ARG:NH1	23:YW:40:ARG:HG2	1.72	0.94
50:XS:5:LYS:HE3	50:XS:6:LYS:H	1.32	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:483:A:H2'	1:YA:484:C:C6	2.02	0.94
17:RQ:48:ASP:HA	17:RQ:51:GLN:HB2	1.49	0.94
27:Y0:12:ARG:HG3	27:Y0:15:ARG:HH11	1.33	0.94
1:YA:2344:U:H4'	1:YA:2345:G:OP1	1.64	0.94
23:RW:8:SER:O	23:RW:9:THR:HG22	1.68	0.94
32:XA:60:A:H4'	32:XA:61:G:O5'	1.67	0.94
35:XD:25:ARG:NH1	35:XD:30:LYS:HG2	1.83	0.94
33:XB:130:LYS:HA	33:XB:133:ALA:HB3	1.46	0.94
1:RA:1993:U:H4'	4:RD:133:THR:HG21	1.49	0.94
25:YY:20:ASN:HD22	25:YY:50:VAL:HG22	1.29	0.94
1:YA:33:C:H4'	1:YA:34:U:OP1	1.65	0.94
32:XA:1217:C:H2'	32:XA:1218:C:H6	1.31	0.93
1:YA:870:U:H2'	1:YA:871:U:H5'	1.49	0.93
4:YD:53:GLY:HA3	4:YD:77:ARG:HG3	1.48	0.93
1:YA:2466:C:OP1	31:Y4:4:ARG:HB3	1.67	0.93
50:XS:40:PHE:HB3	50:XS:41:PRO:HD2	1.49	0.93
1:YA:2666:C:O2'	1:YA:2667:C:H5'	1.69	0.93
9:RI:100:ILE:HG22	9:RI:101:SER:H	1.33	0.93
1:YA:1935:G:H1'	1:YA:1964:G:N2	1.83	0.93
9:RI:15:GLY:HA2	9:RI:50:LYS:HB3	1.50	0.93
5:YE:148:ILE:HD13	5:YE:187:VAL:HG21	1.50	0.93
1:YA:1847:A:HO2'	1:YA:1848:A:H8	1.02	0.93
33:XB:146:SER:HB2	33:XB:147:LEU:HD12	1.49	0.93
1:YA:674:G:O2'	5:YE:69:ARG:HG2	1.67	0.93
32:QA:1123:U:H4'	41:QJ:39:PRO:HD2	1.47	0.93
35:QD:109:THR:HG23	35:QD:112:GLU:H	1.34	0.93
32:XA:1299:A:N3	32:XA:1299:A:H2'	1.80	0.93
1:YA:138:U:H2'	1:YA:140:C:H1'	1.50	0.93
39:XH:68:LYS:HD3	39:XH:69:ALA:H	1.34	0.93
32:XA:245:U:O2'	32:XA:246:A:H5'	1.69	0.93
1:YA:241:A:H4'	1:YA:242:G:OP1	1.67	0.93
35:QD:25:ARG:NH1	35:QD:30:LYS:HE3	1.82	0.93
32:XA:1239:A:H5'	38:XG:118:ARG:HH12	1.34	0.93
17:RQ:63:ARG:HH12	17:RQ:96:ASP:HA	0.80	0.93
1:YA:2387:U:H1'	23:YW:38:ARG:HH12	1.34	0.93
36:QE:80:LEU:HD23	36:QE:122:VAL:HG11	1.51	0.93
6:RF:134:GLN:H	6:RF:134:GLN:NE2	1.66	0.93
41:XJ:5:ARG:HH21	41:XJ:77:VAL:HG13	1.29	0.93
1:YA:668:A:H2'	1:YA:670:A:H62	1.32	0.92
32:QA:1138:G:N3	32:QA:1138:G:H2'	1.84	0.92
47:XP:70:ARG:O	47:XP:74:LEU:HG	1.69	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:93:ASN:HD22	12:RL:94:THR:H	1.14	0.92
1:YA:1846:G:H5''	1:YA:1847:A:OP2	1.69	0.92
1:YA:2060:A:H62	5:YE:69:ARG:HH12	1.17	0.92
32:XA:239:U:OP1	32:XA:239:U:H4'	1.68	0.92
39:QH:74:ILE:HD13	39:QH:128:VAL:HG13	1.50	0.92
1:RA:1733:G:HO2'	1:RA:1734:G:H8	0.96	0.92
1:RA:855:G:H21	23:RW:23:LYS:HG2	1.34	0.92
41:XJ:84:VAL:HG23	41:XJ:85:ASP:H	1.35	0.92
2:YB:13:G:H8	2:YB:13:G:H5''	1.34	0.92
32:XA:330:C:HO2'	32:XA:331:G:H8	0.94	0.92
10:RJ:17:VAL:HG23	10:RJ:137:PRO:HB2	1.52	0.92
26:YZ:30:ARG:NH2	26:YZ:33:HIS:HB2	1.83	0.92
41:QJ:65:TYR:HB3	45:QN:95:LEU:HD11	1.50	0.92
9:YI:74:PRO:HB2	9:YI:77:VAL:HG22	1.49	0.92
32:QA:86:G:N2	32:QA:87:C:H41	1.67	0.92
4:RD:90:PHE:HB2	4:RD:92:VAL:HG23	1.52	0.92
8:RH:89:LYS:HG2	8:RH:90:LEU:H	1.34	0.92
1:YA:873:C:H4'	13:YM:64:TRP:NE1	1.84	0.92
32:QA:1239:A:H62	32:QA:1299:A:N6	1.68	0.92
11:YK:71:ARG:HB3	11:YK:72:PRO:HD3	1.52	0.92
23:RW:37:VAL:HG12	23:RW:38:ARG:H	1.33	0.92
1:YA:503:A:H4'	1:YA:504:A:O5'	1.70	0.92
32:QA:667:G:H4'	46:QO:50:HIS:CE1	2.05	0.92
1:YA:2748:A:H1'	7:YG:66:THR:HG22	1.50	0.92
1:YA:206:U:H2'	1:YA:207:A:H8	1.33	0.91
39:QH:21:LYS:HE2	39:QH:22:ALA:H	1.32	0.91
32:QA:1021:A:H2'	32:QA:1022:A:H5''	1.51	0.91
32:QA:975:A:H4'	32:QA:976:G:C5'	2.00	0.91
32:QA:1441:A:N6	32:QA:1461:G:H21	1.68	0.91
1:YA:811:U:H5''	1:YA:812:C:OP2	1.71	0.91
16:RP:4:ILE:HG22	16:RP:5:LYS:N	1.85	0.91
36:QE:155:LYS:HA	36:QE:158:LYS:NZ	1.84	0.91
1:YA:784:G:C2	3:YC:227:VAL:HG21	2.05	0.91
32:XA:664:G:H22	32:XA:741:G:H1	1.19	0.91
4:YD:13:ARG:HH12	16:YP:74:GLN:HE21	1.16	0.91
23:RW:51:GLY:HA3	23:RW:59:PHE:CE2	2.05	0.91
28:R1:47:ILE:HD12	28:R1:47:ILE:H	1.34	0.91
3:RC:81:GLU:HB2	3:RC:90:ILE:HG22	1.53	0.91
4:YD:106:LYS:HB3	4:YD:206:ALA:HB3	1.52	0.91
36:XE:29:ILE:CG2	36:XE:30:PHE:H	1.77	0.91
12:RL:30:THR:O	12:RL:33:ARG:HG2	1.69	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2875:C:O2'	1:YA:2876:G:H8	1.53	0.91
32:XA:1129:C:H1'	32:XA:1146:A:H61	1.35	0.91
1:YA:1274:A:O2'	1:YA:1275:A:H5''	1.71	0.91
37:QF:3:HIS:H	37:QF:92:THR:HG23	1.32	0.91
20:YT:60:THR:HG22	20:YT:83:ALA:HA	1.52	0.91
41:XJ:15:HIS:HA	41:XJ:18:ILE:HG22	1.51	0.91
24:YX:31:ASN:H	24:YX:31:ASN:ND2	1.69	0.91
1:RA:1734:G:H2'	1:RA:1735:A:H8	1.34	0.91
1:YA:1024:G:H3'	1:YA:1025:G:H5''	1.53	0.91
3:YC:52:HIS:HA	3:YC:216:ARG:HB2	1.51	0.91
23:RW:17:ALA:HA	23:RW:35:ILE:HG23	1.52	0.90
49:XR:72:ARG:H	49:XR:72:ARG:HE	1.15	0.90
32:XA:135:C:O2	47:XP:1:MET:HB2	1.71	0.90
2:YB:57:A:HO2'	2:YB:58:A:H8	0.94	0.90
7:RG:83:THR:HA	7:RG:84:LYS:HZ3	1.35	0.90
1:YA:249:C:H3'	1:YA:2394:C:H4'	1.51	0.90
1:YA:1447:C:H2'	1:YA:1448:G:H8	1.32	0.90
1:YA:492:A:N1	19:YS:49:LYS:HE2	1.86	0.90
4:YD:29:VAL:HB	4:YD:98:VAL:HG12	1.52	0.90
14:YN:28:LEU:HD21	14:YN:115:LEU:HD21	1.49	0.90
32:XA:279:A:H5''	32:XA:280:C:H3'	1.53	0.90
11:YK:61:VAL:HG11	11:YK:112:PHE:HE2	1.36	0.90
23:YW:18:LYS:H	23:YW:36:ILE:HG12	1.35	0.90
45:QN:60:ARG:O	45:QN:61:ASN:HB2	1.70	0.90
1:RA:276:U:O2'	1:RA:278:A:N7	2.04	0.90
33:QB:22:TRP:CZ3	33:QB:24:PRO:HA	2.06	0.90
32:XA:973:G:O2'	32:XA:974:A:H5'	1.72	0.90
12:RL:110:VAL:O	12:RL:111:ILE:HB	1.71	0.90
4:YD:184:ARG:HH22	16:YP:6:GLN:HE21	1.18	0.90
32:XA:814:A:H5'	32:XA:1511:G:H4'	1.52	0.90
22:RV:72:VAL:HG12	22:RV:93:ARG:HA	1.54	0.90
37:QF:86:ARG:NH1	49:QR:63:TYR:HB3	1.86	0.90
1:RA:1340:U:H4'	1:RA:1341:G:OP2	1.71	0.90
1:YA:762:U:H4'	1:YA:763:G:O5'	1.69	0.90
32:XA:976:G:H5'	32:XA:977:A:OP2	1.70	0.90
1:YA:1387:A:H5'	1:YA:1469:A:H1'	1.50	0.90
36:XE:103:GLY:O	36:XE:104:ILE:HG22	1.71	0.90
24:YX:31:ASN:HD22	24:YX:31:ASN:N	1.67	0.90
1:RA:574:A:P	56:RA:3268:HOH:O	2.30	0.90
1:YA:1359:A:C2	1:YA:1360:G:H1'	2.06	0.90
35:QD:10:LEU:HD22	35:QD:62:ARG:HG3	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:RT:32:LEU:H	20:RT:83:ALA:HB3	1.34	0.90
32:QA:507:C:H3'	32:QA:508:U:H5''	1.52	0.90
1:YA:96:C:H4'	25:YY:41:HIS:CD2	2.07	0.90
44:QM:10:ASP:CG	44:QM:11:HIS:H	1.75	0.90
7:RG:8:VAL:HG11	7:RG:49:LEU:HB2	1.51	0.90
16:YP:50:ARG:HB3	16:YP:57:ALA:N	1.85	0.90
1:YA:1341:G:O2'	1:YA:1398:C:H5'	1.72	0.90
18:RR:60:LYS:H	18:RR:100:GLY:HA3	1.37	0.90
1:YA:118:A:N3	1:YA:178:G:H1'	1.87	0.90
12:RL:29:LYS:HG2	12:RL:30:THR:HG23	1.54	0.90
32:QA:1441:A:H62	32:QA:1461:G:H21	1.19	0.89
32:QA:747:A:H5'	32:QA:748:G:OP2	1.72	0.89
1:YA:302:C:O2'	1:YA:303:G:H8	1.54	0.89
35:QD:172:VAL:HG22	35:QD:173:ASP:H	1.37	0.89
23:YW:18:LYS:HD3	23:YW:19:ARG:N	1.86	0.89
11:RK:18:ARG:H	11:RK:45:GLU:HB2	1.37	0.89
4:YD:11:MET:HE1	4:YD:192:ALA:HA	1.54	0.89
1:RA:947:A:HO2'	1:RA:984:A:H2	0.93	0.89
5:YE:128:ALA:HB1	5:YE:129:PRO:HD2	1.55	0.89
32:XA:439:U:H4'	35:XD:120:LYS:HD2	1.53	0.89
10:RJ:21:THR:O	10:RJ:23:LYS:N	2.04	0.89
32:XA:429:U:H3'	35:XD:8:LEU:HD23	1.52	0.89
1:YA:616:A:O2'	1:YA:617:G:H8	1.53	0.89
38:XG:88:VAL:HG22	38:XG:89:GLU:H	1.33	0.89
3:YC:70:LYS:HD3	3:YC:101:ARG:HH12	1.37	0.89
32:QA:198:G:HO2'	32:QA:199:A:H8	1.15	0.89
37:QF:38:ARG:HG2	37:QF:38:ARG:NH1	1.84	0.89
10:RJ:21:THR:HG22	10:RJ:22:GLY:N	1.87	0.89
43:QL:72:ASN:ND2	43:QL:73:LEU:H	1.71	0.89
40:X1:51:LEU:HB2	40:X1:56:MET:SD	2.11	0.89
32:XA:752:G:H1'	32:XA:754:C:N4	1.88	0.89
10:RJ:81:ILE:CG2	10:RJ:82:GLY:H	1.84	0.89
1:YA:1474:U:H2'	1:YA:1475:G:H5'	1.54	0.89
3:RC:108:GLY:O	3:RC:109:LEU:HD22	1.72	0.89
48:XQ:46:HIS:HB2	48:XQ:70:LYS:HE3	1.54	0.89
32:XA:1195:C:H5''	32:XA:1196:A:OP2	1.72	0.89
32:XA:1134:G:C6	32:XA:1135:U:H1'	2.07	0.89
16:RP:61:ARG:HG2	16:RP:70:GLU:HG2	1.55	0.89
16:YP:28:LYS:HZ2	16:YP:28:LYS:HB2	1.38	0.89
4:RD:151:THR:HG22	4:RD:152:PRO:CD	2.03	0.89
33:QB:42:LEU:HG	33:QB:43:GLU:HG3	1.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:YH:115:VAL:HG12	8:YH:132:PHE:HB2	1.55	0.89
35:XD:137:SER:HB2	35:XD:138:PRO:HD2	1.55	0.89
12:RL:27:LEU:H	12:RL:27:LEU:HD12	1.38	0.89
32:XA:913:A:H4'	32:XA:914:A:O5'	1.71	0.89
43:QL:49:ARG:HG2	43:QL:49:ARG:NH1	1.81	0.88
32:XA:1279:G:H5'	41:XJ:9:ARG:HH12	1.36	0.88
4:RD:151:THR:HG22	4:RD:152:PRO:HD3	1.55	0.88
3:RC:140:VAL:CG1	3:RC:189:ALA:HB1	2.03	0.88
4:RD:125:TRP:CE3	4:RD:160:LYS:HD3	2.09	0.88
21:RU:38:ILE:HG22	21:RU:39:ASN:N	1.87	0.88
28:R1:33:LEU:H	28:R1:51:ALA:HB3	1.37	0.88
8:RH:67:ALA:HA	8:RH:138:VAL:HB	1.55	0.88
26:YZ:30:ARG:HH21	26:YZ:33:HIS:HB2	1.38	0.88
33:XB:49:PHE:HA	33:XB:52:ALA:HB3	1.53	0.88
37:XF:18:VAL:O	37:XF:22:ILE:HG12	1.73	0.88
1:YA:2356:U:H4'	23:YW:16:GLU:HG3	1.54	0.88
8:RH:32:PRO:HB3	24:RX:38:TRP:HB3	1.54	0.88
7:RG:83:THR:HA	7:RG:84:LYS:NZ	1.88	0.88
1:RA:1082:U:H5'	9:RI:117:THR:O	1.73	0.88
48:QQ:12:VAL:HG11	48:QQ:21:VAL:HG13	1.54	0.88
1:YA:674:G:H1'	5:YE:69:ARG:HE	1.38	0.88
1:YA:822:G:O6	1:YA:943:A:H2	1.55	0.88
17:RQ:4:LYS:HG3	17:RQ:5:ARG:H	1.37	0.88
52:QU:9:GLU:HG3	52:QU:10:PRO:HD3	1.56	0.88
34:QC:152:VAL:HG12	34:QC:197:VAL:HG13	1.56	0.88
1:YA:1205:A:H5''	1:YA:1206:G:C8	2.08	0.88
48:QQ:78:VAL:HG12	48:QQ:79:GLU:HG3	1.52	0.88
40:QI:128:LYS:HD2	40:QI:129:ARG:H	1.35	0.88
32:XA:1101:A:H4'	32:XA:1102:A:O5'	1.74	0.88
13:YM:27:SER:H	13:YM:66:ARG:HH22	1.22	0.88
50:QS:50:VAL:HG21	50:QS:70:LEU:HB3	1.53	0.88
20:YT:13:ALA:O	20:YT:32:LEU:HB2	1.72	0.88
32:QA:1469:C:H6	32:QA:1469:C:H5'	1.37	0.88
1:YA:2313:C:HO2'	1:YA:2314:A:H8	0.93	0.88
1:RA:2134:A:HO2'	1:RA:2135:A:H8	0.94	0.88
33:XB:127:LYS:HE3	33:XB:132:GLU:HG3	1.56	0.88
1:RA:1605:C:H5''	1:RA:1606:C:OP2	1.74	0.88
9:RI:7:TYR:HA	9:RI:58:ILE:HB	1.54	0.88
16:RP:50:ARG:HD3	16:RP:56:SER:HB3	1.54	0.88
1:YA:2389:G:C5'	1:YA:2390:U:H5'	2.04	0.88
38:XG:134:VAL:HB	38:XG:137:ARG:HH21	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:137:U:H6	1:RA:137:U:O5'	1.57	0.88
3:YC:68:ARG:HD3	3:YC:103:ILE:HD13	1.55	0.88
38:XG:91:ARG:HG2	38:XG:92:PRO:HD2	1.55	0.88
4:YD:16:THR:HG23	4:YD:18:ASP:H	1.39	0.88
13:YM:35:ALA:HB3	13:YM:99:GLY:H	1.37	0.88
33:QB:40:ILE:HD13	33:QB:201:GLY:HA2	1.54	0.88
1:YA:2297:A:HO2'	1:YA:2298:A:H8	0.88	0.87
1:RA:84:A:H4'	1:RA:85:G:O5'	1.73	0.87
32:XA:522:C:H41	43:XL:49:ARG:HH22	1.20	0.87
1:YA:1965:C:H6	1:YA:1965:C:H5''	1.39	0.87
1:YA:1049:C:HO2'	1:YA:1050:A:H8	0.92	0.87
30:R3:26:ALA:O	30:R3:27:ASN:HB2	1.73	0.87
1:RA:1779:U:H5	1:RA:1784:A:N7	1.71	0.87
2:YB:42:C:H2'	2:YB:43:C:C6	2.07	0.87
1:YA:627:A:H2'	12:YL:78:ARG:NH1	1.89	0.87
7:YG:86:LEU:HA	7:YG:163:TYR:HB3	1.55	0.87
2:YB:112:G:H21	15:YO:45:SER:HA	1.37	0.87
16:RP:50:ARG:HG2	16:RP:57:ALA:N	1.89	0.87
1:YA:491:G:H2'	1:YA:492:A:H8	1.36	0.87
1:YA:286:U:H2'	1:YA:287:G:H8	1.40	0.87
32:XA:1215:G:HO2'	32:XA:1216:A:H8	0.89	0.87
1:YA:320:A:H4'	1:YA:322:A:N7	1.90	0.87
9:RI:126:ARG:HA	9:RI:129:GLU:HB2	1.57	0.87
1:YA:644:A:O2'	1:YA:645:C:H5'	1.73	0.87
6:YF:137:PHE:HB2	6:YF:138:PRO:HD2	1.55	0.87
32:XA:1268:G:H21	32:XA:1327:C:H1'	1.39	0.87
26:YZ:16:LEU:HD22	26:YZ:16:LEU:H	1.37	0.87
4:RD:13:ARG:HH12	16:RP:74:GLN:HE21	1.20	0.87
35:XD:25:ARG:HG2	35:XD:25:ARG:HH11	1.40	0.87
1:YA:240:C:H3'	1:YA:241:A:H5''	1.57	0.87
43:QL:33:CYS:HA	43:QL:54:VAL:HA	1.55	0.87
1:RA:2180:U:H2'	1:RA:2181:U:H5	1.39	0.87
4:RD:68:PHE:HB3	4:RD:73:VAL:HG12	1.56	0.87
50:QS:51:HIS:CD2	50:QS:53:GLY:H	1.92	0.87
32:XA:940:C:H5'	38:XG:101:ARG:HH22	1.39	0.87
32:XA:451:A:H4'	32:XA:452:A:O5'	1.74	0.87
3:RC:140:VAL:HG11	3:RC:189:ALA:HB1	1.56	0.86
7:RG:22:VAL:HG22	7:RG:36:LEU:HD11	1.57	0.86
44:XM:12:LYS:HB3	44:XM:17:ALA:HB2	1.56	0.86
41:XJ:57:VAL:HG22	41:XJ:58:ASN:H	1.39	0.86
44:XM:12:LYS:HE3	44:XM:12:LYS:HA	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:RO:31:THR:HG22	15:RO:34:HIS:H	1.38	0.86
1:YA:2214:C:O2'	1:YA:2215:C:H5'	1.76	0.86
32:QA:204:G:H3'	32:QA:205:A:C5'	2.03	0.86
33:XB:89:PHE:HE2	33:XB:152:ASP:HB2	1.38	0.86
5:RE:119:ILE:HD11	5:RE:187:VAL:CG2	2.06	0.86
24:YX:31:ASN:HD22	24:YX:31:ASN:H	0.89	0.86
35:XD:153:ARG:HG2	35:XD:154:VAL:N	1.87	0.86
28:Y1:8:ILE:HD11	28:Y1:52:LYS:HE3	1.58	0.86
1:YA:332:A:H61	21:YU:68:ASN:HD21	1.22	0.86
48:QQ:12:VAL:HG13	48:QQ:13:SER:H	1.41	0.86
19:RS:73:LYS:HE3	19:RS:74:ILE:H	1.40	0.86
11:RK:108:ARG:HH11	11:RK:108:ARG:CG	1.88	0.86
19:RS:88:ARG:CG	19:RS:88:ARG:HH21	1.88	0.86
32:QA:974:A:H4'	32:QA:975:A:H5'	1.58	0.86
34:QC:166:TRP:HE3	34:QC:166:TRP:H	1.22	0.86
47:XP:74:LEU:O	47:XP:78:VAL:HG23	1.75	0.86
32:QA:243:A:H4'	32:QA:244:U:H5''	1.58	0.86
1:YA:1606:C:H5'	1:YA:1606:C:O2	1.75	0.86
17:RQ:65:ASN:ND2	17:RQ:69:ARG:HH22	1.74	0.86
32:QA:71:A:O2'	32:QA:72:A:H5''	1.75	0.86
7:YG:112:VAL:HG12	7:YG:114:HIS:H	1.40	0.86
1:YA:915:C:H2'	1:YA:916:G:H8	1.39	0.86
27:R0:42:ILE:HD12	27:R0:48:TYR:HB2	1.57	0.86
32:XA:120:A:C2'	32:XA:121:U:H5''	2.05	0.86
1:YA:1847:A:O2'	1:YA:1848:A:H8	1.58	0.86
32:QA:414:A:H2'	32:QA:415:A:H8	1.40	0.86
20:RT:39:THR:HB	20:RT:42:GLU:HB2	1.58	0.86
4:RD:174:SER:O	4:RD:175:LEU:HB2	1.74	0.86
41:XJ:35:GLN:HG2	41:XJ:76:ILE:HG23	1.57	0.86
32:QA:49:U:O4	32:QA:365:U:H5	1.58	0.86
10:RJ:110:PRO:HB2	10:RJ:111:LYS:HG3	1.56	0.85
9:RI:33:ASN:HD22	9:RI:64:ARG:HH22	1.23	0.85
8:RH:31:VAL:HG13	8:RH:36:ALA:O	1.74	0.85
32:XA:1493:A:H8	1:YA:1913:A:H61	1.22	0.85
32:QA:1303:C:H2'	32:QA:1304:G:C8	2.10	0.85
1:RA:2148:G:H2'	1:RA:2149:U:O4'	1.75	0.85
13:RM:42:THR:HG22	13:RM:93:VAL:HG23	1.57	0.85
1:YA:972:A:H3'	1:YA:973:A:H5''	1.55	0.85
1:YA:990:A:O2'	1:YA:991:C:H5''	1.76	0.85
4:RD:5:VAL:H	4:RD:32:ASN:HD21	1.22	0.85
1:YA:1817:G:HO2'	1:YA:1818:U:H5'	1.41	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:648:G:HO2'	1:YA:649:G:H8	0.91	0.85
32:XA:1299:A:C8	32:XA:1301:U:H1'	2.12	0.85
1:RA:1309:G:OP1	29:R2:9:VAL:HG12	1.76	0.85
39:QH:9:MET:HE1	39:QH:32:LYS:HA	1.59	0.85
1:YA:279:A:C2	1:YA:362:A:H4'	2.11	0.85
37:XF:43:GLY:HA2	37:XF:58:HIS:CE1	2.10	0.85
1:YA:810:U:O4	12:YL:30:THR:HG22	1.77	0.85
32:XA:642:A:HO2'	32:XA:643:C:H6	1.21	0.85
32:XA:120:A:H3'	32:XA:121:U:C5'	2.07	0.85
3:YC:144:GLU:HB3	3:YC:187:CYS:HB2	1.55	0.85
1:YA:204:A:H4'	1:YA:205:G:OP1	1.75	0.85
33:QB:108:GLN:HE21	33:QB:108:GLN:H	1.22	0.85
33:XB:74:ALA:HB1	33:XB:206:ILE:HD11	1.57	0.85
32:XA:247:G:O6	32:XA:278:G:C6	2.30	0.85
1:YA:1639:C:H2'	1:YA:1640:A:H5''	1.59	0.85
12:YL:9:ALA:HB3	12:YL:12:SER:HB3	1.58	0.85
10:RJ:130:HIS:CD2	10:RJ:132:HIS:H	1.95	0.85
22:RV:80:HIS:CD2	22:RV:83:LYS:HB2	2.11	0.85
1:RA:1110:G:O2'	1:RA:1111:A:H8	1.60	0.85
32:QA:923:A:H5''	36:QE:25:LYS:HE2	1.58	0.85
38:XG:110:ARG:HG3	38:XG:111:GLY:H	1.41	0.85
39:QH:76:ARG:HG3	39:QH:76:ARG:HH11	1.41	0.85
7:RG:96:ALA:HB3	7:RG:103:ASN:HB3	1.56	0.85
3:YC:147:PRO:HD3	3:YC:184:GLU:HG3	1.59	0.85
1:YA:2612:C:H5''	1:YA:2613:U:OP1	1.75	0.85
1:YA:1417:C:H2'	1:YA:1418:G:C8	2.12	0.85
32:QA:496:A:H2'	32:QA:496:A:N3	1.90	0.85
44:XM:64:VAL:HG12	44:XM:65:GLU:H	1.41	0.85
32:QA:1183:U:H3'	32:QA:1184:G:H5''	1.57	0.85
31:R4:36:ARG:HG2	31:R4:37:GLN:H	1.41	0.85
18:RR:51:VAL:HB	18:RR:52:PRO:HD2	1.56	0.84
32:QA:205:A:OP1	32:QA:205:A:H4'	1.73	0.84
48:QQ:22:VAL:HG21	48:QQ:60:ILE:HD11	1.56	0.84
5:RE:149:ILE:HD11	5:RE:172:ALA:HA	1.59	0.84
1:YA:286:U:H2'	1:YA:287:G:C8	2.12	0.84
1:RA:65:U:H2'	1:RA:66:C:H6	1.42	0.84
32:QA:1373:G:H5''	38:QG:35:LYS:HD2	1.59	0.84
16:RP:3:ILE:HD13	16:RP:3:ILE:O	1.76	0.84
1:YA:1080:A:H2'	1:YA:1081:U:C6	2.12	0.84
1:YA:617:G:HO2'	1:YA:618:G:H8	0.84	0.84
23:YW:23:LYS:HD2	23:YW:24:ARG:N	1.91	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:QH:17:GLN:NE2	39:QH:71:VAL:HG23	1.92	0.84
1:RA:1180:U:H2'	1:RA:1181:U:C6	2.12	0.84
1:YA:616:A:HO2'	1:YA:617:G:H8	0.86	0.84
10:RJ:21:THR:HG22	10:RJ:22:GLY:H	1.41	0.84
33:XB:99:MET:HA	33:XB:106:VAL:HG21	1.59	0.84
25:RY:47:ARG:HH21	25:RY:47:ARG:HG3	1.41	0.84
1:YA:197:A:N6	1:YA:2430:A:H2'	1.91	0.84
32:QA:922:G:H4'	36:QE:24:VAL:HA	1.59	0.84
17:RQ:63:ARG:HD2	17:RQ:64:ILE:N	1.93	0.84
36:QE:81:GLN:HE21	36:QE:81:GLN:H	1.25	0.84
32:XA:90:C:O2'	32:XA:91:U:C6	2.31	0.84
1:YA:1135:C:N4	1:YA:1139:G:C6	2.45	0.84
39:QH:28:SER:HB2	39:QH:58:LEU:HB2	1.59	0.84
34:QC:38:VAL:O	34:QC:42:LEU:HB2	1.76	0.84
2:YB:24:G:H1'	2:YB:27:C:H42	1.43	0.84
17:YQ:57:ARG:NH1	17:YQ:92:LYS:HE2	1.92	0.84
1:RA:1084:A:H2'	1:RA:1085:A:C8	2.12	0.84
4:RD:114:LYS:HE3	4:RD:114:LYS:O	1.77	0.84
1:YA:649:G:H2'	1:YA:650:C:C6	2.12	0.84
4:YD:13:ARG:HH12	16:YP:74:GLN:NE2	1.74	0.84
32:XA:1141:C:HO2'	32:XA:1142:G:H8	1.23	0.84
40:XI:90:ASP:HB3	40:XI:93:LEU:HD23	1.60	0.84
20:YT:44:LYS:O	20:YT:48:GLN:HG2	1.77	0.84
6:YF:39:VAL:HA	6:YF:49:LEU:HG	1.60	0.84
1:RA:1063:G:H2'	1:RA:1064:C:O4'	1.77	0.84
1:YA:1303:G:HO2'	1:YA:1304:A:H8	0.89	0.84
1:YA:45:G:H5'	1:YA:46:G:H5'	1.58	0.84
17:RQ:91:ARG:NH2	17:RQ:93:ILE:HD13	1.92	0.84
1:RA:784:G:C6	3:RC:227:VAL:HG11	2.13	0.84
1:YA:1706:C:H4'	1:YA:1707:G:OP2	1.75	0.84
1:YA:876:C:H3'	1:YA:877:A:H8	1.41	0.84
3:YC:83:ASP:HB2	3:YC:90:ILE:HD12	1.59	0.84
32:QA:982:U:C4'	32:QA:983:A:O5'	2.23	0.84
47:XP:52:LEU:HD21	47:XP:75:ILE:HG12	1.60	0.84
32:XA:519:C:H2'	32:XA:520:A:C8	2.13	0.84
32:QA:731:G:OP1	32:QA:766:A:H1'	1.77	0.84
17:RQ:97:ILE:HD11	17:RQ:105:PHE:HA	1.59	0.84
1:YA:1989:G:H2'	1:YA:1990:C:H5'	1.59	0.84
16:RP:50:ARG:CD	16:RP:51:ASN:H	1.91	0.83
46:QO:63:ARG:HD3	46:QO:87:ARG:NH2	1.93	0.83
32:XA:1225:A:H4'	50:XS:77:ARG:NH1	1.93	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:834:G:H1'	1:YA:2358:A:N3	1.93	0.83
4:RD:91:THR:O	4:RD:93:GLY:N	2.11	0.83
11:RK:71:ARG:HG3	11:RK:106:GLU:OE2	1.78	0.83
3:RC:251:THR:HG22	3:RC:252:LYS:H	1.43	0.83
7:RG:104:LEU:HB2	7:RG:112:VAL:CG2	2.08	0.83
17:RQ:65:ASN:HD21	17:RQ:69:ARG:NH2	1.76	0.83
11:YK:17:ARG:HH11	11:YK:18:ARG:HG2	1.41	0.83
32:QA:1055:A:H1'	34:QC:155:ARG:HH21	1.42	0.83
8:RH:8:LYS:O	8:RH:9:VAL:HB	1.77	0.83
29:R2:3:ARG:HG2	29:R2:3:ARG:HH21	1.43	0.83
1:YA:489:G:HO2'	1:YA:491:G:H8	1.27	0.83
1:YA:15:G:OP1	27:Y0:20:ALA:HB2	1.78	0.83
1:YA:1127:A:O2'	1:YA:1128:G:H5'	1.77	0.83
1:YA:1716:U:O2'	1:YA:1717:A:H8	1.60	0.83
10:RJ:6:ALA:CB	10:RJ:45:THR:HG21	2.06	0.83
32:XA:94:G:H4'	32:XA:95:C:OP1	1.76	0.83
32:XA:245:U:H6	32:XA:245:U:H5''	1.44	0.83
13:YM:19:GLY:H	13:YM:38:ARG:NH2	1.77	0.83
11:RK:113:MET:O	11:RK:116:ILE:HG13	1.77	0.83
1:RA:2225:A:H4'	1:RA:2226:C:O5'	1.79	0.83
2:YB:24:G:H1'	2:YB:27:C:N4	1.92	0.83
1:YA:1352:U:H5	1:YA:1377:G:C6	1.96	0.83
1:YA:1303:G:O2'	1:YA:1304:A:H8	1.61	0.83
3:RC:210:ALA:O	3:RC:215:VAL:HG23	1.77	0.83
8:RH:31:VAL:HB	8:RH:32:PRO:CD	2.08	0.83
31:R4:9:LYS:H	31:R4:9:LYS:CD	1.87	0.83
28:R1:13:SER:HB3	28:R1:47:ILE:O	1.76	0.83
1:RA:1110:G:HO2'	1:RA:1111:A:H8	0.84	0.83
32:XA:372:C:H1'	32:XA:373:A:OP2	1.77	0.83
11:YK:35:VAL:HG23	11:YK:36:GLY:H	1.43	0.83
1:YA:1568:G:H21	3:YC:57:HIS:CE1	1.96	0.83
30:Y3:41:ARG:HG3	30:Y3:41:ARG:HH21	1.42	0.83
1:RA:1654:A:O2'	4:RD:118:PHE:CD2	2.31	0.83
1:YA:654:A:H2'	1:YA:655:A:H5''	1.60	0.83
11:RK:76:VAL:HB	16:RP:72:VAL:CG2	2.09	0.83
1:RA:1238:G:O2'	1:RA:1239:G:H5'	1.77	0.83
32:QA:619:U:H3	35:QD:130:ASN:HB3	1.43	0.83
32:XA:704:A:O2'	32:XA:705:G:H8	1.62	0.83
1:YA:2060:A:H62	5:YE:69:ARG:NH1	1.77	0.83
32:QA:1299:A:H2'	32:QA:1299:A:N3	1.94	0.83
1:RA:1056:G:H5''	1:RA:1057:A:H5'	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:100:U:H4'	1:RA:101:A:O5'	1.78	0.83
4:YD:114:LYS:HD2	4:YD:116:LYS:HZ2	1.42	0.83
17:YQ:69:ARG:HH21	17:YQ:69:ARG:HB2	1.43	0.83
8:YH:27:ARG:NH1	24:YX:59:ASP:HA	1.92	0.83
37:XF:92:THR:HG22	37:XF:94:HIS:H	1.43	0.83
1:YA:2720:U:H5''	16:YP:52:ARG:HH21	1.42	0.82
44:XM:33:LEU:HB3	44:XM:38:ILE:HB	1.59	0.82
1:RA:2813:A:H2	1:RA:2887:A:N6	1.76	0.82
20:YT:50:LEU:HD23	20:YT:51:PHE:H	1.44	0.82
3:RC:230:PRO:HD2	3:RC:246:PRO:HA	1.61	0.82
7:RG:73:SER:HA	7:RG:76:ILE:HG22	1.61	0.82
52:XU:35:GLU:O	52:XU:36:PHE:HD2	1.59	0.82
7:RG:84:LYS:CG	7:RG:132:LEU:H	1.92	0.82
1:YA:604:G:O2'	1:YA:605:G:H5'	1.80	0.82
20:YT:14:PRO:O	20:YT:15:HIS:HB2	1.79	0.82
38:XG:142:ARG:O	38:XG:146:ALA:HB3	1.79	0.82
32:XA:496:A:H2'	32:XA:496:A:N3	1.94	0.82
1:YA:2836:U:O2'	1:YA:2837:A:H8	1.60	0.82
38:QG:86:VAL:HG22	38:QG:150:PHE:HB3	1.59	0.82
5:RE:44:ARG:CG	5:RE:44:ARG:HH21	1.92	0.82
4:YD:119:ALA:HB3	4:YD:163:GLY:H	1.44	0.82
12:RL:93:ASN:ND2	12:RL:94:THR:N	2.27	0.82
33:XB:209:VAL:O	33:XB:213:LEU:HB2	1.78	0.82
1:YA:1126:A:H4'	1:YA:1127:A:O5'	1.79	0.82
26:YZ:4:ILE:HD12	26:YZ:58:GLU:HA	1.61	0.82
1:YA:647:G:H2'	1:YA:648:G:C8	2.13	0.82
8:YH:93:SER:HB3	8:YH:121:VAL:HG21	1.60	0.82
1:YA:593:U:H2'	1:YA:594:U:C6	2.14	0.82
1:YA:2458:G:H8	1:YA:2459:A:H62	1.27	0.82
7:RG:115:GLN:H	7:RG:115:GLN:CD	1.82	0.82
3:YC:159:THR:O	3:YC:194:VAL:HG12	1.79	0.82
1:YA:226:A:H2'	1:YA:227:A:H8	1.43	0.82
48:QQ:16:MET:HB2	48:QQ:19:SER:HB3	1.58	0.82
48:XQ:30:HIS:CE1	48:XQ:32:ILE:HG13	2.13	0.82
21:YU:95:PHE:HD1	21:YU:95:PHE:H	1.23	0.82
4:RD:11:MET:HE1	4:RD:192:ALA:HA	1.61	0.82
20:YT:39:THR:HG21	20:YT:42:GLU:HB2	1.59	0.82
32:XA:129:A:O2'	32:XA:130:A:C8	2.33	0.82
1:RA:1475:G:H1'	1:RA:1476:U:OP2	1.79	0.82
1:YA:2197:U:O2'	1:YA:2198:A:C8	2.32	0.82
2:YB:57:A:O2'	2:YB:58:A:C8	2.24	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:78:U:O2'	1:YA:79:C:H5'	1.79	0.82
32:QA:464:U:C2	32:QA:466:A:H5'	2.14	0.82
1:YA:2800:A:H2'	1:YA:2801:G:H4'	1.58	0.82
1:YA:1714:U:H3'	1:YA:1715:G:H5'	1.61	0.82
2:RB:90:C:H5''	2:RB:90:C:H6	1.43	0.82
23:RW:24:ARG:HD2	23:RW:25:PHE:N	1.95	0.82
32:QA:484:G:C4'	32:QA:485:U:O5'	2.28	0.82
1:YA:126:A:O5'	29:Y2:19:ARG:HG3	1.80	0.82
1:YA:915:C:H2'	1:YA:916:G:C8	2.15	0.82
35:QD:43:ARG:O	35:QD:45:PRO:HD3	1.79	0.82
36:XE:55:VAL:O	36:XE:59:ILE:HG22	1.80	0.82
16:RP:63:ILE:HA	16:RP:68:GLY:HA2	1.61	0.82
15:RO:49:VAL:HG21	15:RO:82:ALA:HA	1.61	0.82
11:YK:13:ASN:H	11:YK:13:ASN:HD22	1.25	0.82
34:XC:140:ALA:O	34:XC:145:ALA:HB3	1.80	0.82
4:RD:97:SER:O	4:RD:99:GLU:HG2	1.79	0.82
18:RR:39:LEU:HD23	18:RR:39:LEU:N	1.94	0.81
1:YA:2336:A:N7	23:YW:40:ARG:CZ	2.42	0.81
23:YW:40:ARG:CG	23:YW:40:ARG:HH11	1.84	0.81
1:YA:1965:C:H5'	1:YA:1966:A:H5''	1.61	0.81
1:YA:2056:G:N2	27:Y0:1:ALA:H1	1.77	0.81
11:YK:76:VAL:HB	16:YP:72:VAL:HG22	1.61	0.81
1:RA:1813:G:N3	3:RC:49:THR:HG21	1.94	0.81
11:YK:87:LEU:HD12	11:YK:92:GLU:HA	1.62	0.81
1:RA:1605:C:H3'	1:RA:1606:C:H5''	1.60	0.81
17:RQ:97:ILE:HD11	17:RQ:105:PHE:CA	2.10	0.81
38:XG:74:VAL:HG13	38:XG:140:VAL:HG13	1.62	0.81
51:XT:23:ARG:HB3	51:XT:60:GLN:NE2	1.95	0.81
35:XD:58:GLN:O	35:XD:62:ARG:HG2	1.80	0.81
2:YB:75:G:H1	2:YB:102:G:H22	1.26	0.81
1:RA:1150:C:O2'	1:RA:1151:A:O5'	1.98	0.81
1:RA:509:C:H5''	1:RA:510:C:OP2	1.80	0.81
1:YA:181:A:H2	1:YA:434:U:H1'	1.43	0.81
23:RW:37:VAL:HG12	23:RW:38:ARG:N	1.94	0.81
32:XA:1183:U:H3'	32:XA:1184:G:C5'	2.09	0.81
1:YA:1489:C:C4'	1:YA:1490:A:OP1	2.26	0.81
6:RF:134:GLN:HE21	6:RF:134:GLN:N	1.78	0.81
1:YA:1126:A:H4'	1:YA:1127:A:C5'	2.09	0.81
1:YA:1716:U:HO2'	1:YA:1717:A:H8	0.87	0.81
12:YL:117:THR:HG22	12:YL:118:THR:H	1.43	0.81
48:XQ:3:LYS:NZ	48:XQ:6:THR:HG21	1.94	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:44:ARG:HH21	40:XI:48:ARG:NH1	1.77	0.81
1:YA:1197:G:H5'	1:YA:1227:G:O2'	1.81	0.81
34:QC:156:LEU:H	34:QC:156:LEU:HD12	1.45	0.81
1:YA:2022:U:HO2'	1:YA:2616:C:HO2'	1.26	0.81
46:QO:63:ARG:CG	46:QO:87:ARG:HH12	1.93	0.81
1:YA:1915:U:H2'	1:YA:1916:A:C8	2.15	0.81
1:YA:2838:G:H1'	14:YN:45:ARG:NH2	1.94	0.81
32:XA:109:A:H4'	32:XA:110:C:OP2	1.79	0.81
3:RC:70:LYS:HE2	3:RC:73:ILE:HD12	1.61	0.81
1:YA:1493:C:H2'	1:YA:1493:C:O2	1.81	0.81
11:RK:21:CYS:HA	11:RK:41:ILE:HD12	1.60	0.81
18:RR:49:ILE:HD12	18:RR:52:PRO:CA	2.11	0.81
16:RP:50:ARG:HB3	16:RP:57:ALA:N	1.95	0.81
42:XK:111:ASP:H	52:XU:3:ILE:N	1.77	0.81
32:XA:279:A:H4'	32:XA:280:C:O5'	1.78	0.81
11:RK:21:CYS:HB2	11:RK:39:ILE:HD11	1.62	0.81
34:XC:110:LEU:HD23	34:XC:110:LEU:O	1.80	0.81
17:YQ:87:VAL:HG11	18:YR:52:PRO:HG3	1.62	0.81
1:YA:2291:U:H2'	1:YA:2292:U:C6	2.16	0.81
1:YA:2266:A:H4'	1:YA:2267:A:O5'	1.81	0.81
1:YA:1714:U:H3'	1:YA:1715:G:C5'	2.11	0.81
9:RI:89:SER:HB3	9:RI:92:PRO:HG3	1.63	0.81
1:YA:12:U:O2	1:YA:12:U:H2'	1.81	0.81
3:RC:123:ILE:O	3:RC:123:ILE:HG12	1.78	0.81
1:YA:1056:G:H1'	1:YA:1103:A:N6	1.95	0.81
32:XA:668:G:O2'	46:XO:45:HIS:HB3	1.79	0.81
32:QA:1062:U:H2'	32:QA:1063:C:C6	2.16	0.81
32:XA:471:U:H2'	32:XA:472:U:H6	1.46	0.81
1:YA:2836:U:HO2'	1:YA:2837:A:H8	0.82	0.81
20:YT:3:ARG:HD2	20:YT:42:GLU:HG2	1.62	0.81
51:QT:67:HIS:HB3	51:QT:68:LYS:NZ	1.94	0.81
32:QA:250:A:H4'	32:QA:251:G:O5'	1.79	0.81
16:RP:36:LYS:HE3	32:QA:344:A:O3'	1.81	0.81
24:RX:5:GLN:NE2	24:RX:49:ARG:H	1.79	0.81
18:RR:49:ILE:CD1	18:RR:52:PRO:HA	2.11	0.81
1:YA:1847:A:O2'	1:YA:1848:A:C8	2.31	0.81
34:XC:56:ILE:HG12	34:XC:65:VAL:HG22	1.63	0.81
43:QL:23:LEU:O	43:QL:25:ALA:N	2.14	0.81
32:XA:1278:G:C4'	32:XA:1279:G:O5'	2.28	0.81
32:XA:960:U:H4'	32:XA:961:U:H5''	1.60	0.81
1:YA:2215:C:HO2'	1:YA:2216:G:H8	1.27	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2887:A:H1'	27:Y0:39:ARG:HH22	1.44	0.81
1:YA:206:U:H6	1:YA:206:U:H5'	1.46	0.81
1:RA:2135:A:HO2'	1:RA:2136:G:H8	1.29	0.81
32:XA:994:A:HO2'	32:XA:995:C:H6	1.27	0.81
1:RA:2427:C:H5''	1:RA:2428:G:OP1	1.80	0.81
1:YA:1552:A:H2'	1:YA:1552:A:N3	1.95	0.80
1:YA:1381:G:H2'	1:YA:1382:G:H5''	1.63	0.80
26:YZ:16:LEU:CD2	26:YZ:16:LEU:H	1.93	0.80
33:QB:137:THR:HA	33:QB:140:LEU:HD13	1.61	0.80
33:QB:127:LYS:HG3	33:QB:128:LEU:H	1.46	0.80
14:RN:79:LEU:O	14:RN:80:PHE:HB2	1.81	0.80
32:XA:1182:G:C4'	32:XA:1183:U:H5'	2.10	0.80
1:YA:230:G:HO2'	1:YA:231:A:H8	1.28	0.80
1:YA:2829:A:H2'	1:YA:2830:C:H5'	1.62	0.80
32:QA:1277:C:O2'	32:QA:1279:G:H8	1.63	0.80
32:XA:1129:C:O2'	32:XA:1130:A:C8	2.34	0.80
1:YA:1989:G:C2'	1:YA:1990:C:H5'	2.11	0.80
37:XF:92:THR:O	37:XF:93:LYS:HG2	1.81	0.80
47:QP:10:GLY:HA3	47:QP:15:PRO:HA	1.63	0.80
1:RA:931:U:H4'	1:RA:932:U:OP2	1.81	0.80
38:XG:75:LYS:HE3	38:XG:76:SER:H	1.46	0.80
43:XL:43:LYS:CB	43:XL:44:PRO:HD2	2.06	0.80
32:XA:1492:A:H2'	1:YA:1913:A:N7	1.96	0.80
48:QQ:12:VAL:HG13	48:QQ:13:SER:N	1.95	0.80
29:Y2:34:ARG:HB3	29:Y2:42:LEU:HD11	1.63	0.80
1:YA:627:A:H5''	12:YL:78:ARG:HH12	1.43	0.80
32:QA:1279:G:H2'	32:QA:1279:G:N3	1.96	0.80
6:RF:134:GLN:HG2	6:RF:135:ILE:H	1.46	0.80
1:YA:95:A:H1'	25:YY:40:SER:HB2	1.60	0.80
4:YD:114:LYS:HD2	4:YD:116:LYS:NZ	1.96	0.80
35:XD:55:ARG:HH11	35:XD:55:ARG:HA	1.46	0.80
1:RA:1287:A:H5'	14:RN:103:ARG:HD2	1.64	0.80
3:RC:250:GLN:N	3:RC:250:GLN:HE21	1.80	0.80
34:XC:190:THR:HG22	34:XC:191:THR:H	1.46	0.80
37:XF:41:ASP:OD2	37:XF:58:HIS:HE1	1.65	0.80
34:QC:56:ILE:HG12	34:QC:65:VAL:HG22	1.64	0.80
1:RA:762:U:H4'	1:RA:763:G:O5'	1.82	0.80
40:QI:83:THR:HG21	40:QI:102:PHE:HB3	1.63	0.80
15:YO:23:ALA:HB1	15:YO:90:VAL:HG12	1.64	0.80
1:YA:2808:G:HO2'	1:YA:2809:A:H8	1.29	0.80
32:XA:154:U:H2'	32:XA:155:A:H5'	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1747:U:H2'	1:RA:1748:C:C6	2.16	0.80
23:YW:27:GLY:CA	23:YW:31:LEU:HD11	2.11	0.80
14:YN:97:ILE:HG13	14:YN:98:LEU:N	1.97	0.80
1:RA:1733:G:O2'	1:RA:1734:G:H8	1.65	0.80
8:YH:77:THR:HG22	8:YH:143:ILE:HD11	1.62	0.80
36:QE:14:LEU:O	36:QE:14:LEU:HD13	1.81	0.80
35:XD:2:ARG:HH21	35:XD:114:ARG:CD	1.92	0.80
50:XS:52:ASN:ND2	50:XS:54:ARG:HG2	1.96	0.80
1:YA:322:A:H3'	5:YE:163:ASN:ND2	1.96	0.80
1:RA:636:G:C6	12:RL:111:ILE:HD11	2.16	0.80
3:RC:109:LEU:HD23	3:RC:110:LYS:H	1.44	0.80
1:RA:2502:G:H5'	1:RA:2503:A:H5''	1.63	0.80
24:RX:58:ILE:HG13	24:RX:66:VAL:HG21	1.64	0.80
1:YA:364:C:H2'	1:YA:365:U:C6	2.17	0.80
1:YA:1913:A:C4'	1:YA:1914:C:OP1	2.29	0.80
32:QA:1277:C:HO2'	32:QA:1279:G:H8	0.82	0.80
16:YP:50:ARG:HB3	16:YP:57:ALA:H	1.44	0.80
32:QA:1411:C:C2'	32:QA:1412:C:H5'	2.12	0.80
20:RT:64:LYS:HA	20:RT:79:ASP:OD1	1.81	0.80
34:QC:142:ARG:HB3	34:QC:143:LEU:HD13	1.60	0.80
14:YN:35:LYS:HZ2	14:YN:112:TYR:HE1	1.30	0.80
10:RJ:43:GLU:O	10:RJ:45:THR:HG22	1.81	0.80
1:RA:923:G:N3	23:RW:23:LYS:HE2	1.95	0.80
20:RT:50:LEU:HD12	20:RT:50:LEU:H	1.46	0.80
45:QN:19:TYR:O	45:QN:22:LYS:HB3	1.80	0.80
19:YS:14:ALA:O	19:YS:18:ARG:HB2	1.81	0.80
1:YA:1870:C:H5''	1:YA:1871:A:H2	1.46	0.80
10:YJ:99:ARG:HA	10:YJ:102:GLU:HB3	1.62	0.80
35:QD:145:ARG:HH11	35:QD:147:LYS:HE3	1.45	0.80
1:RA:923:G:H1'	23:RW:23:LYS:HE2	1.63	0.80
17:YQ:91:ARG:NH1	18:YR:10:LYS:HB3	1.97	0.80
9:RI:115:ASP:O	9:RI:116:MET:HG2	1.82	0.80
1:YA:1255:U:H3'	1:YA:1256:G:H5''	1.61	0.80
1:RA:1019:U:C4	1:RA:1020:A:N6	2.50	0.80
1:RA:2720:U:OP1	16:RP:52:ARG:NH2	2.15	0.80
32:XA:702:A:OP1	32:XA:702:A:C8	2.34	0.80
34:XC:110:LEU:HD21	34:XC:203:LYS:HD2	1.62	0.80
32:QA:1007:U:H2'	32:QA:1008:U:H5''	1.64	0.80
36:QE:155:LYS:HA	36:QE:158:LYS:HZ3	1.47	0.79
1:YA:1079:C:N4	1:YA:1088:A:H5''	1.95	0.79
1:RA:137:U:O2'	1:RA:138:U:P	2.40	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:112:THR:HG22	4:YD:113:SER:N	1.98	0.79
29:R2:42:LEU:H	29:R2:42:LEU:HD22	1.47	0.79
28:Y1:25:ASN:HB3	28:Y1:28:THR:OG1	1.82	0.79
1:YA:2387:U:H1'	23:YW:38:ARG:NH1	1.97	0.79
36:QE:155:LYS:HD2	36:QE:156:ARG:H	1.45	0.79
2:YB:40:U:O2	2:YB:43:C:H2'	1.81	0.79
48:QQ:51:GLU:HG2	48:QQ:52:CYS:SG	2.22	0.79
32:XA:1348:U:H4'	40:X1:121:ARG:HG3	1.64	0.79
32:XA:643:C:H5''	39:XH:31:LEU:HD22	1.62	0.79
1:YA:2577:A:H2	27:Y0:1:ALA:H2	1.29	0.79
8:YH:116:ARG:O	8:YH:117:LEU:HG	1.81	0.79
10:RJ:77:HIS:CD2	10:RJ:79:GLY:H	1.99	0.79
32:QA:92:U:H2'	32:QA:93:U:C6	2.17	0.79
34:XC:179:ALA:HB1	34:XC:202:PHE:CE1	2.18	0.79
23:YW:37:VAL:HG12	23:YW:55:ASP:HB2	1.62	0.79
5:RE:44:ARG:HG3	5:RE:44:ARG:NH2	1.92	0.79
41:XJ:67:ILE:HG23	45:XN:95:LEU:H	1.46	0.79
1:YA:67:U:H2'	1:YA:68:G:H8	1.47	0.79
32:XA:243:A:H4'	32:XA:244:U:H5'	1.65	0.79
1:RA:1605:C:C3'	1:RA:1606:C:H5''	2.12	0.79
17:RQ:71:ASN:OD1	17:RQ:106:THR:HG23	1.82	0.79
46:QO:9:LYS:O	46:QO:13:GLU:HG3	1.83	0.79
6:RF:104:THR:HG22	6:RF:105:ILE:HG23	1.65	0.79
32:XA:1322:C:O2	32:XA:1322:C:H2'	1.82	0.79
17:YQ:60:TRP:O	17:YQ:64:ILE:HG12	1.82	0.79
33:QB:13:VAL:HG23	33:QB:207:ARG:HH22	1.48	0.79
36:XE:104:ILE:H	36:XE:122:VAL:H	1.26	0.79
8:YH:68:ARG:HD2	8:YH:71:LYS:HB2	1.64	0.79
1:RA:289:G:H2'	1:RA:290:U:O4'	1.82	0.79
52:XU:19:LYS:HZ3	52:XU:19:LYS:N	1.79	0.79
1:YA:83:A:H61	1:YA:101:A:H5'	1.45	0.79
33:QB:110:ILE:HD12	33:QB:147:LEU:HD13	1.65	0.79
34:QC:96:VAL:HB	34:QC:97:PRO:HD2	1.65	0.79
32:XA:990:C:H2'	32:XA:991:U:O4'	1.83	0.79
12:YL:124:GLY:H	12:YL:143:GLU:HG3	1.48	0.79
36:QE:114:LEU:HG	36:QE:119:VAL:HG21	1.65	0.79
45:XN:76:PHE:HE2	45:XN:92:ILE:HG21	1.47	0.79
1:RA:228:C:H4'	1:RA:229:C:H5''	1.64	0.79
32:XA:1287:A:O2'	32:XA:1288:A:C8	2.34	0.79
1:YA:1157:G:H2'	1:YA:1158:C:C6	2.17	0.79
20:RT:61:LEU:HD12	20:RT:61:LEU:C	2.03	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:R1:7:LYS:HA	28:R1:23:THR:HG22	1.63	0.79
32:XA:87:C:O2'	32:XA:88:U:H4'	1.82	0.79
32:XA:1135:U:H5'	32:XA:1136:C:OP2	1.83	0.79
33:QB:89:PHE:HB3	33:QB:149:GLY:HA2	1.63	0.79
1:YA:2771:C:H2'	1:YA:2772:C:H6	1.48	0.79
36:XE:38:VAL:HG12	36:XE:39:GLY:N	1.98	0.79
4:RD:172:VAL:O	4:RD:173:GLN:HB2	1.80	0.79
1:YA:1607:C:H4'	1:YA:1608:A:C8	2.18	0.79
1:YA:617:G:O2'	1:YA:618:G:H8	1.64	0.79
6:YF:49:LEU:HD22	6:YF:49:LEU:H	1.47	0.79
1:YA:1258:U:H2'	1:YA:1259:G:C8	2.17	0.79
1:RA:2324:U:H3'	1:RA:2325:G:H5''	1.64	0.79
1:RA:1161:C:H1'	18:RR:8:GLY:O	1.83	0.79
32:XA:1013:G:N2	32:XA:1015:G:H3'	1.98	0.79
32:XA:6:G:C2'	32:XA:6:G:N3	2.40	0.78
30:R3:31:ILE:CD1	30:R3:34:LYS:HD2	2.12	0.78
32:XA:1329:A:H5''	44:XM:25:GLY:N	1.97	0.78
7:YG:124:CYS:HB3	7:YG:130:ILE:HA	1.65	0.78
1:RA:1019:U:H3	1:RA:1142:A:H62	1.30	0.78
1:YA:1854:A:H2'	1:YA:1855:U:H5'	1.65	0.78
38:XG:14:ASP:HB3	38:XG:18:GLY:H	1.46	0.78
36:QE:83:PRO:HB3	36:QE:96:GLN:NE2	1.98	0.78
1:YA:2468:A:O2'	1:YA:2469:A:H8	1.67	0.78
1:RA:479:A:H4'	1:RA:480:A:OP1	1.83	0.78
33:QB:76:SER:HB2	33:QB:92:ASN:HB2	1.65	0.78
32:XA:1224:U:C5'	32:XA:1225:A:OP2	2.31	0.78
33:XB:114:LYS:CA	33:XB:117:GLU:HG2	2.12	0.78
1:YA:2304:G:H22	1:YA:2312:U:H3	1.29	0.78
32:XA:1241:G:H2'	32:XA:1242:G:H8	1.47	0.78
32:XA:1299:A:O2'	32:XA:1300:G:H4'	1.82	0.78
6:YF:42:ALA:HB2	6:YF:49:LEU:HD21	1.65	0.78
10:YJ:73:VAL:HG23	10:YJ:74:TYR:H	1.46	0.78
49:QR:56:ARG:O	49:QR:60:ARG:HB2	1.82	0.78
1:RA:1714:U:H2'	1:RA:1714:U:O2	1.81	0.78
25:RY:9:LYS:HB3	25:RY:12:GLU:HG3	1.65	0.78
1:YA:1467:U:H2'	1:YA:1468:U:H5'	1.64	0.78
1:RA:733:G:C8	1:RA:761:A:N6	2.51	0.78
1:YA:634:C:H2'	1:YA:635:C:C6	2.19	0.78
3:YC:16:VAL:N	3:YC:203:VAL:HG12	1.98	0.78
23:YW:9:THR:HG23	23:YW:10:ARG:HG3	1.64	0.78
23:YW:13:ARG:HG3	23:YW:14:ASP:H	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:548:G:H2'	32:QA:549:C:H6	1.47	0.78
11:YK:38:ILE:HG12	11:YK:61:VAL:HG12	1.64	0.78
1:YA:1586:A:H2'	1:YA:1587:G:H8	1.49	0.78
1:RA:1071:G:H8	1:RA:1071:G:OP2	1.66	0.78
45:QN:44:VAL:HG23	45:QN:45:LEU:H	1.47	0.78
18:YR:87:GLN:HG2	18:YR:88:GLY:H	1.48	0.78
46:XO:61:GLN:O	46:XO:65:LEU:HD12	1.84	0.78
32:QA:6:G:O6	36:QE:98:ALA:HB1	1.83	0.78
33:XB:31:PHE:HB2	33:XB:41:ASN:HB2	1.65	0.78
10:RJ:44:TYR:O	10:RJ:45:THR:HB	1.82	0.78
1:YA:1210:G:H4'	1:YA:1211:C:O5'	1.83	0.78
1:YA:1307:A:H62	1:YA:1606:C:H6	1.30	0.78
12:YL:48:ARG:HH11	12:YL:48:ARG:CG	1.95	0.78
32:QA:481:G:HO2'	32:QA:482:A:H8	1.31	0.78
1:RA:2180:U:H2'	1:RA:2181:U:C5	2.19	0.78
52:XU:35:GLU:HG3	52:XU:36:PHE:H	1.47	0.78
32:XA:66:A:N3	32:XA:66:A:H2'	1.98	0.78
32:XA:464:U:O4	32:XA:466:A:H4'	1.82	0.78
32:XA:1422:G:H5"	11:YK:48:PRO:HB3	1.66	0.78
10:YJ:55:ILE:HG22	10:YJ:123:LYS:HB2	1.64	0.78
26:RZ:29:ARG:HH21	26:RZ:29:ARG:HG3	1.49	0.78
5:RE:112:LEU:HD13	5:RE:186:VAL:HG11	1.66	0.78
32:QA:473:U:H2'	32:QA:474:G:H8	1.46	0.78
17:RQ:85:ALA:O	17:RQ:86:SER:C	2.21	0.78
11:RK:18:ARG:NH1	11:RK:18:ARG:HG3	1.96	0.78
1:YA:2023:C:O2'	1:YA:2024:G:H8	1.65	0.78
22:RV:80:HIS:HD2	22:RV:83:LYS:CB	1.95	0.78
32:QA:374:A:OP1	32:QA:452:A:N1	2.17	0.78
6:YF:46:LYS:HE2	6:YF:83:PRO:HG3	1.64	0.78
34:XC:126:ARG:HA	34:XC:126:ARG:HE	1.47	0.78
16:RP:4:ILE:O	16:RP:6:GLN:N	2.15	0.78
32:QA:464:U:N3	32:QA:466:A:H5'	1.99	0.78
9:RI:79:LEU:HD13	9:RI:135:MET:SD	2.23	0.78
6:YF:103:ILE:HA	6:YF:107:VAL:HG21	1.64	0.78
1:RA:1069:A:O2'	1:RA:1070:A:H5"	1.83	0.78
2:YB:110:C:O2'	2:YB:111:U:H5'	1.84	0.78
10:RJ:111:LYS:CD	10:RJ:112:GLY:N	2.47	0.78
1:YA:2882:A:H4'	14:YN:97:ILE:HG12	1.64	0.78
31:R4:10:LEU:HD12	31:R4:33:HIS:CD2	2.19	0.78
1:YA:287:G:O2'	1:YA:288:U:H5'	1.84	0.78
19:RS:88:ARG:HH21	19:RS:88:ARG:HG3	1.46	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:79:VAL:HA	33:XB:213:LEU:HD21	1.66	0.78
20:YT:1:MET:HG2	20:YT:4:GLU:HA	1.65	0.78
1:RA:819:A:OP2	1:RA:1187:G:N2	2.15	0.78
43:QL:43:LYS:HB2	43:QL:44:PRO:HD3	1.64	0.78
1:RA:1078:U:H4'	1:RA:1079:C:H6	1.48	0.78
32:XA:977:A:O2'	32:XA:978:A:H5''	1.81	0.78
32:XA:1493:A:C8	1:YA:1913:A:N6	2.51	0.78
14:YN:90:ARG:HH21	14:YN:116:VAL:HG11	1.48	0.78
1:YA:1051:G:H5'	1:YA:2752:C:H1'	1.66	0.78
37:XF:18:VAL:HG21	37:XF:58:HIS:CD2	2.19	0.78
4:RD:12:THR:HG22	4:RD:13:ARG:N	1.99	0.78
1:RA:1590:A:H2'	1:RA:1591:A:C8	2.19	0.78
1:YA:963:U:OP1	1:YA:2497:A:H5''	1.84	0.78
1:YA:2716:C:H2'	1:YA:2717:C:H6	1.47	0.78
1:YA:1231:U:H2'	1:YA:1232:G:C8	2.19	0.78
1:YA:1652:A:H62	14:YN:11:ASN:HD21	1.30	0.78
32:QA:1103:C:H2'	32:QA:1104:G:O4'	1.84	0.78
1:RA:2800:A:C2	1:RA:2895:G:H1'	2.18	0.77
48:QQ:18:LYS:CA	48:QQ:47:ASP:HB2	2.13	0.77
2:RB:30:C:H2'	2:RB:31:C:H5'	1.66	0.77
33:QB:32:GLY:HA3	33:QB:39:ILE:H	1.49	0.77
5:YE:47:LYS:HB3	5:YE:51:GLU:HB2	1.65	0.77
2:YB:86:G:H2'	2:YB:87:U:H5''	1.66	0.77
32:XA:533:A:O2'	32:XA:535:A:OP2	2.02	0.77
32:QA:188:C:H2'	32:QA:188:C:O2	1.83	0.77
36:XE:103:GLY:HA3	36:XE:121:ASN:HA	1.64	0.77
35:XD:30:LYS:N	35:XD:30:LYS:HD3	1.99	0.77
37:XF:11:HIS:HD2	37:XF:12:PRO:HD2	1.50	0.77
1:YA:412:A:N6	1:YA:2412:A:O4'	2.17	0.77
52:XU:15:LEU:O	52:XU:15:LEU:HD12	1.84	0.77
35:QD:31:CYS:O	35:QD:32:LYS:HB2	1.82	0.77
23:RW:23:LYS:O	23:RW:66:VAL:HB	1.85	0.77
32:XA:1221:G:H4'	50:XS:35:ARG:NH2	1.99	0.77
32:QA:409:U:H2'	32:QA:410:G:H8	1.47	0.77
32:XA:532:A:C8	34:XC:192:TYR:CE2	2.70	0.77
1:RA:2135:A:O2'	1:RA:2136:G:H8	1.67	0.77
1:RA:84:A:H62	1:RA:101:A:H2	1.33	0.77
1:YA:2286:G:H4'	1:YA:2287:A:O4'	1.83	0.77
32:XA:876:C:H1'	39:XH:11:THR:HG21	1.64	0.77
24:RX:7:THR:OG1	24:RX:9:LYS:HG3	1.84	0.77
3:YC:224:MET:SD	3:YC:229:HIS:HB2	2.25	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1370:G:O5'	40:QI:110:VAL:HG21	1.85	0.77
42:QK:108:ASN:HB3	52:QU:6:ARG:HG2	1.67	0.77
10:RJ:81:ILE:HG23	10:RJ:82:GLY:N	1.93	0.77
1:RA:2269:G:H4'	23:RW:18:LYS:HE2	1.64	0.77
1:YA:320:A:H2'	5:YE:131:THR:OG1	1.84	0.77
1:YA:1071:G:N7	1:YA:1089:A:C6	2.53	0.77
32:XA:822:U:H2'	32:XA:823:C:H6	1.48	0.77
39:XH:1:SER:HB3	39:XH:3:GLN:HG3	1.65	0.77
38:QG:3:ARG:HG3	38:QG:4:ARG:H	1.48	0.77
1:YA:1490:A:H8	3:YC:73:ILE:HD12	1.50	0.77
31:R4:10:LEU:HD12	31:R4:33:HIS:HD2	1.49	0.77
1:YA:2311:A:H5'	1:YA:2312:U:C5	2.19	0.77
38:XG:35:LYS:O	40:XI:42:THR:HG21	1.84	0.77
32:XA:266:G:O2'	32:XA:267:C:H3'	1.83	0.77
1:RA:588:U:H1'	5:RE:85:PHE:CD1	2.19	0.77
32:QA:8:A:H62	35:QD:204:SER:HB2	1.48	0.77
18:RR:3:ALA:HB3	18:RR:59:ILE:HD11	1.64	0.77
26:YZ:10:ARG:HB2	26:YZ:53:MET:HB3	1.65	0.77
49:XR:62:ARG:HB3	49:XR:69:TYR:CE1	2.19	0.77
1:YA:834:G:H5'	30:Y3:56:LEU:HD11	1.65	0.77
1:YA:1062:G:HO2'	1:YA:1063:G:H8	1.33	0.77
4:RD:133:THR:HG23	4:RD:134:HIS:CD2	2.18	0.77
44:QM:10:ASP:CG	44:QM:11:HIS:N	2.36	0.77
1:YA:855:G:N3	23:YW:23:LYS:HE3	1.99	0.77
51:XT:23:ARG:HB3	51:XT:60:GLN:HE22	1.50	0.77
3:YC:75:ALA:HB2	3:YC:95:TYR:CD1	2.20	0.77
32:QA:721:G:H4'	32:QA:722:G:O5'	1.84	0.77
2:YB:50:A:C2	2:YB:51:G:H1'	2.20	0.77
14:RN:71:ARG:CG	14:RN:71:ARG:HH21	1.98	0.77
1:YA:2544:G:H5'	1:YA:2645:G:N7	1.99	0.77
21:YU:58:VAL:HG12	21:YU:60:LYS:H	1.49	0.77
18:RR:48:LYS:H	18:RR:48:LYS:HD2	1.47	0.77
32:QA:1320:C:OP1	50:QS:69:LYS:HE2	1.84	0.77
23:RW:76:ARG:HG3	23:RW:76:ARG:NH2	1.93	0.77
2:YB:12:C:C4'	2:YB:13:G:OP1	2.25	0.77
1:YA:1060:U:O4'	1:YA:1061:U:H2'	1.85	0.77
32:QA:452:A:H2'	32:QA:453:G:O4'	1.84	0.77
24:YX:58:ILE:HG12	24:YX:66:VAL:HG21	1.67	0.77
11:RK:108:ARG:HG2	11:RK:108:ARG:HH11	1.50	0.77
3:RC:166:ARG:O	3:RC:166:ARG:HG3	1.85	0.77
14:YN:103:ARG:HD3	14:YN:110:MET:SD	2.25	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:528:A:C2	1:RA:2043:C:H4'	2.19	0.77
1:RA:137:U:O2'	1:RA:138:U:OP1	2.02	0.77
32:XA:374:A:H5''	32:XA:452:A:N1	2.00	0.77
32:QA:94:G:H4'	32:QA:95:C:H5''	1.67	0.77
1:YA:1231:U:H2'	1:YA:1232:G:H8	1.49	0.77
10:RJ:73:VAL:HG23	10:RJ:74:TYR:H	1.48	0.77
4:RD:9:VAL:HG22	4:RD:26:VAL:HB	1.67	0.77
32:XA:961:U:HO2'	32:XA:962:C:H6	0.78	0.77
14:YN:97:ILE:HG13	14:YN:98:LEU:H	1.50	0.77
1:YA:184:C:H2'	1:YA:185:G:C8	2.20	0.77
41:XJ:44:THR:OG1	41:XJ:70:HIS:CE1	2.38	0.77
52:XU:8:ASN:ND2	52:XU:9:GLU:H	1.82	0.77
14:RN:116:VAL:HG22	14:RN:116:VAL:O	1.85	0.77
3:RC:20:ASN:HD21	3:RC:22:GLU:HG2	1.49	0.77
36:QE:23:THR:HA	36:QE:28:ARG:HA	1.67	0.77
1:RA:1062:G:OP1	1:RA:1070:A:H4'	1.85	0.76
1:YA:624:C:O2'	1:YA:657:U:H5''	1.85	0.76
20:RT:44:LYS:HG3	20:RT:55:VAL:HG11	1.67	0.76
32:XA:166:U:H2'	32:XA:167:A:H5'	1.67	0.76
10:RJ:64:VAL:O	10:RJ:65:THR:HB	1.83	0.76
1:RA:826:U:O2'	12:RL:53:GLY:HA3	1.85	0.76
6:RF:40:GLY:CA	6:RF:84:ILE:HD11	2.15	0.76
12:YL:17:LYS:NZ	12:YL:19:LEU:HD22	2.00	0.76
32:XA:1225:A:H4'	50:XS:77:ARG:HH12	1.50	0.76
14:YN:38:LEU:HB3	14:YN:39:PRO:HD3	1.67	0.76
36:QE:156:ARG:O	36:QE:158:LYS:N	2.18	0.76
6:RF:134:GLN:HG2	6:RF:135:ILE:N	1.98	0.76
33:QB:9:LEU:HD12	33:QB:42:LEU:HD13	1.65	0.76
13:RM:40:ARG:HB2	13:RM:93:VAL:CG2	2.15	0.76
32:QA:721:G:H4'	32:QA:722:G:C5'	2.14	0.76
8:YH:72:ILE:HD11	8:YH:141:LYS:H	1.51	0.76
33:QB:131:LYS:O	33:QB:135:MET:HB2	1.86	0.76
32:XA:1305:G:H22	32:XA:1331:G:H2'	1.49	0.76
1:YA:1379:U:O2	1:YA:1379:U:H2'	1.86	0.76
43:QL:49:ARG:CG	43:QL:49:ARG:HH11	1.95	0.76
23:YW:17:ALA:O	23:YW:18:LYS:HB3	1.85	0.76
1:YA:228:C:H5''	1:YA:229:C:C5	2.21	0.76
1:YA:482:A:N6	1:YA:506:G:C4	2.52	0.76
1:YA:2757:A:N1	7:YG:66:THR:HG21	2.00	0.76
32:XA:1138:G:N2	32:XA:1140:C:C4	2.54	0.76
1:RA:1392:A:H61	20:RT:18:GLU:CD	1.89	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:73:C:O2'	32:QA:74:A:O4'	2.02	0.76
32:QA:214:C:O2'	32:QA:215:C:C6	2.39	0.76
44:QM:2:ARG:O	44:QM:3:ILE:HG12	1.85	0.76
41:XJ:26:VAL:O	41:XJ:30:LYS:HB3	1.84	0.76
4:YD:159:LYS:HE2	4:YD:160:LYS:H	1.48	0.76
32:QA:1066:C:H6	32:QA:1066:C:H5''	1.49	0.76
19:YS:27:LYS:O	19:YS:71:VAL:HG12	1.86	0.76
1:YA:2847:U:H2'	1:YA:2848:G:H5'	1.67	0.76
20:YT:29:THR:H	20:YT:87:LEU:HB2	1.51	0.76
9:RI:76:ALA:HB2	9:RI:131:THR:HG22	1.67	0.76
32:XA:1242:G:O2'	32:XA:1243:C:O5'	2.04	0.76
11:YK:61:VAL:HG11	11:YK:112:PHE:CE2	2.21	0.76
28:Y1:5:ARG:HD2	28:Y1:25:ASN:HB2	1.67	0.76
3:RC:20:ASN:HB3	3:RC:23:LEU:HD23	1.65	0.76
1:YA:2142:A:H2'	1:YA:2144:G:P	2.24	0.76
1:RA:2203:U:H5''	1:RA:2204:G:OP1	1.85	0.76
33:XB:185:ILE:HG22	33:XB:199:ILE:HG13	1.66	0.76
2:YB:24:G:H5'	2:YB:25:U:C5	2.21	0.76
1:YA:1238:G:O2'	1:YA:1239:G:H5'	1.84	0.76
32:QA:409:U:H2'	32:QA:410:G:C8	2.21	0.76
12:RL:95:LEU:HD22	12:RL:100:ILE:HD11	1.67	0.76
32:XA:1296:C:C4	32:XA:1297:G:N2	2.53	0.76
43:QL:62:VAL:HG21	43:QL:94:TYR:CE2	2.19	0.76
42:XK:44:ALA:HB3	42:XK:69:CYS:HB2	1.67	0.76
32:XA:563:A:H2'	32:XA:563:A:N3	1.99	0.76
37:QF:16:GLU:CG	35:XD:191:SER:HB2	2.10	0.76
46:QO:63:ARG:HG2	46:QO:87:ARG:NH1	2.00	0.76
1:YA:1799:G:H4'	1:YA:1800:C:O5'	1.85	0.76
1:YA:226:A:C2	1:YA:230:G:O6	2.38	0.76
1:YA:1237:A:H2	1:YA:1238:G:H1'	1.46	0.76
1:YA:2822:G:H2'	1:YA:2823:A:H5''	1.68	0.76
35:XD:34:GLU:O	35:XD:37:PRO:HD3	1.85	0.76
32:XA:1239:A:O2'	32:XA:1241:G:C5	2.38	0.76
1:YA:2746:U:H5''	7:YG:137:LYS:HG2	1.65	0.76
20:RT:51:PHE:O	20:RT:52:GLU:HG2	1.86	0.76
1:YA:921:C:C2'	1:YA:922:C:H5'	2.16	0.76
1:YA:686:U:O4	29:Y2:12:ARG:HG3	1.85	0.76
42:QK:14:GLN:HA	42:QK:76:TYR:O	1.84	0.76
1:RA:1820:U:OP1	3:RC:176:ARG:HG2	1.85	0.76
40:QI:28:VAL:HB	40:QI:63:TYR:HD2	1.51	0.76
10:RJ:117:ALA:HA	10:RJ:120:ARG:NH2	2.01	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:XT:73:ARG:CG	51:XT:73:ARG:HH11	1.99	0.76
32:QA:1138:G:O2'	32:QA:1139:G:H4'	1.86	0.76
32:XA:1147:C:H4'	40:XI:6:TYR:CE1	2.21	0.76
1:YA:1300:G:H4'	1:YA:1301:A:O5'	1.85	0.76
1:RA:729:G:H4'	1:RA:763:G:H5'	1.65	0.76
1:YA:2503:A:H4'	1:YA:2504:U:OP1	1.84	0.76
10:RJ:77:HIS:HD2	10:RJ:79:GLY:H	1.34	0.76
29:R2:43:THR:O	29:R2:44:VAL:HB	1.84	0.76
3:RC:100:ARG:CG	3:RC:100:ARG:HH11	1.98	0.76
34:QC:10:ARG:HH21	34:QC:181:ILE:HG13	1.51	0.76
1:YA:2619:C:H5'	4:YD:157:LYS:HA	1.67	0.76
1:YA:221:A:H5''	1:YA:222:A:OP1	1.86	0.76
1:YA:1056:G:N2	1:YA:1102:C:H5	1.83	0.76
1:YA:922:C:H1'	23:YW:22:VAL:HG21	1.68	0.76
52:XU:33:ARG:NH1	52:XU:34:ARG:HD3	2.01	0.76
1:RA:508:A:H4'	1:RA:509:C:OP2	1.85	0.76
34:XC:34:SER:O	34:XC:38:VAL:HG13	1.85	0.76
32:XA:728:A:H2'	32:XA:729:A:C8	2.21	0.76
1:RA:1936:A:H2	1:RA:1943:U:C5	2.04	0.76
1:YA:2136:G:H2'	1:YA:2137:U:C6	2.21	0.76
1:RA:1454:C:H41	14:RN:73:ASN:HD21	1.34	0.76
23:RW:39:GLN:HG3	23:RW:42:THR:H	1.50	0.76
10:RJ:111:LYS:HD3	10:RJ:112:GLY:N	2.00	0.76
1:YA:2093:G:O6	1:YA:2225:A:C8	2.38	0.76
1:YA:762:U:C4'	1:YA:763:G:O5'	2.33	0.76
16:YP:56:SER:O	16:YP:75:THR:HG22	1.85	0.76
13:YM:17:ASN:O	13:YM:18:ARG:HG2	1.86	0.76
35:XD:109:THR:HG22	35:XD:111:ALA:H	1.50	0.76
1:YA:2143:C:H3'	1:YA:2144:G:C8	2.21	0.76
1:RA:682:G:H5'	29:R2:26:ASN:OD1	1.86	0.76
35:XD:195:ASN:HB3	35:XD:197:HIS:CD2	2.21	0.76
1:RA:2557:G:H2'	1:RA:2558:C:C6	2.21	0.76
32:XA:1159:U:H5	32:XA:1182:G:HO2'	1.34	0.75
1:YA:2346:A:H3'	1:YA:2347:C:C5'	2.14	0.75
1:YA:1339:G:H5'	1:YA:1393:A:N1	2.01	0.75
1:YA:300:A:OP2	21:YU:96:LYS:HD3	1.84	0.75
22:RV:80:HIS:ND1	22:RV:81:PRO:HD2	2.01	0.75
1:YA:614:A:H4'	1:YA:616:A:H62	1.49	0.75
1:YA:95:A:H4'	25:YY:38:GLN:O	1.85	0.75
32:XA:1215:G:O2'	32:XA:1216:A:H8	1.69	0.75
1:YA:45:G:H5'	1:YA:46:G:OP1	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1780:A:OP1	56:YA:3679:HOH:O	2.04	0.75
32:QA:1191:A:H5''	34:QC:3:LYS:HE3	1.68	0.75
15:RO:88:LYS:O	15:RO:89:ASP:HB2	1.84	0.75
21:YU:35:VAL:HG12	21:YU:36:GLU:H	1.51	0.75
1:YA:995:C:O2	10:YJ:3:THR:HG23	1.86	0.75
32:XA:328:C:H1'	32:XA:329:A:OP2	1.86	0.75
1:YA:806:C:H2'	1:YA:807:U:H6	1.51	0.75
1:YA:1476:U:H1'	1:YA:1732:C:C2	2.21	0.75
1:YA:942:G:H2'	1:YA:943:A:H5'	1.68	0.75
3:RC:246:PRO:HG2	3:RC:247:TRP:CZ3	2.20	0.75
43:QL:23:LEU:HG	43:QL:24:GLU:H	1.50	0.75
42:QK:88:PRO:HD3	52:QU:28:LEU:HD13	1.68	0.75
34:QC:76:ILE:HA	34:QC:83:VAL:HG23	1.66	0.75
16:YP:88:ARG:HE	16:YP:112:ARG:HH21	1.34	0.75
4:RD:107:VAL:H	4:RD:206:ALA:H	1.32	0.75
32:QA:1239:A:H62	32:QA:1299:A:H62	1.33	0.75
1:YA:942:G:C2'	1:YA:943:A:H5'	2.16	0.75
1:RA:1778:U:H2'	1:RA:1784:A:N6	2.01	0.75
32:XA:374:A:H5''	32:XA:452:A:C2	2.21	0.75
32:QA:1227:A:H2'	32:QA:1227:A:N3	2.00	0.75
33:XB:46:VAL:HG13	33:XB:47:PRO:HD3	1.67	0.75
10:RJ:40:HIS:HD2	10:RJ:41:LYS:HG2	1.51	0.75
1:YA:84:A:C5	1:YA:103:A:N6	2.55	0.75
5:YE:133:LEU:O	5:YE:137:LYS:HB2	1.86	0.75
9:YI:45:THR:HG23	9:YI:54:ILE:HD13	1.69	0.75
3:RC:12:ARG:HH11	3:RC:12:ARG:HG3	1.51	0.75
1:YA:616:A:C2'	1:YA:617:G:H8	1.99	0.75
1:YA:729:G:H3'	1:YA:730:A:C5'	2.17	0.75
32:QA:94:G:H4'	32:QA:95:C:C5'	2.16	0.75
32:XA:77:A:H2'	32:XA:78:A:C8	2.22	0.75
1:RA:1415:U:H2'	1:RA:1415:U:O2	1.85	0.75
8:RH:6:LEU:O	8:RH:15:LEU:HA	1.86	0.75
19:RS:18:ARG:O	19:RS:19:LEU:HB2	1.85	0.75
33:QB:185:ILE:HA	33:QB:199:ILE:HB	1.67	0.75
1:YA:1312:U:H4'	1:YA:1313:U:O5'	1.85	0.75
35:QD:34:GLU:O	35:QD:37:PRO:HD3	1.86	0.75
32:XA:202:G:O2'	32:XA:468:A:H8	1.69	0.75
32:XA:597:G:H2'	32:XA:598:U:H5'	1.69	0.75
1:RA:1287:A:O2'	1:RA:1288:G:H5'	1.86	0.75
32:QA:210:C:H4'	32:QA:211:G:N2	2.02	0.75
1:RA:2602:A:H4'	1:RA:2603:G:C5'	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1091:U:O2	32:XA:1093:A:H8	1.70	0.75
36:QE:109:ALA:O	36:QE:110:MET:HG2	1.86	0.75
32:QA:807:A:H2'	32:QA:808:C:H6	1.50	0.75
36:QE:106:ALA:HB2	36:QE:124:ALA:HB3	1.68	0.75
32:XA:14:U:H2'	32:XA:16:A:OP2	1.85	0.75
42:QK:28:ASN:OD1	42:QK:46:ALA:HB3	1.86	0.75
32:QA:475:C:H2'	32:QA:476:U:H6	1.52	0.75
52:XU:19:LYS:HB3	52:XU:24:LYS:HB2	1.66	0.75
1:YA:1469:A:H2'	1:YA:1470:A:C8	2.22	0.75
32:XA:1070:U:H2'	32:XA:1071:C:H6	1.51	0.75
1:YA:1056:G:C1'	1:YA:1103:A:H61	2.00	0.75
2:YB:42:C:H2'	2:YB:43:C:H6	1.49	0.75
48:QQ:42:LYS:O	48:QQ:43:LEU:HD23	1.87	0.75
32:XA:1239:A:H1'	32:XA:1241:G:C4	2.21	0.75
1:RA:481:G:C4	1:RA:507:A:C2	2.75	0.75
33:XB:9:LEU:HB2	33:XB:11:ALA:H	1.51	0.75
32:QA:322:C:O2'	51:QT:17:ARG:HG2	1.87	0.75
38:QG:12:LEU:H	38:QG:12:LEU:HD22	1.51	0.75
10:RJ:4:PHE:O	10:RJ:44:TYR:CE1	2.39	0.75
1:YA:1387:A:C5'	1:YA:1469:A:H1'	2.16	0.75
35:QD:29:THR:HG22	35:QD:30:LYS:HD3	1.68	0.75
10:YJ:5:THR:HA	10:YJ:44:TYR:CD2	2.21	0.75
32:QA:86:G:H21	32:QA:87:C:H41	1.33	0.75
32:XA:1201:A:H4'	32:XA:1202:U:O5'	1.86	0.75
19:YS:73:LYS:HB2	19:YS:106:VAL:HB	1.69	0.75
32:XA:181:A:H4'	32:XA:182:A:OP1	1.85	0.75
8:RH:2:GLN:O	8:RH:3:VAL:HG22	1.86	0.75
32:QA:174:A:H2'	32:QA:175:C:H5'	1.69	0.75
21:YU:10:VAL:HG12	21:YU:71:ILE:HA	1.68	0.75
32:XA:1167:A:N7	32:XA:1169:A:N6	2.35	0.75
1:YA:1364:G:N7	24:YX:1:SER:HB2	2.02	0.75
1:YA:172:A:H2'	1:YA:173:A:H8	1.49	0.75
8:YH:32:PRO:HA	24:YX:38:TRP:HD1	1.52	0.75
10:RJ:44:TYR:CD2	17:RQ:63:ARG:HG2	2.21	0.75
32:XA:120:A:C3'	32:XA:121:U:C5'	2.62	0.75
41:XJ:52:LEU:HD21	41:XJ:59:LYS:HA	1.67	0.75
1:YA:1606:C:O2'	1:YA:1607:C:OP2	2.04	0.75
36:QE:158:LYS:HE2	39:QH:63:LYS:HZ1	1.52	0.75
1:YA:184:C:H2'	1:YA:185:G:H8	1.50	0.75
20:YT:29:THR:HB	20:YT:87:LEU:H	1.52	0.75
1:RA:2415:G:H4'	12:RL:66:PHE:HB2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:RH:96:THR:O	8:RH:97:ARG:HG3	1.87	0.75
20:RT:73:ARG:HB3	20:RT:73:ARG:CZ	2.16	0.75
5:YE:6:LYS:HB2	5:YE:121:VAL:HG12	1.69	0.75
42:QK:21:HIS:CE1	42:QK:34:THR:HG21	2.22	0.75
1:RA:284:U:H2'	1:RA:285:G:H8	1.50	0.75
7:RG:126:THR:HG22	7:RG:127:GLN:H	1.51	0.75
1:YA:230:G:O2'	1:YA:231:A:H8	1.70	0.75
32:XA:1493:A:H8	1:YA:1913:A:N6	1.85	0.75
1:YA:75:G:H4'	25:YY:48:ARG:NH2	2.02	0.75
5:YE:143:LEU:HG	5:YE:185:LYS:HD3	1.68	0.75
37:QF:3:HIS:H	37:QF:92:THR:CG2	1.99	0.75
28:R1:24:LYS:HE2	28:R1:52:LYS:HB2	1.68	0.75
38:XG:137:ARG:CZ	38:XG:138:GLU:HG2	2.17	0.75
1:YA:2142:A:C3'	1:YA:2143:C:H4'	2.17	0.75
5:RE:41:GLN:OE1	5:RE:43:THR:HG21	1.87	0.75
7:YG:78:VAL:HG23	7:YG:79:THR:HG23	1.67	0.75
49:QR:40:PRO:HB2	49:QR:42:ARG:HG2	1.66	0.75
1:YA:2190:G:H5'	1:YA:2191:A:OP2	1.85	0.75
39:QH:86:LYS:HG3	39:QH:90:GLU:HB3	1.69	0.75
9:YI:76:ALA:HB2	9:YI:131:THR:HB	1.69	0.74
45:QN:22:LYS:HG3	45:QN:23:ARG:N	2.02	0.74
1:RA:2320:U:H4'	1:RA:2321:U:H5''	1.67	0.74
4:RD:48:ILE:HG23	4:RD:84:LEU:HD21	1.69	0.74
35:XD:66:VAL:HG22	35:XD:96:ARG:NH1	2.02	0.74
6:RF:34:THR:HG23	6:RF:89:THR:HG23	1.69	0.74
3:YC:59:GLN:NE2	3:YC:84:PRO:HB2	2.00	0.74
1:YA:2056:G:C2	1:YA:2057:G:C8	2.74	0.74
39:XH:9:MET:O	39:XH:13:ILE:HG13	1.86	0.74
15:RO:51:ALA:HB3	15:RO:78:VAL:HG13	1.67	0.74
32:QA:1387:G:H2'	32:QA:1388:C:C6	2.22	0.74
35:XD:143:SER:HB3	35:XD:178:GLU:HG3	1.68	0.74
2:YB:13:G:C8	2:YB:13:G:H5''	2.21	0.74
32:XA:1366:C:O2'	32:XA:1367:C:C6	2.39	0.74
20:YT:20:ALA:HB1	20:YT:31:VAL:HG11	1.68	0.74
32:QA:204:G:H1'	32:QA:465:A:C2	2.22	0.74
1:YA:320:A:N7	5:YE:132:LYS:HB2	2.02	0.74
1:RA:962:G:OP1	56:RA:3355:HOH:O	2.05	0.74
7:RG:60:GLY:O	7:RG:61:TRP:HB2	1.84	0.74
4:RD:8:LYS:HB2	4:RD:201:LEU:HD22	1.69	0.74
32:QA:113:G:H1'	32:QA:354:G:H5'	1.69	0.74
1:YA:1324:G:H1'	1:YA:1616:A:N6	2.01	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2648:G:H2'	1:RA:2649:C:C6	2.21	0.74
3:RC:14:HIS:O	3:RC:203:VAL:HG11	1.87	0.74
52:QU:39:LYS:H	52:QU:40:PRO:HD2	1.52	0.74
9:RI:53:PRO:HD2	9:RI:77:VAL:HG21	1.70	0.74
1:YA:1387:A:N6	1:YA:1401:G:C6	2.54	0.74
1:RA:2136:G:O2'	1:RA:2137:U:C6	2.39	0.74
1:YA:1870:C:H5''	1:YA:1871:A:C2	2.21	0.74
32:XA:1361:G:H2'	32:XA:1362:A:H5'	1.69	0.74
42:QK:87:GLY:H	42:QK:113:THR:HG22	1.51	0.74
4:YD:33:ARG:H	4:YD:33:ARG:HD2	1.52	0.74
13:RM:1:MET:O	13:RM:2:LEU:HB2	1.87	0.74
32:XA:346:G:N3	32:XA:346:G:H2'	1.99	0.74
6:RF:76:PHE:O	6:RF:77:LYS:HB2	1.87	0.74
1:RA:2353:G:H1'	23:RW:30:VAL:HG13	1.69	0.74
32:XA:1218:C:H2'	32:XA:1219:A:C8	2.23	0.74
1:YA:312:G:H5'	1:YA:331:C:O2'	1.86	0.74
33:QB:207:ARG:O	33:QB:211:LEU:HB2	1.86	0.74
1:YA:118:A:C8	1:YA:119:A:C8	2.76	0.74
32:XA:1151:A:HO2'	32:XA:1152:A:H8	0.77	0.74
1:YA:2261:C:C2	1:YA:2280:G:N2	2.56	0.74
1:YA:163:C:O2'	1:YA:164:C:O4'	2.05	0.74
1:RA:2793:C:H2'	1:RA:2794:C:H6	1.53	0.74
32:XA:1276:G:H21	32:XA:1282:C:H1'	1.51	0.74
1:YA:1695:G:H2'	1:YA:1696:G:O4'	1.87	0.74
16:YP:63:ILE:HA	16:YP:68:GLY:HA2	1.68	0.74
4:YD:106:LYS:HB3	4:YD:206:ALA:CB	2.17	0.74
32:QA:1049:U:H4'	32:QA:1050:G:OP2	1.87	0.74
1:RA:1871:A:O2'	1:RA:1872:A:C8	2.41	0.74
8:YH:8:LYS:HD2	8:YH:9:VAL:N	2.02	0.74
50:XS:10:ILE:HG22	50:XS:14:LEU:HD11	1.69	0.74
1:RA:1469:A:H2'	1:RA:1470:A:C8	2.21	0.74
32:XA:704:A:O2'	32:XA:705:G:C8	2.39	0.74
1:YA:27:G:N2	1:YA:512:G:H2'	2.02	0.74
1:YA:506:G:H4'	1:YA:507:A:H5'	1.70	0.74
32:XA:995:C:N3	32:XA:1046:A:O2'	2.20	0.74
32:XA:373:A:H2'	32:XA:374:A:H8	1.52	0.74
32:QA:548:G:H2'	32:QA:549:C:C6	2.22	0.74
1:YA:1783:A:H5'	1:YA:2608:G:H4'	1.70	0.74
25:YY:19:LEU:HG	25:YY:22:LEU:HD22	1.70	0.74
4:YD:137:SER:HB3	4:YD:138:LEU:HD22	1.67	0.74
1:RA:2092:U:H4'	1:RA:2093:G:O5'	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:RW:39:GLN:HG3	23:RW:42:THR:N	2.02	0.74
32:XA:701:U:O2'	32:XA:702:A:P	2.46	0.74
44:XM:78:ARG:NH2	44:XM:79:LEU:HD23	2.03	0.74
32:XA:330:C:O2'	32:XA:331:G:C8	2.25	0.74
4:RD:118:PHE:HD2	4:RD:119:ALA:N	1.83	0.74
1:YA:2267:A:N6	1:YA:2272:U:H3	1.85	0.74
1:YA:870:U:C2'	1:YA:871:U:H5'	2.18	0.74
52:XU:38:GLU:N	52:XU:40:PRO:HD2	2.02	0.74
43:QL:24:GLU:HB2	43:QL:26:CYS:SG	2.28	0.74
1:YA:962:G:OP1	1:YA:962:G:H3'	1.88	0.74
1:YA:1324:G:H1	1:YA:1330:C:H42	1.35	0.74
15:YO:94:ARG:HD2	15:YO:97:PHE:O	1.87	0.74
1:YA:1857:G:O2'	1:YA:1884:G:N2	2.19	0.74
45:QN:51:PRO:O	45:QN:52:ARG:HB2	1.88	0.74
32:QA:110:C:H2'	32:QA:111:G:C8	2.23	0.74
44:XM:81:ASP:HB3	44:XM:82:LEU:HD12	1.70	0.74
26:RZ:7:THR:HG23	26:RZ:34:THR:N	2.02	0.74
39:QH:104:SER:O	39:QH:122:GLY:HA3	1.86	0.74
35:QD:169:TRP:CD1	35:QD:170:LEU:HG	2.22	0.74
4:YD:149:ASN:O	4:YD:152:PRO:HD2	1.87	0.74
1:YA:2423:U:O2'	1:YA:2425:A:H2'	1.88	0.74
1:YA:1210:G:C6	1:YA:1237:A:N7	2.56	0.74
1:YA:335:C:HO2'	1:YA:336:C:H6	1.34	0.74
1:YA:2750:A:H4'	1:YA:2751:G:OP2	1.87	0.74
32:QA:202:G:H21	32:QA:466:A:H61	1.35	0.74
32:QA:214:C:O2'	32:QA:215:C:H6	1.71	0.74
4:YD:124:ARG:HD3	4:YD:125:TRP:NE1	2.03	0.74
45:YN:16:ALA:HA	45:YN:20:PHE:HD1	1.52	0.74
32:QA:338:A:N1	32:QA:351:G:O6	2.21	0.74
1:RA:995:C:H6	1:RA:995:C:H5'	1.51	0.74
1:YA:1453:A:H4'	1:YA:1454:C:OP2	1.87	0.74
1:YA:2269:G:O3'	23:YW:18:LYS:HE2	1.88	0.74
1:YA:2333:A:C2	1:YA:2335:A:N6	2.55	0.74
1:YA:335:C:O2'	1:YA:336:C:C6	2.40	0.74
23:RW:9:THR:OG1	23:RW:10:ARG:N	2.20	0.74
5:YE:147:LEU:HB3	5:YE:186:VAL:HG23	1.69	0.74
38:XG:110:ARG:CG	38:XG:111:GLY:H	2.01	0.74
40:QI:90:ASP:OD2	40:QI:93:LEU:HG	1.87	0.74
1:RA:1455:G:OP2	56:RA:3413:HOH:O	2.04	0.74
35:QD:11:SER:HA	35:QD:18:LEU:HD12	1.69	0.74
1:YA:1558:C:H4'	1:YA:1559:U:H5'	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:RQ:69:ARG:CB	17:RQ:69:ARG:HH21	1.99	0.73
38:XG:68:VAL:HG22	38:XG:134:VAL:HG12	1.70	0.73
1:RA:506:G:H4'	1:RA:507:A:H5'	1.70	0.73
1:RA:933:A:H5'	1:RA:934:U:OP2	1.88	0.73
1:YA:41:C:H2'	1:YA:42:A:C8	2.23	0.73
6:YF:5:ASP:C	6:YF:7:TYR:H	1.90	0.73
14:YN:71:ARG:NH2	14:YN:71:ARG:HB2	2.03	0.73
1:RA:1371:G:N7	56:RA:3402:HOH:O	2.21	0.73
1:RA:1131:G:OP1	10:RJ:82:GLY:HA2	1.88	0.73
33:QB:13:VAL:CG2	33:QB:207:ARG:HH22	2.00	0.73
1:YA:1080:A:H2'	1:YA:1081:U:H6	1.49	0.73
1:RA:430:A:H5''	1:RA:431:U:OP2	1.88	0.73
12:YL:79:LEU:HB2	12:YL:113:ALA:H	1.51	0.73
6:YF:110:ILE:HA	6:YF:111:ARG:HH11	1.52	0.73
32:XA:373:A:C8	32:XA:373:A:H5'	2.23	0.73
1:YA:1645:G:OP1	1:YA:1646:C:H5'	1.89	0.73
32:XA:701:U:HO2'	32:XA:702:A:P	2.11	0.73
1:YA:223:A:N6	1:YA:422:A:N6	2.37	0.73
14:YN:98:LEU:HD21	27:Y0:53:VAL:HG21	1.67	0.73
1:YA:2316:G:H2'	1:YA:2317:A:H8	1.51	0.73
10:YJ:59:ALA:O	10:YJ:62:VAL:HG12	1.88	0.73
43:QL:27:PRO:HB2	43:QL:28:GLN:OE1	1.87	0.73
1:RA:1022:G:N2	1:RA:1142:A:C2	2.56	0.73
25:YY:18:LEU:O	25:YY:22:LEU:HD13	1.88	0.73
11:RK:63:VAL:HG22	11:RK:107:LEU:HD21	1.69	0.73
12:RL:109:LYS:HG2	12:RL:126:ARG:HB3	1.69	0.73
43:QL:86:VAL:HG11	43:QL:89:LEU:HD23	1.68	0.73
1:RA:2636:C:H2'	1:RA:2637:U:C6	2.22	0.73
4:YD:68:PHE:HB3	4:YD:73:VAL:HA	1.70	0.73
7:YG:43:LYS:O	7:YG:49:LEU:HD12	1.88	0.73
32:XA:381:C:H2'	32:XA:381:C:O2	1.87	0.73
16:RP:50:ARG:CG	16:RP:57:ALA:H	2.00	0.73
32:QA:86:G:N2	32:QA:87:C:N4	2.36	0.73
20:RT:32:LEU:N	20:RT:83:ALA:HB3	2.03	0.73
37:XF:3:HIS:HD2	37:XF:65:GLU:HG2	1.53	0.73
36:QE:82:HIS:HB2	36:QE:83:PRO:HD2	1.70	0.73
32:QA:601:G:H2'	32:QA:602:A:C8	2.23	0.73
47:XP:36:VAL:HG13	47:XP:36:VAL:O	1.87	0.73
5:YE:166:LYS:HA	5:YE:166:LYS:HE2	1.70	0.73
23:RW:73:PRO:HG2	23:RW:76:ARG:HB2	1.71	0.73
1:RA:2352:A:N1	23:RW:30:VAL:HG11	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1394:U:H4'	1:YA:1603:A:H4'	1.69	0.73
1:YA:242:G:H8	30:Y3:3:ILE:O	1.71	0.73
45:QN:22:LYS:HG3	45:QN:23:ARG:H	1.54	0.73
1:YA:1255:U:H2'	5:YE:68:ALA:HB2	1.70	0.73
5:RE:46:GLN:HG3	5:RE:87:ALA:H	1.53	0.73
38:QG:69:ARG:HG3	38:QG:95:ARG:HG2	1.69	0.73
1:RA:856:G:H1'	23:RW:23:LYS:HB3	1.69	0.73
27:Y0:12:ARG:HG3	27:Y0:15:ARG:NH1	2.01	0.73
33:XB:103:TRP:HB2	33:XB:106:VAL:HB	1.69	0.73
11:YK:13:ASN:HD21	11:YK:97:THR:H	1.35	0.73
11:YK:70:ARG:HB3	11:YK:76:VAL:HG22	1.71	0.73
43:QL:113:ARG:HB3	43:QL:118:VAL:HB	1.71	0.73
32:XA:876:C:C1'	39:XH:11:THR:HG21	2.19	0.73
4:YD:49:GLN:HE21	4:YD:79:LEU:HB3	1.53	0.73
25:YY:31:GLN:HE22	25:YY:37:LEU:HD12	1.54	0.73
42:QK:30:ILE:HB	42:QK:45:THR:HG22	1.71	0.73
32:QA:858:G:O2'	32:QA:859:G:H5'	1.87	0.73
17:RQ:63:ARG:CZ	17:RQ:96:ASP:HA	2.16	0.73
5:YE:130:LYS:CB	5:YE:133:LEU:HB3	2.18	0.73
36:QE:114:LEU:HG	36:QE:119:VAL:CG2	2.17	0.73
36:QE:158:LYS:HE2	39:QH:63:LYS:NZ	2.04	0.73
1:YA:1070:A:H5'	1:YA:1071:G:H5''	1.71	0.73
32:XA:1242:G:N2	32:XA:1243:C:H1'	2.03	0.73
32:XA:1138:G:O2'	32:XA:1139:G:OP1	2.07	0.73
33:XB:103:TRP:HA	33:XB:106:VAL:HB	1.70	0.73
20:YT:38:ALA:HB1	20:YT:81:LYS:NZ	2.04	0.73
9:RI:79:LEU:HA	9:RI:83:ALA:HB3	1.70	0.73
33:XB:48:MET:O	33:XB:199:ILE:HG22	1.87	0.73
34:QC:75:VAL:O	34:QC:82:ASP:HB3	1.88	0.73
6:YF:91:ARG:HH21	6:YF:91:ARG:HB3	1.51	0.73
1:YA:1929:G:H4'	1:YA:1930:G:OP1	1.86	0.73
32:XA:560:A:H4'	32:XA:561:U:H5''	1.71	0.73
17:RQ:63:ARG:NH1	17:RQ:96:ASP:CA	2.35	0.73
17:RQ:93:ILE:HG23	17:RQ:94:LEU:N	2.04	0.73
32:XA:1279:G:H5''	41:XJ:9:ARG:HH22	1.53	0.73
23:RW:41:GLY:HA2	23:RW:44:PHE:CE2	2.24	0.73
23:RW:47:GLY:O	23:RW:49:ASN:N	2.20	0.73
1:YA:27:G:H1'	1:YA:513:A:N6	2.04	0.73
52:QU:33:ARG:NE	52:QU:34:ARG:HG3	2.02	0.73
43:XL:49:ARG:HG2	43:XL:89:LEU:HD21	1.71	0.73
4:RD:12:THR:CG2	4:RD:13:ARG:H	2.02	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2056:G:N2	27:Y0:1:ALA:N	2.36	0.73
32:QA:206:C:H2'	32:QA:207:C:O4'	1.89	0.73
32:QA:111:G:O6	32:QA:330:C:N4	2.21	0.73
25:YY:31:GLN:OE1	25:YY:37:LEU:HB2	1.88	0.73
40:QI:98:ARG:HG2	40:QI:103:VAL:HG21	1.69	0.73
1:YA:846:U:O2'	1:YA:847:U:H5''	1.88	0.73
5:RE:108:ILE:HD13	5:RE:109:LEU:N	2.04	0.73
4:YD:133:THR:HG23	4:YD:134:HIS:H	1.53	0.73
1:RA:2199:A:C8	1:RA:2199:A:H5'	2.24	0.73
19:RS:20:VAL:HA	19:RS:23:LEU:HD12	1.71	0.73
1:RA:927:A:H2'	1:RA:928:A:C8	2.24	0.73
32:XA:1183:U:C3'	32:XA:1184:G:H5''	2.12	0.73
1:YA:2331:G:O2'	23:YW:40:ARG:HB3	1.88	0.73
1:YA:1912:A:H62	1:YA:1917:U:H3	1.37	0.73
1:YA:1654:A:H2'	1:YA:1655:A:H8	1.53	0.73
1:YA:1062:G:H8	1:YA:1070:A:OP2	1.71	0.73
27:Y0:38:LEU:HB2	27:Y0:41:HIS:NE2	2.04	0.73
19:YS:8:ARG:O	19:YS:9:HIS:HB2	1.88	0.73
32:QA:373:A:O2'	32:QA:374:A:H5'	1.88	0.73
16:YP:20:ARG:HD2	16:YP:21:PRO:HD2	1.70	0.73
51:XT:2:ASN:N	51:XT:7:LYS:HZ3	1.86	0.73
46:XO:7:THR:O	46:XO:11:VAL:HG23	1.89	0.73
48:QQ:55:GLY:HA3	48:QQ:82:VAL:HG11	1.69	0.73
52:XU:16:ARG:CG	52:XU:19:LYS:HG2	2.14	0.73
32:QA:1101:A:C4'	32:QA:1102:A:O5'	2.35	0.73
32:XA:1242:G:C2	32:XA:1243:C:H1'	2.23	0.73
33:QB:22:TRP:O	33:QB:22:TRP:CG	2.41	0.73
32:QA:49:U:O4	32:QA:365:U:C5	2.42	0.73
38:XG:112:ASP:HB3	38:XG:117:LEU:HB3	1.70	0.73
1:YA:2468:A:HO2'	1:YA:2469:A:H8	1.34	0.73
2:YB:38:C:H4'	15:YO:100:HIS:NE2	2.03	0.73
42:XK:55:ARG:HD2	42:XK:55:ARG:H	1.54	0.73
8:YH:83:LYS:HE2	8:YH:149:GLU:HB3	1.68	0.73
21:RU:73:ASN:ND2	21:RU:76:THR:HG23	2.03	0.73
26:RZ:13:ILE:HG22	26:RZ:14:GLY:N	2.02	0.73
43:XL:82:ARG:HG2	43:XL:82:ARG:HH11	1.54	0.73
1:YA:984:A:O2'	1:YA:985:C:OP1	2.06	0.73
43:XL:19:ASN:H	43:XL:19:ASN:HD22	1.34	0.73
1:RA:994:C:H1'	18:RR:10:LYS:HZ1	1.52	0.72
1:YA:1917:U:H2'	1:YA:1918:A:H5'	1.71	0.72
1:YA:1351:C:H4'	1:YA:1572:A:O4'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1441:A:H62	32:QA:1461:G:N2	1.87	0.72
33:QB:9:LEU:HB2	33:QB:42:LEU:HD13	1.70	0.72
7:RG:73:SER:HA	7:RG:76:ILE:CG2	2.18	0.72
32:QA:202:G:N2	32:QA:466:A:H61	1.87	0.72
19:YS:14:ALA:HB1	19:YS:18:ARG:NH2	2.03	0.72
32:QA:1338:G:H2'	32:QA:1339:A:C8	2.25	0.72
13:RM:72:PRO:O	13:RM:91:TYR:O	2.06	0.72
1:RA:1256:G:C2'	5:RE:77:ILE:HD11	2.19	0.72
10:RJ:2:LYS:HD3	10:RJ:2:LYS:N	2.02	0.72
34:XC:166:TRP:HE3	34:XC:166:TRP:H	1.35	0.72
34:XC:22:PHE:CD2	41:XJ:97:ASP:HB2	2.24	0.72
32:XA:932:C:H5''	38:XG:2:ARG:HD3	1.69	0.72
32:XA:982:U:H4'	32:XA:983:A:H5'	1.71	0.72
1:YA:249:C:C3'	1:YA:2394:C:H4'	2.19	0.72
27:Y0:28:SER:HB3	27:Y0:39:ARG:NE	2.03	0.72
3:RC:12:ARG:HG2	3:RC:12:ARG:HH11	1.52	0.72
21:RU:38:ILE:HG22	21:RU:39:ASN:H	1.54	0.72
1:RA:2135:A:O2'	1:RA:2136:G:C8	2.41	0.72
36:XE:14:LEU:HD13	36:XE:59:ILE:HD12	1.69	0.72
1:RA:2428:G:H5''	1:RA:2429:G:OP1	1.89	0.72
40:XI:75:ALA:HA	40:XI:78:ILE:HD12	1.69	0.72
12:YL:23:ILE:HG13	18:YR:82:HIS:CE1	2.24	0.72
1:RA:545:U:H2'	1:RA:546:U:O3'	1.89	0.72
1:YA:379:G:C6	1:YA:396:G:O6	2.42	0.72
7:RG:104:LEU:HB2	7:RG:112:VAL:HG22	1.71	0.72
32:XA:205:A:C6	32:XA:206:C:N4	2.57	0.72
1:YA:128:C:O2'	1:YA:129:C:C6	2.42	0.72
1:YA:185:G:H2'	1:YA:186:G:C8	2.23	0.72
1:YA:784:G:N1	3:YC:227:VAL:HG21	2.04	0.72
11:YK:60:ALA:HA	11:YK:87:LEU:HD23	1.69	0.72
1:YA:686:U:H3	29:Y2:12:ARG:HB2	1.54	0.72
34:QC:10:ARG:NH2	34:QC:181:ILE:HG13	2.04	0.72
10:RJ:2:LYS:HD3	10:RJ:2:LYS:H	1.53	0.72
1:YA:528:A:C2	1:YA:2043:C:H4'	2.25	0.72
1:YA:845:A:N6	1:YA:932:U:H3	1.87	0.72
1:YA:389:G:C8	1:YA:2413:G:H4'	2.25	0.72
1:RA:372:G:H5''	24:RX:60:LYS:HE3	1.69	0.72
32:QA:423:G:H2'	32:QA:424:G:O4'	1.89	0.72
5:RE:5:LEU:HD12	5:RE:10:SER:HB3	1.71	0.72
51:QT:4:LYS:HE2	51:QT:5:SER:HB3	1.70	0.72
1:RA:2276:G:OP2	13:RM:83:GLY:O	2.07	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:184:G:H2'	32:QA:185:U:C6	2.24	0.72
23:RW:37:VAL:CG1	23:RW:38:ARG:H	2.02	0.72
1:YA:2358:A:H61	12:YL:54:GLN:HE22	1.37	0.72
18:RR:42:ALA:HA	18:RR:46:GLU:CB	2.17	0.72
1:YA:480:A:H5'	21:YU:43:LYS:HD2	1.69	0.72
1:YA:729:G:H3'	1:YA:730:A:H5''	1.71	0.72
32:QA:1183:U:H3'	32:QA:1184:G:C5'	2.17	0.72
1:YA:2286:G:H5''	1:YA:2287:A:H1'	1.70	0.72
10:RJ:74:TYR:HB2	10:RJ:87:ALA:O	1.88	0.72
3:RC:16:VAL:HB	3:RC:203:VAL:HB	1.70	0.72
45:QN:50:LEU:HB3	45:QN:51:PRO:HD2	1.72	0.72
1:YA:1521:G:C6	1:YA:1522:A:N6	2.57	0.72
5:YE:149:ILE:O	5:YE:188:MET:HA	1.89	0.72
1:YA:1723:G:H2'	1:YA:1724:G:H8	1.53	0.72
17:RQ:91:ARG:NH1	18:RR:10:LYS:HB3	2.04	0.72
1:YA:642:U:H4'	1:YA:2349:G:O2'	1.89	0.72
1:YA:83:A:N6	1:YA:101:A:H5'	2.04	0.72
5:RE:189:THR:OG1	5:RE:191:ASP:HB3	1.88	0.72
24:YX:52:ALA:O	24:YX:53:LYS:HB3	1.89	0.72
1:YA:616:A:H4'	5:YE:101:TYR:CZ	2.24	0.72
1:YA:464:U:H1'	1:YA:686:U:H5	1.54	0.72
3:RC:16:VAL:H	3:RC:203:VAL:HG12	1.53	0.72
1:RA:1319:C:O2'	1:RA:1320:C:H5'	1.89	0.72
18:RR:16:GLU:HA	18:RR:98:ILE:HG22	1.70	0.72
32:QA:940:C:OP1	38:QG:101:ARG:HD3	1.89	0.72
3:YC:79:ARG:HD3	3:YC:81:GLU:OE1	1.90	0.72
32:XA:157:U:O2'	32:XA:158:G:H5'	1.88	0.72
47:QP:59:HIS:CE1	47:QP:63:GLN:HE22	2.08	0.72
1:YA:1439:A:H1'	1:YA:1553:A:N6	2.05	0.72
4:YD:118:PHE:CD1	4:YD:119:ALA:N	2.58	0.72
33:XB:114:LYS:HE3	33:XB:151:LYS:HB2	1.70	0.72
32:XA:1301:U:H2'	32:XA:1301:U:O2	1.87	0.72
1:RA:572:A:C2	1:RA:2033:A:C2	2.78	0.72
9:RI:104:GLN:O	9:RI:105:LEU:HB2	1.90	0.72
34:XC:39:ARG:HG2	34:XC:54:ILE:HD13	1.72	0.72
1:RA:2188:U:H2'	1:RA:2189:U:H6	1.54	0.72
25:YY:21:LEU:HA	25:YY:25:GLN:HB3	1.71	0.72
2:YB:5:U:H2'	2:YB:6:G:C8	2.24	0.72
1:YA:301:G:H3'	21:YU:81:ARG:NH1	2.05	0.72
1:YA:1275:A:N7	14:YN:16:HIS:HB2	2.04	0.72
40:XI:58:GLU:HG3	40:XI:59:LYS:H	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:126:ILE:O	13:YM:128:THR:HG23	1.88	0.72
11:YK:13:ASN:HD21	11:YK:97:THR:N	1.88	0.72
1:RA:1746:A:H2'	1:RA:1747:U:C6	2.25	0.72
36:QE:105:ILE:HD11	36:QE:123:LEU:HD23	1.70	0.72
32:XA:142:G:C2	32:XA:143:A:H1'	2.25	0.72
14:RN:2:ARG:HA	14:RN:5:LYS:HD2	1.71	0.72
4:RD:120:GLY:HA2	4:RD:162:ALA:CB	2.20	0.72
10:RJ:13:ARG:O	10:RJ:14:ASP:HB2	1.90	0.72
32:XA:1264:U:H2'	32:XA:1265:C:C6	2.24	0.72
24:RX:67:LEU:HD13	24:RX:77:TYR:CE1	2.24	0.72
2:YB:18:G:C2	2:YB:67:G:O6	2.43	0.72
20:RT:48:GLN:HB2	20:RT:49:LYS:HE3	1.71	0.72
1:YA:181:A:C2	1:YA:434:U:H1'	2.25	0.72
32:XA:471:U:H2'	32:XA:472:U:C6	2.23	0.72
8:YH:97:ARG:O	8:YH:98:ASP:HB2	1.88	0.72
22:RV:51:GLN:HE22	22:RV:79:ARG:HH12	1.38	0.72
23:RW:23:LYS:HG3	23:RW:24:ARG:O	1.89	0.72
1:YA:232:G:H4'	1:YA:233:A:OP1	1.90	0.72
36:QE:152:VAL:O	36:QE:156:ARG:HB2	1.90	0.72
1:YA:2311:A:H3'	1:YA:2312:U:O4'	1.90	0.72
1:YA:352:A:C4	1:YA:353:C:H1'	2.25	0.72
1:YA:1206:G:H2'	1:YA:1207:C:C6	2.25	0.72
7:YG:162:ARG:HD2	7:YG:162:ARG:H	1.54	0.72
15:YO:26:LEU:HB3	15:YO:92:PHE:HD1	1.55	0.72
32:QA:358:U:H2'	32:QA:359:G:H8	1.55	0.72
35:QD:100:VAL:HG12	35:QD:100:VAL:O	1.89	0.72
32:QA:390:U:H2'	32:QA:391:G:C8	2.24	0.72
32:XA:764:C:H2'	32:XA:765:G:H5'	1.71	0.72
50:XS:52:ASN:HD21	50:XS:54:ARG:HG2	1.52	0.72
32:QA:266:G:H3'	48:QQ:68:LYS:HB2	1.71	0.72
32:XA:1337:G:H5''	32:XA:1338:G:OP1	1.89	0.72
32:XA:1136:C:C5	32:XA:1138:G:O6	2.42	0.72
7:RG:11:PRO:O	7:RG:14:VAL:HG22	1.89	0.72
1:RA:2591:C:OP1	3:RC:237:ARG:HG3	1.89	0.72
1:YA:2230:G:H2'	1:YA:2231:U:C6	2.25	0.71
52:XU:24:LYS:HG3	52:XU:25:ALA:H	1.55	0.71
1:YA:1097:U:H2'	1:YA:1098:A:O4'	1.89	0.71
1:YA:867:C:HO2'	1:YA:868:U:H6	0.73	0.71
28:R1:8:ILE:HG23	28:R1:51:ALA:HA	1.71	0.71
40:XI:48:ARG:C	40:XI:50:PRO:HD2	2.10	0.71
38:XG:76:SER:HA	38:XG:85:GLN:HA	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2571:U:C4	1:YA:2574:G:C8	2.78	0.71
14:RN:31:HIS:O	14:RN:33:ILE:HD12	1.88	0.71
35:QD:99:ASN:O	35:QD:103:ARG:HB2	1.90	0.71
29:Y2:22:MET:O	29:Y2:22:MET:HG2	1.90	0.71
45:QN:15:LEU:HD12	45:QN:53:ASP:HB2	1.70	0.71
15:YO:70:ALA:O	15:YO:74:VAL:HG23	1.90	0.71
38:XG:135:LYS:O	38:XG:139:ASP:HB2	1.90	0.71
2:YB:58:A:H2'	2:YB:59:A:H8	1.53	0.71
1:YA:1437:C:H2'	1:YA:1438:U:C6	2.25	0.71
1:YA:422:A:O2'	1:YA:423:A:C8	2.43	0.71
1:YA:1343:G:C5	1:YA:1597:A:N6	2.58	0.71
42:QK:126:ARG:HB2	52:QU:33:ARG:NH1	2.05	0.71
33:QB:211:LEU:O	33:QB:215:ALA:HB2	1.90	0.71
47:QP:20:VAL:HG21	47:QP:32:PHE:CG	2.25	0.71
5:YE:178:VAL:HG13	5:YE:179:SER:H	1.55	0.71
32:XA:1268:G:N2	32:XA:1327:C:H1'	2.06	0.71
7:YG:112:VAL:HG13	7:YG:150:TYR:HE1	1.55	0.71
32:XA:66:A:N6	32:XA:67:C:N4	2.38	0.71
1:YA:2619:C:H4'	4:YD:156:PHE:O	1.90	0.71
9:YI:106:GLN:HA	9:YI:109:ALA:HB3	1.71	0.71
19:YS:86:MET:SD	19:YS:87:PRO:HD2	2.29	0.71
9:RI:20:SER:HB3	9:RI:21:PRO:HD3	1.72	0.71
32:QA:761:G:H2'	32:QA:762:U:H6	1.55	0.71
1:YA:1816:C:H2'	3:YC:61:TYR:CZ	2.24	0.71
32:XA:1217:C:H2'	32:XA:1218:C:C6	2.21	0.71
1:RA:1178:C:H2'	1:RA:1179:G:N7	2.05	0.71
1:YA:1345:C:OP2	1:YA:1345:C:H3'	1.91	0.71
32:XA:108:G:H5'	32:XA:109:A:H5''	1.72	0.71
19:YS:6:LYS:HD2	19:YS:8:ARG:HD2	1.71	0.71
1:YA:1416:G:C6	1:YA:1417:C:N4	2.57	0.71
1:YA:273:G:H2'	1:YA:274:C:O4'	1.90	0.71
1:YA:2135:A:H2'	1:YA:2136:G:C8	2.24	0.71
30:R3:22:LYS:HA	30:R3:47:ALA:O	1.90	0.71
34:XC:84:GLU:C	34:XC:86:LEU:H	1.91	0.71
32:XA:252:U:H5'	32:XA:252:U:H6	1.54	0.71
38:QG:61:PHE:HE1	38:QG:65:LEU:HD22	1.55	0.71
37:QF:81:ASN:HB3	37:QF:84:VAL:HG12	1.73	0.71
37:QF:38:ARG:HG3	37:QF:39:LEU:N	2.03	0.71
50:XS:35:ARG:HH21	50:XS:51:HIS:CD2	2.08	0.71
1:YA:410:G:C6	1:YA:2407:A:N6	2.58	0.71
32:XA:268:U:H2'	32:XA:269:C:C6	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1779:U:C5	1:RA:1784:A:N7	2.56	0.71
13:RM:40:ARG:HB2	13:RM:93:VAL:HG21	1.71	0.71
33:XB:96:LEU:H	33:XB:99:MET:HE3	1.56	0.71
34:XC:18:ASN:HD21	34:XC:53:ARG:NH1	1.88	0.71
1:RA:2420:C:OP1	30:R3:33:THR:HB	1.91	0.71
32:XA:1011:C:H2'	32:XA:1012:A:H8	1.54	0.71
21:RU:46:LYS:HG2	21:RU:47:PRO:HD2	1.71	0.71
32:XA:1226:C:H41	44:XM:102:LYS:HG2	1.56	0.71
32:QA:143:A:H5'	32:QA:144:G:H5'	1.72	0.71
15:RO:76:LYS:O	15:RO:80:GLU:HG3	1.91	0.71
23:RW:18:LYS:HA	23:RW:36:ILE:CG1	2.16	0.71
32:XA:1322:C:O2'	32:XA:1323:G:H5'	1.89	0.71
4:RD:106:LYS:HB3	4:RD:206:ALA:CB	2.16	0.71
1:YA:226:A:H2'	1:YA:227:A:C8	2.25	0.71
1:YA:1314:C:OP1	1:YA:1332:G:H5''	1.90	0.71
1:YA:1056:G:N2	1:YA:1102:C:C5	2.58	0.71
4:RD:118:PHE:CD2	4:RD:119:ALA:N	2.56	0.71
4:RD:12:THR:CG2	4:RD:13:ARG:N	2.53	0.71
35:XD:151:GLN:HB3	35:XD:154:VAL:HG12	1.71	0.71
32:QA:76:G:H2'	32:QA:76:G:N3	2.05	0.71
33:QB:66:ILE:HB	33:QB:88:GLN:HB3	1.71	0.71
4:RD:114:LYS:HE3	4:RD:114:LYS:N	2.06	0.71
11:YK:69:VAL:HG11	11:YK:106:GLU:HG2	1.72	0.71
32:QA:1003:G:N2	32:QA:1005:A:H5'	2.06	0.71
1:YA:568:U:H2'	1:YA:570:G:OP2	1.91	0.71
1:RA:1498:C:O2'	1:RA:1499:C:H6	1.72	0.71
1:YA:2051:A:H4'	1:YA:2052:A:OP1	1.90	0.71
15:RO:105:ALA:O	15:RO:106:LEU:HB3	1.88	0.71
32:XA:1081:A:H5'	36:XE:22:LYS:HD2	1.72	0.71
8:RH:18:GLN:HA	8:RH:18:GLN:HE21	1.54	0.71
32:QA:409:U:OP1	35:QD:23:GLY:HA3	1.91	0.71
32:XA:328:C:O2	32:XA:328:C:H2'	1.89	0.71
39:XH:86:LYS:HB2	39:XH:124:ILE:HD11	1.72	0.71
41:XJ:84:VAL:HG23	41:XJ:85:ASP:N	2.04	0.71
32:QA:86:G:H21	32:QA:87:C:N4	1.87	0.71
3:RC:68:ARG:HD3	3:RC:103:ILE:HD11	1.72	0.71
37:QF:92:THR:O	37:QF:93:LYS:HG2	1.90	0.71
3:RC:141:HIS:HB2	3:RC:190:THR:HB	1.73	0.71
38:XG:110:ARG:HG3	38:XG:111:GLY:N	2.04	0.71
51:QT:67:HIS:HB3	51:QT:68:LYS:HZ2	1.55	0.71
21:YU:58:VAL:HG13	21:YU:60:LYS:HG2	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:RF:131:VAL:HG22	6:RF:151:LEU:O	1.91	0.71
1:RA:2615:U:C2	27:R0:3:GLN:HA	2.26	0.71
14:RN:65:LEU:HD11	14:RN:69:ARG:NH2	2.04	0.71
21:RU:97:SER:O	21:RU:98:ASN:HB3	1.89	0.71
37:XF:61:LEU:HD13	37:XF:62:MET:H	1.54	0.71
32:XA:1450:U:H4'	32:XA:1451:U:H5	1.55	0.71
32:XA:1024:G:H2'	32:XA:1025:U:O4'	1.91	0.71
1:RA:1060:U:O4'	1:RA:1062:G:H5''	1.90	0.71
18:YR:4:VAL:HG23	18:YR:39:LEU:HG	1.72	0.71
23:RW:28:GLU:HB3	23:RW:31:LEU:CD2	2.19	0.71
32:XA:983:A:O2'	32:XA:984:C:H5'	1.89	0.71
33:XB:89:PHE:CE2	33:XB:152:ASP:HB2	2.22	0.71
1:YA:1060:U:C4'	1:YA:1061:U:H2'	2.21	0.71
32:XA:239:U:H6	32:XA:239:U:C5'	2.04	0.71
37:QF:3:HIS:N	37:QF:92:THR:HG23	2.04	0.71
48:XQ:46:HIS:HE2	48:XQ:48:GLU:HG2	1.54	0.71
1:RA:141:G:H5'	1:RA:142:A:C8	2.25	0.71
1:RA:2793:C:H2'	1:RA:2794:C:C6	2.25	0.71
1:YA:969:G:H2'	1:YA:970:U:C6	2.25	0.71
1:RA:1929:G:H4'	1:RA:1930:G:OP1	1.90	0.71
9:YI:32:VAL:HG22	9:YI:58:ILE:HG21	1.73	0.71
1:YA:132:G:N2	1:YA:148:U:C2	2.58	0.71
36:XE:74:ALA:O	36:XE:75:LEU:HB2	1.91	0.71
44:XM:95:PRO:HD3	44:XM:108:ARG:HG2	1.72	0.71
1:YA:2147:A:OP1	1:YA:2147:A:H4'	1.90	0.71
34:QC:150:VAL:HG12	34:QC:199:VAL:HB	1.71	0.71
8:YH:80:ILE:HB	8:YH:101:ASP:CB	2.20	0.71
3:YC:15:VAL:HG22	3:YC:205:GLY:HA3	1.73	0.71
19:RS:73:LYS:HE3	19:RS:74:ILE:N	2.04	0.71
1:YA:923:G:H1'	23:YW:23:LYS:NZ	2.05	0.71
3:RC:251:THR:HG22	3:RC:252:LYS:N	2.04	0.71
32:QA:389:A:C6	32:QA:390:U:H1'	2.26	0.71
34:XC:178:ARG:HD2	34:XC:178:ARG:O	1.90	0.71
40:XI:26:LYS:O	40:XI:62:LEU:HB2	1.90	0.71
1:YA:2258:C:H4'	1:YA:2259:U:OP2	1.90	0.71
14:YN:63:ARG:O	14:YN:67:PHE:HB2	1.89	0.71
18:YR:27:ILE:HG22	18:YR:28:ALA:N	2.04	0.71
35:XD:34:GLU:O	35:XD:36:ALA:N	2.24	0.71
4:RD:13:ARG:HH12	16:RP:74:GLN:NE2	1.88	0.71
12:YL:81:ASP:O	12:YL:83:ALA:N	2.23	0.71
10:YJ:117:ALA:HA	10:YJ:120:ARG:HD2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1281:G:C6	1:YA:1290:C:N4	2.58	0.71
15:RO:74:VAL:O	15:RO:78:VAL:HG22	1.90	0.71
33:QB:14:HIS:CG	33:QB:14:HIS:O	2.44	0.71
34:QC:21:TRP:HB3	34:QC:58:ARG:H	1.56	0.71
40:XI:10:ARG:HG3	40:XI:14:SER:O	1.91	0.71
35:QD:61:ARG:NH1	35:QD:68:GLU:HG2	2.05	0.71
10:YJ:20:ALA:HA	10:YJ:23:LYS:HG3	1.73	0.71
32:QA:1491:G:H5'	32:QA:1492:A:OP1	1.90	0.71
23:RW:30:VAL:O	23:RW:30:VAL:HG22	1.91	0.71
1:RA:2336:A:N6	23:RW:40:ARG:HD2	2.05	0.71
36:XE:29:ILE:CG2	36:XE:30:PHE:N	2.42	0.71
11:RK:18:ARG:N	11:RK:45:GLU:HB2	2.06	0.71
32:QA:267:C:H2'	32:QA:268:U:C6	2.26	0.71
6:RF:132:ARG:O	6:RF:133:GLU:HB3	1.91	0.71
1:YA:68:G:N2	1:YA:74:A:OP2	2.24	0.71
14:YN:12:ARG:HG3	14:YN:13:ASN:H	1.55	0.71
13:YM:36:VAL:HG22	22:YV:82:TYR:HB2	1.72	0.71
3:RC:244:VAL:HG12	3:RC:250:GLN:HA	1.73	0.71
19:RS:14:ALA:O	19:RS:18:ARG:HG3	1.90	0.71
1:YA:1324:G:O2'	1:YA:1616:A:C6	2.44	0.71
48:QQ:7:LEU:HD23	48:QQ:24:ILE:CD1	2.21	0.71
17:RQ:88:GLU:C	17:RQ:88:GLU:OE1	2.28	0.70
32:XA:1129:C:O2'	32:XA:1130:A:H8	1.74	0.70
38:XG:10:LYS:HD2	38:XG:10:LYS:O	1.91	0.70
1:RA:2321:U:H5''	1:RA:2321:U:H6	1.56	0.70
4:YD:49:GLN:NE2	4:YD:79:LEU:HB3	2.04	0.70
37:XF:14:GLN:HB3	37:XF:17:GLN:NE2	2.06	0.70
10:YJ:106:LYS:HB2	10:YJ:119:PHE:HE2	1.56	0.70
32:XA:1038:C:H2'	32:XA:1039:G:C8	2.26	0.70
35:QD:60:VAL:O	35:QD:63:ILE:HG22	1.91	0.70
7:YG:1:SER:HB2	7:YG:61:TRP:HB3	1.73	0.70
43:QL:34:THR:HG22	43:QL:35:ARG:NE	2.04	0.70
1:YA:1310:G:H2'	1:YA:1311:G:O4'	1.91	0.70
1:YA:1340:U:OP1	1:YA:1340:U:H4'	1.89	0.70
1:YA:502:A:C5	1:YA:505:A:N7	2.59	0.70
6:RF:105:ILE:O	6:RF:109:ARG:HD3	1.90	0.70
4:YD:106:LYS:O	4:YD:107:VAL:HB	1.91	0.70
32:XA:1143:G:H2'	32:XA:1144:G:H8	1.55	0.70
3:RC:106:PRO:HB3	3:RC:141:HIS:CE1	2.26	0.70
1:RA:137:U:H5''	1:RA:140:C:C5	2.25	0.70
35:XD:144:ILE:CD1	35:XD:154:VAL:HG21	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1639:C:C2'	1:YA:1640:A:H5''	2.21	0.70
1:RA:1590:A:H2'	1:RA:1591:A:H8	1.57	0.70
32:QA:1307:U:H2'	32:QA:1308:U:C6	2.25	0.70
1:RA:1450:G:C6	1:RA:1451:C:N4	2.59	0.70
14:RN:8:ARG:HB3	14:RN:10:LEU:HD22	1.73	0.70
4:YD:34:VAL:HG12	4:YD:48:ILE:HD11	1.73	0.70
5:YE:126:VAL:HG13	5:YE:127:GLU:N	2.05	0.70
52:XU:24:LYS:CG	52:XU:25:ALA:H	2.04	0.70
1:YA:246:C:H2'	1:YA:247:G:H5'	1.73	0.70
1:YA:1352:U:C5	1:YA:1377:G:C6	2.79	0.70
1:YA:301:G:C6	1:YA:302:C:N4	2.59	0.70
1:YA:664:G:H4'	1:YA:941:A:OP1	1.91	0.70
11:RK:71:ARG:HB2	11:RK:72:PRO:HD3	1.73	0.70
52:XU:35:GLU:O	52:XU:36:PHE:CD2	2.43	0.70
10:YJ:74:TYR:CE2	10:YJ:103:ILE:HD11	2.26	0.70
8:YH:90:LEU:HB2	8:YH:123:ARG:HB3	1.73	0.70
22:RV:44:HIS:HE1	22:RV:86:LEU:H	1.37	0.70
4:YD:4:LEU:HD23	4:YD:101:PHE:CE1	2.26	0.70
6:YF:43:ILE:HG23	6:YF:44:ALA:H	1.56	0.70
1:YA:422:A:O2'	1:YA:423:A:H8	1.73	0.70
35:QD:62:ARG:NE	35:QD:62:ARG:HA	2.07	0.70
5:YE:60:TRP:CZ2	5:YE:71:GLY:HA2	2.26	0.70
1:YA:1049:C:O2'	1:YA:1050:A:H8	1.71	0.70
33:QB:133:ALA:O	33:QB:137:THR:HG23	1.90	0.70
1:RA:2199:A:C8	1:RA:2199:A:C5'	2.74	0.70
43:XL:98:ARG:HB2	43:XL:116:TYR:HA	1.73	0.70
3:YC:9:SER:O	3:YC:12:ARG:HB2	1.91	0.70
1:YA:745:G:H5''	1:YA:746:U:OP2	1.91	0.70
7:RG:3:VAL:O	7:RG:68:ARG:HG3	1.91	0.70
51:XT:22:SER:O	51:XT:26:MET:HB2	1.91	0.70
7:YG:117:PRO:HG2	7:YG:143:VAL:HG11	1.72	0.70
1:YA:1797:G:O3'	3:YC:255:LYS:O	2.09	0.70
33:QB:187:ASP:HB2	33:QB:203:ASP:HB3	1.73	0.70
38:QG:114:SER:HB3	38:QG:117:LEU:CG	2.22	0.70
35:XD:25:ARG:HH12	35:XD:30:LYS:HG2	1.56	0.70
28:R1:47:ILE:N	28:R1:47:ILE:HD12	2.07	0.70
1:RA:1056:G:HO2'	1:RA:1086:A:H8	1.39	0.70
40:XI:118:ARG:HH21	40:XI:122:ARG:HE	1.36	0.70
1:YA:1682:G:O2'	1:YA:1683:U:C6	2.43	0.70
10:YJ:74:TYR:HE2	10:YJ:103:ILE:HD11	1.55	0.70
32:XA:1304:G:H1'	32:XA:1333:A:H61	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1451:U:O2'	32:XA:1452:C:OP1	2.09	0.70
42:QK:35:ASP:OD2	42:QK:39:ASN:HB2	1.91	0.70
18:YR:39:LEU:O	18:YR:40:MET:HB2	1.92	0.70
23:RW:40:ARG:H	23:RW:56:HIS:HB3	1.56	0.70
1:YA:1439:A:H1'	1:YA:1553:A:H61	1.57	0.70
21:YU:45:GLN:HA	21:YU:45:GLN:HE21	1.56	0.70
4:YD:123:LYS:HG2	4:YD:165:MET:SD	2.32	0.70
32:XA:412:A:H4'	32:XA:413:G:OP1	1.91	0.70
32:XA:1239:A:H62	32:XA:1299:A:H61	1.37	0.70
13:RM:42:THR:O	13:RM:44:ARG:N	2.24	0.70
33:QB:69:VAL:HB	33:QB:162:VAL:HG12	1.73	0.70
34:QC:156:LEU:HD13	34:QC:163:ARG:HB2	1.72	0.70
43:XL:19:ASN:H	43:XL:19:ASN:ND2	1.89	0.70
6:RF:131:VAL:CG2	6:RF:151:LEU:H	2.05	0.70
32:XA:1450:U:H4'	32:XA:1451:U:C5	2.25	0.70
1:YA:758:C:O2	1:YA:758:C:H2'	1.90	0.70
32:XA:831:A:OP1	33:XB:20:ARG:HG3	1.90	0.70
34:XC:8:GLY:HA3	45:YN:88:MET:SD	2.31	0.70
35:XD:25:ARG:HG2	35:XD:25:ARG:NH1	2.06	0.70
1:RA:2136:G:H2'	1:RA:2137:U:H5	1.56	0.70
45:QN:42:ASN:C	45:QN:44:VAL:H	1.95	0.70
4:YD:159:LYS:HE2	4:YD:160:LYS:N	2.06	0.70
32:XA:17:U:H2'	32:XA:18:C:C6	2.26	0.70
9:YI:106:GLN:O	9:YI:106:GLN:HG3	1.91	0.70
32:XA:1033:G:O2'	32:XA:1034:G:H5''	1.92	0.70
32:QA:222:C:H2'	32:QA:223:A:H8	1.54	0.70
9:YI:113:ALA:HB1	9:YI:124:MET:SD	2.31	0.70
18:YR:62:GLU:HB3	18:YR:97:LYS:HB3	1.73	0.70
1:RA:2352:A:N1	23:RW:30:VAL:HG21	2.07	0.70
1:RA:2577:A:H5''	1:RA:2578:G:C5'	2.20	0.70
36:QE:81:GLN:HE21	36:QE:81:GLN:N	1.89	0.70
41:XJ:40:ILE:HG22	41:XJ:42:LEU:HD12	1.72	0.70
6:YF:74:ALA:HB3	6:YF:78:ILE:HB	1.73	0.70
14:YN:33:ILE:HA	14:YN:114:GLU:HB2	1.73	0.70
1:YA:2458:G:H8	1:YA:2459:A:N6	1.90	0.70
16:RP:33:GLU:CB	16:RP:38:ARG:HH11	2.04	0.70
1:YA:935:C:H2'	1:YA:936:A:H8	1.56	0.70
36:QE:59:ILE:O	36:QE:62:ALA:HB3	1.92	0.70
1:YA:5:A:C2	1:YA:2899:A:C2	2.79	0.70
4:YD:51:THR:HG21	4:YD:75:ALA:O	1.91	0.70
41:XJ:64:GLN:HB2	45:YN:98:ALA:HB3	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:QF:6:ILE:HG12	37:QF:89:VAL:HG23	1.72	0.70
32:XA:701:U:H4'	32:XA:702:A:H5''	1.72	0.70
3:YC:140:VAL:CG2	3:YC:161:VAL:HB	2.22	0.70
1:YA:319:G:OP2	5:YE:132:LYS:HD2	1.91	0.70
1:YA:1059:G:H1	1:YA:1088:A:H2	1.40	0.70
32:XA:210:C:H2'	32:XA:210:C:O2	1.91	0.70
2:YB:42:C:H41	6:YF:87:LYS:NZ	1.90	0.70
10:RJ:18:VAL:HG22	10:RJ:140:LEU:CD1	2.22	0.70
10:RJ:18:VAL:HG23	10:RJ:54:ILE:HD13	1.74	0.70
1:YA:77:G:N2	1:YA:110:G:H1'	2.07	0.70
1:YA:279:A:H61	1:YA:361:G:H1'	1.57	0.70
52:XU:39:LYS:N	52:XU:40:PRO:HD2	2.06	0.70
10:RJ:73:VAL:HG23	10:RJ:74:TYR:N	2.05	0.70
51:XT:4:LYS:HB3	51:XT:6:ALA:H	1.57	0.70
1:RA:1498:C:O2'	1:RA:1499:C:C6	2.45	0.70
10:RJ:105:VAL:HG23	10:RJ:109:LEU:HD11	1.73	0.70
32:QA:1038:C:H2'	32:QA:1039:G:H8	1.56	0.70
16:YP:25:VAL:HA	16:YP:85:VAL:HA	1.74	0.70
15:YO:115:LEU:HD13	15:YO:115:LEU:H	1.55	0.70
32:XA:1278:G:H4'	32:XA:1279:G:C5'	2.22	0.70
36:QE:79:THR:HB	36:QE:121:ASN:ND2	2.06	0.70
1:YA:648:G:O2'	1:YA:649:G:H8	1.71	0.70
32:XA:93:U:H2'	32:XA:95:C:C5	2.27	0.70
35:QD:145:ARG:NH1	35:QD:147:LYS:HE3	2.06	0.70
1:YA:1695:G:H8	3:YC:7:PRO:O	1.75	0.70
1:YA:982:C:H5''	1:YA:983:A:OP1	1.92	0.70
41:QJ:81:GLU:O	41:QJ:85:ASP:HB2	1.92	0.70
1:YA:443:A:H61	5:YE:36:ALA:HB1	1.57	0.70
1:YA:1440:U:O2'	1:YA:1441:G:H5'	1.91	0.69
1:YA:247:G:H4'	1:YA:386:G:C5	2.27	0.69
1:YA:1345:C:H5''	1:YA:1396:U:O4	1.93	0.69
1:YA:1809:A:C2	1:YA:1810:A:C4	2.80	0.69
1:YA:675:A:OP1	5:YE:60:TRP:CZ2	2.45	0.69
1:YA:1204:A:H4'	1:YA:1205:A:O5'	1.91	0.69
32:XA:994:A:O2'	32:XA:995:C:H6	1.74	0.69
26:YZ:16:LEU:N	26:YZ:16:LEU:HD22	2.07	0.69
20:RT:10:VAL:HG23	20:RT:11:LEU:HD23	1.74	0.69
1:RA:2887:A:H5'	1:RA:2888:C:OP2	1.92	0.69
10:YJ:55:ILE:CG2	10:YJ:123:LYS:HB2	2.21	0.69
20:YT:87:LEU:HD23	20:YT:88:LYS:N	2.06	0.69
14:YN:71:ARG:HH21	14:YN:71:ARG:HB2	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:133:THR:HG23	4:YD:134:HIS:N	2.06	0.69
32:XA:491:G:O2'	32:XA:492:C:H5'	1.91	0.69
39:XH:5:PRO:O	39:XH:8:ASP:HB3	1.92	0.69
1:YA:2707:U:H2'	1:YA:2708:G:C8	2.27	0.69
32:XA:54:C:H41	32:XA:352:C:H2'	1.55	0.69
17:YQ:27:ARG:HA	17:YQ:33:VAL:HG12	1.74	0.69
5:RE:146:VAL:HG23	5:RE:167:VAL:HG23	1.73	0.69
1:RA:1076:C:H2'	1:RA:1077:A:H8	1.57	0.69
6:RF:129:MET:HG2	6:RF:153:ILE:HD11	1.74	0.69
1:YA:1490:A:C8	3:YC:73:ILE:HD12	2.26	0.69
32:XA:1319:A:N6	32:XA:1323:G:C2	2.60	0.69
36:XE:98:ALA:HB2	36:XE:123:LEU:HG	1.73	0.69
48:QQ:45:VAL:HG22	48:QQ:72:TRP:HB2	1.74	0.69
22:RV:10:LYS:H	22:RV:10:LYS:CD	1.95	0.69
4:YD:107:VAL:H	4:YD:206:ALA:H	1.38	0.69
7:RG:22:VAL:HG22	7:RG:36:LEU:CD1	2.22	0.69
35:XD:61:ARG:HH21	35:XD:67:LEU:HA	1.57	0.69
32:QA:807:A:H2'	32:QA:808:C:C6	2.26	0.69
42:XK:51:PHE:O	42:XK:52:ARG:HD2	1.91	0.69
11:RK:61:VAL:HG22	11:RK:87:LEU:HD11	1.72	0.69
31:Y4:19:ARG:O	31:Y4:20:ASP:HB2	1.92	0.69
13:RM:133:LYS:O	13:RM:134:THR:HB	1.91	0.69
32:QA:479:U:O2'	32:QA:480:U:H5'	1.92	0.69
17:RQ:86:SER:O	17:RQ:88:GLU:N	2.25	0.69
23:RW:51:GLY:HA3	23:RW:59:PHE:CZ	2.26	0.69
33:QB:20:ARG:NH1	33:QB:20:ARG:HA	2.08	0.69
38:XG:94:ARG:HB3	38:XG:98:LEU:HG	1.74	0.69
2:YB:83:G:OP1	26:YZ:16:LEU:HD21	1.92	0.69
20:RT:39:THR:O	20:RT:40:LYS:HB2	1.92	0.69
33:QB:67:LEU:HB3	33:QB:160:LEU:CD1	2.23	0.69
1:YA:747:U:H3'	1:YA:748:G:C5'	2.21	0.69
32:QA:1160:G:O6	32:QA:1181:G:C6	2.45	0.69
32:XA:464:U:C4	32:XA:466:A:H4'	2.27	0.69
6:RF:40:GLY:HA2	6:RF:84:ILE:HD11	1.74	0.69
9:YI:60:VAL:HG22	9:YI:66:PHE:HE2	1.57	0.69
32:QA:1307:U:H2'	32:QA:1308:U:H6	1.56	0.69
32:XA:351:G:H4'	32:XA:352:C:OP2	1.93	0.69
22:YV:16:ALA:HA	22:YV:19:ARG:CZ	2.22	0.69
3:YC:177:SER:O	3:YC:270:ARG:HG3	1.91	0.69
1:RA:1780:A:OP1	56:RA:3691:HOH:O	2.10	0.69
31:Y4:16:ILE:HG12	31:Y4:25:VAL:HG22	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:QS:14:LEU:HD13	50:QS:32:THR:HG21	1.74	0.69
22:YV:30:ILE:HG12	22:YV:91:PHE:HB2	1.73	0.69
1:RA:1078:U:H4'	1:RA:1079:C:C6	2.27	0.69
16:RP:51:ASN:O	16:RP:52:ARG:HG2	1.92	0.69
1:YA:1597:A:O3'	1:YA:1598:A:H8	1.76	0.69
1:YA:2212:A:C8	1:YA:2214:C:N4	2.61	0.69
1:YA:321:U:H5'	5:YE:129:PRO:HB3	1.73	0.69
1:YA:116:C:H5''	1:YA:128:C:H41	1.57	0.69
5:RE:151:GLY:HA2	5:RE:192:ALA:HB2	1.74	0.69
1:RA:1150:C:O2'	1:RA:1151:A:O4'	2.11	0.69
40:XI:35:GLU:HA	40:XI:39:GLY:HA3	1.74	0.69
1:RA:2310:C:H2'	6:RF:76:PHE:HE1	1.55	0.69
4:YD:148:GLN:HG2	4:YD:152:PRO:HG2	1.75	0.69
32:QA:246:A:H4'	32:QA:247:G:OP1	1.93	0.69
38:XG:59:GLU:HG3	38:XG:60:ALA:N	2.06	0.69
5:RE:76:PRO:HA	5:RE:82:GLY:HA3	1.74	0.69
1:YA:1311:G:H1'	1:YA:1313:U:O4	1.92	0.69
17:YQ:57:ARG:O	17:YQ:61:ILE:HD13	1.92	0.69
48:QQ:11:VAL:HG21	48:QQ:53:GLY:O	1.93	0.69
1:YA:481:G:H1'	1:YA:506:G:H21	1.55	0.69
1:YA:614:A:C4'	1:YA:616:A:H62	2.04	0.69
1:RA:572:A:OP2	18:RR:80:ARG:NH2	2.24	0.69
37:XF:59:TYR:HE2	49:XR:66:LEU:HD21	1.58	0.69
34:QC:55:VAL:O	34:QC:65:VAL:HA	1.92	0.69
1:YA:1259:G:H2'	1:YA:1260:A:H8	1.57	0.69
38:QG:3:ARG:HG3	38:QG:4:ARG:N	2.08	0.69
12:YL:17:LYS:HE2	12:YL:19:LEU:HD13	1.74	0.69
42:QK:21:HIS:HE1	42:QK:34:THR:HG21	1.58	0.69
6:YF:16:MET:HA	6:YF:21:TYR:HB2	1.74	0.69
2:YB:44:G:H5''	6:YF:91:ARG:CZ	2.22	0.69
21:RU:73:ASN:ND2	21:RU:75:ALA:HB3	2.07	0.69
1:YA:1938:A:OP2	56:YA:3717:HOH:O	2.11	0.69
1:YA:1700:A:H2'	1:YA:1701:A:O4'	1.92	0.69
1:RA:1941:C:H5'	1:RA:1941:C:H6	1.57	0.69
1:RA:1378:A:H4'	1:RA:1379:U:OP1	1.91	0.69
39:XH:76:ARG:HD3	39:XH:77:VAL:N	2.08	0.69
16:RP:51:ASN:C	16:RP:52:ARG:HG2	2.13	0.69
37:QF:71:ILE:HD11	37:QF:89:VAL:HG21	1.75	0.69
1:YA:1156:A:C8	17:YQ:50:ARG:HG2	2.27	0.69
1:YA:335:C:O2'	1:YA:336:C:H6	1.74	0.69
1:YA:508:A:H3'	1:YA:509:C:H5'	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1731:G:H2'	1:RA:1732:C:H5''	1.74	0.69
6:YF:134:GLN:HG3	6:YF:149:ARG:O	1.92	0.69
32:XA:373:A:H8	32:XA:373:A:H5'	1.58	0.69
20:RT:40:LYS:H	20:RT:43:ILE:HG23	1.55	0.69
11:YK:54:LYS:HD2	11:YK:54:LYS:H	1.58	0.69
1:RA:2636:C:H2'	1:RA:2637:U:H6	1.58	0.69
1:YA:2415:G:H4'	12:YL:66:PHE:HB2	1.74	0.69
5:YE:110:SER:O	5:YE:113:VAL:HG12	1.92	0.69
1:YA:455:C:H42	1:YA:473:G:H5'	1.58	0.69
1:YA:1809:A:O2'	1:YA:1810:A:C8	2.26	0.69
1:RA:1654:A:O2'	4:RD:118:PHE:CD1	2.45	0.69
7:YG:93:TYR:CD2	7:YG:93:TYR:N	2.55	0.69
1:YA:649:G:H2'	1:YA:650:C:H6	1.58	0.69
32:QA:1285:A:H5'	32:QA:1286:U:C4	2.27	0.69
32:XA:1241:G:C2	32:XA:1242:G:N7	2.61	0.69
32:QA:87:C:H2'	32:QA:88:U:H6	1.56	0.69
43:QL:33:CYS:HB3	43:QL:54:VAL:HG22	1.75	0.69
1:YA:2798:U:H5'	1:YA:2800:A:C6	2.27	0.69
36:XE:132:PRO:O	36:XE:136:VAL:HG12	1.92	0.69
11:RK:59:LYS:HE2	11:RK:89:ASN:O	1.93	0.69
1:YA:1590:A:H2'	1:YA:1591:A:C8	2.28	0.69
32:QA:17:U:H2'	32:QA:18:C:C6	2.28	0.69
1:YA:2138:G:OP2	1:YA:2138:G:H8	1.75	0.69
1:RA:996:A:H4'	17:RQ:91:ARG:HG2	1.74	0.69
16:RP:50:ARG:CG	16:RP:57:ALA:N	2.56	0.69
23:RW:49:ASN:HA	23:RW:61:LYS:HB2	1.74	0.69
42:XK:110:THR:HG22	52:XU:4:LYS:HA	1.74	0.69
17:YQ:4:LYS:NZ	17:YQ:6:GLY:HA3	2.07	0.69
4:RD:106:LYS:H	4:RD:106:LYS:HD2	1.56	0.69
23:YW:39:GLN:HG2	23:YW:42:THR:HB	1.75	0.69
1:YA:226:A:C4	1:YA:227:A:N7	2.61	0.69
1:YA:1391:U:H4'	20:YT:19:LYS:NZ	2.08	0.69
1:YA:332:A:C4	1:YA:335:C:N4	2.61	0.69
36:QE:152:VAL:HG12	36:QE:155:LYS:HZ1	1.57	0.69
1:YA:125:A:H3'	29:Y2:19:ARG:CD	2.23	0.69
1:YA:784:G:O2'	1:YA:785:G:H8	1.75	0.69
1:YA:201:C:C5	1:YA:202:U:H5	2.10	0.69
4:YD:12:THR:HG22	4:YD:13:ARG:O	1.93	0.69
3:RC:81:GLU:HB2	3:RC:90:ILE:CG2	2.22	0.69
25:YY:28:LEU:HG	25:YY:42:LEU:HD22	1.74	0.69
1:YA:1205:A:H5''	1:YA:1206:G:N7	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:YF:147:ARG:HG2	6:YF:149:ARG:HH12	1.57	0.69
1:YA:2800:A:C4	1:YA:2801:G:H1'	2.28	0.69
16:YP:48:ALA:HB3	16:YP:59:THR:OG1	1.93	0.69
12:YL:117:THR:HG22	12:YL:118:THR:N	2.07	0.69
32:QA:1409:C:O2'	32:QA:1410:A:H5'	1.93	0.69
32:XA:1249:C:H2'	32:XA:1250:A:H5''	1.72	0.69
6:YF:104:THR:HG22	6:YF:105:ILE:HG13	1.75	0.69
32:XA:16:A:C2'	32:XA:17:U:H5'	2.23	0.69
1:RA:2591:C:H2'	1:RA:2592:G:C8	2.27	0.69
4:YD:4:LEU:HD12	4:YD:32:ASN:OD1	1.93	0.69
32:QA:1228:C:H2'	32:QA:1229:A:C8	2.28	0.69
1:RA:74:A:H4'	1:RA:75:G:O5'	1.93	0.69
1:YA:1308:A:H2'	1:YA:1309:G:O4'	1.92	0.69
40:XI:12:LYS:H	40:XI:105:ARG:HH12	1.41	0.69
12:RL:87:GLY:O	12:RL:89:VAL:N	2.25	0.69
32:XA:1172:C:O2'	32:XA:1173:U:H5'	1.92	0.69
44:QM:26:LYS:O	44:QM:30:LYS:HG3	1.92	0.69
1:YA:1941:C:H2'	1:YA:1942:C:C6	2.28	0.69
32:XA:1067:A:H4'	32:XA:1068:G:O5'	1.92	0.69
1:YA:1181:U:H2'	1:YA:1182:G:H8	1.58	0.69
1:YA:1722:A:N6	1:YA:1739:A:C8	2.61	0.69
3:RC:170:TYR:CD2	3:RC:184:GLU:HA	2.28	0.69
17:RQ:63:ARG:HH22	17:RQ:96:ASP:N	1.91	0.69
23:RW:39:GLN:HG3	23:RW:42:THR:HB	1.74	0.69
32:XA:1366:C:HO2'	32:XA:1367:C:H6	1.37	0.69
45:XN:52:ARG:CZ	45:XN:52:ARG:HA	2.23	0.69
1:YA:2336:A:N7	23:YW:40:ARG:NH2	2.40	0.69
33:QB:101:THR:HG22	33:QB:174:GLU:OE1	1.93	0.69
45:QN:78:LEU:HB2	45:QN:83:VAL:HG23	1.73	0.69
35:QD:10:LEU:CD2	35:QD:62:ARG:HG3	2.23	0.69
1:YA:303:G:H2'	1:YA:304:U:C6	2.28	0.69
1:YA:354:A:H2'	1:YA:355:U:O4'	1.92	0.69
9:RI:105:LEU:HD23	9:RI:108:ILE:HG21	1.75	0.69
29:Y2:15:SER:O	29:Y2:16:HIS:CD2	2.45	0.69
39:QH:87:ARG:O	39:QH:121:GLY:HA3	1.93	0.69
1:RA:1867:G:C2'	1:RA:1868:C:H5'	2.23	0.69
5:YE:75:SER:O	5:YE:78:TRP:HB2	1.92	0.69
46:QO:72:LYS:HA	46:QO:72:LYS:HE2	1.75	0.69
1:RA:1090:A:O2'	1:RA:1091:G:H5'	1.92	0.69
32:QA:1452:C:H5'	32:QA:1453:G:C6	2.28	0.69
1:YA:2563:U:H1'	1:YA:2566:A:N6	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:139:U:O2	1:YA:139:U:H2'	1.92	0.69
42:XK:23:HIS:HB3	42:XK:30:ILE:HB	1.73	0.69
18:RR:39:LEU:H	18:RR:39:LEU:HD23	1.55	0.69
15:YO:53:THR:HB	15:YO:65:THR:HG22	1.74	0.69
40:XI:71:ILE:CD1	40:XI:72:SER:H	2.02	0.69
33:QB:17:HIS:CD2	33:QB:202:ASN:HD21	2.10	0.69
50:XS:39:ILE:HG12	50:XS:68:HIS:O	1.92	0.69
5:RE:196:VAL:HG13	5:RE:200:LEU:HD23	1.73	0.69
39:QH:21:LYS:HE2	39:QH:22:ALA:N	2.07	0.69
33:QB:20:ARG:HA	33:QB:20:ARG:CZ	2.23	0.69
44:XM:13:HIS:HD1	44:XM:43:LYS:HE2	1.57	0.69
1:YA:2800:A:H2'	1:YA:2801:G:C4'	2.23	0.69
1:YA:2788:C:H2'	1:YA:2789:C:H6	1.57	0.69
24:RX:65:THR:O	24:RX:68:ALA:HB3	1.93	0.69
14:RN:32:GLU:HA	14:RN:115:LEU:HD12	1.74	0.69
43:XL:72:ASN:H	43:XL:72:ASN:HD22	1.40	0.69
30:R3:54:LEU:O	30:R3:58:ILE:HG13	1.93	0.69
1:YA:2355:G:H5''	23:YW:20:LEU:HD22	1.74	0.69
1:RA:356:G:O2'	1:RA:357:C:H5'	1.93	0.69
32:QA:115:G:H4'	32:QA:116:A:O5'	1.93	0.69
24:YX:4:CYS:HA	24:YX:32:LEU:HD11	1.74	0.68
36:QE:155:LYS:HA	36:QE:158:LYS:HZ2	1.57	0.68
1:YA:475:C:H2'	1:YA:476:G:C8	2.28	0.68
1:YA:1998:A:H2'	1:YA:1999:C:H6	1.58	0.68
1:YA:727:A:H2'	1:YA:728:G:C8	2.28	0.68
34:QC:119:ILE:HG21	34:QC:197:VAL:HG11	1.75	0.68
1:YA:1241:A:N3	1:YA:1241:A:H5'	2.08	0.68
32:XA:1328:C:H5''	44:XM:27:THR:HG21	1.76	0.68
19:RS:88:ARG:CG	19:RS:88:ARG:NH2	2.51	0.68
21:YU:95:PHE:O	21:YU:97:SER:N	2.26	0.68
4:RD:29:VAL:HB	4:RD:98:VAL:HG22	1.74	0.68
16:YP:88:ARG:HH11	16:YP:112:ARG:HH21	1.39	0.68
46:QO:18:ALA:O	46:QO:19:ASN:HB2	1.91	0.68
1:YA:1666:G:O3'	11:YK:6:THR:HG23	1.93	0.68
1:RA:404:A:H1'	1:RA:405:U:OP2	1.93	0.68
1:YA:2902:C:H2'	1:YA:2903:U:O4'	1.93	0.68
10:RJ:31:GLU:HG3	10:RJ:142:ILE:HG21	1.75	0.68
1:RA:2104:C:H2'	1:RA:2105:U:O4'	1.93	0.68
32:XA:120:A:O2'	32:XA:121:U:H4'	1.94	0.68
16:RP:50:ARG:CD	16:RP:56:SER:HB3	2.23	0.68
32:XA:977:A:H8	32:XA:1223:C:C4	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1388:G:N1	1:YA:1400:U:N3	2.40	0.68
1:YA:1311:G:H21	1:YA:1603:A:H62	1.39	0.68
17:YQ:91:ARG:HG3	18:YR:11:GLN:CD	2.14	0.68
1:YA:125:A:H4'	1:YA:126:A:OP2	1.93	0.68
32:XA:413:G:C6	35:XD:32:LYS:HE3	2.27	0.68
50:XS:40:PHE:CB	50:XS:41:PRO:HD2	2.23	0.68
28:R1:33:LEU:N	28:R1:51:ALA:HB3	2.07	0.68
1:YA:1742:U:H2'	1:YA:1743:G:C8	2.28	0.68
32:XA:728:A:H2'	32:XA:729:A:H8	1.58	0.68
1:RA:2648:G:H2'	1:RA:2649:C:H6	1.56	0.68
3:RC:15:VAL:HA	3:RC:203:VAL:HG11	1.75	0.68
38:QG:61:PHE:CE1	38:QG:65:LEU:HD22	2.28	0.68
16:RP:92:ARG:O	16:RP:93:LYS:HB2	1.91	0.68
37:XF:80:PHE:CE2	3:YC:123:ILE:HG21	2.29	0.68
48:XQ:59:GLU:O	48:XQ:75:VAL:HG22	1.93	0.68
7:RG:82:PHE:CE2	7:RG:137:LYS:HB2	2.29	0.68
1:RA:1098:A:H5'	1:RA:1099:G:OP2	1.92	0.68
6:RF:129:MET:CG	6:RF:153:ILE:HD11	2.22	0.68
42:QK:124:LYS:CE	52:QU:33:ARG:HH21	2.06	0.68
32:XA:1151:A:O2'	32:XA:1152:A:C8	2.30	0.68
1:YA:675:A:OP1	5:YE:60:TRP:HZ2	1.76	0.68
1:YA:142:A:O2'	1:YA:143:C:C6	2.46	0.68
39:XH:68:LYS:HD3	39:XH:69:ALA:N	2.09	0.68
32:XA:495:A:C6	32:XA:496:A:N6	2.62	0.68
32:XA:67:C:OP1	32:XA:199:A:H5''	1.93	0.68
14:RN:71:ARG:HG3	14:RN:71:ARG:HH21	1.57	0.68
16:YP:20:ARG:HG2	16:YP:112:ARG:HH12	1.57	0.68
1:YA:1326:U:O2'	1:YA:1327:A:H8	1.76	0.68
1:RA:1829:A:N3	3:RC:14:HIS:HE1	1.92	0.68
1:RA:1867:G:O2'	1:RA:1868:C:H5'	1.92	0.68
13:YM:136:MET:HE1	22:YV:57:TYR:HD2	1.56	0.68
34:XC:149:LYS:HG3	34:XC:168:ARG:HB2	1.75	0.68
25:RY:2:LYS:HG3	25:RY:52:ARG:HD3	1.74	0.68
9:RI:102:ARG:HH21	9:RI:103:ALA:HB2	1.58	0.68
10:RJ:44:TYR:CD1	10:RJ:44:TYR:C	2.66	0.68
1:RA:558:U:OP1	10:RJ:111:LYS:HE3	1.92	0.68
1:YA:1032:A:H1'	31:Y4:23:ILE:CD1	2.21	0.68
41:XJ:44:THR:HG22	41:XJ:45:ARG:H	1.58	0.68
39:XH:17:GLN:NE2	39:XH:69:ALA:HB1	2.09	0.68
3:RC:104:LEU:O	3:RC:105:ALA:HB2	1.93	0.68
41:XJ:12:ALA:HB3	41:XJ:18:ILE:HB	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:QQ:79:GLU:C	48:QQ:80:LYS:HD3	2.14	0.68
39:XH:54:THR:HG23	39:XH:55:LYS:H	1.58	0.68
9:RI:105:LEU:HA	9:RI:108:ILE:HB	1.76	0.68
12:YL:92:LEU:HD22	12:YL:124:GLY:HA3	1.75	0.68
32:XA:765:G:C5	32:XA:812:G:C5	2.81	0.68
17:YQ:27:ARG:HA	17:YQ:33:VAL:CG1	2.23	0.68
16:RP:91:VAL:HG11	16:RP:96:LEU:HD21	1.76	0.68
2:RB:7:G:O2'	15:RO:38:GLN:NE2	2.27	0.68
40:QI:27:ILE:HG13	40:QI:62:LEU:HD21	1.75	0.68
3:RC:131:MET:HA	3:RC:134:ILE:HD12	1.74	0.68
42:QK:22:ILE:HD13	42:QK:95:THR:HG21	1.75	0.68
1:YA:229:C:O2'	1:YA:230:G:O4'	2.10	0.68
29:Y2:19:ARG:NH2	29:Y2:19:ARG:HB3	2.08	0.68
1:YA:53:A:C2	1:YA:179:C:H4'	2.28	0.68
20:RT:18:GLU:HA	20:RT:18:GLU:OE2	1.93	0.68
28:R1:33:LEU:H	28:R1:51:ALA:CB	2.06	0.68
32:XA:373:A:O2'	32:XA:374:A:H5'	1.93	0.68
32:XA:518:C:H2'	32:XA:530:G:N7	2.07	0.68
29:R2:3:ARG:NH2	29:R2:3:ARG:HG2	2.04	0.68
1:RA:1238:G:C2'	1:RA:1239:G:H5'	2.22	0.68
33:XB:184:ALA:O	33:XB:199:ILE:HG12	1.94	0.68
52:QU:39:LYS:N	52:QU:40:PRO:HD2	2.08	0.68
13:RM:108:VAL:HG13	13:RM:109:PRO:HD2	1.76	0.68
37:XF:6:ILE:HD12	37:XF:6:ILE:N	2.09	0.68
7:YG:68:ARG:O	7:YG:72:ASN:HB3	1.94	0.68
35:XD:2:ARG:HE	35:XD:114:ARG:CD	2.07	0.68
40:QI:6:TYR:HE2	40:QI:17:ARG:HB2	1.59	0.68
32:XA:1130:A:C5	32:XA:1146:A:C6	2.81	0.68
1:RA:276:U:H2'	1:RA:276:U:O2	1.93	0.68
1:YA:1240:U:O2'	1:YA:1241:A:H5''	1.93	0.68
32:QA:967:C:H1'	40:QI:129:ARG:HH22	1.58	0.68
32:QA:414:A:N6	32:QA:431:A:N3	2.42	0.68
20:RT:38:ALA:HB1	20:RT:43:ILE:CG2	2.22	0.68
1:YA:989:G:H4'	1:YA:990:A:OP1	1.94	0.68
39:QH:9:MET:HE2	39:QH:32:LYS:HG2	1.76	0.68
13:YM:72:PRO:O	13:YM:73:ILE:HB	1.93	0.68
1:RA:1818:U:OP2	3:RC:155:ARG:NH1	2.27	0.68
32:XA:1014:A:C2	50:XS:33:TRP:HB2	2.28	0.68
32:XA:1363:A:C6	32:XA:1365:G:O6	2.45	0.68
1:YA:2345:G:H4'	1:YA:2346:A:H5''	1.74	0.68
1:YA:1012:U:O4	10:YJ:30:THR:HG21	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:74:GLN:O	40:XI:78:ILE:HG13	1.93	0.68
13:RM:73:ILE:HG21	13:RM:91:TYR:CZ	2.29	0.68
22:RV:25:LYS:HD3	22:RV:43:ASP:HA	1.76	0.68
1:YA:1315:C:OP2	56:YA:3745:HOH:O	2.12	0.68
20:YT:67:VAL:HG23	20:YT:75:GLY:O	1.92	0.68
1:YA:2623:G:H4'	1:YA:2825:G:C8	2.28	0.68
18:RR:51:VAL:HB	18:RR:52:PRO:CD	2.22	0.68
1:RA:1179:G:H3'	1:RA:1180:U:C4'	2.19	0.68
21:YU:90:LYS:HE2	21:YU:92:VAL:HG12	1.73	0.68
1:YA:2822:G:C5'	4:YD:164:GLN:HE22	2.05	0.68
1:YA:118:A:H1'	1:YA:178:G:O4'	1.92	0.68
5:RE:119:ILE:O	5:RE:119:ILE:HG12	1.92	0.68
9:RI:126:ARG:HA	9:RI:129:GLU:CB	2.24	0.68
39:XH:54:THR:O	39:XH:56:PRO:HD3	1.94	0.68
52:XU:39:LYS:N	52:XU:40:PRO:CD	2.57	0.68
15:YO:24:THR:HG22	15:YO:41:ALA:HA	1.76	0.68
9:RI:71:LYS:HG2	9:RI:72:THR:H	1.59	0.68
20:RT:4:GLU:HG3	20:RT:6:ARG:NE	2.09	0.68
1:RA:78:U:H2'	1:RA:79:C:C6	2.29	0.68
1:RA:2641:G:OP1	10:RJ:76:HIS:HE1	1.77	0.68
5:RE:24:ASN:O	5:RE:28:VAL:HG12	1.94	0.68
24:RX:50:VAL:HG12	24:RX:51:SER:O	1.94	0.68
2:YB:116:G:H2'	2:YB:117:G:H8	1.58	0.68
22:RV:61:LEU:O	22:RV:71:LYS:HA	1.94	0.68
23:YW:49:ASN:ND2	23:YW:81:ILE:HG23	2.08	0.68
43:XL:80:LEU:HD23	43:XL:97:VAL:HG21	1.76	0.68
13:RM:71:LYS:HD3	13:RM:95:LEU:CD1	2.24	0.68
1:RA:2674:G:H4'	11:RK:30:ARG:HG3	1.74	0.68
32:QA:194:C:O2'	32:QA:195:A:H5'	1.93	0.68
18:YR:39:LEU:O	18:YR:49:ILE:HG12	1.94	0.68
15:YO:30:ARG:HA	15:YO:35:ILE:HD13	1.75	0.68
32:QA:485:U:O2'	32:QA:486:U:OP1	2.12	0.68
1:YA:333:G:O2'	1:YA:334:C:H6	1.77	0.68
17:RQ:65:ASN:ND2	17:RQ:69:ARG:NH2	2.38	0.68
1:YA:1062:G:O2'	1:YA:1063:G:H8	1.77	0.68
32:XA:1135:U:O2	32:XA:1135:U:H2'	1.93	0.68
3:YC:52:HIS:HB3	3:YC:216:ARG:O	1.93	0.68
28:R1:8:ILE:HG22	28:R1:9:LYS:N	2.09	0.68
37:XF:41:ASP:OD2	37:XF:58:HIS:CE1	2.47	0.68
20:RT:40:LYS:N	20:RT:43:ILE:HG23	2.09	0.68
4:YD:112:THR:HG22	4:YD:113:SER:H	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:YW:8:SER:O	23:YW:9:THR:HB	1.93	0.68
18:RR:48:LYS:N	18:RR:48:LYS:HD2	2.09	0.68
7:RG:140:ILE:HD12	7:RG:141:GLY:N	2.08	0.68
41:QJ:80:THR:HB	41:QJ:83:THR:HG22	1.75	0.68
44:XM:68:LEU:O	44:XM:72:ILE:HG22	1.94	0.68
1:RA:1153:C:OP2	56:RA:3360:HOH:O	2.12	0.68
6:YF:58:ALA:HB1	6:YF:139:GLU:HG2	1.75	0.68
1:RA:2051:A:OP2	1:RA:2051:A:H8	1.77	0.68
1:YA:396:G:O2'	1:YA:397:U:C6	2.43	0.68
1:YA:1439:A:N7	1:YA:1440:U:C1'	2.57	0.68
1:YA:1555:G:H2'	1:YA:1556:C:C6	2.28	0.68
7:RG:86:LEU:HB3	7:RG:162:ARG:O	1.94	0.68
36:QE:81:GLN:HE22	36:QE:146:MET:CE	2.07	0.68
1:YA:70:G:H4'	1:YA:71:A:OP1	1.91	0.68
25:YY:49:ASP:HA	25:YY:52:ARG:HD2	1.76	0.68
32:QA:1021:A:C2'	32:QA:1022:A:H5''	2.23	0.68
3:YC:94:LEU:HB2	3:YC:100:ARG:HD2	1.75	0.68
32:XA:1054:C:O2'	32:XA:1055:A:H5''	1.94	0.68
1:YA:45:G:C5'	1:YA:46:G:H5'	2.23	0.68
52:XU:36:PHE:HD1	52:XU:40:PRO:HB3	1.59	0.68
21:YU:95:PHE:HD1	21:YU:95:PHE:N	1.92	0.68
1:YA:2788:C:O2'	1:YA:2809:A:N3	2.25	0.68
12:YL:17:LYS:HZ1	12:YL:19:LEU:HD22	1.59	0.68
43:QL:86:VAL:CG1	43:QL:89:LEU:HD23	2.24	0.68
1:YA:574:A:H4'	1:YA:575:A:H5'	1.76	0.68
32:QA:116:A:H2'	32:QA:117:G:H8	1.58	0.68
1:YA:1774:C:O2	3:YC:10:PRO:HB2	1.93	0.68
12:RL:74:THR:HG22	12:RL:107:PHE:HB2	1.73	0.68
40:QI:21:LYS:HG2	40:QI:22:PRO:HD2	1.75	0.68
32:QA:259:G:H2'	32:QA:260:G:H8	1.59	0.68
2:RB:42:C:OP1	6:RF:63:LYS:HE2	1.94	0.68
20:RT:28:ASN:HA	20:RT:91:GLN:NE2	2.09	0.68
1:YA:1734:G:HO2'	1:YA:1735:A:H8	1.41	0.68
10:RJ:44:TYR:C	10:RJ:44:TYR:HD1	1.96	0.67
1:RA:1092:C:H2'	1:RA:1093:G:O4'	1.92	0.67
16:RP:50:ARG:CB	16:RP:57:ALA:N	2.51	0.67
23:YW:27:GLY:HA3	23:YW:31:LEU:HD11	1.76	0.67
1:YA:27:G:H22	1:YA:512:G:H2'	1.58	0.67
1:RA:2052:A:O4'	4:RD:147:GLY:HA3	1.93	0.67
35:QD:33:ILE:O	35:QD:34:GLU:HB3	1.94	0.67
44:XM:79:LEU:HD13	44:XM:86:ARG:HG2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:973:G:H3'	32:QA:974:A:H5''	1.76	0.67
31:R4:25:VAL:HB	31:R4:35:GLN:HB2	1.75	0.67
1:YA:804:A:H2'	1:YA:806:C:C4	2.29	0.67
1:YA:806:C:H2'	1:YA:807:U:C6	2.28	0.67
1:YA:244:A:H2'	1:YA:245:G:O4'	1.93	0.67
1:YA:973:A:OP1	1:YA:973:A:H8	1.78	0.67
48:XQ:3:LYS:HZ3	48:XQ:6:THR:HG21	1.59	0.67
32:QA:1411:C:H2'	32:QA:1412:C:H5'	1.76	0.67
1:YA:959:A:H2'	1:YA:960:A:C8	2.29	0.67
1:YA:956:G:C2	1:YA:962:G:O6	2.47	0.67
20:YT:29:THR:CB	20:YT:86:THR:H	2.08	0.67
11:RK:5:GLN:O	11:RK:6:THR:HB	1.92	0.67
1:RA:204:A:H4'	1:RA:205:G:OP1	1.94	0.67
1:RA:977:G:O6	56:RA:3586:HOH:O	2.12	0.67
32:QA:443:C:O2'	32:QA:444:G:H5'	1.94	0.67
3:RC:153:LEU:N	3:RC:153:LEU:HD23	2.09	0.67
32:QA:1168:U:C6	32:QA:1168:U:OP1	2.48	0.67
40:QI:51:LEU:HB3	40:QI:56:MET:HG2	1.75	0.67
17:RQ:91:ARG:CZ	18:RR:11:GLN:H	2.06	0.67
1:RA:271:G:C4'	1:RA:272:A:OP1	2.35	0.67
7:RG:132:LEU:HD23	7:RG:132:LEU:N	2.10	0.67
10:RJ:56:VAL:HG12	10:RJ:57:LEU:N	2.09	0.67
1:YA:1662:U:C2'	1:YA:1663:G:H5''	2.21	0.67
32:QA:198:G:O2'	32:QA:199:A:H8	1.76	0.67
1:RA:1141:U:H4'	1:RA:1142:A:O4'	1.93	0.67
32:XA:13:U:O2'	32:XA:14:U:H5'	1.94	0.67
50:XS:59:VAL:HB	50:XS:73:PHE:HD2	1.59	0.67
34:XC:166:TRP:HE3	34:XC:166:TRP:N	1.92	0.67
32:XA:765:G:C8	32:XA:812:G:C2	2.82	0.67
22:YV:30:ILE:HG13	22:YV:40:ILE:HD11	1.76	0.67
13:RM:49:ALA:HB1	13:RM:120:ALA:HB1	1.77	0.67
1:YA:251:A:H4'	12:YL:47:ARG:NH2	2.08	0.67
12:YL:63:LYS:HB3	30:Y3:12:ARG:HD3	1.76	0.67
1:YA:874:G:H5'	1:YA:875:G:OP2	1.93	0.67
33:QB:187:ASP:HB2	33:QB:203:ASP:CG	2.14	0.67
1:YA:2348:U:H2'	1:YA:2349:G:H8	1.58	0.67
1:YA:1605:C:C3'	1:YA:1606:C:H5''	2.25	0.67
41:QJ:57:VAL:HG22	41:QJ:58:ASN:N	2.04	0.67
1:YA:128:C:H5''	1:YA:128:C:H6	1.59	0.67
12:YL:79:LEU:HD12	12:YL:112:LEU:HA	1.76	0.67
1:YA:782:A:H5'	1:YA:783:A:C2	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:948:C:OP1	56:RA:3355:HOH:O	2.12	0.67
20:RT:39:THR:HG22	20:RT:39:THR:O	1.94	0.67
42:QK:95:THR:O	42:QK:99:LEU:HB2	1.94	0.67
32:XA:718:A:C5	42:XK:117:HIS:CD2	2.82	0.67
1:YA:2353:G:H21	23:YW:30:VAL:HG21	1.59	0.67
9:RI:42:ASN:HA	9:RI:45:THR:HB	1.74	0.67
32:XA:256:U:H2'	32:XA:257:G:O4'	1.94	0.67
1:RA:2197:U:OP1	35:XD:150:LYS:HE3	1.94	0.67
1:YA:21:A:C2	1:YA:520:G:C2	2.82	0.67
1:YA:304:U:H2'	1:YA:305:C:C6	2.30	0.67
11:YK:18:ARG:HB2	11:YK:45:GLU:HB2	1.76	0.67
51:QT:66:ILE:HD11	51:QT:70:LYS:HE3	1.76	0.67
32:QA:1411:C:O2'	32:QA:1412:C:H5'	1.95	0.67
33:XB:10:LYS:HA	33:XB:10:LYS:HE3	1.76	0.67
52:QU:35:GLU:O	52:QU:36:PHE:HB2	1.93	0.67
1:RA:1385:A:H1'	1:RA:1386:C:C6	2.30	0.67
1:RA:1190:G:OP1	12:RL:32:GLY:HA2	1.94	0.67
1:RA:2757:A:N1	7:RG:66:THR:HG21	2.10	0.67
32:QA:1052:U:H5''	32:QA:1053:G:OP2	1.95	0.67
6:YF:64:PRO:HA	6:YF:88:VAL:HG22	1.74	0.67
1:YA:2331:G:N1	1:YA:2385:C:N4	2.43	0.67
1:YA:1357:C:C5	56:YA:3417:HOH:O	2.47	0.67
8:RH:68:ARG:NH2	8:RH:72:ILE:HG21	2.08	0.67
37:XF:42:TRP:HB2	37:XF:59:TYR:HB2	1.75	0.67
1:RA:740:C:H5'	1:RA:1784:A:H3'	1.77	0.67
44:XM:13:HIS:HB3	44:XM:16:ILE:HD13	1.76	0.67
32:QA:414:A:H2'	32:QA:415:A:C8	2.27	0.67
32:QA:495:A:H4'	32:QA:496:A:OP1	1.93	0.67
1:RA:580:U:H2'	1:RA:581:C:H6	1.58	0.67
1:YA:1258:U:H2'	1:YA:1259:G:H8	1.59	0.67
8:YH:32:PRO:HA	24:YX:38:TRP:CD1	2.28	0.67
6:YF:91:ARG:NH2	6:YF:91:ARG:HB3	2.09	0.67
1:YA:1905:C:O2'	1:YA:1929:G:H1'	1.94	0.67
41:XJ:48:ARG:HB3	45:XN:100:TRP:HZ2	1.60	0.67
44:QM:106:ARG:HH21	44:QM:112:ARG:HB3	1.59	0.67
1:YA:774:G:HO2'	1:YA:775:G:H8	1.42	0.67
1:YA:1693:U:H4'	1:YA:1694:C:OP2	1.93	0.67
22:YV:59:GLU:HG2	22:YV:60:VAL:H	1.57	0.67
7:RG:86:LEU:HD12	7:RG:86:LEU:N	2.09	0.67
1:YA:298:G:H2'	1:YA:339:U:O4	1.95	0.67
21:YU:35:VAL:HG12	21:YU:36:GLU:N	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1153:C:H2'	1:YA:1154:G:C8	2.30	0.67
32:QA:373:A:H2'	32:QA:374:A:H8	1.60	0.67
1:YA:626:A:H2'	12:YL:78:ARG:NH2	2.09	0.67
4:RD:92:VAL:HG12	4:RD:92:VAL:O	1.95	0.67
32:QA:198:G:C2'	32:QA:199:A:H8	2.06	0.67
35:XD:57:LYS:HG3	35:XD:58:GLN:N	2.10	0.67
37:XF:54:LEU:HD12	37:XF:56:LYS:O	1.95	0.67
18:RR:48:LYS:H	18:RR:48:LYS:CD	2.04	0.67
33:XB:47:PRO:HA	33:XB:50:ASN:HB2	1.77	0.67
5:YE:149:ILE:HG23	5:YE:188:MET:CA	2.23	0.67
18:RR:97:LYS:O	18:RR:98:ILE:HB	1.94	0.67
7:YG:117:PRO:HD2	7:YG:120:ILE:CG2	2.24	0.67
2:YB:8:C:H5'	15:YO:27:VAL:HG11	1.75	0.67
41:QJ:48:ARG:NH2	45:QN:100:TRP:CD2	2.63	0.67
16:RP:83:ILE:C	16:RP:83:ILE:HD13	2.15	0.67
32:QA:461:A:H3'	32:QA:461:A:N3	2.10	0.67
1:YA:1635:A:O2'	1:YA:1636:U:H5'	1.93	0.67
32:XA:1387:G:H2'	32:XA:1388:C:C6	2.30	0.67
40:XI:9:GLY:HA3	40:XI:16:ALA:HB3	1.77	0.67
1:RA:923:G:N3	23:RW:23:LYS:CE	2.57	0.67
1:YA:1490:A:H8	3:YC:73:ILE:CD1	2.07	0.67
36:QE:81:GLN:HG2	36:QE:149:PRO:HB3	1.76	0.67
1:YA:1055:G:N3	1:YA:1055:G:H2'	2.10	0.67
32:QA:667:G:H4'	46:QO:50:HIS:ND1	2.08	0.67
1:YA:2758:A:H2'	1:YA:2759:G:H5'	1.76	0.67
1:YA:1273:U:H4'	1:YA:1275:A:OP2	1.95	0.67
1:RA:574:A:OP1	56:RA:3268:HOH:O	2.10	0.67
6:YF:136:ILE:O	6:YF:137:PHE:O	2.13	0.67
32:XA:372:C:C1'	32:XA:373:A:OP2	2.42	0.67
32:XA:736:C:H2'	32:XA:737:C:C6	2.29	0.67
1:RA:2502:G:H5'	1:RA:2503:A:C5'	2.24	0.67
32:XA:1201:A:H1'	32:XA:1202:U:OP2	1.94	0.67
2:YB:44:G:H3'	6:YF:91:ARG:NE	2.10	0.67
7:YG:115:GLN:HG2	7:YG:116:LEU:N	2.10	0.67
13:YM:28:PHE:HB2	13:YM:104:GLU:OE1	1.95	0.67
1:RA:319:G:C4	1:RA:333:G:N2	2.63	0.67
1:RA:1277:G:H5'	14:RN:20:MET:CE	2.25	0.67
32:QA:299:G:H2'	32:QA:300:A:C8	2.28	0.67
37:QF:55:HIS:O	37:QF:56:LYS:HB2	1.93	0.67
19:YS:22:ASP:HA	19:YS:25:ARG:HH12	1.60	0.67
18:RR:54:VAL:HG23	18:RR:57:GLY:H	1.57	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:XR:59:LYS:O	49:XR:63:TYR:CD1	2.48	0.67
1:YA:454:A:C4'	1:YA:455:C:OP2	2.36	0.67
1:YA:2384:U:H3'	1:YA:2385:C:H3'	1.77	0.67
1:YA:857:G:H1'	23:YW:19:ARG:NE	2.09	0.67
23:YW:36:ILE:HG22	23:YW:39:GLN:HB2	1.77	0.67
1:YA:223:A:C4	1:YA:408:G:H1'	2.30	0.67
1:YA:1063:G:C6	1:YA:1064:C:N4	2.63	0.67
32:XA:245:U:HO2'	32:XA:246:A:H5'	1.58	0.67
3:RC:109:LEU:CD2	3:RC:110:LYS:H	2.08	0.67
32:XA:642:A:O2'	32:XA:643:C:H6	1.78	0.67
16:YP:88:ARG:NE	16:YP:112:ARG:HH21	1.93	0.67
32:QA:113:G:C1'	32:QA:354:G:H5'	2.24	0.67
7:YG:120:ILE:HG13	7:YG:140:ILE:HG22	1.76	0.67
32:XA:632:U:O2	32:XA:632:U:H2'	1.94	0.67
32:QA:658:C:H1'	46:QO:21:THR:HG21	1.75	0.67
1:RA:1300:G:H5''	1:RA:1301:A:H5'	1.77	0.67
1:YA:2880:C:H1'	14:YN:93:GLY:H	1.60	0.67
12:YL:100:ILE:O	12:YL:101:ILE:HB	1.95	0.67
38:XG:45:ALA:HB1	38:XG:120:ALA:HB2	1.76	0.67
1:RA:460:A:OP1	29:R2:41:ARG:NH1	2.28	0.67
6:RF:68:LYS:H	6:RF:68:LYS:HD2	1.58	0.67
6:RF:82:TYR:HD2	6:RF:83:PRO:HD2	1.59	0.67
32:XA:976:G:C5'	32:XA:977:A:OP2	2.41	0.67
3:YC:181:ARG:HE	3:YC:265:PHE:HB2	1.60	0.67
36:QE:148:SER:O	36:QE:152:VAL:HG13	1.95	0.67
32:XA:1150:A:N6	32:XA:1151:A:N6	2.42	0.67
32:XA:93:U:H2'	32:XA:95:C:H5	1.58	0.67
3:RC:100:ARG:HG2	3:RC:100:ARG:HH11	1.59	0.67
1:RA:995:C:C6	1:RA:995:C:H5'	2.29	0.67
1:RA:545:U:H2'	1:RA:546:U:H4'	1.75	0.67
1:YA:388:G:N7	1:YA:390:U:H2'	2.10	0.67
4:YD:51:THR:CG2	4:YD:76:GLY:HA3	2.25	0.67
32:QA:1453:G:H2'	32:QA:1453:G:N3	2.08	0.67
20:RT:4:GLU:HG3	20:RT:6:ARG:HE	1.60	0.67
32:QA:1219:A:H2'	32:QA:1220:G:C8	2.30	0.67
10:YJ:110:PRO:HG2	10:YJ:111:LYS:HG2	1.77	0.67
32:XA:1049:U:H4'	32:XA:1050:G:OP2	1.94	0.67
10:RJ:99:ARG:O	10:RJ:103:ILE:HG23	1.95	0.67
1:RA:386:G:H4'	1:RA:387:U:OP2	1.95	0.67
33:QB:36:LYS:HE3	33:QB:36:LYS:HA	1.76	0.67
35:XD:69:ARG:HG3	35:XD:69:ARG:HH11	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:275:C:H2'	1:YA:276:U:O4'	1.95	0.67
34:QC:41:TYR:OH	34:QC:89:VAL:HG21	1.94	0.67
35:XD:2:ARG:NH2	35:XD:114:ARG:HH11	1.92	0.67
23:RW:23:LYS:HE3	23:RW:24:ARG:HG3	1.77	0.67
1:YA:206:U:C6	1:YA:206:U:H5'	2.28	0.67
14:YN:22:ARG:HG3	14:YN:70:THR:HA	1.77	0.67
20:RT:37:ASP:O	20:RT:38:ALA:O	2.13	0.67
32:QA:1181:G:O2'	32:QA:1182:G:C5	2.48	0.67
1:RA:2188:U:H2'	1:RA:2189:U:C6	2.29	0.67
17:YQ:24:TYR:O	17:YQ:27:ARG:HB3	1.95	0.67
12:RL:61:LEU:O	30:R3:12:ARG:HD3	1.95	0.67
19:RS:95:ARG:O	19:RS:96:ILE:HG12	1.94	0.67
32:QA:433:G:C2'	32:QA:434:U:H5'	2.25	0.67
2:RB:116:G:H4'	15:RO:54:VAL:HG22	1.77	0.67
41:XJ:25:ILE:HG22	41:XJ:25:ILE:O	1.94	0.67
23:RW:23:LYS:CE	23:RW:24:ARG:HG3	2.26	0.66
23:RW:39:GLN:HE21	23:RW:43:LYS:N	1.92	0.66
21:YU:3:LYS:HD3	21:YU:82:VAL:HG21	1.77	0.66
1:YA:489:G:H4'	1:YA:490:C:OP1	1.95	0.66
28:R1:8:ILE:HD11	28:R1:24:LYS:HG2	1.77	0.66
52:QU:9:GLU:CG	52:QU:10:PRO:HD3	2.25	0.66
7:YG:103:ASN:HD22	7:YG:111:PRO:HB2	1.59	0.66
1:YA:594:U:H2'	1:YA:595:C:C6	2.30	0.66
20:YT:39:THR:CG2	20:YT:42:GLU:HB2	2.26	0.66
21:RU:42:LYS:HA	21:RU:58:VAL:O	1.95	0.66
16:YP:88:ARG:HH11	16:YP:112:ARG:NH2	1.92	0.66
10:YJ:20:ALA:HA	10:YJ:23:LYS:CG	2.25	0.66
40:QI:51:LEU:HA	40:QI:54:VAL:HG23	1.78	0.66
32:QA:865:A:H2'	32:QA:866:C:H6	1.60	0.66
13:YM:42:THR:HB	13:YM:45:GLN:HG3	1.76	0.66
25:RY:57:LEU:HA	25:RY:60:LYS:HB3	1.77	0.66
39:QH:105:THR:HG21	39:QH:120:LEU:HD13	1.76	0.66
40:XI:11:ARG:HH22	40:XI:108:ARG:NH2	1.93	0.66
1:YA:397:U:OP2	24:YX:9:LYS:HE2	1.95	0.66
23:RW:39:GLN:C	23:RW:41:GLY:N	2.46	0.66
1:YA:447:A:H5'	1:YA:449:A:C5	2.30	0.66
16:RP:4:ILE:CG2	16:RP:5:LYS:H	1.94	0.66
32:QA:430:A:OP1	35:QD:8:LEU:HB2	1.95	0.66
21:YU:82:VAL:O	21:YU:96:LYS:HG3	1.96	0.66
1:YA:2305:U:OP1	6:YF:132:ARG:HG3	1.95	0.66
41:QJ:65:TYR:CB	45:QN:95:LEU:HD11	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:10:GLY:O	4:YD:11:MET:HB2	1.96	0.66
17:RQ:4:LYS:HG3	17:RQ:5:ARG:N	2.10	0.66
11:YK:7:MET:CE	11:YK:7:MET:HA	2.25	0.66
52:XU:33:ARG:HH12	52:XU:34:ARG:HD3	1.59	0.66
1:RA:2503:A:H4'	1:RA:2504:U:OP1	1.94	0.66
1:RA:1188:U:O2'	1:RA:1189:A:H5'	1.95	0.66
20:YT:28:ASN:HB2	20:YT:87:LEU:HB3	1.77	0.66
1:RA:284:U:H2'	1:RA:285:G:C8	2.30	0.66
1:RA:1152:C:H3'	56:RA:3360:HOH:O	1.94	0.66
1:YA:187:G:C2	1:YA:210:C:C2	2.84	0.66
1:YA:1951:U:H2'	1:YA:1953:A:OP2	1.95	0.66
1:RA:2063:C:O2	1:RA:2450:A:N1	2.28	0.66
22:YV:42:LEU:HD13	22:YV:47:VAL:HG21	1.77	0.66
32:QA:740:U:O2'	32:QA:741:G:H5'	1.95	0.66
16:RP:112:ARG:C	16:RP:113:LEU:HD23	2.15	0.66
32:XA:649:A:H2'	32:XA:650:G:O4'	1.95	0.66
21:RU:15:GLY:O	21:RU:17:ASP:N	2.28	0.66
1:YA:270:A:N1	1:YA:369:U:H1'	2.10	0.66
32:QA:723:U:OP1	52:QU:48:LYS:HD3	1.94	0.66
1:RA:994:C:H3'	17:RQ:53:LYS:HE2	1.78	0.66
32:XA:1279:G:OP2	32:XA:1279:G:N2	2.29	0.66
1:RA:924:G:H4'	23:RW:24:ARG:HH21	1.60	0.66
17:YQ:8:ILE:O	17:YQ:8:ILE:HG12	1.95	0.66
3:YC:103:ILE:HD12	3:YC:104:LEU:H	1.60	0.66
6:YF:56:LEU:O	6:YF:60:SER:HB3	1.95	0.66
10:YJ:24:THR:HB	10:YJ:27:ARG:HB2	1.78	0.66
13:YM:66:ARG:CZ	13:YM:101:VAL:HG11	2.25	0.66
32:QA:1281:C:O2'	32:QA:1282:C:H5'	1.95	0.66
38:XG:27:ASN:O	38:XG:30:MET:HB2	1.95	0.66
1:YA:2752:C:H2'	1:YA:2753:A:C8	2.29	0.66
1:YA:1474:U:C2'	1:YA:1475:G:H5'	2.23	0.66
1:RA:134:G:H5'	1:RA:135:U:OP2	1.96	0.66
52:XU:35:GLU:CG	52:XU:36:PHE:H	2.09	0.66
4:YD:125:TRP:CG	4:YD:160:LYS:HB3	2.30	0.66
33:XB:163:ILE:HG23	33:XB:185:ILE:HD11	1.77	0.66
1:YA:1973:G:C6	1:YA:1974:C:C4	2.83	0.66
1:RA:1688:U:H1'	1:RA:1701:A:C6	2.31	0.66
6:RF:7:TYR:O	6:RF:12:VAL:HG12	1.96	0.66
4:RD:53:GLY:HA3	4:RD:77:ARG:HB2	1.76	0.66
1:YA:682:G:H5'	29:Y2:26:ASN:OD1	1.95	0.66
1:YA:2540:C:C2	1:YA:2541:A:C8	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:ZN:89:ARG:HG3	45:ZN:91:GLU:HG3	1.77	0.66
1:RA:2021:C:OP1	27:R0:8:THR:HG21	1.95	0.66
2:YB:65:U:H3'	2:YB:108:A:N6	2.11	0.66
51:QT:27:MET:CE	51:QT:57:VAL:HG22	2.26	0.66
1:YA:639:U:H2'	1:YA:640:C:H6	1.60	0.66
1:YA:2876:G:H4'	16:YP:2:ASN:HD21	1.60	0.66
34:XC:109:GLU:HG2	34:XC:139:ASN:HB2	1.77	0.66
34:QC:139:ASN:HA	34:QC:142:ARG:HB2	1.76	0.66
1:YA:2286:G:H4'	1:YA:2287:A:C1'	2.25	0.66
14:RN:66:ALA:O	14:RN:69:ARG:O	2.13	0.66
40:XI:11:ARG:HH22	40:XI:108:ARG:HH21	1.44	0.66
1:YA:2403:C:H2'	1:YA:2404:U:H6	1.60	0.66
18:YR:43:ASN:ND2	18:YR:44:GLY:H	1.92	0.66
10:RJ:3:THR:HB	10:RJ:44:TYR:OH	1.94	0.66
33:QB:186:VAL:O	33:QB:186:VAL:HG23	1.95	0.66
1:YA:339:U:H2'	1:YA:340:A:C8	2.31	0.66
37:QF:86:ARG:HH12	49:QR:63:TYR:HB3	1.59	0.66
48:XQ:46:HIS:NE2	48:XQ:48:GLU:HG2	2.10	0.66
3:RC:159:THR:O	3:RC:194:VAL:HG12	1.95	0.66
20:RT:39:THR:HB	20:RT:42:GLU:CB	2.25	0.66
30:Y3:41:ARG:CG	30:Y3:41:ARG:HH21	2.09	0.66
36:XE:55:VAL:N	36:XE:56:PRO:HD2	2.11	0.66
1:RA:1252:G:N3	17:RQ:32:ARG:HG2	2.10	0.66
34:XC:84:GLU:HA	34:XC:87:ARG:HB2	1.76	0.66
6:RF:9:ASP:O	6:RF:10:GLU:HB2	1.95	0.66
52:QU:16:ARG:NH1	52:QU:19:LYS:HG3	2.11	0.66
44:QM:45:SER:O	44:QM:46:GLU:HB2	1.94	0.66
1:YA:917:A:H2	2:YB:79:G:H21	1.38	0.66
35:QD:105:GLY:HA3	35:QD:161:ALA:HB1	1.78	0.66
47:QP:73:ALA:O	47:QP:77:GLU:HB2	1.95	0.66
46:XO:73:ASP:OD2	46:XO:76:ARG:HD3	1.96	0.66
43:XL:34:THR:HG22	43:XL:35:ARG:HG2	1.76	0.66
1:YA:797:G:OP1	5:YE:57:LYS:HG2	1.96	0.66
23:RW:39:GLN:O	23:RW:41:GLY:N	2.29	0.66
1:YA:2324:U:H5'	1:YA:2325:G:C5'	2.25	0.66
12:YL:56:PRO:O	12:YL:60:ARG:HG3	1.95	0.66
32:QA:254:G:O2'	32:QA:255:G:H5'	1.95	0.66
1:YA:2665:A:H2'	1:YA:2666:C:O2	1.96	0.66
11:YK:60:ALA:HA	11:YK:87:LEU:CD2	2.25	0.66
1:RA:446:G:OP1	17:RQ:2:ARG:HD2	1.96	0.66
35:QD:167:PRO:HB2	35:QD:170:LEU:HD11	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:RH:82:SER:O	8:RH:83:LYS:HB2	1.95	0.66
3:RC:7:PRO:HB3	3:RC:13:ARG:HB2	1.76	0.66
12:RL:55:MET:HA	12:RL:55:MET:HE3	1.77	0.66
1:YA:2893:A:H4'	1:YA:2894:G:O5'	1.95	0.66
1:RA:1411:U:O2'	1:RA:1412:U:H5'	1.96	0.66
52:QU:17:ARG:HG3	52:QU:17:ARG:HH11	1.60	0.66
35:QD:166:LYS:HB3	35:QD:166:LYS:NZ	2.10	0.66
5:YE:48:THR:O	5:YE:52:VAL:HG23	1.95	0.66
1:RA:533:G:H5'	17:RQ:23:TYR:CD2	2.30	0.66
17:RQ:40:LYS:HG2	17:RQ:44:TYR:CD1	2.31	0.66
42:QK:42:GLY:HA3	42:QK:73:VAL:HG12	1.77	0.66
8:YH:5:LEU:HD11	8:YH:13:GLY:HA3	1.77	0.66
1:RA:1653:G:H1	14:RN:11:ASN:ND2	1.92	0.66
32:XA:1105:A:H2'	32:XA:1106:G:H8	1.59	0.66
28:Y1:10:LEU:HB2	28:Y1:20:TYR:HB2	1.77	0.66
1:RA:1459:G:O2'	1:RA:1460:U:H3'	1.96	0.66
33:QB:212:TYR:O	33:QB:216:VAL:HG23	1.95	0.66
36:XE:79:THR:HG23	36:XE:81:GLN:H	1.61	0.66
32:XA:1239:A:H62	32:XA:1299:A:N6	1.93	0.66
1:YA:243:U:HO2'	1:YA:244:A:H8	1.44	0.66
32:XA:663:A:O2'	32:XA:664:G:H5'	1.96	0.66
7:YG:85:LYS:HD3	7:YG:164:ALA:HB3	1.77	0.66
32:XA:693:G:OP1	42:XK:126:ARG:NH1	2.29	0.66
8:YH:93:SER:CB	8:YH:121:VAL:HG21	2.25	0.66
38:XG:63:VAL:HG11	38:XG:127:ALA:HB2	1.76	0.66
25:RY:56:LEU:O	25:RY:57:LEU:HB3	1.95	0.66
1:RA:2897:U:H2'	1:RA:2898:U:C6	2.30	0.66
1:YA:2636:C:H2'	1:YA:2637:U:C6	2.31	0.66
1:YA:1510:G:N2	1:YA:1511:G:C4	2.63	0.66
1:YA:2264:C:C2	1:YA:2277:G:N2	2.64	0.66
21:YU:83:GLY:O	21:YU:93:ARG:HA	1.96	0.66
11:RK:105:ARG:HD3	11:RK:105:ARG:H	1.60	0.66
19:YS:20:VAL:HG23	19:YS:23:LEU:HD12	1.78	0.66
1:YA:636:G:H5'	1:YA:639:U:OP1	1.96	0.66
14:YN:62:ASN:O	14:YN:63:ARG:HB2	1.95	0.66
1:YA:241:A:C8	1:YA:243:U:C4	2.84	0.66
43:QL:21:PRO:O	43:QL:23:LEU:N	2.28	0.66
3:RC:78:GLU:OE1	3:RC:100:ARG:NE	2.28	0.66
41:QJ:41:PRO:O	41:QJ:42:LEU:HB2	1.94	0.66
32:XA:708:C:H2'	32:XA:709:U:H6	1.61	0.66
32:XA:1430:A:H2'	32:XA:1431:A:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:611:C:C2'	1:RA:612:G:H5'	2.25	0.66
1:RA:1070:A:H2'	1:RA:1097:U:OP1	1.95	0.66
15:YO:31:THR:HG21	15:YO:36:TYR:HE2	1.59	0.66
32:QA:428:G:H4'	32:QA:429:U:OP1	1.95	0.66
10:RJ:56:VAL:O	10:RJ:124:VAL:O	2.14	0.66
1:YA:873:C:H4'	13:YM:64:TRP:CD1	2.30	0.66
9:RI:23:VAL:HG23	9:RI:24:GLY:H	1.60	0.66
32:QA:408:A:OP1	35:QD:109:THR:HG21	1.95	0.66
32:XA:1245:C:H2'	32:XA:1246:A:H8	1.61	0.66
1:RA:1734:G:H2'	1:RA:1735:A:C8	2.24	0.66
36:XE:45:VAL:O	36:XE:71:ILE:HG22	1.96	0.66
18:YR:81:LYS:N	18:YR:81:LYS:HD3	2.10	0.66
32:QA:358:U:H2'	32:QA:359:G:C8	2.31	0.66
37:XF:14:GLN:HB3	37:XF:17:GLN:HE22	1.61	0.66
32:XA:350:G:C6	32:XA:351:G:C6	2.84	0.66
20:RT:28:ASN:HA	20:RT:91:GLN:OE1	1.96	0.66
1:YA:851:C:H4'	26:YZ:46:MET:HG2	1.78	0.66
39:QH:93:LYS:HE3	39:QH:116:ARG:HH12	1.61	0.66
3:YC:68:ARG:HH12	3:YC:115:ILE:HD12	1.61	0.66
1:YA:538:A:H5''	10:YJ:7:LYS:NZ	2.11	0.66
33:QB:49:PHE:CG	33:QB:212:TYR:OH	2.48	0.66
1:YA:2305:U:O2'	6:YF:132:ARG:HA	1.95	0.66
1:YA:2667:C:O2'	1:YA:2668:G:C8	2.48	0.66
1:YA:1965:C:H5''	1:YA:1965:C:C6	2.28	0.66
1:YA:593:U:H2'	1:YA:594:U:H6	1.60	0.66
1:YA:2798:U:H5'	1:YA:2800:A:C5	2.31	0.66
1:RA:1813:G:N3	3:RC:49:THR:CG2	2.58	0.66
1:YA:532:A:N1	1:YA:2020:A:H1'	2.11	0.66
35:QD:147:LYS:HE2	35:QD:147:LYS:H	1.61	0.66
1:RA:1964:G:H4'	1:RA:1965:C:OP2	1.96	0.66
32:QA:1454:G:H2'	32:QA:1455:G:H8	1.61	0.66
8:YH:5:LEU:O	8:YH:6:LEU:HD12	1.96	0.66
8:RH:117:LEU:HD11	8:RH:130:VAL:HG11	1.78	0.66
1:RA:2394:C:OP2	30:R3:29:ARG:HD3	1.95	0.66
32:XA:456:A:H2'	32:XA:457:G:H8	1.60	0.66
1:YA:1245:G:OP1	12:YL:8:PRO:HG3	1.95	0.66
1:RA:2328:A:H2'	1:RA:2329:U:C6	2.31	0.66
12:RL:114:GLY:C	12:RL:115:GLU:HG3	2.16	0.66
32:XA:963:G:C6	32:XA:973:G:O6	2.48	0.65
28:Y1:51:ALA:O	28:Y1:52:LYS:HB2	1.96	0.65
1:YA:2430:A:H5'	1:YA:2431:U:OP2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2448:A:HO2'	1:YA:2449:U:H5	1.44	0.65
51:XT:73:ARG:HG2	51:XT:73:ARG:NH1	2.03	0.65
17:YQ:60:TRP:CZ2	17:YQ:93:ILE:HB	2.31	0.65
16:YP:91:VAL:HG11	16:YP:96:LEU:HD11	1.77	0.65
32:QA:265:G:N2	32:QA:267:C:H5''	2.10	0.65
41:XJ:80:THR:O	41:XJ:84:VAL:HG22	1.96	0.65
39:QH:76:ARG:NE	39:QH:78:SER:O	2.29	0.65
24:RX:34:SER:HA	24:RX:49:ARG:HA	1.78	0.65
32:XA:1249:C:H4'	40:XJ:74:GLN:HE22	1.61	0.65
3:RC:15:VAL:HA	3:RC:203:VAL:CG1	2.25	0.65
14:RN:33:ILE:HD11	14:RN:118:ARG:NH2	2.11	0.65
50:XS:79:TYR:O	50:XS:80:ARG:HB2	1.95	0.65
10:YJ:57:LEU:HD11	10:YJ:129:GLU:H	1.60	0.65
38:QG:115:MET:HA	38:QG:118:ARG:HD3	1.78	0.65
8:RH:45:GLU:O	8:RH:49:ALA:N	2.27	0.65
3:RC:259:ASN:O	3:RC:261:ARG:N	2.27	0.65
36:XE:154:ALA:HB1	39:XH:65:PHE:HE2	1.60	0.65
2:YB:13:G:N2	2:YB:16:G:C4	2.64	0.65
50:XS:52:ASN:HD21	50:XS:55:GLN:N	1.94	0.65
11:RK:18:ARG:HH11	11:RK:18:ARG:CG	2.02	0.65
1:YA:1313:U:O2	1:YA:1313:U:H2'	1.94	0.65
1:YA:1598:A:H2'	1:YA:1599:U:C6	2.31	0.65
1:YA:185:G:H2'	1:YA:186:G:H8	1.59	0.65
1:YA:2311:A:H1'	6:YF:78:ILE:HD11	1.78	0.65
1:RA:780:G:N2	1:RA:783:A:H62	1.91	0.65
1:RA:2134:A:O2'	1:RA:2135:A:H8	1.71	0.65
15:RO:31:THR:HG22	15:RO:34:HIS:N	2.11	0.65
10:RJ:65:THR:HG22	10:RJ:68:LYS:HE3	1.77	0.65
6:RF:45:ASP:HB3	6:RF:48:LEU:HB2	1.76	0.65
1:YA:2135:A:H2'	1:YA:2136:G:H8	1.59	0.65
1:YA:1364:G:C5	24:YX:1:SER:HB2	2.31	0.65
6:YF:58:ALA:HB1	6:YF:139:GLU:CG	2.25	0.65
6:RF:43:ILE:HG22	6:RF:82:TYR:CE1	2.31	0.65
1:RA:2017:U:H4'	27:R0:4:GLN:O	1.95	0.65
46:QO:34:GLN:NE2	46:QO:38:LEU:HD21	2.10	0.65
11:YK:118:LEU:C	11:YK:120:PRO:HD2	2.17	0.65
8:RH:24:GLY:O	8:RH:28:ASN:HB2	1.96	0.65
47:QP:51:ARG:C	47:QP:52:LEU:HD12	2.16	0.65
1:YA:1429:G:HO2'	1:YA:1430:G:H8	1.43	0.65
23:RW:41:GLY:O	23:RW:42:THR:C	2.34	0.65
32:XA:973:G:C2'	32:XA:974:A:H5'	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:QQ:13:SER:O	48:QQ:20:ILE:HD11	1.96	0.65
1:YA:636:G:H3'	12:YL:128:THR:HG21	1.77	0.65
32:XA:1298:U:H5	38:XG:113:LYS:HA	1.61	0.65
30:Y3:3:ILE:HG21	30:Y3:62:PRO:HG2	1.76	0.65
47:XP:78:VAL:O	47:XP:78:VAL:HG12	1.95	0.65
11:YK:71:ARG:HB3	11:YK:72:PRO:CD	2.26	0.65
1:YA:1568:G:N2	3:YC:57:HIS:CE1	2.64	0.65
38:XG:136:LYS:O	38:XG:140:VAL:HG23	1.96	0.65
1:YA:532:A:N1	1:YA:2020:A:O2'	2.21	0.65
40:QI:51:LEU:HB3	40:QI:56:MET:CG	2.26	0.65
40:XI:11:ARG:HD3	40:XI:106:ASP:OD1	1.95	0.65
1:RA:2339:C:H2'	1:RA:2340:A:C8	2.31	0.65
5:RE:61:ARG:NH1	5:RE:64:GLY:HA3	2.10	0.65
17:YQ:42:GLY:HA3	18:YR:75:VAL:HG21	1.78	0.65
10:RJ:43:GLU:O	10:RJ:44:TYR:C	2.34	0.65
1:YA:1249:U:OP1	1:YA:1249:U:H3'	1.97	0.65
10:YJ:44:TYR:HB2	17:YQ:63:ARG:NH1	2.10	0.65
1:YA:781:A:H5''	1:YA:782:A:OP1	1.96	0.65
40:XI:51:LEU:HG	40:XI:86:LEU:HD22	1.79	0.65
33:QB:40:ILE:HG21	33:QB:201:GLY:H	1.61	0.65
2:RB:28:C:C2'	2:RB:29:A:H5'	2.26	0.65
39:QH:76:ARG:HH11	39:QH:76:ARG:CG	2.09	0.65
26:YZ:4:ILE:CD1	26:YZ:58:GLU:HA	2.26	0.65
35:QD:145:ARG:HD2	35:QD:147:LYS:CE	2.27	0.65
1:YA:1281:G:H2'	1:YA:1282:U:O4'	1.95	0.65
32:QA:475:C:H2'	32:QA:476:U:C6	2.31	0.65
3:YC:38:LYS:HE2	3:YC:55:GLY:H	1.61	0.65
1:YA:2631:G:H2'	1:YA:2632:A:H5''	1.78	0.65
41:QJ:28:THR:HG22	41:QJ:28:THR:O	1.96	0.65
2:RB:48:U:H2'	2:RB:49:C:C6	2.31	0.65
32:XA:119:A:H4'	32:XA:120:A:O5'	1.97	0.65
32:XA:1323:G:H2'	32:XA:1324:A:C8	2.31	0.65
42:XK:74:LYS:HD2	42:XK:104:PHE:HE1	1.60	0.65
32:QA:452:A:H8	32:QA:452:A:H5''	1.60	0.65
1:YA:1109:C:C5	1:YA:1110:G:C6	2.84	0.65
33:QB:75:ALA:O	33:QB:79:VAL:HG23	1.95	0.65
24:RX:34:SER:HB3	24:RX:49:ARG:HG3	1.78	0.65
5:YE:145:ASP:OD1	5:YE:166:LYS:HG3	1.97	0.65
1:YA:1494:A:H2'	1:YA:1495:A:C8	2.31	0.65
36:QE:67:ARG:HB2	36:QE:68:ARG:HE	1.61	0.65
32:QA:1472:U:O2'	32:QA:1473:G:H5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:59:PRO:HB2	5:YE:67:ARG:NH2	2.12	0.65
32:XA:461:A:P	32:XA:462:G:OP2	2.55	0.65
32:XA:961:U:O4	32:XA:983:A:C6	2.50	0.65
1:YA:1441:G:H2'	1:YA:1442:U:C6	2.32	0.65
1:YA:2324:U:H5'	1:YA:2325:G:H5''	1.78	0.65
1:YA:247:G:H4'	1:YA:386:G:C4	2.31	0.65
1:YA:223:A:C5	1:YA:422:A:N7	2.65	0.65
47:QP:22:ALA:HA	47:QP:33:ILE:HG13	1.78	0.65
1:YA:74:A:H4'	1:YA:75:G:O5'	1.97	0.65
1:YA:587:C:H1'	1:YA:671:C:H5'	1.78	0.65
16:YP:50:ARG:CB	16:YP:57:ALA:H	2.09	0.65
1:YA:2197:U:O2'	1:YA:2198:A:H2'	1.96	0.65
36:XE:14:LEU:HD22	36:XE:59:ILE:HD13	1.78	0.65
1:RA:1747:U:H2'	1:RA:1748:C:H6	1.58	0.65
18:YR:87:GLN:HG2	18:YR:88:GLY:N	2.11	0.65
7:YG:167:VAL:HG23	7:YG:168:VAL:H	1.61	0.65
32:XA:251:G:H21	32:XA:253:A:H62	1.45	0.65
51:XT:26:MET:HE1	51:XT:56:ILE:HD13	1.79	0.65
1:YA:2353:G:H21	23:YW:30:VAL:CG2	2.10	0.65
1:YA:1838:C:H4'	1:YA:1839:G:C8	2.32	0.65
38:QG:23:ALA:O	38:QG:26:VAL:HG22	1.95	0.65
1:YA:63:A:N6	1:YA:91:A:N6	2.44	0.65
1:YA:90:U:H3'	1:YA:91:A:H5''	1.77	0.65
32:XA:170:U:O2'	32:XA:171:A:H5'	1.96	0.65
1:YA:2529:G:H4'	7:YG:174:LYS:CD	2.27	0.65
36:QE:136:VAL:O	36:QE:137:ARG:HB2	1.97	0.65
27:R0:29:VAL:HG13	27:R0:34:GLY:O	1.97	0.65
32:XA:738:C:H2'	32:XA:739:C:H6	1.60	0.65
38:QG:145:GLU:HA	38:QG:148:LYS:HB2	1.76	0.65
32:XA:976:G:O5'	32:XA:1358:U:O2'	2.14	0.65
1:RA:1179:G:C5	1:RA:1180:U:C1'	2.77	0.65
1:RA:2346:A:H3'	1:RA:2347:C:C5'	2.22	0.65
48:QQ:46:HIS:HB2	48:QQ:66:LEU:HD12	1.78	0.65
1:YA:502:A:H5'	1:YA:503:A:OP2	1.97	0.65
29:Y2:19:ARG:HB3	29:Y2:19:ARG:HH21	1.62	0.65
8:RH:90:LEU:HB2	8:RH:123:ARG:HB3	1.78	0.65
39:QH:21:LYS:CE	39:QH:22:ALA:H	2.06	0.65
32:QA:198:G:C6	32:QA:220:G:C2	2.85	0.65
8:RH:68:ARG:HH12	8:RH:140:ALA:HB2	1.60	0.65
1:RA:31:C:OP1	56:RA:3701:HOH:O	2.15	0.65
1:RA:2887:A:H2'	1:RA:2887:A:N3	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2617:U:C2'	1:YA:2618:G:H5'	2.27	0.65
32:XA:1011:C:H2'	32:XA:1012:A:C8	2.31	0.65
21:RU:43:LYS:O	21:RU:57:ILE:HA	1.97	0.65
32:XA:456:A:H2'	32:XA:457:G:C8	2.32	0.65
23:RW:11:ASN:HD22	23:RW:12:GLY:H	1.43	0.65
43:QL:78:VAL:O	43:QL:101:LEU:HB3	1.96	0.65
50:QS:3:SER:O	50:QS:5:LYS:HG3	1.97	0.65
1:YA:615:U:O4	5:YE:39:ALA:HB2	1.96	0.65
37:QF:97:THR:O	37:QF:98:GLU:HG2	1.96	0.65
32:QA:596:A:N6	32:QA:645:G:C6	2.65	0.65
1:YA:1023:U:C6	1:YA:1023:U:H5'	2.32	0.65
8:YH:41:LYS:HA	8:YH:44:ILE:HG12	1.79	0.65
17:RQ:68:ALA:HB1	17:RQ:73:ILE:HG23	1.79	0.65
32:XA:1160:G:C6	32:XA:1181:G:O6	2.49	0.65
14:YN:99:LYS:O	27:Y0:41:HIS:HB2	1.96	0.65
10:YJ:64:VAL:HG22	10:YJ:68:LYS:HE2	1.79	0.65
32:XA:1145:A:H4'	32:XA:1146:A:OP1	1.95	0.65
41:XJ:15:HIS:CE1	41:XJ:68:ARG:HD3	2.32	0.65
38:XG:28:ILE:HG21	38:XG:100:MET:HG3	1.78	0.65
6:YF:59:ILE:HD13	6:YF:137:PHE:HZ	1.62	0.65
32:XA:372:C:H4'	32:XA:373:A:C5'	2.26	0.65
1:RA:2151:U:H2'	1:RA:2152:G:O4'	1.95	0.65
1:YA:2285:C:H5	28:Y1:5:ARG:NH2	1.95	0.65
1:RA:229:C:H2'	1:RA:230:G:O4'	1.97	0.65
32:XA:920:U:H2'	32:XA:921:U:C6	2.32	0.65
1:YA:2147:A:OP1	1:YA:2147:A:C4'	2.45	0.65
20:YT:67:VAL:O	20:YT:68:LYS:HG3	1.97	0.65
40:QI:23:GLY:H	40:QI:60:LEU:HA	1.62	0.65
32:QA:89:U:O2'	32:QA:90:C:H5''	1.96	0.65
1:YA:2537:U:H2'	1:YA:2538:C:C6	2.32	0.65
40:QI:32:ARG:HG2	40:QI:36:GLN:HB3	1.79	0.65
25:YY:4:LYS:HB2	25:YY:4:LYS:NZ	2.12	0.65
22:YV:73:LYS:HD3	22:YV:74:ALA:N	2.12	0.65
32:QA:1469:C:H6	32:QA:1469:C:C5'	2.09	0.65
37:QF:61:LEU:HD12	37:QF:62:MET:H	1.61	0.65
23:RW:24:ARG:HB2	23:RW:65:LYS:HD3	1.79	0.65
50:XS:35:ARG:HA	50:XS:70:LEU:HB2	1.78	0.65
23:YW:37:VAL:C	23:YW:39:GLN:H	2.01	0.65
33:QB:95:TRP:HZ2	33:QB:100:LEU:HD23	1.61	0.65
13:RM:35:ALA:O	13:RM:128:THR:HA	1.97	0.65
11:YK:61:VAL:HG13	11:YK:87:LEU:CD2	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:YH:72:ILE:HD11	8:YH:141:LYS:N	2.12	0.65
50:QS:44:ILE:HA	50:QS:61:VAL:HB	1.78	0.65
1:RA:2573:C:H3'	56:RA:3712:HOH:O	1.97	0.65
21:YU:26:ASN:O	21:YU:34:ILE:HB	1.97	0.65
1:RA:2466:C:OP1	31:R4:4:ARG:HB2	1.97	0.65
9:YI:30:GLN:HG3	9:YI:31:GLY:H	1.62	0.65
5:YE:88:ARG:HB3	5:YE:89:PRO:HD2	1.79	0.65
1:RA:45:G:H5''	1:RA:46:G:H5'	1.79	0.65
43:XL:42:LYS:HG2	43:XL:43:LYS:N	2.12	0.65
32:XA:981:U:H2'	32:XA:982:U:C5	2.31	0.65
51:QT:27:MET:HE3	51:QT:57:VAL:HG22	1.79	0.65
42:QK:126:ARG:C	52:QU:33:ARG:HH12	1.99	0.65
32:XA:414:A:H2'	32:XA:415:A:H5''	1.77	0.65
7:YG:139:VAL:HA	7:YG:142:GLN:HB3	1.79	0.65
1:YA:763:G:HO2'	1:YA:764:A:H3'	1.60	0.65
10:RJ:21:THR:C	10:RJ:23:LYS:H	1.98	0.65
52:QU:11:PHE:O	52:QU:12:ASP:HB2	1.96	0.65
4:RD:13:ARG:NH1	16:RP:74:GLN:HE21	1.93	0.65
1:RA:65:U:H2'	1:RA:66:C:C6	2.28	0.65
52:XU:14:ALA:O	52:XU:15:LEU:O	2.15	0.65
1:YA:172:A:H2'	1:YA:173:A:C8	2.30	0.65
7:RG:59:ASP:HB2	7:RG:63:GLN:HG2	1.77	0.65
32:XA:160:A:H2'	32:XA:161:A:O4'	1.97	0.65
32:XA:1003:G:N2	32:XA:1005:A:H5''	2.12	0.65
32:QA:1470:U:O2'	32:QA:1471:U:H5'	1.97	0.65
5:RE:131:THR:HG22	5:RE:160:ALA:HA	1.78	0.65
35:QD:55:ARG:HH12	35:QD:58:GLN:HG2	1.62	0.65
10:RJ:88:THR:HG22	10:RJ:91:GLU:CD	2.17	0.65
1:RA:320:A:H4'	1:RA:322:A:N7	2.12	0.65
3:YC:67:LYS:HB3	3:YC:150:GLY:HA2	1.78	0.65
50:XS:36:ARG:O	50:XS:69:LYS:HD2	1.97	0.64
1:YA:2332:C:O2'	23:YW:40:ARG:NH2	2.30	0.64
1:YA:1605:C:H4'	1:YA:1610:A:C6	2.31	0.64
1:YA:206:U:H2'	1:YA:207:A:C8	2.25	0.64
32:XA:1348:U:H2'	32:XA:1349:A:H8	1.62	0.64
1:YA:1255:U:H5'	1:YA:2502:G:H22	1.61	0.64
32:QA:721:G:H4'	32:QA:722:G:H5''	1.78	0.64
1:YA:769:U:C4	1:YA:770:G:N7	2.65	0.64
40:XI:12:LYS:H	40:XI:105:ARG:NH1	1.95	0.64
38:QG:145:GLU:CA	38:QG:148:LYS:HB2	2.27	0.64
41:QJ:8:ILE:HG12	41:QJ:100:ILE:HG22	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:43:ASN:HB3	3:RC:45:ASN:H	1.61	0.64
1:YA:992:C:H4'	18:YR:74:ILE:HD13	1.79	0.64
12:RL:68:SER:O	12:RL:69:ARG:HB2	1.97	0.64
32:QA:1069:C:H4'	32:QA:1192:C:O2	1.97	0.64
1:RA:587:C:OP2	12:RL:21:ARG:NH1	2.30	0.64
13:RM:17:ASN:O	13:RM:38:ARG:HD3	1.97	0.64
1:YA:1358:G:N2	1:YA:1374:G:C6	2.65	0.64
10:YJ:44:TYR:O	10:YJ:45:THR:HB	1.95	0.64
12:RL:77:ILE:CD1	12:RL:108:ALA:HB1	2.27	0.64
1:YA:628:G:H2'	1:YA:629:G:C8	2.32	0.64
1:YA:804:A:H2'	1:YA:806:C:N4	2.12	0.64
1:RA:137:U:O5'	1:RA:137:U:C6	2.46	0.64
38:XG:117:LEU:HG	38:XG:121:ASN:HD22	1.60	0.64
1:RA:2425:A:H5''	1:RA:2427:C:O4'	1.98	0.64
15:YO:23:ALA:O	15:YO:42:PRO:HG3	1.97	0.64
1:YA:2788:C:H2'	1:YA:2789:C:C6	2.32	0.64
1:YA:1364:G:C8	24:YX:1:SER:HB2	2.32	0.64
1:YA:170:U:H2'	1:YA:171:U:H6	1.61	0.64
40:QI:25:GLY:N	40:QI:58:GLU:HA	2.13	0.64
1:YA:1973:G:C6	1:YA:1974:C:N4	2.66	0.64
1:YA:1507:C:H5'	1:YA:1508:A:OP2	1.96	0.64
11:RK:1:MET:HG3	11:RK:67:LYS:HG3	1.77	0.64
39:QH:15:ASN:O	39:QH:18:ALA:HB3	1.98	0.64
30:R3:40:LYS:HA	30:R3:43:LEU:HD12	1.79	0.64
1:YA:1400:U:O2'	1:YA:1401:G:O4'	2.13	0.64
38:XG:91:ARG:CG	38:XG:92:PRO:HD2	2.25	0.64
6:YF:147:ARG:O	6:YF:148:VAL:HG22	1.97	0.64
1:YA:747:U:O2	1:YA:2014:A:H1'	1.98	0.64
1:YA:1744:A:H3'	1:YA:1745:A:H8	1.62	0.64
40:XI:24:ASN:O	40:XI:61:ASP:HA	1.98	0.64
32:XA:1038:C:H2'	32:XA:1039:G:H8	1.62	0.64
32:QA:1219:A:H2'	32:QA:1220:G:H8	1.61	0.64
45:XN:89:ARG:HG3	45:XN:91:GLU:CG	2.27	0.64
1:YA:1264:A:H5'	27:Y0:7:PRO:HG2	1.79	0.64
21:YU:39:ASN:HB3	21:YU:62:ALA:HB3	1.79	0.64
17:RQ:39:ILE:O	17:RQ:43:GLN:HG3	1.97	0.64
32:XA:1382:C:O2'	32:XA:1383:C:H5'	1.97	0.64
43:XL:42:LYS:HG2	43:XL:43:LYS:HG2	1.80	0.64
33:QB:187:ASP:HB2	33:QB:203:ASP:CB	2.28	0.64
23:YW:19:ARG:HA	23:YW:34:SER:HA	1.78	0.64
32:QA:1201:A:H1'	32:QA:1202:U:OP2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:54:G:H2'	1:YA:55:G:O4'	1.97	0.64
6:RF:55:ASP:O	6:RF:59:ILE:HG13	1.97	0.64
1:YA:71:A:H5''	1:YA:73:A:C8	2.32	0.64
1:YA:2093:G:N2	1:YA:2094:A:C4	2.66	0.64
1:YA:1416:G:C4	1:YA:1417:C:C5	2.86	0.64
11:YK:97:THR:O	11:YK:98:ARG:HB2	1.96	0.64
43:QL:23:LEU:C	43:QL:25:ALA:H	2.00	0.64
32:QA:548:G:H8	32:QA:548:G:H5''	1.61	0.64
1:YA:2716:C:H2'	1:YA:2717:C:C6	2.32	0.64
1:YA:1286:A:H5''	14:YN:104:ALA:HB2	1.79	0.64
34:QC:13:ILE:O	34:QC:15:LYS:N	2.30	0.64
32:XA:1095:U:H2'	32:XA:1096:C:C6	2.32	0.64
32:QA:601:G:H2'	32:QA:602:A:H8	1.62	0.64
34:XC:22:PHE:HD2	41:XJ:97:ASP:HB2	1.62	0.64
1:YA:1519:G:H5'	1:YA:1520:U:OP2	1.98	0.64
1:YA:1429:G:O2'	1:YA:1430:G:H8	1.79	0.64
32:XA:679:C:O2	32:XA:712:A:C2	2.50	0.64
33:XB:116:LEU:HA	33:XB:119:GLN:HB3	1.78	0.64
32:XA:312:C:H2'	32:XA:313:A:H8	1.63	0.64
1:YA:456:C:O2'	20:YT:73:ARG:HG3	1.97	0.64
8:RH:42:LYS:HG2	8:RH:43:ASN:HD22	1.62	0.64
5:RE:95:LYS:O	5:RE:96:VAL:HB	1.97	0.64
1:RA:1720:U:H2'	1:RA:1721:G:O4'	1.97	0.64
40:XI:23:GLY:H	40:XI:60:LEU:HA	1.61	0.64
2:YB:109:A:C2	2:YB:110:C:C2	2.86	0.64
1:YA:109:C:H4'	1:YA:348:A:H4'	1.78	0.64
38:XG:107:ALA:O	38:XG:118:ARG:HB3	1.98	0.64
1:YA:621:A:OP2	1:YA:621:A:H3'	1.97	0.64
8:RH:67:ALA:HA	8:RH:138:VAL:CB	2.23	0.64
37:XF:3:HIS:HB2	37:XF:92:THR:HA	1.78	0.64
32:XA:1250:A:N3	32:XA:1287:A:N6	2.46	0.64
1:RA:2557:G:H2'	1:RA:2558:C:H6	1.61	0.64
19:RS:17:VAL:HG12	19:RS:76:VAL:HG11	1.78	0.64
32:XA:1035:A:H2	32:XA:1036:A:H62	1.46	0.64
44:XM:95:PRO:HG2	44:XM:99:GLN:HB3	1.80	0.64
43:XL:109:ARG:HB2	43:XL:118:VAL:HG21	1.78	0.64
32:QA:16:A:O2'	32:QA:17:U:H5'	1.97	0.64
1:RA:611:C:H2'	1:RA:612:G:H5'	1.78	0.64
32:QA:84:U:O2	32:QA:84:U:H2'	1.97	0.64
4:RD:182:ALA:C	4:RD:183:GLU:HG3	2.18	0.64
11:YK:24:VAL:HG13	11:YK:33:ALA:HB2	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:R3:44:ARG:N	30:R3:45:PRO:HD2	2.12	0.64
1:YA:2727:A:O2'	1:YA:2728:U:H5'	1.98	0.64
38:XG:4:ARG:HD2	38:XG:5:VAL:H	1.63	0.64
11:RK:111:LYS:HE2	11:RK:111:LYS:H	1.60	0.64
8:YH:1:MET:HB3	8:YH:21:VAL:O	1.97	0.64
23:RW:18:LYS:HG3	23:RW:19:ARG:N	2.12	0.64
23:RW:21:GLY:C	23:RW:22:VAL:HG12	2.17	0.64
1:YA:976:G:H5'	1:YA:1156:A:C6	2.32	0.64
1:YA:1343:G:O2'	1:YA:1344:U:C6	2.41	0.64
5:YE:108:ILE:HD13	5:YE:108:ILE:O	1.98	0.64
1:YA:1654:A:O2'	1:YA:1655:A:O4'	2.15	0.64
1:YA:2829:A:C2'	1:YA:2830:C:H5'	2.27	0.64
32:XA:93:U:O5'	32:XA:93:U:H6	1.81	0.64
1:YA:764:A:C2	1:YA:781:A:C2	2.85	0.64
3:YC:206:LYS:HG3	3:YC:209:ALA:H	1.63	0.64
1:RA:2136:G:H2'	1:RA:2137:U:C5	2.33	0.64
7:YG:83:THR:C	7:YG:84:LYS:HD3	2.18	0.64
20:RT:43:ILE:O	20:RT:47:VAL:HG23	1.98	0.64
1:RA:2680:U:OP1	4:RD:114:LYS:HG3	1.98	0.64
4:RD:97:SER:C	4:RD:99:GLU:HG2	2.18	0.64
1:YA:2735:G:H2'	1:YA:2736:A:H8	1.63	0.64
1:YA:1281:G:C2	1:YA:1290:C:N3	2.65	0.64
16:YP:88:ARG:NH1	16:YP:112:ARG:HH21	1.95	0.64
7:RG:59:ASP:HB2	7:RG:63:GLN:CG	2.28	0.64
1:YA:1695:G:C8	3:YC:7:PRO:HB2	2.33	0.64
31:Y4:7:VAL:HG13	31:Y4:8:LYS:N	2.13	0.64
10:YJ:111:LYS:HB2	10:YJ:115:GLY:N	2.13	0.64
1:YA:2773:C:H2'	1:YA:2774:C:H6	1.63	0.64
35:QD:53:GLN:HE21	35:QD:202:LEU:HA	1.62	0.64
32:QA:1348:U:HO2'	32:QA:1349:A:H8	1.44	0.64
3:YC:125:PRO:HA	3:YC:191:LEU:HB2	1.79	0.64
1:RA:1996:C:H4'	1:RA:1997:C:OP1	1.96	0.64
32:XA:808:C:OP1	46:XO:47:LYS:HE2	1.97	0.64
5:YE:61:ARG:O	5:YE:61:ARG:HD2	1.98	0.64
32:XA:465:A:H8	32:XA:467:U:OP1	1.80	0.64
23:YW:67:LYS:HB3	23:YW:80:SER:HB2	1.79	0.64
10:RJ:40:HIS:CD2	10:RJ:41:LYS:HG2	2.33	0.64
36:QE:80:LEU:HD23	36:QE:122:VAL:CG1	2.25	0.64
36:QE:81:GLN:HG2	36:QE:149:PRO:HG3	1.78	0.64
32:XA:86:G:O2'	32:XA:87:C:P	2.54	0.64
6:RF:134:GLN:HE22	6:RF:150:GLY:H	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YY:48:ARG:HH11	25:YY:48:ARG:HG3	1.61	0.64
1:YA:616:A:H2'	1:YA:617:G:C8	2.32	0.64
1:RA:141:G:H5'	1:RA:142:A:N7	2.13	0.64
1:RA:2680:U:P	4:RD:114:LYS:HE2	2.38	0.64
32:QA:203:G:N2	32:QA:215:C:C2	2.66	0.64
43:QL:43:LYS:HB2	43:QL:44:PRO:CD	2.27	0.64
1:RA:2849:U:O4	16:RP:20:ARG:NH1	2.31	0.64
17:RQ:40:LYS:HG2	17:RQ:44:TYR:CE1	2.32	0.64
43:QL:2:THR:HB	43:QL:5:GLN:HG3	1.78	0.64
4:YD:45:TYR:HE2	4:YD:47:ALA:HB3	1.62	0.64
49:XR:21:ASP:HB3	49:XR:23:LYS:HG2	1.79	0.64
6:RF:114:ARG:HD2	6:RF:114:ARG:H	1.62	0.64
32:QA:121:U:H6	32:QA:121:U:H5''	1.63	0.64
23:RW:18:LYS:CA	23:RW:36:ILE:HG13	2.19	0.64
7:RG:96:ALA:O	7:RG:97:VAL:HB	1.98	0.64
1:YA:303:G:C2	1:YA:304:U:C2	2.86	0.64
21:YU:14:THR:HG23	21:YU:15:GLY:N	2.10	0.64
21:YU:81:ARG:HB2	21:YU:96:LYS:HD2	1.80	0.64
1:RA:780:G:H21	1:RA:783:A:N6	1.89	0.64
14:YN:56:LYS:HA	14:YN:84:GLY:HA2	1.80	0.64
32:QA:1123:U:O3'	41:QJ:38:GLY:HA3	1.97	0.64
32:XA:1135:U:H3'	32:XA:1137:C:O2	1.98	0.64
32:QA:198:G:H2'	32:QA:199:A:C8	2.33	0.64
32:XA:268:U:H2'	32:XA:269:C:H6	1.62	0.64
52:QU:10:PRO:O	52:QU:11:PHE:HB3	1.98	0.64
33:QB:40:ILE:HG21	33:QB:201:GLY:HA2	1.78	0.64
20:RT:44:LYS:O	20:RT:48:GLN:HG2	1.96	0.64
1:RA:2148:G:C2'	1:RA:2149:U:O4'	2.45	0.64
33:QB:90:PHE:HE2	33:QB:148:GLY:HA3	1.62	0.64
32:QA:406:G:C8	32:QA:495:A:C2	2.86	0.64
1:YA:876:C:H3'	1:YA:877:A:C8	2.29	0.64
1:YA:1545:A:H2'	1:YA:1546:G:O4'	1.98	0.64
37:XF:11:HIS:CD2	37:XF:12:PRO:HD2	2.31	0.64
35:XD:195:ASN:HB3	35:XD:197:HIS:NE2	2.12	0.64
1:YA:851:C:C4'	26:YZ:46:MET:HG2	2.28	0.64
4:RD:182:ALA:C	4:RD:184:ARG:N	2.49	0.64
32:QA:769:G:H4'	32:QA:1513:A:H4'	1.80	0.64
35:XD:53:GLN:HB3	35:XD:202:LEU:HD12	1.78	0.64
1:RA:2514:U:H2'	1:RA:2515:C:C6	2.32	0.64
12:RL:82:LEU:HD23	12:RL:83:ALA:N	2.13	0.64
33:QB:19:THR:HB	33:QB:37:VAL:HB	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:YK:15:GLY:O	11:YK:16:ALA:O	2.16	0.64
11:RK:38:ILE:HD11	11:RK:112:PHE:HZ	1.61	0.64
6:YF:65:LEU:HD23	6:YF:65:LEU:H	1.63	0.64
32:QA:481:G:O2'	32:QA:482:A:H8	1.80	0.64
1:RA:783:A:H8	1:RA:784:G:H4'	1.63	0.64
32:XA:1350:A:C2	38:XG:33:GLY:HA3	2.32	0.64
1:YA:1207:C:H2'	1:YA:1208:C:H6	1.63	0.64
35:XD:116:LEU:HD21	35:XD:153:ARG:HD3	1.79	0.64
7:RG:115:GLN:N	7:RG:115:GLN:CD	2.51	0.64
32:QA:215:C:O2'	32:QA:216:U:H5'	1.98	0.64
20:YT:29:THR:H	20:YT:87:LEU:CB	2.10	0.64
32:XA:79:G:H2'	32:XA:80:A:H8	1.63	0.64
47:QP:56:ARG:O	47:QP:59:HIS:HB3	1.98	0.64
1:YA:1023:U:H6	1:YA:1023:U:H5'	1.63	0.64
37:QF:19:PRO:HA	37:QF:22:ILE:HD12	1.80	0.64
1:RA:1028:A:N6	1:RA:1125:G:H2'	2.13	0.64
1:RA:1958:C:H2'	1:RA:1959:G:H5'	1.79	0.64
1:RA:876:C:H2'	1:RA:877:A:O4'	1.98	0.64
17:YQ:79:ILE:C	17:YQ:79:ILE:HD13	2.18	0.64
9:YI:12:VAL:HG12	9:YI:13:ALA:N	2.13	0.64
1:YA:1648:U:O2'	1:YA:1649:G:O4'	2.08	0.64
18:RR:39:LEU:HA	18:RR:49:ILE:HG21	1.79	0.64
3:YC:68:ARG:HH21	3:YC:190:THR:HG23	1.63	0.64
1:YA:319:G:C6	1:YA:333:G:N1	2.66	0.64
4:RD:119:ALA:HB2	4:RD:165:MET:HB2	1.80	0.64
32:QA:374:A:H5''	32:QA:452:A:N1	2.13	0.64
23:RW:8:SER:O	23:RW:9:THR:CG2	2.44	0.64
5:YE:98:LYS:O	5:YE:99:LYS:HB2	1.98	0.64
40:XI:118:ARG:NH2	40:XI:122:ARG:HE	1.96	0.64
26:YZ:4:ILE:HG23	26:YZ:56:VAL:HG13	1.80	0.64
1:YA:533:G:H5'	17:YQ:23:TYR:CE2	2.33	0.64
10:YJ:73:VAL:HG23	10:YJ:74:TYR:N	2.13	0.64
29:R2:43:THR:O	29:R2:44:VAL:CB	2.46	0.64
19:RS:13:SER:O	19:RS:14:ALA:HB2	1.97	0.64
4:YD:94:GLN:HG2	4:YD:94:GLN:O	1.98	0.64
43:QL:87:LYS:O	43:QL:88:ASP:HB2	1.98	0.64
1:RA:1256:G:H2'	5:RE:77:ILE:HD11	1.80	0.64
1:YA:845:A:N6	1:YA:932:U:N3	2.45	0.64
9:YI:109:ALA:HB1	9:YI:125:THR:HG22	1.79	0.64
33:XB:20:ARG:NE	33:XB:20:ARG:HA	2.13	0.64
32:XA:1381:U:C4	38:XG:77:ARG:NH1	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2796:U:H3	1:RA:2799:A:H61	1.45	0.64
1:RA:1315:C:OP2	56:RA:3763:HOH:O	2.15	0.64
34:XC:120:THR:HG23	34:XC:187:GLU:O	1.97	0.64
10:YJ:80:HIS:HB3	10:YJ:81:ILE:HG13	1.80	0.64
15:RO:41:ALA:HB2	15:RO:48:LEU:HD21	1.80	0.64
32:QA:918:A:H2'	32:QA:919:A:C8	2.32	0.64
5:YE:139:LYS:HB2	5:YE:139:LYS:NZ	2.13	0.64
1:YA:1709:U:H2'	1:YA:1710:G:C8	2.33	0.64
32:XA:824:G:O2'	32:XA:825:A:H5'	1.97	0.64
45:QN:26:LEU:HD23	45:QN:30:ILE:HD11	1.80	0.64
44:XM:21:ILE:HB	44:XM:24:VAL:HG23	1.80	0.63
48:QQ:20:ILE:H	48:QQ:47:ASP:CG	2.02	0.63
12:RL:28:GLY:O	12:RL:29:LYS:HB3	1.99	0.63
50:QS:50:VAL:CG2	50:QS:70:LEU:HB3	2.27	0.63
9:RI:126:ARG:HA	9:RI:129:GLU:CG	2.27	0.63
1:YA:279:A:N6	1:YA:361:G:O2'	2.31	0.63
1:RA:1475:G:O2'	1:RA:1476:U:P	2.55	0.63
36:XE:131:ASN:O	36:XE:135:VAL:HG23	1.98	0.63
1:YA:533:G:H21	17:YQ:44:TYR:HD1	1.46	0.63
1:YA:2285:C:OP2	28:Y1:5:ARG:HD3	1.98	0.63
1:YA:2135:A:C2'	1:YA:2136:G:O4'	2.46	0.63
43:QL:88:ASP:HB3	43:QL:89:LEU:HD22	1.80	0.63
1:RA:545:U:H2'	1:RA:546:U:C4'	2.28	0.63
32:XA:537:G:H5''	43:XL:109:ARG:NH1	2.12	0.63
1:YA:1590:A:H2'	1:YA:1591:A:H8	1.61	0.63
20:RT:28:ASN:HA	20:RT:91:GLN:HE22	1.61	0.63
20:RT:28:ASN:OD1	20:RT:29:THR:HG22	1.98	0.63
1:RA:842:U:O4	56:RA:3584:HOH:O	2.12	0.63
20:RT:9:LYS:HG3	20:RT:9:LYS:O	1.98	0.63
1:RA:1079:C:C4	1:RA:1088:A:H2	2.16	0.63
1:YA:1338:G:H4'	20:YT:18:GLU:CG	2.29	0.63
42:QK:122:PRO:HG2	52:QU:33:ARG:O	1.99	0.63
21:YU:12:VAL:HG21	21:YU:38:ILE:HG12	1.80	0.63
31:Y4:36:ARG:HG2	31:Y4:37:GLN:N	2.12	0.63
45:QN:9:GLU:OE1	45:QN:60:ARG:HB3	1.98	0.63
18:YR:78:ARG:HB3	18:YR:83:TYR:CD1	2.33	0.63
33:QB:148:GLY:O	33:QB:151:LYS:HG2	1.97	0.63
52:XU:35:GLU:OE2	52:XU:35:GLU:HA	1.97	0.63
34:QC:156:LEU:HD12	34:QC:156:LEU:N	2.12	0.63
32:QA:500:G:H2'	32:QA:501:C:C6	2.34	0.63
3:RC:16:VAL:H	3:RC:203:VAL:CG1	2.11	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1993:U:H4'	4:YD:133:THR:CG2	2.28	0.63
1:YA:2376:A:H2	15:YO:92:PHE:HD2	1.46	0.63
3:RC:259:ASN:C	3:RC:261:ARG:H	2.02	0.63
2:RB:49:C:OP1	15:RO:101:GLY:HA3	1.98	0.63
1:YA:565:C:H4'	1:YA:1253:A:N6	2.13	0.63
16:YP:92:ARG:O	16:YP:92:ARG:HG2	1.98	0.63
7:YG:154:GLU:O	7:YG:156:TYR:N	2.30	0.63
3:YC:51:ARG:O	3:YC:53:ILE:HG22	1.96	0.63
27:R0:9:ARG:HG3	27:R0:9:ARG:HH21	1.63	0.63
40:XI:30:ASN:O	40:XI:31:GLN:HG2	1.98	0.63
32:XA:377:G:H2'	32:XA:378:G:H8	1.63	0.63
46:QO:26:VAL:HG12	46:QO:30:LEU:HD11	1.80	0.63
1:YA:1728:C:H2'	1:YA:1730:C:O2	1.98	0.63
32:XA:51:A:H4'	32:XA:52:C:C5'	2.29	0.63
1:YA:857:G:H2'	1:YA:858:G:H4'	1.80	0.63
18:RR:1:MET:HG3	18:RR:1:MET:O	1.97	0.63
16:YP:50:ARG:HA	16:YP:57:ALA:O	1.99	0.63
19:RS:74:ILE:HD13	19:RS:105:VAL:HG22	1.79	0.63
33:QB:103:TRP:HE1	33:QB:150:ILE:HD11	1.62	0.63
51:QT:68:LYS:NZ	51:QT:68:LYS:HB2	2.14	0.63
1:YA:1309:G:OP1	29:Y2:9:VAL:HG12	1.98	0.63
1:YA:774:G:O2'	1:YA:775:G:H8	1.82	0.63
19:RS:84:ARG:HB2	19:RS:96:ILE:HD11	1.79	0.63
50:QS:4:LEU:HD12	50:QS:4:LEU:H	1.62	0.63
12:YL:20:GLY:HA2	12:YL:28:GLY:HA2	1.80	0.63
1:RA:2086:U:H2'	1:RA:2087:G:C8	2.34	0.63
3:YC:196:ASN:OD1	3:YC:199:HIS:HB2	1.99	0.63
32:QA:1329:A:H5''	44:QM:25:GLY:H	1.63	0.63
37:QF:52:ASN:O	37:QF:53:LYS:HB3	1.98	0.63
21:RU:13:LEU:HD11	21:RU:70:ALA:HB2	1.80	0.63
35:XD:84:ASN:HD22	35:XD:84:ASN:C	2.02	0.63
32:QA:1447:A:H5'	32:QA:1448:C:OP2	1.99	0.63
1:RA:714:U:H5'	1:RA:715:A:OP2	1.98	0.63
33:XB:212:TYR:HD2	33:XB:212:TYR:O	1.82	0.63
1:RA:1059:G:C6	1:RA:1060:U:C4	2.86	0.63
7:RG:83:THR:HA	7:RG:84:LYS:CE	2.28	0.63
51:QT:82:ILE:O	51:QT:86:ALA:HB3	1.98	0.63
1:RA:1509:A:O2'	1:RA:1510:G:P	2.57	0.63
1:YA:308:G:H21	1:YA:329:G:H21	1.45	0.63
1:YA:616:A:H2'	1:YA:617:G:H8	1.63	0.63
4:YD:107:VAL:CG1	4:YD:109:VAL:HG23	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:YJ:23:LYS:HB3	10:YJ:28:LEU:HD13	1.80	0.63
12:RL:55:MET:HA	12:RL:55:MET:CE	2.29	0.63
32:QA:1316:G:N2	32:QA:1318:A:H3'	2.13	0.63
22:YV:75:GLN:HB2	22:YV:90:ASP:O	1.98	0.63
32:QA:109:A:H2'	32:QA:326:G:N2	2.12	0.63
1:YA:2550:G:C2	1:YA:2559:C:O2	2.51	0.63
1:YA:1827:U:H2'	1:YA:1828:G:O4'	1.97	0.63
18:YR:49:ILE:HG22	18:YR:54:VAL:N	2.14	0.63
1:RA:1509:A:O2'	1:RA:1510:G:OP2	2.13	0.63
1:YA:310:A:O2'	1:YA:311:A:C8	2.35	0.63
1:YA:301:G:H3'	21:YU:81:ARG:HH12	1.64	0.63
1:YA:2886:A:H62	27:Y0:39:ARG:HD3	1.64	0.63
14:YN:97:ILE:HD11	14:YN:99:LYS:NZ	2.12	0.63
1:YA:128:C:HO2'	1:YA:129:C:H6	1.42	0.63
10:RJ:54:ILE:HD12	10:RJ:54:ILE:C	2.19	0.63
1:YA:1021:A:C2'	1:YA:1022:G:H4'	2.28	0.63
1:YA:622:G:H2'	1:YA:623:C:C6	2.34	0.63
32:XA:238:A:H2'	32:XA:239:U:H5''	1.81	0.63
19:RS:73:LYS:HB2	19:RS:106:VAL:HB	1.79	0.63
14:RN:98:LEU:HD22	27:R0:42:ILE:HD11	1.79	0.63
1:RA:580:U:H2'	1:RA:581:C:C6	2.33	0.63
4:YD:124:ARG:HD3	4:YD:125:TRP:CD1	2.33	0.63
52:QU:36:PHE:HD1	52:QU:39:LYS:HB3	1.63	0.63
40:QI:90:ASP:CG	40:QI:92:SER:HB3	2.19	0.63
32:XA:444:G:O2'	32:XA:445:G:H5'	1.97	0.63
40:QI:24:ASN:H	40:QI:61:ASP:HB2	1.63	0.63
5:RE:154:ASP:OD2	5:RE:157:LEU:HB3	1.98	0.63
1:YA:755:U:O2'	1:YA:756:A:H5'	1.99	0.63
30:Y3:15:LYS:NZ	30:Y3:19:GLY:HA2	2.14	0.63
42:QK:19:VAL:HG22	42:QK:82:GLU:HG2	1.80	0.63
43:XL:79:ILE:HD12	43:XL:96:THR:HG21	1.80	0.63
3:RC:18:VAL:HG13	3:RC:18:VAL:O	1.98	0.63
23:RW:73:PRO:CG	23:RW:76:ARG:HD2	2.29	0.63
23:RW:76:ARG:HH21	23:RW:76:ARG:CG	2.01	0.63
1:RA:2800:A:C4'	1:RA:2801:G:OP2	2.25	0.63
33:QB:163:ILE:HG23	33:QB:164:ASP:N	2.09	0.63
1:YA:223:A:N6	1:YA:422:A:C6	2.67	0.63
1:YA:151:C:H2'	1:YA:152:A:C8	2.34	0.63
10:RJ:130:HIS:HD2	10:RJ:132:HIS:N	1.88	0.63
21:YU:81:ARG:CB	21:YU:96:LYS:HD2	2.29	0.63
1:YA:1081:U:H4'	9:YI:123:ALA:HA	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1998:A:H4'	1:YA:2724:U:O2'	1.98	0.63
35:XD:8:LEU:HD22	35:XD:21:LYS:HD2	1.80	0.63
32:XA:1239:A:N6	32:XA:1299:A:N6	2.46	0.63
41:XJ:84:VAL:CG2	41:XJ:85:ASP:H	2.11	0.63
4:YD:10:GLY:HA3	4:YD:26:VAL:HB	1.80	0.63
16:RP:33:GLU:OE1	32:QA:346:G:OP1	2.17	0.63
32:XA:1250:A:H2'	32:XA:1251:A:O4'	1.98	0.63
1:RA:2324:U:H3'	1:RA:2325:G:C5'	2.27	0.63
32:QA:212:G:H2'	32:QA:213:G:H8	1.63	0.63
1:RA:2649:C:H2'	1:RA:2650:U:H6	1.64	0.63
32:QA:1049:U:C4'	32:QA:1050:G:OP2	2.46	0.63
40:QI:25:GLY:H	40:QI:58:GLU:HA	1.63	0.63
1:RA:627:A:C6	1:RA:637:A:C8	2.87	0.63
32:QA:1430:A:C2	32:QA:1471:U:C2	2.87	0.63
1:YA:2729:G:H5''	4:YD:190:LYS:HZ3	1.62	0.63
1:RA:1958:C:C2'	1:RA:1959:G:H5'	2.28	0.63
43:XL:6:LEU:HA	43:XL:9:LYS:O	1.98	0.63
32:QA:1225:A:H2'	32:QA:1226:C:C5	2.33	0.63
20:YT:62:VAL:HG12	20:YT:63:VAL:N	2.13	0.63
1:RA:90:U:H2'	1:RA:91:A:C8	2.34	0.63
7:RG:174:LYS:C	7:RG:174:LYS:HD2	2.19	0.63
15:YO:17:LYS:O	15:YO:17:LYS:HE3	1.99	0.63
42:XK:63:GLN:HB2	42:XK:98:ALA:HB2	1.79	0.63
3:YC:77:VAL:CG2	3:YC:112:GLY:H	2.12	0.63
9:YI:36:GLU:O	9:YI:36:GLU:HG2	1.98	0.63
1:YA:217:A:H2'	1:YA:218:A:O4'	1.99	0.63
23:RW:19:ARG:HA	23:RW:34:SER:HA	1.81	0.63
3:YC:71:ASP:HA	3:YC:117:SER:O	1.99	0.63
1:YA:2337:G:H2'	1:YA:2337:G:N3	2.13	0.63
1:YA:857:G:N7	1:YA:858:G:C8	2.66	0.63
1:YA:230:G:N2	1:YA:231:A:C5	2.67	0.63
47:QP:22:ALA:HB2	47:QP:32:PHE:HA	1.80	0.63
29:Y2:46:LYS:N	29:Y2:46:LYS:HD2	2.13	0.63
45:XN:76:PHE:CE2	45:XN:92:ILE:HG21	2.31	0.63
1:YA:740:C:H5'	1:YA:1784:A:C3'	2.26	0.63
32:QA:1239:A:N6	32:QA:1299:A:H62	1.97	0.63
34:XC:63:ILE:HG12	34:XC:65:VAL:HG23	1.81	0.63
1:RA:1188:U:C2'	1:RA:1189:A:H5'	2.29	0.63
1:YA:960:A:H2'	1:YA:962:G:H5'	1.81	0.63
3:RC:203:VAL:O	3:RC:204:LEU:HB2	1.99	0.63
6:YF:8:LYS:HG3	6:YF:12:VAL:HG21	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:RF:131:VAL:HG21	6:RF:151:LEU:HG	1.81	0.63
43:XL:97:VAL:O	43:XL:97:VAL:HG23	1.98	0.63
20:RT:27:SER:O	20:RT:28:ASN:CG	2.36	0.63
30:R3:56:LEU:H	30:R3:56:LEU:HD22	1.64	0.63
1:RA:2703:C:H2'	1:RA:2704:C:H6	1.64	0.63
1:RA:1023:U:H5'	1:RA:1023:U:H6	1.64	0.63
5:YE:122:GLU:HA	5:YE:190:ALA:HB2	1.79	0.63
50:XS:38:THR:HA	50:XS:69:LYS:HA	1.80	0.63
1:YA:1313:U:O2	1:YA:1313:U:C2'	2.46	0.63
14:YN:37:THR:HB	14:YN:40:LYS:HB2	1.81	0.63
17:YQ:61:ILE:CD1	17:YQ:92:LYS:HD3	2.26	0.63
1:YA:2815:C:O2	27:Y0:40:HIS:CE1	2.52	0.63
22:RV:10:LYS:N	22:RV:10:LYS:HD3	2.04	0.63
1:YA:137:U:C4	1:YA:138:U:C2	2.86	0.63
33:QB:105:THR:HG22	33:QB:105:THR:O	1.97	0.63
33:XB:78:ALA:O	33:XB:213:LEU:HD23	1.99	0.63
3:RC:229:HIS:CD2	3:RC:246:PRO:HB3	2.33	0.63
1:YA:1364:G:H1'	1:YA:1368:G:N2	2.14	0.63
32:QA:116:A:H2'	32:QA:117:G:C8	2.33	0.63
41:QJ:8:ILE:HA	41:QJ:99:GLN:O	1.99	0.63
33:QB:19:THR:HA	33:QB:37:VAL:HG23	1.81	0.63
5:RE:153:LEU:HB3	5:RE:171:ASP:HB3	1.81	0.63
32:QA:569:C:H5''	32:QA:570:G:OP1	1.98	0.63
1:YA:2332:C:H5''	1:YA:2333:A:OP2	1.99	0.63
32:QA:1458:G:H5'	51:QT:26:MET:HB3	1.81	0.63
1:YA:1339:G:H21	1:YA:1603:A:H1'	1.63	0.63
1:YA:1307:A:N6	1:YA:1606:C:H6	1.96	0.63
1:YA:152:A:C2	1:YA:175:G:C2	2.87	0.63
36:QE:152:VAL:HB	36:QE:155:LYS:HZ2	1.63	0.63
6:YF:36:ASN:O	6:YF:37:MET:HB3	1.99	0.63
32:QA:272:C:H2'	32:QA:273:U:H6	1.63	0.63
19:YS:9:HIS:H	19:YS:102:HIS:CE1	2.17	0.63
1:YA:2760:C:O2	1:YA:2760:C:H2'	1.99	0.63
1:YA:200:U:C5	1:YA:201:C:C4	2.87	0.63
1:RA:2149:U:O2'	1:RA:2150:C:O4'	2.15	0.63
3:RC:123:ILE:O	3:RC:123:ILE:CG1	2.47	0.63
32:XA:1013:G:H22	32:XA:1015:G:H3'	1.62	0.63
43:QL:43:LYS:NZ	43:QL:43:LYS:HB2	2.14	0.63
8:RH:3:VAL:HB	8:RH:37:VAL:O	1.99	0.63
42:QK:87:GLY:N	42:QK:113:THR:HG22	2.14	0.63
8:YH:94:ILE:HB	8:YH:98:ASP:HB2	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:R3:53:ASP:HA	30:R3:56:LEU:HD23	1.80	0.63
19:RS:96:ILE:O	19:RS:96:ILE:HG13	1.97	0.63
52:QU:19:LYS:N	52:QU:19:LYS:HE2	2.14	0.63
1:RA:1026:G:H2'	1:RA:1027:A:C8	2.33	0.63
14:RN:24:MET:HG2	14:RN:44:LEU:HD22	1.79	0.63
32:XA:624:C:H2'	32:XA:625:U:O4'	1.99	0.63
40:QI:112:ARG:HH22	41:QJ:64:GLN:HE22	1.46	0.63
49:QR:50:TYR:O	49:QR:54:LEU:HB2	1.98	0.63
10:RJ:43:GLU:O	10:RJ:45:THR:N	2.31	0.62
10:RJ:44:TYR:CB	17:RQ:63:ARG:HB3	2.18	0.62
18:RR:4:VAL:HG23	18:RR:39:LEU:HG	1.80	0.62
50:XS:50:VAL:HG11	50:XS:70:LEU:HB3	1.81	0.62
1:YA:2423:U:H5''	1:YA:2424:C:OP1	1.99	0.62
1:YA:1608:A:N7	1:YA:1611:C:N4	2.46	0.62
14:YN:42:LYS:HA	14:YN:45:ARG:HD3	1.80	0.62
36:QE:81:GLN:N	36:QE:81:GLN:NE2	2.42	0.62
32:QA:451:A:C4'	32:QA:452:A:O5'	2.41	0.62
1:YA:647:G:O2'	1:YA:648:G:H5'	1.99	0.62
1:RA:1993:U:H4'	4:RD:133:THR:CG2	2.25	0.62
32:XA:1134:G:C5	32:XA:1135:U:H1'	2.33	0.62
16:YP:54:LEU:HA	16:YP:76:HIS:CD2	2.33	0.62
32:XA:270:A:H2'	32:XA:271:C:H6	1.64	0.62
4:RD:151:THR:HG22	4:RD:152:PRO:N	2.13	0.62
6:YF:110:ILE:HD13	6:YF:110:ILE:H	1.64	0.62
32:XA:1268:G:H21	32:XA:1327:C:C1'	2.10	0.62
32:XA:1375:A:O2'	38:XG:101:ARG:NH2	2.32	0.62
1:RA:1045:C:O5'	1:RA:1046:A:H5'	1.99	0.62
1:YA:2617:U:H2'	1:YA:2618:G:H5'	1.81	0.62
11:RK:21:CYS:CB	11:RK:39:ILE:HD11	2.29	0.62
32:QA:1002:G:H2'	32:QA:1003:G:O4'	1.99	0.62
1:YA:2288:A:H4'	1:YA:2289:G:OP2	1.99	0.62
1:RA:2325:G:C6	1:RA:2326:C:N4	2.66	0.62
7:RG:126:THR:HG22	7:RG:127:GLN:N	2.13	0.62
50:XS:45:GLY:H	50:XS:61:VAL:HB	1.64	0.62
1:YA:2147:A:H2'	1:YA:2147:A:N3	2.13	0.62
32:QA:1038:C:H2'	32:QA:1039:G:C8	2.34	0.62
42:QK:85:VAL:HG11	42:QK:92:ARG:HG3	1.81	0.62
13:RM:31:PHE:CE2	13:RM:110:GLU:HG2	2.34	0.62
32:XA:1052:U:H5''	32:XA:1053:G:OP2	1.99	0.62
1:RA:727:A:H2	3:RC:8:THR:HG21	1.63	0.62
9:YI:91:LYS:HB3	9:YI:94:LYS:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:QS:10:ILE:HD11	50:QS:15:LEU:HB2	1.80	0.62
1:YA:1956:U:O2	1:YA:1985:C:H4'	1.97	0.62
6:YF:122:ASP:HB2	6:YF:126:ASN:HB2	1.80	0.62
10:RJ:44:TYR:O	10:RJ:45:THR:CB	2.47	0.62
32:XA:1255:G:O2'	32:XA:1258:G:H1'	1.99	0.62
32:XA:1183:U:O2'	32:XA:1184:G:OP1	2.17	0.62
2:YB:5:U:H2'	2:YB:6:G:H8	1.63	0.62
23:YW:37:VAL:HG23	23:YW:38:ARG:HH11	1.63	0.62
51:QT:38:ILE:HD11	51:QT:82:ILE:HG22	1.81	0.62
36:QE:149:PRO:O	36:QE:152:VAL:HG22	1.98	0.62
6:RF:175:PRO:O	6:RF:176:PHE:HB2	1.98	0.62
1:YA:1830:C:H5'	3:YC:14:HIS:CE1	2.34	0.62
32:XA:575:G:H4'	32:XA:576:C:O5'	1.99	0.62
14:YN:63:ARG:HH12	14:YN:81:ASN:HD21	1.46	0.62
25:YY:48:ARG:O	25:YY:51:ALA:HB3	2.00	0.62
1:YA:622:G:H2'	1:YA:623:C:C5	2.34	0.62
16:YP:48:ALA:HB3	16:YP:59:THR:CB	2.29	0.62
1:RA:1820:U:O2	3:RC:199:HIS:HB3	2.00	0.62
32:XA:344:A:H5''	32:XA:345:C:C5	2.35	0.62
6:RF:131:VAL:HG22	6:RF:151:LEU:H	1.64	0.62
32:XA:1066:C:H2'	32:XA:1067:A:C8	2.34	0.62
1:YA:1734:G:O2'	1:YA:1735:A:H8	1.82	0.62
18:YR:43:ASN:HD22	18:YR:44:GLY:H	1.45	0.62
21:YU:26:ASN:OD1	21:YU:34:ILE:HD12	1.99	0.62
1:RA:815:C:OP1	18:RR:85:LYS:HE2	2.00	0.62
44:XM:36:ALA:HB3	44:XM:55:LEU:HD11	1.79	0.62
1:RA:869:G:O2'	13:RM:8:LYS:HD3	1.99	0.62
3:RC:71:ASP:HA	3:RC:117:SER:O	1.99	0.62
2:YB:52:A:O2'	2:YB:53:A:C8	2.51	0.62
4:YD:208:LYS:O	4:YD:209:ALA:HB2	1.98	0.62
32:XA:500:G:H5''	32:XA:500:G:H8	1.62	0.62
1:RA:1798:U:OP1	3:RC:255:LYS:O	2.17	0.62
47:QP:67:ILE:HG23	47:QP:68:SER:O	1.98	0.62
32:XA:39:G:H2'	32:XA:40:C:H6	1.63	0.62
20:YT:10:VAL:HG23	20:YT:11:LEU:HD12	1.80	0.62
17:YQ:4:LYS:HZ2	17:YQ:6:GLY:HA3	1.63	0.62
32:XA:702:A:H5'	32:XA:703:G:N7	2.14	0.62
1:YA:511:U:H5''	1:YA:512:G:OP2	2.00	0.62
1:YA:1393:A:N6	20:YT:19:LYS:HB2	2.14	0.62
12:RL:93:ASN:ND2	12:RL:94:THR:H	1.92	0.62
1:YA:1059:G:N1	1:YA:1088:A:C2	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:991:C:O5'	1:YA:991:C:H6	1.82	0.62
43:QL:29:LYS:O	43:QL:81:ILE:HG22	1.99	0.62
16:YP:88:ARG:HE	16:YP:112:ARG:NH2	1.96	0.62
32:XA:765:G:N7	32:XA:812:G:C4	2.67	0.62
31:Y4:7:VAL:HG13	31:Y4:8:LYS:H	1.64	0.62
35:QD:158:LEU:O	35:QD:161:ALA:HB3	2.00	0.62
15:YO:13:ARG:O	15:YO:17:LYS:HB2	1.99	0.62
32:XA:500:G:H5''	32:XA:500:G:C8	2.33	0.62
32:QA:1234:C:O2'	32:QA:1235:U:H5'	1.99	0.62
18:RR:90:ARG:O	18:RR:91:GLN:HB3	2.00	0.62
33:QB:139:GLU:O	33:QB:143:LEU:HD23	1.99	0.62
32:QA:896:C:H2'	32:QA:897:C:H6	1.63	0.62
22:YV:61:LEU:H	22:YV:61:LEU:HD23	1.65	0.62
1:RA:1176:U:H2'	1:RA:1177:G:C4	2.34	0.62
32:QA:284:C:H2'	32:QA:285:C:H6	1.63	0.62
8:YH:59:ALA:HA	8:YH:63:ALA:HB3	1.80	0.62
1:YA:2345:G:C8	1:YA:2347:C:C5	2.87	0.62
1:YA:2822:G:H5''	4:YD:164:GLN:NE2	2.08	0.62
33:XB:66:ILE:H	33:XB:88:GLN:HB3	1.64	0.62
4:RD:90:PHE:C	4:RD:92:VAL:H	2.03	0.62
48:QQ:80:LYS:HB2	48:QQ:80:LYS:NZ	2.13	0.62
11:RK:69:VAL:O	11:RK:76:VAL:HA	2.00	0.62
2:YB:75:G:H1	2:YB:102:G:N2	1.97	0.62
29:R2:35:ARG:HG2	29:R2:42:LEU:HD11	1.80	0.62
1:YA:957:C:O2'	1:YA:959:A:H5''	1.99	0.62
43:XL:19:ASN:HD22	43:XL:19:ASN:N	1.96	0.62
1:YA:2401:U:H5''	1:YA:2402:U:OP2	1.99	0.62
4:RD:182:ALA:O	4:RD:184:ARG:N	2.31	0.62
5:YE:29:HIS:HA	5:YE:32:VAL:HG22	1.81	0.62
1:RA:893:C:H2'	1:RA:894:U:O4'	2.00	0.62
1:YA:706:A:H2'	1:YA:707:G:O4'	2.00	0.62
32:XA:748:G:H2'	32:XA:749:A:H8	1.63	0.62
17:RQ:63:ARG:HD2	17:RQ:64:ILE:H	1.64	0.62
18:RR:49:ILE:HG13	18:RR:49:ILE:O	2.00	0.62
32:XA:1363:A:C6	32:XA:1365:G:C6	2.88	0.62
1:YA:1398:C:O2'	1:YA:1399:C:O4'	2.18	0.62
1:YA:1605:C:H3'	1:YA:1606:C:C5'	2.30	0.62
32:XA:1073:U:H2'	32:XA:1074:G:H8	1.64	0.62
1:YA:185:G:C6	1:YA:212:G:C2	2.87	0.62
9:RI:15:GLY:CA	9:RI:50:LYS:HB3	2.28	0.62
1:YA:1024:G:C3'	1:YA:1025:G:H5''	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:QM:10:ASP:CG	44:QM:44:ILE:HB	2.20	0.62
1:RA:1045:C:C3'	1:RA:1046:A:H5'	2.29	0.62
34:QC:54:ILE:HD12	34:QC:54:ILE:C	2.19	0.62
1:YA:2812:G:N2	1:YA:2889:C:C2	2.67	0.62
10:YJ:89:PHE:HE2	10:YJ:100:VAL:HG11	1.65	0.62
34:XC:179:ALA:HB1	34:XC:202:PHE:HE1	1.60	0.62
26:RZ:29:ARG:HH21	26:RZ:29:ARG:CG	2.12	0.62
50:XS:59:VAL:HG21	50:XS:73:PHE:HB3	1.80	0.62
6:YF:12:VAL:HA	6:YF:15:LEU:HB2	1.81	0.62
15:YO:26:LEU:HB3	15:YO:92:PHE:CD1	2.34	0.62
15:YO:51:ALA:HB3	15:YO:78:VAL:CG2	2.30	0.62
23:YW:20:LEU:HD12	23:YW:20:LEU:N	2.13	0.62
1:YA:2622:U:O2'	1:YA:2825:G:N7	2.32	0.62
1:RA:2021:C:P	27:R0:8:THR:HG21	2.39	0.62
1:RA:666:A:H2'	1:RA:667:U:H6	1.65	0.62
19:RS:59:GLU:HA	19:RS:64:ALA:HB2	1.81	0.62
1:RA:118:A:C8	1:RA:119:A:C8	2.87	0.62
1:YA:2244:U:H2'	1:YA:2245:U:O4'	1.99	0.62
1:YA:1865:U:H2'	1:YA:1866:A:H8	1.64	0.62
26:YZ:18:LYS:O	26:YZ:22:THR:HG23	1.98	0.62
40:XI:114:LYS:HB2	40:XI:117:LEU:HD12	1.80	0.62
17:RQ:91:ARG:NE	18:RR:11:GLN:HB2	2.14	0.62
17:RQ:91:ARG:HH12	18:RR:10:LYS:HB3	1.65	0.62
1:YA:397:U:OP1	24:YX:30:PRO:CA	2.39	0.62
1:YA:1534:U:H6	1:YA:1538:G:N1	1.98	0.62
1:YA:311:A:O2'	1:YA:312:G:OP1	2.17	0.62
32:XA:109:A:C6	32:XA:327:A:C6	2.88	0.62
32:XA:204:G:H2'	32:XA:205:A:H8	1.64	0.62
1:YA:503:A:C4	1:YA:506:G:N7	2.67	0.62
25:YY:60:LYS:HG2	25:YY:60:LYS:O	1.99	0.62
13:YM:35:ALA:HB3	13:YM:99:GLY:N	2.12	0.62
33:QB:89:PHE:CZ	33:QB:153:MET:HB2	2.35	0.62
1:YA:2226:C:H2'	1:YA:2227:A:O4'	1.99	0.62
44:XM:93:GLY:O	44:XM:109:LYS:HG3	1.98	0.62
1:YA:2401:U:H3'	1:YA:2402:U:H5''	1.81	0.62
1:RA:875:G:C2'	1:RA:876:C:H5'	2.29	0.62
5:YE:5:LEU:HA	5:YE:120:VAL:HG13	1.81	0.62
35:XD:196:GLU:O	35:XD:199:ILE:HG12	2.00	0.62
5:RE:36:ALA:O	5:RE:39:ALA:HB3	2.00	0.62
32:XA:1502:A:H5'	32:XA:1504:G:N7	2.15	0.62
32:XA:890:G:HO2'	32:XA:891:U:P	2.23	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:141:ARG:HB3	4:YD:141:ARG:HH11	1.64	0.62
19:RS:2:GLU:O	19:RS:107:VAL:O	2.16	0.62
1:YA:1361:G:C2'	1:YA:1362:C:H5'	2.30	0.62
33:QB:212:TYR:HA	33:QB:215:ALA:HB3	1.82	0.62
33:XB:89:PHE:HB3	33:XB:149:GLY:O	1.99	0.62
1:YA:142:A:HO2'	1:YA:143:C:H6	1.45	0.62
32:XA:1146:A:O2'	32:XA:1147:C:H5'	2.00	0.62
45:QN:60:ARG:O	45:QN:61:ASN:CB	2.47	0.62
39:XH:28:SER:HA	39:XH:58:LEU:HD12	1.81	0.62
1:RA:64:A:H2'	1:RA:65:U:C6	2.34	0.62
1:YA:2195:U:H2'	1:YA:2196:C:H6	1.63	0.62
2:RB:90:C:C6	2:RB:90:C:H5'	2.31	0.62
10:RJ:77:HIS:HD2	10:RJ:79:GLY:N	1.96	0.62
1:RA:2286:G:H5'	1:RA:2286:G:C8	2.35	0.62
10:RJ:65:THR:HG23	10:RJ:66:GLY:N	2.14	0.62
1:RA:2308:G:N7	6:RF:76:PHE:HE2	1.97	0.62
9:YI:57:VAL:O	9:YI:58:ILE:HG13	1.99	0.62
12:YL:93:ASN:CG	12:YL:94:THR:H	2.02	0.62
1:YA:1511:G:O2'	1:YA:1512:C:H5'	2.00	0.62
32:QA:662:U:H2'	32:QA:663:A:C8	2.35	0.62
13:RM:77:PRO:HD2	13:RM:80:VAL:HG11	1.82	0.62
1:RA:675:A:OP1	5:RE:58:LYS:HE2	2.00	0.62
35:XD:191:SER:O	35:XD:192:ALA:HB2	2.00	0.62
32:XA:980:C:O3'	45:YN:12:ARG:NH2	2.33	0.62
23:YW:18:LYS:HD3	23:YW:19:ARG:HG2	1.81	0.62
23:YW:28:GLU:N	23:YW:31:LEU:HD21	2.03	0.62
51:QT:25:SER:O	51:QT:28:ARG:HG3	1.99	0.62
32:XA:1309:G:H2'	32:XA:1310:G:H8	1.64	0.62
1:YA:529:A:C8	1:YA:2023:C:N4	2.68	0.62
35:QD:24:VAL:HG12	35:QD:25:ARG:N	2.13	0.62
32:QA:674:G:H2'	32:QA:675:A:H8	1.65	0.62
32:QA:414:A:O2'	32:QA:415:A:O4'	2.12	0.62
6:YF:47:LYS:HA	6:YF:50:ASP:HB3	1.82	0.62
32:QA:467:U:O2'	32:QA:468:A:O5'	2.11	0.62
1:YA:2798:U:H5'	1:YA:2800:A:N6	2.14	0.62
32:XA:1287:A:HO2'	32:XA:1288:A:H8	1.38	0.62
44:QM:5:GLY:HA3	44:QM:65:GLU:HG3	1.81	0.62
51:QT:14:GLU:HA	51:QT:17:ARG:HB2	1.82	0.62
1:YA:2414:G:H2'	1:YA:2415:G:H5'	1.80	0.62
12:YL:98:ALA:O	12:YL:100:ILE:HG22	1.99	0.62
50:QS:46:LEU:H	50:QS:61:VAL:HG23	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2626:C:O2'	1:YA:2627:G:H5'	1.99	0.62
3:RC:77:VAL:O	3:RC:77:VAL:HG22	2.00	0.62
4:YD:110:THR:OG1	4:YD:171:THR:HG22	1.99	0.62
36:QE:89:THR:HG22	36:QE:90:GLY:N	2.15	0.62
1:YA:558:U:OP1	10:YJ:113:PRO:HD2	1.99	0.62
17:RQ:63:ARG:NH2	17:RQ:96:ASP:N	2.48	0.62
1:YA:1248:G:H2'	17:YQ:1:ALA:O	2.00	0.62
7:RG:102:ILE:HD13	7:RG:130:ILE:HD13	1.82	0.62
32:XA:1494:G:N2	32:XA:1495:U:C2	2.68	0.62
1:YA:1388:G:H2'	1:YA:1389:G:H8	1.62	0.62
25:YY:28:LEU:HD11	25:YY:43:LEU:HD13	1.82	0.62
1:YA:942:G:H4'	1:YA:1190:G:H5'	1.81	0.62
32:XA:451:A:H61	32:XA:481:G:H5'	1.64	0.62
32:QA:74:A:H1'	32:QA:97:G:N2	2.15	0.62
33:XB:206:ILE:HA	33:XB:209:VAL:HG22	1.82	0.62
1:YA:1417:C:C2'	1:YA:1418:G:C8	2.82	0.62
32:QA:554:A:H5''	43:QL:25:ALA:HB1	1.82	0.62
37:XF:11:HIS:HD2	37:XF:12:PRO:CD	2.11	0.62
1:YA:770:G:H1'	1:YA:1379:U:C4	2.35	0.62
4:YD:73:VAL:O	4:YD:74:GLU:HB2	2.00	0.62
51:XT:49:ALA:O	51:XT:52:GLU:HB3	2.00	0.62
20:RT:25:GLU:C	20:RT:27:SER:H	2.03	0.62
20:RT:29:THR:HB	20:RT:86:THR:CG2	2.29	0.62
32:XA:1388:C:H2'	32:XA:1389:C:H6	1.64	0.62
12:RL:57:LEU:HD22	30:R3:53:ASP:HB3	1.81	0.62
44:XM:36:ALA:HB2	44:XM:55:LEU:HD21	1.82	0.62
1:RA:1105:U:H2'	1:RA:1106:G:H8	1.65	0.62
1:YA:9:G:H1	1:YA:2629:U:H2'	1.63	0.62
38:QG:24:LYS:O	38:QG:28:ILE:HG12	1.99	0.62
41:QJ:91:ASP:O	41:QJ:92:LEU:O	2.18	0.62
32:QA:1247:U:O2'	32:QA:1248:A:H5'	2.00	0.62
38:QG:53:SER:C	38:QG:55:LYS:H	2.02	0.62
35:QD:16:THR:HG22	35:QD:17:ASP:N	2.14	0.62
47:XP:4:ILE:N	47:XP:4:ILE:HD12	2.14	0.62
14:RN:49:GLU:OE2	14:RN:95:THR:HG22	2.00	0.62
32:XA:1160:G:O6	32:XA:1181:G:C6	2.53	0.62
2:YB:49:C:OP1	15:YO:102:ARG:N	2.33	0.62
1:YA:302:C:HO2'	1:YA:303:G:H8	0.73	0.62
10:YJ:43:GLU:O	10:YJ:45:THR:N	2.33	0.62
36:QE:155:LYS:HD2	36:QE:156:ARG:N	2.14	0.62
41:XJ:15:HIS:HA	41:XJ:18:ILE:CG2	2.27	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2093:G:H5''	8:YH:24:GLY:HA3	1.82	0.62
1:RA:1045:C:C4'	1:RA:1046:A:H5'	2.29	0.62
8:RH:5:LEU:HD13	8:RH:13:GLY:HA2	1.80	0.62
11:YK:104:THR:OG1	11:YK:106:GLU:HB2	2.00	0.62
1:YA:533:G:H5'	17:YQ:23:TYR:CD2	2.35	0.62
32:XA:166:U:C2'	32:XA:167:A:H5'	2.29	0.62
36:XE:38:VAL:HG12	36:XE:39:GLY:H	1.63	0.62
1:YA:2260:C:H2'	1:YA:2261:C:H6	1.65	0.62
1:YA:910:A:H62	13:YM:12:MET:HA	1.65	0.62
32:XA:631:C:H3'	32:XA:632:U:H5'	1.81	0.62
1:RA:2014:A:H2'	1:RA:2015:A:C8	2.35	0.62
32:QA:830:G:H2'	32:QA:831:A:H8	1.65	0.62
44:QM:84:CYS:HA	50:QS:73:PHE:HD2	1.65	0.62
1:RA:979:A:H2'	1:RA:982:C:H42	1.65	0.62
12:RL:127:VAL:HG11	12:RL:142:ILE:HG21	1.81	0.62
15:RO:67:ASN:O	15:RO:69:ASP:N	2.32	0.62
34:QC:174:LEU:HD12	34:QC:174:LEU:O	2.00	0.62
29:R2:12:ARG:CZ	29:R2:12:ARG:HB2	2.29	0.62
16:RP:104:GLY:O	16:RP:106:ALA:N	2.33	0.62
7:RG:120:ILE:HD13	7:RG:121:THR:N	2.15	0.62
17:RQ:82:LEU:O	17:RQ:88:GLU:HB3	2.00	0.61
18:YR:49:ILE:HB	18:YR:51:VAL:O	2.00	0.61
1:YA:2298:A:O2'	1:YA:2299:U:C6	2.44	0.61
1:YA:1345:C:C5'	1:YA:1396:U:O4	2.48	0.61
1:YA:1358:G:C5	56:YA:3417:HOH:O	2.53	0.61
48:QQ:18:LYS:HA	48:QQ:47:ASP:CB	2.28	0.61
14:YN:67:PHE:HE2	14:YN:73:ASN:OD1	1.82	0.61
1:YA:104:A:H2'	1:YA:105:C:O4'	2.00	0.61
1:YA:2746:U:H2'	1:YA:2747:G:H5'	1.81	0.61
1:YA:192:C:OP1	56:YA:3724:HOH:O	2.16	0.61
9:RI:56:VAL:HG11	9:RI:68:PHE:CD2	2.35	0.61
38:XG:117:LEU:HA	38:XG:121:ASN:HB2	1.81	0.61
37:XF:91:ARG:O	37:XF:93:LYS:HE3	2.00	0.61
32:XA:1304:G:H1'	32:XA:1333:A:N6	2.14	0.61
14:RN:73:ASN:O	14:RN:76:VAL:HG12	1.99	0.61
1:RA:544:C:N3	1:RA:548:G:OP1	2.33	0.61
44:XM:93:GLY:O	44:XM:94:LEU:HG	2.00	0.61
1:YA:63:A:N6	1:YA:91:A:H62	1.97	0.61
8:YH:37:VAL:HG23	8:YH:38:PRO:HD2	1.82	0.61
5:YE:5:LEU:HD23	5:YE:120:VAL:HG22	1.82	0.61
3:RC:257:ARG:NE	3:RC:269:ARG:HH22	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:8:C:O2'	1:YA:9:G:H5'	2.00	0.61
33:QB:58:LYS:NZ	33:QB:62:ARG:HG3	2.14	0.61
9:YI:35:MET:C	9:YI:37:PHE:H	2.03	0.61
52:QU:4:LYS:O	52:QU:4:LYS:HD2	1.99	0.61
33:QB:119:GLN:C	33:QB:119:GLN:HE21	2.02	0.61
1:YA:2236:U:H2'	1:YA:2237:G:O4'	2.00	0.61
44:QM:86:ARG:HH21	44:QM:96:VAL:HG12	1.65	0.61
1:RA:613:A:H8	1:RA:616:A:N1	1.98	0.61
40:QI:40:ARG:HA	40:QI:44:ARG:HB3	1.82	0.61
38:XG:148:LYS:NZ	38:XG:148:LYS:HB2	2.15	0.61
1:YA:2506:U:H3'	1:YA:2506:U:H6	1.65	0.61
38:XG:64:ALA:HB2	38:XG:126:ALA:HB1	1.81	0.61
1:RA:654:A:H5'	1:RA:654:A:N3	2.15	0.61
18:RR:39:LEU:HA	18:RR:49:ILE:CG2	2.30	0.61
50:XS:5:LYS:HE3	50:XS:6:LYS:N	2.09	0.61
1:YA:975:A:O2'	1:YA:976:G:O5'	2.17	0.61
1:YA:1388:G:HO2'	1:YA:1389:G:H8	1.47	0.61
4:YD:117:GLY:O	4:YD:119:ALA:N	2.32	0.61
32:QA:841:C:H3'	32:QA:843:U:OP2	2.00	0.61
1:YA:655:A:H4'	1:YA:656:G:H5'	1.83	0.61
1:YA:2093:G:C5'	8:YH:24:GLY:HA3	2.31	0.61
1:YA:763:G:O2'	1:YA:764:A:H3'	2.00	0.61
32:XA:940:C:H5'	38:XG:101:ARG:NH2	2.13	0.61
47:XP:8:ARG:HB3	47:XP:28:ARG:NH1	2.15	0.61
32:QA:1003:G:H22	32:QA:1005:A:H5'	1.65	0.61
1:YA:1157:G:H2'	1:YA:1158:C:H6	1.64	0.61
33:XB:44:LYS:O	33:XB:48:MET:HG3	2.00	0.61
1:RA:1936:A:C2	1:RA:1943:U:H5	2.18	0.61
43:QL:85:ARG:NH2	43:QL:87:LYS:HD2	2.15	0.61
5:RE:108:ILE:HD11	5:RE:180:LEU:HD13	1.81	0.61
32:XA:252:U:H2'	32:XA:253:A:C8	2.34	0.61
1:YA:1796:U:H2'	1:YA:1797:G:C8	2.35	0.61
13:YM:40:ARG:HB2	13:YM:93:VAL:HG21	1.82	0.61
32:XA:935:A:HO2'	32:XA:936:C:H6	1.43	0.61
19:RS:66:ILE:HD13	19:RS:67:ASP:N	2.16	0.61
4:RD:62:LYS:HB2	4:RD:63:PRO:HD3	1.81	0.61
32:QA:261:U:OP2	51:QT:73:ARG:NH2	2.34	0.61
1:RA:2296:U:H4'	1:RA:2297:A:OP1	2.00	0.61
32:QA:1136:C:O2	32:QA:1136:C:H2'	1.99	0.61
8:RH:62:LEU:HD12	8:RH:63:ALA:N	2.14	0.61
16:RP:80:VAL:O	16:RP:81:ASP:HB3	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:YS:32:ALA:O	19:YS:33:LEU:HB2	2.00	0.61
23:RW:17:ALA:O	23:RW:18:LYS:HB3	2.00	0.61
1:YA:1439:A:C2	1:YA:1553:A:N7	2.68	0.61
1:YA:826:U:H5'	1:YA:2428:G:O2'	1.99	0.61
36:QE:79:THR:OG1	36:QE:80:LEU:N	2.33	0.61
32:XA:1206:G:H4'	34:XC:191:THR:O	2.00	0.61
32:XA:206:C:H2'	32:XA:207:C:H4'	1.81	0.61
1:YA:674:G:O3'	5:YE:60:TRP:HH2	1.82	0.61
1:YA:617:G:H21	1:YA:618:G:H1'	1.65	0.61
1:YA:201:C:C4	1:YA:202:U:C5	2.88	0.61
14:YN:28:LEU:O	14:YN:32:GLU:N	2.30	0.61
39:QH:9:MET:CE	39:QH:32:LYS:HA	2.30	0.61
32:QA:1161:C:O2'	32:QA:1162:C:C6	2.52	0.61
1:RA:2680:U:OP1	4:RD:114:LYS:HE2	2.01	0.61
1:RA:819:A:C4	1:RA:1189:A:C2	2.88	0.61
8:YH:84:ALA:H	8:YH:148:ALA:HA	1.65	0.61
3:RC:171:VAL:HG23	3:RC:185:ALA:HA	1.83	0.61
18:RR:54:VAL:CG2	18:RR:57:GLY:HA3	2.30	0.61
32:QA:978:A:HO2'	32:QA:1322:C:H5	1.49	0.61
34:XC:120:THR:HG22	34:XC:120:THR:O	2.01	0.61
1:YA:1769:U:H1'	1:YA:1984:G:N2	2.15	0.61
11:YK:108:ARG:HA	11:YK:116:ILE:HD13	1.82	0.61
1:RA:419:U:H5''	56:RA:3233:HOH:O	2.00	0.61
32:XA:1078:U:C5	32:XA:1079:G:C5	2.88	0.61
32:XA:1533:C:H2'	32:XA:1534:A:H5''	1.82	0.61
1:YA:2662:A:H2'	1:YA:2663:G:O4'	2.00	0.61
1:RA:2291:U:H2'	1:RA:2292:U:C6	2.35	0.61
17:RQ:109:VAL:HG12	17:RQ:113:LYS:HD2	1.81	0.61
1:RA:1199:U:H2'	1:RA:1200:C:C6	2.35	0.61
23:RW:39:GLN:HE21	23:RW:43:LYS:H	1.48	0.61
32:XA:1492:A:C8	1:YA:1913:A:C8	2.88	0.61
36:QE:158:LYS:HG3	39:QH:63:LYS:HZ1	1.66	0.61
1:YA:127:A:N7	29:Y2:46:LYS:HE3	2.16	0.61
1:YA:627:A:H5''	12:YL:78:ARG:NH1	2.15	0.61
1:YA:74:A:H5'	25:YY:48:ARG:HH22	1.66	0.61
1:YA:240:C:C3'	1:YA:241:A:H5''	2.29	0.61
49:XR:72:ARG:NE	49:XR:72:ARG:H	1.93	0.61
3:YC:94:LEU:HD13	3:YC:100:ARG:HD3	1.81	0.61
33:QB:67:LEU:HD21	33:QB:91:VAL:HG23	1.82	0.61
44:XM:22:TYR:HB2	44:XM:65:GLU:HG2	1.83	0.61
52:XU:41:THR:O	52:XU:45:LYS:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:YT:5:GLU:HA	20:YT:8:LEU:HB2	1.82	0.61
47:QP:79:ASN:O	47:QP:80:LYS:HB2	2.00	0.61
1:YA:1508:A:H4'	1:YA:1509:A:OP1	2.00	0.61
32:XA:312:C:H2'	32:XA:313:A:C8	2.34	0.61
9:YI:12:VAL:HG12	9:YI:13:ALA:H	1.64	0.61
16:RP:102:ARG:O	16:RP:103:THR:HG22	2.00	0.61
6:RF:72:SER:HB2	6:RF:80:GLN:H	1.65	0.61
32:XA:1272:G:H2'	32:XA:1273:C:H5'	1.81	0.61
1:YA:2520:C:H2'	1:YA:2521:C:H6	1.65	0.61
32:QA:991:U:HO2'	32:QA:1212:U:H6	1.47	0.61
32:XA:512:U:O2'	32:XA:513:C:H6	1.83	0.61
32:XA:425:G:H2'	32:XA:426:U:O4'	2.00	0.61
7:RG:30:GLY:HA3	7:RG:78:VAL:HG12	1.83	0.61
32:QA:1356:G:H2'	32:QA:1357:A:C8	2.36	0.61
1:RA:2097:A:H2'	1:RA:2098:U:C6	2.34	0.61
9:YI:50:LYS:HE2	9:YI:50:LYS:HA	1.82	0.61
15:RO:11:ALA:HB2	15:RO:96:GLY:N	2.15	0.61
1:RA:744:U:H2'	1:RA:745:G:O4'	2.00	0.61
6:RF:36:ASN:HB2	6:RF:87:LYS:HB2	1.83	0.61
1:RA:1132:U:H3'	1:RA:1133:A:H5''	1.82	0.61
10:RJ:117:ALA:HA	10:RJ:120:ARG:HH21	1.64	0.61
32:XA:263:A:P	51:XT:73:ARG:HH12	2.24	0.61
32:QA:428:G:O4'	32:QA:430:A:C8	2.54	0.61
1:YA:311:A:C2	1:YA:328:U:O4	2.53	0.61
17:YQ:91:ARG:NH2	17:YQ:93:ILE:HD13	2.15	0.61
12:RL:100:ILE:HD12	12:RL:101:ILE:HD13	1.82	0.61
41:XJ:51:VAL:HB	45:XN:80:ARG:HB2	1.83	0.61
4:YD:19:GLY:O	11:YK:72:PRO:HB2	1.99	0.61
7:YG:95:ALA:HB3	7:YG:127:GLN:HA	1.82	0.61
32:QA:1236:A:H4'	32:QA:1304:G:H4'	1.82	0.61
1:YA:749:A:C5	1:YA:750:A:N7	2.68	0.61
39:QH:17:GLN:NE2	39:QH:71:VAL:H	1.99	0.61
3:RC:245:THR:OG1	3:RC:249:VAL:HB	2.00	0.61
36:XE:59:ILE:O	36:XE:59:ILE:HG13	2.00	0.61
1:RA:1414:C:C4	1:RA:1415:U:H5	2.17	0.61
32:XA:252:U:H6	32:XA:252:U:C5'	2.11	0.61
32:XA:1029:U:H1'	32:XA:1033:G:O6	1.99	0.61
40:XI:112:ARG:HH22	41:XJ:64:GLN:NE2	1.98	0.61
19:RS:83:LYS:O	19:RS:84:ARG:HD3	2.00	0.61
5:YE:28:VAL:O	5:YE:32:VAL:HG13	2.00	0.61
32:QA:128:G:O2'	32:QA:129:A:H5'	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:112:LEU:O	13:YM:112:LEU:HD13	2.01	0.61
1:RA:1182:G:H2'	1:RA:1183:U:O4'	1.99	0.61
24:RX:53:LYS:O	24:RX:57:VAL:HG23	2.00	0.61
50:QS:6:LYS:HA	50:QS:6:LYS:HE2	1.82	0.61
32:XA:106:C:O2	32:XA:379:C:H4'	2.00	0.61
1:RA:1062:G:HO2'	1:RA:1063:G:H8	1.46	0.61
2:YB:16:G:O6	2:YB:69:G:C5	2.53	0.61
1:RA:1179:G:C3'	1:RA:1180:U:H4'	2.18	0.61
51:QT:53:MET:O	51:QT:56:ILE:HG22	1.99	0.61
1:YA:228:C:H5''	1:YA:229:C:C6	2.36	0.61
5:YE:130:LYS:HB3	5:YE:133:LEU:CB	2.26	0.61
48:QQ:10:ARG:O	48:QQ:22:VAL:HG13	2.01	0.61
32:XA:1298:U:C5	38:XG:113:LYS:HA	2.35	0.61
32:XA:1140:C:HO2'	32:XA:1141:C:H6	1.44	0.61
27:R0:42:ILE:CD1	27:R0:48:TYR:HB2	2.30	0.61
33:QB:218:ALA:HA	33:QB:221:ARG:HH21	1.66	0.61
1:YA:2223:G:H2'	1:YA:2224:G:H5'	1.81	0.61
1:YA:1255:U:O2'	1:YA:1256:G:OP1	2.18	0.61
1:YA:2734:A:C2'	1:YA:2735:G:H5'	2.30	0.61
1:YA:686:U:OP2	56:YA:3708:HOH:O	2.16	0.61
19:RS:18:ARG:HG2	19:RS:76:VAL:HG13	1.82	0.61
1:RA:2298:A:C2	1:RA:2321:U:N3	2.68	0.61
1:YA:969:G:H2'	1:YA:970:U:H6	1.64	0.61
34:XC:39:ARG:HE	34:XC:54:ILE:HG23	1.64	0.61
1:YA:2353:G:H1'	23:YW:30:VAL:HG13	1.81	0.61
1:YA:852:U:H2'	1:YA:853:C:C6	2.35	0.61
31:R4:3:VAL:O	31:R4:4:ARG:O	2.19	0.61
1:RA:1103:A:H2'	1:RA:1104:C:H5'	1.82	0.61
17:RQ:114:ALA:C	17:RQ:116:LEU:H	2.02	0.61
1:YA:64:A:OP1	20:YT:77:ARG:HA	2.00	0.61
51:QT:55:PRO:O	51:QT:59:ARG:HB3	2.01	0.61
1:RA:994:C:H1'	18:RR:10:LYS:NZ	2.15	0.61
23:RW:73:PRO:HG3	23:RW:76:ARG:HD2	1.82	0.61
23:RW:31:LEU:HD23	23:RW:31:LEU:N	2.16	0.61
32:XA:704:A:O2'	32:XA:705:G:O5'	2.17	0.61
44:XM:77:LYS:HD3	44:XM:77:LYS:O	2.01	0.61
33:QB:209:VAL:HG23	33:QB:210:THR:N	2.08	0.61
1:YA:1076:C:O2	9:YI:92:PRO:HG2	2.00	0.61
1:YA:2316:G:H2'	1:YA:2317:A:C8	2.34	0.61
29:Y2:35:ARG:HG3	29:Y2:42:LEU:HD21	1.83	0.61
38:XG:27:ASN:HA	38:XG:30:MET:HG3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:80:LEU:HD11	3:RC:109:LEU:HG	1.83	0.61
3:RC:230:PRO:CD	3:RC:246:PRO:HA	2.29	0.61
52:XU:33:ARG:HH22	52:XU:34:ARG:HH11	1.49	0.61
21:YU:73:ASN:HB2	21:YU:95:PHE:HE2	1.66	0.61
32:XA:162:A:H2'	32:XA:163:C:O4'	2.00	0.61
15:YO:51:ALA:HB3	15:YO:78:VAL:HG22	1.83	0.61
8:RH:18:GLN:HE21	8:RH:18:GLN:CA	2.14	0.61
13:YM:136:MET:HE1	22:YV:57:TYR:CD2	2.36	0.61
16:RP:25:VAL:HG11	16:RP:46:VAL:HG23	1.83	0.61
32:QA:433:G:H2'	32:QA:434:U:H5'	1.83	0.61
1:RA:533:G:H5'	17:RQ:23:TYR:CE2	2.36	0.61
34:QC:69:THR:O	34:QC:105:VAL:HG23	2.00	0.61
44:QM:113:LYS:H	44:QM:114:PRO:CD	2.14	0.61
47:QP:19:VAL:HG13	47:QP:37:GLY:C	2.20	0.61
1:YA:2339:C:H2'	1:YA:2340:A:C8	2.35	0.61
1:YA:2406:A:C2	12:YL:69:ARG:NH2	2.68	0.61
4:YD:56:LYS:NZ	4:YD:58:ASN:HD22	1.99	0.61
1:YA:414:C:H5''	1:YA:1879:C:O2'	2.00	0.61
4:RD:121:THR:O	4:RD:122:VAL:HB	2.01	0.61
37:XF:90:MET:HE1	49:XR:60:ARG:HD3	1.83	0.61
1:RA:14:A:H5''	1:RA:15:G:OP2	2.01	0.61
23:RW:24:ARG:C	23:RW:24:ARG:HD2	2.20	0.61
42:XK:27:ASN:HA	42:XK:57:SER:HB3	1.83	0.61
1:RA:272:A:O2'	1:RA:273:G:H8	1.82	0.61
10:YJ:4:PHE:O	10:YJ:44:TYR:CZ	2.53	0.61
1:YA:1054:A:C4	1:YA:1055:G:H1'	2.36	0.61
33:XB:74:ALA:CB	33:XB:206:ILE:HD11	2.30	0.61
6:YF:45:ASP:C	6:YF:47:LYS:H	2.03	0.61
1:YA:1706:C:H2'	1:YA:1757:A:OP2	2.01	0.61
1:RA:1475:G:HO2'	1:RA:1476:U:P	2.23	0.61
1:YA:2808:G:O2'	1:YA:2809:A:H8	1.82	0.61
1:YA:364:C:H2'	1:YA:365:U:H6	1.62	0.61
32:XA:216:U:H4'	32:XA:464:U:H4'	1.82	0.61
1:YA:2733:A:O2'	1:YA:2734:A:H5'	2.00	0.61
1:RA:2602:A:H4'	1:RA:2603:G:O5'	1.99	0.61
32:QA:182:A:C2	32:QA:184:G:C8	2.89	0.61
31:Y4:7:VAL:CG1	31:Y4:8:LYS:H	2.13	0.61
32:XA:227:G:H2'	32:XA:228:A:O4'	2.00	0.61
13:RM:43:ALA:H	13:RM:46:ILE:HG23	1.65	0.61
32:QA:604:G:C2	32:QA:635:A:C2	2.89	0.61
8:RH:50:ARG:O	8:RH:54:LEU:HB2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:QR:35:SER:HA	49:QR:71:ASP:HB3	1.82	0.61
1:YA:425:G:H2'	1:YA:426:C:H6	1.66	0.61
11:YK:10:VAL:HG13	11:YK:12:ASP:OD1	2.01	0.61
32:QA:982:U:H4'	32:QA:983:A:C5'	2.29	0.61
1:YA:379:G:C6	1:YA:396:G:C6	2.89	0.61
1:YA:2038:G:H2'	1:YA:2039:U:O4'	2.00	0.61
32:QA:204:G:C1'	32:QA:465:A:C2	2.83	0.61
5:YE:128:ALA:HB1	5:YE:129:PRO:CD	2.28	0.61
1:YA:321:U:O4'	5:YE:159:LEU:HG	2.00	0.61
18:YR:9:GLY:H	18:YR:10:LYS:HD2	1.63	0.61
33:XB:114:LYS:CE	33:XB:151:LYS:HB2	2.31	0.61
1:YA:125:A:H3'	29:Y2:19:ARG:HD2	1.82	0.61
41:XJ:11:LYS:HB3	41:XJ:71:LEU:HD13	1.83	0.61
7:RG:8:VAL:HG12	7:RG:49:LEU:H	1.64	0.61
1:RA:31:C:O3'	1:RA:1238:G:H5''	2.01	0.61
1:RA:287:G:H2'	1:RA:288:U:C6	2.36	0.61
1:YA:1280:G:H2'	1:YA:1281:G:H5'	1.82	0.61
32:XA:251:G:H4'	32:XA:252:U:H5''	1.81	0.61
1:YA:1007:C:O3'	10:YJ:110:PRO:HB3	2.01	0.61
10:YJ:110:PRO:O	10:YJ:115:GLY:HA3	2.00	0.61
10:YJ:111:LYS:HB2	10:YJ:115:GLY:CA	2.31	0.61
41:QJ:35:GLN:HG2	41:QJ:77:VAL:HB	1.83	0.61
11:RK:2:ILE:O	11:RK:3:GLN:HB3	2.00	0.61
41:XJ:31:ARG:NH2	41:XJ:32:THR:HB	2.16	0.61
45:QN:89:ARG:O	45:QN:91:GLU:HG2	1.99	0.61
1:YA:2839:G:H21	14:YN:92:GLY:HA3	1.65	0.61
1:RA:1062:G:O2'	1:RA:1063:G:C8	2.53	0.61
16:RP:50:ARG:HD3	16:RP:56:SER:CB	2.31	0.61
1:YA:225:C:H2'	1:YA:226:A:O4'	2.00	0.61
1:YA:1399:C:O2'	1:YA:1400:U:H5'	2.00	0.61
5:RE:119:ILE:CD1	5:RE:187:VAL:HG22	2.27	0.61
5:RE:187:VAL:O	5:RE:188:MET:HB3	1.99	0.61
1:YA:78:U:C2'	1:YA:79:C:H5'	2.30	0.61
1:YA:202:U:H2'	1:YA:202:U:O2	2.00	0.61
43:QL:28:GLN:HB2	43:QL:81:ILE:O	2.01	0.61
34:QC:15:LYS:HG3	34:QC:16:PRO:HD2	1.81	0.61
1:YA:1616:A:OP1	1:YA:1616:A:H8	1.83	0.61
1:YA:1884:G:OP2	1:YA:1884:G:H8	1.84	0.61
43:QL:85:ARG:CZ	43:QL:87:LYS:HB3	2.31	0.61
7:YG:16:VAL:HG11	7:YG:44:HIS:ND1	2.16	0.61
7:YG:8:VAL:O	7:YG:9:VAL:HB	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:390:U:H2'	32:QA:391:G:H8	1.63	0.61
32:XA:1451:U:C2	32:XA:1453:G:O6	2.54	0.61
4:RD:53:GLY:HA3	4:RD:77:ARG:H	1.66	0.61
32:XA:935:A:O2'	32:XA:936:C:H6	1.82	0.61
3:YC:77:VAL:HG23	3:YC:112:GLY:H	1.65	0.61
32:XA:748:G:H2'	32:XA:749:A:C8	2.35	0.61
44:QM:84:CYS:HB3	50:QS:73:PHE:HE2	1.66	0.61
6:YF:33:ILE:HB	6:YF:90:LEU:HB2	1.83	0.61
32:XA:1513:A:H2'	32:XA:1514:G:C8	2.36	0.61
5:YE:79:ARG:HG2	5:YE:80:SER:H	1.65	0.61
1:YA:2721:A:H2'	1:YA:2722:G:O4'	2.01	0.61
32:QA:847:G:H2'	32:QA:848:C:C6	2.36	0.61
11:RK:15:GLY:O	11:RK:46:ALA:HA	2.01	0.61
1:RA:1079:C:C4	1:RA:1088:A:C2	2.89	0.60
1:RA:1098:A:H3'	1:RA:1099:G:C8	2.35	0.60
23:RW:37:VAL:CG1	23:RW:38:ARG:N	2.62	0.60
1:YA:1915:U:O2'	1:YA:1916:A:H5'	2.01	0.60
1:YA:1071:G:N7	1:YA:1089:A:C5	2.69	0.60
41:XJ:38:GLY:O	41:XJ:40:ILE:HD12	2.00	0.60
1:YA:1965:C:H3'	1:YA:1966:A:C5'	2.30	0.60
32:XA:1242:G:O2'	32:XA:1243:C:O4'	2.18	0.60
43:QL:33:CYS:HA	43:QL:53:ARG:O	2.01	0.60
1:RA:1057:A:C2	1:RA:1082:U:C2	2.88	0.60
32:QA:1160:G:O6	32:QA:1181:G:O6	2.19	0.60
25:RY:43:LEU:O	25:RY:47:ARG:HB2	2.01	0.60
21:RU:42:LYS:HB3	21:RU:57:ILE:HG23	1.81	0.60
1:YA:21:A:H2'	1:YA:22:C:C6	2.36	0.60
12:YL:73:ILE:O	12:YL:105:ILE:HG23	2.00	0.60
10:RJ:53:TYR:CE1	10:RJ:121:LYS:HG2	2.36	0.60
1:RA:1429:G:O2'	1:RA:1430:G:H5'	2.01	0.60
4:RD:35:THR:OG1	4:RD:49:GLN:HG2	2.01	0.60
5:YE:119:ILE:HG13	5:YE:119:ILE:O	2.01	0.60
34:XC:14:VAL:HG12	34:XC:14:VAL:O	2.00	0.60
39:QH:75:GLN:O	39:QH:126:CYS:HB2	2.01	0.60
2:YB:12:C:O2'	23:YW:74:LYS:HA	2.00	0.60
49:XR:59:LYS:O	49:XR:63:TYR:HD1	1.83	0.60
15:YO:30:ARG:HG2	15:YO:31:THR:N	2.15	0.60
1:YA:1439:A:N7	1:YA:1440:U:H1'	2.17	0.60
7:RG:83:THR:C	7:RG:84:LYS:HD3	2.20	0.60
1:YA:2332:C:H4'	23:YW:40:ARG:NH2	2.16	0.60
6:YF:28:PRO:HB2	6:YF:168:LEU:CD2	2.23	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1533:C:C2'	1:YA:1534:U:H5'	2.30	0.60
1:YA:151:C:OP1	1:YA:1359:A:O2'	2.19	0.60
21:YU:17:ASP:HB2	21:YU:38:ILE:HA	1.82	0.60
10:YJ:5:THR:HA	10:YJ:44:TYR:CE2	2.36	0.60
32:QA:269:C:H2'	32:QA:270:A:C8	2.36	0.60
48:QQ:12:VAL:CG1	48:QQ:13:SER:H	2.13	0.60
29:Y2:45:SER:C	29:Y2:46:LYS:HD2	2.22	0.60
1:YA:867:C:O2'	1:YA:868:U:O5'	2.18	0.60
32:XA:90:C:O2'	32:XA:91:U:H5'	2.02	0.60
32:XA:1350:A:H2	38:XG:33:GLY:HA3	1.65	0.60
1:YA:2667:C:O2'	1:YA:2668:G:H8	1.84	0.60
32:QA:198:G:H2'	32:QA:199:A:H8	1.63	0.60
32:XA:640:A:O2'	39:XH:106:SER:HB2	2.01	0.60
39:QH:76:ARG:HD3	39:QH:77:VAL:N	2.16	0.60
9:RI:80:LYS:HA	9:RI:85:ILE:O	2.01	0.60
1:YA:2716:C:O2'	1:YA:2717:C:H5'	2.00	0.60
1:RA:2199:A:H8	1:RA:2199:A:C5'	2.14	0.60
5:YE:42:GLY:HA3	5:YE:90:GLN:O	2.00	0.60
30:R3:21:PHE:HB2	30:R3:49:VAL:CG1	2.30	0.60
32:XA:39:G:H2'	32:XA:40:C:C6	2.37	0.60
19:RS:63:GLY:O	19:RS:64:ALA:CB	2.49	0.60
49:XR:22:TYR:HA	49:XR:57:ALA:HB1	1.83	0.60
1:YA:742:A:H2'	1:YA:743:A:C8	2.36	0.60
1:YA:394:C:H2'	1:YA:395:U:H5'	1.83	0.60
35:QD:160:LEU:H	35:QD:160:LEU:HD13	1.65	0.60
32:XA:476:U:OP2	32:XA:476:U:C6	2.54	0.60
32:QA:328:C:H2'	32:QA:328:C:O2	2.01	0.60
39:QH:88:LYS:HA	39:QH:91:LEU:HD12	1.82	0.60
1:RA:1154:G:OP2	17:RQ:57:ARG:NH1	2.33	0.60
37:QF:4:TYR:O	37:QF:63:ASN:HA	2.01	0.60
1:YA:2345:G:C6	1:YA:2347:C:N4	2.67	0.60
1:YA:1341:G:H3'	1:YA:1397:U:O2	2.00	0.60
1:YA:125:A:H5''	29:Y2:19:ARG:HD3	1.82	0.60
32:XA:1241:G:C4	32:XA:1242:G:N7	2.69	0.60
1:YA:243:U:O2'	1:YA:244:A:H8	1.84	0.60
38:XG:88:VAL:HG22	38:XG:89:GLU:N	2.13	0.60
7:YG:84:LYS:O	7:YG:85:LYS:HB3	1.99	0.60
1:RA:1071:G:C8	1:RA:1071:G:OP2	2.53	0.60
1:YA:2135:A:H2'	1:YA:2136:G:O4'	2.02	0.60
1:RA:2320:U:H4'	1:RA:2321:U:C5'	2.31	0.60
7:YG:10:VAL:HB	7:YG:14:VAL:HG21	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:545:U:O4'	1:RA:545:U:O2	2.18	0.60
1:RA:357:C:H2'	1:RA:358:U:C6	2.36	0.60
32:XA:675:A:H1'	42:XK:117:HIS:ND1	2.16	0.60
15:YO:7:ARG:HA	15:YO:10:ARG:NH2	2.16	0.60
32:XA:465:A:C8	32:XA:467:U:OP1	2.55	0.60
3:RC:77:VAL:CG2	3:RC:77:VAL:O	2.48	0.60
11:YK:113:MET:HA	11:YK:116:ILE:HD11	1.83	0.60
32:XA:769:G:H4'	32:XA:1513:A:H4'	1.82	0.60
1:RA:2065:C:H2'	1:RA:2066:C:H6	1.66	0.60
13:RM:54:THR:O	13:RM:56:ALA:N	2.33	0.60
1:YA:2591:C:OP1	3:YC:237:ARG:HD2	2.01	0.60
32:QA:439:U:C2'	32:QA:440:C:H5'	2.31	0.60
17:RQ:94:LEU:C	17:RQ:96:ASP:H	2.04	0.60
1:RA:1075:C:C4	1:RA:1076:C:N4	2.69	0.60
23:RW:37:VAL:HG13	23:RW:56:HIS:HB2	1.83	0.60
32:XA:972:C:H4'	41:XJ:59:LYS:HG2	1.83	0.60
17:YQ:50:ARG:N	17:YQ:50:ARG:HD2	2.17	0.60
1:YA:81:G:H2'	1:YA:82:U:O4'	2.02	0.60
1:YA:538:A:N6	1:YA:555:G:O2'	2.34	0.60
12:RL:77:ILE:HD13	12:RL:108:ALA:HB1	1.83	0.60
1:YA:665:U:H2'	1:YA:666:A:H8	1.66	0.60
1:YA:2305:U:H4'	6:YF:132:ARG:HG2	1.82	0.60
14:YN:73:ASN:HD22	14:YN:76:VAL:HG21	1.65	0.60
1:YA:601:C:H4'	5:YE:99:LYS:HE2	1.83	0.60
32:XA:1140:C:O2'	32:XA:1141:C:C6	2.51	0.60
1:YA:2091:C:OP2	1:YA:2092:U:H3'	2.01	0.60
43:QL:73:LEU:HD11	43:QL:79:ILE:HG21	1.82	0.60
4:YD:169:ARG:O	4:YD:170:VAL:HG22	2.01	0.60
52:XU:38:GLU:HA	52:XU:41:THR:OG1	2.01	0.60
1:YA:2577:A:H5''	1:YA:2578:G:H5'	1.83	0.60
1:YA:2020:A:H5'	27:Y0:8:THR:HG22	1.82	0.60
1:YA:1499:C:H2'	1:YA:1500:G:H5'	1.83	0.60
4:YD:120:GLY:O	4:YD:124:ARG:HB2	2.01	0.60
32:QA:174:A:C2'	32:QA:175:C:H5'	2.30	0.60
32:QA:601:G:O2'	32:QA:602:A:H5'	2.00	0.60
32:QA:1349:A:OP1	40:QI:122:ARG:N	2.29	0.60
1:YA:2059:A:O3'	5:YE:64:GLY:HA2	2.01	0.60
1:YA:716:A:C3'	1:YA:717:C:H5''	2.31	0.60
40:QI:3:ASN:CG	40:QI:4:GLN:H	2.05	0.60
1:YA:660:C:H5''	5:YE:94:GLN:OE1	2.02	0.60
24:RX:38:TRP:HB2	24:RX:45:PHE:HE2	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1316:G:N2	32:XA:1318:A:H3'	2.15	0.60
1:YA:1551:A:C4	1:YA:1552:A:C8	2.89	0.60
4:RD:107:VAL:O	4:RD:174:SER:O	2.19	0.60
1:YA:1210:G:H4'	1:YA:1211:C:C5'	2.32	0.60
35:QD:25:ARG:O	35:QD:26:ALA:HB2	2.01	0.60
38:XG:22:LEU:O	38:XG:26:VAL:HG22	2.00	0.60
1:YA:2094:A:H2'	1:YA:2095:A:O4'	2.00	0.60
3:RC:139:THR:O	3:RC:161:VAL:O	2.19	0.60
21:RU:38:ILE:CG2	21:RU:39:ASN:N	2.62	0.60
50:QS:51:HIS:HD2	50:QS:53:GLY:H	1.46	0.60
33:QB:110:ILE:CD1	33:QB:147:LEU:HD13	2.31	0.60
32:QA:344:A:H4'	32:QA:345:C:OP2	2.00	0.60
32:QA:1001:C:H2'	32:QA:1002:G:H8	1.65	0.60
25:RY:9:LYS:NZ	25:RY:9:LYS:HA	2.17	0.60
1:YA:1232:G:H2'	1:YA:1233:C:C6	2.36	0.60
32:QA:206:C:C2	32:QA:207:C:H1'	2.35	0.60
7:YG:117:PRO:CG	7:YG:143:VAL:HG11	2.30	0.60
1:YA:1665:A:C2'	1:YA:1666:G:H5'	2.32	0.60
52:QU:48:LYS:HA	52:QU:51:ALA:HB3	1.82	0.60
1:YA:467:G:H4'	1:YA:796:C:O2'	2.01	0.60
11:YK:2:ILE:HG22	11:YK:3:GLN:N	2.17	0.60
32:XA:1514:G:H2'	32:XA:1515:G:H8	1.65	0.60
32:QA:1031:C:O2'	32:QA:1032:G:H5''	2.02	0.60
11:RK:51:LYS:HD2	11:RK:51:LYS:O	2.01	0.60
1:YA:1480:C:H2'	1:YA:1481:U:O4'	2.01	0.60
32:XA:968:A:C4	32:XA:1062:U:H4'	2.37	0.60
4:RD:33:ARG:NH2	4:RD:51:THR:HG23	2.17	0.60
21:RU:82:VAL:O	21:RU:94:PHE:O	2.20	0.60
1:RA:2471:A:H2'	1:RA:2472:G:H5'	1.82	0.60
32:QA:107:G:H2'	32:QA:108:G:H5'	1.82	0.60
16:YP:44:GLY:HA3	16:YP:60:VAL:HG12	1.84	0.60
37:XF:97:THR:O	37:XF:98:GLU:HG3	2.02	0.60
10:YJ:35:ARG:NH1	10:YJ:140:LEU:HD11	2.16	0.60
32:QA:1025:U:H5''	32:QA:1026:G:OP1	2.02	0.60
1:YA:379:G:C6	1:YA:380:G:C5	2.90	0.60
45:XN:13:VAL:HG22	45:XN:59:GLN:NE2	2.17	0.60
45:XN:60:ARG:NH2	45:XN:70:HIS:HB3	2.17	0.60
51:QT:43:LYS:CB	51:QT:86:ALA:HB1	2.24	0.60
1:YA:234:U:H2'	1:YA:235:U:C6	2.37	0.60
1:YA:1404:C:O2'	1:YA:1405:U:H5'	2.02	0.60
2:YB:42:C:H41	6:YF:87:LYS:HZ3	1.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:XG:30:MET:O	38:XG:31:VAL:HB	2.01	0.60
32:XA:374:A:OP1	32:XA:452:A:N1	2.34	0.60
1:YA:1568:G:H21	3:YC:57:HIS:HE1	1.47	0.60
35:XD:58:GLN:OE1	35:XD:58:GLN:HA	2.02	0.60
28:Y1:5:ARG:NH2	28:Y1:23:THR:HB	2.17	0.60
18:YR:89:HIS:NE2	18:YR:91:GLN:HB2	2.17	0.60
1:RA:2358:A:H61	12:RL:54:GLN:HE22	1.48	0.60
41:XJ:30:LYS:CG	41:XJ:36:VAL:HG22	2.32	0.60
26:RZ:7:THR:HG23	26:RZ:34:THR:H	1.67	0.60
10:RJ:13:ARG:HD3	10:RJ:51:GLY:O	2.01	0.60
32:QA:1492:A:H2'	32:QA:1493:A:H5''	1.84	0.60
1:YA:2414:G:C2'	1:YA:2415:G:H5'	2.31	0.60
32:QA:1314:C:C5	50:QS:5:LYS:HD3	2.36	0.60
33:XB:164:ASP:HB3	33:XB:167:HIS:HB3	1.83	0.60
32:XA:1400:C:H4'	32:XA:1401:G:OP2	2.02	0.60
32:XA:458:U:H2'	32:XA:459:A:C8	2.37	0.60
30:Y3:22:LYS:H	30:Y3:48:MET:CB	2.15	0.60
7:RG:15:ASP:CG	7:RG:16:VAL:N	2.55	0.60
22:YV:4:ILE:HB	22:YV:63:ILE:HG13	1.83	0.60
32:QA:737:C:H2'	32:QA:738:C:H6	1.65	0.60
1:RA:470:A:H61	20:RT:72:GLN:HE22	1.49	0.60
38:QG:121:ASN:O	38:QG:125:ASP:HB2	2.00	0.60
8:RH:32:PRO:O	8:RH:33:GLN:HB2	2.00	0.60
37:QF:38:ARG:HB3	37:QF:63:ASN:HB2	1.83	0.60
37:QF:40:GLU:CB	37:QF:42:TRP:HE1	2.15	0.60
36:XE:79:THR:HA	36:XE:121:ASN:OD1	2.01	0.60
1:YA:492:A:H2'	1:YA:493:G:O4'	2.02	0.60
50:XS:40:PHE:HB3	50:XS:41:PRO:CD	2.29	0.60
5:YE:179:SER:HA	5:YE:182:ALA:HB3	1.83	0.60
1:YA:2060:A:H2'	5:YE:63:LYS:NZ	2.17	0.60
32:XA:1336:C:H1'	32:XA:1337:G:C2	2.37	0.60
1:YA:620:G:H8	1:YA:622:G:O6	1.83	0.60
32:XA:1141:C:O2'	32:XA:1142:G:H8	1.85	0.60
47:XP:8:ARG:HB3	47:XP:28:ARG:HH11	1.66	0.60
19:RS:4:ILE:CG2	19:RS:106:VAL:HG22	2.31	0.60
1:RA:1110:G:O2'	1:RA:1111:A:C8	2.44	0.60
1:RA:1149:G:O2'	1:RA:1150:C:H5'	2.01	0.60
1:RA:1150:C:HO2'	1:RA:1151:A:C5'	2.15	0.60
12:RL:109:LYS:CG	12:RL:126:ARG:HB3	2.31	0.60
7:YG:48:THR:O	7:YG:49:LEU:HB2	2.01	0.60
32:QA:603:U:H3'	32:QA:603:U:H6	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:259:G:H2'	32:QA:260:G:C8	2.36	0.60
40:XI:17:ARG:HB2	40:XI:65:THR:HB	1.84	0.60
1:YA:2638:G:O2'	1:YA:2639:A:C8	2.55	0.60
1:YA:2873:A:H4'	56:YA:3801:HOH:O	2.01	0.60
27:Y0:37:HIS:CG	27:Y0:43:THR:HG22	2.37	0.60
36:XE:24:VAL:HG23	36:XE:26:GLY:H	1.67	0.60
1:YA:2:G:C6	1:YA:3:U:C4	2.90	0.60
36:QE:44:ARG:HA	36:QE:71:ILE:O	2.02	0.60
8:RH:14:SER:O	8:RH:16:GLY:N	2.34	0.60
41:QJ:22:THR:HG22	41:QJ:23:ALA:N	2.17	0.60
14:YN:1:MET:O	14:YN:2:ARG:HB2	2.01	0.60
32:XA:1365:G:O2'	32:XA:1366:C:C6	2.55	0.60
1:YA:226:A:N6	1:YA:227:A:N6	2.50	0.60
3:YC:173:LEU:HD22	3:YC:173:LEU:H	1.66	0.60
6:YF:34:THR:O	6:YF:35:LEU:HB2	2.00	0.60
20:RT:32:LEU:O	20:RT:83:ALA:HB2	2.01	0.60
43:QL:72:ASN:HD22	43:QL:73:LEU:H	1.50	0.60
39:XH:85:TYR:CE1	48:XQ:36:PHE:HE2	2.20	0.60
33:QB:89:PHE:HB3	33:QB:149:GLY:CA	2.31	0.60
33:XB:76:SER:O	33:XB:79:VAL:HG12	2.00	0.60
11:YK:35:VAL:HG23	11:YK:36:GLY:N	2.16	0.60
3:RC:250:GLN:HE21	3:RC:250:GLN:H	1.47	0.60
1:RA:1936:A:C2	1:RA:1943:U:C5	2.87	0.60
1:YA:1521:G:C6	1:YA:1522:A:C6	2.89	0.60
5:RE:146:VAL:HG23	5:RE:167:VAL:CG2	2.32	0.60
32:QA:181:A:N6	32:QA:195:A:C8	2.70	0.60
1:YA:1635:A:H2'	1:YA:1636:U:H6	1.66	0.60
1:YA:2234:G:C5	1:YA:2235:G:C8	2.89	0.60
32:QA:1212:U:H2'	32:QA:1212:U:O2	2.02	0.60
32:XA:71:A:O2'	32:XA:72:A:O4'	2.16	0.60
32:QA:135:C:H2'	32:QA:136:C:H5'	1.82	0.60
1:RA:1062:G:O2'	1:RA:1063:G:O4'	2.20	0.60
1:RA:2356:U:H4'	23:RW:16:GLU:HG3	1.84	0.60
17:YQ:46:TYR:CZ	17:YQ:50:ARG:NH1	2.70	0.60
32:XA:1118:U:H1'	32:XA:1179:A:C4	2.36	0.60
36:QE:114:LEU:HD21	36:QE:122:VAL:HG21	1.82	0.60
1:YA:1083:U:H1'	1:YA:1086:A:C2	2.37	0.60
1:YA:478:A:N1	1:YA:480:A:C4	2.70	0.60
1:YA:128:C:O2'	1:YA:129:C:H6	1.81	0.60
6:RF:134:GLN:CG	6:RF:135:ILE:H	2.09	0.60
38:XG:92:PRO:HA	38:XG:95:ARG:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1327:C:N4	32:XA:1328:C:N4	2.49	0.60
1:YA:1286:A:O2'	1:YA:1288:G:N2	2.35	0.60
8:YH:84:ALA:HA	8:YH:89:LYS:O	2.00	0.60
20:RT:29:THR:HB	20:RT:86:THR:HG22	1.84	0.60
15:YO:18:LEU:HD13	15:YO:25:ARG:HG2	1.82	0.60
32:QA:1218:C:H2'	32:QA:1219:A:C8	2.37	0.60
19:RS:84:ARG:HB2	19:RS:96:ILE:CG1	2.31	0.60
1:RA:1738:G:HO2'	1:RA:1739:A:H8	1.50	0.60
1:YA:2729:G:H5''	4:YD:190:LYS:NZ	2.17	0.60
17:YQ:10:ARG:HA	17:YQ:13:HIS:HB2	1.82	0.60
1:RA:1501:G:O2'	1:RA:1502:A:H5'	2.02	0.60
45:YN:68:ARG:HG3	45:YN:69:PRO:HD2	1.82	0.60
32:QA:1287:A:H2'	32:QA:1288:A:C8	2.37	0.60
1:RA:194:G:C8	56:RA:3760:HOH:O	2.52	0.60
8:YH:57:LYS:HD2	8:YH:57:LYS:O	2.02	0.60
2:YB:11:C:C5	2:YB:12:C:H5	2.20	0.60
42:QK:124:LYS:HE2	52:QU:33:ARG:HH21	1.66	0.60
36:QE:81:GLN:HG2	36:QE:149:PRO:CB	2.32	0.60
38:XG:19:SER:HB3	38:XG:22:LEU:HB3	1.81	0.60
6:RF:134:GLN:O	6:RF:136:ILE:N	2.30	0.60
1:YA:785:G:O2'	1:YA:1779:U:H5''	2.01	0.60
4:YD:108:ASP:OD1	4:YD:207:VAL:HG23	2.02	0.60
43:QL:33:CYS:H	43:QL:54:VAL:HG13	1.66	0.60
32:QA:1005:A:C2	32:QA:1006:G:H1'	2.37	0.60
10:YJ:84:ILE:O	10:YJ:84:ILE:HG23	2.00	0.60
8:YH:117:LEU:HD22	8:YH:122:LEU:HB2	1.83	0.60
1:RA:973:A:O4'	1:RA:1188:U:C6	2.55	0.60
25:YY:19:LEU:HA	25:YY:22:LEU:HB2	1.83	0.60
15:RO:75:GLY:HA3	15:RO:109:ALA:HB3	1.84	0.60
36:QE:55:VAL:N	36:QE:56:PRO:HD2	2.17	0.60
24:RX:52:ALA:O	24:RX:53:LYS:CB	2.49	0.60
5:YE:79:ARG:HG2	5:YE:80:SER:N	2.17	0.60
27:Y0:30:ASP:OD1	27:Y0:47:TYR:HB3	2.02	0.60
1:RA:1585:C:H2'	1:RA:1586:A:O4'	2.01	0.60
5:YE:170:ARG:HH22	5:YE:176:ASP:HB2	1.67	0.60
1:RA:1794:A:H2'	1:RA:1795:C:C6	2.37	0.60
10:YJ:77:HIS:CE1	10:YJ:83:GLY:HA3	2.37	0.60
1:YA:120:U:H4'	1:YA:121:G:H5'	1.84	0.60
14:RN:72:ASP:OD1	14:RN:75:ILE:HG23	2.02	0.60
45:QN:90:GLY:O	45:QN:92:ILE:N	2.32	0.60
9:RI:18:ASN:HB2	9:RI:38:CYS:HB3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:XH:73:SER:HB2	39:XH:129:ALA:HB3	1.84	0.60
23:RW:39:GLN:NE2	23:RW:43:LYS:H	2.00	0.59
1:YA:2448:A:H61	12:YL:36:LYS:NZ	1.99	0.59
1:YA:247:G:N7	1:YA:249:C:C2	2.70	0.59
1:YA:1607:C:H4'	1:YA:1608:A:H8	1.66	0.59
1:YA:1608:A:C8	1:YA:1611:C:N4	2.70	0.59
48:QQ:60:ILE:HG22	48:QQ:72:TRP:HE3	1.66	0.59
1:YA:125:A:C5'	29:Y2:19:ARG:HD3	2.32	0.59
36:QE:11:GLN:HA	36:QE:11:GLN:NE2	2.10	0.59
32:QA:1124:G:H2'	32:QA:1145:A:H61	1.67	0.59
1:RA:962:G:H21	1:RA:2250:G:H1	1.50	0.59
32:QA:1304:G:H1'	32:QA:1334:G:N2	2.17	0.59
3:RC:251:THR:CG2	3:RC:252:LYS:H	2.14	0.59
2:YB:86:G:C2'	2:YB:87:U:H5''	2.31	0.59
14:RN:71:ARG:NH2	14:RN:71:ARG:HG3	2.15	0.59
1:YA:2765:A:H3'	1:YA:2766:A:H5'	1.83	0.59
8:YH:94:ILE:HG13	8:YH:98:ASP:CB	2.32	0.59
42:QK:57:SER:O	42:QK:90:PRO:HG3	2.02	0.59
13:RM:31:PHE:CZ	13:RM:110:GLU:HG2	2.35	0.59
22:RV:21:ARG:HA	22:RV:25:LYS:O	2.01	0.59
7:YG:154:GLU:C	7:YG:156:TYR:H	2.06	0.59
40:XI:114:LYS:HD2	40:XI:120:ALA:O	2.02	0.59
45:QN:87:ALA:HB2	45:QN:92:ILE:HD12	1.84	0.59
42:QK:60:PHE:O	42:QK:63:GLN:HB3	2.01	0.59
46:XO:34:GLN:OE1	46:XO:38:LEU:HD22	2.02	0.59
38:XG:42:VAL:O	38:XG:43:TYR:HB2	2.00	0.59
8:RH:41:LYS:HA	8:RH:44:ILE:HG12	1.83	0.59
4:YD:140:HIS:CD2	4:YD:140:HIS:N	2.69	0.59
12:RL:77:ILE:HD11	12:RL:101:ILE:HD11	1.83	0.59
1:YA:481:G:O2'	1:YA:507:A:N6	2.35	0.59
1:YA:638:G:H2'	1:YA:639:U:C6	2.37	0.59
13:RM:35:ALA:O	13:RM:36:VAL:CB	2.46	0.59
1:YA:784:G:HO2'	1:YA:785:G:H8	1.48	0.59
1:YA:80:G:O2'	1:YA:346:A:C2	2.55	0.59
8:YH:24:GLY:O	8:YH:28:ASN:HB2	2.00	0.59
32:XA:1046:A:H2'	32:XA:1047:G:O4'	2.03	0.59
15:RO:31:THR:CG2	15:RO:34:HIS:H	2.10	0.59
39:QH:58:LEU:HD13	39:QH:59:GLU:N	2.17	0.59
4:YD:114:LYS:HB2	4:YD:116:LYS:HE3	1.84	0.59
4:RD:98:VAL:O	4:RD:99:GLU:C	2.41	0.59
1:RA:26:G:H1'	1:RA:514:A:N6	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:532:A:C4	1:YA:2021:C:O2	2.55	0.59
14:YN:35:LYS:NZ	14:YN:112:TYR:HE1	1.98	0.59
1:YA:1232:G:H2'	1:YA:1233:C:H6	1.67	0.59
1:RA:285:G:N3	1:RA:285:G:H2'	2.16	0.59
1:YA:2191:A:H5''	1:YA:2192:U:OP2	2.03	0.59
32:XA:54:C:N4	32:XA:352:C:H2'	2.17	0.59
32:XA:1049:U:H4'	32:XA:1050:G:C5'	2.33	0.59
1:YA:558:U:OP2	10:YJ:113:PRO:HG2	2.02	0.59
13:YM:57:VAL:O	13:YM:58:LYS:HB2	2.02	0.59
1:YA:1843:C:O2'	3:YC:253:GLY:HA3	2.03	0.59
32:XA:1124:G:H1'	32:XA:1125:U:H5	1.65	0.59
1:RA:790:U:O2'	1:RA:791:C:O5'	2.20	0.59
25:RY:39:GLN:HB2	25:RY:41:HIS:CD2	2.37	0.59
1:RA:1157:G:O2'	26:RZ:31:ILE:HD11	2.01	0.59
26:RZ:40:THR:HG23	26:RZ:43:ILE:H	1.67	0.59
35:XD:190:LEU:O	35:XD:191:SER:O	2.20	0.59
35:XD:191:SER:O	35:XD:192:ALA:CB	2.51	0.59
1:RA:1180:U:H2'	1:RA:1181:U:C5	2.37	0.59
11:RK:10:VAL:HB	11:RK:16:ALA:HB1	1.85	0.59
1:YA:1338:G:H5''	20:YT:17:SER:HB3	1.83	0.59
1:YA:84:A:H2	1:YA:98:G:N3	2.00	0.59
10:RJ:55:ILE:HG13	10:RJ:55:ILE:O	2.01	0.59
32:XA:87:C:O2'	32:XA:88:U:C4'	2.49	0.59
1:YA:142:A:O2'	1:YA:143:C:H6	1.83	0.59
1:YA:2680:U:OP2	4:YD:114:LYS:HD3	2.02	0.59
28:Y1:5:ARG:CD	28:Y1:25:ASN:HB2	2.30	0.59
14:RN:73:ASN:HD22	14:RN:76:VAL:HG11	1.66	0.59
32:QA:330:C:C6	32:QA:330:C:H5''	2.37	0.59
1:YA:2898:U:H2'	1:YA:2899:A:C8	2.37	0.59
32:QA:1314:C:O2'	32:QA:1315:U:H5'	2.02	0.59
5:RE:161:ALA:HA	5:RE:164:LEU:HB2	1.83	0.59
12:RL:132:ARG:HG3	12:RL:142:ILE:HD12	1.84	0.59
1:RA:1931:U:O2'	1:RA:1932:A:H5'	2.01	0.59
1:RA:1014:A:H2'	1:RA:1015:U:C6	2.37	0.59
1:RA:568:U:OP1	12:RL:36:LYS:HE3	2.02	0.59
1:RA:811:U:C2	1:RA:1251:C:C5	2.90	0.59
42:XK:60:PHE:O	42:XK:64:VAL:HG13	2.02	0.59
1:YA:327:G:H21	21:YU:67:SER:HB2	1.66	0.59
41:QJ:32:THR:HG23	41:QJ:33:GLY:H	1.68	0.59
32:XA:356:A:H2'	32:XA:357:G:O4'	2.01	0.59
15:RO:111:ARG:O	15:RO:113:ALA:N	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:8:LYS:N	13:YM:8:LYS:HD2	2.16	0.59
4:RD:107:VAL:N	4:RD:206:ALA:H	1.99	0.59
1:YA:246:C:H4'	1:YA:385:C:O2'	2.02	0.59
1:YA:410:G:N1	1:YA:2407:A:N6	2.49	0.59
17:RQ:69:ARG:NH2	17:RQ:69:ARG:HB2	2.06	0.59
10:YJ:6:ALA:HB3	10:YJ:45:THR:HB	1.84	0.59
36:QE:114:LEU:HD21	36:QE:122:VAL:CG2	2.32	0.59
33:QB:211:LEU:O	33:QB:215:ALA:CB	2.49	0.59
1:YA:2816:G:O3'	14:YN:99:LYS:HE3	2.00	0.59
1:YA:503:A:C4'	1:YA:504:A:O5'	2.47	0.59
1:YA:647:G:C5	1:YA:648:G:N7	2.70	0.59
1:YA:1998:A:H2'	1:YA:1999:C:C6	2.36	0.59
1:YA:79:C:H2'	1:YA:80:G:O4'	2.01	0.59
14:YN:12:ARG:HA	14:YN:12:ARG:NE	2.17	0.59
20:RT:51:PHE:C	20:RT:52:GLU:HG2	2.22	0.59
33:QB:103:TRP:NE1	33:QB:150:ILE:HD11	2.17	0.59
1:RA:1047:G:N2	1:RA:1110:G:C4	2.71	0.59
32:XA:671:G:N2	32:XA:736:C:C2	2.70	0.59
1:YA:2286:G:H4'	1:YA:2287:A:C4	2.37	0.59
36:QE:110:MET:H	36:QE:113:VAL:HG13	1.66	0.59
4:YD:149:ASN:O	4:YD:151:THR:N	2.35	0.59
1:YA:90:U:H3'	1:YA:91:A:C5'	2.32	0.59
1:YA:2478:A:N7	1:YA:2529:G:C6	2.69	0.59
1:YA:850:U:O2'	26:YZ:22:THR:HG22	2.02	0.59
1:YA:2627:G:O2'	1:YA:2781:A:N1	2.31	0.59
1:YA:370:G:N1	1:YA:424:G:C5	2.70	0.59
5:YE:79:ARG:CG	5:YE:80:SER:H	2.14	0.59
40:QI:18:VAL:HA	40:QI:64:ILE:HG23	1.84	0.59
32:QA:1256:A:H5''	34:QC:26:LYS:HE2	1.84	0.59
33:XB:168:GLU:O	33:XB:172:ILE:HG12	2.02	0.59
35:XD:125:ASN:N	35:XD:141:VAL:O	2.35	0.59
48:XQ:25:GLU:HA	48:XQ:39:ARG:O	2.03	0.59
26:YZ:23:LEU:HD12	26:YZ:28:LEU:HD21	1.83	0.59
16:YP:86:LYS:HZ2	16:YP:86:LYS:HA	1.68	0.59
1:YA:536:G:C2'	1:YA:537:G:H5'	2.33	0.59
1:YA:813:U:H2'	1:YA:814:C:C6	2.36	0.59
17:RQ:85:ALA:O	17:RQ:86:SER:O	2.21	0.59
1:RA:1076:C:H2'	1:RA:1077:A:C8	2.37	0.59
52:XU:3:ILE:O	52:XU:4:LYS:HG2	2.01	0.59
32:XA:1365:G:C2	32:XA:1366:C:C2	2.91	0.59
33:QB:49:PHE:O	33:QB:52:ALA:HB3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:QQ:11:VAL:HG12	48:QQ:12:VAL:HG12	1.85	0.59
31:R4:9:LYS:HB3	31:R4:14:CYS:HB2	1.82	0.59
9:YI:51:GLY:O	9:YI:52:LEU:HB2	2.01	0.59
1:YA:2305:U:P	6:YF:132:ARG:HE	2.25	0.59
1:RA:1731:G:O2'	1:RA:1732:C:H3'	2.02	0.59
1:RA:1731:G:C4	1:RA:1733:G:N7	2.71	0.59
41:QJ:65:TYR:HB3	45:QN:95:LEU:CD1	2.27	0.59
1:RA:573:U:O2'	1:RA:574:A:H3'	2.03	0.59
44:QM:10:ASP:OD1	44:QM:44:ILE:HB	2.02	0.59
7:RG:8:VAL:CG1	7:RG:9:VAL:N	2.64	0.59
32:XA:522:C:H41	43:XL:49:ARG:NH2	1.96	0.59
1:YA:1327:A:H2'	1:YA:1328:A:O4'	2.02	0.59
2:YB:38:C:O2'	2:YB:39:A:H5'	2.02	0.59
1:YA:1522:A:H1'	1:YA:1524:G:C4	2.38	0.59
1:RA:459:U:O2'	1:RA:460:A:H5'	2.03	0.59
8:YH:4:ILE:HG23	8:YH:17:ASP:O	2.02	0.59
32:XA:457:G:OP2	32:XA:457:G:C8	2.56	0.59
32:QA:1319:A:C8	32:QA:1323:G:C6	2.90	0.59
38:XG:4:ARG:HD2	38:XG:5:VAL:N	2.16	0.59
1:RA:893:C:O2'	1:RA:894:U:H5'	2.03	0.59
14:RN:85:PRO:HA	14:RN:88:ALA:HB2	1.84	0.59
50:QS:79:TYR:O	50:QS:80:ARG:HB3	2.02	0.59
18:RR:24:LYS:HA	18:RR:94:THR:HG23	1.84	0.59
8:RH:4:ILE:HG23	8:RH:17:ASP:O	2.02	0.59
32:QA:1257:A:H4'	32:QA:1258:G:OP2	2.02	0.59
14:RN:102:PHE:HD1	14:RN:107:ASN:HD21	1.50	0.59
21:RU:86:PHE:CE1	21:RU:101:THR:HG21	2.37	0.59
14:RN:74:GLU:O	14:RN:77:ALA:HB3	2.03	0.59
26:RZ:39:ASP:CG	26:RZ:44:ARG:HH11	2.06	0.59
18:RR:27:ILE:HD13	18:RR:27:ILE:N	2.15	0.59
18:RR:45:GLU:HA	18:RR:45:GLU:OE2	2.02	0.59
8:RH:99:ILE:O	8:RH:99:ILE:HG22	2.01	0.59
1:YA:263:G:H4'	1:YA:430:A:O4'	2.03	0.59
1:YA:560:C:O2	17:YQ:47:ARG:NH1	2.35	0.59
32:QA:1469:C:H5'	32:QA:1469:C:C6	2.29	0.59
32:XA:1014:A:H4'	50:XS:13:HIS:ND1	2.17	0.59
50:XS:35:ARG:NH2	50:XS:53:GLY:H	2.00	0.59
1:YA:386:G:H4'	1:YA:387:U:OP2	2.01	0.59
51:QT:27:MET:HE2	51:QT:31:ILE:HD11	1.85	0.59
1:YA:301:G:C5	1:YA:302:C:N4	2.71	0.59
12:RL:76:GLU:C	12:RL:77:ILE:HD12	2.22	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:483:A:C8	21:YU:44:HIS:CG	2.90	0.59
6:YF:131:VAL:C	6:YF:133:GLU:H	2.06	0.59
32:QA:70:U:O2'	32:QA:71:A:C8	2.56	0.59
1:YA:1255:U:H3'	1:YA:1256:G:C5'	2.31	0.59
43:QL:42:LYS:O	43:QL:44:PRO:HD2	2.01	0.59
8:YH:82:SER:O	8:YH:90:LEU:HD11	2.03	0.59
34:XC:166:TRP:CE3	34:XC:166:TRP:N	2.70	0.59
15:RO:75:GLY:HA3	15:RO:106:LEU:HA	1.83	0.59
20:RT:29:THR:N	20:RT:91:GLN:HE22	2.00	0.59
1:RA:322:A:H5'	1:RA:340:A:H1'	1.84	0.59
41:QJ:33:GLY:O	41:QJ:34:ALA:HB2	2.03	0.59
21:RU:100:GLU:O	21:RU:101:THR:HB	2.02	0.59
18:YR:24:LYS:HA	18:YR:94:THR:HG23	1.84	0.59
1:RA:813:U:H2'	1:RA:814:C:C6	2.38	0.59
32:XA:140:U:H2'	32:XA:141:G:O4'	2.02	0.59
1:RA:603:A:H4'	1:RA:604:G:H5'	1.84	0.59
34:XC:88:LYS:HA	34:XC:91:ALA:HB3	1.84	0.59
1:RA:1567:G:H2'	3:RC:84:PRO:HG3	1.84	0.59
1:YA:1413:A:C6	1:YA:1414:C:N4	2.71	0.59
24:YX:39:VAL:HG22	24:YX:44:ARG:O	2.03	0.59
49:QR:44:THR:OG1	49:QR:46:THR:HG22	2.02	0.59
32:QA:575:G:O3'	56:QA:1740:HOH:O	2.17	0.59
32:XA:1037:C:H2'	32:XA:1037:C:O2	2.00	0.59
1:YA:2515:C:H42	1:YA:2569:G:H1	1.48	0.59
36:XE:157:GLY:HA3	39:XH:63:LYS:NZ	2.17	0.59
1:YA:2846:G:OP1	16:YP:51:ASN:HB2	2.03	0.59
32:QA:1489:G:C2'	32:QA:1490:U:H5'	2.32	0.59
13:RM:13:HIS:O	13:RM:14:LYS:CB	2.50	0.59
16:RP:87:ARG:NH2	16:RP:111:GLU:HG3	2.17	0.59
34:QC:46:LEU:HB3	34:QC:49:ALA:HB3	1.84	0.59
2:YB:69:G:H3'	2:YB:70:C:H6	1.66	0.59
1:RA:527:C:H4'	1:RA:528:A:O5'	2.02	0.59
1:YA:1388:G:H2'	1:YA:1389:G:C8	2.38	0.59
1:YA:84:A:C4	1:YA:103:A:N6	2.71	0.59
1:YA:1062:G:O4'	1:YA:1088:A:N7	2.35	0.59
1:YA:1079:C:O2'	1:YA:1080:A:O4'	2.20	0.59
2:YB:42:C:N4	6:YF:87:LYS:HD2	2.18	0.59
1:YA:637:A:OP2	12:YL:128:THR:HG21	2.02	0.59
13:YM:19:GLY:H	13:YM:38:ARG:HH21	1.51	0.59
33:QB:15:PHE:O	33:QB:40:ILE:HG12	2.03	0.59
20:RT:38:ALA:HB1	20:RT:43:ILE:HG22	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:49:GLN:N	40:XI:50:PRO:HD2	2.17	0.59
1:YA:1259:G:H2'	1:YA:1260:A:C8	2.38	0.59
44:QM:3:ILE:HA	44:QM:56:ARG:NH1	2.18	0.59
19:YS:71:VAL:HG13	19:YS:71:VAL:O	2.03	0.59
32:XA:1170:A:H2'	32:XA:1171:A:O4'	2.02	0.59
32:XA:951:G:H1'	32:XA:970:C:O2'	2.02	0.59
32:XA:457:G:N3	32:XA:457:G:H2'	2.18	0.59
36:XE:154:ALA:HB1	39:XH:65:PHE:CE2	2.38	0.59
3:YC:20:ASN:HB2	3:YC:23:LEU:HD22	1.84	0.59
47:XP:67:ILE:HG12	47:XP:72:ALA:HB2	1.84	0.59
1:YA:1574:C:H6	1:YA:1574:C:O5'	1.85	0.59
4:RD:149:ASN:CG	4:RD:150:GLN:H	2.05	0.59
48:XQ:13:SER:HB3	48:XQ:21:VAL:HB	1.85	0.59
47:XP:44:SER:H	47:XP:46:LYS:NZ	2.01	0.59
1:RA:343:C:H2'	1:RA:343:C:O2	2.03	0.59
22:RV:5:ASN:ND2	22:RV:5:ASN:H	2.01	0.59
1:YA:553:G:H2'	1:YA:554:U:O4'	2.03	0.59
32:XA:1372:U:H5''	40:XI:71:ILE:HD11	1.84	0.59
10:RJ:114:LEU:O	10:RJ:117:ALA:HB3	2.02	0.59
1:YA:1551:A:C4	1:YA:1552:A:H8	2.20	0.59
1:YA:1553:A:N7	1:YA:1555:G:C6	2.71	0.59
33:QB:49:PHE:CB	33:QB:212:TYR:OH	2.50	0.59
32:QA:255:G:H4'	48:QQ:18:LYS:HE3	1.83	0.59
1:YA:2310:C:O2'	1:YA:2311:A:C4'	2.50	0.59
1:YA:353:C:N4	1:YA:354:A:N6	2.51	0.59
5:YE:147:LEU:O	5:YE:148:ILE:HB	2.02	0.59
32:XA:376:G:H5''	47:XP:5:ARG:HB2	1.84	0.59
1:RA:1734:G:C4	1:RA:1735:A:C8	2.91	0.59
28:R1:46:VAL:HG12	28:R1:47:ILE:H	1.68	0.59
33:QB:9:LEU:HB2	33:QB:42:LEU:CD1	2.32	0.59
4:RD:66:GLY:O	4:RD:69:ALA:HB3	2.03	0.59
32:XA:987:G:H2'	32:XA:988:G:C8	2.38	0.59
1:YA:686:U:H6	1:YA:788:A:N1	2.01	0.59
32:XA:1458:G:O2'	51:XT:22:SER:HB3	2.02	0.59
1:RA:2449:U:H4'	1:RA:2450:A:OP1	2.03	0.59
3:RC:259:ASN:O	3:RC:260:LYS:HB2	2.03	0.59
1:YA:2725:A:C4	1:YA:2727:A:N7	2.71	0.59
34:XC:187:GLU:O	34:XC:188:ALA:HB2	2.03	0.59
26:RZ:8:GLN:O	26:RZ:53:MET:O	2.21	0.59
3:RC:30:ALA:HB3	3:RC:31:PRO:HD3	1.83	0.59
13:RM:78:LEU:HD23	13:RM:79:ALA:N	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:R4:7:VAL:HG23	31:R4:8:LYS:H	1.68	0.59
39:XH:104:SER:HA	39:XH:109:VAL:HG22	1.85	0.59
32:QA:636:U:H5''	48:QQ:5:ARG:HG2	1.83	0.59
36:XE:80:LEU:HD22	36:XE:146:MET:HE1	1.83	0.59
10:RJ:39:LYS:HA	10:RJ:43:GLU:HG3	1.83	0.59
32:XA:963:G:O2'	32:XA:964:A:H5'	2.03	0.59
32:XA:984:C:O2'	32:XA:985:C:C6	2.55	0.59
1:YA:976:G:H2'	1:YA:977:G:H8	1.68	0.59
1:YA:226:A:C5	1:YA:227:A:N7	2.71	0.59
33:XB:90:PHE:CE2	33:XB:149:GLY:HA3	2.37	0.59
10:RJ:124:VAL:O	10:RJ:125:TYR:HB2	2.03	0.59
32:XA:86:G:HO2'	32:XA:87:C:P	2.26	0.59
1:YA:67:U:H2'	1:YA:68:G:C8	2.33	0.59
1:YA:1252:G:H5''	56:YA:3286:HOH:O	2.02	0.59
32:XA:1134:G:N1	32:XA:1135:U:H1'	2.18	0.59
37:QF:93:LYS:O	37:QF:94:HIS:HB2	2.03	0.59
32:QA:64:G:C8	32:QA:99:C:N4	2.71	0.59
8:YH:120:GLY:O	8:YH:121:VAL:HB	2.02	0.59
1:YA:464:U:C1'	1:YA:686:U:H5	2.14	0.59
32:XA:1169:A:H2'	32:XA:1170:A:H8	1.68	0.59
32:QA:707:U:OP1	42:QK:86:LYS:HE3	2.03	0.59
7:YG:44:HIS:HA	7:YG:49:LEU:HA	1.84	0.59
32:QA:865:A:H2'	32:QA:866:C:C6	2.37	0.59
41:QJ:7:ARG:HD3	41:QJ:75:ASP:OD1	2.03	0.59
43:XL:41:PRO:HD2	43:XL:47:ALA:O	2.03	0.59
21:RU:6:ARG:O	21:RU:24:VAL:HB	2.03	0.59
1:RA:747:U:C5	1:RA:2613:U:C5	2.91	0.59
6:YF:160:LYS:HD3	6:YF:161:SER:N	2.18	0.59
1:YA:1593:A:C6	1:YA:1594:U:C4	2.91	0.59
1:YA:590:A:H2'	1:YA:591:U:H6	1.67	0.59
4:YD:97:SER:HB2	4:YD:99:GLU:HG2	1.84	0.59
35:QD:96:ARG:HB3	35:QD:98:ASP:OD1	2.03	0.59
1:RA:39:G:H2'	1:RA:40:U:C6	2.38	0.59
5:YE:138:LEU:HA	5:YE:141:MET:HE2	1.83	0.59
32:XA:1254:A:H2'	32:XA:1255:G:C8	2.38	0.59
23:RW:23:LYS:HD2	23:RW:24:ARG:N	2.18	0.59
51:QT:79:THR:O	51:QT:82:ILE:HG13	2.02	0.59
1:YA:27:G:H1'	1:YA:513:A:H62	1.66	0.59
1:YA:1808:A:N7	24:YX:27:ARG:NH1	2.51	0.59
1:YA:321:U:C2	5:YE:159:LEU:HD21	2.38	0.59
1:YA:1062:G:OP1	1:YA:1070:A:OP2	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:12:ARG:CG	3:RC:12:ARG:NH1	2.51	0.59
32:XA:822:U:H2'	32:XA:823:C:C6	2.35	0.59
1:YA:78:U:H2'	1:YA:79:C:C6	2.38	0.59
1:YA:621:A:O2'	1:YA:622:G:O4'	2.21	0.59
20:RT:19:LYS:O	20:RT:20:ALA:C	2.40	0.59
35:QD:173:ASP:O	35:QD:174:ALA:HB2	2.03	0.59
20:YT:14:PRO:O	20:YT:32:LEU:HA	2.02	0.59
9:RI:90:GLY:O	9:RI:92:PRO:HD3	2.03	0.59
16:YP:62:LYS:O	16:YP:63:ILE:HB	2.03	0.59
1:RA:1935:G:H1'	1:RA:1964:G:N2	2.17	0.59
1:YA:1178:C:H2'	1:YA:1179:G:O4'	2.03	0.59
13:YM:42:THR:HG22	13:YM:44:ARG:H	1.68	0.59
1:YA:459:U:C5	1:YA:469:G:N2	2.71	0.59
33:QB:143:LEU:H	33:QB:143:LEU:HD23	1.67	0.59
1:YA:1866:A:H2'	1:YA:1867:G:O4'	2.03	0.59
1:YA:394:C:C2'	1:YA:395:U:H5'	2.32	0.59
45:XN:27:LYS:HB2	45:XN:45:LEU:CD2	2.32	0.59
32:QA:1331:G:O2'	32:QA:1332:A:P	2.61	0.59
13:YM:41:LEU:HD23	13:YM:46:ILE:HG22	1.85	0.59
16:RP:105:LYS:HA	16:RP:108:ARG:HD3	1.84	0.59
1:YA:711:G:C2	1:YA:721:A:C2	2.90	0.59
42:QK:100:ASN:HD22	42:QK:106:ILE:HG22	1.67	0.59
35:XD:170:LEU:HA	35:XD:182:LYS:HB2	1.84	0.59
32:XA:659:U:H2'	32:XA:660:C:H6	1.67	0.59
1:RA:1073:A:N7	1:RA:1074:G:H8	2.02	0.58
1:RA:1079:C:N4	1:RA:1088:A:C2	2.71	0.58
35:XD:2:ARG:CZ	35:XD:114:ARG:HD3	2.32	0.58
23:RW:23:LYS:HE3	23:RW:24:ARG:O	2.02	0.58
1:YA:37:C:H2'	1:YA:38:A:O4'	2.03	0.58
50:XS:38:THR:N	50:XS:69:LYS:HD3	2.18	0.58
1:YA:2345:G:H4'	1:YA:2346:A:C5'	2.32	0.58
32:XA:261:U:H2'	32:XA:263:A:OP2	2.02	0.58
32:QA:843:U:H2'	32:QA:844:G:H5'	1.85	0.58
4:RD:133:THR:HG23	4:RD:134:HIS:HD2	1.66	0.58
1:YA:2066:C:O2'	1:YA:2067:G:H5'	2.02	0.58
32:QA:1461:G:O2'	32:QA:1462:C:H5'	2.04	0.58
1:YA:1475:G:O2'	1:YA:1476:U:C6	2.55	0.58
32:XA:1084:G:H5'	32:XA:1102:A:OP2	2.03	0.58
16:RP:33:GLU:CA	16:RP:38:ARG:HH11	2.15	0.58
24:RX:34:SER:HA	24:RX:48:LEU:O	2.03	0.58
1:YA:1378:A:O2'	1:YA:1379:U:H3'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:XJ:30:LYS:HG3	41:XJ:36:VAL:HG22	1.85	0.58
7:YG:162:ARG:HB2	7:YG:166:GLU:CB	2.32	0.58
7:RG:10:VAL:HB	7:RG:14:VAL:HG21	1.84	0.58
34:XC:84:GLU:C	34:XC:86:LEU:N	2.57	0.58
32:XA:1033:G:HO2'	32:XA:1034:G:H5''	1.68	0.58
15:RO:52:SER:HB2	15:RO:54:VAL:HG12	1.85	0.58
32:QA:82:G:N2	32:QA:84:U:N3	2.51	0.58
1:RA:900:A:H2'	1:RA:901:C:O4'	2.02	0.58
1:RA:1315:C:O2'	1:RA:1316:U:H5'	2.03	0.58
1:YA:1924:C:O2'	1:YA:1925:C:H5'	2.03	0.58
5:RE:23:PHE:CD1	5:RE:111:GLU:HG3	2.37	0.58
32:XA:784:A:N6	32:XA:799:G:C6	2.70	0.58
7:YG:148:ARG:HB2	7:YG:152:ARG:NH2	2.18	0.58
1:RA:693:A:H2'	1:RA:694:U:O4'	2.03	0.58
5:RE:48:THR:HG22	5:RE:86:ALA:HB3	1.85	0.58
21:YU:47:PRO:HB3	21:YU:54:PRO:HG2	1.85	0.58
34:XC:129:PHE:CE1	34:XC:156:LEU:HB3	2.37	0.58
1:RA:1185:G:H5''	1:RA:1186:G:P	2.43	0.58
38:QG:136:LYS:O	38:QG:140:VAL:HG23	2.03	0.58
3:YC:147:PRO:CD	3:YC:184:GLU:HG3	2.32	0.58
1:YA:167:A:H2'	1:YA:168:G:O4'	2.03	0.58
32:XA:1206:G:C6	32:XA:1207:G:C5	2.90	0.58
32:XA:204:G:H2'	32:XA:205:A:C8	2.38	0.58
32:QA:481:G:O2'	32:QA:482:A:C8	2.56	0.58
32:QA:1279:G:H1'	32:QA:1282:C:H42	1.63	0.58
33:XB:133:ALA:HA	33:XB:137:THR:HG21	1.85	0.58
9:RI:100:ILE:HG22	9:RI:101:SER:N	2.11	0.58
32:XA:754:C:O2	32:XA:754:C:H2'	2.03	0.58
32:XA:322:C:O2'	51:XT:17:ARG:HG3	2.02	0.58
22:RV:44:HIS:CE1	22:RV:85:LYS:HB2	2.38	0.58
24:RX:31:ASN:O	24:RX:51:SER:HA	2.03	0.58
1:YA:1733:G:C8	1:YA:1733:G:H5'	2.38	0.58
46:QO:35:ILE:HG22	46:QO:36:ASN:N	2.18	0.58
4:RD:121:THR:HB	4:RD:127:PHE:CD1	2.38	0.58
32:QA:439:U:H1'	35:QD:118:SER:O	2.03	0.58
7:RG:93:TYR:O	7:RG:94:ARG:O	2.21	0.58
43:XL:2:THR:HB	43:XL:5:GLN:HB2	1.83	0.58
3:YC:143:VAL:HB	3:YC:153:LEU:HB3	1.83	0.58
32:XA:33:A:H2'	32:XA:34:C:H6	1.66	0.58
41:QJ:44:THR:HG23	41:QJ:70:HIS:HA	1.85	0.58
1:YA:2718:G:OP1	16:YP:97:TYR:HD1	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YY:1:MET:H2	25:YY:5:GLU:CG	2.15	0.58
32:XA:723:U:O5'	32:XA:723:U:H6	1.86	0.58
10:RJ:44:TYR:CD1	10:RJ:44:TYR:O	2.57	0.58
2:YB:109:A:O2'	2:YB:110:C:C6	2.53	0.58
37:QF:38:ARG:CG	37:QF:38:ARG:HH11	2.01	0.58
1:YA:1349:C:H2'	1:YA:1350:C:C5	2.39	0.58
50:QS:28:LYS:HB3	50:QS:29:PRO:CD	2.19	0.58
1:YA:1062:G:H22	1:YA:1077:A:H2	1.50	0.58
48:QQ:21:VAL:HA	48:QQ:43:LEU:O	2.04	0.58
10:RJ:140:LEU:HD13	10:RJ:140:LEU:C	2.24	0.58
32:QA:1286:U:O2	32:QA:1286:U:H2'	2.02	0.58
32:XA:410:G:OP1	35:XD:25:ARG:HD2	2.03	0.58
32:QA:507:C:C3'	32:QA:508:U:H5''	2.31	0.58
7:YG:85:LYS:O	7:YG:86:LEU:HG	2.03	0.58
19:RS:88:ARG:HG2	19:RS:88:ARG:NH2	2.17	0.58
1:YA:989:G:OP2	26:YZ:11:SER:HB2	2.04	0.58
1:YA:1303:G:O2'	1:YA:1304:A:O5'	2.21	0.58
1:RA:2813:A:C2	1:RA:2887:A:N6	2.66	0.58
42:XK:126:ARG:HB2	52:XU:33:ARG:HD2	1.84	0.58
1:RA:475:C:C4	1:RA:481:G:O6	2.56	0.58
32:QA:6:G:HO2'	32:QA:7:A:H8	1.50	0.58
39:XH:1:SER:C	39:XH:3:GLN:H	2.05	0.58
1:YA:172:A:O2'	1:YA:173:A:H5'	2.02	0.58
6:YF:8:LYS:NZ	6:YF:8:LYS:HB2	2.18	0.58
7:YG:7:PRO:O	7:YG:8:VAL:HB	2.03	0.58
34:QC:21:TRP:CD1	34:QC:58:ARG:HG2	2.38	0.58
1:YA:2415:G:C6	1:YA:2416:C:C4	2.90	0.58
3:RC:144:GLU:HA	3:RC:151:GLY:HA2	1.85	0.58
1:YA:1635:A:H8	1:YA:1635:A:H5'	1.67	0.58
11:YK:2:ILE:HB	11:YK:33:ALA:HB3	1.85	0.58
1:RA:2292:U:H2'	1:RA:2293:G:H8	1.68	0.58
1:YA:716:A:H2'	1:YA:717:C:H5''	1.85	0.58
32:QA:1028:C:C2	32:QA:1034:G:C2	2.91	0.58
37:XF:98:GLU:O	37:XF:99:ALA:HB3	2.04	0.58
1:YA:2516:A:O2'	1:YA:2517:C:H5'	2.04	0.58
1:YA:1200:C:H6	1:YA:1200:C:O5'	1.86	0.58
17:YQ:71:ASN:ND2	17:YQ:106:THR:HA	2.18	0.58
32:XA:1416:G:N2	32:XA:1485:U:H1'	2.18	0.58
19:YS:84:ARG:HB3	19:YS:96:ILE:HG23	1.85	0.58
32:XA:618:C:H5''	32:XA:619:U:H5''	1.86	0.58
39:XH:38:VAL:HA	39:XH:41:GLU:HG3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:YU:94:PHE:O	21:YU:94:PHE:HD2	1.87	0.58
48:QQ:37:ILE:H	48:QQ:37:ILE:HD12	1.67	0.58
38:XG:78:ARG:HA	38:XG:84:TYR:HB2	1.85	0.58
43:XL:33:CYS:HB3	43:XL:77:SER:O	2.02	0.58
32:XA:263:A:OP1	51:XT:73:ARG:NH1	2.33	0.58
1:YA:1612:C:O2'	1:YA:1613:G:O5'	2.21	0.58
1:RA:2052:A:C2	1:RA:2053:G:C8	2.92	0.58
41:QJ:53:ILE:HG13	45:QN:84:ARG:CZ	2.33	0.58
10:YJ:3:THR:HG21	17:YQ:60:TRP:HE1	1.69	0.58
41:QJ:57:VAL:CG2	41:QJ:58:ASN:H	2.08	0.58
38:QG:113:LYS:HB2	38:QG:117:LEU:HD12	1.85	0.58
32:QA:1282:C:H2'	32:QA:1283:U:C6	2.38	0.58
47:XP:68:SER:HB3	47:XP:71:VAL:HG13	1.86	0.58
32:QA:1299:A:O2'	32:QA:1300:G:H4'	2.03	0.58
1:YA:1048:A:N6	1:YA:1111:A:C4	2.71	0.58
1:YA:2758:A:C2'	1:YA:2759:G:H5'	2.32	0.58
4:YD:9:VAL:HG22	16:YP:4:ILE:HD11	1.86	0.58
32:XA:1130:A:N7	32:XA:1146:A:N6	2.52	0.58
30:R3:26:ALA:O	30:R3:27:ASN:CB	2.47	0.58
39:XH:28:SER:HB3	39:XH:56:PRO:HB2	1.84	0.58
1:RA:2637:U:C2'	1:RA:2638:G:H5'	2.34	0.58
41:QJ:80:THR:HG22	41:QJ:82:LYS:H	1.68	0.58
11:RK:105:ARG:N	11:RK:105:ARG:HD3	2.17	0.58
41:QJ:74:VAL:HG12	41:QJ:75:ASP:N	2.17	0.58
32:QA:1343:G:O3'	40:QI:123:ARG:HB3	2.03	0.58
1:RA:613:A:C8	1:RA:616:A:N1	2.71	0.58
24:YX:6:VAL:HG22	24:YX:7:THR:HG23	1.84	0.58
1:RA:2311:A:H1'	6:RF:78:ILE:HD13	1.86	0.58
33:XB:216:VAL:C	33:XB:218:ALA:H	2.07	0.58
3:YC:56:GLY:HA3	3:YC:213:ARG:O	2.03	0.58
35:XD:18:LEU:HD22	35:XD:63:ILE:HG12	1.85	0.58
32:XA:423:G:H2'	32:XA:424:G:O4'	2.04	0.58
6:RF:33:ILE:O	6:RF:90:LEU:HB2	2.03	0.58
42:XK:34:THR:HA	42:XK:41:LEU:HG	1.85	0.58
18:YR:51:VAL:HB	18:YR:52:PRO:HD2	1.85	0.58
1:RA:2354:C:C4'	23:RW:31:LEU:HD22	2.32	0.58
1:YA:35:G:N2	1:YA:36:G:H1'	2.19	0.58
1:YA:2386:A:O2'	1:YA:2387:U:C6	2.56	0.58
32:QA:1072:G:H2'	32:QA:1073:U:C6	2.39	0.58
1:RA:1506:U:H2'	1:RA:1507:C:C6	2.38	0.58
1:YA:1358:G:C6	56:YA:3417:HOH:O	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:91:ASP:HB3	12:RL:94:THR:HB	1.85	0.58
12:RL:91:ASP:CB	12:RL:94:THR:HB	2.34	0.58
36:XE:79:THR:HA	36:XE:121:ASN:CG	2.24	0.58
1:RA:783:A:C8	1:RA:784:G:H4'	2.38	0.58
13:YM:27:SER:N	13:YM:66:ARG:HH22	1.97	0.58
1:YA:600:G:C5'	5:YE:27:LEU:HD22	2.33	0.58
47:XP:78:VAL:C	47:XP:80:LYS:H	2.06	0.58
32:QA:1022:A:H2'	32:QA:1023:U:O4'	2.04	0.58
37:QF:91:ARG:HG3	37:QF:92:THR:H	1.69	0.58
32:XA:814:A:C5'	32:XA:1511:G:H4'	2.30	0.58
8:RH:137:GLU:HG3	8:RH:138:VAL:N	2.19	0.58
1:YA:921:C:H2'	1:YA:922:C:H5'	1.85	0.58
39:QH:17:GLN:HE21	39:QH:71:VAL:HG23	1.66	0.58
3:YC:83:ASP:CB	3:YC:90:ILE:HD12	2.33	0.58
48:XQ:3:LYS:HZ2	48:XQ:6:THR:HG21	1.68	0.58
16:RP:33:GLU:HB2	16:RP:38:ARG:HH11	1.67	0.58
1:YA:2808:G:O2'	1:YA:2809:A:C8	2.55	0.58
32:QA:1006:G:H2'	32:QA:1007:U:O4'	2.03	0.58
12:YL:123:ARG:HG2	12:YL:143:GLU:HB3	1.85	0.58
6:YF:31:GLU:C	6:YF:95:MET:HE1	2.23	0.58
32:QA:1452:C:H4'	32:QA:1453:G:C4	2.38	0.58
20:RT:24:MET:HG3	20:RT:29:THR:HG23	1.84	0.58
32:QA:723:U:H5'	52:QU:48:LYS:HE2	1.85	0.58
32:QA:978:A:OP2	32:QA:1362:A:N6	2.23	0.58
3:YC:77:VAL:HG23	3:YC:111:ALA:HA	1.86	0.58
47:QP:5:ARG:HA	47:QP:68:SER:OG	2.03	0.58
13:YM:8:LYS:HE3	13:YM:8:LYS:HA	1.86	0.58
1:RA:1786:A:C5	1:RA:1938:A:C2	2.92	0.58
1:RA:1266:G:H5''	19:RS:15:GLN:HE22	1.68	0.58
29:Y2:11:LYS:NZ	56:Y2:101:HOH:O	2.37	0.58
1:YA:708:G:H2'	1:YA:709:U:H6	1.68	0.58
44:XM:106:ARG:HA	44:XM:110:GLY:O	2.02	0.58
17:RQ:18:LYS:O	17:RQ:21:LYS:HG3	2.03	0.58
38:QG:96:ASN:O	38:QG:100:MET:HG3	2.02	0.58
33:XB:84:LEU:O	33:XB:84:LEU:HG	2.03	0.58
1:RA:1826:G:H2'	1:RA:1827:U:H6	1.69	0.58
9:RI:3:LYS:CD	9:RI:4:VAL:HG23	2.33	0.58
1:RA:1223:G:OP2	18:RR:68:ARG:NH1	2.37	0.58
52:XU:31:VAL:O	52:XU:32:ARG:C	2.41	0.58
32:XA:960:U:H4'	32:XA:961:U:C5'	2.30	0.58
32:XA:1219:A:OP1	45:XN:52:ARG:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:YQ:6:GLY:C	17:YQ:8:ILE:H	2.07	0.58
1:YA:860:U:O4	1:YA:2268:A:C5	2.57	0.58
30:Y3:29:ARG:HH21	30:Y3:29:ARG:HG2	1.68	0.58
1:YA:324:A:O2'	1:YA:325:G:O4'	2.16	0.58
21:YU:14:THR:HB	21:YU:68:ASN:HB3	1.84	0.58
1:YA:478:A:C6	1:YA:480:A:C5	2.92	0.58
5:RE:175:ILE:O	5:RE:175:ILE:HG23	2.04	0.58
32:XA:238:A:H2'	32:XA:239:U:C4'	2.33	0.58
1:YA:1048:A:C6	1:YA:1111:A:C2	2.90	0.58
32:XA:254:G:O2'	32:XA:255:G:H5'	2.03	0.58
7:YG:103:ASN:O	7:YG:104:LEU:HD23	2.03	0.58
14:RN:96:ARG:HH22	14:RN:116:VAL:HG23	1.69	0.58
1:RA:1820:U:H4'	1:RA:1821:A:OP2	2.04	0.58
5:RE:45:ALA:O	5:RE:46:GLN:HG2	2.03	0.58
5:YE:149:ILE:HG23	5:YE:188:MET:N	2.17	0.58
32:XA:512:U:O2'	32:XA:513:C:C6	2.55	0.58
1:RA:1857:G:N2	1:RA:1884:G:O2'	2.37	0.58
32:XA:218:U:H2'	32:XA:219:U:O4'	2.04	0.58
39:QH:34:ALA:O	39:QH:37:ASN:HB3	2.03	0.58
49:XR:19:GLU:CD	49:XR:20:ILE:H	2.06	0.58
8:YH:2:GLN:O	8:YH:3:VAL:O	2.22	0.58
45:QN:48:GLN:HA	45:QN:48:GLN:NE2	2.19	0.58
1:RA:914:G:H5''	1:RA:914:G:C8	2.38	0.58
40:QI:48:ARG:C	40:QI:50:PRO:HD2	2.23	0.58
17:YQ:111:LYS:HE2	18:YR:48:LYS:HD3	1.86	0.58
17:RQ:91:ARG:HH21	17:RQ:93:ILE:HD13	1.66	0.58
18:RR:39:LEU:N	18:RR:39:LEU:CD2	2.65	0.58
2:YB:58:A:H2'	2:YB:59:A:C8	2.38	0.58
1:YA:1807:G:H2'	1:YA:1808:A:H5'	1.85	0.58
3:YC:146:LYS:HG3	3:YC:149:LYS:HD3	1.85	0.58
36:QE:148:SER:HB2	36:QE:151:MET:HB2	1.85	0.58
36:QE:80:LEU:HD12	36:QE:146:MET:CE	2.34	0.58
42:XK:81:LEU:HD11	42:XK:104:PHE:CD2	2.38	0.58
1:YA:1140:C:O2'	1:YA:1141:U:H5'	2.04	0.58
32:QA:1138:G:C2'	32:QA:1138:G:N3	2.64	0.58
1:YA:2720:U:H5''	16:YP:52:ARG:NH2	2.16	0.58
11:RK:108:ARG:NH1	11:RK:108:ARG:HG2	2.19	0.58
1:YA:923:G:H1'	23:YW:23:LYS:HZ1	1.66	0.58
1:RA:588:U:H2'	1:RA:589:U:C6	2.39	0.58
1:YA:1287:A:H5'	14:YN:103:ARG:NH1	2.19	0.58
1:YA:845:A:N1	1:YA:932:U:O2	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:631:A:O2'	12:YL:66:PHE:HB3	2.04	0.58
1:YA:684:G:C2	1:YA:794:A:C2	2.92	0.58
1:YA:1773:A:H2'	1:YA:1774:C:O4'	2.04	0.58
32:XA:1050:G:O2'	32:XA:1051:C:C6	2.56	0.58
22:YV:73:LYS:HD3	22:YV:74:ALA:H	1.68	0.58
1:YA:1826:G:C6	1:YA:1827:U:C4	2.92	0.58
32:QA:1248:A:H2	40:QL:71:ILE:HD11	1.69	0.58
19:YS:39:THR:HG22	19:YS:40:ASN:N	2.17	0.58
1:YA:2001:C:H4'	1:YA:2689:U:O2'	2.04	0.58
21:RU:52:ASN:C	21:RU:54:PRO:HD2	2.24	0.58
32:XA:223:A:C6	32:XA:224:U:C4	2.92	0.58
1:RA:2267:A:H5''	1:RA:2268:A:H5'	1.84	0.58
8:RH:104:THR:HG23	8:RH:104:THR:O	2.03	0.58
35:QD:21:LYS:HD3	35:QD:21:LYS:O	2.03	0.58
23:RW:23:LYS:HD2	23:RW:24:ARG:H	1.67	0.58
1:YA:35:G:H21	1:YA:36:G:H1'	1.68	0.58
1:YA:1249:U:O2'	1:YA:1250:G:OP2	2.19	0.58
1:YA:858:G:C4	1:YA:2268:A:C2	2.92	0.58
1:YA:2297:A:O2'	1:YA:2298:A:C8	2.36	0.58
30:Y3:32:LEU:HD23	30:Y3:35:LYS:HE2	1.86	0.58
51:QT:24:ARG:O	51:QT:28:ARG:HG2	2.03	0.58
51:QT:28:ARG:HA	51:QT:31:ILE:HD12	1.86	0.58
1:YA:2310:C:O2'	1:YA:2311:A:C5'	2.52	0.58
1:YA:2443:C:O2'	1:YA:2444:G:H5'	2.04	0.58
5:YE:58:LYS:HB3	5:YE:60:TRP:HE1	1.68	0.58
32:XA:243:A:H4'	32:XA:244:U:OP2	2.04	0.58
20:RT:31:VAL:C	20:RT:32:LEU:HD23	2.23	0.58
32:XA:1215:G:O2'	32:XA:1216:A:C8	2.50	0.58
7:YG:94:ARG:CZ	7:YG:105:SER:HB2	2.33	0.58
1:YA:46:G:C2	1:YA:47:C:C5	2.91	0.58
37:XF:3:HIS:CE1	37:XF:95:ALA:H	2.22	0.58
38:XG:140:VAL:C	38:XG:142:ARG:H	2.06	0.58
16:RP:33:GLU:HA	16:RP:38:ARG:HH11	1.69	0.58
1:YA:2788:C:H1'	1:YA:2809:A:H2	1.69	0.58
1:YA:2732:G:H5''	1:YA:2733:A:O4'	2.04	0.58
6:RF:24:VAL:O	6:RF:27:VAL:HG12	2.04	0.58
11:YK:101:GLY:O	11:YK:120:PRO:HB3	2.04	0.58
1:YA:1494:A:C2	1:YA:1495:A:C4	2.92	0.58
32:XA:68:G:H5'	32:XA:171:A:H1'	1.85	0.58
32:QA:1034:G:H2'	32:QA:1035:A:C8	2.38	0.58
36:XE:80:LEU:O	36:XE:80:LEU:HD13	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:128:LYS:O	40:XI:129:ARG:HB2	2.04	0.58
36:XE:152:VAL:HG21	39:XH:98:LEU:HD22	1.84	0.58
1:YA:1669:A:OP2	56:YA:3711:HOH:O	2.17	0.58
1:RA:1419:A:N7	1:RA:1421:G:C6	2.72	0.58
1:YA:2714:G:H2'	1:YA:2715:C:H6	1.68	0.58
2:YB:81:G:C6	2:YB:82:U:C4	2.92	0.58
32:QA:591:U:H2'	32:QA:592:G:H8	1.68	0.58
51:QT:29:THR:HA	51:QT:32:LYS:HG2	1.85	0.58
1:RA:1508:A:O2'	1:RA:1509:A:OP2	2.20	0.58
1:YA:307:G:N2	1:YA:310:A:C8	2.72	0.58
48:QQ:13:SER:O	48:QQ:16:MET:SD	2.62	0.58
1:YA:211:C:H2'	1:YA:212:G:O4'	2.04	0.58
1:YA:647:G:C8	1:YA:648:G:N7	2.72	0.58
32:XA:1241:G:N3	32:XA:1242:G:N7	2.52	0.58
7:YG:163:TYR:CD2	7:YG:163:TYR:N	2.71	0.58
1:RA:2149:U:O2'	1:RA:2150:C:O5'	2.20	0.58
33:QB:221:ARG:HH11	33:QB:221:ARG:HG2	1.67	0.58
33:QB:67:LEU:HA	33:QB:89:PHE:O	2.04	0.58
11:RK:71:ARG:CB	11:RK:72:PRO:HD3	2.33	0.58
11:YK:7:MET:CG	11:YK:17:ARG:HH12	2.17	0.58
37:XF:51:ILE:O	37:XF:54:LEU:HB2	2.03	0.58
4:RD:9:VAL:HG13	4:RD:26:VAL:O	2.04	0.58
5:RE:45:ALA:C	5:RE:46:GLN:HG2	2.24	0.58
32:QA:1387:G:H2'	32:QA:1388:C:H6	1.64	0.58
11:RK:59:LYS:HG3	11:RK:89:ASN:HD22	1.69	0.58
1:YA:1739:A:C6	1:YA:1740:G:C5	2.92	0.58
1:YA:1510:G:N2	1:YA:1511:G:N3	2.50	0.58
1:RA:899:A:HO2'	1:RA:900:A:H8	1.50	0.58
1:YA:259:G:C6	1:YA:260:G:N7	2.72	0.58
42:XK:40:ALA:O	42:XK:41:LEU:HD23	2.04	0.58
32:XA:392:C:C2	32:XA:393:A:C8	2.91	0.58
1:RA:1050:A:C2	1:RA:2751:G:C4	2.92	0.58
32:XA:1270:G:H2'	32:XA:1271:A:H8	1.69	0.58
38:XG:12:LEU:HD22	38:XG:13:PRO:O	2.03	0.58
13:YM:67:VAL:HG21	13:YM:102:LEU:HD12	1.84	0.58
15:RO:2:ASP:OD1	15:RO:3:LYS:HG2	2.04	0.58
41:QJ:36:VAL:HG22	41:QJ:76:ILE:HG23	1.86	0.58
32:QA:1417:G:C6	32:QA:1482:G:C6	2.92	0.58
1:YA:2298:A:C6	1:YA:2321:U:C5	2.92	0.58
1:YA:1807:G:C2'	1:YA:1808:A:H5'	2.33	0.58
33:QB:22:TRP:CE3	33:QB:24:PRO:HA	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:RO:31:THR:HG23	15:RO:33:ARG:H	1.69	0.58
17:RQ:97:ILE:HD11	17:RQ:105:PHE:N	2.18	0.58
32:QA:1055:A:H8	32:QA:1055:A:O5'	1.86	0.58
38:QG:68:VAL:HB	38:QG:99:ALA:HB1	1.84	0.58
18:YR:82:HIS:CG	18:YR:82:HIS:O	2.57	0.58
45:QN:11:LYS:O	45:QN:15:LEU:HG	2.04	0.58
13:RM:71:LYS:HD3	13:RM:95:LEU:HD11	1.86	0.58
1:RA:2262:U:H4'	1:RA:2328:A:H2	1.69	0.58
32:QA:1361:G:C3'	32:QA:1362:A:H5''	2.34	0.58
32:XA:747:A:H2'	32:XA:748:G:O4'	2.03	0.58
1:YA:1866:A:O2'	1:YA:1867:G:H5'	2.04	0.58
39:QH:88:LYS:HG3	39:QH:89:ASP:H	1.68	0.58
32:QA:957:U:O2	32:QA:959:A:H8	1.87	0.58
11:RK:57:VAL:C	11:RK:58:LEU:HD23	2.24	0.58
32:QA:1418:A:C2	32:QA:1483:A:C2	2.92	0.58
1:YA:85:G:HO2'	1:YA:86:G:H8	1.51	0.58
12:RL:131:ALA:O	12:RL:135:ILE:HD12	2.04	0.58
32:QA:666:G:H5'	32:QA:726:C:H1'	1.86	0.58
1:YA:453:A:H4'	1:YA:472:A:H62	1.69	0.58
35:XD:2:ARG:NH2	35:XD:114:ARG:NH1	2.51	0.57
32:XA:5:U:H4'	32:XA:6:G:H5'	1.84	0.57
1:YA:2344:U:H2'	28:Y1:35:LEU:O	2.04	0.57
1:YA:2392:A:H2	12:YL:55:MET:SD	2.26	0.57
32:XA:112:G:C2	32:XA:330:C:N4	2.72	0.57
8:RH:68:ARG:HH21	8:RH:72:ILE:HG21	1.69	0.57
1:RA:2681:C:C2	1:RA:2724:U:O4	2.57	0.57
10:RJ:64:VAL:HG13	10:RJ:65:THR:O	2.04	0.57
19:RS:20:VAL:HG21	19:RS:43:ALA:HB3	1.86	0.57
32:QA:182:A:N3	32:QA:184:G:C8	2.71	0.57
1:YA:2400:G:H2'	1:YA:2401:U:O4'	2.04	0.57
1:RA:2340:A:H2'	1:RA:2341:G:H8	1.69	0.57
13:RM:43:ALA:O	13:RM:46:ILE:HG13	2.03	0.57
8:YH:3:VAL:H	8:YH:39:ALA:HB2	1.68	0.57
1:RA:2393:U:H5'	12:RL:60:ARG:O	2.04	0.57
32:QA:1251:A:H2'	32:QA:1252:A:C8	2.39	0.57
18:RR:46:GLU:O	18:RR:46:GLU:OE1	2.22	0.57
1:YA:995:C:O2'	17:YQ:93:ILE:HD12	2.03	0.57
10:RJ:56:VAL:CG1	10:RJ:57:LEU:N	2.67	0.57
10:YJ:25:LEU:HB2	10:YJ:62:VAL:HG21	1.85	0.57
20:RT:32:LEU:H	20:RT:83:ALA:CB	2.11	0.57
1:RA:569:U:H1'	1:RA:947:A:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2134:A:OP1	1:RA:2134:A:H8	1.86	0.57
1:RA:100:U:C4'	1:RA:101:A:O5'	2.51	0.57
20:RT:38:ALA:HB1	20:RT:43:ILE:HG21	1.86	0.57
1:RA:1110:G:O2'	1:RA:1111:A:O5'	2.22	0.57
29:R2:42:LEU:H	29:R2:42:LEU:CD2	2.16	0.57
28:Y1:25:ASN:OD1	28:Y1:28:THR:HG23	2.03	0.57
1:YA:2544:G:H2'	1:YA:2545:G:H8	1.69	0.57
32:QA:211:G:C6	32:QA:212:G:H1'	2.38	0.57
50:XS:60:PHE:CG	50:XS:61:VAL:N	2.72	0.57
14:RN:28:LEU:HD23	14:RN:48:VAL:HG11	1.86	0.57
29:Y2:28:ARG:C	29:Y2:30:VAL:H	2.08	0.57
7:YG:116:LEU:HD13	7:YG:120:ILE:O	2.04	0.57
17:YQ:26:ALA:O	17:YQ:30:VAL:HB	2.04	0.57
1:RA:1268:A:C2	1:RA:2013:A:C4	2.92	0.57
1:YA:1510:G:O2'	1:YA:1511:G:O4'	2.22	0.57
32:QA:1234:C:C2'	32:QA:1235:U:H5'	2.33	0.57
26:RZ:8:GLN:HB3	26:RZ:31:ILE:HA	1.86	0.57
1:YA:591:U:H1'	30:Y3:1:PRO:HD2	1.85	0.57
1:RA:1858:A:H2'	1:RA:1859:U:C6	2.40	0.57
27:R0:11:LYS:HA	27:R0:14:MET:HG3	1.86	0.57
17:YQ:101:ASP:HB2	18:YR:2:TYR:OH	2.03	0.57
1:YA:779:U:OP1	3:YC:48:ILE:HG13	2.05	0.57
7:RG:163:TYR:O	7:RG:164:ALA:HB2	2.04	0.57
25:RY:17:GLU:HG3	25:RY:18:LEU:N	2.19	0.57
32:XA:791:G:C2'	32:XA:792:A:H5'	2.34	0.57
32:XA:615:G:H2'	32:XA:616:G:H8	1.70	0.57
1:YA:254:G:N7	30:Y3:4:LYS:HE2	2.19	0.57
1:RA:2678:C:H2'	1:RA:2679:A:O4'	2.04	0.57
2:YB:30:C:O2	2:YB:30:C:H2'	2.03	0.57
37:QF:40:GLU:HB2	37:QF:42:TRP:HE1	1.69	0.57
1:RA:923:G:H5'	23:RW:25:PHE:CZ	2.39	0.57
52:XU:16:ARG:HG3	52:XU:19:LYS:CG	2.21	0.57
50:XS:35:ARG:NH2	50:XS:51:HIS:CD2	2.73	0.57
41:QJ:53:ILE:CG2	41:QJ:61:ALA:HB1	2.24	0.57
1:YA:1071:G:O2'	1:YA:1072:C:O5'	2.21	0.57
32:XA:328:C:C1'	32:XA:329:A:OP2	2.52	0.57
1:YA:1965:C:H3'	1:YA:1966:A:H5''	1.86	0.57
5:YE:178:VAL:HG13	5:YE:179:SER:N	2.17	0.57
32:XA:666:G:C6	32:XA:741:G:C6	2.92	0.57
41:XJ:10:LEU:HB2	41:XJ:72:ARG:HB2	1.86	0.57
11:YK:61:VAL:HG13	11:YK:87:LEU:HD21	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:YF:111:ARG:HG3	6:YF:135:ILE:HG12	1.86	0.57
36:XE:35:LEU:HD11	36:XE:136:VAL:HG11	1.86	0.57
1:RA:2649:C:H2'	1:RA:2650:U:C6	2.39	0.57
9:RI:52:LEU:HD11	9:RI:81:LYS:HE2	1.86	0.57
1:YA:1676:A:H2'	1:YA:1677:A:O4'	2.04	0.57
32:XA:765:G:C6	32:XA:812:G:C5	2.92	0.57
35:QD:69:ARG:HA	35:QD:69:ARG:HE	1.69	0.57
20:RT:28:ASN:HA	20:RT:91:GLN:CD	2.25	0.57
6:RF:4:HIS:O	6:RF:7:TYR:HB3	2.04	0.57
32:QA:1314:C:OP2	50:QS:5:LYS:HD2	2.03	0.57
32:QA:1324:A:H2'	32:QA:1325:C:C6	2.39	0.57
1:YA:2629:U:H5''	1:YA:2630:G:OP1	2.04	0.57
33:QB:58:LYS:HZ1	33:QB:62:ARG:HG3	1.68	0.57
46:XO:28:VAL:HG13	46:XO:62:ARG:HG3	1.86	0.57
32:QA:818:G:O2'	32:QA:819:A:H5'	2.04	0.57
7:RG:88:LEU:HD11	7:RG:95:ALA:HB2	1.85	0.57
20:YT:40:LYS:HE3	20:YT:58:VAL:O	2.04	0.57
7:RG:154:GLU:OE1	7:RG:157:LYS:HB2	2.04	0.57
1:YA:777:G:N7	1:YA:793:A:H2	2.02	0.57
32:XA:801:U:H2'	32:XA:802:A:H8	1.69	0.57
8:RH:46:PHE:HD2	8:RH:46:PHE:O	1.87	0.57
1:RA:959:A:H62	13:RM:82:MET:HE3	1.69	0.57
1:RA:1068:G:H2'	1:RA:1069:A:H5'	1.86	0.57
52:XU:24:LYS:CG	52:XU:25:ALA:N	2.67	0.57
32:XA:977:A:H1'	32:XA:1223:C:H42	1.69	0.57
32:XA:974:A:H5''	45:YN:70:HIS:CE1	2.38	0.57
30:Y3:33:THR:HG23	30:Y3:34:LYS:N	2.20	0.57
1:YA:246:C:C2'	1:YA:247:G:H5'	2.34	0.57
1:YA:1342:A:C5	1:YA:1345:C:N4	2.73	0.57
1:YA:1338:G:H4'	20:YT:18:GLU:HG3	1.86	0.57
1:YA:1131:G:O6	1:YA:2024:G:O2'	2.22	0.57
1:YA:82:U:N3	1:YA:83:A:C8	2.72	0.57
32:XA:330:C:O2'	32:XA:331:G:O5'	2.21	0.57
1:YA:489:G:C4	1:YA:491:G:C8	2.92	0.57
29:Y2:34:ARG:HB3	29:Y2:42:LEU:CD1	2.34	0.57
1:YA:1830:C:C4'	3:YC:14:HIS:HE1	2.18	0.57
32:XA:1143:G:H2'	32:XA:1144:G:C8	2.39	0.57
7:YG:163:TYR:HD2	7:YG:163:TYR:N	2.02	0.57
32:QA:1181:G:O2'	32:QA:1182:G:N7	2.37	0.57
1:RA:511:U:O4	1:RA:512:G:C2	2.57	0.57
43:QL:81:ILE:HD11	43:QL:94:TYR:CG	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:QE:14:LEU:CB	36:QE:36:THR:HG22	2.34	0.57
1:YA:1320:C:H5	1:YA:1329:U:H5'	1.70	0.57
1:YA:2847:U:C2'	1:YA:2848:G:H5'	2.33	0.57
1:YA:1609:A:N6	1:YA:1616:A:C2	2.72	0.57
44:XM:94:LEU:HD22	44:XM:101:THR:HG22	1.85	0.57
13:YM:40:ARG:HB2	13:YM:93:VAL:CG2	2.34	0.57
12:YL:94:THR:O	12:YL:98:ALA:N	2.38	0.57
6:RF:68:LYS:N	6:RF:68:LYS:HD2	2.18	0.57
1:RA:2062:A:O2'	1:RA:2063:C:H5'	2.05	0.57
8:YH:41:LYS:H	8:YH:44:ILE:HG23	1.69	0.57
3:RC:257:ARG:NE	3:RC:269:ARG:NH2	2.53	0.57
32:XA:818:G:O2'	32:XA:819:A:H5'	2.04	0.57
1:RA:1568:G:H4'	3:RC:58:LYS:CG	2.34	0.57
8:YH:67:ALA:HA	8:YH:138:VAL:HG22	1.87	0.57
34:XC:21:TRP:CH2	45:XN:93:PRO:HG2	2.40	0.57
1:YA:1176:U:H2'	1:YA:1177:G:C8	2.39	0.57
23:RW:72:GLY:N	23:RW:73:PRO:HD2	2.20	0.57
23:YW:18:LYS:H	23:YW:36:ILE:CG1	2.12	0.57
51:QT:53:MET:CE	51:QT:57:VAL:HG21	2.34	0.57
32:XA:1496:C:H2'	32:XA:1497:G:O4'	2.05	0.57
1:RA:2355:G:H4'	23:RW:20:LEU:CD1	2.28	0.57
10:YJ:5:THR:HG23	10:YJ:7:LYS:HE2	1.87	0.57
33:XB:66:ILE:O	33:XB:88:GLN:HB2	2.05	0.57
1:YA:483:A:O2'	1:YA:484:C:H5'	2.03	0.57
32:XA:570:G:H1'	32:XA:820:U:C4	2.39	0.57
32:XA:822:U:C2	32:XA:823:C:C5	2.92	0.57
14:YN:56:LYS:HE2	14:YN:87:PHE:O	2.03	0.57
37:QF:5:GLU:HG2	37:QF:90:MET:HE3	1.85	0.57
16:YP:48:ALA:HB3	16:YP:59:THR:HB	1.86	0.57
16:YP:59:THR:HG23	16:YP:72:VAL:HG12	1.86	0.57
35:QD:145:ARG:HD2	35:QD:147:LYS:HE2	1.85	0.57
18:YR:90:ARG:O	18:YR:91:GLN:HB3	2.04	0.57
32:QA:1370:G:P	40:QI:110:VAL:HG21	2.44	0.57
1:YA:2734:A:H2'	1:YA:2735:G:H5'	1.87	0.57
32:QA:1320:C:N3	50:QS:35:ARG:NH1	2.53	0.57
25:YY:22:LEU:HG	25:YY:23:ARG:NH1	2.19	0.57
1:YA:443:A:H2'	5:YE:40:ARG:NE	2.19	0.57
5:YE:42:GLY:HA2	5:YE:92:HIS:HE1	1.68	0.57
1:YA:2638:G:O2'	1:YA:2639:A:H8	1.88	0.57
32:XA:1382:C:H2'	32:XA:1383:C:H6	1.70	0.57
3:RC:77:VAL:HA	3:RC:93:VAL:HA	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:YK:113:MET:O	11:YK:116:ILE:HG13	2.05	0.57
32:XA:1514:G:H2'	32:XA:1515:G:C8	2.39	0.57
32:QA:439:U:H2'	32:QA:440:C:H5'	1.86	0.57
1:YA:813:U:H2'	1:YA:814:C:H6	1.69	0.57
1:RA:2572:A:N7	4:RD:150:GLN:HB3	2.20	0.57
43:XL:3:VAL:HG23	43:XL:4:ASN:H	1.70	0.57
43:QL:98:ARG:HD2	43:QL:103:CYS:SG	2.43	0.57
45:QN:46:LYS:HD2	50:QS:12:LEU:HD21	1.86	0.57
28:Y1:46:VAL:HG22	28:Y1:47:ILE:N	2.19	0.57
1:RA:1006:C:O2'	1:RA:1007:C:H5'	2.04	0.57
32:QA:1241:G:HO2'	32:QA:1242:G:H8	1.53	0.57
32:QA:240:G:H4'	32:QA:240:G:OP1	2.05	0.57
32:XA:1339:A:H2'	32:XA:1340:A:O4'	2.04	0.57
45:XN:63:CYS:HB3	45:XN:67:GLY:H	1.70	0.57
1:RA:299:A:H8	1:RA:299:A:OP2	1.87	0.57
32:QA:1159:U:O2	32:QA:1159:U:O4'	2.22	0.57
41:QJ:59:LYS:HD2	41:QJ:60:ASP:N	2.19	0.57
32:XA:1009:U:H2'	32:XA:1010:U:C6	2.39	0.57
1:YA:1156:A:P	17:YQ:54:ARG:HE	2.28	0.57
1:YA:323:C:H3'	5:YE:163:ASN:HD21	1.69	0.57
48:QQ:58:VAL:HG22	48:QQ:59:GLU:N	2.20	0.57
10:YJ:25:LEU:HD12	10:YJ:64:VAL:HA	1.87	0.57
1:YA:2666:C:O2'	1:YA:2667:C:C5'	2.46	0.57
47:XP:1:MET:HG3	47:XP:1:MET:O	2.04	0.57
3:RC:250:GLN:H	3:RC:250:GLN:NE2	2.02	0.57
32:XA:1018:G:H2'	32:XA:1019:A:O4'	2.04	0.57
10:RJ:65:THR:HG22	10:RJ:68:LYS:CE	2.34	0.57
40:QI:28:VAL:HB	40:QI:63:TYR:CD2	2.36	0.57
32:XA:1446:A:H2'	32:XA:1447:A:C5'	2.35	0.57
3:RC:143:VAL:HG12	3:RC:144:GLU:O	2.04	0.57
40:XI:17:ARG:NH1	40:XI:65:THR:HG21	2.19	0.57
41:QJ:42:LEU:HB3	41:QJ:43:PRO:HD2	1.86	0.57
1:RA:1853:A:N1	1:RA:2087:G:H1'	2.20	0.57
1:RA:1014:A:H2'	1:RA:1015:U:H6	1.70	0.57
25:RY:23:ARG:O	25:RY:24:GLU:C	2.42	0.57
33:QB:117:GLU:HA	33:QB:120:SER:HB2	1.86	0.57
1:RA:969:G:H2'	1:RA:970:U:C6	2.38	0.57
34:XC:133:MET:HB2	34:XC:150:VAL:HG21	1.85	0.57
1:YA:100:U:C6	1:YA:100:U:OP1	2.57	0.57
52:QU:24:LYS:HG2	52:QU:25:ALA:H	1.68	0.57
1:RA:397:U:H6	1:RA:397:U:O5'	1.88	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:127:ARG:HB2	35:XD:127:ARG:CZ	2.35	0.57
8:YH:62:LEU:C	8:YH:64:ALA:H	2.08	0.57
5:RE:88:ARG:HB3	5:RE:89:PRO:HD2	1.86	0.57
16:RP:50:ARG:CG	16:RP:57:ALA:O	2.53	0.57
32:XA:978:A:H8	32:XA:978:A:O5'	1.88	0.57
17:YQ:4:LYS:CE	17:YQ:7:VAL:H	2.17	0.57
28:Y1:24:LYS:HE2	28:Y1:29:LYS:O	2.05	0.57
1:YA:1914:C:O2'	1:YA:1915:U:O4'	2.21	0.57
1:RA:1510:G:H2'	1:RA:1511:G:O4'	2.05	0.57
3:YC:145:MET:CE	3:YC:181:ARG:HH22	2.17	0.57
27:Y0:54:ILE:O	27:Y0:55:ALA:HB2	2.05	0.57
1:YA:2313:C:O2'	1:YA:2314:A:C8	2.54	0.57
6:YF:35:LEU:O	6:YF:87:LYS:HA	2.05	0.57
32:QA:267:C:O2'	32:QA:268:U:H5'	2.05	0.57
32:XA:86:G:O2'	32:XA:87:C:OP2	2.22	0.57
35:XD:25:ARG:NH1	35:XD:30:LYS:HE2	2.19	0.57
1:YA:110:G:N2	1:YA:111:A:H1'	2.20	0.57
1:YA:203:A:O5'	1:YA:204:A:H2'	2.05	0.57
20:RT:59:ASN:O	20:RT:83:ALA:O	2.22	0.57
10:RJ:21:THR:CG2	10:RJ:22:GLY:N	2.62	0.57
1:YA:1475:G:O2'	1:YA:1476:U:H6	1.87	0.57
32:XA:269:C:H2'	32:XA:270:A:C8	2.39	0.57
1:YA:1259:G:C4	1:YA:1260:A:C8	2.93	0.57
6:YF:107:VAL:N	6:YF:108:PRO:CD	2.68	0.57
21:YU:58:VAL:CG1	21:YU:60:LYS:HG2	2.35	0.57
45:QN:51:PRO:O	45:QN:52:ARG:CB	2.53	0.57
43:XL:97:VAL:O	43:XL:97:VAL:CG2	2.53	0.57
15:YO:11:ALA:O	15:YO:15:ARG:HG3	2.03	0.57
32:QA:1151:A:H5'	41:QJ:42:LEU:O	2.05	0.57
32:XA:51:A:H4'	32:XA:52:C:H5''	1.85	0.57
32:XA:888:G:H3'	32:XA:889:A:H5''	1.87	0.57
32:XA:513:C:H2'	32:XA:514:C:H6	1.69	0.57
30:Y3:22:LYS:H	30:Y3:48:MET:HB3	1.69	0.57
21:YU:54:PRO:HG2	21:YU:55:GLY:H	1.70	0.57
1:RA:1040:A:H2	1:RA:1115:G:H22	1.53	0.57
32:QA:538:G:OP2	43:QL:111:GLN:HB2	2.04	0.57
21:RU:41:VAL:O	21:RU:59:GLU:HA	2.05	0.57
1:RA:2547:A:H2'	1:RA:2548:U:C6	2.39	0.57
41:QJ:51:VAL:HB	45:QN:80:ARG:HB2	1.85	0.57
5:YE:105:LEU:HD12	5:YE:200:LEU:HD11	1.86	0.57
52:QU:32:ARG:O	52:QU:32:ARG:HG2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:YH:48:GLU:HG2	8:YH:51:ARG:HH21	1.69	0.57
17:RQ:82:LEU:CD2	17:RQ:112:ALA:HB2	2.35	0.57
49:XR:63:TYR:CD2	49:XR:69:TYR:OH	2.57	0.57
50:XS:54:ARG:HG2	50:XS:55:GLN:H	1.70	0.57
1:YA:1537:G:H2'	1:YA:1538:G:C4'	2.23	0.57
22:RV:80:HIS:CD2	22:RV:83:LYS:H	2.22	0.57
1:YA:1090:A:H3'	1:YA:1091:G:H5''	1.87	0.57
14:YN:96:ARG:HG3	14:YN:97:ILE:H	1.68	0.57
1:YA:489:G:O2'	1:YA:491:G:H8	1.85	0.57
1:YA:2310:C:O2'	1:YA:2311:A:H4'	2.05	0.57
1:YA:738:G:H2'	1:YA:739:A:C8	2.40	0.57
1:YA:2683:C:OP1	16:YP:55:HIS:HB3	2.05	0.57
4:YD:184:ARG:NH2	16:YP:6:GLN:HE21	1.97	0.57
35:QD:172:VAL:HG22	35:QD:173:ASP:N	2.15	0.57
37:XF:2:ARG:HG2	37:XF:4:TYR:CZ	2.39	0.57
1:YA:2223:G:C2'	1:YA:2224:G:H5'	2.34	0.57
1:RA:510:C:H2'	1:RA:511:U:O4'	2.05	0.57
1:YA:2287:A:O2'	1:YA:2288:A:H2'	2.04	0.57
1:YA:1157:G:H5'	1:YA:1157:G:C8	2.40	0.57
1:YA:1467:U:C2'	1:YA:1468:U:H5'	2.34	0.57
1:YA:2620:C:O4'	4:YD:161:MET:HG3	2.04	0.57
34:QC:14:VAL:O	34:QC:15:LYS:HD2	2.05	0.57
1:RA:1256:G:H21	5:RE:77:ILE:HG13	1.70	0.57
38:QG:101:ARG:O	38:QG:105:GLU:HB3	2.04	0.57
6:RF:151:LEU:C	6:RF:151:LEU:HD12	2.24	0.57
32:XA:1446:A:H2'	32:XA:1447:A:H5''	1.85	0.57
41:QJ:81:GLU:HA	41:QJ:84:VAL:CG1	2.35	0.57
1:YA:17:G:H4'	17:YQ:24:TYR:HE1	1.70	0.57
1:RA:2196:C:O3'	35:XD:150:LYS:HD2	2.05	0.57
26:YZ:46:MET:O	26:YZ:49:ALA:HB3	2.04	0.57
4:RD:182:ALA:C	4:RD:184:ARG:H	2.07	0.57
43:QL:2:THR:HG22	43:QL:4:ASN:H	1.70	0.57
1:YA:7:G:H4'	10:YJ:15:TRP:CH2	2.40	0.57
19:YS:39:THR:O	19:YS:40:ASN:HB3	2.05	0.57
8:RH:101:ASP:O	8:RH:104:THR:HB	2.04	0.57
19:YS:66:ILE:O	19:YS:68:ASP:N	2.38	0.57
32:QA:1435:G:H2'	32:QA:1436:U:C6	2.40	0.57
18:RR:21:ARG:NH2	18:RR:93:PHE:CE1	2.73	0.57
32:XA:1161:C:O2	32:XA:1176:A:C2	2.58	0.57
34:XC:161:ILE:H	34:XC:161:ILE:HD13	1.70	0.57
10:RJ:45:THR:O	10:RJ:45:THR:HG23	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:YW:37:VAL:CG2	23:YW:38:ARG:HH11	2.17	0.57
35:QD:36:ALA:HA	35:QD:41:GLY:HA3	1.87	0.57
27:Y0:42:ILE:HD11	27:Y0:48:TYR:HB2	1.87	0.57
16:YP:22:GLY:HA3	16:YP:91:VAL:CG2	2.35	0.57
35:XD:29:THR:C	35:XD:30:LYS:HD3	2.25	0.57
5:YE:147:LEU:CB	5:YE:186:VAL:HG23	2.35	0.57
1:YA:612:G:N2	1:YA:614:A:O2'	2.38	0.57
1:YA:617:G:O2'	1:YA:618:G:O4'	2.23	0.57
4:YD:12:THR:HG22	4:YD:13:ARG:N	2.20	0.57
1:YA:1275:A:C4	14:YN:16:HIS:HD2	2.23	0.57
9:RI:78:LEU:HD13	9:RI:108:ILE:HG12	1.86	0.57
35:QD:147:LYS:O	35:QD:149:LYS:N	2.37	0.57
45:QN:42:ASN:O	45:QN:44:VAL:N	2.38	0.57
1:RA:38:A:N3	5:RE:43:THR:HB	2.19	0.57
4:RD:120:GLY:HA2	4:RD:162:ALA:HB2	1.86	0.57
32:QA:1040:U:H2'	32:QA:1041:G:C8	2.39	0.57
32:QA:1348:U:O2'	32:QA:1349:A:H8	1.88	0.57
1:RA:2531:A:OP1	7:RG:174:LYS:HG3	2.05	0.57
46:XO:2:LEU:HD13	46:XO:34:GLN:HG2	1.86	0.57
35:QD:196:GLU:C	35:QD:198:LEU:H	2.08	0.57
32:QA:771:G:H2'	32:QA:772:U:C6	2.40	0.57
43:QL:74:GLN:HG3	43:QL:75:GLU:HG2	1.86	0.57
4:YD:181:ASP:C	4:YD:183:GLU:H	2.08	0.57
1:RA:221:A:H4'	1:RA:222:A:O5'	2.04	0.57
2:YB:23:G:N2	2:YB:61:G:C2	2.73	0.57
1:RA:1515:A:H2'	1:RA:1516:G:O4'	2.04	0.57
1:YA:154:U:H2'	1:YA:155:A:O4'	2.04	0.57
17:RQ:82:LEU:HD23	17:RQ:112:ALA:HB2	1.86	0.57
35:XD:187:ARG:CZ	35:XD:191:SER:OG	2.53	0.57
1:YA:446:G:H4'	1:YA:447:A:OP1	2.04	0.57
1:YA:1555:G:N2	1:YA:1556:C:C2	2.73	0.57
32:XA:1492:A:C8	1:YA:1913:A:H8	2.22	0.57
42:QK:125:LYS:O	42:QK:126:ARG:HB2	2.05	0.57
1:YA:329:G:H4'	1:YA:330:A:OP2	2.05	0.57
36:XE:103:GLY:HA3	36:XE:121:ASN:CA	2.34	0.57
19:YS:8:ARG:HA	19:YS:102:HIS:ND1	2.19	0.57
32:XA:1123:U:H4'	41:XJ:39:PRO:HD2	1.86	0.57
38:XG:30:MET:HE1	38:XG:33:GLY:HA2	1.87	0.57
24:YX:53:LYS:HA	24:YX:56:ARG:CB	2.28	0.57
1:YA:28:A:C6	1:YA:29:U:O2	2.58	0.57
32:XA:1133:G:C6	32:XA:1134:G:N7	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:371:A:O2'	32:XA:372:C:H5'	2.05	0.57
11:RK:108:ARG:HH11	11:RK:108:ARG:HG3	1.68	0.57
13:RM:40:ARG:HB2	13:RM:93:VAL:HG22	1.86	0.57
16:RP:59:THR:HG23	16:RP:72:VAL:HG13	1.87	0.57
1:YA:1499:C:C2'	1:YA:1500:G:H5'	2.35	0.57
1:YA:2502:G:H5'	1:YA:2503:A:H5''	1.85	0.57
40:XI:66:VAL:HG21	40:XI:74:GLN:HB3	1.86	0.57
32:QA:8:A:N6	35:QD:201:GLU:O	2.38	0.57
32:XA:79:G:H2'	32:XA:80:A:C8	2.40	0.57
8:YH:84:ALA:HB3	8:YH:148:ALA:HB2	1.87	0.57
20:YT:9:LYS:O	20:YT:9:LYS:HG2	2.05	0.57
43:XL:113:ARG:HB3	43:XL:118:VAL:HB	1.86	0.57
40:XI:16:ALA:HA	40:XI:65:THR:O	2.04	0.57
21:RU:13:LEU:HD12	21:RU:69:VAL:C	2.25	0.57
43:XL:79:ILE:HD12	43:XL:96:THR:CG2	2.35	0.57
1:RA:1107:G:H2'	1:RA:1108:U:C6	2.40	0.57
32:XA:65:A:C5	32:XA:200:G:O2'	2.58	0.57
32:XA:858:G:O6	56:XA:1822:HOH:O	2.17	0.57
2:RB:112:G:H2'	2:RB:113:C:C6	2.40	0.57
1:YA:864:G:C6	1:YA:865:C:N4	2.72	0.57
35:QD:86:GLY:O	35:QD:89:LEU:HB3	2.05	0.57
1:YA:2552:U:C2	1:YA:2554:U:H5'	2.39	0.57
21:YU:13:LEU:HD12	21:YU:13:LEU:H	1.70	0.57
1:RA:1833:C:C4	1:RA:1834:U:C5	2.93	0.57
1:RA:1061:U:H3'	1:RA:1062:G:H5''	1.86	0.56
23:RW:49:ASN:HB2	23:RW:60:ALA:HA	1.87	0.56
1:YA:974:G:H1'	1:YA:975:A:C8	2.40	0.56
1:YA:2259:U:H1'	1:YA:2427:C:C2	2.40	0.56
1:YA:2428:G:H4'	1:YA:2429:G:C5	2.40	0.56
1:YA:831:G:H5''	12:YL:37:GLY:HA2	1.86	0.56
1:YA:308:G:C6	1:YA:309:A:C6	2.93	0.56
19:YS:8:ARG:HB3	19:YS:102:HIS:CE1	2.40	0.56
1:YA:466:A:P	29:Y2:34:ARG:HH21	2.27	0.56
32:XA:1151:A:O2'	32:XA:1152:A:O5'	2.23	0.56
1:RA:137:U:H5	1:RA:137:U:OP2	1.88	0.56
9:RI:126:ARG:CA	9:RI:129:GLU:HB2	2.30	0.56
32:QA:49:U:H5	32:QA:365:U:O4	1.88	0.56
1:YA:819:A:OP2	1:YA:1187:G:N2	2.38	0.56
33:QB:71:THR:HG22	33:QB:72:LYS:H	1.70	0.56
6:YF:49:LEU:HA	6:YF:52:ALA:HB3	1.87	0.56
1:RA:1288:G:C4	1:RA:1327:A:C2	2.92	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2738:A:H2	1:YA:2766:A:H61	1.50	0.56
20:RT:70:HIS:HB2	20:RT:73:ARG:O	2.05	0.56
7:YG:28:LYS:HG3	7:YG:79:THR:HG22	1.87	0.56
9:YI:57:VAL:HG12	9:YI:58:ILE:H	1.70	0.56
32:XA:1032:G:N2	32:XA:1033:G:C5	2.73	0.56
50:QS:41:PRO:O	50:QS:44:ILE:HG13	2.04	0.56
1:RA:194:G:N7	56:RA:3760:HOH:O	2.38	0.56
1:RA:2058:A:H5''	1:RA:2059:A:OP2	2.05	0.56
12:RL:47:ARG:HG2	12:RL:47:ARG:NH2	2.18	0.56
45:QN:63:CYS:HB2	45:QN:79:SER:OG	2.05	0.56
24:YX:19:HIS:C	24:YX:21:LEU:H	2.08	0.56
48:XQ:22:VAL:HG21	48:XQ:58:VAL:HG21	1.86	0.56
13:YM:114:ARG:HA	13:YM:130:PHE:CE1	2.39	0.56
47:QP:36:VAL:HG13	47:QP:36:VAL:O	2.05	0.56
1:YA:1044:C:H2'	1:YA:1044:C:O2	2.04	0.56
1:YA:2850:A:OP2	1:YA:2866:U:N3	2.35	0.56
1:RA:1061:U:H1'	1:RA:1070:A:O4'	2.05	0.56
16:RP:50:ARG:HB2	16:RP:56:SER:HA	1.87	0.56
3:YC:74:PRO:HA	3:YC:116:GLN:HG3	1.87	0.56
33:QB:70:GLY:HA2	33:QB:163:ILE:HG22	1.86	0.56
1:YA:1553:A:C8	1:YA:1555:G:C6	2.92	0.56
1:YA:1401:G:C5	1:YA:1402:U:C4	2.93	0.56
1:YA:2815:C:H2'	1:YA:2816:G:H8	1.70	0.56
16:YP:22:GLY:HA3	16:YP:91:VAL:HG21	1.87	0.56
9:RI:48:ILE:HG13	9:RI:49:GLU:H	1.70	0.56
32:XA:238:A:H2'	32:XA:239:U:C5'	2.34	0.56
28:R1:47:ILE:H	28:R1:47:ILE:CD1	2.09	0.56
25:YY:39:GLN:O	25:YY:42:LEU:HB2	2.04	0.56
7:RG:8:VAL:HG12	7:RG:9:VAL:N	2.20	0.56
1:RA:142:A:O2'	1:RA:143:C:O5'	2.23	0.56
33:QB:40:ILE:HG21	33:QB:201:GLY:N	2.20	0.56
33:QB:67:LEU:HD22	33:QB:69:VAL:HG22	1.87	0.56
38:XG:117:LEU:HG	38:XG:121:ASN:ND2	2.20	0.56
8:RH:8:LYS:O	8:RH:13:GLY:HA3	2.06	0.56
4:RD:24:VAL:HA	4:RD:191:GLY:H	1.69	0.56
35:QD:116:LEU:C	35:QD:122:ILE:HD11	2.26	0.56
21:RU:42:LYS:N	21:RU:42:LYS:HD3	2.21	0.56
4:YD:137:SER:C	4:YD:138:LEU:HD22	2.25	0.56
1:YA:570:G:H2'	1:YA:571:U:H5'	1.87	0.56
1:YA:1181:U:H2'	1:YA:1182:G:C8	2.38	0.56
38:QG:112:ASP:HB2	38:QG:118:ARG:HG2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2506:U:H3'	1:YA:2506:U:C6	2.39	0.56
32:XA:502:A:H2'	32:XA:503:C:O4'	2.04	0.56
1:RA:1421:G:C2	1:RA:1422:G:C8	2.92	0.56
32:XA:775:G:C2'	32:XA:776:G:H5'	2.35	0.56
5:RE:132:LYS:NZ	5:RE:132:LYS:HB3	2.20	0.56
7:RG:109:SER:O	7:RG:110:HIS:HB3	2.05	0.56
32:QA:1449:C:C2'	32:QA:1450:U:H5'	2.35	0.56
1:YA:2097:A:H2'	1:YA:2098:U:C6	2.40	0.56
16:RP:31:VAL:O	16:RP:31:VAL:HG13	2.05	0.56
1:YA:2842:G:H2'	1:YA:2843:G:O4'	2.05	0.56
33:XB:35:ASN:O	33:XB:36:LYS:HD2	2.05	0.56
27:R0:35:GLU:OE1	27:R0:45:ASP:HB2	2.05	0.56
34:XC:29:ALA:HB1	45:XN:64:ARG:NH1	2.20	0.56
17:RQ:63:ARG:HH22	17:RQ:96:ASP:CA	2.18	0.56
17:RQ:91:ARG:HD3	18:RR:11:GLN:HG3	1.87	0.56
18:RR:9:GLY:C	18:RR:10:LYS:HD2	2.25	0.56
23:RW:24:ARG:HD3	23:RW:65:LYS:CD	2.35	0.56
23:RW:39:GLN:O	23:RW:40:ARG:C	2.43	0.56
1:YA:1799:G:H8	3:YC:179:GLU:OE1	1.88	0.56
32:XA:1319:A:C2'	32:XA:1320:C:OP2	2.53	0.56
3:YC:144:GLU:HG3	3:YC:151:GLY:N	2.20	0.56
1:YA:1469:A:H2'	1:YA:1470:A:H8	1.70	0.56
1:YA:1809:A:N3	1:YA:1810:A:C8	2.73	0.56
1:YA:1373:A:C5'	1:YA:2212:A:H1'	2.35	0.56
1:YA:309:A:N3	1:YA:329:G:H1'	2.19	0.56
3:YC:173:LEU:HD22	3:YC:181:ARG:O	2.04	0.56
1:YA:1059:G:N1	1:YA:1088:A:H2	2.03	0.56
32:XA:315:A:C5	32:XA:330:C:H5''	2.40	0.56
1:YA:2815:C:H2'	1:YA:2816:G:C8	2.40	0.56
32:XA:209:U:C5'	32:XA:210:C:OP2	2.48	0.56
41:XJ:41:PRO:O	41:XJ:42:LEU:HB2	2.05	0.56
1:YA:1992:G:N2	1:YA:1996:C:O2'	2.39	0.56
4:RD:169:ARG:O	4:RD:170:VAL:CG1	2.48	0.56
1:YA:111:A:C2	1:YA:112:U:C2	2.93	0.56
25:YY:50:VAL:HA	25:YY:53:VAL:HG23	1.86	0.56
1:YA:676:A:H2	1:YA:2069:G:N3	2.02	0.56
1:YA:242:G:C8	30:Y3:3:ILE:O	2.55	0.56
1:RA:1733:G:N3	1:RA:1734:G:C8	2.73	0.56
37:QF:92:THR:HG22	37:QF:93:LYS:N	2.20	0.56
20:RT:19:LYS:O	20:RT:23:ALA:N	2.29	0.56
28:R1:49:LYS:O	28:R1:50:GLU:HB3	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:QB:40:ILE:HG21	33:QB:201:GLY:CA	2.35	0.56
44:XM:12:LYS:HA	44:XM:12:LYS:CE	2.30	0.56
7:YG:97:VAL:HG21	7:YG:124:CYS:H	1.71	0.56
1:YA:972:A:C3'	1:YA:973:A:H5''	2.32	0.56
33:QB:90:PHE:H	33:QB:149:GLY:HA2	1.70	0.56
1:YA:1301:A:C4	1:YA:1303:G:N7	2.73	0.56
38:XG:110:ARG:HG2	38:XG:112:ASP:OD1	2.05	0.56
1:YA:748:G:O2'	1:YA:749:A:H3'	2.04	0.56
23:YW:22:VAL:O	23:YW:23:LYS:HG3	2.05	0.56
3:RC:229:HIS:HD2	3:RC:246:PRO:HB3	1.69	0.56
36:XE:135:VAL:O	36:XE:139:THR:HG23	2.06	0.56
1:RA:565:C:H4'	56:RA:3332:HOH:O	2.05	0.56
1:RA:1327:A:H2'	1:RA:1328:A:O4'	2.05	0.56
10:YJ:97:PRO:C	10:YJ:99:ARG:H	2.08	0.56
35:QD:113:ALA:O	35:QD:116:LEU:HB2	2.05	0.56
1:YA:2771:C:H2'	1:YA:2772:C:C6	2.35	0.56
1:YA:1525:A:H2'	1:YA:1526:C:O4'	2.05	0.56
26:YZ:10:ARG:HD2	26:YZ:52:PHE:O	2.05	0.56
1:YA:1378:A:H2'	1:YA:1380:G:N7	2.19	0.56
32:XA:16:A:H2'	32:XA:17:U:H5'	1.85	0.56
8:YH:31:VAL:HB	8:YH:32:PRO:HD3	1.87	0.56
5:RE:46:GLN:HE21	5:RE:87:ALA:H	1.54	0.56
9:RI:74:PRO:O	9:RI:77:VAL:HG22	2.05	0.56
6:YF:11:VAL:O	6:YF:12:VAL:HB	2.04	0.56
6:YF:1:ALA:HA	6:YF:97:GLU:HB3	1.87	0.56
48:QQ:6:THR:O	48:QQ:7:LEU:HD12	2.05	0.56
3:YC:8:THR:O	3:YC:9:SER:HB3	2.05	0.56
1:YA:1734:G:H2'	1:YA:1735:A:C8	2.40	0.56
19:YS:22:ASP:HA	19:YS:25:ARG:NH1	2.20	0.56
2:YB:78:A:C2	2:YB:99:A:C4	2.93	0.56
1:YA:2725:A:C4	1:YA:2727:A:C8	2.93	0.56
11:RK:111:LYS:CE	11:RK:111:LYS:H	2.18	0.56
3:YC:196:ASN:O	3:YC:197:ALA:HB3	2.05	0.56
1:YA:120:U:O4	1:YA:177:G:C8	2.58	0.56
18:RR:66:HIS:CD2	18:RR:94:THR:HG22	2.40	0.56
43:XL:3:VAL:O	43:XL:7:VAL:HG23	2.06	0.56
1:RA:1885:A:H2'	1:RA:1886:U:O4'	2.06	0.56
32:QA:1108:G:H5''	34:QC:175:HIS:ND1	2.19	0.56
1:RA:1310:G:C2'	1:RA:1311:G:H5'	2.35	0.56
44:QM:21:ILE:HB	44:QM:24:VAL:HG22	1.86	0.56
32:XA:629:A:H2'	32:XA:630:A:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YV:36:ALA:HB1	22:YV:37:PRO:HD2	1.86	0.56
19:YS:47:VAL:HG12	19:YS:103:ILE:HG12	1.87	0.56
1:YA:1651:G:N2	1:YA:2007:U:C2	2.72	0.56
32:QA:903:G:C5	32:QA:904:U:C5	2.93	0.56
1:YA:646:U:OP2	1:YA:646:U:H6	1.87	0.56
48:XQ:45:VAL:HG21	48:XQ:60:ILE:HD12	1.87	0.56
1:RA:41:C:H2'	1:RA:42:A:O5'	2.05	0.56
24:YX:48:LEU:O	24:YX:50:VAL:HG13	2.05	0.56
1:YA:447:A:H5'	1:YA:449:A:C4	2.41	0.56
15:YO:62:LEU:HD11	15:YO:65:THR:N	2.20	0.56
1:YA:265:A:N7	1:YA:427:U:O2'	2.37	0.56
41:QJ:53:ILE:HD11	45:QN:84:ARG:NH2	2.20	0.56
31:R4:9:LYS:O	31:R4:10:LEU:HD23	2.05	0.56
1:YA:504:A:O2'	1:YA:505:A:P	2.63	0.56
4:RD:169:ARG:C	4:RD:170:VAL:CG1	2.74	0.56
1:YA:620:G:C8	1:YA:622:G:O6	2.59	0.56
1:RA:278:A:C2	1:RA:362:A:C8	2.93	0.56
33:QB:24:PRO:C	33:QB:26:MET:H	2.09	0.56
23:YW:16:GLU:HA	23:YW:16:GLU:OE2	2.05	0.56
32:QA:71:A:N7	32:QA:100:G:C6	2.73	0.56
1:YA:1586:A:H2'	1:YA:1587:G:C8	2.35	0.56
4:YD:112:THR:O	4:YD:113:SER:HB2	2.04	0.56
1:RA:34:U:H1'	1:RA:35:G:OP1	2.05	0.56
1:RA:2199:A:H5''	1:RA:2199:A:H8	1.70	0.56
34:XC:76:ILE:HA	34:XC:83:VAL:CG1	2.34	0.56
15:RO:75:GLY:HA2	15:RO:106:LEU:CD1	2.35	0.56
32:XA:1448:C:O2'	32:XA:1449:C:C6	2.58	0.56
7:YG:143:VAL:HA	7:YG:146:ASP:OD2	2.05	0.56
41:QJ:81:GLU:HA	41:QJ:84:VAL:HG12	1.87	0.56
5:RE:146:VAL:HA	5:RE:185:LYS:O	2.05	0.56
2:YB:116:G:H4'	15:YO:54:VAL:HG22	1.87	0.56
1:YA:1831:G:N2	1:YA:1975:G:C4	2.73	0.56
1:RA:560:C:O2	17:RQ:47:ARG:NH1	2.38	0.56
32:XA:888:G:H4'	32:XA:1488:G:O2'	2.05	0.56
32:XA:423:G:N3	32:XA:423:G:H2'	2.20	0.56
20:YT:40:LYS:HA	20:YT:43:ILE:HG22	1.86	0.56
1:RA:2496:C:OP1	13:RM:82:MET:HB2	2.05	0.56
1:RA:1847:A:H4'	1:RA:1848:A:OP2	2.05	0.56
32:XA:1190:G:H5'	34:XC:175:HIS:NE2	2.20	0.56
15:RO:24:THR:HG22	15:RO:42:PRO:HD3	1.88	0.56
9:YI:95:ASP:CG	9:YI:96:LYS:H	2.09	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1409:U:H6	1:YA:1409:U:O5'	1.89	0.56
1:YA:2232:C:P	24:YX:26:ARG:NH1	2.79	0.56
1:YA:2336:A:C8	23:YW:40:ARG:NH2	2.73	0.56
1:YA:834:G:C5'	30:Y3:56:LEU:HD11	2.36	0.56
40:QI:6:TYR:CE2	40:QI:17:ARG:HB2	2.41	0.56
1:YA:233:A:H61	1:YA:428:A:H61	1.54	0.56
1:YA:234:U:H2'	1:YA:235:U:H6	1.70	0.56
14:YN:37:THR:OG1	14:YN:40:LYS:HE2	2.05	0.56
1:YA:320:A:H62	5:YE:132:LYS:HG3	1.71	0.56
14:YN:97:ILE:HD11	14:YN:99:LYS:HZ3	1.71	0.56
32:QA:1125:U:OP2	32:QA:1145:A:N6	2.39	0.56
32:XA:243:A:C4'	32:XA:244:U:OP2	2.53	0.56
1:YA:2745:C:N4	1:YA:2759:G:H1	2.04	0.56
41:XJ:15:HIS:ND1	41:XJ:15:HIS:N	2.53	0.56
1:YA:2093:G:H4'	8:YH:24:GLY:HA3	1.88	0.56
32:QA:675:A:H1'	42:QK:117:HIS:CD2	2.41	0.56
1:RA:1605:C:H3'	1:RA:1606:C:C5'	2.34	0.56
38:XG:24:LYS:O	38:XG:28:ILE:HG12	2.05	0.56
2:YB:90:C:H4'	13:YM:38:ARG:NH1	2.20	0.56
32:XA:994:A:N3	32:XA:995:C:C6	2.73	0.56
1:RA:2813:A:H2	1:RA:2887:A:H62	1.51	0.56
1:YA:2615:U:C2	27:Y0:3:GLN:HA	2.40	0.56
16:RP:33:GLU:C	16:RP:33:GLU:OE1	2.44	0.56
35:QD:117:VAL:N	35:QD:122:ILE:HD11	2.20	0.56
1:YA:2645:G:H4'	1:YA:2732:G:H2'	1.88	0.56
1:YA:2135:A:O2'	1:YA:2136:G:O4'	2.23	0.56
19:YS:4:ILE:CG2	19:YS:106:VAL:HG22	2.35	0.56
43:XL:82:ARG:NH1	43:XL:82:ARG:HG2	2.19	0.56
34:QC:21:TRP:CG	34:QC:58:ARG:HG2	2.41	0.56
48:QQ:6:THR:C	48:QQ:7:LEU:HD12	2.26	0.56
1:YA:2415:G:H2'	1:YA:2416:C:H6	1.71	0.56
6:RF:7:TYR:OH	6:RF:29:ARG:HB3	2.06	0.56
21:RU:70:ALA:CB	21:RU:79:ALA:HB1	2.35	0.56
7:RG:174:LYS:HD2	7:RG:174:LYS:O	2.05	0.56
22:YV:69:GLU:HG2	22:YV:70:ILE:N	2.19	0.56
14:YN:2:ARG:HG2	14:YN:5:LYS:HD3	1.87	0.56
1:RA:1585:C:C2'	1:RA:1586:A:H5'	2.36	0.56
32:XA:659:U:H2'	32:XA:660:C:C6	2.41	0.56
1:YA:85:G:OP2	21:YU:6:ARG:HB2	2.06	0.56
1:YA:1651:G:C2	1:YA:2007:U:C2	2.94	0.56
32:XA:1191:A:H5''	34:XC:3:LYS:HE3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:862:C:C2'	32:QA:863:U:H5'	2.35	0.56
10:YJ:2:LYS:NZ	10:YJ:2:LYS:HB2	2.21	0.56
32:QA:418:C:N4	56:QA:1718:HOH:O	2.39	0.56
38:QG:34:LYS:HB3	38:QG:37:THR:HG23	1.88	0.56
39:XH:100:ILE:HD12	39:XH:100:ILE:C	2.25	0.56
43:XL:50:LYS:HD2	43:XL:50:LYS:N	2.19	0.56
1:RA:1554:U:H4'	1:RA:1555:G:OP2	2.05	0.56
1:YA:2345:G:C6	1:YA:2381:A:C6	2.94	0.56
1:YA:2345:G:C4	1:YA:2347:C:H5	2.23	0.56
1:YA:2391:G:HO2'	1:YA:2392:A:P	2.28	0.56
1:YA:1360:G:H2'	1:YA:1361:G:H5'	1.88	0.56
36:QE:80:LEU:HD12	36:QE:146:MET:HE1	1.86	0.56
32:XA:328:C:C2'	32:XA:328:C:O2	2.53	0.56
36:XE:81:GLN:OE1	36:XE:149:PRO:HD3	2.06	0.56
29:Y2:31:LEU:HA	29:Y2:34:ARG:HB2	1.86	0.56
32:XA:1151:A:C2	32:XA:1152:A:C5	2.94	0.56
32:XA:245:U:H6	32:XA:245:U:C5'	2.16	0.56
1:YA:612:G:N2	1:YA:614:A:HO2'	2.04	0.56
1:YA:1275:A:O3'	1:YA:1276:A:O4'	2.24	0.56
1:RA:2134:A:N6	1:RA:2135:A:N6	2.53	0.56
20:RT:40:LYS:H	20:RT:43:ILE:CG2	2.18	0.56
1:YA:1126:A:H4'	1:YA:1127:A:H5''	1.87	0.56
1:YA:1742:U:H2'	1:YA:1743:G:H8	1.70	0.56
1:YA:2200:C:N4	1:YA:2224:G:N2	2.52	0.56
3:RC:100:ARG:CG	3:RC:100:ARG:NH1	2.66	0.56
1:RA:545:U:C2'	1:RA:546:U:O3'	2.54	0.56
7:YG:167:VAL:HG23	7:YG:168:VAL:N	2.20	0.56
1:YA:1688:U:O2	1:YA:1700:A:H5'	2.06	0.56
2:YB:116:G:H2'	2:YB:117:G:C8	2.40	0.56
2:YB:8:C:O2'	15:YO:40:ILE:HD13	2.06	0.56
40:XI:11:ARG:NH2	40:XI:108:ARG:HH21	2.02	0.56
52:QU:18:PHE:HB3	52:QU:19:LYS:HE2	1.87	0.56
35:QD:105:GLY:HA3	35:QD:161:ALA:CB	2.35	0.56
50:QS:46:LEU:H	50:QS:61:VAL:CG2	2.17	0.56
4:YD:22:ILE:HD12	4:YD:190:LYS:HD2	1.88	0.56
49:QR:19:GLU:HG3	49:QR:54:LEU:HD22	1.87	0.56
1:YA:526:A:N6	1:YA:2626:C:H4'	2.21	0.56
42:QK:109:ILE:HB	52:QU:5:VAL:CG2	2.36	0.56
11:RK:43:ILE:HG21	11:RK:46:ALA:HB2	1.87	0.56
30:Y3:22:LYS:HG2	30:Y3:46:LYS:HE2	1.87	0.56
32:XA:1124:G:H4'	32:XA:1125:U:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:35:HIS:O	12:RL:36:LYS:HB2	2.06	0.56
18:RR:25:LEU:H	18:RR:94:THR:CG2	2.18	0.56
40:QI:8:THR:O	40:QI:81:GLY:HA3	2.06	0.56
32:XA:636:U:H2'	32:XA:637:C:C6	2.40	0.56
1:YA:2583:G:C2'	1:YA:2584:U:H5'	2.36	0.56
4:YD:105:LYS:HA	4:YD:177:VAL:HG22	1.88	0.56
1:RA:1528:A:H2'	1:RA:1529:G:O4'	2.06	0.56
1:RA:804:A:H5''	1:RA:805:G:OP1	2.06	0.56
32:QA:1451:U:O2	32:QA:1451:U:H2'	2.04	0.56
32:XA:1113:C:H2'	32:XA:1114:C:H6	1.70	0.56
1:YA:1794:A:H2'	1:YA:1795:C:H6	1.70	0.56
1:YA:216:A:O2'	1:YA:217:A:C8	2.20	0.56
2:YB:67:G:HO2'	2:YB:68:C:H6	1.53	0.56
45:YN:60:ARG:HG2	45:YN:61:ASN:H	1.71	0.56
11:RK:10:VAL:CB	11:RK:16:ALA:HB1	2.36	0.56
1:YA:226:A:H2	1:YA:230:G:O6	1.88	0.56
1:RA:1458:U:C4'	1:RA:1459:G:O5'	2.42	0.56
1:YA:1341:G:HO2'	1:YA:1398:C:H5'	1.69	0.56
1:YA:1427:A:H4'	1:YA:1428:C:OP1	2.05	0.56
1:YA:2212:A:N7	1:YA:2214:C:N4	2.54	0.56
1:YA:1102:C:OP2	1:YA:1102:C:H6	1.89	0.56
1:YA:2314:A:H5''	6:YF:34:THR:OG1	2.06	0.56
1:YA:2314:A:C2	1:YA:2315:G:C5	2.93	0.56
1:YA:1731:G:H4'	1:YA:1732:C:OP1	2.03	0.56
32:XA:266:G:HO2'	32:XA:267:C:H3'	1.70	0.56
1:RA:1778:U:H2'	1:RA:1784:A:H62	1.70	0.56
32:XA:653:U:H5'	39:XH:55:LYS:NZ	2.21	0.56
33:QB:103:TRP:CH2	33:QB:107:ARG:HD3	2.41	0.56
11:YK:17:ARG:CG	11:YK:18:ARG:H	2.17	0.56
36:XE:131:ASN:C	36:XE:135:VAL:HG23	2.25	0.56
3:RC:242:HIS:O	3:RC:244:VAL:HG13	2.06	0.56
8:YH:82:SER:O	8:YH:83:LYS:HB3	2.06	0.56
34:XC:166:TRP:O	34:XC:167:TYR:HB2	2.05	0.56
1:RA:545:U:H6	1:RA:546:U:HO2'	1.54	0.56
32:XA:812:G:OP1	32:XA:812:G:H4'	2.06	0.56
8:YH:80:ILE:HB	8:YH:101:ASP:HB2	1.88	0.56
32:QA:82:G:N2	32:QA:84:U:H3	2.02	0.56
5:RE:153:LEU:HD12	5:RE:154:ASP:O	2.05	0.56
1:RA:2292:U:H2'	1:RA:2293:G:C8	2.41	0.56
32:XA:212:G:O2'	32:XA:213:G:OP2	2.21	0.56
2:RB:66:A:H4'	2:RB:67:G:OP1	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:QJ:11:LYS:HG3	41:QJ:97:ASP:HB3	1.86	0.56
47:QP:18:GLN:HE21	47:QP:35:ARG:HD2	1.70	0.56
1:RA:697:G:H2'	1:RA:698:C:C6	2.40	0.56
32:XA:1097:C:H2'	32:XA:1098:C:H6	1.71	0.56
46:QO:86:LEU:C	46:QO:88:ARG:H	2.08	0.56
52:QU:8:ASN:HD22	52:QU:8:ASN:N	2.03	0.56
32:XA:1086:U:O5'	32:XA:1086:U:H6	1.88	0.56
1:RA:469:G:O6	29:R2:37:LYS:HE2	2.06	0.56
36:XE:89:THR:OG1	36:XE:90:GLY:N	2.35	0.56
42:QK:51:PHE:HB2	42:QK:55:ARG:HB3	1.86	0.56
18:RR:49:ILE:C	18:RR:51:VAL:O	2.44	0.56
1:RA:1063:G:OP1	9:RI:76:ALA:HB3	2.06	0.56
2:YB:16:G:H2'	2:YB:17:C:C6	2.41	0.56
1:YA:221:A:C2	1:YA:233:A:C5	2.94	0.56
35:QD:28:ASP:OD1	35:QD:33:ILE:HG12	2.05	0.56
33:QB:13:VAL:HG23	33:QB:207:ARG:NH2	2.19	0.56
48:QQ:12:VAL:HG12	48:QQ:21:VAL:O	2.06	0.56
1:YA:507:A:H2'	1:YA:507:A:OP2	2.05	0.56
1:YA:59:U:H1'	1:YA:73:A:O2'	2.05	0.56
40:XI:58:GLU:HG3	40:XI:59:LYS:N	2.20	0.56
7:YG:94:ARG:NH2	7:YG:111:PRO:HB3	2.20	0.56
25:RY:47:ARG:HG3	25:RY:47:ARG:NH2	2.18	0.56
32:QA:131:A:H2'	32:QA:132:C:C6	2.41	0.56
2:YB:85:G:O2'	2:YB:86:G:H5'	2.05	0.56
32:XA:1169:A:H2'	32:XA:1170:A:C8	2.39	0.56
4:YD:149:ASN:OD1	4:YD:150:GLN:N	2.39	0.56
6:YF:1:ALA:HB2	6:YF:93:GLU:O	2.05	0.56
1:YA:1993:U:H4'	4:YD:133:THR:HG22	1.87	0.56
40:QI:26:LYS:C	40:QI:27:ILE:HD12	2.25	0.56
20:RT:29:THR:HA	20:RT:86:THR:HA	1.88	0.56
1:YA:2403:C:O2'	1:YA:2404:U:H5'	2.06	0.56
32:QA:1361:G:H2'	32:QA:1362:A:H5''	1.87	0.56
32:XA:313:A:H2'	32:XA:314:C:C6	2.41	0.56
18:RR:27:ILE:HG13	18:RR:33:VAL:HG12	1.86	0.56
1:YA:453:A:N3	1:YA:457:A:O2'	2.39	0.56
28:Y1:46:VAL:HG22	28:Y1:47:ILE:H	1.71	0.56
32:XA:637:C:H2'	32:XA:638:U:C6	2.41	0.56
1:RA:1032:A:H1'	31:R4:23:ILE:HD13	1.88	0.56
1:YA:677:A:O2'	1:YA:2071:A:H5'	2.06	0.56
33:QB:168:GLU:O	33:QB:169:HIS:C	2.43	0.56
5:RE:152:GLU:OE2	5:RE:152:GLU:HA	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:XL:24:GLU:O	43:XL:25:ALA:HB3	2.05	0.56
1:RA:1000:A:H62	1:RA:1154:G:H2'	1.71	0.56
1:RA:2093:G:C2'	1:RA:2094:A:H5'	2.36	0.56
23:RW:22:VAL:HG13	23:RW:25:PHE:CE2	2.41	0.56
52:XU:24:LYS:HG3	52:XU:25:ALA:N	2.18	0.56
46:QO:74:VAL:O	46:QO:77:TYR:HB3	2.06	0.56
33:QB:163:ILE:CG2	33:QB:164:ASP:H	2.14	0.56
32:XA:982:U:H4'	32:XA:983:A:C5'	2.34	0.56
17:YQ:4:LYS:HE3	17:YQ:7:VAL:H	1.70	0.56
1:YA:1071:G:O2'	1:YA:1072:C:C5'	2.54	0.56
9:YI:74:PRO:HB2	9:YI:77:VAL:CG2	2.30	0.56
39:XH:78:SER:HB2	39:XH:124:ILE:O	2.06	0.56
1:YA:674:G:H4'	5:YE:69:ARG:HB3	1.88	0.56
32:QA:1239:A:N6	32:QA:1299:A:N6	2.47	0.56
1:YA:781:A:H2'	1:YA:1777:U:H1'	1.88	0.56
52:QU:7:GLU:HB2	52:QU:11:PHE:CE1	2.40	0.56
1:YA:279:A:N6	1:YA:361:G:H1'	2.21	0.56
1:YA:1567:G:H1'	1:YA:1568:G:C6	2.40	0.56
40:XI:44:ARG:O	40:XI:48:ARG:HG2	2.06	0.56
1:RA:225:C:H2'	1:RA:226:A:O4'	2.06	0.56
6:RF:39:VAL:HG11	6:RF:49:LEU:HD13	1.88	0.56
12:YL:18:ARG:HA	12:YL:18:ARG:HE	1.71	0.56
1:RA:1319:C:C2'	1:RA:1320:C:H5'	2.34	0.56
14:RN:33:ILE:HG12	14:RN:118:ARG:CZ	2.35	0.56
33:XB:20:ARG:C	33:XB:21:TYR:HD1	2.09	0.56
13:RM:71:LYS:HD3	13:RM:95:LEU:HD13	1.85	0.56
41:XJ:66:GLU:HG3	45:XN:100:TRP:HZ3	1.71	0.56
1:YA:2638:G:H1'	1:YA:2778:A:N6	2.21	0.56
5:YE:59:PRO:HB2	5:YE:67:ARG:HH22	1.70	0.56
1:RA:2515:C:O2'	1:RA:2516:A:H5'	2.05	0.56
22:YV:56:PHE:C	22:YV:58:SER:H	2.09	0.56
19:RS:63:GLY:O	19:RS:64:ALA:HB3	2.06	0.56
17:YQ:10:ARG:O	17:YQ:14:LYS:HB2	2.06	0.56
1:RA:1014:A:O2'	1:RA:1015:U:H5'	2.06	0.56
1:YA:261:G:H2'	1:YA:262:A:H8	1.71	0.56
1:YA:1413:A:H2'	1:YA:1414:C:C6	2.41	0.56
1:RA:39:G:H2'	1:RA:40:U:H6	1.70	0.56
9:YI:118:GLY:O	9:YI:119:ALA:HB3	2.05	0.56
1:RA:2344:U:H4'	1:RA:2345:G:OP1	2.04	0.56
1:YA:402:A:H2'	1:YA:403:U:O4'	2.06	0.56
1:YA:732:C:H2'	1:YA:733:G:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:QG:77:ARG:HB2	38:QG:84:TYR:O	2.06	0.56
1:RA:1434:A:OP1	1:RA:1434:A:H4'	2.05	0.56
50:QS:19:GLU:OE2	50:QS:19:GLU:HA	2.06	0.56
26:YZ:7:THR:O	26:YZ:54:VAL:HA	2.06	0.56
32:QA:1057:G:O3'	34:QC:196:GLY:HA3	2.05	0.56
6:RF:142:TYR:O	6:RF:145:VAL:HG22	2.06	0.56
50:XS:49:ALA:HB1	50:XS:56:HIS:HB3	1.86	0.56
32:XA:983:A:O2'	32:XA:984:C:C5'	2.54	0.56
1:YA:1392:A:H62	1:YA:1393:A:N6	2.04	0.56
1:YA:83:A:N6	1:YA:101:A:C5'	2.69	0.56
33:QB:209:VAL:HG23	33:QB:210:THR:HG23	1.88	0.56
5:RE:149:ILE:O	5:RE:188:MET:HA	2.06	0.56
5:RE:196:VAL:HG13	5:RE:200:LEU:CD2	2.36	0.56
14:YN:62:ASN:O	14:YN:63:ARG:CB	2.54	0.56
32:QA:87:C:H2'	32:QA:88:U:C6	2.40	0.56
32:XA:1146:A:O2'	32:XA:1147:C:C5'	2.54	0.56
38:XG:89:GLU:O	38:XG:90:VAL:HG13	2.06	0.56
38:XG:100:MET:HA	38:XG:103:ILE:HB	1.87	0.56
32:XA:644:U:H2'	32:XA:645:G:H8	1.71	0.56
1:YA:1717:A:H2'	1:YA:1718:G:O4'	2.06	0.56
32:QA:806:C:O2'	32:QA:807:A:H5'	2.06	0.56
12:RL:66:PHE:CD1	12:RL:66:PHE:C	2.77	0.56
35:XD:66:VAL:HG22	35:XD:96:ARG:HH11	1.68	0.56
1:YA:571:U:C4	1:YA:2030:A:C6	2.93	0.56
7:YG:120:ILE:HD13	7:YG:120:ILE:O	2.06	0.56
32:XA:490:C:O2'	32:XA:491:G:H5'	2.06	0.56
1:YA:2415:G:C5	1:YA:2416:C:C4	2.94	0.56
1:YA:270:A:H2	1:YA:369:U:H4'	1.70	0.56
1:RA:2340:A:H2'	1:RA:2341:G:C8	2.40	0.56
4:YD:110:THR:HA	4:YD:171:THR:HA	1.86	0.56
32:XA:1513:A:H2'	32:XA:1514:G:H8	1.70	0.56
11:RK:43:ILE:HG13	11:RK:56:ASP:HB2	1.88	0.56
47:XP:44:SER:HB2	47:XP:46:LYS:CG	2.36	0.56
1:RA:1185:G:H5''	1:RA:1186:G:OP2	2.06	0.56
1:RA:2311:A:O3'	1:RA:2312:U:O4'	2.24	0.56
19:YS:17:VAL:HG11	19:YS:103:ILE:HG13	1.88	0.56
34:QC:179:ALA:HB1	34:QC:202:PHE:HE1	1.71	0.56
32:QA:795:C:H5''	32:QA:796:C:OP2	2.06	0.56
1:YA:499:U:H5''	21:YU:42:LYS:NZ	2.21	0.56
11:YK:63:VAL:HG12	11:YK:64:ARG:HD3	1.88	0.56
32:XA:571:U:H5''	32:XA:572:A:OP2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:QH:85:TYR:CE2	39:QH:123:GLU:HB2	2.41	0.56
15:YO:39:VAL:HB	15:YO:49:VAL:O	2.05	0.56
23:RW:35:ILE:O	23:RW:37:VAL:N	2.39	0.55
23:RW:50:VAL:C	23:RW:52:CYS:H	2.09	0.55
1:RA:528:A:H3'	1:RA:528:A:H8	1.70	0.55
1:YA:1555:G:C2	1:YA:1556:C:C2	2.94	0.55
23:YW:36:ILE:CG2	23:YW:39:GLN:HB2	2.36	0.55
32:XA:1309:G:H2'	32:XA:1310:G:C8	2.40	0.55
32:XA:1409:C:H5'	1:YA:1916:A:N1	2.21	0.55
1:YA:1352:U:H5	1:YA:1377:G:C5	2.23	0.55
17:YQ:60:TRP:CH2	17:YQ:93:ILE:HB	2.42	0.55
1:YA:1087:G:C5	1:YA:1089:A:C2	2.94	0.55
1:YA:1663:G:C6	1:YA:1998:A:N6	2.74	0.55
1:YA:294:A:N1	1:YA:346:A:N1	2.54	0.55
1:YA:352:A:C6	1:YA:353:C:C2	2.94	0.55
1:YA:73:A:H8	1:YA:73:A:O5'	1.89	0.55
1:YA:602:A:H1'	1:YA:656:G:N2	2.20	0.55
1:YA:811:U:C5'	1:YA:812:C:OP2	2.51	0.55
1:YA:1275:A:C8	14:YN:16:HIS:CD2	2.94	0.55
1:YA:1277:G:H5'	14:YN:20:MET:SD	2.46	0.55
13:YM:17:ASN:OD1	13:YM:95:LEU:HB3	2.06	0.55
39:XH:52:GLY:HA3	39:XH:56:PRO:HA	1.86	0.55
52:XU:35:GLU:HG3	52:XU:36:PHE:N	2.20	0.55
1:YA:2544:G:H5'	1:YA:2645:G:C8	2.40	0.55
1:YA:1324:G:C2	1:YA:1328:A:N6	2.74	0.55
1:RA:2648:G:O2'	1:RA:2649:C:H5'	2.06	0.55
1:YA:570:G:C2'	1:YA:571:U:H5'	2.36	0.55
32:QA:546:A:P	35:QD:68:GLU:HB2	2.46	0.55
1:YA:1797:G:H4'	3:YC:254:LYS:O	2.06	0.55
1:RA:1090:A:C2'	1:RA:1091:G:H5'	2.36	0.55
1:YA:2623:G:C4'	1:YA:2825:G:H8	2.19	0.55
1:RA:2786:U:O2'	1:RA:2787:C:H5'	2.06	0.55
41:XJ:63:ASP:OD2	45:XN:84:ARG:NH1	2.39	0.55
32:QA:968:A:H4'	32:QA:969:A:OP2	2.06	0.55
44:QM:52:ILE:O	44:QM:55:LEU:HB2	2.05	0.55
1:YA:1462:C:C1'	1:YA:2702:G:H21	2.19	0.55
5:RE:7:ASP:O	5:RE:9:GLN:N	2.40	0.55
32:QA:1261:A:C2	32:QA:1274:A:C2	2.94	0.55
44:XM:76:ILE:O	44:XM:76:ILE:HG22	2.06	0.55
4:YD:15:PHE:CE2	16:YP:77:SER:HA	2.40	0.55
16:RP:50:ARG:HD2	16:RP:51:ASN:H	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:RW:51:GLY:O	23:RW:52:CYS:C	2.45	0.55
32:XA:1363:A:C5	32:XA:1365:G:C6	2.94	0.55
50:XS:5:LYS:CE	50:XS:6:LYS:H	2.14	0.55
7:RG:85:LYS:HA	7:RG:130:ILE:O	2.06	0.55
1:YA:1605:C:H5"	1:YA:1606:C:OP2	2.06	0.55
1:YA:2213:U:O2'	1:YA:2214:C:H5'	2.06	0.55
1:YA:1056:G:H3'	1:YA:1056:G:OP2	2.06	0.55
29:Y2:43:THR:HG23	29:Y2:45:SER:OG	2.05	0.55
32:XA:91:U:C4	32:XA:92:U:C4	2.94	0.55
41:XJ:37:ARG:HB3	41:XJ:74:VAL:O	2.06	0.55
1:RA:1394:U:H4'	1:RA:1603:A:H4'	1.88	0.55
1:RA:574:A:H4'	1:RA:575:A:O5'	2.06	0.55
8:RH:137:GLU:HG3	8:RH:138:VAL:HG13	1.88	0.55
9:RI:57:VAL:HG12	9:RI:58:ILE:N	2.21	0.55
32:QA:1303:C:H2'	32:QA:1304:G:H8	1.63	0.55
1:YA:855:G:O2'	23:YW:23:LYS:HD3	2.07	0.55
51:XT:60:GLN:HB3	51:XT:65:LEU:HD12	1.89	0.55
40:XI:40:ARG:H	40:XI:44:ARG:HD3	1.72	0.55
1:RA:2425:A:H4'	1:RA:2426:A:O5'	2.06	0.55
8:YH:78:VAL:HB	8:YH:144:VAL:HA	1.88	0.55
19:RS:13:SER:O	19:RS:14:ALA:CB	2.54	0.55
4:RD:110:THR:HG23	4:RD:171:THR:HG22	1.88	0.55
1:YA:1856:U:O4	1:YA:1857:G:C2	2.59	0.55
32:QA:112:G:C6	32:QA:330:C:N4	2.74	0.55
7:YG:162:ARG:HG3	7:YG:166:GLU:HG3	1.88	0.55
32:QA:1453:G:H2'	32:QA:1454:G:O4'	2.05	0.55
1:RA:2103:C:H2'	1:RA:2104:C:H5'	1.88	0.55
10:RJ:93:ILE:O	10:RJ:97:PRO:HG3	2.07	0.55
32:QA:376:G:H2'	32:QA:377:G:H8	1.70	0.55
1:RA:675:A:H4'	5:RE:62:GLN:NE2	2.20	0.55
32:XA:512:U:O2'	32:XA:513:C:O5'	2.23	0.55
1:RA:2097:A:H2'	1:RA:2098:U:H6	1.70	0.55
13:YM:57:VAL:HA	13:YM:112:LEU:HD11	1.89	0.55
39:XH:41:GLU:C	39:XH:43:GLY:H	2.09	0.55
44:XM:106:ARG:HH21	44:XM:112:ARG:CZ	2.19	0.55
32:QA:1449:C:H2'	32:QA:1450:U:H5'	1.89	0.55
6:RF:142:TYR:HA	6:RF:145:VAL:HG13	1.89	0.55
1:YA:1016:G:C2	1:YA:1147:A:C2	2.94	0.55
1:RA:1224:U:C4	1:RA:1225:G:C6	2.94	0.55
1:RA:2819:G:H5"	56:RA:3806:HOH:O	2.07	0.55
1:RA:1245:G:OP1	12:RL:13:LYS:HE3	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:XE:95:MET:HB3	36:XE:124:ALA:HB2	1.88	0.55
1:YA:145:C:H6	1:YA:145:C:O5'	1.89	0.55
12:RL:23:ILE:HG12	18:RR:82:HIS:CE1	2.42	0.55
9:RI:61:TYR:CD2	9:RI:61:TYR:N	2.74	0.55
16:RP:50:ARG:HD3	16:RP:51:ASN:H	1.71	0.55
3:YC:71:ASP:O	3:YC:73:ILE:HG12	2.07	0.55
2:YB:58:A:C8	2:YB:59:A:N7	2.75	0.55
33:QB:16:GLY:HA2	33:QB:202:ASN:HB2	1.87	0.55
1:YA:1553:A:N7	1:YA:1555:G:C5	2.74	0.55
3:YC:129:LEU:HB2	3:YC:130:PRO:HD2	1.87	0.55
1:RA:1248:G:OP2	5:RE:44:ARG:NH1	2.40	0.55
36:QE:81:GLN:HG2	36:QE:149:PRO:CG	2.36	0.55
12:RL:77:ILE:O	12:RL:110:VAL:O	2.24	0.55
1:YA:503:A:N3	1:YA:505:A:H2'	2.21	0.55
32:XA:1280:A:H5''	41:XJ:43:PRO:CG	2.36	0.55
10:YJ:62:VAL:HG11	10:YJ:101:ILE:HD11	1.88	0.55
14:YN:73:ASN:HA	14:YN:76:VAL:HG22	1.87	0.55
32:XA:667:G:C2	32:XA:740:U:O2	2.59	0.55
32:QA:674:G:H2'	32:QA:675:A:C8	2.41	0.55
1:RA:571:U:C5	1:RA:575:A:C6	2.95	0.55
28:R1:8:ILE:CG2	28:R1:9:LYS:N	2.69	0.55
1:YA:1208:C:N3	1:YA:1209:U:C5	2.75	0.55
20:YT:14:PRO:O	20:YT:15:HIS:CB	2.53	0.55
1:RA:142:A:O2'	1:RA:143:C:O4'	2.24	0.55
32:QA:71:A:N6	32:QA:100:G:N7	2.54	0.55
20:RT:10:VAL:CG2	20:RT:11:LEU:HD23	2.36	0.55
32:XA:247:G:C6	32:XA:278:G:C2	2.94	0.55
52:XU:33:ARG:CZ	52:XU:34:ARG:HD3	2.36	0.55
4:RD:97:SER:H	4:RD:99:GLU:CD	2.10	0.55
40:QI:83:THR:HG21	40:QI:102:PHE:CB	2.33	0.55
1:YA:2287:A:N7	1:YA:2289:G:C8	2.74	0.55
39:XH:11:THR:HG22	39:XH:14:ARG:NH1	2.21	0.55
20:YT:29:THR:N	20:YT:87:LEU:HB2	2.21	0.55
25:YY:23:ARG:HB3	25:YY:27:ASN:OD1	2.07	0.55
45:QN:15:LEU:HD23	45:QN:18:LYS:HE3	1.87	0.55
1:YA:571:U:C5	1:YA:575:A:C6	2.94	0.55
15:RO:103:VAL:O	15:RO:105:ALA:O	2.25	0.55
1:YA:1181:U:O2'	1:YA:1182:G:H5'	2.06	0.55
32:QA:1471:U:O2'	32:QA:1472:U:H5'	2.07	0.55
8:YH:21:VAL:HG22	8:YH:22:LYS:H	1.70	0.55
1:YA:1709:U:H2'	1:YA:1710:G:H8	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:QM:84:CYS:HB3	50:QS:73:PHE:CE2	2.41	0.55
1:YA:2657:A:O3'	7:YG:159:LYS:NZ	2.40	0.55
37:XF:99:ALA:O	37:XF:100:SER:HB2	2.06	0.55
1:YA:2096:C:H2'	1:YA:2097:A:C8	2.41	0.55
44:QM:19:THR:HA	44:QM:24:VAL:HG23	1.88	0.55
44:QM:55:LEU:O	44:QM:59:VAL:HG12	2.06	0.55
13:RM:21:ALA:HA	13:RM:97:GLN:HG2	1.88	0.55
32:QA:616:G:O2'	32:QA:617:G:H5'	2.06	0.55
49:QR:22:TYR:CZ	49:QR:23:LYS:HE3	2.41	0.55
6:RF:3:LEU:HD23	6:RF:100:GLU:HB2	1.88	0.55
3:RC:165:ALA:HB3	3:RC:172:THR:HG23	1.89	0.55
1:RA:997:G:OP1	17:RQ:92:LYS:HD2	2.06	0.55
1:YA:1535:A:H5''	1:YA:1536:C:OP2	2.06	0.55
3:YC:68:ARG:HH12	3:YC:115:ILE:CD1	2.19	0.55
42:QK:126:ARG:CA	52:QU:33:ARG:HH12	2.19	0.55
1:YA:1055:G:H2'	1:YA:1056:G:H5'	1.89	0.55
1:YA:1019:U:O2'	1:YA:1021:A:N1	2.34	0.55
1:YA:1139:G:N2	1:YA:1140:C:C2	2.74	0.55
14:YN:82:GLU:C	14:YN:85:PRO:HD2	2.27	0.55
1:YA:1965:C:H5''	1:YA:1966:A:H2'	1.89	0.55
1:YA:674:G:H2'	1:YA:804:A:H61	1.70	0.55
1:YA:2746:U:C2	1:YA:2759:G:N2	2.75	0.55
14:YN:70:THR:O	14:YN:70:THR:HG22	2.06	0.55
7:RG:8:VAL:O	7:RG:9:VAL:HG12	2.06	0.55
32:XA:270:A:H2'	32:XA:271:C:C6	2.40	0.55
48:QQ:80:LYS:HB2	48:QQ:80:LYS:HZ3	1.70	0.55
20:RT:40:LYS:O	20:RT:44:LYS:N	2.39	0.55
33:QB:71:THR:HG22	33:QB:72:LYS:N	2.20	0.55
39:QH:17:GLN:HE21	39:QH:71:VAL:H	1.51	0.55
32:XA:796:C:H4'	42:XK:126:ARG:NH2	2.20	0.55
36:XE:110:MET:HG2	36:XE:139:THR:HG21	1.89	0.55
38:QG:4:ARG:HA	38:QG:4:ARG:NE	2.21	0.55
3:RC:20:ASN:C	3:RC:20:ASN:HD22	2.10	0.55
32:XA:1303:C:H42	32:XA:1334:G:H1	1.52	0.55
1:YA:2574:G:O2'	4:YD:148:GLN:HB2	2.06	0.55
1:YA:1520:U:O4	1:YA:1521:G:C6	2.59	0.55
47:QP:59:HIS:CE1	47:QP:63:GLN:NE2	2.73	0.55
32:XA:1452:C:H4'	32:XA:1453:G:O5'	2.06	0.55
13:RM:108:VAL:HG13	13:RM:112:LEU:HB3	1.89	0.55
5:RE:28:VAL:O	5:RE:32:VAL:HG13	2.07	0.55
1:YA:1733:G:H5'	1:YA:1733:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:565:C:H2'	1:YA:566:U:O4'	2.06	0.55
33:QB:138:ARG:HG3	33:QB:139:GLU:N	2.21	0.55
32:QA:192:A:C2'	51:QT:54:GLN:HE22	2.18	0.55
33:XB:164:ASP:HB3	33:XB:167:HIS:CB	2.37	0.55
32:XA:33:A:H2'	32:XA:34:C:C6	2.41	0.55
32:XA:35:G:H21	43:XL:114:SER:HB3	1.70	0.55
5:YE:105:LEU:HB3	5:YE:200:LEU:HD11	1.88	0.55
1:YA:2850:A:N7	1:YA:2868:A:O2'	2.25	0.55
4:YD:105:LYS:HA	4:YD:177:VAL:CG2	2.37	0.55
32:QA:217:C:O2'	32:QA:218:U:H5'	2.07	0.55
28:Y1:34:GLU:HG3	28:Y1:49:LYS:HB2	1.88	0.55
44:XM:52:ILE:C	44:XM:54:THR:H	2.09	0.55
32:QA:834:U:OP1	49:QR:48:ALA:HB2	2.06	0.55
32:XA:1342:C:H2'	32:XA:1343:G:C8	2.41	0.55
1:YA:2651:C:O2'	1:YA:2652:C:H5'	2.06	0.55
3:YC:131:MET:HG2	3:YC:134:ILE:HD11	1.87	0.55
15:RO:79:ALA:HB2	15:RO:110:ALA:HA	1.87	0.55
2:RB:34:A:H2'	2:RB:35:C:OP2	2.06	0.55
40:QI:88:GLU:HG3	40:QI:89:TYR:H	1.70	0.55
24:YX:30:PRO:HG2	24:YX:32:LEU:CD2	2.37	0.55
1:YA:1249:U:H4'	17:YQ:3:VAL:HG21	1.86	0.55
1:YA:1213:A:H1'	1:YA:1237:A:C2	2.41	0.55
1:YA:299:A:C2	1:YA:319:G:N3	2.75	0.55
1:YA:183:C:H2'	1:YA:184:C:H5'	1.87	0.55
32:XA:93:U:C2	32:XA:95:C:N4	2.74	0.55
1:RA:161:A:C3'	1:RA:162:U:H5''	2.32	0.55
33:XB:133:ALA:HA	33:XB:137:THR:CG2	2.36	0.55
1:YA:142:A:H2'	1:YA:143:C:C6	2.42	0.55
4:RD:34:VAL:HG22	4:RD:94:GLN:H	1.71	0.55
32:XA:664:G:N2	32:XA:666:G:C8	2.74	0.55
1:YA:2093:G:O2'	1:YA:2094:A:P	2.64	0.55
3:YC:70:LYS:HD3	3:YC:101:ARG:NH1	2.16	0.55
48:XQ:19:SER:HB3	48:XQ:70:LYS:NZ	2.20	0.55
3:RC:140:VAL:HA	3:RC:190:THR:O	2.07	0.55
7:YG:104:LEU:H	7:YG:112:VAL:HG23	1.71	0.55
26:YZ:4:ILE:CG2	26:YZ:56:VAL:HG13	2.36	0.55
40:XI:44:ARG:HH21	40:XI:48:ARG:HH11	1.50	0.55
34:XC:35:ASP:OD1	34:XC:56:ILE:HG21	2.07	0.55
42:QK:13:LYS:O	42:QK:14:GLN:HB3	2.06	0.55
8:RH:2:GLN:HA	8:RH:20:ASN:HA	1.88	0.55
1:RA:2308:G:N7	6:RF:76:PHE:CE2	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:80:ARG:HB3	18:YR:81:LYS:HD3	1.88	0.55
7:RG:1:SER:O	7:RG:3:VAL:N	2.37	0.55
37:XF:6:ILE:HD12	37:XF:6:ILE:H	1.71	0.55
40:QI:24:ASN:HA	40:QI:58:GLU:O	2.06	0.55
1:RA:2262:U:H4'	1:RA:2328:A:C2	2.42	0.55
50:QS:3:SER:HB2	50:QS:4:LEU:HD12	1.89	0.55
1:RA:322:A:H3'	5:RE:163:ASN:HD21	1.72	0.55
29:R2:12:ARG:NH2	29:R2:12:ARG:HB2	2.21	0.55
1:YA:2721:A:C2	1:YA:2873:A:C5	2.94	0.55
1:RA:1794:A:H2'	1:RA:1795:C:H6	1.70	0.55
1:RA:1856:U:C2'	1:RA:1857:G:H5'	2.37	0.55
49:XR:19:GLU:CD	49:XR:20:ILE:N	2.60	0.55
34:XC:133:MET:O	34:XC:137:VAL:HG23	2.07	0.55
30:R3:60:CYS:O	30:R3:61:LEU:HD23	2.07	0.55
18:RR:28:ALA:O	18:RR:63:VAL:HG21	2.06	0.55
1:RA:1009:A:O5'	1:RA:1009:A:H8	1.89	0.55
10:RJ:43:GLU:O	10:RJ:45:THR:CG2	2.54	0.55
18:YR:39:LEU:HB2	18:YR:49:ILE:HG12	1.87	0.55
30:R3:31:ILE:HG13	30:R3:31:ILE:O	2.05	0.55
15:YO:62:LEU:HD11	15:YO:65:THR:HG23	1.89	0.55
40:XI:38:PHE:CE2	40:XI:71:ILE:HG22	2.42	0.55
32:XA:1366:C:O2'	32:XA:1367:C:H6	1.82	0.55
32:XA:981:U:OP2	32:XA:982:U:H3'	2.06	0.55
32:XA:1269:A:H2	32:XA:1312:G:H21	1.54	0.55
32:QA:486:U:C5'	32:QA:486:U:C6	2.82	0.55
3:YC:140:VAL:HG23	3:YC:141:HIS:H	1.71	0.55
21:YU:92:VAL:HB	21:YU:101:THR:CG2	2.36	0.55
32:XA:1074:G:H2'	32:XA:1075:U:H6	1.72	0.55
33:QB:49:PHE:HB2	33:QB:53:LEU:HD23	1.87	0.55
32:XA:239:U:H6	32:XA:239:U:H5'	1.72	0.55
1:YA:191:A:H2'	1:YA:192:C:C6	2.42	0.55
32:XA:1139:G:H4'	32:XA:1140:C:O5'	2.07	0.55
1:RA:1084:A:H2'	1:RA:1085:A:H8	1.69	0.55
32:QA:1305:G:HO2'	32:QA:1306:A:H8	1.53	0.55
1:YA:1188:U:O2'	1:YA:1189:A:H5'	2.07	0.55
32:XA:274:A:N3	32:XA:275:G:C8	2.75	0.55
32:QA:923:A:OP1	36:QE:25:LYS:HG2	2.07	0.55
37:XF:3:HIS:ND1	37:XF:92:THR:HG23	2.20	0.55
32:QA:367:U:OP1	32:QA:395:C:H1'	2.07	0.55
6:YF:103:ILE:O	6:YF:103:ILE:HG22	2.07	0.55
2:YB:32:U:C2	2:YB:51:G:N2	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:YH:80:ILE:HB	8:YH:101:ASP:OD2	2.06	0.55
10:YJ:51:GLY:O	10:YJ:121:LYS:HE3	2.06	0.55
1:YA:1178:C:C2	1:YA:1179:G:C8	2.94	0.55
12:YL:73:ILE:O	12:YL:105:ILE:HA	2.06	0.55
25:YY:4:LYS:HD3	25:YY:4:LYS:H	1.70	0.55
32:XA:935:A:O2'	32:XA:936:C:C6	2.55	0.55
33:XB:119:GLN:HG3	33:XB:124:THR:HG21	1.88	0.55
48:QQ:28:VAL:O	48:QQ:36:PHE:HA	2.07	0.55
32:QA:1329:A:H5''	44:QM:25:GLY:N	2.20	0.55
32:XA:72:A:N6	32:XA:99:C:H1'	2.22	0.55
14:RN:75:ILE:HD12	14:RN:75:ILE:C	2.27	0.55
32:QA:957:U:O2	32:QA:959:A:C8	2.59	0.55
32:QA:1190:G:OP1	34:QC:4:VAL:HG12	2.06	0.55
1:RA:1945:G:C4	1:RA:1946:U:C5	2.94	0.55
1:RA:1947:C:O2'	1:RA:1948:G:H5'	2.06	0.55
1:RA:2520:C:C6	1:RA:2567:G:H1'	2.41	0.55
51:XT:71:ALA:O	51:XT:74:HIS:HB2	2.07	0.55
48:XQ:11:VAL:HG12	48:XQ:12:VAL:N	2.22	0.55
32:XA:794:A:H2'	32:XA:795:C:C6	2.41	0.55
36:XE:68:ARG:O	36:XE:70:MET:HG2	2.06	0.55
32:XA:998:C:H2'	32:XA:999:C:H6	1.70	0.55
1:RA:250:G:H2'	1:RA:251:A:C8	2.42	0.55
1:RA:975:A:H1'	1:RA:990:A:C2	2.42	0.55
32:QA:914:A:H2'	32:QA:915:A:H8	1.72	0.55
32:XA:555:U:H2'	32:XA:556:C:C6	2.41	0.55
38:QG:92:PRO:O	38:QG:93:VAL:HG13	2.06	0.55
17:RQ:86:SER:O	17:RQ:87:VAL:C	2.45	0.55
23:RW:39:GLN:HG2	23:RW:41:GLY:N	2.08	0.55
32:XA:1160:G:O6	32:XA:1181:G:O6	2.25	0.55
1:YA:1551:A:C6	1:YA:1552:A:N7	2.74	0.55
7:RG:162:ARG:NH1	7:RG:168:VAL:HG21	2.22	0.55
1:YA:2407:A:C2	1:YA:2408:U:N3	2.75	0.55
1:YA:1392:A:N6	1:YA:1393:A:N6	2.54	0.55
5:YE:130:LYS:HG3	5:YE:133:LEU:HD13	1.88	0.55
1:YA:1019:U:O4	1:YA:1020:A:N6	2.39	0.55
32:QA:1285:A:H5'	32:QA:1286:U:O4	2.06	0.55
35:XD:29:THR:HG22	35:XD:30:LYS:HD3	1.88	0.55
9:RI:49:GLU:HG2	9:RI:50:LYS:N	2.22	0.55
1:YA:2750:A:H1'	1:YA:2752:C:H41	1.72	0.55
14:YN:14:SER:C	14:YN:16:HIS:H	2.08	0.55
33:XB:49:PHE:O	33:XB:53:LEU:N	2.31	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:71:A:C2	32:QA:72:A:C8	2.94	0.55
20:RT:39:THR:HG22	20:RT:41:ALA:HB3	1.89	0.55
13:RM:42:THR:CG2	13:RM:93:VAL:HG23	2.31	0.55
4:RD:98:VAL:O	4:RD:100:LEU:N	2.39	0.55
34:QC:156:LEU:C	34:QC:158:GLY:H	2.09	0.55
14:RN:103:ARG:HD3	14:RN:110:MET:CE	2.37	0.55
1:YA:1286:A:H5''	14:YN:104:ALA:CB	2.36	0.55
13:RM:1:MET:CE	13:RM:2:LEU:H	2.19	0.55
25:YY:23:ARG:O	25:YY:27:ASN:HB2	2.07	0.55
44:XM:105:ALA:HB1	44:XM:109:LYS:HB2	1.89	0.55
32:XA:1067:A:H1'	32:XA:1068:G:C8	2.42	0.55
1:YA:1179:G:H2'	1:YA:1180:U:H6	1.71	0.55
44:XM:67:ASP:O	44:XM:70:ARG:HB3	2.07	0.55
1:YA:1635:A:C8	1:YA:1635:A:H5'	2.41	0.55
5:YE:44:ARG:HB2	5:YE:88:ARG:O	2.07	0.55
27:Y0:37:HIS:CD2	27:Y0:43:THR:HG22	2.42	0.55
1:YA:1412:U:H2'	1:YA:1413:A:O4'	2.06	0.55
13:RM:13:HIS:O	13:RM:14:LYS:HB2	2.06	0.55
1:YA:457:A:N1	1:YA:470:A:H5''	2.21	0.55
2:RB:112:G:H2'	2:RB:113:C:H6	1.71	0.55
15:YO:39:VAL:HG12	15:YO:48:LEU:HB2	1.88	0.55
44:XM:59:VAL:HG13	44:XM:60:ALA:N	2.22	0.55
32:XA:367:U:OP1	32:XA:395:C:H1'	2.06	0.55
1:RA:2140:G:C6	1:RA:2141:G:C6	2.95	0.55
32:XA:360:G:O2'	32:XA:361:G:H5'	2.07	0.55
32:QA:138:G:O2'	32:QA:139:A:H5'	2.07	0.55
1:RA:615:U:C4	5:RE:35:TYR:CE1	2.94	0.55
32:XA:145:G:C2	32:XA:146:G:C8	2.95	0.55
39:QH:49:LYS:HB3	39:QH:51:GLU:OE2	2.06	0.55
24:YX:63:ILE:O	24:YX:67:LEU:HD12	2.07	0.55
32:QA:1112:C:N4	34:QC:177:LEU:HD22	2.22	0.55
23:RW:67:LYS:HB3	23:RW:80:SER:H	1.72	0.55
1:RA:1171:G:C6	1:RA:1172:C:C4	2.95	0.55
1:YA:1340:U:C4	1:YA:1603:A:C8	2.95	0.55
1:YA:303:G:C6	1:YA:315:G:O6	2.60	0.55
1:YA:82:U:H5''	1:YA:296:U:H5''	1.89	0.55
1:YA:491:G:N2	1:YA:492:A:H1'	2.22	0.55
1:YA:116:C:H2'	1:YA:117:G:H8	1.72	0.55
1:RA:784:G:O6	3:RC:227:VAL:HG11	2.06	0.55
32:XA:409:U:H2'	32:XA:410:G:O4'	2.06	0.55
1:YA:2748:A:H1'	7:YG:66:THR:CG2	2.31	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:61:C:N3	1:YA:94:A:C2	2.75	0.55
16:YP:50:ARG:CA	16:YP:57:ALA:H	2.19	0.55
9:RI:56:VAL:HG11	9:RI:68:PHE:HD2	1.70	0.55
32:XA:437:U:O2'	35:XD:119:HIS:HD2	1.90	0.55
33:QB:148:GLY:HA2	33:QB:151:LYS:HB3	1.88	0.55
30:Y3:41:ARG:HD2	30:Y3:41:ARG:O	2.06	0.55
32:XA:1011:C:N3	32:XA:1019:A:C2	2.75	0.55
34:QC:84:GLU:HA	34:QC:87:ARG:HE	1.72	0.55
1:RA:635:C:H3'	12:RL:109:LYS:HZ1	1.71	0.55
45:QN:12:ARG:HG2	45:QN:53:ASP:HB3	1.89	0.55
3:RC:255:LYS:O	3:RC:257:ARG:N	2.35	0.55
1:YA:1593:A:C5	1:YA:1594:U:C4	2.95	0.55
52:QU:24:LYS:CG	52:QU:25:ALA:H	2.18	0.55
1:RA:974:G:H8	1:RA:990:A:H62	1.55	0.55
24:YX:63:ILE:HD12	24:YX:64:ASP:H	1.71	0.55
1:RA:848:C:H2'	1:RA:849:A:C8	2.42	0.55
1:YA:752:A:O2'	1:YA:753:A:OP2	2.15	0.55
24:RX:10:ARG:HB2	24:RX:11:PRO:CD	2.36	0.55
47:XP:12:LYS:HG2	47:XP:13:LYS:HG2	1.88	0.55
32:XA:1503:A:C8	32:XA:1531:A:H1'	2.42	0.55
32:QA:1533:C:H3'	32:QA:1534:A:H5''	1.89	0.55
16:YP:32:VAL:O	16:YP:32:VAL:HG13	2.06	0.55
1:RA:172:A:O2'	1:RA:173:A:H5'	2.06	0.55
34:XC:26:LYS:HA	34:XC:26:LYS:HE3	1.88	0.55
39:XH:89:ASP:N	39:XH:89:ASP:OD1	2.38	0.55
39:XH:114:ALA:O	39:XH:117:GLN:HB3	2.07	0.55
50:XS:54:ARG:CG	50:XS:55:GLN:H	2.20	0.55
1:YA:1438:U:O2'	1:YA:1439:A:H5'	2.06	0.55
1:YA:2295:C:O2'	1:YA:2296:U:H5'	2.07	0.55
1:YA:224:U:C4	1:YA:225:C:C5	2.94	0.55
1:YA:663:G:O6	1:YA:664:G:C6	2.59	0.55
1:YA:479:A:C2	1:YA:480:A:C6	2.94	0.55
1:YA:807:U:H1'	1:YA:2445:G:H5'	1.89	0.55
32:XA:1238:A:OP1	32:XA:1336:C:H5	1.90	0.55
1:YA:607:U:O4	1:YA:619:G:H2'	2.07	0.55
1:YA:202:U:H3'	1:YA:203:A:C8	2.41	0.55
4:YD:184:ARG:HH22	16:YP:6:GLN:NE2	1.97	0.55
32:XA:752:G:HO2'	32:XA:753:A:P	2.30	0.55
3:RC:141:HIS:HD2	3:RC:192:GLY:O	1.88	0.55
34:QC:153:SER:CB	34:QC:164:THR:HA	2.37	0.55
32:XA:437:U:H4'	35:XD:151:GLN:OE1	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:RS:73:LYS:CB	19:RS:106:VAL:HB	2.36	0.55
16:RP:67:GLU:HG3	16:RP:68:GLY:H	1.71	0.55
4:RD:100:LEU:HD23	4:RD:101:PHE:HE1	1.71	0.55
4:RD:101:PHE:N	4:RD:101:PHE:CD1	2.75	0.55
39:XH:11:THR:CG2	39:XH:14:ARG:HH22	2.20	0.55
32:XA:1303:C:O2	32:XA:1303:C:H2'	2.07	0.55
32:XA:1331:G:HO2'	32:XA:1332:A:H8	1.53	0.55
16:YP:20:ARG:HG2	16:YP:112:ARG:NH1	2.21	0.55
32:XA:920:U:O2'	32:XA:921:U:H5'	2.07	0.55
32:XA:182:A:O2'	32:XA:183:C:H2'	2.06	0.55
6:YF:92:GLY:O	6:YF:95:MET:HB3	2.07	0.55
40:QI:9:GLY:HA2	40:QI:80:HIS:HD2	1.71	0.55
1:RA:2820:A:OP1	14:RN:2:ARG:NH2	2.39	0.55
32:XA:1005:A:C5	32:XA:1006:G:H1'	2.42	0.55
43:XL:98:ARG:HD3	43:XL:103:CYS:SG	2.47	0.55
1:RA:2339:C:H2'	1:RA:2340:A:H8	1.69	0.55
35:QD:16:THR:HG22	35:QD:17:ASP:H	1.72	0.55
22:YV:70:ILE:HD13	22:YV:70:ILE:N	2.22	0.55
32:XA:71:A:C6	32:XA:100:G:C5	2.95	0.55
1:YA:156:A:H2'	1:YA:157:C:H6	1.71	0.55
44:QM:18:LEU:O	44:QM:24:VAL:HG21	2.07	0.55
1:RA:1032:A:H1'	31:R4:23:ILE:CD1	2.37	0.55
32:QA:537:G:H5''	43:QL:109:ARG:HH12	1.72	0.55
4:YD:8:LYS:HB2	4:YD:201:LEU:HD11	1.89	0.55
22:YV:44:HIS:CE1	22:YV:85:LYS:HD3	2.42	0.55
47:QP:48:GLU:HG3	47:QP:49:GLY:N	2.22	0.55
1:YA:2799:A:H2'	1:YA:2799:A:N3	2.22	0.55
33:XB:156:LEU:HD23	33:XB:156:LEU:H	1.71	0.55
1:RA:370:G:OP2	56:RA:3560:HOH:O	2.18	0.55
1:YA:2015:A:C4	27:Y0:2:VAL:HG11	2.42	0.55
9:RI:109:ALA:HB1	9:RI:124:MET:HE1	1.89	0.55
1:RA:855:G:H21	23:RW:23:LYS:CG	2.14	0.55
3:YC:147:PRO:HA	3:YC:187:CYS:HB3	1.89	0.55
1:YA:2882:A:H5''	14:YN:96:ARG:HD3	1.89	0.55
1:YA:481:G:H1'	1:YA:506:G:N2	2.22	0.55
1:RA:1731:G:C2	1:RA:1733:G:C5	2.95	0.55
35:XD:137:SER:HB2	35:XD:138:PRO:CD	2.33	0.55
1:YA:1240:U:H2'	1:YA:1240:U:O2	2.06	0.55
9:RI:64:ARG:HG3	9:RI:65:SER:N	2.22	0.55
1:RA:2145:C:OP1	1:RA:2148:G:C5	2.60	0.55
31:R4:37:GLN:HG2	31:R4:37:GLN:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1197:G:H2'	1:YA:1198:U:C6	2.41	0.55
1:YA:531:C:H4'	1:YA:532:A:C8	2.42	0.55
1:YA:1286:A:C6	1:YA:1289:C:N3	2.75	0.55
51:XT:3:ILE:O	51:XT:4:LYS:HG2	2.07	0.55
32:QA:1337:G:H5''	32:QA:1338:G:OP1	2.06	0.55
5:YE:149:ILE:HG23	5:YE:188:MET:HA	1.89	0.55
18:RR:61:ALA:HB2	18:RR:98:ILE:HA	1.89	0.55
3:RC:131:MET:HA	3:RC:134:ILE:CD1	2.37	0.55
1:YA:1737:G:C5	1:YA:1738:G:C6	2.95	0.55
35:QD:151:GLN:O	35:QD:152:SER:C	2.45	0.55
42:QK:42:GLY:HA3	42:QK:73:VAL:CG1	2.37	0.55
22:YV:56:PHE:CE1	22:YV:61:LEU:HD13	2.42	0.55
1:RA:655:A:H4'	1:RA:656:G:OP1	2.05	0.55
6:RF:72:SER:HB2	6:RF:80:GLN:N	2.21	0.55
12:YL:68:SER:O	12:YL:69:ARG:HB2	2.06	0.55
24:YX:44:ARG:NH1	24:YX:44:ARG:HB3	2.22	0.55
47:XP:46:LYS:H	47:XP:46:LYS:HZ2	1.55	0.55
3:RC:28:PRO:HG2	3:RC:33:LEU:HD11	1.88	0.55
14:RN:18:GLN:HE21	14:RN:22:ARG:NH1	2.05	0.55
5:YE:162:ARG:C	5:YE:164:LEU:H	2.10	0.55
42:XK:87:GLY:H	42:XK:113:THR:HG23	1.72	0.55
34:XC:118:SER:O	34:XC:122:GLN:HG2	2.07	0.55
1:RA:1452:G:H2'	1:RA:1457:U:O4	2.07	0.55
1:YA:2350:C:H2'	1:YA:2351:G:O4'	2.07	0.55
32:QA:4:U:H2'	32:QA:4:U:O2	2.06	0.55
32:QA:1468:A:C3'	32:QA:1469:C:H5''	2.37	0.54
18:YR:38:VAL:N	18:YR:53:PHE:HB3	2.21	0.54
23:RW:28:GLU:HG3	23:RW:29:SER:H	1.71	0.54
23:RW:24:ARG:HD3	23:RW:65:LYS:HE2	1.89	0.54
32:XA:1181:G:O2'	32:XA:1182:G:O4'	2.25	0.54
1:RA:1171:G:C5	1:RA:1172:C:C5	2.96	0.54
1:YA:1394:U:H3'	1:YA:1394:U:H6	1.72	0.54
1:YA:1358:G:N7	1:YA:1371:G:C6	2.75	0.54
32:XA:1070:U:H2'	32:XA:1071:C:C6	2.36	0.54
36:QE:81:GLN:HE22	36:QE:146:MET:HE1	1.71	0.54
32:QA:842:U:H2'	32:QA:844:G:P	2.47	0.54
1:YA:1056:G:H1'	1:YA:1103:A:C6	2.42	0.54
1:YA:2310:C:C2'	1:YA:2311:A:H5''	2.36	0.54
8:RH:67:ALA:C	8:RH:69:ALA:H	2.09	0.54
40:XI:35:GLU:HA	40:XI:39:GLY:CA	2.37	0.54
45:QN:20:PHE:HA	45:QN:24:ALA:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:QE:94:PHE:CZ	36:QE:96:GLN:HG2	2.42	0.54
3:RC:199:HIS:O	3:RC:202:ARG:HG3	2.06	0.54
32:XA:920:U:C2	32:XA:921:U:C5	2.95	0.54
24:YX:1:SER:O	24:YX:3:VAL:N	2.40	0.54
5:RE:46:GLN:HG3	5:RE:87:ALA:N	2.19	0.54
1:YA:2100:G:N2	1:YA:2190:G:H1'	2.22	0.54
52:QU:36:PHE:HB3	52:QU:40:PRO:HD3	1.89	0.54
5:YE:149:ILE:HD12	5:YE:175:ILE:HD13	1.88	0.54
32:QA:761:G:H2'	32:QA:762:U:C6	2.40	0.54
34:XC:76:ILE:HD11	34:XC:102:ILE:HD11	1.89	0.54
1:YA:2623:G:H4'	1:YA:2825:G:H8	1.70	0.54
1:RA:1153:C:OP2	56:RA:3358:HOH:O	2.18	0.54
10:YJ:111:LYS:HB2	10:YJ:115:GLY:HA3	1.87	0.54
11:YK:119:ALA:N	11:YK:120:PRO:HD2	2.21	0.54
33:XB:119:GLN:HG3	33:XB:124:THR:CG2	2.37	0.54
32:XA:749:A:C2	32:XA:750:C:C2	2.96	0.54
32:XA:510:A:H5''	32:XA:511:C:OP2	2.06	0.54
3:RC:29:PHE:CE2	3:RC:31:PRO:HG2	2.42	0.54
32:XA:791:G:H2'	32:XA:792:A:H5'	1.89	0.54
32:XA:1391:U:H2'	32:XA:1392:G:C8	2.42	0.54
41:XJ:87:LEU:HD22	41:XJ:90:LEU:HD13	1.89	0.54
1:YA:2556:C:H2'	1:YA:2557:G:O4'	2.07	0.54
1:RA:17:G:H2'	1:RA:18:U:H6	1.72	0.54
1:RA:2383:G:H2'	1:RA:2384:U:C6	2.42	0.54
32:XA:8:A:C5	35:XD:205:LYS:HG3	2.41	0.54
1:YA:227:A:C4'	1:YA:228:C:OP1	2.42	0.54
33:QB:102:ASN:O	33:QB:106:VAL:HG23	2.08	0.54
1:YA:1356:G:N2	1:YA:1357:C:H1'	2.22	0.54
1:YA:1370:C:H2'	1:YA:1371:G:C8	2.43	0.54
1:YA:82:U:H2'	1:YA:83:A:O4'	2.06	0.54
4:YD:119:ALA:HB3	4:YD:163:GLY:N	2.19	0.54
45:XN:87:ALA:HB2	45:XN:92:ILE:HD12	1.89	0.54
9:RI:46:ASP:HA	9:RI:50:LYS:HD2	1.88	0.54
11:YK:39:ILE:HD11	11:YK:62:VAL:CG2	2.38	0.54
25:YY:28:LEU:O	25:YY:28:LEU:HD22	2.07	0.54
1:YA:1475:G:H2'	1:YA:1475:G:N3	2.23	0.54
13:YM:38:ARG:O	13:YM:126:ILE:HG21	2.07	0.54
13:YM:34:LYS:HB3	13:YM:129:THR:HG22	1.89	0.54
19:RS:73:LYS:HA	19:RS:73:LYS:CE	2.33	0.54
32:QA:100:G:C6	32:QA:101:A:C5	2.95	0.54
33:XB:103:TRP:CA	33:XB:106:VAL:HB	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1493:C:C2'	1:YA:1493:C:O2	2.54	0.54
25:RY:5:GLU:O	25:RY:8:GLU:HB2	2.07	0.54
44:QM:3:ILE:O	44:QM:5:GLY:N	2.40	0.54
32:QA:174:A:C5	32:QA:175:C:C5	2.96	0.54
7:YG:70:LEU:O	7:YG:74:MET:HB2	2.07	0.54
32:QA:600:A:H2'	32:QA:601:G:C8	2.42	0.54
1:YA:1519:G:C6	1:YA:1520:U:N3	2.76	0.54
8:RH:18:GLN:HG3	8:RH:18:GLN:O	2.06	0.54
32:XA:1451:U:C2'	32:XA:1452:C:OP1	2.54	0.54
1:YA:17:G:H4'	17:YQ:24:TYR:CE1	2.42	0.54
5:YE:61:ARG:HE	5:YE:65:THR:HB	1.71	0.54
43:QL:6:LEU:HB3	48:QQ:33:TYR:CE1	2.42	0.54
32:XA:1533:C:H6	32:XA:1533:C:H3'	1.72	0.54
51:QT:55:PRO:O	51:QT:59:ARG:CB	2.55	0.54
4:RD:50:VAL:HG22	4:RD:80:TRP:O	2.07	0.54
1:YA:1196:C:H1'	1:YA:1226:A:C4	2.41	0.54
18:RR:27:ILE:HD13	18:RR:27:ILE:H	1.71	0.54
5:RE:132:LYS:O	5:RE:135:ALA:HB3	2.07	0.54
34:XC:122:GLN:O	34:XC:127:VAL:HG13	2.07	0.54
33:QB:161:PHE:HA	33:QB:183:PHE:O	2.06	0.54
1:RA:207:A:H2'	1:RA:208:C:O4'	2.06	0.54
1:RA:215:G:H4'	1:RA:216:A:OP1	2.08	0.54
1:RA:2808:G:N2	1:RA:2891:U:C6	2.76	0.54
18:RR:29:THR:O	18:RR:29:THR:HG22	2.07	0.54
32:XA:45:G:O2'	32:XA:46:G:H5'	2.08	0.54
32:XA:295:C:H2'	32:XA:296:U:H6	1.71	0.54
1:YA:2586:U:H2'	1:YA:2587:A:O4'	2.07	0.54
10:RJ:44:TYR:HA	17:RQ:59:LEU:CD2	2.37	0.54
17:RQ:91:ARG:HD3	18:RR:11:GLN:CG	2.38	0.54
17:RQ:93:ILE:CG2	17:RQ:94:LEU:N	2.71	0.54
1:RA:1131:G:H4'	1:RA:1132:U:OP1	2.07	0.54
30:R3:31:ILE:HD11	30:R3:34:LYS:CD	2.24	0.54
32:XA:977:A:O2'	32:XA:1224:U:O4	2.20	0.54
32:XA:1365:G:O2'	32:XA:1366:C:C5'	2.56	0.54
32:XA:1365:G:O2'	32:XA:1366:C:H6	1.90	0.54
1:YA:976:G:H5'	1:YA:1156:A:N6	2.22	0.54
32:QA:1127:G:C2'	32:QA:1128:C:H5'	2.37	0.54
35:QD:25:ARG:HH12	35:QD:30:LYS:HG2	1.72	0.54
10:YJ:4:PHE:HB3	17:YQ:63:ARG:HH22	1.72	0.54
10:YJ:4:PHE:HB3	17:YQ:63:ARG:NH2	2.23	0.54
18:YR:10:LYS:N	18:YR:10:LYS:HD2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:975:A:H4'	32:QA:976:G:H5''	1.85	0.54
13:RM:36:VAL:HG23	22:RV:82:TYR:HB2	1.89	0.54
1:YA:288:U:H2'	1:YA:289:G:C8	2.42	0.54
1:YA:2669:G:H2'	1:YA:2670:A:C8	2.42	0.54
32:XA:1299:A:N3	32:XA:1299:A:C2'	2.62	0.54
32:XA:1133:G:C2	32:XA:1142:G:C5	2.94	0.54
32:XA:1054:C:OP2	32:XA:1197:A:OP2	2.26	0.54
1:RA:2134:A:O2'	1:RA:2135:A:C8	2.53	0.54
9:RI:33:ASN:ND2	9:RI:64:ARG:HH22	2.00	0.54
1:RA:2149:U:O2'	1:RA:2150:C:C4'	2.55	0.54
33:QB:86:CYS:HB2	33:QB:88:GLN:HG3	1.89	0.54
1:YA:1197:G:H2'	1:YA:1198:U:H6	1.72	0.54
4:YD:173:GLN:HE21	4:YD:173:GLN:HA	1.72	0.54
6:RF:84:ILE:O	6:RF:84:ILE:HG13	2.08	0.54
4:YD:89:GLU:HG2	4:YD:94:GLN:NE2	2.22	0.54
45:QN:15:LEU:HD23	45:QN:18:LYS:HD2	1.89	0.54
10:RJ:97:PRO:O	10:RJ:99:ARG:N	2.40	0.54
32:QA:1323:G:O2'	32:QA:1324:A:O4'	2.25	0.54
46:XO:88:ARG:HH21	1:YA:715:A:H4'	1.72	0.54
4:YD:99:GLU:HG3	4:YD:100:LEU:N	2.23	0.54
41:QJ:51:VAL:O	41:QJ:62:ARG:HA	2.07	0.54
32:QA:1394:A:C5	32:QA:1501:C:H4'	2.42	0.54
35:XD:64:TYR:CE2	35:XD:93:LEU:HB3	2.43	0.54
1:YA:2624:G:C2	1:YA:2625:G:H1'	2.42	0.54
40:QI:33:SER:OG	40:QI:35:GLU:HG2	2.06	0.54
33:XB:17:HIS:CG	33:XB:18:GLN:N	2.72	0.54
1:YA:1626:A:C2'	1:YA:1627:G:OP2	2.55	0.54
1:RA:1062:G:O2'	1:RA:1063:G:O5'	2.25	0.54
2:YB:17:C:O2'	2:YB:18:G:H5'	2.07	0.54
2:YB:18:G:C2	2:YB:19:C:C2	2.96	0.54
1:YA:38:A:C2	1:YA:442:G:C6	2.94	0.54
1:YA:445:C:O2'	1:YA:449:A:N3	2.41	0.54
32:XA:981:U:H5	32:XA:982:U:HO2'	1.56	0.54
50:XS:35:ARG:HH22	50:XS:53:GLY:H	1.54	0.54
1:YA:417:C:H6	1:YA:417:C:O5'	1.90	0.54
33:QB:53:LEU:HA	33:QB:56:LEU:HB3	1.88	0.54
1:YA:2668:G:O2'	1:YA:2669:G:H5'	2.07	0.54
4:RD:90:PHE:HB2	4:RD:92:VAL:CG2	2.33	0.54
3:RC:106:PRO:CB	3:RC:141:HIS:CE1	2.90	0.54
2:RB:28:C:O2'	2:RB:29:A:H5'	2.07	0.54
6:YF:42:ALA:CB	6:YF:49:LEU:HD21	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:YK:43:ILE:HG22	11:YK:54:LYS:HA	1.89	0.54
1:RA:2887:A:H3'	1:RA:2888:C:H6	1.72	0.54
34:XC:139:ASN:HB3	34:XC:142:ARG:NH2	2.23	0.54
1:RA:514:A:H1'	1:RA:581:C:O2'	2.08	0.54
1:YA:630:G:N2	1:YA:633:A:OP2	2.31	0.54
34:XC:126:ARG:CA	34:XC:126:ARG:HE	2.19	0.54
32:XA:533:A:OP1	56:XA:1852:HOH:O	2.17	0.54
1:YA:2542:A:H4'	1:YA:2543:G:H5'	1.88	0.54
32:QA:1386:G:H2'	32:QA:1387:G:H8	1.70	0.54
1:RA:1872:A:H2'	1:RA:1873:G:O4'	2.08	0.54
50:XS:10:ILE:CG2	50:XS:14:LEU:HD11	2.36	0.54
37:XF:38:ARG:HD2	37:XF:63:ASN:OD1	2.08	0.54
7:YG:117:PRO:HG2	7:YG:143:VAL:CG1	2.38	0.54
18:YR:97:LYS:HG2	18:YR:97:LYS:O	2.07	0.54
32:QA:1015:G:H1'	32:QA:1218:C:O2'	2.07	0.54
23:RW:11:ASN:HD22	23:RW:12:GLY:N	2.06	0.54
32:QA:652:U:C5	32:QA:752:G:C2	2.95	0.54
1:YA:716:A:H3'	1:YA:717:C:H5''	1.89	0.54
1:RA:1203:U:H1'	12:RL:4:ASN:HB3	1.90	0.54
1:RA:2272:U:H5''	1:RA:2273:A:OP1	2.07	0.54
12:YL:122:VAL:HG23	12:YL:122:VAL:O	2.07	0.54
1:YA:357:C:H2'	1:YA:358:U:H6	1.71	0.54
8:RH:58:LEU:HA	8:RH:61:VAL:HB	1.89	0.54
24:YX:70:LEU:O	24:YX:74:GLY:N	2.39	0.54
32:QA:438:U:C4	32:QA:494:G:C5	2.95	0.54
1:YA:2230:G:H2'	1:YA:2231:U:H6	1.70	0.54
18:YR:49:ILE:HG22	18:YR:54:VAL:HB	1.88	0.54
1:YA:449:A:H2'	1:YA:450:G:H5'	1.90	0.54
23:YW:25:PHE:O	23:YW:27:GLY:N	2.37	0.54
1:YA:1387:A:O2'	1:YA:1388:G:H8	1.89	0.54
1:YA:315:G:H2'	1:YA:316:C:O4'	2.08	0.54
1:YA:1655:A:H5'	4:YD:118:PHE:CE1	2.43	0.54
2:YB:42:C:C5	6:YF:65:LEU:HD13	2.42	0.54
1:YA:482:A:N6	1:YA:506:G:N9	2.54	0.54
5:RE:187:VAL:O	5:RE:188:MET:CB	2.55	0.54
1:YA:78:U:H2'	1:YA:79:C:H6	1.71	0.54
1:YA:657:U:C2	1:YA:658:U:C5	2.95	0.54
32:XA:994:A:N6	32:XA:1216:A:H5'	2.22	0.54
44:XM:13:HIS:HB3	44:XM:16:ILE:HB	1.88	0.54
19:RS:73:LYS:CA	19:RS:73:LYS:HE3	2.38	0.54
39:QH:78:SER:OG	39:QH:83:ARG:HA	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:103:TRP:CB	33:XB:106:VAL:HB	2.36	0.54
32:XA:519:C:O2'	32:XA:520:A:C5'	2.56	0.54
42:XK:126:ARG:N	52:XU:33:ARG:HE	2.06	0.54
4:RD:4:LEU:HD23	4:RD:29:VAL:HG11	1.89	0.54
40:XI:46:VAL:O	40:XI:79:ARG:HG3	2.07	0.54
21:YU:60:LYS:HD2	21:YU:60:LYS:N	2.21	0.54
1:RA:1415:U:C2'	1:RA:1415:U:O2	2.55	0.54
32:QA:807:A:C5	32:QA:808:C:C5	2.96	0.54
4:YD:79:LEU:N	4:YD:79:LEU:HD22	2.22	0.54
32:QA:184:G:H2'	32:QA:185:U:H6	1.71	0.54
1:YA:1723:G:H2'	1:YA:1724:G:C8	2.40	0.54
1:YA:1182:G:H2'	1:YA:1183:U:O4'	2.07	0.54
52:QU:16:ARG:HH11	52:QU:19:LYS:HG3	1.72	0.54
32:XA:68:G:H5'	32:XA:171:A:O2'	2.07	0.54
1:RA:2511:U:O4	1:RA:2575:C:N3	2.41	0.54
48:QQ:33:TYR:O	48:QQ:35:LYS:N	2.40	0.54
45:QN:27:LYS:HA	45:QN:30:ILE:HB	1.89	0.54
32:XA:513:C:H2'	32:XA:514:C:C6	2.43	0.54
39:XH:97:GLY:O	39:XH:98:LEU:HB2	2.08	0.54
42:QK:33:ILE:HG12	42:QK:69:CYS:SG	2.48	0.54
33:XB:208:ALA:HA	33:XB:211:LEU:HB3	1.90	0.54
1:RA:500:G:N2	1:RA:502:A:H3'	2.22	0.54
49:XR:44:THR:OG1	49:XR:46:THR:HG22	2.07	0.54
26:RZ:3:THR:HA	26:RZ:37:ARG:O	2.07	0.54
44:QM:89:ARG:HH11	44:QM:94:LEU:HB3	1.72	0.54
1:YA:2654:A:H4'	1:YA:2655:G:OP1	2.08	0.54
1:YA:343:C:O2	1:YA:343:C:H2'	2.06	0.54
33:XB:112:ARG:O	33:XB:112:ARG:HG3	2.08	0.54
6:RF:66:ILE:HG13	6:RF:66:ILE:O	2.07	0.54
17:YQ:9:ALA:O	17:YQ:12:ARG:HG2	2.06	0.54
1:RA:742:A:H2'	1:RA:743:A:C8	2.42	0.54
10:RJ:38:GLY:O	10:RJ:43:GLU:HB2	2.08	0.54
17:RQ:85:ALA:O	17:RQ:88:GLU:HB2	2.07	0.54
32:XA:1159:U:H5	32:XA:1182:G:O2'	1.88	0.54
1:RA:10:A:H2	1:RA:2800:A:H2'	1.73	0.54
32:XA:1316:G:H22	32:XA:1318:A:H3'	1.73	0.54
1:RA:526:A:H5''	1:RA:527:C:OP1	2.08	0.54
1:YA:2282:G:H4'	1:YA:2283:C:OP2	2.08	0.54
1:YA:569:U:H5''	1:YA:821:A:C2	2.41	0.54
1:YA:1608:A:C5	1:YA:1611:C:N4	2.75	0.54
1:YA:324:A:C2	1:YA:325:G:H1'	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:182:A:H2'	1:YA:183:C:C6	2.43	0.54
14:YN:73:ASN:HA	14:YN:76:VAL:HG13	1.89	0.54
1:YA:201:C:C5	1:YA:202:U:C5	2.95	0.54
32:XA:1137:C:H4'	32:XA:1138:G:C2	2.42	0.54
14:YN:19:ALA:HA	14:YN:22:ARG:HB3	1.89	0.54
22:YV:80:HIS:CD2	22:YV:83:LYS:N	2.76	0.54
22:YV:80:HIS:HD2	22:YV:83:LYS:N	2.05	0.54
4:RD:68:PHE:CB	4:RD:73:VAL:HG12	2.34	0.54
36:XE:131:ASN:HD22	36:XE:132:PRO:HD2	1.72	0.54
1:YA:2286:G:H5''	1:YA:2287:A:C1'	2.36	0.54
32:QA:473:U:H2'	32:QA:474:G:C8	2.36	0.54
6:YF:105:ILE:C	6:YF:108:PRO:HD2	2.27	0.54
1:YA:954:G:C2	1:YA:964:C:O2	2.61	0.54
34:QC:6:PRO:HG2	34:QC:183:TYR:CG	2.43	0.54
1:YA:2415:G:H2'	1:YA:2416:C:C6	2.42	0.54
1:RA:2327:A:H2'	1:RA:2328:A:C8	2.42	0.54
1:YA:1819:A:H4'	1:YA:1820:U:H5'	1.89	0.54
19:RS:107:VAL:HG12	19:RS:107:VAL:O	2.06	0.54
14:YN:94:TYR:N	14:YN:94:TYR:CD1	2.72	0.54
31:R4:7:VAL:O	31:R4:8:LYS:HB2	2.08	0.54
16:RP:105:LYS:HA	16:RP:108:ARG:HH21	1.73	0.54
32:XA:1176:A:H2'	32:XA:1177:G:O4'	2.08	0.54
1:YA:699:A:C8	1:YA:700:G:C8	2.95	0.54
1:RA:1433:A:H2'	1:RA:1434:A:O4'	2.08	0.54
44:QM:94:LEU:HB3	44:QM:95:PRO:HD2	1.88	0.54
17:YQ:74:SER:O	17:YQ:78:PHE:HB2	2.08	0.54
35:QD:129:VAL:HG13	35:QD:131:ILE:HD12	1.88	0.54
1:YA:1588:G:H2'	1:YA:1589:U:C6	2.43	0.54
20:YT:69:ARG:HD2	20:YT:70:HIS:H	1.72	0.54
1:YA:515:A:H2'	1:YA:516:C:H5'	1.88	0.54
37:XF:67:PRO:O	37:XF:69:GLU:N	2.41	0.54
1:YA:2372:U:H1'	28:Y1:45:HIS:CE1	2.42	0.54
28:R1:31:GLU:O	28:R1:31:GLU:HG2	2.07	0.54
1:YA:563:A:C4	1:YA:2018:G:C2	2.96	0.54
11:RK:34:GLY:O	11:RK:35:VAL:C	2.45	0.54
1:YA:1823:G:H5''	56:YA:3767:HOH:O	2.06	0.54
32:XA:1256:A:O5'	32:XA:1278:G:N2	2.41	0.54
33:QB:165:ALA:HA	33:QB:172:ILE:HD11	1.89	0.54
1:RA:558:U:H5''	10:RJ:111:LYS:HE3	1.90	0.54
1:YA:1338:G:H4'	20:YT:18:GLU:OE2	2.08	0.54
35:QD:3:TYR:O	35:QD:4:LEU:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:81:G:H2'	1:YA:82:U:C6	2.43	0.54
32:XA:1072:G:H2'	32:XA:1073:U:O4'	2.08	0.54
42:XK:74:LYS:HA	42:XK:78:ILE:CD1	2.29	0.54
10:RJ:54:ILE:HD12	10:RJ:55:ILE:N	2.23	0.54
1:YA:104:A:N7	1:YA:105:C:C4	2.75	0.54
1:YA:2745:C:H42	1:YA:2759:G:H1	1.56	0.54
7:YG:62:ALA:O	7:YG:66:THR:HG23	2.07	0.54
11:YK:19:VAL:HG12	11:YK:41:ILE:HG13	1.89	0.54
1:RA:983:A:C6	1:RA:984:A:C2	2.96	0.54
1:YA:1190:G:OP1	12:YL:32:GLY:HA2	2.08	0.54
6:YF:101:ARG:HH11	6:YF:138:PRO:HB3	1.73	0.54
38:XG:71:THR:HG23	38:XG:72:VAL:HG23	1.88	0.54
9:RI:105:LEU:HD23	9:RI:108:ILE:HD13	1.90	0.54
32:XA:197:A:C6	32:XA:221:C:H4'	2.43	0.54
1:YA:2544:G:H2'	1:YA:2545:G:C8	2.42	0.54
36:QE:106:ALA:CB	36:QE:124:ALA:HB3	2.38	0.54
4:YD:148:GLN:CG	4:YD:152:PRO:HG2	2.38	0.54
1:YA:1905:C:O4'	1:YA:1928:A:C2	2.61	0.54
1:YA:1166:G:N2	1:YA:1184:U:H1'	2.23	0.54
38:XG:4:ARG:NH2	38:XG:6:ILE:HB	2.23	0.54
1:YA:2008:C:H2'	1:YA:2009:A:H8	1.73	0.54
6:RF:33:ILE:HG12	6:RF:155:ILE:HG12	1.88	0.54
11:RK:58:LEU:HD23	11:RK:58:LEU:N	2.22	0.54
4:YD:27:ILE:HG12	4:YD:201:LEU:HD12	1.90	0.54
1:YA:2015:A:C5	27:Y0:2:VAL:HG11	2.42	0.54
44:QM:29:SER:O	44:QM:33:LEU:HD12	2.07	0.54
19:YS:79:GLY:HA3	19:YS:100:THR:OG1	2.07	0.54
1:RA:1680:U:H2'	1:RA:1681:G:O4'	2.08	0.54
46:QO:44:GLU:HG3	46:QO:45:HIS:N	2.23	0.54
46:QO:44:GLU:O	46:QO:45:HIS:HB2	2.07	0.54
36:QE:13:LYS:HD3	36:QE:115:GLU:OE2	2.07	0.54
32:QA:168:G:C6	32:QA:169:C:C4	2.96	0.54
1:RA:2562:U:H2'	1:RA:2563:U:H5'	1.89	0.54
1:YA:545:U:H2'	1:YA:547:A:OP1	2.07	0.54
38:XG:128:GLU:HG3	38:XG:130:LYS:H	1.73	0.54
1:RA:1079:C:N4	1:RA:1088:A:H2	2.05	0.54
23:RW:28:GLU:CG	23:RW:29:SER:H	2.20	0.54
32:XA:982:U:C4	32:XA:983:A:N6	2.76	0.54
1:YA:1439:A:C8	1:YA:1440:U:O4'	2.61	0.54
1:YA:30:G:C5	1:YA:31:C:C4	2.95	0.54
1:YA:2420:C:OP1	30:Y3:33:THR:HB	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1156:A:OP1	1:YA:1156:A:H8	1.91	0.54
51:QT:23:ARG:O	51:QT:26:MET:HG3	2.07	0.54
51:QT:43:LYS:HD3	51:QT:86:ALA:O	2.07	0.54
1:YA:1537:G:O2'	1:YA:1538:G:H4'	2.07	0.54
1:YA:1598:A:H2'	1:YA:1599:U:H6	1.72	0.54
18:RR:41:ILE:O	18:RR:46:GLU:HB2	2.08	0.54
32:XA:1072:G:C6	32:XA:1073:U:C4	2.96	0.54
32:XA:204:G:H2'	32:XA:205:A:O4'	2.08	0.54
10:RJ:56:VAL:CG1	10:RJ:57:LEU:H	2.21	0.54
1:YA:1998:A:O3'	1:YA:2724:U:H4'	2.08	0.54
33:XB:137:THR:O	33:XB:140:LEU:HB3	2.07	0.54
1:YA:2666:C:H2'	1:YA:2667:C:H6	1.72	0.54
35:QD:109:THR:HG23	35:QD:112:GLU:N	2.15	0.54
32:XA:245:U:H5''	32:XA:245:U:C6	2.35	0.54
32:XA:280:C:H4'	32:XA:281:G:OP2	2.08	0.54
7:YG:139:VAL:HA	7:YG:142:GLN:CB	2.37	0.54
33:QB:20:ARG:O	33:QB:22:TRP:HB3	2.07	0.54
37:QF:85:ILE:O	37:QF:86:ARG:C	2.45	0.54
1:YA:1206:G:C2	1:YA:1207:C:C2	2.96	0.54
37:XF:2:ARG:HG2	37:XF:4:TYR:OH	2.08	0.54
42:XK:124:LYS:O	52:XU:34:ARG:HB2	2.08	0.54
38:XG:74:VAL:CG1	38:XG:143:MET:HB2	2.37	0.54
1:RA:1475:G:C1'	1:RA:1476:U:OP2	2.53	0.54
1:RA:511:U:C5	1:RA:512:G:C5	2.95	0.54
40:XI:48:ARG:HH21	40:XI:57:VAL:HG21	1.73	0.54
10:YJ:94:ALA:O	10:YJ:95:ARG:CB	2.56	0.54
32:XA:991:U:C5	32:XA:1212:U:H1'	2.43	0.54
1:YA:1286:A:C4	1:YA:1289:C:N4	2.76	0.54
20:YT:29:THR:HB	20:YT:86:THR:N	2.23	0.54
1:YA:1857:G:N3	1:YA:1884:G:N1	2.55	0.54
1:YA:389:G:O2'	1:YA:390:U:H5'	2.07	0.54
32:XA:764:C:N4	32:XA:812:G:H1	2.06	0.54
29:Y2:28:ARG:O	29:Y2:30:VAL:N	2.41	0.54
32:XA:338:A:N1	32:XA:351:G:N2	2.55	0.54
22:YV:30:ILE:HB	22:YV:38:LEU:HB3	1.90	0.54
16:RP:88:ARG:HG2	16:RP:112:ARG:NH1	2.22	0.54
32:QA:89:U:O2'	32:QA:90:C:C5'	2.55	0.54
44:XM:53:ASP:HA	44:XM:56:ARG:CZ	2.38	0.54
34:XC:125:ARG:HH11	34:XC:125:ARG:HG3	1.73	0.54
43:QL:115:LYS:O	43:QL:116:TYR:HB2	2.07	0.54
1:YA:1008:A:H4'	1:YA:1009:A:OP1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:75:TYR:CD1	35:QD:75:TYR:C	2.81	0.54
2:YB:62:C:H2'	2:YB:63:C:O4'	2.08	0.54
32:XA:397:A:H5'	32:XA:398:U:OP1	2.08	0.54
32:QA:633:G:H2'	32:QA:634:C:H6	1.73	0.54
5:RE:79:ARG:CG	5:RE:80:SER:H	2.20	0.54
7:RG:23:ILE:HG21	7:RG:71:LEU:HD11	1.89	0.54
32:QA:489:C:O2'	32:QA:490:C:H5'	2.08	0.54
17:RQ:111:LYS:CE	18:RR:50:GLY:HA2	2.38	0.54
1:RA:1913:A:H4'	1:RA:1913:A:OP1	2.08	0.54
32:XA:1279:G:OP2	32:XA:1279:G:C2	2.61	0.54
42:XK:27:ASN:O	42:XK:28:ASN:HB2	2.07	0.54
52:XU:25:ALA:O	52:XU:29:ALA:N	2.39	0.54
1:YA:454:A:H3'	1:YA:455:C:H5''	1.88	0.54
1:RA:528:A:H2	1:RA:2043:C:H5'	1.73	0.54
7:RG:104:LEU:HB2	7:RG:112:VAL:HG21	1.87	0.54
1:YA:1536:C:C2	1:YA:1536:C:OP2	2.61	0.54
1:YA:1391:U:H4'	20:YT:19:LYS:HZ1	1.71	0.54
1:YA:1351:C:O2'	1:YA:1571:A:H1'	2.08	0.54
1:YA:301:G:C6	1:YA:317:G:C6	2.95	0.54
10:YJ:45:THR:HG21	10:YJ:50:THR:HG23	1.89	0.54
14:YN:96:ARG:HG3	14:YN:97:ILE:N	2.23	0.54
32:QA:267:C:H5'	32:QA:267:C:C6	2.43	0.54
1:YA:628:G:C6	1:YA:636:G:C2	2.96	0.54
1:YA:141:G:H2'	1:YA:142:A:O4'	2.08	0.54
1:YA:1275:A:C5	14:YN:16:HIS:HD2	2.26	0.54
1:YA:95:A:O2'	25:YY:41:HIS:CD2	2.60	0.54
1:YA:822:G:O6	1:YA:943:A:C2	2.48	0.54
40:QI:128:LYS:CD	40:QI:129:ARG:H	2.15	0.54
6:YF:46:LYS:HD3	6:YF:50:ASP:HB2	1.89	0.54
32:QA:1054:C:O2	32:QA:1054:C:O4'	2.26	0.54
1:YA:2195:U:O2'	1:YA:2196:C:H5'	2.08	0.54
1:RA:27:G:N2	1:RA:512:G:H1'	2.22	0.54
1:YA:2285:C:C5	28:Y1:5:ARG:NH2	2.75	0.54
1:YA:2286:G:H4'	1:YA:2287:A:N9	2.23	0.54
32:XA:1012:A:C5	32:XA:1013:G:N7	2.75	0.54
1:YA:2468:A:O2'	1:YA:2469:A:C8	2.50	0.54
42:QK:108:ASN:CB	52:QU:6:ARG:HG2	2.37	0.54
1:YA:2519:U:C6	1:YA:2542:A:N6	2.76	0.54
1:YA:1285:A:N6	1:YA:1329:U:C5	2.76	0.54
1:YA:1320:C:O2'	1:YA:1321:A:C8	2.60	0.54
1:RA:1936:A:H2	1:RA:1943:U:C4	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:920:U:H2'	32:XA:921:U:H6	1.71	0.54
32:XA:344:A:H5''	32:XA:345:C:H5	1.71	0.54
1:YA:438:G:C6	1:YA:439:A:C6	2.96	0.54
32:XA:1025:U:O2'	32:XA:1026:G:OP 2	2.26	0.54
33:XB:20:ARG:HA	33:XB:20:ARG:HE	1.72	0.54
1:YA:1168:G:C2	1:YA:1182:G:C2	2.96	0.54
32:QA:1053:G:O6	32:QA:1199:U:H2'	2.08	0.54
1:YA:1635:A:H2'	1:YA:1636:U:O4'	2.07	0.54
32:XA:1387:G:C6	32:XA:1388:C:N4	2.75	0.54
32:QA:1361:G:C2'	32:QA:1362:A:H5''	2.38	0.54
11:YK:2:ILE:O	11:YK:3:GLN:HG2	2.07	0.54
46:QO:23:SER:O	46:QO:24:THR:C	2.46	0.54
1:RA:1419:A:C6	1:RA:1421:G:C4	2.96	0.54
1:RA:17:G:H2'	1:RA:18:U:C6	2.43	0.54
2:YB:63:C:H2'	2:YB:63:C:O2	2.08	0.54
21:YU:9:GLU:OE1	21:YU:23:LYS:HA	2.07	0.54
32:XA:946:A:H2'	32:XA:947:G:C8	2.42	0.54
1:RA:304:U:H2'	1:RA:305:C:C6	2.43	0.54
32:QA:613:C:H2'	32:QA:614:C:H6	1.73	0.54
1:YA:1317:G:C6	1:YA:1318:U:N3	2.75	0.54
48:XQ:23:ALA:C	48:XQ:24:ILE:HD12	2.28	0.54
15:YO:117:PHE:CD2	15:YO:117:PHE:C	2.81	0.54
42:XK:106:ILE:O	42:XK:106:ILE:HG12	2.08	0.54
4:RD:42:ASN:HD22	4:RD:42:ASN:C	2.11	0.54
16:YP:102:ARG:HD2	16:YP:106:ALA:O	2.06	0.54
23:RW:23:LYS:NZ	23:RW:24:ARG:HG3	2.22	0.54
41:XJ:57:VAL:HG22	41:XJ:58:ASN:N	2.18	0.54
45:XN:59:GLN:O	45:XN:60:ARG:HB2	2.06	0.54
32:XA:704:A:H2'	32:XA:705:G:C8	2.43	0.54
1:YA:1536:C:H4'	1:YA:1537:G:C5'	2.38	0.54
1:YA:1210:G:H5''	1:YA:1211:C:H3'	1.89	0.54
32:XA:1074:G:H2'	32:XA:1075:U:C6	2.42	0.54
4:RD:111:GLY:O	4:RD:169:ARG:O	2.26	0.54
35:XD:24:VAL:HG23	35:XD:25:ARG:HB2	1.90	0.54
1:YA:2746:U:C5'	7:YG:137:LYS:HG2	2.37	0.54
16:YP:3:ILE:O	16:YP:7:LEU:HB2	2.08	0.54
28:R1:49:LYS:HG2	28:R1:50:GLU:H	1.73	0.54
28:R1:24:LYS:NZ	28:R1:51:ALA:O	2.40	0.54
32:QA:71:A:O2'	32:QA:72:A:C5'	2.51	0.54
1:YA:818:G:O2'	1:YA:819:A:H5''	2.07	0.54
39:QH:8:ASP:O	39:QH:9:MET:C	2.47	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:XC:53:ARG:HG3	34:XC:68:HIS:CD2	2.43	0.54
32:QA:212:G:H2'	32:QA:213:G:C8	2.42	0.54
19:YS:4:ILE:O	19:YS:4:ILE:HG13	2.08	0.54
4:YD:150:GLN:HG3	4:YD:151:THR:N	2.23	0.54
1:YA:2635:A:H5'	4:YD:79:LEU:HB2	1.90	0.54
1:YA:2043:C:H2'	1:YA:2043:C:O2	2.08	0.54
11:RK:61:VAL:CG2	11:RK:87:LEU:HD11	2.36	0.54
32:QA:114:U:O2'	32:QA:115:G:H5'	2.08	0.54
32:XA:719:C:H3'	32:XA:720:C:C6	2.42	0.54
1:RA:2013:A:OP1	19:RS:96:ILE:HA	2.09	0.54
52:QU:16:ARG:HH11	52:QU:19:LYS:CG	2.20	0.54
30:Y3:15:LYS:HZ1	30:Y3:19:GLY:HA2	1.71	0.54
32:XA:888:G:O3'	32:XA:1488:G:H4'	2.06	0.54
9:YI:23:VAL:HG21	9:YI:37:PHE:HE2	1.73	0.54
42:QK:110:THR:HG22	52:QU:4:LYS:CB	2.37	0.54
1:RA:1856:U:O2'	1:RA:1857:G:H5'	2.08	0.54
1:RA:1419:A:C5	1:RA:1421:G:C5	2.95	0.54
21:YU:7:ASP:O	21:YU:8:ASP:HB2	2.08	0.54
32:XA:802:A:H2'	32:XA:803:G:O5'	2.08	0.54
9:YI:55:PRO:HG2	9:YI:70:THR:HG23	1.90	0.54
35:QD:190:LEU:O	35:QD:190:LEU:HD12	2.08	0.54
51:XT:54:GLN:N	51:XT:55:PRO:HD2	2.22	0.54
1:YA:2221:G:C5	1:YA:2222:C:C5	2.96	0.54
1:RA:492:A:H2'	1:RA:493:G:O4'	2.08	0.54
42:XK:12:ARG:HD3	42:XK:12:ARG:N	2.23	0.54
41:XJ:92:LEU:HD22	41:XJ:93:ALA:N	2.23	0.54
1:RA:930:G:H1'	26:RZ:24:LEU:HD21	1.90	0.54
32:QA:1084:G:C5	32:QA:1085:U:C4	2.96	0.54
1:RA:163:C:O2'	1:RA:164:C:H5''	2.08	0.54
1:RA:1537:G:H2'	1:RA:1538:G:O4'	2.06	0.54
32:QA:1381:U:HO2'	32:QA:1382:C:H6	1.52	0.54
51:QT:77:ASN:HD22	51:QT:77:ASN:N	2.05	0.54
1:RA:2006:C:H6	1:RA:2006:C:O5'	1.91	0.54
40:QI:11:ARG:NH1	40:QI:106:ASP:HB3	2.23	0.54
1:RA:996:A:H4'	17:RQ:91:ARG:CG	2.37	0.53
32:XA:933:G:OP1	38:XG:3:ARG:NH1	2.41	0.53
51:QT:71:ALA:O	51:QT:74:HIS:HB2	2.08	0.53
1:YA:1234:U:H2'	1:YA:1235:G:C8	2.43	0.53
1:YA:995:C:O2'	17:YQ:60:TRP:CZ2	2.61	0.53
1:YA:1066:U:H2'	1:YA:1068:G:OP2	2.08	0.53
1:YA:1059:G:N3	9:YI:131:THR:HG22	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1654:A:H2'	1:RA:1655:A:H8	1.73	0.53
9:YI:49:GLU:HG3	9:YI:54:ILE:HD11	1.89	0.53
4:RD:169:ARG:C	4:RD:170:VAL:HG13	2.28	0.53
35:XD:25:ARG:CG	35:XD:25:ARG:HH11	2.16	0.53
5:YE:146:VAL:O	5:YE:167:VAL:HA	2.08	0.53
1:YA:1050:A:C2	1:YA:2751:G:N3	2.76	0.53
1:YA:729:G:C2'	1:YA:729:G:N3	2.70	0.53
44:XM:13:HIS:NE2	44:XM:41:ASP:HA	2.23	0.53
1:YA:749:A:C6	1:YA:750:A:N7	2.76	0.53
32:QA:1055:A:H1'	34:QC:155:ARG:NH2	2.20	0.53
11:YK:69:VAL:HG12	11:YK:70:ARG:H	1.72	0.53
3:RC:199:HIS:O	3:RC:201:LEU:N	2.40	0.53
42:QK:87:GLY:H	42:QK:113:THR:CG2	2.20	0.53
1:YA:41:C:H2'	1:YA:42:A:H8	1.72	0.53
32:QA:600:A:H2'	32:QA:601:G:H8	1.73	0.53
42:QK:30:ILE:O	42:QK:30:ILE:HG13	2.08	0.53
20:YT:74:ILE:HG13	20:YT:75:GLY:H	1.72	0.53
41:XJ:48:ARG:NH1	41:XJ:48:ARG:HB2	2.24	0.53
32:XA:1387:G:H2'	32:XA:1388:C:H6	1.71	0.53
11:YK:24:VAL:CG1	11:YK:33:ALA:HB2	2.37	0.53
13:RM:46:ILE:C	13:RM:46:ILE:HD12	2.28	0.53
32:QA:107:G:C2'	32:QA:108:G:H5'	2.37	0.53
48:XQ:42:LYS:HB3	48:XQ:42:LYS:NZ	2.23	0.53
18:YR:3:ALA:HB2	18:YR:101:ILE:HD13	1.90	0.53
1:YA:158:U:O2	1:YA:158:U:H2'	2.08	0.53
1:YA:1317:G:C2	1:YA:1336:A:C2	2.96	0.53
29:Y2:10:LEU:HD21	29:Y2:14:ARG:HH11	1.73	0.53
32:XA:957:U:C5	32:XA:959:A:OP2	2.61	0.53
4:YD:36:GLN:HE21	4:YD:38:LYS:HZ1	1.57	0.53
1:RA:632:A:H2'	1:RA:633:A:C8	2.43	0.53
1:RA:1789:A:OP2	3:RC:220:ARG:NH1	2.42	0.53
1:YA:1424:G:O6	1:YA:1425:G:C2	2.61	0.53
2:YB:96:G:O2'	2:YB:97:C:H5'	2.08	0.53
23:YW:11:ASN:O	23:YW:11:ASN:ND2	2.41	0.53
1:RA:2553:G:C2	1:RA:2554:U:O2	2.61	0.53
52:QU:38:GLU:CD	52:QU:41:THR:HG21	2.29	0.53
10:RJ:40:HIS:C	10:RJ:41:LYS:CG	2.75	0.53
43:XL:42:LYS:HG2	43:XL:43:LYS:H	1.73	0.53
38:XG:2:ARG:HG2	38:XG:3:ARG:N	2.23	0.53
32:XA:973:G:HO2'	32:XA:974:A:H5'	1.68	0.53
1:YA:2330:G:N1	1:YA:2386:A:C6	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:QI:6:TYR:CG	40:QI:7:GLY:N	2.76	0.53
1:YA:223:A:H61	1:YA:422:A:N6	2.06	0.53
1:YA:1339:G:N2	1:YA:1603:A:H1'	2.22	0.53
1:YA:311:A:O2'	1:YA:332:A:H5'	2.09	0.53
32:XA:1073:U:C2	32:XA:1074:G:C8	2.95	0.53
2:YB:42:C:O2'	2:YB:43:C:C5'	2.46	0.53
32:XA:1152:A:H2'	32:XA:1153:G:C8	2.43	0.53
1:YA:108:G:H2'	1:YA:109:C:C6	2.43	0.53
32:XA:1296:C:N4	32:XA:1297:G:H22	2.06	0.53
1:YA:764:A:N3	1:YA:781:A:C6	2.77	0.53
1:YA:95:A:O2'	25:YY:41:HIS:HD2	1.91	0.53
32:XA:796:C:H4'	42:XK:126:ARG:HH21	1.72	0.53
10:YJ:93:ILE:HA	10:YJ:97:PRO:HB3	1.89	0.53
35:QD:146:GLU:HB3	35:QD:147:LYS:NZ	2.23	0.53
1:RA:1019:U:O4	1:RA:1020:A:N6	2.41	0.53
23:YW:13:ARG:HG3	23:YW:14:ASP:N	2.22	0.53
50:XS:44:ILE:HA	50:XS:61:VAL:CG1	2.38	0.53
1:YA:2571:U:O4	1:YA:2574:G:C8	2.61	0.53
38:XG:116:ALA:O	38:XG:120:ALA:HB3	2.08	0.53
32:QA:740:U:OP1	46:QO:37:HIS:HE1	1.91	0.53
33:XB:115:ASP:O	33:XB:119:GLN:HB2	2.09	0.53
1:RA:2703:C:H6	1:RA:2703:C:O5'	1.91	0.53
14:YN:1:MET:O	14:YN:2:ARG:CB	2.57	0.53
34:QC:22:PHE:C	34:QC:22:PHE:CD2	2.81	0.53
35:QD:191:SER:O	35:QD:192:ALA:HB2	2.09	0.53
8:RH:75:LEU:HD22	8:RH:143:ILE:HG23	1.89	0.53
1:RA:1967:C:C2'	1:RA:1968:G:H5'	2.38	0.53
12:YL:103:ILE:HD12	12:YL:103:ILE:N	2.24	0.53
39:QH:39:LEU:HB2	39:QH:45:ILE:HD11	1.89	0.53
24:RX:36:ARG:HG2	24:RX:47:THR:HB	1.91	0.53
33:XB:26:MET:HE1	33:XB:192:PRO:HB3	1.90	0.53
33:XB:161:PHE:HA	33:XB:183:PHE:O	2.08	0.53
1:RA:2220:U:H2'	1:RA:2221:G:H8	1.71	0.53
23:RW:37:VAL:C	23:RW:38:ARG:CG	2.77	0.53
23:RW:46:ALA:HB3	23:RW:79:ILE:O	2.09	0.53
32:XA:961:U:O4	32:XA:983:A:N6	2.42	0.53
1:YA:30:G:C6	1:YA:31:C:N3	2.77	0.53
1:RA:1169:A:C2	1:RA:1181:U:O2	2.61	0.53
35:QD:28:ASP:C	35:QD:29:THR:O	2.46	0.53
12:RL:95:LEU:HD22	12:RL:100:ILE:CD1	2.36	0.53
32:XA:89:U:O2'	32:XA:90:C:O4'	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1279:G:N3	32:QA:1279:G:C2'	2.70	0.53
35:XD:28:ASP:O	35:XD:29:THR:O	2.26	0.53
1:YA:2741:A:C8	1:YA:2742:G:C8	2.96	0.53
14:YN:12:ARG:HA	14:YN:12:ARG:HE	1.74	0.53
48:XQ:46:HIS:HB2	48:XQ:70:LYS:CE	2.31	0.53
37:XF:43:GLY:HA2	37:XF:58:HIS:ND1	2.23	0.53
1:RA:1057:A:N6	1:RA:1087:G:OP2	2.29	0.53
33:XB:132:GLU:C	33:XB:134:LEU:H	2.10	0.53
33:QB:148:GLY:C	33:QB:150:ILE:H	2.11	0.53
37:XF:3:HIS:ND1	37:XF:95:ALA:N	2.56	0.53
20:YT:38:ALA:HB1	20:YT:81:LYS:HZ2	1.70	0.53
32:QA:1007:U:C2'	32:QA:1008:U:H5''	2.37	0.53
32:XA:1091:U:O2	32:XA:1093:A:C8	2.57	0.53
1:YA:847:U:H5'	1:YA:848:C:OP2	2.08	0.53
15:RO:75:GLY:HA2	15:RO:106:LEU:HD13	1.88	0.53
33:QB:14:HIS:HB2	33:QB:208:ALA:HB2	1.91	0.53
1:YA:1179:G:H2'	1:YA:1180:U:C6	2.43	0.53
52:QU:3:ILE:HD13	52:QU:19:LYS:NZ	2.23	0.53
32:QA:1323:G:O2'	32:QA:1324:A:C8	2.60	0.53
8:YH:41:LYS:HA	8:YH:44:ILE:CG1	2.38	0.53
41:QJ:71:LEU:O	41:QJ:72:ARG:HD3	2.08	0.53
18:YR:66:HIS:CD2	18:YR:94:THR:HG22	2.43	0.53
24:YX:44:ARG:HH11	24:YX:44:ARG:HB3	1.73	0.53
32:XA:223:A:H2'	32:XA:224:U:C6	2.43	0.53
1:RA:2267:A:H5''	1:RA:2268:A:C5'	2.38	0.53
32:XA:1114:C:O2	45:XN:99:SER:HB3	2.08	0.53
1:YA:1794:A:H2'	1:YA:1795:C:C6	2.44	0.53
1:RA:2345:G:N3	1:RA:2381:A:H2'	2.23	0.53
15:YO:48:LEU:HD13	15:YO:87:ILE:HD12	1.89	0.53
9:RI:61:TYR:N	9:RI:61:TYR:HD2	2.07	0.53
2:RB:33:G:O2'	2:RB:34:A:H5'	2.09	0.53
1:YA:56:A:C2	1:YA:115:C:C2	2.97	0.53
1:RA:455:C:N3	1:RA:472:A:H2'	2.23	0.53
35:QD:137:SER:HB3	35:QD:138:PRO:HD2	1.89	0.53
19:YS:70:LYS:H	19:YS:70:LYS:HE3	1.73	0.53
6:YF:113:PHE:O	6:YF:114:ARG:CB	2.56	0.53
1:YA:1726:C:H2'	1:YA:1727:C:H6	1.74	0.53
6:YF:155:ILE:HD12	6:YF:155:ILE:H	1.73	0.53
32:XA:1417:G:C6	32:XA:1482:G:C6	2.97	0.53
23:RW:72:GLY:N	23:RW:73:PRO:CD	2.72	0.53
2:YB:15:A:C8	2:YB:109:A:N6	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:923:G:N3	23:RW:23:LYS:NZ	2.56	0.53
23:RW:37:VAL:CG2	23:RW:55:ASP:O	2.57	0.53
15:YO:31:THR:HG23	15:YO:34:HIS:C	2.28	0.53
1:YA:1551:A:C5	1:YA:1552:A:N7	2.76	0.53
12:YL:55:MET:SD	12:YL:59:ARG:HB3	2.48	0.53
1:YA:418:C:H2'	1:YA:419:U:H6	1.74	0.53
1:YA:1537:G:H2'	1:YA:1537:G:N3	2.22	0.53
21:YU:4:ILE:HD13	21:YU:69:VAL:HG12	1.91	0.53
1:YA:1654:A:H2'	1:YA:1655:A:C8	2.39	0.53
36:XE:79:THR:OG1	36:XE:121:ASN:ND2	2.41	0.53
1:YA:502:A:N6	1:YA:505:A:C6	2.76	0.53
25:YY:57:LEU:O	25:YY:60:LYS:HE3	2.08	0.53
32:XA:1239:A:N3	32:XA:1241:G:C2	2.76	0.53
1:YA:142:A:H2'	1:YA:143:C:C5	2.43	0.53
35:QD:173:ASP:O	35:QD:174:ALA:CB	2.56	0.53
16:YP:28:LYS:NZ	16:YP:28:LYS:HB2	2.16	0.53
32:XA:1046:A:O2'	32:XA:1047:G:H5'	2.08	0.53
1:RA:2109:U:C4	1:RA:2181:U:O4	2.61	0.53
44:XM:13:HIS:HB2	44:XM:43:LYS:HE2	1.91	0.53
13:RM:40:ARG:HD3	13:RM:93:VAL:HG21	1.89	0.53
32:XA:275:G:HO2'	32:XA:276:G:H8	1.55	0.53
32:XA:519:C:O2'	32:XA:520:A:H5'	2.09	0.53
1:RA:31:C:O3'	1:RA:1238:G:C5'	2.56	0.53
4:RD:99:GLU:CG	4:RD:100:LEU:N	2.72	0.53
32:XA:154:U:C2'	32:XA:155:A:H5'	2.34	0.53
34:QC:143:LEU:H	34:QC:143:LEU:HD22	1.72	0.53
6:YF:103:ILE:HG21	6:YF:173:ASP:O	2.09	0.53
14:YN:7:GLY:O	14:YN:8:ARG:HB2	2.08	0.53
1:YA:2142:A:C2'	1:YA:2143:C:H4'	2.38	0.53
34:QC:10:ARG:O	34:QC:13:ILE:O	2.26	0.53
16:YP:88:ARG:CZ	16:YP:112:ARG:HH21	2.21	0.53
45:XN:46:LYS:NZ	50:XS:10:ILE:HD13	2.23	0.53
4:YD:148:GLN:N	4:YD:148:GLN:CD	2.62	0.53
32:XA:764:C:N4	32:XA:812:G:C6	2.77	0.53
35:QD:57:LYS:NZ	35:QD:68:GLU:OE2	2.35	0.53
1:YA:1736:U:H2'	1:YA:1737:G:O4'	2.09	0.53
37:QF:47:LEU:HB3	49:QR:65:SER:OG	2.08	0.53
1:YA:270:A:C2	1:YA:369:U:H4'	2.44	0.53
1:YA:2636:C:H4'	4:YD:81:GLU:OE1	2.08	0.53
32:QA:1321:U:H5''	32:QA:1322:C:OP2	2.09	0.53
1:YA:2008:C:H2'	1:YA:2009:A:C8	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:RE:169:VAL:O	5:RE:170:ARG:HD2	2.07	0.53
17:RQ:81:GLY:HA2	17:RQ:116:LEU:HD13	1.89	0.53
1:YA:64:A:H2'	1:YA:65:U:O4'	2.09	0.53
47:XP:46:LYS:H	47:XP:46:LYS:NZ	2.06	0.53
21:RU:48:VAL:O	21:RU:48:VAL:HG13	2.08	0.53
8:RH:81:ALA:O	8:RH:102:ALA:HB2	2.09	0.53
32:QA:1251:A:H2'	32:QA:1252:A:H8	1.72	0.53
1:RA:2046:G:OP1	27:R0:11:LYS:HE3	2.09	0.53
22:YV:44:HIS:NE2	22:YV:85:LYS:HB2	2.24	0.53
1:RA:2783:U:H2'	1:RA:2784:U:C6	2.43	0.53
37:QF:17:GLN:HG2	35:XD:188:SER:HB2	1.90	0.53
32:QA:692:U:O2	32:QA:694:A:C8	2.61	0.53
34:XC:9:ILE:HG23	34:XC:10:ARG:HG2	1.90	0.53
7:YG:149:ALA:O	7:YG:151:ARG:N	2.41	0.53
16:RP:13:LYS:HE3	16:RP:76:HIS:HA	1.91	0.53
47:QP:44:SER:O	47:QP:46:LYS:HG3	2.08	0.53
37:XF:46:GLN:OE1	37:XF:55:HIS:O	2.25	0.53
32:XA:844:G:O2'	32:XA:845:A:H5''	2.07	0.53
24:YX:29:LEU:HB2	24:YX:30:PRO:CD	2.38	0.53
32:XA:1258:G:O2'	32:XA:1259:C:H5'	2.08	0.53
52:XU:24:LYS:CD	52:XU:25:ALA:H	2.21	0.53
1:RA:2776:A:H4'	1:RA:2777:G:H5''	1.89	0.53
1:YA:319:G:O6	1:YA:333:G:C6	2.61	0.53
32:XA:109:A:C6	32:XA:327:A:C5	2.97	0.53
32:XA:109:A:C8	32:XA:327:A:O4'	2.61	0.53
48:QQ:45:VAL:HG22	48:QQ:72:TRP:CB	2.39	0.53
1:YA:180:G:P	29:Y2:35:ARG:HH12	2.31	0.53
1:YA:2307:G:H1'	1:YA:2308:G:C5	2.43	0.53
1:YA:605:G:H2'	1:YA:606:U:C6	2.43	0.53
1:RA:1731:G:N1	1:RA:1733:G:C6	2.77	0.53
14:YN:20:MET:C	14:YN:22:ARG:H	2.11	0.53
44:QM:10:ASP:OD1	44:QM:11:HIS:N	2.30	0.53
1:RA:1784:A:H4'	1:RA:1785:A:O5'	2.08	0.53
6:YF:42:ALA:HB1	6:YF:46:LYS:HA	1.91	0.53
17:RQ:104:ALA:O	17:RQ:107:ALA:HB3	2.08	0.53
1:YA:2577:A:C2	27:Y0:1:ALA:N	2.75	0.53
14:RN:103:ARG:NH1	14:RN:110:MET:HE3	2.24	0.53
1:YA:413:C:H4'	1:YA:1880:U:H4'	1.89	0.53
1:YA:1287:A:O2'	1:YA:1288:G:H5'	2.08	0.53
7:YG:25:ILE:HG22	7:YG:78:VAL:HG11	1.90	0.53
37:XF:38:ARG:HG3	37:XF:63:ASN:HB2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YV:40:ILE:N	22:YV:40:ILE:HD13	2.24	0.53
30:R3:49:VAL:HG23	30:R3:53:ASP:HB2	1.91	0.53
52:QU:3:ILE:N	52:QU:19:LYS:HZ1	2.06	0.53
1:YA:1432:G:O2'	1:YA:1433:A:H5'	2.08	0.53
32:XA:377:G:H2'	32:XA:378:G:C8	2.43	0.53
32:QA:1248:A:C2	40:QI:71:ILE:HD11	2.44	0.53
1:YA:2235:G:C6	1:YA:2236:U:C4	2.97	0.53
42:QK:100:ASN:HB2	42:QK:106:ILE:HG21	1.91	0.53
1:RA:1568:G:H4'	3:RC:58:LYS:HG2	1.90	0.53
32:QA:217:C:C2'	32:QA:218:U:H5'	2.38	0.53
1:RA:304:U:H2'	1:RA:305:C:H6	1.73	0.53
32:QA:1118:U:OP1	40:QI:10:ARG:HD2	2.09	0.53
1:RA:202:U:H2'	1:RA:203:A:C8	2.43	0.53
35:QD:65:GLY:HA3	35:QD:114:ARG:HH22	1.74	0.53
4:YD:21:SER:H	11:YK:73:ASP:HA	1.74	0.53
1:RA:1728:C:O2'	1:RA:1729:U:H6	1.91	0.53
32:XA:892:A:O2'	32:XA:1415:G:H4'	2.09	0.53
33:QB:166:ASP:OD1	33:QB:167:HIS:N	2.41	0.53
14:YN:55:ALA:HA	14:YN:80:PHE:CE1	2.44	0.53
1:RA:1610:A:H5'	1:RA:1610:A:H8	1.74	0.53
47:XP:54:LEU:HD23	47:XP:54:LEU:H	1.74	0.53
21:RU:25:LYS:O	21:RU:26:ASN:HB3	2.08	0.53
1:YA:1465:G:H2'	1:YA:1466:U:H6	1.74	0.53
23:RW:16:GLU:OE2	23:RW:16:GLU:CA	2.56	0.53
23:RW:16:GLU:OE2	23:RW:16:GLU:HA	2.09	0.53
32:XA:981:U:O4	32:XA:1222:G:O6	2.27	0.53
1:YA:418:C:H2'	1:YA:419:U:C6	2.44	0.53
32:XA:260:G:H2'	32:XA:261:U:C6	2.44	0.53
4:YD:118:PHE:CG	4:YD:119:ALA:N	2.76	0.53
4:YD:117:GLY:HA2	4:YD:164:GLN:OE1	2.09	0.53
32:XA:1072:G:C5	32:XA:1073:U:C4	2.97	0.53
6:YF:65:LEU:O	6:YF:86:CYS:HB3	2.08	0.53
1:YA:53:A:H2	1:YA:179:C:H4'	1.71	0.53
41:XJ:5:ARG:HG2	41:XJ:79:PRO:HG3	1.91	0.53
32:XA:1136:C:H5	32:XA:1138:G:O6	1.89	0.53
1:YA:2093:G:N7	1:YA:2225:A:C4	2.77	0.53
32:XA:752:G:C1'	32:XA:754:C:N4	2.67	0.53
38:XG:100:MET:H	38:XG:100:MET:CE	2.22	0.53
32:XA:523:A:H61	43:XL:49:ARG:HH12	1.56	0.53
47:XP:28:ARG:HG2	47:XP:29:ASN:OD1	2.09	0.53
39:QH:17:GLN:NE2	39:QH:69:ALA:HB1	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2053:G:H2'	1:YA:2054:A:O4'	2.09	0.53
23:YW:8:SER:O	23:YW:9:THR:CB	2.57	0.53
32:QA:1397:C:OP2	36:QE:28:ARG:NH2	2.41	0.53
1:RA:1140:C:P	10:RJ:68:LYS:HZ3	2.32	0.53
1:YA:1378:A:C8	1:YA:1380:G:C6	2.96	0.53
1:YA:1327:A:C6	1:YA:1328:A:C4	2.97	0.53
4:YD:33:ARG:HB3	4:YD:95:SER:OG	2.08	0.53
1:YA:40:U:C4	1:YA:41:C:N4	2.77	0.53
32:XA:157:U:C2'	32:XA:158:G:H5'	2.38	0.53
1:RA:2821:A:H2'	1:RA:2822:G:O4'	2.09	0.53
10:RJ:32:LEU:O	10:RJ:36:LEU:HB2	2.09	0.53
20:RT:28:ASN:CA	20:RT:91:GLN:HE22	2.21	0.53
20:RT:87:LEU:HB2	20:RT:91:GLN:HG2	1.89	0.53
1:YA:917:A:H2	2:YB:79:G:N2	2.04	0.53
50:QS:46:LEU:HB2	50:QS:61:VAL:HG21	1.89	0.53
1:YA:1957:C:H5'	1:YA:1984:G:O2'	2.09	0.53
15:RO:11:ALA:HB2	15:RO:96:GLY:CA	2.39	0.53
5:YE:153:LEU:HD21	5:YE:157:LEU:HG	1.90	0.53
26:RZ:38:GLU:O	26:RZ:43:ILE:HG12	2.08	0.53
24:YX:39:VAL:O	24:YX:40:GLU:HB2	2.08	0.53
32:QA:1489:G:O2'	32:QA:1490:U:H5'	2.09	0.53
40:QI:49:GLN:N	40:QI:50:PRO:HD2	2.23	0.53
9:YI:89:SER:HB3	9:YI:97:VAL:HG11	1.89	0.53
1:YA:374:A:H2'	1:YA:375:G:O4'	2.07	0.53
46:QO:16:ARG:HD3	46:QO:20:ASP:OD2	2.09	0.53
1:YA:2863:C:O2'	1:YA:2864:G:H5'	2.09	0.53
1:RA:1113:U:H2'	1:RA:1114:C:H6	1.72	0.53
1:YA:1936:A:C2	1:YA:1945:G:C4	2.96	0.53
1:RA:1322:A:H2'	1:RA:1323:C:H5'	1.91	0.53
4:RD:70:LYS:O	4:RD:71:ALA:HB3	2.09	0.53
32:QA:659:U:O2'	32:QA:660:C:H5'	2.09	0.53
3:YC:166:ARG:O	3:YC:166:ARG:HG3	2.07	0.53
1:YA:919:U:H2'	1:YA:920:A:C8	2.44	0.53
32:QA:1496:C:H2'	32:QA:1497:G:O4'	2.08	0.53
17:RQ:87:VAL:HB	18:RR:52:PRO:HD3	1.90	0.53
1:RA:923:G:CI'	23:RW:23:LYS:HE2	2.35	0.53
42:XK:92:ARG:HH22	52:XU:19:LYS:HD2	1.72	0.53
33:QB:165:ALA:HB3	33:QB:190:SER:HB3	1.90	0.53
32:XA:972:C:H4'	41:XJ:59:LYS:HE2	1.90	0.53
1:YA:857:G:H2'	1:YA:858:G:C4'	2.38	0.53
17:YQ:50:ARG:O	17:YQ:54:ARG:HD3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:249:C:H3'	1:YA:2394:C:C4'	2.33	0.53
32:XA:704:A:C2'	32:XA:705:G:C8	2.92	0.53
36:QE:80:LEU:HD12	36:QE:146:MET:SD	2.49	0.53
12:YL:48:ARG:NH1	12:YL:48:ARG:CG	2.64	0.53
5:RE:121:VAL:O	5:RE:189:THR:HA	2.08	0.53
5:RE:193:VAL:O	5:RE:197:GLU:HB2	2.08	0.53
14:YN:67:PHE:HE2	14:YN:73:ASN:CG	2.12	0.53
4:RD:133:THR:CG2	4:RD:134:HIS:HD2	2.22	0.53
1:YA:105:C:H2'	1:YA:106:C:C6	2.44	0.53
1:YA:1965:C:H6	1:YA:1965:C:C5'	2.17	0.53
1:RA:946:C:O2'	1:RA:947:A:H5'	2.09	0.53
33:XB:205:ALA:O	33:XB:209:VAL:HG13	2.09	0.53
17:RQ:97:ILE:CD1	17:RQ:105:PHE:N	2.71	0.53
1:YA:1821:A:H5'	3:YC:156:SER:OG	2.09	0.53
51:QT:66:ILE:CD1	51:QT:70:LYS:HE3	2.39	0.53
10:RJ:26:GLY:HA2	10:RJ:29:ALA:HB3	1.90	0.53
32:XA:1304:G:C1'	32:XA:1333:A:H61	2.19	0.53
32:XA:332:G:OP2	51:XT:4:LYS:HG3	2.09	0.53
20:YT:9:LYS:HG3	25:YY:21:LEU:HD13	1.90	0.53
32:XA:764:C:C2'	32:XA:765:G:H5'	2.38	0.53
14:RN:32:GLU:OE1	14:RN:118:ARG:HA	2.08	0.53
1:YA:1666:G:O2'	1:YA:1667:G:H5'	2.09	0.53
13:YM:71:LYS:HG3	13:YM:72:PRO:HD2	1.90	0.53
3:RC:259:ASN:C	3:RC:261:ARG:N	2.59	0.53
49:XR:57:ALA:O	49:XR:60:ARG:N	2.41	0.53
10:YJ:35:ARG:HG2	10:YJ:40:HIS:CD2	2.44	0.53
18:YR:23:GLU:O	18:YR:25:LEU:HD22	2.08	0.53
5:RE:48:THR:C	5:RE:50:ALA:H	2.12	0.53
32:QA:1381:U:O2'	32:QA:1382:C:O5'	2.26	0.53
1:YA:1936:A:H2	1:YA:1943:U:C5	2.27	0.53
1:YA:836:G:C6	1:YA:837:C:N3	2.76	0.53
32:XA:1317:C:OP1	45:XN:56:PRO:HD2	2.08	0.53
44:XM:57:ASP:O	44:XM:61:LYS:HG3	2.06	0.53
1:RA:1882:U:O2'	1:RA:1883:U:H5'	2.08	0.53
32:QA:1522:U:O2'	32:QA:1523:G:H5'	2.09	0.53
1:RA:146:A:H2'	1:RA:147:C:C6	2.44	0.53
51:QT:60:GLN:NE2	51:QT:60:GLN:HA	2.23	0.53
19:RS:42:LYS:O	19:RS:45:VAL:HG13	2.09	0.53
50:QS:62:THR:HG22	50:QS:63:ASP:N	2.24	0.53
1:YA:432:A:O2'	1:YA:433:C:H5'	2.09	0.53
1:YA:380:G:O3'	24:YX:15:ASN:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XS:35:ARG:HH21	50:XS:51:HIS:HD2	1.57	0.53
1:YA:2426:A:H3'	1:YA:2427:C:C5'	2.37	0.53
1:YA:1387:A:N3	1:YA:1388:G:C8	2.77	0.53
1:YA:1596:A:N6	1:YA:1597:A:N6	2.57	0.53
33:QB:95:TRP:HE3	33:QB:95:TRP:O	1.92	0.53
1:YA:1351:C:C2	1:YA:1381:G:C2	2.96	0.53
1:YA:1809:A:C2	1:YA:1810:A:C5	2.96	0.53
1:YA:1072:C:O2'	1:YA:1093:G:O6	2.26	0.53
1:YA:179:C:H2'	1:YA:180:G:O4'	2.09	0.53
41:XJ:7:ARG:HG3	41:XJ:75:ASP:OD1	2.09	0.53
3:RC:103:ILE:O	3:RC:104:LEU:O	2.26	0.53
32:XA:1130:A:C6	32:XA:1131:G:N7	2.77	0.53
1:RA:142:A:O2'	1:RA:143:C:C6	2.61	0.53
33:QB:40:ILE:O	33:QB:41:ASN:HB2	2.09	0.53
19:RS:74:ILE:HG23	19:RS:74:ILE:O	2.09	0.53
39:XH:85:TYR:HE1	48:XQ:36:PHE:CE2	2.27	0.53
33:QB:153:MET:SD	33:QB:157:PRO:HD3	2.49	0.53
32:XA:274:A:H4'	32:XA:275:G:OP1	2.08	0.53
1:YA:1684:G:C6	1:YA:1685:C:C4	2.96	0.53
16:RP:67:GLU:HA	16:RP:67:GLU:OE1	2.09	0.53
1:YA:532:A:H4'	1:YA:533:G:C8	2.43	0.53
36:QE:14:LEU:HB2	36:QE:36:THR:HG22	1.90	0.53
1:RA:1020:A:H2	1:RA:1141:U:HO2'	1.56	0.53
4:RD:157:LYS:HD2	10:RJ:79:GLY:O	2.09	0.53
1:YA:1544:A:N1	1:YA:1545:A:C2	2.77	0.53
1:YA:412:A:N7	1:YA:2412:A:H1'	2.23	0.53
32:QA:259:G:C4	32:QA:260:G:C8	2.97	0.53
22:YV:41:GLU:HG2	22:YV:42:LEU:N	2.22	0.53
50:QS:4:LEU:HD12	50:QS:4:LEU:N	2.24	0.53
1:YA:2728:U:HO2'	1:YA:2729:G:H8	1.56	0.53
32:QA:376:G:H5"	47:QP:5:ARG:HB2	1.91	0.53
20:YT:7:LEU:O	20:YT:7:LEU:HD23	2.08	0.53
41:QJ:35:GLN:HA	41:QJ:35:GLN:HE21	1.72	0.53
1:YA:813:U:H1'	1:YA:1226:A:N3	2.24	0.53
32:XA:1343:G:C5	32:XA:1344:C:C4	2.96	0.53
1:RA:108:G:C2'	1:RA:109:C:H5'	2.39	0.53
43:XL:51:VAL:HG12	43:XL:52:CYS:N	2.24	0.53
22:YV:20:LEU:HD22	22:YV:25:LYS:HD2	1.88	0.53
32:XA:781:A:H2'	32:XA:782:A:H5'	1.91	0.53
1:RA:503:A:H5'	1:RA:505:A:OP1	2.07	0.53
32:XA:1508:A:H2'	32:XA:1509:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:95:TRP:CZ3	33:XB:174:GLU:OE2	2.61	0.53
43:XL:81:ILE:HD11	43:XL:94:TYR:CB	2.39	0.53
3:RC:76:VAL:O	3:RC:76:VAL:HG23	2.08	0.53
36:QE:29:ILE:HD12	36:QE:30:PHE:H	1.73	0.53
3:YC:179:GLU:HA	3:YC:269:ARG:O	2.09	0.53
1:YA:2269:G:O2'	23:YW:18:LYS:HG2	2.09	0.53
1:YA:2282:G:C4	1:YA:2425:A:N6	2.77	0.53
1:YA:1605:C:H3'	1:YA:1606:C:H5''	1.91	0.53
1:YA:332:A:O2'	1:YA:333:G:H3'	2.08	0.53
1:YA:1062:G:OP1	1:YA:1070:A:H4'	2.09	0.53
48:QQ:20:ILE:N	48:QQ:47:ASP:OD1	2.40	0.53
48:QQ:67:SER:OG	48:QQ:70:LYS:HB3	2.09	0.53
32:QA:373:A:H2'	32:QA:374:A:C8	2.44	0.53
1:YA:637:A:O5'	12:YL:112:LEU:HD21	2.08	0.53
6:RF:133:GLU:H	6:RF:150:GLY:HA3	1.74	0.53
35:XD:20:LEU:N	35:XD:20:LEU:HD23	2.24	0.53
1:RA:571:U:H3'	18:RR:80:ARG:NH2	2.24	0.53
1:RA:574:A:OP2	56:RA:3268:HOH:O	2.18	0.53
32:XA:653:U:C2	39:XH:55:LYS:HG2	2.44	0.53
23:YW:23:LYS:HD2	23:YW:24:ARG:H	1.72	0.53
15:RO:49:VAL:HG12	15:RO:50:ALA:N	2.24	0.53
34:XC:142:ARG:HG2	34:XC:143:LEU:HD12	1.90	0.53
32:QA:36:C:O2'	32:QA:501:C:OP1	2.26	0.53
32:QA:502:A:H2'	32:QA:503:C:C6	2.44	0.53
10:RJ:73:VAL:CG2	10:RJ:74:TYR:H	2.17	0.53
32:XA:185:U:H6	32:XA:185:U:O5'	1.91	0.53
1:RA:2773:C:OP1	4:RD:171:THR:CG2	2.57	0.53
1:YA:1324:G:O2'	1:YA:1616:A:N6	2.42	0.53
50:XS:10:ILE:HD12	50:XS:10:ILE:N	2.23	0.53
11:RK:98:ARG:O	11:RK:99:ILE:HD12	2.08	0.53
1:YA:1723:G:H2'	1:YA:1724:G:O4'	2.09	0.53
5:YE:126:VAL:CG1	5:YE:127:GLU:N	2.72	0.53
52:QU:17:ARG:HG3	52:QU:17:ARG:NH1	2.22	0.53
35:XD:84:ASN:CG	36:XE:101:GLY:HA3	2.28	0.53
5:RE:154:ASP:OD2	5:RE:154:ASP:C	2.47	0.53
1:RA:954:G:OP2	13:RM:16:ARG:NH2	2.35	0.53
1:YA:100:U:H2'	1:YA:100:U:OP1	2.08	0.53
1:YA:2097:A:H2'	1:YA:2098:U:H6	1.73	0.53
44:QM:15:VAL:HA	44:QM:33:LEU:CD1	2.39	0.53
1:YA:1335:C:H2'	1:YA:1336:A:C1'	2.39	0.53
9:RI:111:THR:O	9:RI:113:ALA:N	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2834:G:O6	1:RA:2879:A:H2'	2.08	0.53
1:YA:659:G:H4'	5:YE:95:LYS:CD	2.39	0.53
46:XO:23:SER:O	46:XO:26:VAL:HB	2.09	0.53
32:XA:878:A:OP1	39:XH:79:ARG:HB2	2.08	0.53
32:QA:420:U:O2'	32:QA:421:U:H5''	2.09	0.53
32:QA:1170:A:H2'	32:QA:1171:A:O4'	2.08	0.53
16:RP:37:LYS:HD3	16:RP:37:LYS:H	1.74	0.53
1:YA:2106:U:C4	1:YA:2107:G:N7	2.77	0.53
43:XL:37:TYR:O	43:XL:38:THR:HG23	2.09	0.53
10:RJ:40:HIS:C	10:RJ:41:LYS:HG2	2.29	0.53
1:YA:214:G:O2'	1:YA:216:A:O3'	2.26	0.53
23:RW:49:ASN:C	23:RW:49:ASN:ND2	2.61	0.53
46:QO:77:TYR:OH	46:QO:87:ARG:HG2	2.09	0.53
1:YA:1799:G:N7	3:YC:175:LEU:HD13	2.23	0.53
50:XS:52:ASN:HD22	50:XS:54:ARG:H	1.56	0.53
1:YA:2428:G:C2	12:YL:54:GLN:NE2	2.77	0.53
1:YA:222:A:H3'	1:YA:421:C:H5'	1.91	0.53
1:YA:265:A:C5	1:YA:428:A:C8	2.96	0.53
21:YU:35:VAL:HB	21:YU:38:ILE:HD13	1.91	0.53
12:RL:93:ASN:O	12:RL:95:LEU:N	2.40	0.53
1:YA:1085:A:H2'	1:YA:1086:A:N3	2.24	0.53
13:YM:62:LYS:C	13:YM:63:ILE:HD12	2.29	0.53
14:YN:82:GLU:O	14:YN:86:ARG:HG3	2.09	0.53
38:XG:37:THR:HA	38:XG:40:SER:HB2	1.91	0.53
1:YA:2756:U:H4'	1:YA:2757:A:O5'	2.08	0.53
20:RT:15:HIS:HB3	20:RT:31:VAL:HG22	1.91	0.53
3:YC:93:VAL:CG1	3:YC:101:ARG:H	2.22	0.53
32:XA:267:C:OP2	48:XQ:68:LYS:HD2	2.09	0.53
32:XA:254:G:H5''	48:XQ:70:LYS:HD3	1.91	0.53
32:XA:1346:A:C8	32:XA:1348:U:N3	2.76	0.53
32:XA:644:U:H2'	32:XA:645:G:C8	2.44	0.53
32:XA:495:A:N1	32:XA:496:A:N6	2.57	0.53
35:XD:57:LYS:HE2	35:XD:61:ARG:HD3	1.91	0.53
34:QC:154:GLY:O	34:QC:195:ILE:HG12	2.08	0.53
1:RA:1020:A:H4'	1:RA:1021:A:O5'	2.10	0.53
36:QE:83:PRO:HB3	36:QE:96:GLN:HE22	1.69	0.53
10:RJ:64:VAL:O	10:RJ:65:THR:CB	2.55	0.53
32:XA:1202:U:O2	45:XN:81:ILE:HD13	2.09	0.53
32:QA:1338:G:H2'	32:QA:1339:A:H8	1.74	0.53
32:XA:763:G:H2'	32:XA:764:C:H6	1.74	0.53
1:RA:1965:C:H5''	1:RA:1966:A:H2'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1739:A:N6	1:YA:1740:G:C6	2.77	0.53
1:YA:1665:A:H2'	1:YA:1666:G:H5'	1.91	0.53
24:RX:30:PRO:O	24:RX:32:LEU:HD12	2.09	0.53
1:RA:2747:G:O2'	7:RG:66:THR:HG22	2.09	0.53
32:QA:80:A:C2	32:QA:90:C:N3	2.77	0.53
39:QH:88:LYS:HG3	39:QH:89:ASP:N	2.24	0.53
1:RA:1501:G:C2'	1:RA:1502:A:H5'	2.38	0.53
42:QK:100:ASN:HB2	42:QK:106:ILE:CG2	2.39	0.53
32:XA:1484:C:H2'	32:XA:1485:U:O4'	2.09	0.53
32:QA:633:G:O2'	32:QA:634:C:H5'	2.08	0.53
7:RG:23:ILE:H	7:RG:23:ILE:HD12	1.74	0.53
5:RE:145:ASP:HB3	5:RE:184:ASP:HB2	1.89	0.53
1:RA:1417:C:H2'	1:RA:1418:G:O4'	2.09	0.53
38:QG:38:ALA:O	38:QG:42:VAL:HG23	2.08	0.53
32:QA:149:A:C2	32:QA:150:U:C2	2.96	0.53
21:YU:11:ILE:HG12	21:YU:11:ILE:O	2.09	0.53
25:YY:34:SER:O	25:YY:36:GLN:HG3	2.09	0.53
40:XI:88:GLU:CD	40:XI:88:GLU:H	2.12	0.53
2:YB:16:G:C6	2:YB:69:G:C4	2.97	0.52
50:XS:68:HIS:HB3	50:XS:72:GLU:HG3	1.91	0.52
1:YA:422:A:C2	1:YA:423:A:C5	2.96	0.52
6:YF:32:LYS:HB2	6:YF:32:LYS:NZ	2.24	0.52
32:QA:254:G:H2'	32:QA:255:G:H8	1.74	0.52
1:YA:484:C:O2'	1:YA:485:C:H5'	2.09	0.52
1:YA:638:G:O2'	1:YA:639:U:H5'	2.09	0.52
32:XA:60:A:C4'	32:XA:61:G:O5'	2.50	0.52
1:YA:2741:A:H2'	1:YA:2742:G:O4'	2.09	0.52
32:QA:408:A:P	35:QD:109:THR:HG21	2.49	0.52
1:YA:604:G:C6	1:YA:625:G:C6	2.97	0.52
1:YA:612:G:C2	1:YA:614:A:H1'	2.44	0.52
4:RD:90:PHE:C	4:RD:92:VAL:N	2.61	0.52
44:QM:10:ASP:OD1	44:QM:44:ILE:HD13	2.09	0.52
43:QL:54:VAL:HG21	43:QL:79:ILE:HD11	1.91	0.52
35:XD:137:SER:O	35:XD:140:ASP:HB2	2.08	0.52
40:XI:118:ARG:HG3	40:XI:124:PRO:HG3	1.90	0.52
34:QC:166:TRP:N	34:QC:166:TRP:HE3	1.99	0.52
1:RA:2742:G:OP1	31:R4:36:ARG:HD3	2.09	0.52
11:YK:76:VAL:O	16:YP:71:ARG:HG3	2.09	0.52
1:RA:26:G:H1'	1:RA:514:A:H61	1.74	0.52
1:YA:2889:C:N4	1:YA:2890:G:C6	2.76	0.52
40:XI:78:ILE:O	40:XI:82:ILE:HG13	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1290:C:C6	1:YA:1291:C:H5	2.27	0.52
1:YA:2191:A:C5'	1:YA:2192:U:OP2	2.56	0.52
4:RD:47:ALA:N	4:RD:84:LEU:HD12	2.24	0.52
1:YA:567:U:O4	1:YA:568:U:C4	2.62	0.52
31:Y4:19:ARG:O	31:Y4:20:ASP:CB	2.56	0.52
1:YA:2355:G:C5'	23:YW:20:LEU:HD22	2.39	0.52
1:YA:1665:A:N7	56:YA:3439:HOH:O	2.33	0.52
22:YV:55:GLU:O	22:YV:57:TYR:N	2.42	0.52
39:QH:105:THR:HG21	39:QH:120:LEU:CD1	2.38	0.52
17:RQ:44:TYR:O	17:RQ:47:ARG:HB3	2.10	0.52
1:YA:2276:G:O2'	1:YA:2277:G:H5'	2.09	0.52
32:QA:1472:U:H2'	32:QA:1473:G:H8	1.74	0.52
32:QA:978:A:O2'	32:QA:1322:C:H5	1.91	0.52
20:YT:64:LYS:HD2	20:YT:64:LYS:N	2.24	0.52
3:RC:257:ARG:NH1	3:RC:263:ASP:OD2	2.42	0.52
1:YA:1875:G:H8	1:YA:1875:G:OP2	1.92	0.52
41:XJ:81:GLU:O	41:XJ:83:THR:N	2.41	0.52
1:YA:3:U:C4	1:YA:4:U:C5	2.97	0.52
32:QA:820:U:H4'	32:QA:821:G:OP2	2.09	0.52
8:YH:2:GLN:O	8:YH:19:VAL:O	2.27	0.52
9:RI:109:ALA:HB1	9:RI:124:MET:CE	2.39	0.52
37:XF:68:GLN:O	37:XF:71:ILE:HG22	2.08	0.52
1:YA:1835:G:H2'	1:YA:1836:C:H6	1.73	0.52
44:QM:47:LEU:HD23	44:QM:51:GLN:HB3	1.91	0.52
1:RA:864:G:O2'	1:RA:865:C:H5'	2.08	0.52
48:QQ:30:HIS:HE1	48:QQ:32:ILE:HD12	1.74	0.52
14:YN:21:PHE:N	14:YN:21:PHE:CD1	2.77	0.52
1:YA:1812:U:H2'	1:YA:1813:G:C8	2.44	0.52
1:YA:136:G:H8	1:YA:136:G:O5'	1.93	0.52
33:QB:156:LEU:O	33:QB:156:LEU:HG	2.09	0.52
1:YA:2576:G:C8	1:YA:2580:U:O4	2.63	0.52
43:XL:42:LYS:HD3	43:XL:43:LYS:HZ2	1.74	0.52
32:XA:1182:G:C3'	32:XA:1183:U:H5'	2.38	0.52
1:RA:273:G:N2	1:RA:365:U:C2	2.78	0.52
7:RG:162:ARG:CZ	7:RG:168:VAL:HG21	2.39	0.52
10:YJ:45:THR:O	10:YJ:45:THR:HG23	2.08	0.52
36:QE:121:ASN:HD22	36:QE:121:ASN:N	2.06	0.52
33:QB:52:ALA:O	33:QB:54:ALA:N	2.42	0.52
1:YA:1060:U:H1'	1:YA:1062:G:OP2	2.10	0.52
32:XA:1126:U:C4	41:XJ:42:LEU:HD21	2.44	0.52
6:RF:107:VAL:HG13	6:RF:113:PHE:CZ	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2669:G:H2'	1:YA:2670:A:H8	1.74	0.52
32:QA:579:A:H2'	32:QA:580:C:H6	1.74	0.52
1:YA:2746:U:C2'	1:YA:2747:G:H5'	2.39	0.52
32:XA:1346:A:N6	38:XG:9:ARG:HH12	2.07	0.52
1:YA:748:G:HO2'	1:YA:749:A:H3'	1.72	0.52
1:YA:45:G:C5'	1:YA:46:G:OP1	2.55	0.52
1:RA:1474:U:C2'	1:RA:1475:G:H5'	2.40	0.52
32:QA:554:A:C5'	43:QL:25:ALA:HB1	2.38	0.52
47:QP:10:GLY:HA3	47:QP:15:PRO:CA	2.38	0.52
10:YJ:74:TYR:OH	10:YJ:100:VAL:HG13	2.09	0.52
32:QA:501:C:H1'	32:QA:549:C:H1'	1.90	0.52
1:YA:1650:A:O2'	14:YN:108:ALA:HB1	2.09	0.52
1:YA:686:U:N3	29:Y2:12:ARG:HB2	2.23	0.52
1:YA:2353:G:N3	23:YW:30:VAL:HG13	2.23	0.52
22:YV:29:ILE:HG22	22:YV:39:ALA:HA	1.91	0.52
35:QD:157:ALA:O	35:QD:161:ALA:HB2	2.09	0.52
1:YA:469:G:OP2	5:YE:54:GLY:O	2.26	0.52
32:QA:978:A:N7	32:QA:1318:A:N6	2.56	0.52
1:RA:45:G:H5''	1:RA:46:G:OP1	2.09	0.52
41:QJ:73:LEU:O	41:QJ:74:VAL:HB	2.08	0.52
43:QL:1:ALA:HB3	43:QL:5:GLN:OE1	2.09	0.52
1:RA:875:G:H2'	1:RA:876:C:H5'	1.92	0.52
6:YF:122:ASP:HB3	6:YF:126:ASN:ND2	2.23	0.52
2:YB:52:A:N6	15:YO:33:ARG:HE	2.06	0.52
18:RR:90:ARG:O	18:RR:91:GLN:CB	2.56	0.52
1:RA:665:U:O2'	1:RA:666:A:H5'	2.08	0.52
13:YM:57:VAL:HG23	13:YM:58:LYS:O	2.09	0.52
1:RA:2572:A:C8	4:RD:149:ASN:ND2	2.78	0.52
1:RA:1786:A:C4	1:RA:1938:A:C6	2.97	0.52
32:QA:1240:U:H3'	32:QA:1241:G:H5'	1.90	0.52
32:XA:1343:G:C6	32:XA:1344:C:C4	2.98	0.52
40:QI:11:ARG:HA	40:QI:105:ARG:NH1	2.24	0.52
3:YC:24:HIS:CG	3:YC:25:LYS:H	2.26	0.52
32:QA:1134:G:H2'	32:QA:1135:U:H1'	1.91	0.52
1:RA:1229:C:H2'	1:RA:1230:A:C8	2.44	0.52
9:YI:86:LYS:O	9:YI:87:SER:HB2	2.09	0.52
1:RA:2486:C:H2'	1:RA:2487:G:O5'	2.09	0.52
4:YD:40:LEU:HA	4:YD:44:GLY:HA2	1.90	0.52
13:RM:66:ARG:NH1	13:RM:104:GLU:OE1	2.40	0.52
33:XB:221:ARG:O	33:XB:224:ARG:HG2	2.09	0.52
47:XP:41:PRO:O	47:XP:42:ILE:HD13	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:YC:120:ASP:CG	3:YC:121:ALA:H	2.12	0.52
5:RE:176:ASP:C	5:RE:176:ASP:OD1	2.47	0.52
43:XL:14:LYS:HE2	43:XL:15:VAL:C	2.29	0.52
6:YF:116:LEU:HG	6:YF:117:SER:H	1.73	0.52
3:YC:245:THR:C	3:YC:247:TRP:H	2.13	0.52
32:QA:572:A:H5'	32:QA:573:A:OP2	2.08	0.52
1:RA:1420:A:C8	1:RA:2211:A:N6	2.78	0.52
35:XD:2:ARG:HE	35:XD:114:ARG:HD3	1.73	0.52
1:RA:2331:G:O2'	23:RW:39:GLN:O	2.27	0.52
50:XS:38:THR:CA	50:XS:69:LYS:HD3	2.38	0.52
1:YA:2425:A:H4'	1:YA:2426:A:O5'	2.09	0.52
1:YA:150:U:H2'	1:YA:151:C:C6	2.44	0.52
32:XA:1071:C:H2'	32:XA:1072:G:C8	2.44	0.52
36:QE:114:LEU:O	36:QE:119:VAL:HG22	2.09	0.52
1:YA:505:A:O2'	1:YA:506:G:H5'	2.08	0.52
24:YX:57:VAL:CG1	24:YX:58:ILE:N	2.71	0.52
1:YA:623:C:H2'	1:YA:624:C:C6	2.45	0.52
4:RD:159:LYS:HA	4:RD:159:LYS:HZ3	1.74	0.52
6:YF:111:ARG:NE	6:YF:111:ARG:H	2.07	0.52
32:QA:100:G:O6	32:QA:101:A:C6	2.61	0.52
20:RT:39:THR:O	20:RT:41:ALA:N	2.43	0.52
39:QH:5:PRO:O	39:QH:8:ASP:HB3	2.09	0.52
32:QA:1157:A:C5	32:QA:1180:A:C6	2.97	0.52
1:YA:921:C:O2'	1:YA:922:C:H5'	2.08	0.52
32:QA:36:C:OP1	43:QL:119:LYS:HE3	2.09	0.52
40:QI:80:HIS:HE1	40:QI:103:VAL:O	1.93	0.52
34:QC:183:TYR:HA	34:QC:199:VAL:O	2.09	0.52
13:RM:132:THR:HG22	13:RM:133:LYS:N	2.23	0.52
1:YA:2415:G:H4'	12:YL:65:GLY:O	2.09	0.52
1:YA:1666:G:H4'	11:YK:6:THR:HG23	1.90	0.52
3:RC:151:GLY:C	3:RC:152:GLN:HG3	2.30	0.52
1:YA:1494:A:H2'	1:YA:1495:A:H8	1.71	0.52
1:YA:2529:G:H4'	7:YG:174:LYS:HD3	1.91	0.52
40:XI:22:PRO:HA	40:XI:60:LEU:HB3	1.91	0.52
38:QG:20:GLU:HB3	38:QG:24:LYS:HE2	1.89	0.52
1:YA:708:G:H2'	1:YA:709:U:C6	2.44	0.52
1:YA:709:U:O2'	1:YA:710:U:H5'	2.08	0.52
46:QO:16:ARG:O	46:QO:17:ASP:HB3	2.09	0.52
1:YA:2107:G:C2	1:YA:2183:A:C2	2.98	0.52
36:QE:15:ILE:HG22	36:QE:16:ALA:N	2.23	0.52
1:RA:591:U:H1'	30:R3:1:PRO:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1319:C:O2	1:YA:1334:G:C2	2.63	0.52
34:XC:124:GLU:H	34:XC:124:GLU:CD	2.12	0.52
49:XR:58:ILE:O	49:XR:62:ARG:HG3	2.09	0.52
1:RA:527:C:N3	1:RA:2779:U:H2'	2.25	0.52
7:RG:85:LYS:HG2	7:RG:131:VAL:HG12	1.91	0.52
7:RG:84:LYS:CB	7:RG:132:LEU:H	2.22	0.52
23:YW:77:LYS:O	23:YW:78:PHE:HB2	2.10	0.52
1:YA:1313:U:OP2	1:YA:1314:C:H5	1.92	0.52
5:YE:128:ALA:O	5:YE:130:LYS:HG2	2.09	0.52
1:YA:1061:U:O2'	1:YA:1062:G:H5''	2.10	0.52
1:YA:1087:G:C6	1:YA:1089:A:C2	2.98	0.52
36:XE:96:GLN:HG2	36:XE:97:PRO:HD2	1.91	0.52
1:RA:243:U:OP1	30:R3:5:THR:CG2	2.48	0.52
12:YL:79:LEU:HB3	12:YL:114:GLY:H	1.73	0.52
35:XD:29:THR:C	35:XD:31:CYS:H	2.13	0.52
33:QB:20:ARG:O	33:QB:21:TYR:C	2.47	0.52
1:RA:1392:A:N6	1:RA:1393:A:N6	2.57	0.52
1:YA:1204:A:H1'	1:YA:1205:A:OP2	2.10	0.52
40:XI:119:LYS:O	40:XI:119:LYS:HG3	2.09	0.52
7:YG:84:LYS:O	7:YG:85:LYS:CB	2.57	0.52
7:YG:112:VAL:HG12	7:YG:114:HIS:N	2.19	0.52
20:RT:50:LEU:HD12	20:RT:50:LEU:N	2.20	0.52
33:QB:72:LYS:HZ2	33:QB:204:ASP:HB3	1.75	0.52
1:YA:749:A:C4	1:YA:750:A:C8	2.97	0.52
36:XE:131:ASN:ND2	36:XE:132:PRO:HD2	2.24	0.52
4:RD:99:GLU:HG3	4:RD:100:LEU:N	2.24	0.52
23:YW:13:ARG:CG	23:YW:14:ASP:H	2.18	0.52
1:YA:2543:G:C6	1:YA:2765:A:C5	2.97	0.52
32:QA:211:G:C2	32:QA:212:G:H1'	2.44	0.52
1:RA:2414:G:C2'	1:RA:2415:G:H5'	2.40	0.52
38:QG:102:TRP:O	38:QG:106:ALA:HB2	2.08	0.52
8:YH:84:ALA:N	8:YH:148:ALA:HA	2.24	0.52
32:XA:1051:C:O2'	32:XA:1052:U:O5'	2.27	0.52
40:XI:11:ARG:HH12	40:XI:108:ARG:HE	1.58	0.52
46:XO:47:LYS:HD2	46:XO:47:LYS:H	1.75	0.52
1:YA:1868:C:N4	1:YA:1869:G:O6	2.42	0.52
32:XA:64:G:H5''	32:XA:65:A:OP1	2.08	0.52
34:XC:19:SER:O	45:XN:93:PRO:HG3	2.10	0.52
44:XM:52:ILE:HG13	44:XM:56:ARG:HH21	1.74	0.52
33:XB:17:HIS:CE1	33:XB:18:GLN:HG3	2.44	0.52
1:RA:1537:G:N3	1:RA:1537:G:H5''	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:36:GLN:HG3	4:YD:38:LYS:HZ1	1.75	0.52
14:YN:57:THR:O	14:YN:80:PHE:HD1	1.92	0.52
1:YA:1943:U:H4'	1:YA:1944:U:OP1	2.08	0.52
32:XA:665:A:N3	32:XA:732:C:H2'	2.23	0.52
1:YA:2033:A:OP1	1:YA:2033:A:H2'	2.10	0.52
9:YI:104:GLN:HA	9:YI:107:GLU:CB	2.40	0.52
1:RA:671:C:H3'	12:RL:42:SER:OG	2.09	0.52
24:YX:51:SER:OG	24:YX:54:GLY:HA3	2.08	0.52
18:YR:70:GLU:CD	18:YR:70:GLU:H	2.13	0.52
41:QJ:54:SER:OG	41:QJ:55:PRO:HD2	2.09	0.52
34:XC:24:ASN:O	34:XC:28:PHE:HB2	2.10	0.52
23:RW:19:ARG:CZ	23:RW:22:VAL:HB	2.39	0.52
23:RW:24:ARG:HD3	23:RW:65:LYS:CE	2.40	0.52
30:R3:30:HIS:O	30:R3:31:ILE:C	2.48	0.52
45:YN:52:ARG:NE	45:YN:52:ARG:HA	2.25	0.52
1:RA:1171:G:N2	1:RA:1179:G:C6	2.78	0.52
32:XA:704:A:C2'	32:XA:705:G:H8	2.22	0.52
32:XA:1408:A:C2	32:XA:1494:G:C4	2.98	0.52
1:YA:1917:U:C2'	1:YA:1918:A:H5'	2.39	0.52
1:YA:1373:A:H2'	1:YA:1374:G:O4'	2.10	0.52
32:QA:1202:U:C1'	45:QN:68:ARG:HD2	2.40	0.52
33:QB:53:LEU:HD21	33:QB:212:TYR:OH	2.10	0.52
9:YI:52:LEU:O	9:YI:54:ILE:HD12	2.10	0.52
32:QA:451:A:H5''	47:QP:70:ARG:HH22	1.75	0.52
1:RA:263:G:H1'	1:RA:430:A:N3	2.24	0.52
6:RF:107:VAL:N	6:RF:108:PRO:CD	2.73	0.52
1:YA:614:A:H4'	1:YA:616:A:N6	2.20	0.52
32:XA:1130:A:N7	32:XA:1146:A:C6	2.78	0.52
1:YA:2093:G:C2	1:YA:2094:A:C5	2.97	0.52
4:YD:186:LEU:HD21	16:YP:3:ILE:HD11	1.90	0.52
16:YP:50:ARG:CB	16:YP:56:SER:HB3	2.39	0.52
1:YA:1208:C:C2	1:YA:1209:U:C5	2.98	0.52
35:XD:106:PHE:N	35:XD:106:PHE:CD1	2.77	0.52
33:QB:89:PHE:CE1	33:QB:153:MET:HB2	2.45	0.52
3:RC:20:ASN:CB	3:RC:23:LEU:HD23	2.36	0.52
32:XA:78:A:H2'	32:XA:79:G:C8	2.45	0.52
32:XA:1094:G:C2'	32:XA:1095:U:OP2	2.56	0.52
32:XA:183:C:H2'	32:XA:183:C:O2	2.08	0.52
32:QA:330:C:H6	32:QA:330:C:H5''	1.73	0.52
1:YA:528:A:N1	1:YA:2043:C:O5'	2.42	0.52
32:XA:1004:A:N7	32:XA:1025:U:O2'	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:491:G:C2'	32:XA:492:C:H5'	2.40	0.52
1:YA:2563:U:C1'	1:YA:2566:A:N6	2.72	0.52
1:RA:2341:G:H2'	1:RA:2342:C:C6	2.44	0.52
32:QA:510:A:N3	32:QA:543:U:H1'	2.25	0.52
40:QI:119:LYS:HG3	40:QI:119:LYS:O	2.09	0.52
40:QI:41:GLU:O	40:QI:44:ARG:HG2	2.08	0.52
1:RA:1050:A:C2	1:RA:2751:G:C5	2.97	0.52
8:YH:61:VAL:HG13	8:YH:62:LEU:N	2.25	0.52
32:QA:633:G:H2'	32:QA:634:C:C6	2.44	0.52
32:QA:1134:G:H2'	32:QA:1135:U:C1'	2.39	0.52
1:RA:756:A:N7	56:RA:3298:HOH:O	2.34	0.52
18:YR:58:VAL:HG13	18:YR:102:SER:OG	2.09	0.52
3:YC:212:TRP:C	3:YC:212:TRP:CD1	2.82	0.52
10:YJ:56:VAL:CG2	10:YJ:124:VAL:HG23	2.40	0.52
1:RA:679:C:H2'	1:RA:680:C:H6	1.75	0.52
6:RF:32:LYS:HD3	6:RF:91:ARG:NH1	2.24	0.52
6:RF:120:SER:HB2	6:RF:127:TYR:CE1	2.44	0.52
1:RA:184:C:H2'	1:RA:185:G:C8	2.45	0.52
32:QA:291:U:O2'	32:QA:292:G:H5'	2.10	0.52
38:QG:137:ARG:C	38:QG:139:ASP:H	2.13	0.52
33:XB:30:ILE:HG23	33:XB:39:ILE:O	2.10	0.52
8:YH:49:ALA:O	8:YH:53:GLU:HB2	2.10	0.52
13:RM:11:LYS:HE2	13:RM:87:GLY:O	2.09	0.52
32:QA:582:C:C2	32:QA:583:A:C8	2.97	0.52
1:RA:2406:A:OP2	1:RA:2406:A:H2'	2.09	0.52
17:RQ:63:ARG:HH12	17:RQ:96:ASP:CB	2.23	0.52
8:RH:25:TYR:HE1	8:RH:29:PHE:CD2	2.28	0.52
18:YR:49:ILE:HG22	18:YR:54:VAL:H	1.74	0.52
23:YW:39:GLN:HE22	23:YW:58:LEU:HD23	1.75	0.52
1:YA:1596:A:C6	1:YA:1597:A:C6	2.98	0.52
1:YA:1611:C:C2	1:YA:1612:C:H5	2.27	0.52
1:YA:1349:C:H2'	1:YA:1350:C:C6	2.44	0.52
1:YA:311:A:O2'	1:YA:332:A:O4'	2.21	0.52
41:XJ:42:LEU:HB3	41:XJ:43:PRO:HD2	1.91	0.52
38:XG:27:ASN:OD1	38:XG:35:LYS:HD2	2.10	0.52
1:YA:1963:U:O2'	1:YA:1964:G:H5'	2.10	0.52
32:XA:246:A:N3	32:XA:279:A:N6	2.58	0.52
1:YA:2751:G:H5'	7:YG:2:ARG:HH21	1.75	0.52
1:RA:2250:G:H8	1:RA:2250:G:O5'	1.93	0.52
32:QA:67:C:H4'	32:QA:172:A:O4'	2.10	0.52
33:QB:103:TRP:C	33:QB:105:THR:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:748:G:OP2	19:YS:88:ARG:HG3	2.08	0.52
1:YA:1744:A:H3'	1:YA:1745:A:C8	2.44	0.52
1:YA:2197:U:HO2'	1:YA:2198:A:H8	1.45	0.52
15:YO:88:LYS:O	15:YO:89:ASP:HB3	2.10	0.52
40:XI:18:VAL:HG11	40:XI:82:ILE:HA	1.91	0.52
32:XA:197:A:H4'	32:XA:198:G:O5'	2.08	0.52
14:RN:116:VAL:O	14:RN:116:VAL:CG2	2.55	0.52
1:YA:696:G:C2	1:YA:767:U:O2	2.63	0.52
33:XB:162:VAL:HG13	33:XB:184:ALA:HB2	1.92	0.52
1:YA:1857:G:C4	1:YA:1884:G:N1	2.77	0.52
4:YD:151:THR:HG22	4:YD:152:PRO:HD3	1.91	0.52
44:XM:100:ARG:CZ	44:XM:102:LYS:HD3	2.39	0.52
32:XA:1004:A:N3	32:XA:1026:G:C5	2.77	0.52
1:RA:118:A:N3	1:RA:178:G:H1'	2.24	0.52
1:RA:1107:G:H2'	1:RA:1108:U:H6	1.74	0.52
51:QT:54:GLN:HB3	51:QT:55:PRO:HD3	1.92	0.52
32:QA:1331:G:O2'	32:QA:1332:A:OP2	2.25	0.52
45:YN:63:CYS:HA	45:YN:78:LEU:HA	1.91	0.52
43:QL:111:GLN:O	43:QL:112:ALA:HB3	2.10	0.52
12:RL:47:ARG:CG	12:RL:47:ARG:HH21	2.23	0.52
1:RA:163:C:O2'	1:RA:164:C:P	2.66	0.52
7:YG:87:GLN:HA	7:YG:129:GLU:HA	1.91	0.52
32:XA:542:G:H2'	32:XA:543:U:H6	1.74	0.52
11:RK:91:SER:O	11:RK:92:GLU:C	2.48	0.52
32:QA:1352:C:H2'	32:QA:1353:G:C8	2.43	0.52
5:YE:16:GLU:HG3	5:YE:16:GLU:O	2.09	0.52
15:YO:79:ALA:HB1	15:YO:114:GLY:HA3	1.91	0.52
8:RH:125:THR:HG23	8:RH:126:GLY:H	1.75	0.52
1:RA:996:A:H4'	17:RQ:91:ARG:CD	2.39	0.52
23:RW:22:VAL:HG13	23:RW:25:PHE:CD2	2.45	0.52
23:RW:37:VAL:HG22	23:RW:55:ASP:O	2.09	0.52
42:XK:57:SER:C	42:XK:90:PRO:HG3	2.29	0.52
32:XA:978:A:C6	32:XA:1319:A:C5	2.98	0.52
30:Y3:33:THR:HG23	30:Y3:34:LYS:H	1.74	0.52
1:YA:2259:U:H4'	1:YA:2427:C:O2'	2.09	0.52
32:QA:1127:G:O2'	32:QA:1128:C:H5'	2.10	0.52
32:XA:1492:A:H2'	1:YA:1913:A:C8	2.44	0.52
1:YA:1314:C:OP1	1:YA:1332:G:OP1	2.26	0.52
32:QA:1060:U:H4'	41:QJ:53:ILE:HG23	1.90	0.52
1:YA:1071:G:O6	1:YA:1089:A:C2	2.63	0.52
47:QP:20:VAL:CG2	47:QP:32:PHE:HB2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:476:G:O2'	1:YA:477:A:H5''	2.10	0.52
10:RJ:140:LEU:C	10:RJ:140:LEU:CD1	2.77	0.52
32:XA:1152:A:OP2	41:XJ:70:HIS:CE1	2.62	0.52
1:YA:2304:G:H2'	1:YA:2305:U:H5''	1.92	0.52
1:YA:106:C:O2'	1:YA:294:A:O2'	2.27	0.52
4:YD:28:GLU:HA	4:YD:185:ASN:O	2.09	0.52
8:YH:132:PHE:CD1	8:YH:133:GLN:N	2.77	0.52
4:RD:72:GLY:O	4:RD:73:VAL:O	2.27	0.52
20:RT:50:LEU:O	20:RT:51:PHE:HB2	2.08	0.52
35:XD:3:TYR:O	35:XD:4:LEU:HB2	2.10	0.52
32:QA:624:C:H4'	47:QP:10:GLY:O	2.08	0.52
32:QA:393:A:OP2	47:QP:12:LYS:HD2	2.10	0.52
45:QN:20:PHE:C	45:QN:22:LYS:H	2.13	0.52
35:QD:121:ALA:C	35:QD:122:ILE:HD13	2.29	0.52
38:QG:4:ARG:HA	38:QG:4:ARG:HE	1.74	0.52
6:RF:39:VAL:CG2	6:RF:48:LEU:HD23	2.39	0.52
36:QE:108:GLY:O	36:QE:109:ALA:HB3	2.10	0.52
1:RA:449:A:H2'	1:RA:450:G:H5'	1.91	0.52
1:YA:1326:U:O2'	1:YA:1327:A:C8	2.61	0.52
4:YD:88:GLU:O	4:YD:89:GLU:HG3	2.10	0.52
1:RA:2199:A:H3'	1:RA:2200:C:C6	2.44	0.52
32:XA:764:C:N4	32:XA:812:G:N1	2.57	0.52
1:YA:571:U:C4	1:YA:575:A:C5	2.97	0.52
32:XA:1026:G:H1	32:XA:1036:A:N6	2.08	0.52
40:XI:61:ASP:C	40:XI:62:LEU:HD22	2.30	0.52
10:YJ:106:LYS:HE2	10:YJ:106:LYS:HA	1.92	0.52
1:YA:2355:G:H4'	23:YW:20:LEU:HD22	1.92	0.52
32:QA:723:U:O2	32:QA:855:U:H4'	2.10	0.52
36:QE:132:PRO:HA	36:QE:135:VAL:CG1	2.40	0.52
22:YV:75:GLN:HG3	22:YV:92:VAL:HG13	1.91	0.52
43:QL:4:ASN:ND2	43:QL:8:ARG:HH12	2.08	0.52
33:QB:34:ARG:O	33:QB:37:VAL:O	2.28	0.52
5:RE:57:LYS:HG3	5:RE:58:LYS:N	2.25	0.52
1:YA:7:G:HO2'	10:YJ:15:TRP:HZ2	1.58	0.52
16:RP:99:LEU:HA	16:RP:102:ARG:HG3	1.92	0.52
21:RU:71:ILE:HD13	21:RU:82:VAL:HG22	1.89	0.52
27:Y0:32:THR:HG21	27:Y0:47:TYR:CE2	2.44	0.52
1:YA:589:U:O2'	1:YA:590:A:OP2	2.27	0.52
25:YY:1:MET:H2	25:YY:5:GLU:HG2	1.75	0.52
1:RA:41:C:C2'	1:RA:42:A:O5'	2.57	0.52
32:XA:1086:U:H6	32:XA:1086:U:C5'	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:RB:35:C:H2'	2:RB:36:C:O4'	2.10	0.52
11:RK:36:GLY:HA2	11:RK:62:VAL:O	2.10	0.52
1:YA:836:G:C5	1:YA:837:C:C4	2.97	0.52
32:QA:697:U:H2'	32:QA:698:G:H5'	1.90	0.52
1:RA:1593:A:H2'	1:RA:1594:U:O4'	2.09	0.52
32:QA:880:C:O2'	32:QA:881:G:H5'	2.10	0.52
4:RD:104:VAL:O	4:RD:177:VAL:HG21	2.08	0.52
13:YM:119:LEU:O	13:YM:119:LEU:HD23	2.09	0.52
50:XS:46:LEU:HD23	50:XS:46:LEU:H	1.75	0.52
35:QD:194:ILE:O	35:QD:194:ILE:HG13	2.10	0.52
28:R1:10:LEU:O	28:R1:19:PHE:HB2	2.10	0.52
24:RX:39:VAL:HG22	24:RX:44:ARG:O	2.09	0.52
18:YR:51:VAL:HB	18:YR:52:PRO:CD	2.40	0.52
1:YA:1552:A:C2'	1:YA:1552:A:N3	2.69	0.52
3:YC:147:PRO:HD3	3:YC:184:GLU:CG	2.36	0.52
1:RA:1458:U:H5'	1:RA:1459:G:N3	2.24	0.52
51:XT:73:ARG:CG	51:XT:73:ARG:NH1	2.61	0.52
1:YA:305:C:H1'	1:YA:313:G:N2	2.25	0.52
10:YJ:46:PRO:HD2	10:YJ:47:HIS:CE1	2.45	0.52
12:RL:101:ILE:CG2	12:RL:102:GLY:N	2.73	0.52
1:YA:1063:G:N2	1:YA:1076:C:C2	2.78	0.52
1:YA:1076:C:O2'	1:YA:1077:A:C8	2.63	0.52
1:YA:2271:G:H2'	1:YA:2272:U:C6	2.45	0.52
1:YA:116:C:H2'	1:YA:117:G:C8	2.45	0.52
1:YA:186:G:N2	1:YA:211:C:O2	2.43	0.52
1:YA:2310:C:H2'	1:YA:2311:A:H5''	1.90	0.52
32:QA:1253:G:N1	32:QA:1285:A:N6	2.57	0.52
6:RF:133:GLU:H	6:RF:150:GLY:CA	2.23	0.52
1:YA:623:C:H2'	1:YA:624:C:H6	1.74	0.52
1:YA:2747:G:O6	1:YA:2755:C:H5''	2.10	0.52
32:QA:508:U:H4'	32:QA:509:A:OP1	2.10	0.52
3:YC:93:VAL:HG13	3:YC:94:LEU:N	2.25	0.52
33:XB:59:ILE:HD12	33:XB:59:ILE:C	2.29	0.52
2:YB:91:C:OP1	13:YM:19:GLY:HA3	2.10	0.52
7:YG:112:VAL:CG1	7:YG:114:HIS:HB3	2.40	0.52
20:RT:50:LEU:CD1	20:RT:50:LEU:H	2.18	0.52
32:QA:49:U:C5	32:QA:365:U:O4	2.62	0.52
42:XK:124:LYS:HE3	52:XU:34:ARG:CZ	2.40	0.52
11:RK:39:ILE:HD13	11:RK:41:ILE:HD13	1.92	0.52
44:QM:7:ASN:O	44:QM:9:PRO:HD3	2.10	0.52
6:YF:19:PHE:HB3	6:YF:21:TYR:CE2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:YB:94:A:OP1	22:YV:19:ARG:HD3	2.09	0.52
20:RT:87:LEU:O	20:RT:88:LYS:C	2.48	0.52
5:YE:79:ARG:O	5:YE:80:SER:C	2.47	0.52
13:RM:53:MET:O	13:RM:56:ALA:HB3	2.10	0.52
1:RA:342:A:C6	1:RA:343:C:C5	2.98	0.52
44:QM:24:VAL:HG23	44:QM:24:VAL:O	2.10	0.52
35:QD:190:LEU:C	35:QD:190:LEU:HD12	2.30	0.52
1:YA:1833:C:C4	1:YA:1834:U:C5	2.98	0.52
49:XR:32:ILE:O	49:XR:32:ILE:HG13	2.09	0.52
48:QQ:40:THR:HG22	48:QQ:41:THR:N	2.25	0.52
7:RG:54:ARG:C	7:RG:54:ARG:HD3	2.29	0.52
52:XU:3:ILE:HG21	52:XU:18:PHE:HB3	1.91	0.52
1:YA:1490:A:H5'	1:YA:1490:A:N3	2.25	0.52
1:YA:223:A:H2	1:YA:407:G:N3	2.08	0.52
1:YA:1069:A:O2'	1:YA:1072:C:OP2	2.26	0.52
32:QA:1277:C:H2'	32:QA:1278:G:H5''	1.92	0.52
1:YA:616:A:C2'	1:YA:617:G:C8	2.86	0.52
1:YA:668:A:H2'	1:YA:670:A:N6	2.13	0.52
1:YA:192:C:N4	1:YA:193:U:C2	2.78	0.52
1:YA:729:G:N3	1:YA:729:G:H2'	2.25	0.52
3:RC:106:PRO:CA	3:RC:141:HIS:CE1	2.92	0.52
37:XF:43:GLY:HA2	37:XF:58:HIS:HE1	1.71	0.52
20:YT:13:ALA:HB1	20:YT:14:PRO:HD2	1.92	0.52
32:XA:994:A:C6	32:XA:1216:A:H5''	2.45	0.52
32:XA:369:G:OP2	32:XA:388:G:N2	2.42	0.52
19:RS:74:ILE:CD1	19:RS:105:VAL:HG22	2.39	0.52
33:QB:77:GLU:HB2	33:QB:80:LYS:HE2	1.92	0.52
32:XA:496:A:C2	32:XA:497:G:C5	2.98	0.52
1:RA:565:C:C2'	1:RA:566:U:H5'	2.40	0.52
16:RP:33:GLU:OE2	16:RP:38:ARG:NH1	2.42	0.52
21:YU:58:VAL:CG1	21:YU:60:LYS:H	2.19	0.52
1:YA:1281:G:C2'	1:YA:1282:U:H5'	2.40	0.52
1:YA:808:G:O2'	1:YA:1254:A:H4'	2.10	0.52
32:XA:1454:G:HO2'	32:XA:1455:G:H8	1.55	0.52
5:RE:117:ARG:HA	5:RE:185:LYS:HD3	1.91	0.52
31:Y4:7:VAL:CG1	31:Y4:8:LYS:N	2.71	0.52
32:QA:181:A:N6	32:QA:195:A:OP2	2.43	0.52
12:YL:47:ARG:HG2	12:YL:47:ARG:HH21	1.74	0.52
1:RA:1277:G:H4'	14:RN:20:MET:HE2	1.91	0.52
25:RY:61:ALA:C	25:RY:63:ALA:H	2.14	0.52
38:QG:144:ALA:C	38:QG:146:ALA:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:5:LEU:HD12	5:YE:10:SER:HB2	1.92	0.52
1:YA:2656:U:H2'	1:YA:2657:A:H8	1.75	0.52
32:QA:965:U:O2	32:QA:969:A:C2	2.63	0.52
10:YJ:37:ARG:HG3	10:YJ:118:MET:SD	2.49	0.52
33:XB:174:GLU:O	33:XB:178:LEU:HB2	2.09	0.52
5:RE:145:ASP:OD1	5:RE:183:PHE:HD2	1.92	0.52
2:RB:2:G:C6	2:RB:119:A:C2	2.98	0.52
1:RA:1205:A:H4'	1:RA:1206:G:OP2	2.09	0.52
1:RA:1635:A:C6	1:RA:1636:U:C2	2.98	0.52
32:XA:1418:A:H2	1:YA:1948:G:N3	2.07	0.52
46:QO:62:ARG:HG2	46:QO:66:LEU:HD12	1.92	0.52
32:QA:654:G:H2'	32:QA:655:A:H8	1.75	0.52
11:RK:8:LEU:N	11:RK:8:LEU:HD23	2.24	0.52
1:YA:724:U:H2'	1:YA:725:G:O4'	2.09	0.52
32:XA:1477:U:H2'	32:XA:1478:U:C6	2.44	0.52
1:YA:2562:U:H1'	11:YK:23:LYS:HE2	1.92	0.52
1:YA:2853:C:H2'	1:YA:2854:G:H8	1.74	0.52
1:YA:1451:C:N4	1:YA:1461:C:H42	2.08	0.52
1:RA:998:C:OP2	17:RQ:57:ARG:NH2	2.37	0.52
37:QF:71:ILE:HG23	37:QF:72:ASP:N	2.25	0.52
1:YA:35:G:C8	1:YA:454:A:C2	2.98	0.52
2:YB:28:C:OP1	15:YO:31:THR:HG21	2.10	0.52
1:YA:1515:A:H4'	1:YA:1556:C:O2'	2.10	0.52
1:YA:2345:G:C5	1:YA:2347:C:N4	2.78	0.52
1:YA:827:U:H5'	1:YA:828:U:O5'	2.10	0.52
11:RK:18:ARG:HB2	11:RK:45:GLU:CG	2.40	0.52
1:YA:1532:A:C5	1:YA:1533:C:C4	2.98	0.52
1:RA:301:G:OP2	21:RU:81:ARG:NH1	2.43	0.52
32:QA:1060:U:H5''	41:QJ:53:ILE:HD13	1.92	0.52
1:YA:1055:G:C3'	1:YA:1056:G:H5'	2.40	0.52
13:YM:62:LYS:HG2	13:YM:64:TRP:CZ2	2.45	0.52
32:XA:86:G:H1'	32:XA:87:C:O5'	2.10	0.52
1:YA:351:C:N4	1:YA:352:A:H62	2.08	0.52
39:QH:74:ILE:CD1	39:QH:128:VAL:HG22	2.40	0.52
8:RH:89:LYS:HG2	8:RH:90:LEU:N	2.14	0.52
7:YG:138:GLN:HG2	7:YG:138:GLN:O	2.09	0.52
33:QB:22:TRP:HA	33:QB:189:ASN:HA	1.92	0.52
16:YP:54:LEU:HD12	16:YP:76:HIS:CB	2.40	0.52
43:QL:53:ARG:HA	43:QL:63:THR:HA	1.91	0.52
7:YG:164:ALA:O	7:YG:165:ASP:HB2	2.10	0.52
32:XA:598:U:H4'	39:XH:85:TYR:CD1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:XM:64:VAL:HG12	44:XM:65:GLU:HG3	1.92	0.52
33:XB:103:TRP:HA	33:XB:106:VAL:H	1.74	0.52
32:XA:1287:A:O2'	32:XA:1288:A:H8	1.84	0.52
14:YN:103:ARG:HG3	14:YN:104:ALA:H	1.75	0.52
1:YA:1330:C:O2'	1:YA:1331:G:O5'	2.27	0.52
32:QA:708:C:O2'	32:QA:709:U:H5'	2.09	0.52
1:RA:2638:G:O2'	1:RA:2775:G:N2	2.38	0.52
1:YA:1968:G:H5'	56:YA:3484:HOH:O	2.10	0.52
32:QA:1053:G:N2	32:QA:1056:U:C4	2.78	0.52
10:RJ:97:PRO:O	10:RJ:98:GLU:C	2.48	0.52
1:YA:468:G:H5'	1:YA:797:G:OP1	2.09	0.52
38:XG:4:ARG:CZ	38:XG:6:ILE:HB	2.40	0.52
3:YC:191:LEU:HD22	3:YC:191:LEU:N	2.25	0.52
43:QL:3:VAL:HG23	43:QL:4:ASN:H	1.75	0.52
1:RA:2097:A:C2	1:RA:2193:G:C2	2.98	0.52
32:XA:1124:G:N2	32:XA:1127:G:N2	2.57	0.52
32:QA:821:G:H4'	56:QA:1742:HOH:O	2.10	0.52
41:QJ:15:HIS:C	41:QJ:17:LEU:H	2.11	0.52
32:QA:725:G:H2'	32:QA:726:C:H6	1.74	0.52
1:YA:2583:G:H2'	1:YA:2584:U:H5'	1.92	0.52
1:YA:1588:G:H2'	1:YA:1589:U:H6	1.74	0.52
32:QA:953:G:H2'	32:QA:954:G:O4'	2.10	0.52
32:QA:1414:U:H2'	32:QA:1415:G:C8	2.44	0.52
44:QM:28:ARG:NH2	44:QM:62:PHE:HB2	2.25	0.52
32:XA:1040:U:C2'	32:XA:1041:G:H5'	2.40	0.52
25:RY:26:PHE:HD1	25:RY:27:ASN:HD22	1.58	0.52
32:XA:695:A:H61	32:XA:797:C:H1'	1.75	0.52
35:XD:72:ARG:HD2	35:XD:203:TYR:CE1	2.45	0.52
38:QG:44:SER:O	38:QG:48:THR:HG23	2.10	0.52
17:RQ:8:ILE:HD12	17:RQ:8:ILE:C	2.30	0.52
15:YO:72:ALA:HA	15:YO:106:LEU:HA	1.91	0.52
23:RW:76:ARG:CG	23:RW:76:ARG:NH2	2.65	0.51
3:YC:72:GLY:O	3:YC:73:ILE:HD13	2.11	0.51
1:YA:1437:C:H2'	1:YA:1438:U:H6	1.75	0.51
1:YA:1531:C:H2'	1:YA:1532:A:O4'	2.10	0.51
1:YA:1311:G:H21	1:YA:1603:A:N6	2.08	0.51
1:YA:1809:A:C2'	1:YA:1810:A:C8	2.93	0.51
6:YF:32:LYS:HB3	6:YF:156:THR:HB	1.92	0.51
9:YI:48:ILE:HG13	9:YI:49:GLU:N	2.24	0.51
21:YU:44:HIS:HD2	21:YU:57:ILE:HG21	1.74	0.51
1:YA:183:C:O5'	1:YA:183:C:H6	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1139:G:O2'	1:YA:1140:C:H5'	2.09	0.51
33:XB:125:PHE:CD1	33:XB:137:THR:HG22	2.45	0.51
1:YA:68:G:C2	1:YA:69:C:C2	2.98	0.51
31:Y4:36:ARG:HG2	31:Y4:37:GLN:H	1.75	0.51
37:XF:41:ASP:O	37:XF:42:TRP:C	2.48	0.51
1:YA:810:U:C4	12:YL:30:THR:HG22	2.43	0.51
32:XA:597:G:C2'	32:XA:598:U:H5'	2.38	0.51
33:QB:86:CYS:SG	33:QB:221:ARG:HB2	2.50	0.51
1:YA:2013:A:N6	1:YA:2014:A:C2	2.79	0.51
32:QA:1055:A:C6	32:QA:1206:G:C5	2.98	0.51
1:YA:1716:U:O2'	1:YA:1717:A:C8	2.47	0.51
1:YA:2197:U:O2'	1:YA:2198:A:H8	1.91	0.51
32:XA:988:G:H2'	32:XA:989:U:O4'	2.11	0.51
1:YA:1320:C:O2'	1:YA:1321:A:H8	1.93	0.51
1:YA:2142:A:O3'	1:YA:2143:C:H4'	2.10	0.51
35:XD:96:ARG:O	35:XD:100:VAL:HG23	2.10	0.51
43:QL:87:LYS:O	43:QL:88:ASP:CB	2.58	0.51
14:RN:65:LEU:HD12	14:RN:65:LEU:O	2.10	0.51
20:RT:4:GLU:OE1	20:RT:6:ARG:HG3	2.10	0.51
1:YA:2352:A:C6	23:YW:30:VAL:HG11	2.45	0.51
30:R3:56:LEU:H	30:R3:56:LEU:CD2	2.22	0.51
47:QP:77:GLU:C	47:QP:79:ASN:H	2.13	0.51
32:XA:151:A:H2'	32:XA:152:A:O4'	2.11	0.51
32:QA:751:U:C5	32:QA:752:G:C6	2.98	0.51
5:YE:5:LEU:CD2	5:YE:120:VAL:HG22	2.40	0.51
32:QA:1261:A:N1	32:QA:1274:A:C2	2.78	0.51
1:RA:2563:U:H1'	1:RA:2566:A:N6	2.25	0.51
16:YP:107:ALA:O	16:YP:108:ARG:C	2.48	0.51
35:QD:190:LEU:O	35:QD:191:SER:HB2	2.10	0.51
32:QA:1381:U:O2'	32:QA:1382:C:O4'	2.27	0.51
33:XB:95:TRP:CZ3	33:XB:170:ILE:HG22	2.45	0.51
32:XA:1394:A:H4'	32:XA:1395:C:OP2	2.08	0.51
32:QA:1311:A:C2	32:QA:1327:C:N3	2.78	0.51
19:YS:55:ILE:O	19:YS:59:GLU:HG2	2.10	0.51
22:RV:40:ILE:HG22	22:RV:41:GLU:N	2.25	0.51
1:RA:2373:G:H2'	1:RA:2374:C:C6	2.44	0.51
35:XD:98:ASP:OD2	35:XD:132:ALA:HB1	2.10	0.51
7:YG:76:ILE:HG22	7:YG:76:ILE:O	2.10	0.51
5:YE:9:GLN:HG3	5:YE:9:GLN:O	2.10	0.51
1:RA:2852:G:H2'	1:RA:2853:C:O4'	2.10	0.51
1:YA:1638:C:H5"	1:YA:2710:C:O2'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:149:LYS:NZ	35:XD:176:LYS:NZ	2.58	0.51
1:YA:379:G:C5	1:YA:396:G:C6	2.97	0.51
18:YR:39:LEU:CA	18:YR:49:ILE:HG21	2.25	0.51
37:QF:29:ILE:HG12	37:QF:64:VAL:HG11	1.92	0.51
1:RA:364:C:H2'	1:RA:365:U:C6	2.45	0.51
1:YA:1340:U:O2'	1:YA:1602:U:H2'	2.09	0.51
44:XM:75:SER:C	44:XM:77:LYS:H	2.12	0.51
39:QH:63:LYS:C	39:QH:64:TYR:HD1	2.14	0.51
32:QA:271:C:O2'	32:QA:272:C:H5'	2.10	0.51
9:YI:52:LEU:CD1	9:YI:53:PRO:HD2	2.30	0.51
1:YA:484:C:N4	1:YA:497:A:C2	2.78	0.51
1:YA:628:G:O2'	1:YA:629:G:H5'	2.10	0.51
27:Y0:12:ARG:O	27:Y0:16:ARG:HG3	2.10	0.51
32:QA:579:A:O2'	46:QO:53:ARG:NH1	2.43	0.51
1:YA:2092:U:H4'	1:YA:2093:G:H5''	1.93	0.51
11:YK:39:ILE:HB	11:YK:41:ILE:HD13	1.93	0.51
1:YA:727:A:C2'	1:YA:728:G:C8	2.94	0.51
1:RA:571:U:C5	1:RA:575:A:C5	2.98	0.51
35:XD:138:PRO:O	35:XD:139:ASN:HB2	2.10	0.51
32:XA:1213:A:C8	32:XA:1215:G:C5	2.98	0.51
1:YA:1299:G:H22	1:YA:1640:A:H5'	1.74	0.51
32:QA:1181:G:O2'	32:QA:1182:G:C8	2.63	0.51
1:RA:31:C:O2'	1:RA:1238:G:H5'	2.10	0.51
12:YL:83:ALA:CB	12:YL:117:THR:HB	2.40	0.51
1:YA:1157:G:H2'	1:YA:1158:C:C5	2.45	0.51
1:YA:1545:A:N6	1:YA:1546:G:N2	2.58	0.51
33:QB:32:GLY:CA	33:QB:39:ILE:H	2.20	0.51
26:YZ:52:PHE:CD2	26:YZ:53:MET:HG2	2.46	0.51
1:YA:769:U:HO2'	1:YA:1379:U:H6	1.56	0.51
20:YT:29:THR:HB	20:YT:86:THR:CA	2.39	0.51
1:RA:2414:G:O2'	1:RA:2415:G:H5'	2.10	0.51
50:XS:45:GLY:N	50:XS:61:VAL:HB	2.25	0.51
18:YR:80:ARG:HG2	18:YR:81:LYS:NZ	2.24	0.51
43:XL:98:ARG:HA	43:XL:103:CYS:SG	2.50	0.51
32:XA:337:G:H2'	32:XA:338:A:C8	2.45	0.51
1:RA:1378:A:O2'	56:RA:3754:HOH:O	2.18	0.51
48:XQ:61:ARG:HG2	48:XQ:75:VAL:CG1	2.40	0.51
34:XC:183:TYR:HE1	34:XC:198:LYS:HB3	1.74	0.51
12:YL:101:ILE:HG23	12:YL:105:ILE:HG13	1.92	0.51
17:RQ:23:TYR:O	17:RQ:28:SER:HB3	2.10	0.51
32:QA:82:G:H2'	32:QA:83:C:H4'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:425:G:H2'	1:YA:426:C:C6	2.43	0.51
1:YA:777:G:N7	1:YA:793:A:C2	2.77	0.51
32:XA:858:G:O6	32:XA:869:G:C8	2.64	0.51
1:YA:498:G:C2	1:YA:499:U:C6	2.99	0.51
1:YA:1628:G:H2'	1:YA:1629:U:H6	1.74	0.51
1:RA:454:A:H4'	1:RA:455:C:OP2	2.10	0.51
9:YI:103:ALA:O	9:YI:107:GLU:HB2	2.09	0.51
32:QA:1405:G:O4'	32:QA:1519:A:H4'	2.11	0.51
32:XA:455:G:N2	32:XA:478:A:C2	2.77	0.51
37:QF:41:ASP:O	37:QF:43:GLY:N	2.43	0.51
16:RP:64:SER:O	16:RP:65:ASN:C	2.48	0.51
35:XD:60:VAL:HG22	35:XD:194:ILE:HG21	1.92	0.51
1:RA:232:G:H4'	1:RA:233:A:OP1	2.09	0.51
4:YD:115:GLY:O	14:YN:3:HIS:HE1	1.93	0.51
47:XP:56:ARG:O	47:XP:59:HIS:HB3	2.10	0.51
23:RW:50:VAL:O	23:RW:52:CYS:N	2.35	0.51
23:RW:40:ARG:HG3	23:RW:52:CYS:SG	2.50	0.51
1:YA:2347:C:O2'	1:YA:2348:U:O5'	2.29	0.51
1:YA:2282:G:N3	1:YA:2425:A:N6	2.58	0.51
51:QT:78:LEU:O	51:QT:82:ILE:HG23	2.10	0.51
1:YA:406:G:O2'	1:YA:407:G:O4'	2.27	0.51
3:YC:122:ALA:HB3	3:YC:127:ASN:ND2	2.24	0.51
1:YA:83:A:P	21:YU:91:LYS:HZ2	2.33	0.51
3:YC:145:MET:HB2	3:YC:152:GLN:HE22	1.75	0.51
48:QQ:18:LYS:C	48:QQ:47:ASP:OD2	2.49	0.51
48:QQ:20:ILE:HG22	48:QQ:47:ASP:OD1	2.10	0.51
14:YN:90:ARG:CZ	14:YN:116:VAL:HG11	2.39	0.51
32:XA:279:A:C4'	32:XA:280:C:O5'	2.57	0.51
4:YD:108:ASP:N	4:YD:204:LYS:O	2.35	0.51
8:YH:132:PHE:CZ	8:YH:134:VAL:HB	2.45	0.51
20:YT:14:PRO:HA	20:YT:32:LEU:HB3	1.91	0.51
43:XL:89:LEU:HB3	43:XL:92:VAL:HG21	1.91	0.51
32:XA:1326:U:H2'	32:XA:1327:C:C6	2.46	0.51
33:QB:72:LYS:O	33:QB:74:ALA:N	2.42	0.51
1:YA:2021:C:H4'	1:YA:2022:U:OP2	2.10	0.51
8:YH:68:ARG:HD2	8:YH:71:LYS:HD3	1.92	0.51
39:QH:94:VAL:HG12	39:QH:95:MET:HG3	1.92	0.51
19:YS:27:LYS:O	19:YS:28:LYS:O	2.28	0.51
1:YA:686:U:C6	1:YA:788:A:N1	2.77	0.51
9:RI:52:LEU:N	9:RI:52:LEU:HD12	2.25	0.51
1:RA:544:C:H3'	1:RA:545:U:O2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:QF:81:ASN:HB3	37:QF:84:VAL:CG1	2.40	0.51
32:XA:1226:C:O2'	32:XA:1227:A:H5'	2.10	0.51
32:XA:444:G:C2'	32:XA:445:G:H5'	2.40	0.51
34:XC:5:HIS:CD2	34:XC:183:TYR:HE2	2.29	0.51
1:YA:874:G:C2	1:YA:904:G:C2	2.99	0.51
32:XA:1050:G:O2'	32:XA:1051:C:H6	1.92	0.51
19:RS:84:ARG:HB2	19:RS:96:ILE:CD1	2.40	0.51
12:RL:55:MET:HE2	12:RL:56:PRO:HD3	1.93	0.51
1:YA:2894:G:OP2	1:YA:2894:G:H2'	2.10	0.51
32:XA:461:A:N3	32:XA:461:A:H2'	2.25	0.51
36:QE:136:VAL:O	36:QE:136:VAL:HG22	2.10	0.51
1:YA:2531:A:H5'	7:YG:156:TYR:CZ	2.45	0.51
32:QA:652:U:C5	32:QA:752:G:C4	2.98	0.51
22:YV:51:GLN:HA	22:YV:56:PHE:CD2	2.45	0.51
32:QA:996:A:C2	32:QA:1046:A:H5'	2.46	0.51
5:YE:34:ALA:HB1	5:YE:94:GLN:HB2	1.91	0.51
20:YT:34:VAL:HG21	20:YT:43:ILE:HD12	1.91	0.51
32:QA:1241:G:N2	32:QA:1242:G:C4	2.79	0.51
32:QA:1108:G:OP1	34:QC:175:HIS:HB2	2.11	0.51
16:YP:32:VAL:HA	16:YP:37:LYS:HA	1.91	0.51
32:QA:612:C:O2'	32:QA:613:C:H5'	2.10	0.51
44:QM:39:ALA:HB3	44:QM:42:VAL:HG22	1.92	0.51
11:YK:40:LYS:NZ	11:YK:89:ASN:HD21	2.07	0.51
32:QA:872:A:C4	32:QA:874:G:N7	2.78	0.51
1:YA:1678:A:C8	56:YA:3453:HOH:O	2.54	0.51
32:XA:1057:G:H4'	34:XC:196:GLY:H	1.75	0.51
32:QA:11:G:C5	32:QA:12:U:C5	2.98	0.51
7:RG:33:THR:C	7:RG:34:ARG:HD3	2.30	0.51
34:XC:134:LYS:HD3	34:XC:138:GLN:OE1	2.10	0.51
32:XA:681:A:C2	32:XA:710:G:C2	2.99	0.51
1:RA:1441:G:H2'	1:RA:1442:U:C6	2.45	0.51
14:RN:23:ASN:N	14:RN:23:ASN:HD22	2.08	0.51
32:XA:1370:G:H5''	40:XI:110:VAL:HG21	1.92	0.51
32:XA:291:U:O2'	32:XA:292:G:H5'	2.09	0.51
32:XA:1258:G:H2'	32:XA:1259:C:C6	2.45	0.51
23:RW:47:GLY:C	23:RW:49:ASN:H	2.14	0.51
23:RW:50:VAL:HB	23:RW:61:LYS:NZ	2.26	0.51
52:XU:24:LYS:CE	52:XU:25:ALA:H	2.23	0.51
16:RP:3:ILE:HD13	16:RP:3:ILE:C	2.30	0.51
1:YA:860:U:C4	1:YA:2268:A:C5	2.99	0.51
1:YA:2331:G:H1	1:YA:2385:C:N4	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:430:A:OP2	35:QD:7:LYS:HG2	2.11	0.51
1:YA:301:G:C4	1:YA:302:C:C4	2.98	0.51
1:YA:305:C:C2	1:YA:313:G:C2	2.97	0.51
1:YA:2887:A:C1'	27:Y0:39:ARG:HH22	2.18	0.51
1:YA:118:A:N7	1:YA:119:A:C8	2.78	0.51
32:XA:1280:A:H5''	41:XJ:43:PRO:HG2	1.91	0.51
10:YJ:30:THR:HG23	10:YJ:31:GLU:N	2.25	0.51
14:YN:56:LYS:HD3	14:YN:88:ALA:HA	1.92	0.51
1:YA:195:A:C6	1:YA:198:C:C5	2.98	0.51
32:QA:1441:A:N7	32:QA:1442:G:N7	2.59	0.51
32:XA:666:G:N2	32:XA:667:G:H1'	2.25	0.51
4:RD:125:TRP:CD2	4:RD:160:LYS:HD3	2.45	0.51
1:RA:84:A:N6	1:RA:101:A:H2	2.05	0.51
32:XA:1327:C:C4	32:XA:1328:C:N4	2.79	0.51
44:XM:11:HIS:HA	44:XM:44:ILE:HB	1.92	0.51
19:RS:73:LYS:HA	19:RS:73:LYS:HE3	1.92	0.51
1:YA:279:A:H8	1:YA:279:A:P	2.33	0.51
33:QB:81:ASP:OD1	33:QB:83:ALA:N	2.38	0.51
1:YA:1297:C:H2'	1:YA:1298:C:H6	1.75	0.51
34:QC:110:LEU:HD21	34:QC:143:LEU:HD23	1.90	0.51
25:RY:1:MET:HG2	25:RY:5:GLU:OE1	2.09	0.51
1:YA:1526:C:H2'	1:YA:1527:G:O4'	2.11	0.51
32:XA:66:A:C6	32:XA:67:C:C4	2.99	0.51
1:YA:2543:G:H2'	1:YA:2544:G:C8	2.46	0.51
20:YT:29:THR:HB	20:YT:87:LEU:N	2.21	0.51
34:QC:86:LEU:O	34:QC:90:VAL:HG23	2.11	0.51
1:RA:2415:G:H2'	1:RA:2416:C:C6	2.45	0.51
8:YH:9:VAL:CG1	8:YH:10:ALA:N	2.73	0.51
5:YE:90:GLN:HG3	5:YE:92:HIS:NE2	2.26	0.51
9:RI:102:ARG:HB2	9:RI:141:ASP:OD2	2.11	0.51
45:XN:100:TRP:C	45:XN:100:TRP:CD1	2.84	0.51
1:RA:323:C:N4	1:RA:333:G:C5	2.78	0.51
1:YA:1974:C:H2'	1:YA:1975:G:H8	1.75	0.51
2:YB:78:A:H2'	2:YB:79:G:O4'	2.10	0.51
1:YA:468:G:H5''	5:YE:55:SER:CB	2.40	0.51
5:YE:53:THR:OG1	5:YE:54:GLY:N	2.43	0.51
1:YA:852:U:H5'	26:YZ:45:GLY:HA3	1.92	0.51
13:RM:43:ALA:HA	13:RM:46:ILE:HG13	1.91	0.51
1:YA:1411:U:H2'	1:YA:1412:U:C6	2.45	0.51
1:YA:590:A:C5	1:YA:591:U:C5	2.97	0.51
1:RA:1786:A:H1'	1:RA:1938:A:N6	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QL:76:HIS:O	43:QL:77:SER:HB2	2.10	0.51
7:RG:109:SER:O	7:RG:110:HIS:CB	2.59	0.51
32:XA:1108:G:H5"	34:XC:175:HIS:CE1	2.45	0.51
30:R3:61:LEU:HB3	30:R3:64:ALA:HB2	1.93	0.51
33:XB:91:VAL:HG11	33:XB:95:TRP:HD1	1.75	0.51
32:QA:316:C:C2	32:QA:317:U:C5	2.98	0.51
1:YA:669:G:C2	1:YA:801:G:C6	2.98	0.51
6:YF:129:MET:HG3	6:YF:153:ILE:HD12	1.92	0.51
32:XA:335:C:H2'	32:XA:336:A:C8	2.46	0.51
32:QA:531:U:H5"	34:QC:160:GLU:OE2	2.11	0.51
32:QA:1296:C:O2'	32:QA:1302:C:C4	2.63	0.51
32:QA:56:U:H2'	32:QA:57:G:C8	2.46	0.51
1:RA:833:A:H2'	1:RA:834:G:C8	2.46	0.51
1:YA:396:G:O2'	1:YA:397:U:O5'	2.28	0.51
18:YR:39:LEU:HD23	18:YR:39:LEU:H	1.76	0.51
23:RW:22:VAL:O	23:RW:25:PHE:HD2	1.94	0.51
30:R3:31:ILE:CG1	30:R3:34:LYS:HD2	2.40	0.51
1:YA:2298:A:O2'	1:YA:2299:U:O5'	2.28	0.51
3:YC:127:ASN:O	3:YC:190:THR:HA	2.10	0.51
47:QP:20:VAL:HG23	47:QP:34:GLU:O	2.11	0.51
1:YA:2267:A:N6	1:YA:2272:U:N3	2.53	0.51
25:YY:57:LEU:O	25:YY:60:LYS:HB3	2.11	0.51
1:YA:612:G:C2	1:YA:617:G:O6	2.64	0.51
1:YA:2093:G:N3	1:YA:2094:A:C8	2.78	0.51
32:XA:1346:A:C8	32:XA:1348:U:C2	2.99	0.51
6:YF:137:PHE:CB	6:YF:138:PRO:HD2	2.35	0.51
32:QA:365:U:H5"	32:QA:366:A:OP1	2.11	0.51
1:YA:818:G:C2'	1:YA:819:A:H5"	2.40	0.51
1:YA:1417:C:H4'	1:YA:1587:G:H21	1.75	0.51
1:YA:856:G:O4'	23:YW:23:LYS:HB3	2.10	0.51
4:RD:114:LYS:N	4:RD:114:LYS:CE	2.72	0.51
10:YJ:95:ARG:O	10:YJ:96:ARG:C	2.49	0.51
1:RA:480:A:H2'	1:RA:481:G:OP1	2.10	0.51
32:XA:1422:G:O2'	32:XA:1423:G:H5'	2.11	0.51
1:YA:412:A:O2'	1:YA:413:C:H5'	2.11	0.51
39:XH:11:THR:HG23	39:XH:14:ARG:HH22	1.73	0.51
32:QA:1371:G:H5"	32:QA:1372:U:OP2	2.10	0.51
1:YA:1282:U:O4	1:YA:1283:G:C6	2.64	0.51
1:YA:2729:G:H2'	1:YA:2730:C:C6	2.46	0.51
21:RU:12:VAL:O	21:RU:18:LYS:O	2.28	0.51
5:YE:170:ARG:NH2	5:YE:176:ASP:HB2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1270:G:H2'	32:XA:1271:A:C8	2.45	0.51
1:YA:453:A:H4'	1:YA:472:A:N6	2.24	0.51
1:YA:99:U:H5'	1:YA:100:U:H2'	1.91	0.51
1:YA:56:A:C2	1:YA:57:C:C2	2.97	0.51
1:YA:836:G:C6	1:YA:837:C:C4	2.99	0.51
38:QG:134:VAL:O	38:QG:137:ARG:HB3	2.11	0.51
1:RA:125:A:OP2	29:R2:19:ARG:NH2	2.43	0.51
1:YA:2508:G:H2'	1:YA:2509:G:H8	1.75	0.51
1:RA:684:G:OP1	29:R2:21:ARG:NH1	2.43	0.51
32:XA:620:C:H1'	35:XD:131:ILE:HG21	1.93	0.51
24:YX:10:ARG:HB3	24:YX:11:PRO:HD2	1.92	0.51
32:QA:890:G:O2'	32:QA:906:A:N6	2.43	0.51
1:RA:2714:G:P	56:RA:3546:HOH:O	2.68	0.51
32:QA:908:A:C2	32:QA:909:A:C4	2.98	0.51
1:YA:2492:U:H2'	1:YA:2493:U:C6	2.44	0.51
29:Y2:25:LYS:O	29:Y2:25:LYS:HG2	2.11	0.51
9:RI:96:LYS:HD2	9:RI:96:LYS:N	2.25	0.51
9:RI:8:VAL:HG23	9:RI:9:LYS:N	2.26	0.51
50:XS:35:ARG:HH22	50:XS:53:GLY:N	2.09	0.51
1:RA:528:A:H2'	1:RA:529:A:H5''	1.91	0.51
1:RA:528:A:H3'	1:RA:528:A:C8	2.45	0.51
1:YA:833:A:H2'	1:YA:834:G:C8	2.45	0.51
1:YA:1131:G:N7	1:YA:2025:C:H4'	2.26	0.51
1:YA:321:U:O2	5:YE:159:LEU:HD11	2.11	0.51
2:YB:42:C:H5	6:YF:65:LEU:HD13	1.75	0.51
9:RI:27:LEU:HD12	9:RI:27:LEU:O	2.11	0.51
1:YA:2744:G:C6	1:YA:2761:A:C6	2.99	0.51
1:YA:782:A:N7	3:YC:219:VAL:HG21	2.26	0.51
50:QS:39:ILE:HD11	50:QS:70:LEU:HD23	1.93	0.51
13:YM:34:LYS:O	13:YM:128:THR:HB	2.11	0.51
4:RD:5:VAL:N	4:RD:32:ASN:HD21	1.99	0.51
32:XA:642:A:O2'	32:XA:643:C:C6	2.54	0.51
1:YA:2021:C:C2'	1:YA:2021:C:O2	2.58	0.51
32:QA:132:C:H2'	32:QA:133:U:O4'	2.11	0.51
32:QA:553:A:O2'	32:QA:554:A:H5'	2.11	0.51
3:YC:95:TYR:C	3:YC:97:ASP:H	2.13	0.51
8:YH:8:LYS:HD2	8:YH:8:LYS:C	2.30	0.51
45:XN:20:PHE:CA	45:XN:24:ALA:HB2	2.40	0.51
1:RA:1496:A:H2'	1:RA:1498:C:N4	2.26	0.51
31:Y4:15:LYS:O	31:Y4:16:ILE:HB	2.10	0.51
16:RP:21:PRO:HA	16:RP:46:VAL:CG1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Y3:23:HIS:ND1	30:Y3:24:LYS:O	2.43	0.51
34:XC:29:ALA:HB1	45:XN:64:ARG:HH12	1.75	0.51
44:QM:49:GLU:O	44:QM:52:ILE:HG22	2.10	0.51
3:RC:33:LEU:CD2	3:RC:62:ARG:HD3	2.40	0.51
33:QB:183:PHE:CE1	33:QB:197:PHE:CD2	2.99	0.51
32:XA:892:A:C6	32:XA:893:C:C4	2.99	0.51
1:RA:2210:U:C2	1:RA:2212:A:N7	2.79	0.51
1:YA:1566:A:C2	3:YC:212:TRP:HB2	2.45	0.51
32:XA:486:U:O2	32:XA:486:U:H2'	2.10	0.51
1:RA:2075:U:H2'	1:RA:2238:G:N2	2.26	0.51
16:YP:90:ALA:HB3	16:YP:110:LYS:HB2	1.92	0.51
32:XA:861:G:C6	32:XA:862:C:C4	2.99	0.51
1:YA:1202:G:N7	1:YA:1203:U:C5	2.78	0.51
1:RA:2430:A:H2'	1:RA:2430:A:N3	2.26	0.51
32:XA:880:C:C2'	32:XA:881:G:H5'	2.40	0.51
48:QQ:49:ASN:O	48:QQ:50:ASN:C	2.48	0.51
4:RD:45:TYR:N	4:RD:45:TYR:CD1	2.78	0.51
26:YZ:40:THR:H	26:YZ:43:ILE:HD11	1.74	0.51
27:Y0:27:LEU:N	27:Y0:27:LEU:HD22	2.26	0.51
32:XA:1351:U:O2'	32:XA:1352:C:H5'	2.11	0.51
32:XA:977:A:H8	32:XA:1223:C:N3	2.08	0.51
1:YA:2360:G:H1'	12:YL:60:ARG:HH21	1.74	0.51
51:QT:53:MET:HE1	51:QT:57:VAL:HG21	1.92	0.51
32:XA:1408:A:C2	32:XA:1492:A:N6	2.78	0.51
1:YA:1384:A:H1'	1:YA:1405:U:H1'	1.92	0.51
1:YA:329:G:O6	21:YU:16:LYS:HB2	2.10	0.51
12:RL:101:ILE:HG22	12:RL:102:GLY:N	2.25	0.51
1:YA:1079:C:N4	1:YA:1088:A:N3	2.59	0.51
1:YA:1092:C:C2'	1:YA:1093:G:H5'	2.40	0.51
10:RJ:17:VAL:CG2	10:RJ:137:PRO:HB2	2.34	0.51
41:QJ:67:ILE:HG13	45:QN:95:LEU:HD13	1.92	0.51
8:YH:24:GLY:O	8:YH:25:TYR:C	2.48	0.51
1:YA:1775:U:H2'	1:YA:1776:G:O5'	2.10	0.51
32:XA:642:A:N7	39:XH:106:SER:HA	2.26	0.51
33:XB:103:TRP:HA	33:XB:106:VAL:CB	2.41	0.51
6:YF:49:LEU:HD22	6:YF:49:LEU:N	2.21	0.51
20:YT:38:ALA:HB1	20:YT:81:LYS:HZ3	1.75	0.51
20:YT:39:THR:HG21	20:YT:42:GLU:CB	2.34	0.51
2:RB:89:U:H3'	2:RB:90:C:C5'	2.40	0.51
18:YR:68:ARG:CZ	18:YR:90:ARG:HG2	2.41	0.51
4:YD:133:THR:O	4:YD:134:HIS:C	2.49	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:176:C:H2'	32:QA:177:G:N3	2.26	0.51
35:QD:68:GLU:O	35:QD:69:ARG:C	2.47	0.51
51:XT:26:MET:CE	51:XT:30:PHE:HD1	2.24	0.51
32:QA:222:C:H2'	32:QA:223:A:C8	2.40	0.51
1:YA:1734:G:C2'	1:YA:1735:A:H8	2.24	0.51
32:XA:708:C:H2'	32:XA:709:U:C6	2.44	0.51
32:XA:624:C:O2'	47:XP:10:GLY:HA2	2.10	0.51
32:XA:64:G:H4'	32:XA:65:A:H5''	1.93	0.51
32:QA:575:G:H4'	32:QA:576:C:OP1	2.11	0.51
32:QA:636:U:O2'	32:QA:637:C:H5'	2.11	0.51
32:XA:38:G:C2	32:XA:397:A:C2	2.99	0.51
1:RA:164:C:H2'	1:RA:165:A:O4'	2.11	0.51
1:YA:927:A:C6	1:YA:928:A:C6	2.99	0.51
38:QG:22:LEU:O	38:QG:25:PHE:HB3	2.10	0.51
32:XA:1042:A:H2'	32:XA:1043:G:O4'	2.11	0.51
1:YA:597:G:H2'	1:YA:598:U:O4'	2.11	0.51
1:YA:2435:A:H2'	1:YA:2436:G:O5'	2.10	0.51
32:XA:189:A:H3'	32:XA:190:A:C8	2.46	0.51
30:Y3:36:ALA:O	30:Y3:40:LYS:HG3	2.10	0.51
1:RA:1275:A:C2	1:RA:1295:C:O2	2.64	0.51
50:XS:15:LEU:O	50:XS:19:GLU:HB2	2.10	0.51
1:YA:609:A:H2'	1:YA:610:C:O4'	2.11	0.51
4:YD:17:GLU:CD	4:YD:17:GLU:H	2.14	0.51
23:RW:14:ASP:OD2	23:RW:16:GLU:OE1	2.29	0.51
1:YA:2324:U:HO2'	1:YA:2385:C:H5	1.59	0.51
21:YU:81:ARG:O	21:YU:82:VAL:HG13	2.10	0.51
1:YA:666:A:H4'	12:YL:48:ARG:HD3	1.93	0.51
32:QA:267:C:H5'	32:QA:267:C:H6	1.75	0.51
48:QQ:12:VAL:HG21	48:QQ:21:VAL:HG13	1.93	0.51
48:QQ:18:LYS:O	48:QQ:47:ASP:OD2	2.29	0.51
1:YA:508:A:H3'	1:YA:509:C:C5'	2.41	0.51
1:YA:2305:U:H4'	6:YF:132:ARG:CG	2.41	0.51
12:YL:79:LEU:HA	12:YL:82:LEU:HD11	1.93	0.51
25:YY:47:ARG:O	25:YY:50:VAL:N	2.39	0.51
1:YA:1965:C:H2'	1:YA:1966:A:C8	2.46	0.51
32:XA:1244:G:H2'	32:XA:1245:C:C6	2.45	0.51
1:YA:617:G:N3	1:YA:618:G:C8	2.79	0.51
4:RD:92:VAL:O	4:RD:93:GLY:C	2.48	0.51
4:YD:29:VAL:HB	4:YD:98:VAL:CG1	2.31	0.51
11:YK:21:CYS:SG	11:YK:39:ILE:CG2	2.99	0.51
3:YC:70:LYS:HB2	3:YC:101:ARG:HH22	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:RI:56:VAL:HG22	9:RI:68:PHE:HB2	1.92	0.51
1:YA:1188:U:H2'	1:YA:1189:A:H8	1.76	0.51
1:RA:2813:A:H2	1:RA:2887:A:H61	1.57	0.51
11:RK:21:CYS:SG	11:RK:39:ILE:HD11	2.51	0.51
1:YA:2788:C:H1'	1:YA:2809:A:C2	2.46	0.51
1:YA:1854:A:C2'	1:YA:1855:U:H5'	2.40	0.51
32:QA:211:G:N1	32:QA:212:G:H1'	2.25	0.51
32:XA:765:G:C5	32:XA:812:G:C6	2.99	0.51
32:XA:765:G:C6	32:XA:812:G:N7	2.79	0.51
32:XA:1453:G:H2'	32:XA:1454:G:O4'	2.11	0.51
43:XL:109:ARG:NH2	43:XL:116:TYR:HE2	2.09	0.51
5:YE:73:ILE:HG13	5:YE:78:TRP:HE1	1.75	0.51
9:RI:17:ALA:HB1	9:RI:42:ASN:HD21	1.76	0.51
32:XA:1049:U:H4'	32:XA:1050:G:H5'	1.92	0.51
6:RF:7:TYR:HD2	6:RF:11:VAL:HG11	1.75	0.51
32:XA:711:G:O2'	32:XA:712:A:H5'	2.11	0.51
1:RA:659:G:H4'	5:RE:95:LYS:HD3	1.92	0.51
1:YA:2727:A:O2'	1:YA:2728:U:C5'	2.58	0.51
19:RS:59:GLU:HA	19:RS:64:ALA:CB	2.41	0.51
41:QJ:91:ASP:C	41:QJ:92:LEU:HD23	2.31	0.51
32:QA:956:U:H2'	32:QA:957:U:H6	1.75	0.51
8:YH:58:LEU:HA	8:YH:61:VAL:HG12	1.93	0.51
41:QJ:11:LYS:CG	41:QJ:97:ASP:HB3	2.40	0.51
3:YC:131:MET:HA	3:YC:134:ILE:HD11	1.92	0.51
12:YL:90:VAL:HG12	12:YL:90:VAL:O	2.09	0.51
32:XA:672:U:H2'	32:XA:673:A:H8	1.76	0.51
18:YR:21:ARG:HB2	18:YR:93:PHE:HD1	1.75	0.51
35:QD:56:GLU:O	35:QD:59:LYS:HB3	2.10	0.51
1:YA:1497:U:C5	1:YA:1578:U:O5'	2.64	0.51
9:YI:132:ALA:HA	9:YI:137:LEU:HD12	1.92	0.51
1:YA:2512:C:H2'	1:YA:2513:A:O4'	2.11	0.51
32:QA:157:U:O2'	32:QA:158:G:H5'	2.11	0.51
1:YA:2072:C:C2'	1:YA:2073:C:H5'	2.40	0.51
1:YA:1229:C:H2'	1:YA:1230:A:C8	2.45	0.51
1:RA:2182:U:C2'	1:RA:2183:A:OP1	2.58	0.51
32:QA:622:A:C8	32:QA:623:C:C6	2.99	0.51
5:RE:72:SER:C	5:RE:74:LYS:H	2.14	0.51
32:XA:1178:G:OP2	40:XI:98:ARG:NH2	2.44	0.51
32:QA:912:C:O2'	32:QA:913:A:H5'	2.10	0.51
32:XA:827:U:H2'	32:XA:870:U:O4	2.10	0.51
1:RA:915:C:H6	1:RA:915:C:H5''	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:RO:84:GLU:C	15:RO:86:GLY:H	2.14	0.51
32:QA:1017:U:OP2	32:QA:1017:U:H6	1.93	0.51
1:RA:195:A:C6	1:RA:198:C:C5	2.98	0.51
2:RB:98:G:H1	22:RV:14:LYS:HB3	1.76	0.51
24:YX:29:LEU:HB2	24:YX:30:PRO:HD2	1.93	0.51
32:XA:701:U:C2'	32:XA:702:A:OP2	2.57	0.51
32:XA:1408:A:N1	32:XA:1494:G:C6	2.79	0.51
1:YA:1403:A:C2	1:YA:1404:C:C2	2.99	0.51
10:YJ:44:TYR:O	10:YJ:45:THR:CB	2.59	0.51
42:XK:74:LYS:HG2	42:XK:74:LYS:O	2.10	0.51
33:QB:49:PHE:CD1	33:QB:53:LEU:HD23	2.46	0.51
32:XA:1435:G:H2'	32:XA:1436:U:C6	2.45	0.51
36:XE:79:THR:HA	36:XE:121:ASN:ND2	2.26	0.51
48:QQ:13:SER:O	48:QQ:20:ILE:CD1	2.59	0.51
48:QQ:22:VAL:HG21	48:QQ:60:ILE:CD1	2.36	0.51
6:RF:107:VAL:HG11	6:RF:175:PRO:HG2	1.92	0.51
22:RV:10:LYS:NZ	22:RV:11:GLU:HG3	2.26	0.51
32:XA:407:U:H2'	32:XA:408:A:C8	2.45	0.51
33:XB:147:LEU:N	33:XB:147:LEU:HD12	2.25	0.51
1:YA:600:G:H1'	5:YE:100:MET:HG2	1.91	0.51
1:YA:608:A:C6	1:YA:621:A:C8	2.99	0.51
14:YN:12:ARG:HG2	14:YN:16:HIS:CG	2.46	0.51
1:RA:1394:U:H2'	1:RA:1395:A:O5'	2.11	0.51
1:YA:1417:C:O2'	1:YA:1418:G:O4'	2.29	0.51
1:YA:1027:A:N7	1:YA:1126:A:C2	2.79	0.51
37:XF:3:HIS:O	37:XF:4:TYR:CG	2.63	0.51
32:XA:496:A:C2'	32:XA:496:A:N3	2.71	0.51
21:YU:73:ASN:CB	21:YU:95:PHE:HE2	2.24	0.51
21:YU:95:PHE:N	21:YU:95:PHE:CD1	2.64	0.51
43:QL:23:LEU:HB3	43:QL:58:ASN:HD22	1.76	0.51
14:YN:35:LYS:HG2	14:YN:112:TYR:CE1	2.45	0.51
1:YA:694:U:OP1	1:YA:1569:A:H1'	2.11	0.51
4:YD:161:MET:O	4:YD:162:ALA:O	2.29	0.51
32:XA:17:U:H2'	32:XA:18:C:H6	1.73	0.51
4:RD:193:VAL:HB	4:RD:194:PRO:HD2	1.93	0.51
6:YF:12:VAL:CG1	6:YF:16:MET:HG3	2.40	0.51
1:RA:1906:G:H2'	1:RA:1907:G:O5'	2.10	0.51
33:XB:20:ARG:HH21	33:XB:38:HIS:CE1	2.28	0.51
1:YA:2019:A:H4'	17:YQ:33:VAL:HG21	1.93	0.51
1:RA:2196:C:O2'	1:RA:2197:U:H5'	2.10	0.51
32:QA:1053:G:C6	32:QA:1199:U:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:RP:21:PRO:HA	16:RP:46:VAL:HG12	1.93	0.51
43:QL:2:THR:HG22	43:QL:4:ASN:N	2.26	0.51
16:RP:80:VAL:HG12	16:RP:81:ASP:N	2.25	0.51
1:RA:2193:G:H2'	1:RA:2194:U:C6	2.45	0.51
1:YA:260:G:C6	1:YA:261:G:C5	2.99	0.51
32:XA:32:A:C2	32:XA:33:A:C5	2.99	0.51
32:QA:1152:A:OP1	41:QJ:70:HIS:ND1	2.42	0.51
1:YA:2584:U:H2'	1:YA:2585:U:H5'	1.92	0.51
32:QA:928:G:O2'	32:QA:1533:C:OP1	2.29	0.51
37:XF:67:PRO:O	37:XF:68:GLN:C	2.49	0.51
16:RP:37:LYS:HD3	16:RP:37:LYS:N	2.25	0.51
1:RA:2405:G:O2'	1:RA:2406:A:OP1	2.26	0.51
1:YA:1295:C:H1'	14:YN:23:ASN:HD21	1.76	0.51
22:YV:27:PRO:O	22:YV:88:HIS:HA	2.11	0.51
3:RC:79:ARG:HG3	3:RC:92:LEU:HB3	1.92	0.51
1:RA:987:C:H2'	1:RA:988:A:H5'	1.93	0.51
1:YA:2818:U:H2'	1:YA:2819:G:C8	2.46	0.51
32:QA:186:C:O4'	51:QT:75:LYS:HD2	2.11	0.51
19:RS:103:ILE:H	19:RS:103:ILE:HD12	1.76	0.51
16:YP:13:LYS:HD2	16:YP:13:LYS:H	1.75	0.51
1:RA:2492:U:H2'	1:RA:2493:U:H6	1.76	0.51
1:RA:191:A:H2'	1:RA:192:C:C6	2.46	0.51
34:XC:185:THR:O	34:XC:186:SER:HB2	2.11	0.51
18:YR:49:ILE:CG2	18:YR:54:VAL:H	2.24	0.51
23:RW:39:GLN:CG	23:RW:41:GLY:H	2.11	0.51
1:YA:1817:G:C2'	1:YA:1818:U:H5'	2.38	0.51
33:QB:17:HIS:CE1	33:QB:202:ASN:HD21	2.29	0.51
1:RA:2779:U:C6	1:RA:2781:A:C2	2.99	0.51
7:RG:83:THR:O	7:RG:84:LYS:HD3	2.09	0.51
1:YA:2324:U:C5'	1:YA:2325:G:H5''	2.40	0.51
1:YA:2330:G:H2'	1:YA:2331:G:H5'	1.92	0.51
23:YW:33:GLY:O	23:YW:34:SER:CB	2.59	0.51
23:YW:36:ILE:O	23:YW:39:GLN:CB	2.60	0.51
1:YA:249:C:C5'	1:YA:2394:C:O2'	2.45	0.51
51:QT:26:MET:CE	51:QT:56:ILE:HD11	2.41	0.51
1:YA:1337:G:N2	1:YA:1338:G:H1'	2.26	0.51
35:QD:33:ILE:HG23	35:QD:33:ILE:O	2.11	0.51
1:YA:295:G:C2	1:YA:296:U:C6	2.99	0.51
1:YA:322:A:H3'	5:YE:163:ASN:HD21	1.72	0.51
1:YA:84:A:H5'	21:YU:5:ARG:HD2	1.93	0.51
44:XM:78:ARG:HH21	44:XM:79:LEU:CD2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:YI:74:PRO:O	9:YI:78:LEU:HG	2.11	0.51
41:XJ:65:TYR:HB3	45:XN:95:LEU:CD1	2.41	0.51
5:RE:189:THR:OG1	5:RE:191:ASP:CB	2.58	0.51
32:XA:83:C:H2'	32:XA:83:C:O2	2.11	0.51
1:YA:1140:C:OP2	10:YJ:68:LYS:HE3	2.11	0.51
32:XA:429:U:H1'	32:XA:430:A:H5''	1.93	0.51
33:XB:125:PHE:HD1	33:XB:137:THR:HG22	1.75	0.51
1:YA:2667:C:HO2'	1:YA:2668:G:H8	1.44	0.51
1:YA:668:A:C5	1:YA:670:A:C8	2.99	0.51
1:YA:2751:G:N3	7:YG:2:ARG:NH2	2.59	0.51
1:RA:276:U:O2'	1:RA:277:G:O5'	2.28	0.51
28:R1:34:GLU:HG2	28:R1:49:LYS:HG3	1.93	0.51
1:RA:137:U:OP2	1:RA:137:U:C5	2.64	0.51
32:XA:373:A:C5'	32:XA:373:A:H8	2.23	0.51
33:QB:79:VAL:O	33:QB:83:ALA:HB3	2.10	0.51
33:XB:73:ARG:HG3	33:XB:74:ALA:N	2.26	0.51
1:YA:1417:C:O2'	1:YA:1418:G:C8	2.64	0.51
3:RC:251:THR:CG2	3:RC:252:LYS:N	2.72	0.51
4:RD:97:SER:HB3	4:RD:99:GLU:OE1	2.11	0.51
34:QC:156:LEU:CD1	34:QC:156:LEU:H	2.17	0.51
32:XA:216:U:C4	32:XA:217:C:N4	2.79	0.51
1:RA:1386:C:H2'	1:RA:1387:A:C8	2.45	0.51
32:XA:1447:A:O3'	32:XA:1448:C:H6	1.94	0.51
42:QK:22:ILE:HG13	42:QK:22:ILE:O	2.10	0.51
1:YA:520:G:H2'	1:YA:521:U:C6	2.46	0.51
16:RP:19:PHE:CE2	16:RP:83:ILE:HD12	2.45	0.51
1:YA:1245:G:H4'	5:YE:33:VAL:HG11	1.93	0.51
8:RH:42:LYS:HG2	8:RH:43:ASN:ND2	2.26	0.51
46:QO:23:SER:HB3	46:QO:26:VAL:HG23	1.92	0.51
4:YD:208:LYS:O	4:YD:209:ALA:CB	2.59	0.51
32:XA:511:C:C2	32:XA:512:U:C5	2.99	0.51
21:RU:48:VAL:O	21:RU:53:GLN:HB3	2.11	0.51
32:XA:801:U:H2'	32:XA:802:A:C8	2.46	0.51
32:QA:1261:A:N1	32:QA:1274:A:N3	2.58	0.51
24:RX:10:ARG:HB2	24:RX:11:PRO:HD2	1.92	0.51
1:YA:545:U:C4	1:YA:547:A:H4'	2.46	0.51
1:RA:2461:A:H1'	1:RA:2492:U:C2	2.45	0.51
34:QC:106:ARG:HG2	34:QC:106:ARG:O	2.12	0.51
19:YS:2:GLU:OE2	19:YS:2:GLU:HA	2.10	0.51
1:YA:842:U:C4	1:YA:843:G:N7	2.79	0.51
46:QO:31:LEU:O	46:QO:32:THR:C	2.49	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:YB:104:A:H2'	2:YB:105:G:O4'	2.11	0.51
3:RC:219:VAL:HG12	3:RC:224:MET:CE	2.41	0.51
17:RQ:13:HIS:HD2	17:RQ:31:TYR:CE1	2.28	0.51
44:XM:69:ARG:O	44:XM:73:SER:HB3	2.10	0.51
21:RU:87:GLU:O	21:RU:88:ASP:O	2.29	0.51
13:YM:69:PRO:O	13:YM:70:ASP:HB3	2.11	0.51
32:QA:51:A:H4'	32:QA:52:C:C5'	2.41	0.51
32:QA:1378:C:N4	32:QA:1379:G:C4	2.79	0.51
1:YA:1278:C:O2'	1:YA:1279:G:H5'	2.11	0.51
17:RQ:60:TRP:CH2	17:RQ:93:ILE:HB	2.46	0.50
1:RA:1060:U:O4'	1:RA:1062:G:C5'	2.57	0.50
1:YA:2232:C:OP1	24:YX:26:ARG:NH1	2.44	0.50
17:YQ:87:VAL:HG12	17:YQ:88:GLU:H	1.76	0.50
18:YR:38:VAL:O	18:YR:53:PHE:HA	2.12	0.50
32:XA:1014:A:C6	50:XS:33:TRP:CE3	2.98	0.50
23:YW:36:ILE:O	23:YW:39:GLN:HB3	2.12	0.50
1:YA:223:A:C6	1:YA:422:A:N7	2.79	0.50
1:YA:1344:U:H5'	1:YA:1384:A:C6	2.46	0.50
1:RA:2052:A:OP1	4:RD:145:SER:HA	2.11	0.50
32:QA:429:U:H4'	32:QA:430:A:OP1	2.11	0.50
1:YA:1062:G:C8	1:YA:1088:A:C8	2.99	0.50
1:YA:1056:G:C2	1:YA:1102:C:H5	2.29	0.50
32:QA:266:G:H4'	32:QA:267:C:OP1	2.10	0.50
48:QQ:45:VAL:O	48:QQ:47:ASP:OD1	2.29	0.50
1:YA:477:A:H2'	1:YA:478:A:H8	1.76	0.50
1:YA:2308:G:C2'	1:YA:2309:A:OP1	2.58	0.50
6:RF:134:GLN:CG	6:RF:135:ILE:N	2.68	0.50
1:YA:1045:C:H4'	1:YA:1047:G:C4	2.46	0.50
1:YA:581:C:P	17:YQ:32:ARG:HE	2.33	0.50
34:QC:119:ILE:HA	34:QC:122:GLN:HG3	1.93	0.50
1:RA:2134:A:C6	1:RA:2135:A:N6	2.79	0.50
1:YA:748:G:H2'	1:YA:750:A:OP2	2.12	0.50
1:RA:1188:U:H2'	1:RA:1189:A:H5'	1.92	0.50
1:YA:1652:A:H62	14:YN:11:ASN:ND2	2.05	0.50
10:RJ:65:THR:CG2	10:RJ:68:LYS:HE3	2.40	0.50
1:YA:2135:A:HO2'	1:YA:2136:G:C1'	2.24	0.50
1:RA:2564:A:C2	1:RA:2647:U:H4'	2.45	0.50
1:RA:1385:A:C4	1:RA:1386:C:C5	2.99	0.50
1:YA:2044:C:N3	1:YA:2045:C:C5	2.79	0.50
1:YA:931:U:O2	1:YA:931:U:H2'	2.11	0.50
32:QA:683:G:H2'	32:QA:684:U:O4'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:935:C:H2'	1:YA:936:A:C8	2.44	0.50
13:RM:132:THR:CG2	13:RM:133:LYS:N	2.75	0.50
1:YA:684:G:OP1	29:Y2:16:HIS:CE1	2.64	0.50
32:XA:1105:A:H2'	32:XA:1106:G:C8	2.44	0.50
1:YA:851:C:H2'	1:YA:852:U:C6	2.46	0.50
21:RU:70:ALA:HB3	21:RU:79:ALA:HB1	1.93	0.50
1:YA:1244:A:O2'	5:YE:29:HIS:CE1	2.65	0.50
1:RA:2474:U:H5''	1:RA:2475:C:OP2	2.11	0.50
5:YE:153:LEU:HD12	5:YE:170:ARG:O	2.09	0.50
1:RA:1224:U:H4'	18:RR:88:GLY:O	2.11	0.50
32:QA:1112:C:H2'	32:QA:1113:C:O5'	2.11	0.50
32:XA:8:A:C6	35:XD:205:LYS:HG3	2.46	0.50
1:RA:743:A:O3'	56:RA:3653:HOH:O	2.19	0.50
46:QO:17:ASP:O	46:QO:20:ASP:HB3	2.11	0.50
32:XA:1058:G:C6	32:XA:1059:C:C4	2.99	0.50
1:YA:2819:G:H5''	56:YA:3802:HOH:O	2.11	0.50
1:YA:924:G:O2'	1:YA:925:A:H5'	2.11	0.50
5:YE:150:THR:HA	5:YE:189:THR:OG1	2.11	0.50
1:RA:1767:G:C2	1:RA:1768:C:C5	2.98	0.50
1:RA:594:U:H2'	1:RA:595:C:C6	2.46	0.50
37:XF:32:ALA:O	37:XF:33:GLU:HB2	2.11	0.50
13:RM:65:ILE:HG12	13:RM:103:TYR:CE2	2.47	0.50
32:QA:1009:U:O2'	32:QA:1010:U:H5'	2.11	0.50
36:XE:82:HIS:HB2	36:XE:83:PRO:HD2	1.92	0.50
26:YZ:31:ILE:HG13	26:YZ:31:ILE:O	2.11	0.50
32:QA:1478:U:H2'	32:QA:1479:C:C6	2.45	0.50
8:YH:103:VAL:HG23	8:YH:105:ALA:O	2.11	0.50
32:XA:841:C:H3'	32:XA:843:U:OP2	2.11	0.50
3:RC:180:MET:HG3	3:RC:268:ARG:NH1	2.25	0.50
18:RR:4:VAL:HA	18:RR:12:HIS:O	2.12	0.50
18:YR:49:ILE:CG2	18:YR:54:VAL:N	2.74	0.50
23:RW:44:PHE:O	23:RW:78:PHE:HA	2.10	0.50
51:QT:29:THR:O	51:QT:33:LYS:HE2	2.12	0.50
1:YA:1391:U:H4'	20:YT:19:LYS:HZ2	1.75	0.50
1:YA:1400:U:HO2'	1:YA:1401:G:C1'	2.23	0.50
33:QB:98:GLY:HA2	33:QB:101:THR:HG22	1.92	0.50
42:QK:125:LYS:O	52:QU:33:ARG:CZ	2.59	0.50
1:YA:319:G:C6	1:YA:333:G:C6	2.99	0.50
1:YA:323:C:H3'	5:YE:163:ASN:ND2	2.26	0.50
21:YU:91:LYS:O	21:YU:92:VAL:HG22	2.11	0.50
12:RL:77:ILE:HG12	12:RL:95:LEU:HD13	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:95:LEU:HB3	12:RL:100:ILE:HD11	1.93	0.50
1:YA:2831:G:OP2	4:YD:59:ARG:NE	2.44	0.50
32:XA:205:A:C5	32:XA:206:C:N4	2.79	0.50
32:QA:272:C:H2'	32:QA:273:U:C6	2.43	0.50
1:YA:55:G:N2	1:YA:116:C:C2	2.80	0.50
34:XC:8:GLY:HA2	34:XC:11:LEU:HG	1.93	0.50
5:RE:151:GLY:CA	5:RE:192:ALA:HB2	2.40	0.50
33:XB:146:SER:HB2	33:XB:147:LEU:CD1	2.30	0.50
4:YD:13:ARG:NH1	16:YP:74:GLN:NE2	2.53	0.50
32:XA:1349:A:OP1	40:XI:121:ARG:HB2	2.12	0.50
1:RA:143:C:H2'	1:RA:144:A:H8	1.77	0.50
6:YF:135:ILE:O	6:YF:137:PHE:N	2.45	0.50
6:YF:147:ARG:HD3	6:YF:149:ARG:HH22	1.75	0.50
32:QA:243:A:C2	32:QA:245:U:H2'	2.47	0.50
20:RT:55:VAL:O	20:RT:55:VAL:HG12	2.11	0.50
1:YA:1491:G:O6	1:YA:1500:G:C2	2.64	0.50
1:RA:478:A:C6	1:RA:480:A:C6	2.99	0.50
32:XA:464:U:O4	32:XA:466:A:C4'	2.58	0.50
19:RS:18:ARG:O	19:RS:19:LEU:CB	2.58	0.50
37:XF:62:MET:O	37:XF:63:ASN:HB2	2.11	0.50
44:XM:95:PRO:HG3	44:XM:99:GLN:CD	2.31	0.50
1:RA:1277:G:H5'	14:RN:20:MET:HE1	1.93	0.50
12:YL:93:ASN:CG	12:YL:94:THR:N	2.64	0.50
10:YJ:111:LYS:HB2	10:YJ:115:GLY:H	1.74	0.50
32:QA:1474:U:H2'	32:QA:1475:G:H5''	1.92	0.50
32:XA:68:G:N2	32:XA:152:A:H1'	2.26	0.50
21:YU:34:ILE:HG12	21:YU:63:ALA:HA	1.93	0.50
30:Y3:18:LYS:HD2	30:Y3:19:GLY:H	1.76	0.50
32:QA:1331:G:C2'	32:QA:1332:A:OP2	2.59	0.50
5:RE:48:THR:C	5:RE:50:ALA:N	2.62	0.50
1:RA:1857:G:H1'	1:RA:1858:A:OP2	2.11	0.50
21:RU:52:ASN:C	21:RU:54:PRO:CD	2.79	0.50
32:QA:1135:U:OP2	32:QA:1135:U:H6	1.95	0.50
19:YS:44:ALA:O	19:YS:48:LYS:HB2	2.10	0.50
3:YC:29:PHE:CE2	3:YC:31:PRO:HG2	2.46	0.50
32:XA:1489:G:C6	32:XA:1490:U:C4	2.99	0.50
15:YO:75:GLY:HA3	15:YO:109:ALA:O	2.11	0.50
44:XM:47:LEU:HD23	44:XM:48:SER:N	2.26	0.50
35:QD:64:TYR:CD1	35:QD:93:LEU:HD13	2.46	0.50
32:QA:687:A:C5	32:QA:701:U:H5	2.29	0.50
32:QA:1464:U:O2'	32:QA:1465:A:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1007:U:H2'	32:XA:1007:U:O2	2.11	0.50
23:YW:83:ALA:O	23:YW:84:GLU:HB2	2.11	0.50
36:QE:12:GLU:CB	36:QE:38:VAL:HG12	2.41	0.50
17:RQ:96:ASP:C	17:RQ:98:ALA:N	2.63	0.50
18:RR:49:ILE:HB	18:RR:51:VAL:O	2.10	0.50
35:XD:2:ARG:NE	35:XD:114:ARG:HD3	2.26	0.50
6:RF:35:LEU:HD12	6:RF:35:LEU:O	2.11	0.50
23:RW:51:GLY:HA3	23:RW:59:PHE:HE2	1.71	0.50
1:YA:455:C:N3	1:YA:473:G:H4'	2.26	0.50
32:XA:1092:A:C2	32:XA:1183:U:N3	2.75	0.50
15:YO:71:ALA:CB	15:YO:102:ARG:HB3	2.41	0.50
50:XS:52:ASN:C	50:XS:54:ARG:H	2.15	0.50
3:YC:144:GLU:HB3	3:YC:187:CYS:CB	2.33	0.50
23:YW:37:VAL:CG2	23:YW:38:ARG:NH1	2.74	0.50
1:YA:976:G:N2	1:YA:1155:A:C2	2.80	0.50
20:YT:19:LYS:O	20:YT:20:ALA:HB2	2.12	0.50
42:QK:124:LYS:O	52:QU:33:ARG:NE	2.45	0.50
1:YA:1060:U:H4'	1:YA:1061:U:O5'	2.11	0.50
32:XA:1150:A:N6	32:XA:1151:A:H62	2.08	0.50
5:RE:119:ILE:O	5:RE:187:VAL:O	2.28	0.50
10:YJ:25:LEU:C	10:YJ:27:ARG:H	2.14	0.50
9:RI:15:GLY:HA2	9:RI:50:LYS:CB	2.34	0.50
1:YA:141:G:H3'	1:YA:142:A:C8	2.46	0.50
1:YA:584:C:N4	1:YA:585:G:C6	2.79	0.50
40:XI:51:LEU:HG	40:XI:86:LEU:CD2	2.41	0.50
37:XF:43:GLY:O	37:XF:44:ARG:C	2.49	0.50
52:QU:11:PHE:O	52:QU:12:ASP:CB	2.59	0.50
9:RI:123:ALA:HA	9:RI:126:ARG:CZ	2.42	0.50
33:QB:71:THR:O	33:QB:72:LYS:HG2	2.11	0.50
11:RK:72:PRO:O	11:RK:74:GLY:N	2.41	0.50
8:YH:27:ARG:CZ	24:YX:59:ASP:HA	2.41	0.50
37:XF:92:THR:HG22	37:XF:93:LYS:N	2.26	0.50
52:XU:38:GLU:OE1	52:XU:41:THR:OG1	2.28	0.50
14:RN:103:ARG:HD3	14:RN:110:MET:HE3	1.94	0.50
1:YA:1525:A:C6	1:YA:1526:C:C2	2.99	0.50
39:XH:11:THR:HG22	39:XH:14:ARG:HH12	1.76	0.50
1:YA:2048:G:C6	1:YA:2049:G:C5	2.99	0.50
33:XB:9:LEU:O	33:XB:10:LYS:CB	2.59	0.50
1:YA:758:C:O2	1:YA:758:C:C2'	2.57	0.50
12:YL:77:ILE:HD11	12:YL:108:ALA:HB1	1.93	0.50
15:RO:54:VAL:HG22	15:RO:54:VAL:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:149:A:C2	32:XA:150:U:C2	2.99	0.50
32:QA:895:G:C6	32:QA:896:C:C4	2.99	0.50
1:RA:1197:G:H2'	1:RA:1198:U:C6	2.46	0.50
13:RM:43:ALA:HA	13:RM:46:ILE:CG1	2.42	0.50
37:XF:98:GLU:O	37:XF:99:ALA:CB	2.59	0.50
8:YH:54:LEU:HA	8:YH:57:LYS:HG3	1.94	0.50
1:YA:264:C:H4'	1:YA:264:C:OP1	2.12	0.50
32:XA:802:A:C2'	32:XA:803:G:O5'	2.59	0.50
32:QA:771:G:H2'	32:QA:772:U:H6	1.77	0.50
1:YA:1936:A:C2	1:YA:1943:U:C5	2.98	0.50
1:YA:1944:U:O4'	1:YA:1955:U:H1'	2.11	0.50
1:YA:2492:U:H2'	1:YA:2493:U:H6	1.77	0.50
1:YA:2857:G:N2	1:YA:2860:A:OP2	2.36	0.50
1:RA:2438:U:O2'	1:RA:2439:A:H5''	2.12	0.50
21:RU:66:VAL:C	21:RU:68:ASN:H	2.15	0.50
34:XC:119:ILE:O	34:XC:123:LEU:HB2	2.10	0.50
1:YA:2184:A:H2'	1:YA:2185:U:O4'	2.11	0.50
15:RO:116:GLN:O	15:RO:117:PHE:HB3	2.11	0.50
2:RB:12:C:H4'	2:RB:13:G:OP1	2.12	0.50
45:QN:13:VAL:HG23	45:QN:59:GLN:HG2	1.93	0.50
6:RF:87:LYS:HG3	6:RF:88:VAL:N	2.27	0.50
17:YQ:84:LYS:C	17:YQ:86:SER:H	2.15	0.50
40:XI:70:GLY:O	40:XI:73:GLY:N	2.41	0.50
32:XA:977:A:C8	32:XA:1223:C:N3	2.80	0.50
28:Y1:10:LEU:HB2	28:Y1:20:TYR:CB	2.41	0.50
1:YA:945:A:C8	1:YA:2448:A:C2	2.99	0.50
1:YA:1210:G:C4'	1:YA:1211:C:O5'	2.57	0.50
1:YA:1348:C:OP2	1:YA:1349:C:N4	2.45	0.50
1:YA:998:C:OP2	17:YQ:57:ARG:NH2	2.43	0.50
17:YQ:93:ILE:O	17:YQ:96:ASP:HB3	2.12	0.50
31:R4:30:GLU:OE2	31:R4:32:LYS:HG3	2.12	0.50
1:YA:466:A:P	29:Y2:34:ARG:NH2	2.84	0.50
1:YA:108:G:H2'	1:YA:109:C:H6	1.75	0.50
47:XP:5:ARG:HA	47:XP:71:VAL:HG11	1.92	0.50
1:RA:1735:A:C2	1:RA:1736:U:C2	2.99	0.50
4:RD:91:THR:C	4:RD:93:GLY:H	2.07	0.50
14:YN:12:ARG:HB3	14:YN:16:HIS:ND1	2.27	0.50
11:YK:61:VAL:HG13	11:YK:87:LEU:HD22	1.93	0.50
1:RA:276:U:C2'	1:RA:276:U:O2	2.60	0.50
1:RA:1340:U:C5	1:RA:1603:A:C8	2.99	0.50
32:QA:967:C:C1'	40:QI:129:ARG:HH22	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2149:U:HO2'	1:RA:2150:C:C4'	2.22	0.50
33:QB:108:GLN:N	33:QB:108:GLN:HE21	2.01	0.50
32:QA:1182:G:H4'	32:QA:1183:U:H5'	1.93	0.50
8:RH:9:VAL:O	8:RH:13:GLY:N	2.41	0.50
1:YA:2201:G:C4	1:YA:2202:U:C6	3.00	0.50
1:YA:2615:U:H2'	1:YA:2616:C:C6	2.46	0.50
32:QA:624:C:C2	32:QA:625:U:C6	2.99	0.50
45:QN:45:LEU:O	45:QN:45:LEU:HG	2.12	0.50
39:QH:104:SER:HB2	39:QH:125:ILE:HD11	1.93	0.50
1:YA:981:A:H5''	1:YA:982:C:OP2	2.11	0.50
1:RA:1499:C:H2'	1:RA:1500:G:H8	1.77	0.50
32:XA:338:A:H61	32:XA:351:G:H1	1.60	0.50
12:YL:61:LEU:O	30:Y3:12:ARG:NH2	2.43	0.50
1:YA:1973:G:O6	1:YA:1974:C:N4	2.44	0.50
1:YA:1023:U:H6	1:YA:1023:U:C5'	2.23	0.50
1:YA:716:A:C2'	1:YA:717:C:H5''	2.40	0.50
16:RP:111:GLU:CD	16:RP:111:GLU:N	2.65	0.50
1:RA:1826:G:C5	1:RA:1827:U:C5	2.99	0.50
1:RA:1419:A:N7	1:RA:1421:G:C5	2.80	0.50
7:RG:163:TYR:O	7:RG:164:ALA:CB	2.59	0.50
24:YX:19:HIS:O	24:YX:20:ALA:HB3	2.12	0.50
32:QA:953:G:C2	32:QA:954:G:H1'	2.47	0.50
1:YA:2435:A:C2'	1:YA:2436:G:O5'	2.59	0.50
32:XA:672:U:H2'	32:XA:673:A:C8	2.45	0.50
1:RA:1486:U:H2'	1:RA:1487:U:C6	2.44	0.50
19:YS:53:SER:O	19:YS:56:ALA:HB3	2.11	0.50
1:RA:186:G:O2'	1:RA:187:G:H5'	2.10	0.50
4:RD:40:LEU:O	4:RD:41:ALA:C	2.50	0.50
33:QB:132:GLU:HG3	33:QB:132:GLU:O	2.11	0.50
34:XC:181:ILE:HA	34:XC:201:ILE:O	2.11	0.50
1:RA:686:U:H2'	1:RA:788:A:N1	2.27	0.50
1:RA:414:C:H1'	1:RA:1864:U:O2'	2.12	0.50
51:QT:81:GLN:HA	51:QT:84:LYS:HB2	1.93	0.50
46:XO:52:ARG:O	46:XO:55:LEU:HB3	2.11	0.50
7:RG:116:LEU:HD13	7:RG:116:LEU:H	1.75	0.50
1:RA:885:C:H6	1:RA:885:C:O5'	1.93	0.50
18:YR:98:ILE:O	18:YR:98:ILE:HG22	2.12	0.50
1:RA:2032:G:C8	56:RA:3532:HOH:O	2.54	0.50
4:RD:16:THR:O	4:RD:19:GLY:N	2.41	0.50
10:RJ:44:TYR:CE1	17:RQ:59:LEU:HD11	2.47	0.50
18:YR:37:GLU:HB2	18:YR:53:PHE:CD2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:974:A:O2'	32:XA:975:A:OP1	2.23	0.50
1:YA:858:G:C6	1:YA:2268:A:C6	3.00	0.50
1:YA:249:C:O2'	1:YA:250:G:OP2	2.26	0.50
1:YA:834:G:H2'	1:YA:835:C:O4'	2.11	0.50
1:YA:1918:A:O2'	1:YA:1920:C:N4	2.44	0.50
1:YA:1655:A:C6	1:YA:1656:C:C2	2.99	0.50
33:XB:102:ASN:O	33:XB:102:ASN:CG	2.50	0.50
1:YA:1056:G:H1'	1:YA:1103:A:N1	2.27	0.50
32:XA:109:A:H8	32:XA:327:A:H5'	1.77	0.50
9:YI:48:ILE:HG13	9:YI:49:GLU:H	1.77	0.50
32:QA:374:A:H5''	32:QA:452:A:C2	2.47	0.50
1:YA:58:G:N3	1:YA:73:A:H2	2.10	0.50
1:YA:71:A:H5''	1:YA:73:A:C5	2.46	0.50
1:YA:2742:G:OP1	31:Y4:36:ARG:HD3	2.10	0.50
5:YE:148:ILE:HA	5:YE:187:VAL:HB	1.93	0.50
1:YA:611:C:H2'	1:YA:612:G:O4'	2.10	0.50
1:YA:604:G:O6	1:YA:625:G:C6	2.64	0.50
32:XA:239:U:C6	32:XA:239:U:H5'	2.46	0.50
32:XA:1133:G:C2	32:XA:1142:G:C6	2.99	0.50
1:YA:2093:G:O2'	1:YA:2094:A:H8	1.95	0.50
33:QB:22:TRP:O	33:QB:22:TRP:CD2	2.65	0.50
20:RT:14:PRO:HA	20:RT:32:LEU:HB3	1.92	0.50
20:YT:14:PRO:HA	20:YT:32:LEU:CB	2.41	0.50
22:YV:80:HIS:CD2	22:YV:83:LYS:HB2	2.46	0.50
32:QA:76:G:N1	32:QA:95:C:N4	2.58	0.50
33:QB:103:TRP:CD1	33:QB:150:ILE:HD11	2.46	0.50
20:YT:48:GLN:HA	20:YT:48:GLN:HE21	1.77	0.50
40:XI:49:GLN:N	40:XI:50:PRO:CD	2.74	0.50
33:QB:137:THR:O	33:QB:140:LEU:HB2	2.11	0.50
14:RN:108:ALA:O	14:RN:110:MET:HG2	2.12	0.50
32:QA:6:G:O2'	32:QA:7:A:H8	1.94	0.50
3:RC:20:ASN:ND2	3:RC:22:GLU:HG2	2.24	0.50
10:RJ:25:LEU:HD13	10:RJ:25:LEU:O	2.12	0.50
32:XA:1304:G:C2'	32:XA:1333:A:H61	2.24	0.50
24:RX:67:LEU:O	24:RX:69:GLU:O	2.30	0.50
32:QA:143:A:N3	32:QA:143:A:H2'	2.24	0.50
32:QA:178:C:O2'	32:QA:179:A:H5'	2.12	0.50
1:YA:2051:A:C2	1:YA:2052:A:N6	2.79	0.50
32:XA:1388:C:C2	32:XA:1389:C:C5	3.00	0.50
16:RP:113:LEU:O	16:RP:113:LEU:HG	2.12	0.50
1:YA:1973:G:C5	1:YA:1974:C:C4	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:RH:117:LEU:CD1	8:RH:130:VAL:HG11	2.41	0.50
45:QN:27:LYS:CA	45:QN:30:ILE:HB	2.42	0.50
21:RU:12:VAL:HG22	21:RU:69:VAL:HG12	1.93	0.50
19:YS:33:LEU:HD12	19:YS:51:LEU:HD23	1.94	0.50
46:XO:62:ARG:NH2	46:XO:88:ARG:HH21	2.09	0.50
32:XA:382:A:O2'	32:XA:383:A:O4'	2.28	0.50
1:YA:2869:G:H2'	1:YA:2870:C:C6	2.46	0.50
10:YJ:18:VAL:HG13	10:YJ:56:VAL:HA	1.94	0.50
32:XA:696:A:H8	32:XA:696:A:O5'	1.93	0.50
33:QB:179:GLY:O	33:QB:180:ILE:HD13	2.10	0.50
5:RE:1:MET:HG3	5:RE:14:VAL:HG23	1.93	0.50
32:XA:676:A:H2'	32:XA:677:U:C6	2.47	0.50
32:XA:676:A:H2'	32:XA:677:U:H6	1.76	0.50
32:XA:262:A:H5'	51:XT:68:LYS:HD3	1.93	0.50
1:RA:1409:U:O2'	1:RA:1410:G:H5'	2.12	0.50
45:XN:47:LEU:O	45:XN:50:LEU:HG	2.11	0.50
1:YA:2108:A:OP2	1:YA:2108:A:H8	1.95	0.50
11:YK:111:LYS:H	11:YK:111:LYS:HE3	1.77	0.50
1:YA:2373:G:C6	1:YA:2374:C:C4	3.00	0.50
40:XI:5:TYR:HD2	40:XI:5:TYR:N	2.09	0.50
11:YK:28:SER:O	11:YK:29:HIS:HB3	2.12	0.50
1:RA:5:A:C2	1:RA:2899:A:C2	2.99	0.50
35:XD:19:PHE:O	35:XD:22:SER:HB2	2.11	0.50
10:RJ:38:GLY:C	10:RJ:40:HIS:H	2.14	0.50
2:YB:69:G:H3'	2:YB:70:C:C6	2.45	0.50
1:RA:2336:A:H61	23:RW:40:ARG:HB3	1.76	0.50
52:XU:24:LYS:HE3	52:XU:25:ALA:HB2	1.94	0.50
10:RJ:111:LYS:HE2	10:RJ:115:GLY:H	1.75	0.50
1:YA:1438:U:H2'	1:YA:1439:A:O4'	2.12	0.50
3:YC:144:GLU:CA	3:YC:151:GLY:HA2	2.25	0.50
1:YA:2297:A:N3	1:YA:2298:A:C8	2.79	0.50
1:YA:860:U:O2'	1:YA:861:A:H8	1.95	0.50
1:RA:1173:U:O2	1:RA:1173:U:H2'	2.11	0.50
1:YA:1535:A:N3	1:YA:1535:A:H2'	2.27	0.50
1:YA:1342:A:C4	1:YA:1345:C:N4	2.79	0.50
1:YA:538:A:H5''	10:YJ:7:LYS:HZ3	1.77	0.50
10:YJ:45:THR:H	10:YJ:46:PRO:HD3	1.75	0.50
1:YA:2823:A:H2'	1:YA:2824:C:H5'	1.94	0.50
36:QE:79:THR:HB	36:QE:121:ASN:CG	2.32	0.50
33:XB:81:ASP:CG	33:XB:82:ALA:H	2.14	0.50
1:YA:1053:C:N4	1:YA:1054:A:N6	2.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:108:G:H5'	32:XA:109:A:C5'	2.40	0.50
1:YA:2315:G:C2	1:YA:2316:G:C4	2.99	0.50
1:YA:502:A:H62	1:YA:505:A:N6	2.10	0.50
32:XA:239:U:C6	32:XA:239:U:C5'	2.91	0.50
39:QH:74:ILE:O	39:QH:74:ILE:HG23	2.11	0.50
1:YA:729:G:O6	3:YC:207:ALA:N	2.37	0.50
1:RA:572:A:H5''	1:RA:573:U:OP2	2.11	0.50
16:YP:50:ARG:HA	16:YP:57:ALA:H	1.76	0.50
20:RT:39:THR:O	20:RT:39:THR:CG2	2.58	0.50
33:QB:72:LYS:HZ1	33:QB:204:ASP:HA	1.77	0.50
1:RA:1046:A:H3'	1:RA:1047:G:H5'	1.94	0.50
33:XB:96:LEU:H	33:XB:99:MET:CE	2.20	0.50
11:RK:70:ARG:CD	11:RK:76:VAL:HG22	2.41	0.50
52:XU:35:GLU:OE1	52:XU:37:TYR:CD1	2.64	0.50
1:RA:2682:A:C8	4:RD:11:MET:CG	2.95	0.50
51:QT:67:HIS:HB3	51:QT:68:LYS:HZ1	1.73	0.50
15:YO:41:ALA:O	15:YO:43:ASN:N	2.44	0.50
1:RA:1714:U:H5'	1:RA:1715:G:H5'	1.94	0.50
1:YA:1525:A:C6	1:YA:1526:C:N3	2.79	0.50
37:XF:12:PRO:HD2	37:XF:54:LEU:HD11	1.94	0.50
1:YA:768:G:C2'	1:YA:769:U:H5'	2.42	0.50
1:YA:2144:G:C2	1:YA:2148:G:O6	2.64	0.50
32:QA:707:U:H2'	32:QA:708:C:C6	2.47	0.50
50:XS:11:ASP:O	50:XS:14:LEU:HG	2.11	0.50
6:YF:7:TYR:O	6:YF:8:LYS:HG3	2.11	0.50
1:RA:1494:A:C2	1:RA:1495:A:C4	2.99	0.50
22:YV:9:ARG:HG2	22:YV:39:ALA:O	2.11	0.50
12:RL:78:ARG:HB3	12:RL:113:ALA:CB	2.42	0.50
1:RA:869:G:H4'	13:RM:8:LYS:HE2	1.93	0.50
1:RA:2472:G:H2'	1:RA:2475:C:H42	1.76	0.50
1:RA:1013:C:H2'	1:RA:1014:A:C8	2.47	0.50
1:RA:1857:G:N3	1:RA:1884:G:C2	2.80	0.50
43:QL:74:GLN:O	43:QL:75:GLU:C	2.49	0.50
1:RA:1310:G:H2'	1:RA:1311:G:H5'	1.93	0.50
48:XQ:24:ILE:HD12	48:XQ:24:ILE:N	2.27	0.50
37:QF:41:ASP:OD2	37:QF:58:HIS:NE2	2.44	0.50
1:YA:2461:A:H1'	1:YA:2492:U:C2	2.47	0.50
1:YA:1229:C:H2'	1:YA:1230:A:H8	1.76	0.50
1:YA:841:G:C2'	1:YA:842:U:H5'	2.42	0.50
4:RD:40:LEU:HD12	4:RD:40:LEU:H	1.76	0.50
22:RV:29:ILE:HG12	22:RV:30:ILE:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:40:SER:O	12:RL:41:ARG:O	2.30	0.50
1:RA:523:C:O2'	1:RA:524:G:H5'	2.12	0.50
42:XK:17:ASP:HA	42:XK:80:ASN:O	2.11	0.50
3:RC:124:LYS:HB3	3:RC:127:ASN:ND2	2.27	0.50
36:QE:77:ASN:CG	36:QE:78:GLY:N	2.65	0.50
34:XC:96:VAL:HB	34:XC:97:PRO:HD2	1.94	0.50
1:YA:859:G:OP2	1:YA:859:G:C8	2.65	0.50
32:QA:279:A:H8	32:QA:279:A:H5'	1.76	0.50
8:YH:43:ASN:O	8:YH:47:PHE:HD2	1.94	0.50
1:RA:996:A:C2	1:RA:997:G:C8	2.99	0.50
17:YQ:87:VAL:HG11	18:YR:52:PRO:CG	2.38	0.50
2:YB:15:A:OP1	2:YB:108:A:H5'	2.12	0.50
2:YB:65:U:C4	2:YB:108:A:C4	3.00	0.50
3:YC:184:GLU:HB2	3:YC:187:CYS:SG	2.52	0.50
1:YA:2337:G:OP1	1:YA:2385:C:OP2	2.29	0.50
1:RA:1172:C:N3	1:RA:1173:U:H1'	2.27	0.50
32:XA:706:A:C5	32:XA:707:U:C5	2.99	0.50
3:YC:140:VAL:HG23	3:YC:141:HIS:N	2.27	0.50
1:YA:1211:C:H5''	1:YA:1212:G:C8	2.47	0.50
1:YA:1385:A:N6	1:YA:1403:A:C5	2.80	0.50
36:QE:120:HIS:O	36:QE:121:ASN:HB3	2.10	0.50
1:YA:1062:G:C8	1:YA:1088:A:H8	2.30	0.50
1:RA:1535:A:C4'	1:RA:1536:C:OP2	2.50	0.50
24:YX:57:VAL:HG12	24:YX:58:ILE:N	2.27	0.50
32:QA:1123:U:H5''	32:QA:1124:G:OP2	2.11	0.50
41:XJ:77:VAL:O	41:XJ:79:PRO:HD3	2.12	0.50
1:YA:2094:A:C4	1:YA:2095:A:C8	3.00	0.50
32:XA:1511:G:C5	32:XA:1512:U:C5	3.00	0.50
38:XG:91:ARG:NH2	38:XG:92:PRO:HB2	2.27	0.50
35:XD:154:VAL:O	35:XD:157:ALA:HB3	2.11	0.50
33:QB:66:ILE:HB	33:QB:88:GLN:CB	2.41	0.50
32:QA:1157:A:C4	32:QA:1181:G:C6	2.99	0.50
4:RD:114:LYS:NZ	4:RD:116:LYS:HE2	2.27	0.50
11:YK:104:THR:C	11:YK:106:GLU:H	2.15	0.50
32:QA:1062:U:H2'	32:QA:1063:C:C5	2.46	0.50
32:QA:91:U:C5	32:QA:92:U:C2	3.00	0.50
1:YA:2261:C:N4	23:YW:10:ARG:HB3	2.27	0.50
10:YJ:120:ARG:O	10:YJ:123:LYS:NZ	2.43	0.50
7:RG:61:TRP:HA	7:RG:61:TRP:CE3	2.46	0.50
52:QU:40:PRO:HA	52:QU:43:GLU:HB2	1.93	0.50
1:RA:2308:G:C5	6:RF:76:PHE:HE2	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:YP:64:SER:O	16:YP:66:GLY:N	2.43	0.50
1:YA:1783:A:C2	1:YA:2588:G:O4'	2.64	0.50
35:QD:167:PRO:HB2	35:QD:170:LEU:CD1	2.41	0.50
11:RK:107:LEU:C	11:RK:109:SER:H	2.15	0.50
1:YA:1906:G:C8	1:YA:1929:G:H2'	2.46	0.50
1:YA:1993:U:H4'	4:YD:133:THR:HG21	1.94	0.50
32:XA:250:A:H1'	32:XA:252:U:C4	2.47	0.50
1:RA:1941:C:C5'	1:RA:1941:C:H6	2.25	0.50
2:YB:7:G:O2'	15:YO:38:GLN:NE2	2.45	0.50
16:RP:25:VAL:CG1	16:RP:46:VAL:HG23	2.42	0.50
6:RF:68:LYS:H	6:RF:68:LYS:CD	2.25	0.50
32:XA:1053:G:O6	32:XA:1199:U:H2'	2.12	0.50
39:QH:93:LYS:HE3	39:QH:116:ARG:NH1	2.27	0.50
27:R0:9:ARG:CG	27:R0:9:ARG:HH21	2.25	0.50
32:QA:652:U:C5	32:QA:752:G:N3	2.79	0.50
32:QA:991:U:O2'	32:QA:1212:U:H6	1.92	0.50
47:XP:66:THR:HG22	47:XP:67:ILE:N	2.27	0.50
1:RA:747:U:C4	1:RA:2613:U:C5	3.00	0.50
32:QA:1240:U:H3'	32:QA:1241:G:C5'	2.42	0.50
2:YB:23:G:C2	2:YB:61:G:C2	3.00	0.50
32:QA:1273:C:H2'	32:QA:1274:A:O4'	2.11	0.50
32:QA:1111:A:N1	34:QC:176:THR:HG23	2.27	0.50
1:YA:1628:G:H2'	1:YA:1629:U:C6	2.47	0.50
3:YC:166:ARG:HA	3:YC:171:VAL:HA	1.93	0.50
36:QE:29:ILE:HD12	36:QE:30:PHE:N	2.26	0.50
10:YJ:54:ILE:O	10:YJ:122:LEU:HD12	2.10	0.50
1:RA:988:A:O5'	1:RA:988:A:H8	1.95	0.50
32:XA:300:A:H2'	32:XA:301:G:O4'	2.12	0.50
1:RA:1539:U:H2'	1:RA:1540:G:H8	1.76	0.50
35:XD:161:ALA:O	35:XD:164:ARG:HB2	2.11	0.50
4:YD:193:VAL:HB	4:YD:194:PRO:HD2	1.94	0.50
1:YA:1272:A:C5	1:YA:1618:A:H1'	2.47	0.50
32:QA:1392:G:C2'	32:QA:1393:U:H5'	2.42	0.50
1:YA:377:G:C6	1:YA:378:C:C4	2.99	0.50
37:QF:40:GLU:HB2	37:QF:42:TRP:NE1	2.26	0.50
1:RA:856:G:H21	23:RW:19:ARG:HH22	1.58	0.50
16:RP:4:ILE:CG2	16:RP:5:LYS:N	2.60	0.50
32:XA:961:U:C4	32:XA:983:A:C6	2.99	0.50
23:YW:27:GLY:HA2	23:YW:31:LEU:HD11	1.90	0.50
1:YA:234:U:O2'	1:YA:235:U:H5'	2.12	0.50
1:YA:81:G:H2'	1:YA:82:U:H6	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:XM:75:SER:HB2	44:XM:79:LEU:CD1	2.42	0.50
32:XA:1072:G:H2'	32:XA:1073:U:C6	2.47	0.50
32:QA:974:A:P	45:QN:68:ARG:HH22	2.34	0.50
1:YA:479:A:C4'	1:YA:480:A:OP1	2.47	0.50
12:YL:111:ILE:HA	12:YL:128:THR:OG1	2.12	0.50
35:XD:20:LEU:O	35:XD:21:LYS:C	2.50	0.50
32:XA:1301:U:H5''	32:XA:1302:C:OP2	2.12	0.50
1:YA:608:A:C5	1:YA:621:A:N7	2.80	0.50
1:YA:600:G:H5'	5:YE:27:LEU:HD13	1.94	0.50
32:QA:1141:C:C2	32:QA:1142:G:C8	3.00	0.50
41:XJ:80:THR:C	41:XJ:84:VAL:HG22	2.32	0.50
32:QA:579:A:H2'	32:QA:580:C:C6	2.47	0.50
1:YA:2751:G:H2'	1:YA:2751:G:N3	2.27	0.50
11:YK:92:GLU:O	11:YK:93:GLN:O	2.30	0.50
1:RA:1338:G:O2'	20:RT:18:GLU:HG2	2.12	0.50
25:YY:28:LEU:HD23	25:YY:42:LEU:HD13	1.94	0.50
1:RA:960:A:H5''	1:RA:961:C:OP2	2.12	0.50
48:XQ:19:SER:HB3	48:XQ:70:LYS:HZ2	1.75	0.50
28:R1:3:GLY:O	28:R1:4:ILE:HG12	2.11	0.50
1:YA:1205:A:H5''	1:YA:1206:G:H8	1.71	0.50
9:RI:56:VAL:HG22	9:RI:57:VAL:N	2.27	0.50
1:YA:1500:G:N1	1:YA:1501:G:C5	2.80	0.50
16:RP:33:GLU:OE1	32:QA:345:C:H3'	2.12	0.50
32:QA:1001:C:H2'	32:QA:1002:G:C8	2.46	0.50
46:QO:5:GLU:O	46:QO:9:LYS:HG3	2.12	0.50
19:RS:12:SER:OG	19:RS:13:SER:N	2.45	0.50
1:YA:931:U:H4'	1:YA:932:U:OP2	2.11	0.50
32:XA:251:G:N2	32:XA:253:A:H62	2.07	0.50
1:YA:570:G:C5	1:YA:2030:A:N7	2.80	0.50
32:XA:1453:G:O2'	32:XA:1454:G:H4'	2.12	0.50
33:XB:19:THR:HG22	33:XB:37:VAL:HG23	1.93	0.50
10:RJ:88:THR:HG22	10:RJ:91:GLU:CG	2.42	0.50
21:YU:39:ASN:CB	21:YU:62:ALA:HB3	2.41	0.50
1:YA:565:C:H1'	1:YA:577:G:N2	2.26	0.50
46:XO:88:ARG:CZ	1:YA:715:A:O3'	2.60	0.50
16:YP:45:VAL:O	16:YP:60:VAL:HA	2.11	0.50
26:RZ:8:GLN:O	26:RZ:9:THR:HG22	2.12	0.50
1:RA:747:U:C4	1:RA:2613:U:C4	2.99	0.50
25:YY:5:GLU:O	25:YY:6:LEU:HG	2.12	0.50
32:XA:721:G:H4'	32:XA:722:G:O5'	2.12	0.50
32:XA:223:A:C5	32:XA:224:U:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:47:ARG:HG2	12:RL:47:ARG:HH21	1.77	0.50
36:XE:68:ARG:O	36:XE:69:ASN:C	2.48	0.50
35:QD:2:ARG:CZ	35:QD:114:ARG:HD3	2.41	0.50
1:RA:484:C:H2'	1:RA:485:C:H6	1.77	0.50
1:RA:388:G:N7	1:RA:390:U:H2'	2.26	0.50
1:RA:1477:A:H2'	1:RA:1478:G:O4'	2.12	0.50
1:RA:621:A:OP2	12:RL:99:ASN:OD1	2.30	0.50
1:YA:1620:G:C6	1:YA:1621:U:C4	3.00	0.50
32:XA:811:C:H4'	32:XA:900:A:N6	2.26	0.50
56:RA:3242:HOH:O	5:RE:81:GLY:HA2	2.12	0.50
48:XQ:77:VAL:HG12	48:XQ:78:VAL:O	2.11	0.50
19:RS:29:VAL:HG13	19:RS:55:ILE:HD11	1.92	0.50
1:RA:997:G:O2'	1:RA:998:C:H5'	2.11	0.50
10:RJ:38:GLY:O	10:RJ:40:HIS:N	2.45	0.50
32:QA:983:A:H2	32:QA:1222:G:H22	1.60	0.50
23:RW:17:ALA:CA	23:RW:35:ILE:HG23	2.35	0.50
23:RW:39:GLN:NE2	23:RW:43:LYS:N	2.57	0.50
32:XA:1014:A:H4'	50:XS:13:HIS:CE1	2.47	0.50
32:XA:1221:G:N2	32:XA:1222:G:H1'	2.27	0.50
1:YA:2408:U:O2'	1:YA:2409:G:C8	2.64	0.50
32:XA:1497:G:H2'	32:XA:1498:U:H5'	1.93	0.50
1:YA:1388:G:C2'	1:YA:1389:G:H8	2.23	0.50
16:YP:91:VAL:HG21	16:YP:96:LEU:HD21	1.94	0.50
1:YA:117:G:C2	1:YA:119:A:N6	2.80	0.50
41:XJ:40:ILE:HG22	41:XJ:42:LEU:CD1	2.42	0.50
6:YF:74:ALA:HB1	6:YF:76:PHE:CD2	2.47	0.50
38:XG:114:SER:O	38:XG:118:ARG:HG3	2.12	0.50
1:YA:142:A:O2'	1:YA:143:C:O4'	2.29	0.50
32:XA:243:A:H2	32:XA:245:U:H2'	1.77	0.50
1:YA:607:U:H5	1:YA:619:G:C2	2.30	0.50
1:YA:1049:C:O2'	1:YA:1050:A:O5'	2.30	0.50
1:YA:2757:A:O2'	1:YA:2758:A:H5'	2.12	0.50
32:XA:663:A:H5'	32:XA:836:G:OP1	2.11	0.50
10:RJ:21:THR:C	10:RJ:23:LYS:N	2.61	0.50
1:RA:2148:G:O2'	1:RA:2149:U:C4'	2.60	0.50
1:YA:1416:G:C2	1:YA:1417:C:C4	3.00	0.50
32:QA:1163:A:C2	32:QA:1174:G:C2	3.00	0.50
47:QP:10:GLY:O	47:QP:11:ALA:HB2	2.11	0.50
8:YH:68:ARG:HB3	8:YH:68:ARG:CZ	2.37	0.50
1:RA:477:A:C6	1:RA:478:A:C6	3.00	0.50
6:YF:104:THR:H	6:YF:107:VAL:HG22	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:412:A:O2'	1:YA:413:C:C5'	2.60	0.50
2:YB:50:A:OP1	15:YO:68:LYS:HB2	2.12	0.50
1:YA:1378:A:C8	1:YA:1380:G:C5	3.00	0.50
1:RA:1955:U:H5	1:RA:2557:G:N2	2.10	0.50
1:RA:1413:A:C6	1:RA:1414:C:N3	2.80	0.50
32:XA:1089:G:H2'	32:XA:1090:U:O4'	2.12	0.50
25:YY:31:GLN:NE2	25:YY:37:LEU:HD12	2.25	0.50
1:RA:2199:A:H3'	1:RA:2200:C:H6	1.76	0.50
2:YB:94:A:OP1	22:YV:19:ARG:CD	2.60	0.50
1:YA:2415:G:C5	1:YA:2416:C:C5	3.00	0.50
1:YA:2415:G:C2	1:YA:2416:C:C2	3.00	0.50
12:RL:120:VAL:O	12:RL:140:GLY:HA2	2.12	0.50
1:YA:1180:U:C4	1:YA:1181:U:C4	3.00	0.50
1:RA:2186:G:C6	1:RA:2187:U:C2	3.00	0.50
8:RH:131:SER:O	8:RH:132:PHE:HB3	2.12	0.50
41:QJ:28:THR:CG2	41:QJ:28:THR:O	2.59	0.50
32:QA:1319:A:C4	32:QA:1323:G:C8	3.00	0.50
40:QI:32:ARG:HG2	40:QI:36:GLN:CB	2.42	0.50
32:XA:1533:C:C2'	32:XA:1534:A:H5''	2.42	0.50
1:YA:1759:A:O2'	1:YA:2714:G:H1'	2.12	0.50
2:RB:65:U:C4	2:RB:108:A:C4	3.00	0.50
1:RA:1945:G:H2'	1:RA:1946:U:H6	1.77	0.50
24:YX:67:LEU:O	24:YX:77:TYR:OH	2.28	0.50
6:YF:127:TYR:O	6:YF:155:ILE:HD11	2.12	0.50
11:YK:28:SER:O	11:YK:29:HIS:CB	2.60	0.50
27:R0:53:VAL:O	27:R0:54:ILE:O	2.30	0.50
6:RF:19:PHE:O	6:RF:20:ASN:C	2.50	0.50
1:YA:1042:G:C6	1:YA:1043:C:C4	3.00	0.50
32:XA:1499:A:H1'	32:XA:1520:C:H5'	1.94	0.50
1:YA:146:A:C6	1:YA:147:C:C4	3.00	0.50
5:RE:127:GLU:H	5:RE:127:GLU:CD	2.14	0.50
1:YA:1460:U:OP2	1:YA:1460:U:C6	2.64	0.50
10:RJ:95:ARG:O	10:RJ:95:ARG:HG3	2.10	0.50
1:YA:280:U:C5	1:YA:281:C:C4	3.00	0.50
50:XS:38:THR:HB	50:XS:69:LYS:NZ	2.27	0.49
1:YA:2384:U:OP2	1:YA:2384:U:H6	1.95	0.49
1:YA:2429:G:H3'	1:YA:2429:G:OP2	2.12	0.49
1:YA:1361:G:H2'	1:YA:1362:C:H5'	1.93	0.49
1:YA:1809:A:C2'	1:YA:1810:A:H8	2.24	0.49
4:RD:117:GLY:C	4:RD:118:PHE:CG	2.82	0.49
1:YA:118:A:O5'	1:YA:119:A:H5''	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:867:C:O2'	1:YA:868:U:C6	2.35	0.49
34:XC:17:TRP:CD1	45:XN:90:GLY:HA2	2.47	0.49
6:RF:134:GLN:NE2	6:RF:150:GLY:H	2.10	0.49
5:YE:165:HIS:O	5:YE:167:VAL:N	2.45	0.49
1:YA:600:G:H5''	5:YE:27:LEU:HD22	1.94	0.49
1:YA:670:A:H4'	1:YA:671:C:H3'	1.94	0.49
34:QC:153:SER:HB3	34:QC:164:THR:HA	1.93	0.49
1:YA:1207:C:H2'	1:YA:1208:C:C6	2.45	0.49
39:XH:85:TYR:CE1	48:XQ:36:PHE:CE2	3.00	0.49
32:QA:1160:G:O2'	32:QA:1161:C:O5'	2.28	0.49
1:YA:1719:G:C2	1:YA:1742:U:O2	2.65	0.49
1:YA:2056:G:H21	27:Y0:1:ALA:N	2.08	0.49
9:RI:135:MET:HG2	9:RI:137:LEU:HG	1.93	0.49
32:XA:1095:U:H2'	32:XA:1096:C:H6	1.77	0.49
32:QA:174:A:C6	32:QA:175:C:C4	3.00	0.49
1:RA:2415:G:H2'	1:RA:2416:C:H6	1.77	0.49
1:RA:2772:C:H2'	1:RA:2773:C:H6	1.76	0.49
51:QT:6:ALA:HA	51:QT:8:LYS:HG2	1.93	0.49
25:YY:21:LEU:HD23	25:YY:25:GLN:HG2	1.92	0.49
14:RN:33:ILE:CD1	14:RN:118:ARG:NH2	2.75	0.49
14:RN:33:ILE:HD11	14:RN:118:ARG:HH21	1.77	0.49
1:RA:1496:A:C4	1:RA:1498:C:N4	2.80	0.49
11:YK:6:THR:O	11:YK:8:LEU:HD12	2.11	0.49
40:QI:57:VAL:O	40:QI:58:GLU:HG2	2.12	0.49
1:RA:2516:A:O2'	1:RA:2517:C:H5'	2.12	0.49
5:RE:153:LEU:HG	5:RE:153:LEU:O	2.11	0.49
1:RA:2192:U:O2'	1:RA:2193:G:H5'	2.12	0.49
39:QH:88:LYS:O	39:QH:91:LEU:HB2	2.12	0.49
14:RN:77:ALA:O	14:RN:81:ASN:HB2	2.12	0.49
1:RA:603:A:H4'	1:RA:604:G:C5'	2.41	0.49
13:YM:41:LEU:HB3	13:YM:46:ILE:HG23	1.94	0.49
1:YA:373:U:O2	1:YA:374:A:C8	2.65	0.49
38:QG:77:ARG:HB3	38:QG:79:VAL:HG23	1.93	0.49
32:QA:833:G:O2'	32:QA:834:U:H5'	2.12	0.49
1:YA:2371:G:O3'	28:Y1:44:GLN:NE2	2.46	0.49
32:XA:892:A:C5	32:XA:893:C:C5	3.00	0.49
1:YA:659:G:H4'	5:YE:95:LYS:HD2	1.93	0.49
13:YM:69:PRO:HA	13:YM:94:ALA:HB2	1.94	0.49
32:XA:590:U:O2'	32:XA:591:U:H5'	2.12	0.49
1:RA:237:C:O2'	1:RA:238:C:H5'	2.12	0.49
32:XA:602:A:O2'	32:XA:603:U:H5'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2378:A:N7	1:RA:2379:G:H1'	2.26	0.49
32:XA:1356:G:H2'	32:XA:1357:A:C8	2.47	0.49
11:YK:57:VAL:HG13	11:YK:57:VAL:O	2.11	0.49
1:YA:948:C:O5'	1:YA:948:C:H6	1.95	0.49
1:RA:2856:A:C2'	1:RA:2857:G:H5'	2.42	0.49
32:QA:1480:A:C6	32:QA:1481:U:C4	3.00	0.49
1:RA:2336:A:N6	23:RW:40:ARG:HB3	2.28	0.49
23:RW:30:VAL:HA	23:RW:60:ALA:O	2.11	0.49
1:RA:271:G:C6	1:RA:272:A:N6	2.80	0.49
32:XA:973:G:H2'	32:XA:974:A:H2'	1.94	0.49
1:RA:528:A:C2	1:RA:2042:A:H2'	2.47	0.49
1:YA:1131:G:C5	1:YA:2025:C:H4'	2.47	0.49
32:QA:784:A:O2'	32:QA:785:G:H5'	2.13	0.49
35:QD:29:THR:C	35:QD:30:LYS:HD3	2.32	0.49
1:YA:2823:A:C5	1:YA:2824:C:C5	2.99	0.49
1:YA:480:A:H3'	1:YA:481:G:H5''	1.94	0.49
10:RJ:124:VAL:HG23	10:RJ:125:TYR:H	1.77	0.49
1:YA:348:A:H2'	1:YA:349:U:H6	1.76	0.49
1:YA:674:G:O3'	5:YE:60:TRP:CH2	2.64	0.49
1:YA:617:G:O2'	1:YA:618:G:C8	2.48	0.49
32:XA:754:C:O2'	32:XA:755:G:H5'	2.11	0.49
6:YF:59:ILE:HD13	6:YF:137:PHE:CZ	2.46	0.49
32:XA:373:A:C5'	32:XA:373:A:C8	2.95	0.49
33:QB:74:ALA:O	33:QB:75:ALA:HB2	2.12	0.49
11:RK:76:VAL:HB	16:RP:72:VAL:HG23	1.90	0.49
36:XE:54:GLU:C	36:XE:56:PRO:HD2	2.32	0.49
36:XE:56:PRO:O	36:XE:59:ILE:HG23	2.12	0.49
1:RA:1253:A:N7	56:RA:3332:HOH:O	2.35	0.49
48:XQ:3:LYS:O	48:XQ:3:LYS:HG3	2.11	0.49
40:XI:45:MET:HA	40:XI:48:ARG:CG	2.42	0.49
24:RX:5:GLN:HE21	24:RX:49:ARG:CB	2.25	0.49
36:XE:37:VAL:HG12	36:XE:38:VAL:H	1.76	0.49
32:QA:35:G:H2'	32:QA:36:C:C6	2.47	0.49
32:QA:1066:C:H6	32:QA:1066:C:C5'	2.21	0.49
1:YA:464:U:H1'	1:YA:686:U:C5	2.43	0.49
32:XA:343:U:HO2'	32:XA:344:A:H8	1.60	0.49
1:RA:1869:G:N2	1:RA:1873:G:C6	2.79	0.49
50:XS:11:ASP:H	50:XS:14:LEU:HD21	1.76	0.49
1:RA:635:C:H3'	12:RL:109:LYS:NZ	2.26	0.49
7:YG:41:GLU:O	7:YG:43:LYS:HG3	2.12	0.49
21:RU:73:ASN:HD22	21:RU:75:ALA:HB3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:100:VAL:CG1	35:QD:100:VAL:O	2.60	0.49
5:YE:126:VAL:HG13	5:YE:127:GLU:H	1.74	0.49
32:XA:1066:C:H2'	32:XA:1067:A:N7	2.28	0.49
13:RM:109:PRO:O	13:RM:110:GLU:C	2.51	0.49
24:RX:29:LEU:HB2	24:RX:30:PRO:HD3	1.94	0.49
18:RR:54:VAL:HG23	18:RR:57:GLY:N	2.27	0.49
3:YC:77:VAL:CG2	3:YC:111:ALA:HA	2.41	0.49
1:RA:870:U:C2'	1:RA:871:U:H5'	2.42	0.49
1:YA:2663:G:H2'	1:YA:2664:G:C8	2.46	0.49
1:YA:2712:C:OP1	1:YA:2714:G:H4'	2.12	0.49
21:YU:6:ARG:HG2	21:YU:7:ASP:N	2.26	0.49
48:XQ:11:VAL:HG12	48:XQ:12:VAL:H	1.76	0.49
5:RE:147:LEU:HD23	5:RE:183:PHE:CD1	2.46	0.49
36:QE:15:ILE:HG21	36:QE:35:LEU:HD23	1.92	0.49
38:QG:129:ASN:HA	38:QG:134:VAL:HG11	1.94	0.49
49:XR:33:THR:C	49:XR:35:SER:H	2.16	0.49
7:RG:116:LEU:N	7:RG:116:LEU:HD13	2.27	0.49
10:YJ:8:PRO:HG2	10:YJ:9:GLU:H	1.77	0.49
1:YA:2140:G:C6	1:YA:2152:G:C6	3.00	0.49
1:RA:687:C:H2'	1:RA:688:U:O4'	2.12	0.49
12:YL:40:SER:OG	12:YL:41:ARG:N	2.45	0.49
32:QA:536:C:OP1	56:QA:1889:HOH:O	2.20	0.49
35:XD:94:GLU:OE1	35:XD:103:ARG:NE	2.38	0.49
4:YD:121:THR:HG21	4:YD:127:PHE:CD1	2.47	0.49
20:YT:61:LEU:HD12	20:YT:61:LEU:C	2.33	0.49
1:RA:646:U:H3'	1:RA:647:G:H5''	1.94	0.49
39:XH:91:LEU:HD12	39:XH:116:ARG:HG3	1.94	0.49
17:RQ:60:TRP:O	17:RQ:61:ILE:C	2.51	0.49
18:RR:39:LEU:HB3	18:RR:49:ILE:HD13	1.94	0.49
3:YC:17:LYS:HD3	3:YC:18:VAL:N	2.26	0.49
37:QF:62:MET:O	37:QF:63:ASN:HB2	2.12	0.49
52:XU:20:ARG:NH1	52:XU:24:LYS:HG2	2.26	0.49
32:XA:1159:U:O4'	32:XA:1182:G:N2	2.45	0.49
15:YO:62:LEU:CD1	15:YO:65:THR:HG23	2.43	0.49
1:YA:857:G:H1'	23:YW:19:ARG:HE	1.77	0.49
1:YA:2290:G:C6	1:YA:2291:U:C4	3.00	0.49
1:YA:642:U:H2'	1:YA:644:A:OP2	2.12	0.49
3:YC:68:ARG:NE	3:YC:128:THR:OG1	2.46	0.49
1:YA:1060:U:H4'	1:YA:1061:U:H2'	1.95	0.49
12:YL:48:ARG:HG3	12:YL:48:ARG:NH1	2.08	0.49
41:XJ:67:ILE:HG23	45:XN:95:LEU:N	2.22	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:83:C:C2	32:XA:87:C:N4	2.79	0.49
3:RC:12:ARG:HG2	3:RC:12:ARG:NH1	2.23	0.49
1:YA:670:A:H4'	1:YA:671:C:O5'	2.12	0.49
32:QA:1142:G:H2'	32:QA:1143:G:O4'	2.12	0.49
1:YA:1251:C:C5	17:YQ:5:ARG:NH1	2.81	0.49
16:YP:50:ARG:CA	16:YP:57:ALA:O	2.60	0.49
1:RA:2136:G:O2'	1:RA:2137:U:H6	1.90	0.49
44:XM:11:HIS:N	44:XM:44:ILE:HD12	2.27	0.49
2:RB:28:C:OP1	15:RO:31:THR:HG21	2.12	0.49
20:RT:39:THR:HB	20:RT:42:GLU:H	1.77	0.49
20:RT:44:LYS:HG3	20:RT:55:VAL:CG1	2.41	0.49
1:YA:1757:A:N1	1:YA:1762:A:H2	2.10	0.49
8:RH:9:VAL:HG12	8:RH:9:VAL:O	2.12	0.49
2:RB:90:C:H5'	13:RM:18:ARG:HG2	1.94	0.49
36:XE:55:VAL:N	36:XE:56:PRO:CD	2.75	0.49
1:RA:2257:U:O2'	1:RA:2258:C:H5'	2.13	0.49
10:YJ:99:ARG:HA	10:YJ:102:GLU:CB	2.37	0.49
52:XU:8:ASN:CG	52:XU:9:GLU:H	2.14	0.49
1:YA:170:U:H2'	1:YA:171:U:C6	2.44	0.49
1:RA:37:C:O2'	5:RE:45:ALA:HA	2.13	0.49
1:RA:2849:U:H1'	1:RA:2866:U:O2	2.10	0.49
1:RA:323:C:C4	1:RA:333:G:C8	3.01	0.49
1:RA:1277:G:C5'	14:RN:20:MET:CE	2.89	0.49
12:RL:55:MET:HE2	12:RL:56:PRO:CD	2.42	0.49
19:YS:20:VAL:HG11	19:YS:43:ALA:HB1	1.95	0.49
32:QA:1224:U:O2'	32:QA:1322:C:OP1	2.31	0.49
1:YA:705:A:H2'	1:YA:706:A:C8	2.47	0.49
21:YU:47:PRO:HB3	21:YU:54:PRO:CG	2.42	0.49
32:XA:1161:C:O2	32:XA:1176:A:H2	1.95	0.49
1:YA:1425:G:H2'	1:YA:1426:G:C8	2.46	0.49
51:XT:11:ILE:C	51:XT:13:SER:H	2.16	0.49
32:QA:237:G:H5''	48:QQ:26:ARG:NH2	2.27	0.49
1:YA:88:G:C2	1:YA:89:A:C8	3.00	0.49
36:QE:87:VAL:O	36:QE:88:HIS:HB2	2.11	0.49
28:R1:29:LYS:NZ	28:R1:29:LYS:HB3	2.27	0.49
32:XA:1460:C:O5'	32:XA:1460:C:H6	1.95	0.49
3:RC:181:ARG:HH21	3:RC:181:ARG:CG	2.24	0.49
17:RQ:60:TRP:O	17:RQ:63:ARG:HG3	2.11	0.49
23:RW:30:VAL:CG2	23:RW:30:VAL:O	2.60	0.49
33:QB:172:ILE:HG23	33:QB:182:VAL:HG11	1.93	0.49
1:YA:1440:U:H2'	1:YA:1441:G:H8	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2331:G:N1	1:YA:2385:C:C4	2.80	0.49
1:YA:2290:G:H4'	1:YA:2381:A:O2'	2.12	0.49
1:YA:1312:U:N3	1:YA:1603:A:C6	2.81	0.49
1:YA:1313:U:OP1	56:YA:3407:HOH:O	2.18	0.49
1:YA:1607:C:C4'	1:YA:1608:A:C8	2.92	0.49
1:YA:309:A:N7	1:YA:330:A:N6	2.60	0.49
21:YU:3:LYS:HD3	21:YU:82:VAL:CG2	2.42	0.49
36:QE:153:ALA:HA	36:QE:156:ARG:HB2	1.94	0.49
6:YF:37:MET:HE3	6:YF:56:LEU:HD23	1.95	0.49
32:QA:450:G:N7	32:QA:481:G:O6	2.45	0.49
1:YA:1139:G:N3	1:YA:1143:A:H2	2.10	0.49
32:QA:1283:U:H2'	32:QA:1284:C:C6	2.47	0.49
14:YN:67:PHE:CE2	14:YN:73:ASN:OD1	2.65	0.49
3:YC:226:PRO:O	3:YC:227:VAL:C	2.51	0.49
32:XA:408:A:C2	32:XA:435:A:C2	3.00	0.49
1:YA:2667:C:O2'	1:YA:2668:G:O4'	2.30	0.49
32:XA:1239:A:N7	32:XA:1298:U:N3	2.54	0.49
32:XA:1242:G:HO2'	32:XA:1243:C:C4'	2.26	0.49
4:RD:34:VAL:HG21	4:RD:90:PHE:O	2.13	0.49
1:YA:584:C:C4	1:YA:585:G:C5	3.00	0.49
4:YD:106:LYS:HD3	4:YD:106:LYS:N	2.27	0.49
1:YA:1476:U:H1'	1:YA:1732:C:O2	2.11	0.49
28:R1:9:LYS:O	28:R1:50:GLU:HG2	2.11	0.49
8:RH:72:ILE:HG23	8:RH:72:ILE:O	2.11	0.49
1:YA:942:G:H2'	1:YA:943:A:C5'	2.39	0.49
44:XM:12:LYS:H	44:XM:44:ILE:HG13	1.76	0.49
7:YG:94:ARG:O	7:YG:95:ALA:HB2	2.13	0.49
7:YG:95:ALA:HB1	7:YG:124:CYS:SG	2.53	0.49
9:RI:33:ASN:HD22	9:RI:64:ARG:NH2	2.02	0.49
32:QA:405:U:OP1	32:QA:406:G:O2'	2.28	0.49
1:YA:1705:A:C5	1:YA:1706:C:C4	3.00	0.49
1:YA:2056:G:N2	1:YA:2057:G:N9	2.60	0.49
9:RI:90:GLY:C	9:RI:92:PRO:HD3	2.31	0.49
34:QC:39:ARG:CZ	34:QC:54:ILE:HD11	2.42	0.49
38:XG:14:ASP:HB3	38:XG:18:GLY:N	2.22	0.49
1:RA:2298:A:C2	1:RA:2321:U:C4	3.00	0.49
32:QA:116:A:C2'	32:QA:117:G:O5'	2.60	0.49
6:RF:79:ARG:O	6:RF:82:TYR:HB2	2.13	0.49
1:YA:992:C:H4'	18:YR:74:ILE:CD1	2.42	0.49
35:XD:84:ASN:ND2	35:XD:84:ASN:C	2.64	0.49
5:YE:5:LEU:HD22	5:YE:122:GLU:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:191:G:C4	32:QA:192:A:C8	3.00	0.49
16:RP:24:THR:CG2	16:RP:86:LYS:HB2	2.43	0.49
1:RA:2489:U:O2	1:RA:2491:U:C4	2.66	0.49
1:YA:1594:U:H2'	1:YA:1595:C:C6	2.47	0.49
3:YC:131:MET:HA	3:YC:134:ILE:CD1	2.43	0.49
44:QM:15:VAL:HG13	44:QM:40:GLU:O	2.13	0.49
1:YA:280:U:H5	1:YA:281:C:C4	2.30	0.49
43:QL:107:LYS:O	43:QL:108:ASP:HB2	2.12	0.49
1:YA:1292:G:C6	1:YA:1293:C:N4	2.80	0.49
1:YA:382:A:H2'	1:YA:383:C:H5''	1.94	0.49
1:RA:1851:U:C4	1:RA:1852:U:C4	3.00	0.49
41:QJ:88:MET:C	41:QJ:90:LEU:H	2.16	0.49
45:XN:30:ILE:HG22	45:XN:41:TRP:N	2.26	0.49
2:RB:77:U:C2'	2:RB:78:A:H5'	2.43	0.49
32:XA:168:G:H2'	32:XA:169:C:H5'	1.94	0.49
33:XB:153:MET:HE3	33:XB:155:GLY:O	2.11	0.49
9:RI:32:VAL:HG13	9:RI:66:PHE:CE2	2.47	0.49
1:YA:653:U:O2	1:YA:653:U:H2'	2.13	0.49
28:Y1:42:VAL:O	28:Y1:42:VAL:HG12	2.11	0.49
1:RA:884:U:O2	1:RA:884:U:H2'	2.12	0.49
32:XA:1378:C:H3'	32:XA:1379:G:H5''	1.93	0.49
1:YA:2232:C:P	24:YX:26:ARG:HH12	2.35	0.49
23:RW:35:ILE:O	23:RW:37:VAL:HG23	2.13	0.49
32:XA:1014:A:C2	32:XA:1219:A:H1'	2.47	0.49
1:YA:1553:A:C8	1:YA:1555:G:C5	3.00	0.49
1:YA:860:U:C4	1:YA:2268:A:C4	3.01	0.49
15:YO:9:ARG:HA	15:YO:12:THR:OG1	2.13	0.49
28:Y1:8:ILE:CD1	28:Y1:52:LYS:HG3	2.43	0.49
1:YA:2428:G:H3'	1:YA:2428:G:OP1	2.12	0.49
1:YA:1237:A:N3	1:YA:1238:G:H1'	2.26	0.49
1:YA:1056:G:O5'	1:YA:1085:A:C2	2.64	0.49
1:YA:1054:A:C2	1:YA:1106:G:C2	3.00	0.49
1:YA:49:A:C8	1:YA:51:G:C2	3.00	0.49
32:XA:86:G:O2'	32:XA:87:C:O5'	2.30	0.49
1:YA:1779:U:H5	1:YA:1784:A:N7	2.10	0.49
1:YA:784:G:C2	3:YC:227:VAL:CG2	2.90	0.49
1:YA:345:A:O2'	1:YA:346:A:C2	2.61	0.49
31:Y4:3:VAL:O	31:Y4:4:ARG:HB2	2.12	0.49
35:QD:109:THR:HG22	35:QD:112:GLU:HB2	1.93	0.49
1:YA:2758:A:H2'	1:YA:2759:G:C5'	2.42	0.49
1:YA:192:C:OP1	1:YA:2243:U:OP1	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:YK:20:MET:HG2	11:YK:21:CYS:O	2.13	0.49
33:QB:22:TRP:HA	33:QB:188:THR:O	2.13	0.49
32:QA:748:G:C6	32:QA:749:A:C6	3.00	0.49
43:QL:72:ASN:CG	43:QL:73:LEU:H	2.12	0.49
32:XA:752:G:H1'	32:XA:754:C:H41	1.70	0.49
7:YG:132:LEU:HD12	7:YG:132:LEU:N	2.27	0.49
44:XM:18:LEU:HD12	44:XM:18:LEU:N	2.28	0.49
32:QA:73:C:O2'	32:QA:74:A:C5'	2.61	0.49
25:RY:42:LEU:O	25:RY:45:GLN:O	2.30	0.49
1:RA:2886:A:C2	1:RA:2887:A:H1'	2.47	0.49
1:YA:1491:G:N2	1:YA:1492:G:C4	2.80	0.49
25:RY:9:LYS:HA	25:RY:9:LYS:HZ1	1.78	0.49
3:YC:75:ALA:HA	3:YC:95:TYR:HA	1.93	0.49
20:YT:29:THR:OG1	20:YT:85:VAL:HB	2.12	0.49
1:YA:2142:A:H2'	1:YA:2143:C:H4'	1.95	0.49
16:YP:67:GLU:CD	16:YP:68:GLY:H	2.16	0.49
1:YA:2376:A:H2'	1:YA:2377:A:O4'	2.13	0.49
32:QA:222:C:O2'	32:QA:223:A:H5'	2.12	0.49
1:RA:1867:G:H2'	1:RA:1868:C:H5'	1.95	0.49
1:RA:357:C:H2'	1:RA:358:U:H6	1.76	0.49
18:RR:54:VAL:O	18:RR:55:ASP:C	2.50	0.49
1:YA:2485:G:H5''	13:YM:45:GLN:NE2	2.28	0.49
1:RA:2517:C:C2	1:RA:2542:A:N6	2.80	0.49
4:YD:99:GLU:HG3	4:YD:100:LEU:H	1.78	0.49
5:YE:105:LEU:HD12	5:YE:200:LEU:HD21	1.95	0.49
32:QA:903:G:H2'	32:QA:904:U:H6	1.78	0.49
1:YA:546:U:H5'	1:YA:547:A:OP1	2.12	0.49
32:QA:1117:A:O3'	40:QL:105:ARG:NE	2.46	0.49
32:XA:878:A:O2'	32:XA:879:C:H5'	2.13	0.49
9:YI:100:ILE:HD11	9:YI:137:LEU:HD22	1.93	0.49
1:RA:987:C:C2'	1:RA:988:A:H5'	2.43	0.49
32:QA:1379:G:C6	32:QA:1380:U:C4	2.99	0.49
1:RA:1669:A:H5''	1:RA:1670:C:OP2	2.13	0.49
2:RB:94:A:O2'	2:RB:95:U:H5'	2.12	0.49
1:RA:254:G:N7	30:R3:4:LYS:HE2	2.27	0.49
32:QA:562:U:H1'	43:QL:11:ARG:HB3	1.93	0.49
1:RA:1443:U:H2'	1:RA:1444:G:C8	2.48	0.49
1:YA:1455:G:N7	14:YN:64:ARG:NH1	2.60	0.49
1:RA:353:C:H2'	1:RA:353:C:O2	2.11	0.49
1:YA:19:A:C2	1:YA:522:A:C2	2.99	0.49
32:XA:731:G:OP1	32:XA:766:A:H1'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:14:LYS:CG	12:RL:15:ALA:N	2.75	0.49
32:XA:386:C:H2'	32:XA:387:U:H5'	1.94	0.49
40:XI:29:ILE:HA	40:XI:64:ILE:O	2.12	0.49
37:QF:25:TYR:O	37:QF:28:ALA:HB3	2.12	0.49
32:XA:1255:G:N1	32:XA:1279:G:N7	2.60	0.49
23:RW:19:ARG:NH2	23:RW:22:VAL:HG21	2.27	0.49
1:RA:922:C:HO2'	23:RW:25:PHE:HE2	1.60	0.49
23:RW:28:GLU:HA	23:RW:28:GLU:OE2	2.12	0.49
37:XF:86:ARG:HD3	49:XR:63:TYR:O	2.12	0.49
1:YA:2335:A:C4	1:YA:2337:G:N7	2.81	0.49
51:QT:33:LYS:N	51:QT:33:LYS:HE2	2.27	0.49
32:QA:1128:C:C2'	32:QA:1129:C:H5'	2.42	0.49
1:YA:1314:C:OP1	1:YA:1332:G:C5'	2.60	0.49
3:YC:149:LYS:HE3	3:YC:152:GLN:NE2	2.28	0.49
32:QA:842:U:H3'	32:QA:843:U:C5'	2.42	0.49
9:YI:52:LEU:HD11	9:YI:78:LEU:HD21	1.93	0.49
7:YG:88:LEU:HD11	7:YG:128:THR:HA	1.95	0.49
1:YA:628:G:H2'	1:YA:629:G:H8	1.74	0.49
10:YJ:65:THR:O	10:YJ:68:LYS:NZ	2.38	0.49
38:XG:29:LEU:O	38:XG:30:MET:O	2.30	0.49
32:XA:407:U:H2'	32:XA:408:A:H8	1.77	0.49
32:XA:279:A:H4'	32:XA:280:C:C5'	2.41	0.49
1:YA:607:U:H5	1:YA:619:G:C4	2.31	0.49
1:YA:2356:U:C4'	23:YW:16:GLU:HG3	2.35	0.49
43:XL:89:LEU:HB3	43:XL:92:VAL:CG2	2.42	0.49
20:RT:11:LEU:HD23	20:RT:11:LEU:N	2.27	0.49
1:YA:277:G:O2'	1:YA:278:A:C4	2.66	0.49
33:QB:162:VAL:HG22	33:QB:184:ALA:HB2	1.93	0.49
11:YK:7:MET:HG3	11:YK:17:ARG:HH12	1.78	0.49
1:YA:2197:U:C5	1:YA:2224:G:C6	3.00	0.49
11:YK:13:ASN:H	11:YK:13:ASN:ND2	2.03	0.49
1:RA:1252:G:C2	17:RQ:32:ARG:HG2	2.48	0.49
1:YA:2054:A:C2	1:YA:2616:C:C2	3.00	0.49
32:QA:1410:A:C2'	32:QA:1411:C:O5'	2.61	0.49
1:YA:1157:G:H5'	1:YA:1157:G:H8	1.75	0.49
5:RE:112:LEU:HD13	5:RE:186:VAL:CG1	2.41	0.49
51:XT:3:ILE:H	51:XT:3:ILE:HD12	1.77	0.49
1:RA:373:U:O2'	1:RA:423:A:H1'	2.12	0.49
51:QT:4:LYS:O	51:QT:5:SER:C	2.51	0.49
32:XA:252:U:H5'	32:XA:252:U:C6	2.42	0.49
1:RA:1496:A:H2'	1:RA:1498:C:C4	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2051:A:N3	1:YA:2052:A:N6	2.56	0.49
6:YF:43:ILE:HG12	6:YF:77:LYS:HD3	1.93	0.49
1:RA:517:C:OP2	27:R0:9:ARG:NH2	2.41	0.49
1:RA:1106:G:N2	1:RA:1107:G:H1'	2.27	0.49
24:RX:52:ALA:O	24:RX:53:LYS:HB3	2.12	0.49
37:XF:88:MET:HG2	37:XF:90:MET:SD	2.53	0.49
10:YJ:140:LEU:HD22	10:YJ:141:ASP:H	1.76	0.49
41:QJ:10:LEU:HD22	41:QJ:22:THR:OG1	2.12	0.49
8:RH:101:ASP:OD2	8:RH:102:ALA:N	2.44	0.49
1:YA:470:A:C2	1:YA:471:A:C4	3.00	0.49
20:YT:34:VAL:O	20:YT:34:VAL:HG12	2.12	0.49
1:YA:646:U:OP2	1:YA:646:U:C6	2.65	0.49
42:XK:12:ARG:NH1	42:XK:76:TYR:HE1	2.10	0.49
52:QU:38:GLU:OE2	52:QU:41:THR:HG21	2.12	0.49
32:QA:1521:C:C2	32:QA:1522:U:C5	3.00	0.49
27:Y0:26:SER:O	27:Y0:27:LEU:HD13	2.12	0.49
2:RB:78:A:H2'	2:RB:79:G:O4'	2.12	0.49
33:XB:153:MET:SD	33:XB:157:PRO:HD3	2.53	0.49
1:YA:999:U:O2'	1:YA:1000:A:H5'	2.13	0.49
1:RA:770:G:O2'	1:RA:771:G:H5'	2.12	0.49
32:QA:1149:C:H2'	32:QA:1150:A:C8	2.47	0.49
32:QA:714:G:H2'	32:QA:715:A:C8	2.47	0.49
1:RA:182:A:H2'	1:RA:183:C:C6	2.48	0.49
32:QA:1095:U:O2'	32:QA:1096:C:H5'	2.12	0.49
27:Y0:4:GLN:O	27:Y0:4:GLN:HG2	2.13	0.49
42:XK:115:ILE:O	42:XK:115:ILE:HG12	2.11	0.49
52:XU:22:CYS:O	52:XU:23:GLU:O	2.30	0.49
1:RA:1926:U:H2'	1:RA:1928:A:N7	2.27	0.49
6:RF:147:ARG:HG3	6:RF:148:VAL:N	2.28	0.49
2:RB:46:A:C5	2:RB:47:C:C5	3.00	0.49
1:YA:1816:C:O2'	1:YA:1817:G:P	2.70	0.49
33:QB:17:HIS:CD2	33:QB:202:ASN:ND2	2.80	0.49
1:YA:858:G:H2'	1:YA:2268:A:N3	2.27	0.49
51:QT:28:ARG:O	51:QT:32:LYS:HG2	2.13	0.49
32:XA:1158:C:H2'	32:XA:1158:C:O2	2.12	0.49
14:YN:98:LEU:HG	27:Y0:42:ILE:HG13	1.94	0.49
48:QQ:51:GLU:H	48:QQ:51:GLU:CD	2.15	0.49
1:YA:475:C:O2'	1:YA:476:G:H5'	2.13	0.49
38:XG:21:LEU:O	38:XG:25:PHE:N	2.45	0.49
1:YA:655:A:H4'	1:YA:656:G:OP1	2.12	0.49
1:YA:2875:C:O2'	1:YA:2876:G:O5'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1148:U:H2'	32:XA:1149:C:O4'	2.12	0.49
32:XA:752:G:H1'	32:XA:754:C:H42	1.72	0.49
34:QC:152:VAL:O	34:QC:164:THR:O	2.30	0.49
7:YG:84:LYS:HB3	7:YG:132:LEU:O	2.13	0.49
1:YA:750:A:H5''	1:YA:751:A:OP2	2.12	0.49
17:YQ:65:ASN:O	17:YQ:69:ARG:HB2	2.13	0.49
4:RD:101:PHE:HD1	4:RD:101:PHE:N	2.11	0.49
16:YP:87:ARG:HG2	16:YP:88:ARG:H	1.77	0.49
32:XA:1202:U:H2'	32:XA:1203:C:C5'	2.43	0.49
1:RA:1469:A:H2'	1:RA:1470:A:H8	1.73	0.49
1:YA:1857:G:H1'	1:YA:1884:G:H22	1.77	0.49
1:YA:2634:A:C2	1:YA:2635:A:C4	3.01	0.49
5:RE:5:LEU:CD1	5:RE:10:SER:HB3	2.41	0.49
10:RJ:12:LYS:O	10:RJ:13:ARG:HB2	2.11	0.49
1:YA:1844:C:O3'	3:YC:255:LYS:NZ	2.34	0.49
32:QA:1040:U:H2'	32:QA:1041:G:H8	1.78	0.49
32:QA:115:G:C6	32:QA:313:A:C2	3.00	0.49
20:RT:30:ILE:HG23	20:RT:85:VAL:HB	1.94	0.49
1:RA:2848:G:N3	1:RA:2867:G:C2	2.81	0.49
32:XA:40:C:H2'	32:XA:41:G:O4'	2.12	0.49
19:YS:24:ILE:HG21	19:YS:36:LEU:HD21	1.95	0.49
22:YV:63:ILE:O	22:YV:70:ILE:HD11	2.13	0.49
1:YA:85:G:O2'	1:YA:86:G:H8	1.95	0.49
34:XC:21:TRP:CZ3	45:XN:93:PRO:HG2	2.47	0.49
1:RA:2562:U:C2'	1:RA:2563:U:H5'	2.42	0.49
32:QA:1118:U:H2'	32:QA:1119:C:C6	2.47	0.49
1:RA:1790:C:O2'	3:RC:207:ALA:HB2	2.12	0.49
32:QA:420:U:C2'	32:QA:421:U:H5''	2.43	0.49
32:QA:290:C:C2'	32:QA:291:U:H5'	2.43	0.49
32:XA:673:A:H2'	32:XA:674:G:C8	2.47	0.49
32:QA:1508:A:H2'	32:QA:1509:C:O4'	2.12	0.49
1:YA:815:C:P	18:YR:85:LYS:HE2	2.53	0.49
44:XM:8:ILE:N	44:XM:9:PRO:HD3	2.28	0.49
4:YD:78:GLY:C	4:YD:80:TRP:CZ3	2.86	0.49
4:YD:129:THR:HG22	4:YD:130:GLN:O	2.13	0.49
39:XH:23:ALA:HB1	39:XH:60:LEU:O	2.12	0.49
1:YA:712:G:C2	1:YA:720:U:O2	2.65	0.49
15:RO:15:ARG:NE	15:RO:93:ASP:OD1	2.43	0.49
56:RA:3780:HOH:O	10:RJ:39:LYS:HE3	2.12	0.49
49:XR:63:TYR:CE2	49:XR:69:TYR:OH	2.64	0.49
32:XA:6:G:H1	36:XE:102:THR:HG21	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:364:C:H2'	1:RA:365:U:H6	1.78	0.49
32:XA:979:C:OP2	32:XA:981:U:O4	2.31	0.49
1:YA:2392:A:C8	1:YA:2429:G:C2	3.00	0.49
1:YA:2392:A:C2	12:YL:55:MET:SD	3.04	0.49
11:RK:16:ALA:O	11:RK:17:ARG:HB2	2.12	0.49
1:YA:229:C:O2'	1:YA:230:G:O5'	2.31	0.49
1:YA:160:A:N6	1:YA:167:A:H1'	2.28	0.49
35:QD:3:TYR:HB2	35:QD:62:ARG:NH2	2.27	0.49
1:YA:311:A:H1'	1:YA:332:A:C8	2.48	0.49
5:YE:135:ALA:C	5:YE:137:LYS:H	2.15	0.49
10:YJ:43:GLU:O	10:YJ:45:THR:HG22	2.12	0.49
47:QP:20:VAL:HG22	47:QP:21:VAL:N	2.28	0.49
48:QQ:12:VAL:HG11	48:QQ:21:VAL:H	1.77	0.49
1:RA:244:A:OP2	30:R3:7:ARG:NH2	2.46	0.49
1:YA:626:A:H2'	12:YL:78:ARG:HH22	1.77	0.49
13:RM:35:ALA:HB3	13:RM:99:GLY:H	1.77	0.49
1:YA:870:U:H2'	1:YA:871:U:C5'	2.33	0.49
1:YA:141:G:H3'	1:YA:142:A:H8	1.78	0.49
32:XA:1138:G:N3	32:XA:1138:G:H5''	2.28	0.49
11:YK:19:VAL:HG12	11:YK:41:ILE:CG1	2.42	0.49
1:RA:277:G:H4'	1:RA:278:A:N7	2.28	0.49
1:RA:361:G:O2'	1:RA:362:A:O5'	2.28	0.49
40:XI:51:LEU:C	40:XI:53:LEU:H	2.16	0.49
33:QB:9:LEU:HD23	33:QB:11:ALA:N	2.28	0.49
1:YA:2356:U:H4'	23:YW:16:GLU:CG	2.36	0.49
1:RA:1085:A:H2'	1:RA:1086:A:N3	2.28	0.49
9:RI:58:ILE:O	9:RI:58:ILE:HG22	2.12	0.49
33:QB:221:ARG:CZ	33:QB:221:ARG:HB3	2.43	0.49
4:RD:114:LYS:HE3	4:RD:114:LYS:C	2.32	0.49
32:XA:737:C:OP1	37:XF:91:ARG:HD2	2.13	0.49
20:YT:39:THR:HG21	20:YT:42:GLU:CD	2.33	0.49
32:QA:201:G:H2'	32:QA:202:G:O4'	2.13	0.49
11:YK:13:ASN:N	11:YK:13:ASN:HD22	1.96	0.49
1:YA:534:U:H6	1:YA:534:U:O5'	1.96	0.49
24:RX:34:SER:CA	24:RX:49:ARG:HA	2.43	0.49
32:QA:1005:A:H4'	32:QA:1037:C:O2	2.12	0.49
18:RR:38:VAL:HG11	18:RR:59:ILE:HG13	1.93	0.49
42:QK:121:ARG:CZ	52:QU:35:GLU:HG3	2.42	0.49
1:YA:1906:G:H5''	1:YA:1929:G:O2'	2.13	0.49
1:YA:983:A:N6	1:YA:984:A:C2	2.81	0.49
10:RJ:13:ARG:O	10:RJ:14:ASP:CB	2.57	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:RK:59:LYS:HG3	11:RK:89:ASN:ND2	2.27	0.49
17:RQ:40:LYS:O	17:RQ:41:ALA:C	2.49	0.49
1:YA:2726:A:HO2'	1:YA:2727:A:C5'	2.26	0.49
1:YA:2773:C:C2	1:YA:2774:C:C5	3.01	0.49
1:RA:870:U:O2'	1:RA:871:U:H5'	2.12	0.49
1:RA:745:G:H2'	1:RA:746:U:H5'	1.95	0.49
1:YA:64:A:O2'	1:YA:65:U:H5'	2.12	0.49
4:RD:149:ASN:OD1	4:RD:150:GLN:N	2.46	0.49
1:RA:1266:G:H5''	19:RS:15:GLN:NE2	2.27	0.49
25:RY:22:LEU:O	25:RY:23:ARG:O	2.30	0.49
32:QA:1111:A:O2'	32:QA:1112:C:H5'	2.13	0.49
1:YA:752:A:C6	1:YA:1781:U:H1'	2.48	0.49
34:XC:124:GLU:N	34:XC:124:GLU:CD	2.66	0.49
13:YM:52:ALA:HB1	13:YM:119:LEU:CD2	2.43	0.49
32:XA:484:G:H4'	32:XA:485:U:OP1	2.09	0.49
3:RC:219:VAL:HG12	3:RC:224:MET:HE3	1.93	0.49
40:XI:5:TYR:CD2	40:XI:5:TYR:N	2.80	0.49
32:XA:1486:G:H2'	32:XA:1487:G:O4'	2.13	0.49
32:XA:872:A:C5	32:XA:874:G:C8	3.01	0.49
32:QA:1423:G:O2'	32:QA:1424:U:H5'	2.12	0.49
1:YA:949:G:C6	1:YA:950:G:N7	2.80	0.49
3:YC:28:PRO:HG3	3:YC:62:ARG:NH1	2.28	0.49
29:Y2:1:MET:HG3	29:Y2:2:LYS:N	2.27	0.49
42:QK:17:ASP:HB3	42:QK:80:ASN:OD1	2.13	0.49
32:QA:955:U:H6	32:QA:955:U:O5'	1.95	0.49
33:QB:84:LEU:O	33:QB:84:LEU:HG	2.13	0.49
7:RG:38:ASP:N	7:RG:38:ASP:OD1	2.46	0.49
1:RA:1467:U:C5	1:RA:1546:G:N3	2.81	0.49
28:R1:27:ARG:O	28:R1:30:PRO:HD3	2.12	0.49
17:RQ:63:ARG:NH2	17:RQ:96:ASP:CA	2.76	0.49
1:RA:2353:G:H1'	23:RW:30:VAL:CG1	2.39	0.49
30:Y3:28:LEU:HD23	30:Y3:32:LEU:HD21	1.93	0.49
1:YA:2345:G:C5	1:YA:2381:A:C2	3.01	0.49
1:YA:246:C:O2'	1:YA:385:C:H4'	2.13	0.49
51:QT:32:LYS:O	51:QT:35:TYR:CD2	2.66	0.49
1:YA:410:G:N2	1:YA:418:C:C2	2.81	0.49
33:QB:95:TRP:HZ3	33:QB:98:GLY:N	2.11	0.49
1:YA:2023:C:O2'	1:YA:2024:G:O5'	2.31	0.49
1:YA:1361:G:C6	1:YA:1371:G:N2	2.81	0.49
33:XB:83:ALA:O	33:XB:85:SER:N	2.45	0.49
27:Y0:42:ILE:CD1	27:Y0:48:TYR:HB2	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:54:G:C4	1:YA:55:G:C8	3.01	0.49
10:RJ:54:ILE:HD12	10:RJ:55:ILE:C	2.33	0.49
14:YN:81:ASN:O	14:YN:82:GLU:HB2	2.13	0.49
14:YN:83:LEU:HD11	14:YN:86:ARG:HH21	1.78	0.49
1:YA:785:G:O2'	1:YA:1779:U:C5'	2.61	0.49
1:YA:142:A:C2'	1:YA:143:C:C6	2.96	0.49
32:XA:243:A:C2	32:XA:246:A:C8	3.01	0.49
1:RA:1733:G:N2	1:RA:1734:G:C4	2.81	0.49
32:XA:1134:G:C6	32:XA:1141:C:N4	2.81	0.49
1:YA:1789:A:H2'	1:YA:1790:C:C6	2.48	0.49
32:QA:198:G:O2'	32:QA:199:A:C5'	2.61	0.49
37:XF:42:TRP:HB2	37:XF:59:TYR:CB	2.41	0.49
4:RD:68:PHE:CE2	4:RD:75:ALA:HA	2.48	0.49
32:QA:97:G:H2'	32:QA:98:A:O4'	2.13	0.49
39:QH:5:PRO:HB2	39:QH:32:LYS:NZ	2.28	0.49
32:XA:519:C:O2'	32:XA:520:A:O4'	2.22	0.49
4:YD:113:SER:HB3	4:YD:168:GLU:H	1.78	0.49
12:YL:83:ALA:HB2	12:YL:117:THR:HB	1.93	0.49
38:XG:16:LYS:HG2	40:XI:45:MET:SD	2.53	0.49
14:RN:79:LEU:O	14:RN:80:PHE:CB	2.56	0.49
32:QA:1005:A:H2'	32:QA:1006:G:O4'	2.13	0.49
36:XE:37:VAL:HG12	36:XE:38:VAL:N	2.28	0.49
6:RF:45:ASP:CB	6:RF:48:LEU:HB2	2.43	0.49
12:RL:65:GLY:O	12:RL:66:PHE:CB	2.60	0.49
1:YA:1926:U:H2'	1:YA:1928:A:N7	2.28	0.49
1:YA:931:U:C2'	1:YA:931:U:O2	2.60	0.49
9:YI:69:VAL:HG13	9:YI:69:VAL:O	2.12	0.49
1:YA:1635:A:H2'	1:YA:1636:U:C6	2.45	0.49
17:RQ:20:ALA:HA	17:RQ:23:TYR:CE1	2.48	0.49
50:QS:4:LEU:HD22	50:QS:8:PRO:HA	1.95	0.49
32:QA:1226:C:N4	44:QM:102:LYS:HG3	2.27	0.49
1:YA:1869:G:N1	1:YA:1873:G:C6	2.81	0.49
13:YM:108:VAL:HG21	13:YM:112:LEU:HB3	1.94	0.49
1:YA:2590:A:H4'	3:YC:237:ARG:NH2	2.27	0.49
32:XA:64:G:C8	32:XA:99:C:N4	2.81	0.49
5:YE:154:ASP:C	5:YE:156:ASN:H	2.15	0.49
25:YY:1:MET:H2	25:YY:5:GLU:HG3	1.77	0.49
19:RS:82:MET:HB2	19:RS:98:LYS:HB2	1.94	0.49
40:QI:50:PRO:HG3	40:QI:82:ILE:HD12	1.94	0.49
39:QH:85:TYR:CD2	39:QH:123:GLU:HB2	2.47	0.49
35:QD:191:SER:O	35:QD:192:ALA:CB	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:484:G:H4'	32:XA:485:U:O5'	2.09	0.49
46:XO:54:GLY:O	46:XO:58:MET:HG3	2.13	0.49
1:YA:1760:C:H2'	1:YA:1761:C:H5'	1.94	0.49
1:RA:2579:C:H2'	1:RA:2580:U:O4'	2.13	0.49
32:XA:1522:U:H2'	32:XA:1523:G:H8	1.78	0.49
1:RA:1584:U:H2'	1:RA:1584:U:O2	2.13	0.49
45:QN:47:LEU:O	45:QN:47:LEU:HD23	2.13	0.49
33:QB:195:VAL:HG11	33:QB:198:VAL:HA	1.95	0.49
49:XR:53:GLN:O	49:XR:56:ARG:HB2	2.12	0.49
32:XA:9:G:OP2	36:XE:125:LYS:HG3	2.12	0.49
16:RP:56:SER:O	16:RP:75:THR:HG23	2.13	0.49
1:RA:2269:G:O2'	23:RW:18:LYS:HG2	2.13	0.49
45:XN:61:ASN:OD1	45:XN:61:ASN:N	2.45	0.49
11:RK:47:ILE:HG13	11:RK:48:PRO:HD3	1.94	0.49
1:YA:2407:A:HO2'	1:YA:2408:U:C5'	2.26	0.49
1:YA:416:U:H2'	1:YA:417:C:C6	2.48	0.49
1:YA:2024:G:N2	1:YA:2040:G:H1'	2.27	0.49
1:YA:1361:G:O2'	1:YA:1362:C:H5'	2.13	0.49
1:YA:1377:G:O5'	1:YA:1377:G:H8	1.96	0.49
32:QA:797:C:O2'	32:QA:798:U:H5'	2.13	0.49
1:YA:485:C:C4	1:YA:496:G:N1	2.81	0.49
1:YA:117:G:N1	1:YA:119:A:N6	2.60	0.49
1:YA:2311:A:H3'	1:YA:2312:U:H6	1.78	0.49
1:YA:2303:G:H5'	6:YF:121:PHE:CE1	2.47	0.49
1:YA:108:G:C6	1:YA:109:C:C4	3.01	0.49
1:YA:71:A:H5''	1:YA:73:A:C4	2.48	0.49
32:XA:1133:G:C5	32:XA:1134:G:N7	2.81	0.49
1:RA:962:G:N2	1:RA:2250:G:H1	2.11	0.49
1:YA:1517:G:N2	1:YA:1732:C:C6	2.81	0.49
32:XA:996:A:N1	32:XA:1046:A:H5'	2.28	0.49
14:RN:98:LEU:HB3	27:R0:42:ILE:HG12	1.95	0.49
32:QA:1304:G:H1'	32:QA:1334:G:H22	1.77	0.49
1:YA:747:U:H3'	1:YA:748:G:H5'	1.95	0.49
32:QA:406:G:C8	32:QA:495:A:N3	2.81	0.49
1:RA:2683:C:O2	11:RK:70:ARG:NH2	2.44	0.49
32:QA:133:U:H1'	32:QA:230:G:N2	2.28	0.49
51:QT:61:ALA:HA	51:QT:66:ILE:HG22	1.95	0.49
33:QB:134:LEU:HA	33:QB:137:THR:OG1	2.13	0.49
1:YA:2286:G:C8	28:Y1:33:LEU:HD21	2.48	0.49
10:RJ:77:HIS:HD2	10:RJ:79:GLY:CA	2.25	0.49
32:XA:197:A:H4'	32:XA:198:G:OP1	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1287:A:H5'	14:YN:103:ARG:CZ	2.43	0.49
1:RA:2321:U:C6	1:RA:2321:U:H5''	2.44	0.49
32:QA:351:G:H4'	32:QA:352:C:OP2	2.11	0.49
14:RN:33:ILE:HG23	14:RN:114:GLU:HB3	1.93	0.49
32:XA:1226:C:C5'	44:XM:94:LEU:HD21	2.43	0.49
10:YJ:106:LYS:HB2	10:YJ:119:PHE:CE2	2.42	0.49
13:RM:50:ARG:HG2	13:RM:50:ARG:NH2	2.28	0.49
1:RA:2196:C:H5''	35:XD:150:LYS:HD2	1.95	0.49
44:QM:45:SER:O	44:QM:46:GLU:CB	2.60	0.49
8:YH:35:LYS:O	8:YH:36:ALA:HB2	2.13	0.49
1:YA:1819:A:H4'	1:YA:1820:U:C5'	2.43	0.49
42:QK:110:THR:HA	52:QU:4:LYS:HA	1.95	0.49
32:QA:995:C:N3	32:QA:1046:A:O2'	2.46	0.49
8:RH:54:LEU:O	8:RH:56:ALA:N	2.46	0.49
45:QN:86:ALA:O	45:QN:91:GLU:HB2	2.12	0.49
1:RA:1006:C:C2'	1:RA:1007:C:H5'	2.43	0.49
51:XT:71:ALA:O	51:XT:72:ALA:C	2.51	0.49
4:YD:39:ASP:CG	4:YD:40:LEU:H	2.16	0.49
32:QA:1414:U:H2'	32:QA:1415:G:H8	1.76	0.49
1:YA:2600:A:C6	1:YA:2601:C:N4	2.81	0.49
24:YX:65:THR:O	24:YX:68:ALA:HB3	2.13	0.49
49:XR:25:ILE:O	49:XR:25:ILE:HG13	2.12	0.49
1:RA:920:A:C6	1:RA:921:C:C4	3.01	0.49
1:RA:996:A:N6	1:RA:1160:G:C6	2.81	0.48
24:RX:44:ARG:HG2	24:RX:45:PHE:N	2.28	0.48
1:YA:396:G:O2'	1:YA:397:U:H6	1.91	0.48
33:QB:165:ALA:HB2	33:QB:186:VAL:HG12	1.94	0.48
32:XA:956:U:O2	32:XA:1225:A:C2	2.66	0.48
1:RA:528:A:H2	1:RA:2043:C:C5'	2.26	0.48
28:Y1:8:ILE:HG12	28:Y1:24:LYS:HB3	1.95	0.48
1:YA:1533:C:H2'	1:YA:1534:U:H5'	1.95	0.48
1:YA:1361:G:C2	1:YA:1362:C:C6	3.00	0.48
1:YA:312:G:C2	1:YA:313:G:C8	3.00	0.48
32:XA:321:A:N7	32:XA:328:C:C2	2.81	0.48
32:QA:451:A:O4'	32:QA:452:A:C8	2.66	0.48
1:YA:2060:A:H2'	5:YE:63:LYS:HZ1	1.78	0.48
32:XA:1130:A:C6	32:XA:1146:A:C5	3.00	0.48
1:RA:1392:A:C6	1:RA:1393:A:C6	3.00	0.48
40:XI:86:LEU:O	40:XI:86:LEU:HG	2.12	0.48
32:XA:254:G:HO2'	32:XA:255:G:H5'	1.77	0.48
13:YM:35:ALA:O	13:YM:128:THR:HA	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RG:35:THR:C	7:RG:36:LEU:HD22	2.34	0.48
32:QA:1157:A:C6	32:QA:1180:A:C5	3.00	0.48
1:YA:1026:G:H2'	1:YA:1027:A:C8	2.48	0.48
11:RK:116:ILE:HD12	11:RK:117:SER:N	2.28	0.48
52:XU:38:GLU:CA	52:XU:40:PRO:HD2	2.43	0.48
1:YA:593:U:C2	1:YA:594:U:C5	3.01	0.48
47:QP:12:LYS:O	47:QP:13:LYS:HB2	2.13	0.48
14:RN:73:ASN:HA	14:RN:76:VAL:HG12	1.95	0.48
32:XA:1201:A:C4'	32:XA:1202:U:O5'	2.58	0.48
1:YA:1905:C:O4'	1:YA:1928:A:H2	1.94	0.48
1:RA:545:U:H6	1:RA:546:U:O2'	1.95	0.48
1:RA:2820:A:C2'	1:RA:2821:A:OP1	2.61	0.48
1:RA:2103:C:C2'	1:RA:2104:C:H5'	2.42	0.48
42:QK:90:PRO:C	42:QK:92:ARG:H	2.16	0.48
16:RP:89:GLY:O	16:RP:112:ARG:HD3	2.13	0.48
1:YA:2540:C:H2'	1:YA:2541:A:H8	1.78	0.48
1:YA:469:G:OP2	5:YE:55:SER:HB3	2.13	0.48
27:Y0:6:LYS:HG2	27:Y0:7:PRO:O	2.13	0.48
8:RH:43:ASN:HD22	8:RH:43:ASN:N	2.11	0.48
1:RA:675:A:H4'	5:RE:62:GLN:HE22	1.77	0.48
13:RM:47:GLU:O	13:RM:48:ALA:C	2.51	0.48
32:XA:383:A:C8	32:XA:384:G:H1'	2.48	0.48
1:YA:263:G:H2'	1:YA:264:C:O4'	2.13	0.48
1:RA:1856:U:H2'	1:RA:1857:G:H5'	1.94	0.48
1:YA:2868:A:C6	1:YA:2869:G:C6	3.01	0.48
32:XA:1108:G:H5''	34:XC:175:HIS:ND1	2.28	0.48
36:XE:48:GLY:HA3	36:XE:66:ALA:HB2	1.94	0.48
1:RA:832:U:H2'	1:RA:833:A:C8	2.48	0.48
1:YA:2461:A:H1'	1:YA:2492:U:O2	2.13	0.48
19:RS:29:VAL:HG22	19:RS:51:LEU:HD11	1.94	0.48
39:XH:91:LEU:HB3	39:XH:112:ASP:OD2	2.13	0.48
19:RS:10:ALA:O	19:RS:100:THR:HB	2.12	0.48
1:RA:1576:U:O2'	1:RA:1577:C:H5'	2.13	0.48
32:XA:579:A:H2'	32:XA:580:C:C6	2.48	0.48
7:YG:135:ALA:O	7:YG:136:ASP:HB2	2.11	0.48
5:RE:134:LEU:HD12	5:RE:134:LEU:O	2.13	0.48
44:QM:75:SER:O	44:QM:78:ARG:HB3	2.12	0.48
1:RA:149:A:H2'	1:RA:150:U:H6	1.77	0.48
33:XB:186:VAL:HG23	33:XB:186:VAL:O	2.13	0.48
1:YA:2474:U:O4'	1:YA:2474:U:O2	2.30	0.48
15:YO:8:ILE:H	15:YO:8:ILE:HD12	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:RQ:88:GLU:O	17:RQ:88:GLU:OE1	2.31	0.48
16:RP:50:ARG:HG3	16:RP:57:ALA:O	2.13	0.48
18:YR:49:ILE:HG22	18:YR:54:VAL:CB	2.43	0.48
37:QF:6:ILE:HB	37:QF:62:MET:HB3	1.95	0.48
42:XK:27:ASN:N	42:XK:27:ASN:OD1	2.46	0.48
42:XK:91:GLY:O	42:XK:92:ARG:C	2.51	0.48
45:XN:12:ARG:HD3	45:XN:58:ARG:O	2.13	0.48
50:XS:50:VAL:CG1	50:XS:70:LEU:HB3	2.43	0.48
1:YA:2384:U:H5''	1:YA:2386:A:OP1	2.13	0.48
12:YL:57:LEU:HA	12:YL:60:ARG:HG3	1.93	0.48
1:YA:2360:G:C1'	12:YL:60:ARG:HH21	2.27	0.48
51:QT:33:LYS:O	51:QT:36:ALA:HB3	2.13	0.48
11:RK:18:ARG:HB2	11:RK:45:GLU:HG2	1.94	0.48
1:YA:1351:C:H2'	1:YA:1352:U:O4'	2.13	0.48
10:YJ:45:THR:C	10:YJ:47:HIS:H	2.15	0.48
48:QQ:51:GLU:O	48:QQ:52:CYS:O	2.31	0.48
9:YI:52:LEU:HD12	9:YI:53:PRO:CD	2.31	0.48
1:YA:183:C:N4	1:YA:184:C:C4	2.81	0.48
1:RA:264:C:O2'	1:RA:265:A:H2'	2.13	0.48
1:YA:1663:G:C6	1:YA:1992:G:N7	2.81	0.48
5:RE:187:VAL:HG12	5:RE:188:MET:N	2.27	0.48
32:QA:1282:C:H2'	32:QA:1283:U:H6	1.76	0.48
6:RF:109:ARG:O	6:RF:136:ILE:HG22	2.12	0.48
3:RC:12:ARG:HG3	3:RC:12:ARG:NH1	2.22	0.48
1:YA:2748:A:C2	1:YA:2749:A:C4	3.02	0.48
1:YA:28:A:C6	1:YA:29:U:C2	3.01	0.48
8:YH:24:GLY:O	8:YH:26:ALA:O	2.31	0.48
40:XI:53:LEU:O	40:XI:54:VAL:HG13	2.13	0.48
7:YG:84:LYS:HB2	7:YG:132:LEU:H	1.78	0.48
9:RI:120:ASP:HB3	9:RI:123:ALA:HB3	1.94	0.48
1:RA:1812:U:H2'	1:RA:1813:G:H8	1.78	0.48
10:YJ:99:ARG:HG3	10:YJ:102:GLU:CD	2.32	0.48
1:RA:1020:A:O5'	1:RA:1020:A:H8	1.97	0.48
32:QA:34:C:H2'	32:QA:35:G:H8	1.77	0.48
32:QA:188:C:C2'	32:QA:188:C:O2	2.60	0.48
42:QK:76:TYR:N	42:QK:76:TYR:CD1	2.81	0.48
42:QK:21:HIS:CE1	42:QK:34:THR:CG2	2.94	0.48
1:RA:445:C:H5''	17:RQ:2:ARG:HB2	1.95	0.48
1:YA:1324:G:C2	1:YA:1328:A:C6	3.01	0.48
50:XS:44:ILE:HD12	50:XS:63:ASP:HB2	1.95	0.48
6:YF:12:VAL:HG12	6:YF:16:MET:HG3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:RU:73:ASN:HA	21:RU:95:PHE:CE2	2.48	0.48
1:YA:984:A:HO2'	1:YA:985:C:P	2.33	0.48
18:RR:18:GLN:O	18:RR:97:LYS:O	2.31	0.48
32:XA:177:G:O2'	32:XA:1448:C:H4'	2.12	0.48
1:YA:1667:G:O5'	1:YA:1667:G:H8	1.97	0.48
1:YA:2637:U:C2'	1:YA:2638:G:H5'	2.42	0.48
32:QA:830:G:H2'	32:QA:831:A:C8	2.46	0.48
41:QJ:70:HIS:H	41:QJ:70:HIS:CD2	2.31	0.48
1:RA:1857:G:C1'	1:RA:1858:A:OP2	2.61	0.48
40:X1:127:SER:O	40:X1:128:LYS:HB3	2.13	0.48
18:YR:2:TYR:O	18:YR:3:ALA:HB2	2.13	0.48
32:XA:858:G:C6	56:XA:1822:HOH:O	2.65	0.48
22:YV:44:HIS:NE2	22:YV:85:LYS:HD3	2.28	0.48
12:YL:103:ILE:HD12	12:YL:103:ILE:H	1.77	0.48
21:YU:11:ILE:HG21	21:YU:79:ALA:HB2	1.96	0.48
32:QA:51:A:H4'	32:QA:52:C:O5'	2.13	0.48
6:RF:128:SER:OG	6:RF:154:THR:HB	2.13	0.48
12:RL:19:LEU:C	12:RL:19:LEU:HD23	2.33	0.48
1:RA:346:A:C2	1:RA:347:A:H1'	2.48	0.48
13:RM:96:ILE:C	13:RM:96:ILE:HD12	2.33	0.48
32:QA:471:U:H2'	32:QA:472:U:O4'	2.13	0.48
41:XJ:49:PHE:CE2	45:XN:73:LEU:HD13	2.48	0.48
1:RA:996:A:H4'	17:RQ:91:ARG:HD2	1.95	0.48
3:YC:74:PRO:HG2	3:YC:96:LYS:HB2	1.94	0.48
1:YA:2298:A:H5'	1:YA:2322:A:O2'	2.13	0.48
1:YA:1346:G:H2'	1:YA:1347:A:C8	2.49	0.48
1:YA:2209:G:C2	1:YA:2216:G:C2	3.02	0.48
1:YA:2217:G:C4	1:YA:2218:G:C8	3.01	0.48
1:YA:300:A:H1'	1:YA:333:G:N2	2.29	0.48
27:Y0:55:ALA:HB3	27:Y0:56:LYS:NZ	2.28	0.48
16:YP:91:VAL:HG11	16:YP:96:LEU:HD21	1.94	0.48
1:YA:480:A:H3'	1:YA:481:G:C5'	2.43	0.48
1:YA:54:G:C5	1:YA:55:G:C8	3.02	0.48
34:XC:11:LEU:HD23	34:XC:11:LEU:HA	1.59	0.48
1:YA:1019:U:OP1	1:YA:1035:U:O2'	2.24	0.48
25:YY:44:LYS:NZ	25:YY:48:ARG:NE	2.61	0.48
1:RA:1777:U:O2'	1:RA:1778:U:H5'	2.13	0.48
32:XA:1213:A:C4	32:XA:1215:G:C8	3.01	0.48
6:YF:111:ARG:N	6:YF:111:ARG:HE	2.11	0.48
4:RD:12:THR:HG22	4:RD:13:ARG:H	1.64	0.48
2:RB:30:C:C2'	2:RB:31:C:H5'	2.39	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:921:U:H2'	32:QA:922:G:O4'	2.13	0.48
39:QH:7:ALA:H	39:QH:76:ARG:HH12	1.61	0.48
1:YA:1682:G:HO2'	1:YA:1683:U:H6	1.46	0.48
47:QP:11:ALA:O	47:QP:12:LYS:C	2.51	0.48
8:YH:128:HIS:HB2	8:YH:144:VAL:HG22	1.94	0.48
1:YA:2772:C:H2'	1:YA:2772:C:O2	2.12	0.48
25:RY:6:LEU:O	25:RY:7:ARG:HB3	2.12	0.48
1:YA:767:U:O2'	1:YA:768:G:H5'	2.14	0.48
1:YA:1609:A:C6	1:YA:1616:A:C4	3.00	0.48
3:RC:16:VAL:N	3:RC:203:VAL:CG1	2.76	0.48
16:YP:63:ILE:O	16:YP:63:ILE:HG22	2.11	0.48
8:YH:80:ILE:HG13	8:YH:81:ALA:H	1.78	0.48
42:QK:22:ILE:HD11	42:QK:85:VAL:HG13	1.94	0.48
41:XJ:48:ARG:CZ	41:XJ:48:ARG:HB2	2.43	0.48
36:QE:132:PRO:HA	36:QE:135:VAL:HG13	1.95	0.48
12:RL:79:LEU:O	12:RL:81:ASP:O	2.31	0.48
32:QA:1226:C:C5	44:QM:102:LYS:HA	2.48	0.48
1:RA:1025:G:H4'	1:RA:1026:G:OP2	2.13	0.48
1:YA:1865:U:C4	1:YA:1875:G:C2	3.01	0.48
21:RU:3:LYS:HD3	21:RU:82:VAL:HB	1.94	0.48
10:YJ:140:LEU:HD22	10:YJ:141:ASP:N	2.28	0.48
26:YZ:28:LEU:HD23	26:YZ:28:LEU:N	2.28	0.48
1:YA:2845:U:H5''	16:YP:51:ASN:O	2.13	0.48
32:XA:223:A:H2'	32:XA:224:U:H6	1.78	0.48
41:QJ:36:VAL:HG13	41:QJ:76:ILE:HG12	1.95	0.48
5:RE:132:LYS:HZ2	5:RE:132:LYS:HB3	1.78	0.48
2:RB:46:A:C5	2:RB:47:C:C4	3.02	0.48
32:QA:471:U:O2'	32:QA:472:U:H5'	2.13	0.48
18:RR:37:GLU:N	18:RR:37:GLU:CD	2.65	0.48
32:XA:865:A:H2	32:XA:918:A:H4'	1.79	0.48
32:QA:1203:C:H4'	45:QN:66:THR:HG22	1.95	0.48
26:RZ:19:HIS:O	26:RZ:22:THR:HB	2.14	0.48
36:XE:107:GLY:O	36:XE:111:ARG:HB2	2.12	0.48
6:YF:67:THR:O	6:YF:84:ILE:HG22	2.13	0.48
35:XD:82:LYS:O	35:XD:83:GLY:O	2.31	0.48
1:RA:112:U:H5'	25:RY:58:ASN:ND2	2.28	0.48
52:QU:45:LYS:HE3	52:QU:45:LYS:HA	1.95	0.48
10:YJ:105:VAL:HG22	10:YJ:105:VAL:O	2.14	0.48
32:XA:286:C:H2'	32:XA:287:U:O4'	2.13	0.48
1:RA:415:A:N6	1:RA:2407:A:H61	2.11	0.48
18:RR:49:ILE:HG21	18:RR:53:PHE:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:379:G:N1	1:YA:380:G:C4	2.82	0.48
23:RW:35:ILE:O	23:RW:35:ILE:HG12	2.13	0.48
32:XA:960:U:O2	32:XA:960:U:H2'	2.14	0.48
1:YA:2331:G:C2	1:YA:2385:C:N3	2.81	0.48
23:YW:37:VAL:HG23	23:YW:38:ARG:NH1	2.29	0.48
30:Y3:31:ILE:HG21	30:Y3:34:LYS:NZ	2.28	0.48
42:QK:124:LYS:O	52:QU:33:ARG:CZ	2.61	0.48
10:YJ:44:TYR:C	10:YJ:44:TYR:CD2	2.86	0.48
17:YQ:91:ARG:HG3	18:YR:11:GLN:NE2	2.28	0.48
32:XA:1071:C:H2'	32:XA:1072:G:H8	1.78	0.48
38:QG:114:SER:CB	38:QG:117:LEU:HG	2.30	0.48
1:YA:492:A:C2	19:YS:49:LYS:HE2	2.46	0.48
19:YS:49:LYS:HB3	19:YS:49:LYS:NZ	2.29	0.48
4:RD:119:ALA:HB2	4:RD:165:MET:CB	2.42	0.48
1:YA:55:G:C2	1:YA:116:C:C2	3.01	0.48
7:YG:90:GLY:HA3	7:YG:93:TYR:CZ	2.48	0.48
1:YA:1011:G:H4'	1:YA:1012:U:OP2	2.10	0.48
38:XG:30:MET:SD	38:XG:35:LYS:HB2	2.53	0.48
1:YA:112:U:H5'	25:YY:58:ASN:HD21	1.77	0.48
32:QA:407:U:H2'	32:QA:408:A:H8	1.77	0.48
1:YA:141:G:H3'	1:YA:142:A:O4'	2.12	0.48
1:YA:192:C:C4	1:YA:193:U:C2	3.01	0.48
32:XA:1133:G:N2	32:XA:1142:G:C5	2.82	0.48
14:YN:15:SER:HA	14:YN:18:GLN:HB3	1.95	0.48
1:YA:1275:A:C5	14:YN:16:HIS:CD2	3.00	0.48
32:QA:674:G:OP1	37:QF:51:ILE:HG13	2.13	0.48
32:XA:265:G:H5'	48:XQ:65:PRO:O	2.14	0.48
32:XA:390:U:O2'	32:XA:391:G:H5'	2.13	0.48
35:XD:154:VAL:O	35:XD:158:LEU:HD12	2.13	0.48
32:QA:95:C:H5''	32:QA:95:C:H6	1.78	0.48
1:YA:990:A:H61	18:YR:78:ARG:NH1	2.11	0.48
33:QB:146:SER:O	33:QB:147:LEU:HD23	2.14	0.48
6:YF:39:VAL:HG22	6:YF:49:LEU:HG	1.94	0.48
1:YA:46:G:N2	1:YA:47:C:C2	2.82	0.48
11:RK:113:MET:O	11:RK:114:LYS:C	2.52	0.48
1:YA:2201:G:C5	1:YA:2202:U:C5	3.01	0.48
42:QK:76:TYR:N	42:QK:76:TYR:HD1	2.11	0.48
20:RT:73:ARG:NH2	20:RT:73:ARG:HB3	2.28	0.48
1:RA:38:A:O2'	5:RE:43:THR:HA	2.13	0.48
25:YY:18:LEU:HD13	25:YY:18:LEU:O	2.13	0.48
45:QN:50:LEU:O	45:QN:52:ARG:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:YG:162:ARG:NH1	7:YG:168:VAL:HG21	2.27	0.48
1:YA:575:A:C2	1:YA:576:U:C5	3.01	0.48
32:QA:545:C:H5'	35:QD:68:GLU:CG	2.44	0.48
32:QA:1052:U:C5'	32:QA:1053:G:OP2	2.61	0.48
2:YB:77:U:C2'	2:YB:78:A:H5'	2.44	0.48
1:YA:852:U:H2'	1:YA:853:C:H6	1.78	0.48
32:QA:77:A:N6	32:QA:90:C:C4	2.81	0.48
21:YU:33:VAL:O	21:YU:34:ILE:HG13	2.12	0.48
45:QN:26:LEU:HA	45:QN:30:ILE:HD13	1.95	0.48
1:YA:754:U:H2'	1:YA:755:U:H6	1.77	0.48
1:RA:1106:G:C2	1:RA:1107:G:C8	3.01	0.48
32:QA:575:G:C6	32:QA:821:G:N7	2.82	0.48
1:YA:1573:G:H2'	1:YA:1574:C:H5'	1.95	0.48
1:RA:2383:G:H2'	1:RA:2384:U:H6	1.78	0.48
32:QA:488:C:O2'	32:QA:489:C:H5'	2.13	0.48
32:XA:946:A:H2'	32:XA:947:G:H8	1.78	0.48
1:RA:1789:A:OP1	3:RC:220:ARG:HD3	2.13	0.48
4:RD:177:VAL:O	4:RD:177:VAL:HG23	2.13	0.48
1:YA:1833:C:H2'	1:YA:1834:U:H6	1.77	0.48
1:RA:2454:G:H1'	56:RA:3532:HOH:O	2.13	0.48
32:XA:677:U:H3	32:XA:713:G:H22	1.60	0.48
4:YD:122:VAL:HA	4:YD:127:PHE:H	1.78	0.48
1:YA:712:G:N2	1:YA:720:U:H1'	2.29	0.48
36:XE:125:LYS:HE3	36:XE:125:LYS:HB2	1.54	0.48
6:RF:128:SER:HA	6:RF:154:THR:HA	1.95	0.48
1:RA:2233:U:H2'	1:RA:2234:G:C8	2.49	0.48
56:RA:3654:HOH:O	4:RD:140:HIS:CE1	2.64	0.48
2:RB:109:A:C6	2:RB:110:C:C4	3.02	0.48
1:YA:2582:G:N3	1:YA:2582:G:H2'	2.28	0.48
1:YA:1614:A:H2'	1:YA:1615:C:H5'	1.94	0.48
34:QC:190:THR:C	34:QC:192:TYR:H	2.17	0.48
34:QC:188:ALA:O	34:QC:194:VAL:HA	2.12	0.48
1:YA:543:G:N2	1:YA:551:G:C4	2.81	0.48
1:RA:2223:G:C2'	1:RA:2224:G:H5'	2.43	0.48
17:RQ:86:SER:HB3	18:RR:51:VAL:HA	1.95	0.48
24:YX:30:PRO:HG2	24:YX:32:LEU:HD21	1.94	0.48
6:RF:35:LEU:HD12	6:RF:88:VAL:HB	1.96	0.48
15:YO:34:HIS:CD2	15:YO:65:THR:HG21	2.48	0.48
32:XA:976:G:N2	32:XA:1363:A:C4	2.81	0.48
4:RD:107:VAL:HG13	4:RD:203:VAL:HG23	1.95	0.48
1:YA:510:C:H2'	1:YA:511:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1358:G:H2'	1:YA:1372:U:O4	2.14	0.48
1:YA:295:G:N3	1:YA:295:G:H2'	2.28	0.48
21:YU:3:LYS:O	21:YU:4:ILE:C	2.52	0.48
1:YA:2886:A:N7	27:Y0:39:ARG:NE	2.61	0.48
1:YA:185:G:C5	1:YA:212:G:N2	2.81	0.48
32:XA:1123:U:O3'	41:XJ:38:GLY:HA3	2.14	0.48
3:YC:16:VAL:N	3:YC:203:VAL:CG1	2.73	0.48
35:XD:8:LEU:CD2	35:XD:21:LYS:HD2	2.43	0.48
1:YA:240:C:H5''	1:YA:623:C:OP1	2.13	0.48
39:QH:74:ILE:HD12	39:QH:127:TYR:O	2.14	0.48
1:YA:204:A:C5	1:YA:206:U:O4	2.66	0.48
1:YA:727:A:O2'	1:YA:728:G:C8	2.63	0.48
4:RD:151:THR:CG2	4:RD:152:PRO:HD3	2.36	0.48
4:YD:16:THR:HG23	4:YD:18:ASP:N	2.20	0.48
1:RA:2109:U:N3	1:RA:2181:U:C4	2.81	0.48
32:QA:922:G:H2'	32:QA:923:A:C8	2.49	0.48
9:RI:104:GLN:O	9:RI:105:LEU:CB	2.61	0.48
34:QC:96:VAL:HG23	34:QC:97:PRO:O	2.14	0.48
1:YA:1526:C:N4	1:YA:1527:G:C6	2.81	0.48
32:QA:548:G:C8	32:QA:548:G:H5''	2.46	0.48
1:RA:1071:G:C8	1:RA:1089:A:N6	2.80	0.48
6:RF:42:ALA:HA	6:RF:45:ASP:O	2.13	0.48
33:XB:46:VAL:HG13	33:XB:47:PRO:CD	2.42	0.48
4:RD:201:LEU:HD12	4:RD:201:LEU:HA	1.61	0.48
9:RI:53:PRO:O	9:RI:74:PRO:HD2	2.14	0.48
6:YF:31:GLU:CA	6:YF:95:MET:HE1	2.44	0.48
10:RJ:105:VAL:HG23	10:RJ:109:LEU:CD1	2.41	0.48
1:YA:1737:G:C6	1:YA:1738:G:N1	2.82	0.48
32:QA:444:G:N2	32:QA:491:G:C4	2.81	0.48
1:RA:2756:U:H5''	31:R4:19:ARG:HG2	1.96	0.48
1:YA:2294:G:OP1	15:YO:10:ARG:HD3	2.13	0.48
34:XC:36:PHE:CE1	45:XN:91:GLU:HB3	2.48	0.48
32:QA:1319:A:C8	32:QA:1323:G:C5	3.01	0.48
32:QA:1329:A:C2'	32:QA:1330:U:H5'	2.44	0.48
13:RM:8:LYS:N	13:RM:8:LYS:HD2	2.19	0.48
1:YA:370:G:C6	1:YA:424:G:N7	2.81	0.48
30:Y3:23:HIS:O	30:Y3:46:LYS:HE3	2.13	0.48
1:YA:2371:G:C2	1:YA:2372:U:C6	3.02	0.48
7:RG:23:ILE:N	7:RG:23:ILE:HD12	2.28	0.48
32:QA:489:C:C2'	32:QA:490:C:H5'	2.43	0.48
32:XA:1330:U:H5'	44:XM:69:ARG:HH22	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:RD:39:ASP:OD2	4:RD:40:LEU:HD12	2.14	0.48
2:RB:77:U:H2'	2:RB:78:A:H5'	1.96	0.48
1:YA:1099:G:C6	1:YA:1100:C:C2	3.01	0.48
6:RF:13:LYS:O	6:RF:17:THR:HG23	2.13	0.48
46:QO:41:HIS:CD2	46:QO:42:PHE:CE2	3.00	0.48
33:XB:128:LEU:O	33:XB:129:THR:C	2.52	0.48
22:YV:3:THR:HA	22:YV:62:THR:O	2.13	0.48
38:QG:88:VAL:HG22	38:QG:89:GLU:N	2.27	0.48
39:QH:124:ILE:O	39:QH:124:ILE:HG13	2.13	0.48
1:RA:2676:C:O2	1:RA:2732:G:N2	2.46	0.48
42:QK:27:ASN:O	42:QK:56:LYS:HE3	2.14	0.48
32:QA:1221:G:H2'	32:QA:1222:G:H8	1.79	0.48
1:YA:2230:G:O3'	24:YX:29:LEU:HD12	2.13	0.48
28:Y1:8:ILE:O	28:Y1:21:THR:HA	2.13	0.48
1:YA:1394:U:C6	1:YA:1394:U:H3'	2.48	0.48
45:QN:83:VAL:HG12	45:QN:84:ARG:N	2.28	0.48
1:YA:301:G:C2	1:YA:317:G:C4	3.01	0.48
1:YA:1153:C:H2'	1:YA:1154:G:H8	1.75	0.48
1:YA:996:A:OP2	17:YQ:91:ARG:NH1	2.47	0.48
33:QB:49:PHE:HB2	33:QB:53:LEU:CD2	2.43	0.48
1:YA:1092:C:H2'	1:YA:1093:G:H5'	1.94	0.48
1:YA:1059:G:O2'	9:YI:131:THR:HG21	2.13	0.48
1:YA:53:A:C8	1:YA:54:G:C8	3.01	0.48
32:QA:1253:G:H2'	32:QA:1254:A:H8	1.79	0.48
6:RF:174:PHE:CD1	6:RF:176:PHE:CE1	3.02	0.48
1:YA:2067:G:H4'	1:YA:2068:U:OP2	2.12	0.48
32:QA:1124:G:H2'	32:QA:1145:A:N6	2.27	0.48
32:XA:1239:A:H1'	32:XA:1241:G:N3	2.27	0.48
32:XA:1295:U:H2'	32:XA:1296:C:C6	2.48	0.48
1:YA:672:C:C6	1:YA:672:C:H3'	2.49	0.48
1:RA:1733:G:O2'	1:RA:1734:G:O5'	2.32	0.48
4:YD:107:VAL:HG13	4:YD:203:VAL:HG23	1.95	0.48
32:XA:134:G:H2'	32:XA:135:C:O4'	2.14	0.48
1:RA:277:G:H4'	1:RA:278:A:C8	2.49	0.48
38:XG:70:PRO:HG2	38:XG:98:LEU:HB2	1.96	0.48
7:YG:122:ALA:HB2	7:YG:132:LEU:HA	1.95	0.48
32:QA:95:C:O2'	32:QA:96:U:H5'	2.14	0.48
16:RP:33:GLU:OE1	32:QA:345:C:C3'	2.62	0.48
15:YO:89:ASP:O	15:YO:90:VAL:HG13	2.13	0.48
35:QD:117:VAL:HA	35:QD:122:ILE:CG1	2.43	0.48
1:YA:2285:C:O4'	1:YA:2288:A:C2	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:286:U:H2'	1:RA:287:G:O4'	2.13	0.48
32:XA:216:U:H2'	32:XA:217:C:C6	2.48	0.48
32:QA:211:G:N1	32:QA:212:G:N3	2.62	0.48
32:XA:919:A:C2	32:XA:920:U:C5	3.02	0.48
33:XB:8:MET:SD	33:XB:9:LEU:HG	2.54	0.48
42:QK:86:LYS:HA	42:QK:113:THR:HG22	1.95	0.48
51:QT:5:SER:OG	51:QT:6:ALA:N	2.45	0.48
3:YC:92:LEU:HD13	3:YC:102:TYR:CE1	2.48	0.48
4:RD:120:GLY:HA2	4:RD:162:ALA:HB1	1.95	0.48
45:QN:14:ALA:O	45:QN:18:LYS:HG3	2.13	0.48
32:XA:1068:G:C2'	32:XA:1069:C:H5'	2.44	0.48
24:RX:29:LEU:CD2	24:RX:29:LEU:N	2.76	0.48
23:YW:49:ASN:HB3	23:YW:81:ILE:HG12	1.96	0.48
20:RT:25:GLU:C	20:RT:27:SER:N	2.67	0.48
40:QI:56:MET:CE	40:QI:57:VAL:H	2.27	0.48
32:XA:1048:G:C2	32:XA:1050:G:N7	2.82	0.48
32:QA:1323:G:H2'	32:QA:1324:A:C8	2.49	0.48
32:QA:77:A:N6	32:QA:90:C:C5	2.81	0.48
5:RE:95:LYS:O	5:RE:96:VAL:CB	2.59	0.48
33:QB:139:GLU:O	33:QB:143:LEU:CD2	2.62	0.48
19:RS:69:LEU:HG	19:RS:107:VAL:HG13	1.94	0.48
1:YA:2626:C:H2'	1:YA:2627:G:O4'	2.13	0.48
46:XO:62:ARG:HH22	46:XO:88:ARG:HH21	1.61	0.48
1:RA:1013:C:H2'	1:RA:1014:A:H8	1.78	0.48
1:RA:2311:A:H1'	6:RF:78:ILE:CD1	2.44	0.48
1:RA:1419:A:C5	1:RA:1421:G:C4	3.01	0.48
35:QD:2:ARG:CZ	35:QD:114:ARG:CD	2.91	0.48
19:RS:42:LYS:O	19:RS:42:LYS:HD3	2.13	0.48
1:YA:1319:C:H1'	1:YA:1334:G:N2	2.28	0.48
46:QO:41:HIS:HD2	46:QO:42:PHE:CE2	2.32	0.48
1:RA:1754:A:C6	1:RA:1755:A:C6	3.02	0.48
17:YQ:77:LYS:CE	17:YQ:116:LEU:HD11	2.44	0.48
35:XD:104:MET:SD	35:XD:142:VAL:HG13	2.53	0.48
30:Y3:5:THR:O	30:Y3:7:ARG:N	2.47	0.48
35:XD:77:GLU:HG3	35:XD:81:LEU:HD11	1.96	0.48
6:RF:97:GLU:O	6:RF:101:ARG:HG2	2.14	0.48
1:YA:2797:U:O2	1:YA:2797:U:H2'	2.13	0.48
17:RQ:27:ARG:HG3	17:RQ:27:ARG:HH11	1.79	0.48
1:YA:102:U:H3	25:YY:2:LYS:HB3	1.77	0.48
1:YA:540:C:O2'	1:YA:541:A:H5'	2.14	0.48
46:XO:78:THR:O	46:XO:82:GLU:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YN:61:ASN:HB2	45:YN:72:PHE:CZ	2.48	0.48
4:RD:106:LYS:N	4:RD:106:LYS:HD2	2.28	0.48
1:YA:226:A:C6	1:YA:227:A:N6	2.82	0.48
1:YA:2408:U:O2'	1:YA:2409:G:H8	1.97	0.48
1:YA:303:G:C6	1:YA:315:G:C6	3.01	0.48
32:XA:1073:U:H2'	32:XA:1074:G:C8	2.47	0.48
36:QE:155:LYS:N	36:QE:155:LYS:HD2	2.28	0.48
14:YN:73:ASN:O	14:YN:76:VAL:HG22	2.14	0.48
1:YA:349:U:H2'	1:YA:350:G:H8	1.78	0.48
5:YE:58:LYS:O	5:YE:60:TRP:HD1	1.97	0.48
1:YA:728:G:C2	1:YA:730:A:C4	3.01	0.48
32:XA:752:G:C2'	32:XA:753:A:OP2	2.62	0.48
4:RD:124:ARG:HG2	4:RD:125:TRP:CD1	2.49	0.48
32:XA:373:A:N3	32:XA:374:A:C8	2.81	0.48
1:RA:2151:U:C4	1:RA:2152:G:N7	2.82	0.48
1:YA:1716:U:C6	1:YA:1743:G:N2	2.82	0.48
1:RA:26:G:C6	1:RA:27:G:N1	2.81	0.48
1:YA:2808:G:N2	1:YA:2891:U:C6	2.81	0.48
10:YJ:94:ALA:O	10:YJ:95:ARG:HB3	2.14	0.48
42:XK:33:ILE:HD11	42:XK:69:CYS:O	2.12	0.48
1:RA:2772:C:H2'	1:RA:2773:C:C6	2.49	0.48
32:XA:345:C:H4'	32:XA:346:G:H5''	1.95	0.48
51:XT:4:LYS:HE3	51:XT:5:SER:H	1.79	0.48
34:XC:85:LYS:O	34:XC:86:LEU:HD23	2.14	0.48
1:YA:16:C:O2'	1:YA:17:G:H5'	2.14	0.48
12:RL:57:LEU:C	12:RL:59:ARG:H	2.16	0.48
37:QF:97:THR:O	37:QF:98:GLU:CG	2.61	0.48
1:YA:1649:G:O2'	14:YN:106:ASP:OD2	2.31	0.48
1:YA:1754:A:C6	1:YA:1755:A:C6	3.01	0.48
18:RR:76:LYS:HD2	18:RR:85:LYS:HD2	1.95	0.48
1:YA:2663:G:H2'	1:YA:2664:G:H8	1.78	0.48
11:RK:51:LYS:HE2	11:RK:95:ILE:HG12	1.95	0.48
32:QA:1449:C:H2'	32:QA:1450:U:C5'	2.44	0.48
16:YP:37:LYS:O	16:YP:38:ARG:HB3	2.13	0.48
32:QA:167:A:H2'	32:QA:168:G:O4'	2.13	0.48
2:YB:63:C:C4	2:YB:64:G:N7	2.82	0.48
1:YA:1335:C:N4	56:YA:3409:HOH:O	2.40	0.48
37:QF:41:ASP:C	37:QF:43:GLY:H	2.17	0.48
2:RB:94:A:C2'	2:RB:95:U:H5'	2.43	0.48
1:RA:1485:U:C2	1:RA:1505:A:C2	3.01	0.48
13:YM:15:GLY:O	13:YM:16:ARG:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:RB:24:G:C6	2:RB:56:G:C2	3.01	0.48
20:RT:8:LEU:N	20:RT:8:LEU:HD23	2.27	0.48
1:RA:2667:C:H2'	1:RA:2668:G:O4'	2.13	0.48
1:YA:736:C:H6	1:YA:736:C:O5'	1.97	0.48
44:XM:2:ARG:O	44:XM:3:ILE:HB	2.14	0.48
5:YE:25:GLU:HG2	12:YL:6:LEU:HD23	1.96	0.48
22:RV:65:VAL:O	22:RV:65:VAL:HG22	2.13	0.48
35:QD:176:LYS:N	35:QD:176:LYS:HD3	2.28	0.48
36:QE:10:LEU:H	36:QE:10:LEU:HD23	1.79	0.48
6:YF:27:VAL:HG23	6:YF:27:VAL:O	2.13	0.48
6:YF:71:LYS:HG3	6:YF:73:VAL:H	1.79	0.48
41:XJ:8:ILE:HG22	41:XJ:100:ILE:HG12	1.95	0.48
8:RH:31:VAL:O	8:RH:32:PRO:C	2.51	0.48
2:YB:14:U:H3'	2:YB:15:A:H5''	1.95	0.48
2:YB:16:G:O6	2:YB:69:G:C6	2.66	0.48
32:XA:1255:G:HO2'	32:XA:1258:G:H1'	1.79	0.48
23:RW:40:ARG:HB2	23:RW:56:HIS:ND1	2.27	0.48
23:RW:42:THR:HG22	23:RW:43:LYS:HZ2	1.78	0.48
32:XA:1319:A:N6	32:XA:1323:G:N3	2.62	0.48
7:RG:96:ALA:O	7:RG:97:VAL:CB	2.61	0.48
1:YA:2337:G:C3'	1:YA:2338:C:H5'	2.43	0.48
23:YW:31:LEU:C	23:YW:33:GLY:H	2.17	0.48
1:YA:511:U:H3'	1:YA:512:G:O4'	2.14	0.48
33:QB:95:TRP:CH2	33:QB:99:MET:HG2	2.49	0.48
42:QK:124:LYS:HE3	52:QU:34:ARG:HG2	1.96	0.48
1:YA:320:A:H8	1:YA:320:A:O5'	1.97	0.48
33:XB:100:LEU:C	33:XB:102:ASN:H	2.16	0.48
1:YA:1058:U:H2'	1:YA:1059:G:O4'	2.13	0.48
1:YA:508:A:N6	19:YS:9:HIS:CE1	2.68	0.48
1:YA:49:A:C8	1:YA:51:G:N2	2.82	0.48
1:YA:868:U:C4	1:YA:869:G:N7	2.81	0.48
10:RJ:136:GLN:N	10:RJ:137:PRO:CD	2.76	0.48
1:RA:262:A:C2'	1:RA:263:G:H5'	2.43	0.48
1:YA:740:C:O2'	1:YA:741:U:H5'	2.13	0.48
1:YA:348:A:H2'	1:YA:349:U:C6	2.49	0.48
1:YA:237:C:N3	1:YA:238:C:C5	2.82	0.48
5:YE:24:ASN:HB3	5:YE:27:LEU:HB3	1.95	0.48
1:YA:204:A:C4	1:YA:206:U:O4	2.67	0.48
1:RA:569:U:C4	1:RA:570:G:C6	3.01	0.48
3:RC:106:PRO:HA	3:RC:141:HIS:HE2	1.78	0.48
1:RA:1081:U:O2'	9:RI:117:THR:O	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2136:G:C2'	1:RA:2137:U:C5	2.97	0.48
6:YF:146:ASP:HB3	6:YF:147:ARG:H	1.50	0.48
12:YL:9:ALA:HB3	12:YL:12:SER:CB	2.34	0.48
32:XA:787:A:C2	32:XA:796:C:N3	2.82	0.48
42:XK:126:ARG:O	52:XU:33:ARG:NH2	2.47	0.48
32:XA:495:A:H4'	32:XA:496:A:O5'	2.12	0.48
34:XC:38:VAL:O	34:XC:42:LEU:HD23	2.13	0.48
32:QA:1004:A:H2'	32:QA:1005:A:O4'	2.13	0.48
12:YL:123:ARG:HA	12:YL:143:GLU:HB3	1.95	0.48
6:YF:103:ILE:HG12	6:YF:175:PRO:HD3	1.95	0.48
1:YA:39:G:C2	1:YA:40:U:C4	3.02	0.48
25:YY:31:GLN:C	25:YY:33:ALA:H	2.15	0.48
7:RG:10:VAL:CG2	7:RG:10:VAL:O	2.62	0.48
34:XC:67:ILE:H	34:XC:102:ILE:HA	1.79	0.48
32:XA:952:U:H5	44:XM:102:LYS:HZ1	1.57	0.48
7:YG:53:PRO:HB3	7:YG:61:TRP:H	1.78	0.48
4:YD:4:LEU:HD23	4:YD:101:PHE:CZ	2.47	0.48
33:XB:19:THR:HB	33:XB:37:VAL:HA	1.95	0.48
1:YA:443:A:N6	5:YE:36:ALA:HB1	2.27	0.48
1:YA:2700:A:C2	1:YA:2708:G:C2	3.02	0.48
39:XH:102:VAL:CG2	39:XH:125:ILE:HB	2.44	0.48
40:QI:54:VAL:O	40:QI:55:ASP:O	2.31	0.48
1:RA:2747:G:C2	1:RA:2756:U:C5	3.02	0.48
36:QE:131:ASN:O	36:QE:135:VAL:HG12	2.13	0.48
46:XO:62:ARG:HH22	46:XO:88:ARG:NH2	2.12	0.48
1:YA:536:G:H2'	1:YA:537:G:H5'	1.94	0.48
36:XE:157:GLY:HA3	39:XH:63:LYS:HE3	1.96	0.48
1:YA:254:G:N7	30:Y3:4:LYS:CE	2.77	0.48
2:YB:29:A:C6	2:YB:30:C:N4	2.82	0.48
51:XT:72:ALA:C	51:XT:74:HIS:H	2.17	0.48
32:XA:29:U:H5'	32:XA:296:U:OP1	2.13	0.48
14:YN:21:PHE:HE2	14:YN:43:GLU:HB3	1.78	0.48
22:RV:39:ALA:C	22:RV:40:ILE:HD13	2.34	0.48
26:YZ:40:THR:C	26:YZ:42:ALA:H	2.16	0.48
3:RC:219:VAL:O	3:RC:224:MET:HE3	2.14	0.48
4:RD:140:HIS:N	4:RD:140:HIS:CD2	2.81	0.48
1:RA:2667:C:O2	7:RG:108:PHE:HB3	2.13	0.48
9:RI:95:ASP:O	9:RI:97:VAL:HG23	2.13	0.48
32:QA:153:C:C2'	32:QA:154:U:H5'	2.44	0.48
1:RA:1274:A:H2	1:RA:1644:C:O2	1.97	0.48
6:YF:3:LEU:O	6:YF:6:TYR:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:QR:67:LEU:HA	49:QR:67:LEU:HD23	1.70	0.48
25:RY:21:LEU:HD23	25:RY:21:LEU:N	2.29	0.48
1:RA:376:G:O2'	1:RA:377:G:H5'	2.14	0.48
32:XA:288:A:H2'	32:XA:289:G:H4'	1.94	0.48
2:YB:109:A:C2	2:YB:110:C:N3	2.82	0.48
23:RW:39:GLN:HG2	23:RW:40:ARG:N	2.28	0.48
1:RA:271:G:C4	1:RA:272:A:N7	2.82	0.48
1:YA:1439:A:N7	1:YA:1440:U:N1	2.62	0.48
1:YA:2298:A:N1	1:YA:2321:U:C5	2.82	0.48
1:YA:834:G:H1'	1:YA:2358:A:C2	2.49	0.48
1:YA:420:C:H2'	1:YA:421:C:H6	1.78	0.48
1:YA:1385:A:C6	1:YA:1403:A:C5	3.01	0.48
1:YA:1387:A:C4	1:YA:1388:G:N7	2.81	0.48
1:YA:1612:C:C2'	1:YA:1613:G:O5'	2.62	0.48
36:XE:121:ASN:ND2	36:XE:121:ASN:O	2.46	0.48
1:YA:966:G:H5'	1:YA:2272:U:O2	2.14	0.48
32:XA:821:G:H2'	32:XA:822:U:C6	2.49	0.48
32:XA:1297:G:C8	32:XA:1297:G:OP2	2.67	0.48
1:YA:237:C:C4	1:YA:238:C:H5	2.31	0.48
3:RC:104:LEU:O	3:RC:105:ALA:CB	2.58	0.48
32:XA:1137:C:H4'	32:XA:1138:G:N1	2.28	0.48
33:QB:24:PRO:C	33:QB:26:MET:N	2.67	0.48
1:YA:1788:C:C2'	1:YA:1789:A:H5'	2.43	0.48
3:RC:190:THR:CG2	3:RC:191:LEU:N	2.76	0.48
40:QI:129:ARG:HA	40:QI:129:ARG:NH1	2.29	0.48
13:YM:34:LYS:HB2	13:YM:131:VAL:CG2	2.44	0.48
32:XA:391:G:H5''	47:XP:8:ARG:CD	2.44	0.48
32:XA:530:G:H5''	32:XA:531:U:H5''	1.96	0.48
1:YA:1568:G:N3	3:YC:57:HIS:HE1	2.11	0.48
52:XU:35:GLU:CG	52:XU:36:PHE:N	2.77	0.48
32:QA:393:A:O2'	32:QA:394:G:H5'	2.14	0.48
14:YN:35:LYS:NZ	14:YN:112:TYR:CE1	2.75	0.48
1:RA:1714:U:C2'	1:RA:1714:U:O2	2.57	0.48
32:QA:1371:G:OP1	40:QI:13:SER:HB3	2.13	0.48
35:QD:11:SER:HA	35:QD:18:LEU:CD1	2.41	0.48
1:YA:1930:G:HO2'	1:YA:1968:G:H1	1.57	0.48
8:YH:84:ALA:HB3	8:YH:148:ALA:CB	2.43	0.48
5:YE:149:ILE:O	5:YE:149:ILE:HG12	2.14	0.48
1:RA:2592:G:C6	1:RA:2593:U:C4	3.01	0.48
1:YA:1798:U:C5	3:YC:270:ARG:NH1	2.82	0.48
32:QA:1453:G:N2	32:QA:1454:G:C8	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1737:G:N7	1:YA:1738:G:O6	2.46	0.48
34:XC:36:PHE:HE1	45:XN:91:GLU:OE1	1.96	0.48
1:RA:320:A:HO2'	1:RA:322:A:H8	1.62	0.48
32:QA:1348:U:O2'	32:QA:1349:A:O4'	2.32	0.48
32:QA:1374:A:H2'	32:QA:1375:A:H8	1.79	0.48
38:XG:124:SER:C	38:XG:126:ALA:H	2.17	0.48
32:QA:192:A:H2'	51:QT:54:GLN:HE22	1.79	0.48
32:XA:770:C:H1'	32:XA:899:C:H42	1.79	0.48
1:YA:743:A:OP1	4:YD:135:GLY:HA2	2.13	0.48
41:QJ:10:LEU:O	41:QJ:71:LEU:HA	2.13	0.48
5:RE:48:THR:O	5:RE:50:ALA:N	2.47	0.48
32:QA:725:G:O2'	32:QA:726:C:H5'	2.13	0.48
2:RB:66:A:C2	2:RB:108:A:C2	3.01	0.48
1:YA:1465:G:H2'	1:YA:1466:U:C6	2.49	0.48
32:QA:1520:C:H2'	32:QA:1521:C:H6	1.79	0.48
26:YZ:43:ILE:HD12	26:YZ:44:ARG:N	2.29	0.48
32:QA:1018:G:H2'	32:QA:1018:G:N3	2.28	0.48
1:YA:382:A:H2'	1:YA:383:C:C5'	2.44	0.48
1:RA:2667:C:C2'	1:RA:2668:G:H5'	2.44	0.48
9:RI:95:ASP:O	9:RI:97:VAL:N	2.46	0.48
26:YZ:32:GLY:C	26:YZ:34:THR:H	2.17	0.48
47:QP:28:ARG:HE	47:QP:29:ASN:HD21	1.60	0.48
37:XF:20:GLY:HA2	37:XF:23:GLU:HG2	1.94	0.48
14:RN:38:LEU:HD12	14:RN:38:LEU:O	2.13	0.48
32:QA:436:C:O2'	32:QA:437:U:H5'	2.14	0.48
32:QA:1088:G:H21	32:QA:1167:A:H62	1.62	0.48
3:YC:202:ARG:HE	3:YC:204:LEU:HD21	1.79	0.48
32:QA:763:G:H2'	32:QA:764:C:C6	2.48	0.48
46:XO:69:LEU:HD13	46:XO:69:LEU:O	2.14	0.48
7:YG:19:ASN:HD22	7:YG:19:ASN:N	2.11	0.48
19:RS:39:THR:HG22	19:RS:44:ALA:HB2	1.95	0.48
23:RW:67:LYS:HE2	23:RW:67:LYS:O	2.13	0.48
32:XA:981:U:O2'	45:XN:60:ARG:NH1	2.46	0.48
32:XA:707:U:H4'	42:XK:21:HIS:CD2	2.48	0.48
11:RK:17:ARG:HB3	11:RK:45:GLU:HB3	1.96	0.48
35:QD:34:GLU:O	35:QD:36:ALA:N	2.43	0.48
1:YA:301:G:O5'	21:YU:81:ARG:NH1	2.46	0.48
17:YQ:57:ARG:C	17:YQ:59:LEU:H	2.15	0.48
1:YA:503:A:N3	1:YA:506:G:C8	2.82	0.48
1:YA:504:A:HO2'	1:YA:505:A:P	2.36	0.48
13:YM:27:SER:N	13:YM:66:ARG:NH2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2443:C:C2	1:YA:2444:G:C8	3.02	0.48
1:YA:138:U:H2'	1:YA:140:C:C1'	2.34	0.48
32:XA:1140:C:O2'	32:XA:1141:C:H6	1.93	0.48
7:RG:45:ALA:O	7:RG:46:ASP:CB	2.62	0.48
4:RD:151:THR:CG2	4:RD:152:PRO:N	2.76	0.48
34:QC:119:ILE:O	34:QC:123:LEU:HG	2.14	0.48
38:XG:9:ARG:HD3	38:XG:24:LYS:HZ1	1.79	0.48
1:YA:364:C:H2'	1:YA:365:U:O4'	2.14	0.48
46:XO:63:ARG:O	46:XO:65:LEU:N	2.46	0.48
1:YA:2766:A:H2'	1:YA:2766:A:N3	2.29	0.48
1:RA:1414:C:C4	1:RA:1415:U:C5	3.00	0.48
7:RG:59:ASP:O	7:RG:60:GLY:C	2.51	0.48
32:XA:1361:G:H2'	32:XA:1362:A:C5'	2.39	0.48
26:RZ:7:THR:HG22	26:RZ:32:GLY:HA2	1.96	0.48
32:QA:706:A:O2'	42:QK:30:ILE:HD11	2.14	0.48
32:XA:951:G:H2'	32:XA:952:U:C6	2.49	0.48
32:XA:350:G:C6	32:XA:351:G:O6	2.67	0.48
1:RA:2848:G:H1'	1:RA:2867:G:N2	2.29	0.48
1:RA:460:A:P	29:R2:41:ARG:HH12	2.37	0.48
35:XD:69:ARG:HG3	35:XD:69:ARG:NH1	2.28	0.48
1:YA:1430:G:H2'	1:YA:1431:A:C8	2.48	0.48
36:QE:136:VAL:O	36:QE:137:ARG:CB	2.62	0.48
32:QA:1346:A:N1	32:QA:1374:A:H5''	2.29	0.48
1:YA:2531:A:H4'	7:YG:156:TYR:CE1	2.49	0.48
1:YA:526:A:C6	1:YA:2626:C:H4'	2.49	0.48
16:RP:103:THR:HG23	16:RP:103:THR:O	2.14	0.48
32:QA:1136:C:O2	32:QA:1136:C:C2'	2.61	0.48
32:XA:510:A:H5''	32:XA:511:C:P	2.54	0.48
22:YV:69:GLU:C	22:YV:70:ILE:HD13	2.33	0.48
1:YA:3:U:C4	1:YA:4:U:C4	3.02	0.48
26:RZ:43:ILE:C	26:RZ:43:ILE:HD12	2.33	0.48
39:XH:37:ASN:O	39:XH:41:GLU:HG2	2.14	0.48
1:YA:155:A:H2'	1:YA:156:A:C8	2.49	0.48
32:QA:1533:C:H3'	32:QA:1534:A:C5'	2.43	0.48
1:RA:190:A:C4	1:RA:207:A:C2	3.02	0.48
32:QA:1381:U:O2'	32:QA:1382:C:H6	1.96	0.48
49:XR:40:PRO:HB2	49:XR:42:ARG:HG3	1.95	0.48
1:RA:197:A:N6	1:RA:2430:A:O2'	2.41	0.48
32:QA:186:C:H4'	51:QT:75:LYS:HG3	1.95	0.48
36:QE:77:ASN:CG	36:QE:78:GLY:H	2.17	0.48
1:RA:2243:U:O2	1:RA:2434:A:C2	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:111:LYS:C	33:XB:113:LEU:H	2.17	0.48
34:QC:71:ARG:O	34:QC:74:ILE:HG22	2.13	0.48
9:RI:93:ASN:OD1	9:RI:136:GLY:HA2	2.13	0.48
17:YQ:90:ASP:O	17:YQ:94:LEU:HB2	2.13	0.48
32:XA:949:A:C2	32:XA:1233:G:C2	3.02	0.48
1:YA:1647:U:OP2	1:YA:1647:U:H3'	2.14	0.48
43:XL:36:VAL:HG23	43:XL:36:VAL:O	2.13	0.48
44:XM:32:ILE:O	44:XM:32:ILE:HD13	2.14	0.48
19:YS:74:ILE:O	19:YS:74:ILE:HG12	2.14	0.48
15:YO:56:LYS:O	15:YO:56:LYS:HD3	2.13	0.48
37:XF:72:ASP:O	37:XF:75:GLU:HB2	2.14	0.48
4:RD:166:GLY:O	4:RD:167:ASN:HB3	2.13	0.48
1:RA:1070:A:C2	1:RA:1097:U:H4'	2.49	0.47
1:RA:1079:C:C4	1:RA:1080:A:N7	2.82	0.47
17:YQ:87:VAL:CG2	18:YR:52:PRO:HD3	2.23	0.47
2:YB:65:U:H3'	2:YB:108:A:H62	1.77	0.47
42:XK:92:ARG:HG3	42:XK:92:ARG:HH11	1.77	0.47
52:XU:19:LYS:C	52:XU:21:SER:H	2.17	0.47
15:YO:34:HIS:O	15:YO:35:ILE:HG12	2.13	0.47
32:XA:983:A:OP1	45:YN:8:ARG:NH2	2.47	0.47
1:YA:1515:A:H2'	1:YA:1516:G:O4'	2.14	0.47
1:YA:1550:C:O2'	1:YA:1551:A:H5'	2.13	0.47
1:YA:2319:G:O2'	1:YA:2320:U:O5'	2.32	0.47
32:XA:1157:A:C4'	32:XA:1158:C:O5'	2.43	0.47
1:YA:419:U:H5''	56:YA:3233:HOH:O	2.12	0.47
1:YA:1386:C:HO2'	1:YA:1387:A:H8	1.61	0.47
20:YT:18:GLU:HA	20:YT:22:THR:HG21	1.95	0.47
1:YA:160:A:H1'	1:YA:2208:C:O2'	2.14	0.47
35:QD:29:THR:HG22	35:QD:30:LYS:N	2.29	0.47
36:QE:153:ALA:HA	36:QE:156:ARG:CB	2.44	0.47
36:QE:153:ALA:O	36:QE:154:ALA:C	2.52	0.47
39:QH:20:ASN:HA	39:QH:64:TYR:OH	2.14	0.47
12:RL:110:VAL:HG12	12:RL:111:ILE:N	2.29	0.47
32:XA:112:G:N3	32:XA:330:C:N4	2.62	0.47
1:YA:478:A:N6	1:YA:480:A:C6	2.82	0.47
10:RJ:56:VAL:HG12	10:RJ:57:LEU:H	1.75	0.47
41:XJ:65:TYR:HD2	45:YN:96:LYS:O	1.97	0.47
14:YN:56:LYS:HA	14:YN:84:GLY:CA	2.44	0.47
25:YY:58:ASN:O	25:YY:61:ALA:HB2	2.14	0.47
5:YE:184:ASP:O	5:YE:185:LYS:HG3	2.14	0.47
1:YA:202:U:H5''	1:YA:203:A:OP2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:583:G:C6	1:YA:584:C:C4	3.02	0.47
32:XA:1133:G:N1	32:XA:1142:G:C6	2.82	0.47
20:YT:50:LEU:HD23	20:YT:51:PHE:N	2.21	0.47
3:RC:69:ASN:O	3:RC:70:LYS:C	2.52	0.47
34:XC:55:VAL:O	34:XC:56:ILE:HG13	2.14	0.47
33:QB:112:ARG:HG2	33:QB:116:LEU:HD23	1.95	0.47
32:QA:1409:C:C2'	32:QA:1410:A:H5'	2.44	0.47
36:XE:39:GLY:HA2	36:XE:44:ARG:O	2.14	0.47
45:QN:44:VAL:HG23	45:QN:45:LEU:N	2.24	0.47
1:YA:2497:A:O5'	1:YA:2497:A:H8	1.97	0.47
1:YA:963:U:O2'	1:YA:964:C:P	2.72	0.47
1:RA:36:G:O2'	1:RA:450:G:H2'	2.14	0.47
43:QL:85:ARG:HH21	43:QL:87:LYS:HD2	1.77	0.47
32:QA:858:G:C2'	32:QA:859:G:H5'	2.44	0.47
1:YA:389:G:C6	1:YA:2413:G:O2'	2.66	0.47
1:YA:1519:G:N1	1:YA:1520:U:C2	2.82	0.47
35:QD:61:ARG:HH21	35:QD:67:LEU:HD23	1.79	0.47
43:XL:72:ASN:HD21	43:XL:104:SER:H	1.61	0.47
37:XF:80:PHE:CD1	37:XF:80:PHE:N	2.81	0.47
7:RG:66:THR:O	7:RG:70:LEU:HG	2.14	0.47
15:YO:11:ALA:HB2	15:YO:96:GLY:N	2.29	0.47
12:RL:59:ARG:HA	30:R3:12:ARG:NH2	2.28	0.47
32:QA:433:G:O2'	32:QA:434:U:H5'	2.13	0.47
30:R3:35:LYS:O	30:R3:40:LYS:HE2	2.14	0.47
32:XA:678:U:H2'	32:XA:679:C:C6	2.49	0.47
1:YA:2728:U:O2'	1:YA:2729:G:H8	1.97	0.47
6:RF:110:ILE:O	6:RF:111:ARG:C	2.52	0.47
1:RA:1959:G:H2'	1:RA:1960:A:O5'	2.14	0.47
32:QA:650:G:N2	32:QA:651:C:H1'	2.28	0.47
1:YA:2550:G:N2	1:YA:2559:C:O2	2.47	0.47
1:YA:1865:U:O4	1:YA:1875:G:C2	2.67	0.47
38:QG:21:LEU:HD23	38:QG:24:LYS:HD2	1.95	0.47
43:XL:33:CYS:HA	43:XL:54:VAL:HA	1.96	0.47
17:YQ:111:LYS:CE	18:YR:48:LYS:HD3	2.44	0.47
1:RA:1434:A:H2'	1:RA:1435:G:C8	2.49	0.47
2:RB:34:A:C2'	2:RB:35:C:OP2	2.61	0.47
1:RA:499:U:O4	1:RA:500:G:C6	2.67	0.47
16:YP:104:GLY:O	16:YP:105:LYS:HB2	2.14	0.47
32:XA:957:U:O2'	32:XA:958:A:N7	2.40	0.47
32:QA:691:G:H2'	32:QA:692:U:C6	2.49	0.47
1:RA:1728:C:O2'	1:RA:1729:U:C6	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:841:G:O2'	1:YA:842:U:H5'	2.13	0.47
12:YL:3:LEU:O	12:YL:4:ASN:C	2.52	0.47
23:RW:26:GLY:O	23:RW:27:GLY:O	2.32	0.47
1:YA:2306:C:H42	6:YF:150:GLY:N	2.12	0.47
1:YA:2417:C:H2'	1:YA:2418:A:C8	2.49	0.47
1:YA:2464:G:H2'	1:YA:2465:C:O4'	2.14	0.47
1:YA:1969:A:H2'	1:YA:1972:G:H21	1.79	0.47
32:QA:587:G:H4'	39:QH:3:GLN:HA	1.96	0.47
1:RA:634:C:O5'	1:RA:634:C:H6	1.97	0.47
32:XA:59:A:N3	32:XA:59:A:H2'	2.29	0.47
32:XA:1017:U:H2'	32:XA:1017:U:O2	2.13	0.47
32:XA:1060:U:H5'	41:XJ:53:ILE:HG12	1.96	0.47
2:YB:6:G:H4'	2:YB:28:C:H4'	1.95	0.47
32:XA:1221:G:H5'	50:XS:35:ARG:NE	2.29	0.47
6:YF:30:VAL:HG13	6:YF:168:LEU:HD23	1.96	0.47
32:QA:429:U:H1'	32:QA:430:A:H5''	1.95	0.47
1:YA:335:C:O2'	1:YA:336:C:O5'	2.32	0.47
4:YD:118:PHE:O	4:YD:119:ALA:HB3	2.13	0.47
36:QE:153:ALA:CA	36:QE:156:ARG:HB2	2.43	0.47
48:QQ:46:HIS:HB2	48:QQ:66:LEU:CD1	2.43	0.47
1:YA:53:A:N7	1:YA:54:G:C5	2.82	0.47
1:YA:108:G:P	1:YA:293:U:HO2'	2.37	0.47
1:YA:671:C:O2'	1:YA:672:C:P	2.72	0.47
32:QA:1460:C:N4	32:QA:1461:G:C6	2.82	0.47
24:YX:33:HIS:O	24:YX:34:SER:O	2.32	0.47
22:YV:80:HIS:NE2	22:YV:83:LYS:HB2	2.30	0.47
40:XI:90:ASP:CB	40:XI:93:LEU:HD23	2.37	0.47
11:RK:70:ARG:HD2	11:RK:76:VAL:HG22	1.96	0.47
38:QG:86:VAL:HG13	38:QG:87:PRO:HD2	1.95	0.47
1:YA:2457:U:C2'	1:YA:2458:G:H5'	2.44	0.47
4:RD:189:VAL:O	4:RD:191:GLY:N	2.40	0.47
36:XE:56:PRO:HG2	36:XE:57:ALA:H	1.79	0.47
9:RI:89:SER:OG	9:RI:135:MET:HA	2.15	0.47
32:XA:472:U:H2'	32:XA:472:U:O2	2.13	0.47
1:YA:273:G:N2	1:YA:365:U:O2	2.45	0.47
32:XA:573:A:N3	32:XA:883:C:O2'	2.44	0.47
1:RA:1820:U:C2	3:RC:200:MET:HB2	2.49	0.47
1:YA:2571:U:C4	1:YA:2574:G:H8	2.29	0.47
45:QN:15:LEU:HD23	45:QN:18:LYS:CE	2.44	0.47
32:XA:952:U:C5	44:XM:102:LYS:NZ	2.81	0.47
32:XA:1454:G:O2'	32:XA:1455:G:O4'	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:37:ALA:HA	5:YE:40:ARG:HB3	1.95	0.47
38:XG:59:GLU:HG3	38:XG:60:ALA:H	1.75	0.47
34:XC:149:LYS:CG	34:XC:168:ARG:HB2	2.42	0.47
1:YA:1734:G:H2'	1:YA:1735:A:H8	1.78	0.47
8:YH:4:ILE:HG22	8:YH:5:LEU:N	2.29	0.47
35:XD:53:GLN:CB	35:XD:202:LEU:HD12	2.42	0.47
1:RA:877:A:C6	1:RA:899:A:C6	3.02	0.47
1:YA:1649:G:N1	1:YA:2009:A:C6	2.82	0.47
1:RA:2531:A:P	7:RG:174:LYS:HG3	2.53	0.47
1:YA:2506:U:C3'	1:YA:2506:U:C6	2.96	0.47
19:YS:33:LEU:HA	19:YS:36:LEU:HD23	1.96	0.47
11:RK:13:ASN:O	11:RK:15:GLY:N	2.47	0.47
1:RA:2471:A:C2'	1:RA:2472:G:H5'	2.43	0.47
27:Y0:32:THR:HG21	27:Y0:47:TYR:CD2	2.49	0.47
32:XA:1271:A:H5'	32:XA:1314:C:H5''	1.96	0.47
32:XA:1189:U:O2'	34:XC:175:HIS:CD2	2.67	0.47
49:XR:32:ILE:HD12	49:XR:33:THR:O	2.14	0.47
32:QA:1018:G:H5'	32:QA:1019:A:OP2	2.13	0.47
18:RR:37:GLU:CD	18:RR:37:GLU:H	2.18	0.47
5:RE:31:VAL:HG21	5:RE:104:ALA:HB2	1.95	0.47
1:RA:2480:C:C2'	1:RA:2481:G:H5'	2.44	0.47
24:RX:70:LEU:O	24:RX:74:GLY:N	2.47	0.47
47:QP:30:GLY:O	47:QP:31:ARG:C	2.52	0.47
1:YA:2255:G:H2'	1:YA:2256:G:O4'	2.14	0.47
1:RA:622:G:H2'	1:RA:623:C:C6	2.49	0.47
32:QA:736:C:H5'	37:QF:88:MET:HE1	1.96	0.47
6:RF:46:LYS:N	6:RF:46:LYS:HD2	2.29	0.47
25:YY:9:LYS:HB3	25:YY:12:GLU:HG3	1.96	0.47
37:QF:42:TRP:HZ2	37:QF:61:LEU:HD22	1.79	0.47
1:RA:2365:G:H4'	23:RW:59:PHE:CZ	2.48	0.47
16:RP:5:LYS:O	16:RP:9:GLN:HG2	2.15	0.47
2:YB:55:U:H2'	2:YB:56:G:C8	2.49	0.47
1:YA:1441:G:C2	1:YA:1551:A:C2	3.02	0.47
3:YC:144:GLU:HG3	3:YC:151:GLY:CA	2.44	0.47
1:YA:860:U:O2'	1:YA:861:A:O5'	2.27	0.47
51:QT:34:VAL:O	51:QT:38:ILE:HG12	2.14	0.47
1:YA:1606:C:O2'	1:YA:1607:C:P	2.72	0.47
1:YA:98:G:O2'	1:YA:103:A:C8	2.67	0.47
44:XM:75:SER:HB2	44:XM:79:LEU:HG	1.95	0.47
32:QA:1202:U:O2'	45:QN:68:ARG:HB2	2.14	0.47
33:XB:151:LYS:HG3	33:XB:152:ASP:OD1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:452:A:H5''	32:QA:452:A:C8	2.44	0.47
7:YG:91:VAL:N	7:YG:93:TYR:CD2	2.81	0.47
1:YA:1019:U:O2'	1:YA:1021:A:C2	2.65	0.47
32:XA:239:U:H6	32:XA:239:U:H5''	1.78	0.47
1:YA:2744:G:N2	1:YA:2745:C:C2	2.82	0.47
3:RC:109:LEU:HD23	3:RC:110:LYS:N	2.21	0.47
33:XB:59:ILE:HA	33:XB:62:ARG:HD3	1.96	0.47
37:XF:59:TYR:CE2	49:XR:66:LEU:HD21	2.45	0.47
49:XR:64:LEU:O	49:XR:66:LEU:HD23	2.14	0.47
38:XG:100:MET:H	38:XG:100:MET:HE2	1.79	0.47
38:XG:91:ARG:HG2	38:XG:92:PRO:CD	2.36	0.47
44:XM:17:ALA:HB3	44:XM:18:LEU:HD12	1.95	0.47
32:QA:414:A:N3	32:QA:415:A:C8	2.82	0.47
32:XA:406:G:H5'	35:XD:4:LEU:HD22	1.95	0.47
1:YA:2056:G:H2'	1:YA:2056:G:N3	2.30	0.47
32:XA:668:G:O2'	32:XA:669:G:H5'	2.14	0.47
16:RP:35:SER:OG	32:QA:345:C:OP1	2.27	0.47
10:YJ:73:VAL:HB	10:YJ:75:TYR:CE2	2.49	0.47
1:RA:477:A:H2'	1:RA:478:A:C8	2.49	0.47
33:QB:32:GLY:HA3	33:QB:39:ILE:HG12	1.95	0.47
4:YD:125:TRP:CE3	4:YD:160:LYS:HD3	2.49	0.47
38:QG:68:VAL:HG12	38:QG:102:TRP:HE3	1.80	0.47
19:RS:20:VAL:HG11	19:RS:47:VAL:HG11	1.96	0.47
7:YG:162:ARG:HB2	7:YG:166:GLU:HB3	1.95	0.47
34:XC:76:ILE:HA	34:XC:83:VAL:HG13	1.96	0.47
5:YE:126:VAL:HG22	5:YE:127:GLU:OE2	2.14	0.47
51:XT:30:PHE:HE2	51:XT:52:GLU:HG2	1.79	0.47
3:RC:184:GLU:O	3:RC:185:ALA:HB3	2.13	0.47
1:RA:1090:A:N1	1:RA:1091:G:C5	2.82	0.47
1:RA:2102:G:N2	1:RA:2103:C:C2	2.83	0.47
42:QK:22:ILE:HG12	42:QK:85:VAL:HG22	1.96	0.47
1:YA:1633:G:C5	1:YA:1635:A:C5	3.02	0.47
25:RY:59:GLU:HG3	25:RY:60:LYS:N	2.29	0.47
43:QL:3:VAL:HG23	43:QL:4:ASN:N	2.29	0.47
7:RG:120:ILE:C	7:RG:120:ILE:HD13	2.34	0.47
4:RD:121:THR:O	4:RD:122:VAL:CB	2.61	0.47
5:YE:79:ARG:CG	5:YE:80:SER:N	2.77	0.47
32:XA:784:A:H2'	32:XA:785:G:C8	2.49	0.47
41:QJ:14:ASP:HB3	41:QJ:17:LEU:HB3	1.96	0.47
41:QJ:15:HIS:HB3	41:QJ:70:HIS:CE1	2.49	0.47
6:RF:33:ILE:HD12	6:RF:95:MET:HG3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:772:U:C2'	32:QA:773:G:H5'	2.44	0.47
11:YK:64:ARG:HD2	11:YK:102:PRO:O	2.14	0.47
32:XA:794:A:H2'	32:XA:795:C:H6	1.80	0.47
1:RA:499:U:C4	1:RA:500:G:C5	3.02	0.47
35:QD:189:ASP:O	35:QD:190:LEU:HB3	2.14	0.47
14:YN:52:ILE:HA	14:YN:55:ALA:HB3	1.95	0.47
32:QA:1521:C:O2'	32:QA:1522:U:H5'	2.14	0.47
13:RM:10:ARG:HB3	13:RM:11:LYS:HG3	1.95	0.47
1:YA:1833:C:C4	1:YA:1834:U:C4	3.02	0.47
19:RS:29:VAL:O	19:RS:33:LEU:HD22	2.14	0.47
51:XT:11:ILE:C	51:XT:13:SER:N	2.67	0.47
1:RA:1939:U:OP1	1:RA:2604:U:O2'	2.30	0.47
32:XA:772:U:O2'	32:XA:773:G:H5'	2.14	0.47
32:XA:778:G:C2	32:XA:779:C:O2	2.67	0.47
3:RC:209:ALA:HA	3:RC:212:TRP:CE2	2.49	0.47
1:RA:1817:G:OP1	3:RC:86:ARG:NH2	2.47	0.47
32:XA:954:G:H1	32:XA:1228:C:N4	2.12	0.47
11:RK:9:ASN:O	11:RK:83:ALA:HA	2.14	0.47
46:XO:87:ARG:HD2	46:XO:87:ARG:HA	1.68	0.47
32:XA:908:A:H2'	32:XA:909:A:H8	1.78	0.47
37:QF:10:VAL:HG12	37:QF:11:HIS:N	2.29	0.47
1:RA:2352:A:C6	23:RW:30:VAL:HG11	2.50	0.47
7:RG:85:LYS:HG2	7:RG:131:VAL:CG1	2.44	0.47
32:XA:1179:A:H2'	32:XA:1180:A:O4'	2.13	0.47
1:YA:1537:G:C3'	1:YA:1538:G:H4'	2.41	0.47
1:YA:1313:U:OP2	1:YA:1314:C:C5	2.67	0.47
1:YA:1612:C:O2'	1:YA:1613:G:O4'	2.28	0.47
32:QA:797:C:OP2	42:QK:125:LYS:HG3	2.14	0.47
12:RL:110:VAL:O	12:RL:111:ILE:CB	2.49	0.47
1:YA:185:G:N1	1:YA:212:G:C2	2.82	0.47
7:YG:88:LEU:HD13	7:YG:93:TYR:HB3	1.96	0.47
1:YA:739:A:H4'	1:YA:740:C:OP1	2.13	0.47
1:YA:347:A:N6	1:YA:348:A:N6	2.62	0.47
25:YY:48:ARG:HH11	25:YY:48:ARG:CG	2.26	0.47
32:QA:1124:G:H3'	32:QA:1145:A:N6	2.29	0.47
1:YA:607:U:H3'	1:YA:607:U:H6	1.79	0.47
32:XA:375:U:C4	32:XA:376:G:N7	2.82	0.47
1:YA:2748:A:C1'	7:YG:66:THR:HG22	2.35	0.47
4:YD:12:THR:CG2	4:YD:13:ARG:N	2.77	0.47
4:YD:9:VAL:O	16:YP:4:ILE:HD11	2.14	0.47
32:XA:1134:G:N1	32:XA:1141:C:C4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:RD:159:LYS:NZ	4:RD:160:LYS:H	2.11	0.47
1:YA:1682:G:C2	1:YA:1757:A:O4'	2.68	0.47
4:RD:191:GLY:O	4:RD:192:ALA:HB3	2.14	0.47
43:QL:23:LEU:C	43:QL:25:ALA:N	2.63	0.47
20:RT:61:LEU:O	20:RT:61:LEU:HD12	2.14	0.47
1:RA:480:A:C2'	1:RA:481:G:OP1	2.63	0.47
32:XA:346:G:O2'	32:XA:347:G:O4'	2.31	0.47
6:YF:11:VAL:HG12	6:YF:12:VAL:N	2.29	0.47
19:RS:43:ALA:O	19:RS:47:VAL:HG12	2.14	0.47
43:XL:106:VAL:HG23	43:XL:116:TYR:HB3	1.95	0.47
52:QU:21:SER:C	52:QU:22:CYS:SG	2.93	0.47
1:RA:1411:U:C2'	1:RA:1412:U:H5'	2.45	0.47
46:QO:34:GLN:OE1	46:QO:34:GLN:HA	2.14	0.47
20:YT:63:VAL:C	20:YT:64:LYS:HD2	2.33	0.47
22:YV:61:LEU:O	22:YV:72:VAL:HG22	2.14	0.47
32:QA:1355:G:O2'	32:QA:1356:G:H5'	2.14	0.47
45:XN:27:LYS:HD2	45:XN:27:LYS:C	2.34	0.47
13:YM:41:LEU:HB3	13:YM:46:ILE:CG2	2.44	0.47
43:XL:75:GLU:C	43:XL:77:SER:H	2.16	0.47
52:QU:24:LYS:O	52:QU:26:GLY:N	2.48	0.47
34:XC:161:ILE:H	34:XC:161:ILE:CD1	2.27	0.47
46:QO:84:LEU:HB3	46:QO:86:LEU:HD22	1.97	0.47
32:QA:1083:U:C5	32:QA:1084:G:C5	3.02	0.47
1:RA:1588:G:C4	1:RA:1589:U:C5	3.02	0.47
1:RA:851:C:H2'	1:RA:852:U:C6	2.50	0.47
44:QM:105:ALA:O	44:QM:109:LYS:HB2	2.14	0.47
36:XE:40:ASP:OD1	36:XE:41:GLY:N	2.46	0.47
1:YA:219:A:N7	1:YA:220:G:C5	2.82	0.47
21:YU:50:ALA:O	21:YU:51:LEU:HB2	2.13	0.47
41:QJ:21:ALA:HA	41:QJ:24:GLU:OE2	2.14	0.47
3:RC:32:LEU:HD23	3:RC:32:LEU:HA	1.65	0.47
28:R1:16:THR:HG21	28:R1:41:VAL:HG22	1.95	0.47
18:RR:49:ILE:HG21	18:RR:53:PHE:N	2.29	0.47
1:RA:1069:A:O2'	1:RA:1070:A:C5'	2.58	0.47
16:RP:57:ALA:HB1	16:RP:73:PHE:O	2.15	0.47
24:YX:47:THR:O	24:YX:48:LEU:HD23	2.14	0.47
32:XA:1279:G:C5'	41:XJ:9:ARG:HH12	2.19	0.47
1:YA:1441:G:H2'	1:YA:1442:U:H6	1.78	0.47
1:YA:1553:A:C8	1:YA:1555:G:O6	2.67	0.47
1:YA:2335:A:O2'	1:YA:2336:A:H2'	2.15	0.47
1:YA:2426:A:H3'	1:YA:2427:C:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2429:G:OP2	1:YA:2430:A:OP2	2.31	0.47
1:YA:233:A:O2'	1:YA:234:U:O4'	2.32	0.47
32:XA:110:C:H2'	32:XA:111:G:O4'	2.15	0.47
47:QP:20:VAL:HG21	47:QP:32:PHE:CB	2.44	0.47
1:YA:500:G:N2	1:YA:503:A:C8	2.83	0.47
1:YA:1021:A:H2'	1:YA:1022:G:H4'	1.96	0.47
14:YN:67:PHE:HE2	14:YN:73:ASN:ND2	2.11	0.47
1:YA:740:C:O2'	1:YA:741:U:C5'	2.63	0.47
32:XA:1241:G:C2	32:XA:1242:G:C5	3.02	0.47
1:YA:2683:C:H4'	4:YD:13:ARG:NH2	2.30	0.47
1:YA:2683:C:OP1	16:YP:55:HIS:CB	2.62	0.47
1:YA:2876:G:H4'	16:YP:2:ASN:ND2	2.26	0.47
20:RT:32:LEU:HG	20:RT:83:ALA:CB	2.44	0.47
32:QA:198:G:O6	32:QA:220:G:C6	2.67	0.47
1:YA:1473:G:O2'	1:YA:1474:U:H5'	2.13	0.47
3:RC:140:VAL:HG13	3:RC:189:ALA:HB1	1.91	0.47
20:RT:34:VAL:HG23	20:RT:34:VAL:O	2.14	0.47
31:R4:36:ARG:HG2	31:R4:37:GLN:N	2.19	0.47
1:RA:2886:A:C5	1:RA:2887:A:C8	3.02	0.47
1:RA:1998:A:H2'	1:RA:1999:C:C6	2.50	0.47
36:XE:14:LEU:HD22	36:XE:59:ILE:CD1	2.43	0.47
36:XE:14:LEU:HD12	36:XE:15:ILE:H	1.78	0.47
1:YA:1259:G:H2'	1:YA:1260:A:O4'	2.14	0.47
26:RZ:29:ARG:NH2	26:RZ:29:ARG:CG	2.76	0.47
1:YA:2848:G:H1'	1:YA:2849:U:C5	2.48	0.47
34:QC:86:LEU:O	34:QC:87:ARG:C	2.53	0.47
36:QE:37:VAL:HG11	36:QE:113:VAL:HA	1.97	0.47
38:QG:12:LEU:HD13	38:QG:12:LEU:N	2.30	0.47
20:RT:69:ARG:CZ	20:RT:70:HIS:HA	2.44	0.47
1:YA:1326:U:O2'	1:YA:1327:A:O5'	2.31	0.47
45:XN:16:ALA:HA	45:XN:20:PHE:CD1	2.42	0.47
51:XT:2:ASN:O	51:XT:3:ILE:C	2.53	0.47
1:YA:2707:U:H2'	1:YA:2708:G:H8	1.75	0.47
38:XG:59:GLU:C	38:XG:61:PHE:H	2.16	0.47
1:YA:1666:G:C2'	1:YA:1667:G:H5'	2.44	0.47
37:XF:80:PHE:N	37:XF:80:PHE:HD1	2.13	0.47
1:YA:1734:G:O2'	1:YA:1735:A:C8	2.59	0.47
2:YB:8:C:O3'	15:YO:25:ARG:NH1	2.48	0.47
12:YL:93:ASN:O	12:YL:95:LEU:N	2.44	0.47
1:RA:2897:U:H2'	1:RA:2898:U:H6	1.75	0.47
32:QA:596:A:H2'	32:QA:597:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:84:U:O2	32:QA:84:U:C2'	2.63	0.47
35:QD:52:VAL:CG2	35:QD:53:GLN:N	2.77	0.47
1:YA:1866:A:H2'	1:YA:1867:G:C8	2.49	0.47
46:XO:38:LEU:HD12	46:XO:41:HIS:CB	2.45	0.47
1:RA:1157:G:O2'	26:RZ:31:ILE:CD1	2.62	0.47
32:QA:1488:G:O2'	32:QA:1489:G:H5'	2.14	0.47
21:RU:53:GLN:N	21:RU:54:PRO:CD	2.77	0.47
1:YA:2714:G:H2'	1:YA:2715:C:C6	2.48	0.47
32:QA:1367:C:C4	32:QA:1368:A:N7	2.82	0.47
1:RA:1832:C:N4	1:RA:1833:C:C4	2.82	0.47
10:YJ:1:MET:SD	10:YJ:2:LYS:HE3	2.54	0.47
32:XA:1098:C:H2'	32:XA:1099:G:O4'	2.14	0.47
16:YP:77:SER:OG	16:YP:79:VAL:HG22	2.15	0.47
1:RA:2140:G:C2	1:RA:2141:G:C4	3.02	0.47
32:QA:1118:U:P	40:QI:105:ARG:HE	2.37	0.47
1:RA:2783:U:H2'	1:RA:2784:U:H6	1.78	0.47
1:RA:2486:C:C2'	1:RA:2487:G:O5'	2.63	0.47
32:QA:292:G:C2	32:QA:309:A:C2	3.02	0.47
1:YA:2073:C:O2'	1:YA:2074:U:H5'	2.14	0.47
19:YS:1:MET:O	19:YS:2:GLU:HG2	2.15	0.47
32:QA:715:A:H2'	32:QA:716:A:C8	2.49	0.47
12:RL:18:ARG:O	12:RL:19:LEU:HB3	2.14	0.47
38:XG:65:LEU:O	38:XG:69:ARG:HB2	2.15	0.47
28:Y1:38:PHE:CD2	28:Y1:39:ASP:N	2.82	0.47
12:RL:9:ALA:HB3	12:RL:12:SER:HB2	1.95	0.47
32:XA:404:G:O6	35:XD:1:ALA:HB2	2.15	0.47
42:QK:96:ILE:HG13	42:QK:97:ARG:N	2.29	0.47
13:YM:1:MET:O	13:YM:2:LEU:O	2.32	0.47
11:YK:9:ASN:O	11:YK:83:ALA:HA	2.14	0.47
47:XP:16:PHE:CE2	47:XP:40:ASN:HB2	2.49	0.47
41:QJ:29:ALA:C	41:QJ:31:ARG:H	2.18	0.47
32:XA:557:G:H2'	32:XA:558:G:C8	2.50	0.47
43:XL:42:LYS:HD3	43:XL:43:LYS:NZ	2.30	0.47
8:RH:29:PHE:O	8:RH:33:GLN:HB3	2.14	0.47
17:YQ:87:VAL:O	17:YQ:88:GLU:O	2.32	0.47
3:YC:17:LYS:HD3	3:YC:18:VAL:O	2.15	0.47
37:XF:9:MET:HB2	37:XF:85:ILE:HG13	1.96	0.47
32:XA:6:G:O6	36:XE:99:SER:HB2	2.14	0.47
2:YB:24:G:C6	2:YB:56:G:C2	3.01	0.47
33:QB:185:ILE:HA	33:QB:199:ILE:O	2.15	0.47
1:YA:971:G:OP2	1:YA:974:G:N2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:233:A:H2'	1:YA:234:U:C6	2.50	0.47
35:QD:12:ARG:NH1	35:QD:36:ALA:O	2.48	0.47
1:YA:299:A:H2	1:YA:320:A:O4'	1.96	0.47
1:YA:323:C:H2'	5:YE:163:ASN:CG	2.35	0.47
32:QA:1202:U:H1'	45:QN:68:ARG:HD2	1.96	0.47
1:YA:1073:A:O2'	1:YA:1074:G:C8	2.57	0.47
32:QA:274:A:H4'	32:QA:275:G:O5'	2.10	0.47
48:QQ:47:ASP:HA	48:QQ:51:GLU:OE2	2.14	0.47
1:RA:2478:A:H5'	31:R4:32:LYS:HD3	1.96	0.47
1:YA:116:C:C4	1:YA:117:G:C5	3.03	0.47
5:RE:190:ALA:HA	5:RE:193:VAL:HB	1.97	0.47
1:YA:1011:G:H5''	17:YQ:76:SER:HB2	1.96	0.47
1:YA:1785:A:N1	1:YA:1787:A:H1'	2.30	0.47
35:XD:35:GLN:O	35:XD:36:ALA:HB2	2.14	0.47
32:XA:1336:C:C2'	32:XA:1337:G:OP2	2.62	0.47
1:YA:140:C:H5'	1:YA:141:G:N2	2.30	0.47
1:YA:241:A:C4	1:YA:243:U:O4	2.68	0.47
1:YA:607:U:O2	1:YA:622:G:C6	2.67	0.47
1:YA:1251:C:C6	17:YQ:5:ARG:NH1	2.82	0.47
1:YA:1789:A:OP2	3:YC:220:ARG:NH1	2.43	0.47
28:R1:50:GLU:O	28:R1:51:ALA:HB2	2.14	0.47
20:YT:14:PRO:HG2	20:YT:15:HIS:H	1.79	0.47
38:XG:98:LEU:O	38:XG:99:ALA:C	2.53	0.47
2:YB:90:C:H6	2:YB:90:C:H5''	1.80	0.47
32:XA:369:G:O2'	32:XA:370:C:H5'	2.13	0.47
1:YA:922:C:H1'	23:YW:22:VAL:CG2	2.41	0.47
34:QC:33:ASP:O	34:QC:37:LYS:HB2	2.15	0.47
10:RJ:77:HIS:CD2	10:RJ:79:GLY:N	2.74	0.47
1:YA:960:A:H5''	1:YA:961:C:OP2	2.14	0.47
37:XF:56:LYS:O	37:XF:57:ALA:HB2	2.15	0.47
1:RA:34:U:C1'	1:RA:35:G:OP1	2.63	0.47
7:YG:6:ALA:HA	7:YG:7:PRO:HD3	1.63	0.47
51:QT:6:ALA:HB1	51:QT:9:ARG:HB2	1.96	0.47
1:RA:1965:C:H3'	1:RA:1966:A:H8	1.79	0.47
34:QC:116:ALA:HB2	34:QC:199:VAL:CG1	2.45	0.47
33:XB:19:THR:OG1	33:XB:20:ARG:N	2.47	0.47
32:QA:222:C:C2	32:QA:223:A:C8	3.03	0.47
40:QI:60:LEU:HD23	40:QI:60:LEU:H	1.79	0.47
44:QM:106:ARG:HG2	44:QM:106:ARG:HH11	1.80	0.47
1:YA:1495:A:H2'	1:YA:1496:A:C8	2.50	0.47
32:QA:644:U:O2'	32:QA:645:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QL:2:THR:HB	43:QL:5:GLN:H	1.79	0.47
12:RL:82:LEU:HD23	12:RL:82:LEU:C	2.35	0.47
32:QA:570:G:H2'	32:QA:571:U:C6	2.50	0.47
1:YA:9:G:C6	1:YA:2629:U:C5	3.03	0.47
1:YA:8:C:C2'	1:YA:9:G:H5'	2.45	0.47
14:RN:49:GLU:N	14:RN:50:PRO:HD3	2.30	0.47
1:RA:2505:G:O4'	54:RA:3135:EM1:H58	2.14	0.47
1:YA:2515:C:O2'	1:YA:2516:A:H5'	2.15	0.47
1:RA:1138:G:H5''	1:RA:1139:G:OP2	2.13	0.47
1:RA:2563:U:C1'	1:RA:2566:A:N6	2.78	0.47
26:YZ:40:THR:C	26:YZ:42:ALA:N	2.67	0.47
32:QA:164:G:C2'	32:QA:165:G:H5'	2.45	0.47
4:RD:16:THR:CG2	4:RD:20:VAL:HB	2.44	0.47
1:YA:1456:G:C5	1:YA:1457:U:C5	3.02	0.47
1:RA:181:A:C2	1:RA:182:A:C4	3.03	0.47
1:YA:1746:A:H2'	1:YA:1747:U:C6	2.50	0.47
19:RS:24:ILE:O	19:RS:71:VAL:HG11	2.14	0.47
32:QA:574:A:H1'	32:QA:883:C:O4'	2.15	0.47
3:YC:63:ILE:O	3:YC:64:VAL:HB	2.15	0.47
41:QJ:18:ILE:CG2	41:QJ:19:ASP:N	2.77	0.47
1:YA:2031:A:C6	1:YA:2498:C:H1'	2.49	0.47
50:QS:48:ILE:HD12	50:QS:48:ILE:O	2.14	0.47
33:XB:177:ASN:O	33:XB:177:ASN:ND2	2.48	0.47
21:RU:61:GLU:H	21:RU:61:GLU:HG2	1.34	0.47
1:YA:693:A:O2'	1:YA:1353:A:N3	2.44	0.47
17:RQ:78:PHE:CZ	17:RQ:82:LEU:HD11	2.50	0.47
18:RR:10:LYS:N	18:RR:10:LYS:CD	2.77	0.47
18:RR:39:LEU:O	18:RR:49:ILE:HG23	2.13	0.47
1:RA:1063:G:C2	1:RA:1064:C:H1'	2.50	0.47
32:XA:120:A:O2'	32:XA:121:U:C4'	2.62	0.47
1:RA:2846:G:H2'	1:RA:2847:U:O4'	2.14	0.47
17:YQ:82:LEU:O	17:YQ:85:ALA:HB3	2.14	0.47
23:RW:49:ASN:OD1	23:RW:79:ILE:O	2.32	0.47
23:RW:37:VAL:HG13	23:RW:55:ASP:C	2.35	0.47
1:YA:37:C:H1'	5:YE:45:ALA:HB2	1.97	0.47
32:XA:1224:U:C4'	32:XA:1225:A:OP2	2.63	0.47
1:YA:2425:A:H1'	1:YA:2426:A:OP2	2.14	0.47
3:YC:140:VAL:O	3:YC:141:HIS:HB2	2.15	0.47
1:YA:1596:A:N6	1:YA:1597:A:C6	2.83	0.47
1:YA:1312:U:O2	1:YA:1603:A:C2	2.68	0.47
1:YA:1370:C:O4'	1:YA:1810:A:H2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:308:G:N2	1:YA:329:G:H21	2.12	0.47
21:YU:14:THR:CG2	21:YU:15:GLY:H	2.10	0.47
42:XK:70:ALA:CA	42:XK:73:VAL:HG22	2.29	0.47
32:XA:321:A:O2'	32:XA:1436:U:H5'	2.15	0.47
27:Y0:38:LEU:HB2	27:Y0:41:HIS:CE1	2.50	0.47
6:YF:36:ASN:HA	6:YF:86:CYS:O	2.15	0.47
32:QA:270:A:H2'	32:QA:271:C:C6	2.49	0.47
1:YA:116:C:H5''	1:YA:128:C:N4	2.27	0.47
1:YA:51:G:N3	1:YA:119:A:C2	2.82	0.47
1:YA:116:C:H5''	1:YA:128:C:C5	2.50	0.47
10:RJ:55:ILE:HD12	10:RJ:56:VAL:O	2.15	0.47
1:YA:2304:G:N2	1:YA:2312:U:H3	2.07	0.47
1:YA:1135:C:N4	1:YA:1139:G:O6	2.47	0.47
32:XA:414:A:H2'	32:XA:415:A:C5'	2.45	0.47
1:YA:68:G:C2'	1:YA:69:C:H5'	2.45	0.47
1:YA:1965:C:C5'	1:YA:1966:A:H2'	2.45	0.47
33:XB:147:LEU:O	33:XB:150:ILE:HG22	2.15	0.47
32:QA:1124:G:HO2'	32:QA:1125:U:H6	1.53	0.47
32:XA:1240:U:O2'	38:XG:37:THR:HB	2.14	0.47
32:XA:1239:A:H5''	38:XG:118:ARG:NH1	2.17	0.47
1:YA:607:U:H5	1:YA:619:G:C5	2.33	0.47
1:YA:2748:A:N1	1:YA:2757:A:N7	2.62	0.47
39:QH:21:LYS:HA	39:QH:21:LYS:HE2	1.96	0.47
1:YA:1252:G:N3	17:YQ:32:ARG:HG2	2.30	0.47
4:YD:13:ARG:HH22	16:YP:74:GLN:NE2	2.13	0.47
1:YA:1275:A:H4'	1:YA:1276:A:OP1	2.14	0.47
47:XP:1:MET:HE2	47:XP:2:VAL:N	2.29	0.47
14:YN:28:LEU:HD23	14:YN:29:VAL:N	2.30	0.47
37:QF:86:ARG:CZ	49:QR:63:TYR:HB3	2.41	0.47
1:YA:1788:C:O2'	1:YA:1789:A:H5'	2.14	0.47
20:RT:13:ALA:HB1	20:RT:14:PRO:HD2	1.95	0.47
1:RA:983:A:N6	1:RA:984:A:N1	2.63	0.47
40:XI:56:MET:O	40:XI:58:GLU:HG2	2.15	0.47
4:RD:124:ARG:HG2	4:RD:125:TRP:NE1	2.29	0.47
1:RA:2151:U:N3	1:RA:2152:G:N7	2.62	0.47
1:YA:1300:G:C4'	1:YA:1301:A:O5'	2.59	0.47
44:XM:64:VAL:HG12	44:XM:65:GLU:N	2.21	0.47
42:XK:126:ARG:O	52:XU:33:ARG:CZ	2.61	0.47
32:XA:406:G:C8	32:XA:495:A:C4	3.02	0.47
4:RD:11:MET:HA	4:RD:24:VAL:O	2.15	0.47
51:QT:68:LYS:HZ3	51:QT:68:LYS:HB2	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:RP:33:GLU:CD	32:QA:345:C:H4'	2.35	0.47
32:QA:250:A:C4'	32:QA:251:G:O5'	2.56	0.47
12:YL:124:GLY:H	12:YL:143:GLU:CG	2.25	0.47
45:QN:42:ASN:C	45:QN:44:VAL:N	2.63	0.47
32:XA:203:G:N2	32:XA:215:C:C2	2.83	0.47
26:RZ:30:ARG:HE	26:RZ:30:ARG:HB2	1.46	0.47
5:YE:47:LYS:O	5:YE:83:VAL:HB	2.14	0.47
5:YE:47:LYS:HD3	5:YE:51:GLU:HB3	1.97	0.47
32:XA:533:A:C2	32:XA:536:C:C5	3.02	0.47
32:QA:1371:G:OP2	40:QI:12:LYS:HD3	2.14	0.47
2:YB:51:G:C8	15:YO:64:TYR:CE2	3.03	0.47
12:YL:17:LYS:CE	12:YL:19:LEU:HD13	2.44	0.47
41:XJ:30:LYS:O	41:XJ:30:LYS:HG2	2.15	0.47
20:YT:29:THR:HA	20:YT:87:LEU:HB2	1.96	0.47
1:RA:1802:A:N1	1:RA:1822:C:H1'	2.30	0.47
24:YX:1:SER:C	24:YX:3:VAL:N	2.68	0.47
12:RL:65:GLY:O	12:RL:66:PHE:HB3	2.14	0.47
4:YD:137:SER:CB	4:YD:138:LEU:HD22	2.39	0.47
25:YY:18:LEU:HD13	25:YY:22:LEU:HD13	1.97	0.47
1:YA:39:G:C6	1:YA:40:U:O4	2.68	0.47
47:XP:36:VAL:CG1	47:XP:36:VAL:O	2.59	0.47
24:RX:77:TYR:O	24:RX:77:TYR:CG	2.68	0.47
22:RV:48:MET:O	22:RV:51:GLN:HG3	2.14	0.47
15:YO:26:LEU:O	15:YO:28:VAL:N	2.48	0.47
7:RG:1:SER:HB3	7:RG:5:LYS:NZ	2.30	0.47
7:YG:117:PRO:HD2	7:YG:120:ILE:HG23	1.95	0.47
4:YD:51:THR:HG21	4:YD:76:GLY:HA3	1.97	0.47
32:QA:16:A:C2'	32:QA:17:U:H5'	2.45	0.47
32:QA:1453:G:C2'	32:QA:1453:G:N3	2.76	0.47
24:RX:30:PRO:HD2	24:RX:32:LEU:HD11	1.96	0.47
1:YA:1733:G:C6	1:YA:1734:G:N7	2.82	0.47
1:YA:2353:G:H1'	23:YW:30:VAL:CG1	2.45	0.47
9:RI:17:ALA:CB	9:RI:42:ASN:HD21	2.27	0.47
45:XN:89:ARG:HG3	45:XN:91:GLU:HG2	1.97	0.47
6:RF:10:GLU:O	6:RF:11:VAL:HB	2.14	0.47
36:XE:153:ALA:O	36:XE:156:ARG:HG2	2.14	0.47
32:XA:461:A:O5'	32:XA:462:G:OP2	2.32	0.47
8:YH:38:PRO:HB2	8:YH:40:THR:CG2	2.45	0.47
1:RA:322:A:H5'	1:RA:340:A:C1'	2.45	0.47
1:YA:754:U:H2'	1:YA:755:U:C6	2.50	0.47
5:YE:28:VAL:HG23	5:YE:29:HIS:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:117:G:C6	1:RA:119:A:C6	3.03	0.47
1:RA:666:A:H4'	12:RL:48:ARG:HD2	1.96	0.47
14:RN:49:GLU:N	14:RN:50:PRO:CD	2.78	0.47
32:QA:191:G:H2'	32:QA:192:A:H8	1.79	0.47
48:XQ:42:LYS:HB3	48:XQ:42:LYS:HZ3	1.80	0.47
1:YA:1594:U:H2'	1:YA:1595:C:O4'	2.15	0.47
5:RE:48:THR:N	5:RE:51:GLU:HG3	2.30	0.47
1:RA:1422:G:C4	1:RA:1423:G:C8	3.03	0.47
52:QU:24:LYS:HG2	52:QU:25:ALA:N	2.30	0.47
48:XQ:45:VAL:HG11	48:XQ:60:ILE:CG2	2.44	0.47
16:YP:77:SER:HB3	16:YP:80:VAL:HG23	1.97	0.47
32:XA:998:C:H2'	32:XA:999:C:C6	2.50	0.47
24:YX:63:ILE:CD1	24:YX:64:ASP:H	2.27	0.47
1:YA:2439:A:C8	1:YA:2586:U:H4'	2.50	0.47
26:RZ:26:LEU:O	26:RZ:37:ARG:NH1	2.48	0.47
1:RA:679:C:H2'	1:RA:680:C:C6	2.50	0.47
28:R1:18:HIS:CG	28:R1:19:PHE:N	2.82	0.47
1:YA:1638:C:H1'	1:YA:2698:U:O2'	2.14	0.47
1:RA:2075:U:C4	1:RA:2238:G:C6	3.02	0.47
32:QA:164:G:H2'	32:QA:165:G:H5'	1.96	0.47
4:YD:193:VAL:O	4:YD:194:PRO:O	2.33	0.47
32:QA:471:U:C2'	32:QA:472:U:H5'	2.45	0.47
1:RA:2223:G:H2'	1:RA:2224:G:C5'	2.44	0.47
32:XA:949:A:C2	32:XA:1233:G:N3	2.83	0.47
32:XA:909:A:H2'	32:XA:910:C:O4'	2.14	0.47
1:RA:1570:A:H2'	1:RA:1571:A:C8	2.49	0.47
1:YA:661:A:H2'	1:YA:662:G:O4'	2.15	0.47
51:XT:66:ILE:CG1	51:XT:67:HIS:N	2.78	0.47
1:RA:1682:G:H2'	1:RA:1683:U:C6	2.49	0.47
2:RB:8:C:O3'	15:RO:25:ARG:NH1	2.47	0.47
32:XA:690:G:H2'	32:XA:691:G:O4'	2.15	0.47
46:QO:54:GLY:O	46:QO:58:MET:HG3	2.14	0.47
1:RA:608:A:H2'	1:RA:609:A:C8	2.50	0.47
1:YA:2083:G:C5	1:YA:2084:C:C5	3.03	0.47
32:QA:1091:U:O2	32:QA:1093:A:C8	2.68	0.47
16:YP:65:ASN:ND2	16:YP:65:ASN:N	2.63	0.47
16:YP:65:ASN:N	16:YP:65:ASN:HD22	2.13	0.47
52:XU:52:VAL:O	52:XU:52:VAL:HG22	2.15	0.47
43:QL:71:HIS:ND1	43:QL:71:HIS:C	2.68	0.47
1:RA:1004:U:C2'	1:RA:1005:C:OP2	2.62	0.47
1:RA:1279:G:O2'	1:RA:1280:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:YQ:35:PHE:HE1	17:YQ:39:ILE:HD11	1.80	0.47
46:QO:55:LEU:O	46:QO:55:LEU:HD12	2.14	0.47
1:RA:1842:G:H2'	1:RA:1843:C:C6	2.50	0.47
5:RE:12:LEU:O	5:RE:13:THR:HB	2.15	0.47
32:QA:1406:U:C5	32:QA:1407:C:C5	3.03	0.47
32:QA:1232:U:C4	32:QA:1233:G:N7	2.83	0.47
11:RK:119:ALA:HA	11:RK:120:PRO:HD2	1.78	0.47
1:YA:2246:G:H2'	1:YA:2247:A:C8	2.50	0.47
44:QM:73:SER:O	44:QM:77:LYS:HG2	2.15	0.47
1:YA:2341:G:H2'	1:YA:2342:C:O4'	2.15	0.47
35:XD:76:LYS:O	35:XD:79:ALA:HB3	2.15	0.47
36:QE:125:LYS:HG3	36:QE:126:ALA:N	2.30	0.47
1:RA:2444:G:OP2	5:RE:63:LYS:HD2	2.14	0.47
1:YA:1487:U:O5'	1:YA:1487:U:H6	1.97	0.47
1:YA:579:G:C2	1:YA:1262:A:C5	3.03	0.47
32:QA:754:C:O2'	32:QA:755:G:OP1	2.31	0.47
18:YR:41:ILE:HG22	18:YR:42:ALA:N	2.30	0.47
2:YB:110:C:O2'	2:YB:111:U:C5'	2.60	0.47
42:XK:88:PRO:HD3	52:XU:28:LEU:HD11	1.97	0.47
1:YA:455:C:N3	1:YA:473:G:C4'	2.78	0.47
50:XS:38:THR:O	50:XS:43:MET:SD	2.73	0.47
50:XS:57:VAL:HG21	50:XS:75:PRO:HD2	1.97	0.47
1:RA:528:A:C2	1:RA:2043:C:C5'	2.97	0.47
1:YA:1155:A:H5''	17:YQ:54:ARG:CZ	2.45	0.47
1:YA:828:U:C5	1:YA:829:A:N6	2.83	0.47
32:QA:485:U:O4'	32:QA:485:U:O2	2.30	0.47
32:XA:1494:G:C2	32:XA:1495:U:C2	3.03	0.47
1:YA:1358:G:N7	56:YA:3417:HOH:O	2.46	0.47
1:YA:1810:A:H3'	1:YA:1811:G:C8	2.50	0.47
1:YA:302:C:O2'	1:YA:303:G:O5'	2.33	0.47
18:YR:9:GLY:H	18:YR:10:LYS:NZ	2.12	0.47
1:YA:1068:G:C8	1:YA:1069:A:N7	2.83	0.47
1:YA:1087:G:H1'	1:YA:1089:A:H1'	1.96	0.47
48:QQ:13:SER:O	48:QQ:16:MET:HE2	2.15	0.47
48:QQ:14:ASP:O	48:QQ:16:MET:SD	2.73	0.47
1:YA:500:G:C2	1:YA:503:A:N7	2.83	0.47
1:YA:1142:A:H4'	10:YJ:27:ARG:HH22	1.80	0.47
39:QH:74:ILE:CD1	39:QH:128:VAL:HG13	2.34	0.47
32:XA:1138:G:N2	32:XA:1140:C:N3	2.61	0.47
1:RA:278:A:H2'	1:RA:278:A:N3	2.28	0.47
32:QA:198:G:N3	32:QA:199:A:C8	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:QC:133:MET:HE3	34:QC:167:TYR:HB2	1.95	0.47
20:RT:54:GLU:O	20:RT:55:VAL:HB	2.13	0.47
1:YA:818:G:HO2'	1:YA:819:A:H5''	1.79	0.47
1:YA:1585:C:H2'	1:YA:1586:A:O5'	2.15	0.47
25:RY:45:GLN:O	25:RY:46:VAL:CB	2.63	0.47
39:XH:11:THR:CG2	39:XH:14:ARG:NH2	2.78	0.47
50:QS:35:ARG:HH21	50:QS:74:ALA:HB3	1.79	0.47
3:RC:67:LYS:HE2	3:RC:149:LYS:O	2.15	0.47
42:QK:86:LYS:CG	42:QK:114:PRO:HD3	2.44	0.47
1:RA:2821:A:OP2	4:RD:115:GLY:N	2.46	0.47
1:YA:1722:A:C6	1:YA:1739:A:C8	3.03	0.47
1:RA:1866:A:H2'	1:RA:1867:G:H5'	1.95	0.47
1:RA:404:A:C1'	1:RA:405:U:OP2	2.62	0.47
10:RJ:30:THR:HG22	10:RJ:31:GLU:N	2.29	0.47
7:RG:82:PHE:CZ	7:RG:137:LYS:HD2	2.50	0.47
1:YA:1737:G:C5'	1:YA:1738:G:OP2	2.63	0.47
15:YO:10:ARG:HD2	15:YO:96:GLY:O	2.14	0.47
6:RF:7:TYR:O	6:RF:11:VAL:HB	2.14	0.47
32:QA:1348:U:O2'	32:QA:1349:A:O5'	2.33	0.47
40:QI:119:LYS:HG3	40:QI:122:ARG:HB3	1.96	0.47
21:RU:5:ARG:O	21:RU:8:ASP:HB2	2.14	0.47
9:RI:59:THR:HG22	9:RI:61:TYR:HE2	1.79	0.47
42:XK:87:GLY:H	42:XK:113:THR:CG2	2.28	0.47
20:YT:69:ARG:HG3	20:YT:70:HIS:N	2.30	0.47
1:RA:304:U:C2	1:RA:305:C:C5	3.02	0.47
4:YD:36:GLN:NE2	4:YD:38:LYS:HZ1	2.12	0.47
32:XA:186:C:O2'	32:XA:187:G:H5'	2.15	0.47
12:YL:89:VAL:HG22	12:YL:90:VAL:N	2.30	0.47
35:XD:164:ARG:HB3	35:XD:165:GLU:H	1.53	0.47
18:RR:74:ILE:HB	18:RR:87:GLN:O	2.15	0.47
1:YA:1563:U:H2'	1:YA:1564:C:C6	2.50	0.47
34:QC:59:PRO:O	34:QC:60:ALA:O	2.33	0.47
42:QK:75:GLU:C	42:QK:77:GLY:H	2.17	0.47
33:QB:30:ILE:HG23	33:QB:31:PHE:N	2.30	0.47
37:XF:27:ALA:O	37:XF:31:GLY:HA3	2.14	0.47
12:YL:84:LYS:O	12:YL:85:VAL:HB	2.15	0.47
32:QA:1403:C:H6	32:QA:1403:C:O5'	1.98	0.47
32:XA:211:G:C2'	32:XA:211:G:N3	2.77	0.47
5:YE:85:PHE:O	5:YE:86:ALA:C	2.53	0.47
2:YB:67:G:O2'	2:YB:68:C:H6	1.97	0.47
2:YB:55:U:O2'	2:YB:56:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:YB:59:A:H2'	2:YB:60:C:O4'	2.14	0.47
33:QB:172:ILE:HG22	33:QB:176:ASN:OD1	2.15	0.47
32:XA:961:U:O2'	32:XA:962:C:O5'	2.32	0.47
45:YN:52:ARG:HA	45:YN:52:ARG:NH1	2.30	0.47
1:YA:2425:A:P	1:YA:2427:C:H5'	2.54	0.47
1:YA:231:A:C2'	1:YA:232:G:H5'	2.45	0.47
1:YA:1238:G:HO2'	1:YA:1239:G:H5'	1.79	0.47
1:YA:1394:U:C4	1:YA:1395:A:C6	3.03	0.47
1:YA:1341:G:C2	20:YT:84:TYR:CE2	3.03	0.47
44:XM:74:MET:HG3	44:XM:78:ARG:HB2	1.97	0.47
33:XB:88:GLN:C	33:XB:89:PHE:CG	2.88	0.47
1:YA:2816:G:C2	1:YA:2831:G:C2	3.03	0.47
1:YA:2313:C:O2'	1:YA:2314:A:H8	1.74	0.47
48:QQ:76:ARG:HG2	48:QQ:77:VAL:H	1.80	0.47
1:YA:637:A:P	12:YL:128:THR:HG21	2.54	0.47
1:YA:675:A:C8	1:YA:802:A:N6	2.83	0.47
1:YA:607:U:H3'	1:YA:607:U:C6	2.50	0.47
1:YA:607:U:C5	1:YA:619:G:C2	3.03	0.47
1:YA:2756:U:H1'	1:YA:2757:A:C5'	2.45	0.47
1:YA:206:U:O2'	1:YA:207:A:H5'	2.15	0.47
1:YA:1277:G:O2'	14:YN:24:MET:HB2	2.15	0.47
32:QA:673:A:H2'	32:QA:674:G:C8	2.50	0.47
1:RA:2285:C:P	28:R1:5:ARG:HH21	2.38	0.47
43:XL:86:VAL:HG11	43:XL:89:LEU:HD23	1.96	0.47
1:RA:2485:G:H5''	13:RM:45:GLN:HE21	1.80	0.47
33:QB:86:CYS:H	33:QB:88:GLN:NE2	2.13	0.47
1:YA:1716:U:C4	1:YA:1745:A:N6	2.83	0.47
8:YH:27:ARG:HH12	24:YX:59:ASP:HA	1.75	0.47
1:RA:26:G:OP1	19:RS:80:PRO:HB3	2.15	0.47
8:YH:143:ILE:O	8:YH:144:VAL:HG13	2.14	0.47
45:QN:22:LYS:CG	45:QN:23:ARG:H	2.20	0.47
14:YN:8:ARG:HG2	14:YN:10:LEU:HD22	1.96	0.47
18:YR:80:ARG:HG2	18:YR:81:LYS:HZ3	1.80	0.47
1:RA:545:U:O5'	1:RA:545:U:O2	2.32	0.47
39:XH:77:VAL:N	39:XH:125:ILE:O	2.47	0.47
32:QA:1453:G:N2	32:QA:1454:G:C5	2.83	0.47
33:XB:122:ASP:HB3	33:XB:124:THR:HG22	1.97	0.47
2:YB:52:A:N6	15:YO:33:ARG:NE	2.62	0.47
20:YT:10:VAL:HG23	20:YT:11:LEU:H	1.80	0.47
32:XA:509:A:C6	32:XA:510:A:C6	3.03	0.47
1:YA:425:G:C2	1:YA:426:C:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:140:HIS:CD2	4:YD:140:HIS:H	2.33	0.47
34:QC:22:PHE:CD1	41:QJ:12:ALA:HA	2.50	0.47
1:YA:85:G:OP2	21:YU:27:VAL:HG11	2.15	0.47
32:QA:1240:U:H3	38:QG:29:LEU:CD2	2.28	0.47
32:XA:1509:C:O2'	32:XA:1510:C:H5'	2.15	0.47
33:XB:176:ASN:C	33:XB:178:LEU:H	2.18	0.47
1:RA:2211:A:H4'	1:RA:2211:A:OP2	2.14	0.47
1:RA:1206:G:C6	1:RA:1207:C:C4	3.03	0.47
44:XM:48:SER:O	44:XM:50:GLY:N	2.48	0.47
1:RA:907:G:O2'	1:RA:908:C:H5'	2.15	0.47
1:RA:827:U:H5'	1:RA:828:U:O5'	2.15	0.47
48:XQ:14:ASP:OD2	48:XQ:52:CYS:HB2	2.14	0.47
1:YA:2740:A:N6	1:YA:2764:A:C8	2.83	0.47
49:QR:33:THR:HG22	49:QR:37:LYS:N	2.30	0.47
32:QA:827:U:C4	32:QA:870:U:C2	3.02	0.47
46:QO:57:ARG:HB3	46:QO:57:ARG:HH11	1.80	0.47
32:XA:284:C:H2'	32:XA:285:C:C6	2.50	0.47
32:QA:173:U:C2	32:QA:197:A:N1	2.83	0.47
1:RA:999:U:C5	1:RA:1154:G:C5	3.02	0.47
8:RH:31:VAL:CG1	8:RH:36:ALA:O	2.57	0.47
1:YA:379:G:C6	1:YA:380:G:N7	2.83	0.47
1:RA:2385:C:O2'	1:RA:2386:A:H5'	2.14	0.47
42:XK:91:GLY:O	42:XK:95:THR:HG22	2.14	0.47
32:XA:1225:A:H2'	32:XA:1225:A:N3	2.29	0.47
1:YA:1549:A:C6	1:YA:1550:C:N3	2.83	0.47
4:RD:107:VAL:HA	4:RD:205:PRO:HA	1.97	0.47
1:YA:857:G:O2'	23:YW:19:ARG:CZ	2.63	0.47
23:YW:37:VAL:C	23:YW:39:GLN:N	2.67	0.47
1:YA:2336:A:N7	23:YW:40:ARG:NE	2.63	0.47
1:YA:2345:G:C5	1:YA:2347:C:C5	3.02	0.47
12:YL:56:PRO:HD2	12:YL:59:ARG:HB2	1.97	0.47
11:RK:47:ILE:HA	11:RK:47:ILE:HD12	1.75	0.47
1:YA:233:A:H61	1:YA:428:A:N6	2.12	0.47
32:XA:1495:U:O2'	32:XA:1496:C:H5'	2.15	0.47
51:XT:70:LYS:HD2	51:XT:73:ARG:HH21	1.80	0.47
10:YJ:45:THR:C	10:YJ:47:HIS:N	2.68	0.47
32:QA:269:C:H2'	32:QA:270:A:H8	1.79	0.47
1:YA:475:C:O2'	1:YA:476:G:C5'	2.63	0.47
1:YA:636:G:H3'	12:YL:128:THR:CG2	2.43	0.47
32:XA:60:A:N3	32:XA:61:G:H1'	2.29	0.47
1:YA:141:G:C2'	1:YA:142:A:O4'	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:243:A:H4'	32:XA:244:U:C5'	2.41	0.47
1:YA:616:A:N3	1:YA:617:G:C8	2.83	0.47
1:YA:2093:G:C6	1:YA:2225:A:C8	3.03	0.47
9:RI:7:TYR:HB3	9:RI:58:ILE:H	1.79	0.47
32:XA:372:C:H4'	32:XA:373:A:H5'	1.97	0.47
20:RT:39:THR:H	20:RT:43:ILE:HG22	1.80	0.47
32:QA:364:A:C2	32:QA:365:U:O4	2.68	0.47
1:RA:2151:U:N3	1:RA:2152:G:C5	2.82	0.47
1:YA:1639:C:C3'	1:YA:1640:A:H5''	2.45	0.47
39:QH:83:ARG:O	39:QH:84:ILE:HD13	2.16	0.47
37:XF:3:HIS:CD2	37:XF:65:GLU:HG2	2.42	0.47
1:YA:1255:U:O2'	1:YA:1256:G:P	2.72	0.47
1:RA:2286:G:H5'	1:RA:2286:G:H8	1.77	0.47
32:QA:34:C:H2'	32:QA:35:G:C8	2.49	0.47
43:QL:42:LYS:HD3	43:QL:90:PRO:HG3	1.96	0.47
1:YA:962:G:O2'	1:YA:963:U:O5'	2.32	0.47
1:RA:588:U:H2'	1:RA:589:U:H6	1.78	0.47
42:QK:13:LYS:O	42:QK:14:GLN:CB	2.63	0.47
34:QC:81:GLU:O	34:QC:84:GLU:HB3	2.15	0.47
32:QA:208:U:H3	32:QA:212:G:N2	2.12	0.47
33:XB:9:LEU:HB2	33:XB:11:ALA:N	2.25	0.47
24:YX:38:TRP:HA	24:YX:38:TRP:CE3	2.50	0.47
1:RA:35:G:N2	1:RA:36:G:H1'	2.30	0.47
7:YG:74:MET:O	7:YG:78:VAL:HG13	2.15	0.47
1:YA:1518:C:H2'	1:YA:1519:G:O4'	2.15	0.47
37:QF:81:ASN:OD1	37:QF:83:ALA:HB3	2.15	0.47
1:YA:1308:A:N6	1:YA:1309:G:C2	2.83	0.47
32:QA:645:G:C2'	32:QA:646:G:H5'	2.45	0.47
1:RA:2574:G:C6	1:RA:2575:C:C4	3.04	0.47
1:YA:1709:U:C2	1:YA:1750:G:N2	2.82	0.47
1:RA:1176:U:H2'	1:RA:1177:G:N9	2.30	0.47
7:RG:30:GLY:O	7:RG:32:LEU:N	2.47	0.47
32:XA:72:A:O2'	32:XA:73:C:H5'	2.14	0.47
1:RA:958:U:N3	13:RM:16:ARG:HD3	2.30	0.47
43:XL:2:THR:O	43:XL:3:VAL:C	2.51	0.47
1:RA:1266:G:O2'	1:RA:2012:G:O6	2.23	0.47
1:RA:2012:G:OP1	19:RS:98:LYS:HG2	2.15	0.47
19:YS:103:ILE:HD12	19:YS:103:ILE:N	2.30	0.47
44:XM:52:ILE:HG23	44:XM:53:ASP:N	2.30	0.47
1:RA:250:G:C6	1:RA:251:A:C6	3.03	0.47
5:RE:126:VAL:HG22	5:RE:127:GLU:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:168:G:C2'	32:XA:169:C:H5'	2.45	0.47
1:YA:1455:G:O2'	1:YA:1456:G:O5'	2.32	0.47
32:XA:211:G:N3	32:XA:211:G:H2'	2.29	0.47
13:YM:13:HIS:O	13:YM:14:LYS:HB2	2.15	0.47
1:YA:1753:G:C2	1:YA:1756:G:C2	3.04	0.47
32:QA:607:A:H2'	32:QA:608:A:C8	2.50	0.47
32:XA:320:A:C2	32:XA:334:C:N3	2.83	0.47
1:RA:409:G:O2'	1:RA:410:G:H5'	2.15	0.47
1:YA:2078:C:C4	1:YA:2079:U:C4	3.02	0.47
1:RA:2825:G:C3'	1:RA:2826:A:H5'	2.44	0.47
1:YA:2453:A:O2'	1:YA:2572:A:H1'	2.15	0.47
47:XP:48:GLU:HG3	47:XP:51:ARG:HE	1.80	0.47
3:YC:225:ASN:HB2	3:YC:228:ASP:OD2	2.14	0.47
3:RC:115:ILE:HD12	3:RC:115:ILE:HA	1.61	0.47
32:XA:610:U:O4'	32:XA:610:U:O2	2.33	0.47
32:QA:767:A:H2'	32:QA:768:A:O4'	2.15	0.47
1:YA:2675:A:C2	1:YA:2676:C:C2	3.02	0.47
32:XA:104:G:H4'	32:XA:174:A:O4'	2.15	0.47
18:RR:11:GLN:C	18:RR:12:HIS:ND1	2.68	0.46
1:RA:2845:U:H5''	16:RP:51:ASN:O	2.15	0.46
1:RA:855:G:N3	23:RW:23:LYS:CD	2.68	0.46
1:RA:923:G:H1'	23:RW:23:LYS:CE	2.40	0.46
23:RW:50:VAL:HG12	23:RW:51:GLY:N	2.30	0.46
2:YB:57:A:H2'	2:YB:57:A:OP2	2.15	0.46
33:QB:187:ASP:OD2	33:QB:202:ASN:HA	2.14	0.46
1:YA:2330:G:C2	1:YA:2386:A:N1	2.83	0.46
1:YA:1337:G:H8	1:YA:1337:G:OP2	1.97	0.46
20:YT:19:LYS:HA	20:YT:19:LYS:HD3	1.71	0.46
36:QE:119:VAL:HG23	36:QE:119:VAL:O	2.14	0.46
1:RA:2823:A:OP2	4:RD:118:PHE:HD1	1.98	0.46
32:XA:1150:A:H1'	32:XA:1280:A:N6	2.30	0.46
41:XJ:45:ARG:O	41:XJ:46:LYS:C	2.53	0.46
1:YA:627:A:O4'	1:YA:637:A:N6	2.48	0.46
1:YA:2446:G:H5''	1:YA:2447:G:OP2	2.15	0.46
1:YA:201:C:H6	1:YA:201:C:O5'	1.99	0.46
22:YV:80:HIS:CD2	22:YV:82:TYR:H	2.32	0.46
32:XA:523:A:H61	43:XL:88:ASP:HB2	1.80	0.46
44:XM:16:ILE:HD12	44:XM:16:ILE:N	2.31	0.46
33:QB:67:LEU:HD22	33:QB:69:VAL:CG2	2.45	0.46
32:QA:1161:C:HO2'	32:QA:1162:C:H6	1.51	0.46
1:YA:923:G:H1'	23:YW:23:LYS:HZ2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:518:C:H2'	32:XA:530:G:C8	2.50	0.46
3:RC:247:TRP:C	3:RC:249:VAL:H	2.17	0.46
52:XU:36:PHE:HA	52:XU:39:LYS:HE2	1.97	0.46
1:YA:595:C:H6	1:YA:595:C:O5'	1.98	0.46
33:QB:134:LEU:HD12	33:QB:137:THR:OG1	2.14	0.46
32:XA:1331:G:O2'	32:XA:1332:A:H8	1.97	0.46
1:YA:2136:G:H2'	1:YA:2137:U:H6	1.76	0.46
32:QA:807:A:C4	32:QA:808:C:C5	3.02	0.46
33:XB:11:ALA:C	33:XB:13:VAL:H	2.17	0.46
32:XA:182:A:C2	32:XA:194:C:N4	2.79	0.46
32:XA:183:C:HO2'	32:XA:184:G:C5'	2.27	0.46
1:RA:1871:A:C8	1:RA:1872:A:C6	3.03	0.46
32:QA:340:U:H2'	32:QA:341:C:C6	2.49	0.46
7:YG:11:PRO:O	7:YG:14:VAL:HG22	2.14	0.46
5:RE:5:LEU:HD23	5:RE:120:VAL:O	2.15	0.46
51:QT:4:LYS:CE	51:QT:5:SER:HB3	2.43	0.46
32:XA:765:G:C4	32:XA:812:G:C6	3.03	0.46
1:YA:574:A:H4'	1:YA:575:A:C5'	2.44	0.46
39:XH:102:VAL:HG22	39:XH:125:ILE:HB	1.97	0.46
1:YA:2415:G:C4	1:YA:2416:C:C5	3.03	0.46
20:RT:29:THR:HA	20:RT:86:THR:H	1.80	0.46
1:RA:2755:C:O2'	1:RA:2756:U:H2'	2.15	0.46
44:QM:106:ARG:HG2	44:QM:106:ARG:NH1	2.29	0.46
30:R3:14:LYS:O	30:R3:21:PHE:O	2.33	0.46
35:QD:166:LYS:HB3	35:QD:166:LYS:HZ2	1.79	0.46
36:XE:151:MET:O	36:XE:154:ALA:HB3	2.15	0.46
38:QG:146:ALA:C	38:QG:148:LYS:H	2.17	0.46
50:QS:43:MET:O	50:QS:61:VAL:HG21	2.15	0.46
8:RH:40:THR:O	8:RH:42:LYS:N	2.46	0.46
1:RA:1738:G:O2'	1:RA:1739:A:H8	1.96	0.46
1:YA:2235:G:C5	1:YA:2236:U:C5	3.04	0.46
26:RZ:40:THR:CG2	26:RZ:43:ILE:HG23	2.45	0.46
38:QG:29:LEU:HD23	38:QG:29:LEU:C	2.36	0.46
1:RA:2140:G:C6	1:RA:2141:G:C5	3.02	0.46
44:QM:15:VAL:HA	44:QM:33:LEU:HD11	1.96	0.46
1:RA:184:C:H2'	1:RA:185:G:H8	1.79	0.46
32:QA:1017:U:C2	32:QA:1018:G:C8	3.03	0.46
32:XA:1520:C:H2'	32:XA:1521:C:C6	2.50	0.46
32:XA:759:A:H2'	32:XA:760:G:H5'	1.96	0.46
43:QL:64:SER:OG	43:QL:96:THR:HG23	2.14	0.46
1:RA:776:G:H4'	1:RA:777:G:O5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:608:A:H2'	32:XA:609:A:O4'	2.15	0.46
44:QM:88:LEU:HD23	44:QM:91:ARG:HH21	1.80	0.46
33:XB:64:GLY:HA2	33:XB:158:ASP:OD2	2.15	0.46
32:XA:358:U:H2'	32:XA:359:G:C8	2.51	0.46
1:YA:1801:A:C4	1:YA:2203:U:C5	3.03	0.46
39:XH:75:GLN:O	39:XH:126:CYS:HB2	2.15	0.46
1:RA:2239:G:H5'	3:RC:248:GLY:HA3	1.96	0.46
1:YA:1436:G:N2	1:YA:1557:C:C2	2.83	0.46
17:RQ:96:ASP:OD2	17:RQ:96:ASP:C	2.54	0.46
1:RA:1063:G:C6	1:RA:1064:C:C2	3.04	0.46
35:XD:111:ALA:O	35:XD:114:ARG:HB3	2.15	0.46
24:YX:35:HIS:O	24:YX:47:THR:HA	2.15	0.46
6:RF:36:ASN:HA	6:RF:87:LYS:HA	1.97	0.46
10:RJ:81:ILE:HG23	10:RJ:83:GLY:N	2.30	0.46
2:YB:18:G:C6	2:YB:19:C:C4	3.03	0.46
23:RW:22:VAL:HA	23:RW:68:PHE:HE2	1.80	0.46
1:RA:923:G:N2	23:RW:23:LYS:HZ3	2.13	0.46
32:XA:1363:A:N1	32:XA:1365:G:O6	2.48	0.46
32:XA:972:C:O2'	41:XJ:57:VAL:HG23	2.15	0.46
6:YF:157:THR:HB	6:YF:168:LEU:HD22	1.97	0.46
1:YA:2394:C:O2'	1:YA:2395:C:H5'	2.15	0.46
3:YC:106:PRO:HB3	3:YC:141:HIS:CE1	2.49	0.46
1:YA:1387:A:C4	1:YA:1388:G:C8	3.03	0.46
1:YA:1341:G:C4	20:YT:84:TYR:CE2	3.03	0.46
36:QE:147:ASN:O	36:QE:149:PRO:HD3	2.15	0.46
33:XB:80:LYS:O	33:XB:83:ALA:N	2.48	0.46
12:RL:75:ALA:O	12:RL:108:ALA:HA	2.15	0.46
27:Y0:39:ARG:O	27:Y0:40:HIS:HB2	2.15	0.46
27:Y0:53:VAL:HG23	27:Y0:54:ILE:H	1.80	0.46
1:YA:466:A:H2	1:YA:795:C:O2	1.98	0.46
30:R3:7:ARG:HA	30:R3:7:ARG:HD2	1.48	0.46
34:XC:17:TRP:CZ2	45:XN:94:GLY:O	2.69	0.46
5:RE:148:ILE:H	5:RE:187:VAL:H	1.63	0.46
32:XA:375:U:N3	32:XA:376:G:N7	2.63	0.46
32:QA:1239:A:H62	32:QA:1299:A:H61	1.58	0.46
32:XA:1130:A:C5	32:XA:1146:A:C5	3.02	0.46
41:XJ:71:LEU:HD12	41:XJ:72:ARG:H	1.79	0.46
32:XA:254:G:H21	48:XQ:17:GLU:HG3	1.78	0.46
32:XA:1054:C:H1'	32:XA:1196:A:C5	2.50	0.46
3:RC:141:HIS:N	3:RC:190:THR:O	2.42	0.46
9:RI:56:VAL:CG2	9:RI:68:PHE:HB2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:141:G:H3'	1:RA:142:A:O4'	2.15	0.46
6:YF:110:ILE:HA	6:YF:111:ARG:NH1	2.24	0.46
32:XA:1326:U:C2	32:XA:1327:C:C5	3.03	0.46
32:XA:369:G:OP2	32:XA:388:G:N1	2.46	0.46
32:XA:653:U:H5'	39:XH:55:LYS:CE	2.45	0.46
33:QB:78:ALA:O	33:QB:81:ASP:OD2	2.33	0.46
33:XB:99:MET:O	33:XB:103:TRP:HB3	2.16	0.46
37:XF:3:HIS:ND1	37:XF:94:HIS:HA	2.30	0.46
32:XA:1525:G:OP1	52:XU:37:TYR:HD1	1.97	0.46
1:RA:565:C:O2'	1:RA:566:U:H5'	2.15	0.46
1:YA:532:A:H5'	1:YA:533:G:O4'	2.14	0.46
1:YA:1492:G:H3'	1:YA:1493:C:C5'	2.45	0.46
32:QA:1409:C:H2'	32:QA:1410:A:H8	1.79	0.46
35:QD:145:ARG:HD2	35:QD:147:LYS:HE3	1.95	0.46
32:XA:1287:A:O2'	32:XA:1288:A:O5'	2.33	0.46
1:YA:1286:A:C5	1:YA:1289:C:N4	2.83	0.46
32:QA:207:C:H5''	32:QA:208:U:OP2	2.15	0.46
1:YA:1884:G:C8	1:YA:1884:G:OP2	2.67	0.46
3:YC:92:LEU:HD12	3:YC:92:LEU:HA	1.82	0.46
14:RN:1:MET:O	14:RN:2:ARG:CB	2.62	0.46
32:XA:764:C:H42	32:XA:812:G:H1	1.62	0.46
45:QN:15:LEU:CD1	45:QN:53:ASP:HB2	2.43	0.46
32:XA:969:A:C5	32:XA:970:C:O2	2.68	0.46
35:QD:60:VAL:HA	35:QD:63:ILE:HG22	1.95	0.46
7:YG:1:SER:C	7:YG:3:VAL:H	2.18	0.46
4:YD:48:ILE:HG23	4:YD:48:ILE:O	2.15	0.46
43:XL:113:ARG:HD2	43:XL:118:VAL:CG1	2.45	0.46
16:RP:19:PHE:N	16:RP:19:PHE:CD2	2.81	0.46
52:QU:3:ILE:HA	52:QU:19:LYS:NZ	2.30	0.46
2:YB:99:A:C5	2:YB:100:G:C5	3.03	0.46
32:XA:1103:C:N4	32:XA:1104:G:C6	2.83	0.46
1:RA:2515:C:O5'	1:RA:2515:C:H6	1.99	0.46
32:QA:109:A:C6	32:QA:326:G:C6	3.02	0.46
4:RD:61:THR:OG1	4:RD:63:PRO:HD2	2.14	0.46
19:YS:36:LEU:C	19:YS:38:TYR:N	2.69	0.46
32:XA:1532:U:H2'	32:XA:1534:A:OP2	2.14	0.46
1:YA:2656:U:OP2	1:YA:2664:G:N2	2.45	0.46
13:YM:108:VAL:HG23	13:YM:109:PRO:HD2	1.97	0.46
1:YA:2059:A:H4'	5:YE:64:GLY:O	2.15	0.46
32:XA:65:A:C2'	32:XA:382:A:H61	2.28	0.46
1:RA:789:A:OP1	1:RA:790:U:C5	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:RI:2:LYS:HB3	9:RI:3:LYS:H	1.57	0.46
32:XA:1189:U:O2'	34:XC:175:HIS:HD2	1.99	0.46
48:QQ:30:HIS:ND1	48:QQ:31:PRO:HD2	2.30	0.46
32:QA:697:U:C5	32:QA:698:G:C8	3.03	0.46
32:QA:316:C:N3	32:QA:317:U:C5	2.83	0.46
34:QC:106:ARG:O	34:QC:107:LYS:O	2.32	0.46
3:RC:173:LEU:O	3:RC:180:MET:HA	2.14	0.46
2:RB:78:A:C2	2:RB:99:A:C4	3.03	0.46
13:YM:81:ARG:HH21	13:YM:84:LYS:HE2	1.80	0.46
33:QB:63:LYS:C	33:QB:63:LYS:HD3	2.35	0.46
15:RO:14:ALA:O	15:RO:18:LEU:HB2	2.15	0.46
1:RA:1684:G:C2	1:RA:1705:A:C2	3.03	0.46
1:RA:2523:G:C2'	1:RA:2524:G:H5'	2.46	0.46
3:YC:2:VAL:O	3:YC:3:VAL:HB	2.15	0.46
1:RA:2804:U:H2'	1:RA:2805:C:C6	2.50	0.46
21:YU:64:ILE:HG23	21:YU:64:ILE:O	2.15	0.46
36:XE:129:SER:HA	56:XE:204:HOH:O	2.14	0.46
3:RC:211:ARG:HD2	3:RC:211:ARG:HA	1.43	0.46
38:QG:107:ALA:CA	38:QG:122:GLU:HG3	2.46	0.46
44:QM:36:ALA:HB3	44:QM:38:ILE:HG12	1.97	0.46
10:RJ:4:PHE:O	10:RJ:44:TYR:CZ	2.68	0.46
1:RA:1060:U:O4	1:RA:1088:A:C6	2.68	0.46
24:RX:44:ARG:CG	24:RX:45:PHE:N	2.78	0.46
1:RA:10:A:C2	1:RA:2800:A:H2'	2.51	0.46
32:XA:1319:A:H2'	32:XA:1320:C:OP 2	2.14	0.46
1:RA:528:A:C3'	1:RA:528:A:C8	2.98	0.46
4:RD:108:ASP:OD2	4:RD:173:GLN:HA	2.15	0.46
30:Y3:28:LEU:O	30:Y3:29:ARG:HB3	2.15	0.46
1:YA:333:G:C4	1:YA:334:C:C5	3.03	0.46
17:YQ:64:ILE:HD12	17:YQ:95:ALA:CB	2.46	0.46
33:XB:80:LYS:HD3	33:XB:90:PHE:CZ	2.50	0.46
1:YA:1055:G:C2'	1:YA:1056:G:H5'	2.46	0.46
32:XA:109:A:C5	32:XA:327:A:C4	3.04	0.46
2:YB:40:U:O2	2:YB:43:C:C2'	2.58	0.46
1:YA:1784:A:H4'	1:YA:1785:A:O5'	2.15	0.46
1:YA:353:C:N4	1:YA:354:A:H62	2.14	0.46
1:YA:70:G:H3'	1:YA:113:U:H4'	1.95	0.46
1:YA:584:C:P	17:YQ:5:ARG:HD3	2.55	0.46
1:RA:360:U:C4	1:RA:361:G:C6	3.04	0.46
1:YA:729:G:O2'	1:YA:1775:U:H1'	2.15	0.46
32:XA:913:A:C4'	32:XA:914:A:O5'	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:YG:112:VAL:HG12	7:YG:114:HIS:HB3	1.97	0.46
1:RA:1474:U:H2'	1:RA:1475:G:H5'	1.98	0.46
1:RA:581:C:O2'	1:RA:582:A:H5'	2.16	0.46
40:XI:45:MET:O	40:XI:49:GLN:N	2.35	0.46
16:RP:33:GLU:HB2	16:RP:38:ARG:HE	1.80	0.46
1:RA:2503:A:OP2	1:RA:2503:A:H3'	2.15	0.46
1:RA:761:A:N6	56:RA:3293:HOH:O	2.48	0.46
1:YA:2496:C:N4	56:YA:3562:HOH:O	2.49	0.46
36:QE:110:MET:HB3	36:QE:139:THR:HG21	1.97	0.46
1:RA:36:G:C2'	1:RA:37:C:H5'	2.45	0.46
9:RI:74:PRO:HB2	9:RI:77:VAL:HG13	1.98	0.46
6:YF:11:VAL:HG22	6:YF:171:ALA:HA	1.98	0.46
32:XA:1006:G:C6	32:XA:1024:G:C2	3.04	0.46
32:XA:1067:A:C4'	32:XA:1068:G:O5'	2.63	0.46
46:QO:68:TYR:O	46:QO:69:LEU:C	2.54	0.46
16:RP:112:ARG:O	16:RP:113:LEU:HD23	2.15	0.46
32:QA:1319:A:C4	32:QA:1323:G:N7	2.84	0.46
3:RC:257:ARG:HE	3:RC:269:ARG:HH22	1.63	0.46
38:XG:124:SER:C	38:XG:126:ALA:N	2.69	0.46
7:RG:29:ASN:CG	7:RG:30:GLY:N	2.68	0.46
32:XA:785:G:H2'	32:XA:785:G:N3	2.30	0.46
40:XI:129:ARG:CZ	40:XI:129:ARG:HA	2.46	0.46
1:RA:1421:G:C2	1:RA:1422:G:N7	2.84	0.46
32:QA:446:G:N2	32:QA:489:C:C2	2.84	0.46
1:YA:1451:C:H42	1:YA:1461:C:H42	1.62	0.46
32:XA:190:A:H8	32:XA:190:A:O5'	1.98	0.46
1:RA:686:U:H1'	29:R2:6:GLN:O	2.15	0.46
39:XH:111:THR:HG22	39:XH:112:ASP:N	2.29	0.46
41:QJ:88:MET:O	41:QJ:90:LEU:N	2.48	0.46
1:YA:1354:A:OP1	3:YC:35:LYS:HE2	2.16	0.46
1:RA:1727:C:O2	1:RA:1727:C:H2'	2.16	0.46
32:XA:793:U:O2	32:XA:1516:G:H4'	2.15	0.46
23:RW:69:GLU:O	23:RW:77:LYS:O	2.33	0.46
1:RA:383:C:H5'	1:RA:384:A:H5''	1.97	0.46
1:RA:996:A:C6	1:RA:1160:G:C2	3.03	0.46
1:RA:1059:G:C6	1:RA:1080:A:N1	2.83	0.46
23:RW:75:ASN:O	23:RW:76:ARG:HB2	2.15	0.46
32:XA:1277:C:O2'	32:XA:1279:G:C8	2.63	0.46
32:XA:1279:G:N3	32:XA:1279:G:H2'	2.31	0.46
23:RW:30:VAL:HG23	23:RW:59:PHE:HD1	1.79	0.46
1:YA:455:C:N4	1:YA:473:G:H5'	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1372:U:OP1	40:XI:70:GLY:O	2.33	0.46
50:XS:52:ASN:HD22	50:XS:52:ASN:C	2.18	0.46
10:RJ:111:LYS:HD2	10:RJ:112:GLY:N	2.29	0.46
1:YA:1551:A:C5	1:YA:1552:A:C8	3.03	0.46
1:YA:2322:A:C8	1:YA:2323:G:C8	3.03	0.46
23:YW:37:VAL:HG12	23:YW:55:ASP:CB	2.40	0.46
1:YA:227:A:H5'	1:YA:229:C:N4	2.31	0.46
1:YA:235:U:N3	1:YA:236:C:C5	2.83	0.46
1:YA:266:G:N2	1:YA:427:U:H1'	2.30	0.46
1:YA:1394:U:C3'	1:YA:1394:U:C6	2.99	0.46
1:YA:1402:U:H2'	1:YA:1403:A:O5'	2.15	0.46
1:YA:2025:C:H2'	1:YA:2026:U:C6	2.51	0.46
1:YA:2037:A:C6	1:YA:2038:G:C6	3.04	0.46
1:RA:301:G:C4	1:RA:302:C:C5	3.03	0.46
1:YA:1570:A:O5'	1:YA:1570:A:H8	1.99	0.46
1:YA:82:U:H5''	1:YA:296:U:C5'	2.46	0.46
1:YA:332:A:C5	1:YA:335:C:N4	2.83	0.46
12:RL:94:THR:HG22	12:RL:95:LEU:N	2.30	0.46
36:XE:78:GLY:O	36:XE:121:ASN:OD1	2.34	0.46
32:QA:267:C:O2'	32:QA:268:U:C5'	2.63	0.46
32:QA:274:A:H4'	48:QQ:15:LYS:HE2	1.96	0.46
1:YA:483:A:O2'	1:YA:484:C:C5'	2.64	0.46
1:YA:118:A:P	1:YA:119:A:H5''	2.55	0.46
32:XA:90:C:O2'	32:XA:91:U:H6	1.91	0.46
1:RA:160:A:C6	1:RA:161:A:C6	3.03	0.46
38:XG:26:VAL:HG23	38:XG:27:ASN:H	1.81	0.46
32:XA:820:U:C4'	32:XA:821:G:OP2	2.51	0.46
32:XA:411:A:O3'	32:XA:412:A:O4'	2.32	0.46
32:XA:428:G:H4'	32:XA:429:U:OP1	2.15	0.46
32:XA:1238:A:N6	32:XA:1302:C:N4	2.63	0.46
33:QB:20:ARG:NE	33:QB:20:ARG:HA	2.30	0.46
3:RC:141:HIS:CD2	3:RC:192:GLY:O	2.68	0.46
28:R1:34:GLU:O	28:R1:35:LEU:HB3	2.15	0.46
34:QC:164:THR:O	34:QC:165:GLU:O	2.33	0.46
13:YM:17:ASN:HB3	13:YM:38:ARG:NH2	2.30	0.46
1:RA:1784:A:H4'	1:RA:1785:A:C5'	2.46	0.46
19:RS:4:ILE:HG22	19:RS:106:VAL:HG22	1.98	0.46
33:QB:68:PHE:HE2	33:QB:88:GLN:HB2	1.80	0.46
1:YA:1265:A:C4	1:YA:1267:U:C4	3.04	0.46
10:YJ:123:LYS:HG2	10:YJ:132:HIS:NE2	2.31	0.46
3:RC:20:ASN:HA	3:RC:21:PRO:HD2	1.75	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:159:LYS:O	4:YD:161:MET:HG2	2.16	0.46
1:RA:2556:C:H2'	1:RA:2557:G:H5'	1.97	0.46
32:XA:1202:U:C2'	32:XA:1203:C:H5'	2.45	0.46
1:YA:1324:G:N2	1:YA:1328:A:C6	2.84	0.46
1:YA:2571:U:N3	1:YA:2574:G:C8	2.84	0.46
32:QA:342:C:C2'	32:QA:343:U:H5'	2.45	0.46
44:XM:95:PRO:HG3	44:XM:99:GLN:OE1	2.15	0.46
7:RG:51:PHE:CE2	7:RG:68:ARG:HA	2.50	0.46
6:RF:82:TYR:CD2	6:RF:83:PRO:HD2	2.44	0.46
32:QA:864:A:H3'	32:QA:865:A:C8	2.51	0.46
34:XC:36:PHE:CZ	45:XN:91:GLU:HB3	2.51	0.46
8:YH:6:LEU:HD13	8:YH:36:ALA:HA	1.98	0.46
34:XC:120:THR:O	34:XC:120:THR:CG2	2.63	0.46
21:RU:10:VAL:HB	21:RU:70:ALA:O	2.15	0.46
5:YE:5:LEU:HD22	5:YE:122:GLU:H	1.81	0.46
32:QA:263:A:OP2	51:QT:73:ARG:NH1	2.47	0.46
33:XB:164:ASP:CG	33:XB:203:ASP:HB2	2.36	0.46
1:RA:958:U:H3	13:RM:16:ARG:HD3	1.79	0.46
1:YA:1936:A:H2	1:YA:1943:U:C4	2.33	0.46
1:RA:1417:C:O2'	1:RA:1587:G:O2'	2.24	0.46
13:YM:69:PRO:CA	13:YM:94:ALA:HB2	2.46	0.46
36:QE:12:GLU:HB3	36:QE:38:VAL:HG12	1.97	0.46
1:YA:718:A:C3'	1:YA:719:C:H5'	2.45	0.46
19:RS:24:ILE:HD11	19:RS:35:ILE:HB	1.98	0.46
32:XA:104:G:C2	32:XA:105:G:C8	3.04	0.46
1:YA:1801:A:C5	1:YA:2203:U:C5	3.03	0.46
1:RA:843:G:O2'	1:RA:844:A:H5'	2.15	0.46
4:RD:179:ARG:HB3	4:RD:188:LEU:HB2	1.97	0.46
1:YA:1420:A:N3	1:YA:2211:A:N7	2.63	0.46
32:XA:948:C:OP2	44:XM:104:ASN:HB3	2.14	0.46
30:Y3:9:ALA:HB1	30:Y3:13:PHE:CD2	2.50	0.46
32:QA:1266:G:N1	32:QA:1270:G:C6	2.83	0.46
44:XM:85:TYR:HE2	44:XM:96:VAL:HG13	1.80	0.46
3:RC:85:ASN:OD1	3:RC:85:ASN:N	2.48	0.46
40:QI:111:GLU:HG2	40:QI:120:ALA:HB1	1.96	0.46
8:YH:50:ARG:C	8:YH:52:ALA:N	2.69	0.46
1:RA:1061:U:H6	1:RA:1070:A:N9	2.14	0.46
17:YQ:87:VAL:HG12	17:YQ:88:GLU:N	2.30	0.46
2:YB:15:A:H1'	2:YB:109:A:N7	2.30	0.46
32:XA:1256:A:N1	32:XA:1278:G:H2'	2.31	0.46
1:RA:923:G:H21	23:RW:23:LYS:HZ3	1.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:XU:3:ILE:CG2	52:XU:19:LYS:HZ1	2.28	0.46
1:YA:1532:A:H2'	1:YA:1533:C:C6	2.51	0.46
1:RA:301:G:H4'	1:RA:302:C:OP1	2.15	0.46
1:YA:995:C:HO2'	17:YQ:60:TRP:HZ2	1.53	0.46
36:XE:103:GLY:CA	36:XE:121:ASN:HA	2.40	0.46
47:QP:20:VAL:HG21	47:QP:32:PHE:HB2	1.98	0.46
48:QQ:58:VAL:HG23	48:QQ:76:ARG:O	2.15	0.46
1:YA:186:G:N2	1:YA:211:C:C2	2.83	0.46
32:XA:85:U:O4'	32:XA:85:U:O2	2.32	0.46
32:XA:1240:U:OP1	38:XG:118:ARG:CZ	2.64	0.46
1:YA:654:A:C2'	1:YA:655:A:H5''	2.40	0.46
1:YA:587:C:N3	12:YL:33:ARG:NH2	2.63	0.46
1:YA:1109:C:H5''	1:YA:1110:G:OP2	2.15	0.46
1:YA:1033:U:O2'	1:YA:2750:A:N6	2.48	0.46
1:YA:203:A:OP2	1:YA:204:A:O2'	2.29	0.46
32:QA:1460:C:C2	32:QA:1461:G:C8	3.03	0.46
14:YN:16:HIS:CE1	14:YN:20:MET:CE	2.99	0.46
1:YA:2091:C:H1'	24:YX:33:HIS:NE2	2.30	0.46
44:XM:13:HIS:ND1	44:XM:43:LYS:HE2	2.26	0.46
32:QA:76:G:C2	32:QA:95:C:N3	2.84	0.46
32:QA:72:A:N6	32:QA:99:C:H1'	2.30	0.46
1:RA:2152:G:H2'	1:RA:2153:C:H6	1.80	0.46
18:YR:78:ARG:HB3	18:YR:83:TYR:HD1	1.79	0.46
39:XH:57:GLU:O	39:XH:58:LEU:HB2	2.15	0.46
1:RA:1045:C:H4'	1:RA:1046:A:H5'	1.98	0.46
33:QB:116:LEU:HG	33:QB:140:LEU:HG	1.96	0.46
36:XE:44:ARG:HG2	36:XE:72:ASN:HA	1.97	0.46
32:XA:505:G:C6	32:XA:535:A:C2	3.04	0.46
12:RL:53:GLY:O	12:RL:54:GLN:C	2.53	0.46
4:YD:94:GLN:O	4:YD:95:SER:C	2.53	0.46
1:YA:2574:G:N2	1:YA:2575:C:H1'	2.30	0.46
1:YA:40:U:C4	1:YA:41:C:C4	3.04	0.46
32:XA:251:G:N2	32:XA:253:A:N6	2.63	0.46
36:QE:56:PRO:O	36:QE:59:ILE:HG13	2.15	0.46
41:QJ:81:GLU:CA	41:QJ:84:VAL:HG12	2.45	0.46
24:RX:32:LEU:O	24:RX:33:HIS:CG	2.68	0.46
12:YL:47:ARG:H	12:YL:47:ARG:HG3	1.60	0.46
50:QS:43:MET:HA	50:QS:46:LEU:HD12	1.97	0.46
16:RP:24:THR:HG23	16:RP:24:THR:O	2.15	0.46
1:YA:1410:G:N2	1:YA:1593:A:C4	2.83	0.46
45:XN:31:SER:HA	45:XN:45:LEU:HD11	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:35:G:H21	43:XL:114:SER:CB	2.28	0.46
38:XG:12:LEU:O	38:XG:12:LEU:HD13	2.15	0.46
32:XA:801:U:O2'	32:XA:802:A:H5'	2.16	0.46
32:QA:772:U:O2'	32:QA:773:G:H5'	2.16	0.46
1:YA:371:A:N6	1:YA:402:A:OP2	2.44	0.46
38:QG:83:THR:O	38:QG:84:TYR:C	2.53	0.46
13:RM:19:GLY:O	13:RM:97:GLN:HB2	2.15	0.46
44:XM:56:ARG:C	44:XM:59:VAL:HG12	2.36	0.46
35:QD:191:SER:OG	35:QD:192:ALA:N	2.45	0.46
35:XD:60:VAL:CG2	35:XD:194:ILE:HG21	2.46	0.46
1:YA:2492:U:H6	1:YA:2492:U:O5'	1.99	0.46
15:RO:84:GLU:O	15:RO:86:GLY:N	2.48	0.46
1:RA:2223:G:H2'	1:RA:2224:G:H5'	1.98	0.46
3:YC:35:LYS:O	3:YC:36:ASN:CB	2.62	0.46
1:RA:488:G:O2'	19:RS:49:LYS:NZ	2.44	0.46
32:XA:354:G:C2	32:XA:355:C:C6	3.04	0.46
2:RB:104:A:H2'	2:RB:105:G:O4'	2.16	0.46
34:QC:53:ARG:O	34:QC:68:HIS:HB2	2.16	0.46
35:QD:168:THR:HG22	35:QD:183:ARG:HH21	1.81	0.46
38:QG:46:LEU:O	38:QG:50:ALA:HB2	2.15	0.46
32:QA:993:G:N3	32:QA:993:G:H2'	2.30	0.46
16:YP:19:PHE:N	16:YP:19:PHE:CD2	2.83	0.46
1:RA:2669:G:C2'	1:RA:2670:A:H5'	2.45	0.46
1:RA:1563:U:H2'	1:RA:1564:C:C6	2.51	0.46
32:QA:370:C:O2'	32:QA:371:A:H5'	2.15	0.46
17:RQ:91:ARG:CB	17:RQ:94:LEU:HB2	2.46	0.46
17:RQ:91:ARG:CZ	17:RQ:93:ILE:HG21	2.46	0.46
32:XA:120:A:O2'	32:XA:121:U:H5''	2.15	0.46
1:YA:1799:G:O2'	3:YC:179:GLU:OE2	2.34	0.46
32:XA:963:G:C2	32:XA:973:G:C6	3.03	0.46
32:XA:986:U:C2	32:XA:1220:G:N2	2.83	0.46
32:XA:1014:A:C5	50:XS:33:TRP:CE3	3.04	0.46
32:XA:1319:A:OP2	50:XS:4:LEU:HD21	2.15	0.46
1:YA:2321:U:H5''	1:YA:2322:A:OP2	2.16	0.46
28:Y1:8:ILE:HD12	28:Y1:52:LYS:HG3	1.96	0.46
1:YA:406:G:O2'	1:YA:407:G:O5'	2.34	0.46
21:YU:3:LYS:HG2	21:YU:84:PHE:CZ	2.51	0.46
3:YC:149:LYS:HE3	3:YC:152:GLN:CD	2.36	0.46
12:RL:93:ASN:O	12:RL:94:THR:HB	2.15	0.46
32:XA:1434:A:N6	32:XA:1435:G:C6	2.84	0.46
48:QQ:12:VAL:CG1	48:QQ:21:VAL:O	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:478:A:C2	1:YA:480:A:N9	2.84	0.46
1:YA:482:A:N6	1:YA:506:G:C5	2.83	0.46
32:QA:450:G:H2'	32:QA:451:A:OP1	2.15	0.46
45:XN:80:ARG:HH11	45:XN:80:ARG:HG2	1.80	0.46
14:YN:73:ASN:CA	14:YN:76:VAL:HG22	2.45	0.46
1:YA:105:C:H2'	1:YA:106:C:H6	1.78	0.46
1:RA:1733:G:C2	1:RA:1734:G:C5	3.04	0.46
1:YA:204:A:C8	1:YA:206:U:C4	3.03	0.46
32:XA:1133:G:C4	32:XA:1134:G:C8	3.04	0.46
8:YH:25:TYR:O	8:YH:29:PHE:HB3	2.15	0.46
38:XG:68:VAL:O	38:XG:70:PRO:HD3	2.15	0.46
32:XA:996:A:C2	32:XA:1046:A:H5'	2.50	0.46
44:XM:13:HIS:CD2	44:XM:14:ALA:H	2.34	0.46
32:QA:95:C:C6	32:QA:95:C:H5''	2.51	0.46
13:RM:42:THR:H	13:RM:45:GLN:HB2	1.80	0.46
39:XH:29:SER:OG	39:XH:32:LYS:HB2	2.15	0.46
33:QB:71:THR:HG23	33:QB:93:HIS:C	2.36	0.46
1:YA:1568:G:N2	3:YC:57:HIS:HE1	2.07	0.46
1:RA:508:A:C4'	1:RA:509:C:OP2	2.61	0.46
1:YA:1222:U:H2'	1:YA:1223:G:C8	2.50	0.46
1:YA:533:G:N2	17:YQ:44:TYR:CE1	2.83	0.46
32:QA:33:A:H2'	32:QA:34:C:C6	2.51	0.46
1:YA:1378:A:N7	1:YA:1380:G:C6	2.83	0.46
1:YA:2142:A:H2'	1:YA:2143:C:O3'	2.15	0.46
1:RA:2204:G:O5'	3:RC:149:LYS:HE3	2.15	0.46
45:XN:46:LYS:HE3	50:XS:10:ILE:HB	1.98	0.46
32:XA:562:U:H1'	43:XL:11:ARG:HD2	1.97	0.46
18:RR:15:SER:O	18:RR:18:GLN:HB3	2.14	0.46
32:XA:1226:C:H5'	44:XM:94:LEU:HD21	1.97	0.46
1:YA:1179:G:C4	1:YA:1180:U:C5	3.04	0.46
1:YA:1512:C:C4	1:YA:1513:U:C4	3.03	0.46
33:XB:124:THR:C	33:XB:126:ASP:H	2.18	0.46
1:RA:1721:G:O2'	1:RA:1739:A:N6	2.49	0.46
6:RF:111:ARG:NE	6:RF:111:ARG:HA	2.30	0.46
1:YA:2686:G:C5	1:YA:2687:U:C4	3.03	0.46
33:XB:164:ASP:OD2	33:XB:203:ASP:HB2	2.16	0.46
32:QA:819:A:N7	32:QA:1529:G:C2	2.84	0.46
21:YU:54:PRO:CG	21:YU:55:GLY:H	2.27	0.46
27:R0:14:MET:O	27:R0:17:SER:HB3	2.15	0.46
1:YA:2097:A:C4	1:YA:2098:U:C5	3.04	0.46
32:QA:417:G:O2'	32:QA:418:C:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2553:G:N1	1:RA:2554:U:O2	2.49	0.46
9:YI:104:GLN:HA	9:YI:107:GLU:HB3	1.98	0.46
1:RA:1275:A:H2	1:RA:1295:C:O2	1.98	0.46
3:RC:181:ARG:NH2	3:RC:265:PHE:HB3	2.29	0.46
12:RL:14:LYS:HG3	12:RL:15:ALA:N	2.31	0.46
40:XI:63:TYR:C	40:XI:64:ILE:HD12	2.36	0.46
1:YA:2474:U:H2'	1:YA:2475:C:O5'	2.16	0.46
39:QH:1:SER:C	39:QH:3:GLN:H	2.19	0.46
32:QA:680:C:O2'	32:QA:681:A:H5'	2.16	0.46
10:RJ:58:ASN:N	10:RJ:127:GLY:O	2.45	0.46
1:YA:1114:C:H2'	1:YA:1115:G:C8	2.50	0.46
19:YS:10:ALA:HB3	19:YS:101:SER:O	2.15	0.46
24:RX:20:ALA:O	24:RX:21:LEU:HB2	2.16	0.46
1:RA:402:A:C2'	1:RA:403:U:H5'	2.46	0.46
32:QA:924:C:H2'	32:QA:925:G:H8	1.80	0.46
16:YP:16:VAL:HA	16:YP:17:PRO:HD3	1.59	0.46
32:QA:1014:A:H4'	50:QS:13:HIS:CD2	2.51	0.46
13:YM:7:THR:HG22	13:YM:9:PHE:H	1.80	0.46
39:XH:33:VAL:C	39:XH:35:ILE:H	2.18	0.46
1:RA:996:A:O2'	17:RQ:91:ARG:HG3	2.16	0.46
18:RR:49:ILE:O	18:RR:51:VAL:O	2.33	0.46
43:XL:42:LYS:CG	43:XL:43:LYS:HG2	2.45	0.46
1:YA:217:A:H2'	1:YA:218:A:C8	2.51	0.46
2:YB:13:G:O2'	2:YB:14:U:H5''	2.15	0.46
1:YA:454:A:C3'	1:YA:455:C:H5''	2.46	0.46
1:YA:266:G:H2'	1:YA:267:C:O5'	2.15	0.46
32:QA:484:G:H4'	32:QA:485:U:C5'	2.46	0.46
1:YA:1611:C:O2'	1:YA:1612:C:O5'	2.32	0.46
33:QB:95:TRP:HZ3	33:QB:98:GLY:H	1.61	0.46
42:QK:124:LYS:HE2	52:QU:33:ARG:NH2	2.31	0.46
1:YA:321:U:O2'	1:YA:340:A:N3	2.46	0.46
1:YA:1655:A:H4'	4:YD:118:PHE:CD1	2.50	0.46
48:QQ:16:MET:HE2	48:QQ:20:ILE:HD12	1.98	0.46
48:QQ:46:HIS:HB3	48:QQ:73:THR:HG23	1.98	0.46
32:XA:415:A:H3'	32:XA:416:G:H8	1.81	0.46
4:RD:133:THR:CG2	4:RD:134:HIS:CD2	2.92	0.46
1:YA:2444:G:C6	1:YA:2445:G:C5	3.04	0.46
1:YA:617:G:N2	1:YA:618:G:C4	2.83	0.46
1:YA:811:U:H1'	1:YA:1251:C:C2	2.51	0.46
32:XA:1130:A:C6	32:XA:1146:A:N7	2.83	0.46
10:RJ:20:ALA:O	10:RJ:21:THR:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:141:HIS:NE2	3:RC:194:VAL:HA	2.30	0.46
32:QA:967:C:O5'	32:QA:967:C:H6	1.99	0.46
44:XM:12:LYS:HB3	44:XM:17:ALA:CB	2.38	0.46
1:YA:279:A:C2	1:YA:362:A:C4'	2.92	0.46
4:RD:101:PHE:O	4:RD:102:ALA:C	2.54	0.46
11:YK:69:VAL:HG12	11:YK:70:ARG:N	2.30	0.46
40:XI:45:MET:HA	40:XI:48:ARG:HG2	1.97	0.46
14:RN:36:THR:HG23	14:RN:37:THR:O	2.16	0.46
40:XI:15:ALA:O	40:XI:66:VAL:HA	2.15	0.46
21:RU:44:HIS:HD2	21:RU:57:ILE:HG12	1.81	0.46
1:RA:733:G:O6	1:RA:761:A:C8	2.69	0.46
32:XA:203:G:O5'	32:XA:203:G:H8	1.97	0.46
1:YA:1281:G:O2'	1:YA:1282:U:H5'	2.15	0.46
1:YA:170:U:H6	1:YA:170:U:O5'	1.99	0.46
1:YA:173:A:H2'	1:YA:174:U:C6	2.51	0.46
1:RA:449:A:C2'	1:RA:450:G:H5'	2.45	0.46
1:YA:2635:A:C5'	4:YD:79:LEU:HB2	2.46	0.46
1:RA:989:G:C8	26:RZ:13:ILE:HD11	2.51	0.46
1:YA:968:C:H2'	1:YA:969:G:H8	1.81	0.46
32:QA:184:G:H2'	32:QA:185:U:C5	2.51	0.46
29:Y2:24:THR:O	29:Y2:28:ARG:HB3	2.15	0.46
32:XA:251:G:H4'	32:XA:252:U:OP1	2.14	0.46
6:RF:151:LEU:HD12	6:RF:152:ASP:N	2.31	0.46
40:XI:27:ILE:HD13	40:XI:62:LEU:HG	1.98	0.46
32:QA:545:C:H5'	35:QD:68:GLU:HG3	1.97	0.46
16:YP:24:THR:O	16:YP:25:VAL:C	2.54	0.46
1:YA:1171:G:C4	1:YA:1179:G:N2	2.84	0.46
32:QA:1056:U:H5'	34:QC:162:ALA:HB2	1.97	0.46
37:QF:47:LEU:HG	37:QF:56:LYS:H	1.81	0.46
32:QA:855:U:H2'	32:QA:856:C:H6	1.81	0.46
12:RL:78:ARG:HA	12:RL:113:ALA:HB3	1.97	0.46
30:Y3:18:LYS:CD	30:Y3:19:GLY:H	2.29	0.46
1:YA:1244:A:HO2'	5:YE:29:HIS:CE1	2.32	0.46
3:RC:77:VAL:HG22	3:RC:111:ALA:HA	1.98	0.46
32:QA:990:C:H2'	32:QA:991:U:C6	2.51	0.46
1:YA:2845:U:H2'	1:YA:2846:G:O4'	2.16	0.46
1:RA:2311:A:O3'	1:RA:2312:U:C6	2.69	0.46
48:XQ:20:ILE:HG13	48:XQ:22:VAL:HG23	1.98	0.46
1:YA:2096:C:H2'	1:YA:2097:A:H8	1.81	0.46
3:YC:251:THR:HG22	3:YC:252:LYS:HG3	1.97	0.46
32:QA:140:U:H2'	32:QA:141:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:878:A:C5	32:XA:879:C:C5	3.03	0.46
44:XM:1:ALA:HB3	44:XM:8:ILE:HG23	1.96	0.46
2:RB:54:G:H21	6:RF:25:MET:CE	2.28	0.46
34:XC:131:ARG:O	34:XC:135:ARG:HB2	2.15	0.46
5:RE:110:SER:O	5:RE:113:VAL:HG12	2.16	0.46
45:XN:79:SER:O	45:XN:83:VAL:HG23	2.15	0.46
32:XA:805:C:C2	32:XA:806:C:C5	3.03	0.46
1:RA:2282:G:H4'	1:RA:2389:G:O2'	2.16	0.46
10:RJ:5:THR:O	10:RJ:5:THR:HG22	2.14	0.46
1:RA:2884:U:O4'	1:RA:2884:U:O2	2.33	0.46
39:XH:93:LYS:N	39:XH:93:LYS:HD3	2.31	0.46
32:XA:828:U:H2'	32:XA:829:G:O5'	2.14	0.46
1:YA:381:G:H5'	24:YX:15:ASN:HD22	1.79	0.46
1:RA:364:C:O2'	1:RA:365:U:H5'	2.15	0.46
32:XA:976:G:N2	32:XA:1363:A:N3	2.64	0.46
23:YW:37:VAL:CG1	23:YW:55:ASP:HB2	2.38	0.46
30:Y3:29:ARG:HH21	30:Y3:29:ARG:CG	2.29	0.46
1:YA:2394:C:H41	30:Y3:30:HIS:CE1	2.33	0.46
1:YA:2390:U:H2'	1:YA:2390:U:O2	2.16	0.46
11:RK:10:VAL:HG11	11:RK:16:ALA:HB2	1.96	0.46
1:YA:231:A:H2'	1:YA:232:G:H5'	1.97	0.46
1:YA:1571:A:H2'	1:YA:1572:A:C8	2.50	0.46
1:YA:302:C:C2'	1:YA:303:G:H8	2.28	0.46
39:QH:20:ASN:HA	39:QH:64:TYR:CE2	2.51	0.46
1:YA:125:A:H5''	29:Y2:19:ARG:HB2	1.98	0.46
1:YA:126:A:H2'	29:Y2:46:LYS:HE2	1.98	0.46
35:XD:28:ASP:O	35:XD:31:CYS:SG	2.74	0.46
1:RA:1730:C:H1'	1:RA:1731:G:C2	2.51	0.46
1:RA:2033:A:H1'	1:RA:2035:G:OP2	2.15	0.46
16:YP:50:ARG:HB2	16:YP:56:SER:HB3	1.96	0.46
16:YP:75:THR:HG23	16:YP:76:HIS:CD2	2.50	0.46
32:XA:752:G:O2'	32:XA:753:A:P	2.73	0.46
32:XA:275:G:H2'	32:XA:276:G:C8	2.50	0.46
32:QA:1160:G:HO2'	32:QA:1161:C:C5'	2.28	0.46
1:RA:2680:U:OP2	4:RD:114:LYS:HE2	2.16	0.46
30:Y3:41:ARG:CG	30:Y3:41:ARG:NH2	2.72	0.46
52:XU:33:ARG:HG2	52:XU:34:ARG:N	2.31	0.46
1:YA:2800:A:C2'	1:YA:2801:G:H4'	2.39	0.46
32:XA:989:U:C2'	32:XA:990:C:H5'	2.46	0.46
25:RY:5:GLU:O	25:RY:6:LEU:C	2.54	0.46
23:YW:9:THR:HG23	23:YW:10:ARG:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:68:ARG:NH1	18:YR:90:ARG:HG2	2.30	0.46
32:XA:1305:G:C6	32:XA:1331:G:C2	3.03	0.46
32:XA:563:A:C8	32:XA:567:G:O4'	2.68	0.46
34:QC:13:ILE:N	34:QC:13:ILE:HD13	2.30	0.46
21:YU:71:ILE:HG12	21:YU:71:ILE:H	1.47	0.46
1:RA:1792:G:OP1	3:RC:203:VAL:O	2.34	0.46
2:YB:44:G:H3'	6:YF:91:ARG:HE	1.80	0.46
1:YA:567:U:H4'	1:YA:808:G:OP1	2.15	0.46
30:R3:54:LEU:HA	30:R3:54:LEU:HD12	1.70	0.46
13:YM:73:ILE:HG12	13:YM:93:VAL:CG1	2.45	0.46
9:RI:71:LYS:CG	9:RI:72:THR:H	2.28	0.46
20:RT:29:THR:CA	20:RT:86:THR:HA	2.45	0.46
32:XA:632:U:O2	32:XA:632:U:C2'	2.63	0.46
1:YA:2636:C:H4'	4:YD:81:GLU:CD	2.36	0.46
1:YA:2726:A:O2'	1:YA:2727:A:H5'	2.16	0.46
4:YD:45:TYR:CE2	4:YD:47:ALA:HB3	2.48	0.46
32:QA:263:A:H2'	32:QA:264:C:C5	2.51	0.46
6:RF:72:SER:HB2	6:RF:80:GLN:HB2	1.98	0.46
1:RA:2064:C:H2'	1:RA:2065:C:C6	2.50	0.46
36:XE:157:GLY:HA3	39:XH:63:LYS:CE	2.46	0.46
16:RP:24:THR:HG22	16:RP:87:ARG:H	1.80	0.46
32:QA:1332:A:H5''	32:QA:1333:A:OP2	2.16	0.46
32:XA:802:A:HO2'	32:XA:803:G:P	2.37	0.46
45:YN:78:LEU:HD12	45:YN:78:LEU:N	2.31	0.46
44:QM:18:LEU:O	44:QM:24:VAL:CG2	2.63	0.46
32:XA:1099:G:H5''	33:XB:94:ARG:NH2	2.31	0.46
32:XA:998:C:C6	32:XA:999:C:H5	2.33	0.46
24:RX:3:VAL:HG22	24:RX:10:ARG:HB3	1.98	0.46
39:QH:36:ALA:HA	39:QH:39:LEU:HD12	1.98	0.46
32:XA:1000:A:C2	32:XA:1041:G:C5	3.04	0.46
2:RB:13:G:O2'	2:RB:15:A:H5'	2.16	0.46
32:QA:804:U:H5''	32:QA:805:C:OP2	2.15	0.46
1:RA:1005:C:H1'	1:RA:1012:U:N3	2.30	0.46
1:RA:2523:G:O2'	1:RA:2524:G:H5'	2.15	0.46
1:YA:1483:G:C6	1:YA:1484:U:C4	3.04	0.46
1:RA:2654:A:N1	1:RA:2665:A:H5''	2.31	0.46
1:RA:722:A:H2'	1:RA:723:C:O4'	2.16	0.46
38:QG:49:LEU:CD2	38:QG:124:SER:HB2	2.45	0.46
30:Y3:50:SER:O	30:Y3:52:GLY:N	2.49	0.46
35:XD:75:TYR:HA	35:XD:89:LEU:HD13	1.98	0.46
1:RA:1356:G:C2	1:RA:1357:C:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:14:HIS:CD2	33:XB:16:GLY:HA3	2.51	0.46
1:YA:1006:C:O5'	1:YA:1006:C:H6	1.99	0.46
17:RQ:75:TYR:CD2	17:RQ:75:TYR:C	2.88	0.46
32:XA:102:G:H2'	32:XA:103:U:H6	1.80	0.46
17:RQ:93:ILE:HG23	17:RQ:94:LEU:H	1.80	0.46
1:RA:2846:G:OP2	16:RP:51:ASN:CB	2.64	0.46
1:RA:2365:G:H2'	1:RA:2366:A:C8	2.51	0.46
37:XF:86:ARG:NH1	49:XR:63:TYR:CB	2.57	0.46
1:YA:1816:C:H2'	3:YC:61:TYR:OH	2.15	0.46
15:YO:62:LEU:HD11	15:YO:65:THR:CA	2.46	0.46
32:XA:1219:A:C6	32:XA:1220:G:C5	3.04	0.46
1:YA:2298:A:N6	1:YA:2321:U:O4	2.49	0.46
1:YA:2330:G:H8	1:YA:2330:G:O5'	1.99	0.46
1:YA:945:A:C5	1:YA:2448:A:C2	3.04	0.46
1:YA:1534:U:H6	1:YA:1538:G:H1	1.61	0.46
21:YU:16:LYS:HB3	21:YU:17:ASP:H	1.52	0.46
32:QA:972:C:O2'	41:QJ:57:VAL:HG23	2.14	0.46
32:QA:842:U:H2'	32:QA:844:G:OP1	2.15	0.46
47:QP:22:ALA:CB	47:QP:32:PHE:HA	2.43	0.46
1:YA:647:G:N7	1:YA:648:G:N7	2.63	0.46
1:RA:263:G:H2'	1:RA:264:C:O5'	2.16	0.46
32:XA:86:G:N2	32:XA:87:C:C2	2.84	0.46
1:YA:2067:G:O6	1:YA:2444:G:C6	2.69	0.46
5:YE:98:LYS:O	5:YE:99:LYS:CB	2.63	0.46
32:XA:1133:G:C6	32:XA:1142:G:O6	2.68	0.46
8:YH:25:TYR:CE1	8:YH:29:PHE:HD2	2.33	0.46
1:RA:574:A:C4'	1:RA:575:A:O5'	2.63	0.46
20:RT:15:HIS:O	20:RT:17:SER:N	2.49	0.46
32:XA:267:C:H2'	32:XA:268:U:O5'	2.16	0.46
1:RA:2134:A:C4	1:RA:2135:A:N7	2.84	0.46
38:XG:68:VAL:CG2	38:XG:134:VAL:HG12	2.45	0.46
2:RB:28:C:H2'	2:RB:29:A:H5'	1.98	0.46
2:RB:27:C:OP1	15:RO:34:HIS:CE1	2.68	0.46
32:QA:71:A:C6	32:QA:100:G:C8	3.04	0.46
20:RT:34:VAL:HG21	20:RT:43:ILE:HD12	1.98	0.46
1:YA:1187:G:H8	1:YA:1187:G:O5'	1.98	0.46
33:QB:66:ILE:HG13	33:QB:220:VAL:HG11	1.97	0.46
1:RA:1045:C:H3'	1:RA:1046:A:C5'	2.46	0.46
1:RA:1110:G:O2'	1:RA:1111:A:P	2.74	0.46
25:RY:47:ARG:HH21	25:RY:47:ARG:CG	2.17	0.46
4:RD:114:LYS:CA	4:RD:114:LYS:HE3	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2198:A:O2'	1:YA:2199:A:H8	1.98	0.46
14:RN:37:THR:HG22	14:RN:110:MET:HE1	1.98	0.46
10:YJ:69:ARG:HH21	10:YJ:93:ILE:HG12	1.80	0.46
36:QE:82:HIS:CE1	39:QH:95:MET:HE2	2.51	0.46
1:YA:2543:G:H8	1:YA:2543:G:H5'	1.80	0.46
1:YA:1280:G:C2'	1:YA:1281:G:H5'	2.46	0.46
1:YA:1378:A:N6	1:YA:1569:A:N1	2.59	0.46
38:QG:12:LEU:HD22	38:QG:12:LEU:N	2.25	0.46
32:XA:1167:A:C2'	32:XA:1168:U:OP1	2.64	0.46
1:YA:172:A:C2	1:YA:173:A:C5	3.04	0.46
8:RH:96:THR:C	8:RH:97:ARG:HG3	2.36	0.46
20:RT:68:LYS:O	20:RT:69:ARG:O	2.33	0.46
3:RC:15:VAL:CA	3:RC:203:VAL:HG11	2.43	0.46
52:QU:39:LYS:N	52:QU:40:PRO:CD	2.76	0.46
13:RM:1:MET:HE3	13:RM:2:LEU:H	1.81	0.46
1:RA:2794:C:H2'	1:RA:2795:C:H6	1.81	0.46
4:YD:148:GLN:O	4:YD:149:ASN:HB2	2.16	0.46
6:YF:14:LYS:O	6:YF:15:LEU:HD23	2.16	0.46
6:YF:91:ARG:HA	6:YF:95:MET:SD	2.56	0.46
32:XA:1024:G:C5	32:XA:1025:U:C5	3.04	0.46
9:YI:112:LYS:HZ3	9:YI:128:ILE:HD12	1.81	0.46
1:YA:2623:G:C4'	1:YA:2825:G:C8	2.94	0.46
23:YW:49:ASN:HB2	23:YW:60:ALA:HA	1.98	0.46
40:QI:56:MET:SD	40:QI:57:VAL:N	2.89	0.46
12:YL:58:TYR:O	30:Y3:12:ARG:CZ	2.64	0.46
1:YA:1430:G:H2'	1:YA:1431:A:H8	1.80	0.46
32:QA:1343:G:H1'	40:QI:122:ARG:NH1	2.30	0.46
1:YA:2550:G:N2	1:YA:2559:C:H1'	2.31	0.46
32:QA:604:G:C6	32:QA:605:U:N3	2.84	0.46
41:QJ:35:GLN:HG2	41:QJ:77:VAL:CB	2.45	0.46
14:RN:70:THR:HG21	14:RN:75:ILE:HD11	1.97	0.46
14:RN:101:GLY:HA3	14:RN:102:PHE:HD2	1.80	0.46
24:YX:39:VAL:O	24:YX:41:SER:N	2.41	0.46
32:XA:1010:U:C2	32:XA:1020:G:N2	2.84	0.46
35:XD:127:ARG:HG2	35:XD:127:ARG:HH11	1.80	0.46
1:YA:2507:C:H1'	1:YA:2583:G:N2	2.31	0.46
32:QA:613:C:H2'	32:QA:614:C:C6	2.50	0.46
40:QI:11:ARG:HA	40:QI:105:ARG:HH12	1.80	0.46
1:YA:898:C:H2'	1:YA:899:A:O4'	2.16	0.46
44:QM:92:ARG:HG2	44:QM:92:ARG:HH11	1.80	0.46
3:YC:124:LYS:HB3	3:YC:124:LYS:NZ	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:935:A:O2'	32:QA:1383:C:N3	2.40	0.46
1:RA:1924:C:C4	1:RA:1925:C:C5	3.03	0.46
18:RR:49:ILE:HD12	18:RR:53:PHE:H	1.81	0.46
1:RA:2354:C:H4'	23:RW:31:LEU:HD22	1.98	0.46
23:RW:13:ARG:O	23:RW:14:ASP:C	2.55	0.46
52:XU:24:LYS:HE3	52:XU:25:ALA:H	1.80	0.46
17:YQ:6:GLY:C	17:YQ:8:ILE:N	2.69	0.46
1:YA:2391:G:O2'	1:YA:2392:A:O5'	2.27	0.46
1:YA:265:A:O2'	1:YA:266:G:H1'	2.16	0.46
1:YA:1919:A:H2'	1:YA:1920:C:H5'	1.97	0.46
33:QB:98:GLY:O	33:QB:102:ASN:N	2.47	0.46
1:YA:1359:A:N3	1:YA:1359:A:H2'	2.31	0.46
1:YA:2218:G:H2'	1:YA:2219:U:H6	1.81	0.46
35:QD:34:GLU:C	35:QD:36:ALA:H	2.19	0.46
1:YA:323:C:OP1	1:YA:339:U:O2'	2.32	0.46
10:YJ:4:PHE:CD2	17:YQ:99:VAL:HG11	2.51	0.46
32:QA:841:C:O2	32:QA:841:C:H2'	2.15	0.46
34:XC:190:THR:HG22	34:XC:191:THR:N	2.22	0.46
7:YG:88:LEU:N	7:YG:128:THR:O	2.49	0.46
1:YA:2311:A:N3	6:YF:78:ILE:HD11	2.31	0.46
1:RA:263:G:C2'	1:RA:264:C:O5'	2.64	0.46
5:RE:119:ILE:HD11	5:RE:187:VAL:HG23	1.93	0.46
1:YA:636:G:O5'	12:YL:128:THR:HG23	2.16	0.46
1:YA:1022:G:N7	10:YJ:68:LYS:HD3	2.31	0.46
35:XD:12:ARG:NH2	35:XD:36:ALA:O	2.49	0.46
1:YA:287:G:N1	1:YA:354:A:C6	2.84	0.46
1:YA:1965:C:C3'	1:YA:1966:A:H5''	2.46	0.46
32:XA:1301:U:H2'	32:XA:1302:C:H5	1.80	0.46
1:RA:960:A:C5'	1:RA:961:C:OP2	2.64	0.46
3:YC:94:LEU:HA	3:YC:100:ARG:HG2	1.97	0.46
1:RA:2284:A:OP1	28:R1:4:ILE:HG12	2.16	0.46
33:QB:90:PHE:CD2	33:QB:90:PHE:O	2.69	0.46
52:XU:39:LYS:O	52:XU:43:GLU:HB2	2.15	0.46
9:RI:115:ASP:C	9:RI:115:ASP:OD1	2.54	0.46
1:RA:228:C:H4'	1:RA:229:C:C5'	2.43	0.46
1:YA:1526:C:C4	1:YA:1527:G:C5	3.03	0.46
32:QA:208:U:H3	32:QA:212:G:H21	1.64	0.46
5:RE:46:GLN:CG	5:RE:87:ALA:H	2.27	0.46
1:YA:1324:G:O2'	1:YA:1616:A:N1	2.49	0.46
1:YA:1695:G:H8	3:YC:7:PRO:HB2	1.81	0.46
44:XM:82:LEU:HD21	50:XS:60:PHE:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:YC:79:ARG:HG3	3:YC:92:LEU:HB2	1.98	0.46
32:XA:1264:U:H2'	32:XA:1265:C:H6	1.76	0.46
32:XA:1449:C:C2'	32:XA:1450:U:H5'	2.46	0.46
7:RG:1:SER:HB3	7:RG:5:LYS:HZ3	1.80	0.46
1:RA:1941:C:H5'	1:RA:1941:C:C6	2.46	0.46
1:RA:2756:U:H1'	1:RA:2757:A:H5''	1.98	0.46
1:RA:2849:U:C6	1:RA:2849:U:H5'	2.50	0.46
1:RA:309:A:H4'	21:RU:15:GLY:HA2	1.97	0.46
8:YH:5:LEU:C	8:YH:6:LEU:HD12	2.35	0.46
1:YA:1431:A:H2'	1:YA:1432:G:O4'	2.16	0.46
32:QA:1473:G:O2'	32:QA:1474:U:H5'	2.16	0.46
17:RQ:43:GLN:NE2	18:RR:77:PHE:HB3	2.30	0.46
11:YK:1:MET:HA	11:YK:33:ALA:O	2.16	0.46
1:YA:1709:U:O2'	1:YA:1710:G:H5'	2.16	0.46
46:QO:26:VAL:O	46:QO:27:GLN:C	2.54	0.46
44:QM:84:CYS:HA	50:QS:73:PHE:CD2	2.47	0.46
32:XA:512:U:HO2'	32:XA:513:C:H6	1.46	0.46
46:XO:88:ARG:NH2	1:YA:715:A:H4'	2.29	0.46
32:QA:1031:C:C2'	32:QA:1032:G:OP2	2.63	0.46
39:XH:82:LEU:HD21	48:XQ:34:GLY:O	2.16	0.46
42:XK:34:THR:HG1	42:XK:39:ASN:C	2.18	0.46
1:YA:1668:A:H4'	1:YA:1669:A:O5'	2.15	0.46
2:YB:81:G:C5	2:YB:82:U:C5	3.05	0.46
28:Y1:47:ILE:N	28:Y1:47:ILE:HD12	2.31	0.46
41:QJ:59:LYS:HD2	41:QJ:60:ASP:H	1.79	0.46
12:RL:47:ARG:HG3	12:RL:50:PHE:HB2	1.97	0.46
32:XA:998:C:C5	32:XA:999:C:H5	2.34	0.46
42:XK:87:GLY:N	42:XK:113:THR:HG23	2.32	0.46
46:QO:16:ARG:O	46:QO:17:ASP:CB	2.63	0.46
1:YA:599:A:N3	1:YA:659:G:C2	2.84	0.46
3:YC:212:TRP:C	3:YC:212:TRP:HD1	2.19	0.46
32:XA:1040:U:O2'	32:XA:1041:G:H5'	2.16	0.46
38:QG:48:THR:O	38:QG:52:ARG:HB2	2.16	0.46
1:YA:2697:G:C2	1:YA:2711:A:C2	3.04	0.46
12:YL:88:GLY:O	12:YL:89:VAL:HG12	2.16	0.46
19:RS:50:VAL:HG12	19:RS:51:LEU:N	2.32	0.46
1:RA:646:U:H3'	1:RA:647:G:C5'	2.46	0.46
42:XK:115:ILE:HD12	52:XU:23:GLU:HG2	1.97	0.46
35:XD:80:ARG:HB2	35:XD:81:LEU:H	1.50	0.46
9:YI:28:GLY:O	9:YI:29:GLN:C	2.53	0.46
32:XA:499:A:C6	32:XA:547:A:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RV:49:ASN:O	22:RV:52:ALA:HB3	2.16	0.46
1:YA:2895:G:H2'	1:YA:2896:C:C6	2.50	0.46
32:QA:161:A:N6	32:QA:162:A:C6	2.84	0.46
6:RF:60:SER:O	6:RF:61:GLY:C	2.54	0.46
50:XS:20:LYS:O	50:XS:20:LYS:HD3	2.15	0.46
2:YB:66:A:C2	2:YB:108:A:C6	3.04	0.45
1:YA:1388:G:O6	1:YA:1400:U:O4	2.34	0.45
1:RA:1507:C:C4	1:RA:1508:A:C2	3.04	0.45
10:YJ:4:PHE:CB	17:YQ:63:ARG:HH22	2.28	0.45
32:XA:1072:G:H21	33:XB:105:THR:HG21	1.81	0.45
36:QE:155:LYS:CD	36:QE:155:LYS:H	2.28	0.45
9:YI:76:ALA:O	9:YI:135:MET:HE1	2.16	0.45
39:XH:103:VAL:CG1	39:XH:124:ILE:HA	2.30	0.45
1:YA:2304:G:H2'	1:YA:2304:G:N3	2.31	0.45
1:YA:1138:G:H2'	1:YA:1139:G:O4'	2.16	0.45
32:QA:1284:C:C4	32:QA:1285:A:N7	2.84	0.45
1:YA:2443:C:C2'	1:YA:2444:G:H5'	2.45	0.45
37:QF:51:ILE:HD13	37:QF:86:ARG:HB2	1.98	0.45
20:RT:18:GLU:O	20:RT:19:LYS:C	2.54	0.45
1:RA:947:A:O2'	1:RA:984:A:C2	2.56	0.45
9:RI:7:TYR:HA	9:RI:58:ILE:CB	2.36	0.45
32:XA:372:C:H4'	32:XA:373:A:O5'	2.13	0.45
32:XA:530:G:C5'	32:XA:531:U:H5''	2.46	0.45
11:YK:17:ARG:HD3	11:YK:18:ARG:H	1.80	0.45
32:XA:737:C:OP1	37:XF:91:ARG:HB3	2.17	0.45
7:RG:73:SER:CA	7:RG:76:ILE:HG22	2.39	0.45
11:YK:107:LEU:C	11:YK:109:SER:H	2.19	0.45
40:XI:46:VAL:O	40:XI:50:PRO:HD3	2.16	0.45
16:RP:35:SER:HG	32:QA:345:C:P	2.38	0.45
1:RA:1165:A:H2'	1:RA:1166:G:C8	2.51	0.45
1:YA:2542:A:H4'	1:YA:2543:G:C5'	2.47	0.45
12:YL:17:LYS:HZ3	12:YL:19:LEU:HD22	1.79	0.45
39:QH:104:SER:HB2	39:QH:125:ILE:CD1	2.46	0.45
8:YH:83:LYS:HG3	8:YH:149:GLU:HB2	1.97	0.45
3:YC:79:ARG:C	3:YC:80:LEU:HD12	2.36	0.45
29:Y2:22:MET:HA	29:Y2:28:ARG:HB2	1.97	0.45
29:Y2:28:ARG:C	29:Y2:30:VAL:N	2.69	0.45
32:XA:1446:A:C2'	32:XA:1447:A:H5''	2.46	0.45
1:YA:1773:A:N7	1:YA:1829:A:H1'	2.32	0.45
32:XA:1049:U:C4'	32:XA:1050:G:OP2	2.63	0.45
10:RJ:97:PRO:C	10:RJ:99:ARG:N	2.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:YT:62:VAL:CG1	20:YT:63:VAL:N	2.79	0.45
17:RQ:114:ALA:C	17:RQ:116:LEU:N	2.68	0.45
37:XF:99:ALA:O	37:XF:100:SER:CB	2.64	0.45
32:QA:1332:A:C5'	32:QA:1333:A:OP2	2.64	0.45
38:XG:13:PRO:HA	38:XG:23:ALA:HB2	1.97	0.45
32:QA:1241:G:O2'	32:QA:1242:G:H8	1.98	0.45
32:QA:1368:A:O2'	32:QA:1369:C:H5'	2.16	0.45
46:QO:29:ALA:HA	46:QO:84:LEU:HD21	1.99	0.45
13:RM:97:GLN:CD	13:RM:97:GLN:N	2.69	0.45
32:XA:366:A:O2'	32:XA:394:G:N2	2.49	0.45
32:QA:421:U:H2'	32:QA:422:C:OP1	2.16	0.45
1:YA:799:G:P	1:YA:800:A:H3'	2.56	0.45
1:YA:1000:A:N1	1:YA:1001:A:C2	2.84	0.45
14:RN:38:LEU:HB3	14:RN:39:PRO:HD3	1.97	0.45
1:RA:721:A:H2'	1:RA:722:A:C8	2.52	0.45
40:XI:83:THR:HG21	40:XI:102:PHE:HB3	1.98	0.45
39:QH:10:LEU:O	39:QH:13:ILE:HB	2.16	0.45
2:YB:54:G:N2	6:YF:25:MET:HE1	2.31	0.45
1:YA:1686:C:H2'	1:YA:1687:G:O4'	2.16	0.45
32:QA:528:C:H41	43:QL:45:ASN:ND2	2.15	0.45
43:XL:85:ARG:HA	43:XL:93:ARG:HA	1.98	0.45
43:XL:48:LEU:N	43:XL:48:LEU:HD23	2.30	0.45
1:RA:2024:G:OP2	1:RA:2034:U:H4'	2.14	0.45
1:RA:996:A:N6	1:RA:1160:G:N1	2.64	0.45
10:RJ:44:TYR:HD2	17:RQ:63:ARG:HG2	1.79	0.45
18:RR:49:ILE:O	18:RR:49:ILE:CG1	2.64	0.45
23:RW:37:VAL:HG13	23:RW:55:ASP:O	2.16	0.45
1:YA:35:G:C5	1:YA:454:A:C2	3.05	0.45
32:XA:1316:G:N1	32:XA:1319:A:OP2	2.35	0.45
51:QT:82:ILE:HD12	51:QT:82:ILE:C	2.36	0.45
33:QB:99:MET:HA	33:QB:106:VAL:HG21	1.97	0.45
14:YN:38:LEU:CB	14:YN:39:PRO:HD3	2.43	0.45
32:XA:1072:G:N2	33:XB:105:THR:HG21	2.32	0.45
41:QJ:56:HIS:HD2	41:QJ:57:VAL:HG12	1.81	0.45
10:RJ:17:VAL:HG22	10:RJ:55:ILE:HG12	1.98	0.45
32:XA:1294:G:C6	32:XA:1295:U:C4	3.04	0.45
1:YA:140:C:O2'	1:YA:141:G:OP2	2.34	0.45
41:XJ:37:ARG:HG2	41:XJ:75:ASP:HB3	1.99	0.45
37:QF:9:MET:HE3	49:QR:64:LEU:HD22	1.98	0.45
4:YD:10:GLY:O	4:YD:11:MET:CB	2.62	0.45
8:RH:68:ARG:NH2	8:RH:69:ALA:HA	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1083:U:H2'	1:RA:1084:A:O5'	2.17	0.45
1:RA:2134:A:O2'	1:RA:2135:A:H5''	2.17	0.45
39:QH:28:SER:HA	39:QH:32:LYS:HD2	1.98	0.45
33:QB:83:ALA:O	33:QB:88:GLN:NE2	2.50	0.45
33:QB:80:LYS:HG3	33:QB:90:PHE:CE1	2.50	0.45
25:RY:45:GLN:O	25:RY:46:VAL:HB	2.17	0.45
37:XF:3:HIS:O	37:XF:4:TYR:CD1	2.69	0.45
1:RA:2888:C:O2	1:RA:2888:C:H2'	2.16	0.45
32:QA:466:A:O2'	32:QA:467:U:C6	2.69	0.45
16:RP:63:ILE:O	16:RP:63:ILE:HG22	2.17	0.45
51:QT:67:HIS:C	51:QT:68:LYS:HZ2	2.20	0.45
1:RA:2428:G:H5''	1:RA:2429:G:P	2.57	0.45
1:YA:1255:U:HO2'	1:YA:1256:G:P	2.37	0.45
1:YA:2468:A:O2'	1:YA:2469:A:O5'	2.35	0.45
1:RA:733:G:N7	1:RA:761:A:N6	2.64	0.45
32:QA:501:C:O2'	32:QA:502:A:H5'	2.15	0.45
6:YF:103:ILE:HA	6:YF:107:VAL:CG2	2.43	0.45
33:XB:185:ILE:HA	33:XB:199:ILE:HG13	1.98	0.45
1:YA:1363:C:C2	1:YA:1364:G:C8	3.04	0.45
16:YP:67:GLU:OE1	16:YP:68:GLY:N	2.50	0.45
32:QA:601:G:C2	32:QA:602:A:C4	3.04	0.45
5:YE:40:ARG:NH2	5:YE:92:HIS:NE2	2.65	0.45
32:QA:479:U:C2'	32:QA:480:U:H5'	2.46	0.45
12:RL:120:VAL:HG12	12:RL:121:THR:N	2.32	0.45
25:RY:2:LYS:HE3	25:RY:52:ARG:CZ	2.46	0.45
20:RT:29:THR:H	20:RT:91:GLN:HE22	1.63	0.45
12:YL:47:ARG:HG2	12:YL:47:ARG:NH2	2.32	0.45
12:YL:63:LYS:HB3	30:Y3:12:ARG:CD	2.43	0.45
32:XA:1387:G:C4	32:XA:1388:C:C5	3.04	0.45
32:XA:631:C:H5''	32:XA:632:U:O4'	2.16	0.45
5:RE:61:ARG:H	5:RE:61:ARG:HG2	1.46	0.45
8:YH:38:PRO:O	8:YH:40:THR:HG23	2.16	0.45
32:QA:544:G:OP1	35:QD:55:ARG:NH1	2.49	0.45
1:RA:1607:C:N4	1:RA:1622:G:C5	2.84	0.45
32:XA:1381:U:HO2'	32:XA:1382:C:C5'	2.30	0.45
40:QI:119:LYS:CG	40:QI:122:ARG:HB3	2.46	0.45
32:QA:652:U:C6	32:QA:752:G:C2	3.04	0.45
1:YA:2626:C:C2'	1:YA:2627:G:H5'	2.47	0.45
1:RA:654:A:H2'	1:RA:655:A:H5''	1.97	0.45
32:XA:71:A:C2	32:XA:72:A:C8	3.04	0.45
14:RN:51:LEU:HA	14:RN:51:LEU:HD12	1.62	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:819:A:H4'	32:QA:820:U:OP2	2.17	0.45
41:QJ:17:LEU:C	41:QJ:17:LEU:HD23	2.36	0.45
40:XI:128:LYS:O	40:XI:128:LYS:HG3	2.16	0.45
1:YA:99:U:O4'	1:YA:99:U:O2	2.33	0.45
32:XA:868:C:H2'	32:XA:869:G:O4'	2.17	0.45
1:RA:697:G:H2'	1:RA:698:C:H6	1.80	0.45
6:RF:3:LEU:HD13	6:RF:3:LEU:HA	1.63	0.45
32:XA:398:U:H2'	32:XA:399:G:H8	1.81	0.45
1:YA:2072:C:H2'	1:YA:2073:C:H5'	1.99	0.45
1:RA:2107:G:H2'	1:RA:2107:G:N3	2.31	0.45
35:XD:102:TYR:C	35:XD:104:MET:H	2.19	0.45
39:QH:1:SER:C	39:QH:3:GLN:N	2.68	0.45
1:RA:1726:C:H2'	1:RA:1727:C:H6	1.81	0.45
5:RE:3:LEU:O	5:RE:11:ALA:HA	2.16	0.45
34:QC:120:THR:HG22	34:QC:121:SER:N	2.31	0.45
45:QN:2:LYS:N	56:QN:205:HOH:O	2.48	0.45
10:YJ:17:VAL:HG23	10:YJ:137:PRO:HB2	1.97	0.45
33:XB:93:HIS:CD2	33:XB:145:ASN:HB3	2.51	0.45
1:RA:1246:A:H2'	1:RA:1247:A:O5'	2.16	0.45
12:RL:3:LEU:HA	12:RL:3:LEU:HD23	1.76	0.45
22:RV:75:GLN:OE1	22:RV:75:GLN:HA	2.16	0.45
32:QA:1293:C:H2'	32:QA:1294:G:C8	2.51	0.45
33:QB:46:VAL:HB	33:QB:47:PRO:HD3	1.98	0.45
32:XA:1283:U:H2'	32:XA:1284:C:H6	1.80	0.45
34:QC:113:LYS:HE3	34:QC:117:ASP:OD2	2.16	0.45
1:RA:2685:G:O2'	1:RA:2686:G:H5'	2.16	0.45
32:XA:1442:G:O2'	16:YP:113:LEU:HD13	2.15	0.45
33:XB:195:VAL:HB	33:XB:198:VAL:HG12	1.97	0.45
33:QB:186:VAL:N	33:QB:199:ILE:O	2.42	0.45
32:XA:1323:G:H2'	32:XA:1324:A:H8	1.81	0.45
32:XA:1364:U:O2'	32:XA:1365:G:H5'	2.16	0.45
1:YA:30:G:OP1	17:YQ:4:LYS:HG3	2.15	0.45
1:YA:247:G:N2	1:YA:250:G:H3'	2.31	0.45
11:RK:17:ARG:HG3	11:RK:47:ILE:HD13	1.97	0.45
32:XA:1408:A:C8	32:XA:1409:C:C5	3.04	0.45
1:YA:510:C:C4	1:YA:511:U:C4	3.05	0.45
1:YA:2040:G:H2'	1:YA:2041:U:H6	1.82	0.45
42:QK:126:ARG:CB	52:QU:33:ARG:NH1	2.76	0.45
1:YA:1655:A:H5'	4:YD:118:PHE:CD1	2.52	0.45
32:XA:532:A:H62	34:XC:191:THR:HG21	1.81	0.45
1:YA:476:G:O2'	1:YA:477:A:C5'	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:XC:17:TRP:HD1	45:XN:90:GLY:HA2	1.81	0.45
5:RE:148:ILE:HA	5:RE:187:VAL:HB	1.98	0.45
32:XA:91:U:C6	32:XA:92:U:C5	3.04	0.45
1:YA:1019:U:C2'	1:YA:1021:A:N1	2.79	0.45
4:RD:170:VAL:O	4:RD:170:VAL:HG22	2.16	0.45
1:YA:351:C:H42	1:YA:352:A:N6	2.15	0.45
9:RI:50:LYS:HE2	9:RI:50:LYS:HB2	1.83	0.45
1:YA:605:G:H2'	1:YA:606:U:H6	1.79	0.45
1:YA:618:G:C2	1:YA:619:G:H1'	2.51	0.45
1:YA:668:A:C5	1:YA:670:A:N7	2.84	0.45
1:YA:2755:C:O2'	1:YA:2756:U:H2'	2.16	0.45
28:R1:47:ILE:N	28:R1:47:ILE:CD1	2.75	0.45
1:YA:698:C:C4	1:YA:762:U:O4	2.69	0.45
1:YA:96:C:C4'	25:YY:41:HIS:CD2	2.92	0.45
48:XQ:18:LYS:HE3	48:XQ:48:GLU:OE1	2.17	0.45
8:RH:67:ALA:O	8:RH:69:ALA:N	2.40	0.45
13:YM:17:ASN:HB3	13:YM:38:ARG:HH22	1.81	0.45
32:QA:73:C:HO2'	32:QA:74:A:H8	1.61	0.45
1:YA:278:A:O3'	1:YA:279:A:H8	1.99	0.45
32:XA:599:C:H4'	39:XH:121:GLY:C	2.37	0.45
33:XB:72:LYS:O	33:XB:74:ALA:N	2.50	0.45
1:YA:2013:A:H2	19:YS:88:ARG:HH11	1.59	0.45
32:XA:796:C:O3'	42:XK:126:ARG:NH2	2.47	0.45
1:YA:1501:G:C4	1:YA:1502:A:C8	3.04	0.45
45:QN:20:PHE:HA	45:QN:24:ALA:CB	2.47	0.45
10:YJ:94:ALA:O	10:YJ:95:ARG:CG	2.65	0.45
1:RA:1071:G:C5	1:RA:1089:A:C6	3.05	0.45
6:YF:107:VAL:N	6:YF:108:PRO:HD2	2.30	0.45
20:YT:5:GLU:HA	20:YT:8:LEU:CD1	2.46	0.45
15:YO:68:LYS:HB2	15:YO:68:LYS:NZ	2.31	0.45
16:YP:89:GLY:O	16:YP:112:ARG:NH1	2.48	0.45
5:RE:108:ILE:HD13	5:RE:108:ILE:C	2.36	0.45
43:XL:82:ARG:N	43:XL:95:HIS:O	2.38	0.45
1:YA:1519:G:N3	1:YA:1519:G:H2'	2.31	0.45
32:QA:684:U:O2'	42:QK:39:ASN:O	2.32	0.45
33:XB:21:TYR:HD1	33:XB:21:TYR:N	2.14	0.45
17:YQ:26:ALA:HB1	17:YQ:30:VAL:CG2	2.46	0.45
32:XA:1172:C:C2'	32:XA:1173:U:H5'	2.46	0.45
1:RA:2104:C:C2	1:RA:2186:G:N2	2.85	0.45
42:QK:22:ILE:HG12	42:QK:85:VAL:HA	1.98	0.45
13:YM:72:PRO:HB2	13:YM:73:ILE:H	1.62	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:RM:50:ARG:HG2	13:RM:50:ARG:HH21	1.80	0.45
1:YA:2353:G:N3	23:YW:30:VAL:CG1	2.78	0.45
1:RA:1268:A:H2'	1:RA:1269:A:O4'	2.17	0.45
17:YQ:42:GLY:O	17:YQ:45:ALA:HB3	2.16	0.45
32:QA:978:A:C5	32:QA:1318:A:C6	3.03	0.45
50:QS:4:LEU:CD1	50:QS:4:LEU:H	2.27	0.45
32:XA:936:C:H1'	32:XA:1382:C:H42	1.80	0.45
48:QQ:35:LYS:HG2	48:QQ:36:PHE:N	2.32	0.45
6:RF:111:ARG:HB3	6:RF:112:ASP:H	1.39	0.45
18:RR:76:LYS:HB2	18:RR:85:LYS:HG3	1.98	0.45
1:RA:868:U:C4	1:RA:869:G:N7	2.84	0.45
2:YB:53:A:H2'	2:YB:53:A:N3	2.32	0.45
16:RP:102:ARG:O	16:RP:103:THR:CG2	2.64	0.45
38:XG:148:LYS:O	38:XG:148:LYS:HD3	2.16	0.45
41:QJ:35:GLN:HE21	41:QJ:35:GLN:CA	2.27	0.45
32:QA:1033:G:H2'	32:QA:1034:G:H5''	1.98	0.45
32:XA:722:G:O3'	32:XA:723:U:C5	2.69	0.45
32:XA:367:U:C6	32:XA:394:G:N2	2.85	0.45
42:XK:86:LYS:HB2	42:XK:113:THR:HA	1.99	0.45
1:YA:358:U:N3	1:YA:359:G:N7	2.63	0.45
1:YA:1316:U:O2'	1:YA:1317:G:H5'	2.16	0.45
32:QA:1526:G:P	52:QU:38:GLU:HB2	2.56	0.45
1:YA:659:G:C5'	5:YE:95:LYS:HD2	2.47	0.45
14:YN:21:PHE:HD1	14:YN:21:PHE:N	2.14	0.45
1:RA:2210:U:O2	1:RA:2212:A:C8	2.69	0.45
32:QA:701:U:H4'	32:QA:702:A:O5'	2.15	0.45
1:RA:187:G:C2	1:RA:210:C:O2	2.69	0.45
33:XB:65:LYS:HB2	33:XB:157:PRO:HA	1.98	0.45
1:RA:812:C:H1'	1:RA:1250:G:C2	2.51	0.45
1:YA:1647:U:P	1:YA:1647:U:H3'	2.57	0.45
32:XA:908:A:H2'	32:XA:909:A:C8	2.51	0.45
38:QG:119:LEU:CD2	38:QG:123:LEU:HD23	2.46	0.45
32:QA:1293:C:H2'	32:QA:1294:G:H8	1.80	0.45
1:RA:1844:C:C2	1:RA:1897:G:C2	3.04	0.45
4:RD:38:LYS:O	4:RD:46:ARG:HA	2.17	0.45
8:RH:147:VAL:CG1	8:RH:149:GLU:HG3	2.46	0.45
32:XA:1406:U:H1'	32:XA:1518:A:H4'	1.99	0.45
1:RA:81:G:C2	1:RA:106:C:C2	3.04	0.45
35:QD:84:ASN:HB3	35:QD:87:GLU:HG2	1.98	0.45
32:XA:442:G:C6	32:XA:443:C:C4	3.04	0.45
33:QB:38:HIS:CD2	33:QB:38:HIS:H	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:YW:70:VAL:HG22	23:YW:70:VAL:O	2.16	0.45
1:RA:465:G:H4'	29:R2:16:HIS:CD2	2.51	0.45
20:YT:21:SER:HA	20:YT:25:GLU:HB2	1.98	0.45
35:XD:2:ARG:HH11	35:XD:2:ARG:N	2.15	0.45
23:RW:37:VAL:CG1	23:RW:55:ASP:O	2.64	0.45
23:RW:41:GLY:HA2	23:RW:44:PHE:CZ	2.52	0.45
4:RD:172:VAL:O	4:RD:173:GLN:CB	2.55	0.45
1:YA:2332:C:H4'	23:YW:40:ARG:CZ	2.47	0.45
28:Y1:7:LYS:C	28:Y1:8:ILE:HD13	2.37	0.45
32:XA:1409:C:O5'	32:XA:1409:C:H6	1.98	0.45
35:QD:25:ARG:O	35:QD:26:ALA:CB	2.65	0.45
4:YD:118:PHE:CE1	4:YD:119:ALA:O	2.69	0.45
42:XK:18:GLY:O	42:XK:81:LEU:HA	2.16	0.45
27:Y0:38:LEU:N	27:Y0:41:HIS:CE1	2.83	0.45
1:YA:183:C:C2'	1:YA:184:C:H5'	2.46	0.45
32:XA:91:U:O2'	32:XA:92:U:OP2	2.31	0.45
1:YA:1021:A:HO2'	1:YA:1022:G:P	2.39	0.45
5:YE:146:VAL:HG13	5:YE:187:VAL:HG23	1.97	0.45
1:YA:621:A:HO2'	1:YA:622:G:C4'	2.29	0.45
41:XJ:5:ARG:CG	41:XJ:79:PRO:HG3	2.46	0.45
1:YA:2748:A:C2	1:YA:2757:A:C5	3.04	0.45
14:YN:14:SER:C	14:YN:16:HIS:N	2.69	0.45
37:QF:91:ARG:HG3	37:QF:92:THR:N	2.31	0.45
1:YA:2093:G:HO2'	1:YA:2094:A:P	2.37	0.45
3:RC:106:PRO:HA	3:RC:141:HIS:NE2	2.31	0.45
8:RH:66:ASN:C	8:RH:68:ARG:N	2.70	0.45
32:XA:1348:U:H2'	32:XA:1349:A:C8	2.47	0.45
32:XA:653:U:H5'	39:XH:55:LYS:HE3	1.99	0.45
1:RA:64:A:C5	1:RA:65:U:C4	3.05	0.45
1:YA:876:C:O4'	1:YA:876:C:O2	2.32	0.45
1:RA:1253:A:C5	56:RA:3332:HOH:O	2.69	0.45
1:RA:286:U:H2'	1:RA:287:G:C8	2.51	0.45
36:XE:38:VAL:CG1	36:XE:39:GLY:N	2.70	0.45
1:YA:1260:A:C2	1:YA:1261:C:C2	3.04	0.45
32:XA:1090:U:H2'	32:XA:1091:U:H6	1.80	0.45
32:QA:521:G:O2'	32:QA:522:C:H5'	2.17	0.45
1:RA:2199:A:H5'	1:RA:2200:C:H5	1.81	0.45
18:YR:81:LYS:O	18:YR:82:HIS:C	2.55	0.45
1:RA:544:C:C4	1:RA:550:C:N4	2.85	0.45
35:QD:103:ARG:NH1	35:QD:110:ARG:HH22	2.15	0.45
18:YR:62:GLU:CD	18:YR:97:LYS:HD2	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:90:GLN:OE1	5:YE:90:GLN:HA	2.15	0.45
1:RA:1378:A:C4'	1:RA:1379:U:OP1	2.60	0.45
1:RA:247:G:C8	1:RA:249:C:C6	3.04	0.45
52:QU:19:LYS:C	52:QU:21:SER:H	2.19	0.45
35:QD:154:VAL:O	35:QD:157:ALA:HB3	2.16	0.45
36:QE:67:ARG:O	36:QE:70:MET:HE3	2.16	0.45
32:XA:503:C:O2	32:XA:510:A:H2	1.99	0.45
1:RA:1430:G:O2'	1:RA:1431:A:H5'	2.17	0.45
18:RR:66:HIS:CG	18:RR:94:THR:HG22	2.51	0.45
16:RP:85:VAL:O	16:RP:86:LYS:HB2	2.16	0.45
1:YA:86:G:HO2'	1:YA:87:U:H6	1.62	0.45
1:YA:1651:G:C2	1:YA:2007:U:N3	2.85	0.45
33:XB:17:HIS:CG	33:XB:18:GLN:H	2.33	0.45
44:QM:13:HIS:CD2	44:QM:41:ASP:HB2	2.52	0.45
32:QA:1520:C:C2	32:QA:1521:C:C5	3.04	0.45
1:RA:1355:G:C2	1:RA:1356:G:C8	3.05	0.45
1:RA:2049:G:C2'	1:RA:2050:C:H5'	2.46	0.45
38:QG:14:ASP:CG	38:QG:17:PHE:HB2	2.36	0.45
32:XA:1402:C:H2'	32:XA:1403:C:O4'	2.17	0.45
42:QK:62:ALA:CB	42:QK:91:GLY:HA3	2.46	0.45
14:RN:62:ASN:HD22	14:RN:62:ASN:N	2.13	0.45
32:QA:756:C:H2'	32:QA:757:U:O4'	2.17	0.45
32:XA:1384:C:O2'	32:XA:1385:G:H5'	2.15	0.45
1:RA:2092:U:C2	1:RA:2225:A:O2'	2.69	0.45
17:YQ:82:LEU:HB3	17:YQ:88:GLU:OE2	2.16	0.45
1:YA:450:G:N1	1:YA:454:A:OP2	2.42	0.45
4:RD:174:SER:OG	4:RD:175:LEU:N	2.49	0.45
4:RD:174:SER:O	4:RD:175:LEU:CB	2.53	0.45
1:YA:2337:G:C2'	1:YA:2338:C:H5'	2.46	0.45
3:YC:68:ARG:NH2	3:YC:126:GLY:O	2.41	0.45
1:YA:510:C:OP1	1:YA:511:U:OP2	2.35	0.45
1:YA:1605:C:C3'	1:YA:1606:C:C5'	2.89	0.45
1:YA:2025:C:H42	1:YA:2037:A:H61	1.64	0.45
1:YA:2314:A:N1	1:YA:2315:G:C6	2.85	0.45
1:YA:489:G:C4'	1:YA:490:C:OP1	2.65	0.45
1:RA:2478:A:C2'	1:RA:2479:U:H5'	2.47	0.45
1:YA:482:A:N6	1:YA:506:G:C8	2.85	0.45
1:YA:125:A:OP2	29:Y2:19:ARG:NH2	2.49	0.45
1:YA:872:U:C2'	1:YA:873:C:H5'	2.46	0.45
1:YA:352:A:H2'	1:YA:353:C:H4'	1.99	0.45
5:YE:143:LEU:HD23	5:YE:146:VAL:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2755:C:O3'	1:YA:2756:U:H6	1.99	0.45
3:YC:76:VAL:O	3:YC:93:VAL:O	2.34	0.45
40:XI:119:LYS:O	40:XI:121:ARG:N	2.39	0.45
20:RT:11:LEU:HA	20:RT:34:VAL:HG12	1.98	0.45
1:YA:1299:G:H5''	56:YA:3648:HOH:O	2.17	0.45
1:YA:1415:U:O3'	1:YA:1416:G:H4'	2.16	0.45
25:RY:42:LEU:HD12	25:RY:42:LEU:HA	1.80	0.45
1:RA:2680:U:OP2	4:RD:114:LYS:CE	2.65	0.45
6:YF:52:ALA:HA	6:YF:55:ASP:HB2	1.98	0.45
1:YA:876:C:H2'	1:YA:877:A:OP1	2.17	0.45
11:RK:19:VAL:CG1	11:RK:41:ILE:HG12	2.46	0.45
9:RI:78:LEU:HD13	9:RI:108:ILE:HG23	1.99	0.45
45:QN:20:PHE:C	45:QN:22:LYS:N	2.70	0.45
1:RA:760:G:H4'	1:RA:1776:G:OP1	2.16	0.45
1:YA:1652:A:OP1	14:YN:8:ARG:HD3	2.16	0.45
10:RJ:73:VAL:CG2	10:RJ:74:TYR:N	2.74	0.45
32:XA:1303:C:N4	32:XA:1334:G:H1	2.14	0.45
32:QA:1066:C:C6	32:QA:1066:C:H5''	2.40	0.45
20:YT:30:ILE:O	20:YT:85:VAL:HG23	2.17	0.45
32:XA:567:G:H1'	56:XA:1820:HOH:O	2.16	0.45
1:RA:2602:A:H4'	1:RA:2603:G:H5'	1.94	0.45
44:XM:82:LEU:CD2	50:XS:60:PHE:HB3	2.47	0.45
40:QI:9:GLY:HA2	40:QI:80:HIS:CD2	2.52	0.45
1:RA:1966:A:C2	1:RA:2593:U:O4'	2.69	0.45
45:QN:14:ALA:HB1	45:QN:18:LYS:HE2	1.99	0.45
3:YC:8:THR:O	3:YC:9:SER:CB	2.65	0.45
32:QA:1039:G:O2'	32:QA:1040:U:H5'	2.17	0.45
1:YA:1740:G:O2'	1:YA:1741:C:H5'	2.17	0.45
16:RP:19:PHE:O	16:RP:20:ARG:CB	2.64	0.45
32:QA:664:G:H22	32:QA:741:G:H1	1.65	0.45
8:YH:4:ILE:O	8:YH:36:ALA:HB1	2.17	0.45
32:QA:1473:G:C2'	32:QA:1474:U:H5'	2.46	0.45
21:YU:40:LEU:HA	21:YU:61:GLU:HA	1.99	0.45
32:QA:1309:G:C6	32:QA:1329:A:N1	2.84	0.45
5:RE:153:LEU:HB3	5:RE:171:ASP:CB	2.46	0.45
6:YF:122:ASP:HB3	6:YF:123:GLY:H	1.40	0.45
1:YA:2234:G:C6	1:YA:2235:G:N7	2.85	0.45
41:XJ:81:GLU:C	41:XJ:83:THR:H	2.18	0.45
38:QG:125:ASP:OD2	38:QG:130:LYS:HG3	2.16	0.45
8:RH:39:ALA:O	8:RH:41:LYS:N	2.48	0.45
21:RU:5:ARG:O	21:RU:6:ARG:C	2.54	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:693:A:O2'	1:RA:694:U:H5'	2.17	0.45
38:QG:78:ARG:HA	38:QG:83:THR:HA	1.99	0.45
3:RC:96:LYS:HA	3:RC:96:LYS:HD3	1.81	0.45
1:RA:593:U:H2'	1:RA:594:U:C6	2.51	0.45
44:XM:7:ASN:C	44:XM:9:PRO:HD3	2.37	0.45
12:YL:3:LEU:C	12:YL:3:LEU:HD12	2.36	0.45
1:YA:579:G:N2	1:YA:1262:A:C4	2.85	0.45
21:YU:65:GLN:HB3	21:YU:65:GLN:HE21	1.59	0.45
32:QA:950:U:H2'	32:QA:951:G:H8	1.82	0.45
11:RK:7:MET:SD	11:RK:20:MET:HB2	2.57	0.45
13:YM:21:ALA:HB2	13:YM:97:GLN:O	2.17	0.45
35:QD:101:VAL:HG13	35:QD:106:PHE:HB2	1.98	0.45
1:RA:598:U:H2'	1:RA:599:A:C8	2.52	0.45
26:RZ:12:ALA:HA	26:RZ:15:ARG:HD3	1.97	0.45
34:QC:99:GLN:O	34:QC:100:ILE:HB	2.17	0.45
35:QD:133:SER:O	35:QD:134:TYR:C	2.53	0.45
13:YM:61:GLY:CA	13:YM:107:GLY:HA3	2.47	0.45
44:XM:87:GLY:O	44:XM:91:ARG:HD2	2.16	0.45
35:QD:156:ALA:O	35:QD:159:GLU:HB3	2.16	0.45
52:QU:13:VAL:HG13	52:QU:15:LEU:HG	1.99	0.45
32:QA:460:A:O3'	32:QA:462:G:OP2	2.34	0.45
1:RA:1743:G:H8	1:RA:1743:G:O5'	2.00	0.45
17:RQ:10:ARG:HB2	17:RQ:10:ARG:HH11	1.81	0.45
38:XG:34:LYS:NZ	38:XG:34:LYS:HB2	2.31	0.45
32:QA:1291:U:O2'	32:QA:1292:G:H5'	2.16	0.45
21:YU:80:ASP:OD1	21:YU:80:ASP:N	2.50	0.45
8:RH:78:VAL:HB	8:RH:145:ASN:HB3	1.98	0.45
35:XD:2:ARG:HE	35:XD:114:ARG:HD2	1.80	0.45
2:YB:16:G:H2'	2:YB:17:C:H6	1.82	0.45
23:RW:21:GLY:O	23:RW:22:VAL:HB	2.17	0.45
42:XK:90:PRO:O	42:XK:91:GLY:C	2.55	0.45
1:YA:447:A:C8	1:YA:473:G:C6	3.04	0.45
2:YB:25:U:O2	2:YB:25:U:H2'	2.16	0.45
32:XA:1315:U:C5	32:XA:1316:G:N7	2.85	0.45
32:XA:1319:A:C6	32:XA:1323:G:C4	3.04	0.45
32:XA:978:A:N3	32:XA:1318:A:C2	2.85	0.45
50:XS:32:THR:O	50:XS:32:THR:HG23	2.16	0.45
1:YA:2296:U:H4'	1:YA:2297:A:OP1	2.16	0.45
1:RA:1171:G:C6	1:RA:1172:C:C5	3.05	0.45
32:XA:1269:A:C2	32:XA:1313:U:H1'	2.52	0.45
1:YA:310:A:C2	1:YA:330:A:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1060:U:O4'	1:YA:1061:U:C2'	2.62	0.45
1:YA:1087:G:C4	1:YA:1089:A:C2	3.04	0.45
1:YA:2272:U:H6	1:YA:2272:U:O5'	1.98	0.45
1:YA:180:G:O6	1:YA:213:A:N6	2.50	0.45
1:YA:2305:U:H5	1:YA:2312:U:O4	2.00	0.45
14:YN:84:GLY:N	14:YN:85:PRO:CD	2.79	0.45
1:YA:1778:U:H2'	1:YA:1784:A:N6	2.31	0.45
1:YA:785:G:C6	1:YA:786:C:C4	3.04	0.45
32:XA:1243:C:N4	32:XA:1244:G:O6	2.50	0.45
1:YA:238:C:H2'	1:YA:239:C:O4'	2.17	0.45
1:YA:617:G:O2'	1:YA:618:G:O5'	2.35	0.45
1:YA:586:A:H5'	5:YE:84:THR:HG21	1.98	0.45
14:YN:16:HIS:O	14:YN:20:MET:CB	2.65	0.45
25:YY:40:SER:C	25:YY:42:LEU:H	2.19	0.45
7:RG:7:PRO:O	7:RG:8:VAL:HB	2.15	0.45
32:XA:994:A:C6	32:XA:1216:A:C5'	3.00	0.45
4:RD:69:ALA:HA	4:RD:73:VAL:HG13	1.98	0.45
1:YA:855:G:H21	23:YW:23:LYS:HZ2	1.64	0.45
40:XI:90:ASP:HB3	40:XI:93:LEU:CD2	2.40	0.45
1:RA:31:C:H4'	1:RA:1238:G:H4'	1.98	0.45
1:YA:181:A:H2	1:YA:434:U:C1'	2.22	0.45
1:YA:2809:A:OP2	1:YA:2890:G:N1	2.47	0.45
14:YN:35:LYS:HA	14:YN:111:ALA:O	2.17	0.45
39:XH:1:SER:C	39:XH:3:GLN:N	2.70	0.45
12:YL:18:ARG:O	12:YL:19:LEU:HB3	2.16	0.45
4:RD:110:THR:HA	4:RD:171:THR:HA	1.98	0.45
32:QA:339:C:H2'	32:QA:340:U:H6	1.80	0.45
8:YH:94:ILE:CB	8:YH:98:ASP:HB2	2.47	0.45
14:RN:8:ARG:HB2	14:RN:43:GLU:HG3	1.99	0.45
43:XL:113:ARG:HD2	43:XL:118:VAL:HG12	1.97	0.45
1:RA:1818:U:O2'	3:RC:152:GLN:O	2.19	0.45
12:YL:77:ILE:HG12	12:YL:101:ILE:HD11	1.98	0.45
1:RA:627:A:OP1	12:RL:78:ARG:NH1	2.49	0.45
1:YA:1429:G:H8	1:YA:1429:G:O5'	1.99	0.45
50:QS:41:PRO:C	50:QS:43:MET:H	2.20	0.45
32:XA:679:C:C2	32:XA:712:A:C2	3.04	0.45
32:QA:82:G:H22	32:QA:84:U:H3	1.64	0.45
1:YA:1867:G:O6	1:YA:1875:G:N2	2.50	0.45
5:RE:37:ALA:C	5:RE:39:ALA:H	2.20	0.45
8:RH:99:ILE:CG2	8:RH:99:ILE:O	2.64	0.45
43:XL:2:THR:HB	43:XL:5:GLN:H	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:126:PHE:CG	40:XI:126:PHE:O	2.68	0.45
43:QL:74:GLN:O	43:QL:76:HIS:N	2.50	0.45
1:RA:1528:A:C2'	1:RA:1529:G:H5'	2.45	0.45
1:YA:732:C:C4	1:YA:733:G:C5	3.05	0.45
1:YA:2015:A:C6	27:Y0:2:VAL:HG11	2.51	0.45
1:RA:163:C:O2'	1:RA:164:C:C5'	2.65	0.45
32:XA:1480:A:H2'	32:XA:1481:U:O4'	2.17	0.45
1:RA:668:A:H2'	1:RA:670:A:H62	1.80	0.45
1:RA:253:C:OP2	30:R3:4:LYS:NZ	2.44	0.45
18:RR:36:ALA:N	18:RR:37:GLU:OE2	2.49	0.45
13:YM:61:GLY:HA2	13:YM:107:GLY:HA3	1.98	0.45
26:YZ:37:ARG:NE	26:YZ:37:ARG:HA	2.32	0.45
1:YA:1014:A:C2	1:YA:1149:G:C2	3.05	0.45
8:YH:136:SER:C	8:YH:137:GLU:HG3	2.37	0.45
1:YA:486:C:O2	1:YA:495:G:N2	2.50	0.45
1:RA:1402:U:H2'	1:RA:1403:A:O5'	2.17	0.45
19:RS:36:LEU:HA	19:RS:36:LEU:HD12	1.55	0.45
1:RA:2715:C:H6	1:RA:2715:C:O5'	2.00	0.45
32:XA:623:C:H6	32:XA:623:C:O5'	2.00	0.45
18:RR:53:PHE:CD1	18:RR:53:PHE:N	2.83	0.45
42:XK:66:ALA:HB2	42:XK:95:THR:OG1	2.16	0.45
32:XA:976:G:N7	32:XA:1359:C:O4'	2.49	0.45
1:RA:1178:C:C5	1:RA:1180:U:C4	3.05	0.45
1:YA:1392:A:N6	1:YA:1393:A:C6	2.85	0.45
35:QD:7:LYS:O	35:QD:10:LEU:HB2	2.17	0.45
1:YA:2831:G:C8	4:YD:59:ARG:NH1	2.84	0.45
32:XA:1151:A:OP1	41:XJ:43:PRO:HA	2.16	0.45
35:XD:29:THR:O	35:XD:30:LYS:HB2	2.16	0.45
25:YY:20:ASN:ND2	25:YY:50:VAL:HG22	2.14	0.45
32:XA:1239:A:H3'	38:XG:118:ARG:NH2	2.32	0.45
41:XJ:76:ILE:HG22	41:XJ:77:VAL:N	2.31	0.45
40:XI:59:LYS:HB3	40:XI:59:LYS:HE2	1.72	0.45
32:XA:1346:A:N1	38:XG:9:ARG:NH2	2.64	0.45
9:RI:126:ARG:HD3	9:RI:126:ARG:H	1.80	0.45
1:YA:46:G:N1	1:YA:47:C:C4	2.85	0.45
1:YA:1744:A:N6	1:YA:1745:A:C2	2.85	0.45
1:RA:1998:A:O2'	1:RA:1999:C:H5'	2.17	0.45
9:RI:91:LYS:O	9:RI:92:PRO:O	2.34	0.45
1:YA:2889:C:C4	1:YA:2890:G:C6	3.04	0.45
14:YN:10:LEU:HD13	14:YN:10:LEU:HA	1.84	0.45
52:XU:13:VAL:HG22	52:XU:15:LEU:HD23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1331:G:C2'	32:XA:1332:A:OP2	2.65	0.45
34:QC:82:ASP:O	34:QC:86:LEU:HG	2.16	0.45
45:YN:46:LYS:CE	50:XS:10:ILE:HB	2.47	0.45
1:YA:1723:G:O2'	1:YA:1724:G:H5'	2.16	0.45
1:YA:570:G:C4	1:YA:2030:A:N7	2.85	0.45
2:YB:8:C:H2'	2:YB:9:G:O4'	2.17	0.45
15:YO:10:ARG:HB2	15:YO:96:GLY:HA2	1.98	0.45
16:RP:20:ARG:HG2	16:RP:21:PRO:HD2	1.98	0.45
1:YA:187:G:N2	1:YA:210:C:H1'	2.32	0.45
52:QU:18:PHE:O	52:QU:21:SER:HB3	2.17	0.45
35:QD:158:LEU:HA	35:QD:161:ALA:HB3	1.99	0.45
38:QG:145:GLU:N	38:QG:148:LYS:HB2	2.32	0.45
22:YV:56:PHE:CD1	22:YV:56:PHE:C	2.90	0.45
4:YD:181:ASP:C	4:YD:183:GLU:N	2.70	0.45
1:RA:2563:U:H1'	1:RA:2566:A:C6	2.52	0.45
5:RE:79:ARG:HG2	5:RE:80:SER:N	2.32	0.45
32:QA:1381:U:O2'	32:QA:1382:C:C5'	2.65	0.45
3:YC:171:VAL:N	3:YC:185:ALA:HB2	2.32	0.45
16:RP:37:LYS:O	16:RP:37:LYS:HG2	2.15	0.45
1:YA:1805:A:O2'	3:YC:49:THR:HA	2.16	0.45
32:XA:1058:G:C5	32:XA:1059:C:C4	3.04	0.45
9:RI:96:LYS:H	9:RI:96:LYS:HD2	1.81	0.45
9:YI:79:LEU:C	9:YI:81:LYS:H	2.19	0.45
35:QD:64:TYR:CE1	35:QD:93:LEU:HD13	2.52	0.45
1:RA:1478:G:O2'	1:RA:1479:G:H5'	2.16	0.45
2:RB:109:A:C5	2:RB:110:C:C4	3.05	0.45
1:RA:1289:C:H2'	1:RA:1290:C:H6	1.82	0.45
1:RA:395:U:O2'	1:RA:396:G:N7	2.45	0.45
43:XL:65:TYR:CE1	43:XL:67:GLY:HA2	2.51	0.45
47:QP:39:PHE:CD2	47:QP:74:LEU:HD11	2.51	0.45
18:YR:22:LEU:HD21	18:YR:96:VAL:HG22	1.97	0.45
45:YN:4:SER:O	45:YN:7:ALA:HB3	2.17	0.45
22:YV:49:ASN:O	22:YV:52:ALA:HB3	2.16	0.45
32:QA:813:U:H2'	32:QA:814:A:H5''	1.97	0.45
17:RQ:34:ALA:O	17:RQ:38:VAL:HG23	2.17	0.45
32:XA:626:G:H2'	32:XA:627:G:C8	2.51	0.45
52:XU:53:LYS:NZ	52:XU:53:LYS:HB2	2.31	0.45
12:RL:104:GLN:HE21	12:RL:104:GLN:HA	1.80	0.45
21:RU:60:LYS:HA	21:RU:60:LYS:HD2	1.68	0.45
44:XM:97:ARG:O	44:XM:97:ARG:HG2	2.17	0.45
46:XO:80:LEU:HD22	46:XO:84:LEU:HD12	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2463:C:O5'	1:YA:2463:C:H6	1.98	0.45
32:QA:947:G:C6	32:QA:948:C:C4	3.05	0.45
1:YA:2677:G:H2'	1:YA:2678:C:C6	2.52	0.45
10:RJ:41:LYS:N	17:RQ:66:ALA:HB1	2.32	0.45
1:RA:1069:A:N1	1:RA:1073:A:N6	2.43	0.45
1:RA:1073:A:OP1	1:RA:1073:A:H8	2.00	0.45
23:RW:23:LYS:CG	23:RW:24:ARG:N	2.76	0.45
32:XA:981:U:C4	32:XA:982:U:C2	3.04	0.45
1:YA:860:U:O4	1:YA:2268:A:C4	2.70	0.45
3:YC:128:THR:O	3:YC:129:LEU:HB3	2.17	0.45
1:YA:1914:C:O2'	1:YA:1915:U:C5'	2.64	0.45
33:QB:100:LEU:HD13	33:QB:100:LEU:HA	1.79	0.45
1:YA:168:G:HO2'	1:YA:2209:G:HO2'	1.64	0.45
1:YA:2215:C:O2'	1:YA:2216:G:H8	1.94	0.45
35:QD:37:PRO:HD2	35:QD:41:GLY:HA2	1.99	0.45
36:QE:104:ILE:O	36:QE:104:ILE:HG23	2.17	0.45
36:QE:148:SER:O	36:QE:152:VAL:CG1	2.64	0.45
1:YA:1056:G:O5'	1:YA:1085:A:H2	2.00	0.45
32:XA:111:G:O6	32:XA:330:C:H5	2.00	0.45
36:XE:103:GLY:HA3	36:XE:120:HIS:O	2.17	0.45
1:YA:508:A:C3'	1:YA:509:C:C5'	2.95	0.45
32:QA:1253:G:C6	32:QA:1285:A:N6	2.85	0.45
32:QA:1283:U:H2'	32:QA:1284:C:H6	1.81	0.45
1:YA:2067:G:C6	1:YA:2444:G:N1	2.84	0.45
1:YA:2445:G:H2'	1:YA:2446:G:C8	2.52	0.45
1:YA:200:U:O4	1:YA:248:G:C2	2.70	0.45
37:QF:91:ARG:CG	37:QF:92:THR:H	2.27	0.45
1:YA:764:A:C2	1:YA:781:A:C4	3.05	0.45
1:YA:94:A:C6	1:YA:95:A:C6	3.05	0.45
1:RA:1084:A:C6	1:RA:1085:A:C6	3.05	0.45
1:RA:1056:G:O2'	1:RA:1086:A:H1'	2.17	0.45
32:XA:1326:U:N3	32:XA:1327:C:C4	2.85	0.45
32:XA:1375:A:H2'	32:XA:1376:U:C6	2.52	0.45
44:XM:16:ILE:H	44:XM:16:ILE:HD12	1.82	0.45
33:QB:221:ARG:HH11	33:QB:221:ARG:CG	2.30	0.45
1:RA:1045:C:H3'	1:RA:1046:A:H5'	1.98	0.45
6:YF:45:ASP:C	6:YF:47:LYS:N	2.69	0.45
1:RA:1165:A:H2'	1:RA:1166:G:H8	1.81	0.45
10:YJ:69:ARG:CZ	10:YJ:89:PHE:HE1	2.30	0.45
10:RJ:77:HIS:HD2	10:RJ:79:GLY:HA2	1.82	0.45
1:YA:1544:A:C6	1:YA:1545:A:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:QE:97:PRO:HB2	36:QE:98:ALA:H	1.59	0.45
33:QB:32:GLY:HA3	33:QB:39:ILE:N	2.25	0.45
39:XH:9:MET:HG3	39:XH:26:MET:SD	2.57	0.45
1:YA:1558:C:H4'	1:YA:1559:U:C5'	2.44	0.45
32:QA:603:U:C6	32:QA:603:U:H3'	2.48	0.45
40:XI:27:ILE:HG13	40:XI:34:LEU:HD13	1.99	0.45
1:YA:758:C:O2	1:YA:759:G:C8	2.69	0.45
12:YL:65:GLY:O	12:YL:66:PHE:HB2	2.16	0.45
3:RC:170:TYR:HD2	3:RC:183:VAL:C	2.21	0.45
32:QA:988:G:C6	32:QA:989:U:C4	3.04	0.45
25:RY:56:LEU:O	25:RY:57:LEU:CB	2.57	0.45
1:YA:1973:G:C5	1:YA:1974:C:C5	3.05	0.45
47:QP:51:ARG:HG2	47:QP:52:LEU:N	2.31	0.45
3:RC:257:ARG:O	3:RC:258:SER:HB2	2.16	0.45
32:XA:750:C:O2'	46:XO:20:ASP:HB2	2.17	0.45
1:RA:1106:G:C2	1:RA:1107:G:N9	2.85	0.45
9:YI:20:SER:N	9:YI:21:PRO:CD	2.80	0.45
40:QI:40:ARG:O	40:QI:44:ARG:HD3	2.17	0.45
1:YA:121:G:N2	1:YA:131:A:C4	2.85	0.45
1:RA:2572:A:H2'	4:RD:149:ASN:HD22	1.82	0.45
7:YG:152:ARG:CD	7:YG:153:PRO:HD2	2.46	0.45
9:RI:3:LYS:HD3	9:RI:4:VAL:HG23	1.97	0.45
1:RA:866:A:C2'	1:RA:867:C:H5'	2.47	0.45
32:QA:591:U:H2'	32:QA:592:G:C8	2.51	0.45
1:YA:2652:C:H2'	1:YA:2653:U:O4'	2.17	0.45
34:XC:10:ARG:O	34:XC:13:ILE:O	2.34	0.45
47:QP:42:ILE:O	47:QP:44:SER:N	2.42	0.45
1:RA:1881:C:H2'	1:RA:1882:U:O4'	2.17	0.45
1:RA:1587:G:C2	1:RA:1588:G:C8	3.05	0.45
32:XA:1000:A:H1'	32:XA:1041:G:N2	2.31	0.45
22:RV:38:LEU:HD23	22:RV:40:ILE:HD11	1.99	0.45
1:RA:183:C:H1'	1:RA:433:C:H1'	1.99	0.45
5:RE:134:LEU:HD12	5:RE:138:LEU:HG	1.98	0.45
26:YZ:6:ILE:O	26:YZ:34:THR:HA	2.17	0.45
4:RD:166:GLY:O	4:RD:167:ASN:CB	2.64	0.45
12:YL:85:VAL:O	12:YL:86:GLU:HB2	2.17	0.45
32:XA:948:C:H5''	44:XM:104:ASN:HB3	1.98	0.45
32:XA:487:A:H2'	32:XA:488:C:O4'	2.17	0.45
1:RA:1664:A:C2	1:RA:2726:A:C8	3.05	0.45
3:YC:180:MET:O	3:YC:267:VAL:HG23	2.16	0.45
33:QB:125:PHE:HD2	33:QB:125:PHE:N	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:YI:105:LEU:HD21	9:YI:129:GLU:OE2	2.16	0.45
1:RA:1326:U:N3	1:RA:1648:U:O2'	2.49	0.45
1:YA:2786:U:OP1	4:YD:70:LYS:HD2	2.16	0.45
33:XB:25:LYS:H	33:XB:25:LYS:HD2	1.81	0.45
3:RC:114:GLN:HB2	3:RC:114:GLN:HE21	1.53	0.45
7:RG:37:ASN:N	7:RG:37:ASN:OD1	2.50	0.45
36:QE:133:ILE:HD12	36:QE:133:ILE:H	1.82	0.45
1:RA:553:G:H2'	1:RA:554:U:O4'	2.17	0.45
1:RA:1009:A:P	10:RJ:39:LYS:HZ1	2.40	0.45
1:RA:1064:C:C4	1:RA:1066:U:O2	2.70	0.45
37:QF:6:ILE:O	37:QF:61:LEU:HD12	2.16	0.45
40:XI:38:PHE:HE2	40:XI:71:ILE:HG22	1.80	0.45
32:XA:1319:A:H5''	50:XS:4:LEU:CD1	2.47	0.45
1:RA:2780:G:H4'	1:RA:2781:A:OP2	2.17	0.45
4:RD:108:ASP:CG	4:RD:206:ALA:HA	2.36	0.45
51:QT:27:MET:HG3	51:QT:28:ARG:N	2.30	0.45
1:YA:1352:U:C5	1:YA:1377:G:O6	2.70	0.45
1:YA:1570:A:C6	1:YA:1571:A:C6	3.05	0.45
1:YA:322:A:H3'	5:YE:163:ASN:CG	2.37	0.45
33:QB:49:PHE:C	33:QB:49:PHE:CD1	2.90	0.45
12:RL:95:LEU:HD13	12:RL:100:ILE:HD11	1.99	0.45
1:YA:1090:A:C6	1:YA:1102:C:O2	2.70	0.45
9:YI:92:PRO:HB3	9:YI:134:SER:O	2.16	0.45
32:QA:267:C:H2'	32:QA:268:U:H6	1.80	0.45
45:XN:76:PHE:CE2	45:XN:95:LEU:HD22	2.51	0.45
1:YA:1019:U:H2'	1:YA:1021:A:N1	2.31	0.45
32:QA:1278:G:O5'	32:QA:1279:G:H5'	2.17	0.45
1:YA:348:A:C6	1:YA:349:U:C4	3.04	0.45
1:YA:77:G:H2'	1:YA:78:U:O4'	2.17	0.45
25:YY:53:VAL:O	25:YY:57:LEU:HB2	2.16	0.45
1:YA:672:C:C6	1:YA:672:C:C3'	3.00	0.45
4:RD:90:PHE:N	4:RD:90:PHE:CD1	2.84	0.45
1:YA:1047:G:C2'	1:YA:1048:A:OP2	2.64	0.45
32:XA:1147:C:HO2'	32:XA:1148:U:H6	1.62	0.45
1:RA:361:G:HO2'	1:RA:362:A:C5'	2.30	0.45
22:RV:93:ARG:O	22:RV:94:ALA:HB2	2.16	0.45
1:RA:571:U:H3'	18:RR:80:ARG:CZ	2.47	0.45
50:QS:33:TRP:CD1	50:QS:51:HIS:CG	3.05	0.45
32:XA:939:G:O3'	38:XG:101:ARG:NH2	2.50	0.45
27:R0:42:ILE:HD12	27:R0:42:ILE:HA	1.81	0.45
23:YW:23:LYS:HD2	23:YW:24:ARG:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:516:U:C4	32:XA:517:G:C6	3.05	0.45
1:YA:1716:U:C5	1:YA:1743:G:N2	2.84	0.45
1:YA:2458:G:H1'	1:YA:2459:A:N7	2.31	0.45
1:YA:1223:G:N1	1:YA:1227:G:C6	2.85	0.45
16:RP:33:GLU:CB	16:RP:36:LYS:HB2	2.47	0.45
43:QL:81:ILE:HD11	43:QL:94:TYR:CB	2.47	0.45
33:QB:127:LYS:HG3	33:QB:128:LEU:N	2.24	0.45
1:RA:2323:G:C2'	1:RA:2324:U:H5'	2.47	0.45
21:YU:58:VAL:CG1	21:YU:59:GLU:N	2.79	0.45
1:RA:2556:C:C2'	1:RA:2557:G:H5'	2.47	0.45
36:QE:113:VAL:O	36:QE:117:ALA:HB2	2.16	0.45
32:QA:111:G:C6	32:QA:330:C:N4	2.85	0.45
7:YG:43:LYS:HB2	7:YG:50:THR:O	2.17	0.45
32:QA:601:G:C2	32:QA:638:U:O2	2.69	0.45
1:YA:2043:C:C2	1:YA:2044:C:C5	3.05	0.45
4:YD:48:ILE:HG22	4:YD:82:PHE:O	2.17	0.45
32:QA:1039:G:C6	32:QA:1040:U:C4	3.04	0.45
31:Y4:16:ILE:CG1	31:Y4:25:VAL:HG22	2.45	0.45
22:YV:40:ILE:H	22:YV:40:ILE:HD13	1.80	0.45
39:XH:77:VAL:HG12	39:XH:84:ILE:HG13	1.98	0.45
13:RM:108:VAL:CG1	13:RM:112:LEU:HB3	2.46	0.45
16:RP:25:VAL:HA	16:RP:84:SER:O	2.17	0.45
2:YB:76:G:H2'	2:YB:77:U:H6	1.81	0.45
1:RA:2573:C:OP1	1:RA:2574:G:OP1	2.34	0.45
40:XI:25:GLY:HA2	40:XI:60:LEU:O	2.16	0.45
1:RA:900:A:C2	1:RA:901:C:H1'	2.52	0.45
5:YE:139:LYS:HB2	5:YE:139:LYS:HZ3	1.82	0.45
1:YA:2531:A:C4	1:YA:2532:G:C8	3.05	0.45
21:RU:13:LEU:HD12	21:RU:69:VAL:CA	2.47	0.45
1:RA:727:A:C2	3:RC:8:THR:HG21	2.47	0.45
14:YN:92:GLY:H	14:YN:94:TYR:HE1	1.62	0.45
4:RD:35:THR:HG1	4:RD:49:GLN:HG2	1.81	0.45
36:QE:71:ILE:CD1	36:QE:144:GLU:HG3	2.46	0.45
18:RR:24:LYS:HE2	18:RR:24:LYS:HB3	1.68	0.45
21:RU:2:ALA:HB3	21:RU:5:ARG:NH2	2.32	0.45
1:RA:1826:G:C4	1:RA:1827:U:C5	3.05	0.45
32:QA:958:A:C6	32:QA:959:A:N1	2.84	0.45
38:QG:29:LEU:HD23	38:QG:29:LEU:O	2.17	0.45
1:RA:1833:C:C5	1:RA:1834:U:C5	3.05	0.45
32:QA:141:G:C2	32:QA:142:G:H1'	2.52	0.45
1:RA:1322:A:C2'	1:RA:1323:C:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:36:ALA:HA	18:YR:58:VAL:HA	1.99	0.45
1:YA:2853:C:H2'	1:YA:2854:G:C8	2.51	0.45
7:RG:34:ARG:N	7:RG:34:ARG:HD3	2.32	0.45
44:XM:47:LEU:HD23	44:XM:48:SER:C	2.38	0.45
33:QB:132:GLU:O	33:QB:136:ARG:HB3	2.17	0.45
32:XA:301:G:H2'	32:XA:302:G:H8	1.82	0.45
35:XD:105:GLY:HA2	35:XD:161:ALA:HB2	1.99	0.45
1:RA:646:U:C3'	1:RA:647:G:H5''	2.46	0.45
1:YA:816:C:H2'	1:YA:817:C:H6	1.82	0.45
18:RR:37:GLU:OE1	18:RR:37:GLU:O	2.35	0.45
32:XA:283:U:H2'	32:XA:284:C:C6	2.52	0.45
1:YA:2674:G:H4'	11:YK:30:ARG:HD2	1.99	0.45
35:QD:106:PHE:CG	35:QD:144:ILE:HD11	2.52	0.45
1:RA:1037:G:C2	1:RA:1119:U:O2	2.70	0.45
1:YA:1112:G:H2'	1:YA:1113:U:C5	2.52	0.45
7:RG:18:ILE:HD12	7:RG:42:VAL:HG13	1.99	0.45
1:YA:1958:C:C2'	1:YA:1959:G:H5'	2.46	0.45
1:RA:434:U:H4'	1:RA:435:C:OP1	2.16	0.45
1:YA:2367:G:O2'	1:YA:2368:C:H5'	2.17	0.45
9:RI:122:GLU:O	9:RI:122:GLU:HG3	2.16	0.45
33:QB:130:LYS:HE2	33:QB:130:LYS:HA	1.98	0.45
32:QA:441:A:H2'	32:QA:441:A:N3	2.32	0.45
1:RA:2585:U:HO2'	1:RA:2586:U:C5'	2.30	0.45
17:RQ:63:ARG:NH2	17:RQ:95:ALA:C	2.70	0.45
1:RA:2846:G:OP2	16:RP:51:ASN:HB2	2.17	0.45
17:YQ:86:SER:HB3	18:YR:50:GLY:O	2.17	0.45
23:RW:39:GLN:NE2	23:RW:43:LYS:HB2	2.32	0.45
1:YA:1440:U:H2'	1:YA:1441:G:C8	2.52	0.45
28:Y1:10:LEU:HD12	28:Y1:50:GLU:O	2.17	0.45
17:YQ:46:TYR:CE1	17:YQ:50:ARG:NH2	2.85	0.45
1:YA:249:C:C4'	1:YA:250:G:O5'	2.65	0.45
32:XA:1309:G:C6	32:XA:1329:A:N1	2.84	0.45
1:YA:1601:G:C5	1:YA:1602:U:C4	3.05	0.45
1:YA:1341:G:C2	20:YT:84:TYR:HE2	2.35	0.45
1:YA:2036:C:H2'	1:YA:2037:A:C8	2.52	0.45
35:QD:29:THR:CG2	35:QD:30:LYS:HD3	2.45	0.45
1:YA:84:A:C2	1:YA:98:G:N2	2.79	0.45
6:YF:65:LEU:HD21	6:YF:87:LYS:HG3	1.99	0.45
29:Y2:18:PHE:O	29:Y2:21:ARG:N	2.50	0.45
1:YA:1019:U:C4	1:YA:1020:A:N6	2.85	0.45
24:YX:53:LYS:O	24:YX:57:VAL:N	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:32:LYS:O	35:XD:35:GLN:HG2	2.16	0.45
32:XA:1335:U:H5''	32:XA:1336:C:H5'	1.98	0.45
1:YA:586:A:O5'	1:YA:586:A:H8	1.99	0.45
1:RA:1731:G:C5	1:RA:1733:G:N7	2.85	0.45
1:YA:2760:C:C2'	1:YA:2761:A:H5'	2.47	0.45
16:YP:52:ARG:HH11	16:YP:52:ARG:HG2	1.82	0.45
1:YA:2876:G:H5''	16:YP:2:ASN:ND2	2.32	0.45
1:YA:1775:U:C2'	1:YA:1776:G:O5'	2.65	0.45
32:QA:198:G:C6	32:QA:220:G:N3	2.85	0.45
1:YA:1208:C:O2'	1:YA:1209:U:H5'	2.16	0.45
32:XA:1326:U:N3	32:XA:1327:C:N4	2.65	0.45
7:YG:112:VAL:HG13	7:YG:150:TYR:CE1	2.45	0.45
32:XA:275:G:O2'	32:XA:276:G:H8	2.00	0.45
4:YD:114:LYS:CD	4:YD:116:LYS:NZ	2.75	0.45
1:YA:2056:G:N2	1:YA:2057:G:C8	2.85	0.45
1:RA:1288:G:C5	1:RA:1327:A:C2	3.05	0.45
10:YJ:69:ARG:O	10:YJ:90:GLU:HB2	2.16	0.45
10:YJ:95:ARG:NH1	10:YJ:99:ARG:HH21	2.15	0.45
37:XF:12:PRO:CD	37:XF:54:LEU:HD11	2.46	0.45
33:XB:199:ILE:HG13	33:XB:199:ILE:O	2.16	0.45
42:QK:24:ALA:O	42:QK:88:PRO:O	2.35	0.45
7:RG:59:ASP:O	7:RG:60:GLY:O	2.35	0.45
4:YD:73:VAL:HG22	4:YD:74:GLU:N	2.31	0.45
32:QA:858:G:C6	32:QA:869:G:C8	3.05	0.45
32:XA:764:C:O2	32:XA:764:C:H2'	2.16	0.45
32:XA:952:U:H5	44:XM:102:LYS:NZ	2.14	0.45
9:YI:57:VAL:HG12	9:YI:58:ILE:N	2.32	0.45
43:XL:115:LYS:O	43:XL:116:TYR:CB	2.64	0.45
10:RJ:105:VAL:O	10:RJ:109:LEU:HD12	2.16	0.45
32:QA:1039:G:C2'	32:QA:1040:U:H5'	2.47	0.45
10:RJ:31:GLU:O	10:RJ:32:LEU:C	2.54	0.45
34:XC:6:PRO:HG3	34:XC:200:TRP:HE1	1.81	0.45
1:YA:21:A:H2'	1:YA:22:C:H6	1.80	0.45
32:XA:631:C:C3'	32:XA:632:U:H5'	2.46	0.45
12:RL:57:LEU:CD2	30:R3:53:ASP:HB3	2.46	0.45
6:RF:27:VAL:O	6:RF:29:ARG:NH1	2.50	0.45
1:RA:2020:A:H5'	27:R0:8:THR:HG22	1.98	0.45
3:YC:196:ASN:HB3	3:YC:197:ALA:H	1.66	0.45
1:YA:2687:U:H2'	1:YA:2688:G:O4'	2.17	0.45
13:RM:54:THR:O	13:RM:57:VAL:HG22	2.16	0.45
32:XA:140:U:H3'	32:XA:140:U:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:YG:152:ARG:HG3	7:YG:153:PRO:HD2	1.98	0.45
49:XR:19:GLU:CG	49:XR:20:ILE:N	2.80	0.45
8:YH:3:VAL:N	8:YH:39:ALA:HB2	2.31	0.45
18:RR:21:ARG:HG3	18:RR:95:ASP:OD1	2.17	0.45
48:XQ:45:VAL:CG2	48:XQ:60:ILE:HD12	2.46	0.45
4:YD:15:PHE:CD2	16:YP:77:SER:HA	2.52	0.45
36:XE:69:ASN:ND2	36:XE:69:ASN:O	2.49	0.45
34:XC:122:GLN:HA	34:XC:125:ARG:HG3	1.98	0.45
35:QD:75:TYR:CD2	35:QD:203:TYR:HD1	2.34	0.45
1:RA:2220:U:H2'	1:RA:2221:G:C8	2.50	0.45
1:RA:231:A:N7	1:RA:232:G:C6	2.85	0.45
32:QA:1378:C:C5	32:QA:1379:G:C8	3.05	0.45
3:YC:30:ALA:N	3:YC:31:PRO:CD	2.80	0.45
40:XI:4:GLN:H	40:XI:4:GLN:HG2	1.37	0.45
1:YA:653:U:H4'	1:YA:653:U:OP1	2.17	0.45
47:QP:28:ARG:NE	47:QP:29:ASN:HD21	2.15	0.45
1:YA:219:A:N6	1:YA:220:G:N1	2.65	0.45
48:XQ:52:CYS:HB2	48:XQ:53:GLY:H	1.58	0.45
1:RA:1724:G:C2'	1:RA:1725:U:H5'	2.46	0.45
16:YP:19:PHE:HD2	16:YP:19:PHE:N	2.15	0.45
44:QM:92:ARG:CZ	44:QM:92:ARG:HB3	2.47	0.45
32:XA:623:C:H3'	32:XA:623:C:C6	2.52	0.45
43:XL:78:VAL:O	43:XL:102:ASP:HB2	2.17	0.45
37:XF:25:TYR:O	37:XF:29:ILE:HD13	2.16	0.45
1:YA:685:A:C8	1:YA:773:U:O4	2.70	0.45
32:QA:1517:G:O6	32:QA:1518:A:C6	2.69	0.45
1:YA:2361:G:C6	1:YA:2362:C:C4	3.05	0.45
32:QA:40:C:H2'	32:QA:40:C:O2	2.16	0.45
48:XQ:51:GLU:H	48:XQ:51:GLU:HG2	1.42	0.45
35:QD:47:LEU:HD23	35:QD:47:LEU:H	1.81	0.45
1:RA:734:A:C4	1:RA:735:A:C8	3.05	0.45
1:RA:1002:G:H2'	1:RA:1003:G:O5'	2.16	0.45
51:XT:47:GLN:O	51:XT:51:ASN:OD1	2.35	0.45
2:YB:108:A:O2'	2:YB:109:A:OP1	2.28	0.44
2:YB:17:C:H2'	2:YB:18:G:H8	1.83	0.44
23:RW:37:VAL:HG11	23:RW:55:ASP:HB2	1.98	0.44
32:XA:1092:A:H5'	38:XG:3:ARG:NH2	2.32	0.44
15:YO:30:ARG:HH12	15:YO:102:ARG:HB2	1.81	0.44
33:QB:164:ASP:CG	33:QB:203:ASP:OD1	2.56	0.44
1:YA:2331:G:C1'	23:YW:40:ARG:HB3	2.46	0.44
51:QT:32:LYS:O	51:QT:35:TYR:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:706:A:N7	32:XA:707:U:C5	2.85	0.44
1:YA:1210:G:H4'	1:YA:1211:C:H5''	1.98	0.44
1:YA:1338:G:N3	1:YA:1393:A:H2	2.16	0.44
1:YA:1571:A:O5'	1:YA:1571:A:H8	1.99	0.44
42:QK:125:LYS:O	42:QK:126:ARG:CB	2.65	0.44
44:XM:77:LYS:HA	44:XM:80:MET:CE	2.47	0.44
17:YQ:63:ARG:O	17:YQ:64:ILE:C	2.54	0.44
32:XA:207:C:N3	32:XA:208:U:O4	2.50	0.44
1:YA:2307:G:N7	1:YA:2312:U:C5	2.85	0.44
12:YL:79:LEU:HD12	12:YL:112:LEU:CA	2.46	0.44
6:RF:105:ILE:C	6:RF:108:PRO:HD2	2.37	0.44
32:XA:575:G:C6	32:XA:821:G:C5	3.06	0.44
14:YN:83:LEU:CD1	14:YN:86:ARG:HH21	2.30	0.44
25:YY:17:GLU:HG3	25:YY:53:VAL:HG11	1.99	0.44
5:YE:146:VAL:HG12	5:YE:167:VAL:HG23	1.99	0.44
4:RD:34:VAL:CG2	4:RD:91:THR:HA	2.47	0.44
14:YN:16:HIS:CE1	14:YN:20:MET:HE2	2.52	0.44
33:QB:26:MET:HA	33:QB:26:MET:HE3	1.99	0.44
1:YA:1789:A:H5''	3:YC:218:THR:O	2.17	0.44
1:YA:1790:C:O2'	3:YC:207:ALA:HB2	2.16	0.44
32:QA:362:G:N2	32:QA:365:U:OP2	2.50	0.44
32:XA:599:C:H4'	39:XH:121:GLY:HA3	1.99	0.44
1:RA:1045:C:C3'	1:RA:1046:A:C5'	2.95	0.44
20:YT:45:ALA:HA	20:YT:48:GLN:CG	2.47	0.44
1:YA:2200:C:N4	1:YA:2224:G:H21	2.14	0.44
32:QA:466:A:C3'	32:QA:467:U:H5''	2.46	0.44
1:YA:2056:G:H21	27:Y0:1:ALA:H3	1.66	0.44
15:YO:24:THR:H	15:YO:90:VAL:CG1	2.29	0.44
1:RA:1746:A:C2	1:RA:1747:U:N3	2.85	0.44
1:YA:2286:G:O6	28:Y1:22:THR:HG21	2.17	0.44
28:R1:22:THR:OG1	28:R1:23:THR:N	2.50	0.44
44:QM:65:GLU:HB3	44:QM:66:GLY:H	1.57	0.44
20:YT:55:VAL:HG23	20:YT:86:THR:O	2.17	0.44
1:YA:1327:A:N6	1:YA:1328:A:C6	2.85	0.44
1:YA:2607:G:H2'	1:YA:2608:G:O4'	2.17	0.44
45:QN:50:LEU:O	45:QN:51:PRO:C	2.56	0.44
43:QL:41:PRO:HA	43:QL:88:ASP:O	2.17	0.44
21:RU:73:ASN:HD22	21:RU:76:THR:H	1.64	0.44
38:QG:105:GLU:O	38:QG:105:GLU:HG2	2.17	0.44
7:RG:10:VAL:HG23	7:RG:10:VAL:O	2.16	0.44
1:YA:571:U:C6	1:YA:575:A:N6	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:XF:61:LEU:CD1	37:XF:62:MET:H	2.25	0.44
3:YC:255:LYS:C	3:YC:256:THR:HG23	2.36	0.44
24:RX:29:LEU:HD23	24:RX:29:LEU:H	1.82	0.44
32:XA:1050:G:O6	32:XA:1209:C:N3	2.50	0.44
1:YA:271:G:C2	1:YA:367:G:N3	2.86	0.44
6:RF:21:TYR:CE2	6:RF:27:VAL:HA	2.52	0.44
35:QD:151:GLN:H	35:QD:154:VAL:HG13	1.81	0.44
11:YK:118:LEU:O	11:YK:120:PRO:HD2	2.16	0.44
32:XA:469:C:H2'	32:XA:470:C:O4'	2.18	0.44
12:RL:80:SER:C	12:RL:81:ASP:O	2.54	0.44
1:RA:1316:U:H2'	1:RA:1317:G:C8	2.53	0.44
1:YA:1827:U:O4'	1:YA:1970:A:O2'	2.34	0.44
1:RA:1797:G:C6	1:RA:1798:U:C4	3.05	0.44
1:YA:2234:G:C5	1:YA:2235:G:N7	2.85	0.44
32:QA:191:G:C5	32:QA:192:A:N7	2.85	0.44
1:RA:1932:A:H2'	1:RA:1933:G:O4'	2.17	0.44
1:RA:2571:U:H2'	1:RA:2572:A:OP1	2.16	0.44
1:RA:2307:G:N2	1:RA:2311:A:C8	2.85	0.44
35:XD:59:LYS:O	35:XD:63:ILE:HG13	2.17	0.44
32:XA:637:C:H2'	32:XA:638:U:H6	1.81	0.44
46:QO:86:LEU:C	46:QO:88:ARG:N	2.70	0.44
32:QA:1394:A:C6	32:QA:1501:C:H4'	2.52	0.44
5:RE:79:ARG:O	5:RE:80:SER:C	2.56	0.44
6:YF:73:VAL:HG12	6:YF:73:VAL:O	2.17	0.44
1:YA:2254:C:C2'	1:YA:2255:G:H5'	2.46	0.44
37:QF:11:HIS:CD2	37:QF:12:PRO:HD2	2.53	0.44
32:QA:828:U:H2'	32:QA:829:G:O5'	2.17	0.44
32:XA:53:A:C2	32:XA:359:G:C6	3.05	0.44
8:YH:50:ARG:C	8:YH:52:ALA:H	2.20	0.44
1:RA:1246:A:C2'	1:RA:1247:A:O5'	2.65	0.44
33:QB:121:GLN:HA	33:QB:125:PHE:CE1	2.51	0.44
33:QB:125:PHE:CD2	33:QB:125:PHE:N	2.84	0.44
32:XA:944:G:H3'	32:XA:945:G:H5'	1.97	0.44
3:RC:196:ASN:C	3:RC:198:GLU:H	2.19	0.44
29:R2:29:GLN:O	29:R2:33:ARG:HG3	2.16	0.44
43:XL:56:LEU:HB2	43:XL:58:ASN:OD1	2.17	0.44
32:QA:1503:A:C8	32:QA:1531:A:H1'	2.53	0.44
6:YF:177:ARG:NE	6:YF:178:LYS:H	2.13	0.44
46:QO:7:THR:O	46:QO:11:VAL:HG23	2.17	0.44
32:QA:1432:G:O2'	32:QA:1433:A:OP2	2.27	0.44
1:RA:2544:G:H2'	1:RA:2545:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:YB:95:U:O4	56:YB:303:HOH:O	2.15	0.44
50:QS:34:SER:C	50:QS:36:ARG:H	2.19	0.44
39:XH:45:ILE:O	39:XH:45:ILE:HG13	2.17	0.44
1:RA:1922:G:H2'	1:RA:1923:U:O4'	2.17	0.44
1:YA:462:C:C2'	1:YA:463:G:H5'	2.47	0.44
1:RA:996:A:C2'	1:RA:997:G:O5'	2.66	0.44
17:RQ:60:TRP:CZ2	17:RQ:93:ILE:HB	2.52	0.44
1:RA:1059:G:C8	1:RA:1060:U:H2'	2.52	0.44
1:RA:2353:G:O2'	23:RW:31:LEU:CD2	2.65	0.44
32:XA:1364:U:O4'	32:XA:1364:U:O2	2.34	0.44
50:XS:39:ILE:O	50:XS:39:ILE:HG13	2.17	0.44
1:YA:228:C:C5'	1:YA:229:C:C5	2.98	0.44
10:YJ:43:GLU:O	10:YJ:44:TYR:C	2.56	0.44
42:XK:74:LYS:HG3	42:XK:78:ILE:HG12	2.00	0.44
32:XA:207:C:H2'	32:XA:207:C:O2	2.17	0.44
6:YF:65:LEU:HD11	6:YF:87:LYS:NZ	2.31	0.44
32:QA:273:U:O4	32:QA:274:A:N6	2.49	0.44
48:QQ:12:VAL:CG1	48:QQ:21:VAL:HG13	2.38	0.44
31:R4:9:LYS:HB3	31:R4:14:CYS:CB	2.47	0.44
1:YA:475:C:C2'	1:YA:476:G:C8	2.98	0.44
38:XG:36:SER:HA	40:XI:42:THR:CG2	2.47	0.44
32:XA:575:G:O2'	32:XA:821:G:H5'	2.18	0.44
14:YN:87:PHE:CD1	14:YN:90:ARG:HD3	2.52	0.44
23:RW:8:SER:C	23:RW:9:THR:HG22	2.36	0.44
35:XD:8:LEU:O	35:XD:9:LYS:C	2.54	0.44
1:YA:75:G:O2'	1:YA:76:C:O5'	2.34	0.44
1:YA:2066:C:H5''	56:YA:3533:HOH:O	2.17	0.44
1:YA:28:A:O2'	1:YA:583:G:H5'	2.18	0.44
1:YA:584:C:H2'	1:YA:585:G:C8	2.52	0.44
37:QF:92:THR:HG22	37:QF:93:LYS:H	1.81	0.44
11:YK:60:ALA:HB2	11:YK:86:LEU:HA	1.99	0.44
16:YP:28:LYS:HB3	16:YP:39:LEU:HD23	1.99	0.44
1:RA:1085:A:C2	1:RA:1086:A:N7	2.85	0.44
6:YF:134:GLN:HE22	6:YF:136:ILE:H	1.65	0.44
4:RD:68:PHE:CD2	4:RD:75:ALA:HA	2.52	0.44
44:XM:13:HIS:O	44:XM:14:ALA:C	2.55	0.44
11:YK:17:ARG:O	11:YK:18:ARG:O	2.36	0.44
32:XA:495:A:C2	32:XA:496:A:C6	3.05	0.44
21:YU:73:ASN:HD22	21:YU:95:PHE:HD2	1.65	0.44
1:RA:1999:C:H4'	1:RA:2723:C:O2	2.17	0.44
20:YT:39:THR:C	20:YT:41:ALA:H	2.19	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1499:C:C4	1:YA:1500:G:N7	2.85	0.44
1:RA:1019:U:C2	1:RA:1142:A:N6	2.85	0.44
1:YA:635:C:OP2	12:YL:126:ARG:NH1	2.48	0.44
1:YA:770:G:H1'	1:YA:1379:U:O4	2.17	0.44
44:QM:2:ARG:HA	44:QM:8:ILE:HG12	1.99	0.44
1:YA:2049:G:H21	4:YD:161:MET:HE2	1.82	0.44
32:XA:567:G:H2'	32:XA:568:G:O4'	2.17	0.44
8:RH:110:VAL:HG23	8:RH:111:ALA:N	2.32	0.44
32:XA:160:A:C2	32:XA:343:U:H1'	2.52	0.44
38:QG:94:ARG:O	38:QG:95:ARG:C	2.55	0.44
1:YA:1677:A:C8	56:YA:3749:HOH:O	2.70	0.44
32:XA:178:C:H2'	32:XA:179:A:H8	1.82	0.44
18:YR:62:GLU:OE1	18:YR:97:LYS:HD2	2.18	0.44
1:YA:684:G:H5'	29:Y2:16:HIS:NE2	2.32	0.44
13:RM:108:VAL:HG13	13:RM:109:PRO:CD	2.45	0.44
40:QI:22:PRO:HA	40:QI:60:LEU:HA	1.98	0.44
1:YA:2402:U:O2'	1:YA:2403:C:OP1	2.31	0.44
2:YB:76:G:P	22:YV:13:GLY:H	2.41	0.44
2:YB:78:A:H2'	2:YB:79:G:H8	1.82	0.44
1:YA:1506:U:H2'	1:YA:1507:C:O4'	2.17	0.44
22:YV:75:GLN:HG3	22:YV:92:VAL:CG1	2.47	0.44
40:XI:30:ASN:O	40:XI:31:GLN:CG	2.65	0.44
1:RA:715:A:H8	1:RA:715:A:OP1	1.99	0.44
32:XA:41:G:H2'	32:XA:42:G:C8	2.51	0.44
3:RC:77:VAL:HG13	3:RC:113:ASP:O	2.17	0.44
1:RA:1104:C:H2'	1:RA:1105:U:C6	2.52	0.44
39:QH:91:LEU:HD23	39:QH:92:PRO:HD2	1.99	0.44
32:QA:1033:G:H2'	32:QA:1034:G:C5'	2.48	0.44
5:YE:153:LEU:HD23	5:YE:154:ASP:N	2.32	0.44
8:RH:39:ALA:C	8:RH:41:LYS:H	2.20	0.44
1:RA:866:A:C8	1:RA:914:G:C6	3.05	0.44
2:YB:81:G:C5	2:YB:82:U:C4	3.05	0.44
32:XA:858:G:C8	32:XA:869:G:O6	2.70	0.44
1:YA:1672:A:O4'	1:YA:2553:G:H4'	2.17	0.44
1:YA:2850:A:C6	1:YA:2869:G:H4'	2.51	0.44
32:XA:934:C:H5	32:XA:1344:C:C2	2.35	0.44
1:RA:1945:G:H2'	1:RA:1946:U:C6	2.51	0.44
4:YD:200:ASP:O	4:YD:201:LEU:HD23	2.16	0.44
38:XG:128:GLU:O	38:XG:129:ASN:HB2	2.18	0.44
1:YA:1936:A:C2	1:YA:1943:U:H5	2.34	0.44
33:XB:15:PHE:O	33:XB:39:ILE:HD11	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1296:C:O3'	32:QA:1302:C:N4	2.50	0.44
1:YA:609:A:N7	1:YA:610:C:C2	2.86	0.44
1:YA:146:A:C2	1:YA:147:C:C2	3.05	0.44
39:XH:23:ALA:HA	39:XH:62:LEU:HD22	1.98	0.44
19:RS:24:ILE:HD12	19:RS:24:ILE:HA	1.62	0.44
17:RQ:75:TYR:CE2	17:RQ:79:ILE:HG13	2.52	0.44
1:RA:464:U:O2'	29:R2:16:HIS:CE1	2.70	0.44
1:YA:1112:G:H2'	1:YA:1113:U:C6	2.53	0.44
1:RA:2585:U:O2'	1:RA:2586:U:O5'	2.34	0.44
2:RB:63:C:O2'	2:RB:64:G:H5'	2.17	0.44
5:YE:72:SER:C	5:YE:74:LYS:H	2.20	0.44
3:RC:216:ARG:HB3	3:RC:217:PRO:HD2	1.99	0.44
13:RM:117:PHE:O	13:RM:118:LYS:C	2.54	0.44
1:YA:1485:U:C2	1:YA:1505:A:C2	3.05	0.44
32:QA:21:G:N2	32:QA:22:G:C6	2.85	0.44
1:YA:2813:A:H2'	1:YA:2814:A:C8	2.52	0.44
1:RA:1347:A:H2'	1:RA:1348:C:O4'	2.17	0.44
32:QA:1398:A:H8	32:QA:1398:A:H5''	1.82	0.44
8:YH:104:THR:O	8:YH:104:THR:CG2	2.65	0.44
7:YG:176:LYS:HD2	7:YG:176:LYS:OXT	2.16	0.44
33:QB:170:ILE:H	33:QB:170:ILE:HG12	1.50	0.44
6:RF:99:PHE:O	6:RF:103:ILE:HG12	2.17	0.44
27:R0:43:THR:HG23	27:R0:47:TYR:O	2.17	0.44
10:RJ:40:HIS:O	10:RJ:41:LYS:HG2	2.17	0.44
1:YA:214:G:H1'	1:YA:217:A:H5'	1.98	0.44
23:RW:74:LYS:HB3	23:RW:74:LYS:HE2	1.77	0.44
37:QF:7:VAL:HA	37:QF:60:VAL:O	2.17	0.44
37:QF:6:ILE:HG22	37:QF:7:VAL:N	2.32	0.44
42:XK:92:ARG:HA	42:XK:92:ARG:HD2	1.65	0.44
1:YA:1799:G:C8	3:YC:175:LEU:HD13	2.53	0.44
1:YA:1439:A:H8	1:YA:1440:U:O4'	1.99	0.44
40:QI:7:GLY:HA3	40:QI:85:ALA:HB2	1.99	0.44
1:YA:511:U:C5'	1:YA:1235:G:H4'	2.47	0.44
1:YA:1386:C:O2'	1:YA:1387:A:H8	1.99	0.44
14:YN:45:ARG:HG2	14:YN:95:THR:HG21	1.99	0.44
1:YA:1381:G:C2'	1:YA:1382:G:H5''	2.43	0.44
1:YA:1350:C:C2	1:YA:1382:G:N7	2.85	0.44
32:QA:976:G:N1	32:QA:1363:A:C2	2.85	0.44
1:YA:1062:G:H2'	1:YA:1070:A:OP1	2.17	0.44
32:XA:109:A:C8	32:XA:327:A:H5'	2.52	0.44
1:YA:648:G:N3	1:YA:649:G:C8	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1830:C:H5'	3:YC:14:HIS:HE1	1.81	0.44
35:XD:25:ARG:HH12	35:XD:30:LYS:HE2	1.80	0.44
35:XD:29:THR:C	35:XD:31:CYS:N	2.70	0.44
32:QA:1461:G:H2'	32:QA:1462:C:H6	1.82	0.44
4:YD:107:VAL:HA	4:YD:204:LYS:O	2.18	0.44
37:QF:90:MET:HB3	37:QF:91:ARG:H	1.49	0.44
48:XQ:68:LYS:O	48:XQ:69:THR:HG23	2.17	0.44
1:RA:1081:U:O2	1:RA:1081:U:H2'	2.17	0.44
20:RT:2:ILE:HB	20:RT:3:ARG:NH1	2.32	0.44
6:YF:110:ILE:CD1	6:YF:110:ILE:H	2.31	0.44
32:XA:642:A:O2'	32:XA:643:C:O5'	2.34	0.44
32:XA:249:U:C2	32:XA:276:G:N1	2.85	0.44
20:YT:47:VAL:O	20:YT:53:VAL:O	2.35	0.44
20:YT:48:GLN:NE2	20:YT:54:GLU:HB2	2.32	0.44
11:YK:46:ALA:HB3	11:YK:54:LYS:NZ	2.32	0.44
3:RC:246:PRO:HG2	3:RC:247:TRP:CH2	2.51	0.44
52:XU:33:ARG:NH2	52:XU:34:ARG:HD3	2.33	0.44
38:XG:72:VAL:O	38:XG:140:VAL:HG11	2.18	0.44
36:XE:136:VAL:HG22	36:XE:137:ARG:N	2.31	0.44
35:XD:55:ARG:HH12	35:XD:58:GLN:HG2	1.82	0.44
1:RA:1252:G:O2'	1:RA:1253:A:C8	2.68	0.44
34:QC:54:ILE:HD12	34:QC:55:VAL:N	2.33	0.44
35:QD:113:ALA:O	35:QD:117:VAL:HG23	2.17	0.44
35:QD:121:ALA:HA	35:QD:145:ARG:HG3	2.00	0.44
1:YA:2287:A:O2'	1:YA:2288:A:H3'	2.18	0.44
32:XA:1422:G:C5'	11:YK:48:PRO:HB3	2.44	0.44
1:YA:2005:A:H5''	1:YA:2006:C:OP2	2.17	0.44
14:YN:103:ARG:HG3	14:YN:104:ALA:N	2.32	0.44
44:QM:2:ARG:HG3	44:QM:3:ILE:H	1.82	0.44
1:YA:2135:A:OP2	1:YA:2135:A:H8	2.00	0.44
32:QA:207:C:H2'	32:QA:207:C:O2	2.17	0.44
24:YX:3:VAL:O	24:YX:3:VAL:HG23	2.17	0.44
35:XD:100:VAL:HG21	35:XD:136:VAL:HG21	1.98	0.44
1:YA:1616:A:OP1	1:YA:1616:A:C8	2.68	0.44
1:RA:2792:A:C2	1:RA:2793:C:C2	3.06	0.44
25:YY:22:LEU:CD1	25:YY:23:ARG:HH12	2.31	0.44
11:RK:98:ARG:NE	32:QA:340:U:OP2	2.51	0.44
32:QA:342:C:H2'	32:QA:343:U:H5'	1.98	0.44
43:QL:87:LYS:NZ	43:QL:87:LYS:HB2	2.32	0.44
47:QP:56:ARG:HA	47:QP:56:ARG:HD2	1.69	0.44
24:RX:69:GLU:O	24:RX:71:ARG:N	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:21:TYR:N	33:XB:21:TYR:CD1	2.84	0.44
32:QA:1216:A:C2	32:QA:1217:C:C4	3.05	0.44
32:XA:1050:G:O2'	32:XA:1051:C:O5'	2.35	0.44
40:XI:106:ASP:OD1	40:XI:106:ASP:N	2.51	0.44
2:YB:77:U:H2'	2:YB:78:A:H5'	2.00	0.44
2:YB:99:A:N6	2:YB:100:G:C6	2.86	0.44
32:QA:284:C:H2'	32:QA:285:C:C6	2.48	0.44
14:RN:92:GLY:O	14:RN:93:GLY:C	2.54	0.44
1:YA:414:C:H4'	1:YA:1879:C:O2	2.17	0.44
1:YA:48:G:N2	1:YA:177:G:C2	2.85	0.44
1:YA:2718:G:O2'	16:YP:95:LYS:HG3	2.18	0.44
7:RG:164:ALA:C	7:RG:166:GLU:H	2.20	0.44
32:QA:1241:G:C2	32:QA:1242:G:C5	3.06	0.44
32:XA:858:G:C5	56:XA:1822:HOH:O	2.69	0.44
38:QG:80:GLY:C	38:QG:82:SER:H	2.21	0.44
5:RE:79:ARG:CG	5:RE:80:SER:N	2.80	0.44
1:RA:2553:G:H2'	1:RA:2554:U:O4'	2.17	0.44
33:XB:176:ASN:O	33:XB:178:LEU:N	2.50	0.44
4:YD:43:ASP:HB3	4:YD:44:GLY:H	1.59	0.44
32:QA:56:U:H2'	32:QA:57:G:H8	1.80	0.44
32:XA:188:C:H42	32:XA:189:A:N6	2.15	0.44
46:XO:55:LEU:HA	46:XO:58:MET:HG3	1.98	0.44
1:YA:2373:G:C2	1:YA:2374:C:C2	3.04	0.44
8:YH:45:GLU:C	8:YH:47:PHE:H	2.21	0.44
26:RZ:16:LEU:O	26:RZ:19:HIS:HB2	2.18	0.44
12:YL:3:LEU:HG	12:YL:4:ASN:N	2.33	0.44
23:RW:26:GLY:O	23:RW:27:GLY:C	2.55	0.44
1:YA:1562:U:H2'	1:YA:1563:U:O4'	2.17	0.44
33:QB:61:SER:C	33:QB:63:LYS:H	2.20	0.44
2:YB:54:G:H21	6:YF:25:MET:CE	2.29	0.44
32:QA:777:A:H2'	32:QA:778:G:C8	2.52	0.44
32:XA:853:C:H2'	32:XA:854:U:O4'	2.18	0.44
1:RA:497:A:H2'	1:RA:498:G:O4'	2.18	0.44
1:RA:58:G:N2	1:RA:70:G:C4	2.85	0.44
1:YA:1670:C:C4	1:YA:1671:U:C2	3.05	0.44
32:QA:1154:G:N1	32:QA:1155:A:C5	2.85	0.44
5:YE:102:ARG:O	5:YE:104:ALA:N	2.50	0.44
1:RA:2146:C:O4'	1:RA:2146:C:O2	2.34	0.44
34:XC:93:ILE:HG13	34:XC:93:ILE:O	2.17	0.44
1:RA:258:G:H8	1:RA:258:G:O5'	2.00	0.44
1:RA:1799:G:H8	3:RC:179:GLU:OE1	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:QT:2:ASN:O	51:QT:3:ILE:C	2.55	0.44
1:YA:2650:U:C2	1:YA:2671:G:N2	2.85	0.44
17:RQ:85:ALA:HA	17:RQ:115:ALA:CB	2.48	0.44
2:YB:24:G:H4'	2:YB:26:C:H5	1.83	0.44
7:RG:97:VAL:HG22	7:RG:102:ILE:HG12	1.99	0.44
1:YA:857:G:H4'	23:YW:43:LYS:HE2	1.99	0.44
20:YT:18:GLU:HA	20:YT:22:THR:CG2	2.48	0.44
1:YA:2214:C:O2'	1:YA:2215:C:C5'	2.57	0.44
1:YA:320:A:H5''	1:YA:321:U:OP1	2.18	0.44
39:QH:63:LYS:O	39:QH:70:VAL:HG23	2.18	0.44
12:RL:95:LEU:CD2	12:RL:100:ILE:HD11	2.43	0.44
1:YA:1064:C:C4	1:YA:1065:U:C5	3.05	0.44
1:YA:1070:A:C5	1:YA:1097:U:H4'	2.52	0.44
32:XA:327:A:O2'	32:XA:328:C:H6	2.00	0.44
1:YA:2300:C:O2'	1:YA:2301:C:H5'	2.18	0.44
4:RD:119:ALA:CB	4:RD:165:MET:HB2	2.48	0.44
45:XN:96:LYS:HD2	45:XN:96:LYS:H	1.81	0.44
1:YA:2307:G:O2'	1:YA:2308:G:O4'	2.36	0.44
9:RI:24:GLY:HA3	9:RI:25:PRO:HD3	1.86	0.44
25:YY:57:LEU:O	25:YY:57:LEU:HD13	2.17	0.44
50:XS:40:PHE:CE1	50:XS:66:VAL:HG12	2.52	0.44
1:YA:600:G:C5	1:YA:601:C:C4	3.05	0.44
1:YA:1109:C:C4	1:YA:1110:G:C6	3.06	0.44
1:YA:1251:C:O2'	56:YA:3286:HOH:O	2.21	0.44
3:RC:90:ILE:HD12	3:RC:90:ILE:HA	1.53	0.44
1:YA:2875:C:HO2'	1:YA:2876:G:H8	0.70	0.44
7:YG:85:LYS:HG3	7:YG:163:TYR:HB2	1.98	0.44
32:QA:1304:G:H5''	32:QA:1305:G:OP1	2.17	0.44
32:XA:247:G:N2	32:XA:248:C:C2	2.86	0.44
1:YA:1417:C:H2'	1:YA:1418:G:N7	2.29	0.44
1:YA:854:C:O2'	1:YA:855:G:H5'	2.18	0.44
38:XG:74:VAL:HG11	38:XG:143:MET:HB2	1.99	0.44
33:QB:116:LEU:HD13	33:QB:116:LEU:HA	1.76	0.44
1:YA:2287:A:C8	1:YA:2289:G:C8	3.06	0.44
25:RY:8:GLU:O	25:RY:9:LYS:HB3	2.17	0.44
44:QM:2:ARG:HA	44:QM:7:ASN:O	2.17	0.44
20:YT:27:SER:O	20:YT:28:ASN:HB3	2.17	0.44
20:YT:85:VAL:O	20:YT:86:THR:OG1	2.31	0.44
32:QA:210:C:H4'	32:QA:211:G:C2	2.52	0.44
3:RC:238:ASN:O	3:RC:239:PHE:HB2	2.18	0.44
15:YO:74:VAL:O	15:YO:78:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:177:G:C2'	32:QA:178:C:H5'	2.47	0.44
5:YE:127:GLU:H	5:YE:127:GLU:CD	2.21	0.44
32:QA:684:U:H1'	42:QK:39:ASN:O	2.17	0.44
5:RE:24:ASN:HD22	5:RE:24:ASN:C	2.19	0.44
32:QA:1216:A:C6	32:QA:1217:C:N4	2.86	0.44
36:XE:154:ALA:C	36:XE:156:ARG:H	2.20	0.44
36:QE:132:PRO:O	36:QE:136:VAL:HG13	2.17	0.44
34:XC:117:ASP:HA	34:XC:120:THR:HB	1.99	0.44
1:YA:1754:A:OP1	16:YP:93:LYS:HE3	2.18	0.44
1:YA:2234:G:C4	1:YA:2235:G:C8	3.06	0.44
13:YM:58:LYS:O	13:YM:60:GLN:N	2.51	0.44
17:YQ:10:ARG:HB2	17:YQ:10:ARG:NH1	2.32	0.44
32:XA:636:U:O2'	32:XA:637:C:H5'	2.18	0.44
1:YA:401:A:H2'	1:YA:402:A:C8	2.52	0.44
38:QG:78:ARG:HD2	38:QG:83:THR:HA	2.00	0.44
49:XR:41:SER:HA	49:XR:46:THR:HG22	1.99	0.44
32:XA:484:G:C5	32:XA:486:U:H1'	2.52	0.44
32:XA:484:G:C6	32:XA:486:U:H1'	2.53	0.44
1:YA:2817:U:H2'	1:YA:2818:U:O5'	2.18	0.44
1:YA:2151:U:H2'	1:YA:2152:G:C8	2.52	0.44
2:RB:94:A:C5	2:RB:95:U:C4	3.05	0.44
4:YD:5:VAL:HG21	4:YD:80:TRP:CG	2.53	0.44
1:YA:2474:U:C2'	1:YA:2475:C:O5'	2.65	0.44
32:QA:45:G:O2'	32:QA:46:G:H5'	2.17	0.44
34:XC:59:PRO:HG2	34:XC:62:SER:HB3	1.99	0.44
1:YA:135:U:H3	1:YA:144:A:H61	1.64	0.44
1:RA:1438:U:O2'	1:RA:1439:A:H5'	2.17	0.44
25:YY:56:LEU:HD22	25:YY:56:LEU:N	2.32	0.44
38:XG:79:VAL:O	38:XG:79:VAL:HG23	2.18	0.44
1:YA:1270:C:O5'	1:YA:1270:C:H6	2.00	0.44
13:RM:24:THR:O	13:RM:24:THR:HG23	2.18	0.44
1:RA:2459:A:O5'	1:RA:2459:A:C8	2.70	0.44
1:YA:1528:A:H2'	1:YA:1529:G:O4'	2.18	0.44
1:YA:1266:G:O2'	1:YA:2012:G:O6	2.21	0.44
32:QA:1342:C:O2'	40:QI:125:GLN:HG3	2.17	0.44
1:YA:2204:G:C2	1:YA:2205:A:C8	3.05	0.44
17:RQ:91:ARG:NH2	17:RQ:93:ILE:CD1	2.74	0.44
1:RA:1062:G:H2'	1:RA:1063:G:C8	2.52	0.44
24:RX:39:VAL:HG21	24:RX:42:GLU:HB3	1.99	0.44
6:RF:129:MET:HG3	6:RF:129:MET:O	2.18	0.44
23:RW:67:LYS:O	23:RW:68:PHE:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:271:G:C2	1:RA:367:G:N3	2.86	0.44
15:YO:62:LEU:HD21	15:YO:65:THR:HA	1.98	0.44
1:YA:410:G:C2	1:YA:2407:A:C6	3.05	0.44
1:YA:405:U:H3'	1:YA:406:G:C5'	2.48	0.44
1:YA:1534:U:O2	1:YA:1534:U:H3'	2.18	0.44
1:YA:1400:U:H2'	1:YA:1401:G:O4'	2.17	0.44
1:YA:1608:A:C5	1:YA:1611:C:C4	3.05	0.44
1:YA:2039:U:H2'	1:YA:2040:G:C8	2.53	0.44
1:YA:1371:G:H8	1:YA:1371:G:O5'	2.00	0.44
17:YQ:57:ARG:HH12	17:YQ:92:LYS:HE2	1.76	0.44
48:QQ:60:ILE:HG22	48:QQ:72:TRP:CE3	2.50	0.44
1:YA:474:G:H4'	1:YA:475:C:OP2	2.16	0.44
1:YA:2724:U:H5''	4:YD:123:LYS:NZ	2.32	0.44
10:YJ:64:VAL:HG22	10:YJ:68:LYS:HG3	1.99	0.44
32:XA:428:G:OP2	35:XD:9:LYS:HE3	2.18	0.44
25:YY:49:ASP:O	25:YY:52:ARG:HB2	2.16	0.44
1:YA:803:U:C2'	1:YA:804:A:H5'	2.47	0.44
47:XP:71:VAL:O	47:XP:74:LEU:HB2	2.18	0.44
1:RA:1734:G:N3	1:RA:1735:A:C8	2.86	0.44
41:XJ:15:HIS:CA	41:XJ:18:ILE:HG22	2.35	0.44
14:YN:114:GLU:HG3	14:YN:118:ARG:HD3	1.99	0.44
7:RG:44:HIS:O	7:RG:45:ALA:O	2.35	0.44
28:R1:5:ARG:HG3	28:R1:24:LYS:O	2.17	0.44
33:XB:56:LEU:HD22	33:XB:59:ILE:HD11	1.98	0.44
52:QU:10:PRO:C	52:QU:11:PHE:HD2	2.20	0.44
32:QA:70:U:H5	32:QA:94:G:HO2'	1.62	0.44
7:YG:94:ARG:CG	7:YG:104:LEU:HA	2.47	0.44
1:RA:2145:C:P	1:RA:2148:G:C6	3.11	0.44
1:YA:1268:A:H2'	1:YA:1269:A:O4'	2.18	0.44
32:XA:130:A:O2'	32:XA:131:A:O5'	2.32	0.44
1:YA:2196:C:O2'	1:YA:2197:U:H5'	2.17	0.44
1:RA:226:A:N6	1:RA:227:A:C6	2.85	0.44
46:XO:63:ARG:C	46:XO:65:LEU:H	2.21	0.44
14:YN:108:ALA:O	14:YN:110:MET:HG2	2.17	0.44
16:YP:21:PRO:HA	16:YP:46:VAL:HG12	1.98	0.44
36:QE:93:VAL:HG11	36:QE:139:THR:HG22	1.99	0.44
1:RA:2298:A:H2'	1:RA:2299:U:O4'	2.18	0.44
4:RD:110:THR:O	4:RD:201:LEU:HD12	2.18	0.44
11:RK:107:LEU:HA	11:RK:107:LEU:HD12	1.76	0.44
8:YH:90:LEU:CD2	8:YH:91:PHE:H	2.30	0.44
32:XA:158:G:C5	32:XA:164:G:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:177:G:H2'	32:QA:178:C:H5'	1.98	0.44
32:XA:1449:C:C2	32:XA:1455:G:N2	2.85	0.44
34:XC:5:HIS:NE2	34:XC:183:TYR:HE2	2.15	0.44
16:RP:19:PHE:HE2	16:RP:83:ILE:HD12	1.82	0.44
38:XG:116:ALA:C	38:XG:120:ALA:HB3	2.38	0.44
1:RA:659:G:H21	5:RE:30:GLN:HE22	1.66	0.44
32:QA:109:A:C6	32:QA:327:A:C6	3.06	0.44
32:XA:888:G:H3'	32:XA:889:A:C5'	2.47	0.44
9:YI:21:PRO:N	9:YI:22:PRO:HD2	2.33	0.44
14:RN:51:LEU:HD21	14:RN:70:THR:HG22	2.00	0.44
32:XA:1098:C:OP1	33:XB:142:LYS:HE3	2.16	0.44
4:YD:8:LYS:HE2	4:YD:197:THR:H	1.82	0.44
1:YA:1626:A:O2'	1:YA:1627:G:OP2	2.35	0.44
1:YA:547:A:H8	1:YA:548:G:H5'	1.82	0.44
43:XL:37:TYR:O	43:XL:38:THR:CG2	2.66	0.44
1:RA:863:A:H2'	1:RA:864:G:C8	2.53	0.44
32:XA:1057:G:H2'	32:XA:1058:G:O4'	2.17	0.44
1:RA:782:A:C2	3:RC:224:MET:SD	3.11	0.44
5:RE:127:GLU:N	5:RE:127:GLU:CD	2.71	0.44
32:XA:865:A:C2	32:XA:918:A:H4'	2.52	0.44
46:QO:41:HIS:CD2	46:QO:42:PHE:CD2	3.06	0.44
32:QA:753:A:H4'	32:QA:754:C:O2	2.17	0.44
38:QG:14:ASP:OD1	38:QG:17:PHE:HB2	2.16	0.44
32:QA:757:U:O2'	32:QA:879:C:H1'	2.17	0.44
1:YA:1485:U:N3	1:YA:1505:A:C2	2.85	0.44
3:RC:39:SER:C	3:RC:41:GLY:H	2.19	0.44
4:YD:166:GLY:O	4:YD:167:ASN:CB	2.65	0.44
8:RH:134:VAL:O	8:RH:135:HIS:HB2	2.18	0.44
1:YA:2787:C:O4'	4:YD:63:PRO:HA	2.17	0.44
34:QC:125:ARG:O	34:QC:126:ARG:CB	2.66	0.44
1:RA:1970:A:H4'	1:RA:1971:U:O5'	2.17	0.44
1:RA:1234:U:H2'	1:RA:1235:G:O4'	2.17	0.44
32:QA:1250:A:O3'	40:QI:68:GLY:HA2	2.17	0.44
45:QN:72:PHE:CD1	45:QN:73:LEU:N	2.86	0.44
1:YA:2262:U:H1'	1:YA:2328:A:H1'	2.00	0.44
6:YF:69:ALA:O	6:YF:70:ARG:HB2	2.18	0.44
1:RA:2765:A:N3	1:RA:2765:A:H2'	2.31	0.44
5:RE:137:LYS:O	5:RE:141:MET:HG3	2.17	0.44
1:RA:1837:C:C2	1:RA:1899:A:N6	2.86	0.44
1:YA:252:G:N2	1:YA:253:C:C2	2.85	0.44
1:RA:923:G:H21	23:RW:23:LYS:NZ	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:RW:36:ILE:O	23:RW:39:GLN:OE1	2.35	0.44
1:RA:2364:C:H4'	23:RW:55:ASP:OD1	2.17	0.44
32:XA:960:U:C5	32:XA:1225:A:H1'	2.53	0.44
45:YN:60:ARG:CZ	45:YN:70:HIS:HB3	2.48	0.44
7:RG:96:ALA:CB	7:RG:103:ASN:HB3	2.39	0.44
1:YA:249:C:H4'	1:YA:250:G:O5'	2.18	0.44
1:YA:229:C:O2'	1:YA:230:G:C5'	2.66	0.44
1:YA:1342:A:H4'	1:YA:1343:G:OP2	2.17	0.44
1:YA:1360:G:C2'	1:YA:1361:G:H5'	2.48	0.44
17:RQ:69:ARG:CG	17:RQ:69:ARG:HH21	2.31	0.44
18:RR:1:MET:HA	18:RR:42:ALA:O	2.18	0.44
32:XA:1074:G:C4'	33:XB:102:ASN:HB2	2.47	0.44
33:QB:209:VAL:O	33:QB:211:LEU:N	2.51	0.44
1:YA:1091:G:C2	1:YA:1101:U:N3	2.86	0.44
1:YA:1096:A:H3'	1:YA:1097:U:C5	2.52	0.44
9:YI:90:GLY:O	9:YI:92:PRO:HD3	2.18	0.44
1:YA:2881:U:O2'	14:YN:96:ARG:HA	2.16	0.44
1:YA:2882:A:C5'	14:YN:96:ARG:HD3	2.48	0.44
16:YP:91:VAL:HG11	16:YP:96:LEU:CD1	2.45	0.44
16:YP:91:VAL:HG11	16:YP:96:LEU:CG	2.48	0.44
1:RA:1655:A:H3'	1:RA:1656:C:C6	2.52	0.44
48:QQ:46:HIS:N	48:QQ:72:TRP:O	2.40	0.44
1:YA:478:A:C2	1:YA:480:A:C8	3.06	0.44
1:YA:182:A:O2'	1:YA:183:C:H5'	2.17	0.44
7:YG:91:VAL:O	7:YG:93:TYR:N	2.51	0.44
32:XA:82:G:N7	32:XA:89:U:C4	2.85	0.44
14:YN:72:ASP:O	14:YN:76:VAL:HG13	2.18	0.44
1:YA:59:U:H2'	1:YA:60:G:H5'	1.98	0.44
1:YA:241:A:C5	1:YA:243:U:O4	2.71	0.44
1:YA:2746:U:H1'	7:YG:138:GLN:HE21	1.83	0.44
41:XJ:18:ILE:HG12	41:XJ:18:ILE:O	2.18	0.44
11:YK:38:ILE:C	11:YK:39:ILE:HD13	2.38	0.44
20:RT:13:ALA:O	20:RT:33:LYS:N	2.50	0.44
32:XA:265:G:O2'	48:XQ:67:SER:HA	2.17	0.44
1:RA:1058:U:O2'	9:RI:117:THR:HG23	2.17	0.44
44:XM:18:LEU:HD12	44:XM:18:LEU:H	1.83	0.44
20:RT:40:LYS:CA	20:RT:43:ILE:HG23	2.47	0.44
20:RT:49:LYS:HB2	20:RT:50:LEU:HD12	2.00	0.44
32:QA:1305:G:O2'	32:QA:1306:A:H8	2.00	0.44
33:QB:107:ARG:O	33:QB:110:ILE:HB	2.18	0.44
33:QB:90:PHE:O	33:QB:149:GLY:HA3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1298:C:H2'	1:YA:1299:G:O4'	2.17	0.44
25:RY:44:LYS:O	25:RY:47:ARG:HB3	2.18	0.44
1:YA:1026:G:O2'	1:YA:1027:A:H5'	2.17	0.44
12:YL:110:VAL:HG23	12:YL:126:ARG:O	2.18	0.44
32:XA:198:G:H1'	32:XA:199:A:H5'	1.99	0.44
1:YA:1232:G:C4	1:YA:1233:C:C5	3.05	0.44
44:QM:2:ARG:O	44:QM:7:ASN:O	2.36	0.44
35:XD:197:HIS:O	35:XD:201:GLU:HG3	2.17	0.44
32:XA:184:G:C6	32:XA:185:U:O4	2.71	0.44
15:RO:51:ALA:O	15:RO:74:VAL:HG13	2.17	0.44
13:RM:2:LEU:O	13:RM:3:GLN:HB3	2.17	0.44
1:RA:2822:G:OP2	4:RD:115:GLY:O	2.35	0.44
32:QA:144:G:N2	32:QA:179:A:H1'	2.33	0.44
6:YF:41:GLU:O	6:YF:43:ILE:N	2.51	0.44
1:RA:1866:A:C2	1:RA:1876:A:C5	3.06	0.44
40:QI:26:LYS:HE2	40:QI:26:LYS:HB3	1.86	0.44
43:XL:80:LEU:HD23	43:XL:97:VAL:CG2	2.43	0.44
40:QI:21:LYS:HE3	40:QI:21:LYS:HB3	1.89	0.44
41:XJ:25:ILE:CG2	41:XJ:25:ILE:O	2.64	0.44
32:QA:855:U:H2'	32:QA:856:C:C6	2.53	0.44
47:QP:52:LEU:HD12	47:QP:52:LEU:N	2.32	0.44
8:RH:27:ARG:NH1	24:RX:59:ASP:O	2.51	0.44
15:YO:17:LYS:HE2	15:YO:21:LEU:HD11	1.99	0.44
1:YA:1867:G:C2	1:YA:1868:C:C2	3.06	0.44
14:RN:93:GLY:C	14:RN:95:THR:H	2.21	0.44
1:YA:2237:G:H5''	1:YA:2238:G:OP1	2.18	0.44
40:QI:40:ARG:N	40:QI:44:ARG:HA	2.33	0.44
11:RK:51:LYS:HE3	11:RK:52:VAL:HG12	1.99	0.44
45:XN:68:ARG:HG3	45:XN:69:PRO:CD	2.47	0.44
25:RY:39:GLN:HB2	25:RY:41:HIS:HD2	1.80	0.44
40:QI:18:VAL:HG22	40:QI:64:ILE:CG2	2.48	0.44
39:XH:46:GLU:N	39:XH:63:LYS:HG3	2.32	0.44
39:XH:82:LEU:HG	43:XL:3:VAL:HG11	2.00	0.44
32:QA:592:G:C6	32:QA:648:A:C6	3.06	0.44
41:QJ:52:LEU:HD23	41:QJ:62:ARG:CG	2.48	0.44
1:YA:2869:G:H2'	1:YA:2870:C:O4'	2.17	0.44
5:RE:8:ALA:O	5:RE:9:GLN:C	2.56	0.44
1:RA:848:C:H2'	1:RA:849:A:H8	1.81	0.44
22:YV:44:HIS:CD2	22:YV:85:LYS:HB2	2.53	0.44
3:YC:120:ASP:CG	3:YC:121:ALA:N	2.71	0.44
11:YK:25:LEU:H	11:YK:25:LEU:HD23	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:YI:132:ALA:CA	9:YI:137:LEU:HD12	2.48	0.44
2:RB:15:A:O2'	2:RB:16:G:H5'	2.17	0.44
1:YA:817:C:O2'	1:YA:839:U:H5''	2.17	0.44
33:XB:128:LEU:HB3	33:XB:131:LYS:HB3	1.99	0.44
1:RA:827:U:H2'	1:RA:2068:U:C2	2.53	0.44
1:YA:773:U:H4'	3:YC:46:GLY:HA3	1.99	0.44
1:RA:2722:G:H4'	14:RN:4:ARG:HB2	2.00	0.44
1:YA:965:C:H5''	56:YA:3346:HOH:O	2.16	0.44
38:QG:6:ILE:HB	38:QG:7:GLY:H	1.57	0.44
32:XA:762:U:O5'	32:XA:762:U:H6	1.99	0.44
1:RA:1122:G:N3	1:RA:1122:G:H2'	2.31	0.44
14:RN:30:ARG:HB2	14:RN:30:ARG:HE	1.57	0.44
1:RA:1193:G:O2'	1:RA:1194:A:H5'	2.17	0.44
1:RA:2315:G:O2'	1:RA:2316:G:H5'	2.17	0.44
24:RX:38:TRP:HE3	24:RX:45:PHE:CE2	2.35	0.44
1:YA:1565:C:H3'	3:YC:17:LYS:CE	2.21	0.44
1:RA:2352:A:C2	1:RA:2366:A:C2	3.05	0.44
23:RW:22:VAL:O	23:RW:23:LYS:O	2.35	0.44
23:RW:22:VAL:CG1	23:RW:25:PHE:CE2	3.01	0.44
32:XA:932:C:O2	32:XA:932:C:H2'	2.18	0.44
32:XA:978:A:C5	32:XA:1319:A:C2	3.06	0.44
1:RA:2780:G:OP2	10:RJ:120:ARG:HD3	2.18	0.44
1:YA:2298:A:C6	1:YA:2321:U:C4	3.05	0.44
1:YA:2385:C:O2'	1:YA:2386:A:H8	2.01	0.44
30:Y3:28:LEU:O	30:Y3:29:ARG:CB	2.66	0.44
1:YA:1400:U:C2'	1:YA:1401:G:O4'	2.64	0.44
1:YA:2209:G:C6	1:YA:2216:G:N1	2.86	0.44
1:YA:333:G:O2'	1:YA:334:C:O5'	2.34	0.44
1:YA:1080:A:O2'	9:YI:126:ARG:O	2.35	0.44
48:QQ:59:GLU:HG2	48:QQ:60:ILE:H	1.83	0.44
1:YA:477:A:H2'	1:YA:478:A:C8	2.52	0.44
1:YA:2303:G:H2'	1:YA:2304:G:H8	1.83	0.44
10:YJ:27:ARG:O	10:YJ:30:THR:HG22	2.17	0.44
14:YN:84:GLY:O	14:YN:88:ALA:HB2	2.18	0.44
1:YA:352:A:N3	1:YA:353:C:H1'	2.31	0.44
1:YA:2665:A:C2	1:YA:2666:C:N3	2.85	0.44
1:YA:1935:G:N2	1:YA:1964:G:OP2	2.51	0.44
1:YA:614:A:H4'	1:YA:616:A:N7	2.33	0.44
1:YA:607:U:H5	1:YA:619:G:C6	2.36	0.44
1:YA:671:C:H1'	1:YA:672:C:H5'	1.99	0.44
3:RC:106:PRO:HB3	3:RC:141:HIS:NE2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1204:A:O4'	1:YA:1206:G:N7	2.51	0.44
44:XM:11:HIS:CE1	44:XM:43:LYS:HD2	2.52	0.44
7:YG:94:ARG:HG2	7:YG:104:LEU:HA	1.99	0.44
33:QB:103:TRP:C	33:QB:105:THR:N	2.69	0.44
32:QA:1054:C:O2'	32:QA:1055:A:OP2	2.29	0.44
1:RA:2887:A:H3'	1:RA:2888:C:C6	2.52	0.44
1:YA:1714:U:C3'	1:YA:1715:G:C5'	2.90	0.44
11:YK:104:THR:O	11:YK:107:LEU:HD22	2.18	0.44
43:QL:62:VAL:HG21	43:QL:94:TYR:HE2	1.78	0.44
32:XA:155:A:C4	32:XA:167:A:C2	3.06	0.44
32:QA:1410:A:H2'	32:QA:1411:C:C6	2.53	0.44
1:RA:481:G:O2'	1:RA:507:A:N1	2.45	0.44
1:YA:633:A:O5'	1:YA:633:A:H8	1.99	0.44
6:YF:103:ILE:HD12	6:YF:103:ILE:N	2.33	0.44
20:YT:5:GLU:HA	20:YT:8:LEU:HD12	2.00	0.44
1:YA:1285:A:C6	1:YA:1329:U:C5	3.05	0.44
1:RA:1140:C:OP1	10:RJ:25:LEU:O	2.36	0.44
32:XA:567:G:N2	56:XA:1819:HOH:O	2.36	0.44
7:YG:44:HIS:O	7:YG:45:ALA:HB3	2.17	0.44
32:XA:812:G:N3	32:XA:812:G:H2'	2.33	0.44
1:RA:1906:G:C6	1:RA:1929:G:N2	2.86	0.44
9:YI:113:ALA:HB2	9:YI:124:MET:HB3	2.00	0.44
17:YQ:30:VAL:HG12	17:YQ:33:VAL:H	1.83	0.44
36:XE:148:SER:O	36:XE:151:MET:HB3	2.18	0.44
38:XG:77:ARG:HA	38:XG:77:ARG:HD3	1.59	0.44
43:QL:2:THR:O	43:QL:5:GLN:HB2	2.18	0.44
32:QA:1246:A:H2'	32:QA:1247:U:O4'	2.18	0.44
42:QK:109:ILE:HB	52:QU:5:VAL:HG22	1.99	0.44
1:YA:425:G:C4	1:YA:426:C:C5	3.06	0.44
1:RA:568:U:P	12:RL:36:LYS:HE3	2.58	0.44
16:RP:85:VAL:HG13	16:RP:86:LYS:N	2.32	0.44
42:XK:19:VAL:HG12	42:XK:34:THR:HG22	1.99	0.44
1:RA:1786:A:C6	1:RA:1938:A:C2	3.06	0.44
32:XA:1270:G:C4	32:XA:1271:A:C8	3.06	0.44
32:QA:417:G:H2'	32:QA:418:C:C6	2.53	0.44
9:RI:59:THR:HG22	9:RI:61:TYR:CE2	2.52	0.44
1:RA:630:G:N2	1:RA:633:A:OP2	2.46	0.44
1:RA:108:G:O2'	1:RA:109:C:H5'	2.18	0.44
8:YH:53:GLU:C	8:YH:55:GLU:H	2.20	0.44
1:RA:1486:U:H2'	1:RA:1487:U:H6	1.82	0.44
1:YA:2151:U:H2'	1:YA:2152:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:815:C:OP2	18:YR:85:LYS:HE2	2.18	0.44
1:YA:2253:G:C6	1:YA:2254:C:C4	3.06	0.44
32:XA:1228:C:HO2'	32:XA:1229:A:P	2.40	0.44
1:YA:2674:G:H2'	1:YA:2675:A:C8	2.52	0.44
37:XF:29:ILE:HG22	37:XF:34:GLY:O	2.18	0.44
3:YC:176:ARG:C	3:YC:178:GLY:H	2.21	0.44
32:XA:855:U:H2'	32:XA:856:C:C6	2.52	0.44
9:YI:63:ASP:O	9:YI:64:ARG:HB2	2.18	0.44
42:QK:15:VAL:HG13	42:QK:78:ILE:CG2	2.48	0.44
32:XA:866:C:C4	32:XA:867:G:H1'	2.53	0.44
43:QL:120:ARG:C	43:QL:122:LYS:H	2.21	0.44
1:RA:2072:C:H6	1:RA:2072:C:H5''	1.83	0.44
1:YA:2832:U:H5''	1:YA:2834:G:H5'	2.00	0.44
32:QA:799:G:H2'	32:QA:800:G:O4'	2.18	0.44
1:YA:92:U:C6	1:YA:93:G:C8	3.05	0.44
39:QH:46:GLU:O	39:QH:47:ASP:HB3	2.18	0.44
32:XA:688:G:C4	32:XA:700:G:C2	3.06	0.44
1:RA:2026:U:H2'	1:RA:2027:G:O4'	2.18	0.44
1:RA:43:G:C2	1:RA:437:U:C2	3.05	0.44
52:XU:16:ARG:NE	52:XU:16:ARG:HA	2.25	0.44
7:RG:83:THR:C	7:RG:84:LYS:CD	2.85	0.44
23:YW:35:ILE:O	23:YW:36:ILE:O	2.36	0.44
41:QJ:53:ILE:HG12	41:QJ:53:ILE:O	2.16	0.44
3:YC:149:LYS:CE	3:YC:152:GLN:NE2	2.81	0.44
36:QE:121:ASN:CG	36:QE:122:VAL:N	2.71	0.44
32:QA:841:C:N3	32:QA:843:U:H5'	2.32	0.44
1:YA:1071:G:H8	1:YA:1071:G:OP1	2.00	0.44
31:R4:14:CYS:HA	31:R4:26:ILE:O	2.17	0.44
29:Y2:43:THR:O	29:Y2:44:VAL:C	2.56	0.44
32:QA:373:A:O2'	32:QA:374:A:C5'	2.62	0.44
1:YA:1661:G:C5	1:YA:1662:U:C5	3.06	0.44
5:YE:165:HIS:C	5:YE:167:VAL:H	2.22	0.44
1:YA:2447:G:N7	1:YA:2500:U:H2'	2.33	0.44
5:YE:58:LYS:N	5:YE:58:LYS:HD3	2.33	0.44
1:YA:616:A:H4'	5:YE:101:TYR:OH	2.17	0.44
1:RA:1394:U:C2'	1:RA:1395:A:O5'	2.64	0.44
32:QA:66:A:H2'	32:QA:67:C:H5'	1.99	0.44
1:YA:1204:A:N1	1:YA:1241:A:N1	2.65	0.44
40:XI:118:ARG:NH2	40:XI:122:ARG:NE	2.65	0.44
7:RG:36:LEU:HD22	7:RG:36:LEU:N	2.32	0.44
38:QG:35:LYS:O	38:QG:39:GLU:HG2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:466:A:H8	32:QA:466:A:H5''	1.83	0.44
1:YA:2021:C:H2'	1:YA:2021:C:O2	2.18	0.44
1:YA:533:G:C5	1:YA:534:U:C4	3.06	0.44
20:RT:65:GLY:N	20:RT:79:ASP:OD1	2.49	0.44
28:Y1:5:ARG:HH21	28:Y1:23:THR:HB	1.83	0.44
4:YD:173:GLN:NE2	4:YD:173:GLN:HA	2.33	0.44
21:RU:44:HIS:O	21:RU:45:GLN:C	2.57	0.44
1:YA:633:A:C5	1:YA:634:C:H1'	2.52	0.44
32:QA:36:C:H2'	32:QA:37:U:O4'	2.18	0.44
40:QI:110:VAL:O	40:QI:110:VAL:HG23	2.16	0.44
12:YL:18:ARG:HA	12:YL:18:ARG:NE	2.33	0.44
8:YH:72:ILE:CD1	8:YH:140:ALA:HA	2.47	0.44
1:YA:2142:A:N3	1:YA:2144:G:OP1	2.51	0.44
32:XA:1360:A:C2	32:XA:1361:G:H1'	2.52	0.44
1:RA:2199:A:H5'	1:RA:2200:C:C5	2.52	0.44
1:YA:983:A:C6	1:YA:984:A:C2	3.05	0.44
51:QT:11:ILE:HG12	51:QT:12:GLN:N	2.33	0.44
51:QT:8:LYS:HA	51:QT:11:ILE:HG23	2.00	0.44
14:RN:32:GLU:CA	14:RN:115:LEU:HD12	2.44	0.44
32:QA:222:C:O2	32:QA:223:A:C8	2.71	0.44
40:XI:112:ARG:HH22	41:XJ:64:GLN:HE21	1.66	0.44
32:XA:1068:G:H2'	32:XA:1069:C:H5'	1.99	0.44
13:YM:12:MET:HG3	13:YM:72:PRO:HG2	2.00	0.44
1:YA:1735:A:C6	1:YA:1736:U:C4	3.06	0.44
40:QI:57:VAL:C	40:QI:58:GLU:HG2	2.37	0.44
22:YV:47:VAL:HG12	22:YV:47:VAL:O	2.17	0.44
1:RA:637:A:H4'	1:RA:638:G:O5'	2.17	0.44
1:YA:90:U:C4	1:YA:91:A:C5	3.06	0.44
25:YY:4:LYS:HZ2	25:YY:4:LYS:HB2	1.79	0.44
32:QA:1348:U:H4'	40:QI:121:ARG:HG2	1.99	0.44
40:QI:42:THR:O	40:QI:43:ALA:HB2	2.17	0.44
32:QA:1034:G:C6	32:QA:1035:A:C6	3.05	0.44
12:YL:62:PRO:HG2	30:Y3:24:LYS:HB3	1.98	0.44
1:YA:2:G:H2'	1:YA:3:U:O4'	2.18	0.44
1:YA:1411:U:H2'	1:YA:1412:U:O4'	2.18	0.44
1:YA:591:U:C2	1:YA:592:A:C8	3.06	0.44
39:XH:41:GLU:C	39:XH:43:GLY:N	2.70	0.44
15:RO:2:ASP:HB3	15:RO:5:SER:OG	2.17	0.44
32:QA:1272:G:C6	32:QA:1273:C:C4	3.04	0.44
32:QA:832:G:C6	32:QA:833:G:N7	2.86	0.44
44:QM:14:ALA:HB1	44:QM:33:LEU:HD21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1479:C:H2'	32:XA:1480:A:H8	1.83	0.44
37:QF:14:GLN:OE1	37:QF:17:GLN:HB2	2.18	0.44
1:RA:2211:A:HO2'	1:RA:2212:A:P	2.41	0.44
1:RA:670:A:H4'	1:RA:671:C:O5'	2.18	0.44
1:YA:1833:C:C2	1:YA:1834:U:C6	3.06	0.44
34:XC:119:ILE:HG22	34:XC:123:LEU:HD12	2.00	0.44
41:XJ:8:ILE:O	41:XJ:8:ILE:HG13	2.18	0.44
32:QA:153:C:O2'	32:QA:154:U:H5'	2.18	0.44
38:QG:7:GLY:O	38:QG:8:GLN:HB3	2.18	0.44
29:R2:24:THR:O	29:R2:25:LYS:C	2.55	0.44
1:YA:993:G:O2'	1:YA:994:C:H5'	2.18	0.44
35:XD:38:GLY:O	35:XD:40:HIS:N	2.51	0.44
5:YE:112:LEU:HD12	5:YE:118:LEU:HD13	2.00	0.44
1:RA:2802:G:H2'	1:RA:2803:G:O4'	2.18	0.44
7:RG:27:GLY:O	7:RG:28:LYS:C	2.56	0.44
16:RP:28:LYS:HB2	16:RP:82:SER:HB3	1.99	0.44
4:YD:1:MET:HB3	4:YD:205:PRO:HG3	2.00	0.44
2:RB:37:C:C5	2:RB:38:C:C4	3.06	0.44
32:XA:1471:U:O2'	32:XA:1472:U:H5'	2.17	0.44
1:YA:1463:C:H2'	1:YA:1464:G:C8	2.53	0.44
24:RX:39:VAL:HG23	24:RX:40:GLU:N	2.33	0.44
6:RF:35:LEU:CD1	6:RF:88:VAL:HB	2.48	0.44
1:RA:2366:A:H2'	1:RA:2367:G:O4'	2.18	0.44
46:QO:63:ARG:CD	46:QO:87:ARG:HH12	2.29	0.44
1:YA:2349:G:OP1	30:Y3:44:ARG:NH2	2.51	0.44
51:QT:33:LYS:HA	51:QT:33:LYS:HD3	1.64	0.44
32:XA:703:G:H4'	32:XA:704:A:H5'	2.00	0.44
1:YA:409:G:O2'	1:YA:410:G:H5'	2.18	0.44
3:YC:103:ILE:HD12	3:YC:104:LEU:N	2.28	0.44
33:QB:95:TRP:CD1	33:QB:171:ALA:HB2	2.53	0.44
33:QB:95:TRP:CZ2	33:QB:99:MET:HG2	2.53	0.44
1:YA:1374:G:H2'	1:YA:1375:U:O4'	2.18	0.44
1:YA:308:G:N1	1:YA:309:A:C2	2.86	0.44
1:YA:83:A:H2	1:YA:103:A:H62	1.65	0.44
36:QE:104:ILE:HG13	36:QE:114:LEU:HD23	2.00	0.44
32:QA:843:U:O5'	32:QA:844:G:OP2	2.36	0.44
1:YA:1071:G:O4'	1:YA:1088:A:O2'	2.35	0.44
1:RA:244:A:C2	1:RA:255:A:C4	3.06	0.44
25:YY:44:LYS:HZ1	25:YY:48:ARG:NE	2.16	0.44
1:YA:1935:G:H1'	1:YA:1964:G:H21	1.78	0.44
39:XH:17:GLN:NE2	39:XH:71:VAL:HG23	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2744:G:C6	1:YA:2761:A:N6	2.86	0.44
11:YK:60:ALA:CB	11:YK:86:LEU:HA	2.48	0.44
1:RA:1340:U:C4'	1:RA:1341:G:OP2	2.54	0.44
25:YY:28:LEU:CD2	25:YY:42:LEU:HD13	2.48	0.44
40:QI:129:ARG:HA	40:QI:129:ARG:HH11	1.83	0.44
1:RA:2134:A:C6	1:RA:2135:A:C6	3.05	0.44
32:XA:451:A:O4'	32:XA:452:A:C8	2.71	0.44
32:QA:100:G:C6	32:QA:101:A:C6	3.06	0.44
1:YA:915:C:O2'	1:YA:916:G:H5'	2.17	0.44
1:RA:2148:G:HO2'	1:RA:2149:U:P	2.41	0.44
6:YF:45:ASP:O	6:YF:47:LYS:N	2.50	0.44
37:XF:64:VAL:HG23	37:XF:65:GLU:N	2.32	0.44
1:RA:511:U:H5	1:RA:512:G:C5	2.36	0.44
40:XI:44:ARG:HH21	40:XI:48:ARG:HH12	1.62	0.44
1:YA:2004:G:C5	1:YA:2005:A:C8	3.06	0.44
10:RJ:64:VAL:CG1	10:RJ:65:THR:N	2.81	0.44
32:XA:1331:G:H2'	32:XA:1332:A:OP2	2.18	0.44
1:YA:2847:U:H2'	1:YA:2848:G:C5'	2.44	0.44
32:QA:212:G:C2'	32:QA:213:G:H8	2.28	0.44
32:XA:16:A:O4'	36:XE:21:SER:HB3	2.18	0.44
1:YA:1368:G:H8	1:YA:1368:G:O5'	2.00	0.44
1:RA:449:A:H4'	17:RQ:2:ARG:NH1	2.33	0.44
32:QA:858:G:O6	32:QA:869:G:C8	2.71	0.44
1:YA:1931:U:OP2	1:YA:1968:G:N2	2.43	0.44
32:XA:764:C:C4	32:XA:812:G:O6	2.71	0.44
31:Y4:16:ILE:HA	31:Y4:24:ARG:O	2.18	0.44
1:RA:1090:A:C6	1:RA:1091:G:N7	2.86	0.44
6:RF:27:VAL:HG13	6:RF:27:VAL:O	2.18	0.44
32:XA:150:U:O2'	32:XA:151:A:H5'	2.17	0.44
5:RE:131:THR:CG2	5:RE:160:ALA:HA	2.48	0.44
33:XB:115:ASP:O	33:XB:119:GLN:CB	2.66	0.44
1:RA:1317:G:C2	1:RA:1336:A:C2	3.06	0.44
1:RA:666:A:C4	1:RA:667:U:C5	3.06	0.44
32:QA:663:A:H5'	32:QA:836:G:OP1	2.17	0.44
1:YA:64:A:P	20:YT:77:ARG:HG2	2.58	0.44
47:XP:44:SER:O	47:XP:46:LYS:HG3	2.18	0.44
7:YG:152:ARG:HD2	7:YG:153:PRO:HD2	2.00	0.44
21:YU:27:VAL:O	21:YU:28:LEU:HD23	2.17	0.44
7:RG:166:GLU:C	7:RG:166:GLU:OE2	2.57	0.44
1:YA:863:A:C2	1:YA:864:G:C4	3.05	0.44
32:QA:1526:G:OP2	52:QU:38:GLU:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:RP:37:LYS:CD	16:RP:37:LYS:N	2.81	0.44
1:RA:756:A:H2'	1:RA:757:G:O4'	2.18	0.44
6:YF:71:LYS:O	6:YF:72:SER:HB3	2.17	0.44
32:XA:174:A:C2'	32:XA:175:C:H5'	2.48	0.44
32:XA:582:C:C4	32:XA:760:G:C6	3.05	0.44
1:RA:2665:A:C2	1:RA:2666:C:C2	3.06	0.44
32:QA:1517:G:C6	32:QA:1518:A:C6	3.05	0.44
1:YA:1670:C:N4	1:YA:1671:U:N3	2.66	0.44
1:YA:2834:G:H1'	1:YA:2879:A:N6	2.32	0.44
1:RA:1770:G:C4'	56:RA:3729:HOH:O	2.66	0.44
47:XP:32:PHE:CD1	47:XP:32:PHE:C	2.91	0.44
5:YE:151:GLY:HA3	5:YE:191:ASP:HB3	2.00	0.44
40:QI:34:LEU:HD11	40:QI:47:VAL:HG21	2.00	0.44
50:QS:64:GLU:CD	50:QS:64:GLU:N	2.70	0.44
6:RF:169:LEU:HD12	6:RF:169:LEU:HA	1.81	0.44
43:QL:82:ARG:HG2	43:QL:82:ARG:NH1	2.33	0.44
4:YD:60:VAL:O	4:YD:60:VAL:HG13	2.18	0.44
32:QA:557:G:C6	32:QA:558:G:N1	2.86	0.44
33:QB:16:GLY:HA2	33:QB:202:ASN:CB	2.47	0.43
32:XA:981:U:C5	32:XA:982:U:C2	3.06	0.43
1:YA:858:G:C5	1:YA:2268:A:N1	2.86	0.43
1:YA:2297:A:C2	1:YA:2298:A:N7	2.86	0.43
23:YW:25:PHE:CD1	23:YW:25:PHE:C	2.92	0.43
1:RA:1178:C:H2'	1:RA:1179:G:C8	2.53	0.43
1:YA:826:U:C5	1:YA:828:U:H6	2.36	0.43
1:YA:311:A:H1'	1:YA:332:A:N9	2.33	0.43
21:YU:35:VAL:CG1	21:YU:36:GLU:H	2.20	0.43
3:YC:145:MET:HE2	3:YC:181:ARG:HH22	1.82	0.43
33:QB:53:LEU:CA	33:QB:56:LEU:HB3	2.48	0.43
1:YA:1069:A:C2	1:YA:1072:C:O2'	2.66	0.43
2:YB:42:C:O2	6:YF:89:THR:N	2.50	0.43
5:RE:190:ALA:C	5:RE:192:ALA:N	2.70	0.43
10:YJ:30:THR:CG2	10:YJ:31:GLU:N	2.81	0.43
3:YC:203:VAL:O	3:YC:205:GLY:N	2.51	0.43
1:YA:1779:U:C5	1:YA:1784:A:N7	2.86	0.43
1:YA:1965:C:C5'	1:YA:1966:A:H5''	2.41	0.43
32:QA:407:U:H2'	32:QA:408:A:C8	2.53	0.43
37:QF:9:MET:CE	37:QF:59:TYR:CE2	3.01	0.43
1:YA:61:C:C2	1:YA:94:A:C2	3.06	0.43
1:RA:1604:C:H2'	1:RA:1605:C:H6	1.83	0.43
1:RA:2150:C:C5	1:RA:2151:U:O4	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1304:A:C6	1:YA:1305:C:C4	3.06	0.43
32:QA:1160:G:C6	32:QA:1181:G:O6	2.71	0.43
32:QA:1162:C:H2'	32:QA:1163:A:C8	2.53	0.43
1:YA:2201:G:C5	1:YA:2223:G:C2	3.06	0.43
32:QA:464:U:C2	32:QA:466:A:C5'	2.94	0.43
1:RA:1745:A:C2	1:RA:1746:A:C8	3.06	0.43
36:XE:39:GLY:HA2	36:XE:45:VAL:HA	2.00	0.43
1:RA:480:A:OP2	21:RU:43:LYS:HD2	2.18	0.43
32:QA:501:C:H2'	32:QA:502:A:C8	2.53	0.43
32:XA:1303:C:N4	32:XA:1304:G:C2	2.86	0.43
1:RA:1821:A:H2'	1:RA:1822:C:C6	2.53	0.43
1:RA:2794:C:H2'	1:RA:2795:C:C6	2.53	0.43
32:XA:158:G:C4	32:XA:164:G:C2	3.05	0.43
35:QD:57:LYS:HZ2	35:QD:61:ARG:HD3	1.83	0.43
46:QO:73:ASP:CG	46:QO:76:ARG:HG3	2.38	0.43
1:RA:356:G:C6	1:RA:357:C:C4	3.06	0.43
1:RA:358:U:H2'	1:RA:359:G:O4'	2.18	0.43
25:RY:2:LYS:HE3	25:RY:52:ARG:NH2	2.33	0.43
40:QI:27:ILE:HG13	40:QI:62:LEU:CD2	2.46	0.43
7:YG:72:ASN:OD1	7:YG:73:SER:N	2.51	0.43
1:YA:1734:G:C2'	1:YA:1735:A:C8	2.99	0.43
32:XA:148:G:N1	32:XA:149:A:C5	2.86	0.43
36:QE:137:ARG:O	36:QE:141:ASP:HB2	2.18	0.43
30:R3:44:ARG:N	30:R3:45:PRO:CD	2.79	0.43
43:QL:6:LEU:HD23	48:QQ:33:TYR:CE2	2.53	0.43
20:YT:7:LEU:O	20:YT:10:VAL:HG13	2.18	0.43
1:YA:2688:G:H1'	1:YA:2721:A:H61	1.83	0.43
32:XA:458:U:H6	32:XA:458:U:OP2	2.01	0.43
26:RZ:23:LEU:HD21	26:RZ:53:MET:HE1	2.00	0.43
1:YA:1907:G:C2	1:YA:1924:C:O2	2.71	0.43
5:RE:48:THR:O	5:RE:52:VAL:HG23	2.17	0.43
42:XK:82:GLU:OE2	42:XK:82:GLU:N	2.51	0.43
1:YA:709:U:H2'	1:YA:710:U:H6	1.82	0.43
1:YA:86:G:O2'	1:YA:87:U:H6	2.01	0.43
1:YA:1901:A:OP2	3:YC:252:LYS:HE3	2.18	0.43
31:R4:23:ILE:HB	31:R4:38:GLY:HA3	2.00	0.43
32:XA:1343:G:H2'	32:XA:1344:C:C6	2.52	0.43
32:QA:1190:G:P	34:QC:4:VAL:HG12	2.58	0.43
32:QA:613:C:C2	32:QA:614:C:C5	3.06	0.43
32:QA:1527:U:OP2	52:QU:38:GLU:HG2	2.17	0.43
32:XA:1509:C:H2'	32:XA:1510:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:RB:2:G:C2	2:RB:119:A:N3	2.86	0.43
1:RA:2373:G:H2'	1:RA:2374:C:H6	1.82	0.43
1:YA:2461:A:C2	1:YA:2490:G:N2	2.86	0.43
34:QC:190:THR:O	34:QC:192:TYR:N	2.51	0.43
1:YA:1753:G:N2	1:YA:1756:G:OP2	2.49	0.43
47:XP:48:GLU:CD	47:XP:51:ARG:HB2	2.37	0.43
39:XH:30:LYS:O	39:XH:33:VAL:HB	2.18	0.43
1:RA:1404:C:O2'	1:RA:1405:U:H5'	2.18	0.43
8:RH:86:ASP:O	8:RH:87:GLU:C	2.56	0.43
32:QA:593:U:O2'	32:QA:594:U:H5'	2.18	0.43
26:YZ:5:LYS:HG2	26:YZ:36:GLU:HB2	2.00	0.43
1:RA:674:G:O2'	5:RE:69:ARG:HD2	2.18	0.43
1:YA:1751:U:H2'	1:YA:1752:C:C6	2.53	0.43
22:YV:32:GLY:O	22:YV:33:GLY:C	2.56	0.43
13:RM:136:MET:HE1	22:RV:57:TYR:HD2	1.83	0.43
8:RH:21:VAL:HG22	8:RH:22:LYS:N	2.33	0.43
32:XA:525:C:N4	32:XA:526:C:N4	2.66	0.43
1:YA:1242:U:H2'	1:YA:1243:C:C6	2.53	0.43
43:XL:20:VAL:O	43:XL:20:VAL:HG23	2.18	0.43
6:YF:48:LEU:HD23	6:YF:48:LEU:H	1.82	0.43
1:YA:2099:U:O2	1:YA:2099:U:H2'	2.18	0.43
1:RA:2861:U:C2	1:RA:2862:G:C8	3.06	0.43
1:RA:1062:G:C8	1:RA:1088:A:C8	3.06	0.43
1:RA:2846:G:P	16:RP:51:ASN:HB2	2.57	0.43
18:YR:49:ILE:C	18:YR:51:VAL:N	2.71	0.43
36:XE:100:GLU:O	36:XE:102:THR:HG23	2.18	0.43
33:QB:186:VAL:O	33:QB:186:VAL:CG2	2.65	0.43
32:XA:1316:G:N2	32:XA:1318:A:C8	2.86	0.43
1:RA:528:A:C2	1:RA:2043:C:C4'	2.97	0.43
1:YA:229:C:O2'	1:YA:230:G:C4'	2.66	0.43
1:YA:1388:G:N3	1:YA:1389:G:C8	2.86	0.43
1:YA:301:G:N1	1:YA:302:C:N4	2.65	0.43
1:YA:338:G:H2'	1:YA:339:U:H5'	2.00	0.43
1:YA:2887:A:C4	27:Y0:39:ARG:NH1	2.85	0.43
1:YA:2314:A:N1	1:YA:2315:G:C5	2.86	0.43
1:YA:481:G:OP2	21:YU:43:LYS:HA	2.18	0.43
21:YU:43:LYS:HG2	21:YU:45:GLN:HG2	2.00	0.43
34:XC:11:LEU:HD13	34:XC:17:TRP:NE1	2.32	0.43
3:YC:13:ARG:HG2	3:YC:14:HIS:CD2	2.52	0.43
1:YA:351:C:N4	1:YA:352:A:N6	2.66	0.43
52:QU:9:GLU:CB	52:QU:10:PRO:HD3	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:71:A:C5	32:QA:100:G:C5	3.05	0.43
32:XA:598:U:H2'	32:XA:599:C:C6	2.52	0.43
32:QA:1160:G:C2	32:QA:1161:C:C5	3.06	0.43
2:RB:90:C:C5'	2:RB:90:C:H6	2.23	0.43
1:RA:580:U:O2'	1:RA:581:C:H5'	2.18	0.43
8:YH:68:ARG:CD	8:YH:71:LYS:HB2	2.43	0.43
3:YC:221:GLY:O	3:YC:224:MET:HG2	2.18	0.43
1:YA:2519:U:C2	1:YA:2542:A:C6	3.06	0.43
1:YA:2765:A:C3'	1:YA:2766:A:H5'	2.46	0.43
1:YA:1286:A:C8	1:YA:1289:C:N4	2.85	0.43
12:RL:53:GLY:O	12:RL:54:GLN:O	2.36	0.43
6:RF:39:VAL:HG13	6:RF:40:GLY:N	2.33	0.43
32:XA:1332:A:C6	32:XA:1333:A:C4	3.05	0.43
32:XA:1202:U:H2'	32:XA:1203:C:H5'	1.99	0.43
16:YP:62:LYS:HD3	16:YP:64:SER:HB2	2.00	0.43
32:QA:330:C:C5'	32:QA:330:C:H6	2.30	0.43
44:XM:82:LEU:HB2	50:XS:73:PHE:CE2	2.53	0.43
32:QA:341:C:H2'	32:QA:342:C:H6	1.82	0.43
11:RK:99:ILE:CG2	11:RK:100:PHE:N	2.79	0.43
5:RE:108:ILE:CD1	5:RE:180:LEU:HD13	2.47	0.43
34:XC:83:VAL:O	34:XC:87:ARG:N	2.51	0.43
32:XA:1449:C:H2'	32:XA:1450:U:C5'	2.47	0.43
32:XA:1066:C:C2'	32:XA:1067:A:C8	3.01	0.43
1:RA:1190:G:H5''	12:RL:32:GLY:HA2	2.00	0.43
1:RA:2849:U:N3	1:RA:2867:G:O4'	2.51	0.43
12:YL:101:ILE:HD13	12:YL:101:ILE:HA	1.81	0.43
12:RL:113:ALA:O	12:RL:114:GLY:O	2.35	0.43
37:QF:18:VAL:HB	37:QF:19:PRO:CD	2.48	0.43
16:YP:92:ARG:O	16:YP:92:ARG:CG	2.66	0.43
32:QA:751:U:H4'	46:QO:23:SER:HA	1.99	0.43
1:RA:1853:A:C5	1:RA:1889:A:C6	3.06	0.43
1:RA:871:U:H5''	13:RM:68:PHE:CZ	2.53	0.43
38:QG:20:GLU:O	38:QG:24:LYS:HG3	2.18	0.43
16:RP:103:THR:O	16:RP:104:GLY:O	2.35	0.43
9:YI:35:MET:C	9:YI:37:PHE:N	2.70	0.43
32:XA:511:C:O2'	32:XA:512:U:H5''	2.18	0.43
44:QM:113:LYS:H	44:QM:114:PRO:HD2	1.83	0.43
13:RM:46:ILE:HD12	13:RM:47:GLU:N	2.33	0.43
8:RH:52:ALA:C	8:RH:54:LEU:H	2.20	0.43
6:YF:90:LEU:HG	6:YF:98:PHE:CD2	2.53	0.43
32:XA:769:G:O2'	32:XA:770:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2688:G:H1'	1:YA:2721:A:N6	2.33	0.43
16:RP:111:GLU:CD	16:RP:111:GLU:H	2.20	0.43
8:RH:100:ALA:O	8:RH:101:ASP:C	2.56	0.43
38:QG:37:THR:O	38:QG:41:ILE:HG13	2.18	0.43
34:QC:179:ALA:HB1	34:QC:202:PHE:CE1	2.53	0.43
32:QA:1501:C:C4	32:QA:1504:G:C5	3.06	0.43
1:RA:1913:A:C2	32:QA:1494:G:C8	3.06	0.43
1:YA:56:A:C6	1:YA:57:C:N3	2.86	0.43
1:RA:1408:G:C2'	1:RA:1409:U:H5'	2.48	0.43
22:RV:66:ASP:O	22:RV:66:ASP:CG	2.57	0.43
32:XA:283:U:C4	32:XA:284:C:C4	3.06	0.43
30:Y3:9:ALA:HB1	30:Y3:13:PHE:HD2	1.83	0.43
1:RA:2727:A:C6	1:RA:2728:U:O4	2.71	0.43
42:XK:94:SER:O	42:XK:97:ARG:HB2	2.18	0.43
5:YE:3:LEU:O	5:YE:11:ALA:HA	2.17	0.43
12:YL:14:LYS:NZ	12:YL:14:LYS:HB3	2.34	0.43
32:XA:57:G:C6	32:XA:58:C:N4	2.87	0.43
10:RJ:44:TYR:HA	17:RQ:59:LEU:HD21	1.99	0.43
1:RA:2093:G:O2'	1:RA:2094:A:H5'	2.18	0.43
1:YA:1565:C:C3'	3:YC:17:LYS:HE2	2.22	0.43
2:YB:11:C:H5'	23:YW:71:LYS:HD3	2.00	0.43
32:XA:1320:C:H2'	32:XA:1321:U:O4'	2.18	0.43
1:YA:1437:C:C2	1:YA:1438:U:C5	3.05	0.43
23:YW:37:VAL:HG23	23:YW:38:ARG:CD	2.33	0.43
1:YA:2333:A:P	23:YW:76:ARG:HH12	2.42	0.43
1:YA:2359:C:H2'	1:YA:2360:G:O4'	2.18	0.43
51:QT:43:LYS:O	51:QT:46:ALA:HB3	2.19	0.43
1:YA:226:A:N6	1:YA:409:G:N2	2.66	0.43
1:YA:1912:A:N6	1:YA:1917:U:H3	2.10	0.43
1:RA:444:C:H4'	5:RE:44:ARG:HD3	2.00	0.43
1:YA:1343:G:N2	1:YA:1344:U:C2	2.86	0.43
1:YA:311:A:O2'	1:YA:312:G:P	2.76	0.43
1:YA:334:C:O2'	1:YA:335:C:OP1	2.28	0.43
36:XE:103:GLY:O	36:XE:104:ILE:CG2	2.54	0.43
6:YF:36:ASN:O	6:YF:37:MET:CB	2.66	0.43
48:QQ:60:ILE:CG2	48:QQ:61:ARG:N	2.81	0.43
48:QQ:66:LEU:HB2	48:QQ:70:LYS:HG2	2.00	0.43
32:XA:1126:U:N3	32:XA:1280:A:OP1	2.51	0.43
50:XS:40:PHE:CB	50:XS:41:PRO:CD	2.95	0.43
32:XA:1301:U:O2	32:XA:1301:U:C2'	2.62	0.43
11:YK:88:ASN:CB	11:YK:91:SER:HB2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:948:C:O2'	1:RA:949:G:H5'	2.18	0.43
4:RD:12:THR:HG23	4:RD:13:ARG:H	1.78	0.43
7:YG:104:LEU:N	7:YG:112:VAL:HG23	2.32	0.43
25:RY:47:ARG:NH2	25:RY:47:ARG:CG	2.78	0.43
11:RK:113:MET:O	11:RK:116:ILE:N	2.52	0.43
36:XE:59:ILE:O	36:XE:62:ALA:HB3	2.17	0.43
32:XA:155:A:C6	32:XA:167:A:C6	3.06	0.43
1:YA:2734:A:H2'	1:YA:2735:G:C5'	2.47	0.43
6:RF:39:VAL:C	6:RF:41:GLU:H	2.21	0.43
32:XA:568:G:N2	32:XA:883:C:C2	2.86	0.43
50:XS:14:LEU:HD22	50:XS:37:SER:OG	2.18	0.43
32:XA:251:G:H4'	32:XA:252:U:C5'	2.47	0.43
21:RU:97:SER:O	21:RU:98:ASN:CB	2.58	0.43
32:QA:1000:A:C2	32:QA:1041:G:C2	3.07	0.43
5:YE:73:ILE:HG13	5:YE:78:TRP:NE1	2.33	0.43
7:RG:139:VAL:C	7:RG:141:GLY:N	2.71	0.43
6:RF:114:ARG:HD2	6:RF:114:ARG:N	2.29	0.43
1:RA:1798:U:P	3:RC:255:LYS:O	2.76	0.43
34:QC:70:ALA:HA	34:QC:105:VAL:HB	2.00	0.43
1:YA:2406:A:OP2	1:YA:2411:A:N6	2.34	0.43
1:YA:2846:G:P	16:YP:51:ASN:HB2	2.58	0.43
2:YB:29:A:H3'	2:YB:30:C:H6	1.83	0.43
32:XA:50:A:N6	32:XA:361:G:H4'	2.33	0.43
37:XF:71:ILE:HD12	37:XF:71:ILE:HA	1.93	0.43
1:YA:1008:A:H5''	10:YJ:37:ARG:HH22	1.82	0.43
16:YP:102:ARG:O	16:YP:103:THR:CB	2.66	0.43
33:XB:176:ASN:C	33:XB:178:LEU:N	2.71	0.43
1:YA:724:U:O4	1:YA:725:G:N1	2.51	0.43
32:XA:403:C:H5'	35:XD:131:ILE:HD12	2.00	0.43
9:YI:79:LEU:HD13	9:YI:100:ILE:HD12	2.01	0.43
1:RA:1513:U:C2'	1:RA:1514:G:H5'	2.49	0.43
13:YM:1:MET:O	13:YM:2:LEU:C	2.55	0.43
32:QA:827:U:H5''	32:QA:828:U:OP2	2.17	0.43
32:QA:126:G:H2'	32:QA:127:G:O5'	2.19	0.43
1:RA:324:A:H2'	1:RA:325:G:O4'	2.17	0.43
17:RQ:15:LYS:O	17:RQ:19:GLN:HG3	2.18	0.43
12:YL:119:PRO:HB3	12:YL:139:GLY:O	2.19	0.43
27:R0:12:ARG:O	27:R0:16:ARG:HG3	2.18	0.43
1:YA:2103:C:O2	1:YA:2103:C:H2'	2.17	0.43
32:QA:307:C:H6	32:QA:307:C:O5'	2.02	0.43
1:YA:2791:G:OP1	1:YA:2791:G:O4'	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:691:C:H6	1:YA:691:C:O5'	2.01	0.43
7:YG:36:LEU:HD12	7:YG:36:LEU:N	2.32	0.43
1:YA:701:G:N3	1:YA:701:G:H2'	2.31	0.43
5:YE:115:GLN:O	5:YE:117:ARG:N	2.51	0.43
1:RA:1061:U:H3'	1:RA:1062:G:C5'	2.47	0.43
6:RF:64:PRO:HA	6:RF:88:VAL:CG2	2.48	0.43
18:YR:39:LEU:HA	18:YR:53:PHE:HA	2.01	0.43
1:RA:855:G:N2	23:RW:23:LYS:HG2	2.16	0.43
23:RW:46:ALA:O	23:RW:47:GLY:O	2.37	0.43
23:RW:30:VAL:HA	23:RW:60:ALA:HB3	2.00	0.43
2:YB:58:A:C8	2:YB:59:A:C8	3.07	0.43
15:YO:62:LEU:HD13	15:YO:62:LEU:C	2.38	0.43
32:XA:1365:G:O2'	32:XA:1366:C:O5'	2.35	0.43
32:XA:704:A:O2'	32:XA:705:G:O4'	2.36	0.43
32:XA:1158:C:O2	32:XA:1158:C:C2'	2.67	0.43
1:YA:265:A:C6	1:YA:428:A:O4'	2.71	0.43
1:YA:511:U:H4'	1:YA:1235:G:H4'	2.00	0.43
1:YA:1338:G:O2'	1:YA:1393:A:N1	2.43	0.43
1:YA:1401:G:C4	1:YA:1402:U:C5	3.07	0.43
1:YA:1807:G:H2'	1:YA:1809:A:OP2	2.19	0.43
1:YA:2209:G:C4	1:YA:2216:G:N2	2.86	0.43
35:QD:35:GLN:O	35:QD:36:ALA:HB2	2.18	0.43
1:YA:303:G:C2	1:YA:304:U:O2	2.71	0.43
1:YA:308:G:O5'	1:YA:308:G:H8	2.02	0.43
1:YA:82:U:C2	1:YA:83:A:C8	3.07	0.43
3:YC:181:ARG:NE	3:YC:265:PHE:HB2	2.31	0.43
17:YQ:96:ASP:C	17:YQ:98:ALA:H	2.22	0.43
17:YQ:96:ASP:C	17:YQ:98:ALA:N	2.71	0.43
36:QE:152:VAL:CB	36:QE:155:LYS:HZ2	2.27	0.43
1:YA:1091:G:C2	1:YA:1092:C:C2	3.06	0.43
32:XA:208:U:O2	32:XA:210:C:H4'	2.18	0.43
48:QQ:45:VAL:HG21	48:QQ:60:ILE:CD1	2.34	0.43
29:Y2:18:PHE:O	29:Y2:19:ARG:C	2.57	0.43
23:RW:8:SER:O	23:RW:9:THR:CB	2.66	0.43
32:XA:1241:G:H2'	32:XA:1242:G:C8	2.39	0.43
32:XA:246:A:C4	32:XA:279:A:N6	2.87	0.43
32:XA:1129:C:C4	32:XA:1139:G:C5	3.06	0.43
3:RC:109:LEU:CD2	3:RC:110:LYS:N	2.79	0.43
52:QU:10:PRO:HG2	34:XC:71:ARG:NH2	2.33	0.43
32:XA:643:C:O2'	32:XA:644:U:H5'	2.18	0.43
1:RA:1045:C:O5'	1:RA:1046:A:C5'	2.64	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2014:A:H2	1:YA:2613:U:C2	2.36	0.43
1:YA:855:G:C2'	23:YW:23:LYS:HD3	2.48	0.43
3:RC:252:LYS:HZ2	3:RC:252:LYS:HA	1.83	0.43
1:YA:2578:G:OP2	1:YA:2578:G:H4'	2.18	0.43
1:RA:1011:G:C2	1:RA:1151:A:C2	3.07	0.43
9:RI:78:LEU:C	9:RI:79:LEU:HG	2.39	0.43
43:QL:23:LEU:CB	43:QL:58:ASN:HD22	2.31	0.43
32:QA:1410:A:H2'	32:QA:1411:C:O5'	2.18	0.43
1:YA:962:G:H4'	1:YA:2496:C:O2'	2.18	0.43
32:XA:587:G:H4'	39:XH:3:GLN:HA	2.00	0.43
1:YA:1287:A:OP1	14:YN:103:ARG:HD2	2.18	0.43
32:XA:1307:U:H1'	44:XM:107:THR:CG2	2.48	0.43
8:RH:97:ARG:HG2	8:RH:111:ALA:HB1	1.99	0.43
7:RG:124:CYS:HB3	7:RG:126:THR:O	2.18	0.43
25:YY:22:LEU:HG	25:YY:23:ARG:H	1.83	0.43
11:RK:99:ILE:HG23	11:RK:100:PHE:N	2.34	0.43
38:QG:70:PRO:HD2	38:QG:95:ARG:CG	2.48	0.43
1:YA:2635:A:H5''	4:YD:79:LEU:O	2.18	0.43
1:YA:970:U:H1'	1:YA:985:C:OP1	2.18	0.43
32:XA:163:C:H2'	32:XA:164:G:O5'	2.17	0.43
22:RV:51:GLN:HG2	22:RV:86:LEU:HD11	2.00	0.43
1:YA:2052:A:H8	1:YA:2052:A:O5'	2.01	0.43
15:RO:106:LEU:C	15:RO:106:LEU:HD12	2.38	0.43
6:RF:131:VAL:CG2	6:RF:151:LEU:HG	2.47	0.43
51:XT:26:MET:HE1	51:XT:30:PHE:CD1	2.53	0.43
51:XT:30:PHE:CE2	51:XT:52:GLU:HG2	2.53	0.43
1:YA:1700:A:O2'	1:YA:1701:A:H5'	2.18	0.43
1:YA:1179:G:C2	1:YA:1180:U:C2	3.06	0.43
7:RG:82:PHE:HB2	7:RG:134:GLY:O	2.17	0.43
13:YM:73:ILE:HA	13:YM:73:ILE:HD13	1.79	0.43
32:QA:461:A:C3'	32:QA:461:A:N3	2.81	0.43
32:XA:631:C:O5'	32:XA:631:C:H6	2.02	0.43
46:QO:34:GLN:O	46:QO:35:ILE:C	2.56	0.43
9:YI:30:GLN:CG	9:YI:31:GLY:H	2.31	0.43
32:QA:895:G:H2'	32:QA:896:C:C6	2.53	0.43
1:RA:666:A:C5	1:RA:667:U:C5	3.07	0.43
1:YA:1877:A:H2'	1:YA:1878:G:C8	2.54	0.43
9:YI:20:SER:HB3	9:YI:21:PRO:HD3	2.00	0.43
17:RQ:114:ALA:O	17:RQ:116:LEU:N	2.50	0.43
32:QA:135:C:C2'	32:QA:136:C:H5'	2.47	0.43
46:XO:38:LEU:HD12	46:XO:41:HIS:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:216:VAL:C	33:XB:218:ALA:N	2.70	0.43
1:RA:1266:G:OP1	27:R0:15:ARG:NE	2.50	0.43
2:YB:29:A:OP2	15:YO:32:PRO:HD2	2.17	0.43
40:QI:8:THR:O	40:QI:81:GLY:CA	2.66	0.43
32:XA:212:G:N2	32:XA:213:G:C8	2.86	0.43
1:RA:2383:G:H5''	1:RA:2383:G:H8	1.83	0.43
1:YA:1627:G:C2	1:YA:1628:G:C8	3.06	0.43
11:RK:34:GLY:O	11:RK:36:GLY:N	2.51	0.43
32:XA:1481:U:H2'	32:XA:1482:G:C8	2.53	0.43
32:XA:1509:C:H2'	32:XA:1510:C:C6	2.53	0.43
14:YN:21:PHE:H	14:YN:21:PHE:HD1	1.65	0.43
33:XB:221:ARG:C	33:XB:223:GLY:H	2.20	0.43
32:QA:290:C:H2'	32:QA:291:U:H5'	2.00	0.43
32:XA:880:C:H2'	32:XA:881:G:H5'	1.98	0.43
32:XA:188:C:N4	32:XA:189:A:C6	2.87	0.43
32:QA:877:G:H21	39:QH:1:SER:HB2	1.84	0.43
1:YA:2254:C:H2'	1:YA:2255:G:H5'	2.00	0.43
33:XB:182:VAL:O	33:XB:195:VAL:HG13	2.19	0.43
35:QD:83:GLY:O	35:QD:84:ASN:C	2.57	0.43
38:QG:16:LYS:O	38:QG:17:PHE:CD1	2.72	0.43
1:YA:2463:C:C2	1:YA:2488:G:N2	2.87	0.43
1:RA:2694:G:H2'	1:RA:2695:U:C6	2.53	0.43
10:YJ:48:VAL:HG12	10:YJ:49:ASP:N	2.33	0.43
1:RA:586:A:C2	1:RA:1254:A:C2	3.07	0.43
1:RA:211:C:O2'	1:RA:212:G:H5'	2.18	0.43
1:RA:1952:A:C6	1:RA:1953:A:N1	2.86	0.43
48:XQ:7:LEU:HD23	48:XQ:72:TRP:HZ3	1.83	0.43
19:YS:75:PHE:CZ	19:YS:104:THR:HG21	2.53	0.43
1:RA:2533:U:H2'	1:RA:2534:A:O4'	2.19	0.43
1:RA:1972:G:H2'	1:RA:1973:G:H8	1.83	0.43
37:QF:66:ALA:HB1	37:QF:67:PRO:HD2	2.01	0.43
1:RA:1716:U:H2'	1:RA:1717:A:C8	2.54	0.43
32:XA:25:C:H2'	32:XA:26:A:C8	2.53	0.43
1:RA:1855:U:H6	1:RA:1855:U:O5'	2.01	0.43
1:RA:501:A:H8	1:RA:501:A:O5'	2.01	0.43
7:YG:175:LYS:HD3	7:YG:175:LYS:C	2.39	0.43
33:QB:10:LYS:HE3	33:QB:10:LYS:HB2	1.72	0.43
9:YI:11:GLN:HG3	9:YI:11:GLN:O	2.18	0.43
1:RA:2850:A:H2'	1:RA:2851:A:O4'	2.18	0.43
32:XA:898:G:N2	32:XA:901:A:OP2	2.43	0.43
1:YA:524:G:H2'	1:YA:525:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:XR:31:TYR:CG	49:XR:54:LEU:HD21	2.53	0.43
32:XA:49:U:O2	32:XA:362:G:H1'	2.18	0.43
10:RJ:40:HIS:HD2	10:RJ:41:LYS:CG	2.27	0.43
1:RA:1073:A:C2'	1:RA:1074:G:H5''	2.45	0.43
1:YA:2229:U:H2'	1:YA:2230:G:C8	2.54	0.43
24:YX:32:LEU:HD13	24:YX:50:VAL:O	2.19	0.43
16:RP:3:ILE:C	16:RP:4:ILE:O	2.56	0.43
23:YW:18:LYS:CD	23:YW:19:ARG:N	2.71	0.43
3:YC:130:PRO:HG2	3:YC:133:ASN:ND2	2.34	0.43
1:YA:1387:A:O2'	1:YA:1388:G:P	2.77	0.43
1:YA:1387:A:O2'	1:YA:1388:G:OP2	2.29	0.43
1:YA:1403:A:C6	1:YA:1404:C:C4	3.07	0.43
1:YA:1606:C:C5'	1:YA:1606:C:O2	2.58	0.43
1:YA:1129:A:HO2'	1:YA:1130:U:P	2.41	0.43
1:YA:1355:G:C2	1:YA:1356:G:C8	3.07	0.43
1:YA:295:G:N2	1:YA:296:U:C6	2.87	0.43
1:YA:301:G:N1	1:YA:317:G:C5	2.86	0.43
10:YJ:44:TYR:HD1	17:YQ:63:ARG:NH2	2.17	0.43
33:XB:100:LEU:O	33:XB:102:ASN:N	2.50	0.43
32:QA:1202:U:N3	45:QN:81:ILE:HG21	2.33	0.43
32:XA:1126:U:O4'	32:XA:1281:C:C2	2.71	0.43
12:YL:112:LEU:HD23	12:YL:112:LEU:H	1.83	0.43
35:XD:24:VAL:HG23	35:XD:25:ARG:N	2.33	0.43
1:YA:107:G:C2	1:YA:108:G:C8	3.05	0.43
1:YA:288:U:H2'	1:YA:289:G:H8	1.83	0.43
1:YA:804:A:C2'	1:YA:806:C:C4	3.00	0.43
1:YA:237:C:C4	1:YA:238:C:C5	3.06	0.43
1:YA:625:G:H1'	1:YA:656:G:O2'	2.18	0.43
47:XP:6:LEU:HB2	47:XP:17:TYR:HB3	2.00	0.43
4:RD:89:GLU:HG3	4:RD:94:GLN:OE1	2.18	0.43
4:YD:184:ARG:O	4:YD:186:LEU:HD13	2.18	0.43
37:QF:86:ARG:HH12	49:QR:63:TYR:CB	2.28	0.43
1:RA:141:G:N1	20:RT:2:ILE:HG23	2.34	0.43
32:QA:100:G:C5	32:QA:101:A:C5	3.06	0.43
1:YA:991:C:OP2	1:YA:1186:G:OP2	2.35	0.43
20:YT:48:GLN:NE2	20:YT:54:GLU:CB	2.82	0.43
1:RA:2681:C:H4'	1:RA:2682:A:OP1	2.18	0.43
1:YA:2201:G:H2'	1:YA:2202:U:H6	1.82	0.43
1:RA:581:C:H2'	1:RA:582:A:C8	2.53	0.43
1:YA:2022:U:O2'	1:YA:2617:U:H5'	2.18	0.43
16:RP:33:GLU:HA	16:RP:38:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RZ:29:ARG:C	26:RZ:30:ARG:HG3	2.39	0.43
32:XA:16:A:N1	32:XA:919:A:H2	2.17	0.43
11:YK:80:ASP:HB2	16:YP:67:GLU:OE1	2.18	0.43
1:RA:1387:A:H5'	1:RA:1469:A:H1'	1.99	0.43
6:YF:93:GLU:C	6:YF:95:MET:H	2.22	0.43
32:XA:560:A:C5	36:XE:127:TYR:CE2	3.07	0.43
1:YA:2052:A:OP1	4:YD:146:ILE:HG12	2.19	0.43
13:RM:132:THR:CG2	13:RM:133:LYS:H	2.31	0.43
38:XG:61:PHE:O	38:XG:63:VAL:N	2.50	0.43
32:QA:1053:G:N7	32:QA:1199:U:C6	2.86	0.43
19:RS:84:ARG:O	19:RS:95:ARG:O	2.36	0.43
1:RA:666:A:O5'	1:RA:666:A:H8	2.00	0.43
42:QK:109:ILE:HG22	42:QK:110:THR:N	2.34	0.43
32:QA:1029:U:N3	32:QA:1033:G:C6	2.87	0.43
37:XF:97:THR:C	37:XF:98:GLU:HG3	2.38	0.43
7:YG:152:ARG:HD2	7:YG:153:PRO:CD	2.48	0.43
43:XL:7:VAL:O	43:XL:8:ARG:HB2	2.18	0.43
21:YU:27:VAL:HG22	21:YU:28:LEU:N	2.34	0.43
35:QD:196:GLU:C	35:QD:198:LEU:N	2.71	0.43
32:XA:1114:C:O2'	45:XN:99:SER:HB2	2.17	0.43
38:QG:91:ARG:HA	38:QG:92:PRO:HD3	1.81	0.43
1:RA:2879:A:H4'	1:RA:2880:C:OP1	2.19	0.43
32:QA:654:G:H4'	39:QH:2:MET:CE	2.48	0.43
1:YA:1497:U:O2'	1:YA:1577:C:H4'	2.19	0.43
22:RV:29:ILE:HG12	22:RV:30:ILE:H	1.84	0.43
32:XA:1460:C:N4	32:XA:1461:G:C6	2.86	0.43
1:YA:1455:G:HO2'	1:YA:1456:G:H8	1.64	0.43
39:QH:1:SER:HB3	39:QH:3:GLN:HG3	1.99	0.43
1:RA:1725:U:H2'	1:RA:1726:C:O4'	2.19	0.43
9:YI:64:ARG:HB2	9:YI:64:ARG:CZ	2.49	0.43
32:QA:1120:C:H2'	32:QA:1121:U:C6	2.54	0.43
34:XC:49:ALA:O	34:XC:50:SER:HB2	2.18	0.43
4:RD:143:PRO:HD2	4:RD:144:GLY:H	1.83	0.43
32:QA:1514:G:O2'	32:QA:1515:G:H5'	2.18	0.43
1:RA:2080:A:O5'	24:RX:18:SER:HB2	2.19	0.43
32:QA:809:G:C6	32:QA:810:C:C5	3.06	0.43
41:XJ:20:GLN:O	41:XJ:23:ALA:HB3	2.19	0.43
1:YA:1530:G:N2	1:YA:1542:U:O2	2.52	0.43
32:QA:382:A:H2'	32:QA:383:A:C8	2.54	0.43
7:YG:58:ALA:O	7:YG:59:ASP:C	2.57	0.43
1:RA:820:A:H2'	1:RA:821:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:YB:67:G:N3	2:YB:68:C:C6	2.87	0.43
23:RW:16:GLU:O	23:RW:17:ALA:HB3	2.19	0.43
1:RA:2353:G:O2'	23:RW:31:LEU:HD23	2.18	0.43
42:XK:92:ARG:NH2	42:XK:111:ASP:OD1	2.51	0.43
50:XS:69:LYS:O	50:XS:72:GLU:HB2	2.18	0.43
1:YA:1551:A:H2'	1:YA:1552:A:O4'	2.19	0.43
1:YA:858:G:C5	1:YA:2268:A:C2	3.07	0.43
1:YA:2347:C:O2'	1:YA:2348:U:C6	2.71	0.43
1:YA:2392:A:OP1	30:Y3:30:HIS:ND1	2.51	0.43
13:RM:34:LYS:HE3	13:RM:131:VAL:HG11	1.99	0.43
1:YA:1091:G:N2	1:YA:1101:U:C2	2.86	0.43
38:XG:22:LEU:HA	38:XG:25:PHE:CB	2.33	0.43
1:YA:142:A:C2	1:YA:143:C:C2	3.06	0.43
1:YA:621:A:O2'	1:YA:622:G:C4'	2.67	0.43
46:QO:50:HIS:O	46:QO:53:ARG:N	2.52	0.43
1:RA:275:C:H3'	1:RA:276:U:H5''	2.00	0.43
3:RC:106:PRO:HA	3:RC:141:HIS:CE1	2.54	0.43
33:XB:52:ALA:O	33:XB:56:LEU:HB2	2.18	0.43
32:XA:996:A:H2'	32:XA:997:U:C6	2.53	0.43
36:XE:35:LEU:HD22	36:XE:36:THR:N	2.32	0.43
1:RA:511:U:O4	1:RA:512:G:N1	2.52	0.43
24:RX:5:GLN:HE21	24:RX:49:ARG:HB3	1.83	0.43
1:YA:2142:A:H3'	1:YA:2143:C:H4'	1.96	0.43
7:YG:24:THR:C	7:YG:25:ILE:HD12	2.39	0.43
1:YA:1435:G:N2	1:YA:1558:C:N4	2.67	0.43
38:QG:70:PRO:HD2	38:QG:95:ARG:HG2	2.01	0.43
5:RE:109:LEU:HD13	5:RE:109:LEU:HA	1.47	0.43
18:RR:14:VAL:HA	18:RR:18:GLN:OE1	2.17	0.43
32:XA:143:A:H2'	32:XA:143:A:N3	2.33	0.43
32:XA:1003:G:H21	32:XA:1005:A:H5''	1.82	0.43
8:YH:101:ASP:O	8:YH:102:ALA:O	2.36	0.43
7:YG:53:PRO:HG3	7:YG:61:TRP:CE2	2.54	0.43
16:YP:25:VAL:HG23	16:YP:25:VAL:O	2.19	0.43
1:YA:2699:C:H2'	1:YA:2700:A:C8	2.53	0.43
32:XA:632:U:H3'	32:XA:633:G:H5'	2.00	0.43
12:RL:78:ARG:HB3	12:RL:113:ALA:HB3	2.01	0.43
1:RA:1737:G:H5''	1:RA:1738:G:OP2	2.18	0.43
5:RE:150:THR:CG2	5:RE:153:LEU:HA	2.48	0.43
22:YV:61:LEU:N	22:YV:61:LEU:HD23	2.33	0.43
54:RA:3135:EM1:H24A	54:RA:3135:EM1:H30	1.63	0.43
1:RA:1931:U:C2'	1:RA:1932:A:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:XH:63:LYS:O	39:XH:70:VAL:HG12	2.17	0.43
32:QA:863:U:O2	32:QA:867:G:C2	2.72	0.43
1:YA:372:G:N2	1:YA:401:A:OP2	2.42	0.43
13:RM:97:GLN:CD	13:RM:97:GLN:H	2.22	0.43
32:XA:934:C:N3	32:XA:1345:U:C5	2.87	0.43
32:XA:398:U:H2'	32:XA:399:G:C8	2.53	0.43
32:QA:660:C:H2'	32:QA:661:G:O4'	2.18	0.43
1:YA:2029:G:C2	1:YA:2033:A:N7	2.87	0.43
32:XA:1040:U:H2'	32:XA:1041:G:H5'	2.01	0.43
17:RQ:7:VAL:HG22	17:RQ:8:ILE:N	2.33	0.43
1:YA:800:A:H4'	1:YA:801:G:O5'	2.18	0.43
8:YH:103:VAL:C	8:YH:105:ALA:H	2.21	0.43
1:YA:487:C:H1'	19:YS:53:SER:OG	2.18	0.43
1:RA:2223:G:O2'	1:RA:2224:G:H5'	2.18	0.43
32:QA:765:G:H2'	32:QA:812:G:N2	2.34	0.43
32:XA:284:C:H2'	32:XA:285:C:H6	1.83	0.43
15:RO:16:ARG:C	15:RO:18:LEU:H	2.21	0.43
40:XI:80:HIS:O	40:XI:83:THR:HG23	2.19	0.43
42:QK:59:PRO:HB2	42:QK:94:SER:HB2	2.00	0.43
32:QA:946:A:H2'	32:QA:947:G:C8	2.54	0.43
3:RC:35:LYS:NZ	3:RC:37:SER:HB2	2.34	0.43
1:RA:846:U:C2'	1:RA:847:U:OP2	2.67	0.43
7:RG:153:PRO:HD3	7:RG:161:VAL:O	2.19	0.43
13:YM:31:PHE:O	13:YM:105:MET:N	2.43	0.43
32:XA:229:U:H2'	32:XA:230:G:O4'	2.19	0.43
1:YA:1120:G:O2'	1:YA:1121:C:H5'	2.19	0.43
1:RA:2626:C:H2'	1:RA:2627:G:O4'	2.19	0.43
1:RA:1614:A:C2	19:RS:93:ALA:HB2	2.54	0.43
1:RA:1614:A:N1	19:RS:93:ALA:HB2	2.34	0.43
7:YG:15:ASP:HB3	7:YG:26:LYS:H	1.83	0.43
9:RI:39:LYS:NZ	9:RI:39:LYS:HB2	2.33	0.43
1:RA:1257:C:H5'	5:RE:78:TRP:CZ3	2.53	0.43
33:QB:27:LYS:HB3	33:QB:28:PRO:HD3	2.00	0.43
13:RM:25:ASP:OD2	13:RM:25:ASP:N	2.52	0.43
39:QH:66:GLN:HB3	39:QH:67:GLY:H	1.60	0.43
1:RA:910:A:C6	1:RA:911:A:C6	3.06	0.43
1:RA:1566:A:P	3:RC:17:LYS:HZ1	2.41	0.43
32:QA:933:G:OP2	38:QG:2:ARG:HB3	2.19	0.43
32:XA:1352:C:O2	32:XA:1371:G:C2	2.72	0.43
32:XA:960:U:H1'	32:XA:1223:C:H5'	2.00	0.43
1:YA:1438:U:C5	1:YA:1552:A:N1	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:821:A:O2'	1:YA:945:A:H5'	2.18	0.43
1:YA:233:A:O2'	1:YA:234:U:O5'	2.37	0.43
1:YA:415:A:C2	1:YA:2409:G:C6	3.06	0.43
1:YA:1534:U:H2'	1:YA:1536:C:O2	2.19	0.43
32:XA:1408:A:N1	32:XA:1494:G:C5	2.87	0.43
1:YA:1611:C:C2	1:YA:1612:C:C5	3.06	0.43
1:YA:166:U:C2'	1:YA:167:A:H5'	2.49	0.43
1:YA:340:A:H2'	1:YA:341:C:O4'	2.18	0.43
1:YA:2886:A:N7	27:Y0:39:ARG:CZ	2.82	0.43
32:XA:204:G:C4	32:XA:205:A:C8	3.06	0.43
31:R4:33:HIS:O	31:R4:35:GLN:HG3	2.18	0.43
1:YA:485:C:C2	1:YA:496:G:N2	2.87	0.43
1:YA:54:G:C6	1:YA:55:G:N7	2.87	0.43
32:QA:374:A:H2'	32:QA:375:U:H6	1.83	0.43
1:YA:622:G:O2'	1:YA:623:C:H5'	2.18	0.43
1:YA:623:C:H2'	1:YA:624:C:O4'	2.18	0.43
1:YA:2749:A:P	1:YA:2750:A:H3'	2.59	0.43
11:YK:87:LEU:N	11:YK:87:LEU:HD23	2.34	0.43
1:RA:960:A:C8	1:RA:962:G:C8	3.07	0.43
1:RA:1604:C:H2'	1:RA:1605:C:C6	2.53	0.43
43:XL:86:VAL:C	43:XL:88:ASP:H	2.21	0.43
32:XA:994:A:O2'	32:XA:995:C:O5'	2.36	0.43
1:RA:1599:U:OP2	20:RT:40:LYS:HD2	2.17	0.43
32:QA:1303:C:O2'	32:QA:1304:G:C5'	2.66	0.43
39:QH:78:SER:CB	39:QH:84:ILE:H	2.32	0.43
1:YA:1585:C:C2'	1:YA:1586:A:O5'	2.66	0.43
1:RA:65:U:C2	1:RA:66:C:C5	3.06	0.43
1:RA:1805:A:H1'	3:RC:49:THR:HG23	1.99	0.43
40:XI:44:ARG:HB3	40:XI:44:ARG:NH1	2.34	0.43
10:YJ:97:PRO:C	10:YJ:99:ARG:N	2.69	0.43
28:R1:7:LYS:HE3	30:R3:33:THR:HG21	2.00	0.43
43:QL:43:LYS:HZ3	43:QL:43:LYS:HB2	1.83	0.43
1:YA:1287:A:O2'	1:YA:1288:G:C5'	2.67	0.43
3:RC:20:ASN:C	3:RC:20:ASN:ND2	2.72	0.43
1:RA:826:U:HO2'	12:RL:53:GLY:HA3	1.81	0.43
1:YA:768:G:N2	1:YA:1379:U:O2'	2.41	0.43
32:XA:181:A:C4'	32:XA:182:A:OP1	2.59	0.43
1:YA:173:A:H2'	1:YA:174:U:H6	1.82	0.43
7:RG:59:ASP:CB	7:RG:63:GLN:HG2	2.45	0.43
42:QK:86:LYS:HG2	42:QK:114:PRO:HD3	2.00	0.43
4:YD:151:THR:HG22	4:YD:152:PRO:CD	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:927:A:H2'	1:RA:928:A:H8	1.81	0.43
32:QA:1338:G:C6	32:QA:1339:A:C6	3.07	0.43
8:YH:94:ILE:HG13	8:YH:98:ASP:CG	2.39	0.43
14:RN:65:LEU:HD12	14:RN:65:LEU:C	2.38	0.43
1:YA:1590:A:C6	1:YA:1591:A:N6	2.86	0.43
1:RA:357:C:O2'	1:RA:358:U:H5'	2.19	0.43
1:YA:2636:C:H2'	1:YA:2637:U:H6	1.78	0.43
32:XA:171:A:N1	32:XA:172:A:C2	2.87	0.43
4:RD:182:ALA:O	4:RD:183:GLU:C	2.57	0.43
19:YS:33:LEU:CA	19:YS:36:LEU:HD23	2.47	0.43
32:QA:1210:C:C2'	32:QA:1211:U:H5'	2.49	0.43
1:RA:790:U:HO2'	1:RA:791:C:P	2.40	0.43
41:QJ:33:GLY:O	41:QJ:34:ALA:CB	2.66	0.43
47:XP:44:SER:HB2	47:XP:46:LYS:HG3	2.00	0.43
45:XN:63:CYS:O	45:XN:67:GLY:HA2	2.18	0.43
8:YH:62:LEU:C	8:YH:64:ALA:N	2.72	0.43
1:YA:371:A:C4	1:YA:373:U:O4	2.72	0.43
1:RA:1789:A:H2'	1:RA:1790:C:O4'	2.18	0.43
32:QA:1520:C:H2'	32:QA:1521:C:C6	2.53	0.43
1:YA:927:A:N1	1:YA:928:A:C2	2.87	0.43
1:YA:1760:C:C2'	1:YA:1761:C:H5'	2.48	0.43
1:RA:1754:A:N1	1:RA:2716:C:O2'	2.45	0.43
32:XA:954:G:H1	32:XA:1228:C:H42	1.65	0.43
1:YA:2031:A:O2'	1:YA:2454:G:N2	2.52	0.43
48:XQ:14:ASP:CB	48:XQ:54:ILE:HG22	2.49	0.43
48:XQ:14:ASP:HB2	48:XQ:54:ILE:HG22	1.99	0.43
38:QG:119:LEU:O	38:QG:122:GLU:N	2.52	0.43
32:QA:370:C:C2'	32:QA:371:A:H5'	2.48	0.43
26:YZ:37:ARG:HB3	26:YZ:38:GLU:H	1.59	0.43
27:R0:47:TYR:CZ	27:R0:52:LYS:HD3	2.54	0.43
1:RA:2727:A:C2'	1:RA:2728:U:H5'	2.48	0.43
1:RA:839:U:H2'	1:RA:840:C:C6	2.54	0.43
1:RA:766:U:H2'	1:RA:767:U:C6	2.54	0.43
32:XA:683:G:C2'	32:XA:684:U:H5'	2.49	0.43
1:RA:1692:U:O2'	1:RA:1693:U:H2'	2.19	0.43
1:RA:1696:G:C6	1:RA:1697:G:C4	3.06	0.43
1:YA:2061:G:N7	1:YA:2501:C:H4'	2.33	0.43
1:RA:1916:A:O5'	1:RA:1916:A:H8	2.01	0.43
1:YA:2157:G:OP2	1:YA:2157:G:N2	2.49	0.43
56:RA:3288:HOH:O	5:RE:98:LYS:HE2	2.19	0.43
19:RS:57:ASN:O	19:RS:61:ASN:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:RR:49:ILE:CG1	18:RR:52:PRO:HA	2.49	0.43
35:XD:190:LEU:HD23	35:XD:190:LEU:O	2.19	0.43
1:RA:2846:G:OP1	16:RP:52:ARG:NH1	2.51	0.43
1:YA:36:G:C6	1:YA:37:C:C4	3.07	0.43
15:YO:31:THR:HG23	15:YO:34:HIS:O	2.19	0.43
32:XA:977:A:H1'	32:XA:1223:C:N4	2.31	0.43
50:XS:50:VAL:HG22	50:XS:57:VAL:O	2.19	0.43
51:QT:53:MET:HE3	51:QT:57:VAL:HG21	2.01	0.43
1:YA:266:G:C2'	1:YA:267:C:O5'	2.66	0.43
10:YJ:3:THR:CG2	17:YQ:60:TRP:HE1	2.29	0.43
27:Y0:53:VAL:HG23	27:Y0:54:ILE:HG12	2.00	0.43
6:YF:131:VAL:O	6:YF:132:ARG:HB2	2.18	0.43
3:YC:58:LYS:O	3:YC:59:GLN:HB2	2.19	0.43
1:YA:289:G:H2'	1:YA:290:U:O4'	2.19	0.43
1:YA:2443:C:H2'	1:YA:2444:G:O4'	2.19	0.43
32:XA:237:G:C6	32:XA:238:A:C5	3.06	0.43
1:YA:1047:G:H2'	1:YA:1048:A:OP2	2.18	0.43
32:QA:1460:C:C4	32:QA:1461:G:C5	3.07	0.43
1:YA:2682:A:O2'	1:YA:2683:C:O4'	2.37	0.43
1:YA:2093:G:C4'	8:YH:24:GLY:HA3	2.49	0.43
16:YP:50:ARG:HB3	16:YP:56:SER:HB3	1.99	0.43
32:QA:748:G:C6	32:QA:749:A:C5	3.07	0.43
1:RA:947:A:H2'	1:RA:948:C:C6	2.54	0.43
3:YC:93:VAL:HG12	3:YC:101:ARG:N	2.34	0.43
32:XA:267:C:C2'	32:XA:268:U:O5'	2.66	0.43
19:RS:72:THR:HG21	19:RS:108:SER:OG	2.19	0.43
1:RA:2887:A:C5'	1:RA:2888:C:OP2	2.63	0.43
32:XA:1525:G:OP1	52:XU:37:TYR:CD1	2.71	0.43
38:XG:74:VAL:HG12	38:XG:143:MET:HB2	2.00	0.43
43:QL:94:TYR:CD2	43:QL:94:TYR:N	2.87	0.43
1:RA:229:C:C2'	1:RA:230:G:O5'	2.67	0.43
1:RA:1071:G:C4	1:RA:1089:A:C6	3.06	0.43
39:XH:11:THR:HG22	39:XH:14:ARG:CZ	2.49	0.43
1:YA:2848:G:H1'	1:YA:2849:U:H5	1.83	0.43
36:QE:109:ALA:O	36:QE:110:MET:CG	2.61	0.43
7:YG:10:VAL:HG21	7:YG:44:HIS:HE1	1.84	0.43
32:QA:603:U:C6	32:QA:603:U:C3'	3.01	0.43
8:YH:94:ILE:HD12	8:YH:98:ASP:OD1	2.19	0.43
3:RC:236:GLY:O	3:RC:237:ARG:HB2	2.19	0.43
32:QA:761:G:C4	32:QA:762:U:C5	3.07	0.43
15:RO:105:ALA:O	15:RO:106:LEU:CB	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1028:C:H2'	32:XA:1029:U:H5'	2.01	0.43
1:YA:2415:G:C4	1:YA:2416:C:C6	3.06	0.43
10:RJ:141:ASP:HB3	10:RJ:142:ILE:H	1.42	0.43
1:YA:1733:G:C2	1:YA:1734:G:C8	3.07	0.43
17:YQ:38:VAL:O	17:YQ:42:GLY:N	2.52	0.43
1:RA:659:G:H21	5:RE:30:GLN:NE2	2.16	0.43
12:RL:81:ASP:O	12:RL:82:LEU:HB3	2.18	0.43
1:YA:2076:U:H5''	1:YA:2238:G:H22	1.84	0.43
32:XA:106:C:O2'	32:XA:107:G:H5'	2.19	0.43
46:XO:34:GLN:O	46:XO:38:LEU:HB2	2.19	0.43
1:RA:958:U:H5'	13:RM:14:LYS:NZ	2.33	0.43
1:RA:2491:U:H5''	1:RA:2570:G:H5''	1.99	0.43
43:XL:46:SER:O	43:XL:47:ALA:HB2	2.19	0.43
32:QA:647:C:O2'	32:QA:648:A:H5'	2.18	0.43
1:RA:1847:A:C2'	1:RA:1847:A:N3	2.81	0.43
1:RA:443:A:H2	1:RA:1245:G:N3	2.17	0.43
32:QA:1405:G:H1'	32:QA:1519:A:O4'	2.18	0.43
1:RA:125:A:C6	29:R2:10:LEU:HD13	2.54	0.43
40:XI:5:TYR:O	40:XI:19:PHE:HA	2.18	0.43
1:YA:1042:G:C5	1:YA:1043:C:C4	3.06	0.43
1:RA:236:C:O2'	1:RA:237:C:H5'	2.18	0.43
1:YA:391:A:C2	1:YA:411:G:C5	3.07	0.43
1:RA:919:U:C4	1:RA:920:A:N7	2.87	0.43
1:YA:2677:G:C4	1:YA:2731:G:N2	2.86	0.43
32:QA:777:A:H2'	32:QA:778:G:H8	1.83	0.43
28:R1:42:VAL:HG12	28:R1:44:GLN:HB2	2.01	0.43
1:RA:768:G:C5	1:RA:769:U:C5	3.07	0.43
46:XO:9:LYS:O	46:XO:13:GLU:OE2	2.36	0.43
10:YJ:104:ALA:O	10:YJ:108:MET:HG3	2.18	0.43
38:QG:43:TYR:O	38:QG:47:GLU:HB2	2.19	0.43
32:QA:1086:U:O2'	32:QA:1087:G:H5'	2.19	0.43
8:RH:34:GLY:O	8:RH:35:LYS:HG3	2.19	0.43
32:QA:540:G:H2'	32:QA:541:G:O4'	2.18	0.43
18:YR:72:VAL:O	18:YR:72:VAL:HG23	2.18	0.43
1:YA:2603:G:H4'	1:YA:2603:G:OP2	2.19	0.43
23:RW:41:GLY:C	23:RW:43:LYS:N	2.68	0.43
33:QB:199:ILE:O	33:QB:200:PRO:O	2.37	0.43
33:QB:70:GLY:O	33:QB:92:ASN:HA	2.19	0.43
45:XN:54:SER:O	45:XN:55:SER:HB2	2.19	0.43
50:XS:54:ARG:HG2	50:XS:55:GLN:N	2.32	0.43
1:YA:2331:G:C2	1:YA:2385:C:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:YW:18:LYS:CD	23:YW:19:ARG:HG2	2.47	0.43
1:YA:2448:A:H61	12:YL:36:LYS:HZ1	1.66	0.43
11:RK:10:VAL:CG2	11:RK:16:ALA:HB1	2.49	0.43
3:YC:128:THR:CG2	3:YC:188:ARG:HB3	2.28	0.43
1:YA:1236:G:O2'	1:YA:1237:A:C8	2.72	0.43
32:QA:784:A:H2'	32:QA:785:G:H8	1.84	0.43
32:QA:410:G:C2	32:QA:429:U:C2	3.06	0.43
32:QA:976:G:OP1	45:QN:70:HIS:ND1	2.52	0.43
36:XE:98:ALA:O	36:XE:121:ASN:HB2	2.18	0.43
1:YA:1663:G:C2	1:YA:1998:A:C5	3.07	0.43
25:YY:50:VAL:C	25:YY:52:ARG:H	2.22	0.43
1:YA:2069:G:N2	1:YA:2443:C:C2	2.87	0.43
32:QA:1145:A:HO2'	32:QA:1146:A:P	2.41	0.43
14:YN:114:GLU:HG2	14:YN:115:LEU:N	2.34	0.43
32:XA:523:A:C2	32:XA:527:G:O6	2.72	0.43
32:QA:69:G:N3	32:QA:69:G:H2'	2.34	0.43
1:YA:915:C:H5''	1:YA:915:C:H6	1.84	0.43
39:XH:29:SER:O	39:XH:31:LEU:N	2.51	0.43
32:QA:1157:A:C6	32:QA:1180:A:C6	3.07	0.43
1:RA:62:U:H4'	1:RA:63:A:OP1	2.19	0.43
1:RA:63:A:O2'	1:RA:64:A:H5'	2.19	0.43
1:YA:1757:A:N1	1:YA:1762:A:C2	2.87	0.43
16:RP:59:THR:OG1	16:RP:72:VAL:HG12	2.18	0.43
16:RP:67:GLU:CG	16:RP:68:GLY:H	2.32	0.43
34:XC:53:ARG:HH11	34:XC:53:ARG:HB2	1.84	0.43
1:YA:1255:U:H2'	1:YA:1255:U:H6	1.56	0.43
39:QH:95:MET:SD	39:QH:129:ALA:HB1	2.59	0.43
3:RC:132:ARG:O	3:RC:132:ARG:HD3	2.19	0.43
10:RJ:25:LEU:HD22	10:RJ:26:GLY:N	2.34	0.43
10:RJ:26:GLY:HA2	10:RJ:29:ALA:CB	2.49	0.43
32:XA:1306:A:N6	32:XA:1331:G:H1'	2.34	0.43
1:RA:1414:C:C5	1:RA:1415:U:H5	2.36	0.43
20:RT:70:HIS:HB2	20:RT:73:ARG:C	2.39	0.43
1:YA:1609:A:N3	1:YA:1616:A:O4'	2.51	0.43
1:YA:42:A:C2	1:YA:438:G:C2	3.07	0.43
6:YF:31:GLU:HA	6:YF:95:MET:HE1	2.01	0.43
22:RV:77:VAL:CG2	22:RV:86:LEU:HD22	2.48	0.43
29:Y2:27:GLY:O	29:Y2:30:VAL:HB	2.18	0.43
32:XA:1026:G:O6	32:XA:1035:A:N1	2.52	0.43
41:QJ:80:THR:O	41:QJ:83:THR:N	2.52	0.43
41:XJ:66:GLU:CG	45:XN:100:TRP:HZ3	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1347:G:N2	32:XA:1373:G:H2'	2.33	0.43
8:YH:40:THR:O	8:YH:41:LYS:HB2	2.18	0.43
10:YJ:80:HIS:O	10:YJ:81:ILE:C	2.57	0.43
32:XA:890:G:O2'	32:XA:906:A:N6	2.52	0.43
15:RO:67:ASN:O	15:RO:68:LYS:C	2.57	0.43
11:YK:108:ARG:CA	11:YK:116:ILE:HD13	2.49	0.43
1:RA:418:C:H2'	1:RA:419:U:C6	2.53	0.43
1:YA:743:A:O2'	1:YA:744:U:H5'	2.19	0.43
32:QA:1025:U:H5''	32:QA:1026:G:H5'	2.00	0.43
32:XA:71:A:C5	32:XA:100:G:C5	3.07	0.43
32:XA:65:A:H2'	32:XA:382:A:H61	1.83	0.43
5:YE:153:LEU:HD22	5:YE:158:PHE:HD2	1.84	0.43
1:YA:590:A:H2'	1:YA:591:U:C6	2.50	0.43
45:XN:27:LYS:O	45:XN:45:LEU:HD21	2.18	0.43
32:XA:1270:G:O2'	32:XA:1314:C:H5'	2.18	0.43
1:YA:153:U:O2'	1:YA:154:U:H5'	2.18	0.43
32:QA:914:A:H2'	32:QA:915:A:C8	2.53	0.43
17:RQ:111:LYS:HE3	18:RR:50:GLY:HA2	2.00	0.43
32:QA:693:G:C2'	32:QA:694:A:H5'	2.49	0.43
43:XL:84:GLY:H	43:XL:94:TYR:HA	1.84	0.43
1:RA:986:C:C2'	1:RA:987:C:H5'	2.49	0.43
32:QA:687:A:N7	32:QA:701:U:H5	2.16	0.43
4:RD:16:THR:HG23	4:RD:18:ASP:OD1	2.19	0.43
40:XI:4:GLN:HE21	40:XI:4:GLN:HB3	1.61	0.43
32:XA:301:G:H2'	32:XA:302:G:C8	2.54	0.43
1:YA:1637:A:H5'	1:YA:1760:C:O2'	2.19	0.43
26:RZ:20:LYS:O	26:RZ:22:THR:N	2.52	0.43
1:YA:1014:A:O2'	1:YA:1015:U:H5'	2.18	0.43
32:QA:39:G:H2'	32:QA:40:C:H6	1.84	0.43
1:RA:2335:A:N6	1:RA:2337:G:H1'	2.33	0.43
10:RJ:69:ARG:O	10:RJ:89:PHE:HB3	2.19	0.43
44:QM:71:GLU:O	44:QM:74:MET:HB3	2.18	0.43
18:RR:58:VAL:HG13	18:RR:102:SER:HB2	2.00	0.43
1:RA:2038:G:H2'	1:RA:2039:U:O4'	2.18	0.43
1:RA:1838:C:H4'	1:RA:1839:G:C8	2.54	0.43
1:RA:1840:G:C2	1:RA:1841:U:C2	3.07	0.43
1:RA:1097:U:H3'	1:RA:1098:A:H4'	2.01	0.43
24:YX:15:ASN:C	24:YX:26:ARG:HG2	2.39	0.43
17:YQ:86:SER:O	17:YQ:87:VAL:C	2.58	0.43
1:YA:447:A:C2	1:YA:454:A:C8	3.07	0.43
32:XA:1320:C:H41	50:XS:36:ARG:HG3	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2331:G:C2'	1:YA:2332:C:O5'	2.67	0.43
1:YA:250:G:OP1	12:YL:59:ARG:NH1	2.52	0.43
1:YA:944:C:H5'	1:YA:945:A:C5'	2.49	0.43
11:RK:10:VAL:HG21	11:RK:16:ALA:HB1	2.00	0.43
1:YA:1396:U:C2'	1:YA:1397:U:OP1	2.67	0.43
32:QA:1073:U:O2'	33:QB:102:ASN:ND2	2.52	0.43
32:QA:844:G:H2'	32:QA:844:G:N3	2.34	0.43
1:YA:1091:G:O2'	1:YA:1092:C:H5'	2.19	0.43
1:YA:1095:A:N1	1:YA:1096:A:N6	2.66	0.43
36:XE:104:ILE:N	36:XE:122:VAL:H	2.05	0.43
1:YA:126:A:P	29:Y2:19:ARG:HG3	2.59	0.43
1:YA:49:A:C6	1:YA:118:A:C6	3.06	0.43
7:YG:88:LEU:HG	7:YG:128:THR:O	2.18	0.43
41:XJ:44:THR:HG22	41:XJ:45:ARG:N	2.28	0.43
6:RF:172:PHE:O	6:RF:173:ASP:C	2.56	0.43
32:XA:410:G:P	35:XD:25:ARG:HD2	2.59	0.43
1:YA:871:U:OP1	13:YM:4:PRO:HA	2.19	0.43
1:YA:616:A:O2'	1:YA:617:G:O5'	2.37	0.43
1:YA:656:G:H2'	1:YA:657:U:O4'	2.18	0.43
3:RC:90:ILE:HD12	3:RC:103:ILE:O	2.19	0.43
9:RI:33:ASN:HB3	9:RI:36:GLU:HB2	2.01	0.43
11:YK:45:GLU:O	11:YK:54:LYS:HE3	2.19	0.43
52:XU:35:GLU:CA	52:XU:35:GLU:OE2	2.64	0.43
20:YT:37:ASP:O	20:YT:38:ALA:O	2.36	0.43
1:YA:2200:C:O2	1:YA:2226:C:N4	2.52	0.43
1:YA:2615:U:H2'	1:YA:2616:C:C5	2.54	0.43
1:YA:531:C:H5''	1:YA:532:A:N7	2.34	0.43
14:YN:35:LYS:HD3	14:YN:112:TYR:CZ	2.54	0.43
33:QB:32:GLY:HA3	33:QB:39:ILE:CB	2.49	0.43
32:XA:728:A:C6	32:XA:729:A:N6	2.87	0.43
1:RA:2415:G:C4'	12:RL:66:PHE:HB2	2.44	0.43
1:RA:1873:G:N2	1:RA:1874:C:C2	2.87	0.43
5:YE:175:ILE:O	5:YE:175:ILE:HG23	2.18	0.43
24:RX:76:LYS:O	24:RX:77:TYR:O	2.37	0.43
1:RA:2755:C:HO2'	1:RA:2756:U:H2'	1.82	0.43
1:YA:1633:G:C6	1:YA:1635:A:C5	3.07	0.43
12:YL:108:ALA:HB3	12:YL:125:LEU:HD22	2.00	0.43
32:QA:988:G:O6	32:QA:989:U:C4	2.72	0.43
32:XA:1048:G:H21	32:XA:1214:C:H5	1.66	0.43
32:QA:723:U:H5''	52:QU:48:LYS:HG2	2.01	0.43
1:YA:1512:C:H2'	1:YA:1513:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:QG:112:ASP:HB2	38:QG:118:ARG:CG	2.49	0.43
32:QA:1323:G:N2	32:QA:1324:A:C2	2.87	0.43
32:QA:80:A:C2	32:QA:81:A:H1'	2.54	0.43
1:RA:44:A:H2'	1:RA:45:G:O4'	2.18	0.43
1:RA:1738:G:HO2'	1:RA:1739:A:P	2.39	0.43
35:QD:48:SER:O	35:QD:52:VAL:HG13	2.18	0.43
32:QA:1343:G:H2'	32:QA:1344:C:C6	2.54	0.43
40:QI:38:PHE:HA	40:QI:41:GLU:OE1	2.19	0.43
1:RA:418:C:H2'	1:RA:419:U:O4'	2.19	0.43
1:RA:746:U:O2'	54:RA:3135:EM1:H14	2.19	0.43
1:YA:1480:C:C4	1:YA:1481:U:C5	3.07	0.43
46:XO:42:PHE:O	46:XO:46:LYS:HG2	2.19	0.43
42:XK:64:VAL:O	42:XK:68:ARG:HB2	2.18	0.43
1:YA:2568:U:H2'	1:YA:2569:G:O4'	2.19	0.43
21:RU:2:ALA:HB3	21:RU:5:ARG:HH21	1.84	0.43
42:XK:19:VAL:HG22	42:XK:82:GLU:HG2	2.01	0.43
1:RA:1858:A:O2'	1:RA:1859:U:C5'	2.67	0.43
32:XA:1190:G:HO2'	32:XA:1191:A:P	2.41	0.43
1:YA:1408:G:H2'	1:YA:1409:U:C6	2.54	0.43
32:QA:862:C:H2'	32:QA:863:U:H5'	2.01	0.43
1:YA:2701:U:H3'	1:YA:2702:G:H5''	2.00	0.43
47:QP:48:GLU:CG	47:QP:49:GLY:N	2.82	0.43
1:YA:544:C:N4	1:YA:545:U:H3	2.16	0.43
50:QS:62:THR:CG2	50:QS:63:ASP:N	2.82	0.43
46:XO:26:VAL:HG12	46:XO:27:GLN:N	2.34	0.43
32:QA:1327:C:C2'	32:QA:1328:C:H5'	2.48	0.43
1:YA:924:G:C2'	1:YA:925:A:H5'	2.49	0.43
40:XI:4:GLN:C	40:XI:5:TYR:HD2	2.22	0.43
1:YA:1997:C:P	4:YD:129:THR:HG1	2.41	0.43
1:RA:1576:U:C2'	1:RA:1577:C:H5'	2.49	0.43
1:YA:2253:G:C5	1:YA:2254:C:C5	3.07	0.43
1:RA:1005:C:O2	1:RA:1005:C:H2'	2.18	0.43
12:YL:85:VAL:O	12:YL:85:VAL:HG22	2.18	0.43
1:YA:1484:U:O5'	1:YA:1484:U:H6	2.02	0.43
35:QD:104:MET:HB3	35:QD:106:PHE:CE2	2.53	0.43
1:YA:2677:G:H2'	1:YA:2678:C:H6	1.84	0.43
3:YC:44:ASN:C	3:YC:46:GLY:H	2.21	0.43
1:RA:2071:A:H2'	1:RA:2072:C:C6	2.53	0.43
1:RA:2694:G:C5	1:RA:2695:U:C4	3.07	0.43
41:QJ:78:GLU:HA	41:QJ:79:PRO:HD2	1.87	0.43
1:RA:1638:C:H1'	1:RA:2698:U:O2'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:YH:96:THR:HA	8:YH:113:SER:OG	2.19	0.43
1:YA:832:U:OP1	12:YL:39:LYS:N	2.43	0.43
1:YA:929:U:O2'	1:YA:930:G:H5'	2.18	0.43
1:RA:1581:G:C6	1:RA:1582:C:C4	3.07	0.43
1:RA:857:G:H2'	1:RA:858:G:O4'	2.19	0.43
1:RA:1261:C:C2'	1:RA:1262:A:O5'	2.67	0.43
12:YL:136:GLU:HG3	12:YL:140:GLY:O	2.19	0.43
32:QA:555:U:H2'	32:QA:556:C:C6	2.54	0.43
7:RG:171:LYS:HA	7:RG:171:LYS:HD3	1.78	0.43
17:RQ:94:LEU:O	17:RQ:96:ASP:N	2.50	0.42
16:RP:50:ARG:HG2	16:RP:57:ALA:CA	2.49	0.42
6:RF:56:LEU:HA	6:RF:56:LEU:HD23	1.71	0.42
18:YR:4:VAL:HA	18:YR:12:HIS:O	2.18	0.42
37:QF:25:TYR:CE1	37:QF:78:PHE:HE2	2.37	0.42
23:RW:50:VAL:HB	23:RW:61:LYS:HZ1	1.84	0.42
33:QB:173:LYS:O	33:QB:176:ASN:HB2	2.19	0.42
17:YQ:4:LYS:HZ1	17:YQ:6:GLY:HA3	1.81	0.42
44:XM:19:THR:HA	44:XM:25:GLY:O	2.19	0.42
32:XA:259:G:O2'	32:XA:260:G:H5'	2.19	0.42
45:QN:65:GLN:HG3	45:QN:78:LEU:HD21	2.01	0.42
1:YA:1079:C:N3	1:YA:1088:A:C2	2.87	0.42
14:YN:96:ARG:CZ	14:YN:96:ARG:HB2	2.48	0.42
9:YI:44:LYS:O	9:YI:48:ILE:HG12	2.19	0.42
1:RA:262:A:H2'	1:RA:263:G:H5'	2.00	0.42
5:RE:196:VAL:O	5:RE:197:GLU:C	2.57	0.42
1:YA:287:G:C2'	1:YA:288:U:H5'	2.49	0.42
1:YA:351:C:C2	1:YA:352:A:N7	2.87	0.42
1:YA:803:U:H2'	1:YA:804:A:H5'	2.00	0.42
1:YA:241:A:C8	1:YA:243:U:N3	2.87	0.42
11:YK:39:ILE:HB	11:YK:41:ILE:CD1	2.49	0.42
3:RC:80:LEU:CD1	3:RC:109:LEU:HG	2.47	0.42
4:RD:159:LYS:HZ2	4:RD:160:LYS:H	1.67	0.42
34:QC:119:ILE:CG2	34:QC:197:VAL:HG11	2.46	0.42
1:RA:141:G:H5'	1:RA:142:A:C5	2.54	0.42
32:QA:74:A:C2	32:QA:97:G:C6	3.07	0.42
32:QA:98:A:H2'	32:QA:99:C:H6	1.84	0.42
1:YA:1299:G:H5''	1:YA:1300:G:H5''	2.00	0.42
1:YA:2199:A:C6	1:YA:2200:C:C2	3.07	0.42
15:RO:49:VAL:HG21	15:RO:82:ALA:CA	2.41	0.42
1:RA:1812:U:H2'	1:RA:1813:G:C8	2.54	0.42
10:YJ:75:TYR:CD1	10:YJ:84:ILE:HD11	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2286:G:O6	28:R1:22:THR:HG21	2.19	0.42
32:XA:198:G:O6	32:XA:220:G:C2	2.72	0.42
32:XA:215:C:H2'	32:XA:216:U:O4'	2.19	0.42
24:YX:3:VAL:C	24:YX:5:GLN:N	2.73	0.42
1:RA:2417:C:C2	1:RA:2418:A:C8	3.07	0.42
8:RH:96:THR:HG23	8:RH:96:THR:O	2.19	0.42
7:YG:28:LYS:H	7:YG:79:THR:HG22	1.83	0.42
32:QA:1386:G:H2'	32:QA:1387:G:C8	2.52	0.42
32:QA:945:G:C6	32:QA:1337:G:C5	3.06	0.42
32:XA:765:G:O6	32:XA:812:G:C8	2.72	0.42
9:YI:109:ALA:HB1	9:YI:125:THR:HA	2.00	0.42
40:XI:61:ASP:O	40:XI:62:LEU:HD22	2.19	0.42
7:YG:120:ILE:O	7:YG:120:ILE:HG23	2.19	0.42
32:XA:490:C:OP1	35:XD:145:ARG:NH2	2.52	0.42
16:RP:47:ILE:HA	16:RP:96:LEU:HB2	2.00	0.42
20:RT:30:ILE:O	20:RT:85:VAL:HB	2.19	0.42
6:RF:5:ASP:O	6:RF:8:LYS:N	2.52	0.42
2:YB:100:G:H2'	2:YB:101:A:C8	2.54	0.42
1:YA:2638:G:C2'	1:YA:2639:A:OP2	2.66	0.42
5:RE:61:ARG:HH11	5:RE:64:GLY:HA3	1.80	0.42
49:XR:23:LYS:H	49:XR:23:LYS:HG2	1.67	0.42
1:YA:2009:A:N6	56:YA:3385:HOH:O	2.52	0.42
10:YJ:81:ILE:HG22	10:YJ:82:GLY:N	2.34	0.42
43:XL:9:LYS:HB2	43:XL:9:LYS:HE2	1.81	0.42
1:RA:116:C:H2'	1:RA:117:G:O4'	2.19	0.42
32:QA:263:A:P	51:QT:73:ARG:HH11	2.42	0.42
1:YA:64:A:O5'	1:YA:64:A:H8	2.02	0.42
6:YF:90:LEU:HG	6:YF:98:PHE:CE2	2.53	0.42
1:YA:716:A:H2'	1:YA:717:C:O4'	2.19	0.42
8:RH:16:GLY:C	8:RH:51:ARG:HH21	2.22	0.42
7:RG:93:TYR:HD2	7:RG:93:TYR:HA	1.63	0.42
52:QU:23:GLU:HB3	52:QU:24:LYS:H	1.55	0.42
32:QA:903:G:C4	32:QA:904:U:C5	3.08	0.42
32:QA:903:G:C6	32:QA:904:U:C4	3.07	0.42
36:XE:88:HIS:CE1	36:XE:89:THR:HG23	2.54	0.42
24:YX:76:LYS:HG3	24:YX:77:TYR:N	2.33	0.42
1:YA:2624:G:H2'	1:YA:2625:G:O4'	2.19	0.42
1:YA:544:C:C4	1:YA:545:U:N3	2.86	0.42
16:YP:103:THR:O	16:YP:106:ALA:HB3	2.19	0.42
12:YL:103:ILE:HD13	12:YL:104:GLN:NE2	2.34	0.42
32:XA:751:U:H4'	46:XO:23:SER:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:290:C:H2'	32:QA:291:U:C5'	2.49	0.42
32:QA:880:C:C2'	32:QA:881:G:H5'	2.49	0.42
49:XR:39:VAL:HA	49:XR:40:PRO:HD3	1.89	0.42
32:XA:695:A:N1	32:XA:696:A:C2	2.87	0.42
32:QA:874:G:C6	32:QA:875:U:C4	3.07	0.42
3:RC:180:MET:HG3	3:RC:268:ARG:HH11	1.83	0.42
1:RA:2480:C:H2'	1:RA:2481:G:H5'	2.01	0.42
32:QA:935:A:H2'	32:QA:936:C:H6	1.84	0.42
3:RC:39:SER:C	3:RC:41:GLY:N	2.72	0.42
19:RS:54:ALA:O	19:RS:57:ASN:HB2	2.19	0.42
1:RA:1839:G:C4	1:RA:1840:G:C8	3.07	0.42
32:QA:303:A:H2'	32:QA:304:U:O4'	2.19	0.42
1:RA:2018:G:H2'	1:RA:2019:A:O4'	2.19	0.42
1:YA:2784:U:C4	1:YA:2785:C:N4	2.87	0.42
35:XD:123:MET:CE	35:XD:126:GLY:O	2.67	0.42
4:RD:137:SER:O	4:RD:138:LEU:HB2	2.18	0.42
34:QC:61:LYS:HD2	34:QC:61:LYS:HA	1.89	0.42
1:YA:1365:A:H3'	1:YA:1366:A:C8	2.54	0.42
1:YA:282:A:C6	1:YA:283:G:C5	3.07	0.42
17:RQ:53:LYS:HG2	17:RQ:53:LYS:H	1.60	0.42
1:RA:1061:U:O4'	9:RI:9:LYS:HD2	2.20	0.42
1:RA:1070:A:C6	9:RI:9:LYS:O	2.72	0.42
37:QF:38:ARG:O	37:QF:39:LEU:HB2	2.19	0.42
23:RW:36:ILE:O	23:RW:39:GLN:CD	2.57	0.42
1:YA:447:A:N1	1:YA:454:A:H2'	2.33	0.42
3:YC:269:ARG:HA	3:YC:269:ARG:HE	1.84	0.42
32:XA:1221:G:C2	32:XA:1222:G:H1'	2.53	0.42
1:YA:1438:U:H5''	56:YA:3643:HOH:O	2.20	0.42
1:YA:1555:G:H2'	1:YA:1556:C:C5	2.54	0.42
1:YA:2320:U:H1'	1:YA:2333:A:H62	1.84	0.42
51:QT:26:MET:HE1	51:QT:56:ILE:HD11	1.99	0.42
51:QT:56:ILE:CG2	51:QT:57:VAL:N	2.81	0.42
32:QA:1128:C:O2'	32:QA:1129:C:H5'	2.18	0.42
11:RK:47:ILE:HG13	11:RK:48:PRO:CD	2.49	0.42
1:YA:417:C:H2'	1:YA:418:C:H6	1.83	0.42
32:QA:485:U:O2'	32:QA:486:U:P	2.77	0.42
1:YA:1395:A:H4'	1:YA:1397:U:C5	2.53	0.42
1:YA:1338:G:O2'	20:YT:18:GLU:HG3	2.19	0.42
17:YQ:91:ARG:CZ	18:YR:11:GLN:H	2.32	0.42
17:YQ:64:ILE:HD12	17:YQ:95:ALA:HB3	2.00	0.42
32:QA:255:G:H4'	48:QQ:18:LYS:CE	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:243:U:O2'	1:RA:244:A:H5'	2.18	0.42
10:YJ:24:THR:O	10:YJ:25:LEU:HB3	2.18	0.42
1:YA:607:U:C6	1:YA:607:U:C3'	3.02	0.42
1:YA:656:G:H2'	1:YA:657:U:C6	2.54	0.42
32:XA:238:A:C2'	32:XA:239:U:H5''	2.47	0.42
1:YA:1050:A:O2'	1:YA:1051:G:H5'	2.19	0.42
16:YP:52:ARG:O	16:YP:55:HIS:HB2	2.18	0.42
3:YC:76:VAL:HG12	3:YC:114:GLN:HG3	2.01	0.42
48:XQ:19:SER:CB	48:XQ:70:LYS:HZ2	2.32	0.42
38:XG:99:ALA:HB3	38:XG:100:MET:HE2	2.01	0.42
32:XA:1213:A:C8	32:XA:1215:G:N7	2.87	0.42
32:XA:451:A:C4'	32:XA:452:A:O5'	2.57	0.42
36:QE:24:VAL:O	36:QE:25:LYS:C	2.57	0.42
1:YA:922:C:H2'	1:YA:923:G:C8	2.54	0.42
4:RD:114:LYS:HG3	4:RD:114:LYS:H	1.48	0.42
1:RA:2723:C:O5'	1:RA:2723:C:H6	2.02	0.42
1:YA:2054:A:C2	1:YA:2616:C:N3	2.87	0.42
32:QA:1003:G:C6	32:QA:1036:A:N6	2.87	0.42
1:RA:2286:G:H4'	1:RA:2287:A:O4'	2.19	0.42
12:YL:70:LYS:O	12:YL:70:LYS:HG2	2.19	0.42
1:RA:1187:G:HO2'	1:RA:1188:U:H6	1.65	0.42
39:XH:11:THR:HG22	39:XH:14:ARG:NH2	2.33	0.42
1:YA:2738:A:C2	1:YA:2739:U:C2	3.08	0.42
1:YA:1283:G:N1	1:YA:1286:A:OP2	2.52	0.42
6:RF:40:GLY:C	6:RF:84:ILE:HD11	2.40	0.42
1:YA:768:G:O2'	1:YA:769:U:H5'	2.19	0.42
19:YS:28:LYS:O	19:YS:29:VAL:HG23	2.19	0.42
14:RN:73:ASN:ND2	14:RN:76:VAL:HG11	2.32	0.42
1:RA:2320:U:H5'	1:RA:2321:U:C5	2.55	0.42
4:YD:89:GLU:HG2	4:YD:94:GLN:HE22	1.83	0.42
1:YA:1856:U:H2'	1:YA:1857:G:O5'	2.18	0.42
1:RA:1358:G:N7	56:RA:3402:HOH:O	2.37	0.42
11:RK:63:VAL:HG13	11:RK:103:VAL:HG12	2.01	0.42
48:QQ:55:GLY:HA3	48:QQ:82:VAL:CG1	2.46	0.42
8:YH:147:VAL:O	8:YH:148:ALA:HB3	2.19	0.42
32:XA:142:G:N2	32:XA:143:A:H1'	2.34	0.42
1:RA:1906:G:C2'	1:RA:1907:G:O5'	2.68	0.42
48:QQ:7:LEU:HD23	48:QQ:24:ILE:HD13	1.97	0.42
9:YI:112:LYS:O	9:YI:113:ALA:HB2	2.18	0.42
9:YI:124:MET:O	9:YI:127:SER:HB2	2.18	0.42
1:YA:1308:A:N7	1:YA:1309:G:C5	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:QO:69:LEU:HD21	46:QO:76:ARG:HB2	2.01	0.42
16:RP:96:LEU:HA	16:RP:96:LEU:HD12	1.76	0.42
7:RG:139:VAL:O	7:RG:140:ILE:C	2.57	0.42
32:XA:1051:C:O2'	32:XA:1052:U:C6	2.66	0.42
32:QA:865:A:C5	32:QA:866:C:C5	3.06	0.42
32:XA:68:G:H5'	32:XA:171:A:C1'	2.49	0.42
35:QD:53:GLN:HE21	35:QD:202:LEU:CA	2.31	0.42
32:QA:1346:A:C4	32:QA:1348:U:C4	3.07	0.42
32:XA:807:A:H2'	32:XA:808:C:C6	2.54	0.42
1:RA:1028:A:H61	1:RA:1125:G:H2'	1.80	0.42
13:RM:8:LYS:HD2	13:RM:8:LYS:HA	1.65	0.42
9:YI:22:PRO:HB2	9:YI:23:VAL:H	1.61	0.42
1:YA:370:G:N1	1:YA:424:G:N7	2.66	0.42
41:QJ:35:GLN:CG	41:QJ:77:VAL:HB	2.49	0.42
47:XP:44:SER:H	47:XP:46:LYS:HZ2	1.66	0.42
32:QA:725:G:H2'	32:QA:726:C:C6	2.54	0.42
32:QA:903:G:C5	32:QA:904:U:C4	3.06	0.42
1:RA:1434:A:H2'	1:RA:1435:G:H8	1.84	0.42
32:XA:295:C:C4	32:XA:296:U:C5	3.07	0.42
16:YP:105:LYS:HA	16:YP:108:ARG:NE	2.33	0.42
51:XT:54:GLN:N	51:XT:55:PRO:CD	2.82	0.42
32:QA:1081:A:OP1	36:QE:20:VAL:HG23	2.19	0.42
1:RA:591:U:H1'	30:R3:1:PRO:H3	1.84	0.42
49:XR:39:VAL:HG13	49:XR:40:PRO:HD2	2.01	0.42
35:XD:149:LYS:HZ1	35:XD:176:LYS:HD2	1.85	0.42
35:XD:149:LYS:HZ2	35:XD:176:LYS:NZ	2.17	0.42
32:QA:11:G:C6	32:QA:12:U:C4	3.07	0.42
18:YR:21:ARG:HB2	18:YR:93:PHE:CD1	2.53	0.42
32:QA:937:A:C2	32:QA:1379:G:O6	2.72	0.42
19:RS:28:LYS:O	19:RS:29:VAL:C	2.58	0.42
32:XA:1460:C:N4	32:XA:1461:G:C5	2.87	0.42
1:RA:149:A:H2'	1:RA:150:U:C6	2.53	0.42
37:XF:72:ASP:OD1	37:XF:72:ASP:N	2.52	0.42
3:RC:209:ALA:HA	3:RC:212:TRP:NE1	2.35	0.42
32:QA:949:A:C6	32:QA:950:U:C4	3.07	0.42
6:YF:176:PHE:HB3	6:YF:177:ARG:H	1.72	0.42
37:QF:67:PRO:C	37:QF:69:GLU:H	2.22	0.42
1:RA:818:G:H5'	1:RA:839:U:OP1	2.19	0.42
1:RA:2422:C:H5'	1:RA:2423:U:OP2	2.19	0.42
32:QA:148:G:N3	32:QA:1446:A:H2	2.17	0.42
34:QC:138:GLN:C	34:QC:140:ALA:H	2.21	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:RU:85:ARG:HA	21:RU:91:LYS:O	2.19	0.42
24:RX:73:ARG:HG3	24:RX:73:ARG:O	2.19	0.42
27:R0:22:THR:HG22	27:R0:23:ALA:O	2.19	0.42
32:QA:1137:C:O2	32:QA:1137:C:O4'	2.37	0.42
3:RC:142:ASN:CG	3:RC:142:ASN:O	2.58	0.42
43:XL:42:LYS:CG	43:XL:43:LYS:N	2.81	0.42
37:QF:15:SER:C	37:QF:16:GLU:HG3	2.39	0.42
2:YB:65:U:O2	2:YB:65:U:H2'	2.19	0.42
37:QF:62:MET:HG3	37:QF:64:VAL:HG23	1.99	0.42
23:RW:50:VAL:C	23:RW:52:CYS:N	2.73	0.42
1:YA:1248:G:O2'	17:YQ:2:ARG:HA	2.20	0.42
1:RA:271:G:N1	1:RA:367:G:C4	2.87	0.42
51:QT:74:HIS:O	51:QT:78:LEU:HB2	2.19	0.42
3:YC:161:VAL:HG13	3:YC:174:ARG:O	2.18	0.42
32:XA:1408:A:N7	32:XA:1409:C:N4	2.67	0.42
1:YA:1349:C:N3	1:YA:1382:G:O6	2.52	0.42
1:YA:1428:C:H5''	3:YC:27:LYS:NZ	2.33	0.42
1:YA:303:G:N1	1:YA:315:G:C6	2.87	0.42
1:YA:1154:G:H8	1:YA:1154:G:O5'	2.02	0.42
1:YA:1075:C:O2'	1:YA:1076:C:H5'	2.19	0.42
1:YA:1056:G:C5'	1:YA:1085:A:C2	3.02	0.42
32:XA:112:G:C2	32:XA:330:C:C4	3.06	0.42
1:YA:952:G:C6	1:YA:966:G:N1	2.88	0.42
21:YU:44:HIS:O	21:YU:45:GLN:C	2.57	0.42
1:YA:55:G:H2'	1:YA:55:G:N3	2.34	0.42
32:XA:1241:G:C4	32:XA:1242:G:C8	3.07	0.42
32:XA:375:U:C2	32:XA:376:G:C8	3.07	0.42
32:QA:748:G:O6	32:QA:749:A:N6	2.52	0.42
1:YA:1475:G:C2'	1:YA:1476:U:OP2	2.67	0.42
48:XQ:17:GLU:O	48:XQ:18:LYS:HB2	2.19	0.42
1:RA:1085:A:H2'	1:RA:1086:A:C4	2.54	0.42
34:QC:166:TRP:N	34:QC:166:TRP:CE3	2.79	0.42
1:YA:1186:G:H2'	1:YA:1187:G:O4'	2.20	0.42
33:QB:218:ALA:CA	33:QB:221:ARG:HH21	2.32	0.42
52:XU:34:ARG:O	52:XU:35:GLU:O	2.37	0.42
38:XG:140:VAL:C	38:XG:142:ARG:N	2.72	0.42
36:XE:36:THR:HG23	36:XE:62:ALA:HB1	2.00	0.42
1:YA:2615:U:HO2'	1:YA:2616:C:H6	1.66	0.42
32:QA:251:G:H4'	32:QA:252:U:O5'	2.20	0.42
34:XC:18:ASN:HA	34:XC:55:VAL:HG13	2.00	0.42
45:QN:20:PHE:O	45:QN:21:ALA:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:YJ:73:VAL:CG2	10:YJ:74:TYR:H	2.23	0.42
35:QD:145:ARG:C	35:QD:147:LYS:N	2.71	0.42
32:XA:198:G:O2'	32:XA:199:A:P	2.77	0.42
1:YA:953:G:O2'	1:YA:954:G:H5'	2.19	0.42
1:YA:2620:C:O2'	4:YD:162:ALA:O	2.30	0.42
52:QU:28:LEU:HD23	52:QU:28:LEU:HA	1.80	0.42
32:XA:183:C:O2'	32:XA:184:G:C5'	2.66	0.42
8:YH:32:PRO:C	8:YH:34:GLY:H	2.22	0.42
1:RA:1385:A:N3	1:RA:1386:C:C6	2.87	0.42
1:YA:2574:G:C2	1:YA:2575:C:C2	3.07	0.42
45:YN:20:PHE:HB3	45:YN:24:ALA:HB2	2.01	0.42
19:RS:20:VAL:O	19:RS:23:LEU:HB2	2.19	0.42
26:RZ:13:ILE:CG2	26:RZ:14:GLY:N	2.73	0.42
32:QA:1453:G:HO2'	32:QA:1454:G:P	2.42	0.42
13:RM:49:ALA:O	13:RM:50:ARG:C	2.57	0.42
25:RY:59:GLU:O	25:RY:63:ALA:HB3	2.18	0.42
39:XH:65:PHE:CD2	39:XH:66:GLN:HG2	2.55	0.42
1:RA:1996:C:OP1	11:RK:31:ARG:NE	2.51	0.42
1:YA:1648:U:OP1	56:YA:3399:HOH:O	2.20	0.42
35:XD:84:ASN:OD1	36:XE:101:GLY:HA3	2.19	0.42
3:RC:269:ARG:HD3	3:RC:269:ARG:HA	1.59	0.42
1:YA:1865:U:O2	1:YA:1877:A:C6	2.73	0.42
13:RM:43:ALA:O	13:RM:47:GLU:HB2	2.19	0.42
46:XO:34:GLN:NE2	46:XO:37:HIS:HD2	2.17	0.42
19:YS:40:ASN:OD1	19:YS:41:LYS:N	2.52	0.42
1:RA:2547:A:O2'	1:RA:2548:U:H5'	2.19	0.42
1:YA:2552:U:C2	1:YA:2554:U:C5'	3.01	0.42
32:XA:1097:C:C2	32:XA:1098:C:C5	3.08	0.42
1:YA:752:A:O2'	1:YA:753:A:C8	2.72	0.42
32:QA:4:U:C2'	32:QA:4:U:O2	2.68	0.42
32:QA:1083:U:H5	32:QA:1084:G:C6	2.37	0.42
40:XI:88:GLU:N	40:XI:88:GLU:CD	2.72	0.42
22:RV:9:ARG:HD2	22:RV:40:ILE:O	2.19	0.42
35:QD:87:GLU:O	35:QD:90:LEU:HB2	2.20	0.42
42:QK:91:GLY:HA2	42:QK:94:SER:HB3	2.02	0.42
51:QT:3:ILE:H	51:QT:3:ILE:HG13	1.70	0.42
1:RA:2459:A:O5'	1:RA:2459:A:H8	2.03	0.42
11:RK:49:ARG:HB3	11:RK:50:GLY:H	1.64	0.42
32:QA:1312:G:N7	50:QS:2:ARG:HA	2.33	0.42
8:RH:94:ILE:HG22	8:RH:95:GLY:O	2.19	0.42
1:RA:1773:A:H2'	1:RA:1774:C:H5'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:792:A:H4'	32:QA:793:U:O5'	2.19	0.42
12:RL:105:ILE:CG2	12:RL:106:GLU:N	2.82	0.42
1:RA:2396:G:O2'	1:RA:2397:G:H5'	2.19	0.42
32:QA:504:C:H6	32:QA:504:C:O5'	2.02	0.42
13:YM:5:LYS:HD2	13:YM:5:LYS:HA	1.78	0.42
17:RQ:93:ILE:O	17:RQ:96:ASP:HB3	2.19	0.42
1:RA:1073:A:N7	1:RA:1074:G:C8	2.84	0.42
1:RA:1059:G:C2	1:RA:1080:A:N3	2.87	0.42
1:YA:36:G:C6	1:YA:445:C:N4	2.87	0.42
1:YA:1438:U:C2'	1:YA:1439:A:H5'	2.49	0.42
1:YA:2337:G:C2'	1:YA:2337:G:N3	2.81	0.42
1:YA:233:A:O2'	1:YA:234:U:C5'	2.67	0.42
1:YA:1359:A:OP1	1:YA:1360:G:OP2	2.37	0.42
1:YA:2214:C:H2'	1:YA:2215:C:C6	2.54	0.42
14:YN:38:LEU:HB3	14:YN:39:PRO:CD	2.45	0.42
1:YA:335:C:O2'	1:YA:336:C:P	2.77	0.42
32:QA:971:G:H1'	32:QA:1365:G:O2'	2.20	0.42
6:YF:56:LEU:HD13	6:YF:56:LEU:O	2.20	0.42
32:XA:1126:U:O2	32:XA:1281:C:C6	2.72	0.42
3:YC:14:HIS:O	3:YC:203:VAL:HG11	2.19	0.42
1:YA:110:G:H2'	1:YA:110:G:N3	2.34	0.42
31:Y4:3:VAL:HB	31:Y4:37:GLN:NE2	2.35	0.42
1:YA:675:A:N6	1:YA:676:A:N6	2.68	0.42
33:QB:191:ASP:HA	33:QB:192:PRO:HD2	1.69	0.42
20:RT:19:LYS:HG3	20:RT:19:LYS:H	1.63	0.42
4:RD:158:GLY:O	4:RD:159:LYS:C	2.58	0.42
28:R1:3:GLY:C	28:R1:5:ARG:H	2.22	0.42
32:XA:1084:G:C5	32:XA:1085:U:C4	3.07	0.42
1:RA:2154:A:H2'	1:RA:2155:U:O4'	2.19	0.42
1:RA:2136:G:O6	1:RA:2156:G:C2	2.72	0.42
1:YA:1127:A:O2'	1:YA:1128:G:C5'	2.58	0.42
20:YT:38:ALA:C	20:YT:39:THR:HG22	2.39	0.42
1:YA:2202:U:O2	1:YA:2202:U:H2'	2.19	0.42
36:XE:114:LEU:C	36:XE:116:VAL:H	2.23	0.42
1:RA:1813:G:C2	3:RC:49:THR:CG2	3.01	0.42
32:QA:394:G:H2'	32:QA:395:C:H6	1.85	0.42
34:QC:39:ARG:NE	34:QC:54:ILE:HD11	2.35	0.42
32:QA:36:C:H4'	43:QL:118:VAL:O	2.20	0.42
18:RR:3:ALA:HA	18:RR:40:MET:O	2.18	0.42
4:YD:125:TRP:CD2	4:YD:160:LYS:HB3	2.54	0.42
45:XN:20:PHE:CB	45:XN:24:ALA:HB2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:XK:55:ARG:O	42:XK:56:LYS:C	2.58	0.42
13:RM:83:GLY:O	13:RM:85:GLY:N	2.52	0.42
1:YA:570:G:C5	1:YA:2030:A:C5	3.08	0.42
14:RN:69:ARG:H	14:RN:69:ARG:HG2	1.24	0.42
32:QA:1040:U:C2	32:QA:1041:G:C8	3.08	0.42
1:YA:1171:G:C5	1:YA:1179:G:N2	2.87	0.42
3:RC:129:LEU:O	3:RC:134:ILE:HD11	2.20	0.42
25:RY:56:LEU:HA	25:RY:59:GLU:HG2	2.00	0.42
1:RA:1959:G:C2'	1:RA:1960:A:O5'	2.67	0.42
34:XC:187:GLU:O	34:XC:188:ALA:CB	2.67	0.42
1:YA:1865:U:C2'	1:YA:1866:A:H8	2.32	0.42
51:QT:72:ALA:O	51:QT:73:ARG:C	2.57	0.42
12:YL:68:SER:O	12:YL:69:ARG:CB	2.68	0.42
1:YA:425:G:C2	1:YA:426:C:C5	3.08	0.42
1:YA:121:G:C2	1:YA:131:A:C5	3.07	0.42
16:YP:86:LYS:HA	16:YP:86:LYS:NZ	2.33	0.42
5:RE:83:VAL:HG12	5:RE:86:ALA:N	2.35	0.42
33:XB:84:LEU:CG	33:XB:84:LEU:O	2.67	0.42
32:XA:223:A:C4	32:XA:224:U:C5	3.08	0.42
1:YA:862:G:C4	1:YA:863:A:C8	3.07	0.42
38:QG:78:ARG:HA	38:QG:82:SER:O	2.19	0.42
32:XA:1343:G:H4'	40:XI:123:ARG:O	2.18	0.42
44:QM:13:HIS:CG	44:QM:41:ASP:HB2	2.55	0.42
35:QD:138:PRO:HA	35:QD:181:PHE:HD2	1.84	0.42
32:QA:1327:C:O2'	32:QA:1328:C:H5'	2.19	0.42
32:XA:602:A:C2'	32:XA:603:U:H5'	2.50	0.42
32:QA:1480:A:C2	32:QA:1481:U:C2	3.07	0.42
32:XA:386:C:C2'	32:XA:387:U:H5'	2.48	0.42
1:RA:415:A:H61	1:RA:2407:A:N6	2.17	0.42
1:RA:2716:C:C2	1:RA:2717:C:C5	3.08	0.42
1:YA:1353:A:O2'	1:YA:1354:A:H5'	2.19	0.42
46:QO:55:LEU:HA	46:QO:58:MET:HG3	2.02	0.42
1:RA:396:G:H1'	24:RX:28:PHE:HB3	2.01	0.42
3:YC:44:ASN:C	3:YC:46:GLY:N	2.73	0.42
1:RA:1001:A:H2'	1:RA:1002:G:O4'	2.19	0.42
32:XA:944:G:C3'	32:XA:945:G:H5'	2.49	0.42
1:YA:2011:U:H2'	1:YA:2012:G:O4'	2.19	0.42
9:RI:39:LYS:O	9:RI:43:ALA:HB2	2.20	0.42
1:YA:2844:G:N2	1:YA:2874:C:N3	2.68	0.42
5:YE:12:LEU:O	5:YE:13:THR:HB	2.18	0.42
1:RA:950:G:C6	1:RA:951:C:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:XE:17:VAL:HA	36:XE:33:THR:O	2.19	0.42
24:YX:24:THR:O	24:YX:25:LYS:C	2.57	0.42
12:YL:142:ILE:HG22	12:YL:144:GLU:H	1.85	0.42
3:YC:118:GLY:O	3:YC:119:VAL:C	2.57	0.42
32:XA:1438:G:C2	32:XA:1464:U:O2	2.72	0.42
1:RA:2076:U:O4'	1:RA:2076:U:O2	2.36	0.42
24:YX:69:GLU:HA	24:YX:72:ALA:HB3	2.01	0.42
18:RR:49:ILE:CD1	18:RR:53:PHE:H	2.33	0.42
1:RA:2313:C:H5''	6:RF:87:LYS:HD3	2.01	0.42
18:YR:4:VAL:O	18:YR:38:VAL:HG23	2.20	0.42
37:QF:25:TYR:O	37:QF:29:ILE:HD12	2.20	0.42
37:QF:40:GLU:CB	37:QF:42:TRP:NE1	2.81	0.42
32:XA:1258:G:C2	32:XA:1278:G:N1	2.88	0.42
1:RA:2352:A:C2	23:RW:30:VAL:CG1	2.86	0.42
52:XU:19:LYS:HB2	52:XU:20:ARG:CZ	2.49	0.42
1:YA:455:C:N3	1:YA:473:G:H5'	2.35	0.42
2:YB:27:C:C5	2:YB:28:C:C5	3.08	0.42
33:QB:199:ILE:HA	33:QB:200:PRO:HD2	1.87	0.42
1:RA:558:U:OP2	10:RJ:113:PRO:HG2	2.19	0.42
1:YA:2335:A:C2	1:YA:2337:G:C8	3.07	0.42
1:YA:2331:G:H1'	23:YW:40:ARG:HB3	2.01	0.42
3:YC:115:ILE:HB	3:YC:127:ASN:OD1	2.20	0.42
1:YA:1390:U:O2'	1:YA:1391:U:H5'	2.20	0.42
42:QK:125:LYS:O	52:QU:33:ARG:NH1	2.53	0.42
1:YA:300:A:H2	1:YA:319:G:N2	2.17	0.42
1:YA:323:C:N4	1:YA:333:G:N7	2.68	0.42
44:XM:78:ARG:NH2	44:XM:79:LEU:HA	2.34	0.42
36:QE:120:HIS:C	36:QE:121:ASN:HD22	2.23	0.42
42:XK:70:ALA:HB1	42:XK:104:PHE:CZ	2.55	0.42
1:YA:1056:G:H5''	1:YA:1085:A:C2	2.54	0.42
2:YB:42:C:H2'	2:YB:43:C:C5	2.52	0.42
9:YI:53:PRO:O	9:YI:73:PRO:HG3	2.19	0.42
41:XJ:84:VAL:CG2	41:XJ:85:ASP:N	2.74	0.42
1:YA:28:A:H2'	1:YA:29:U:O4'	2.20	0.42
49:XR:71:ASP:CB	49:XR:72:ARG:HH21	2.33	0.42
32:XA:754:C:O2	32:XA:754:C:C2'	2.64	0.42
1:RA:137:U:HO2'	1:RA:138:U:P	2.27	0.42
2:YB:112:G:N2	15:YO:45:SER:HA	2.18	0.42
32:XA:370:C:O2'	32:XA:371:A:H5'	2.20	0.42
44:XM:11:HIS:NE2	44:XM:43:LYS:HD2	2.34	0.42
32:QA:49:U:O2'	32:QA:50:A:H2'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2149:U:C2'	1:RA:2150:C:O5'	2.67	0.42
1:YA:1303:G:O2'	1:YA:1304:A:C8	2.47	0.42
34:QC:34:SER:O	34:QC:37:LYS:HB3	2.19	0.42
11:YK:46:ALA:HB3	11:YK:54:LYS:CE	2.50	0.42
17:YQ:69:ARG:HH21	17:YQ:69:ARG:CB	2.22	0.42
3:YC:159:THR:N	3:YC:194:VAL:CG1	2.83	0.42
4:RD:190:LYS:O	4:RD:191:GLY:O	2.38	0.42
1:RA:1252:G:N1	17:RQ:36:GLN:OE1	2.38	0.42
12:YL:120:VAL:HG12	12:YL:121:THR:N	2.34	0.42
34:XC:31:ASN:O	34:XC:35:ASP:HB2	2.19	0.42
32:QA:1003:G:H21	32:QA:1005:A:P	2.41	0.42
35:QD:97:LEU:HD22	35:QD:117:VAL:HG11	2.01	0.42
1:RA:733:G:C5	1:RA:761:A:C5	3.08	0.42
32:QA:1370:G:C2	32:QA:1371:G:C8	3.08	0.42
1:YA:769:U:H1'	1:YA:1379:U:C6	2.54	0.42
32:QA:1066:C:C6	32:QA:1066:C:C5'	3.02	0.42
1:RA:2555:U:C5	1:RA:2556:C:C2	3.08	0.42
19:RS:19:LEU:O	27:R0:21:LEU:HD12	2.19	0.42
1:RA:1385:A:H4'	1:RA:1386:C:OP1	2.20	0.42
1:RA:1495:A:C6	1:RA:1496:A:C6	3.08	0.42
15:RO:71:ALA:O	15:RO:106:LEU:HB2	2.19	0.42
4:YD:32:ASN:HB2	4:YD:50:VAL:HB	2.01	0.42
5:YE:70:SER:HG	5:YE:78:TRP:HH2	1.68	0.42
40:QI:27:ILE:HD12	40:QI:27:ILE:N	2.34	0.42
20:YT:74:ILE:HG23	20:YT:75:GLY:N	2.34	0.42
40:XI:9:GLY:CA	40:XI:16:ALA:HB3	2.48	0.42
1:YA:2540:C:H2'	1:YA:2541:A:C8	2.54	0.42
8:YH:7:ASP:OD2	8:YH:35:LYS:HD3	2.20	0.42
1:RA:627:A:C5	1:RA:637:A:N7	2.87	0.42
21:YU:39:ASN:O	21:YU:40:LEU:C	2.57	0.42
1:YA:1866:A:C4	1:YA:1876:A:N6	2.88	0.42
3:RC:77:VAL:CG2	3:RC:111:ALA:HA	2.49	0.42
1:YA:2238:G:H4'	1:YA:2239:G:OP1	2.20	0.42
17:RQ:116:LEU:O	17:RQ:117:ALA:C	2.58	0.42
34:QC:36:PHE:HZ	45:QN:89:ARG:HH12	1.68	0.42
1:YA:2058:A:N6	1:YA:2059:A:N6	2.68	0.42
32:QA:737:C:H2'	32:QA:738:C:C6	2.51	0.42
26:YZ:28:LEU:CD2	26:YZ:28:LEU:N	2.82	0.42
50:QS:79:TYR:CE1	50:QS:80:ARG:HB2	2.54	0.42
45:YN:27:LYS:HB2	45:YN:45:LEU:HD23	2.00	0.42
39:QH:33:VAL:HG12	39:QH:34:ALA:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1065:U:H5	32:XA:1190:G:N7	2.16	0.42
32:XA:1097:C:H2'	32:XA:1098:C:C6	2.52	0.42
1:YA:498:G:C6	1:YA:499:U:C4	3.07	0.42
2:YB:21:G:C2	2:YB:63:C:C2	3.07	0.42
16:YP:103:THR:HG22	16:YP:104:GLY:N	2.34	0.42
40:QI:10:ARG:HB2	40:QI:14:SER:O	2.19	0.42
9:RI:96:LYS:H	9:RI:96:LYS:CD	2.32	0.42
3:RC:79:ARG:HG3	3:RC:92:LEU:CB	2.50	0.42
32:XA:1489:G:C5	32:XA:1490:U:C5	3.08	0.42
32:QA:1391:U:H2'	32:QA:1392:G:C8	2.55	0.42
19:RS:28:LYS:O	19:RS:31:GLN:N	2.53	0.42
1:RA:2856:A:N6	1:RA:2857:G:C6	2.88	0.42
3:RC:181:ARG:NH2	3:RC:181:ARG:CG	2.80	0.42
33:XB:67:LEU:HG	33:XB:157:PRO:HG3	2.01	0.42
2:RB:94:A:H2'	2:RB:95:U:C6	2.55	0.42
40:XI:63:TYR:C	40:XI:63:TYR:CD1	2.93	0.42
32:QA:715:A:OP1	32:QA:805:C:O2'	2.32	0.42
24:YX:65:THR:O	24:YX:68:ALA:CB	2.67	0.42
12:YL:4:ASN:O	12:YL:6:LEU:N	2.51	0.42
32:QA:765:G:H2'	32:QA:812:G:H21	1.85	0.42
1:RA:1562:U:H2'	1:RA:1563:U:O4'	2.20	0.42
1:RA:1354:A:C8	1:RA:1355:G:C8	3.08	0.42
1:RA:2694:G:H2'	1:RA:2695:U:H6	1.85	0.42
42:XK:96:ILE:HD13	42:XK:109:ILE:CD1	2.48	0.42
4:YD:175:LEU:HB3	4:YD:176:ASP:H	1.61	0.42
1:YA:1123:C:H2'	1:YA:1124:G:H8	1.85	0.42
1:YA:123:G:O3'	1:YA:1376:C:H4'	2.20	0.42
36:XE:112:ALA:O	36:XE:113:VAL:C	2.56	0.42
1:RA:1612:C:H4'	29:R2:5:PHE:O	2.19	0.42
1:RA:2831:G:OP1	4:RD:56:LYS:NZ	2.50	0.42
33:QB:23:ASN:OD1	33:QB:25:LYS:HB2	2.19	0.42
1:RA:845:A:N3	1:RA:845:A:H3'	2.34	0.42
14:RN:54:LEU:HD12	14:RN:54:LEU:HA	1.77	0.42
32:XA:1467:C:H2'	32:XA:1468:A:C8	2.55	0.42
32:XA:926:G:C6	32:XA:1505:G:C6	3.07	0.42
7:YG:67:ALA:O	7:YG:71:LEU:HB2	2.19	0.42
2:YB:13:G:N2	2:YB:16:G:N3	2.67	0.42
23:RW:31:LEU:O	23:RW:33:GLY:N	2.53	0.42
1:YA:444:C:O2'	1:YA:445:C:P	2.77	0.42
7:RG:84:LYS:O	7:RG:85:LYS:HB2	2.19	0.42
1:YA:2331:G:H4'	23:YW:41:GLY:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Y3:31:ILE:HG22	30:Y3:34:LYS:HG2	2.01	0.42
11:RK:18:ARG:HD2	11:RK:18:ARG:HA	1.80	0.42
1:YA:1346:G:H2'	1:YA:1347:A:H8	1.85	0.42
1:YA:1395:A:H4'	1:YA:1397:U:C4	2.54	0.42
1:RA:301:G:H1'	1:RA:302:C:C6	2.55	0.42
1:YA:325:G:H2'	1:YA:326:G:H8	1.84	0.42
1:YA:995:C:O2'	17:YQ:60:TRP:HZ2	2.01	0.42
36:QE:104:ILE:HD11	36:QE:114:LEU:HB3	2.00	0.42
1:YA:1082:U:N3	1:YA:1086:A:C6	2.88	0.42
32:XA:330:C:O2'	32:XA:331:G:P	2.77	0.42
36:XE:96:GLN:N	36:XE:123:LEU:O	2.51	0.42
1:YA:2884:U:P	27:Y0:40:HIS:HE2	2.41	0.42
1:RA:1655:A:H5'	4:RD:118:PHE:CD2	2.54	0.42
48:QQ:13:SER:O	48:QQ:16:MET:CE	2.68	0.42
1:YA:2266:A:N6	1:YA:2273:A:OP2	2.49	0.42
41:XJ:51:VAL:HG22	41:XJ:65:TYR:HE1	1.83	0.42
5:RE:194:LYS:O	5:RE:197:GLU:HB3	2.20	0.42
23:RW:9:THR:HG23	23:RW:10:ARG:HG3	2.01	0.42
32:XA:408:A:C5	32:XA:409:U:C5	3.08	0.42
32:XA:413:G:H1'	32:XA:428:G:H21	1.85	0.42
32:XA:429:U:H4'	32:XA:430:A:O5'	2.18	0.42
32:XA:243:A:C2	32:XA:245:U:C2	3.08	0.42
32:QA:1441:A:C8	32:QA:1442:G:C8	3.07	0.42
16:YP:52:ARG:HB3	16:YP:55:HIS:HB2	2.00	0.42
1:YA:729:G:C6	3:YC:206:LYS:HB2	2.54	0.42
6:YF:111:ARG:NE	6:YF:111:ARG:N	2.68	0.42
7:RG:36:LEU:HD13	7:RG:36:LEU:HA	1.85	0.42
34:QC:166:TRP:O	34:QC:166:TRP:CE3	2.72	0.42
32:QA:68:G:C5	32:QA:69:G:H1'	2.55	0.42
1:RA:1599:U:H2'	1:RA:1600:C:C6	2.55	0.42
33:QB:105:THR:CG2	33:QB:105:THR:O	2.64	0.42
39:QH:76:ARG:NH1	39:QH:76:ARG:CG	2.74	0.42
1:YA:2014:A:H5'	19:YS:94:ASP:OD2	2.20	0.42
17:RQ:104:ALA:O	17:RQ:108:LEU:HD12	2.19	0.42
17:RQ:105:PHE:HA	17:RQ:108:LEU:HD12	2.01	0.42
3:RC:229:HIS:CG	3:RC:230:PRO:HD2	2.55	0.42
4:RD:24:VAL:HA	4:RD:189:VAL:O	2.19	0.42
36:XE:131:ASN:HA	36:XE:132:PRO:HD2	1.82	0.42
9:RI:79:LEU:O	9:RI:85:ILE:HD12	2.19	0.42
34:XC:18:ASN:ND2	34:XC:53:ARG:NH1	2.62	0.42
1:YA:2771:C:O2'	4:YD:173:GLN:OE1	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:502:A:H2'	32:QA:503:C:O4'	2.20	0.42
1:YA:957:C:OP2	13:YM:75:GLU:HA	2.20	0.42
32:QA:1370:G:C5'	40:QI:110:VAL:HG21	2.49	0.42
1:YA:1286:A:C5	1:YA:1289:C:C4	3.07	0.42
51:QT:14:GLU:O	51:QT:15:LYS:C	2.57	0.42
38:QG:12:LEU:CD2	38:QG:12:LEU:H	2.20	0.42
7:RG:59:ASP:HB2	7:RG:63:GLN:HG3	2.01	0.42
32:XA:577:G:C6	32:XA:812:G:N2	2.87	0.42
44:XM:101:THR:O	44:XM:102:LYS:C	2.57	0.42
40:XI:27:ILE:HD13	40:XI:62:LEU:HB3	2.01	0.42
10:YJ:51:GLY:C	10:YJ:121:LYS:HE3	2.39	0.42
32:XA:446:G:N2	32:XA:489:C:C2	2.88	0.42
32:XA:444:G:C6	32:XA:491:G:C6	3.08	0.42
19:RS:96:ILE:O	19:RS:96:ILE:CG1	2.65	0.42
32:XA:1347:G:H8	40:XI:108:ARG:O	2.02	0.42
17:RQ:40:LYS:HD3	17:RQ:44:TYR:CE1	2.54	0.42
39:XH:65:PHE:C	39:XH:67:GLY:H	2.23	0.42
5:RE:150:THR:HG21	5:RE:153:LEU:HA	2.01	0.42
1:RA:1105:U:H2'	1:RA:1106:G:C8	2.51	0.42
1:YA:7:G:O2'	10:YJ:15:TRP:HZ2	2.03	0.42
32:QA:1046:A:O2'	32:QA:1047:G:H5'	2.20	0.42
32:XA:509:A:C5	32:XA:510:A:C6	3.07	0.42
1:YA:370:G:C2	1:YA:424:G:C8	3.08	0.42
6:YF:33:ILE:HB	6:YF:90:LEU:HD23	2.02	0.42
21:YU:66:VAL:CG1	21:YU:67:SER:N	2.81	0.42
25:RY:18:LEU:O	25:RY:22:LEU:HB2	2.20	0.42
32:XA:554:A:H2'	32:XA:555:U:C6	2.54	0.42
35:QD:114:ARG:O	35:QD:115:GLN:C	2.58	0.42
1:YA:843:G:C6	1:YA:844:A:N6	2.87	0.42
32:QA:702:A:H3'	32:QA:703:G:C5'	2.49	0.42
3:RC:124:LYS:HB3	3:RC:127:ASN:HD22	1.85	0.42
26:YZ:6:ILE:HD12	26:YZ:47:ILE:HD11	2.01	0.42
1:RA:735:A:H3'	1:RA:736:C:H6	1.85	0.42
27:Y0:33:SER:HB3	27:Y0:34:GLY:H	1.43	0.42
26:YZ:13:ILE:C	26:YZ:15:ARG:H	2.23	0.42
26:YZ:21:ALA:O	26:YZ:24:LEU:N	2.52	0.42
1:YA:2672:U:H6	1:YA:2672:U:O5'	2.03	0.42
33:XB:63:LYS:O	33:XB:63:LYS:HG2	2.20	0.42
1:RA:912:C:C2'	1:RA:913:U:H5'	2.49	0.42
1:RA:2498:C:O2'	1:RA:2499:C:H5'	2.19	0.42
32:XA:1001:C:H2'	32:XA:1002:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:45:GLU:OE1	18:YR:46:GLU:O	2.38	0.42
1:RA:2402:U:H2'	1:RA:2403:C:OP2	2.19	0.42
1:YA:216:A:N7	1:YA:432:A:C6	2.88	0.42
32:QA:1221:G:H2'	32:QA:1222:G:C8	2.54	0.42
30:R3:31:ILE:C	30:R3:31:ILE:HD12	2.40	0.42
32:XA:955:U:H3	32:XA:1225:A:H61	1.67	0.42
45:YN:8:ARG:HD2	45:YN:12:ARG:CZ	2.50	0.42
45:YN:9:GLU:HA	45:YN:12:ARG:HD2	2.02	0.42
1:RA:558:U:OP1	10:RJ:113:PRO:HD2	2.20	0.42
1:RA:2771:C:HO2'	4:RD:173:GLN:HE22	1.66	0.42
1:YA:2322:A:N7	1:YA:2323:G:C5	2.88	0.42
1:YA:2331:G:H2'	1:YA:2332:C:O5'	2.20	0.42
23:YW:37:VAL:O	23:YW:39:GLN:N	2.52	0.42
1:YA:828:U:H4'	1:YA:831:G:N1	2.35	0.42
12:YL:55:MET:SD	12:YL:59:ARG:NE	2.81	0.42
1:YA:1342:A:C6	1:YA:1397:U:C5	3.07	0.42
1:YA:1810:A:H2'	1:YA:1811:G:O4'	2.20	0.42
32:QA:204:G:C3'	32:QA:205:A:C5'	2.88	0.42
33:XB:80:LYS:O	33:XB:81:ASP:C	2.58	0.42
33:XB:90:PHE:CD2	33:XB:149:GLY:HA3	2.55	0.42
48:QQ:66:LEU:O	48:QQ:67:SER:HB3	2.19	0.42
19:YS:9:HIS:H	19:YS:102:HIS:HE1	1.66	0.42
6:YF:131:VAL:CG2	6:YF:151:LEU:H	2.32	0.42
6:YF:151:LEU:HD13	6:YF:151:LEU:N	2.35	0.42
1:YA:637:A:P	12:YL:112:LEU:HD22	2.60	0.42
1:RA:160:A:N6	1:RA:161:A:C6	2.88	0.42
6:RF:173:ASP:O	6:RF:174:PHE:C	2.58	0.42
1:YA:104:A:C8	1:YA:105:C:C5	3.08	0.42
1:YA:2668:G:H2'	1:YA:2669:G:H8	1.85	0.42
1:YA:191:A:N6	1:YA:203:A:H2'	2.34	0.42
33:QB:26:MET:HE3	33:QB:192:PRO:HG3	2.01	0.42
32:XA:254:G:OP1	48:XQ:68:LYS:O	2.38	0.42
34:QC:119:ILE:HD11	34:QC:133:MET:HA	2.02	0.42
32:XA:1349:A:H1'	32:XA:1374:A:N6	2.34	0.42
32:QA:71:A:N3	32:QA:72:A:C8	2.87	0.42
33:QB:103:TRP:O	33:QB:105:THR:N	2.53	0.42
33:QB:221:ARG:HH12	33:QB:222:GLU:HB2	1.83	0.42
32:XA:275:G:O2'	32:XA:276:G:C5'	2.68	0.42
1:RA:64:A:C6	1:RA:65:U:C4	3.08	0.42
1:YA:1568:G:C2	3:YC:57:HIS:HE1	2.38	0.42
8:YH:119:ASN:HB3	8:YH:120:GLY:H	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1142:A:C4	1:RA:1144:A:C8	3.08	0.42
1:RA:286:U:H2'	1:RA:287:G:H8	1.84	0.42
32:XA:1012:A:C6	32:XA:1013:G:N7	2.88	0.42
1:YA:2468:A:H1'	1:YA:2482:A:N6	2.35	0.42
18:YR:88:GLY:O	18:YR:89:HIS:CB	2.68	0.42
2:YB:84:G:O2'	2:YB:85:G:H5'	2.20	0.42
32:XA:1306:A:C6	32:XA:1307:U:C4	3.08	0.42
1:RA:1820:U:OP1	3:RC:176:ARG:CG	2.64	0.42
1:YA:171:U:H2'	1:YA:172:A:C8	2.54	0.42
7:RG:61:TRP:O	7:RG:62:ALA:C	2.57	0.42
19:RS:20:VAL:CG1	19:RS:47:VAL:HG11	2.49	0.42
1:RA:545:U:H2'	1:RA:546:U:C3'	2.49	0.42
32:XA:1006:G:N1	32:XA:1024:G:C2	2.88	0.42
40:XI:26:LYS:HB3	40:XI:26:LYS:HE3	1.82	0.42
32:QA:443:C:C2'	32:QA:444:G:H5'	2.50	0.42
13:YM:45:GLN:OE1	13:YM:125:PRO:HG3	2.20	0.42
32:QA:82:G:H2'	32:QA:83:C:C4'	2.50	0.42
6:RF:112:ASP:OD2	6:RF:114:ARG:HG3	2.19	0.42
12:RL:79:LEU:O	12:RL:82:LEU:HD22	2.19	0.42
32:QA:1225:A:H2'	32:QA:1226:C:C6	2.55	0.42
32:XA:137:U:H1'	32:XA:227:G:N2	2.35	0.42
1:YA:394:C:H2'	1:YA:395:U:C5'	2.49	0.42
1:RA:2571:U:C2'	1:RA:2572:A:OP1	2.67	0.42
7:RG:93:TYR:O	7:RG:105:SER:O	2.38	0.42
19:YS:82:MET:HE1	19:YS:84:ARG:NH2	2.35	0.42
40:XI:129:ARG:NE	40:XI:129:ARG:HA	2.34	0.42
15:RO:3:LYS:CG	15:RO:4:LYS:H	2.33	0.42
40:XI:123:ARG:HE	40:XI:123:ARG:HB2	1.72	0.42
1:YA:2015:A:C2	27:Y0:2:VAL:HG11	2.55	0.42
32:QA:1084:G:C6	32:QA:1085:U:O4	2.72	0.42
1:RA:1967:C:H2'	1:RA:1968:G:H5'	2.01	0.42
1:YA:2033:A:H4'	1:YA:2034:U:OP1	2.20	0.42
1:YA:2034:U:O2'	1:YA:2035:G:O5'	2.25	0.42
35:XD:149:LYS:NZ	35:XD:176:LYS:HD2	2.35	0.42
1:RA:197:A:N6	1:RA:2430:A:H2'	2.35	0.42
32:QA:257:G:H2'	32:QA:258:G:H8	1.85	0.42
1:RA:540:C:O2'	1:RA:541:A:H5'	2.20	0.42
1:RA:1668:A:H4'	1:RA:1669:A:O5'	2.20	0.42
1:RA:1443:U:H2'	1:RA:1444:G:H8	1.84	0.42
12:YL:4:ASN:HA	12:YL:4:ASN:HD22	1.68	0.42
6:RF:46:LYS:HD2	6:RF:46:LYS:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:53:A:N1	32:XA:359:G:C6	2.88	0.42
1:YA:1482:G:C4	1:YA:1483:G:C8	3.08	0.42
1:RA:720:U:H2'	1:RA:721:A:C8	2.54	0.42
1:YA:898:C:C5	1:YA:899:A:C5	3.08	0.42
4:RD:46:ARG:HG2	4:RD:46:ARG:NH1	2.35	0.42
32:XA:1384:C:C2'	32:XA:1385:G:H5'	2.50	0.42
1:RA:324:A:C2	1:RA:325:G:H1'	2.54	0.42
1:YA:1837:C:O2	1:YA:1927:A:H2	2.03	0.42
32:QA:1280:A:OP1	41:QJ:9:ARG:NH1	2.52	0.42
1:YA:1419:A:C2	1:YA:1579:A:C2	3.08	0.42
38:QG:76:SER:HA	38:QG:85:GLN:HB2	2.02	0.42
5:RE:159:LEU:HD12	5:RE:159:LEU:HA	1.73	0.42
1:YA:2379:G:H2'	1:YA:2380:C:C6	2.54	0.42
3:YC:242:HIS:HA	3:YC:243:PRO:HD3	1.88	0.42
17:YQ:87:VAL:CG1	17:YQ:88:GLU:H	2.32	0.42
2:YB:109:A:O2'	2:YB:110:C:O5'	2.38	0.42
23:RW:24:ARG:CD	23:RW:24:ARG:C	2.85	0.42
32:XA:975:A:H1'	32:XA:1358:U:H1'	2.02	0.42
7:RG:102:ILE:HG22	7:RG:104:LEU:HG	2.01	0.42
3:YC:170:TYR:HD2	3:YC:183:VAL:O	2.03	0.42
23:YW:43:LYS:HD2	23:YW:79:ILE:HD11	2.02	0.42
32:XA:1408:A:C2	32:XA:1494:G:C2	3.07	0.42
32:XA:259:G:C2'	32:XA:260:G:H5'	2.49	0.42
1:YA:1387:A:C5'	1:YA:1469:A:C1'	2.93	0.42
1:YA:1361:G:C6	1:YA:1371:G:C2	3.08	0.42
1:YA:1350:C:O2	1:YA:1382:G:C8	2.73	0.42
1:YA:299:A:N3	1:YA:319:G:O2'	2.43	0.42
1:YA:302:C:O2'	1:YA:303:G:C8	2.42	0.42
1:YA:323:C:H3'	1:YA:323:C:OP2	2.19	0.42
21:YU:35:VAL:CG1	21:YU:36:GLU:N	2.77	0.42
4:YD:119:ALA:CB	4:YD:163:GLY:C	2.88	0.42
32:XA:1072:G:C5	32:XA:1073:U:C5	3.08	0.42
1:YA:1069:A:N6	1:YA:1073:A:H5''	2.34	0.42
6:YF:60:SER:C	6:YF:62:GLN:H	2.23	0.42
21:YU:43:LYS:HE3	21:YU:45:GLN:CD	2.40	0.42
1:YA:466:A:OP1	29:Y2:34:ARG:NH2	2.53	0.42
32:QA:481:G:C2'	32:QA:482:A:C8	3.02	0.42
5:RE:174:GLY:O	5:RE:175:ILE:C	2.58	0.42
32:XA:429:U:H3'	35:XD:8:LEU:CD2	2.36	0.42
32:XA:1298:U:H4'	32:XA:1299:A:O5'	2.20	0.42
1:YA:141:G:HO2'	1:YA:142:A:P	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:601:C:H2'	1:YA:602:A:O4'	2.20	0.42
1:YA:204:A:O4'	1:YA:206:U:C6	2.73	0.42
1:YA:204:A:C4	1:YA:206:U:C4	3.07	0.42
32:QA:1462:C:H2'	32:QA:1463:U:O4'	2.20	0.42
3:RC:104:LEU:HB3	3:RC:105:ALA:H	1.66	0.42
32:XA:264:C:H2'	32:XA:265:G:O4'	2.19	0.42
8:RH:67:ALA:C	8:RH:69:ALA:N	2.72	0.42
40:QI:128:LYS:H	40:QI:128:LYS:HG3	1.71	0.42
38:XG:10:LYS:HE3	38:XG:10:LYS:N	2.35	0.42
20:RT:43:ILE:CD1	20:RT:58:VAL:HG21	2.50	0.42
39:XH:29:SER:OG	39:XH:32:LYS:CB	2.68	0.42
33:QB:66:ILE:HG22	33:QB:67:LEU:N	2.34	0.42
32:XA:518:C:H4'	32:XA:519:C:O5'	2.19	0.42
1:YA:2836:U:O2'	1:YA:2837:A:P	2.78	0.42
7:RG:115:GLN:H	7:RG:115:GLN:NE2	2.18	0.42
20:YT:38:ALA:O	20:YT:39:THR:HB	2.20	0.42
1:RA:1166:G:C2'	1:RA:1167:C:H5'	2.49	0.42
24:RX:54:GLY:O	24:RX:58:ILE:HD12	2.20	0.42
1:RA:1141:U:H4'	1:RA:1142:A:O5'	2.20	0.42
32:XA:1249:C:H4'	40:XI:74:GLN:NE2	2.32	0.42
1:YA:1545:A:H62	1:YA:1546:G:N2	2.18	0.42
20:YT:4:GLU:O	20:YT:8:LEU:HD12	2.20	0.42
4:RD:9:VAL:O	4:RD:197:THR:HG23	2.19	0.42
8:YH:140:ALA:O	8:YH:141:LYS:HG3	2.19	0.42
4:RD:193:VAL:HG21	4:RD:201:LEU:HD21	2.02	0.42
1:YA:1324:G:N2	1:YA:1328:A:N1	2.68	0.42
1:RA:2647:U:O2'	1:RA:2648:G:H5'	2.19	0.42
1:RA:1870:C:H2'	1:RA:1871:A:C2	2.55	0.42
32:QA:522:C:H2'	32:QA:523:A:O4'	2.20	0.42
1:RA:545:U:H1'	1:RA:547:A:H5'	2.01	0.42
32:XA:1265:C:C4	32:XA:1266:G:N7	2.88	0.42
32:XA:1004:A:C4	32:XA:1026:G:N7	2.88	0.42
43:XL:109:ARG:HD2	43:XL:109:ARG:HA	1.83	0.42
17:YQ:26:ALA:HA	17:YQ:29:ARG:HG3	2.02	0.42
38:XG:61:PHE:C	38:XG:63:VAL:H	2.23	0.42
24:RX:29:LEU:HB2	24:RX:30:PRO:CD	2.49	0.42
23:YW:51:GLY:HA2	23:YW:59:PHE:HD2	1.84	0.42
32:QA:741:G:H2'	32:QA:742:G:O4'	2.19	0.42
32:QA:1319:A:OP1	50:QS:4:LEU:HD11	2.20	0.42
1:YA:1791:A:N6	1:YA:1828:G:O2'	2.52	0.42
11:YK:113:MET:O	11:YK:116:ILE:CG1	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:XO:38:LEU:HG	46:XO:42:PHE:CE1	2.55	0.42
1:YA:429:A:N6	1:YA:430:A:N6	2.68	0.42
45:XN:27:LYS:HB2	45:XN:45:LEU:HD22	2.01	0.42
32:XA:34:C:H2'	32:XA:35:G:C8	2.55	0.42
32:XA:723:U:O5'	32:XA:723:U:C6	2.68	0.42
36:XE:152:VAL:O	36:XE:155:LYS:HB2	2.20	0.42
32:QA:1242:G:O2'	32:QA:1243:C:H5'	2.19	0.42
1:YA:374:A:C2	1:YA:375:G:H1'	2.55	0.42
1:YA:374:A:N6	1:YA:401:A:C8	2.87	0.42
36:XE:66:ALA:O	36:XE:68:ARG:O	2.38	0.42
35:XD:149:LYS:HZ2	35:XD:176:LYS:HZ3	1.67	0.42
32:QA:258:G:H5'	51:QT:81:GLN:NE2	2.35	0.42
1:YA:2373:G:O2'	1:YA:2374:C:H5'	2.19	0.42
40:XI:63:TYR:HD1	40:XI:63:TYR:C	2.23	0.42
28:R1:16:THR:HB	28:R1:41:VAL:HG21	2.02	0.42
1:RA:1570:A:C6	1:RA:1571:A:C6	3.07	0.42
3:RC:35:LYS:HB3	3:RC:35:LYS:HE3	1.46	0.42
32:XA:756:C:C2'	32:XA:757:U:H5'	2.50	0.42
1:YA:43:G:N2	1:YA:437:U:C6	2.88	0.42
40:XI:84:ARG:O	40:XI:87:MET:SD	2.78	0.42
34:QC:147:GLY:HA3	34:QC:171:ARG:O	2.20	0.42
35:XD:50:TYR:O	35:XD:51:GLY:C	2.57	0.42
1:RA:2255:G:C2'	1:RA:2256:G:H5'	2.50	0.42
1:YA:2526:G:C5	1:YA:2527:C:C5	3.07	0.42
22:RV:68:LYS:O	22:RV:69:GLU:O	2.38	0.42
39:XH:24:VAL:HG22	39:XH:25:THR:N	2.34	0.42
7:RG:39:ALA:HB1	7:RG:57:TYR:CB	2.50	0.42
5:RE:129:PRO:HG3	5:RE:156:ASN:OD1	2.19	0.42
32:XA:76:G:H2'	32:XA:76:G:N3	2.35	0.42
35:XD:56:GLU:HA	35:XD:56:GLU:OE1	2.20	0.42
23:RW:58:LEU:HD13	23:RW:58:LEU:N	2.34	0.42
1:RA:1917:U:C4	1:RA:1918:A:C5	3.07	0.42
3:YC:239:PHE:HD1	3:YC:240:GLY:H	1.67	0.42
32:XA:1426:G:C4	32:XA:1475:G:C2	3.07	0.42
21:RU:20:LYS:O	21:RU:21:ARG:HG3	2.19	0.42
1:RA:996:A:C4'	17:RQ:91:ARG:HD2	2.50	0.42
17:RQ:94:LEU:HD13	17:RQ:94:LEU:HA	1.81	0.42
1:RA:1092:C:O5'	1:RA:1093:G:OP2	2.37	0.42
16:RP:50:ARG:HD2	16:RP:51:ASN:N	2.34	0.42
18:YR:54:VAL:O	18:YR:55:ASP:C	2.57	0.42
2:YB:58:A:C2'	2:YB:59:A:H8	2.26	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:974:A:C3'	32:XA:975:A:H5'	2.50	0.42
1:RA:2043:C:C4	1:RA:2777:G:C2	3.08	0.42
1:YA:2270:A:H5'	23:YW:18:LYS:HG2	2.02	0.42
23:YW:17:ALA:HB1	23:YW:36:ILE:HG12	2.01	0.42
23:YW:35:ILE:HB	23:YW:36:ILE:H	1.50	0.42
1:RA:1178:C:C4	1:RA:1180:U:C4	3.07	0.42
1:YA:2283:C:C5	1:YA:2389:G:C4	3.07	0.42
51:QT:43:LYS:NZ	51:QT:86:ALA:HA	2.34	0.42
21:YU:3:LYS:HG2	21:YU:84:PHE:HZ	1.84	0.42
1:YA:2821:A:H2'	1:YA:2822:G:O4'	2.20	0.42
1:YA:1059:G:C6	1:YA:1080:A:N1	2.88	0.42
1:YA:1103:A:O5'	1:YA:1103:A:H8	2.02	0.42
38:QG:114:SER:H	38:QG:117:LEU:HD12	1.84	0.42
27:Y0:41:HIS:HD1	27:Y0:41:HIS:C	2.22	0.42
1:YA:491:G:O2'	1:YA:492:A:C5'	2.68	0.42
9:YI:52:LEU:HD11	9:YI:78:LEU:CD2	2.50	0.42
1:YA:500:G:N2	1:YA:502:A:H3'	2.35	0.42
19:YS:5:ALA:O	19:YS:6:LYS:HB3	2.20	0.42
32:QA:451:A:H5'	47:QP:70:ARG:HH12	1.84	0.42
41:XJ:40:ILE:HG23	41:XJ:41:PRO:HD2	2.01	0.42
35:XD:21:LYS:HE2	35:XD:21:LYS:HB2	1.79	0.42
32:XA:413:G:N1	35:XD:32:LYS:HE3	2.35	0.42
1:YA:58:G:N3	1:YA:73:A:C2	2.87	0.42
25:YY:52:ARG:C	25:YY:54:LYS:N	2.73	0.42
1:YA:2445:G:H2'	1:YA:2446:G:H8	1.84	0.42
1:YA:622:G:O2'	1:YA:623:C:C5'	2.68	0.42
1:YA:584:C:C5	1:YA:585:G:N7	2.88	0.42
1:YA:1775:U:H2'	1:YA:1776:G:O4'	2.19	0.42
7:RG:8:VAL:HG12	7:RG:9:VAL:H	1.84	0.42
32:QA:198:G:C4	32:QA:199:A:N7	2.87	0.42
35:XD:106:PHE:CD1	35:XD:158:LEU:HD21	2.54	0.42
7:YG:94:ARG:HH21	7:YG:111:PRO:HB3	1.83	0.42
1:YA:973:A:H1'	1:YA:1188:U:C5	2.55	0.42
32:XA:642:A:C2	32:XA:643:C:C2	3.08	0.42
32:XA:248:C:C2'	32:XA:249:U:O5'	2.68	0.42
1:YA:749:A:C2	1:YA:750:A:C8	3.08	0.42
11:YK:17:ARG:CD	11:YK:18:ARG:H	2.33	0.42
1:RA:224:U:H2'	1:RA:225:C:O5'	2.19	0.42
18:YR:87:GLN:CG	18:YR:88:GLY:H	2.24	0.42
32:QA:722:G:H5"	32:QA:722:G:N3	2.35	0.42
51:QT:16:ALA:O	51:QT:17:ARG:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2416:C:H2'	1:RA:2417:C:H6	1.85	0.42
1:RA:2308:G:H2'	1:RA:2310:C:H5	1.84	0.42
1:YA:1782:U:O2	1:YA:2608:G:O2'	2.22	0.42
4:YD:137:SER:HB3	4:YD:138:LEU:CD2	2.41	0.42
1:YA:2574:G:N2	4:YD:147:GLY:O	2.49	0.42
6:YF:1:ALA:HB3	6:YF:93:GLU:OE2	2.20	0.42
29:Y2:30:VAL:C	29:Y2:32:ALA:H	2.22	0.42
14:RN:10:LEU:O	14:RN:12:ARG:HG3	2.19	0.42
5:YE:55:SER:OG	5:YE:56:GLY:N	2.52	0.42
1:RA:1695:G:H1'	3:RC:7:PRO:O	2.19	0.42
32:QA:1315:U:C4	32:QA:1316:G:C6	3.08	0.42
5:RE:160:ALA:O	5:RE:161:ALA:HB3	2.19	0.42
38:XG:4:ARG:HG2	38:XG:4:ARG:NH1	2.35	0.42
7:YG:154:GLU:HA	7:YG:155:PRO:HD2	1.86	0.42
3:RC:117:SER:HB3	3:RC:128:THR:HB	2.02	0.42
20:YT:10:VAL:HG23	20:YT:11:LEU:CD1	2.49	0.42
5:YE:28:VAL:O	5:YE:31:VAL:HG22	2.19	0.42
1:YA:2629:U:C5'	1:YA:2630:G:OP1	2.67	0.42
1:YA:7:G:H2'	1:YA:8:C:O4'	2.20	0.42
16:RP:30:TRP:CD1	16:RP:81:ASP:HB2	2.55	0.42
1:RA:1429:G:C2'	1:RA:1430:G:H5'	2.50	0.42
1:YA:394:C:O2'	1:YA:395:U:H5'	2.19	0.42
1:RA:790:U:HO2'	1:RA:791:C:C5'	2.31	0.42
1:YA:814:C:OP1	18:YR:86:GLN:NE2	2.53	0.42
1:RA:1419:A:N6	1:RA:1421:G:N3	2.68	0.42
1:YA:85:G:O2'	1:YA:86:G:H5''	2.19	0.42
2:YB:29:A:H2'	2:YB:30:C:C6	2.55	0.42
16:RP:31:VAL:CG1	16:RP:31:VAL:O	2.67	0.42
13:RM:21:ALA:CB	13:RM:100:LYS:N	2.82	0.42
1:YA:1465:G:C4	1:YA:1466:U:C6	3.08	0.42
1:YA:1465:G:H2'	1:YA:1466:U:O4'	2.20	0.42
36:QE:20:VAL:O	36:QE:30:PHE:HA	2.20	0.42
13:RM:66:ARG:NH1	13:RM:101:VAL:HG11	2.35	0.42
32:XA:318:G:C2	32:XA:336:A:C2	3.08	0.42
32:XA:187:G:N2	32:XA:190:A:OP2	2.53	0.42
46:XO:55:LEU:O	46:XO:58:MET:N	2.43	0.42
1:YA:2601:C:H4'	1:YA:2602:A:OP2	2.19	0.42
38:QG:89:GLU:N	38:QG:89:GLU:OE2	2.53	0.42
32:QA:1120:C:H2'	32:QA:1121:U:H6	1.85	0.42
32:QA:555:U:C2'	32:QA:556:C:O5'	2.67	0.42
1:YA:2684:U:N3	1:YA:2685:G:C8	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:918:A:H4'	2:RB:97:C:O2	2.20	0.42
1:RA:1627:G:C2	1:RA:1628:G:C8	3.08	0.42
1:RA:1059:G:C6	1:RA:1080:A:C6	3.08	0.42
2:YB:16:G:C6	2:YB:69:G:C5	3.08	0.42
1:RA:2331:G:N2	1:RA:2385:C:C2	2.87	0.42
1:YA:2345:G:H4'	1:YA:2346:A:O5'	2.19	0.42
6:YF:28:PRO:CB	6:YF:168:LEU:HD21	2.28	0.42
1:YA:1532:A:N1	1:YA:1540:G:C6	2.88	0.42
1:YA:1339:G:O4'	1:YA:1393:A:C2	2.73	0.42
1:YA:1388:G:O2'	1:YA:1389:G:O4'	2.38	0.42
1:YA:2214:C:HO2'	1:YA:2215:C:H5'	1.80	0.42
35:QD:8:LEU:O	35:QD:12:ARG:HG3	2.20	0.42
1:YA:310:A:H5''	21:YU:14:THR:O	2.19	0.42
32:XA:1074:G:H4'	33:XB:102:ASN:HB2	2.01	0.42
1:YA:1066:U:O2	1:YA:1069:A:OP2	2.37	0.42
1:YA:481:G:HO2'	1:YA:507:A:H61	1.68	0.42
21:YU:44:HIS:CD2	21:YU:57:ILE:HG21	2.54	0.42
1:RA:784:G:O2'	1:RA:785:G:H5''	2.19	0.42
12:YL:78:ARG:C	12:YL:80:SER:H	2.23	0.42
32:XA:91:U:C5	32:XA:92:U:C4	3.08	0.42
10:YJ:25:LEU:C	10:YJ:27:ARG:N	2.73	0.42
6:RF:174:PHE:HD1	6:RF:176:PHE:CE1	2.38	0.42
1:YA:70:G:H3'	1:YA:113:U:C4'	2.49	0.42
31:Y4:3:VAL:O	31:Y4:4:ARG:CB	2.67	0.42
4:RD:90:PHE:O	4:RD:92:VAL:N	2.53	0.42
16:YP:52:ARG:HD3	16:YP:52:ARG:HA	1.78	0.42
1:YA:2875:C:O2'	1:YA:2876:G:C8	2.41	0.42
1:YA:1275:A:N6	14:YN:15:SER:O	2.53	0.42
13:YM:36:VAL:HG13	22:YV:82:TYR:CD1	2.55	0.42
9:RI:126:ARG:HA	9:RI:129:GLU:CD	2.40	0.42
32:QA:243:A:H2	32:QA:245:U:H2'	1.85	0.42
32:XA:599:C:C2	32:XA:640:A:C2	3.08	0.42
39:XH:28:SER:HB2	39:XH:57:GLU:O	2.20	0.42
1:RA:2258:C:O2'	1:RA:2426:A:H4'	2.19	0.42
1:RA:476:G:C2	1:RA:479:A:C8	3.08	0.42
1:YA:1285:A:H2'	1:YA:1286:A:H5'	2.01	0.42
7:YG:25:ILE:CG2	7:YG:78:VAL:HG21	2.50	0.42
1:RA:2650:U:O2'	1:RA:2651:C:H5'	2.19	0.42
1:RA:1871:A:H8	1:RA:1872:A:C6	2.38	0.42
6:YF:1:ALA:CB	6:YF:93:GLU:HA	2.49	0.42
8:YH:94:ILE:HG13	8:YH:98:ASP:OD1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1168:G:C6	1:YA:1182:G:C6	3.07	0.42
13:YM:135:VAL:HB	13:YM:136:MET:H	1.66	0.42
34:XC:5:HIS:HA	34:XC:6:PRO:HD2	1.92	0.42
1:YA:520:G:H2'	1:YA:521:U:H6	1.85	0.42
41:QJ:48:ARG:NH2	45:QN:100:TRP:CE2	2.88	0.42
32:XA:1048:G:N1	32:XA:1050:G:O6	2.53	0.42
1:YA:270:A:N1	1:YA:369:U:C1'	2.81	0.42
32:XA:460:A:O3'	32:XA:462:G:OP2	2.37	0.42
3:RC:255:LYS:C	3:RC:256:THR:HG23	2.40	0.42
22:YV:50:MET:O	22:YV:53:LYS:HB2	2.20	0.42
32:XA:71:A:N6	32:XA:100:G:N7	2.67	0.42
32:XA:65:A:C4	32:XA:200:G:O2'	2.73	0.42
1:YA:1593:A:C6	1:YA:1594:U:N3	2.88	0.42
41:QJ:12:ALA:O	41:QJ:70:HIS:HD2	2.03	0.42
1:YA:1199:U:H2'	1:YA:1200:C:C6	2.54	0.42
1:RA:1858:A:C8	1:RA:1885:A:C6	3.08	0.42
32:XA:218:U:O2'	32:XA:219:U:H5'	2.20	0.42
39:XH:97:GLY:O	39:XH:98:LEU:CB	2.68	0.42
1:YA:699:A:H2'	1:YA:700:G:O4'	2.20	0.42
32:QA:833:G:C2'	32:QA:834:U:H5'	2.50	0.42
5:YE:162:ARG:C	5:YE:164:LEU:N	2.72	0.42
32:QA:403:C:H5'	35:QD:131:ILE:HG22	2.01	0.42
1:RA:632:A:O2'	1:RA:633:A:H5'	2.20	0.42
7:RG:33:THR:N	7:RG:34:ARG:HH11	2.18	0.42
1:RA:833:A:H2'	1:RA:834:G:H8	1.83	0.42
6:RF:146:ASP:O	6:RF:147:ARG:HB2	2.19	0.42
46:XO:24:THR:HG21	46:XO:69:LEU:HB2	2.02	0.42
28:R1:16:THR:CG2	28:R1:41:VAL:HG22	2.49	0.42
1:RA:1682:G:C8	1:RA:1757:A:C2	3.07	0.42
47:XP:48:GLU:HG3	47:XP:51:ARG:HH21	1.84	0.42
1:RA:1355:G:C6	1:RA:1377:G:N2	2.88	0.42
6:YF:24:VAL:HB	6:YF:25:MET:SD	2.60	0.42
1:YA:462:C:O2'	1:YA:463:G:H5'	2.19	0.42
29:R2:24:THR:HG23	29:R2:27:GLY:H	1.84	0.42
1:YA:188:G:H2'	1:YA:189:G:H5'	2.01	0.42
1:RA:1840:G:C6	1:RA:1841:U:C4	3.07	0.42
1:RA:1232:G:C5	1:RA:1233:C:C5	3.07	0.42
7:RG:106:LEU:O	7:RG:151:ARG:NH2	2.46	0.42
5:YE:195:GLN:O	5:YE:199:MET:N	2.53	0.42
17:RQ:25:GLY:O	17:RQ:29:ARG:HG3	2.20	0.42
35:XD:97:LEU:HB2	35:XD:134:TYR:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:621:A:H2'	32:XA:622:A:O4'	2.20	0.42
33:XB:160:LEU:HD13	33:XB:180:ILE:HG21	2.01	0.42
49:QR:20:ILE:H	49:QR:20:ILE:HG13	1.61	0.42
17:RQ:49:ARG:HH11	17:RQ:49:ARG:HG3	1.84	0.42
27:R0:38:LEU:O	27:R0:41:HIS:HB2	2.20	0.42
2:RB:14:U:OP2	2:RB:70:C:O2'	2.34	0.42
18:YR:4:VAL:HG22	18:YR:40:MET:HB3	2.02	0.41
1:RA:2356:U:H5''	23:RW:16:GLU:HG3	2.02	0.41
3:YC:73:ILE:O	3:YC:116:GLN:HG2	2.20	0.41
45:XN:60:ARG:HH22	45:XN:70:HIS:HB3	1.85	0.41
45:XN:8:ARG:HD3	45:XN:12:ARG:NH2	2.35	0.41
1:YA:2324:U:C5'	1:YA:2325:G:C5'	2.96	0.41
23:YW:69:GLU:O	23:YW:78:PHE:O	2.38	0.41
32:XA:1310:G:O6	32:XA:1311:A:N6	2.53	0.41
1:YA:224:U:N3	1:YA:225:C:C6	2.88	0.41
1:YA:417:C:O2'	1:YA:418:C:H5'	2.20	0.41
3:YC:106:PRO:HB3	3:YC:141:HIS:HE1	1.85	0.41
1:YA:1235:G:C6	1:YA:1236:G:N2	2.88	0.41
1:YA:1394:U:C4	1:YA:1395:A:N6	2.88	0.41
1:YA:1130:U:HO2'	1:YA:1131:G:H8	1.66	0.41
1:YA:167:A:H3'	1:YA:168:G:H8	1.84	0.41
14:YN:37:THR:HB	14:YN:40:LYS:H	1.85	0.41
36:QE:149:PRO:HG2	36:QE:150:GLU:H	1.86	0.41
32:QA:1202:U:O4'	45:QN:68:ARG:HD2	2.20	0.41
1:YA:2831:G:N7	4:YD:59:ARG:NH1	2.67	0.41
14:YN:98:LEU:HG	27:Y0:42:ILE:CG1	2.50	0.41
1:YA:2301:C:C5	1:YA:2302:U:C5	3.08	0.41
1:RA:2347:C:H2'	1:RA:2348:U:C6	2.55	0.41
1:YA:180:G:P	29:Y2:35:ARG:NH1	2.93	0.41
1:YA:183:C:C5	1:YA:184:C:C5	3.08	0.41
5:RE:149:ILE:HD12	5:RE:175:ILE:HB	2.02	0.41
32:XA:83:C:O2	32:XA:87:C:N3	2.53	0.41
38:XG:26:VAL:HG23	38:XG:27:ASN:N	2.35	0.41
22:RV:10:LYS:HB2	22:RV:10:LYS:NZ	2.35	0.41
24:YX:57:VAL:HG12	24:YX:58:ILE:HG13	2.02	0.41
1:YA:72:U:O2'	1:YA:73:A:H5'	2.20	0.41
1:YA:71:A:O4'	1:YA:73:A:C5	2.73	0.41
32:XA:1297:G:O2'	32:XA:1298:U:OP2	2.28	0.41
1:YA:1048:A:C5	1:YA:1049:C:N4	2.88	0.41
37:QF:92:THR:CG2	37:QF:93:LYS:H	2.33	0.41
6:YF:59:ILE:HG23	6:YF:137:PHE:HE1	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:QB:90:PHE:H	33:QB:149:GLY:CA	2.33	0.41
1:YA:1265:A:C5	1:YA:1267:U:C4	3.08	0.41
1:YA:1267:U:O2'	1:YA:1268:A:O5'	2.30	0.41
32:QA:619:U:N3	35:QD:130:ASN:HB3	2.24	0.41
4:YD:113:SER:HB2	4:YD:168:GLU:OE1	2.20	0.41
1:RA:2258:C:H4'	1:RA:2259:U:OP2	2.20	0.41
1:RA:227:A:H4'	1:RA:229:C:C4	2.55	0.41
45:QN:40:ARG:HH12	45:QN:44:VAL:HG11	1.85	0.41
45:QN:40:ARG:NH1	45:QN:44:VAL:HG11	2.34	0.41
46:XO:63:ARG:C	46:XO:65:LEU:N	2.73	0.41
1:YA:1231:U:OP2	1:YA:1231:U:H6	2.02	0.41
8:YH:72:ILE:HD11	8:YH:140:ALA:HA	2.03	0.41
20:YT:29:THR:CB	20:YT:86:THR:N	2.77	0.41
32:XA:920:U:N3	32:XA:921:U:C4	2.87	0.41
32:XA:193:C:O2'	32:XA:194:C:H5'	2.19	0.41
8:YH:9:VAL:HG12	8:YH:10:ALA:N	2.34	0.41
7:YG:8:VAL:HB	7:YG:49:LEU:HB3	2.02	0.41
20:YT:9:LYS:CG	20:YT:9:LYS:O	2.67	0.41
1:YA:1183:U:H2'	1:YA:1184:U:C6	2.55	0.41
22:RV:20:LEU:HD23	22:RV:25:LYS:HB2	2.03	0.41
32:XA:718:A:C8	32:XA:719:C:C5	3.08	0.41
2:YB:9:G:OP2	15:YO:15:ARG:HD3	2.20	0.41
1:YA:519:U:H5''	19:YS:25:ARG:NH2	2.34	0.41
32:XA:1104:G:H2'	32:XA:1105:A:O4'	2.20	0.41
1:YA:1509:A:C3'	1:YA:1510:G:C5'	2.98	0.41
32:QA:1472:U:H2'	32:QA:1473:G:C8	2.54	0.41
32:QA:1315:U:C5	32:QA:1316:G:C5	3.08	0.41
22:YV:73:LYS:HB3	22:YV:92:VAL:HG23	2.02	0.41
32:QA:649:A:H2'	32:QA:650:G:O4'	2.20	0.41
1:YA:1820:U:H3	3:YC:197:ALA:HA	1.85	0.41
1:RA:869:G:H2'	1:RA:870:U:O4'	2.19	0.41
19:YS:31:GLN:O	19:YS:33:LEU:N	2.54	0.41
7:YG:157:LYS:C	7:YG:159:LYS:N	2.73	0.41
8:RH:54:LEU:O	8:RH:57:LYS:N	2.52	0.41
26:RZ:43:ILE:O	26:RZ:47:ILE:HG13	2.20	0.41
40:QI:18:VAL:HG22	40:QI:64:ILE:HG23	2.01	0.41
8:YH:67:ALA:HA	8:YH:138:VAL:CG2	2.50	0.41
19:YS:66:ILE:HG12	19:YS:67:ASP:N	2.34	0.41
32:XA:1191:A:OP1	34:XC:2:GLN:NE2	2.53	0.41
40:QI:8:THR:O	40:QI:16:ALA:O	2.38	0.41
4:YD:40:LEU:N	4:YD:40:LEU:HD12	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2210:U:H4'	1:RA:2211:A:O5'	2.20	0.41
1:YA:1833:C:C2	1:YA:1834:U:C5	3.08	0.41
1:YA:2853:C:O5'	1:YA:2853:C:H6	2.03	0.41
48:QQ:50:ASN:N	48:QQ:50:ASN:OD1	2.52	0.41
32:QA:157:U:O2	32:QA:165:G:C2	2.73	0.41
1:RA:384:A:N3	1:RA:384:A:H2'	2.35	0.41
1:YA:1420:A:C4	1:YA:2211:A:N7	2.88	0.41
32:QA:1270:G:H2'	32:QA:1271:A:C8	2.54	0.41
32:QA:160:A:H2'	32:QA:161:A:O4'	2.20	0.41
32:XA:1285:A:H4'	32:XA:1286:U:OP1	2.19	0.41
1:RA:1403:A:H2'	1:RA:1404:C:C6	2.55	0.41
1:RA:936:A:H2'	1:RA:937:C:C6	2.55	0.41
1:RA:2607:G:H2'	1:RA:2608:G:O4'	2.20	0.41
46:XO:32:THR:O	46:XO:33:ALA:C	2.57	0.41
1:YA:2706:A:N6	56:YA:3670:HOH:O	2.49	0.41
1:YA:2743:U:OP1	31:Y4:34:LYS:NZ	2.49	0.41
1:RA:2734:A:H2'	1:RA:2735:G:H5'	2.01	0.41
32:QA:811:C:H4'	32:QA:900:A:N6	2.34	0.41
32:XA:1076:U:N3	32:XA:1082:A:C2	2.88	0.41
1:RA:1095:A:OP1	1:RA:1095:A:H8	2.01	0.41
33:XB:27:LYS:N	33:XB:28:PRO:CD	2.83	0.41
40:XI:89:TYR:HD1	40:XI:89:TYR:O	2.03	0.41
1:RA:1963:U:O5'	1:RA:1963:U:H6	2.03	0.41
7:YG:106:LEU:HB2	7:YG:108:PHE:HE1	1.85	0.41
32:QA:669:G:O2'	32:QA:670:G:H5'	2.19	0.41
1:RA:1061:U:H2'	1:RA:1061:U:O2	2.20	0.41
1:RA:1062:G:C2'	1:RA:1063:G:C8	3.03	0.41
1:YA:2231:U:O5'	1:YA:2231:U:H6	2.03	0.41
37:QF:64:VAL:HG12	37:QF:65:GLU:N	2.35	0.41
1:RA:855:G:C4	1:RA:923:G:C2	3.07	0.41
1:RA:272:A:HO2'	1:RA:273:G:P	2.42	0.41
32:XA:1218:C:H2'	32:XA:1219:A:H8	1.81	0.41
50:XS:35:ARG:NH1	50:XS:52:ASN:HA	2.35	0.41
50:XS:4:LEU:HB3	50:XS:5:LYS:H	1.52	0.41
1:YA:2420:C:N4	30:Y3:29:ARG:O	2.43	0.41
1:YA:2391:G:H22	1:YA:2427:C:H4'	1.86	0.41
32:XA:687:A:N3	32:XA:704:A:N6	2.68	0.41
32:XA:705:G:H2'	32:XA:706:A:O4'	2.20	0.41
32:XA:1157:A:C6	32:XA:1180:A:C6	3.08	0.41
1:YA:223:A:C6	1:YA:408:G:O4'	2.73	0.41
1:YA:410:G:N2	1:YA:418:C:O2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1532:A:C2	1:YA:1540:G:N1	2.88	0.41
1:YA:1915:U:H2'	1:YA:1916:A:H8	1.78	0.41
33:QB:174:GLU:O	33:QB:178:LEU:HB2	2.20	0.41
1:RA:2578:G:C5	4:RD:145:SER:HB2	2.55	0.41
5:YE:108:ILE:CD1	5:YE:181:ILE:HB	2.28	0.41
1:YA:1358:G:C8	1:YA:1371:G:C6	3.08	0.41
1:YA:298:G:O5'	1:YA:298:G:H8	2.03	0.41
1:YA:2316:G:C2	1:YA:2317:A:C4	3.08	0.41
4:RD:117:GLY:C	4:RD:118:PHE:CD1	2.93	0.41
48:QQ:51:GLU:HG3	48:QQ:74:LEU:HD21	2.02	0.41
1:YA:476:G:O2'	1:YA:477:A:H3'	2.20	0.41
29:Y2:38:GLY:O	29:Y2:42:LEU:HD13	2.20	0.41
5:RE:189:THR:O	5:RE:192:ALA:N	2.31	0.41
7:YG:137:LYS:C	7:YG:139:VAL:H	2.22	0.41
16:YP:52:ARG:HG2	16:YP:52:ARG:NH1	2.35	0.41
41:XJ:10:LEU:O	41:XJ:18:ILE:HD11	2.20	0.41
1:RA:274:C:H2'	1:RA:275:C:O4'	2.19	0.41
37:QF:9:MET:CE	49:QR:64:LEU:HD22	2.50	0.41
32:XA:265:G:C2'	32:XA:266:G:H5'	2.50	0.41
3:RC:190:THR:HG22	3:RC:191:LEU:N	2.34	0.41
8:RH:66:ASN:C	8:RH:68:ARG:H	2.23	0.41
33:QB:41:ASN:OD1	33:QB:44:LYS:HB2	2.19	0.41
1:RA:740:C:H5'	1:RA:1784:A:C3'	2.46	0.41
32:XA:276:G:O2'	32:XA:277:C:H5'	2.20	0.41
8:RH:12:LEU:HD12	8:RH:19:VAL:HG11	2.01	0.41
8:RH:9:VAL:HG12	8:RH:12:LEU:HG	2.01	0.41
11:YK:107:LEU:HD23	11:YK:107:LEU:C	2.40	0.41
34:QC:154:GLY:H	34:QC:156:LEU:HD11	1.85	0.41
1:YA:1500:G:C6	1:YA:1501:G:C5	3.08	0.41
32:QA:132:C:H5''	51:QT:68:LYS:HD2	2.01	0.41
1:RA:1746:A:C2	1:RA:1747:U:C2	3.08	0.41
14:YN:35:LYS:HD3	14:YN:112:TYR:OH	2.20	0.41
10:RJ:25:LEU:HB2	10:RJ:62:VAL:CG2	2.50	0.41
34:QC:13:ILE:HB	34:QC:14:VAL:HG13	2.01	0.41
34:QC:13:ILE:C	34:QC:15:LYS:H	2.24	0.41
32:QA:1387:G:C6	32:QA:1388:C:N4	2.88	0.41
1:YA:1330:C:O2'	1:YA:1331:G:P	2.77	0.41
45:XN:20:PHE:HA	45:XN:24:ALA:HB2	2.02	0.41
1:RA:2637:U:H2'	1:RA:2638:G:H5'	2.01	0.41
13:RM:72:PRO:HG3	13:RM:92:TRP:CZ3	2.55	0.41
22:RV:51:GLN:NE2	22:RV:79:ARG:HH12	2.10	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1003:G:N3	32:XA:1005:A:OP1	2.53	0.41
9:YI:57:VAL:HG21	9:YI:69:VAL:H	1.86	0.41
10:YJ:119:PHE:C	10:YJ:121:LYS:H	2.23	0.41
4:YD:48:ILE:CG2	4:YD:84:LEU:HD23	2.50	0.41
33:XB:20:ARG:CA	33:XB:20:ARG:NE	2.82	0.41
13:YM:71:LYS:HA	13:YM:72:PRO:HD3	1.70	0.41
41:QJ:48:ARG:NH2	45:QN:100:TRP:CE3	2.88	0.41
32:QA:1217:C:H2'	32:QA:1218:C:H6	1.85	0.41
6:RF:21:TYR:CE2	6:RF:28:PRO:HD3	2.55	0.41
41:QJ:8:ILE:O	41:QJ:73:LEU:O	2.38	0.41
4:RD:181:ASP:OD2	4:RD:184:ARG:HD2	2.21	0.41
43:QL:6:LEU:HD23	48:QQ:33:TYR:CZ	2.56	0.41
12:YL:20:GLY:CA	12:YL:28:GLY:HA2	2.49	0.41
5:RE:150:THR:HG22	5:RE:170:ARG:O	2.20	0.41
41:QJ:92:LEU:HD23	41:QJ:92:LEU:N	2.35	0.41
38:XG:148:LYS:HB2	38:XG:148:LYS:HZ3	1.85	0.41
11:YK:113:MET:SD	11:YK:116:ILE:HD11	2.60	0.41
32:QA:328:C:C2'	32:QA:328:C:O2	2.68	0.41
1:YA:2590:A:H5''	3:YC:237:ARG:HG3	2.01	0.41
40:QI:3:ASN:CG	40:QI:4:GLN:N	2.71	0.41
21:RU:84:PHE:N	21:RU:94:PHE:HE2	2.17	0.41
9:RI:18:ASN:CB	9:RI:38:CYS:HB3	2.49	0.41
29:Y2:11:LYS:C	29:Y2:13:ASN:N	2.72	0.41
1:RA:1006:C:C2	1:RA:1138:G:N2	2.88	0.41
2:YB:23:G:C2	2:YB:61:G:N1	2.89	0.41
48:XQ:45:VAL:HG21	48:XQ:60:ILE:HG21	2.02	0.41
9:YI:118:GLY:O	9:YI:119:ALA:CB	2.68	0.41
50:XS:49:ALA:O	50:XS:56:HIS:HB3	2.20	0.41
35:XD:64:TYR:CD2	35:XD:93:LEU:HB3	2.55	0.41
44:QM:40:GLU:HG3	44:QM:41:ASP:N	2.35	0.41
1:RA:163:C:H6	1:RA:163:C:OP1	2.02	0.41
32:QA:690:G:C6	32:QA:691:G:C6	3.08	0.41
1:RA:108:G:H2'	1:RA:109:C:H5'	2.01	0.41
33:XB:91:VAL:HG11	33:XB:95:TRP:CD1	2.54	0.41
48:QQ:30:HIS:HA	48:QQ:31:PRO:HD3	1.85	0.41
32:QA:292:G:N2	32:QA:309:A:C4	2.88	0.41
35:XD:173:ASP:OD1	35:XD:176:LYS:HB3	2.20	0.41
1:RA:2107:G:O6	1:RA:2183:A:C6	2.74	0.41
34:QC:184:ASN:O	34:QC:198:LYS:HA	2.20	0.41
32:QA:950:U:H2'	32:QA:951:G:C8	2.55	0.41
32:XA:623:C:C6	32:XA:623:C:C3'	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:734:A:C5	1:RA:735:A:C8	3.09	0.41
32:QA:22:G:C5	32:QA:23:C:C5	3.08	0.41
21:RU:33:VAL:O	21:RU:64:ILE:HG22	2.19	0.41
32:XA:685:G:O2'	32:XA:686:U:H5'	2.20	0.41
1:YA:2419:U:H5	56:YA:3656:HOH:O	2.04	0.41
4:YD:187:LEU:O	4:YD:188:LEU:HD23	2.20	0.41
34:XC:111:ASP:O	34:XC:115:VAL:HG12	2.20	0.41
1:YA:1712:U:O4	1:YA:1713:A:C2	2.72	0.41
1:RA:279:A:H2'	1:RA:280:U:O4'	2.19	0.41
1:RA:1351:C:H2'	1:RA:1352:U:O4'	2.20	0.41
1:YA:2648:G:H2'	1:YA:2649:C:O4'	2.20	0.41
1:YA:2658:C:H2'	1:YA:2659:G:H5'	2.02	0.41
46:XO:83:ARG:HG2	46:XO:83:ARG:O	2.20	0.41
35:XD:166:LYS:HB2	35:XD:166:LYS:HE2	1.84	0.41
19:RS:97:LEU:HD22	19:RS:97:LEU:N	2.34	0.41
1:YA:866:A:N1	1:YA:914:G:H5'	2.35	0.41
1:RA:1061:U:O2'	1:RA:1062:G:P	2.79	0.41
2:YB:16:G:O2'	2:YB:17:C:H5'	2.20	0.41
1:YA:449:A:H4'	17:YQ:2:ARG:HH22	1.84	0.41
10:RJ:111:LYS:HE2	10:RJ:114:LEU:HB3	2.03	0.41
1:YA:2428:G:H4'	1:YA:2429:G:C4	2.55	0.41
1:YA:2448:A:H61	12:YL:36:LYS:CE	2.33	0.41
51:QT:29:THR:HA	51:QT:32:LYS:CG	2.49	0.41
3:YC:26:GLY:O	3:YC:27:LYS:C	2.57	0.41
1:YA:1087:G:C4	1:YA:1089:A:N3	2.88	0.41
1:YA:1096:A:C8	1:YA:1097:U:C5	3.08	0.41
1:YA:2830:C:H2'	1:YA:2831:G:O4'	2.20	0.41
1:YA:489:G:C2'	1:YA:491:G:H8	2.33	0.41
1:RA:1656:C:OP1	4:RD:141:ARG:NH1	2.47	0.41
48:QQ:16:MET:CE	48:QQ:20:ILE:HD12	2.51	0.41
1:YA:2266:A:C4'	1:YA:2267:A:O5'	2.57	0.41
1:YA:480:A:H2'	1:YA:480:A:N3	2.34	0.41
1:YA:502:A:C6	1:YA:505:A:N7	2.88	0.41
1:YA:117:G:C6	1:YA:119:A:C6	3.09	0.41
1:YA:639:U:H2'	1:YA:640:C:C6	2.47	0.41
6:RF:135:ILE:C	6:RF:137:PHE:N	2.73	0.41
14:YN:62:ASN:N	14:YN:62:ASN:OD1	2.51	0.41
14:YN:73:ASN:HA	14:YN:76:VAL:CG2	2.50	0.41
1:YA:2067:G:C6	1:YA:2444:G:C6	3.08	0.41
1:YA:586:A:O2'	1:YA:671:C:O2	2.36	0.41
1:RA:1731:G:C4	1:RA:1733:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:RD:91:THR:C	4:RD:93:GLY:N	2.64	0.41
11:YK:88:ASN:HB2	11:YK:91:SER:HB2	2.02	0.41
4:YD:185:ASN:O	4:YD:186:LEU:HD12	2.20	0.41
1:YA:1207:C:N4	1:YA:1208:C:H41	2.18	0.41
38:XG:103:ILE:O	38:XG:103:ILE:HG22	2.20	0.41
2:YB:90:C:H2'	2:YB:91:C:O4'	2.21	0.41
7:YG:86:LEU:HA	7:YG:163:TYR:CB	2.39	0.41
32:QA:71:A:C2	32:QA:72:A:C5	3.07	0.41
1:YA:855:G:N2	1:YA:923:G:C4	2.88	0.41
37:XF:64:VAL:HG23	37:XF:66:ALA:H	1.86	0.41
7:RG:72:ASN:O	7:RG:76:ILE:HG22	2.20	0.41
36:XE:13:LYS:HB2	36:XE:116:VAL:HG11	2.03	0.41
2:YB:75:G:H22	2:YB:102:G:N2	2.19	0.41
1:RA:581:C:OP1	17:RQ:32:ARG:HB2	2.20	0.41
1:YA:532:A:C2'	1:YA:532:A:N3	2.83	0.41
43:QL:21:PRO:HD2	43:QL:94:TYR:OH	2.20	0.41
32:QA:1412:C:H2'	32:QA:1413:A:C8	2.55	0.41
35:QD:146:GLU:HB3	35:QD:147:LYS:HZ3	1.83	0.41
34:QC:96:VAL:HB	34:QC:97:PRO:CD	2.45	0.41
36:QE:105:ILE:HD11	36:QE:123:LEU:CD2	2.47	0.41
32:XA:16:A:O2'	32:XA:17:U:H5'	2.19	0.41
1:YA:170:U:C2	1:YA:171:U:C5	3.08	0.41
24:YX:38:TRP:HA	24:YX:38:TRP:HE3	1.85	0.41
1:RA:1873:G:O2'	1:RA:1874:C:H5'	2.21	0.41
50:XS:59:VAL:HB	50:XS:73:PHE:CD2	2.47	0.41
1:YA:1676:A:C2	1:YA:1993:U:H5'	2.55	0.41
34:XC:22:PHE:CE2	41:XJ:97:ASP:HB2	2.54	0.41
24:RX:68:ALA:C	24:RX:69:GLU:O	2.59	0.41
7:RG:51:PHE:N	7:RG:51:PHE:CD2	2.88	0.41
1:YA:1796:U:H2'	1:YA:1797:G:H8	1.82	0.41
1:YA:2825:G:H3'	1:YA:2826:A:H8	1.84	0.41
16:RP:17:PRO:HG3	16:RP:83:ILE:O	2.21	0.41
1:YA:270:A:H2'	1:YA:271:G:OP1	2.20	0.41
6:RF:4:HIS:O	6:RF:8:LYS:HG2	2.20	0.41
2:YB:100:G:H2'	2:YB:101:A:O4'	2.21	0.41
1:RA:626:A:H2'	12:RL:78:ARG:CZ	2.51	0.41
21:YU:33:VAL:O	21:YU:34:ILE:CG1	2.68	0.41
35:QD:13:ARG:HG3	35:QD:55:ARG:HE	1.86	0.41
3:YC:65:ASP:OD1	3:YC:67:LYS:O	2.38	0.41
46:QO:30:LEU:O	46:QO:33:ALA:HB3	2.20	0.41
32:QA:1226:C:H5''	44:QM:101:THR:OG1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:889:A:O3'	32:XA:890:G:H4'	2.21	0.41
32:QA:663:A:C2	32:QA:743:A:C2	3.08	0.41
1:RA:1104:C:H2'	1:RA:1105:U:H6	1.85	0.41
16:RP:99:LEU:HA	16:RP:99:LEU:HD12	1.81	0.41
1:YA:2235:G:C4	1:YA:2236:U:C5	3.08	0.41
44:QM:113:LYS:N	44:QM:114:PRO:CD	2.80	0.41
4:YD:56:LYS:NZ	4:YD:56:LYS:HB3	2.35	0.41
41:XJ:32:THR:HG23	41:XJ:83:THR:OG1	2.20	0.41
32:XA:770:C:O2'	32:XA:771:G:H5'	2.21	0.41
10:YJ:38:GLY:C	10:YJ:40:HIS:H	2.23	0.41
7:RG:15:ASP:CG	7:RG:16:VAL:H	2.22	0.41
26:RZ:53:MET:O	26:RZ:54:VAL:HG13	2.20	0.41
39:QH:30:LYS:O	39:QH:33:VAL:HB	2.20	0.41
40:QI:48:ARG:HH21	40:QI:52:GLU:HA	1.85	0.41
28:Y1:47:ILE:H	28:Y1:47:ILE:HD12	1.85	0.41
1:YA:157:C:C2	1:YA:158:U:C6	3.07	0.41
1:YA:862:G:H2'	1:YA:863:A:O4'	2.20	0.41
33:XB:35:ASN:O	33:XB:36:LYS:C	2.57	0.41
9:YI:95:ASP:HB3	9:YI:97:VAL:HG23	2.00	0.41
32:QA:1111:A:C2'	32:QA:1112:C:H5'	2.50	0.41
38:XG:128:GLU:OE2	38:XG:130:LYS:HB2	2.20	0.41
4:YD:38:LYS:HB3	4:YD:38:LYS:HZ3	1.85	0.41
1:RA:1587:G:C4	1:RA:1588:G:C8	3.09	0.41
22:RV:40:ILE:N	22:RV:40:ILE:HD13	2.35	0.41
1:RA:2182:U:H2'	1:RA:2183:A:OP1	2.20	0.41
1:RA:595:C:H2'	1:RA:596:U:C6	2.54	0.41
5:RE:138:LEU:HD23	5:RE:138:LEU:HA	1.85	0.41
32:XA:289:G:C6	32:XA:290:C:N4	2.89	0.41
26:YZ:32:GLY:C	26:YZ:34:THR:N	2.74	0.41
1:RA:2243:U:H2'	1:RA:2244:U:C6	2.55	0.41
28:Y1:38:PHE:CG	28:Y1:39:ASP:N	2.88	0.41
19:RS:34:ASP:O	19:RS:35:ILE:C	2.56	0.41
1:RA:2067:G:H4'	1:RA:2068:U:OP2	2.20	0.41
1:RA:2805:C:C4	1:RA:2806:C:C4	3.08	0.41
1:RA:1724:G:C6	1:RA:1725:U:C4	3.08	0.41
23:RW:69:GLU:HB3	23:RW:70:VAL:H	1.73	0.41
7:RG:18:ILE:CD1	7:RG:42:VAL:HG13	2.50	0.41
5:YE:109:LEU:HA	5:YE:112:LEU:HB2	2.03	0.41
27:R0:38:LEU:O	27:R0:39:ARG:C	2.57	0.41
32:QA:224:U:O2'	32:QA:225:C:H5'	2.20	0.41
22:YV:21:ARG:NH2	22:YV:87:GLN:O	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:QH:110:MET:SD	39:QH:115:ALA:HA	2.60	0.41
1:RA:2619:C:O2'	1:RA:2620:C:H5'	2.21	0.41
32:XA:604:G:H2'	32:XA:605:U:O4'	2.20	0.41
32:QA:781:A:C5	32:QA:802:A:C2	3.08	0.41
1:RA:1242:U:H2'	1:RA:1243:C:C6	2.54	0.41
32:QA:1080:A:OP1	36:QE:51:LYS:HE3	2.21	0.41
23:YW:52:CYS:O	23:YW:53:GLY:O	2.39	0.41
41:XJ:17:LEU:C	41:XJ:19:ASP:H	2.24	0.41
49:QR:41:SER:O	49:QR:45:GLY:N	2.53	0.41
1:RA:2001:C:H1'	1:RA:2689:U:C4	2.55	0.41
38:XG:102:TRP:C	38:XG:104:VAL:H	2.23	0.41
1:RA:2855:C:O5'	1:RA:2855:C:H6	2.03	0.41
24:RX:17:ARG:HD2	24:RX:17:ARG:N	2.36	0.41
4:YD:104:VAL:O	4:YD:104:VAL:HG12	2.19	0.41
35:XD:146:GLU:C	35:XD:148:ALA:H	2.23	0.41
1:RA:1065:U:H5	1:RA:1074:G:H21	1.69	0.41
18:YR:49:ILE:C	18:YR:51:VAL:H	2.24	0.41
32:XA:6:G:O2'	32:XA:7:A:P	2.77	0.41
2:YB:27:C:H2'	2:YB:28:C:O4'	2.20	0.41
7:RG:84:LYS:HB3	7:RG:132:LEU:O	2.19	0.41
3:YC:183:VAL:HG22	3:YC:184:GLU:H	1.84	0.41
23:YW:44:PHE:HE2	23:YW:76:ARG:NE	2.18	0.41
23:YW:77:LYS:O	23:YW:78:PHE:CB	2.68	0.41
17:YQ:51:GLN:O	17:YQ:54:ARG:N	2.49	0.41
1:YA:405:U:H3'	1:YA:406:G:H5'	2.02	0.41
1:YA:26:G:H5'	1:YA:27:G:OP2	2.21	0.41
1:YA:1358:G:H1'	1:YA:1374:G:N2	2.34	0.41
1:YA:1808:A:H4'	1:YA:1809:A:OP2	2.21	0.41
35:QD:29:THR:O	35:QD:30:LYS:HB2	2.20	0.41
1:YA:1083:U:H1'	1:YA:1086:A:N1	2.36	0.41
1:YA:1092:C:H2'	1:YA:1093:G:C5'	2.50	0.41
1:YA:1069:A:H2	1:YA:1097:U:OP1	2.03	0.41
48:QQ:14:ASP:O	48:QQ:16:MET:HG2	2.21	0.41
1:YA:184:C:N3	1:YA:213:A:H2	2.18	0.41
1:YA:1661:G:H2'	1:YA:1662:U:H6	1.86	0.41
32:XA:83:C:N4	32:XA:85:U:C4	2.88	0.41
18:YR:27:ILE:CG2	18:YR:28:ALA:N	2.73	0.41
1:YA:1964:G:H4'	1:YA:1965:C:OP2	2.20	0.41
4:RD:91:THR:OG1	4:RD:91:THR:O	2.34	0.41
14:YN:28:LEU:C	14:YN:30:ARG:H	2.23	0.41
1:YA:822:G:H5"	56:YA:3359:HOH:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:113:LYS:HG3	40:XI:119:LYS:HA	2.02	0.41
1:RA:136:G:C6	1:RA:142:A:N6	2.89	0.41
43:XL:49:ARG:HG2	43:XL:49:ARG:HH11	1.86	0.41
1:RA:2180:U:C2'	1:RA:2181:U:H5	2.21	0.41
1:RA:2742:G:OP2	31:R4:24:ARG:NH1	2.53	0.41
1:YA:922:C:H2'	1:YA:923:G:H8	1.85	0.41
34:QC:34:SER:O	34:QC:38:VAL:HG13	2.21	0.41
20:YT:53:VAL:HB	20:YT:54:GLU:H	1.76	0.41
32:XA:530:G:H3'	32:XA:530:G:N3	2.35	0.41
32:QA:203:G:C2	32:QA:215:C:N3	2.88	0.41
34:QC:110:LEU:HD22	34:QC:110:LEU:N	2.36	0.41
40:QI:12:LYS:O	40:QI:13:SER:HB3	2.20	0.41
1:YA:2519:U:N1	1:YA:2542:A:N6	2.68	0.41
7:YG:8:VAL:HG21	7:YG:49:LEU:HD23	2.01	0.41
32:QA:602:A:O2'	32:QA:603:U:H5'	2.20	0.41
1:RA:548:G:H3'	1:RA:548:G:H8	1.85	0.41
1:YA:528:A:C2	1:YA:2043:C:C5'	3.04	0.41
32:XA:765:G:C8	32:XA:812:G:N3	2.89	0.41
1:RA:2590:A:H2'	1:RA:2591:C:C6	2.56	0.41
40:XI:14:SER:OG	40:XI:69:GLY:HA3	2.19	0.41
31:Y4:7:VAL:HG22	31:Y4:25:VAL:HG23	2.03	0.41
1:YA:1740:G:C2	1:YA:1741:C:C2	3.09	0.41
3:RC:171:VAL:HG23	3:RC:185:ALA:CA	2.49	0.41
22:YV:57:TYR:N	22:YV:57:TYR:CD1	2.89	0.41
20:RT:85:VAL:O	20:RT:86:THR:O	2.38	0.41
12:YL:63:LYS:HA	30:Y3:12:ARG:HB3	2.01	0.41
30:R3:21:PHE:HB2	30:R3:49:VAL:HG13	1.99	0.41
42:QK:111:ASP:O	52:QU:3:ILE:HG23	2.20	0.41
1:YA:468:G:H4'	5:YE:57:LYS:CG	2.51	0.41
10:YJ:57:LEU:O	10:YJ:126:ALA:HA	2.20	0.41
1:YA:2538:C:O2'	1:YA:2539:C:H5'	2.21	0.41
32:QA:543:U:H2'	32:QA:544:G:O4'	2.20	0.41
9:YI:12:VAL:CG1	9:YI:13:ALA:N	2.81	0.41
3:YC:196:ASN:O	3:YC:197:ALA:CB	2.67	0.41
42:QK:110:THR:HG22	52:QU:4:LYS:HB3	2.02	0.41
1:YA:2234:G:C6	1:YA:2235:G:C5	3.08	0.41
32:XA:509:A:C6	32:XA:510:A:N1	2.87	0.41
39:QH:88:LYS:HB2	39:QH:88:LYS:HE3	1.87	0.41
22:YV:4:ILE:HD11	22:YV:50:MET:HE2	2.03	0.41
41:QJ:10:LEU:O	41:QJ:71:LEU:HD13	2.21	0.41
32:XA:72:A:H2'	32:XA:73:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:8:GLY:HA3	18:YR:23:GLU:HG2	2.02	0.41
21:RU:5:ARG:O	21:RU:6:ARG:O	2.38	0.41
5:RE:48:THR:OG1	5:RE:50:ALA:HB3	2.20	0.41
19:YS:82:MET:HE1	19:YS:84:ARG:HH22	1.85	0.41
9:RI:3:LYS:HD2	9:RI:4:VAL:H	1.84	0.41
11:YK:11:ALA:O	11:YK:99:ILE:HG23	2.21	0.41
40:QI:88:GLU:HG3	40:QI:89:TYR:N	2.34	0.41
51:XT:74:HIS:O	51:XT:78:LEU:HB2	2.21	0.41
1:YA:752:A:O2'	1:YA:753:A:H8	2.02	0.41
8:RH:75:LEU:HD22	8:RH:143:ILE:CG2	2.50	0.41
32:QA:1521:C:N3	32:QA:1522:U:C5	2.88	0.41
32:QA:1521:C:C2	32:QA:1522:U:C6	3.08	0.41
1:RA:1588:G:C2	1:RA:1589:U:C5	3.08	0.41
1:RA:1229:C:H2'	1:RA:1230:A:H8	1.85	0.41
1:YA:2461:A:N1	1:YA:2490:G:N2	2.68	0.41
1:YA:776:G:N1	1:YA:2072:C:OP1	2.41	0.41
17:YQ:77:LYS:HE3	17:YQ:116:LEU:HD11	2.01	0.41
1:RA:907:G:C2'	1:RA:908:C:H5'	2.51	0.41
16:YP:19:PHE:HE1	16:YP:58:PHE:CG	2.39	0.41
1:RA:1384:A:H1'	1:RA:1405:U:C1'	2.50	0.41
1:RA:1384:A:H1'	1:RA:1405:U:H1'	2.00	0.41
1:YA:2262:U:H4'	1:YA:2328:A:H2	1.85	0.41
1:YA:524:G:H2'	1:YA:525:U:H6	1.86	0.41
1:RA:2830:C:O3'	4:RD:56:LYS:NZ	2.53	0.41
3:RC:156:SER:O	3:RC:157:ALA:C	2.59	0.41
22:YV:14:LYS:HG3	22:YV:18:ARG:HD2	2.02	0.41
32:QA:137:U:O2	32:QA:227:G:C2	2.73	0.41
45:QN:3:GLN:O	45:QN:6:LYS:HB3	2.21	0.41
32:QA:1511:G:C5	32:QA:1512:U:C5	3.08	0.41
32:XA:1186:G:N2	32:XA:1187:G:H1'	2.35	0.41
4:RD:85:ALA:O	4:RD:86:GLU:CB	2.69	0.41
4:RD:85:ALA:O	4:RD:86:GLU:HB2	2.21	0.41
1:RA:2839:G:C5	1:RA:2840:C:C5	3.08	0.41
38:QG:71:THR:O	38:QG:90:VAL:HG12	2.20	0.41
16:RP:98:TYR:H	16:RP:98:TYR:HD1	1.64	0.41
22:YV:26:PHE:CD1	22:YV:26:PHE:C	2.93	0.41
10:YJ:116:ARG:HA	10:YJ:116:ARG:HD2	1.66	0.41
14:YN:51:LEU:HA	14:YN:51:LEU:HD23	1.82	0.41
1:RA:374:A:H2'	1:RA:375:G:O4'	2.20	0.41
1:YA:2396:G:C2'	1:YA:2397:G:H5'	2.50	0.41
32:QA:287:U:H2'	32:QA:288:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:RW:73:PRO:HG2	23:RW:76:ARG:CB	2.47	0.41
37:QF:2:ARG:HH21	37:QF:68:GLN:NE2	2.19	0.41
1:RA:272:A:O2'	1:RA:273:G:P	2.78	0.41
32:XA:1363:A:C5	32:XA:1365:G:O6	2.72	0.41
50:XS:43:MET:HG3	50:XS:43:MET:H	1.73	0.41
1:YA:2387:U:H6	1:YA:2387:U:H3'	1.84	0.41
28:Y1:52:LYS:NZ	28:Y1:52:LYS:HB2	2.36	0.41
1:YA:223:A:O2'	1:YA:224:U:P	2.79	0.41
1:YA:416:U:H2'	1:YA:417:C:O4'	2.20	0.41
32:XA:259:G:C4	32:XA:260:G:C8	3.08	0.41
1:YA:1345:C:O2'	1:YA:1346:G:P	2.79	0.41
21:YU:81:ARG:HD2	21:YU:81:ARG:H	1.85	0.41
12:RL:111:ILE:HD12	12:RL:128:THR:HG21	2.03	0.41
1:YA:117:G:C4'	1:YA:126:A:H2	2.32	0.41
6:YF:130:GLY:HA2	6:YF:151:LEU:O	2.20	0.41
12:YL:79:LEU:HD22	12:YL:115:GLU:O	2.20	0.41
6:RF:172:PHE:O	6:RF:174:PHE:N	2.53	0.41
1:YA:112:U:H2'	1:YA:113:U:H5'	2.03	0.41
25:YY:17:GLU:OE1	25:YY:53:VAL:HB	2.20	0.41
47:XP:78:VAL:C	47:XP:80:LYS:N	2.72	0.41
32:XA:1144:G:N1	32:XA:1145:A:C6	2.88	0.41
7:RG:44:HIS:HA	7:RG:49:LEU:HD23	2.03	0.41
37:XF:18:VAL:HG13	37:XF:22:ILE:HD11	2.01	0.41
1:RA:1083:U:H3'	1:RA:1083:U:H6	1.84	0.41
1:YA:822:G:H2'	1:YA:823:C:C6	2.55	0.41
32:XA:1084:G:C8	32:XA:1085:U:C6	3.08	0.41
44:XM:12:LYS:CE	44:XM:16:ILE:HG22	2.50	0.41
51:QT:66:ILE:O	51:QT:67:HIS:O	2.39	0.41
1:YA:2807:U:C5'	1:YA:2808:G:OP2	2.68	0.41
1:RA:1748:C:H2'	1:RA:1749:A:H8	1.86	0.41
32:XA:505:G:H5'	32:XA:534:U:C2	2.55	0.41
3:YC:229:HIS:ND1	3:YC:230:PRO:HD2	2.35	0.41
10:RJ:25:LEU:HD22	10:RJ:25:LEU:C	2.41	0.41
32:XA:1331:G:O2'	32:XA:1332:A:O5'	2.38	0.41
20:YT:55:VAL:HG22	20:YT:56:GLU:N	2.34	0.41
1:RA:1955:U:C5	1:RA:2557:G:N2	2.89	0.41
22:YV:30:ILE:HG12	22:YV:91:PHE:CB	2.48	0.41
44:XM:72:ILE:HG12	44:XM:72:ILE:O	2.21	0.41
16:RP:19:PHE:HB2	16:RP:20:ARG:H	1.41	0.41
1:YA:2880:C:C1'	14:YN:93:GLY:H	2.29	0.41
41:QJ:42:LEU:HB3	41:QJ:43:PRO:CD	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1429:G:O2'	1:YA:1430:G:P	2.79	0.41
1:YA:1432:G:H2'	1:YA:1433:A:C8	2.55	0.41
1:RA:2341:G:H2'	1:RA:2342:C:H6	1.85	0.41
38:QG:144:ALA:C	38:QG:146:ALA:N	2.73	0.41
37:QF:97:THR:HG22	37:QF:98:GLU:N	2.35	0.41
32:QA:1348:U:C2'	32:QA:1349:A:H8	2.33	0.41
1:YA:1152:C:H5''	17:YQ:79:ILE:HG23	2.01	0.41
5:YE:139:LYS:HZ2	5:YE:139:LYS:HB2	1.83	0.41
46:QO:27:GLN:HA	46:QO:30:LEU:HD12	2.02	0.41
44:QM:86:ARG:NH2	44:QM:96:VAL:HG12	2.34	0.41
21:RU:84:PHE:N	21:RU:94:PHE:CE2	2.89	0.41
5:YE:157:LEU:HD12	5:YE:157:LEU:O	2.20	0.41
50:QS:79:TYR:CZ	50:QS:80:ARG:HB2	2.55	0.41
48:QQ:4:ILE:HG22	48:QQ:5:ARG:HD3	2.02	0.41
43:XL:41:PRO:HG2	43:XL:45:ASN:O	2.21	0.41
18:RR:68:ARG:HD3	18:RR:92:TRP:CZ2	2.54	0.41
1:RA:1856:U:H3	1:RA:1886:U:H3	1.69	0.41
13:YM:102:LEU:HB3	13:YM:103:TYR:CD1	2.56	0.41
1:RA:1568:G:H1'	3:RC:57:HIS:HE1	1.84	0.41
35:QD:195:ASN:O	35:QD:196:GLU:HG3	2.19	0.41
32:QA:903:G:H2'	32:QA:904:U:C6	2.56	0.41
1:YA:1842:G:N2	1:YA:1901:A:C4	2.89	0.41
1:RA:2383:G:H5''	1:RA:2383:G:C8	2.55	0.41
35:XD:64:TYR:N	35:XD:64:TYR:CD1	2.89	0.41
3:YC:166:ARG:CB	3:YC:171:VAL:HG22	2.50	0.41
43:XL:81:ILE:HD11	43:XL:94:TYR:CG	2.55	0.41
3:RC:76:VAL:CG1	3:RC:96:LYS:NZ	2.84	0.41
1:YA:1638:C:H4'	1:YA:2710:C:O2	2.21	0.41
4:YD:115:GLY:O	14:YN:3:HIS:CE1	2.72	0.41
1:RA:1927:A:C6	1:RA:1928:A:C6	3.08	0.41
19:RS:24:ILE:HG23	19:RS:71:VAL:HG11	2.02	0.41
41:QJ:18:ILE:HG23	41:QJ:19:ASP:N	2.34	0.41
32:QA:1406:U:C2'	32:QA:1407:C:H5'	2.51	0.41
1:YA:2079:U:H2'	1:YA:2080:A:O4'	2.20	0.41
38:QG:14:ASP:C	38:QG:14:ASP:OD2	2.58	0.41
1:RA:1095:A:C6	1:RA:1096:A:N6	2.88	0.41
41:XJ:17:LEU:C	41:XJ:19:ASP:N	2.74	0.41
38:QG:71:THR:C	38:QG:90:VAL:HG12	2.40	0.41
50:XS:62:THR:HG21	50:XS:64:GLU:OE2	2.20	0.41
7:RG:90:GLY:HA3	7:RG:159:LYS:HG3	2.03	0.41
1:RA:778:G:C5	1:RA:779:U:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:XF:39:LEU:HD12	37:XF:40:GLU:O	2.21	0.41
1:RA:980:A:C6	1:RA:981:A:N1	2.89	0.41
1:RA:1808:A:O2'	24:RX:2:ARG:NH1	2.54	0.41
32:XA:1111:A:H8	32:XA:1111:A:O5'	2.03	0.41
34:XC:172:VAL:O	34:XC:174:LEU:N	2.54	0.41
51:XT:42:ASP:O	51:XT:44:ALA:N	2.53	0.41
32:XA:1315:U:C4	32:XA:1316:G:C6	3.09	0.41
32:XA:1320:C:N4	50:XS:36:ARG:HG3	2.36	0.41
32:XA:1321:U:N3	32:XA:1322:C:N3	2.67	0.41
32:XA:978:A:HO2'	32:XA:979:C:H6	1.66	0.41
50:XS:38:THR:HA	50:XS:69:LYS:HD3	2.01	0.41
1:YA:1249:U:H3'	1:YA:1249:U:P	2.60	0.41
1:YA:2296:U:H5	15:YO:9:ARG:NH2	2.18	0.41
28:Y1:8:ILE:HG22	28:Y1:10:LEU:HD13	2.03	0.41
1:YA:234:U:O2'	1:YA:235:U:C5'	2.69	0.41
1:RA:1509:A:C1'	1:RA:1510:G:H5'	2.31	0.41
1:YA:324:A:N6	1:YA:339:U:H5'	2.36	0.41
1:YA:98:G:N3	1:YA:98:G:H2'	2.35	0.41
3:YC:66:PHE:CZ	3:YC:155:ARG:NH1	2.89	0.41
10:YJ:4:PHE:HD1	10:YJ:44:TYR:HB3	1.86	0.41
1:YA:2315:G:H5'	6:YF:156:THR:HG23	2.01	0.41
32:QA:254:G:H2'	32:QA:255:G:C8	2.55	0.41
1:YA:478:A:C6	1:YA:480:A:C6	3.09	0.41
4:RD:133:THR:O	4:RD:134:HIS:C	2.58	0.41
32:XA:279:A:H5''	32:XA:280:C:C3'	2.39	0.41
1:YA:604:G:C2	1:YA:605:G:C5	3.09	0.41
1:YA:668:A:C4	1:YA:670:A:N7	2.89	0.41
32:QA:1142:G:C4	32:QA:1143:G:H1'	2.56	0.41
1:RA:1734:G:O2'	1:RA:1735:A:H5'	2.21	0.41
7:YG:82:PHE:CE2	7:YG:137:LYS:HB2	2.56	0.41
1:YA:198:C:H42	1:YA:248:G:H1	1.67	0.41
24:YX:31:ASN:HB2	24:YX:33:HIS:CE1	2.55	0.41
11:YK:91:SER:O	11:YK:92:GLU:C	2.58	0.41
32:XA:270:A:C5	32:XA:271:C:C5	3.09	0.41
11:RK:78:ARG:NH1	16:RP:70:GLU:OE2	2.50	0.41
3:RC:141:HIS:HB2	3:RC:190:THR:CB	2.48	0.41
44:XM:12:LYS:HE2	44:XM:16:ILE:HG22	2.02	0.41
39:QH:24:VAL:O	39:QH:59:GLU:HA	2.21	0.41
33:QB:150:ILE:O	33:QB:151:LYS:C	2.58	0.41
31:R4:16:ILE:HA	31:R4:24:ARG:O	2.21	0.41
34:QC:35:ASP:C	34:QC:37:LYS:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2812:G:H2'	1:RA:2813:A:O4'	2.21	0.41
32:XA:796:C:C3'	42:XK:126:ARG:HH21	2.33	0.41
32:QA:201:G:C2	32:QA:202:G:H1'	2.55	0.41
36:XE:110:MET:HG2	36:XE:139:THR:CG2	2.49	0.41
4:RD:98:VAL:C	4:RD:100:LEU:N	2.74	0.41
16:YP:72:VAL:HG23	16:YP:72:VAL:O	2.19	0.41
10:YJ:98:GLU:O	10:YJ:102:GLU:HB2	2.21	0.41
32:QA:499:A:H4'	32:QA:500:G:OP1	2.20	0.41
6:RF:84:ILE:HG23	6:RF:84:ILE:O	2.21	0.41
1:YA:769:U:O2'	1:YA:1379:U:H6	2.04	0.41
32:XA:1203:C:O5'	32:XA:1203:C:H6	2.02	0.41
1:YA:1323:C:C4	1:YA:1324:G:N7	2.89	0.41
1:YA:1883:U:H2'	1:YA:1884:G:O4'	2.19	0.41
1:YA:1520:U:C4	1:YA:1521:G:C6	3.08	0.41
34:QC:6:PRO:CG	34:QC:183:TYR:CG	3.04	0.41
1:YA:1180:U:O4	1:YA:1181:U:C4	2.74	0.41
1:YA:684:G:OP1	29:Y2:16:HIS:ND1	2.53	0.41
32:QA:195:A:C6	32:QA:196:A:C6	3.08	0.41
1:RA:1190:G:OP1	12:RL:32:GLY:CA	2.66	0.41
1:RA:2747:G:HO2'	7:RG:66:THR:HG22	1.85	0.41
12:YL:75:ALA:HB2	12:YL:105:ILE:CD1	2.50	0.41
39:QH:105:THR:CG2	39:QH:120:LEU:HD13	2.47	0.41
32:QA:89:U:HO2'	32:QA:90:C:C5'	2.32	0.41
1:YA:2727:A:C2	1:YA:2728:U:N3	2.88	0.41
16:YP:92:ARG:O	16:YP:93:LYS:HB2	2.20	0.41
1:RA:1889:A:H2'	1:RA:1890:A:C8	2.56	0.41
37:QF:52:ASN:O	37:QF:53:LYS:CB	2.68	0.41
20:YT:62:VAL:HG12	20:YT:63:VAL:H	1.84	0.41
32:QA:895:G:C5	32:QA:896:C:C4	3.08	0.41
7:RG:31:GLU:O	7:RG:31:GLU:HG3	2.20	0.41
7:RG:31:GLU:O	7:RG:32:LEU:C	2.59	0.41
32:QA:604:G:N1	32:QA:605:U:C2	2.89	0.41
1:YA:424:G:C2	1:YA:425:G:C8	3.08	0.41
13:RM:56:ALA:H	13:RM:58:LYS:H	1.69	0.41
46:XO:88:ARG:HD3	46:XO:88:ARG:N	2.36	0.41
1:YA:715:A:C6	1:YA:716:A:C6	3.08	0.41
1:RA:1585:C:H2'	1:RA:1586:A:H5'	2.02	0.41
46:XO:2:LEU:HA	46:XO:2:LEU:HD12	1.89	0.41
48:XQ:21:VAL:HG11	48:XQ:42:LYS:NZ	2.35	0.41
32:XA:790:A:N6	32:XA:791:G:C6	2.88	0.41
20:YT:43:ILE:CG2	20:YT:58:VAL:HG11	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1161:C:O2'	32:XA:1162:C:H5'	2.21	0.41
24:YX:19:HIS:C	24:YX:21:LEU:N	2.73	0.41
32:XA:213:G:N3	32:XA:213:G:H2'	2.36	0.41
32:QA:1114:C:H2'	32:QA:1115:U:O4'	2.21	0.41
14:RN:18:GLN:NE2	14:RN:22:ARG:NH1	2.68	0.41
3:YC:169:ALA:O	3:YC:185:ALA:HB3	2.20	0.41
5:RE:147:LEU:O	5:RE:168:ASP:O	2.39	0.41
1:RA:1587:G:N3	1:RA:1588:G:C8	2.89	0.41
9:YI:104:GLN:HA	9:YI:107:GLU:HB2	2.03	0.41
35:XD:72:ARG:HA	35:XD:203:TYR:HE1	1.85	0.41
32:QA:11:G:H2'	32:QA:12:U:H6	1.86	0.41
32:XA:1369:C:H2'	32:XA:1370:G:O4'	2.21	0.41
32:XA:881:G:C2	32:XA:882:C:C2	3.09	0.41
1:RA:915:C:O2	2:RB:100:G:H4'	2.20	0.41
34:QC:106:ARG:CG	34:QC:106:ARG:O	2.69	0.41
2:YB:73:A:C4	2:YB:104:A:C2	3.09	0.41
32:QA:51:A:H4'	32:QA:52:C:H5'	2.03	0.41
3:RC:268:ARG:HH11	3:RC:268:ARG:CB	2.33	0.41
1:YA:1452:G:C8	1:YA:1457:U:N3	2.88	0.41
20:RT:7:LEU:C	20:RT:8:LEU:HD23	2.41	0.41
13:YM:21:ALA:HA	13:YM:97:GLN:HG2	2.03	0.41
13:RM:105:MET:HE3	13:RM:117:PHE:CE1	2.56	0.41
48:XQ:62:GLU:HB2	48:XQ:72:TRP:CH2	2.56	0.41
1:RA:2660:A:H2'	1:RA:2661:G:C8	2.55	0.41
44:XM:5:GLY:C	44:XM:6:ILE:HG13	2.41	0.41
4:RD:112:THR:O	4:RD:195:GLY:HA2	2.21	0.41
1:YA:1803:A:H2'	1:YA:1804:C:O4'	2.21	0.41
8:YH:86:ASP:O	8:YH:86:ASP:CG	2.58	0.41
22:RV:4:ILE:O	22:RV:4:ILE:HG22	2.21	0.41
16:YP:5:LYS:HE3	16:YP:9:GLN:NE2	2.36	0.41
27:Y0:21:LEU:HB3	27:Y0:22:THR:H	1.78	0.41
17:RQ:63:ARG:CZ	17:RQ:96:ASP:CA	2.90	0.41
1:RA:2094:A:H5''	8:RH:25:TYR:CD2	2.54	0.41
23:RW:21:GLY:O	23:RW:22:VAL:CB	2.68	0.41
23:RW:24:ARG:HD3	23:RW:65:LYS:HD3	2.02	0.41
52:XU:18:PHE:C	52:XU:19:LYS:HZ3	2.21	0.41
52:XU:28:LEU:O	52:XU:29:ALA:C	2.58	0.41
32:XA:1365:G:O2'	32:XA:1366:C:H5'	2.20	0.41
45:XN:53:ASP:HA	45:XN:58:ARG:HD3	2.03	0.41
1:YA:2332:C:C4'	23:YW:40:ARG:NH2	2.82	0.41
23:YW:44:PHE:HB3	23:YW:78:PHE:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1155:A:H5"	17:YQ:54:ARG:NE	2.35	0.41
17:YQ:46:TYR:CZ	17:YQ:50:ARG:CZ	3.04	0.41
1:YA:828:U:H2'	1:YA:829:A:C8	2.56	0.41
51:QT:53:MET:HE3	51:QT:57:VAL:CG2	2.51	0.41
51:QT:27:MET:HE1	51:QT:57:VAL:HG22	2.01	0.41
1:YA:228:C:O2	1:YA:418:C:H4'	2.20	0.41
1:YA:1400:U:HO2'	1:YA:1401:G:C4'	2.28	0.41
1:RA:1507:C:H5"	1:RA:1508:A:OP2	2.20	0.41
1:YA:2212:A:C8	1:YA:2214:C:C4	3.09	0.41
1:YA:319:G:H2'	1:YA:320:A:C5'	2.51	0.41
17:YQ:89:ILE:O	17:YQ:91:ARG:N	2.53	0.41
42:XK:70:ALA:HB1	42:XK:104:PHE:HZ	1.85	0.41
1:YA:664:G:C2	1:YA:665:U:O2	2.73	0.41
1:YA:2307:G:O2'	1:YA:2308:G:C8	2.69	0.41
38:XG:30:MET:HE2	38:XG:30:MET:HB3	1.93	0.41
6:RF:59:ILE:HG23	6:RF:137:PHE:CD1	2.56	0.41
32:XA:1336:C:O2'	32:XA:1337:G:C4	2.71	0.41
1:YA:604:G:C6	1:YA:625:G:N1	2.89	0.41
39:QH:74:ILE:HD13	39:QH:128:VAL:CG1	2.36	0.41
11:YK:71:ARG:CB	11:YK:72:PRO:HD3	2.36	0.41
1:YA:195:A:C5	1:YA:198:C:C5	3.08	0.41
37:QF:86:ARG:HD3	37:QF:86:ARG:C	2.41	0.41
1:YA:727:A:O2'	1:YA:728:G:O5'	2.38	0.41
3:YC:99:GLU:HG2	3:YC:100:ARG:N	2.35	0.41
43:QL:32:VAL:O	43:QL:33:CYS:O	2.38	0.41
38:XG:9:ARG:C	38:XG:10:LYS:HG3	2.41	0.41
20:RT:37:ASP:C	20:RT:38:ALA:O	2.59	0.41
1:YA:1584:U:C5	1:YA:1585:C:H1'	2.55	0.41
1:RA:61:C:H5"	1:RA:62:U:OP2	2.21	0.41
1:YA:1681:G:H2'	1:YA:1757:A:N1	2.36	0.41
4:YD:168:GLU:HB2	4:YD:169:ARG:H	1.66	0.41
3:YC:156:SER:O	3:YC:194:VAL:HG11	2.21	0.41
35:XD:57:LYS:HE3	35:XD:68:GLU:OE1	2.20	0.41
36:QE:14:LEU:HA	36:QE:36:THR:HA	2.03	0.41
32:QA:1008:U:OP2	45:QN:23:ARG:NH2	2.54	0.41
10:YJ:74:TYR:HE2	10:YJ:103:ILE:CD1	2.28	0.41
1:YA:2087:G:C2	1:YA:2233:U:O2	2.73	0.41
1:RA:760:G:C2'	1:RA:761:A:H5'	2.51	0.41
1:YA:2141:G:H2'	1:YA:2142:A:C8	2.55	0.41
32:QA:807:A:C5	32:QA:808:C:C4	3.09	0.41
1:YA:163:C:O2'	1:YA:164:C:C5'	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:RE:75:SER:OG	5:RE:77:ILE:HG23	2.21	0.41
1:RA:372:G:N2	1:RA:400:G:H2'	2.36	0.41
1:RA:2820:A:O2'	1:RA:2821:A:P	2.79	0.41
1:YA:2376:A:C2	15:YO:92:PHE:HD2	2.33	0.41
32:XA:1003:G:N2	32:XA:1005:A:C5'	2.81	0.41
1:YA:2897:U:H2'	1:YA:2898:U:O4'	2.20	0.41
46:QO:68:TYR:CZ	46:QO:72:LYS:HG3	2.56	0.41
1:YA:2355:G:C4'	23:YW:20:LEU:HD22	2.51	0.41
48:XQ:61:ARG:HG2	48:XQ:75:VAL:HG11	2.02	0.41
5:RE:32:VAL:CG2	5:RE:33:VAL:N	2.83	0.41
20:RT:26:LYS:O	20:RT:27:SER:HB2	2.21	0.41
1:YA:1733:G:C2'	1:YA:1734:G:O5'	2.69	0.41
7:YG:154:GLU:C	7:YG:156:TYR:N	2.71	0.41
1:YA:1826:G:O2'	1:YA:1971:U:OP2	2.38	0.41
32:QA:285:C:O2	32:QA:285:C:H2'	2.21	0.41
1:YA:1867:G:O2'	1:YA:1868:C:H5'	2.21	0.41
1:YA:1865:U:O2	1:YA:1877:A:N1	2.54	0.41
30:Y3:22:LYS:H	30:Y3:48:MET:HB2	1.86	0.41
1:RA:1795:C:H2'	1:RA:1796:U:C6	2.56	0.41
50:QS:79:TYR:CG	50:QS:80:ARG:N	2.87	0.41
1:RA:958:U:O4	13:RM:16:ARG:HA	2.21	0.41
25:YY:3:ALA:C	25:YY:5:GLU:N	2.73	0.41
39:XH:38:VAL:HG12	39:XH:38:VAL:O	2.21	0.41
35:QD:21:LYS:O	35:QD:22:SER:C	2.59	0.41
25:RY:24:GLU:O	25:RY:25:GLN:C	2.59	0.41
7:RG:156:TYR:O	7:RG:157:LYS:HG3	2.21	0.41
32:XA:572:A:H5''	32:XA:917:G:H4'	2.01	0.41
41:XJ:63:ASP:OD1	45:XN:97:LYS:HE3	2.19	0.41
1:YA:2652:C:C4	1:YA:2653:U:C4	3.09	0.41
3:YC:131:MET:CG	3:YC:134:ILE:HD11	2.48	0.41
1:YA:1317:G:N2	1:YA:1336:A:C2	2.88	0.41
10:YJ:18:VAL:HG12	10:YJ:54:ILE:HD11	2.03	0.41
49:XR:40:PRO:HB2	49:XR:42:ARG:CG	2.50	0.41
25:RY:26:PHE:HD1	25:RY:27:ASN:ND2	2.19	0.41
1:RA:541:A:H2'	1:RA:542:C:O4'	2.20	0.41
1:YA:2417:C:H2'	1:YA:2418:A:H8	1.84	0.41
1:RA:1816:C:HO2'	1:RA:1817:G:P	2.44	0.41
38:QG:110:ARG:NH1	38:QG:122:GLU:HG2	2.35	0.41
4:RD:178:VAL:N	4:RD:188:LEU:O	2.40	0.41
39:XH:33:VAL:O	39:XH:35:ILE:N	2.54	0.41
8:RH:147:VAL:HG12	8:RH:149:GLU:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:92:U:H3'	1:YA:93:G:H8	1.86	0.41
7:YG:26:LYS:HD3	7:YG:27:GLY:N	2.35	0.41
1:YA:2784:U:C4	1:YA:2785:C:C4	3.09	0.41
32:XA:661:G:C5	32:XA:662:U:C5	3.08	0.41
14:RN:13:ASN:O	14:RN:14:SER:C	2.59	0.41
7:RG:148:ARG:O	7:RG:149:ALA:C	2.59	0.41
1:YA:562:U:H2'	1:YA:572:A:O4'	2.20	0.41
1:RA:2536:G:C6	1:RA:2537:U:C4	3.09	0.41
1:YA:2522:U:C2'	1:YA:2523:G:H5'	2.51	0.41
1:RA:1333:G:C2	1:RA:1334:G:C8	3.08	0.41
42:XK:20:ALA:HB3	42:XK:83:VAL:HA	2.02	0.41
48:XQ:47:ASP:HB3	48:XQ:74:LEU:CB	2.51	0.41
32:QA:209:U:O2	32:QA:209:U:O4'	2.39	0.41
32:QA:1045:C:O2	32:QA:1045:C:H2'	2.19	0.41
42:XK:75:GLU:OE2	42:XK:75:GLU:HA	2.20	0.41
13:YM:78:LEU:HA	13:YM:78:LEU:HD22	1.68	0.41
40:QI:113:LYS:HG2	40:QI:114:LYS:N	2.35	0.41
32:QA:960:U:H1'	32:QA:1222:G:O2'	2.20	0.41
23:RW:28:GLU:CG	23:RW:29:SER:N	2.83	0.41
52:XU:24:LYS:HA	52:XU:24:LYS:HD2	1.81	0.41
1:YA:449:A:C5	1:YA:450:G:C8	3.09	0.41
32:XA:974:A:H5''	45:YN:70:HIS:ND1	2.35	0.41
6:YF:164:GLU:O	6:YF:168:LEU:HD12	2.21	0.41
51:QT:22:SER:OG	51:QT:23:ARG:HD2	2.20	0.41
32:QA:1101:A:H61	33:QB:101:THR:HG21	1.86	0.41
32:QA:1101:A:N3	32:QA:1102:A:H1'	2.35	0.41
1:YA:1355:G:O2'	1:YA:1356:G:H5'	2.20	0.41
1:YA:2316:G:C4	1:YA:2317:A:C8	3.09	0.41
32:QA:254:G:N2	32:QA:273:U:C2	2.89	0.41
45:YN:94:GLY:O	45:YN:95:LEU:C	2.58	0.41
6:RF:134:GLN:C	6:RF:136:ILE:N	2.74	0.41
32:XA:415:A:N1	32:XA:428:G:O6	2.54	0.41
32:XA:243:A:C2	32:XA:245:U:H2'	2.56	0.41
47:XP:6:LEU:CD2	47:XP:71:VAL:HG12	2.51	0.41
1:YA:1050:A:C2	1:YA:2751:G:C2	3.08	0.41
1:YA:2093:G:O2'	1:YA:2094:A:O5'	2.39	0.41
47:XP:1:MET:HE2	47:XP:2:VAL:O	2.20	0.41
1:YA:1789:A:OP1	3:YC:219:VAL:HA	2.21	0.41
1:YA:95:A:HO2'	25:YY:39:GLN:HA	1.86	0.41
1:RA:143:C:H2'	1:RA:144:A:C8	2.55	0.41
13:YM:36:VAL:HG21	13:YM:129:THR:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:RI:120:ASP:HB3	9:RI:123:ALA:CB	2.51	0.41
2:RB:29:A:H2'	2:RB:30:C:C6	2.56	0.41
32:QA:242:G:C2	32:QA:245:U:C4	3.09	0.41
32:QA:70:U:N3	32:QA:94:G:C5	2.88	0.41
1:YA:279:A:P	1:YA:279:A:C8	3.13	0.41
39:XH:85:TYR:CD1	48:XQ:36:PHE:HE2	2.38	0.41
32:XA:247:G:H4'	32:XA:247:G:OP1	2.21	0.41
1:RA:1047:G:N2	1:RA:1110:G:N9	2.69	0.41
1:YA:1267:U:N3	1:YA:2013:A:N7	2.69	0.41
32:QA:1157:A:C2	32:QA:1181:G:C4	3.09	0.41
25:RY:46:VAL:HB	25:RY:47:ARG:H	1.77	0.41
20:YT:44:LYS:C	20:YT:48:GLN:HG2	2.40	0.41
1:YA:1126:A:OP1	1:YA:1126:A:H8	2.04	0.41
34:XC:110:LEU:HD21	34:XC:203:LYS:CD	2.43	0.41
38:XG:85:GLN:HB3	38:XG:85:GLN:HE21	1.63	0.41
1:YA:2287:A:O2'	1:YA:2288:A:C2'	2.69	0.41
32:QA:78:A:N7	32:QA:79:G:N7	2.69	0.41
1:RA:288:U:O2'	1:RA:289:G:H5'	2.21	0.41
12:YL:92:LEU:HD23	12:YL:92:LEU:H	1.86	0.41
32:XA:1305:G:N2	32:XA:1331:G:H2'	2.28	0.41
38:QG:12:LEU:H	38:QG:12:LEU:HD13	1.85	0.41
8:YH:31:VAL:CB	8:YH:32:PRO:HD3	2.49	0.41
1:RA:2310:C:C5	6:RF:76:PHE:CZ	3.08	0.41
1:RA:1385:A:H1'	1:RA:1386:C:H6	1.84	0.41
32:XA:322:C:C2	32:XA:332:G:N2	2.88	0.41
1:RA:373:U:C5	1:RA:400:G:C2	3.08	0.41
1:RA:2820:A:HO2'	1:RA:2821:A:P	2.44	0.41
8:YH:98:ASP:O	8:YH:99:ILE:HG12	2.20	0.41
42:QK:39:ASN:O	42:QK:40:ALA:HB3	2.21	0.41
43:XL:72:ASN:HD22	43:XL:72:ASN:N	2.13	0.41
12:YL:99:ASN:O	12:YL:100:ILE:HB	2.21	0.41
45:XN:2:LYS:HD3	45:XN:5:MET:CG	2.51	0.41
10:RJ:60:ASP:HB3	10:RJ:97:PRO:HG2	2.02	0.41
1:YA:366:C:H2'	1:YA:367:G:O5'	2.20	0.41
35:QD:164:ARG:O	35:QD:166:LYS:N	2.54	0.41
1:YA:2638:G:O2'	1:YA:2639:A:P	2.79	0.41
1:YA:1513:U:O4	1:YA:1514:G:O6	2.37	0.41
8:RH:130:VAL:HG23	8:RH:131:SER:H	1.86	0.41
1:YA:1838:C:C5	1:YA:1899:A:C6	3.08	0.41
40:QI:41:GLU:HB3	40:QI:42:THR:H	1.58	0.41
1:YA:1769:U:H1'	1:YA:1984:G:H22	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:XF:96:VAL:HG12	37:XF:97:THR:H	1.85	0.41
45:XN:62:ARG:HB3	45:XN:68:ARG:O	2.21	0.41
1:YA:121:G:N3	1:YA:131:A:N1	2.68	0.41
42:XK:68:ARG:HA	42:XK:71:ASP:HB2	2.02	0.41
36:XE:157:GLY:HA3	39:XH:63:LYS:HZ2	1.85	0.41
32:XA:32:A:H2'	32:XA:32:A:N3	2.35	0.41
41:QJ:14:ASP:CB	41:QJ:17:LEU:HB3	2.51	0.41
25:YY:1:MET:N	25:YY:5:GLU:CG	2.84	0.41
1:RA:1858:A:O2'	1:RA:1859:U:O5'	2.38	0.41
8:YH:2:GLN:NE2	8:YH:2:GLN:HA	2.35	0.41
32:QA:119:A:C6	32:QA:240:G:C8	3.09	0.41
1:YA:99:U:H5'	1:YA:100:U:OP1	2.21	0.41
1:RA:804:A:H2'	1:RA:806:C:C4	2.54	0.41
43:XL:24:GLU:O	43:XL:25:ALA:CB	2.69	0.41
44:XM:59:VAL:HG13	44:XM:60:ALA:H	1.85	0.41
48:XQ:10:ARG:HG2	48:XQ:11:VAL:O	2.21	0.41
1:YA:1425:G:H8	1:YA:1425:G:O5'	2.04	0.41
1:RA:2508:G:HO2'	1:RA:2554:U:HO2'	1.69	0.41
5:RE:127:GLU:N	5:RE:127:GLU:OE1	2.54	0.41
1:RA:645:C:O2'	1:RA:646:U:H5''	2.20	0.41
1:YA:736:C:H42	1:YA:760:G:H1	1.69	0.41
32:XA:289:G:C4	32:XA:290:C:C5	3.09	0.41
32:QA:436:C:H2'	32:QA:437:U:C6	2.56	0.41
32:QA:437:U:H4'	35:QD:153:ARG:NH2	2.36	0.41
1:YA:2275:C:O2	13:YM:84:LYS:HD3	2.21	0.41
1:RA:1278:C:H2'	1:RA:1279:G:H8	1.85	0.41
1:RA:2825:G:H5''	1:RA:2826:A:OP2	2.20	0.41
16:YP:19:PHE:CE1	16:YP:58:PHE:CD2	3.08	0.41
16:YP:19:PHE:HE1	16:YP:58:PHE:CD2	2.39	0.41
32:XA:1284:C:P	32:XA:1285:A:H3'	2.61	0.41
34:QC:113:LYS:HD3	34:QC:184:ASN:ND2	2.36	0.41
32:QA:1154:G:C2	32:QA:1155:A:C4	3.09	0.41
1:RA:2830:C:O2	1:RA:2883:A:H2	2.04	0.41
1:RA:1918:A:O2'	1:RA:1920:C:N4	2.54	0.41
1:RA:2839:G:C6	1:RA:2840:C:C4	3.09	0.41
19:RS:68:ASP:O	19:RS:109:ASP:HB3	2.21	0.41
3:YC:172:THR:HG22	3:YC:182:LYS:HG2	2.02	0.41
27:R0:6:LYS:HA	27:R0:7:PRO:HD3	1.93	0.41
1:RA:1676:A:H2'	1:RA:1677:A:C8	2.55	0.41
39:QH:112:ASP:O	39:QH:113:ARG:C	2.59	0.41
1:RA:2758:A:C2'	1:RA:2759:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:RP:15:ASP:O	16:RP:16:VAL:C	2.58	0.41
47:XP:26:ASN:OD1	47:XP:31:ARG:HB3	2.20	0.41
11:YK:121:GLU:HB3	11:YK:122:VAL:H	1.63	0.41
5:YE:193:VAL:O	5:YE:197:GLU:HB2	2.20	0.41
39:QH:65:PHE:HD1	39:QH:65:PHE:HA	1.69	0.41
11:YK:66:LYS:HG2	11:YK:66:LYS:O	2.21	0.41
40:XI:37:TYR:H	40:XI:37:TYR:HD2	1.69	0.41
6:YF:2:LYS:HD3	6:YF:2:LYS:N	2.36	0.41
36:QE:17:VAL:HG22	36:QE:18:ASN:N	2.35	0.41
35:XD:16:THR:HG22	35:XD:17:ASP:N	2.35	0.41
35:QD:39:GLN:OE1	35:QD:40:HIS:CD2	2.74	0.41
1:RA:7:G:H2'	1:RA:8:C:C6	2.56	0.41
32:XA:846:G:O2'	32:XA:847:G:H5'	2.21	0.41
17:RQ:91:ARG:HE	18:RR:11:GLN:HB2	1.85	0.41
10:RJ:38:GLY:C	10:RJ:40:HIS:N	2.74	0.41
1:RA:1059:G:C5	1:RA:1060:U:C4	3.08	0.41
35:XD:187:ARG:NH2	35:XD:191:SER:HB3	2.36	0.41
32:QA:960:U:H5	50:QS:77:ARG:HG2	1.86	0.41
24:YX:36:ARG:HG2	24:YX:47:THR:HB	2.03	0.41
6:RF:129:MET:HG2	6:RF:153:ILE:CD1	2.44	0.41
52:XU:25:ALA:O	52:XU:26:GLY:C	2.59	0.41
5:YE:45:ALA:O	5:YE:46:GLN:HB2	2.21	0.41
32:XA:1371:G:O3'	40:XI:70:GLY:HA3	2.20	0.41
45:YN:52:ARG:O	45:YN:53:ASP:HB2	2.21	0.41
45:YN:55:SER:HB3	45:YN:58:ARG:HG2	2.03	0.41
50:XS:35:ARG:HH12	50:XS:52:ASN:HA	1.86	0.41
7:RG:132:LEU:N	7:RG:132:LEU:CD2	2.81	0.41
7:RG:83:THR:HA	7:RG:84:LYS:HE2	2.03	0.41
7:RG:84:LYS:NZ	7:RG:133:LYS:HD3	2.35	0.41
7:RG:86:LEU:HD11	7:RG:132:LEU:HD21	2.03	0.41
1:YA:2331:G:C6	1:YA:2385:C:N4	2.89	0.41
1:YA:857:G:H1'	23:YW:19:ARG:CZ	2.51	0.41
1:YA:2345:G:C4	1:YA:2381:A:C2	3.08	0.41
6:YF:28:PRO:HA	6:YF:158:THR:OG1	2.21	0.41
1:YA:830:G:H4'	1:YA:831:G:OP2	2.20	0.41
1:YA:833:A:C6	1:YA:834:G:C6	3.09	0.41
51:QT:57:VAL:HG12	51:QT:71:ALA:HB1	2.03	0.41
44:XM:19:THR:C	44:XM:21:ILE:H	2.24	0.41
1:YA:227:A:C5'	1:YA:229:C:H41	2.33	0.41
3:YC:141:HIS:HB3	3:YC:190:THR:O	2.21	0.41
3:YC:104:LEU:HA	3:YC:104:LEU:HD12	1.75	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1213:A:O2'	1:YA:1214:A:H5'	2.21	0.41
1:YA:1606:C:H5'	1:YA:1606:C:C2	2.53	0.41
1:YA:2025:C:OP1	4:YD:154:LYS:HE2	2.21	0.41
35:QD:33:ILE:O	35:QD:34:GLU:CB	2.67	0.41
44:XM:75:SER:HA	44:XM:78:ARG:HB3	2.03	0.41
1:YA:307:G:H2'	1:YA:309:A:OP2	2.21	0.41
1:YA:324:A:N3	1:YA:325:G:H1'	2.36	0.41
1:YA:336:C:O2	1:YA:336:C:H2'	2.20	0.41
3:YC:152:GLN:HA	3:YC:155:ARG:HD3	2.03	0.41
36:QE:121:ASN:ND2	36:QE:121:ASN:N	2.68	0.41
36:QE:152:VAL:O	36:QE:155:LYS:HD2	2.21	0.41
41:QJ:56:HIS:O	41:QJ:57:VAL:HG12	2.21	0.41
1:YA:2887:A:H1'	27:Y0:39:ARG:NH2	2.24	0.41
32:QA:268:U:H2'	32:QA:269:C:C6	2.55	0.41
1:RA:2823:A:OP2	4:RD:118:PHE:CD1	2.74	0.41
21:YU:44:HIS:HD2	21:YU:57:ILE:HD13	1.86	0.41
41:XJ:46:LYS:HA	41:XJ:67:ILE:O	2.21	0.41
5:RE:172:ALA:HB2	5:RE:192:ALA:HB1	2.02	0.41
32:XA:821:G:H2'	32:XA:822:U:H6	1.86	0.41
1:YA:71:A:H5''	1:YA:73:A:N9	2.35	0.41
1:YA:109:C:N3	1:YA:110:G:C8	2.89	0.41
1:YA:347:A:H2'	1:YA:348:A:H8	1.86	0.41
5:YE:147:LEU:HD21	5:YE:179:SER:HB2	2.03	0.41
35:QD:109:THR:CG2	35:QD:112:GLU:HB2	2.51	0.41
32:XA:246:A:C2	32:XA:279:A:N6	2.89	0.41
1:YA:656:G:H2'	1:YA:657:U:H6	1.86	0.41
41:XJ:5:ARG:HA	41:XJ:7:ARG:HH12	1.86	0.41
47:XP:69:ASP:O	47:XP:70:ARG:C	2.59	0.41
1:YA:1045:C:H5''	1:YA:1047:G:H1'	2.02	0.41
1:YA:2751:G:C5'	7:YG:2:ARG:HH21	2.34	0.41
1:YA:2760:C:H2'	1:YA:2761:A:H5'	2.03	0.41
1:YA:782:A:O2'	3:YC:223:ALA:O	2.36	0.41
1:RA:571:U:OP1	18:RR:80:ARG:NH1	2.53	0.41
13:YM:17:ASN:C	13:YM:18:ARG:HG2	2.40	0.41
32:XA:527:G:C2	32:XA:528:C:C6	3.08	0.41
32:XA:994:A:C5	32:XA:1216:A:H4'	2.56	0.41
6:YF:101:ARG:HH11	6:YF:138:PRO:CB	2.33	0.41
26:YZ:16:LEU:HD23	26:YZ:19:HIS:CD2	2.56	0.41
32:QA:76:G:N3	32:QA:76:G:C2'	2.81	0.41
7:YG:126:THR:HG22	7:YG:127:GLN:H	1.85	0.41
32:QA:414:A:O2'	32:QA:415:A:C5'	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2148:G:O2'	1:RA:2149:U:H4'	2.21	0.41
32:XA:653:U:O2'	32:XA:654:G:H8	2.04	0.41
33:QB:69:VAL:CB	33:QB:162:VAL:HG12	2.47	0.41
1:YA:1297:C:C2	1:YA:1298:C:C5	3.09	0.41
32:QA:1158:C:N3	32:QA:1160:G:N7	2.69	0.41
17:YQ:65:ASN:HA	17:YQ:75:TYR:HB2	2.01	0.41
36:XE:56:PRO:O	36:XE:57:ALA:C	2.59	0.41
36:XE:13:LYS:HD3	36:XE:14:LEU:N	2.35	0.41
34:XC:139:ASN:O	34:XC:140:ALA:HB2	2.20	0.41
1:RA:1150:C:C2'	1:RA:1151:A:O5'	2.69	0.41
40:XI:39:GLY:HA2	40:XI:44:ARG:HD3	2.03	0.41
34:XC:110:LEU:CD2	34:XC:203:LYS:HD2	2.43	0.41
1:YA:2889:C:O2'	1:YA:2890:G:H5'	2.21	0.41
1:RA:1744:A:C2	1:RA:1745:A:H1'	2.56	0.41
36:QE:14:LEU:HB3	36:QE:36:THR:HG22	2.02	0.41
1:YA:2284:A:OP1	28:Y1:5:ARG:HG3	2.21	0.41
32:QA:92:U:OP2	32:QA:92:U:H6	2.04	0.41
8:YH:71:LYS:HD3	8:YH:71:LYS:N	2.36	0.41
1:RA:226:A:N6	1:RA:227:A:N1	2.69	0.41
36:QE:105:ILE:HD11	36:QE:123:LEU:HB3	2.03	0.41
36:QE:96:GLN:HB2	36:QE:123:LEU:HD12	2.03	0.41
1:YA:1525:A:O5'	1:YA:1525:A:H8	2.03	0.41
1:YA:1527:G:C2	1:YA:1546:G:N1	2.89	0.41
32:QA:35:G:N2	43:QL:114:SER:OG	2.53	0.41
36:QE:97:PRO:O	36:QE:98:ALA:HB3	2.20	0.41
1:YA:1652:A:C2	1:YA:2006:C:N3	2.89	0.41
18:RR:38:VAL:CG1	18:RR:59:ILE:HG13	2.50	0.41
1:YA:1281:G:C5	1:YA:1282:U:C5	3.08	0.41
32:XA:1305:G:H2'	32:XA:1306:A:H8	1.86	0.41
1:YA:2144:G:N2	1:YA:2148:G:O6	2.53	0.41
33:XB:11:ALA:HA	33:XB:13:VAL:HG22	2.02	0.41
32:XA:183:C:O2'	32:XA:184:G:H5'	2.20	0.41
1:YA:1857:G:N3	1:YA:1884:G:C2	2.89	0.41
51:XT:4:LYS:HB3	51:XT:4:LYS:HE3	1.83	0.41
8:YH:89:LYS:HB2	8:YH:90:LEU:H	1.73	0.41
13:RM:12:MET:HB2	13:RM:72:PRO:HD2	2.03	0.41
32:QA:1336:C:C4'	32:QA:1337:G:OP2	2.68	0.41
1:RA:1256:G:O2'	5:RE:77:ILE:HD11	2.19	0.41
1:YA:845:A:N6	1:YA:932:U:C2	2.89	0.41
20:YT:6:ARG:O	20:YT:9:LYS:HD2	2.21	0.41
22:RV:44:HIS:O	22:RV:45:ASP:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:761:G:C5	32:QA:762:U:C5	3.09	0.41
32:XA:177:G:C2'	32:XA:178:C:H5'	2.51	0.41
37:XF:38:ARG:HD2	37:XF:63:ASN:CG	2.41	0.41
9:YI:58:ILE:HG23	9:YI:66:PHE:CD2	2.55	0.41
10:YJ:119:PHE:C	10:YJ:121:LYS:N	2.74	0.41
1:YA:746:U:O2'	1:YA:2611:C:O2'	2.21	0.41
1:YA:1171:G:C6	1:YA:1179:G:C2	3.09	0.41
1:RA:1090:A:H2'	1:RA:1091:G:H5'	2.02	0.41
1:YA:684:G:H5'	29:Y2:16:HIS:CE1	2.56	0.41
10:RJ:141:ASP:O	10:RJ:142:ILE:O	2.39	0.41
1:RA:2185:U:H2'	1:RA:2186:G:C8	2.56	0.41
44:XM:68:LEU:C	44:XM:70:ARG:H	2.25	0.41
1:YA:1734:G:N2	1:YA:1735:A:C4	2.89	0.41
11:RK:4:GLU:O	11:RK:5:GLN:HB2	2.21	0.41
32:XA:719:C:O2	49:XR:38:ILE:HG13	2.20	0.41
23:YW:30:VAL:HG23	23:YW:59:PHE:HD1	1.86	0.41
32:XA:1049:U:H2'	45:YN:2:LYS:HD2	2.03	0.41
1:YA:468:G:H5''	5:YE:55:SER:HB2	2.02	0.41
2:YB:78:A:H2'	2:YB:79:G:C8	2.56	0.41
8:RH:82:SER:C	8:RH:83:LYS:HD3	2.40	0.41
17:RQ:20:ALA:HA	17:RQ:23:TYR:CD1	2.55	0.41
1:RA:2898:U:O2	10:RJ:134:ALA:HB1	2.21	0.41
10:YJ:127:GLY:O	10:YJ:129:GLU:HG3	2.21	0.41
11:YK:119:ALA:O	11:YK:120:PRO:C	2.59	0.41
50:QS:3:SER:CB	50:QS:4:LEU:HD12	2.50	0.41
5:YE:88:ARG:HB3	5:YE:89:PRO:CD	2.49	0.41
12:RL:21:ARG:HD3	12:RL:21:ARG:HA	1.53	0.41
32:XA:1381:U:C2'	32:XA:1381:U:O2	2.67	0.41
1:YA:1710:G:H2'	1:YA:1711:A:C8	2.55	0.41
1:RA:1316:U:H2'	1:RA:1317:G:H8	1.85	0.41
32:XA:624:C:H4'	47:XP:10:GLY:C	2.42	0.41
1:YA:1867:G:H2'	1:YA:1868:C:C6	2.55	0.41
1:YA:7:G:H4'	10:YJ:15:TRP:HH2	1.85	0.41
54:RA:3135:EM1:H3	54:RA:3135:EM1:O32	2.21	0.41
4:RD:49:GLN:C	4:RD:50:VAL:HG13	2.42	0.41
32:XA:1399:C:O2	32:XA:1401:G:C5	2.73	0.41
1:YA:582:A:OP1	17:YQ:13:HIS:ND1	2.52	0.41
1:YA:48:G:N3	1:YA:48:G:H2'	2.35	0.41
24:YX:44:ARG:HH11	24:YX:44:ARG:CB	2.33	0.41
1:RA:2570:G:C2'	1:RA:2571:U:H5'	2.50	0.41
32:XA:1416:G:C2	32:XA:1485:U:O2	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:YU:94:PHE:O	21:YU:94:PHE:CD2	2.70	0.41
19:YS:39:THR:O	19:YS:40:ASN:CB	2.69	0.41
8:RH:100:ALA:O	8:RH:102:ALA:N	2.54	0.41
32:QA:591:U:O2'	32:QA:592:G:H5'	2.20	0.41
13:YM:49:ALA:HB3	13:YM:103:TYR:OH	2.21	0.41
17:YQ:101:ASP:OD1	17:YQ:104:ALA:HB2	2.21	0.41
1:RA:969:G:H2'	1:RA:970:U:H6	1.85	0.41
41:QJ:52:LEU:HB2	45:QN:80:ARG:HD2	2.01	0.41
19:YS:68:ASP:O	19:YS:69:LEU:HD12	2.20	0.41
32:XA:869:G:C8	56:XA:1822:HOH:O	2.74	0.41
1:RA:1848:A:H2'	1:RA:1849:G:O4'	2.21	0.41
6:RF:1:ALA:O	6:RF:3:LEU:N	2.54	0.41
5:RE:35:TYR:CD2	5:RE:177:PRO:HD2	2.56	0.41
32:XA:28:A:H2'	32:XA:29:U:O4'	2.20	0.41
1:RA:163:C:C6	1:RA:163:C:OP1	2.74	0.41
1:YA:57:C:O2'	20:YT:36:LYS:HE2	2.21	0.41
14:YN:79:LEU:O	14:YN:80:PHE:HB2	2.20	0.41
35:QD:2:ARG:NH2	35:QD:114:ARG:HD3	2.36	0.41
1:YA:2182:U:H2'	1:YA:2183:A:C8	2.56	0.41
43:XL:14:LYS:HG3	43:XL:14:LYS:O	2.20	0.41
28:R1:18:HIS:HE1	28:R1:20:TYR:CE2	2.39	0.41
1:YA:2697:G:H2'	1:YA:2698:U:O4'	2.21	0.41
1:YA:2508:G:H2'	1:YA:2509:G:C8	2.53	0.41
1:RA:2430:A:P	56:RA:3344:HOH:O	2.79	0.41
32:XA:186:C:C2'	32:XA:187:G:H5'	2.51	0.41
18:YR:93:PHE:CD2	18:YR:93:PHE:C	2.93	0.41
44:XM:69:ARG:HD2	44:XM:69:ARG:N	2.36	0.41
32:XA:841:C:H2'	32:XA:843:U:O4'	2.20	0.41
4:RD:17:GLU:C	4:RD:19:GLY:H	2.24	0.41
32:QA:279:A:H5'	32:QA:279:A:C8	2.55	0.41
1:RA:1477:A:N6	1:RA:1514:G:O2'	2.49	0.41
32:QA:520:A:N1	32:QA:536:C:H1'	2.35	0.41
1:YA:719:C:C2'	1:YA:720:U:H5'	2.51	0.41
1:YA:718:A:H3'	1:YA:719:C:C5'	2.51	0.41
1:RA:111:A:H2'	1:RA:112:U:O4'	2.20	0.41
22:RV:65:VAL:O	22:RV:66:ASP:OD1	2.38	0.41
32:QA:1166:G:N1	32:QA:1169:A:OP2	2.54	0.41
32:XA:1233:G:P	40:XI:125:GLN:HE22	2.43	0.41
3:RC:56:GLY:HA2	3:RC:212:TRP:HA	2.02	0.41
1:YA:1262:A:C6	1:YA:1263:U:C2	3.08	0.41
1:YA:2080:A:H4'	24:YX:22:ASN:HD22	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:358:U:H2'	32:XA:359:G:H8	1.85	0.41
21:YU:64:ILE:O	21:YU:65:GLN:O	2.39	0.41
32:QA:924:C:H2'	32:QA:925:G:C8	2.55	0.41
17:RQ:79:ILE:O	17:RQ:80:ASN:C	2.58	0.41
42:QK:58:THR:HB	42:QK:59:PRO:HD2	2.02	0.41
35:QD:102:TYR:C	35:QD:104:MET:H	2.24	0.41
1:RA:496:G:C5	1:RA:497:A:C8	3.08	0.41
1:YA:523:C:O2'	1:YA:524:G:H5'	2.19	0.41
12:YL:141:LYS:HD2	12:YL:142:ILE:N	2.35	0.41
39:XH:24:VAL:HG22	39:XH:25:THR:H	1.86	0.41
1:RA:2840:C:H2'	1:RA:2841:C:H6	1.86	0.41
32:QA:860:A:H2'	32:QA:861:G:O5'	2.21	0.41
22:RV:26:PHE:HB2	22:RV:27:PRO:HD2	2.02	0.41
32:QA:1269:A:C2	32:QA:1326:U:O2	2.74	0.41
32:QA:887:G:H2'	32:QA:888:G:H5'	2.03	0.41
44:QM:76:ILE:O	44:QM:79:LEU:HB2	2.21	0.41
45:QN:82:LYS:HE2	45:QN:82:LYS:HA	2.03	0.41
30:Y3:63:TYR:O	30:Y3:64:ALA:O	2.39	0.41
32:QA:641:U:H4'	39:QH:106:SER:O	2.20	0.41
22:RV:92:VAL:O	22:RV:92:VAL:HG12	2.20	0.41
32:XA:453:G:OP2	32:XA:453:G:H8	2.04	0.41
13:YM:82:MET:HE2	13:YM:82:MET:HB3	1.81	0.41
36:XE:65:LYS:HA	36:XE:65:LYS:HD3	1.88	0.41
37:XF:81:ASN:O	37:XF:82:ASP:C	2.59	0.41
49:QR:61:ALA:O	49:QR:66:LEU:HB2	2.20	0.41
32:XA:1292:G:C6	32:XA:1293:C:C4	3.09	0.41
33:XB:166:ASP:HB2	33:XB:190:SER:HB2	2.02	0.41
34:QC:115:VAL:O	34:QC:118:SER:HB3	2.20	0.41
4:YD:14:ILE:HA	16:YP:11:GLN:HE22	1.86	0.41
13:RM:41:LEU:CD2	13:RM:125:PRO:HD2	2.51	0.41
7:YG:34:ARG:O	7:YG:35:THR:HG23	2.20	0.41
32:XA:21:G:H2'	32:XA:22:G:C8	2.55	0.41
12:YL:131:ALA:O	12:YL:135:ILE:HG22	2.20	0.41
34:XC:153:SER:HB3	34:XC:164:THR:HB	2.03	0.41
40:QI:76:GLY:O	40:QI:79:ARG:HB3	2.21	0.41
17:RQ:91:ARG:HB2	17:RQ:94:LEU:HB2	2.02	0.41
37:QF:71:ILE:CG2	37:QF:72:ASP:N	2.84	0.41
42:XK:92:ARG:HG3	42:XK:92:ARG:NH1	2.35	0.41
32:XA:933:G:H8	32:XA:933:G:O5'	2.04	0.41
40:XI:71:ILE:HD12	40:XI:72:SER:N	2.05	0.41
32:XA:1311:A:H2'	32:XA:1312:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:265:A:C6	1:YA:428:A:C8	3.09	0.41
32:XA:1497:G:C2'	32:XA:1498:U:H5'	2.51	0.41
1:YA:1310:G:N2	1:YA:1605:C:C2	2.89	0.41
1:YA:323:C:H2'	5:YE:163:ASN:OD1	2.21	0.41
1:YA:1654:A:O2'	4:YD:118:PHE:HB2	2.21	0.41
36:QE:152:VAL:C	36:QE:156:ARG:HB2	2.39	0.41
32:XA:110:C:O2	32:XA:110:C:H2'	2.20	0.41
1:YA:2301:C:C2	1:YA:2316:G:N2	2.89	0.41
1:YA:665:U:H2'	1:YA:666:A:C8	2.51	0.41
31:R4:25:VAL:HG11	31:R4:35:GLN:HE21	1.86	0.41
1:YA:502:A:N6	1:YA:505:A:C5	2.89	0.41
10:RJ:124:VAL:O	10:RJ:125:TYR:CB	2.68	0.41
1:YA:2308:G:O6	1:YA:2311:A:N7	2.54	0.41
1:YA:1999:C:H4'	1:YA:2723:C:O2	2.20	0.41
1:YA:1022:G:O6	10:YJ:68:LYS:NZ	2.48	0.41
32:XA:1301:U:H2'	32:XA:1302:C:C5	2.55	0.41
1:YA:200:U:C5	1:YA:201:C:C5	3.09	0.41
32:XA:836:G:C6	32:XA:837:U:N3	2.89	0.41
37:QF:9:MET:HG2	37:QF:86:ARG:O	2.21	0.41
32:XA:255:G:O3'	48:XQ:18:LYS:HD2	2.21	0.41
1:RA:2155:U:O4	1:RA:2156:G:N1	2.53	0.41
32:QA:414:A:C2'	32:QA:415:A:H8	2.23	0.41
1:RA:60:G:H1'	1:RA:61:C:OP1	2.21	0.41
11:RK:72:PRO:CD	11:RK:72:PRO:O	2.69	0.41
8:RH:11:ASN:C	8:RH:12:LEU:HD23	2.41	0.41
11:RK:21:CYS:HA	11:RK:41:ILE:CD1	2.41	0.41
14:RN:55:ALA:HA	14:RN:80:PHE:CE1	2.55	0.41
32:QA:1002:G:C5	32:QA:1003:G:C8	3.09	0.41
29:R2:42:LEU:N	29:R2:42:LEU:HD22	2.26	0.41
36:QE:94:PHE:CE1	36:QE:96:GLN:HG2	2.56	0.41
1:YA:633:A:H5''	12:YL:70:LYS:HD3	2.02	0.41
20:YT:55:VAL:HG21	20:YT:85:VAL:O	2.21	0.41
34:QC:76:ILE:C	34:QC:82:ASP:HB2	2.41	0.41
32:QA:211:G:C5	32:QA:212:G:H1'	2.56	0.41
32:QA:212:G:N3	32:QA:213:G:N7	2.69	0.41
1:YA:163:C:O2'	1:YA:164:C:O5'	2.38	0.41
2:YB:38:C:C4'	15:YO:100:HIS:NE2	2.80	0.41
1:YA:979:A:H2'	1:YA:982:C:H41	1.86	0.41
5:YE:149:ILE:HG23	5:YE:188:MET:H	1.83	0.41
8:YH:94:ILE:HG21	8:YH:98:ASP:OD1	2.21	0.41
1:RA:2591:C:H2'	1:RA:2592:G:H8	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:237:ARG:O	3:RC:238:ASN:HB2	2.20	0.41
32:XA:1004:A:C2	32:XA:1026:G:C5	3.09	0.41
39:XH:8:ASP:OD2	39:XH:12:ARG:NH1	2.53	0.41
32:QA:1452:C:H5'	32:QA:1453:G:C5	2.56	0.41
46:QO:18:ALA:O	46:QO:19:ASN:CB	2.66	0.41
10:RJ:31:GLU:O	10:RJ:35:ARG:HG3	2.21	0.41
34:XC:149:LYS:HD2	34:XC:200:TRP:CE3	2.56	0.41
20:RT:24:MET:O	20:RT:28:ASN:O	2.39	0.41
32:XA:1387:G:C6	32:XA:1388:C:C4	3.08	0.41
1:YA:2402:U:O2'	1:YA:2403:C:P	2.79	0.41
52:QU:16:ARG:HH11	52:QU:19:LYS:HD2	1.85	0.41
2:YB:99:A:C6	2:YB:100:G:C5	3.09	0.41
1:YA:467:G:O3'	1:YA:797:G:H5'	2.21	0.41
1:YA:851:C:O4'	26:YZ:46:MET:HG2	2.20	0.41
32:QA:1315:U:C4	32:QA:1316:G:C5	3.09	0.41
8:RH:27:ARG:NH1	8:RH:38:PRO:HG3	2.36	0.41
8:RH:38:PRO:HB2	8:RH:40:THR:HG23	2.02	0.41
1:RA:1738:G:O2'	1:RA:1739:A:C8	2.74	0.41
9:YI:12:VAL:CG1	9:YI:13:ALA:H	2.31	0.41
1:RA:1103:A:H2'	1:RA:1104:C:C5'	2.51	0.41
1:YA:1768:C:H2'	1:YA:1769:U:O4'	2.21	0.41
5:YE:176:ASP:HA	5:YE:177:PRO:HD3	1.83	0.41
1:YA:2846:G:P	16:YP:51:ASN:CB	3.09	0.41
7:YG:152:ARG:CG	7:YG:153:PRO:HD2	2.51	0.41
41:QJ:15:HIS:CG	41:QJ:16:ARG:N	2.89	0.41
1:YA:470:A:N1	1:YA:471:A:C4	2.89	0.41
50:QS:12:LEU:HA	50:QS:12:LEU:HD23	1.91	0.41
42:QK:52:ARG:O	42:QK:55:ARG:HB2	2.21	0.41
32:QA:515:G:N3	32:QA:537:G:C2	2.90	0.41
17:YQ:73:ILE:HG13	17:YQ:74:SER:N	2.36	0.41
44:QM:15:VAL:HG23	44:QM:16:ILE:HG13	2.02	0.41
32:QA:1084:G:C6	32:QA:1085:U:C4	3.09	0.41
32:QA:1077:G:C6	32:QA:1081:A:C6	3.09	0.41
10:YJ:36:LEU:HD21	10:YJ:122:LEU:HD13	2.03	0.41
1:YA:2461:A:H1'	1:YA:2492:U:N3	2.36	0.41
1:YA:2074:U:H2'	1:YA:2075:U:C6	2.56	0.41
15:RO:84:GLU:C	15:RO:86:GLY:N	2.74	0.41
1:RA:187:G:C2	1:RA:210:C:C2	3.09	0.41
32:QA:533:A:C2	32:QA:536:C:C5	3.09	0.41
32:XA:113:G:H1'	32:XA:354:G:H5'	2.03	0.41
1:RA:735:A:H3'	1:RA:736:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:XT:51:ASN:N	51:XT:51:ASN:OD1	2.52	0.41
47:XP:20:VAL:HG21	47:XP:32:PHE:CG	2.56	0.41
17:RQ:49:ARG:HG3	17:RQ:49:ARG:NH1	2.36	0.41
7:RG:145:ALA:O	7:RG:148:ARG:HB3	2.21	0.41
32:QA:1400:C:H4'	32:QA:1401:G:OP2	2.21	0.41
1:RA:115:C:O2'	1:RA:127:A:O2'	2.33	0.41
43:XL:71:HIS:ND1	43:XL:73:LEU:N	2.69	0.41
34:XC:77:GLY:O	34:XC:79:LYS:N	2.54	0.41
32:XA:1428:A:H2'	32:XA:1429:A:O4'	2.21	0.41
1:RA:703:U:C2'	1:RA:704:G:H5'	2.51	0.41
38:XG:115:MET:O	38:XG:115:MET:HE3	2.20	0.41
50:QS:52:ASN:OD1	50:QS:52:ASN:C	2.60	0.41
5:YE:76:PRO:HA	5:YE:82:GLY:O	2.21	0.41
17:RQ:63:ARG:O	17:RQ:64:ILE:C	2.58	0.40
18:RR:10:LYS:N	18:RR:10:LYS:HD2	2.36	0.40
1:RA:1074:G:H2'	1:RA:1074:G:N3	2.36	0.40
37:QF:68:GLN:HE21	37:QF:68:GLN:HB3	1.60	0.40
23:RW:19:ARG:NH2	23:RW:22:VAL:CG2	2.84	0.40
1:YA:38:A:C2	1:YA:442:G:N1	2.89	0.40
32:XA:961:U:H5	32:XA:1223:C:H1'	1.85	0.40
1:YA:830:G:C2	1:YA:2448:A:N7	2.89	0.40
1:YA:235:U:C4	1:YA:236:C:C5	3.09	0.40
1:YA:419:U:C2	1:YA:420:C:C5	3.09	0.40
32:XA:1495:U:O2'	1:YA:1919:A:N1	2.44	0.40
1:YA:26:G:C5'	1:YA:27:G:OP2	2.69	0.40
1:YA:1389:G:C2	1:YA:1399:C:N3	2.89	0.40
1:YA:2024:G:C2	1:YA:2040:G:N3	2.89	0.40
1:YA:529:A:H4'	1:YA:530:G:OP1	2.21	0.40
1:YA:299:A:H8	1:YA:299:A:P	2.44	0.40
22:RV:80:HIS:CD2	22:RV:83:LYS:N	2.88	0.40
13:RM:34:LYS:HD3	22:RV:81:PRO:O	2.21	0.40
1:YA:1095:A:C2	1:YA:1096:A:C5	3.08	0.40
1:YA:475:C:H4'	1:YA:509:C:O2'	2.21	0.40
1:YA:118:A:OP2	1:YA:119:A:H2'	2.21	0.40
7:YG:93:TYR:HD2	7:YG:93:TYR:N	1.88	0.40
1:YA:648:G:C2	1:YA:649:G:C5	3.08	0.40
41:XJ:65:TYR:HB3	45:XN:95:LEU:HD11	2.03	0.40
35:XD:32:LYS:HB3	35:XD:35:GLN:OE1	2.21	0.40
25:YY:50:VAL:C	25:YY:52:ARG:N	2.74	0.40
9:RI:101:SER:HB2	9:RI:140:GLU:O	2.21	0.40
47:XP:75:ILE:HA	47:XP:78:VAL:HG23	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1147:C:O2'	32:XA:1148:U:H6	2.05	0.40
3:YC:52:HIS:HA	3:YC:216:ARG:CB	2.37	0.40
49:QR:63:TYR:CD1	49:QR:69:TYR:OH	2.73	0.40
1:RA:960:A:N7	1:RA:962:G:C8	2.89	0.40
9:RI:57:VAL:CG1	9:RI:58:ILE:N	2.84	0.40
13:YM:34:LYS:HD3	13:YM:131:VAL:HG21	2.02	0.40
26:YZ:19:HIS:O	26:YZ:20:LYS:C	2.60	0.40
4:RD:67:HIS:O	4:RD:68:PHE:C	2.58	0.40
7:YG:112:VAL:O	7:YG:113:ASP:HB2	2.21	0.40
32:XA:644:U:C2	32:XA:645:G:C8	3.10	0.40
1:YA:1683:U:O2'	1:YA:1684:G:H5'	2.21	0.40
1:RA:2723:C:H2'	1:RA:2724:U:O5'	2.21	0.40
20:YT:39:THR:HG21	20:YT:42:GLU:OE1	2.21	0.40
36:XE:135:VAL:O	36:XE:138:ALA:HB3	2.22	0.40
1:RA:1011:G:H5''	17:RQ:76:SER:OG	2.21	0.40
40:XI:39:GLY:HA2	40:XI:44:ARG:CD	2.51	0.40
11:RK:19:VAL:HG13	11:RK:41:ILE:HG12	2.02	0.40
32:QA:1004:A:C6	32:QA:1005:A:C4	3.09	0.40
1:YA:2504:U:H5''	56:YA:3512:HOH:O	2.21	0.40
28:Y1:5:ARG:NH2	28:Y1:23:THR:CB	2.83	0.40
20:RT:61:LEU:CD1	20:RT:61:LEU:C	2.78	0.40
1:YA:1854:A:O4'	1:YA:2233:U:H4'	2.20	0.40
18:YR:68:ARG:HD2	18:YR:92:TRP:CZ3	2.56	0.40
32:XA:587:G:H4'	39:XH:3:GLN:CA	2.52	0.40
7:RG:124:CYS:HA	7:RG:125:PRO:HD2	1.78	0.40
32:QA:338:A:C6	32:QA:339:C:C4	3.09	0.40
1:YA:1645:G:H5''	1:YA:1646:C:O5'	2.21	0.40
1:YA:1931:U:H2'	1:YA:1932:A:H8	1.86	0.40
1:YA:1968:G:C5'	56:YA:3484:HOH:O	2.67	0.40
32:XA:561:U:O2'	32:XA:562:U:OP1	2.28	0.40
29:Y2:24:THR:HG23	29:Y2:24:THR:O	2.21	0.40
9:YI:60:VAL:HG22	9:YI:66:PHE:CE2	2.46	0.40
7:YG:143:VAL:O	7:YG:147:LEU:HG	2.21	0.40
24:RX:32:LEU:HA	24:RX:51:SER:HA	2.02	0.40
1:YA:1773:A:H2'	1:YA:1774:C:C5'	2.52	0.40
1:RA:976:G:C2	1:RA:977:G:C8	3.10	0.40
32:XA:708:C:H4'	42:XK:38:GLY:HA3	2.03	0.40
36:XE:147:ASN:HA	36:XE:151:MET:HE3	2.03	0.40
1:YA:2531:A:C5'	7:YG:156:TYR:CZ	3.04	0.40
32:QA:751:U:C5	32:QA:752:G:C5	3.09	0.40
1:YA:1826:G:C5	1:YA:1827:U:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:RS:2:GLU:O	19:RS:3:THR:O	2.38	0.40
1:YA:14:A:C6	1:YA:526:A:C2	3.10	0.40
11:YK:115:ILE:HG22	11:YK:116:ILE:N	2.35	0.40
11:YK:94:PRO:HG3	11:YK:115:ILE:HD12	2.03	0.40
1:RA:2293:G:H2'	1:RA:2294:G:O4'	2.21	0.40
32:XA:227:G:O2'	47:XP:63:GLN:HG2	2.21	0.40
32:QA:1032:G:C6	32:QA:1033:G:H1'	2.56	0.40
3:RC:83:ASP:HA	3:RC:84:PRO:HD3	1.83	0.40
21:YU:52:ASN:C	21:YU:54:PRO:HD3	2.41	0.40
21:RU:52:ASN:O	21:RU:54:PRO:HD2	2.21	0.40
1:RA:1422:G:C6	1:RA:1423:G:C5	3.10	0.40
32:QA:1417:G:N2	32:QA:1482:G:H2'	2.36	0.40
1:YA:2553:G:H2'	1:YA:2554:U:H4'	2.02	0.40
34:XC:173:PRO:O	34:XC:175:HIS:N	2.54	0.40
11:YK:11:ALA:HB2	11:YK:64:ARG:NH1	2.36	0.40
32:QA:1501:C:C4	32:QA:1504:G:C4	3.09	0.40
1:RA:164:C:H6	1:RA:164:C:H5''	1.85	0.40
1:RA:2508:G:C2	1:RA:2582:G:C6	3.08	0.40
32:QA:686:U:HO2'	32:QA:687:A:H8	1.66	0.40
45:YN:50:LEU:CB	45:YN:51:PRO:HD3	2.51	0.40
1:YA:2152:G:H2'	1:YA:2152:G:N3	2.36	0.40
32:QA:715:A:H8	32:QA:715:A:O5'	2.04	0.40
1:YA:1614:A:N6	19:YS:91:GLY:HA2	2.36	0.40
13:YM:81:ARG:NH2	13:YM:84:LYS:HE2	2.36	0.40
32:XA:804:U:H5''	32:XA:805:C:OP2	2.21	0.40
1:YA:2357:G:C2	1:YA:2361:G:C6	3.09	0.40
5:RE:68:ALA:O	5:RE:69:ARG:C	2.58	0.40
2:RB:59:A:H2'	2:RB:60:C:O4'	2.20	0.40
13:YM:23:GLY:H	13:YM:100:LYS:NZ	2.19	0.40
33:QB:224:ARG:O	33:QB:225:SER:HB2	2.20	0.40
1:RA:1220:G:H2'	1:RA:1221:C:C6	2.56	0.40
38:QG:31:VAL:HG22	38:QG:32:ASP:N	2.36	0.40
1:RA:792:A:H5''	1:RA:793:A:H5'	2.02	0.40
1:RA:592:A:C2	30:R3:3:ILE:HD11	2.57	0.40
41:QJ:49:PHE:CE1	45:QN:76:PHE:HZ	2.39	0.40
1:RA:521:U:H2'	1:RA:522:A:C8	2.56	0.40
15:YO:20:GLU:HG3	23:YW:50:VAL:HG11	2.03	0.40
38:QG:59:GLU:O	38:QG:63:VAL:HG23	2.21	0.40
1:YA:1703:G:H2'	1:YA:1704:C:C6	2.56	0.40
41:QJ:102:LEU:N	41:QJ:102:LEU:HD22	2.35	0.40
37:XF:30:THR:HG22	37:XF:30:THR:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:QP:78:VAL:HG22	47:QP:78:VAL:O	2.22	0.40
1:YA:285:G:C2	1:YA:356:G:C4	3.08	0.40
1:YA:24:G:O2'	19:YS:77:ASP:HB3	2.21	0.40
3:RC:66:PHE:HB3	3:RC:150:GLY:O	2.21	0.40
10:RJ:44:TYR:CD1	17:RQ:59:LEU:HD11	2.57	0.40
23:RW:72:GLY:C	23:RW:74:LYS:N	2.74	0.40
2:YB:109:A:O2'	2:YB:110:C:H6	1.99	0.40
1:RA:2354:C:O4'	23:RW:31:LEU:HD22	2.22	0.40
23:RW:16:GLU:HB2	23:RW:17:ALA:H	1.52	0.40
23:RW:18:LYS:H	23:RW:36:ILE:N	2.20	0.40
23:RW:28:GLU:OE2	23:RW:29:SER:N	2.54	0.40
23:RW:39:GLN:CG	23:RW:42:THR:H	2.27	0.40
32:XA:6:G:O2'	32:XA:7:A:OP2	2.37	0.40
23:YW:35:ILE:O	23:YW:36:ILE:C	2.59	0.40
1:YA:2258:C:C4'	1:YA:2259:U:OP2	2.65	0.40
1:YA:1532:A:C6	1:YA:1533:C:C4	3.09	0.40
1:YA:296:U:C2	1:YA:297:G:C8	3.09	0.40
1:YA:81:G:C8	1:YA:82:U:C5	3.09	0.40
32:XA:1073:U:N3	32:XA:1074:G:N7	2.69	0.40
36:QE:80:LEU:HD22	36:QE:80:LEU:N	2.36	0.40
32:QA:1363:A:C5	32:QA:1365:G:C6	3.09	0.40
1:YA:1067:A:H2'	1:YA:1068:G:H5''	2.03	0.40
32:QA:450:G:C2'	32:QA:451:A:OP1	2.69	0.40
32:XA:92:U:H2'	32:XA:93:U:C6	2.56	0.40
32:XA:410:G:H5''	32:XA:411:A:OP1	2.22	0.40
1:YA:291:G:N1	1:YA:350:G:C5	2.90	0.40
1:YA:72:U:O2	25:YY:51:ALA:HB1	2.21	0.40
5:YE:146:VAL:HA	5:YE:185:LYS:O	2.21	0.40
1:YA:673:C:C2'	1:YA:674:G:H5'	2.51	0.40
32:XA:1241:G:N3	32:XA:1242:G:C8	2.89	0.40
41:XJ:7:ARG:HD3	41:XJ:102:LEU:HD23	2.02	0.40
32:QA:1139:G:N2	32:QA:1141:C:N4	2.69	0.40
8:RH:89:LYS:CG	8:RH:90:LEU:H	2.14	0.40
1:YA:2745:C:C4	1:YA:2746:U:C4	3.09	0.40
1:YA:2759:G:C5	1:YA:2760:C:C5	3.08	0.40
1:YA:1275:A:C4	14:YN:16:HIS:CD2	3.05	0.40
41:XJ:15:HIS:CE1	41:XJ:68:ARG:CD	3.03	0.40
3:YC:69:ASN:O	3:YC:70:LYS:C	2.58	0.40
9:RI:123:ALA:C	9:RI:125:THR:H	2.24	0.40
9:RI:126:ARG:C	9:RI:129:GLU:HB2	2.41	0.40
33:QB:71:THR:O	33:QB:72:LYS:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:R4:1:MET:SD	31:R4:36:ARG:HB2	2.61	0.40
11:RK:113:MET:O	11:RK:115:ILE:N	2.53	0.40
4:YD:113:SER:OG	4:YD:114:LYS:N	2.55	0.40
32:XA:1525:G:H5''	52:XU:37:TYR:CD1	2.56	0.40
32:XA:496:A:O2'	32:XA:497:G:C8	2.67	0.40
1:YA:2836:U:O2'	1:YA:2837:A:C8	2.49	0.40
1:YA:2800:A:N3	1:YA:2801:G:H1'	2.35	0.40
12:YL:118:THR:O	12:YL:120:VAL:N	2.49	0.40
28:R1:7:LYS:CA	28:R1:23:THR:HG22	2.41	0.40
1:YA:2765:A:H5''	1:YA:2766:A:OP2	2.21	0.40
1:YA:1380:G:H1'	1:YA:1569:A:N6	2.35	0.40
1:YA:687:C:C2	1:YA:788:A:O4'	2.74	0.40
45:XN:44:VAL:C	45:XN:46:LYS:H	2.25	0.40
1:RA:1358:G:N7	1:RA:1371:G:N7	2.70	0.40
32:QA:523:A:H61	43:QL:88:ASP:CB	2.34	0.40
25:YY:31:GLN:C	25:YY:33:ALA:N	2.75	0.40
32:QA:857:C:H2'	32:QA:858:G:O4'	2.21	0.40
1:YA:1926:U:H1'	1:YA:1929:G:C6	2.57	0.40
14:RN:28:LEU:O	14:RN:32:GLU:N	2.52	0.40
33:XB:20:ARG:NH2	33:XB:38:HIS:CE1	2.89	0.40
32:XA:489:C:C4	32:XA:490:C:C5	3.09	0.40
12:RL:89:VAL:HA	12:RL:121:THR:HG23	2.02	0.40
1:YA:1179:G:C6	1:YA:1180:U:C4	3.09	0.40
10:RJ:36:LEU:HA	10:RJ:36:LEU:HD12	1.84	0.40
20:RT:4:GLU:CG	20:RT:6:ARG:HE	2.30	0.40
32:XA:1388:C:N3	32:XA:1389:C:C5	2.89	0.40
2:YB:76:G:H1	2:YB:101:A:N6	2.19	0.40
1:RA:1411:U:H2'	1:RA:1412:U:O4'	2.22	0.40
1:RA:876:C:N3	1:RA:901:C:N4	2.68	0.40
1:RA:2531:A:OP1	7:RG:174:LYS:HE3	2.21	0.40
19:RS:69:LEU:HD12	19:RS:69:LEU:HA	1.91	0.40
19:YS:35:ILE:HG13	19:YS:36:LEU:HD22	2.03	0.40
1:RA:417:C:H2'	1:RA:418:C:H6	1.86	0.40
11:YK:10:VAL:HG13	11:YK:12:ASP:H	1.85	0.40
35:XD:124:VAL:O	35:XD:125:ASN:C	2.60	0.40
16:RP:24:THR:HG22	16:RP:85:VAL:O	2.21	0.40
32:XA:619:U:O2	35:XD:129:VAL:HA	2.21	0.40
40:XI:126:PHE:CE1	40:XI:129:ARG:NH2	2.88	0.40
19:YS:47:VAL:O	19:YS:50:VAL:HB	2.21	0.40
32:XA:1065:U:H5	32:XA:1190:G:C8	2.40	0.40
32:XA:212:G:N2	32:XA:213:G:C4	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:616:G:C2'	32:QA:617:G:H5'	2.51	0.40
32:QA:138:G:C2'	32:QA:139:A:H5'	2.51	0.40
32:QA:139:A:O2'	32:QA:140:U:H5'	2.21	0.40
4:YD:197:THR:HG22	4:YD:197:THR:O	2.21	0.40
1:YA:2862:G:C2	1:YA:2863:C:C2	3.09	0.40
49:XR:32:ILE:HA	49:XR:39:VAL:HG23	2.03	0.40
32:XA:881:G:C6	32:XA:882:C:C4	3.09	0.40
26:YZ:40:THR:N	26:YZ:43:ILE:HD11	2.35	0.40
5:RE:54:GLY:HA3	5:RE:74:LYS:HE2	2.03	0.40
17:RQ:13:HIS:CD2	17:RQ:31:TYR:CD1	3.08	0.40
36:QE:12:GLU:HB2	36:QE:38:VAL:HG12	2.03	0.40
1:YA:2373:G:H2'	1:YA:2374:C:C6	2.57	0.40
1:RA:523:C:H4'	1:RA:540:C:O2	2.20	0.40
1:RA:1669:A:OP2	56:RA:3723:HOH:O	2.21	0.40
1:RA:182:A:H2'	1:RA:183:C:O4'	2.21	0.40
32:QA:1167:A:C8	32:QA:1169:A:C6	3.09	0.40
47:XP:50:THR:O	47:XP:51:ARG:CZ	2.69	0.40
1:RA:1844:C:C2	1:RA:1897:G:N2	2.88	0.40
1:RA:2725:A:O2'	1:RA:2726:A:H2'	2.21	0.40
1:RA:497:A:C4	1:RA:498:G:C8	3.09	0.40
1:YA:1123:C:H2'	1:YA:1124:G:C8	2.56	0.40
32:XA:1426:G:C5	32:XA:1475:G:C2	3.10	0.40
32:XA:1076:U:C2	32:XA:1082:A:C2	3.09	0.40
47:XP:26:ASN:HA	47:XP:26:ASN:HD22	1.62	0.40
39:XH:94:VAL:HG21	39:XH:101:ALA:HB2	2.03	0.40
22:RV:6:ALA:HB2	22:RV:42:LEU:HD22	2.03	0.40
35:XD:117:VAL:O	35:XD:130:ASN:HA	2.21	0.40
32:QA:13:U:C4	32:QA:916:U:O4	2.75	0.40
9:RI:28:GLY:O	9:RI:34:ILE:HD11	2.21	0.40
15:RO:21:LEU:HD23	15:RO:21:LEU:HA	1.57	0.40
1:YA:580:U:O5'	1:YA:580:U:H6	2.04	0.40
1:YA:588:U:O5'	1:YA:588:U:H6	2.04	0.40
31:Y4:9:LYS:O	31:Y4:9:LYS:HD3	2.21	0.40
27:R0:36:LYS:O	27:R0:37:HIS:HB3	2.22	0.40
32:XA:834:U:H2'	32:XA:835:U:C6	2.56	0.40
15:RO:7:ARG:HD3	15:RO:97:PHE:CE1	2.57	0.40
8:YH:65:ALA:O	8:YH:66:ASN:C	2.59	0.40
32:QA:960:U:O2'	32:QA:1223:C:C5'	2.70	0.40
6:RF:35:LEU:HD13	6:RF:56:LEU:HD22	2.02	0.40
18:YR:37:GLU:HB2	18:YR:53:PHE:CE2	2.56	0.40
23:RW:72:GLY:C	23:RW:74:LYS:H	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1565:C:H5''	3:YC:17:LYS:CE	2.51	0.40
3:YC:1:ALA:O	3:YC:18:VAL:HG23	2.21	0.40
2:YB:69:G:C2	2:YB:70:C:H1'	2.57	0.40
37:QF:68:GLN:HA	37:QF:71:ILE:HG21	2.04	0.40
33:QB:70:GLY:HA2	33:QB:163:ILE:CG2	2.51	0.40
32:XA:972:C:OP2	32:XA:1366:C:H5''	2.21	0.40
50:XS:32:THR:HG21	50:XS:70:LEU:HD13	2.03	0.40
17:YQ:3:VAL:HG13	17:YQ:4:LYS:N	2.36	0.40
1:YA:2330:G:C2	1:YA:2386:A:C6	3.10	0.40
44:XM:19:THR:HG22	44:XM:26:LYS:HA	2.03	0.40
3:YC:141:HIS:CB	3:YC:190:THR:O	2.70	0.40
1:YA:1342:A:C6	1:YA:1345:C:N3	2.90	0.40
1:YA:2209:G:C5	1:YA:2210:U:C4	3.09	0.40
32:QA:427:U:C4	32:QA:428:G:C6	3.09	0.40
1:YA:1154:G:OP1	17:YQ:57:ARG:HD2	2.21	0.40
36:QE:152:VAL:CB	36:QE:155:LYS:NZ	2.84	0.40
33:QB:53:LEU:H	33:QB:53:LEU:CD2	2.34	0.40
33:XB:80:LYS:HG3	33:XB:81:ASP:H	1.86	0.40
12:RL:111:ILE:HD12	12:RL:128:THR:CG2	2.51	0.40
1:YA:1069:A:C2	1:YA:1097:U:OP1	2.75	0.40
1:YA:1085:A:C5'	1:YA:1105:U:H4'	2.51	0.40
14:YN:97:ILE:HD12	14:YN:99:LYS:HD3	2.03	0.40
31:R4:30:GLU:HB3	31:R4:33:HIS:ND1	2.36	0.40
32:QA:481:G:H8	32:QA:481:G:H3'	1.87	0.40
13:YM:101:VAL:HG13	13:YM:101:VAL:O	2.22	0.40
35:XD:31:CYS:O	35:XD:32:LYS:HB2	2.21	0.40
35:XD:8:LEU:HA	35:XD:8:LEU:HD13	1.85	0.40
1:YA:290:U:C4	1:YA:291:G:N7	2.90	0.40
32:XA:1239:A:H3'	38:XG:118:ARG:HH22	1.87	0.40
1:YA:238:C:H4'	1:YA:608:A:O2'	2.21	0.40
1:YA:1048:A:C6	1:YA:1049:C:N4	2.89	0.40
1:YA:584:C:H2'	1:YA:585:G:H8	1.86	0.40
4:YD:12:THR:OG1	16:YP:4:ILE:HG23	2.22	0.40
18:RR:80:ARG:C	18:RR:81:LYS:HD3	2.41	0.40
7:RG:7:PRO:HB2	7:RG:8:VAL:H	1.65	0.40
32:QA:67:C:OP1	32:QA:199:A:H5''	2.22	0.40
6:YF:149:ARG:HD3	6:YF:149:ARG:HA	1.92	0.40
32:QA:96:U:O2'	32:QA:97:G:P	2.79	0.40
32:QA:74:A:N3	32:QA:97:G:C2	2.89	0.40
12:YL:29:LYS:HG2	12:YL:30:THR:HG23	2.04	0.40
1:RA:1047:G:C2	1:RA:1110:G:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1160:G:O6	32:QA:1181:G:C5	2.74	0.40
32:XA:517:G:H5'	32:XA:519:C:C2	2.57	0.40
4:YD:169:ARG:O	4:YD:170:VAL:CG2	2.68	0.40
34:XC:38:VAL:HG21	34:XC:56:ILE:HD11	2.03	0.40
43:QL:24:GLU:O	43:QL:25:ALA:C	2.60	0.40
38:XG:75:LYS:CE	38:XG:76:SER:H	2.26	0.40
14:YN:34:ILE:O	14:YN:112:TYR:HA	2.20	0.40
32:XA:990:C:C2'	32:XA:991:U:O4'	2.63	0.40
1:RA:1187:G:H5''	18:RR:83:TYR:CE2	2.57	0.40
43:QL:43:LYS:NZ	43:QL:44:PRO:HD3	2.37	0.40
3:RC:132:ARG:NH2	3:RC:166:ARG:HD2	2.36	0.40
36:QE:116:VAL:CG2	36:QE:117:ALA:N	2.84	0.40
1:RA:2416:C:H2'	1:RA:2417:C:C6	2.56	0.40
45:QN:52:ARG:HD3	45:QN:52:ARG:HA	1.88	0.40
1:YA:2573:C:OP1	1:YA:2575:C:OP2	2.39	0.40
43:QL:89:LEU:N	43:QL:89:LEU:HD22	2.36	0.40
1:RA:372:G:O2'	1:RA:400:G:O6	2.21	0.40
14:RN:32:GLU:CB	14:RN:115:LEU:HD12	2.51	0.40
34:XC:83:VAL:HA	34:XC:86:LEU:HD12	2.03	0.40
32:QA:683:G:N2	42:QK:39:ASN:HA	2.36	0.40
32:QA:599:C:H5''	39:QH:87:ARG:HA	2.02	0.40
8:RH:27:ARG:HG2	8:RH:27:ARG:HH21	1.86	0.40
32:QA:651:C:C4	32:QA:652:U:O4	2.74	0.40
33:QB:118:THR:O	33:QB:119:GLN:HB2	2.21	0.40
1:YA:2533:U:H4'	1:YA:2664:G:H4'	2.03	0.40
26:RZ:9:THR:HG22	26:RZ:53:MET:C	2.42	0.40
1:RA:1857:G:H1'	1:RA:1884:G:N2	2.36	0.40
34:XC:133:MET:HG2	34:XC:133:MET:H	1.77	0.40
8:YH:61:VAL:CG1	8:YH:62:LEU:N	2.85	0.40
1:YA:2866:U:H4'	1:YA:2867:G:OP1	2.21	0.40
44:XM:52:ILE:HG23	44:XM:53:ASP:H	1.86	0.40
2:RB:33:G:C2'	2:RB:34:A:H5'	2.51	0.40
32:QA:1113:C:H2'	32:QA:1114:C:H6	1.86	0.40
19:YS:80:PRO:HD2	19:YS:100:THR:OG1	2.20	0.40
1:YA:2221:G:C6	1:YA:2222:C:C4	3.10	0.40
47:QP:46:LYS:HB2	47:QP:47:GLU:H	1.62	0.40
1:YA:1813:G:N2	3:YC:49:THR:HB	2.36	0.40
1:YA:2579:C:H2'	1:YA:2580:U:O4'	2.21	0.40
13:YM:52:ALA:HB1	13:YM:119:LEU:HD22	2.03	0.40
32:QA:1392:G:O2'	32:QA:1393:U:H5'	2.21	0.40
26:RZ:20:LYS:C	26:RZ:22:THR:N	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:764:C:O2'	32:QA:765:G:H5'	2.21	0.40
32:XA:949:A:C2	32:XA:1233:G:C4	3.10	0.40
32:XA:908:A:O2'	32:XA:909:A:H5'	2.21	0.40
19:RS:24:ILE:O	19:RS:71:VAL:CG1	2.69	0.40
32:QA:1270:G:H2'	32:QA:1271:A:H8	1.86	0.40
1:RA:2670:A:H2'	1:RA:2671:G:O5'	2.21	0.40
9:YI:105:LEU:HD21	9:YI:129:GLU:CD	2.41	0.40
1:RA:2765:A:N3	1:RA:2765:A:C2'	2.84	0.40
35:XD:123:MET:HE1	35:XD:126:GLY:O	2.20	0.40
21:RU:20:LYS:C	21:RU:21:ARG:HG3	2.42	0.40
1:YA:2658:C:C2'	1:YA:2659:G:H5'	2.51	0.40
45:QN:82:LYS:HE2	45:QN:85:GLU:HG3	2.04	0.40
1:YA:24:G:C2'	1:YA:25:U:H5'	2.51	0.40
30:R3:15:LYS:HE2	30:R3:19:GLY:HA2	2.04	0.40
1:RA:483:A:O2'	21:RU:56:GLY:HA2	2.22	0.40
32:XA:63:C:H4'	32:XA:380:G:H4'	2.03	0.40
9:YI:24:GLY:HA3	9:YI:25:PRO:HD3	1.85	0.40
1:YA:1765:U:O2'	1:YA:1766:G:H5'	2.21	0.40
24:RX:35:HIS:HB3	24:RX:37:PHE:CE2	2.57	0.40
1:YA:2187:U:N3	1:YA:2188:U:C5	2.89	0.40
1:RA:2740:A:C6	1:RA:2741:A:C6	3.09	0.40
21:YU:86:PHE:CD2	21:YU:87:GLU:HG3	2.56	0.40
42:XK:13:LYS:O	42:XK:14:GLN:O	2.39	0.40
43:XL:28:GLN:HE21	43:XL:28:GLN:HB3	1.61	0.40
5:YE:111:GLU:HG2	5:YE:114:ARG:NH2	2.37	0.40
2:YB:17:C:C2'	2:YB:18:G:H5'	2.51	0.40
37:QF:42:TRP:CZ2	37:QF:61:LEU:HD22	2.55	0.40
37:XF:85:ILE:HB	37:XF:86:ARG:H	1.64	0.40
3:YC:96:LYS:HD3	3:YC:96:LYS:HA	1.86	0.40
32:XA:963:G:N1	32:XA:973:G:O6	2.54	0.40
45:XN:55:SER:HB3	45:XN:58:ARG:HD2	2.02	0.40
50:XS:39:ILE:HD12	50:XS:65:MET:HG3	2.03	0.40
1:YA:2337:G:C6	1:YA:2338:C:N4	2.89	0.40
23:YW:37:VAL:HG21	23:YW:38:ARG:NH1	2.36	0.40
1:YA:826:U:OP1	56:YA:3687:HOH:O	2.22	0.40
1:YA:415:A:C2	1:YA:2409:G:N1	2.89	0.40
1:YA:1533:C:H6	1:YA:1533:C:O5'	2.04	0.40
32:XA:1517:G:N3	1:YA:1919:A:O2'	2.48	0.40
1:YA:1213:A:H2'	1:YA:1214:A:O4'	2.21	0.40
1:YA:1339:G:C5'	1:YA:1393:A:N1	2.78	0.40
1:YA:1341:G:C2'	1:YA:1397:U:O2'	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1401:G:C6	1:YA:1402:U:C4	3.09	0.40
1:YA:1355:G:C6	1:YA:1377:G:N2	2.90	0.40
42:QK:125:LYS:C	52:QU:33:ARG:NH2	2.75	0.40
35:QD:28:ASP:O	35:QD:29:THR:O	2.39	0.40
1:YA:83:A:H61	1:YA:101:A:C5'	2.25	0.40
10:YJ:44:TYR:CD1	17:YQ:63:ARG:NH2	2.89	0.40
47:QP:20:VAL:HG22	47:QP:32:PHE:HB2	2.02	0.40
1:YA:2314:A:H2'	1:YA:2315:G:C8	2.57	0.40
14:YN:73:ASN:HA	14:YN:76:VAL:CG1	2.52	0.40
24:YX:53:LYS:CA	24:YX:56:ARG:HB3	2.35	0.40
25:YY:58:ASN:C	25:YY:60:LYS:N	2.74	0.40
25:YY:57:LEU:HD13	25:YY:60:LYS:HE3	2.03	0.40
32:XA:1242:G:HO2'	32:XA:1243:C:C5'	2.31	0.40
32:XA:1301:U:H5''	32:XA:1302:C:P	2.62	0.40
32:QA:1441:A:C8	32:QA:1442:G:N7	2.90	0.40
32:XA:1147:C:H4'	40:XI:6:TYR:CZ	2.55	0.40
25:YY:40:SER:C	25:YY:42:LEU:N	2.74	0.40
3:RC:139:THR:O	3:RC:140:VAL:O	2.39	0.40
2:YB:90:C:C6	2:YB:90:C:H5''	2.56	0.40
32:XA:527:G:C6	32:XA:528:C:C5	3.09	0.40
50:QS:51:HIS:CD2	50:QS:53:GLY:N	2.75	0.40
32:QA:71:A:C2	32:QA:72:A:N7	2.89	0.40
32:XA:642:A:C8	39:XH:106:SER:HA	2.56	0.40
39:XH:28:SER:O	39:XH:29:SER:HB3	2.21	0.40
33:QB:71:THR:CG2	33:QB:72:LYS:N	2.83	0.40
1:YA:2013:A:C6	1:YA:2014:A:C2	3.09	0.40
32:QA:1161:C:O2'	32:QA:1162:C:H6	1.99	0.40
23:YW:24:ARG:HA	23:YW:66:VAL:H	1.86	0.40
42:XK:124:LYS:O	52:XU:33:ARG:CZ	2.69	0.40
32:QA:214:C:O2'	32:QA:215:C:O5'	2.39	0.40
4:RD:99:GLU:CG	4:RD:100:LEU:H	2.34	0.40
51:QT:61:ALA:CA	51:QT:66:ILE:HG22	2.51	0.40
34:QC:19:SER:HB2	34:QC:39:ARG:NH2	2.36	0.40
1:YA:1525:A:C2'	1:YA:1526:C:H5'	2.52	0.40
32:XA:220:G:O2'	32:XA:221:C:H5'	2.22	0.40
21:YU:58:VAL:HG12	21:YU:59:GLU:N	2.34	0.40
32:XA:1093:A:C5	32:XA:1095:U:O4'	2.75	0.40
1:YA:846:U:O2	1:YA:846:U:O4'	2.40	0.40
1:RA:2592:G:C5	1:RA:2593:U:C4	3.09	0.40
15:YO:51:ALA:HB3	15:YO:78:VAL:HG23	2.03	0.40
34:XC:80:GLY:O	34:XC:83:VAL:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:444:G:C2	32:XA:445:G:C4	3.10	0.40
42:QK:22:ILE:CD1	42:QK:85:VAL:HG22	2.51	0.40
1:RA:323:C:N4	1:RA:333:G:N7	2.69	0.40
1:YA:271:G:N2	1:YA:367:G:H1'	2.36	0.40
52:QU:17:ARG:HA	52:QU:20:ARG:CG	2.52	0.40
32:XA:462:G:O6	32:XA:469:C:N4	2.54	0.40
1:YA:2529:G:H4'	7:YG:174:LYS:HD2	2.02	0.40
50:QS:4:LEU:O	50:QS:5:LYS:HB2	2.20	0.40
10:YJ:81:ILE:HG22	10:YJ:82:GLY:H	1.87	0.40
32:QA:896:C:H2'	32:QA:897:C:C6	2.51	0.40
1:YA:1868:C:N4	1:YA:1869:G:C6	2.90	0.40
38:QG:53:SER:C	38:QG:55:LYS:N	2.70	0.40
33:QB:57:ASN:O	33:QB:58:LYS:HB2	2.22	0.40
1:RA:2296:U:C4'	1:RA:2297:A:OP1	2.68	0.40
1:RA:1198:U:H2'	1:RA:1199:U:C6	2.56	0.40
1:RA:1183:U:O2'	1:RA:1184:U:H5'	2.22	0.40
1:YA:2873:A:O4'	14:YN:6:SER:HB3	2.21	0.40
30:Y3:23:HIS:O	30:Y3:46:LYS:HB2	2.22	0.40
32:XA:73:C:H2'	32:XA:74:A:H8	1.86	0.40
1:RA:1794:A:O4'	1:RA:1900:A:C2	2.74	0.40
1:YA:48:G:H22	1:YA:177:G:N2	2.19	0.40
1:YA:262:A:C2	1:YA:430:A:H1'	2.56	0.40
1:YA:471:A:H2'	1:YA:472:A:O4'	2.22	0.40
32:QA:1243:C:O2'	32:QA:1244:G:H5'	2.21	0.40
32:QA:1367:C:H5'	41:QJ:62:ARG:NH1	2.36	0.40
9:YI:96:LYS:HE2	9:YI:138:VAL:HG11	2.03	0.40
1:YA:1795:C:O2	3:YC:252:LYS:NZ	2.54	0.40
1:YA:374:A:C6	1:YA:401:A:C8	3.10	0.40
1:YA:2371:G:H4'	28:Y1:44:GLN:HE21	1.86	0.40
1:YA:563:A:H1'	1:YA:2018:G:N2	2.36	0.40
19:YS:79:GLY:CA	19:YS:100:THR:OG1	2.68	0.40
1:YA:1009:A:O2'	1:YA:1010:A:C8	2.59	0.40
1:RA:2582:G:C2	1:RA:2583:G:C8	3.10	0.40
32:QA:875:U:O2'	39:QH:14:ARG:NH1	2.53	0.40
32:XA:1059:C:O2	41:XJ:55:PRO:HG3	2.21	0.40
5:RE:72:SER:C	5:RE:74:LYS:N	2.75	0.40
1:YA:719:C:O2'	1:YA:720:U:H5'	2.21	0.40
1:YA:816:C:C2	1:YA:1192:G:N2	2.90	0.40
1:RA:1577:C:H2'	1:RA:1578:U:O4'	2.21	0.40
1:YA:2256:G:N2	1:YA:2275:C:C4	2.90	0.40
32:XA:954:G:N1	32:XA:1228:C:N4	2.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:RS:71:VAL:O	19:RS:71:VAL:HG22	2.21	0.40
3:YC:36:ASN:HB3	3:YC:37:SER:H	1.78	0.40
1:YA:2341:G:C5	1:YA:2342:C:C5	3.10	0.40
1:RA:2825:G:C2'	1:RA:2826:A:H5'	2.51	0.40
44:XM:96:VAL:C	44:XM:98:GLY:H	2.25	0.40
3:YC:44:ASN:O	3:YC:46:GLY:N	2.55	0.40
1:RA:1809:A:C6	1:RA:1810:A:C6	3.09	0.40
32:QA:787:A:C5	32:QA:788:U:C5	3.10	0.40
24:RX:14:GLY:O	24:RX:26:ARG:HG3	2.22	0.40
1:RA:1042:G:C2'	1:RA:1043:C:H5'	2.51	0.40
32:QA:334:C:O2'	32:QA:335:C:H5'	2.21	0.40
13:RM:64:TRP:CZ3	13:RM:106:ASP:HB2	2.57	0.40
2:YB:71:C:C2	2:YB:106:G:N2	2.89	0.40
36:QE:73:VAL:CG1	36:QE:75:LEU:HD12	2.52	0.40
24:YX:37:PHE:O	24:YX:45:PHE:HA	2.21	0.40
30:Y3:54:LEU:HD11	30:Y3:58:ILE:HD11	2.03	0.40
1:RA:348:A:H2'	1:RA:349:U:O4'	2.21	0.40
33:XB:22:TRP:CG	33:XB:23:ASN:N	2.87	0.40
1:RA:20:C:H2'	1:RA:21:A:H8	1.86	0.40
1:RA:1489:C:H6	1:RA:1489:C:O5'	2.05	0.40
1:RA:1762:A:H8	1:RA:1762:A:O5'	2.05	0.40
13:RM:33:LEU:HD23	13:RM:33:LEU:HA	1.55	0.40
32:QA:532:A:OP2	32:QA:532:A:O4'	2.40	0.40
32:QA:1187:G:N3	32:QA:1187:G:H2'	2.36	0.40
10:RJ:45:THR:O	10:RJ:45:THR:CG2	2.69	0.40
2:YB:18:G:C6	2:YB:19:C:N3	2.90	0.40
52:XU:28:LEU:HD23	52:XU:28:LEU:O	2.22	0.40
40:XI:70:GLY:O	40:XI:72:SER:N	2.55	0.40
23:YW:55:ASP:C	23:YW:57:THR:H	2.25	0.40
1:YA:833:A:N6	1:YA:834:G:O6	2.55	0.40
51:QT:26:MET:HG3	51:QT:27:MET:N	2.37	0.40
32:QA:486:U:C5'	32:QA:486:U:H6	2.11	0.40
3:YC:161:VAL:CG1	3:YC:162:GLN:N	2.84	0.40
1:YA:1210:G:H5'	1:YA:1212:G:O4'	2.21	0.40
3:YC:145:MET:HE3	3:YC:181:ARG:HH22	1.86	0.40
17:YQ:61:ILE:HD12	17:YQ:61:ILE:N	2.36	0.40
1:YA:2823:A:C2'	1:YA:2824:C:H5'	2.51	0.40
41:QJ:57:VAL:O	41:QJ:58:ASN:HB2	2.21	0.40
1:YA:647:G:C4	1:YA:648:G:N7	2.89	0.40
1:YA:1830:C:C5'	3:YC:14:HIS:HE1	2.34	0.40
3:RC:5:CYS:HB3	3:RC:12:ARG:NH1	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:77:G:C6	1:YA:78:U:N3	2.90	0.40
25:YY:60:LYS:HB3	25:YY:60:LYS:HE3	1.85	0.40
1:RA:1731:G:C6	1:RA:1733:G:O6	2.75	0.40
28:R1:46:VAL:HG12	28:R1:47:ILE:N	2.33	0.40
47:XP:1:MET:C	47:XP:1:MET:HE2	2.42	0.40
20:RT:17:SER:O	20:RT:18:GLU:CB	2.68	0.40
32:XA:1349:A:OP1	40:XI:122:ARG:N	2.47	0.40
38:XG:137:ARG:C	38:XG:137:ARG:HD2	2.42	0.40
4:RD:73:VAL:HB	4:RD:74:GLU:H	1.54	0.40
15:RO:30:ARG:HG2	15:RO:31:THR:N	2.36	0.40
19:RS:72:THR:O	19:RS:73:LYS:HD2	2.21	0.40
33:QB:105:THR:HA	33:QB:108:GLN:HE22	1.87	0.40
6:YF:82:TYR:HA	6:YF:83:PRO:HD2	1.83	0.40
1:YA:1027:A:C6	1:YA:1126:A:C4	3.09	0.40
3:RC:245:THR:HG1	3:RC:249:VAL:HB	1.85	0.40
32:QA:202:G:N2	32:QA:216:U:O2	2.54	0.40
1:RA:1149:G:C6	1:RA:1150:C:N4	2.90	0.40
34:XC:35:ASP:OD1	34:XC:58:ARG:NH1	2.54	0.40
21:RU:42:LYS:HB3	21:RU:57:ILE:CG2	2.49	0.40
1:YA:2261:C:H41	23:YW:10:ARG:HB3	1.84	0.40
1:RA:1071:G:N7	1:RA:1089:A:N6	2.70	0.40
33:XB:185:ILE:HA	33:XB:199:ILE:O	2.20	0.40
33:XB:46:VAL:HG22	33:XB:47:PRO:N	2.35	0.40
36:QE:113:VAL:HG21	36:QE:140:ILE:HD12	2.04	0.40
32:XA:919:A:O2'	32:XA:920:U:H5'	2.21	0.40
24:YX:1:SER:O	24:YX:2:ARG:C	2.59	0.40
1:RA:37:C:H2'	1:RA:38:A:O5'	2.21	0.40
52:QU:36:PHE:CD1	52:QU:39:LYS:HB3	2.48	0.40
9:RI:52:LEU:HA	9:RI:53:PRO:HD3	1.98	0.40
1:YA:1858:A:N1	1:YA:1859:U:C2	2.89	0.40
50:XS:44:ILE:HG12	50:XS:45:GLY:N	2.35	0.40
38:QG:68:VAL:O	38:QG:69:ARG:C	2.60	0.40
25:YY:25:GLN:O	25:YY:29:ARG:HD3	2.21	0.40
1:YA:570:G:N7	1:YA:2030:A:N6	2.70	0.40
32:XA:1449:C:C2	32:XA:1455:G:C2	3.09	0.40
1:YA:1665:A:H2'	1:YA:1666:G:C5'	2.50	0.40
5:RE:25:GLU:O	5:RE:28:VAL:HG13	2.21	0.40
41:QJ:80:THR:O	41:QJ:82:LYS:N	2.54	0.40
20:RT:88:LYS:HD3	20:RT:88:LYS:HA	1.93	0.40
15:YO:27:VAL:HB	15:YO:38:GLN:HG3	2.03	0.40
12:YL:98:ALA:O	12:YL:99:ASN:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:247:G:H4'	1:RA:386:G:C5	2.56	0.40
2:YB:76:G:OP1	22:YV:9:ARG:NH2	2.54	0.40
5:YE:54:GLY:O	5:YE:55:SER:HB3	2.22	0.40
19:YS:21:ALA:C	19:YS:23:LEU:H	2.24	0.40
1:RA:626:A:C2	12:RL:78:ARG:HD3	2.56	0.40
32:QA:1323:G:C2'	32:QA:1324:A:C8	3.05	0.40
43:QL:4:ASN:OD1	48:QQ:35:LYS:HE3	2.21	0.40
33:XB:212:TYR:O	33:XB:212:TYR:CD2	2.69	0.40
13:RM:76:LYS:O	13:RM:77:PRO:O	2.39	0.40
1:RA:2505:G:O2'	1:RA:2506:U:H5''	2.22	0.40
51:QT:54:GLN:N	51:QT:55:PRO:HD2	2.37	0.40
8:RH:53:GLU:O	8:RH:54:LEU:HD22	2.22	0.40
1:RA:2065:C:H2'	1:RA:2066:C:C6	2.51	0.40
5:YE:154:ASP:C	5:YE:156:ASN:N	2.75	0.40
46:XO:41:HIS:O	46:XO:44:GLU:O	2.40	0.40
18:YR:25:LEU:H	18:YR:94:THR:HG21	1.86	0.40
1:YA:589:U:O2'	1:YA:590:A:H8	2.04	0.40
1:RA:1049:C:C2'	1:RA:1050:A:H5'	2.52	0.40
2:YB:29:A:C4	2:YB:30:C:C5	3.10	0.40
32:QA:1241:G:N2	32:QA:1242:G:C5	2.90	0.40
8:YH:61:VAL:HG13	8:YH:62:LEU:HG	2.04	0.40
19:YS:68:ASP:OD1	19:YS:68:ASP:N	2.55	0.40
1:YA:1794:A:H1'	1:YA:1900:A:C2	2.56	0.40
1:RA:2345:G:C5	1:RA:2381:A:C2	3.09	0.40
1:YA:372:G:P	24:YX:61:LYS:HZ1	2.45	0.40
16:YP:77:SER:OG	16:YP:78:PRO:HD2	2.22	0.40
32:QA:1112:C:C2'	32:QA:1113:C:O5'	2.68	0.40
47:QP:48:GLU:HG3	47:QP:49:GLY:H	1.85	0.40
49:XR:41:SER:C	49:XR:43:ILE:H	2.25	0.40
47:QP:46:LYS:HD3	47:QP:47:GLU:N	2.36	0.40
37:XF:53:LYS:O	37:XF:55:HIS:CD2	2.75	0.40
32:QA:1081:A:H5'	36:QE:22:LYS:HG3	2.03	0.40
11:RK:92:GLU:O	11:RK:93:GLN:O	2.39	0.40
11:YK:23:LYS:O	11:YK:25:LEU:HD23	2.21	0.40
11:YK:59:LYS:HG2	11:YK:89:ASN:HA	2.03	0.40
1:YA:2108:A:OP2	1:YA:2108:A:C8	2.74	0.40
32:XA:1499:A:O2'	32:XA:1500:A:H5'	2.22	0.40
1:RA:1250:G:OP2	12:RL:18:ARG:NH2	2.48	0.40
2:RB:110:C:C4	2:RB:111:U:C5	3.10	0.40
35:XD:102:TYR:C	35:XD:104:MET:N	2.75	0.40
1:RA:1644:C:H2'	1:RA:1644:C:O2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:764:C:H2'	32:QA:765:G:H8	1.86	0.40
16:YP:19:PHE:CE1	16:YP:58:PHE:CG	3.10	0.40
1:RA:1563:U:H2'	1:RA:1564:C:H6	1.86	0.40
32:XA:442:G:C6	32:XA:443:C:N4	2.89	0.40
1:YA:1752:C:H6	1:YA:1752:C:O5'	2.04	0.40
24:YX:14:GLY:O	24:YX:25:LYS:HA	2.22	0.40
7:YG:23:ILE:HG21	7:YG:71:LEU:HD21	2.04	0.40
52:QU:52:VAL:HG13	52:QU:53:LYS:N	2.37	0.40
45:XN:66:THR:HG23	45:XN:82:LYS:HE3	2.03	0.40
32:QA:1419:G:C6	32:QA:1420:U:C4	3.10	0.40
1:RA:1360:G:C6	1:RA:1372:U:C2	3.10	0.40
1:RA:971:G:H2'	1:RA:972:A:H5'	2.03	0.40
44:XM:63:VAL:HG23	44:XM:63:VAL:O	2.21	0.40
1:YA:1691:C:H6	1:YA:1691:C:O5'	2.05	0.40
14:YN:46:ARG:HG3	14:YN:46:ARG:H	1.54	0.40
38:XG:86:VAL:HA	38:XG:87:PRO:HD2	1.87	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	RC	269/271 (99%)	198 (74%)	43 (16%)	28 (10%)	1	3
3	YC	269/271 (99%)	180 (67%)	60 (22%)	29 (11%)	0	3
4	RD	207/209 (99%)	147 (71%)	31 (15%)	29 (14%)	0	1
4	YD	207/209 (99%)	128 (62%)	45 (22%)	34 (16%)	0	0
5	RE	199/201 (99%)	146 (73%)	32 (16%)	21 (11%)	0	3
5	YE	199/201 (99%)	117 (59%)	55 (28%)	27 (14%)	0	1
6	RF	175/178 (98%)	138 (79%)	22 (13%)	15 (9%)	1	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	YF	176/178 (99%)	102 (58%)	42 (24%)	32 (18%)	0	0
7	RG	174/176 (99%)	121 (70%)	26 (15%)	27 (16%)	0	0
7	YG	174/176 (99%)	104 (60%)	36 (21%)	34 (20%)	0	0
8	RH	147/149 (99%)	64 (44%)	49 (33%)	34 (23%)	0	0
8	YH	147/149 (99%)	73 (50%)	59 (40%)	15 (10%)	1	4
9	RI	139/141 (99%)	84 (60%)	42 (30%)	13 (9%)	1	4
9	YI	139/141 (99%)	85 (61%)	37 (27%)	17 (12%)	0	2
10	RJ	140/142 (99%)	107 (76%)	19 (14%)	14 (10%)	1	4
10	YJ	140/142 (99%)	98 (70%)	28 (20%)	14 (10%)	1	4
11	RK	120/122 (98%)	87 (72%)	16 (13%)	17 (14%)	0	1
11	YK	120/122 (98%)	83 (69%)	20 (17%)	17 (14%)	0	1
12	RL	141/143 (99%)	98 (70%)	27 (19%)	16 (11%)	0	2
12	YL	141/143 (99%)	77 (55%)	45 (32%)	19 (14%)	0	1
13	RM	134/136 (98%)	97 (72%)	22 (16%)	15 (11%)	0	3
13	YM	134/136 (98%)	92 (69%)	28 (21%)	14 (10%)	1	3
14	RN	118/120 (98%)	96 (81%)	14 (12%)	8 (7%)	1	8
14	YN	118/120 (98%)	72 (61%)	30 (25%)	16 (14%)	0	1
15	RO	114/116 (98%)	89 (78%)	17 (15%)	8 (7%)	1	8
15	YO	114/116 (98%)	74 (65%)	29 (25%)	11 (10%)	1	4
16	RP	112/114 (98%)	78 (70%)	18 (16%)	16 (14%)	0	1
16	YP	112/114 (98%)	70 (62%)	25 (22%)	17 (15%)	0	0
17	RQ	115/117 (98%)	93 (81%)	17 (15%)	5 (4%)	3	19
17	YQ	115/117 (98%)	77 (67%)	27 (24%)	11 (10%)	1	4
18	RR	101/103 (98%)	82 (81%)	11 (11%)	8 (8%)	1	6
18	YR	101/103 (98%)	66 (65%)	22 (22%)	13 (13%)	0	1
19	RS	108/110 (98%)	88 (82%)	10 (9%)	10 (9%)	1	4
19	YS	108/110 (98%)	75 (69%)	22 (20%)	11 (10%)	1	4
20	RT	91/93 (98%)	51 (56%)	25 (28%)	15 (16%)	0	0
20	YT	91/93 (98%)	42 (46%)	27 (30%)	22 (24%)	0	0
21	RU	100/102 (98%)	69 (69%)	16 (16%)	15 (15%)	0	0
21	YU	100/102 (98%)	53 (53%)	23 (23%)	24 (24%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
22	RV	92/94 (98%)	81 (88%)	9 (10%)	2 (2%)	8	36
22	YV	92/94 (98%)	61 (66%)	23 (25%)	8 (9%)	1	5
23	RW	77/79 (98%)	34 (44%)	16 (21%)	27 (35%)	0	0
23	YW	77/79 (98%)	30 (39%)	27 (35%)	20 (26%)	0	0
24	RX	75/77 (97%)	58 (77%)	14 (19%)	3 (4%)	4	21
24	YX	75/77 (97%)	45 (60%)	22 (29%)	8 (11%)	0	3
25	RY	61/63 (97%)	38 (62%)	15 (25%)	8 (13%)	0	1
25	YY	61/63 (97%)	37 (61%)	20 (33%)	4 (7%)	1	9
26	RZ	56/58 (97%)	46 (82%)	8 (14%)	2 (4%)	4	24
26	YZ	56/58 (97%)	34 (61%)	16 (29%)	6 (11%)	0	3
27	R0	54/56 (96%)	42 (78%)	9 (17%)	3 (6%)	2	13
27	Y0	54/56 (96%)	38 (70%)	7 (13%)	9 (17%)	0	0
28	R1	48/50 (96%)	36 (75%)	8 (17%)	4 (8%)	1	6
28	Y1	48/50 (96%)	33 (69%)	10 (21%)	5 (10%)	1	3
29	R2	44/46 (96%)	37 (84%)	5 (11%)	2 (4%)	3	17
29	Y2	44/46 (96%)	29 (66%)	9 (20%)	6 (14%)	0	1
30	R3	62/64 (97%)	50 (81%)	8 (13%)	4 (6%)	1	9
30	Y3	62/64 (97%)	43 (69%)	13 (21%)	6 (10%)	1	4
31	R4	36/38 (95%)	29 (81%)	5 (14%)	2 (6%)	2	13
31	Y4	36/38 (95%)	22 (61%)	8 (22%)	6 (17%)	0	0
33	QB	216/218 (99%)	129 (60%)	51 (24%)	36 (17%)	0	0
33	XB	216/218 (99%)	146 (68%)	49 (23%)	21 (10%)	1	4
34	QC	204/206 (99%)	159 (78%)	26 (13%)	19 (9%)	1	4
34	XC	204/206 (99%)	137 (67%)	44 (22%)	23 (11%)	0	2
35	QD	203/205 (99%)	135 (66%)	39 (19%)	29 (14%)	0	1
35	XD	203/205 (99%)	141 (70%)	44 (22%)	18 (9%)	1	5
36	QE	148/150 (99%)	108 (73%)	25 (17%)	15 (10%)	1	4
36	XE	148/150 (99%)	110 (74%)	24 (16%)	14 (10%)	1	4
37	QF	98/100 (98%)	62 (63%)	28 (29%)	8 (8%)	1	6
37	XF	98/100 (98%)	59 (60%)	28 (29%)	11 (11%)	0	3
38	QG	149/151 (99%)	108 (72%)	33 (22%)	8 (5%)	2	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	XG	148/151 (98%)	86 (58%)	46 (31%)	16 (11%)	0	3
39	QH	127/129 (98%)	95 (75%)	25 (20%)	7 (6%)	2	13
39	XH	127/129 (98%)	92 (72%)	25 (20%)	10 (8%)	1	6
40	QI	125/127 (98%)	88 (70%)	25 (20%)	12 (10%)	1	4
40	XI	125/127 (98%)	91 (73%)	25 (20%)	9 (7%)	1	7
41	QJ	96/98 (98%)	64 (67%)	17 (18%)	15 (16%)	0	0
41	XJ	96/98 (98%)	61 (64%)	22 (23%)	13 (14%)	0	1
42	QK	115/117 (98%)	83 (72%)	22 (19%)	10 (9%)	1	5
42	XK	115/117 (98%)	87 (76%)	18 (16%)	10 (9%)	1	5
43	QL	121/123 (98%)	87 (72%)	23 (19%)	11 (9%)	1	5
43	XL	121/123 (98%)	90 (74%)	22 (18%)	9 (7%)	1	7
44	QM	112/114 (98%)	83 (74%)	20 (18%)	9 (8%)	1	6
44	XM	111/114 (97%)	64 (58%)	33 (30%)	14 (13%)	0	1
45	QN	92/101 (91%)	57 (62%)	25 (27%)	10 (11%)	0	3
45	XN	87/101 (86%)	58 (67%)	18 (21%)	11 (13%)	0	1
46	QO	86/88 (98%)	55 (64%)	26 (30%)	5 (6%)	2	12
46	XO	86/88 (98%)	64 (74%)	18 (21%)	4 (5%)	3	17
47	QP	80/82 (98%)	55 (69%)	17 (21%)	8 (10%)	1	4
47	XP	78/82 (95%)	52 (67%)	18 (23%)	8 (10%)	1	4
48	QQ	78/80 (98%)	55 (70%)	11 (14%)	12 (15%)	0	0
48	XQ	78/80 (98%)	63 (81%)	6 (8%)	9 (12%)	0	2
49	QR	53/55 (96%)	41 (77%)	10 (19%)	2 (4%)	4	22
49	XR	53/55 (96%)	37 (70%)	15 (28%)	1 (2%)	10	40
50	QS	77/79 (98%)	57 (74%)	14 (18%)	6 (8%)	1	6
50	XS	77/79 (98%)	47 (61%)	25 (32%)	5 (6%)	1	9
51	QT	83/85 (98%)	61 (74%)	16 (19%)	6 (7%)	1	7
51	XT	83/85 (98%)	59 (71%)	18 (22%)	6 (7%)	1	7
52	QU	49/51 (96%)	25 (51%)	14 (29%)	10 (20%)	0	0
52	XU	49/51 (96%)	21 (43%)	12 (24%)	16 (33%)	0	0
All	All	11234/11454 (98%)	7596 (68%)	2346 (21%)	1292 (12%)	0	2

All (1292) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	RC	104	LEU
3	RC	121	ALA
3	RC	200	MET
3	RC	239	PHE
3	RC	243	PRO
4	RD	43	ASP
4	RD	73	VAL
4	RD	92	VAL
4	RD	99	GLU
4	RD	103	ASP
4	RD	104	VAL
4	RD	122	VAL
4	RD	190	LYS
4	RD	191	GLY
4	RD	192	ALA
5	RE	8	ALA
5	RE	79	ARG
5	RE	175	ILE
6	RF	134	GLN
6	RF	175	PRO
7	RG	7	PRO
7	RG	8	VAL
7	RG	28	LYS
7	RG	31	GLU
7	RG	33	THR
7	RG	84	LYS
7	RG	94	ARG
7	RG	110	HIS
7	RG	118	ALA
7	RG	170	THR
8	RH	3	VAL
8	RH	8	LYS
8	RH	9	VAL
8	RH	10	ALA
8	RH	15	LEU
8	RH	32	PRO
8	RH	33	GLN
9	RI	30	GLN
9	RI	92	PRO
9	RI	96	LYS
10	RJ	21	THR
10	RJ	44	TYR
10	RJ	45	THR

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Mol	Chain	Res	Type
11	RK	13	ASN
11	RK	35	VAL
11	RK	71	ARG
11	RK	72	PRO
12	RL	15	ALA
12	RL	66	PHE
12	RL	81	ASP
12	RL	88	GLY
13	RM	2	LEU
13	RM	35	ALA
13	RM	36	VAL
13	RM	55	ARG
13	RM	69	PRO
14	RN	101	GLY
15	RO	68	LYS
16	RP	25	VAL
16	RP	33	GLU
16	RP	50	ARG
16	RP	93	LYS
16	RP	103	THR
16	RP	105	LYS
17	RQ	5	ARG
17	RQ	87	VAL
17	RQ	91	ARG
19	RS	3	THR
19	RS	19	LEU
19	RS	64	ALA
20	RT	27	SER
20	RT	29	THR
20	RT	38	ALA
20	RT	69	ARG
20	RT	70	HIS
20	RT	86	THR
20	RT	88	LYS
21	RU	6	ARG
21	RU	51	LEU
21	RU	88	ASP
21	RU	98	ASN
22	RV	69	GLU
23	RW	9	THR
23	RW	14	ASP
23	RW	22	VAL

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Mol	Chain	Res	Type
23	RW	23	LYS
23	RW	30	VAL
23	RW	34	SER
23	RW	40	ARG
23	RW	48	ALA
23	RW	50	VAL
23	RW	70	VAL
24	RX	2	ARG
25	RY	22	LEU
25	RY	23	ARG
25	RY	24	GLU
26	RZ	3	THR
27	R0	35	GLU
27	R0	54	ILE
28	R1	4	ILE
28	R1	51	ALA
30	R3	31	ILE
31	R4	4	ARG
33	QB	20	ARG
33	QB	33	ALA
33	QB	40	ILE
33	QB	58	LYS
33	QB	72	LYS
33	QB	74	ALA
33	QB	75	ALA
33	QB	119	GLN
33	QB	133	ALA
33	QB	169	HIS
33	QB	200	PRO
34	QC	14	VAL
34	QC	16	PRO
34	QC	17	TRP
34	QC	60	ALA
34	QC	100	ILE
34	QC	165	GLU
35	QD	26	ALA
35	QD	28	ASP
35	QD	29	THR
35	QD	32	LYS
35	QD	34	GLU
35	QD	148	ALA
35	QD	152	SER

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Mol	Chain	Res	Type
35	QD	159	GLU
35	QD	173	ASP
35	QD	191	SER
35	QD	192	ALA
36	QE	44	ARG
36	QE	97	PRO
36	QE	154	ALA
36	QE	156	ARG
36	QE	157	GLY
37	QF	7	VAL
37	QF	91	ARG
38	QG	93	VAL
39	QH	66	GLN
40	QI	8	THR
40	QI	43	ALA
40	QI	55	ASP
40	QI	71	ILE
41	QJ	57	VAL
41	QJ	61	ALA
41	QJ	92	LEU
41	QJ	101	SER
42	QK	13	LYS
42	QK	126	ARG
43	QL	23	LEU
43	QL	24	GLU
43	QL	33	CYS
43	QL	43	LYS
43	QL	73	LEU
43	QL	75	GLU
44	QM	46	GLU
45	QN	33	VAL
45	QN	51	PRO
45	QN	52	ARG
45	QN	61	ASN
45	QN	81	ILE
46	QO	17	ASP
46	QO	35	ILE
47	QP	11	ALA
47	QP	80	LYS
48	QQ	12	VAL
48	QQ	16	MET
48	QQ	52	CYS

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Mol	Chain	Res	Type
48	QQ	70	LYS
48	QQ	75	VAL
49	QR	47	ARG
51	QT	3	ILE
51	QT	5	SER
51	QT	67	HIS
52	QU	11	PHE
52	QU	23	GLU
33	XB	84	LEU
33	XB	102	ASN
33	XB	129	THR
34	XC	59	PRO
34	XC	140	ALA
34	XC	188	ALA
34	XC	205	GLU
35	XD	24	VAL
35	XD	33	ILE
35	XD	35	GLN
35	XD	39	GLN
35	XD	80	ARG
35	XD	191	SER
35	XD	192	ALA
36	XE	29	ILE
36	XE	31	SER
36	XE	111	ARG
36	XE	144	GLU
37	XF	68	GLN
37	XF	82	ASP
37	XF	99	ALA
38	XG	10	LYS
38	XG	29	LEU
38	XG	30	MET
38	XG	31	VAL
38	XG	52	ARG
38	XG	99	ALA
40	XI	54	VAL
40	XI	71	ILE
41	XJ	36	VAL
41	XJ	57	VAL
41	XJ	87	LEU
42	XK	14	GLN
42	XK	70	ALA

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Mol	Chain	Res	Type
42	XK	92	ARG
43	XL	34	THR
44	XM	4	ALA
44	XM	11	HIS
44	XM	14	ALA
44	XM	49	GLU
45	XN	53	ASP
47	XP	63	GLN
48	XQ	12	VAL
48	XQ	52	CYS
48	XQ	69	THR
51	XT	3	ILE
51	XT	43	LYS
51	XT	65	LEU
52	XU	4	LYS
52	XU	15	LEU
52	XU	23	GLU
52	XU	32	ARG
52	XU	34	ARG
52	XU	35	GLU
52	XU	36	PHE
3	YC	9	SER
3	YC	28	PRO
3	YC	69	ASN
3	YC	140	VAL
3	YC	141	HIS
3	YC	227	VAL
3	YC	232	GLY
3	YC	269	ARG
4	YD	14	ILE
4	YD	31	ALA
4	YD	48	ILE
4	YD	74	GLU
4	YD	77	ARG
4	YD	95	SER
4	YD	102	ALA
4	YD	112	THR
4	YD	118	PHE
4	YD	150	GLN
4	YD	162	ALA
4	YD	164	GLN
4	YD	170	VAL

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Mol	Chain	Res	Type
4	YD	175	LEU
4	YD	194	PRO
4	YD	208	LYS
5	YE	55	SER
5	YE	69	ARG
5	YE	116	ASP
5	YE	153	LEU
5	YE	165	HIS
6	YF	10	GLU
6	YF	12	VAL
6	YF	32	LYS
6	YF	36	ASN
6	YF	42	ALA
6	YF	114	ARG
6	YF	120	SER
6	YF	122	ASP
6	YF	137	PHE
7	YG	49	LEU
7	YG	95	ALA
7	YG	125	PRO
7	YG	164	ALA
7	YG	165	ASP
8	YH	3	VAL
8	YH	9	VAL
8	YH	10	ALA
8	YH	66	ASN
8	YH	72	ILE
8	YH	98	ASP
8	YH	102	ALA
9	YI	22	PRO
9	YI	29	GLN
9	YI	113	ALA
10	YJ	45	THR
10	YJ	95	ARG
11	YK	16	ALA
11	YK	18	ARG
11	YK	49	ARG
11	YK	71	ARG
11	YK	72	PRO
11	YK	110	GLU
11	YK	120	PRO
12	YL	4	ASN

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Mol	Chain	Res	Type
12	YL	41	ARG
12	YL	82	LEU
12	YL	85	VAL
12	YL	89	VAL
12	YL	99	ASN
12	YL	101	ILE
12	YL	111	ILE
13	YM	2	LEU
13	YM	14	LYS
13	YM	72	PRO
13	YM	77	PRO
13	YM	135	VAL
14	YN	104	ALA
15	YO	27	VAL
15	YO	72	ALA
15	YO	90	VAL
16	YP	25	VAL
16	YP	50	ARG
16	YP	83	ILE
16	YP	85	VAL
16	YP	109	ILE
16	YP	112	ARG
18	YR	3	ALA
18	YR	29	THR
18	YR	98	ILE
19	YS	28	LYS
19	YS	33	LEU
19	YS	40	ASN
19	YS	72	THR
20	YT	14	PRO
20	YT	20	ALA
20	YT	29	THR
20	YT	39	THR
20	YT	56	GLU
20	YT	88	LYS
21	YU	4	ILE
21	YU	6	ARG
21	YU	54	PRO
21	YU	65	GLN
21	YU	82	VAL
21	YU	92	VAL
21	YU	96	LYS

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Mol	Chain	Res	Type
21	YU	101	THR
22	YV	56	PHE
23	YW	9	THR
23	YW	34	SER
23	YW	35	ILE
23	YW	36	ILE
23	YW	83	ALA
24	YX	2	ARG
24	YX	25	LYS
25	YY	9	LYS
25	YY	37	LEU
27	Y0	54	ILE
27	Y0	55	ALA
30	Y3	6	VAL
30	Y3	29	ARG
30	Y3	51	LYS
31	Y4	3	VAL
31	Y4	8	LYS
31	Y4	20	ASP
3	RC	105	ALA
3	RC	110	LYS
3	RC	120	ASP
3	RC	140	VAL
3	RC	141	HIS
3	RC	154	ALA
3	RC	167	ASP
4	RD	106	LYS
4	RD	118	PHE
4	RD	144	GLY
4	RD	169	ARG
4	RD	175	LEU
4	RD	183	GLU
4	RD	184	ARG
5	RE	46	GLN
5	RE	80	SER
5	RE	86	ALA
5	RE	123	LYS
6	RF	61	GLY
6	RF	77	LYS
6	RF	113	PHE
6	RF	132	ARG
7	RG	9	VAL

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Mol	Chain	Res	Type
7	RG	45	ALA
7	RG	60	GLY
7	RG	83	THR
7	RG	164	ALA
7	RG	168	VAL
8	RH	28	ASN
8	RH	34	GLY
8	RH	40	THR
8	RH	81	ALA
8	RH	83	LYS
8	RH	107	GLY
8	RH	131	SER
8	RH	138	VAL
10	RJ	2	LYS
10	RJ	22	GLY
10	RJ	39	LYS
10	RJ	41	LYS
10	RJ	81	ILE
10	RJ	98	GLU
11	RK	16	ALA
11	RK	17	ARG
11	RK	29	HIS
11	RK	46	ALA
11	RK	118	LEU
12	RL	41	ARG
12	RL	54	GLN
12	RL	65	GLY
12	RL	111	ILE
12	RL	114	GLY
13	RM	14	LYS
13	RM	56	ALA
13	RM	60	GLN
13	RM	77	PRO
14	RN	117	ASP
15	RO	3	LYS
15	RO	100	HIS
15	RO	112	GLU
16	RP	4	ILE
16	RP	5	LYS
16	RP	65	ASN
16	RP	92	ARG
16	RP	104	GLY

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Mol	Chain	Res	Type
17	RQ	86	SER
19	RS	14	ALA
19	RS	63	GLY
20	RT	16	VAL
20	RT	84	TYR
21	RU	8	ASP
21	RU	87	GLU
21	RU	92	VAL
23	RW	27	GLY
23	RW	36	ILE
23	RW	41	GLY
23	RW	47	GLY
23	RW	53	GLY
23	RW	74	LYS
23	RW	78	PHE
24	RX	34	SER
24	RX	53	LYS
25	RY	37	LEU
26	RZ	34	THR
28	R1	16	THR
29	R2	44	VAL
30	R3	27	ASN
30	R3	30	HIS
33	QB	18	GLN
33	QB	21	TYR
33	QB	52	ALA
33	QB	53	LEU
33	QB	63	LYS
33	QB	73	ARG
33	QB	96	LEU
33	QB	125	PHE
33	QB	142	LYS
33	QB	150	ILE
33	QB	163	ILE
33	QB	170	ILE
33	QB	202	ASN
33	QB	210	THR
33	QB	219	THR
34	QC	88	LYS
34	QC	126	ARG
34	QC	191	THR
35	QD	23	GLY

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Mol	Chain	Res	Type
35	QD	31	CYS
35	QD	147	LYS
35	QD	150	LYS
35	QD	172	VAL
35	QD	174	ALA
36	QE	88	HIS
36	QE	121	ASN
36	QE	137	ARG
37	QF	42	TRP
37	QF	92	THR
38	QG	6	ILE
38	QG	129	ASN
39	QH	49	LYS
40	QI	40	ARG
40	QI	119	LYS
40	QI	128	LYS
41	QJ	33	GLY
41	QJ	74	VAL
42	QK	38	GLY
42	QK	51	PHE
42	QK	77	GLY
42	QK	125	LYS
43	QL	22	ALA
43	QL	88	ASP
43	QL	97	VAL
45	QN	22	LYS
45	QN	27	LYS
45	QN	43	ALA
46	QO	24	THR
47	QP	10	GLY
48	QQ	5	ARG
48	QQ	34	GLY
48	QQ	50	ASN
50	QS	3	SER
50	QS	27	LYS
50	QS	63	ASP
51	QT	4	LYS
52	QU	8	ASN
52	QU	12	ASP
33	XB	73	ARG
33	XB	81	ASP
33	XB	101	THR

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Mol	Chain	Res	Type
33	XB	128	LEU
33	XB	148	GLY
33	XB	150	ILE
33	XB	208	ALA
34	XC	100	ILE
34	XC	180	ASP
35	XD	29	THR
35	XD	82	LYS
35	XD	83	GLY
35	XD	187	ARG
36	XE	69	ASN
36	XE	74	ALA
36	XE	75	LEU
36	XE	143	LEU
37	XF	44	ARG
37	XF	85	ILE
37	XF	92	THR
37	XF	94	HIS
37	XF	98	GLU
38	XG	62	GLU
38	XG	113	LYS
39	XH	29	SER
39	XH	30	LYS
40	XI	11	ARG
41	XJ	34	ALA
41	XJ	82	LYS
41	XJ	93	ALA
42	XK	126	ARG
43	XL	8	ARG
43	XL	43	LYS
43	XL	117	GLY
44	XM	45	SER
45	XN	60	ARG
45	XN	62	ARG
45	XN	95	LEU
46	XO	13	GLU
46	XO	15	GLY
46	XO	87	ARG
47	XP	31	ARG
47	XP	54	LEU
48	XQ	81	ALA
50	XS	4	LEU

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Mol	Chain	Res	Type
50	XS	46	LEU
51	XT	72	ALA
52	XU	7	GLU
52	XU	8	ASN
52	XU	11	PHE
3	YC	3	VAL
3	YC	59	GLN
3	YC	94	LEU
3	YC	239	PHE
4	YD	93	GLY
4	YD	107	VAL
4	YD	119	ALA
4	YD	136	ASN
4	YD	144	GLY
4	YD	145	SER
4	YD	169	ARG
4	YD	174	SER
5	YE	24	ASN
5	YE	62	GLN
5	YE	80	SER
5	YE	96	VAL
5	YE	99	LYS
5	YE	166	LYS
5	YE	188	MET
6	YF	6	TYR
6	YF	41	GLU
6	YF	43	ILE
6	YF	70	ARG
6	YF	86	CYS
6	YF	138	PRO
6	YF	145	VAL
6	YF	148	VAL
7	YG	80	GLU
7	YG	83	THR
7	YG	85	LYS
7	YG	86	LEU
7	YG	92	GLY
7	YG	126	THR
7	YG	136	ASP
7	YG	149	ALA
7	YG	150	TYR
7	YG	155	PRO

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Mol	Chain	Res	Type
8	YH	76	GLU
8	YH	99	ILE
9	YI	23	VAL
9	YI	30	GLN
9	YI	35	MET
9	YI	58	ILE
9	YI	69	VAL
9	YI	119	ALA
9	YI	140	GLU
10	YJ	44	TYR
10	YJ	81	ILE
11	YK	14	SER
11	YK	35	VAL
11	YK	93	GLN
12	YL	65	GLY
12	YL	88	GLY
13	YM	73	ILE
13	YM	83	GLY
14	YN	2	ARG
14	YN	8	ARG
14	YN	10	LEU
14	YN	13	ASN
14	YN	71	ARG
14	YN	82	GLU
15	YO	110	ALA
16	YP	63	ILE
16	YP	108	ARG
17	YQ	88	GLU
17	YQ	91	ARG
18	YR	8	GLY
18	YR	57	GLY
18	YR	65	ALA
18	YR	89	HIS
19	YS	32	ALA
19	YS	61	ASN
19	YS	67	ASP
20	YT	4	GLU
20	YT	15	HIS
20	YT	16	VAL
20	YT	38	ALA
20	YT	50	LEU
20	YT	68	LYS

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Mol	Chain	Res	Type
21	YU	8	ASP
21	YU	17	ASP
21	YU	40	LEU
21	YU	87	GLU
21	YU	95	PHE
21	YU	97	SER
21	YU	99	SER
22	YV	15	GLY
22	YV	33	GLY
23	YW	16	GLU
23	YW	33	GLY
23	YW	46	ALA
23	YW	53	GLY
23	YW	57	THR
23	YW	71	LYS
24	YX	34	SER
24	YX	69	GLU
25	YY	46	VAL
26	YZ	4	ILE
26	YZ	13	ILE
26	YZ	30	ARG
27	Y0	21	LEU
27	Y0	25	THR
27	Y0	32	THR
29	Y2	29	GLN
29	Y2	43	THR
30	Y3	20	GLY
30	Y3	22	LYS
3	RC	149	LYS
3	RC	184	GLU
3	RC	196	ASN
3	RC	257	ARG
3	RC	258	SER
4	RD	41	ALA
4	RD	72	GLY
4	RD	102	ALA
4	RD	107	VAL
4	RD	174	SER
5	RE	6	LYS
5	RE	116	ASP
5	RE	153	LEU
6	RF	8	LYS

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Mol	Chain	Res	Type
6	RF	109	ARG
6	RF	111	ARG
6	RF	149	ARG
7	RG	2	ARG
7	RG	44	HIS
7	RG	61	TRP
7	RG	97	VAL
7	RG	113	ASP
7	RG	174	LYS
8	RH	35	LYS
8	RH	55	GLU
8	RH	68	ARG
8	RH	101	ASP
8	RH	137	GLU
9	RI	112	LYS
10	RJ	14	ASP
10	RJ	74	TYR
11	RK	50	GLY
11	RK	92	GLU
12	RL	29	LYS
12	RL	40	SER
13	RM	54	THR
14	RN	15	SER
14	RN	119	SER
16	RP	2	ASN
16	RP	20	ARG
16	RP	110	LYS
17	RQ	115	ALA
19	RS	57	ASN
19	RS	96	ILE
20	RT	2	ILE
20	RT	49	LYS
21	RU	81	ARG
23	RW	15	SER
23	RW	51	GLY
23	RW	56	HIS
29	R2	42	LEU
30	R3	22	LYS
33	QB	22	TRP
33	QB	41	ASN
34	QC	35	ASP
34	QC	192	TYR

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Mol	Chain	Res	Type
34	QC	205	GLU
35	QD	35	GLN
35	QD	125	ASN
35	QD	165	GLU
35	QD	197	HIS
36	QE	102	THR
37	QF	54	LEU
37	QF	68	GLN
37	QF	80	PHE
37	QF	86	ARG
38	QG	95	ARG
40	QI	38	PHE
40	QI	120	ALA
41	QJ	30	LYS
41	QJ	34	ALA
42	QK	88	PRO
42	QK	97	ARG
44	QM	4	ALA
44	QM	36	ALA
44	QM	84	CYS
44	QM	113	LYS
47	QP	31	ARG
47	QP	45	GLU
47	QP	49	GLY
48	QQ	11	VAL
51	QT	76	ALA
52	QU	25	ALA
52	QU	37	TYR
33	XB	18	GLN
33	XB	42	LEU
33	XB	93	HIS
33	XB	179	GLY
34	XC	47	ALA
34	XC	87	ARG
34	XC	128	MET
34	XC	174	LEU
34	XC	186	SER
35	XD	9	LYS
35	XD	27	ILE
36	XE	56	PRO
36	XE	81	GLN
36	XE	104	ILE

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Mol	Chain	Res	Type
37	XF	39	LEU
38	XG	59	GLU
39	XH	41	GLU
39	XH	58	LEU
40	XI	44	ARG
40	XI	55	ASP
41	XJ	23	ALA
41	XJ	46	LYS
42	XK	88	PRO
42	XK	124	LYS
42	XK	127	ARG
44	XM	76	ILE
44	XM	77	LYS
45	XN	69	PRO
45	XN	99	SER
47	XP	24	SER
47	XP	46	LYS
47	XP	69	ASP
48	XQ	68	LYS
50	XS	79	TYR
52	XU	9	GLU
52	XU	26	GLY
52	XU	37	TYR
3	YC	36	ASN
3	YC	37	SER
3	YC	98	GLY
3	YC	121	ALA
3	YC	190	THR
3	YC	196	ASN
3	YC	237	ARG
4	YD	11	MET
4	YD	44	GLY
4	YD	99	GLU
4	YD	122	VAL
4	YD	167	ASN
4	YD	173	GLN
5	YE	79	ARG
5	YE	123	LYS
5	YE	127	GLU
6	YF	46	LYS
6	YF	67	THR
6	YF	69	ALA

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Mol	Chain	Res	Type
6	YF	88	VAL
6	YF	94	ARG
6	YF	112	ASP
7	YG	9	VAL
7	YG	91	VAL
7	YG	93	TYR
7	YG	169	ARG
8	YH	97	ARG
9	YI	19	PRO
10	YJ	6	ALA
10	YJ	13	ARG
10	YJ	83	GLY
10	YJ	112	GLY
11	YK	17	ARG
11	YK	48	PRO
12	YL	5	THR
12	YL	29	LYS
12	YL	115	GLU
12	YL	117	THR
13	YM	110	GLU
13	YM	111	GLU
13	YM	134	THR
14	YN	30	ARG
15	YO	23	ALA
15	YO	43	ASN
16	YP	20	ARG
16	YP	42	PHE
17	YQ	23	TYR
17	YQ	58	GLN
17	YQ	86	SER
17	YQ	87	VAL
18	YR	15	SER
18	YR	40	MET
19	YS	71	VAL
20	YT	66	LYS
20	YT	77	ARG
21	YU	23	LYS
21	YU	88	ASP
23	YW	17	ALA
23	YW	23	LYS
23	YW	24	ARG
24	YX	27	ARG

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Mol	Chain	Res	Type
24	YX	63	ILE
25	YY	22	LEU
26	YZ	2	LYS
27	Y0	26	SER
28	Y1	35	LEU
31	Y4	16	ILE
3	RC	37	SER
3	RC	77	VAL
3	RC	150	GLY
3	RC	237	ARG
4	RD	119	ALA
4	RD	170	VAL
4	RD	182	ALA
5	RE	43	THR
5	RE	45	ALA
5	RE	67	ARG
5	RE	71	GLY
6	RF	20	ASN
6	RF	174	PHE
7	RG	91	VAL
8	RH	7	ASP
8	RH	12	LEU
8	RH	14	SER
8	RH	70	GLU
8	RH	82	SER
8	RH	103	VAL
8	RH	121	VAL
8	RH	135	HIS
9	RI	59	THR
9	RI	89	SER
10	RJ	13	ARG
11	RK	73	ASP
11	RK	93	GLN
11	RK	108	ARG
11	RK	119	ALA
12	RL	86	GLU
13	RM	134	THR
14	RN	2	ARG
14	RN	80	PHE
15	RO	85	LYS
15	RO	113	ALA
18	RR	55	ASP

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Mol	Chain	Res	Type
18	RR	65	ALA
18	RR	91	GLN
19	RS	56	ALA
20	RT	39	THR
21	RU	85	ARG
22	RV	44	HIS
23	RW	10	ARG
23	RW	18	LYS
23	RW	52	CYS
23	RW	68	PHE
25	RY	44	LYS
25	RY	57	LEU
27	R0	51	ARG
28	R1	28	THR
33	QB	148	GLY
33	QB	201	GLY
34	QC	99	GLN
34	QC	107	LYS
34	QC	138	GLN
35	QD	33	ILE
35	QD	124	VAL
35	QD	132	ALA
35	QD	166	LYS
36	QE	109	ALA
36	QE	148	SER
38	QG	119	LEU
39	QH	48	PHE
39	QH	88	LYS
41	QJ	16	ARG
41	QJ	35	GLN
41	QJ	36	VAL
41	QJ	81	GLU
41	QJ	89	ARG
42	QK	15	VAL
44	QM	3	ILE
44	QM	10	ASP
44	QM	23	GLY
45	QN	63	CYS
45	QN	80	ARG
48	QQ	67	SER
48	QQ	69	THR
50	QS	5	LYS

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Mol	Chain	Res	Type
52	QU	36	PHE
33	XB	86	CYS
33	XB	217	ALA
34	XC	63	ILE
34	XC	164	THR
35	XD	37	PRO
36	XE	38	VAL
36	XE	68	ARG
38	XG	88	VAL
38	XG	93	VAL
38	XG	107	ALA
38	XG	125	ASP
38	XG	133	ALA
39	XH	2	MET
39	XH	34	ALA
39	XH	66	GLN
40	XI	58	GLU
41	XJ	41	PRO
41	XJ	62	ARG
43	XL	83	GLY
44	XM	42	VAL
44	XM	46	GLU
44	XM	53	ASP
45	XN	21	ALA
47	XP	49	GLY
47	XP	78	VAL
48	XQ	29	LYS
48	XQ	31	PRO
51	XT	12	GLN
51	XT	73	ARG
52	XU	22	CYS
52	XU	38	GLU
3	YC	123	ILE
3	YC	204	LEU
3	YC	226	PRO
4	YD	53	GLY
4	YD	176	ASP
5	YE	22	ASP
5	YE	60	TRP
5	YE	148	ILE
6	YF	8	LYS
6	YF	31	GLU

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Mol	Chain	Res	Type
6	YF	77	LYS
6	YF	87	LYS
6	YF	104	THR
7	YG	8	VAL
7	YG	11	PRO
7	YG	45	ALA
7	YG	46	ASP
7	YG	59	ASP
7	YG	118	ALA
8	YH	121	VAL
8	YH	143	ILE
8	YH	144	VAL
9	YI	51	GLY
9	YI	52	LEU
10	YJ	25	LEU
10	YJ	96	ARG
10	YJ	113	PRO
10	YJ	139	VAL
11	YK	46	ALA
11	YK	88	ASN
12	YL	79	LEU
13	YM	69	PRO
15	YO	7	ARG
15	YO	8	ILE
15	YO	42	PRO
16	YP	32	VAL
16	YP	51	ASN
16	YP	56	SER
16	YP	93	LYS
17	YQ	45	ALA
17	YQ	90	ASP
18	YR	53	PHE
19	YS	64	ALA
20	YT	19	LYS
20	YT	53	VAL
20	YT	70	HIS
21	YU	14	THR
22	YV	58	SER
22	YV	84	PRO
23	YW	18	LYS
23	YW	26	GLY
24	YX	17	ARG

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Mol	Chain	Res	Type
26	YZ	9	THR
28	Y1	18	HIS
28	Y1	36	LYS
29	Y2	16	HIS
29	Y2	39	ARG
29	Y2	40	ALA
31	Y4	37	GLN
3	RC	30	ALA
3	RC	57	HIS
3	RC	64	VAL
3	RC	199	HIS
3	RC	204	LEU
4	RD	86	GLU
4	RD	95	SER
4	RD	109	VAL
5	RE	11	ALA
5	RE	13	THR
5	RE	96	VAL
6	RF	2	LYS
6	RF	11	VAL
7	RG	16	VAL
7	RG	38	ASP
8	RH	16	GLY
8	RH	30	LEU
8	RH	111	ALA
9	RI	20	SER
9	RI	71	LYS
10	RJ	65	THR
10	RJ	73	VAL
11	RK	54	LYS
12	RL	69	ARG
13	RM	110	GLU
13	RM	133	LYS
14	RN	32	GLU
14	RN	118	ARG
15	RO	77	ALA
18	RR	53	PHE
18	RR	98	ILE
20	RT	55	VAL
20	RT	68	LYS
21	RU	38	ILE
21	RU	53	GLN

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Mol	Chain	Res	Type
21	RU	63	ALA
21	RU	83	GLY
23	RW	62	ALA
25	RY	36	GLN
31	R4	16	ILE
33	QB	31	PHE
34	QC	65	VAL
34	QC	102	ILE
34	QC	145	ALA
35	QD	24	VAL
35	QD	167	PRO
36	QE	23	THR
36	QE	98	ALA
38	QG	30	MET
39	QH	114	ALA
40	QI	23	GLY
41	QJ	41	PRO
43	QL	25	ALA
43	QL	77	SER
46	QO	43	ALA
48	QQ	49	ASN
49	QR	54	LEU
51	QT	40	ALA
52	QU	24	LYS
52	QU	35	GLU
33	XB	177	ASN
33	XB	205	ALA
33	XB	222	GLU
34	XC	85	LYS
34	XC	130	ARG
34	XC	145	ALA
34	XC	155	ARG
34	XC	167	TYR
34	XC	173	PRO
35	XD	25	ARG
35	XD	47	LEU
39	XH	98	LEU
39	XH	117	GLN
40	XI	52	GLU
41	XJ	31	ARG
42	XK	97	ARG
43	XL	3	VAL

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Mol	Chain	Res	Type
43	XL	7	VAL
43	XL	37	TYR
44	XM	50	GLY
44	XM	65	GLU
46	XO	64	LYS
48	XQ	4	ILE
50	XS	55	GLN
52	XU	10	PRO
3	YC	38	LYS
3	YC	45	ASN
3	YC	64	VAL
3	YC	106	PRO
4	YD	109	VAL
5	YE	13	THR
5	YE	86	ALA
5	YE	103	GLY
5	YE	129	PRO
6	YF	82	TYR
6	YF	136	ILE
6	YF	156	THR
7	YG	40	VAL
7	YG	53	PRO
7	YG	138	GLN
8	YH	61	VAL
9	YI	84	GLY
10	YJ	5	THR
10	YJ	23	LYS
11	YK	98	ARG
12	YL	96	LYS
12	YL	100	ILE
13	YM	16	ARG
13	YM	20	LEU
14	YN	15	SER
14	YN	29	VAL
14	YN	68	ALA
14	YN	72	ASP
14	YN	85	PRO
15	YO	3	LYS
15	YO	107	ALA
16	YP	65	ASN
16	YP	84	SER
16	YP	113	LEU

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Mol	Chain	Res	Type
17	YQ	29	ARG
18	YR	52	PRO
18	YR	91	GLN
19	YS	29	VAL
20	YT	8	LEU
20	YT	61	LEU
21	YU	81	ARG
22	YV	55	GLU
23	YW	41	GLY
23	YW	76	ARG
24	YX	5	GLN
27	Y0	33	SER
28	Y1	38	PHE
5	RE	69	ARG
5	RE	83	VAL
11	RK	49	ARG
12	RL	36	LYS
12	RL	58	TYR
13	RM	73	ILE
15	RO	101	GLY
18	RR	43	ASN
19	RS	74	ILE
20	RT	36	LYS
21	RU	16	LYS
21	RU	101	THR
23	RW	16	GLU
33	QB	42	LEU
33	QB	81	ASP
33	QB	140	LEU
33	QB	187	ASP
34	QC	173	PRO
38	QG	8	GLN
38	QG	55	LYS
39	QH	77	VAL
40	QI	41	GLU
40	QI	42	THR
42	QK	103	GLY
46	QO	86	LEU
34	XC	11	LEU
34	XC	78	LYS
35	XD	107	GLY
35	XD	166	LYS

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Mol	Chain	Res	Type
40	XI	34	LEU
41	XJ	38	GLY
42	XK	90	PRO
42	XK	91	GLY
43	XL	47	ALA
44	XM	97	ARG
45	XN	42	ASN
45	XN	51	PRO
45	XN	55	SER
48	XQ	78	VAL
49	XR	34	GLU
5	YE	73	ILE
5	YE	126	VAL
5	YE	187	VAL
7	YG	117	PRO
7	YG	166	GLU
12	YL	36	LYS
12	YL	139	GLY
14	YN	63	ARG
14	YN	70	THR
14	YN	105	GLY
19	YS	99	ARG
20	YT	11	LEU
21	YU	12	VAL
21	YU	41	VAL
21	YU	64	ILE
22	YV	44	HIS
22	YV	57	TYR
23	YW	22	VAL
23	YW	78	PHE
27	Y0	7	PRO
27	Y0	53	VAL
4	RD	2	ILE
8	RH	31	VAL
8	RH	44	ILE
9	RI	8	VAL
9	RI	31	GLY
12	RL	127	VAL
13	RM	3	GLN
19	RS	29	VAL
25	RY	46	VAL
47	QP	78	VAL

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Mol	Chain	Res	Type
50	QS	48	ILE
34	XC	65	VAL
37	XF	64	VAL
41	XJ	74	VAL
50	XS	8	PRO
5	YE	82	GLY
7	YG	16	VAL
7	YG	97	VAL
9	YI	138	VAL
11	YK	103	VAL
18	YR	27	ILE
21	YU	35	VAL
21	YU	89	GLY
30	Y3	3	ILE
31	Y4	21	GLY
16	RP	34	GLY
18	RR	50	GLY
18	RR	64	VAL
39	QH	102	VAL
41	QJ	42	LEU
47	QP	42	ILE
34	XC	54	ILE
38	XG	68	VAL
40	XI	103	VAL
13	YM	36	VAL
28	Y1	4	ILE
29	Y2	44	VAL
3	RC	9	SER
7	RG	30	GLY
8	RH	80	ILE
35	QD	36	ALA
36	QE	104	ILE
50	QS	61	VAL
52	QU	10	PRO
33	XB	16	GLY
37	XF	22	ILE
38	XG	90	VAL
3	YC	147	PRO
3	YC	195	GLY
4	YD	9	VAL
5	YE	81	GLY
7	YG	152	ARG

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Mol	Chain	Res	Type
8	YH	134	VAL
11	YK	119	ALA
17	YQ	6	GLY
3	RC	226	PRO
5	RE	73	ILE
5	RE	148	ILE
6	RF	83	PRO
7	RG	153	PRO
9	RI	23	VAL
9	RI	28	GLY
16	RP	63	ILE
23	RW	37	VAL
33	QB	209	VAL
35	QD	100	VAL
44	QM	6	ILE
33	XB	163	ILE
36	XE	43	GLY
44	XM	64	VAL
3	YC	2	VAL
6	YF	125	GLY
7	YG	153	PRO
20	YT	47	VAL
20	YT	74	ILE
9	RI	57	VAL
36	QE	149	PRO
39	XH	74	ILE
45	XN	50	LEU
9	YI	31	GLY
9	YI	121	ILE
17	YQ	7	VAL
26	YZ	50	VAL

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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	RC	216/216 (100%)	164 (76%)	52 (24%)	1	3
3	YC	216/216 (100%)	181 (84%)	35 (16%)	3	12
4	RD	164/164 (100%)	138 (84%)	26 (16%)	3	13
4	YD	164/164 (100%)	142 (87%)	22 (13%)	5	20
5	RE	165/165 (100%)	126 (76%)	39 (24%)	1	3
5	YE	165/165 (100%)	140 (85%)	25 (15%)	3	14
6	RF	148/149 (99%)	121 (82%)	27 (18%)	2	9
6	YF	149/149 (100%)	120 (80%)	29 (20%)	2	7
7	RG	137/137 (100%)	108 (79%)	29 (21%)	1	6
7	YG	137/137 (100%)	119 (87%)	18 (13%)	5	21
8	RH	114/114 (100%)	93 (82%)	21 (18%)	2	9
8	YH	114/114 (100%)	91 (80%)	23 (20%)	1	7
9	RI	109/109 (100%)	89 (82%)	20 (18%)	2	9
9	YI	109/109 (100%)	102 (94%)	7 (6%)	22	57
10	RJ	116/116 (100%)	86 (74%)	30 (26%)	0	2
10	YJ	116/116 (100%)	99 (85%)	17 (15%)	4	16
11	RK	103/103 (100%)	81 (79%)	22 (21%)	1	5
11	YK	103/103 (100%)	84 (82%)	19 (18%)	2	9
12	RL	102/102 (100%)	80 (78%)	22 (22%)	1	5
12	YL	102/102 (100%)	85 (83%)	17 (17%)	3	11
13	RM	109/109 (100%)	89 (82%)	20 (18%)	2	9
13	YM	109/109 (100%)	98 (90%)	11 (10%)	9	33
14	RN	100/100 (100%)	82 (82%)	18 (18%)	2	10
14	YN	100/100 (100%)	85 (85%)	15 (15%)	3	15
15	RO	86/86 (100%)	67 (78%)	19 (22%)	1	5
15	YO	86/86 (100%)	79 (92%)	7 (8%)	15	47
16	RP	99/99 (100%)	76 (77%)	23 (23%)	1	4
16	YP	99/99 (100%)	89 (90%)	10 (10%)	9	33
17	RQ	89/89 (100%)	69 (78%)	20 (22%)	1	4
17	YQ	89/89 (100%)	75 (84%)	14 (16%)	3	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	RR	84/84 (100%)	70 (83%)	14 (17%)	3	11
18	YR	84/84 (100%)	67 (80%)	17 (20%)	1	7
19	RS	93/93 (100%)	70 (75%)	23 (25%)	1	3
19	YS	93/93 (100%)	73 (78%)	20 (22%)	1	5
20	RT	80/80 (100%)	62 (78%)	18 (22%)	1	4
20	YT	80/80 (100%)	71 (89%)	9 (11%)	7	28
21	RU	83/83 (100%)	63 (76%)	20 (24%)	1	3
21	YU	83/83 (100%)	68 (82%)	15 (18%)	2	9
22	RV	78/78 (100%)	62 (80%)	16 (20%)	1	6
22	YV	78/78 (100%)	67 (86%)	11 (14%)	4	18
23	RW	59/59 (100%)	37 (63%)	22 (37%)	0	0
23	YW	59/59 (100%)	41 (70%)	18 (30%)	0	1
24	RX	67/67 (100%)	50 (75%)	17 (25%)	1	2
24	YX	67/67 (100%)	52 (78%)	15 (22%)	1	4
25	RY	55/55 (100%)	44 (80%)	11 (20%)	1	7
25	YY	55/55 (100%)	51 (93%)	4 (7%)	17	52
26	RZ	48/48 (100%)	33 (69%)	15 (31%)	0	1
26	YZ	48/48 (100%)	37 (77%)	11 (23%)	1	4
27	R0	47/47 (100%)	38 (81%)	9 (19%)	2	8
27	Y0	47/47 (100%)	34 (72%)	13 (28%)	0	1
28	R1	45/45 (100%)	34 (76%)	11 (24%)	1	3
28	Y1	45/45 (100%)	41 (91%)	4 (9%)	12	42
29	R2	38/38 (100%)	30 (79%)	8 (21%)	1	6
29	Y2	38/38 (100%)	32 (84%)	6 (16%)	3	13
30	R3	51/51 (100%)	42 (82%)	9 (18%)	2	10
30	Y3	51/51 (100%)	38 (74%)	13 (26%)	1	2
31	R4	34/34 (100%)	30 (88%)	4 (12%)	6	25
31	Y4	34/34 (100%)	27 (79%)	7 (21%)	1	6
33	QB	180/180 (100%)	138 (77%)	42 (23%)	1	4
33	XB	180/180 (100%)	148 (82%)	32 (18%)	2	10
34	QC	170/170 (100%)	142 (84%)	28 (16%)	3	12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	XC	170/170 (100%)	148 (87%)	22 (13%)	5	21
35	QD	172/172 (100%)	142 (83%)	30 (17%)	2	11
35	XD	172/172 (100%)	133 (77%)	39 (23%)	1	4
36	QE	113/113 (100%)	86 (76%)	27 (24%)	1	3
36	XE	113/113 (100%)	89 (79%)	24 (21%)	1	6
37	QF	87/87 (100%)	71 (82%)	16 (18%)	2	9
37	XF	87/87 (100%)	69 (79%)	18 (21%)	1	6
38	QG	124/124 (100%)	105 (85%)	19 (15%)	3	14
38	XG	123/124 (99%)	94 (76%)	29 (24%)	1	3
39	QH	104/104 (100%)	85 (82%)	19 (18%)	2	9
39	XH	104/104 (100%)	84 (81%)	20 (19%)	2	8
40	QI	105/105 (100%)	82 (78%)	23 (22%)	1	5
40	XI	105/105 (100%)	82 (78%)	23 (22%)	1	5
41	QJ	86/86 (100%)	69 (80%)	17 (20%)	1	7
41	XJ	86/86 (100%)	70 (81%)	16 (19%)	2	9
42	QK	90/90 (100%)	73 (81%)	17 (19%)	2	8
42	XK	90/90 (100%)	76 (84%)	14 (16%)	3	14
43	QL	103/103 (100%)	85 (82%)	18 (18%)	2	10
43	XL	103/103 (100%)	84 (82%)	19 (18%)	2	9
44	QM	92/92 (100%)	85 (92%)	7 (8%)	16	51
44	XM	91/92 (99%)	81 (89%)	10 (11%)	8	30
45	QN	79/84 (94%)	74 (94%)	5 (6%)	22	58
45	XN	75/84 (89%)	64 (85%)	11 (15%)	4	16
46	QO	76/76 (100%)	66 (87%)	10 (13%)	5	20
46	XO	76/76 (100%)	69 (91%)	7 (9%)	11	40
47	QP	65/65 (100%)	55 (85%)	10 (15%)	3	14
47	XP	65/65 (100%)	51 (78%)	14 (22%)	1	5
48	QQ	74/74 (100%)	57 (77%)	17 (23%)	1	4
48	XQ	74/74 (100%)	57 (77%)	17 (23%)	1	4
49	QR	48/48 (100%)	44 (92%)	4 (8%)	14	46
49	XR	48/48 (100%)	42 (88%)	6 (12%)	6	22

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	QS	70/70 (100%)	61 (87%)	9 (13%)	5	21
50	XS	70/70 (100%)	60 (86%)	10 (14%)	4	17
51	QT	65/65 (100%)	48 (74%)	17 (26%)	0	2
51	XT	65/65 (100%)	48 (74%)	17 (26%)	0	2
52	QU	44/44 (100%)	32 (73%)	12 (27%)	0	1
52	XU	44/44 (100%)	36 (82%)	8 (18%)	2	9
All	All	9327/9344 (100%)	7607 (82%)	1720 (18%)	2	9

All (1720) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	RC	2	VAL
3	RC	8	THR
3	RC	12	ARG
3	RC	13	ARG
3	RC	17	LYS
3	RC	20	ASN
3	RC	27	LYS
3	RC	38	LYS
3	RC	43	ASN
3	RC	63	ILE
3	RC	68	ARG
3	RC	70	LYS
3	RC	76	VAL
3	RC	77	VAL
3	RC	79	ARG
3	RC	85	ASN
3	RC	90	ILE
3	RC	93	VAL
3	RC	100	ARG
3	RC	103	ILE
3	RC	109	LEU
3	RC	114	GLN
3	RC	115	ILE
3	RC	119	VAL
3	RC	120	ASP
3	RC	123	ILE
3	RC	142	ASN
3	RC	155	ARG
3	RC	163	ILE

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Mol	Chain	Res	Type
3	RC	166	ARG
3	RC	167	ASP
3	RC	172	THR
3	RC	173	LEU
3	RC	175	LEU
3	RC	176	ARG
3	RC	181	ARG
3	RC	194	VAL
3	RC	198	GLU
3	RC	202	ARG
3	RC	203	VAL
3	RC	212	TRP
3	RC	215	VAL
3	RC	222	THR
3	RC	227	VAL
3	RC	250	GLN
3	RC	252	LYS
3	RC	254	LYS
3	RC	256	THR
3	RC	257	ARG
3	RC	259	ASN
3	RC	268	ARG
3	RC	269	ARG
4	RD	4	LEU
4	RD	14	ILE
4	RD	16	THR
4	RD	26	VAL
4	RD	42	ASN
4	RD	43	ASP
4	RD	46	ARG
4	RD	60	VAL
4	RD	73	VAL
4	RD	89	GLU
4	RD	90	PHE
4	RD	91	THR
4	RD	95	SER
4	RD	114	LYS
4	RD	118	PHE
4	RD	124	ARG
4	RD	141	ARG
4	RD	146	ILE
4	RD	150	GLN

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Mol	Chain	Res	Type
4	RD	151	THR
4	RD	159	LYS
4	RD	170	VAL
4	RD	171	THR
4	RD	183	GLU
4	RD	201	LEU
4	RD	207	VAL
5	RE	12	LEU
5	RE	18	THR
5	RE	21	ARG
5	RE	24	ASN
5	RE	40	ARG
5	RE	44	ARG
5	RE	51	GLU
5	RE	55	SER
5	RE	61	ARG
5	RE	62	GLN
5	RE	65	THR
5	RE	69	ARG
5	RE	70	SER
5	RE	77	ILE
5	RE	78	TRP
5	RE	80	SER
5	RE	93	SER
5	RE	108	ILE
5	RE	109	LEU
5	RE	113	VAL
5	RE	116	ASP
5	RE	118	LEU
5	RE	119	ILE
5	RE	120	VAL
5	RE	121	VAL
5	RE	123	LYS
5	RE	127	GLU
5	RE	144	GLU
5	RE	146	VAL
5	RE	147	LEU
5	RE	149	ILE
5	RE	153	LEU
5	RE	163	ASN
5	RE	166	LYS
5	RE	167	VAL

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Mol	Chain	Res	Type
5	RE	171	ASP
5	RE	176	ASP
5	RE	186	VAL
5	RE	189	THR
6	RF	3	LEU
6	RF	4	HIS
6	RF	8	LYS
6	RF	9	ASP
6	RF	12	VAL
6	RF	17	THR
6	RF	18	GLU
6	RF	24	VAL
6	RF	34	THR
6	RF	35	LEU
6	RF	36	ASN
6	RF	37	MET
6	RF	46	LYS
6	RF	65	LEU
6	RF	80	GLN
6	RF	82	TYR
6	RF	90	LEU
6	RF	102	LEU
6	RF	103	ILE
6	RF	109	ARG
6	RF	114	ARG
6	RF	132	ARG
6	RF	134	GLN
6	RF	136	ILE
6	RF	154	THR
6	RF	163	GLU
6	RF	169	LEU
7	RG	2	ARG
7	RG	8	VAL
7	RG	10	VAL
7	RG	18	ILE
7	RG	21	GLN
7	RG	29	ASN
7	RG	33	THR
7	RG	34	ARG
7	RG	35	THR
7	RG	37	ASN
7	RG	40	VAL

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Mol	Chain	Res	Type
7	RG	42	VAL
7	RG	55	ASP
7	RG	59	ASP
7	RG	68	ARG
7	RG	80	GLU
7	RG	84	LYS
7	RG	86	LEU
7	RG	91	VAL
7	RG	115	GLN
7	RG	116	LEU
7	RG	120	ILE
7	RG	123	GLU
7	RG	131	VAL
7	RG	132	LEU
7	RG	138	GLN
7	RG	151	ARG
7	RG	170	THR
7	RG	174	LYS
8	RH	3	VAL
8	RH	6	LEU
8	RH	12	LEU
8	RH	14	SER
8	RH	15	LEU
8	RH	18	GLN
8	RH	25	TYR
8	RH	28	ASN
8	RH	31	VAL
8	RH	33	GLN
8	RH	43	ASN
8	RH	46	PHE
8	RH	50	ARG
8	RH	54	LEU
8	RH	68	ARG
8	RH	83	LYS
8	RH	96	THR
8	RH	103	VAL
8	RH	104	THR
8	RH	130	VAL
8	RH	135	HIS
9	RI	2	LYS
9	RI	7	TYR
9	RI	9	LYS

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Mol	Chain	Res	Type
9	RI	10	LEU
9	RI	11	GLN
9	RI	23	VAL
9	RI	27	LEU
9	RI	30	GLN
9	RI	37	PHE
9	RI	39	LYS
9	RI	49	GLU
9	RI	61	TYR
9	RI	71	LYS
9	RI	81	LYS
9	RI	85	ILE
9	RI	86	LYS
9	RI	95	ASP
9	RI	108	ILE
9	RI	126	ARG
9	RI	135	MET
10	RJ	1	MET
10	RJ	2	LYS
10	RJ	5	THR
10	RJ	24	THR
10	RJ	25	LEU
10	RJ	30	THR
10	RJ	34	ARG
10	RJ	36	LEU
10	RJ	40	HIS
10	RJ	41	LYS
10	RJ	44	TYR
10	RJ	50	THR
10	RJ	54	ILE
10	RJ	55	ILE
10	RJ	57	LEU
10	RJ	64	VAL
10	RJ	65	THR
10	RJ	67	ASN
10	RJ	69	ARG
10	RJ	84	ILE
10	RJ	85	LYS
10	RJ	86	GLN
10	RJ	101	ILE
10	RJ	103	ILE
10	RJ	111	LYS

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Mol	Chain	Res	Type
10	RJ	114	LEU
10	RJ	118	MET
10	RJ	129	GLU
10	RJ	139	VAL
10	RJ	140	LEU
11	RK	8	LEU
11	RK	18	ARG
11	RK	19	VAL
11	RK	20	MET
11	RK	23	LYS
11	RK	28	SER
11	RK	30	ARG
11	RK	39	ILE
11	RK	47	ILE
11	RK	51	LYS
11	RK	54	LYS
11	RK	58	LEU
11	RK	63	VAL
11	RK	73	ASP
11	RK	89	ASN
11	RK	99	ILE
11	RK	105	ARG
11	RK	107	LEU
11	RK	108	ARG
11	RK	111	LYS
11	RK	114	LYS
11	RK	115	ILE
12	RL	3	LEU
12	RL	4	ASN
12	RL	6	LEU
12	RL	13	LYS
12	RL	19	LEU
12	RL	21	ARG
12	RL	27	LEU
12	RL	47	ARG
12	RL	51	GLU
12	RL	55	MET
12	RL	60	ARG
12	RL	61	LEU
12	RL	66	PHE
12	RL	82	LEU
12	RL	86	GLU

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Mol	Chain	Res	Type
12	RL	94	THR
12	RL	101	ILE
12	RL	103	ILE
12	RL	111	ILE
12	RL	115	GLU
12	RL	121	THR
12	RL	122	VAL
13	RM	1	MET
13	RM	8	LYS
13	RM	10	ARG
13	RM	12	MET
13	RM	24	THR
13	RM	25	ASP
13	RM	33	LEU
13	RM	51	ARG
13	RM	69	PRO
13	RM	70	ASP
13	RM	76	LYS
13	RM	81	ARG
13	RM	90	GLU
13	RM	96	ILE
13	RM	97	GLN
13	RM	100	LYS
13	RM	102	LEU
13	RM	110	GLU
13	RM	118	LYS
13	RM	128	THR
14	RN	8	ARG
14	RN	10	LEU
14	RN	15	SER
14	RN	23	ASN
14	RN	33	ILE
14	RN	35	LYS
14	RN	37	THR
14	RN	51	LEU
14	RN	69	ARG
14	RN	70	THR
14	RN	71	ARG
14	RN	83	LEU
14	RN	86	ARG
14	RN	95	THR
14	RN	97	ILE

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Mol	Chain	Res	Type
14	RN	116	VAL
14	RN	117	ASP
14	RN	120	GLU
15	RO	5	SER
15	RO	9	ARG
15	RO	16	ARG
15	RO	17	LYS
15	RO	31	THR
15	RO	36	TYR
15	RO	45	SER
15	RO	47	VAL
15	RO	52	SER
15	RO	83	LEU
15	RO	84	GLU
15	RO	89	ASP
15	RO	94	ARG
15	RO	100	HIS
15	RO	102	ARG
15	RO	103	VAL
15	RO	106	LEU
15	RO	111	ARG
15	RO	112	GLU
16	RP	3	ILE
16	RP	5	LYS
16	RP	6	GLN
16	RP	14	GLN
16	RP	16	VAL
16	RP	19	PHE
16	RP	20	ARG
16	RP	24	THR
16	RP	28	LYS
16	RP	33	GLU
16	RP	35	SER
16	RP	36	LYS
16	RP	37	LYS
16	RP	38	ARG
16	RP	61	ARG
16	RP	72	VAL
16	RP	75	THR
16	RP	79	VAL
16	RP	83	ILE
16	RP	91	VAL

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Mol	Chain	Res	Type
16	RP	92	ARG
16	RP	95	LYS
16	RP	96	LEU
17	RQ	2	ARG
17	RQ	4	LYS
17	RQ	10	ARG
17	RQ	17	LEU
17	RQ	32	ARG
17	RQ	40	LYS
17	RQ	50	ARG
17	RQ	57	ARG
17	RQ	59	LEU
17	RQ	63	ARG
17	RQ	65	ASN
17	RQ	69	ARG
17	RQ	73	ILE
17	RQ	88	GLU
17	RQ	89	ILE
17	RQ	93	ILE
17	RQ	94	LEU
17	RQ	96	ASP
17	RQ	97	ILE
17	RQ	106	THR
18	RR	10	LYS
18	RR	25	LEU
18	RR	37	GLU
18	RR	38	VAL
18	RR	39	LEU
18	RR	43	ASN
18	RR	46	GLU
18	RR	48	LYS
18	RR	55	ASP
18	RR	58	VAL
18	RR	63	VAL
18	RR	72	VAL
18	RR	85	LYS
18	RR	87	GLN
19	RS	3	THR
19	RS	4	ILE
19	RS	12	SER
19	RS	24	ILE
19	RS	30	SER

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Mol	Chain	Res	Type
19	RS	33	LEU
19	RS	35	ILE
19	RS	36	LEU
19	RS	45	VAL
19	RS	48	LYS
19	RS	50	VAL
19	RS	57	ASN
19	RS	66	ILE
19	RS	68	ASP
19	RS	71	VAL
19	RS	73	LYS
19	RS	76	VAL
19	RS	81	SER
19	RS	88	ARG
19	RS	100	THR
19	RS	101	SER
19	RS	107	VAL
19	RS	109	ASP
20	RT	2	ILE
20	RT	3	ARG
20	RT	4	GLU
20	RT	8	LEU
20	RT	17	SER
20	RT	29	THR
20	RT	30	ILE
20	RT	31	VAL
20	RT	32	LEU
20	RT	43	ILE
20	RT	49	LYS
20	RT	58	VAL
20	RT	64	LYS
20	RT	67	VAL
20	RT	68	LYS
20	RT	69	ARG
20	RT	73	ARG
20	RT	93	LEU
21	RU	8	ASP
21	RU	10	VAL
21	RU	18	LYS
21	RU	20	LYS
21	RU	23	LYS
21	RU	28	LEU

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Mol	Chain	Res	Type
21	RU	30	SER
21	RU	32	LYS
21	RU	33	VAL
21	RU	34	ILE
21	RU	42	LYS
21	RU	43	LYS
21	RU	52	ASN
21	RU	61	GLU
21	RU	64	ILE
21	RU	78	LYS
21	RU	80	ASP
21	RU	86	PHE
21	RU	87	GLU
21	RU	102	ILE
22	RV	1	MET
22	RV	3	THR
22	RV	5	ASN
22	RV	8	VAL
22	RV	10	LYS
22	RV	14	LYS
22	RV	20	LEU
22	RV	35	GLU
22	RV	41	GLU
22	RV	42	LEU
22	RV	46	LYS
22	RV	51	GLN
22	RV	55	GLU
22	RV	61	LEU
22	RV	65	VAL
22	RV	66	ASP
23	RW	10	ARG
23	RW	11	ASN
23	RW	14	ASP
23	RW	15	SER
23	RW	16	GLU
23	RW	19	ARG
23	RW	23	LYS
23	RW	24	ARG
23	RW	25	PHE
23	RW	38	ARG
23	RW	40	ARG
23	RW	42	THR

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Mol	Chain	Res	Type
23	RW	49	ASN
23	RW	54	ARG
23	RW	58	LEU
23	RW	61	LYS
23	RW	67	LYS
23	RW	71	LYS
23	RW	76	ARG
23	RW	77	LYS
23	RW	80	SER
23	RW	81	ILE
24	RX	6	VAL
24	RX	10	ARG
24	RX	17	ARG
24	RX	19	HIS
24	RX	24	THR
24	RX	26	ARG
24	RX	27	ARG
24	RX	29	LEU
24	RX	41	SER
24	RX	42	GLU
24	RX	45	PHE
24	RX	47	THR
24	RX	53	LYS
24	RX	63	ILE
24	RX	65	THR
24	RX	73	ARG
24	RX	77	TYR
25	RY	9	LYS
25	RY	14	LEU
25	RY	18	LEU
25	RY	37	LEU
25	RY	39	GLN
25	RY	42	LEU
25	RY	45	GLN
25	RY	47	ARG
25	RY	56	LEU
25	RY	57	LEU
25	RY	59	GLU
26	RZ	3	THR
26	RZ	4	ILE
26	RZ	5	LYS
26	RZ	8	GLN

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Mol	Chain	Res	Type
26	RZ	9	THR
26	RZ	13	ILE
26	RZ	15	ARG
26	RZ	23	LEU
26	RZ	29	ARG
26	RZ	30	ARG
26	RZ	34	THR
26	RZ	37	ARG
26	RZ	38	GLU
26	RZ	51	SER
26	RZ	58	GLU
27	R0	5	ASN
27	R0	9	ARG
27	R0	17	SER
27	R0	26	SER
27	R0	27	LEU
27	R0	28	SER
27	R0	39	ARG
27	R0	42	ILE
27	R0	45	ASP
28	R1	4	ILE
28	R1	9	LYS
28	R1	13	SER
28	R1	16	THR
28	R1	21	THR
28	R1	29	LYS
28	R1	33	LEU
28	R1	35	LEU
28	R1	41	VAL
28	R1	42	VAL
28	R1	47	ILE
29	R2	1	MET
29	R2	3	ARG
29	R2	8	SER
29	R2	12	ARG
29	R2	21	ARG
29	R2	24	THR
29	R2	39	ARG
29	R2	45	SER
30	R3	5	THR
30	R3	7	ARG
30	R3	12	ARG

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Mol	Chain	Res	Type
30	R3	22	LYS
30	R3	29	ARG
30	R3	31	ILE
30	R3	49	VAL
30	R3	51	LYS
30	R3	56	LEU
31	R4	6	SER
31	R4	9	LYS
31	R4	16	ILE
31	R4	27	CYS
33	QB	8	MET
33	QB	10	LYS
33	QB	13	VAL
33	QB	14	HIS
33	QB	15	PHE
33	QB	19	THR
33	QB	20	ARG
33	QB	26	MET
33	QB	30	ILE
33	QB	36	LYS
33	QB	38	HIS
33	QB	42	LEU
33	QB	57	ASN
33	QB	67	LEU
33	QB	73	ARG
33	QB	86	CYS
33	QB	87	ASP
33	QB	88	GLN
33	QB	90	PHE
33	QB	100	LEU
33	QB	102	ASN
33	QB	108	GLN
33	QB	115	ASP
33	QB	116	LEU
33	QB	117	GLU
33	QB	119	GLN
33	QB	125	PHE
33	QB	128	LEU
33	QB	141	GLU
33	QB	143	LEU
33	QB	156	LEU
33	QB	158	ASP

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Mol	Chain	Res	Type
33	QB	170	ILE
33	QB	178	LEU
33	QB	185	ILE
33	QB	193	ASP
33	QB	204	ASP
33	QB	206	ILE
33	QB	207	ARG
33	QB	211	LEU
33	QB	219	THR
33	QB	221	ARG
34	QC	2	GLN
34	QC	13	ILE
34	QC	15	LYS
34	QC	17	TRP
34	QC	24	ASN
34	QC	25	THR
34	QC	26	LYS
34	QC	27	GLU
34	QC	28	PHE
34	QC	32	LEU
34	QC	35	ASP
34	QC	36	PHE
34	QC	50	SER
34	QC	52	SER
34	QC	54	ILE
34	QC	79	LYS
34	QC	106	ARG
34	QC	119	ILE
34	QC	120	THR
34	QC	139	ASN
34	QC	143	LEU
34	QC	149	LYS
34	QC	161	ILE
34	QC	165	GLU
34	QC	166	TRP
34	QC	183	TYR
34	QC	184	ASN
34	QC	199	VAL
35	QD	21	LYS
35	QD	25	ARG
35	QD	31	CYS
35	QD	43	ARG

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Mol	Chain	Res	Type
35	QD	52	VAL
35	QD	54	LEU
35	QD	55	ARG
35	QD	57	LYS
35	QD	58	GLN
35	QD	68	GLU
35	QD	69	ARG
35	QD	92	LEU
35	QD	103	ARG
35	QD	110	ARG
35	QD	115	GLN
35	QD	122	ILE
35	QD	127	ARG
35	QD	131	ILE
35	QD	141	VAL
35	QD	147	LYS
35	QD	153	ARG
35	QD	154	VAL
35	QD	160	LEU
35	QD	162	GLU
35	QD	166	LYS
35	QD	170	LEU
35	QD	178	GLU
35	QD	196	GLU
35	QD	199	ILE
35	QD	205	LYS
36	QE	9	GLU
36	QE	11	GLN
36	QE	14	LEU
36	QE	18	ASN
36	QE	25	LYS
36	QE	28	ARG
36	QE	37	VAL
36	QE	45	VAL
36	QE	68	ARG
36	QE	75	LEU
36	QE	79	THR
36	QE	81	GLN
36	QE	93	VAL
36	QE	95	MET
36	QE	100	GLU
36	QE	113	VAL

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Mol	Chain	Res	Type
36	QE	116	VAL
36	QE	121	ASN
36	QE	123	LEU
36	QE	125	LYS
36	QE	135	VAL
36	QE	136	VAL
36	QE	141	ASP
36	QE	146	MET
36	QE	147	ASN
36	QE	155	LYS
36	QE	156	ARG
37	QF	7	VAL
37	QF	14	GLN
37	QF	24	ARG
37	QF	35	LYS
37	QF	38	ARG
37	QF	39	LEU
37	QF	46	GLN
37	QF	52	ASN
37	QF	54	LEU
37	QF	55	HIS
37	QF	68	GLN
37	QF	69	GLU
37	QF	77	THR
37	QF	86	ARG
37	QF	87	SER
37	QF	93	LYS
38	QG	3	ARG
38	QG	6	ILE
38	QG	8	GLN
38	QG	11	ILE
38	QG	12	LEU
38	QG	20	GLU
38	QG	21	LEU
38	QG	22	LEU
38	QG	37	THR
38	QG	47	GLU
38	QG	58	LEU
38	QG	62	GLU
38	QG	72	VAL
38	QG	83	THR
38	QG	85	GLN

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Mol	Chain	Res	Type
38	QG	93	VAL
38	QG	108	ARG
38	QG	123	LEU
38	QG	139	ASP
39	QH	11	THR
39	QH	20	ASN
39	QH	21	LYS
39	QH	58	LEU
39	QH	59	GLU
39	QH	62	LEU
39	QH	65	PHE
39	QH	72	GLU
39	QH	76	ARG
39	QH	79	ARG
39	QH	82	LEU
39	QH	86	LYS
39	QH	89	ASP
39	QH	98	LEU
39	QH	103	VAL
39	QH	110	MET
39	QH	116	ARG
39	QH	120	LEU
39	QH	128	VAL
40	QI	11	ARG
40	QI	21	LYS
40	QI	35	GLU
40	QI	37	TYR
40	QI	42	THR
40	QI	44	ARG
40	QI	47	VAL
40	QI	48	ARG
40	QI	54	VAL
40	QI	56	MET
40	QI	59	LYS
40	QI	62	LEU
40	QI	64	ILE
40	QI	67	LYS
40	QI	86	LEU
40	QI	87	MET
40	QI	89	TYR
40	QI	93	LEU
40	QI	98	ARG

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Mol	Chain	Res	Type
40	QI	105	ARG
40	QI	106	ASP
40	QI	126	PHE
40	QI	128	LYS
41	QJ	6	ILE
41	QJ	17	LEU
41	QJ	22	THR
41	QJ	32	THR
41	QJ	35	GLN
41	QJ	44	THR
41	QJ	46	LYS
41	QJ	48	ARG
41	QJ	50	THR
41	QJ	59	LYS
41	QJ	63	ASP
41	QJ	70	HIS
41	QJ	73	LEU
41	QJ	75	ASP
41	QJ	87	LEU
41	QJ	89	ARG
41	QJ	100	ILE
42	QK	30	ILE
42	QK	51	PHE
42	QK	52	ARG
42	QK	55	ARG
42	QK	64	VAL
42	QK	76	TYR
42	QK	78	ILE
42	QK	81	LEU
42	QK	82	GLU
42	QK	96	ILE
42	QK	100	ASN
42	QK	106	ILE
42	QK	107	THR
42	QK	124	LYS
42	QK	125	LYS
42	QK	127	ARG
42	QK	128	VAL
43	QL	3	VAL
43	QL	9	LYS
43	QL	15	VAL
43	QL	17	LYS

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Mol	Chain	Res	Type
43	QL	26	CYS
43	QL	28	GLN
43	QL	32	VAL
43	QL	35	ARG
43	QL	43	LYS
43	QL	49	ARG
43	QL	63	THR
43	QL	74	GLN
43	QL	82	ARG
43	QL	87	LYS
43	QL	88	ASP
43	QL	94	TYR
43	QL	101	LEU
43	QL	109	ARG
44	QM	6	ILE
44	QM	42	VAL
44	QM	59	VAL
44	QM	71	GLU
44	QM	86	ARG
44	QM	100	ARG
44	QM	106	ARG
45	QN	3	GLN
45	QN	26	LEU
45	QN	58	ARG
45	QN	83	VAL
45	QN	96	LYS
46	QO	16	ARG
46	QO	21	THR
46	QO	34	GLN
46	QO	39	GLN
46	QO	44	GLU
46	QO	47	LYS
46	QO	57	ARG
46	QO	60	SER
46	QO	84	LEU
46	QO	86	LEU
47	QP	6	LEU
47	QP	19	VAL
47	QP	29	ASN
47	QP	31	ARG
47	QP	36	VAL
47	QP	46	LYS

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Mol	Chain	Res	Type
47	QP	55	ASP
47	QP	63	GLN
47	QP	68	SER
47	QP	77	GLU
48	QQ	3	LYS
48	QQ	16	MET
48	QQ	20	ILE
48	QQ	21	VAL
48	QQ	29	LYS
48	QQ	37	ILE
48	QQ	47	ASP
48	QQ	49	ASN
48	QQ	50	ASN
48	QQ	51	GLU
48	QQ	52	CYS
48	QQ	54	ILE
48	QQ	64	ARG
48	QQ	73	THR
48	QQ	74	LEU
48	QQ	75	VAL
48	QQ	80	LYS
49	QR	20	ILE
49	QR	35	SER
49	QR	54	LEU
49	QR	70	THR
50	QS	6	LYS
50	QS	20	LYS
50	QS	26	ASP
50	QS	42	ASN
50	QS	54	ARG
50	QS	55	GLN
50	QS	61	VAL
50	QS	64	GLU
50	QS	79	TYR
51	QT	2	ASN
51	QT	4	LYS
51	QT	5	SER
51	QT	11	ILE
51	QT	17	ARG
51	QT	22	SER
51	QT	26	MET
51	QT	27	MET

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Mol	Chain	Res	Type
51	QT	33	LYS
51	QT	35	TYR
51	QT	42	ASP
51	QT	48	LYS
51	QT	65	LEU
51	QT	67	HIS
51	QT	75	LYS
51	QT	77	ASN
51	QT	84	LYS
52	QU	4	LYS
52	QU	8	ASN
52	QU	9	GLU
52	QU	11	PHE
52	QU	12	ASP
52	QU	15	LEU
52	QU	18	PHE
52	QU	19	LYS
52	QU	33	ARG
52	QU	38	GLU
52	QU	39	LYS
52	QU	42	THR
33	XB	8	MET
33	XB	9	LEU
33	XB	10	LYS
33	XB	14	HIS
33	XB	17	HIS
33	XB	19	THR
33	XB	22	TRP
33	XB	26	MET
33	XB	31	PHE
33	XB	34	ARG
33	XB	36	LYS
33	XB	39	ILE
33	XB	42	LEU
33	XB	46	VAL
33	XB	61	SER
33	XB	69	VAL
33	XB	88	GLN
33	XB	103	TRP
33	XB	105	THR
33	XB	108	GLN
33	XB	112	ARG

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Mol	Chain	Res	Type
33	XB	124	THR
33	XB	125	PHE
33	XB	131	LYS
33	XB	147	LEU
33	XB	164	ASP
33	XB	177	ASN
33	XB	182	VAL
33	XB	191	ASP
33	XB	196	ASP
33	XB	209	VAL
33	XB	212	TYR
34	XC	10	ARG
34	XC	26	LYS
34	XC	34	SER
34	XC	35	ASP
34	XC	38	VAL
34	XC	41	TYR
34	XC	55	VAL
34	XC	106	ARG
34	XC	123	LEU
34	XC	126	ARG
34	XC	134	LYS
34	XC	139	ASN
34	XC	153	SER
34	XC	160	GLU
34	XC	161	ILE
34	XC	164	THR
34	XC	166	TRP
34	XC	178	ARG
34	XC	182	ASP
34	XC	185	THR
34	XC	191	THR
34	XC	198	LYS
35	XD	2	ARG
35	XD	8	LEU
35	XD	12	ARG
35	XD	20	LEU
35	XD	24	VAL
35	XD	25	ARG
35	XD	29	THR
35	XD	30	LYS
35	XD	31	CYS

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Mol	Chain	Res	Type
35	XD	34	GLU
35	XD	43	ARG
35	XD	55	ARG
35	XD	57	LYS
35	XD	58	GLN
35	XD	62	ARG
35	XD	69	ARG
35	XD	74	TYR
35	XD	80	ARG
35	XD	84	ASN
35	XD	98	ASP
35	XD	106	PHE
35	XD	116	LEU
35	XD	127	ARG
35	XD	146	GLU
35	XD	147	LYS
35	XD	151	GLN
35	XD	152	SER
35	XD	153	ARG
35	XD	154	VAL
35	XD	160	LEU
35	XD	168	THR
35	XD	170	LEU
35	XD	183	ARG
35	XD	184	LYS
35	XD	187	ARG
35	XD	189	ASP
35	XD	194	ILE
35	XD	199	ILE
35	XD	204	SER
36	XE	11	GLN
36	XE	13	LYS
36	XE	18	ASN
36	XE	25	LYS
36	XE	31	SER
36	XE	35	LEU
36	XE	51	LYS
36	XE	59	ILE
36	XE	75	LEU
36	XE	76	ASN
36	XE	80	LEU
36	XE	87	VAL

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Mol	Chain	Res	Type
36	XE	91	SER
36	XE	95	MET
36	XE	99	SER
36	XE	104	ILE
36	XE	119	VAL
36	XE	129	SER
36	XE	133	ILE
36	XE	134	ASN
36	XE	136	VAL
36	XE	137	ARG
36	XE	139	THR
36	XE	144	GLU
37	XF	7	VAL
37	XF	10	VAL
37	XF	17	GLN
37	XF	33	GLU
37	XF	38	ARG
37	XF	44	ARG
37	XF	52	ASN
37	XF	54	LEU
37	XF	56	LYS
37	XF	58	HIS
37	XF	61	LEU
37	XF	72	ASP
37	XF	80	PHE
37	XF	86	ARG
37	XF	89	VAL
37	XF	90	MET
37	XF	96	VAL
37	XF	98	GLU
38	XG	3	ARG
38	XG	5	VAL
38	XG	6	ILE
38	XG	8	GLN
38	XG	9	ARG
38	XG	10	LYS
38	XG	12	LEU
38	XG	34	LYS
38	XG	49	LEU
38	XG	55	LYS
38	XG	57	GLU
38	XG	58	LEU

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Mol	Chain	Res	Type
38	XG	61	PHE
38	XG	66	GLU
38	XG	75	LYS
38	XG	77	ARG
38	XG	78	ARG
38	XG	85	GLN
38	XG	95	ARG
38	XG	100	MET
38	XG	101	ARG
38	XG	102	TRP
38	XG	110	ARG
38	XG	119	LEU
38	XG	123	LEU
38	XG	125	ASP
38	XG	137	ARG
38	XG	139	ASP
38	XG	148	LYS
39	XH	37	ASN
39	XH	40	LYS
39	XH	42	GLU
39	XH	46	GLU
39	XH	47	ASP
39	XH	50	VAL
39	XH	54	THR
39	XH	59	GLU
39	XH	62	LEU
39	XH	70	VAL
39	XH	76	ARG
39	XH	79	ARG
39	XH	82	LEU
39	XH	84	ILE
39	XH	89	ASP
39	XH	93	LYS
39	XH	102	VAL
39	XH	103	VAL
39	XH	106	SER
39	XH	110	MET
40	XI	4	GLN
40	XI	11	ARG
40	XI	20	ILE
40	XI	26	LYS
40	XI	37	TYR

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Mol	Chain	Res	Type
40	XI	45	MET
40	XI	47	VAL
40	XI	53	LEU
40	XI	54	VAL
40	XI	55	ASP
40	XI	60	LEU
40	XI	61	ASP
40	XI	63	TYR
40	XI	83	THR
40	XI	87	MET
40	XI	89	TYR
40	XI	105	ARG
40	XI	106	ASP
40	XI	111	GLU
40	XI	115	VAL
40	XI	123	ARG
40	XI	125	GLN
40	XI	129	ARG
41	XJ	11	LYS
41	XJ	15	HIS
41	XJ	28	THR
41	XJ	48	ARG
41	XJ	50	THR
41	XJ	59	LYS
41	XJ	60	ASP
41	XJ	64	GLN
41	XJ	67	ILE
41	XJ	69	THR
41	XJ	75	ASP
41	XJ	82	LYS
41	XJ	87	LEU
41	XJ	90	LEU
41	XJ	92	LEU
41	XJ	101	SER
42	XK	12	ARG
42	XK	33	ILE
42	XK	71	ASP
42	XK	73	VAL
42	XK	78	ILE
42	XK	81	LEU
42	XK	92	ARG
42	XK	94	SER

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Mol	Chain	Res	Type
42	XK	105	ARG
42	XK	106	ILE
42	XK	112	VAL
42	XK	115	ILE
42	XK	121	ARG
42	XK	128	VAL
43	XL	3	VAL
43	XL	5	GLN
43	XL	9	LYS
43	XL	14	LYS
43	XL	19	ASN
43	XL	28	GLN
43	XL	39	THR
43	XL	48	LEU
43	XL	49	ARG
43	XL	57	THR
43	XL	62	VAL
43	XL	72	ASN
43	XL	82	ARG
43	XL	88	ASP
43	XL	96	THR
43	XL	97	VAL
43	XL	102	ASP
43	XL	107	LYS
43	XL	120	ARG
44	XM	12	LYS
44	XM	24	VAL
44	XM	28	ARG
44	XM	32	ILE
44	XM	53	ASP
44	XM	65	GLU
44	XM	91	ARG
44	XM	92	ARG
44	XM	100	ARG
44	XM	113	LYS
45	XN	3	GLN
45	XN	27	LYS
45	XN	41	TRP
45	XN	52	ARG
45	XN	53	ASP
45	XN	58	ARG
45	XN	61	ASN

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Mol	Chain	Res	Type
45	XN	65	GLN
45	XN	72	PHE
45	XN	96	LYS
45	XN	100	TRP
46	XO	16	ARG
46	XO	38	LEU
46	XO	39	GLN
46	XO	45	HIS
46	XO	65	LEU
46	XO	80	LEU
46	XO	87	ARG
47	XP	1	MET
47	XP	2	VAL
47	XP	3	THR
47	XP	6	LEU
47	XP	18	GLN
47	XP	29	ASN
47	XP	35	ARG
47	XP	36	VAL
47	XP	44	SER
47	XP	46	LYS
47	XP	54	LEU
47	XP	56	ARG
47	XP	69	ASP
47	XP	71	VAL
48	XQ	3	LYS
48	XQ	4	ILE
48	XQ	6	THR
48	XQ	20	ILE
48	XQ	27	PHE
48	XQ	28	VAL
48	XQ	32	ILE
48	XQ	37	ILE
48	XQ	39	ARG
48	XQ	43	LEU
48	XQ	51	GLU
48	XQ	52	CYS
48	XQ	54	ILE
48	XQ	67	SER
48	XQ	73	THR
48	XQ	78	VAL
48	XQ	80	LYS

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Mol	Chain	Res	Type
49	XR	25	ILE
49	XR	30	ASN
49	XR	32	ILE
49	XR	47	ARG
49	XR	49	LYS
49	XR	72	ARG
50	XS	5	LYS
50	XS	10	ILE
50	XS	11	ASP
50	XS	46	LEU
50	XS	52	ASN
50	XS	54	ARG
50	XS	57	VAL
50	XS	72	GLU
50	XS	73	PHE
50	XS	80	ARG
51	XT	5	SER
51	XT	8	LYS
51	XT	11	ILE
51	XT	13	SER
51	XT	26	MET
51	XT	30	PHE
51	XT	35	TYR
51	XT	42	ASP
51	XT	47	GLN
51	XT	51	ASN
51	XT	53	MET
51	XT	67	HIS
51	XT	68	LYS
51	XT	73	ARG
51	XT	74	HIS
51	XT	78	LEU
51	XT	82	ILE
52	XU	4	LYS
52	XU	9	GLU
52	XU	24	LYS
52	XU	28	LEU
52	XU	32	ARG
52	XU	36	PHE
52	XU	37	TYR
52	XU	53	LYS
3	YC	12	ARG

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Mol	Chain	Res	Type
3	YC	23	LEU
3	YC	35	LYS
3	YC	43	ASN
3	YC	44	ASN
3	YC	51	ARG
3	YC	52	HIS
3	YC	57	HIS
3	YC	71	ASP
3	YC	102	TYR
3	YC	117	SER
3	YC	124	LYS
3	YC	134	ILE
3	YC	152	GLN
3	YC	162	GLN
3	YC	172	THR
3	YC	173	LEU
3	YC	176	ARG
3	YC	181	ARG
3	YC	183	VAL
3	YC	187	CYS
3	YC	188	ARG
3	YC	190	THR
3	YC	196	ASN
3	YC	212	TRP
3	YC	213	ARG
3	YC	227	VAL
3	YC	235	GLU
3	YC	250	GLN
3	YC	251	THR
3	YC	256	THR
3	YC	258	SER
3	YC	260	LYS
3	YC	267	VAL
3	YC	269	ARG
4	YD	16	THR
4	YD	32	ASN
4	YD	33	ARG
4	YD	38	LYS
4	YD	55	LYS
4	YD	62	LYS
4	YD	79	LEU
4	YD	84	LEU

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Mol	Chain	Res	Type
4	YD	98	VAL
4	YD	100	LEU
4	YD	106	LYS
4	YD	121	THR
4	YD	138	LEU
4	YD	140	HIS
4	YD	141	ARG
4	YD	148	GLN
4	YD	150	GLN
4	YD	159	LYS
4	YD	168	GLU
4	YD	172	VAL
4	YD	193	VAL
4	YD	203	VAL
5	YE	53	THR
5	YE	57	LYS
5	YE	61	ARG
5	YE	63	LYS
5	YE	67	ARG
5	YE	69	ARG
5	YE	73	ILE
5	YE	77	ILE
5	YE	78	TRP
5	YE	84	THR
5	YE	91	ASP
5	YE	93	SER
5	YE	105	LEU
5	YE	108	ILE
5	YE	112	LEU
5	YE	117	ARG
5	YE	126	VAL
5	YE	139	LYS
5	YE	149	ILE
5	YE	157	LEU
5	YE	163	ASN
5	YE	164	LEU
5	YE	166	LYS
5	YE	169	VAL
5	YE	191	ASP
6	YF	5	ASP
6	YF	13	LYS
6	YF	25	MET

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Mol	Chain	Res	Type
6	YF	31	GLU
6	YF	48	LEU
6	YF	49	LEU
6	YF	82	TYR
6	YF	87	LYS
6	YF	91	ARG
6	YF	94	ARG
6	YF	97	GLU
6	YF	110	ILE
6	YF	111	ARG
6	YF	113	PHE
6	YF	119	LYS
6	YF	122	ASP
6	YF	133	GLU
6	YF	134	GLN
6	YF	135	ILE
6	YF	139	GLU
6	YF	141	ASP
6	YF	142	TYR
6	YF	147	ARG
6	YF	151	LEU
6	YF	155	ILE
6	YF	160	LYS
6	YF	169	LEU
6	YF	172	PHE
6	YF	177	ARG
7	YG	2	ARG
7	YG	19	ASN
7	YG	34	ARG
7	YG	35	THR
7	YG	40	VAL
7	YG	42	VAL
7	YG	51	PHE
7	YG	72	ASN
7	YG	84	LYS
7	YG	91	VAL
7	YG	93	TYR
7	YG	101	VAL
7	YG	120	ILE
7	YG	126	THR
7	YG	162	ARG
7	YG	163	TYR

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Mol	Chain	Res	Type
7	YG	166	GLU
7	YG	176	LYS
8	YH	8	LYS
8	YH	22	LYS
8	YH	25	TYR
8	YH	27	ARG
8	YH	28	ASN
8	YH	50	ARG
8	YH	55	GLU
8	YH	57	LYS
8	YH	62	LEU
8	YH	66	ASN
8	YH	68	ARG
8	YH	71	LYS
8	YH	76	GLU
8	YH	86	ASP
8	YH	90	LEU
8	YH	91	PHE
8	YH	98	ASP
8	YH	103	VAL
8	YH	104	THR
8	YH	109	GLU
8	YH	132	PHE
8	YH	133	GLN
8	YH	144	VAL
9	YI	7	TYR
9	YI	30	GLN
9	YI	36	GLU
9	YI	58	ILE
9	YI	68	PHE
9	YI	93	ASN
9	YI	106	GLN
10	YJ	3	THR
10	YJ	5	THR
10	YJ	25	LEU
10	YJ	34	ARG
10	YJ	43	GLU
10	YJ	47	HIS
10	YJ	54	ILE
10	YJ	57	LEU
10	YJ	80	HIS
10	YJ	92	MET

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Mol	Chain	Res	Type
10	YJ	93	ILE
10	YJ	95	ARG
10	YJ	98	GLU
10	YJ	99	ARG
10	YJ	106	LYS
10	YJ	129	GLU
10	YJ	139	VAL
11	YK	3	GLN
11	YK	7	MET
11	YK	10	VAL
11	YK	13	ASN
11	YK	24	VAL
11	YK	25	LEU
11	YK	39	ILE
11	YK	41	ILE
11	YK	47	ILE
11	YK	49	ARG
11	YK	54	LYS
11	YK	65	THR
11	YK	77	ILE
11	YK	87	LEU
11	YK	105	ARG
11	YK	106	GLU
11	YK	107	LEU
11	YK	111	LYS
11	YK	114	LYS
12	YL	3	LEU
12	YL	4	ASN
12	YL	6	LEU
12	YL	18	ARG
12	YL	47	ARG
12	YL	48	ARG
12	YL	69	ARG
12	YL	79	LEU
12	YL	82	LEU
12	YL	92	LEU
12	YL	99	ASN
12	YL	103	ILE
12	YL	111	ILE
12	YL	112	LEU
12	YL	116	VAL
12	YL	141	LYS

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Mol	Chain	Res	Type
12	YL	143	GLU
13	YM	7	THR
13	YM	8	LYS
13	YM	38	ARG
13	YM	47	GLU
13	YM	66	ARG
13	YM	73	ILE
13	YM	78	LEU
13	YM	97	GLN
13	YM	105	MET
13	YM	115	GLU
13	YM	126	ILE
14	YN	14	SER
14	YN	18	GLN
14	YN	20	MET
14	YN	21	PHE
14	YN	33	ILE
14	YN	34	ILE
14	YN	40	LYS
14	YN	62	ASN
14	YN	69	ARG
14	YN	78	LYS
14	YN	94	TYR
14	YN	95	THR
14	YN	96	ARG
14	YN	97	ILE
14	YN	114	GLU
15	YO	17	LYS
15	YO	31	THR
15	YO	65	THR
15	YO	68	LYS
15	YO	90	VAL
15	YO	115	LEU
15	YO	117	PHE
16	YP	6	GLN
16	YP	7	LEU
16	YP	13	LYS
16	YP	15	ASP
16	YP	28	LYS
16	YP	50	ARG
16	YP	67	GLU
16	YP	83	ILE

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Mol	Chain	Res	Type
16	YP	86	LYS
16	YP	101	GLU
17	YQ	3	VAL
17	YQ	10	ARG
17	YQ	12	ARG
17	YQ	15	LYS
17	YQ	21	LYS
17	YQ	35	PHE
17	YQ	39	ILE
17	YQ	50	ARG
17	YQ	54	ARG
17	YQ	57	ARG
17	YQ	63	ARG
17	YQ	69	ARG
17	YQ	79	ILE
17	YQ	93	ILE
18	YR	6	GLN
18	YR	10	LYS
18	YR	13	ARG
18	YR	21	ARG
18	YR	22	LEU
18	YR	37	GLU
18	YR	48	LYS
18	YR	49	ILE
18	YR	51	VAL
18	YR	58	VAL
18	YR	75	VAL
18	YR	80	ARG
18	YR	83	TYR
18	YR	86	GLN
18	YR	90	ARG
18	YR	93	PHE
18	YR	95	ASP
19	YS	4	ILE
19	YS	6	LYS
19	YS	9	HIS
19	YS	22	ASP
19	YS	23	LEU
19	YS	31	GLN
19	YS	33	LEU
19	YS	45	VAL
19	YS	46	LEU

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Mol	Chain	Res	Type
19	YS	62	ASP
19	YS	66	ILE
19	YS	70	LYS
19	YS	73	LYS
19	YS	74	ILE
19	YS	76	VAL
19	YS	84	ARG
19	YS	85	ILE
19	YS	86	MET
19	YS	88	ARG
19	YS	101	SER
20	YT	8	LEU
20	YT	9	LYS
20	YT	18	GLU
20	YT	21	SER
20	YT	39	THR
20	YT	50	LEU
20	YT	54	GLU
20	YT	67	VAL
20	YT	91	GLN
21	YU	13	LEU
21	YU	20	LYS
21	YU	21	ARG
21	YU	40	LEU
21	YU	45	GLN
21	YU	61	GLU
21	YU	65	GLN
21	YU	71	ILE
21	YU	81	ARG
21	YU	82	VAL
21	YU	85	ARG
21	YU	94	PHE
21	YU	95	PHE
21	YU	98	ASN
21	YU	101	THR
22	YV	26	PHE
22	YV	40	ILE
22	YV	41	GLU
22	YV	44	HIS
22	YV	51	GLN
22	YV	56	PHE
22	YV	61	LEU

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Mol	Chain	Res	Type
22	YV	65	VAL
22	YV	69	GLU
22	YV	70	ILE
22	YV	76	ASP
23	YW	11	ASN
23	YW	18	LYS
23	YW	22	VAL
23	YW	23	LYS
23	YW	25	PHE
23	YW	28	GLU
23	YW	30	VAL
23	YW	31	LEU
23	YW	35	ILE
23	YW	38	ARG
23	YW	39	GLN
23	YW	40	ARG
23	YW	44	PHE
23	YW	58	LEU
23	YW	59	PHE
23	YW	68	PHE
23	YW	76	ARG
23	YW	77	LYS
24	YX	5	GLN
24	YX	6	VAL
24	YX	25	LYS
24	YX	26	ARG
24	YX	29	LEU
24	YX	31	ASN
24	YX	33	HIS
24	YX	34	SER
24	YX	44	ARG
24	YX	46	VAL
24	YX	47	THR
24	YX	53	LYS
24	YX	57	VAL
24	YX	63	ILE
24	YX	73	ARG
25	YY	1	MET
25	YY	4	LYS
25	YY	28	LEU
25	YY	45	GLN
26	YZ	3	THR

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Mol	Chain	Res	Type
26	YZ	16	LEU
26	YZ	24	LEU
26	YZ	28	LEU
26	YZ	29	ARG
26	YZ	30	ARG
26	YZ	34	THR
26	YZ	51	SER
26	YZ	53	MET
26	YZ	55	LYS
26	YZ	58	GLU
27	Y0	3	GLN
27	Y0	5	ASN
27	Y0	9	ARG
27	Y0	27	LEU
27	Y0	33	SER
27	Y0	37	HIS
27	Y0	39	ARG
27	Y0	41	HIS
27	Y0	42	ILE
27	Y0	48	TYR
27	Y0	49	ARG
27	Y0	53	VAL
27	Y0	54	ILE
28	Y1	10	LEU
28	Y1	20	TYR
28	Y1	44	GLN
28	Y1	45	HIS
29	Y2	8	SER
29	Y2	22	MET
29	Y2	26	ASN
29	Y2	28	ARG
29	Y2	45	SER
29	Y2	46	LYS
30	Y3	12	ARG
30	Y3	14	LYS
30	Y3	24	LYS
30	Y3	25	HIS
30	Y3	27	ASN
30	Y3	28	LEU
30	Y3	29	ARG
30	Y3	33	THR
30	Y3	41	ARG

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Mol	Chain	Res	Type
30	Y3	46	LYS
30	Y3	48	MET
30	Y3	51	LYS
30	Y3	61	LEU
31	Y4	2	LYS
31	Y4	3	VAL
31	Y4	9	LYS
31	Y4	15	LYS
31	Y4	17	VAL
31	Y4	20	ASP
31	Y4	28	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (309) such sidechains are listed below:

Mol	Chain	Res	Type
3	RC	14	HIS
3	RC	20	ASN
3	RC	43	ASN
3	RC	59	GLN
3	RC	89	ASN
3	RC	114	GLN
3	RC	141	HIS
3	RC	152	GLN
3	RC	250	GLN
4	RD	32	ASN
4	RD	42	ASN
4	RD	58	ASN
4	RD	126	ASN
4	RD	130	GLN
4	RD	150	GLN
5	RE	24	ASN
5	RE	29	HIS
5	RE	30	GLN
5	RE	46	GLN
5	RE	62	GLN
5	RE	97	ASN
5	RE	136	GLN
6	RF	20	ASN
6	RF	22	ASN
6	RF	26	GLN
6	RF	134	GLN
7	RG	72	ASN

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Mol	Chain	Res	Type
7	RG	114	HIS
7	RG	138	GLN
8	RH	2	GLN
8	RH	18	GLN
8	RH	20	ASN
8	RH	28	ASN
8	RH	33	GLN
8	RH	43	ASN
8	RH	145	ASN
9	RI	5	GLN
9	RI	30	GLN
9	RI	33	ASN
10	RJ	40	HIS
10	RJ	58	ASN
10	RJ	76	HIS
10	RJ	77	HIS
10	RJ	128	ASN
10	RJ	130	HIS
11	RK	3	GLN
11	RK	88	ASN
11	RK	89	ASN
12	RL	4	ASN
12	RL	54	GLN
12	RL	93	ASN
12	RL	99	ASN
12	RL	104	GLN
13	RM	13	HIS
13	RM	97	GLN
14	RN	9	GLN
14	RN	11	ASN
14	RN	18	GLN
14	RN	23	ASN
14	RN	62	ASN
14	RN	73	ASN
14	RN	107	ASN
15	RO	19	GLN
15	RO	34	HIS
15	RO	38	GLN
16	RP	9	GLN
16	RP	74	GLN
17	RQ	13	HIS
17	RQ	65	ASN

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Mol	Chain	Res	Type
19	RS	15	GLN
19	RS	57	ASN
19	RS	61	ASN
20	RT	70	HIS
20	RT	72	GLN
20	RT	91	GLN
21	RU	26	ASN
21	RU	65	GLN
21	RU	73	ASN
22	RV	5	ASN
22	RV	44	HIS
22	RV	51	GLN
22	RV	80	HIS
22	RV	88	HIS
23	RW	11	ASN
23	RW	39	GLN
24	RX	5	GLN
24	RX	15	ASN
24	RX	22	ASN
25	RY	15	ASN
25	RY	20	ASN
25	RY	27	ASN
25	RY	31	GLN
25	RY	41	HIS
25	RY	45	GLN
25	RY	58	ASN
26	RZ	8	GLN
27	R0	4	GLN
29	R2	13	ASN
29	R2	16	HIS
30	R3	27	ASN
31	R4	33	HIS
31	R4	35	GLN
31	R4	37	GLN
33	QB	14	HIS
33	QB	38	HIS
33	QB	57	ASN
33	QB	88	GLN
33	QB	102	ASN
33	QB	108	GLN
33	QB	119	GLN
33	QB	167	HIS

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Mol	Chain	Res	Type
33	QB	189	ASN
34	QC	5	HIS
34	QC	24	ASN
34	QC	68	HIS
34	QC	139	ASN
34	QC	184	ASN
35	QD	40	HIS
35	QD	53	GLN
35	QD	58	GLN
35	QD	70	GLN
35	QD	73	ASN
35	QD	84	ASN
35	QD	99	ASN
35	QD	163	GLN
36	QE	11	GLN
36	QE	42	ASN
36	QE	69	ASN
36	QE	72	ASN
36	QE	81	GLN
36	QE	121	ASN
37	QF	11	HIS
37	QF	68	GLN
39	QH	3	GLN
39	QH	17	GLN
39	QH	20	ASN
39	QH	117	GLN
40	QI	4	GLN
40	QI	74	GLN
40	QI	80	HIS
41	QJ	15	HIS
41	QJ	20	GLN
41	QJ	35	GLN
41	QJ	56	HIS
41	QJ	64	GLN
42	QK	21	HIS
42	QK	100	ASN
42	QK	108	ASN
43	QL	45	ASN
43	QL	72	ASN
43	QL	95	HIS
45	QN	42	ASN
45	QN	48	GLN

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Mol	Chain	Res	Type
45	QN	59	GLN
46	QO	19	ASN
46	QO	36	ASN
47	QP	9	HIS
47	QP	26	ASN
47	QP	29	ASN
47	QP	59	HIS
48	QQ	44	HIS
49	QR	30	ASN
49	QR	53	GLN
50	QS	42	ASN
50	QS	55	GLN
51	QT	12	GLN
51	QT	20	ASN
51	QT	54	GLN
51	QT	60	GLN
51	QT	77	ASN
52	QU	8	ASN
33	XB	17	HIS
33	XB	38	HIS
33	XB	108	GLN
33	XB	119	GLN
33	XB	169	HIS
33	XB	176	ASN
34	XC	2	GLN
34	XC	18	ASN
34	XC	31	ASN
34	XC	68	HIS
35	XD	73	ASN
35	XD	84	ASN
35	XD	115	GLN
35	XD	119	HIS
35	XD	125	ASN
35	XD	163	GLN
36	XE	11	GLN
36	XE	121	ASN
36	XE	131	ASN
37	XF	11	HIS
37	XF	17	GLN
37	XF	58	HIS
37	XF	81	ASN
38	XG	67	ASN

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Mol	Chain	Res	Type
38	XG	85	GLN
38	XG	121	ASN
39	XH	3	GLN
39	XH	17	GLN
40	XI	3	ASN
40	XI	4	GLN
40	XI	49	GLN
40	XI	125	GLN
41	XJ	70	HIS
42	XK	21	HIS
42	XK	108	ASN
42	XK	118	ASN
43	XL	19	ASN
43	XL	28	GLN
43	XL	72	ASN
43	XL	74	GLN
43	XL	111	GLN
45	XN	59	GLN
45	XN	65	GLN
46	XO	27	GLN
46	XO	37	HIS
46	XO	39	GLN
46	XO	45	HIS
47	XP	26	ASN
47	XP	63	GLN
48	XQ	49	ASN
49	XR	30	ASN
50	XS	51	HIS
50	XS	52	ASN
51	XT	12	GLN
51	XT	60	GLN
52	XU	8	ASN
3	YC	20	ASN
3	YC	43	ASN
3	YC	52	HIS
3	YC	57	HIS
3	YC	59	GLN
3	YC	85	ASN
3	YC	133	ASN
3	YC	141	HIS
3	YC	152	GLN
3	YC	162	GLN

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Mol	Chain	Res	Type
3	YC	196	ASN
4	YD	36	GLN
4	YD	49	GLN
4	YD	58	ASN
4	YD	140	HIS
4	YD	164	GLN
5	YE	41	GLN
5	YE	165	HIS
6	YF	134	GLN
7	YG	19	ASN
7	YG	103	ASN
7	YG	138	GLN
8	YH	2	GLN
8	YH	28	ASN
8	YH	66	ASN
9	YI	42	ASN
9	YI	93	ASN
9	YI	106	GLN
10	YJ	40	HIS
10	YJ	77	HIS
11	YK	3	GLN
11	YK	9	ASN
11	YK	13	ASN
11	YK	89	ASN
12	YL	4	ASN
12	YL	54	GLN
13	YM	13	HIS
14	YN	3	HIS
14	YN	11	ASN
14	YN	16	HIS
14	YN	23	ASN
14	YN	73	ASN
14	YN	81	ASN
15	YO	29	HIS
15	YO	34	HIS
15	YO	38	GLN
16	YP	6	GLN
16	YP	9	GLN
16	YP	11	GLN
16	YP	74	GLN
17	YQ	19	GLN
17	YQ	71	ASN

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Mol	Chain	Res	Type
18	YR	6	GLN
18	YR	12	HIS
18	YR	43	ASN
18	YR	66	HIS
18	YR	82	HIS
18	YR	86	GLN
19	YS	9	HIS
19	YS	31	GLN
20	YT	48	GLN
20	YT	92	ASN
21	YU	44	HIS
21	YU	45	GLN
21	YU	53	GLN
21	YU	65	GLN
21	YU	68	ASN
22	YV	51	GLN
22	YV	80	HIS
23	YW	11	ASN
24	YX	15	ASN
24	YX	31	ASN
24	YX	35	HIS
25	YY	15	ASN
25	YY	20	ASN
25	YY	41	HIS
25	YY	58	ASN
26	YZ	19	HIS
27	Y0	5	ASN
27	Y0	37	HIS
29	Y2	6	GLN
29	Y2	29	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	RA	2850/2904 (98%)	547 (19%)	74 (2%)
1	YA	2837/2904 (97%)	870 (30%)	153 (5%)
2	RB	117/118 (99%)	22 (18%)	0
2	YB	116/118 (98%)	31 (26%)	6 (5%)
32	QA	1532/1533 (99%)	372 (24%)	56 (3%)
32	XA	1529/1533 (99%)	442 (28%)	70 (4%)
All	All	8981/9110 (98%)	2284 (25%)	359 (3%)

All (2284) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	RA	10	A
1	RA	12	U
1	RA	13	A
1	RA	14	A
1	RA	15	G
1	RA	34	U
1	RA	35	G
1	RA	37	C
1	RA	43	G
1	RA	46	G
1	RA	61	C
1	RA	63	A
1	RA	71	A
1	RA	74	A
1	RA	75	G
1	RA	80	G
1	RA	84	A
1	RA	98	G
1	RA	101	A
1	RA	102	U
1	RA	118	A
1	RA	119	A
1	RA	120	U
1	RA	135	U
1	RA	136	G
1	RA	137	U
1	RA	138	U
1	RA	139	U
1	RA	140	C
1	RA	141	G
1	RA	142	A
1	RA	143	C
1	RA	144	A
1	RA	149	A
1	RA	162	U
1	RA	163	C
1	RA	164	C
1	RA	165	A
1	RA	166	U
1	RA	174	U
1	RA	181	A
1	RA	196	A

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Mol	Chain	Res	Type
1	RA	215	G
1	RA	216	A
1	RA	221	A
1	RA	222	A
1	RA	230	G
1	RA	248	G
1	RA	250	G
1	RA	255	A
1	RA	256	A
1	RA	265	A
1	RA	266	G
1	RA	267	C
1	RA	271	G
1	RA	272	A
1	RA	273	G
1	RA	276	U
1	RA	277	G
1	RA	278	A
1	RA	285	G
1	RA	299	A
1	RA	302	C
1	RA	311	A
1	RA	325	G
1	RA	329	G
1	RA	330	A
1	RA	331	C
1	RA	346	A
1	RA	347	A
1	RA	350	G
1	RA	353	C
1	RA	359	G
1	RA	361	G
1	RA	362	A
1	RA	371	A
1	RA	372	G
1	RA	383	C
1	RA	386	G
1	RA	396	G
1	RA	404	A
1	RA	405	U
1	RA	411	G
1	RA	412	A

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Mol	Chain	Res	Type
1	RA	424	G
1	RA	457	A
1	RA	461	C
1	RA	480	A
1	RA	481	G
1	RA	482	A
1	RA	491	G
1	RA	496	G
1	RA	504	A
1	RA	505	A
1	RA	507	A
1	RA	508	A
1	RA	509	C
1	RA	510	C
1	RA	527	C
1	RA	528	A
1	RA	529	A
1	RA	531	C
1	RA	532	A
1	RA	533	G
1	RA	544	C
1	RA	546	U
1	RA	547	A
1	RA	548	G
1	RA	549	G
1	RA	550	C
1	RA	555	G
1	RA	556	A
1	RA	563	A
1	RA	573	U
1	RA	575	A
1	RA	586	A
1	RA	603	A
1	RA	604	G
1	RA	613	A
1	RA	614	A
1	RA	615	U
1	RA	627	A
1	RA	631	A
1	RA	634	C
1	RA	637	A
1	RA	645	C

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Mol	Chain	Res	Type
1	RA	646	U
1	RA	647	G
1	RA	648	G
1	RA	654	A
1	RA	655	A
1	RA	656	G
1	RA	664	G
1	RA	670	A
1	RA	686	U
1	RA	714	U
1	RA	715	A
1	RA	717	C
1	RA	722	A
1	RA	730	A
1	RA	738	G
1	RA	740	C
1	RA	747	U
1	RA	748	G
1	RA	763	G
1	RA	764	A
1	RA	765	C
1	RA	775	G
1	RA	776	G
1	RA	782	A
1	RA	784	G
1	RA	785	G
1	RA	791	C
1	RA	792	A
1	RA	805	G
1	RA	812	C
1	RA	819	A
1	RA	827	U
1	RA	828	U
1	RA	845	A
1	RA	846	U
1	RA	847	U
1	RA	859	G
1	RA	876	C
1	RA	878	A
1	RA	879	G
1	RA	884	U
1	RA	896	A

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Mol	Chain	Res	Type
1	RA	897	C
1	RA	910	A
1	RA	914	G
1	RA	915	C
1	RA	931	U
1	RA	932	U
1	RA	941	A
1	RA	946	C
1	RA	958	U
1	RA	959	A
1	RA	961	C
1	RA	974	G
1	RA	983	A
1	RA	989	G
1	RA	995	C
1	RA	996	A
1	RA	997	G
1	RA	1005	C
1	RA	1012	U
1	RA	1013	C
1	RA	1021	A
1	RA	1022	G
1	RA	1023	U
1	RA	1024	G
1	RA	1026	G
1	RA	1033	U
1	RA	1044	C
1	RA	1045	C
1	RA	1046	A
1	RA	1047	G
1	RA	1060	U
1	RA	1061	U
1	RA	1062	G
1	RA	1063	G
1	RA	1064	C
1	RA	1065	U
1	RA	1066	U
1	RA	1070	A
1	RA	1071	G
1	RA	1072	C
1	RA	1073	A
1	RA	1074	G

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Mol	Chain	Res	Type
1	RA	1078	U
1	RA	1083	U
1	RA	1084	A
1	RA	1088	A
1	RA	1092	C
1	RA	1098	A
1	RA	1104	C
1	RA	1106	G
1	RA	1111	A
1	RA	1112	G
1	RA	1128	G
1	RA	1130	U
1	RA	1132	U
1	RA	1133	A
1	RA	1135	C
1	RA	1136	G
1	RA	1138	G
1	RA	1139	G
1	RA	1142	A
1	RA	1150	C
1	RA	1151	A
1	RA	1167	C
1	RA	1169	A
1	RA	1170	C
1	RA	1171	G
1	RA	1175	A
1	RA	1176	U
1	RA	1180	U
1	RA	1182	G
1	RA	1185	G
1	RA	1186	G
1	RA	1212	G
1	RA	1238	G
1	RA	1248	G
1	RA	1249	U
1	RA	1250	G
1	RA	1253	A
1	RA	1256	G
1	RA	1258	U
1	RA	1266	G
1	RA	1271	G
1	RA	1272	A

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Mol	Chain	Res	Type
1	RA	1273	U
1	RA	1276	A
1	RA	1281	G
1	RA	1300	G
1	RA	1301	A
1	RA	1317	G
1	RA	1324	G
1	RA	1341	G
1	RA	1352	U
1	RA	1359	A
1	RA	1365	A
1	RA	1368	G
1	RA	1371	G
1	RA	1378	A
1	RA	1379	U
1	RA	1380	G
1	RA	1383	A
1	RA	1386	C
1	RA	1395	A
1	RA	1416	G
1	RA	1419	A
1	RA	1420	A
1	RA	1427	A
1	RA	1428	C
1	RA	1434	A
1	RA	1435	G
1	RA	1437	C
1	RA	1440	U
1	RA	1452	G
1	RA	1453	A
1	RA	1458	U
1	RA	1459	G
1	RA	1475	G
1	RA	1476	U
1	RA	1482	G
1	RA	1483	G
1	RA	1493	C
1	RA	1499	C
1	RA	1502	A
1	RA	1504	A
1	RA	1507	C
1	RA	1508	A

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Mol	Chain	Res	Type
1	RA	1509	A
1	RA	1510	G
1	RA	1512	C
1	RA	1515	A
1	RA	1533	C
1	RA	1534	U
1	RA	1535	A
1	RA	1536	C
1	RA	1538	G
1	RA	1540	G
1	RA	1554	U
1	RA	1555	G
1	RA	1558	C
1	RA	1566	A
1	RA	1569	A
1	RA	1578	U
1	RA	1581	G
1	RA	1583	A
1	RA	1584	U
1	RA	1585	C
1	RA	1588	G
1	RA	1606	C
1	RA	1607	C
1	RA	1608	A
1	RA	1610	A
1	RA	1613	G
1	RA	1626	A
1	RA	1647	U
1	RA	1648	U
1	RA	1649	G
1	RA	1652	A
1	RA	1674	G
1	RA	1688	U
1	RA	1696	G
1	RA	1700	A
1	RA	1707	G
1	RA	1714	U
1	RA	1715	G
1	RA	1723	G
1	RA	1729	U
1	RA	1730	C
1	RA	1732	C

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Mol	Chain	Res	Type
1	RA	1734	G
1	RA	1737	G
1	RA	1738	G
1	RA	1739	A
1	RA	1744	A
1	RA	1755	A
1	RA	1764	C
1	RA	1773	A
1	RA	1776	G
1	RA	1782	U
1	RA	1800	C
1	RA	1801	A
1	RA	1802	A
1	RA	1808	A
1	RA	1809	A
1	RA	1812	U
1	RA	1815	A
1	RA	1816	C
1	RA	1817	G
1	RA	1828	G
1	RA	1829	A
1	RA	1848	A
1	RA	1858	A
1	RA	1859	U
1	RA	1865	U
1	RA	1869	G
1	RA	1870	C
1	RA	1871	A
1	RA	1872	A
1	RA	1873	G
1	RA	1897	G
1	RA	1902	C
1	RA	1906	G
1	RA	1913	A
1	RA	1914	C
1	RA	1927	A
1	RA	1929	G
1	RA	1930	G
1	RA	1937	A
1	RA	1938	A
1	RA	1941	C
1	RA	1942	C

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Mol	Chain	Res	Type
1	RA	1955	U
1	RA	1967	C
1	RA	1970	A
1	RA	1971	U
1	RA	1972	G
1	RA	1991	U
1	RA	1993	U
1	RA	1997	C
1	RA	2022	U
1	RA	2023	C
1	RA	2030	A
1	RA	2031	A
1	RA	2032	G
1	RA	2033	A
1	RA	2043	C
1	RA	2055	C
1	RA	2056	G
1	RA	2060	A
1	RA	2061	G
1	RA	2062	A
1	RA	2063	C
1	RA	2069	G
1	RA	2093	G
1	RA	2096	C
1	RA	2104	C
1	RA	2106	U
1	RA	2107	G
1	RA	2109	U
1	RA	2110	G
1	RA	2134	A
1	RA	2135	A
1	RA	2136	G
1	RA	2137	U
1	RA	2140	G
1	RA	2143	C
1	RA	2144	G
1	RA	2145	C
1	RA	2146	C
1	RA	2147	A
1	RA	2148	G
1	RA	2149	U
1	RA	2150	C

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Mol	Chain	Res	Type
1	RA	2151	U
1	RA	2155	U
1	RA	2156	G
1	RA	2180	U
1	RA	2181	U
1	RA	2183	A
1	RA	2184	A
1	RA	2185	U
1	RA	2187	U
1	RA	2190	G
1	RA	2194	U
1	RA	2198	A
1	RA	2199	A
1	RA	2203	U
1	RA	2204	G
1	RA	2211	A
1	RA	2212	A
1	RA	2214	C
1	RA	2225	A
1	RA	2226	C
1	RA	2238	G
1	RA	2239	G
1	RA	2243	U
1	RA	2268	A
1	RA	2273	A
1	RA	2278	A
1	RA	2279	G
1	RA	2283	C
1	RA	2287	A
1	RA	2297	A
1	RA	2305	U
1	RA	2308	G
1	RA	2311	A
1	RA	2312	U
1	RA	2317	A
1	RA	2321	U
1	RA	2325	G
1	RA	2326	C
1	RA	2327	A
1	RA	2335	A
1	RA	2347	C
1	RA	2350	C

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Mol	Chain	Res	Type
1	RA	2357	G
1	RA	2361	G
1	RA	2383	G
1	RA	2384	U
1	RA	2385	C
1	RA	2402	U
1	RA	2403	C
1	RA	2406	A
1	RA	2423	U
1	RA	2424	C
1	RA	2425	A
1	RA	2426	A
1	RA	2427	C
1	RA	2428	G
1	RA	2429	G
1	RA	2430	A
1	RA	2431	U
1	RA	2434	A
1	RA	2435	A
1	RA	2441	U
1	RA	2445	G
1	RA	2447	G
1	RA	2448	A
1	RA	2476	A
1	RA	2484	G
1	RA	2491	U
1	RA	2502	G
1	RA	2503	A
1	RA	2505	G
1	RA	2506	U
1	RA	2518	A
1	RA	2529	G
1	RA	2554	U
1	RA	2566	A
1	RA	2567	G
1	RA	2572	A
1	RA	2573	C
1	RA	2574	G
1	RA	2578	G
1	RA	2585	U
1	RA	2586	U
1	RA	2602	A

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Mol	Chain	Res	Type
1	RA	2603	G
1	RA	2609	U
1	RA	2613	U
1	RA	2629	U
1	RA	2661	G
1	RA	2663	G
1	RA	2671	G
1	RA	2682	A
1	RA	2689	U
1	RA	2690	U
1	RA	2714	G
1	RA	2716	C
1	RA	2726	A
1	RA	2729	G
1	RA	2732	G
1	RA	2744	G
1	RA	2748	A
1	RA	2757	A
1	RA	2762	C
1	RA	2765	A
1	RA	2769	U
1	RA	2777	G
1	RA	2778	A
1	RA	2779	U
1	RA	2791	G
1	RA	2797	U
1	RA	2798	U
1	RA	2799	A
1	RA	2800	A
1	RA	2801	G
1	RA	2818	U
1	RA	2820	A
1	RA	2821	A
1	RA	2825	G
1	RA	2826	A
1	RA	2849	U
1	RA	2867	G
1	RA	2873	A
1	RA	2874	C
1	RA	2880	C
1	RA	2883	A
1	RA	2884	U

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Mol	Chain	Res	Type
1	RA	2891	U
2	RB	3	C
2	RB	4	C
2	RB	12	C
2	RB	15	A
2	RB	16	G
2	RB	25	U
2	RB	35	C
2	RB	37	C
2	RB	41	G
2	RB	42	C
2	RB	44	G
2	RB	45	A
2	RB	56	G
2	RB	66	A
2	RB	85	G
2	RB	87	U
2	RB	88	C
2	RB	89	U
2	RB	90	C
2	RB	91	C
2	RB	99	A
2	RB	109	A
32	QA	5	U
32	QA	6	G
32	QA	8	A
32	QA	9	G
32	QA	22	G
32	QA	32	A
32	QA	39	G
32	QA	40	C
32	QA	47	C
32	QA	48	C
32	QA	50	A
32	QA	51	A
32	QA	52	C
32	QA	64	G
32	QA	70	U
32	QA	71	A
32	QA	72	A
32	QA	73	C
32	QA	74	A

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Mol	Chain	Res	Type
32	QA	75	G
32	QA	76	G
32	QA	77	A
32	QA	79	G
32	QA	82	G
32	QA	83	C
32	QA	85	U
32	QA	86	G
32	QA	87	C
32	QA	88	U
32	QA	89	U
32	QA	90	C
32	QA	91	U
32	QA	92	U
32	QA	95	C
32	QA	97	G
32	QA	98	A
32	QA	116	A
32	QA	117	G
32	QA	120	A
32	QA	121	U
32	QA	122	G
32	QA	127	G
32	QA	130	A
32	QA	131	A
32	QA	138	G
32	QA	141	G
32	QA	143	A
32	QA	159	G
32	QA	163	C
32	QA	164	G
32	QA	166	U
32	QA	174	A
32	QA	175	C
32	QA	176	C
32	QA	177	G
32	QA	181	A
32	QA	182	A
32	QA	183	C
32	QA	184	G
32	QA	197	A
32	QA	198	G

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Mol	Chain	Res	Type
32	QA	199	A
32	QA	205	A
32	QA	207	C
32	QA	208	U
32	QA	209	U
32	QA	210	C
32	QA	213	G
32	QA	214	C
32	QA	215	C
32	QA	219	U
32	QA	240	G
32	QA	244	U
32	QA	245	U
32	QA	247	G
32	QA	251	G
32	QA	258	G
32	QA	266	G
32	QA	267	C
32	QA	268	U
32	QA	273	U
32	QA	274	A
32	QA	275	G
32	QA	285	C
32	QA	289	G
32	QA	316	C
32	QA	320	A
32	QA	321	A
32	QA	328	C
32	QA	329	A
32	QA	330	C
32	QA	331	G
32	QA	332	G
32	QA	345	C
32	QA	346	G
32	QA	347	G
32	QA	352	C
32	QA	354	G
32	QA	356	A
32	QA	366	A
32	QA	367	U
32	QA	369	G
32	QA	372	C

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Mol	Chain	Res	Type
32	QA	373	A
32	QA	374	A
32	QA	384	G
32	QA	392	C
32	QA	398	U
32	QA	406	G
32	QA	409	U
32	QA	411	A
32	QA	412	A
32	QA	413	G
32	QA	414	A
32	QA	415	A
32	QA	421	U
32	QA	422	C
32	QA	424	G
32	QA	429	U
32	QA	430	A
32	QA	439	U
32	QA	452	A
32	QA	453	G
32	QA	458	U
32	QA	459	A
32	QA	461	A
32	QA	462	G
32	QA	463	U
32	QA	466	A
32	QA	467	U
32	QA	468	A
32	QA	469	C
32	QA	478	A
32	QA	481	G
32	QA	482	A
32	QA	484	G
32	QA	485	U
32	QA	486	U
32	QA	496	A
32	QA	498	A
32	QA	500	G
32	QA	501	C
32	QA	505	G
32	QA	508	U
32	QA	509	A

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Mol	Chain	Res	Type
32	QA	510	A
32	QA	511	C
32	QA	518	C
32	QA	527	G
32	QA	529	G
32	QA	532	A
32	QA	533	A
32	QA	534	U
32	QA	535	A
32	QA	536	C
32	QA	547	A
32	QA	548	G
32	QA	549	C
32	QA	556	C
32	QA	559	A
32	QA	562	U
32	QA	564	C
32	QA	572	A
32	QA	573	A
32	QA	576	C
32	QA	579	A
32	QA	588	G
32	QA	604	G
32	QA	650	G
32	QA	653	U
32	QA	665	A
32	QA	666	G
32	QA	682	G
32	QA	700	G
32	QA	701	U
32	QA	702	A
32	QA	703	G
32	QA	721	G
32	QA	722	G
32	QA	723	U
32	QA	731	G
32	QA	748	G
32	QA	753	A
32	QA	754	C
32	QA	755	G
32	QA	776	G
32	QA	777	A

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Mol	Chain	Res	Type
32	QA	793	U
32	QA	794	A
32	QA	802	A
32	QA	809	G
32	QA	814	A
32	QA	815	A
32	QA	817	C
32	QA	827	U
32	QA	828	U
32	QA	841	C
32	QA	843	U
32	QA	845	A
32	QA	846	G
32	QA	859	G
32	QA	861	G
32	QA	876	C
32	QA	889	A
32	QA	914	A
32	QA	926	G
32	QA	927	G
32	QA	932	C
32	QA	934	C
32	QA	935	A
32	QA	960	U
32	QA	966	G
32	QA	969	A
32	QA	971	G
32	QA	974	A
32	QA	975	A
32	QA	976	G
32	QA	977	A
32	QA	983	A
32	QA	993	G
32	QA	1003	G
32	QA	1004	A
32	QA	1008	U
32	QA	1017	U
32	QA	1018	G
32	QA	1022	A
32	QA	1025	U
32	QA	1026	G
32	QA	1027	C

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Mol	Chain	Res	Type
32	QA	1028	C
32	QA	1029	U
32	QA	1030	U
32	QA	1031	C
32	QA	1032	G
32	QA	1033	G
32	QA	1034	G
32	QA	1037	C
32	QA	1039	G
32	QA	1050	G
32	QA	1052	U
32	QA	1053	G
32	QA	1054	C
32	QA	1055	A
32	QA	1065	U
32	QA	1066	C
32	QA	1086	U
32	QA	1093	A
32	QA	1094	G
32	QA	1095	U
32	QA	1101	A
32	QA	1102	A
32	QA	1104	G
32	QA	1113	C
32	QA	1124	G
32	QA	1125	U
32	QA	1130	A
32	QA	1132	C
32	QA	1133	G
32	QA	1135	U
32	QA	1136	C
32	QA	1137	C
32	QA	1138	G
32	QA	1140	C
32	QA	1141	C
32	QA	1144	G
32	QA	1145	A
32	QA	1158	C
32	QA	1159	U
32	QA	1160	G
32	QA	1161	C
32	QA	1162	C

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Mol	Chain	Res	Type
32	QA	1167	A
32	QA	1168	U
32	QA	1181	G
32	QA	1182	G
32	QA	1183	U
32	QA	1184	G
32	QA	1193	G
32	QA	1196	A
32	QA	1197	A
32	QA	1202	U
32	QA	1212	U
32	QA	1213	A
32	QA	1214	C
32	QA	1226	C
32	QA	1227	A
32	QA	1228	C
32	QA	1238	A
32	QA	1240	U
32	QA	1241	G
32	QA	1242	G
32	QA	1249	C
32	QA	1253	G
32	QA	1256	A
32	QA	1261	A
32	QA	1275	A
32	QA	1278	G
32	QA	1279	G
32	QA	1280	A
32	QA	1282	C
32	QA	1283	U
32	QA	1285	A
32	QA	1286	U
32	QA	1287	A
32	QA	1288	A
32	QA	1293	C
32	QA	1297	G
32	QA	1299	A
32	QA	1301	U
32	QA	1303	C
32	QA	1304	G
32	QA	1305	G
32	QA	1308	U

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Mol	Chain	Res	Type
32	QA	1309	G
32	QA	1315	U
32	QA	1316	G
32	QA	1317	C
32	QA	1318	A
32	QA	1320	C
32	QA	1321	U
32	QA	1322	C
32	QA	1323	G
32	QA	1324	A
32	QA	1331	G
32	QA	1332	A
32	QA	1336	C
32	QA	1337	G
32	QA	1338	G
32	QA	1348	U
32	QA	1349	A
32	QA	1353	G
32	QA	1362	A
32	QA	1363	A
32	QA	1364	U
32	QA	1368	A
32	QA	1370	G
32	QA	1371	G
32	QA	1381	U
32	QA	1382	C
32	QA	1398	A
32	QA	1411	C
32	QA	1412	C
32	QA	1413	A
32	QA	1419	G
32	QA	1432	G
32	QA	1433	A
32	QA	1441	A
32	QA	1442	G
32	QA	1446	A
32	QA	1448	C
32	QA	1451	U
32	QA	1452	C
32	QA	1453	G
32	QA	1454	G
32	QA	1455	G

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Mol	Chain	Res	Type
32	QA	1469	C
32	QA	1470	U
32	QA	1474	U
32	QA	1475	G
32	QA	1476	A
32	QA	1490	U
32	QA	1492	A
32	QA	1494	G
32	QA	1497	G
32	QA	1503	A
32	QA	1505	G
32	QA	1506	U
32	QA	1509	C
32	QA	1517	G
32	QA	1529	G
32	QA	1530	G
32	QA	1531	A
32	XA	6	G
32	XA	7	A
32	XA	8	A
32	XA	9	G
32	XA	14	U
32	XA	22	G
32	XA	32	A
32	XA	39	G
32	XA	47	C
32	XA	48	C
32	XA	51	A
32	XA	61	G
32	XA	64	G
32	XA	65	A
32	XA	66	A
32	XA	67	C
32	XA	68	G
32	XA	71	A
32	XA	72	A
32	XA	73	C
32	XA	76	G
32	XA	77	A
32	XA	80	A
32	XA	81	A
32	XA	82	G

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Mol	Chain	Res	Type
32	XA	83	C
32	XA	84	U
32	XA	85	U
32	XA	86	G
32	XA	87	C
32	XA	88	U
32	XA	89	U
32	XA	90	C
32	XA	91	U
32	XA	92	U
32	XA	94	G
32	XA	95	C
32	XA	96	U
32	XA	98	A
32	XA	101	A
32	XA	110	C
32	XA	116	A
32	XA	120	A
32	XA	121	U
32	XA	122	G
32	XA	129	A
32	XA	131	A
32	XA	132	C
32	XA	141	G
32	XA	143	A
32	XA	144	G
32	XA	154	U
32	XA	155	A
32	XA	164	G
32	XA	166	U
32	XA	167	A
32	XA	169	C
32	XA	177	G
32	XA	178	C
32	XA	181	A
32	XA	182	A
32	XA	191	G
32	XA	198	G
32	XA	199	A
32	XA	201	G
32	XA	206	C
32	XA	207	C

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Mol	Chain	Res	Type
32	XA	208	U
32	XA	209	U
32	XA	210	C
32	XA	211	G
32	XA	212	G
32	XA	214	C
32	XA	239	U
32	XA	240	G
32	XA	243	A
32	XA	244	U
32	XA	245	U
32	XA	246	A
32	XA	247	G
32	XA	248	C
32	XA	250	A
32	XA	251	G
32	XA	252	U
32	XA	253	A
32	XA	258	G
32	XA	262	A
32	XA	266	G
32	XA	267	C
32	XA	268	U
32	XA	275	G
32	XA	279	A
32	XA	280	C
32	XA	289	G
32	XA	298	A
32	XA	301	G
32	XA	306	A
32	XA	316	C
32	XA	321	A
32	XA	328	C
32	XA	329	A
32	XA	330	C
32	XA	331	G
32	XA	332	G
32	XA	338	A
32	XA	339	C
32	XA	345	C
32	XA	346	G
32	XA	347	G

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Mol	Chain	Res	Type
32	XA	348	G
32	XA	352	C
32	XA	353	A
32	XA	354	G
32	XA	366	A
32	XA	367	U
32	XA	369	G
32	XA	372	C
32	XA	373	A
32	XA	374	A
32	XA	381	C
32	XA	382	A
32	XA	383	A
32	XA	384	G
32	XA	397	A
32	XA	398	U
32	XA	406	G
32	XA	408	A
32	XA	409	U
32	XA	411	A
32	XA	412	A
32	XA	413	G
32	XA	415	A
32	XA	418	C
32	XA	421	U
32	XA	422	C
32	XA	423	G
32	XA	424	G
32	XA	425	G
32	XA	429	U
32	XA	430	A
32	XA	435	A
32	XA	436	C
32	XA	448	A
32	XA	451	A
32	XA	452	A
32	XA	456	A
32	XA	457	G
32	XA	458	U
32	XA	461	A
32	XA	462	G
32	XA	463	U

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Mol	Chain	Res	Type
32	XA	464	U
32	XA	466	A
32	XA	467	U
32	XA	468	A
32	XA	474	G
32	XA	476	U
32	XA	477	C
32	XA	478	A
32	XA	479	U
32	XA	481	G
32	XA	484	G
32	XA	485	U
32	XA	486	U
32	XA	493	A
32	XA	496	A
32	XA	497	G
32	XA	500	G
32	XA	501	C
32	XA	509	A
32	XA	511	C
32	XA	512	U
32	XA	513	C
32	XA	518	C
32	XA	519	C
32	XA	520	A
32	XA	522	C
32	XA	527	G
32	XA	530	G
32	XA	531	U
32	XA	532	A
32	XA	533	A
32	XA	534	U
32	XA	535	A
32	XA	536	C
32	XA	547	A
32	XA	550	G
32	XA	559	A
32	XA	562	U
32	XA	563	A
32	XA	564	C
32	XA	568	G
32	XA	572	A

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Mol	Chain	Res	Type
32	XA	573	A
32	XA	576	C
32	XA	577	G
32	XA	579	A
32	XA	595	A
32	XA	604	G
32	XA	616	G
32	XA	617	G
32	XA	628	G
32	XA	633	G
32	XA	641	U
32	XA	642	A
32	XA	643	C
32	XA	653	U
32	XA	665	A
32	XA	687	A
32	XA	694	A
32	XA	695	A
32	XA	700	G
32	XA	701	U
32	XA	702	A
32	XA	703	G
32	XA	704	A
32	XA	705	G
32	XA	721	G
32	XA	723	U
32	XA	724	G
32	XA	731	G
32	XA	748	G
32	XA	753	A
32	XA	754	C
32	XA	755	G
32	XA	758	C
32	XA	776	G
32	XA	777	A
32	XA	781	A
32	XA	782	A
32	XA	785	G
32	XA	787	A
32	XA	792	A
32	XA	793	U
32	XA	794	A

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Mol	Chain	Res	Type
32	XA	803	G
32	XA	812	G
32	XA	813	U
32	XA	815	A
32	XA	817	C
32	XA	820	U
32	XA	828	U
32	XA	829	G
32	XA	841	C
32	XA	842	U
32	XA	843	U
32	XA	844	G
32	XA	845	A
32	XA	846	G
32	XA	847	G
32	XA	849	G
32	XA	880	C
32	XA	889	A
32	XA	890	G
32	XA	914	A
32	XA	926	G
32	XA	927	G
32	XA	934	C
32	XA	935	A
32	XA	936	C
32	XA	942	G
32	XA	945	G
32	XA	960	U
32	XA	961	U
32	XA	962	C
32	XA	966	G
32	XA	968	A
32	XA	969	A
32	XA	972	C
32	XA	974	A
32	XA	975	A
32	XA	976	G
32	XA	977	A
32	XA	982	U
32	XA	985	C
32	XA	990	C
32	XA	991	U

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Mol	Chain	Res	Type
32	XA	992	U
32	XA	993	G
32	XA	995	C
32	XA	996	A
32	XA	1000	A
32	XA	1004	A
32	XA	1007	U
32	XA	1009	U
32	XA	1016	A
32	XA	1019	A
32	XA	1020	G
32	XA	1022	A
32	XA	1026	G
32	XA	1028	C
32	XA	1029	U
32	XA	1031	C
32	XA	1032	G
32	XA	1036	A
32	XA	1037	C
32	XA	1050	G
32	XA	1051	C
32	XA	1052	U
32	XA	1053	G
32	XA	1054	C
32	XA	1065	U
32	XA	1066	C
32	XA	1067	A
32	XA	1068	G
32	XA	1086	U
32	XA	1094	G
32	XA	1095	U
32	XA	1101	A
32	XA	1102	A
32	XA	1118	U
32	XA	1119	C
32	XA	1125	U
32	XA	1130	A
32	XA	1131	G
32	XA	1136	C
32	XA	1137	C
32	XA	1138	G
32	XA	1139	G

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Mol	Chain	Res	Type
32	XA	1140	C
32	XA	1141	C
32	XA	1142	G
32	XA	1143	G
32	XA	1145	A
32	XA	1146	A
32	XA	1147	C
32	XA	1148	U
32	XA	1150	A
32	XA	1151	A
32	XA	1152	A
32	XA	1158	C
32	XA	1159	U
32	XA	1160	G
32	XA	1161	C
32	XA	1167	A
32	XA	1169	A
32	XA	1175	G
32	XA	1178	G
32	XA	1181	G
32	XA	1183	U
32	XA	1184	G
32	XA	1191	A
32	XA	1193	G
32	XA	1196	A
32	XA	1197	A
32	XA	1201	A
32	XA	1202	U
32	XA	1212	U
32	XA	1213	A
32	XA	1214	C
32	XA	1215	G
32	XA	1216	A
32	XA	1217	C
32	XA	1219	A
32	XA	1222	G
32	XA	1224	U
32	XA	1225	A
32	XA	1226	C
32	XA	1228	C
32	XA	1229	A
32	XA	1232	U

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Mol	Chain	Res	Type
32	XA	1238	A
32	XA	1239	A
32	XA	1240	U
32	XA	1241	G
32	XA	1243	C
32	XA	1250	A
32	XA	1251	A
32	XA	1256	A
32	XA	1257	A
32	XA	1260	G
32	XA	1266	G
32	XA	1272	G
32	XA	1278	G
32	XA	1279	G
32	XA	1280	A
32	XA	1281	C
32	XA	1282	C
32	XA	1283	U
32	XA	1285	A
32	XA	1286	U
32	XA	1287	A
32	XA	1288	A
32	XA	1294	G
32	XA	1295	U
32	XA	1297	G
32	XA	1298	U
32	XA	1299	A
32	XA	1300	G
32	XA	1301	U
32	XA	1302	C
32	XA	1303	C
32	XA	1305	G
32	XA	1316	G
32	XA	1317	C
32	XA	1319	A
32	XA	1320	C
32	XA	1322	C
32	XA	1323	G
32	XA	1324	A
32	XA	1332	A
32	XA	1335	U
32	XA	1337	G

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Mol	Chain	Res	Type
32	XA	1338	G
32	XA	1348	U
32	XA	1349	A
32	XA	1359	C
32	XA	1362	A
32	XA	1364	U
32	XA	1365	G
32	XA	1366	C
32	XA	1367	C
32	XA	1379	G
32	XA	1381	U
32	XA	1382	C
32	XA	1395	C
32	XA	1398	A
32	XA	1411	C
32	XA	1429	A
32	XA	1432	G
32	XA	1441	A
32	XA	1446	A
32	XA	1447	A
32	XA	1448	C
32	XA	1449	C
32	XA	1452	C
32	XA	1453	G
32	XA	1454	G
32	XA	1455	G
32	XA	1490	U
32	XA	1491	G
32	XA	1493	A
32	XA	1494	G
32	XA	1497	G
32	XA	1503	A
32	XA	1506	U
32	XA	1517	G
32	XA	1519	A
32	XA	1520	C
32	XA	1529	G
32	XA	1530	G
32	XA	1534	A
1	YA	10	A
1	YA	14	A
1	YA	15	G

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Mol	Chain	Res	Type
1	YA	27	G
1	YA	28	A
1	YA	34	U
1	YA	35	G
1	YA	36	G
1	YA	39	G
1	YA	41	C
1	YA	46	G
1	YA	49	A
1	YA	50	U
1	YA	52	A
1	YA	53	A
1	YA	55	G
1	YA	61	C
1	YA	62	U
1	YA	64	A
1	YA	71	A
1	YA	73	A
1	YA	74	A
1	YA	75	G
1	YA	76	C
1	YA	77	G
1	YA	79	C
1	YA	83	A
1	YA	84	A
1	YA	85	G
1	YA	86	G
1	YA	87	U
1	YA	91	A
1	YA	100	U
1	YA	101	A
1	YA	102	U
1	YA	103	A
1	YA	104	A
1	YA	118	A
1	YA	119	A
1	YA	120	U
1	YA	121	G
1	YA	126	A
1	YA	128	C
1	YA	129	C
1	YA	134	G

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Mol	Chain	Res	Type
1	YA	139	U
1	YA	140	C
1	YA	141	G
1	YA	142	A
1	YA	144	A
1	YA	155	A
1	YA	156	A
1	YA	158	U
1	YA	160	A
1	YA	163	C
1	YA	164	C
1	YA	166	U
1	YA	177	G
1	YA	180	G
1	YA	181	A
1	YA	196	A
1	YA	199	A
1	YA	204	A
1	YA	205	G
1	YA	206	U
1	YA	207	A
1	YA	215	G
1	YA	216	A
1	YA	217	A
1	YA	221	A
1	YA	222	A
1	YA	223	A
1	YA	224	U
1	YA	227	A
1	YA	228	C
1	YA	229	C
1	YA	230	G
1	YA	231	A
1	YA	233	A
1	YA	234	U
1	YA	235	U
1	YA	241	A
1	YA	242	G
1	YA	245	G
1	YA	248	G
1	YA	249	C
1	YA	250	G

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Mol	Chain	Res	Type
1	YA	251	A
1	YA	255	A
1	YA	259	G
1	YA	264	C
1	YA	265	A
1	YA	266	G
1	YA	271	G
1	YA	272	A
1	YA	273	G
1	YA	277	G
1	YA	278	A
1	YA	281	C
1	YA	284	U
1	YA	285	G
1	YA	294	A
1	YA	295	G
1	YA	299	A
1	YA	302	C
1	YA	303	G
1	YA	311	A
1	YA	312	G
1	YA	314	C
1	YA	321	U
1	YA	322	A
1	YA	323	C
1	YA	324	A
1	YA	325	G
1	YA	329	G
1	YA	330	A
1	YA	334	C
1	YA	335	C
1	YA	336	C
1	YA	349	U
1	YA	351	C
1	YA	353	C
1	YA	354	A
1	YA	362	A
1	YA	367	G
1	YA	370	G
1	YA	371	A
1	YA	372	G
1	YA	374	A

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Mol	Chain	Res	Type
1	YA	383	C
1	YA	385	C
1	YA	386	G
1	YA	387	U
1	YA	388	G
1	YA	389	G
1	YA	390	U
1	YA	396	G
1	YA	397	U
1	YA	399	U
1	YA	404	A
1	YA	405	U
1	YA	406	G
1	YA	407	G
1	YA	411	G
1	YA	412	A
1	YA	413	C
1	YA	421	C
1	YA	423	A
1	YA	424	G
1	YA	430	A
1	YA	436	C
1	YA	443	A
1	YA	444	C
1	YA	445	C
1	YA	446	G
1	YA	447	A
1	YA	451	U
1	YA	455	C
1	YA	457	A
1	YA	461	C
1	YA	462	C
1	YA	475	C
1	YA	477	A
1	YA	480	A
1	YA	481	G
1	YA	482	A
1	YA	483	A
1	YA	484	C
1	YA	489	G
1	YA	490	C
1	YA	491	G

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Mol	Chain	Res	Type
1	YA	492	A
1	YA	498	G
1	YA	502	A
1	YA	503	A
1	YA	504	A
1	YA	505	A
1	YA	507	A
1	YA	509	C
1	YA	510	C
1	YA	512	G
1	YA	527	C
1	YA	528	A
1	YA	529	A
1	YA	532	A
1	YA	533	G
1	YA	544	C
1	YA	546	U
1	YA	547	A
1	YA	548	G
1	YA	549	G
1	YA	550	C
1	YA	563	A
1	YA	572	A
1	YA	573	U
1	YA	575	A
1	YA	576	U
1	YA	586	A
1	YA	587	C
1	YA	590	A
1	YA	592	A
1	YA	603	A
1	YA	604	G
1	YA	605	G
1	YA	609	A
1	YA	613	A
1	YA	614	A
1	YA	616	A
1	YA	617	G
1	YA	618	G
1	YA	620	G
1	YA	621	A
1	YA	622	G

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Mol	Chain	Res	Type
1	YA	623	C
1	YA	627	A
1	YA	628	G
1	YA	631	A
1	YA	634	C
1	YA	637	A
1	YA	638	G
1	YA	639	U
1	YA	645	C
1	YA	646	U
1	YA	649	G
1	YA	653	U
1	YA	654	A
1	YA	655	A
1	YA	656	G
1	YA	662	G
1	YA	664	G
1	YA	671	C
1	YA	672	C
1	YA	685	A
1	YA	686	U
1	YA	695	G
1	YA	699	A
1	YA	711	G
1	YA	717	C
1	YA	726	G
1	YA	728	G
1	YA	729	G
1	YA	730	A
1	YA	740	C
1	YA	745	G
1	YA	746	U
1	YA	747	U
1	YA	748	G
1	YA	749	A
1	YA	751	A
1	YA	753	A
1	YA	757	G
1	YA	763	G
1	YA	764	A
1	YA	770	G
1	YA	775	G

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Mol	Chain	Res	Type
1	YA	776	G
1	YA	782	A
1	YA	784	G
1	YA	785	G
1	YA	789	A
1	YA	790	U
1	YA	791	C
1	YA	792	A
1	YA	801	G
1	YA	805	G
1	YA	806	C
1	YA	807	U
1	YA	812	C
1	YA	819	A
1	YA	827	U
1	YA	828	U
1	YA	846	U
1	YA	847	U
1	YA	858	G
1	YA	859	G
1	YA	860	U
1	YA	861	A
1	YA	866	A
1	YA	867	C
1	YA	868	U
1	YA	873	C
1	YA	875	G
1	YA	877	A
1	YA	878	A
1	YA	902	C
1	YA	905	A
1	YA	910	A
1	YA	911	A
1	YA	912	C
1	YA	914	G
1	YA	915	C
1	YA	916	G
1	YA	919	U
1	YA	922	C
1	YA	931	U
1	YA	932	U
1	YA	933	A

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Mol	Chain	Res	Type
1	YA	941	A
1	YA	946	C
1	YA	953	G
1	YA	958	U
1	YA	961	C
1	YA	963	U
1	YA	964	C
1	YA	973	A
1	YA	974	G
1	YA	976	G
1	YA	981	A
1	YA	983	A
1	YA	985	C
1	YA	990	A
1	YA	991	C
1	YA	996	A
1	YA	1005	C
1	YA	1009	A
1	YA	1010	A
1	YA	1012	U
1	YA	1013	C
1	YA	1020	A
1	YA	1021	A
1	YA	1022	G
1	YA	1023	U
1	YA	1024	G
1	YA	1025	G
1	YA	1026	G
1	YA	1027	A
1	YA	1033	U
1	YA	1034	G
1	YA	1044	C
1	YA	1045	C
1	YA	1046	A
1	YA	1047	G
1	YA	1048	A
1	YA	1050	A
1	YA	1055	G
1	YA	1056	G
1	YA	1057	A
1	YA	1060	U
1	YA	1063	G

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Mol	Chain	Res	Type
1	YA	1068	G
1	YA	1069	A
1	YA	1070	A
1	YA	1071	G
1	YA	1072	C
1	YA	1073	A
1	YA	1074	G
1	YA	1076	C
1	YA	1077	A
1	YA	1079	C
1	YA	1080	A
1	YA	1083	U
1	YA	1086	A
1	YA	1088	A
1	YA	1089	A
1	YA	1090	A
1	YA	1091	G
1	YA	1097	U
1	YA	1100	C
1	YA	1103	A
1	YA	1110	G
1	YA	1111	A
1	YA	1112	G
1	YA	1114	C
1	YA	1115	G
1	YA	1116	G
1	YA	1119	U
1	YA	1127	A
1	YA	1128	G
1	YA	1129	A
1	YA	1130	U
1	YA	1132	U
1	YA	1133	A
1	YA	1134	A
1	YA	1135	C
1	YA	1136	G
1	YA	1139	G
1	YA	1142	A
1	YA	1155	A
1	YA	1157	G
1	YA	1158	C
1	YA	1169	A

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Mol	Chain	Res	Type
1	YA	1170	C
1	YA	1172	C
1	YA	1174	U
1	YA	1176	U
1	YA	1195	G
1	YA	1204	A
1	YA	1205	A
1	YA	1206	G
1	YA	1207	C
1	YA	1211	C
1	YA	1227	G
1	YA	1231	U
1	YA	1235	G
1	YA	1236	G
1	YA	1237	A
1	YA	1238	G
1	YA	1241	A
1	YA	1242	U
1	YA	1246	A
1	YA	1247	A
1	YA	1249	U
1	YA	1253	A
1	YA	1255	U
1	YA	1256	G
1	YA	1262	A
1	YA	1266	G
1	YA	1267	U
1	YA	1268	A
1	YA	1271	G
1	YA	1272	A
1	YA	1273	U
1	YA	1274	A
1	YA	1275	A
1	YA	1276	A
1	YA	1278	C
1	YA	1286	A
1	YA	1287	A
1	YA	1288	G
1	YA	1290	C
1	YA	1291	C
1	YA	1300	G
1	YA	1301	A

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Mol	Chain	Res	Type
1	YA	1304	A
1	YA	1311	G
1	YA	1312	U
1	YA	1313	U
1	YA	1317	G
1	YA	1321	A
1	YA	1324	G
1	YA	1325	U
1	YA	1326	U
1	YA	1327	A
1	YA	1330	C
1	YA	1331	G
1	YA	1332	G
1	YA	1336	A
1	YA	1337	G
1	YA	1340	U
1	YA	1341	G
1	YA	1342	A
1	YA	1343	G
1	YA	1344	U
1	YA	1345	C
1	YA	1346	G
1	YA	1349	C
1	YA	1352	U
1	YA	1355	G
1	YA	1360	G
1	YA	1365	A
1	YA	1368	G
1	YA	1374	G
1	YA	1376	C
1	YA	1379	U
1	YA	1380	G
1	YA	1382	G
1	YA	1383	A
1	YA	1386	C
1	YA	1387	A
1	YA	1388	G
1	YA	1389	G
1	YA	1397	U
1	YA	1398	C
1	YA	1399	C
1	YA	1400	U

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Mol	Chain	Res	Type
1	YA	1401	G
1	YA	1403	A
1	YA	1404	C
1	YA	1416	G
1	YA	1417	C
1	YA	1418	G
1	YA	1419	A
1	YA	1420	A
1	YA	1421	G
1	YA	1424	G
1	YA	1426	G
1	YA	1427	A
1	YA	1428	C
1	YA	1430	G
1	YA	1437	C
1	YA	1440	U
1	YA	1444	G
1	YA	1452	G
1	YA	1453	A
1	YA	1455	G
1	YA	1456	G
1	YA	1459	G
1	YA	1460	U
1	YA	1461	C
1	YA	1470	A
1	YA	1478	G
1	YA	1481	U
1	YA	1482	G
1	YA	1483	G
1	YA	1489	C
1	YA	1490	A
1	YA	1491	G
1	YA	1493	C
1	YA	1494	A
1	YA	1498	C
1	YA	1504	A
1	YA	1507	C
1	YA	1508	A
1	YA	1509	A
1	YA	1510	G
1	YA	1511	G
1	YA	1520	U

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Mol	Chain	Res	Type
1	YA	1522	A
1	YA	1523	U
1	YA	1524	G
1	YA	1531	C
1	YA	1532	A
1	YA	1534	U
1	YA	1535	A
1	YA	1536	C
1	YA	1537	G
1	YA	1538	G
1	YA	1539	U
1	YA	1541	C
1	YA	1555	G
1	YA	1556	C
1	YA	1559	U
1	YA	1560	G
1	YA	1565	C
1	YA	1567	G
1	YA	1568	G
1	YA	1569	A
1	YA	1583	A
1	YA	1584	U
1	YA	1585	C
1	YA	1586	A
1	YA	1587	G
1	YA	1600	C
1	YA	1601	G
1	YA	1602	U
1	YA	1603	A
1	YA	1606	C
1	YA	1607	C
1	YA	1608	A
1	YA	1610	A
1	YA	1612	C
1	YA	1613	G
1	YA	1616	A
1	YA	1618	A
1	YA	1626	A
1	YA	1633	G
1	YA	1635	A
1	YA	1636	U
1	YA	1640	A

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Mol	Chain	Res	Type
1	YA	1646	C
1	YA	1647	U
1	YA	1648	U
1	YA	1649	G
1	YA	1655	A
1	YA	1661	G
1	YA	1663	G
1	YA	1674	G
1	YA	1683	U
1	YA	1695	G
1	YA	1696	G
1	YA	1699	G
1	YA	1700	A
1	YA	1701	A
1	YA	1707	G
1	YA	1714	U
1	YA	1715	G
1	YA	1717	A
1	YA	1722	A
1	YA	1723	G
1	YA	1728	C
1	YA	1729	U
1	YA	1730	C
1	YA	1731	G
1	YA	1732	C
1	YA	1733	G
1	YA	1734	G
1	YA	1735	A
1	YA	1738	G
1	YA	1750	G
1	YA	1758	U
1	YA	1764	C
1	YA	1773	A
1	YA	1776	G
1	YA	1782	U
1	YA	1787	A
1	YA	1800	C
1	YA	1802	A
1	YA	1808	A
1	YA	1809	A
1	YA	1810	A
1	YA	1811	G

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Mol	Chain	Res	Type
1	YA	1817	G
1	YA	1818	U
1	YA	1820	U
1	YA	1821	A
1	YA	1822	C
1	YA	1823	G
1	YA	1824	G
1	YA	1829	A
1	YA	1834	U
1	YA	1847	A
1	YA	1848	A
1	YA	1857	G
1	YA	1865	U
1	YA	1866	A
1	YA	1867	G
1	YA	1869	G
1	YA	1870	C
1	YA	1873	G
1	YA	1875	G
1	YA	1876	A
1	YA	1877	A
1	YA	1884	G
1	YA	1889	A
1	YA	1903	G
1	YA	1906	G
1	YA	1913	A
1	YA	1914	C
1	YA	1915	U
1	YA	1916	A
1	YA	1927	A
1	YA	1929	G
1	YA	1930	G
1	YA	1931	U
1	YA	1937	A
1	YA	1938	A
1	YA	1939	U
1	YA	1941	C
1	YA	1944	U
1	YA	1945	G
1	YA	1955	U
1	YA	1956	U
1	YA	1963	U

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Mol	Chain	Res	Type
1	YA	1964	G
1	YA	1966	A
1	YA	1967	C
1	YA	1970	A
1	YA	1971	U
1	YA	1972	G
1	YA	1975	G
1	YA	1981	A
1	YA	1982	U
1	YA	1993	U
1	YA	1997	C
1	YA	2018	G
1	YA	2020	A
1	YA	2022	U
1	YA	2023	C
1	YA	2024	G
1	YA	2031	A
1	YA	2033	A
1	YA	2034	U
1	YA	2035	G
1	YA	2043	C
1	YA	2049	G
1	YA	2055	C
1	YA	2056	G
1	YA	2060	A
1	YA	2061	G
1	YA	2062	A
1	YA	2068	U
1	YA	2069	G
1	YA	2079	U
1	YA	2080	A
1	YA	2092	U
1	YA	2093	G
1	YA	2094	A
1	YA	2104	C
1	YA	2105	U
1	YA	2108	A
1	YA	2109	U
1	YA	2110	G
1	YA	2134	A
1	YA	2135	A
1	YA	2136	G

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Mol	Chain	Res	Type
1	YA	2138	G
1	YA	2139	U
1	YA	2143	C
1	YA	2144	G
1	YA	2145	C
1	YA	2146	C
1	YA	2147	A
1	YA	2148	G
1	YA	2150	C
1	YA	2152	G
1	YA	2153	C
1	YA	2154	A
1	YA	2156	G
1	YA	2157	G
1	YA	2181	U
1	YA	2183	A
1	YA	2187	U
1	YA	2191	A
1	YA	2192	U
1	YA	2194	U
1	YA	2199	A
1	YA	2203	U
1	YA	2204	G
1	YA	2210	U
1	YA	2211	A
1	YA	2212	A
1	YA	2213	U
1	YA	2216	G
1	YA	2225	A
1	YA	2238	G
1	YA	2239	G
1	YA	2250	G
1	YA	2267	A
1	YA	2268	A
1	YA	2279	G
1	YA	2283	C
1	YA	2286	G
1	YA	2289	G
1	YA	2297	A
1	YA	2298	A
1	YA	2299	U
1	YA	2305	U

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Mol	Chain	Res	Type
1	YA	2306	C
1	YA	2308	G
1	YA	2309	A
1	YA	2310	C
1	YA	2311	A
1	YA	2312	U
1	YA	2313	C
1	YA	2314	A
1	YA	2320	U
1	YA	2321	U
1	YA	2322	A
1	YA	2325	G
1	YA	2332	C
1	YA	2334	U
1	YA	2335	A
1	YA	2337	G
1	YA	2338	C
1	YA	2339	C
1	YA	2345	G
1	YA	2347	C
1	YA	2348	U
1	YA	2358	A
1	YA	2361	G
1	YA	2379	G
1	YA	2382	G
1	YA	2383	G
1	YA	2385	C
1	YA	2386	A
1	YA	2387	U
1	YA	2388	A
1	YA	2390	U
1	YA	2392	A
1	YA	2401	U
1	YA	2402	U
1	YA	2403	C
1	YA	2405	G
1	YA	2407	A
1	YA	2409	G
1	YA	2423	U
1	YA	2424	C
1	YA	2425	A
1	YA	2426	A

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Mol	Chain	Res	Type
1	YA	2427	C
1	YA	2428	G
1	YA	2429	G
1	YA	2430	A
1	YA	2431	U
1	YA	2435	A
1	YA	2441	U
1	YA	2447	G
1	YA	2448	A
1	YA	2469	A
1	YA	2475	C
1	YA	2476	A
1	YA	2491	U
1	YA	2494	G
1	YA	2498	C
1	YA	2502	G
1	YA	2505	G
1	YA	2506	U
1	YA	2513	A
1	YA	2514	U
1	YA	2518	A
1	YA	2520	C
1	YA	2529	G
1	YA	2534	A
1	YA	2535	G
1	YA	2541	A
1	YA	2542	A
1	YA	2543	G
1	YA	2544	G
1	YA	2547	A
1	YA	2554	U
1	YA	2555	U
1	YA	2566	A
1	YA	2567	G
1	YA	2573	C
1	YA	2574	G
1	YA	2576	G
1	YA	2578	G
1	YA	2579	C
1	YA	2586	U
1	YA	2602	A
1	YA	2603	G

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Mol	Chain	Res	Type
1	YA	2606	C
1	YA	2609	U
1	YA	2612	C
1	YA	2613	U
1	YA	2614	A
1	YA	2615	U
1	YA	2616	C
1	YA	2618	G
1	YA	2620	C
1	YA	2629	U
1	YA	2630	G
1	YA	2632	A
1	YA	2638	G
1	YA	2639	A
1	YA	2645	G
1	YA	2646	C
1	YA	2656	U
1	YA	2657	A
1	YA	2666	C
1	YA	2667	C
1	YA	2681	C
1	YA	2682	A
1	YA	2683	C
1	YA	2689	U
1	YA	2690	U
1	YA	2714	G
1	YA	2718	G
1	YA	2726	A
1	YA	2727	A
1	YA	2728	U
1	YA	2729	G
1	YA	2732	G
1	YA	2736	A
1	YA	2744	G
1	YA	2748	A
1	YA	2751	G
1	YA	2752	C
1	YA	2753	A
1	YA	2757	A
1	YA	2758	A
1	YA	2761	A
1	YA	2765	A

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Mol	Chain	Res	Type
1	YA	2766	A
1	YA	2777	G
1	YA	2778	A
1	YA	2791	G
1	YA	2798	U
1	YA	2799	A
1	YA	2808	G
1	YA	2820	A
1	YA	2822	G
1	YA	2832	U
1	YA	2834	G
1	YA	2835	A
1	YA	2836	U
1	YA	2837	A
1	YA	2850	A
1	YA	2851	A
1	YA	2861	U
1	YA	2867	G
1	YA	2872	A
1	YA	2874	C
1	YA	2875	C
1	YA	2876	G
1	YA	2879	A
1	YA	2880	C
1	YA	2883	A
1	YA	2894	G
1	YA	2895	G
2	YB	11	C
2	YB	13	G
2	YB	15	A
2	YB	16	G
2	YB	24	G
2	YB	25	U
2	YB	30	C
2	YB	35	C
2	YB	36	C
2	YB	40	U
2	YB	41	G
2	YB	42	C
2	YB	43	C
2	YB	44	G
2	YB	45	A

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Mol	Chain	Res	Type
2	YB	48	U
2	YB	57	A
2	YB	58	A
2	YB	60	C
2	YB	64	G
2	YB	65	U
2	YB	66	A
2	YB	67	G
2	YB	68	C
2	YB	87	U
2	YB	89	U
2	YB	90	C
2	YB	91	C
2	YB	99	A
2	YB	109	A
2	YB	110	C

All (359) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	RA	34	U
1	RA	60	G
1	RA	100	U
1	RA	137	U
1	RA	164	C
1	RA	199	A
1	RA	229	C
1	RA	271	G
1	RA	301	G
1	RA	310	A
1	RA	404	A
1	RA	479	A
1	RA	507	A
1	RA	527	C
1	RA	555	G
1	RA	614	A
1	RA	655	A
1	RA	746	U
1	RA	764	A
1	RA	914	G
1	RA	931	U
1	RA	958	U

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Mol	Chain	Res	Type
1	RA	995	C
1	RA	1011	G
1	RA	1020	A
1	RA	1023	U
1	RA	1062	G
1	RA	1110	G
1	RA	1150	C
1	RA	1247	A
1	RA	1275	A
1	RA	1287	A
1	RA	1378	A
1	RA	1379	U
1	RA	1458	U
1	RA	1459	G
1	RA	1475	G
1	RA	1535	A
1	RA	1537	G
1	RA	1554	U
1	RA	1606	C
1	RA	1626	A
1	RA	1695	G
1	RA	1706	C
1	RA	1714	U
1	RA	1738	G
1	RA	1816	C
1	RA	1847	A
1	RA	1857	G
1	RA	1858	A
1	RA	1871	A
1	RA	1941	C
1	RA	2062	A
1	RA	2136	G
1	RA	2148	G
1	RA	2149	U
1	RA	2199	A
1	RA	2225	A
1	RA	2275	C
1	RA	2282	G
1	RA	2296	U
1	RA	2311	A
1	RA	2321	U
1	RA	2324	U

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Mol	Chain	Res	Type
1	RA	2326	C
1	RA	2383	G
1	RA	2406	A
1	RA	2425	A
1	RA	2430	A
1	RA	2602	A
1	RA	2756	U
1	RA	2800	A
1	RA	2820	A
1	RA	2873	A
32	QA	51	A
32	QA	72	A
32	QA	87	C
32	QA	95	C
32	QA	110	C
32	QA	115	G
32	QA	175	C
32	QA	184	G
32	QA	198	G
32	QA	250	A
32	QA	266	G
32	QA	267	C
32	QA	274	A
32	QA	330	C
32	QA	346	G
32	QA	351	G
32	QA	366	A
32	QA	368	U
32	QA	373	A
32	QA	414	A
32	QA	429	U
32	QA	451	A
32	QA	452	A
32	QA	484	G
32	QA	486	U
32	QA	495	A
32	QA	499	A
32	QA	500	G
32	QA	534	U
32	QA	548	G
32	QA	701	U
32	QA	722	G

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Mol	Chain	Res	Type
32	QA	754	C
32	QA	884	U
32	QA	913	A
32	QA	982	U
32	QA	1049	U
32	QA	1066	C
32	QA	1101	A
32	QA	1136	C
32	QA	1158	C
32	QA	1201	A
32	QA	1228	C
32	QA	1241	G
32	QA	1282	C
32	QA	1287	A
32	QA	1303	C
32	QA	1323	G
32	QA	1331	G
32	QA	1336	C
32	QA	1348	U
32	QA	1381	U
32	QA	1432	G
32	QA	1453	G
32	QA	1454	G
32	QA	1505	G
32	XA	6	G
32	XA	14	U
32	XA	60	A
32	XA	66	A
32	XA	71	A
32	XA	72	A
32	XA	86	G
32	XA	87	C
32	XA	95	C
32	XA	109	A
32	XA	131	A
32	XA	197	A
32	XA	243	A
32	XA	245	U
32	XA	247	G
32	XA	251	G
32	XA	252	U
32	XA	274	A

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Mol	Chain	Res	Type
32	XA	279	A
32	XA	305	G
32	XA	328	C
32	XA	347	G
32	XA	351	G
32	XA	352	C
32	XA	366	A
32	XA	368	U
32	XA	372	C
32	XA	373	A
32	XA	382	A
32	XA	423	G
32	XA	424	G
32	XA	429	U
32	XA	451	A
32	XA	484	G
32	XA	496	A
32	XA	500	G
32	XA	512	U
32	XA	519	C
32	XA	534	U
32	XA	559	A
32	XA	563	A
32	XA	701	U
32	XA	752	G
32	XA	802	A
32	XA	913	A
32	XA	973	G
32	XA	977	A
32	XA	1049	U
32	XA	1064	G
32	XA	1066	C
32	XA	1067	A
32	XA	1086	U
32	XA	1101	A
32	XA	1138	G
32	XA	1142	G
32	XA	1157	A
32	XA	1160	G
32	XA	1190	G
32	XA	1201	A
32	XA	1224	U

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Mol	Chain	Res	Type
32	XA	1242	G
32	XA	1278	G
32	XA	1282	C
32	XA	1299	A
32	XA	1331	G
32	XA	1348	U
32	XA	1381	U
32	XA	1447	A
32	XA	1451	U
32	XA	1453	G
1	YA	14	A
1	YA	33	C
1	YA	35	G
1	YA	49	A
1	YA	52	A
1	YA	73	A
1	YA	86	G
1	YA	103	A
1	YA	121	G
1	YA	140	C
1	YA	179	C
1	YA	196	A
1	YA	204	A
1	YA	206	U
1	YA	215	G
1	YA	221	A
1	YA	223	A
1	YA	227	A
1	YA	234	U
1	YA	249	C
1	YA	311	A
1	YA	324	A
1	YA	329	G
1	YA	386	G
1	YA	388	G
1	YA	389	G
1	YA	406	G
1	YA	412	A
1	YA	422	A
1	YA	423	A
1	YA	443	A
1	YA	454	A

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Mol	Chain	Res	Type
1	YA	474	G
1	YA	479	A
1	YA	483	A
1	YA	489	G
1	YA	491	G
1	YA	503	A
1	YA	575	A
1	YA	604	G
1	YA	617	G
1	YA	621	A
1	YA	622	G
1	YA	638	G
1	YA	648	G
1	YA	670	A
1	YA	727	A
1	YA	740	C
1	YA	746	U
1	YA	762	U
1	YA	763	G
1	YA	800	A
1	YA	806	C
1	YA	915	C
1	YA	931	U
1	YA	984	A
1	YA	990	A
1	YA	1009	A
1	YA	1011	G
1	YA	1021	A
1	YA	1023	U
1	YA	1026	G
1	YA	1079	C
1	YA	1129	A
1	YA	1135	C
1	YA	1157	G
1	YA	1204	A
1	YA	1206	G
1	YA	1210	G
1	YA	1267	U
1	YA	1274	A
1	YA	1275	A
1	YA	1312	U
1	YA	1325	U

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Mol	Chain	Res	Type
1	YA	1339	G
1	YA	1385	A
1	YA	1388	G
1	YA	1398	C
1	YA	1399	C
1	YA	1400	U
1	YA	1417	C
1	YA	1427	A
1	YA	1455	G
1	YA	1482	G
1	YA	1489	C
1	YA	1510	G
1	YA	1537	G
1	YA	1555	G
1	YA	1612	C
1	YA	1635	A
1	YA	1648	U
1	YA	1654	A
1	YA	1682	G
1	YA	1695	G
1	YA	1700	A
1	YA	1706	C
1	YA	1713	A
1	YA	1731	G
1	YA	1733	G
1	YA	1734	G
1	YA	1775	U
1	YA	1799	G
1	YA	1810	A
1	YA	1816	C
1	YA	1817	G
1	YA	1828	G
1	YA	1866	A
1	YA	1913	A
1	YA	1915	U
1	YA	1941	C
1	YA	1943	U
1	YA	1965	C
1	YA	1981	A
1	YA	2068	U
1	YA	2143	C
1	YA	2148	G

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Mol	Chain	Res	Type
1	YA	2214	C
1	YA	2282	G
1	YA	2286	G
1	YA	2288	A
1	YA	2310	C
1	YA	2311	A
1	YA	2337	G
1	YA	2344	U
1	YA	2347	C
1	YA	2391	G
1	YA	2406	A
1	YA	2425	A
1	YA	2427	C
1	YA	2428	G
1	YA	2468	A
1	YA	2497	A
1	YA	2543	G
1	YA	2566	A
1	YA	2613	U
1	YA	2615	U
1	YA	2638	G
1	YA	2656	U
1	YA	2666	C
1	YA	2681	C
1	YA	2682	A
1	YA	2727	A
1	YA	2750	A
1	YA	2752	C
1	YA	2756	U
1	YA	2757	A
1	YA	2776	A
1	YA	2777	G
1	YA	2798	U
1	YA	2850	A
1	YA	2866	U
1	YA	2874	C
1	YA	2875	C
2	YB	12	C
2	YB	13	G
2	YB	16	G
2	YB	56	G
2	YB	90	C

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Mol	Chain	Res	Type
2	YB	110	C

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 364 ligands modelled in this entry, 363 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$
54	EM1	RA	3135	-	57,64,64	1.95	13 (22%)	74,97,97	2.81	22 (29%)

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
54	EM1	RA	3135	-	-	0/75/112/112	0/4/5/5

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	RA	3135	EM1	C76-C78	-7.34	1.37	1.48
54	RA	3135	EM1	N82-N81	-5.43	1.26	1.34
54	RA	3135	EM1	C77-C72	-4.71	1.32	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	RA	3135	EM1	N81-N80	-4.50	1.25	1.34
54	RA	3135	EM1	O5-C2	-3.80	1.41	1.47
54	RA	3135	EM1	O32-C28	-3.22	1.37	1.44
54	RA	3135	EM1	C79-N80	-2.79	1.32	1.35
54	RA	3135	EM1	C74-C75	-2.63	1.33	1.38
54	RA	3135	EM1	C73-C72	-2.56	1.34	1.39
54	RA	3135	EM1	C28-C34	-2.39	1.48	1.55
54	RA	3135	EM1	C74-C73	-2.39	1.34	1.38
54	RA	3135	EM1	C21-C26	-2.05	1.50	1.53
54	RA	3135	EM1	C72-N71	2.53	1.47	1.38

All (22) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	RA	3135	EM1	C8-C4-C2	-10.64	99.56	115.25
54	RA	3135	EM1	C84-C83-N80	-7.70	97.44	112.34
54	RA	3135	EM1	C76-C77-C72	-5.67	115.50	120.61
54	RA	3135	EM1	O45-C42-C44	-4.67	100.70	110.28
54	RA	3135	EM1	C2-O5-C10	-4.66	105.41	109.28
54	RA	3135	EM1	C42-O45-C50	-4.04	106.18	112.97
54	RA	3135	EM1	C3-N6-C10	-3.81	107.28	111.94
54	RA	3135	EM1	C55-C50-C54	-3.40	107.71	113.38
54	RA	3135	EM1	C54-C49-N53	-3.30	105.95	115.70
54	RA	3135	EM1	O16-C10-N6	-2.87	123.74	127.98
54	RA	3135	EM1	C2-C3-N6	-2.86	95.29	99.98
54	RA	3135	EM1	C77-C72-N71	-2.20	116.96	120.53
54	RA	3135	EM1	C19-C13-C7	2.06	122.98	119.16
54	RA	3135	EM1	O45-C50-C55	2.23	111.50	106.78
54	RA	3135	EM1	O45-C50-C54	2.56	113.18	109.09
54	RA	3135	EM1	C44-C49-N53	2.66	118.07	110.62
54	RA	3135	EM1	O5-C10-O16	3.60	126.30	122.53
54	RA	3135	EM1	C76-C78-N82	3.83	125.32	120.81
54	RA	3135	EM1	O5-C2-C4	4.17	115.36	105.61
54	RA	3135	EM1	O9-C4-C2	4.29	115.73	105.44
54	RA	3135	EM1	C73-C72-C77	4.75	124.87	118.66
54	RA	3135	EM1	N82-N81-N80	9.48	114.46	107.31

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	RA	3135	EM1	4	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	RA	2854/2904 (98%)	-0.42	41 (1%) 78 60	19, 47, 175, 400	0
1	YA	2841/2904 (97%)	0.18	96 (3%) 49 24	64, 141, 260, 408	0
2	RB	118/118 (100%)	-0.62	0 100 100	32, 61, 95, 115	0
2	YB	117/118 (99%)	-0.16	0 100 100	111, 185, 242, 277	0
3	RC	271/271 (100%)	-0.23	10 (3%) 45 22	25, 57, 97, 202	0
3	YC	271/271 (100%)	0.46	19 (7%) 19 7	64, 107, 154, 181	0
4	RD	209/209 (100%)	-0.35	0 100 100	19, 41, 90, 149	0
4	YD	209/209 (100%)	0.87	27 (12%) 5 2	71, 122, 174, 236	0
5	RE	201/201 (100%)	-0.23	0 100 100	23, 58, 116, 177	0
5	YE	201/201 (100%)	1.92	84 (41%) 0 0	91, 214, 335, 378	0
6	RF	177/178 (99%)	0.25	14 (7%) 15 5	52, 93, 166, 225	0
6	YF	178/178 (100%)	2.10	84 (47%) 0 0	154, 229, 270, 299	0
7	RG	176/176 (100%)	-0.03	0 100 100	41, 75, 129, 161	0
7	YG	176/176 (100%)	1.95	67 (38%) 0 0	129, 198, 270, 312	0
8	RH	149/149 (100%)	2.64	60 (40%) 0 0	59, 178, 260, 278	0
8	YH	149/149 (100%)	2.50	67 (44%) 0 0	100, 197, 252, 272	0
9	RI	141/141 (100%)	3.40	87 (61%) 0 0	149, 241, 292, 339	0
9	YI	141/141 (100%)	4.43	105 (74%) 0 0	231, 317, 353, 360	0
10	RJ	142/142 (100%)	-0.47	1 (0%) 89 78	21, 40, 76, 139	0
10	YJ	142/142 (100%)	0.51	15 (10%) 8 3	75, 127, 168, 193	0
11	RK	122/122 (100%)	-0.34	1 (0%) 87 75	23, 45, 94, 191	0
11	YK	122/122 (100%)	0.58	13 (10%) 8 3	66, 107, 155, 228	0
12	RL	143/143 (100%)	-0.40	0 100 100	18, 55, 93, 123	0
12	YL	143/143 (100%)	1.42	44 (30%) 1 0	86, 169, 242, 284	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	RM	136/136 (100%)	-0.41	0 100 100	17, 45, 85, 146	0
13	YM	136/136 (100%)	1.09	25 (18%) 2 1	78, 131, 175, 208	0
14	RN	120/120 (100%)	-0.45	0 100 100	18, 41, 63, 132	0
14	YN	120/120 (100%)	0.93	20 (16%) 2 1	88, 136, 190, 237	0
15	RO	116/116 (100%)	-0.22	0 100 100	40, 64, 97, 124	0
15	YO	116/116 (100%)	1.95	47 (40%) 0 0	134, 182, 227, 252	0
16	RP	114/114 (100%)	-0.31	0 100 100	29, 53, 104, 149	0
16	YP	114/114 (100%)	0.69	15 (13%) 4 2	82, 121, 160, 197	0
17	RQ	117/117 (100%)	-0.53	0 100 100	19, 34, 63, 108	0
17	YQ	117/117 (100%)	1.22	30 (25%) 1 0	88, 126, 203, 287	0
18	RR	103/103 (100%)	-0.41	1 (0%) 84 69	20, 48, 92, 115	0
18	YR	103/103 (100%)	2.16	44 (42%) 0 0	98, 154, 219, 274	0
19	RS	110/110 (100%)	-0.41	1 (0%) 85 72	20, 38, 83, 143	0
19	YS	110/110 (100%)	1.61	35 (31%) 1 0	86, 141, 208, 266	0
20	RT	93/93 (100%)	0.37	7 (7%) 17 6	35, 69, 134, 207	0
20	YT	93/93 (100%)	2.38	46 (49%) 0 0	133, 215, 282, 315	0
21	RU	102/102 (100%)	0.04	2 (1%) 68 46	38, 72, 160, 192	0
21	YU	102/102 (100%)	3.37	63 (61%) 0 0	151, 251, 347, 416	0
22	RV	94/94 (100%)	-0.19	0 100 100	31, 61, 102, 114	0
22	YV	94/94 (100%)	1.13	22 (23%) 1 0	107, 157, 199, 222	0
23	RW	79/79 (100%)	0.13	5 (6%) 23 9	22, 53, 114, 195	0
23	YW	79/79 (100%)	2.32	43 (54%) 0 0	108, 163, 232, 250	0
24	RX	77/77 (100%)	-0.14	0 100 100	32, 58, 110, 124	0
24	YX	77/77 (100%)	0.89	11 (14%) 4 2	88, 134, 182, 237	0
25	RY	63/63 (100%)	0.25	3 (4%) 34 15	53, 90, 153, 175	0
25	YY	63/63 (100%)	1.50	17 (26%) 1 0	167, 286, 366, 383	0
26	RZ	58/58 (100%)	-0.34	0 100 100	19, 40, 87, 117	0
26	YZ	58/58 (100%)	1.07	15 (25%) 1 0	104, 143, 200, 247	0
27	R0	56/56 (100%)	-0.50	0 100 100	17, 42, 85, 150	0
27	Y0	56/56 (100%)	1.25	14 (25%) 1 0	87, 161, 210, 255	0
28	R1	50/50 (100%)	0.27	1 (2%) 68 46	45, 65, 111, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	Y1	50/50 (100%)	1.64	16 (32%) 1 0	106, 161, 203, 255	0
29	R2	46/46 (100%)	-0.37	1 (2%) 65 42	30, 42, 69, 166	0
29	Y2	46/46 (100%)	1.15	8 (17%) 2 1	95, 128, 162, 176	0
30	R3	64/64 (100%)	-0.44	0 100 100	25, 44, 64, 91	0
30	Y3	64/64 (100%)	1.82	21 (32%) 0 0	96, 140, 173, 212	0
31	R4	38/38 (100%)	0.09	0 100 100	40, 58, 98, 108	0
31	Y4	38/38 (100%)	2.59	20 (52%) 0 0	94, 155, 195, 203	0
32	QA	1533/1533 (100%)	-0.45	19 (1%) 81 64	46, 97, 198, 345	0
32	XA	1530/1533 (99%)	-0.15	34 (2%) 65 42	55, 113, 259, 356	0
33	QB	218/218 (100%)	0.88	34 (15%) 3 1	82, 141, 198, 243	0
33	XB	218/218 (100%)	1.24	54 (24%) 1 0	93, 145, 201, 251	0
34	QC	206/206 (100%)	0.13	4 (1%) 70 48	71, 107, 156, 198	0
34	XC	206/206 (100%)	0.51	12 (5%) 26 11	86, 136, 185, 215	0
35	QD	205/205 (100%)	0.36	14 (6%) 20 7	57, 114, 174, 236	0
35	XD	205/205 (100%)	-0.18	1 (0%) 91 83	41, 78, 132, 212	0
36	QE	150/150 (100%)	-0.10	2 (1%) 79 62	59, 90, 147, 217	0
36	XE	150/150 (100%)	-0.17	1 (0%) 89 78	55, 92, 141, 191	0
37	QF	100/100 (100%)	0.05	2 (2%) 68 46	80, 126, 168, 190	0
37	XF	100/100 (100%)	0.17	3 (3%) 54 29	82, 119, 176, 211	0
38	QG	151/151 (100%)	0.37	9 (5%) 25 10	98, 138, 186, 203	0
38	XG	150/151 (99%)	1.75	57 (38%) 0 0	121, 195, 245, 277	0
39	QH	129/129 (100%)	0.25	5 (3%) 43 21	62, 101, 142, 189	0
39	XH	129/129 (100%)	0.13	6 (4%) 35 16	77, 115, 152, 209	0
40	QI	127/127 (100%)	0.97	23 (18%) 2 1	82, 137, 209, 250	0
40	XI	127/127 (100%)	1.24	25 (19%) 1 0	114, 158, 225, 259	0
41	QJ	98/98 (100%)	0.44	9 (9%) 11 4	71, 121, 175, 200	0
41	XJ	98/98 (100%)	1.63	30 (30%) 1 0	117, 166, 211, 238	0
42	QK	117/117 (100%)	0.89	12 (10%) 9 3	54, 123, 177, 206	0
42	XK	117/117 (100%)	0.04	3 (2%) 59 35	67, 115, 162, 186	0
43	QL	123/123 (100%)	0.08	2 (1%) 74 55	50, 79, 123, 189	0
43	XL	123/123 (100%)	0.30	3 (2%) 62 39	61, 89, 142, 202	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	QM	114/114 (100%)	0.38	8 (7%) 19 7	94, 142, 198, 217	0
44	XM	113/114 (99%)	2.58	58 (51%) 0 0	218, 370, 442, 470	0
45	QN	96/101 (95%)	0.48	7 (7%) 18 6	80, 116, 187, 224	0
45	XN	91/101 (90%)	1.52	29 (31%) 1 0	107, 180, 260, 287	0
46	QO	88/88 (100%)	0.08	2 (2%) 64 40	64, 102, 139, 188	0
46	XO	88/88 (100%)	-0.10	1 (1%) 82 66	76, 116, 160, 209	0
47	QP	82/82 (100%)	0.89	11 (13%) 4 2	78, 99, 166, 223	0
47	XP	80/82 (97%)	0.83	9 (11%) 7 2	72, 107, 158, 222	0
48	QQ	80/80 (100%)	0.68	7 (8%) 12 4	62, 96, 136, 164	0
48	XQ	80/80 (100%)	1.23	14 (17%) 2 1	78, 115, 144, 155	0
49	QR	55/55 (100%)	0.54	4 (7%) 18 6	90, 110, 168, 218	0
49	XR	55/55 (100%)	0.10	2 (3%) 46 23	74, 103, 171, 243	0
50	QS	79/79 (100%)	1.11	18 (22%) 1 0	110, 143, 197, 208	0
50	XS	79/79 (100%)	3.89	52 (65%) 0 0	205, 346, 411, 424	0
51	QT	85/85 (100%)	0.38	3 (3%) 48 23	74, 103, 147, 179	0
51	XT	85/85 (100%)	1.08	13 (15%) 3 1	91, 134, 190, 216	0
52	QU	51/51 (100%)	1.17	15 (29%) 1 0	96, 139, 187, 225	0
52	XU	51/51 (100%)	0.25	2 (3%) 43 21	83, 120, 184, 224	0
All	All	20427/20564 (99%)	0.34	1987 (9%) 10 3	17, 111, 252, 470	0

All (1987) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
8	YH	91	PHE	20.0
9	RI	52	LEU	17.6
8	RH	92	GLY	16.8
6	YF	129	MET	16.7
9	YI	57	VAL	16.6
8	YH	124	THR	16.2
9	YI	56	VAL	16.1
50	XS	29	PRO	15.2
44	XM	93	GLY	15.0
25	YY	63	ALA	13.8
9	YI	15	GLY	13.8
9	RI	1	ALA	13.3
1	RA	2179	C	13.2

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Mol	Chain	Res	Type	RSRZ
1	RA	2154	A	13.2
9	RI	2	LYS	13.1
9	YI	51	GLY	12.8
8	YH	92	GLY	12.7
9	YI	5	GLN	12.6
9	YI	55	PRO	12.5
21	YU	35	VAL	12.5
9	YI	68	PHE	12.0
9	YI	59	THR	11.9
40	XI	42	THR	11.8
44	XM	94	LEU	11.8
9	YI	119	ALA	11.5
8	RH	113	SER	11.5
9	YI	2	LYS	11.4
9	YI	4	VAL	11.3
8	RH	118	PRO	11.3
8	RH	84	ALA	11.2
50	XS	23	GLU	11.1
32	XA	209	U	11.0
8	YH	93	SER	10.9
8	RH	93	SER	10.9
9	RI	66	PHE	10.8
38	XG	58	LEU	10.6
8	YH	123	ARG	10.5
50	XS	12	LEU	10.5
8	YH	95	GLY	10.5
9	RI	11	GLN	10.4
8	RH	80	ILE	10.4
48	QQ	82	VAL	10.4
1	RA	2147	A	10.4
9	RI	3	LYS	10.3
9	RI	67	THR	10.3
8	RH	90	LEU	10.3
40	XI	127	SER	10.3
9	YI	3	LYS	10.2
8	RH	122	LEU	10.1
50	XS	38	THR	10.1
43	XL	123	ALA	10.0
47	QP	80	LYS	10.0
50	XS	70	LEU	9.9
8	YH	112	LYS	9.9
28	Y1	35	LEU	9.8

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Mol	Chain	Res	Type	RSRZ
21	YU	12	VAL	9.8
5	YE	127	GLU	9.7
9	YI	66	PHE	9.5
21	YU	17	ASP	9.4
8	YH	125	THR	9.2
9	YI	17	ALA	9.2
20	YT	55	VAL	9.1
18	YR	20	VAL	9.0
45	XN	52	ARG	9.0
50	XS	47	THR	9.0
8	RH	124	THR	9.0
9	RI	51	GLY	9.0
8	RH	98	ASP	8.9
30	Y3	20	GLY	8.8
7	YG	7	PRO	8.8
7	YG	83	THR	8.8
8	YH	105	ALA	8.7
50	XS	71	GLY	8.6
8	RH	79	THR	8.6
9	RI	78	LEU	8.6
8	RH	105	ALA	8.6
9	YI	25	PRO	8.6
27	Y0	56	LYS	8.5
50	XS	39	ILE	8.4
18	YR	96	VAL	8.3
8	RH	143	ILE	8.3
7	YG	8	VAL	8.3
21	YU	38	ILE	8.3
40	QI	42	THR	8.3
31	Y4	20	ASP	8.2
18	YR	103	ALA	8.2
21	YU	85	ARG	8.2
44	XM	95	PRO	8.2
7	YG	51	PHE	8.2
8	YH	127	GLU	8.1
5	YE	175	ILE	8.1
15	YO	61	GLN	8.1
15	YO	62	LEU	8.1
9	YI	14	ALA	8.1
9	YI	33	ASN	8.1
33	XB	87	ASP	8.0
50	XS	60	PHE	8.0

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Mol	Chain	Res	Type	RSRZ
50	XS	73	PHE	8.0
38	XG	150	PHE	8.0
6	YF	141	ASP	8.0
9	RI	13	ALA	7.9
9	YI	41	PHE	7.9
21	YU	78	LYS	7.9
5	YE	119	ILE	7.8
9	RI	10	LEU	7.8
38	XG	151	ALA	7.8
50	XS	65	MET	7.8
9	YI	58	ILE	7.8
9	RI	12	VAL	7.7
44	XM	88	LEU	7.7
32	XA	210	C	7.7
21	YU	76	THR	7.7
38	XG	7	GLY	7.7
12	YL	5	THR	7.6
21	YU	31	GLY	7.6
9	YI	52	LEU	7.6
21	YU	26	ASN	7.6
8	RH	117	LEU	7.6
1	RA	2138	G	7.6
1	YA	613	A	7.5
8	YH	87	GLU	7.5
8	RH	86	ASP	7.4
7	YG	56	GLY	7.4
15	YO	52	SER	7.4
50	XS	75	PRO	7.4
5	YE	173	THR	7.4
21	YU	27	VAL	7.4
50	XS	28	LYS	7.4
8	RH	85	GLY	7.4
1	RA	2143	C	7.4
1	RA	2110	G	7.3
50	XS	25	GLY	7.3
8	RH	149	GLU	7.3
32	QA	86	G	7.3
21	YU	59	GLU	7.3
49	QR	19	GLU	7.3
8	RH	74	ALA	7.3
35	QD	35	GLN	7.2
21	YU	11	ILE	7.2

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Mol	Chain	Res	Type	RSRZ
8	YH	82	SER	7.2
18	YR	50	GLY	7.2
8	YH	86	ASP	7.2
8	RH	148	ALA	7.2
21	YU	24	VAL	7.2
44	XM	112	ARG	7.2
21	YU	70	ALA	7.1
8	RH	123	ARG	7.1
50	XS	58	PRO	7.1
50	XS	63	ASP	7.1
8	YH	120	GLY	7.0
19	YS	48	LYS	7.0
12	YL	82	LEU	7.0
5	YE	147	LEU	7.0
41	XJ	8	ILE	7.0
8	YH	119	ASN	7.0
9	YI	50	LYS	7.0
9	YI	118	GLY	6.9
1	RA	2146	C	6.9
9	YI	60	VAL	6.9
9	YI	48	ILE	6.9
8	YH	121	VAL	6.8
21	YU	75	ALA	6.8
5	YE	190	ALA	6.8
28	Y1	52	LYS	6.8
25	YY	62	GLY	6.8
8	RH	125	THR	6.8
21	YU	19	GLY	6.8
9	YI	67	THR	6.8
9	YI	93	ASN	6.8
43	QL	123	ALA	6.8
20	YT	3	ARG	6.8
8	RH	91	PHE	6.8
9	RI	30	GLN	6.8
9	RI	46	ASP	6.8
20	RT	1	MET	6.8
3	RC	234	GLY	6.6
33	XB	147	LEU	6.6
50	XS	64	GLU	6.6
9	YI	13	ALA	6.6
21	YU	51	LEU	6.6
20	YT	83	ALA	6.5

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Mol	Chain	Res	Type	RSRZ
50	XS	36	ARG	6.5
23	YW	42	THR	6.5
9	RI	68	PHE	6.5
9	RI	21	PRO	6.5
9	YI	16	MET	6.5
30	Y3	21	PHE	6.5
7	YG	55	ASP	6.5
8	YH	90	LEU	6.4
12	YL	92	LEU	6.4
44	XM	62	PHE	6.4
8	RH	145	ASN	6.4
1	RA	2180	U	6.4
15	YO	40	ILE	6.4
16	YP	109	ILE	6.4
9	YI	29	GLN	6.4
9	YI	44	LYS	6.3
9	YI	83	ALA	6.3
1	YA	2799	A	6.3
20	YT	42	GLU	6.3
9	RI	114	ALA	6.3
7	YG	41	GLU	6.3
30	Y3	19	GLY	6.3
33	QB	51	GLU	6.3
42	XK	125	LYS	6.3
44	XM	89	ARG	6.3
45	XN	19	TYR	6.3
9	YI	120	ASP	6.3
8	RH	81	ALA	6.3
8	YH	106	ALA	6.3
32	XA	1224	U	6.3
8	RH	147	VAL	6.2
9	YI	81	LYS	6.2
44	XM	82	LEU	6.2
50	XS	26	ASP	6.2
30	Y3	13	PHE	6.2
5	YE	121	VAL	6.2
15	YO	60	GLU	6.2
40	QI	89	TYR	6.2
31	Y4	1	MET	6.2
20	YT	2	ILE	6.1
9	YI	30	GLN	6.1
3	RC	236	GLY	6.1

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Mol	Chain	Res	Type	RSRZ
50	XS	24	SER	6.1
12	YL	101	ILE	6.1
9	YI	12	VAL	6.1
38	XG	72	VAL	6.1
5	YE	144	GLU	6.1
44	XM	63	VAL	6.1
9	YI	32	VAL	6.0
9	RI	33	ASN	6.0
15	YO	56	LYS	6.0
12	YL	81	ASP	6.0
23	YW	29	SER	6.0
7	YG	165	ASP	6.0
30	Y3	57	VAL	6.0
9	RI	53	PRO	6.0
44	XM	107	THR	6.0
8	RH	130	VAL	6.0
50	XS	37	SER	6.0
21	YU	86	PHE	6.0
9	YI	75	ALA	6.0
45	XN	48	GLN	5.9
31	Y4	8	LYS	5.9
8	YH	147	VAL	5.9
1	YA	345	A	5.9
18	YR	52	PRO	5.9
15	YO	27	VAL	5.9
1	YA	2146	C	5.9
9	RI	16	MET	5.9
8	YH	133	GLN	5.8
44	XM	111	PRO	5.8
44	XM	104	ASN	5.8
1	YA	1067	A	5.8
9	YI	125	THR	5.8
30	Y3	60	CYS	5.8
1	RA	2139	U	5.8
21	YU	79	ALA	5.8
18	YR	26	ASP	5.8
21	YU	28	LEU	5.8
1	YA	2181	U	5.7
38	XG	55	LYS	5.7
8	RH	126	GLY	5.7
25	YY	35	GLY	5.7
47	QP	81	ALA	5.7

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Mol	Chain	Res	Type	RSRZ
6	YF	117	SER	5.7
50	XS	11	ASP	5.7
21	YU	88	ASP	5.7
21	YU	42	LYS	5.7
4	YD	91	THR	5.7
21	YU	34	ILE	5.6
40	QI	40	ARG	5.6
21	YU	87	GLU	5.6
38	XG	73	GLU	5.6
40	XI	66	VAL	5.6
7	YG	140	ILE	5.6
32	XA	86	G	5.6
9	YI	53	PRO	5.6
6	YF	152	ASP	5.6
9	RI	57	VAL	5.6
15	YO	87	ILE	5.6
8	RH	87	GLU	5.6
5	YE	171	ASP	5.6
16	YP	114	ASN	5.6
9	RI	139	VAL	5.6
1	YA	1078	U	5.5
8	YH	131	SER	5.5
9	YI	10	LEU	5.5
41	XJ	71	LEU	5.5
41	XJ	12	ALA	5.5
51	XT	40	ALA	5.5
28	Y1	46	VAL	5.5
1	YA	1075	C	5.5
9	RI	5	GLN	5.5
6	YF	41	GLU	5.5
8	YH	126	GLY	5.5
8	YH	143	ILE	5.5
41	QJ	102	LEU	5.5
9	RI	29	GLN	5.5
47	XP	52	LEU	5.5
7	YG	57	TYR	5.5
9	RI	58	ILE	5.5
8	YH	85	GLY	5.4
9	RI	60	VAL	5.4
21	YU	5	ARG	5.4
6	YF	115	GLY	5.4
8	YH	128	HIS	5.4

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Mol	Chain	Res	Type	RSRZ
44	XM	110	GLY	5.4
20	YT	58	VAL	5.4
50	XS	30	LEU	5.4
9	YI	28	GLY	5.4
1	RA	2149	U	5.4
18	YR	88	GLY	5.4
7	YG	42	VAL	5.4
1	YA	645	C	5.3
1	YA	2157	G	5.3
5	YE	25	GLU	5.3
15	YO	41	ALA	5.3
48	QQ	6	THR	5.3
8	RH	128	HIS	5.3
35	QD	26	ALA	5.3
9	YI	61	TYR	5.3
20	YT	15	HIS	5.3
25	YY	36	GLN	5.3
1	RA	139	U	5.3
9	YI	22	PRO	5.3
13	YM	72	PRO	5.3
31	Y4	10	LEU	5.3
1	YA	1090	A	5.3
8	RH	146	VAL	5.3
9	YI	65	SER	5.3
8	RH	88	GLY	5.3
8	RH	106	ALA	5.3
9	RI	75	ALA	5.3
38	XG	149	ALA	5.3
12	YL	80	SER	5.3
38	XG	53	SER	5.2
50	QS	2	ARG	5.2
8	YH	146	VAL	5.2
9	YI	54	ILE	5.2
9	RI	6	ALA	5.2
29	Y2	33	ARG	5.2
8	RH	116	ARG	5.2
14	YN	29	VAL	5.2
21	YU	37	GLY	5.2
8	RH	121	VAL	5.2
31	Y4	25	VAL	5.2
23	YW	62	ALA	5.2
18	YR	55	ASP	5.2

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Mol	Chain	Res	Type	RSRZ
7	YG	61	TRP	5.2
9	RI	65	SER	5.2
20	YT	34	VAL	5.2
33	QB	220	VAL	5.1
22	YV	84	PRO	5.1
5	YE	180	LEU	5.1
41	XJ	6	ILE	5.1
19	YS	110	ARG	5.1
23	YW	52	CYS	5.1
1	YA	1077	A	5.1
1	RA	546	U	5.1
45	XN	51	PRO	5.1
11	RK	71	ARG	5.1
5	YE	12	LEU	5.1
5	YE	128	ALA	5.1
33	XB	186	VAL	5.1
38	XG	65	LEU	5.1
19	YS	3	THR	5.1
17	YQ	28	SER	5.1
44	XM	92	ARG	5.1
11	YK	89	ASN	5.1
48	XQ	7	LEU	5.0
6	YF	178	LYS	5.0
27	Y0	36	LYS	5.0
32	XA	461	A	5.0
3	YC	238	ASN	5.0
9	YI	21	PRO	5.0
6	YF	34	THR	5.0
7	YG	1	SER	5.0
18	YR	46	GLU	5.0
9	YI	138	VAL	5.0
9	YI	43	ALA	5.0
8	RH	73	ASN	5.0
51	XT	2	ASN	5.0
41	XJ	73	LEU	5.0
1	RA	2155	U	5.0
22	YV	69	GLU	5.0
6	YF	127	TYR	5.0
21	YU	77	GLY	5.0
1	YA	2307	G	5.0
17	YQ	36	GLN	5.0
20	YT	35	ALA	5.0

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Mol	Chain	Res	Type	RSRZ
9	YI	1	ALA	5.0
4	YD	10	GLY	4.9
4	YD	73	VAL	4.9
21	YU	13	LEU	4.9
5	YE	148	ILE	4.9
20	YT	43	ILE	4.9
43	XL	122	LYS	4.9
38	XG	64	ALA	4.9
9	RI	77	VAL	4.9
9	YI	121	ILE	4.9
5	YE	201	ALA	4.9
9	RI	132	ALA	4.9
1	YA	846	U	4.9
15	YO	46	GLU	4.9
5	YE	24	ASN	4.9
8	YH	122	LEU	4.9
19	YS	47	VAL	4.9
44	XM	96	VAL	4.9
23	YW	39	GLN	4.9
21	YU	97	SER	4.9
39	QH	129	ALA	4.9
9	RI	7	TYR	4.9
5	YE	104	ALA	4.9
9	YI	20	SER	4.9
14	YN	74	GLU	4.9
47	XP	47	GLU	4.9
5	YE	131	THR	4.8
38	XG	132	THR	4.8
50	XS	43	MET	4.8
32	QA	85	U	4.8
9	YI	23	VAL	4.8
7	YG	85	LYS	4.8
21	YU	2	ALA	4.8
21	YU	32	LYS	4.8
9	YI	27	LEU	4.8
20	YT	36	LYS	4.8
33	QB	135	MET	4.8
32	QA	1030	U	4.8
9	RI	141	ASP	4.8
44	XM	28	ARG	4.8
1	RA	138	U	4.8
1	YA	139	U	4.8

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Mol	Chain	Res	Type	RSRZ
8	YH	144	VAL	4.8
9	YI	84	GLY	4.8
21	YU	72	PHE	4.7
40	XI	3	ASN	4.7
50	XS	66	VAL	4.7
18	YR	6	GLN	4.7
18	YR	95	ASP	4.7
33	QB	50	ASN	4.7
19	YS	5	ALA	4.7
50	XS	59	VAL	4.7
45	QN	20	PHE	4.7
50	XS	79	TYR	4.7
9	YI	72	THR	4.7
1	YA	2402	U	4.7
25	YY	24	GLU	4.7
15	YO	58	ILE	4.7
18	YR	22	LEU	4.7
4	YD	25	THR	4.7
33	XB	129	THR	4.7
44	XM	83	GLY	4.7
20	YT	32	LEU	4.7
8	RH	144	VAL	4.7
8	RH	134	VAL	4.7
20	YT	60	THR	4.6
7	YG	102	ILE	4.6
51	XT	3	ILE	4.6
38	XG	54	GLY	4.6
50	XS	67	GLY	4.6
7	YG	32	LEU	4.6
45	XN	26	LEU	4.6
44	XM	108	ARG	4.6
21	YU	36	GLU	4.6
38	XG	130	LYS	4.6
6	YF	154	THR	4.6
15	YO	24	THR	4.6
1	YA	1095	A	4.6
6	YF	17	THR	4.6
9	RI	22	PRO	4.6
6	RF	79	ARG	4.6
31	Y4	19	ARG	4.6
31	Y4	33	HIS	4.6
32	QA	88	U	4.6

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Mol	Chain	Res	Type	RSRZ
40	XI	65	THR	4.6
1	YA	2104	C	4.6
1	YA	2306	C	4.6
41	XJ	39	PRO	4.6
21	YU	41	VAL	4.6
38	XG	83	THR	4.6
9	RI	37	PHE	4.6
44	XM	81	ASP	4.5
1	YA	1172	C	4.5
45	XN	62	ARG	4.5
21	YU	20	LYS	4.5
4	YD	26	VAL	4.5
23	YW	37	VAL	4.5
8	YH	145	ASN	4.5
50	XS	2	ARG	4.5
50	XS	48	ILE	4.5
50	XS	40	PHE	4.5
1	YA	1175	A	4.5
44	XM	22	TYR	4.5
20	YT	81	LYS	4.5
6	YF	153	ILE	4.5
5	YE	186	VAL	4.5
4	YD	96	ILE	4.5
20	YT	72	GLN	4.5
33	QB	87	ASP	4.5
40	XI	63	TYR	4.5
41	XJ	40	ILE	4.5
8	RH	119	ASN	4.5
19	YS	4	ILE	4.5
8	RH	120	GLY	4.4
8	RH	89	LYS	4.4
8	YH	79	THR	4.4
47	XP	39	PHE	4.4
22	YV	94	ALA	4.4
7	YG	164	ALA	4.4
33	QB	66	ILE	4.4
12	YL	89	VAL	4.4
9	RI	35	MET	4.4
7	YG	40	VAL	4.4
8	RH	64	ALA	4.4
13	YM	103	TYR	4.4
1	YA	546	U	4.4

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Mol	Chain	Res	Type	RSRZ
18	YR	19	THR	4.4
19	YS	6	LYS	4.4
15	YO	59	ALA	4.4
6	YF	78	ILE	4.4
52	QU	22	CYS	4.4
23	YW	41	GLY	4.4
6	YF	131	VAL	4.3
20	YT	31	VAL	4.3
7	YG	166	GLU	4.3
1	YA	1536	C	4.3
30	Y3	22	LYS	4.3
50	XS	13	HIS	4.3
6	YF	112	ASP	4.3
15	YO	25	ARG	4.3
35	QD	24	VAL	4.3
6	YF	130	GLY	4.3
33	QB	152	ASP	4.3
18	YR	25	LEU	4.3
32	QA	87	C	4.3
41	XJ	7	ARG	4.3
6	YF	44	ALA	4.3
32	XA	94	G	4.3
33	QB	26	MET	4.3
9	YI	69	VAL	4.3
23	YW	70	VAL	4.3
21	YU	89	GLY	4.3
38	XG	74	VAL	4.3
9	RI	23	VAL	4.3
9	YI	31	GLY	4.3
20	YT	12	ARG	4.3
8	YH	84	ALA	4.3
8	YH	118	PRO	4.3
19	YS	70	LYS	4.3
27	Y0	23	ALA	4.3
1	RA	2150	C	4.3
8	YH	94	ILE	4.2
3	YC	236	GLY	4.2
9	YI	78	LEU	4.2
5	YE	188	MET	4.2
27	Y0	34	GLY	4.2
9	RI	19	PRO	4.2
47	QP	82	ALA	4.2

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Mol	Chain	Res	Type	RSRZ
6	YF	140	ILE	4.2
21	YU	4	ILE	4.2
5	YE	40	ARG	4.2
38	XG	43	TYR	4.2
26	YZ	33	HIS	4.2
4	YD	27	ILE	4.2
5	YE	193	VAL	4.2
23	YW	67	LYS	4.2
34	XC	41	TYR	4.2
3	RC	239	PHE	4.2
32	XA	85	U	4.2
9	YI	62	ALA	4.2
50	XS	27	LYS	4.2
40	XI	57	VAL	4.2
4	YD	55	LYS	4.2
9	YI	18	ASN	4.2
9	YI	85	ILE	4.2
33	QB	28	PRO	4.2
50	QS	48	ILE	4.2
50	XS	80	ARG	4.2
6	YF	114	ARG	4.2
50	XS	41	PRO	4.2
5	YE	143	LEU	4.2
38	QG	79	VAL	4.2
23	YW	38	ARG	4.2
41	QJ	35	GLN	4.1
45	XN	25	GLU	4.1
23	YW	58	LEU	4.1
44	XM	79	LEU	4.1
15	YO	89	ASP	4.1
5	YE	98	LYS	4.1
41	XJ	72	ARG	4.1
9	YI	139	VAL	4.1
10	YJ	142	ILE	4.1
15	YO	113	ALA	4.1
21	YU	71	ILE	4.1
44	XM	70	ARG	4.1
45	QN	29	ILE	4.1
41	XJ	74	VAL	4.1
47	QP	47	GLU	4.1
45	XN	53	ASP	4.1
1	RA	2144	G	4.1

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Mol	Chain	Res	Type	RSRZ
23	YW	21	GLY	4.1
9	YI	46	ASP	4.1
31	Y4	9	LYS	4.1
44	XM	109	LYS	4.1
9	YI	49	GLU	4.1
9	RI	119	ALA	4.1
9	RI	20	SER	4.1
6	YF	20	ASN	4.1
44	XM	84	CYS	4.1
44	XM	71	GLU	4.1
9	RI	32	VAL	4.1
23	YW	69	GLU	4.1
23	YW	54	ARG	4.1
24	YX	32	LEU	4.1
50	XS	31	ARG	4.1
51	XT	65	LEU	4.1
33	QB	73	ARG	4.0
3	RC	235	GLU	4.0
41	XJ	10	LEU	4.0
48	XQ	6	THR	4.0
40	XI	67	LYS	4.0
15	YO	50	ALA	4.0
9	YI	128	ILE	4.0
18	YR	27	ILE	4.0
1	YA	1870	C	4.0
47	QP	22	ALA	4.0
9	RI	120	ASP	4.0
44	XM	51	GLN	4.0
15	YO	26	LEU	4.0
18	YR	87	GLN	4.0
9	RI	113	ALA	4.0
45	XN	22	LYS	4.0
40	XI	64	ILE	4.0
18	YR	43	ASN	4.0
9	YI	45	THR	4.0
7	YG	33	THR	4.0
18	YR	62	GLU	4.0
4	YD	186	LEU	4.0
7	YG	104	LEU	4.0
9	RI	54	ILE	4.0
9	RI	38	CYS	4.0
6	YF	38	GLY	4.0

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Mol	Chain	Res	Type	RSRZ
44	XM	67	ASP	4.0
21	YU	50	ALA	4.0
28	Y1	34	GLU	4.0
16	YP	111	GLU	4.0
33	XB	66	ILE	3.9
41	XJ	11	LYS	3.9
17	YQ	7	VAL	3.9
7	YG	45	ALA	3.9
9	YI	123	ALA	3.9
50	XS	61	VAL	3.9
44	QM	32	ILE	3.9
12	YL	88	GLY	3.9
7	YG	130	ILE	3.9
33	XB	150	ILE	3.9
40	QI	39	GLY	3.9
30	Y3	48	MET	3.9
9	RI	86	LYS	3.9
13	YM	124	LEU	3.9
34	XC	160	GLU	3.9
7	YG	35	THR	3.9
9	RI	98	GLY	3.9
38	XG	15	PRO	3.9
45	XN	18	LYS	3.9
50	XS	16	LYS	3.9
14	YN	63	ARG	3.9
21	YU	74	ALA	3.9
38	XG	143	MET	3.9
31	Y4	35	GLN	3.9
7	YG	103	ASN	3.9
11	YK	68	GLY	3.9
9	YI	42	ASN	3.9
41	XJ	63	ASP	3.9
12	YL	108	ALA	3.9
1	RA	1175	A	3.9
51	XT	43	LYS	3.9
7	YG	129	GLU	3.9
12	YL	74	THR	3.9
38	QG	3	ARG	3.9
36	QE	102	THR	3.8
33	XB	82	ALA	3.8
1	YA	228	C	3.8
18	YR	34	GLU	3.8

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Mol	Chain	Res	Type	RSRZ
4	YD	97	SER	3.8
21	YU	30	SER	3.8
32	XA	81	A	3.8
13	YM	110	GLU	3.8
1	RA	2148	G	3.8
9	RI	138	VAL	3.8
28	R1	52	LYS	3.8
23	YW	51	GLY	3.8
23	YW	56	HIS	3.8
20	YT	85	VAL	3.8
7	YG	147	LEU	3.8
17	YQ	1	ALA	3.8
32	XA	1312	G	3.8
51	XT	42	ASP	3.8
3	RC	238	ASN	3.8
5	YE	169	VAL	3.8
30	Y3	50	SER	3.8
10	YJ	53	TYR	3.8
45	QN	51	PRO	3.8
5	YE	138	LEU	3.8
8	RH	131	SER	3.8
41	XJ	75	ASP	3.8
5	YE	187	VAL	3.8
18	YR	63	VAL	3.8
33	QB	29	PHE	3.8
14	YN	73	ASN	3.8
1	RA	2108	A	3.8
6	YF	10	GLU	3.8
13	YM	33	LEU	3.8
33	XB	115	ASP	3.8
14	YN	113	ILE	3.8
8	YH	148	ALA	3.8
9	YI	98	GLY	3.8
7	YG	9	VAL	3.8
25	YY	21	LEU	3.8
1	YA	1066	U	3.8
6	YF	105	ILE	3.8
50	QS	38	THR	3.8
19	YS	44	ALA	3.8
48	QQ	3	LYS	3.8
6	YF	120	SER	3.7
15	YO	88	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
30	Y3	51	LYS	3.7
51	XT	67	HIS	3.7
8	RH	77	THR	3.7
15	YO	65	THR	3.7
8	YH	20	ASN	3.7
12	YL	107	PHE	3.7
5	YE	57	LYS	3.7
25	YY	13	GLU	3.7
38	XG	71	THR	3.7
15	YO	55	GLU	3.7
38	XG	57	GLU	3.7
6	YF	156	THR	3.7
6	YF	39	VAL	3.7
9	RI	47	SER	3.7
23	YW	34	SER	3.7
44	XM	73	SER	3.7
1	YA	1537	G	3.7
44	XM	39	ALA	3.7
9	YI	129	GLU	3.7
32	XA	79	G	3.7
23	YW	59	PHE	3.7
9	RI	27	LEU	3.7
9	YI	26	ALA	3.7
1	YA	2142	A	3.7
8	YH	141	LYS	3.7
12	YL	70	LYS	3.7
44	XM	97	ARG	3.7
1	YA	137	U	3.7
39	XH	1	SER	3.7
48	XQ	43	LEU	3.7
35	QD	23	GLY	3.6
31	Y4	36	ARG	3.6
44	XM	30	LYS	3.6
13	YM	41	LEU	3.6
1	RA	2309	A	3.6
6	YF	155	ILE	3.6
9	RI	48	ILE	3.6
52	QU	37	TYR	3.6
6	YF	51	ASN	3.6
7	YG	19	ASN	3.6
8	YH	73	ASN	3.6
15	YO	66	GLY	3.6

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Mol	Chain	Res	Type	RSRZ
44	XM	68	LEU	3.6
7	YG	127	GLN	3.6
1	RA	884	U	3.6
5	YE	10	SER	3.6
1	RA	2136	G	3.6
1	RA	2885	G	3.6
48	XQ	5	ARG	3.6
50	XS	10	ILE	3.6
1	RA	2145	C	3.6
13	YM	136	MET	3.6
23	RW	51	GLY	3.6
45	XN	77	GLY	3.6
7	YG	16	VAL	3.6
9	RI	72	THR	3.6
20	RT	16	VAL	3.6
38	QG	4	ARG	3.6
6	YF	128	SER	3.6
11	YK	38	ILE	3.6
27	Y0	25	THR	3.6
1	YA	2107	G	3.6
20	YT	56	GLU	3.6
1	YA	1173	U	3.6
48	XQ	22	VAL	3.6
8	YH	116	ARG	3.6
45	XN	49	THR	3.6
28	Y1	20	TYR	3.6
52	QU	23	GLU	3.6
8	RH	78	VAL	3.6
30	Y3	9	ALA	3.6
38	XG	85	GLN	3.6
18	YR	21	ARG	3.6
20	YT	37	ASP	3.6
29	R2	46	LYS	3.6
6	YF	174	PHE	3.6
6	YF	176	PHE	3.6
33	XB	124	THR	3.6
23	YW	63	ASP	3.6
6	YF	59	ILE	3.6
12	YL	77	ILE	3.6
31	Y4	15	LYS	3.6
1	RA	2153	C	3.6
1	YA	1076	C	3.6

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Mol	Chain	Res	Type	RSRZ
21	YU	48	VAL	3.6
5	YE	194	LYS	3.6
9	RI	59	THR	3.5
17	YQ	87	VAL	3.5
44	QM	113	LYS	3.5
42	QK	20	ALA	3.5
1	YA	2602	A	3.5
3	YC	240	GLY	3.5
7	YG	6	ALA	3.5
8	RH	94	ILE	3.5
44	XM	98	GLY	3.5
45	XN	3	GLN	3.5
5	YE	120	VAL	3.5
33	XB	109	SER	3.5
5	YE	198	GLU	3.5
8	YH	142	VAL	3.5
23	RW	84	GLU	3.5
38	XG	61	PHE	3.5
15	YO	51	ALA	3.5
20	YT	20	ALA	3.5
50	XS	74	ALA	3.5
16	YP	11	GLN	3.5
50	XS	62	THR	3.5
49	QR	63	TYR	3.5
8	RH	127	GLU	3.5
9	RI	137	LEU	3.5
25	YY	10	SER	3.5
17	YQ	117	ALA	3.5
25	RY	63	ALA	3.5
31	Y4	21	GLY	3.5
8	YH	77	THR	3.5
44	XM	99	GLN	3.5
18	YR	66	HIS	3.5
9	RI	121	ILE	3.5
9	YI	24	GLY	3.5
5	YE	17	THR	3.5
12	YL	121	THR	3.5
32	XA	87	C	3.5
32	XA	1031	C	3.5
32	XA	1314	C	3.5
44	XM	85	TYR	3.5
44	QM	3	ILE	3.5

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Mol	Chain	Res	Type	RSRZ
6	YF	54	ALA	3.5
7	YG	52	GLY	3.5
48	QQ	19	SER	3.5
6	YF	77	LYS	3.5
21	YU	21	ARG	3.5
20	YT	16	VAL	3.5
4	YD	43	ASP	3.4
6	YF	111	ARG	3.4
33	XB	135	MET	3.4
1	YA	2309	A	3.4
9	YI	79	LEU	3.4
25	YY	14	LEU	3.4
42	QK	79	LYS	3.4
33	XB	8	MET	3.4
1	RA	277	G	3.4
5	YE	103	GLY	3.4
9	YI	109	ALA	3.4
38	XG	147	ASN	3.4
40	XI	15	ALA	3.4
23	YW	71	LYS	3.4
38	XG	84	TYR	3.4
6	YF	83	PRO	3.4
20	YT	79	ASP	3.4
26	YZ	32	GLY	3.4
20	YT	33	LYS	3.4
44	QM	4	ALA	3.4
1	YA	1171	G	3.4
9	YI	11	GLN	3.4
12	YL	122	VAL	3.4
50	XS	57	VAL	3.4
1	YA	2147	A	3.4
5	YE	23	PHE	3.4
9	YI	122	GLU	3.4
1	YA	2106	U	3.4
42	QK	17	ASP	3.4
6	YF	84	ILE	3.4
15	YO	19	GLN	3.4
33	QB	151	LYS	3.4
6	YF	172	PHE	3.4
33	QB	224	ARG	3.4
33	XB	128	LEU	3.4
1	YA	1459	G	3.4

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Mol	Chain	Res	Type	RSRZ
30	Y3	58	ILE	3.4
15	YO	71	ALA	3.4
19	YS	43	ALA	3.4
21	YU	94	PHE	3.4
33	XB	151	LYS	3.4
9	YI	95	ASP	3.4
6	YF	22	ASN	3.4
23	YW	50	VAL	3.4
20	YT	14	PRO	3.4
41	XJ	76	ILE	3.4
12	YL	78	ARG	3.4
21	YU	9	GLU	3.4
17	YQ	37	ALA	3.4
8	RH	71	LYS	3.3
12	YL	143	GLU	3.3
5	YE	102	ARG	3.3
31	Y4	38	GLY	3.3
38	XG	16	LYS	3.3
47	QP	19	VAL	3.3
8	YH	129	GLU	3.3
12	YL	106	GLU	3.3
4	YD	187	LEU	3.3
6	RF	118	ALA	3.3
38	XG	146	ALA	3.3
5	YE	48	THR	3.3
20	YT	59	ASN	3.3
20	YT	70	HIS	3.3
33	QB	8	MET	3.3
44	XM	37	GLY	3.3
52	QU	31	VAL	3.3
37	XF	8	PHE	3.3
50	QS	14	LEU	3.3
29	Y2	43	THR	3.3
40	XI	8	THR	3.3
6	YF	76	PHE	3.3
40	XI	36	GLN	3.3
10	YJ	44	TYR	3.3
38	QG	84	TYR	3.3
44	XM	38	ILE	3.3
20	YT	1	MET	3.3
25	YY	1	MET	3.3
6	YF	116	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
7	YG	5	LYS	3.3
38	QG	80	GLY	3.3
38	XG	8	GLN	3.3
4	YD	75	ALA	3.3
33	XB	79	VAL	3.3
35	QD	27	ILE	3.3
5	YE	164	LEU	3.3
8	RH	75	LEU	3.3
38	XG	136	LYS	3.3
19	YS	2	GLU	3.3
41	XJ	66	GLU	3.3
5	YE	172	ALA	3.3
33	XB	17	HIS	3.3
27	Y0	22	THR	3.3
20	YT	10	VAL	3.3
4	YD	188	LEU	3.3
9	YI	64	ARG	3.3
9	YI	103	ALA	3.3
32	QA	79	G	3.2
32	QA	1032	G	3.2
5	YE	122	GLU	3.2
7	YG	131	VAL	3.2
14	YN	75	ILE	3.2
19	YS	40	ASN	3.2
33	QB	150	ILE	3.2
5	YE	179	SER	3.2
38	XG	102	TRP	3.2
12	YL	142	ILE	3.2
21	YU	58	VAL	3.2
9	RI	42	ASN	3.2
5	YE	189	THR	3.2
21	YU	25	LYS	3.2
8	YH	74	ALA	3.2
18	YR	33	VAL	3.2
34	XC	195	ILE	3.2
44	XM	87	GLY	3.2
21	YU	52	ASN	3.2
44	XM	113	LYS	3.2
7	YG	50	THR	3.2
9	YI	70	THR	3.2
20	YT	80	TRP	3.2
33	XB	209	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
6	RF	77	LYS	3.2
30	Y3	23	HIS	3.2
33	QB	67	LEU	3.2
6	RF	78	ILE	3.2
7	YG	84	LYS	3.2
33	XB	94	ARG	3.2
44	XM	78	ARG	3.2
18	YR	102	SER	3.2
23	YW	28	GLU	3.2
1	RA	2106	U	3.2
20	YT	61	LEU	3.2
11	YK	37	ASP	3.2
44	XM	20	SER	3.2
40	XI	128	LYS	3.2
5	YE	174	GLY	3.2
9	RI	14	ALA	3.2
20	YT	75	GLY	3.2
34	XC	106	ARG	3.2
41	XJ	77	VAL	3.2
7	YG	72	ASN	3.2
7	YG	173	ALA	3.2
17	YQ	20	ALA	3.2
18	YR	24	LYS	3.2
38	XG	48	THR	3.2
1	YA	2136	G	3.2
44	XM	46	GLU	3.2
38	XG	17	PHE	3.2
18	YR	61	ALA	3.2
23	YW	18	LYS	3.2
32	XA	1534	A	3.2
33	QB	124	THR	3.2
19	YS	103	ILE	3.2
23	YW	22	VAL	3.2
1	YA	2141	G	3.2
20	YT	64	LYS	3.2
41	QJ	10	LEU	3.2
50	QS	12	LEU	3.2
5	YE	11	ALA	3.2
6	YF	53	ALA	3.2
25	YY	37	LEU	3.1
25	YY	56	LEU	3.1
26	YZ	55	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
27	Y0	41	HIS	3.1
51	XT	41	GLY	3.1
52	QU	3	ILE	3.1
9	RI	40	ALA	3.1
38	XG	44	SER	3.1
6	YF	113	PHE	3.1
7	YG	170	THR	3.1
9	YI	86	LYS	3.1
13	YM	7	THR	3.1
32	XA	207	C	3.1
6	YF	28	PRO	3.1
22	YV	74	ALA	3.1
1	YA	2145	C	3.1
15	YO	57	ALA	3.1
26	YZ	41	PRO	3.1
8	RH	47	PHE	3.1
33	XB	34	ARG	3.1
19	YS	97	LEU	3.1
48	QQ	22	VAL	3.1
8	YH	89	LYS	3.1
1	RA	1065	U	3.1
24	YX	2	ARG	3.1
32	QA	841	C	3.1
14	YN	98	LEU	3.1
3	YC	241	LYS	3.1
33	XB	15	PHE	3.1
6	YF	150	GLY	3.1
46	QO	2	LEU	3.1
18	YR	29	THR	3.1
19	YS	31	GLN	3.1
7	YG	49	LEU	3.1
13	YM	135	VAL	3.1
3	RC	241	LYS	3.1
17	YQ	22	GLY	3.1
40	XI	27	ILE	3.1
41	QJ	75	ASP	3.1
1	YA	1420	A	3.1
23	YW	81	ILE	3.1
32	XA	1271	A	3.1
17	YQ	34	ALA	3.1
51	XT	35	TYR	3.1
5	YE	9	GLN	3.1

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Mol	Chain	Res	Type	RSRZ
14	YN	72	ASP	3.1
6	YF	16	MET	3.1
6	RF	74	ALA	3.1
32	XA	1441	A	3.1
8	YH	115	VAL	3.1
48	XQ	37	ILE	3.1
40	QI	61	ASP	3.1
1	YA	1044	C	3.0
8	RH	76	GLU	3.0
9	YI	94	LYS	3.0
9	RI	4	VAL	3.0
48	XQ	28	VAL	3.0
20	YT	76	ARG	3.0
9	YI	137	LEU	3.0
1	YA	101	A	3.0
6	YF	163	GLU	3.0
15	YO	93	ASP	3.0
16	YP	42	PHE	3.0
19	YS	72	THR	3.0
33	XB	106	VAL	3.0
19	YS	16	LYS	3.0
31	Y4	34	LYS	3.0
1	YA	2585	U	3.0
10	YJ	128	ASN	3.0
20	RT	92	ASN	3.0
38	QG	17	PHE	3.0
9	YI	97	VAL	3.0
51	QT	3	ILE	3.0
7	YG	82	PHE	3.0
29	Y2	1	MET	3.0
13	YM	106	ASP	3.0
18	YR	75	VAL	3.0
9	YI	117	THR	3.0
16	YP	8	GLU	3.0
9	RI	134	SER	3.0
23	RW	45	HIS	3.0
13	YM	39	GLY	3.0
33	XB	212	TYR	3.0
34	QC	167	TYR	3.0
8	YH	140	ALA	3.0
15	YO	37	ALA	3.0
29	Y2	42	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
19	YS	68	ASP	3.0
23	YW	53	GLY	3.0
18	YR	60	LYS	3.0
20	YT	47	VAL	3.0
12	YL	144	GLU	3.0
1	YA	136	G	3.0
8	YH	9	VAL	3.0
13	YM	52	ALA	3.0
38	XG	95	ARG	3.0
40	XI	129	ARG	3.0
17	YQ	110	GLU	3.0
1	YA	1535	A	3.0
9	RI	41	PHE	3.0
7	YG	161	VAL	3.0
14	YN	37	THR	3.0
8	YH	88	GLY	3.0
9	RI	118	GLY	3.0
3	YC	102	TYR	3.0
21	YU	69	VAL	3.0
39	XH	129	ALA	3.0
41	QJ	74	VAL	3.0
1	YA	12	U	3.0
17	YQ	86	SER	2.9
19	YS	108	SER	2.9
38	XG	76	SER	2.9
38	XG	52	ARG	2.9
7	YG	86	LEU	2.9
33	XB	213	LEU	2.9
40	QI	34	LEU	2.9
23	YW	45	HIS	2.9
33	XB	148	GLY	2.9
21	YU	53	GLN	2.9
23	YW	55	ASP	2.9
4	YD	185	ASN	2.9
44	XM	54	THR	2.9
1	YA	2151	U	2.9
38	XG	87	PRO	2.9
45	XN	15	LEU	2.9
1	YA	2103	C	2.9
13	YM	60	GLN	2.9
3	YC	63	ILE	2.9
4	YD	6	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
40	QI	129	ARG	2.9
9	RI	71	LYS	2.9
41	XJ	41	PRO	2.9
9	RI	87	SER	2.9
20	RT	53	VAL	2.9
31	Y4	37	GLN	2.9
12	YL	75	ALA	2.9
40	XI	56	MET	2.9
45	XN	1	ALA	2.9
8	RH	139	PHE	2.9
14	YN	70	THR	2.9
9	RI	107	GLU	2.9
10	YJ	98	GLU	2.9
19	YS	84	ARG	2.9
4	YD	47	ALA	2.9
9	RI	63	ASP	2.9
11	YK	2	ILE	2.9
44	XM	26	LYS	2.9
32	XA	1305	G	2.9
3	YC	47	ARG	2.9
9	RI	111	THR	2.9
8	RH	112	LYS	2.9
33	XB	127	LYS	2.9
10	YJ	74	TYR	2.9
23	YW	19	ARG	2.9
25	RY	7	ARG	2.9
9	RI	24	GLY	2.9
9	YI	47	SER	2.9
32	QA	1031	C	2.9
4	YD	74	GLU	2.9
30	Y3	27	ASN	2.9
13	YM	73	ILE	2.9
24	YX	49	ARG	2.9
28	Y1	14	ALA	2.9
38	XG	75	LYS	2.9
8	YH	3	VAL	2.9
3	YC	237	ARG	2.9
6	YF	75	GLY	2.9
44	XM	80	MET	2.9
3	YC	258	SER	2.9
5	YE	4	VAL	2.9
6	YF	142	TYR	2.9

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Mol	Chain	Res	Type	RSRZ
32	QA	1493	A	2.9
32	XA	80	A	2.9
1	YA	2150	C	2.9
40	XI	62	LEU	2.8
5	YE	126	VAL	2.8
5	YE	178	VAL	2.8
7	YG	167	VAL	2.8
5	YE	21	ARG	2.8
32	QA	1362	A	2.8
8	YH	18	GLN	2.8
8	YH	139	PHE	2.8
17	YQ	94	LEU	2.8
22	YV	42	LEU	2.8
8	RH	70	GLU	2.8
6	YF	79	ARG	2.8
44	XM	103	THR	2.8
50	XS	76	THR	2.8
9	YI	63	ASP	2.8
5	YE	90	GLN	2.8
10	YJ	92	MET	2.8
1	YA	2313	C	2.8
44	QM	42	VAL	2.8
35	XD	27	ILE	2.8
48	XQ	60	ILE	2.8
20	YT	17	SER	2.8
22	YV	22	ALA	2.8
28	Y1	45	HIS	2.8
44	XM	31	ALA	2.8
21	YU	57	ILE	2.8
4	YD	28	GLU	2.8
5	YE	87	ALA	2.8
6	YF	31	GLU	2.8
19	YS	92	ARG	2.8
33	XB	33	ALA	2.8
9	YI	8	VAL	2.8
41	XJ	98	VAL	2.8
6	YF	108	PRO	2.8
10	RJ	142	ILE	2.8
32	XA	1302	C	2.8
44	XM	61	LYS	2.8
17	YQ	99	VAL	2.8
44	XM	42	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
48	XQ	72	TRP	2.8
16	YP	73	PHE	2.8
30	Y3	46	LYS	2.8
31	Y4	14	CYS	2.8
32	XA	212	G	2.8
1	RA	2402	U	2.8
6	YF	99	PHE	2.8
1	RA	1094	U	2.8
1	YA	1606	C	2.8
34	QC	79	LYS	2.8
38	XG	56	SER	2.8
16	YP	90	ALA	2.8
8	YH	78	VAL	2.8
9	RI	96	LYS	2.8
23	RW	40	ARG	2.8
26	YZ	7	THR	2.8
6	RF	75	GLY	2.8
32	XA	208	U	2.8
33	XB	146	SER	2.8
41	XJ	38	GLY	2.8
14	YN	38	LEU	2.8
47	QP	45	GLU	2.8
52	QU	34	ARG	2.8
4	YD	151	THR	2.8
9	YI	130	GLY	2.8
50	XS	78	THR	2.8
46	QO	16	ARG	2.8
1	YA	2110	G	2.8
1	YA	2152	G	2.8
9	RI	79	LEU	2.7
17	YQ	82	LEU	2.7
25	YY	59	GLU	2.7
1	YA	1065	U	2.7
16	YP	37	LYS	2.7
23	YW	43	LYS	2.7
38	XG	81	GLY	2.7
5	YE	47	LYS	2.7
9	YI	39	LYS	2.7
20	YT	82	LYS	2.7
22	YV	45	ASP	2.7
26	YZ	2	LYS	2.7
23	YW	73	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
32	XA	1313	U	2.7
45	XN	61	ASN	2.7
24	YX	17	ARG	2.7
41	XJ	9	ARG	2.7
45	XN	60	ARG	2.7
5	YE	176	ASP	2.7
12	YL	91	ASP	2.7
19	YS	94	ASP	2.7
7	YG	168	VAL	2.7
22	YV	77	VAL	2.7
1	YA	549	G	2.7
6	RF	76	PHE	2.7
7	YG	99	GLY	2.7
19	YS	98	LYS	2.7
43	QL	24	GLU	2.7
7	YG	110	HIS	2.7
6	YF	30	VAL	2.7
21	YU	82	VAL	2.7
42	QK	125	LYS	2.7
1	YA	344	A	2.7
38	XG	18	GLY	2.7
40	QI	62	LEU	2.7
40	QI	88	GLU	2.7
13	YM	131	VAL	2.7
33	XB	83	ALA	2.7
12	YL	115	GLU	2.7
21	YU	29	SER	2.7
34	XC	123	LEU	2.7
52	QU	35	GLU	2.7
9	RI	97	VAL	2.7
17	YQ	114	ALA	2.7
23	YW	48	ALA	2.7
7	YG	18	ILE	2.7
21	YU	56	GLY	2.7
33	QB	64	GLY	2.7
42	QK	18	GLY	2.7
17	YQ	70	GLN	2.7
38	XG	121	ASN	2.7
41	XJ	51	VAL	2.7
19	YS	32	ALA	2.7
9	YI	19	PRO	2.7
17	YQ	97	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
33	QB	157	PRO	2.7
19	YS	49	LYS	2.7
21	YU	14	THR	2.7
6	YF	7	TYR	2.7
1	YA	343	C	2.7
1	YA	357	C	2.7
15	YO	107	ALA	2.7
38	XG	38	ALA	2.7
6	RF	116	LEU	2.7
8	RH	99	ILE	2.7
11	YK	110	GLU	2.7
20	YT	4	GLU	2.7
9	RI	112	LYS	2.7
7	YG	128	THR	2.7
25	YY	45	GLN	2.7
6	RF	102	LEU	2.7
6	YF	52	ALA	2.7
6	YF	171	ALA	2.7
32	QA	412	A	2.7
6	YF	23	SER	2.7
18	YR	8	GLY	2.7
33	QB	63	LYS	2.7
36	XE	157	GLY	2.7
49	XR	73	HIS	2.7
9	RI	102	ARG	2.7
23	YW	49	ASN	2.7
22	YV	72	VAL	2.7
5	YE	155	GLU	2.6
12	YL	28	GLY	2.6
20	YT	71	GLY	2.6
21	YU	40	LEU	2.6
32	QA	81	A	2.6
47	XP	57	ILE	2.6
8	YH	19	VAL	2.6
22	YV	60	VAL	2.6
41	XJ	91	ASP	2.6
1	RA	2152	G	2.6
5	YE	197	GLU	2.6
15	YO	53	THR	2.6
21	YU	62	ALA	2.6
30	Y3	10	ALA	2.6
38	QG	7	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
38	XG	49	LEU	2.6
39	XH	60	LEU	2.6
48	QQ	69	THR	2.6
3	YC	103	ILE	2.6
1	RA	613	A	2.6
15	YO	47	VAL	2.6
25	YY	31	GLN	2.6
19	YS	26	GLY	2.6
29	Y2	34	ARG	2.6
41	XJ	37	ARG	2.6
37	QF	51	ILE	2.6
41	XJ	34	ALA	2.6
26	YZ	9	THR	2.6
5	YE	14	VAL	2.6
34	XC	36	PHE	2.6
38	XG	59	GLU	2.6
52	QU	36	PHE	2.6
10	YJ	45	THR	2.6
20	RT	24	MET	2.6
31	Y4	22	VAL	2.6
6	YF	151	LEU	2.6
12	YL	19	LEU	2.6
12	YL	113	ALA	2.6
7	YG	101	VAL	2.6
42	QK	110	THR	2.6
1	RA	140	C	2.6
1	YA	2143	C	2.6
7	YG	106	LEU	2.6
18	YR	37	GLU	2.6
45	XN	59	GLN	2.6
6	YF	32	LYS	2.6
33	XB	154	GLY	2.6
21	YU	80	ASP	2.6
50	QS	63	ASP	2.6
3	RC	237	ARG	2.6
33	XB	91	VAL	2.6
8	RH	129	GLU	2.6
40	XI	19	PHE	2.6
47	XP	50	THR	2.6
14	YN	83	LEU	2.6
9	YI	7	TYR	2.6
26	YZ	43	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
35	QD	28	ASP	2.6
22	YV	48	MET	2.6
15	YO	85	LYS	2.6
28	Y1	33	LEU	2.6
33	XB	72	LYS	2.6
50	QS	30	LEU	2.6
1	YA	914	G	2.6
3	YC	46	GLY	2.6
17	YQ	43	GLN	2.6
18	YR	98	ILE	2.6
46	XO	16	ARG	2.6
17	YQ	111	LYS	2.6
5	YE	13	THR	2.6
19	YS	8	ARG	2.6
27	Y0	26	SER	2.6
52	XU	34	ARG	2.6
35	QD	1	ALA	2.6
6	YF	146	ASP	2.6
9	RI	95	ASP	2.6
13	YM	93	VAL	2.6
3	YC	99	GLU	2.6
3	YC	109	LEU	2.6
35	QD	178	GLU	2.6
45	XN	47	LEU	2.6
7	YG	23	ILE	2.6
33	XB	163	ILE	2.6
4	YD	38	LYS	2.6
9	YI	127	SER	2.6
12	YL	62	PRO	2.6
5	YE	60	TRP	2.6
40	XI	41	GLU	2.6
12	YL	124	GLY	2.6
13	YM	46	ILE	2.6
28	Y1	47	ILE	2.6
6	YF	89	THR	2.6
20	YT	45	ALA	2.6
6	YF	175	PRO	2.6
11	YK	103	VAL	2.6
50	QS	50	VAL	2.6
32	QA	209	U	2.6
12	YL	99	ASN	2.5
44	XM	90	HIS	2.5

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Mol	Chain	Res	Type	RSRZ
19	YS	39	THR	2.5
23	YW	31	LEU	2.5
34	QC	169	GLU	2.5
5	YE	168	ASP	2.5
18	RR	50	GLY	2.5
34	XC	154	GLY	2.5
34	XC	166	TRP	2.5
6	YF	21	TYR	2.5
8	YH	27	ARG	2.5
18	YR	38	VAL	2.5
18	YR	51	VAL	2.5
34	XC	194	VAL	2.5
35	QD	36	ALA	2.5
33	XB	31	PHE	2.5
33	XB	200	PRO	2.5
1	RA	1072	C	2.5
1	RA	2140	G	2.5
3	RC	233	GLY	2.5
9	YI	141	ASP	2.5
19	YS	67	ASP	2.5
21	YU	39	ASN	2.5
21	YU	73	ASN	2.5
9	RI	103	ALA	2.5
13	YM	45	GLN	2.5
14	YN	111	ALA	2.5
38	XG	128	GLU	2.5
47	QP	20	VAL	2.5
8	RH	132	PHE	2.5
32	QA	1534	A	2.5
19	RS	110	ARG	2.5
8	YH	70	GLU	2.5
9	YI	132	ALA	2.5
26	YZ	8	GLN	2.5
47	XP	20	VAL	2.5
30	Y3	56	LEU	2.5
9	RI	25	PRO	2.5
38	XG	131	GLY	2.5
42	QK	29	THR	2.5
18	YR	92	TRP	2.5
32	QA	78	A	2.5
28	Y1	37	LYS	2.5
35	QD	21	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
40	QI	19	PHE	2.5
52	QU	30	GLU	2.5
12	YL	22	GLY	2.5
32	QA	844	G	2.5
28	Y1	40	PRO	2.5
31	Y4	26	ILE	2.5
38	XG	69	ARG	2.5
33	QB	186	VAL	2.5
41	QJ	91	ASP	2.5
44	QM	40	GLU	2.5
27	Y0	38	LEU	2.5
33	QB	84	LEU	2.5
50	QS	15	LEU	2.5
20	YT	30	ILE	2.5
42	QK	83	VAL	2.5
52	QU	27	VAL	2.5
35	QD	20	LEU	2.5
39	XH	82	LEU	2.5
6	YF	143	ASP	2.5
32	XA	1021	A	2.5
44	XM	72	ILE	2.5
7	YG	153	PRO	2.5
18	YR	35	PHE	2.5
34	XC	172	VAL	2.5
38	XG	68	VAL	2.5
45	XN	72	PHE	2.5
41	XJ	80	THR	2.5
23	YW	35	ILE	2.5
33	XB	153	MET	2.5
26	YZ	54	VAL	2.5
27	Y0	35	GLU	2.5
14	YN	39	PRO	2.5
22	YV	82	TYR	2.5
28	Y1	23	THR	2.5
12	YL	114	GLY	2.5
26	YZ	36	GLU	2.5
40	QI	28	VAL	2.5
40	QI	91	GLU	2.5
1	YA	2180	U	2.5
15	YO	38	GLN	2.5
38	QG	10	LYS	2.5
52	XU	37	TYR	2.5

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Mol	Chain	Res	Type	RSRZ
17	YQ	81	GLY	2.5
40	XI	39	GLY	2.5
9	YI	77	VAL	2.5
20	YT	67	VAL	2.5
38	XG	67	ASN	2.5
38	XG	78	ARG	2.5
39	XH	58	LEU	2.5
3	YC	105	ALA	2.4
6	YF	33	ILE	2.4
19	YS	34	ASP	2.4
5	YE	200	LEU	2.4
45	XN	11	LYS	2.4
50	XS	14	LEU	2.4
42	QK	65	ALA	2.4
1	YA	138	U	2.4
34	QC	187	GLU	2.4
45	XN	23	ARG	2.4
33	QB	48	MET	2.4
15	YO	103	VAL	2.4
1	YA	1407	G	2.4
7	YG	58	ALA	2.4
12	YL	18	ARG	2.4
29	Y2	7	PRO	2.4
16	YP	110	LYS	2.4
33	XB	27	LYS	2.4
33	XB	185	ILE	2.4
44	XM	76	ILE	2.4
8	YH	117	LEU	2.4
9	YI	87	SER	2.4
44	XM	100	ARG	2.4
32	XA	1022	A	2.4
9	YI	36	GLU	2.4
15	YO	28	VAL	2.4
20	RT	51	PHE	2.4
41	XJ	49	PHE	2.4
5	YE	125	SER	2.4
39	QH	53	ASP	2.4
19	YS	42	LYS	2.4
19	YS	99	ARG	2.4
38	XG	35	LYS	2.4
40	QI	32	ARG	2.4
49	XR	63	TYR	2.4

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Mol	Chain	Res	Type	RSRZ
39	QH	60	LEU	2.4
1	RA	2141	G	2.4
17	YQ	90	ASP	2.4
33	QB	118	THR	2.4
5	YE	51	GLU	2.4
7	YG	87	GLN	2.4
22	YV	55	GLU	2.4
33	XB	117	GLU	2.4
40	XI	4	GLN	2.4
45	QN	19	TYR	2.4
18	YR	54	VAL	2.4
17	YQ	4	LYS	2.4
12	YL	26	GLY	2.4
33	XB	32	GLY	2.4
26	YZ	56	VAL	2.4
34	XC	42	LEU	2.4
47	QP	21	VAL	2.4
44	XM	74	MET	2.4
9	RI	26	ALA	2.4
11	YK	60	ALA	2.4
10	YJ	141	ASP	2.4
4	YD	52	THR	2.4
5	YE	43	THR	2.4
1	YA	321	U	2.4
9	RI	99	LYS	2.4
28	Y1	36	LYS	2.4
31	Y4	24	ARG	2.4
1	YA	2140	G	2.4
32	XA	1270	G	2.4
33	QB	24	PRO	2.4
3	YC	81	GLU	2.4
9	RI	122	GLU	2.4
14	YN	26	GLY	2.4
5	YE	146	VAL	2.4
6	RF	174	PHE	2.4
6	YF	98	PHE	2.4
8	RH	8	LYS	2.4
8	YH	130	VAL	2.4
18	YR	53	PHE	2.4
22	YV	3	THR	2.4
47	QP	39	PHE	2.4
50	XS	15	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
52	QU	50	SER	2.4
1	YA	2101	A	2.4
1	YA	2135	A	2.4
19	YS	82	MET	2.4
27	Y0	1	ALA	2.4
6	YF	177	ARG	2.4
12	YL	57	LEU	2.4
29	Y2	18	PHE	2.4
50	QS	55	GLN	2.4
1	YA	1073	A	2.4
19	YS	73	LYS	2.4
8	RH	72	ILE	2.4
42	XK	128	VAL	2.4
11	YK	75	SER	2.3
40	QI	33	SER	2.3
15	YO	16	ARG	2.3
1	YA	790	U	2.3
6	YF	35	LEU	2.3
33	XB	103	TRP	2.3
1	YA	1532	A	2.3
32	QA	80	A	2.3
32	XA	466	A	2.3
48	XQ	8	GLN	2.3
4	YD	8	LYS	2.3
6	YF	173	ASP	2.3
33	QB	193	ASP	2.3
50	XS	35	ARG	2.3
1	YA	2308	G	2.3
9	RI	18	ASN	2.3
11	YK	82	ASN	2.3
13	YM	31	PHE	2.3
15	YO	73	ALA	2.3
18	YR	28	ALA	2.3
38	XG	106	ALA	2.3
15	YO	90	VAL	2.3
43	XL	91	GLY	2.3
8	RH	135	HIS	2.3
33	QB	17	HIS	2.3
1	YA	1409	U	2.3
6	RF	177	ARG	2.3
17	YQ	31	TYR	2.3
32	XA	88	U	2.3

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Mol	Chain	Res	Type	RSRZ
3	YC	232	GLY	2.3
4	YD	95	SER	2.3
7	YG	120	ILE	2.3
33	QB	59	ILE	2.3
39	QH	1	SER	2.3
7	YG	100	ASN	2.3
25	YY	29	ARG	2.3
3	YC	235	GLU	2.3
20	RT	54	GLU	2.3
15	YO	63	LYS	2.3
15	YO	117	PHE	2.3
10	YJ	56	VAL	2.3
24	YX	6	VAL	2.3
1	RA	2109	U	2.3
3	RC	240	GLY	2.3
6	YF	160	LYS	2.3
47	QP	37	GLY	2.3
5	YE	5	LEU	2.3
6	RF	105	ILE	2.3
9	RI	133	ARG	2.3
11	YK	112	PHE	2.3
5	YE	41	GLN	2.3
28	Y1	6	GLU	2.3
8	RH	83	LYS	2.3
41	XJ	99	GLN	2.3
5	YE	170	ARG	2.3
6	YF	85	GLY	2.3
19	YS	85	ILE	2.3
20	YT	11	LEU	2.3
1	YA	290	U	2.3
45	XN	93	PRO	2.3
18	YR	7	SER	2.3
28	Y1	49	LYS	2.3
3	YC	239	PHE	2.3
29	Y2	32	ALA	2.3
33	XB	216	VAL	2.3
50	XS	49	ALA	2.3
1	YA	1094	U	2.3
1	YA	2109	U	2.3
44	QM	114	PRO	2.3
17	YQ	32	ARG	2.3
22	YV	57	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
40	QI	31	GLN	2.3
9	YI	37	PHE	2.3
48	XQ	16	MET	2.3
13	YM	96	ILE	2.3
41	QJ	76	ILE	2.3
1	YA	1068	G	2.3
1	YA	1731	G	2.3
22	YV	59	GLU	2.3
15	YO	64	TYR	2.3
50	QS	16	LYS	2.3
5	YE	157	LEU	2.3
42	QK	41	LEU	2.3
1	RA	2142	A	2.3
48	XQ	46	HIS	2.3
8	YH	136	SER	2.3
40	QI	92	SER	2.3
7	YG	94	ARG	2.2
45	XN	21	ALA	2.2
6	RF	112	ASP	2.2
24	YX	29	LEU	2.2
33	XB	131	LYS	2.2
44	XM	45	SER	2.2
1	YA	1529	G	2.2
5	YE	64	GLY	2.2
23	YW	33	GLY	2.2
40	XI	89	TYR	2.2
44	XM	57	ASP	2.2
10	YJ	136	GLN	2.2
17	YQ	16	ILE	2.2
40	QI	27	ILE	2.2
50	QS	39	ILE	2.2
1	YA	1043	C	2.2
50	XS	18	VAL	2.2
8	YH	149	GLU	2.2
9	YI	40	ALA	2.2
36	QE	150	GLU	2.2
18	YR	73	LYS	2.2
7	YG	71	LEU	2.2
21	RU	86	PHE	2.2
22	YV	91	PHE	2.2
32	XA	1227	A	2.2
33	QB	89	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
38	QG	61	PHE	2.2
40	QI	50	PRO	2.2
51	XT	66	ILE	2.2
8	YH	81	ALA	2.2
27	Y0	55	ALA	2.2
50	QS	13	HIS	2.2
1	RA	885	C	2.2
13	YM	17	ASN	2.2
33	XB	41	ASN	2.2
9	YI	74	PRO	2.2
13	YM	80	VAL	2.2
32	QA	1441	A	2.2
38	XG	51	GLN	2.2
39	QH	9	MET	2.2
42	QK	73	VAL	2.2
6	YF	2	LYS	2.2
15	YO	20	GLU	2.2
22	YV	35	GLU	2.2
26	YZ	1	ALA	2.2
30	Y3	26	ALA	2.2
33	XB	114	LYS	2.2
40	QI	16	ALA	2.2
5	YE	150	THR	2.2
24	YX	21	LEU	2.2
5	YE	183	PHE	2.2
12	YL	31	GLY	2.2
18	YR	5	PHE	2.2
22	YV	33	GLY	2.2
5	YE	35	TYR	2.2
9	RI	80	LYS	2.2
11	YK	69	VAL	2.2
32	XA	211	G	2.2
32	XA	1309	G	2.2
48	XQ	32	ILE	2.2
3	RC	250	GLN	2.2
21	YU	47	PRO	2.2
32	XA	1320	C	2.2
16	YP	4	ILE	2.2
20	YT	62	VAL	2.2
8	YH	40	THR	2.2
1	YA	1064	C	2.2
23	YW	14	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
33	QB	68	PHE	2.2
5	YE	42	GLY	2.2
33	XB	67	LEU	2.2
42	QK	128	VAL	2.2
45	XN	66	THR	2.2
47	XP	3	THR	2.2
52	QU	41	THR	2.2
1	YA	2149	U	2.2
9	RI	55	PRO	2.2
22	YV	61	LEU	2.2
41	XJ	102	LEU	2.2
6	YF	148	VAL	2.2
40	XI	35	GLU	2.2
50	QS	79	TYR	2.2
23	YW	57	THR	2.2
1	RA	2151	U	2.2
1	YA	1174	U	2.2
33	XB	93	HIS	2.2
9	YI	34	ILE	2.2
12	YL	132	ARG	2.2
25	RY	24	GLU	2.2
33	XB	136	ARG	2.2
6	YF	62	GLN	2.2
13	YM	8	LYS	2.2
7	YG	132	LEU	2.2
44	QM	31	ALA	2.2
12	YL	69	ARG	2.2
14	YN	71	ARG	2.2
4	YD	14	ILE	2.2
33	XB	152	ASP	2.2
45	QN	32	ASP	2.2
33	XB	99	MET	2.1
37	XF	62	MET	2.1
50	QS	5	LYS	2.1
7	YG	64	ALA	2.1
8	YH	12	LEU	2.1
33	QB	33	ALA	2.1
50	QS	40	PHE	2.1
1	YA	1311	G	2.1
6	YF	66	ILE	2.1
21	RU	59	GLU	2.1
21	YU	61	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
41	QJ	100	ILE	2.1
1	RA	2137	U	2.1
49	QR	50	TYR	2.1
10	YJ	118	MET	2.1
17	YQ	116	LEU	2.1
30	Y3	61	LEU	2.1
38	XG	90	VAL	2.1
27	Y0	45	ASP	2.1
16	YP	30	TRP	2.1
15	YO	77	ALA	2.1
40	QI	43	ALA	2.1
44	XM	105	ALA	2.1
45	QN	28	ALA	2.1
33	XB	64	GLY	2.1
6	YF	9	ASP	2.1
33	QB	158	ASP	2.1
34	XC	192	TYR	2.1
12	YL	61	LEU	2.1
37	XF	39	LEU	2.1
52	QU	28	LEU	2.1
1	YA	2182	U	2.1
30	Y3	52	GLY	2.1
50	XS	5	LYS	2.1
52	QU	4	LYS	2.1
1	YA	1074	G	2.1
1	YA	1530	G	2.1
28	Y1	42	VAL	2.1
33	XB	144	GLU	2.1
33	XB	180	ILE	2.1
41	XJ	26	VAL	2.1
5	YE	55	SER	2.1
7	YG	54	ARG	2.1
12	YL	21	ARG	2.1
18	YR	68	ARG	2.1
23	YW	40	ARG	2.1
44	XM	91	ARG	2.1
5	YE	141	MET	2.1
22	YV	56	PHE	2.1
50	XS	46	LEU	2.1
9	RI	109	ALA	2.1
35	QD	179	GLY	2.1
5	YE	152	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
32	XA	1308	U	2.1
40	QI	20	ILE	2.1
14	YN	30	ARG	2.1
8	YH	83	LYS	2.1
10	YJ	4	PHE	2.1
1	YA	1205	A	2.1
40	XI	30	ASN	2.1
50	XS	45	GLY	2.1
1	YA	2755	C	2.1
9	YI	38	CYS	2.1
16	YP	91	VAL	2.1
51	XT	57	VAL	2.1
15	YO	13	ARG	2.1
3	YC	92	LEU	2.1
5	YE	177	PRO	2.1
15	YO	92	PHE	2.1
17	YQ	98	ALA	2.1
23	RW	75	ASN	2.1
38	XG	77	ARG	2.1
40	QI	57	VAL	2.1
47	XP	21	VAL	2.1
51	QT	56	ILE	2.1
1	YA	1278	C	2.1
8	YH	6	LEU	2.1
41	QJ	49	PHE	2.1
9	RI	84	GLY	2.1
23	YW	60	ALA	2.1
23	YW	80	SER	2.1
24	YX	1	SER	2.1
10	YJ	5	THR	2.1
27	Y0	43	THR	2.1
33	QB	94	ARG	2.1
9	RI	44	LYS	2.1
5	YE	158	PHE	2.1
6	YF	90	LEU	2.1
39	XH	48	PHE	2.1
45	XN	76	PHE	2.1
1	YA	32	C	2.1
10	YJ	75	TYR	2.1
8	YH	113	SER	2.1
9	YI	6	ALA	2.1
47	XP	48	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
5	YE	130	LYS	2.1
11	YK	76	VAL	2.1
6	YF	50	ASP	2.1
21	YU	43	LYS	2.1
24	YX	13	THR	2.1
33	XB	81	ASP	2.1
40	QI	128	LYS	2.1
6	YF	124	ARG	2.1
20	YT	69	ARG	2.1
4	YD	31	ALA	2.1
5	YE	86	ALA	2.1
48	QQ	21	VAL	2.1
51	XT	62	ALA	2.1
1	YA	93	G	2.1
50	QS	10	ILE	2.1
6	YF	158	THR	2.1
16	YP	33	GLU	2.1
24	YX	14	GLY	2.1
8	YH	138	VAL	2.1
12	YL	73	ILE	2.0
1	YA	2153	C	2.0
15	YO	67	ASN	2.0
26	YZ	44	ARG	2.0
37	QF	52	ASN	2.0
38	XG	37	THR	2.0
45	XN	50	LEU	2.0
7	YG	43	LYS	2.0
6	YF	164	GLU	2.0
20	YT	89	GLU	2.0
5	YE	135	ALA	2.0
12	YL	85	VAL	2.0
45	QN	33	VAL	2.0
7	YG	44	HIS	2.0
8	YH	15	LEU	2.0
25	YY	43	LEU	2.0
6	RF	173	ASP	2.0
14	YN	78	LYS	2.0
12	YL	30	THR	2.0
13	YM	24	THR	2.0
14	YN	100	CYS	2.0
1	YA	281	C	2.0
23	YW	6	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
7	YG	4	ALA	2.0
15	YO	78	VAL	2.0
16	YP	31	VAL	2.0
51	QT	66	ILE	2.0
9	YI	126	ARG	2.0
50	QS	9	PHE	2.0
35	QD	193	ASP	2.0
5	YE	56	GLY	2.0
7	YG	20	GLY	2.0
9	RI	15	GLY	2.0
8	YH	21	VAL	2.0
17	YQ	23	TYR	2.0
18	YR	94	THR	2.0
22	YV	5	ASN	2.0
33	QB	216	VAL	2.0
6	YF	149	ARG	2.0
33	XB	165	ALA	2.0
51	XT	23	ARG	2.0
5	YE	118	LEU	2.0
14	YN	28	LEU	2.0
45	XN	65	GLN	2.0
42	XK	42	GLY	2.0
1	YA	2105	U	2.0
6	YF	1	ALA	2.0
12	YL	93	ASN	2.0
24	YX	10	ARG	2.0
30	Y3	49	VAL	2.0
49	QR	31	TYR	2.0
52	QU	44	ARG	2.0
31	Y4	16	ILE	2.0
12	YL	8	PRO	2.0
32	XA	101	A	2.0
45	XN	78	LEU	2.0
48	XQ	74	LEU	2.0
35	QD	146	GLU	2.0
4	YD	166	GLY	2.0
5	YE	54	GLY	2.0
13	YM	36	VAL	2.0
23	YW	72	GLY	2.0
26	YZ	47	ILE	2.0
40	XI	82	ILE	2.0
17	YQ	105	PHE	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(\AA^2)	Q<0.9
53	MG	YA	3079	1/1	0.83	0.80	29.89	225,225,225,225	0
53	MG	YA	3108	1/1	-0.03	0.81	24.66	217,217,217,217	0
53	MG	YA	3002	1/1	0.42	0.52	13.12	231,231,231,231	0
53	MG	YA	3075	1/1	0.94	0.54	12.20	209,209,209,209	0
53	MG	RA	3020	1/1	0.85	0.38	8.48	200,200,200,200	0
53	MG	RA	3035	1/1	0.89	0.33	6.26	189,189,189,189	0
53	MG	RA	3081	1/1	0.97	0.17	5.82	99,99,99,99	0
53	MG	RA	3070	1/1	0.89	0.33	5.38	137,137,137,137	0
53	MG	YA	3115	1/1	0.92	0.26	5.03	176,176,176,176	0
53	MG	XA	1628	1/1	0.91	0.45	4.54	224,224,224,224	0
53	MG	RA	3099	1/1	0.96	0.19	4.47	34,34,34,34	0
53	MG	RA	3134	1/1	0.75	0.27	4.40	210,210,210,210	0
54	EM1	RA	3135	60/60	0.93	0.26	4.32	0,23,85,88	0
53	MG	RA	3039	1/1	0.98	0.24	4.26	7,7,7,7	0
53	MG	XA	1625	1/1	0.92	0.23	4.21	111,111,111,111	0
53	MG	XA	1640	1/1	0.92	0.17	3.10	137,137,137,137	0
53	MG	RA	3105	1/1	0.96	0.21	2.96	66,66,66,66	0
53	MG	XA	1616	1/1	0.80	0.60	2.82	195,195,195,195	0
53	MG	YA	3033	1/1	0.71	0.29	2.71	151,151,151,151	0
53	MG	RA	3107	1/1	0.98	0.21	2.37	17,17,17,17	0
53	MG	YA	3128	1/1	0.84	0.80	2.07	163,163,163,163	0
53	MG	YA	3022	1/1	0.87	0.23	1.96	149,149,149,149	0
53	MG	XA	1610	1/1	0.80	0.13	1.90	168,168,168,168	0
53	MG	RA	3114	1/1	0.97	0.19	1.90	28,28,28,28	0
53	MG	RA	3106	1/1	0.98	0.19	1.85	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	QA	1631	1/1	0.96	0.19	1.71	228,228,228,228	0
53	MG	YA	3104	1/1	0.91	0.22	1.49	52,52,52,52	0
53	MG	YA	3133	1/1	0.63	0.30	1.48	220,220,220,220	0
53	MG	QA	1641	1/1	0.87	0.16	1.24	171,171,171,171	0
53	MG	YA	3105	1/1	0.97	0.19	1.20	97,97,97,97	0
53	MG	XA	1631	1/1	0.95	0.22	1.15	82,82,82,82	0
53	MG	RA	3102	1/1	0.98	0.17	1.03	24,24,24,24	0
53	MG	RA	3026	1/1	0.98	0.17	1.01	143,143,143,143	0
53	MG	YA	3097	1/1	0.72	0.21	0.83	159,159,159,159	0
53	MG	YA	3027	1/1	0.89	0.22	0.72	194,194,194,194	0
53	MG	QA	1622	1/1	0.97	0.17	0.57	54,54,54,54	0
53	MG	YA	3069	1/1	0.91	0.23	0.53	267,267,267,267	0
53	MG	XA	1641	1/1	0.98	0.15	0.50	116,116,116,116	0
53	MG	RA	3048	1/1	0.96	0.17	0.11	25,25,25,25	0
53	MG	RA	3128	1/1	0.99	0.16	0.11	33,33,33,33	0
53	MG	QA	1634	1/1	0.94	0.15	0.00	94,94,94,94	0
53	MG	RA	3005	1/1	0.96	0.12	-0.22	74,74,74,74	0
53	MG	YA	3101	1/1	0.80	0.20	-0.25	96,96,96,96	0
53	MG	QA	1617	1/1	0.98	0.17	-0.28	129,129,129,129	0
53	MG	QA	1633	1/1	0.98	0.12	-0.29	70,70,70,70	0
53	MG	QA	1616	1/1	0.92	0.18	-0.36	98,98,98,98	0
53	MG	RA	3130	1/1	0.90	0.24	-0.38	118,118,118,118	0
53	MG	RA	3062	1/1	1.00	0.15	-0.53	19,19,19,19	0
53	MG	RA	3049	1/1	0.96	0.14	-0.56	76,76,76,76	0
53	MG	RA	3118	1/1	0.94	0.15	-0.63	48,48,48,48	0
53	MG	QA	1642	1/1	0.97	0.13	-0.69	79,79,79,79	0
53	MG	YA	3066	1/1	0.95	0.17	-0.74	105,105,105,105	0
53	MG	RA	3013	1/1	0.99	0.16	-0.78	18,18,18,18	0
53	MG	RA	3064	1/1	0.97	0.14	-0.82	28,28,28,28	0
53	MG	RA	3103	1/1	0.89	0.15	-0.85	30,30,30,30	0
53	MG	RA	3110	1/1	0.92	0.15	-0.85	84,84,84,84	0
53	MG	RA	3119	1/1	0.92	0.08	-0.89	56,56,56,56	0
53	MG	RA	3008	1/1	0.96	0.14	-0.92	45,45,45,45	0
53	MG	YA	3084	1/1	0.82	0.16	-0.99	168,168,168,168	0
53	MG	YA	3106	1/1	0.84	0.17	-1.04	218,218,218,218	0
53	MG	YA	3042	1/1	0.90	0.17	-1.05	81,81,81,81	0
53	MG	YA	3095	1/1	0.96	0.14	-1.06	138,138,138,138	0
53	MG	RB	202	1/1	0.80	0.11	-1.07	82,82,82,82	0
53	MG	QA	1606	1/1	0.92	0.12	-1.09	80,80,80,80	0
53	MG	XA	1617	1/1	0.49	0.12	-1.09	202,202,202,202	0
53	MG	YA	3083	1/1	0.79	0.10	-1.16	214,214,214,214	0
53	MG	YA	3055	1/1	0.98	0.16	-1.18	103,103,103,103	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	XA	1629	1/1	0.80	0.15	-1.20	190,190,190,190	0
53	MG	YA	3025	1/1	0.87	0.15	-1.24	162,162,162,162	0
53	MG	YA	3070	1/1	0.89	0.13	-1.25	91,91,91,91	0
53	MG	YA	3024	1/1	0.97	0.15	-1.29	102,102,102,102	0
53	MG	YA	3061	1/1	0.97	0.14	-1.35	110,110,110,110	0
53	MG	XA	1613	1/1	0.94	0.17	-1.37	147,147,147,147	0
53	MG	RA	3017	1/1	0.94	0.09	-1.41	57,57,57,57	0
53	MG	RA	3095	1/1	0.96	0.16	-1.43	139,139,139,139	0
53	MG	YA	3037	1/1	0.95	0.13	-1.44	81,81,81,81	0
53	MG	YA	3131	1/1	0.95	0.14	-1.45	94,94,94,94	0
53	MG	YA	3110	1/1	0.77	0.07	-1.46	120,120,120,120	0
53	MG	YB	201	1/1	0.97	0.09	-1.48	111,111,111,111	0
53	MG	XA	1621	1/1	0.95	0.13	-1.54	57,57,57,57	0
53	MG	RA	3045	1/1	0.94	0.14	-1.59	25,25,25,25	0
55	ZN	Y4	101	1/1	0.96	0.07	-1.67	169,169,169,169	0
53	MG	XA	1618	1/1	0.90	0.11	-1.72	136,136,136,136	0
53	MG	XA	1637	1/1	0.94	0.13	-1.72	94,94,94,94	0
53	MG	YA	3040	1/1	0.94	0.17	-1.72	72,72,72,72	0
53	MG	XA	1609	1/1	0.97	0.16	-1.92	98,98,98,98	0
53	MG	RA	3132	1/1	0.97	0.12	-1.94	20,20,20,20	0
53	MG	QA	1618	1/1	0.94	0.12	-2.01	78,78,78,78	0
55	ZN	R4	101	1/1	0.99	0.10	-2.01	108,108,108,108	0
53	MG	XA	1642	1/1	0.93	0.10	-2.04	139,139,139,139	0
53	MG	RA	3112	1/1	0.96	0.10	-2.04	49,49,49,49	0
53	MG	YA	3072	1/1	0.86	0.12	-2.05	183,183,183,183	0
53	MG	XA	1606	1/1	0.89	0.13	-2.12	93,93,93,93	0
53	MG	RA	3022	1/1	0.98	0.12	-2.12	27,27,27,27	0
53	MG	YA	3065	1/1	0.95	0.13	-2.13	88,88,88,88	0
53	MG	QA	1635	1/1	0.95	0.10	-2.13	87,87,87,87	0
53	MG	YA	3112	1/1	0.95	0.09	-2.15	79,79,79,79	0
53	MG	XA	1604	1/1	0.93	0.10	-2.30	96,96,96,96	0
53	MG	YA	3068	1/1	0.98	0.07	-2.36	98,98,98,98	0
53	MG	YA	3051	1/1	0.92	0.14	-2.47	88,88,88,88	0
53	MG	QA	1607	1/1	0.94	0.13	-2.54	136,136,136,136	0
53	MG	YA	3124	1/1	0.92	0.16	-2.55	82,82,82,82	0
53	MG	YA	3103	1/1	0.92	0.13	-2.60	86,86,86,86	0
53	MG	RA	3077	1/1	0.97	0.10	-2.80	63,63,63,63	0
53	MG	RA	3052	1/1	0.95	0.14	-2.82	34,34,34,34	0
53	MG	QA	1611	1/1	0.97	0.14	-2.86	57,57,57,57	0
53	MG	RA	3108	1/1	0.97	0.13	-2.90	95,95,95,95	0
53	MG	RA	3021	1/1	0.99	0.12	-2.92	24,24,24,24	0
53	MG	YA	3100	1/1	0.88	0.13	-3.00	124,124,124,124	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	RA	3023	1/1	0.99	0.12	-3.16	22,22,22,22	0
53	MG	RA	3027	1/1	0.98	0.12	-3.16	33,33,33,33	0
53	MG	XA	1607	1/1	0.95	0.13	-3.18	167,167,167,167	0
53	MG	RA	3046	1/1	0.93	0.08	-3.24	176,176,176,176	0
53	MG	QA	1625	1/1	0.90	0.14	-3.64	101,101,101,101	0
53	MG	RA	3002	1/1	0.95	0.11	-3.71	75,75,75,75	0
53	MG	YA	3023	1/1	0.62	0.09	-3.82	130,130,130,130	0
53	MG	RA	3056	1/1	0.86	0.12	-4.05	148,148,148,148	0
53	MG	RA	3061	1/1	0.94	0.12	-4.05	18,18,18,18	0
53	MG	YA	3044	1/1	0.92	0.15	-4.09	87,87,87,87	0
53	MG	YA	3048	1/1	0.95	0.10	-4.18	103,103,103,103	0
53	MG	YA	3052	1/1	0.98	0.07	-4.49	72,72,72,72	0
53	MG	YA	3012	1/1	0.96	0.09	-4.56	72,72,72,72	0
53	MG	QA	1643	1/1	0.91	0.11	-4.68	67,67,67,67	0
53	MG	RA	3067	1/1	0.97	0.14	-4.78	28,28,28,28	0
53	MG	RA	3016	1/1	0.97	0.11	-5.04	22,22,22,22	0
53	MG	YA	3016	1/1	0.92	0.10	-5.26	60,60,60,60	0
53	MG	RA	3116	1/1	0.97	0.10	-5.36	72,72,72,72	0
53	MG	QA	1613	1/1	0.95	0.07	-5.48	76,76,76,76	0
53	MG	RA	3012	1/1	0.97	0.12	-5.66	20,20,20,20	0
53	MG	XA	1639	1/1	0.94	0.05	-5.95	159,159,159,159	0
53	MG	RA	3091	1/1	0.89	0.10	-5.97	84,84,84,84	0
53	MG	QA	1629	1/1	0.95	0.06	-6.06	97,97,97,97	0
53	MG	RA	3094	1/1	0.98	0.10	-6.42	32,32,32,32	0
53	MG	RA	3057	1/1	0.94	0.07	-6.76	71,71,71,71	0
53	MG	QA	1604	1/1	0.96	0.04	-7.77	139,139,139,139	0
53	MG	RA	3127	1/1	0.97	0.09	-8.86	8,8,8,8	0
53	MG	QA	1609	1/1	0.92	0.08	-9.61	77,77,77,77	0
53	MG	QA	1637	1/1	0.69	0.16	-	131,131,131,131	0
53	MG	RA	3125	1/1	0.98	0.14	-	40,40,40,40	0
53	MG	YA	3020	1/1	0.85	0.21	-	53,53,53,53	0
53	MG	YA	3035	1/1	0.93	0.09	-	90,90,90,90	0
53	MG	RA	3109	1/1	0.97	0.16	-	46,46,46,46	0
53	MG	RA	3068	1/1	0.78	0.12	-	175,175,175,175	0
53	MG	XA	1612	1/1	0.93	0.19	-	125,125,125,125	0
53	MG	RA	3097	1/1	0.97	0.13	-	54,54,54,54	0
53	MG	YA	3102	1/1	0.96	0.10	-	118,118,118,118	0
53	MG	XA	1619	1/1	0.74	0.12	-	212,212,212,212	0
53	MG	RA	3090	1/1	0.84	0.17	-	135,135,135,135	0
53	MG	QA	1626	1/1	0.99	0.20	-	29,29,29,29	0
53	MG	RA	3060	1/1	0.82	0.48	-	236,236,236,236	0
53	MG	YA	3088	1/1	0.79	0.35	-	222,222,222,222	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	RA	3007	1/1	0.97	0.13	-	112,112,112,112	0
53	MG	RA	3133	1/1	0.94	0.28	-	116,116,116,116	0
53	MG	RA	3032	1/1	0.98	0.14	-	23,23,23,23	0
53	MG	RA	3040	1/1	0.98	0.13	-	47,47,47,47	0
53	MG	YA	3121	1/1	0.97	0.17	-	168,168,168,168	0
53	MG	YA	3081	1/1	0.92	0.10	-	83,83,83,83	0
53	MG	YA	3134	1/1	0.95	0.33	-	201,201,201,201	0
53	MG	QA	1610	1/1	0.84	0.11	-	197,197,197,197	0
53	MG	RA	3015	1/1	0.98	0.06	-	65,65,65,65	0
53	MG	YA	3018	1/1	0.95	0.10	-	185,185,185,185	0
53	MG	YA	3015	1/1	0.89	0.19	-	219,219,219,219	0
53	MG	RA	3014	1/1	0.91	0.18	-	38,38,38,38	0
53	MG	XA	1623	1/1	0.90	0.11	-	108,108,108,108	0
53	MG	YA	3091	1/1	0.51	0.22	-	184,184,184,184	0
53	MG	RA	3072	1/1	0.94	0.05	-	61,61,61,61	0
53	MG	YA	3116	1/1	0.92	0.12	-	84,84,84,84	0
53	MG	RA	3043	1/1	0.99	0.26	-	11,11,11,11	0
53	MG	XA	1615	1/1	0.92	0.20	-	187,187,187,187	0
53	MG	RB	201	1/1	0.91	0.33	-	255,255,255,255	0
53	MG	YA	3111	1/1	0.91	0.14	-	202,202,202,202	0
53	MG	YA	3089	1/1	0.92	0.21	-	101,101,101,101	0
53	MG	YA	3031	1/1	0.77	0.21	-	80,80,80,80	0
53	MG	QA	1602	1/1	0.73	0.12	-	177,177,177,177	0
53	MG	RA	3034	1/1	0.99	0.10	-	11,11,11,11	0
53	MG	RA	3098	1/1	0.97	0.07	-	49,49,49,49	0
53	MG	YA	3060	1/1	0.85	0.76	-	235,235,235,235	0
53	MG	QA	1608	1/1	0.96	0.25	-	61,61,61,61	0
53	MG	QA	1614	1/1	0.97	0.15	-	159,159,159,159	0
53	MG	RA	3018	1/1	0.94	0.33	-	32,32,32,32	0
53	MG	RA	3100	1/1	0.92	0.27	-	119,119,119,119	0
53	MG	XA	1624	1/1	0.83	0.37	-	146,146,146,146	0
53	MG	RA	3082	1/1	0.83	0.14	-	86,86,86,86	0
53	MG	RA	3136	1/1	0.98	0.07	-	61,61,61,61	0
53	MG	XA	1635	1/1	0.84	0.11	-	76,76,76,76	0
53	MG	RA	3063	1/1	0.97	0.13	-	26,26,26,26	0
53	MG	RA	3074	1/1	0.96	0.10	-	93,93,93,93	0
53	MG	RA	3033	1/1	0.98	0.15	-	159,159,159,159	0
53	MG	RA	3055	1/1	0.90	0.33	-	252,252,252,252	0
53	MG	YA	3056	1/1	0.96	0.07	-	85,85,85,85	0
53	MG	YA	3029	1/1	0.91	0.22	-	178,178,178,178	0
53	MG	YA	3001	1/1	0.89	0.15	-	141,141,141,141	0
53	MG	RB	204	1/1	0.96	0.14	-	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	RA	3036	1/1	0.97	0.18	-	23,23,23,23	0
53	MG	RA	3096	1/1	0.81	0.18	-	169,169,169,169	0
53	MG	YA	3127	1/1	0.67	1.28	-	248,248,248,248	0
53	MG	QA	1624	1/1	0.89	0.14	-	143,143,143,143	0
53	MG	YA	3120	1/1	0.33	0.21	-	124,124,124,124	0
53	MG	YA	3094	1/1	0.91	0.14	-	145,145,145,145	0
53	MG	XA	1626	1/1	0.98	0.24	-	20,20,20,20	0
53	MG	RA	3117	1/1	0.93	0.17	-	162,162,162,162	0
53	MG	RA	3050	1/1	0.93	0.18	-	39,39,39,39	0
53	MG	RA	3086	1/1	0.82	0.09	-	151,151,151,151	0
53	MG	RA	3011	1/1	0.82	0.18	-	129,129,129,129	0
53	MG	YA	3086	1/1	0.95	0.13	-	109,109,109,109	0
53	MG	YA	3043	1/1	0.85	0.23	-	155,155,155,155	0
53	MG	YA	3003	1/1	0.40	1.58	-	238,238,238,238	0
53	MG	QA	1636	1/1	0.93	0.38	-	218,218,218,218	0
53	MG	RA	3047	1/1	0.70	0.13	-	122,122,122,122	0
53	MG	YA	3010	1/1	0.80	1.07	-	272,272,272,272	0
53	MG	YA	3078	1/1	0.66	0.26	-	214,214,214,214	0
53	MG	RA	3065	1/1	0.96	0.15	-	35,35,35,35	0
53	MG	YA	3046	1/1	0.97	0.22	-	73,73,73,73	0
53	MG	YA	3039	1/1	0.79	0.19	-	105,105,105,105	0
53	MG	RA	3121	1/1	0.95	0.17	-	45,45,45,45	0
53	MG	QA	1628	1/1	0.96	0.24	-	142,142,142,142	0
53	MG	XA	1611	1/1	0.89	0.11	-	110,110,110,110	0
53	MG	XA	1601	1/1	0.86	0.08	-	106,106,106,106	0
53	MG	RA	3029	1/1	0.96	0.19	-	14,14,14,14	0
53	MG	YA	3132	1/1	0.88	0.50	-	240,240,240,240	0
53	MG	RA	3038	1/1	0.98	0.17	-	19,19,19,19	0
53	MG	YA	3082	1/1	0.82	0.19	-	164,164,164,164	0
53	MG	YA	3045	1/1	0.72	0.22	-	206,206,206,206	0
53	MG	YA	3026	1/1	0.86	0.76	-	242,242,242,242	0
53	MG	RA	3093	1/1	0.98	0.08	-	45,45,45,45	0
53	MG	QA	1619	1/1	0.66	0.53	-	230,230,230,230	0
53	MG	YA	3067	1/1	0.93	0.11	-	72,72,72,72	0
53	MG	XA	1620	1/1	0.81	0.19	-	182,182,182,182	0
53	MG	YA	3099	1/1	0.96	0.17	-	188,188,188,188	0
53	MG	YA	3096	1/1	0.91	0.14	-	127,127,127,127	0
53	MG	YA	3113	1/1	0.93	0.07	-	128,128,128,128	0
53	MG	RA	3131	1/1	0.89	0.60	-	187,187,187,187	0
53	MG	QA	1623	1/1	0.96	0.11	-	77,77,77,77	0
53	MG	RA	3080	1/1	0.97	0.07	-	60,60,60,60	0
53	MG	RA	3089	1/1	0.80	0.16	-	127,127,127,127	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	RA	3124	1/1	0.97	0.20	-	63,63,63,63	0
53	MG	YA	3071	1/1	0.84	0.20	-	102,102,102,102	0
53	MG	RA	3044	1/1	0.98	0.14	-	34,34,34,34	0
53	MG	RA	3037	1/1	0.97	0.14	-	30,30,30,30	0
53	MG	RA	3004	1/1	0.86	0.19	-	184,184,184,184	0
53	MG	YA	3028	1/1	0.67	0.33	-	222,222,222,222	0
53	MG	XA	1627	1/1	0.92	0.23	-	197,197,197,197	0
53	MG	RA	3111	1/1	0.98	0.15	-	31,31,31,31	0
53	MG	YA	3064	1/1	0.72	0.87	-	256,256,256,256	0
53	MG	RA	3031	1/1	0.93	0.14	-	37,37,37,37	0
53	MG	YA	3125	1/1	0.51	0.35	-	200,200,200,200	0
53	MG	YA	3123	1/1	0.80	0.36	-	217,217,217,217	0
53	MG	QA	1639	1/1	0.97	0.18	-	118,118,118,118	0
53	MG	YA	3014	1/1	0.98	0.20	-	113,113,113,113	0
53	MG	RA	3088	1/1	0.95	0.08	-	59,59,59,59	0
53	MG	YA	3107	1/1	0.95	0.20	-	91,91,91,91	0
53	MG	RA	3059	1/1	0.96	0.43	-	207,207,207,207	0
53	MG	YA	3053	1/1	0.96	0.18	-	127,127,127,127	0
53	MG	QA	1605	1/1	0.90	0.18	-	72,72,72,72	0
53	MG	XA	1614	1/1	0.74	0.64	-	236,236,236,236	0
53	MG	YA	3054	1/1	0.90	0.12	-	86,86,86,86	0
53	MG	RA	3122	1/1	0.94	0.70	-	164,164,164,164	0
53	MG	YA	3087	1/1	0.58	0.10	-	199,199,199,199	0
53	MG	YA	3059	1/1	0.74	0.18	-	232,232,232,232	0
53	MG	YA	3019	1/1	0.48	0.66	-	278,278,278,278	0
53	MG	YA	3119	1/1	0.94	0.11	-	60,60,60,60	0
53	MG	RA	3058	1/1	0.68	0.22	-	100,100,100,100	0
53	MG	YA	3122	1/1	0.72	0.15	-	104,104,104,104	0
53	MG	YJ	201	1/1	0.20	2.55	-	319,319,319,319	0
53	MG	RA	3053	1/1	0.97	0.17	-	55,55,55,55	0
53	MG	YA	3080	1/1	0.90	0.18	-	154,154,154,154	0
53	MG	RA	3030	1/1	0.95	0.11	-	56,56,56,56	0
53	MG	YA	3118	1/1	0.94	0.17	-	100,100,100,100	0
53	MG	RA	3028	1/1	0.96	0.14	-	92,92,92,92	0
53	MG	XA	1634	1/1	0.78	0.13	-	165,165,165,165	0
53	MG	RA	3087	1/1	0.98	0.08	-	47,47,47,47	0
53	MG	QA	1632	1/1	0.85	0.15	-	85,85,85,85	0
53	MG	RA	3009	1/1	0.98	0.14	-	38,38,38,38	0
53	MG	QA	1603	1/1	0.98	0.09	-	65,65,65,65	0
53	MG	RA	3024	1/1	0.81	0.46	-	210,210,210,210	0
53	MG	RA	3104	1/1	0.98	0.17	-	23,23,23,23	0
53	MG	RA	3084	1/1	0.95	0.15	-	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	RA	3083	1/1	0.93	0.16	-	53,53,53,53	0
53	MG	RA	3010	1/1	0.97	0.12	-	31,31,31,31	0
53	MG	YA	3063	1/1	0.58	1.61	-	273,273,273,273	0
53	MG	XA	1636	1/1	0.27	0.37	-	224,224,224,224	0
53	MG	YA	3008	1/1	0.77	0.24	-	147,147,147,147	0
53	MG	RA	3042	1/1	0.98	0.07	-	60,60,60,60	0
53	MG	RA	3041	1/1	0.95	0.14	-	38,38,38,38	0
53	MG	YA	3109	1/1	0.37	1.51	-	227,227,227,227	0
53	MG	YA	3013	1/1	0.92	0.39	-	241,241,241,241	0
53	MG	YA	3057	1/1	0.67	0.30	-	205,205,205,205	0
53	MG	YA	3050	1/1	0.80	0.16	-	154,154,154,154	0
53	MG	QA	1638	1/1	0.88	0.13	-	67,67,67,67	0
53	MG	YA	3085	1/1	0.71	0.23	-	158,158,158,158	0
53	MG	YA	3017	1/1	0.80	0.13	-	185,185,185,185	0
53	MG	YA	3030	1/1	0.91	0.13	-	130,130,130,130	0
53	MG	XA	1622	1/1	0.58	0.09	-	187,187,187,187	0
53	MG	YA	3077	1/1	0.89	0.07	-	109,109,109,109	0
53	MG	RA	3019	1/1	0.97	0.06	-	34,34,34,34	0
53	MG	RA	3113	1/1	0.93	0.15	-	190,190,190,190	0
53	MG	RA	3051	1/1	0.91	0.16	-	70,70,70,70	0
53	MG	YA	3021	1/1	0.92	0.29	-	183,183,183,183	0
53	MG	RA	3079	1/1	0.97	0.15	-	32,32,32,32	0
53	MG	YA	3058	1/1	0.90	0.38	-	249,249,249,249	0
53	MG	YA	3117	1/1	0.97	0.17	-	73,73,73,73	0
53	MG	YA	3073	1/1	0.68	0.18	-	193,193,193,193	0
53	MG	XA	1632	1/1	0.84	0.10	-	122,122,122,122	0
53	MG	RA	3101	1/1	0.97	0.11	-	48,48,48,48	0
53	MG	RA	3006	1/1	0.97	0.13	-	54,54,54,54	0
53	MG	RA	3076	1/1	0.99	0.07	-	107,107,107,107	0
53	MG	YA	3005	1/1	0.66	0.87	-	282,282,282,282	0
53	MG	YA	3047	1/1	0.83	0.18	-	174,174,174,174	0
53	MG	QA	1630	1/1	0.86	0.14	-	196,196,196,196	0
53	MG	RA	3092	1/1	0.99	0.09	-	68,68,68,68	0
53	MG	RA	3066	1/1	0.98	0.16	-	32,32,32,32	0
53	MG	YA	3074	1/1	0.71	0.56	-	260,260,260,260	0
53	MG	XA	1638	1/1	0.89	0.15	-	204,204,204,204	0
53	MG	RA	3054	1/1	0.76	0.36	-	198,198,198,198	0
53	MG	RA	3071	1/1	0.95	0.11	-	16,16,16,16	0
53	MG	YA	3032	1/1	0.95	0.13	-	162,162,162,162	0
53	MG	QA	1620	1/1	0.97	0.08	-	116,116,116,116	0
53	MG	XA	1608	1/1	0.98	0.27	-	46,46,46,46	0
53	MG	YA	3129	1/1	0.53	0.73	-	261,261,261,261	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	YA	3036	1/1	0.79	0.15	-	205,205,205,205	0
53	MG	XA	1633	1/1	0.96	0.10	-	79,79,79,79	0
53	MG	RA	3003	1/1	0.90	0.14	-	77,77,77,77	0
53	MG	YA	3092	1/1	0.89	0.15	-	169,169,169,169	0
53	MG	RA	3075	1/1	0.96	0.05	-	43,43,43,43	0
53	MG	YA	3076	1/1	0.60	0.19	-	195,195,195,195	0
53	MG	QA	1601	1/1	0.98	0.07	-	94,94,94,94	0
53	MG	YA	3007	1/1	0.83	0.45	-	232,232,232,232	0
53	MG	YA	3114	1/1	0.90	0.12	-	182,182,182,182	0
53	MG	YA	3004	1/1	0.86	0.17	-	134,134,134,134	0
53	MG	RB	203	1/1	0.93	0.12	-	58,58,58,58	0
53	MG	QA	1640	1/1	0.92	0.05	-	79,79,79,79	0
53	MG	RA	3115	1/1	0.98	0.07	-	22,22,22,22	0
53	MG	QA	1615	1/1	0.98	0.11	-	152,152,152,152	0
53	MG	QA	1627	1/1	0.54	0.16	-	132,132,132,132	0
53	MG	RA	3129	1/1	0.71	1.06	-	285,285,285,285	0
53	MG	YA	3098	1/1	0.85	0.21	-	183,183,183,183	0
53	MG	YA	3038	1/1	0.83	0.07	-	234,234,234,234	0
53	MG	QA	1612	1/1	0.97	0.17	-	113,113,113,113	0
53	MG	RA	3123	1/1	0.98	0.10	-	24,24,24,24	0
53	MG	XA	1603	1/1	0.97	0.09	-	136,136,136,136	0
53	MG	QA	1621	1/1	0.93	0.13	-	131,131,131,131	0
53	MG	XA	1605	1/1	0.97	0.19	-	54,54,54,54	0
53	MG	XA	1602	1/1	0.77	0.13	-	139,139,139,139	0
53	MG	YA	3062	1/1	0.69	0.55	-	190,190,190,190	0
53	MG	RA	3085	1/1	0.83	0.17	-	133,133,133,133	0
53	MG	RA	3069	1/1	0.80	0.24	-	197,197,197,197	0
53	MG	YA	3130	1/1	0.69	1.79	-	271,271,271,271	0
53	MG	RA	3120	1/1	0.96	0.31	-	45,45,45,45	0
53	MG	YA	3006	1/1	0.55	0.10	-	237,237,237,237	0
53	MG	YE	301	1/1	0.84	0.29	-	199,199,199,199	0
53	MG	YA	3093	1/1	0.87	0.37	-	188,188,188,188	0
53	MG	RA	3078	1/1	0.98	0.13	-	58,58,58,58	0
53	MG	XA	1630	1/1	0.96	0.16	-	160,160,160,160	0
53	MG	YA	3011	1/1	0.91	0.21	-	150,150,150,150	0
53	MG	RA	3073	1/1	0.97	0.24	-	43,43,43,43	0
53	MG	RA	3025	1/1	0.97	0.06	-	40,40,40,40	0
53	MG	YA	3049	1/1	-0.02	0.45	-	243,243,243,243	0
53	MG	YA	3126	1/1	0.91	0.19	-	120,120,120,120	0
53	MG	RA	3001	1/1	0.94	0.09	-	98,98,98,98	0
53	MG	YA	3034	1/1	0.91	0.09	-	88,88,88,88	0
53	MG	RA	3126	1/1	0.97	0.14	-	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	YA	3090	1/1	0.98	0.10	-	112,112,112,112	0
53	MG	YA	3009	1/1	0.93	0.28	-	157,157,157,157	0
53	MG	YA	3041	1/1	0.93	0.15	-	119,119,119,119	0

6.5 Other polymers [i](#)

There are no such residues in this entry.